

VENEZIANO & ASSOCIATES
84 Business Park Drive
Suite 200
Armonk, New York 10504
(914) 273-1300



August 4, 2023

Christopher Carthy, Chairman
North Castle Planning Board
15 Bedford Road
Armonk, NY 10504

Re: 45 Bedford Road LLC, Site Plan Application

Honorable Chairman and Members of the Planning Board:

As you know, this firm represents 45 Bedford Rd. LLC and on June 28, 2023, the Town Board granted Special Permit Approval for this project. A copy of that Resolution is attached for your review.

You will recall that we appeared before your Board recently and that your Board recommended grant of the Special Permit, while also making certain recommendations regarding the site plan layout and design. Most of those suggestions have been incorporated into the site plan.

The site plan reflects 34 units, all approximately 2,100 s.f. in size, which units shall be for sale and shall be taxed on a condominium basis.

During our presentation to your Board, we advised you that the under-unit garage areas would not be enclosed. When we enclose them, it creates an FAR issue for us and requires a variance. Both your Board and the Town Board supported the enclosed garages and so we request your referral of this application to the Zoning Board of Appeals to resolve that issue. Also, when we reduced the height of the buildings fronting on Bedford Road, we increased our site coverage slightly and will require a modest coverage variance from the ZBA.

The project will feature a private road and public water and sewer utilities will be provided via easement. Other than the potential FAR variance and the coverage variance, the application complies with the R-MF-DA zoning district in all respects.

Submitted herewith are our site plans CS001, *et seq*, dated August 7, 2023, prepared by Langan Engineering. There is also an amended site plan application attached hereto.

With respect to environmental issues, on June 28, 2023, the Town Board, as SEQRA Lead Agency, stated as follows:

“NOW, THEREFORE, BE IT RESOLVED that based upon its review of the full environmental record, the Town Board finds that the proposed action will not result in any significant adverse environmental impacts and hereby reconfirms the Negative Declaration adopted by the Town Board on June 12, 2019, pursuant to the requirements of Article 8 of the New York State Environmental Quality Review law and 6 NYCRR part 617”.

As your Planning Board acted as an “involved” agency, it can rely upon and follow the environmental record created by the Lead Agency.

Kindly place this matter on the Planning Board’s September 11, 2023 agenda for the initial review of the site plan. Thank you.

Very truly yours,

Anthony F. Veneziano, Jr.

ANTHONY F. VENEZIANO, JR.

AFV/kj
Encls.



TOWN OF NORTH CASTLE

Town Hall - 15 Bedford Road
Armonk, New York 10504
northcastleny.com

Established 1736

ALISON SIMON
Town Clerk

(914) 273-3000 x42
asimon@northcastleny.com

On a motion made by Councilman Saleem Hussain and seconded by Councilman José Berra, the following resolution was adopted:

RESOLUTION

Action: Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District

Application Name: The Gateway Residential Development

Owner/Applicant: NCD Acquisitions, LLC and 45 Bedford Road LLC

Zone: Residential Multifamily—Downtown Armonk (R-MF-DA) District

Location: 45 Bedford Road

Date of Approval: June 28, 2023

Expiration Date: June 28, 2024 (1 year)

WHEREAS, the Town of North Castle Town Board received a special use permit application to construct 34 residential units containing 68 bedrooms in multiple buildings; and

WHEREAS, the Town of North Castle Town Board previously approved a special use permit to construct 43 residential units containing 76 bedrooms in four buildings, which has since expired; and

WHEREAS, the application consists of the following plans:

- Plan entitled “Cover Sheet,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-001,” entitled “Proposed Site,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-02,” entitled “Bedford Rd. Townhouse Layout – Proposed Plans,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-03,” entitled “Bedford Rd Townhouse – Proposed Elevations,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-03A,” entitled “Bedford Rd Townhouse – Rendering Option A,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-004.1,” entitled “Maple Avenue Townhouse - Proposed,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-004.2,” entitled “Maple Avenue Townhouse - Proposed,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-005.1,” entitled “Maple Avenue Townhouse - Proposed,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-06.1,” entitled “Maple Ave Townhouse – Rendering View 1,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-06.2,” entitled “Maple Ave Townhouse– Rendering View 2,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-008.1,” entitled “Grade Level Layout – Proposed Type A,” dated June 12, 2023, prepared by Design Development, PLLC.

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

2 of 13

- Plan labeled “A-SK-006.2,” entitled “Second/Third Level Layout - Proposed,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-006.3,” entitled “Roof Plan - Proposed,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-007.1,” entitled “Building A – Proposed Elevations,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-007.2,” entitled “Elevations Side – Proposed,” dated June 12, 2023, prepared by Design Development, PLLC.
- Plan labeled “A-SK-008” entitled “Building A – Rendering (Internal to Site),” dated June 12, 2023, prepared by Design Development, PLLC.

WHEREAS, pursuant to Section 355-21 of the Town Code, the R-MF-DA Zoning District permits attached, semidetached, detached, or multifamily dwellings, subject to the requirements of §355-40X of the Town Code via special use permit by the Town Board; and

WHEREAS, on June 26, 2023, the Planning Board reviewed and discussed the requested special use permit and positively recommended that the Town Board consider issuing the requested permit; and

WHEREAS, the Planning Board, in a June 27, 2023 letter to the Town Board also noted the following:

- The Planning Board recommends that the proposed office/studies be redesigned to eliminate full baths and closets. As designed, offices with full baths can easily be converted to bedrooms. For the Town Board to rely on the previous environmental review, the total number of units and bedrooms must be less than 43 units and 76 bedrooms.
- The Planning Board believes that the proposed apartment buildings should be redesigned to enclose, or partially enclose, the underbuilding parking spaces. The Planning Board supports a Zoning text change or variance to accomplish this goal.
- The Planning Board has no objection to the requested Building Coverage relief since the additional coverage was a result of reducing the height of the proposed buildings.
- The Planning Board directed the Applicant to revise the plans to depict a revised landscaping plan to reflect the importance of the property as a gateway into the Armonk Hamlet. The Planning Board believes that a suitable landscape plan can be attained via site development plan review.
- Given the proposed significant number of new residents living on the property, the Planning Board recommends that the Applicant be required to provide a crosswalk and sidewalk from Bedford Road to the Armonk Square development located across the street. In addition, Planning Board recommends that a sidewalk be extended from Bedford Road to the existing Bee-Line bus stop on Maple Avenue. The Planning Board does not believe that continuing a sidewalk to Business Park Drive with a crosswalk on NYS Route 22 should be installed at this time. The applicant was generally in agreement with these points except it could not commit to constructing a sidewalk on private property without the securing the necessary easements.
- The Planning Board recommends that the Applicant place an easement along the Maple Avenue frontage that would enable the future construction of a right turn lane from Bedford Road onto Maple Avenue.

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

3 of 13

- The Planning Board believes that it is imperative that the Town Board have a firm grasp on how operations at the Maple/Bedford intersection will be impacted by this project, as well as currently approved, but unbuilt, projects and potential future projects that may utilize this intersection (lumberyard, Eagle Ridge, Airport Campus, etc). The Planning Board recommends that the Town Board take into consideration the potential future costs of these improvements when contemplating development projects in and around the Armonk Hamlet.
- The Planning Board recommends that any landscaping proposed within a right-of-way be maintained by the Applicant.

WHEREAS, the application for special use permit was referred to the Westchester County Planning Board pursuant to Section 239 L, M and N of the New York State General Municipal Law and Section 277.61 of the County Administrative Code; and

WHEREAS, the County provided the following comments in a June 9, 2023 letter to the Town:

- The County Planning Board's long-range planning policies set forth in Westchester 2025—Context for County and Municipal Planning and Policies to Guide County Planning, adopted by the Board on May 6, 2008, amended January 5, 2010, and its recommended strategies set forth in Patterns for Westchester: The Land and the People, adopted December 5, 1995 call for directing new development to existing centers where infrastructure can support growth and where redevelopment can enhance economic vitality. While we regret the loss of nine units from the previously approved plan, we agree that the currently proposed development would direct an appropriate level of residential and commercial density to the Armonk hamlet.
- We recognize that the applicant states 10% of the proposed units would be set as affordable AFFH housing. As we support rounding up when the 10% set-aside results in a fraction of a required unit, we anticipate four of the units would be marketed as AFFH. We encourage the Town to continue to work with applicants to provide as many affordable AFFH units as possible into future developments.
- As we have noted in our previous letters, the proposed redevelopment of this site offers the opportunity to construct a sidewalk along the site's Maple Avenue frontage. A sidewalk along Maple Avenue should also be combined with a new crosswalk across Route 22 (connecting to Business Park Drive) as well as a pedestrian signal. Providing this infrastructure will help the application meet special permit requirements by increasing pedestrian accessibility between the site, downtown Armonk, and areas south of Route 22 such as the North Castle Community Park, the commercial buildings along Business Park Drive, and the proposed Eagle Ridge residential development. We note that this sidewalk would also provide safe access to the Bee-Line Bus stop on Maple Avenue, as the current lack of sidewalk forces bus riders to walk in the road shoulder to get to and from the bus stop. We recommend the Town and applicant work to install this sidewalk, and work with the NYS Department of Transportation to provide a crossing of Route 22.

While we appreciate the applicant for including direct pedestrian connections from the townhouses fronting Bedford Road to the sidewalk, we note that there are no sidewalks proposed along the interior street network. While vehicular usage may be low within this development, we still recommend that full pedestrian infrastructure be installed along the street to provide safe access within the site, especially for children and seniors who may reside in the property. Such a sidewalk would be especially important along the entrance portion of the street connecting to Bedford Road, as this section is narrow and space is tight between the flanking townhouse buildings.

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

4 of 13

- While the area of the proposed development would utilize land that is covered with existing impervious surfaces, the applicant and the Town should work to improve the stormwater management capabilities of the property so that as much water as possible can be retained on-site instead of flowing directly into the adjacent streams, and thus into the Wampus River. The applicant should be encouraged to explore at-grade stormwater management solutions wherever possible, such as the installation of vegetative rain gardens. We also note that previous applications indicated that pervious paving would be utilized for the surface parking areas. We recommend that this feature be reinstated in the current site plan.
- The Wampus River, which is located near the site, is a County stream channel. A County Stream Control Permit may be required from the Westchester County Department of Public Works as part of the approval process for this project. The applicant must contact the County Department of Public Works for their analysis.
- The Town should request the applicant to verify that sufficient space will be available to store recyclables under the County recycling program, which includes plastics numbered 1 through 7. County regulations for plastic recycling may be found at: <http://environment.westchestergov.com>.
- We encourage the applicant to include as much green, or sustainable building technology as possible within the proposed development. We note that no indication has been provided towards the utilization of the flat portions of the apartment building rooftops. We recommend that the applicant consider incorporating solar arrays or green roofing in order to provide further environmental remediation within the site. In addition, the Village and the applicant should give consideration towards the provision of electric vehicle parking capabilities within the proposed parking areas.
- We recommend that an indoor bicycle parking room be provided within the apartment buildings for residents and that it includes electrical outlets to charge e-bicycles. We note that as the popularity of e-bicycles increases, there is a fire risk associated with their batteries, particularly when tenants charge them with extension cords. Providing a centralized, sprinklered storage facility with appropriate outlets for charging is the best way to prevent fires and accommodate this form of transportation to and from the site.
- We encourage the Town to consider the principles of universal design in this development. Universal Design standards allow all residents and visitors to fully engage in our public and residential spaces. Universal Design is also an important means of allowing household residents to age in place as well as to provide access for persons with mobility issues; and

WHEREAS, a duly advertised public hearing on said application was opened on June 14, 2023 and closed on June 28, 2023, at which time all those wishing to be heard were given the opportunity to be heard; and

WHEREAS, §355-37 of the North Castle Code establishes certain general standards for all special permit uses; and

WHEREAS, in order for the Town Board to approve a special use permit, the Town Board must find that all of the conditions and standards have been met; and

WHEREAS, pursuant to § 355-37(A) of the Town Code, in order to grant a special permit, the Town Board must find that “the location and size of the use, the nature and intensity of the operations involved in it or conducted in connection with it, the size of the site in relation to it and the location of the site with respect to streets giving access to it are such that it will be in harmony with the appropriate and orderly development of the district in which it is located and that it complies with all special requirements for such use established in” the Town Code; and

WHEREAS, the subject property is located within the Residential Multifamily—Downtown Armonk (R-MF-DA) Zoning District; and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for
The Gateway – 45 Bedford Road
June 28, 2023
5 of 13

WHEREAS, within close proximity are the Armonk Hamlet business district, the Residence Office district and Wampus Brook Park; and

WHEREAS, the Applicant has studied the potential traffic impacts of the proposed action in a report dated March 2, 2023; and

WHEREAS, results of the traffic analysis prepared by the Applicant was reviewed by the Town's Traffic Consultant; and

WHEREAS, the Town's Traffic Consultant submitted the following initial findings:

- The intersection of NYS Route 22/Maple Avenue/Business Park Drive during the weekday morning peak hour has a change in Level of Service (LOS) from No-Build to Build of "D" to "E" for the westbound through lane group. However, this is due to a small increase in delay of 1.7 seconds. The change in LOS is because the No-Build condition is very close to the threshold between LOS D and E.
- During the weekday afternoon peak hour, the southbound left turn lane group has a change in the v/c ratio from 0.99 to 1.00, indicating it is at capacity. This lane group operates at LOS F for both conditions. Also, the southbound left turn lane group's queue in a No-Build condition is 653 feet and with the proposed development it increases to 661 feet (less than a car length), both of which are through the signalized intersection with Maple Avenue and Bedford Road. Review of the site traffic estimates indicated that during the weekday afternoon peak hour a total of 4 vehicles will be added to this movement by the proposed development, which is not considered a significant increase in traffic. This works out to 1 vehicle every 15 minutes.
- The Town has been investigating improvements to the NYS Route 22/Maple Avenue/Business Park Drive intersection in the form of a southbound double left turn to increase capacity and reduce delays and queuing on that approach. Capacity analysis for these improvements were provided both by this office, as well as the Eagle Ridge Development. A preliminary review with implementing these improvements to the weekday afternoon build condition indicates that any impacts from the proposed development will be mitigated and there will be a significant improvement in operations and queuing on the southbound lane groups during this peak hour. A fair share contribution for these improvements should be considered by the Town.
- Also, it should be noted that the school dismissal peak hour during the mid-afternoon is a concern with traffic impacts at the two signalized intersections along Maple Avenue, with extensive queuing on the southbound approach to NYS Route 22. The previous study prepared by JMC did not look at this peak hour, as the proposed development would generate an insignificant amount of traffic during this peak hour. The study prepared by Langan for the 34-units also did not analyze a school dismissal peak hour. The proposed development will generate an insignificant amount of traffic during this peak hour; therefore, a detailed analysis is not warranted; and

WHEREAS, the Town should plan for future roadway improvements to the Maple/Bedford intersection, as needed, as traffic increases in the area and other developments come online generally along the NYS Route 22 Corridor and NYS Route 120, with some of this development having an indirect impact on the Armonk Hamlet; and

WHEREAS, based upon the above, the project will adequately mitigate any impact on existing transportation systems; and

WHEREAS, the proposed project would accomplish many of the goals of the Comprehensive Plan, including, minimizing traffic and parking impacts by permitting multifamily residential adjacent to the Armonk Hamlet and by strengthening the Armonk Hamlet commercial core by prohibiting additional commercial uses on the subject site; and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

6 of 13

WHEREAS, given the generally recognized need for various types of housing to accommodate different ages, incomes and lifestyles, the proposed multifamily zoning district would be consistent with the Comprehensive Plan; and

WHEREAS, the proposed action would ultimately result in the development of a 34 unit project with 68 bedrooms, 4 units of which are AFFH units; and

WHEREAS, the proposed use would be compatible with surrounding uses; and

WHEREAS, the Town Board, based upon its review of the entire record, finds that the location and size of the use, the nature and intensity of the operations involved in it or conducted in connection with it, the size of the site in relation to it and the location of the site with respect to streets giving access to it are such that it will be in harmony with the appropriate and orderly development of the district in which it is located and that it complies with all requirements for such use established in the Town Code; and

WHEREAS, pursuant to § 355-37(B) of the Town Code, the second criteria for the issuance of a special permit is that “the location, nature and height of buildings, walls, fences and the nature and extent of existing or proposed plantings on the site are such that the use will not hinder or discourage the appropriate development and use of the adjacent land and buildings;” and

WHEREAS, Building height has been closely evaluated by the Town Board to ensure that building height is compatible with the scale of adjacent neighborhoods; and

WHEREAS, the Town Board finds that the proposed height of buildings is acceptable and compatible with adjacent neighborhoods; and

WHEREAS, the proposed building height complies with the requirements of the zoning code and the Planning Board will require the implementation of a landscaping plan during site plan review; and

WHEREAS, the location, nature and height of buildings, walls, fences and the nature and extent of existing or proposed plantings on the site are such that the use will not hinder or discourage the appropriate development and use of adjacent land and buildings and a landscaping plan will be implemented, and that the construction of this project will promote appropriate development and use of adjacent land and buildings; and

WHEREAS, the Town Board, based upon its review of the entire record finds that the location, nature and height of buildings, walls, fences and the nature and extent of existing or proposed plantings on the site are such that the use will not hinder or discourage the appropriate development and use of the adjacent land and buildings; and

WHEREAS, pursuant to § 355-37(C), the third requirement for the issuance of a special permit is that “operations in connection with any special permit use will not be more objectionable to nearby properties by reason of noise, fumes, vibration or other characteristics than would be the operations of any permitted uses not requiring a special permit;” and

WHEREAS, the proposed multi-family residential project will not generate significant noise, fumes or vibrations; and

WHEREAS, the Town Board, based upon its review of the entire record finds that the operations in connection with any special permit use will not be more objectionable to nearby properties by reason of noise, fumes, vibration or other characteristics than would be the operations of any permitted uses not requiring a special permit; and

WHEREAS, pursuant to § 355-37(D) of the Town Code, the Town Board, in order to grant a special permit, must find that “parking areas will be of adequate size for the particular use, properly located and suitably screened from adjoining residential uses, and the entrance and exit drives shall be laid out so as to achieve maximum convenience and safety;” and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

7 of 13

WHEREAS, the proposed site has been designed to provide off-street parking in an amount required by the Town Code; and

WHEREAS, the proposed entrance and exit drives will be suitably designed to the satisfaction of the Planning Board; and

WHEREAS, the Town Board, based upon its review of the entire record finds that the proposed parking areas are of adequate size for the proposed use, properly located and suitably screened from adjoining residential uses, and the entrance and exit driveways are laid out so as to achieve maximum convenience and safety; and

WHEREAS, pursuant to § 355-37(E) of the Town Code, the fourth criteria for the issuance of a special permit is compliance “where required, [with] the provisions of the Town Flood Hazard Ordinance;” and

WHEREAS, the Applicant has designed the project to meet the minimum flood requirements of the Town Code and the Applicant will be required to obtain the necessary floodplain development permit from the Town as a condition of this permit and the site development plan approval; and

WHEREAS, the Town Board, based upon its review of the entire record finds that development will require the issuance of a floodplain development permit prior to the issuance of a building permit; and

WHEREAS, pursuant to § 355-37(F), it is required that “the Town Board finds that the proposed special permit use will not have a significant adverse effect on the environment;” and

WHEREAS, the SEQRA review of the Proposed Action has been concluded; and

WHEREAS, the Town Board adopted a Negative Declaration on June 12, 2019.

WHEREAS, the Town Board, based upon its review of the entire record, determined that the project will not have a significant adverse effect on the environment and a Draft Environmental Impact Statement would not be prepared; and

WHEREAS, §355-40.X of the North Castle Code establishes certain specific standards for attached, semidetached, detached, or multifamily dwellings in the Residential Multifamily – Downtown Armonk (R-MF-DA) district; and

WHEREAS, in order for the Town Board to approve a special use permit, the Town Board must find that all of the conditions and standards have been met; and

WHEREAS, pursuant to § 355-40.X(1)(a) of the Town Code, building height shall be closely evaluated by the Town Board to ensure that building height is compatible with the scale of adjacent neighborhoods. Maximum building height shall only be permitted when special mitigating factors, such as Arterial Roads and/or topography, are present to ensure compatibility with adjacent neighborhoods as determined by the Town Board. When such special mitigating factors are not determined to be present by the Town Board, a maximum building height of 30 feet shall be provided within the district; and

WHEREAS, Building height has been closely evaluated by the Town Board to ensure that building height is compatible with the scale of adjacent neighborhoods; and

WHEREAS, the Town Board finds that the proposed building height is acceptable and is compatible with adjacent neighborhoods; and

WHEREAS, the proposed building height complies with the requirements of the zoning code and the Planning Board will require the implementation of a landscaping plan during site plan review; and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for
The Gateway – 45 Bedford Road
June 28, 2023
8 of 13

WHEREAS, the Town Board, based upon its review of the entire record finds that the building height has been closely evaluated by the Town Board; and

WHEREAS, pursuant to § 355-40.X(1)(b) of the Town Code, in order to grant a special permit, the Town Board must find that a “landscaped area shall be required along all street frontages.”

WHEREAS, the Applicant has provided plans to the Planning Board depicting proposed landscaping along the street frontages; and

WHEREAS, the Town Board, based upon its review of the entire record finds that required landscaping will be provided as part of the Planning Board site plan review; and

WHEREAS, pursuant to § 355-40.X(1)(c) of the Town Code, in order to grant a special permit, the Town Board must find that visual privacy shall be preserved for residents through the proper design of rear yards, terraces, decks or patio spaces. Proper screening through the use of vegetation and fencing shall be provided; and

WHEREAS, the Applicant has provided plans to the Planning Board depicting proposed visual privacy; and

WHEREAS, the Town Board, based upon its review of the entire record finds that required visual privacy will be provided as part of the Planning Board site plan review; and

WHEREAS, pursuant to § 355-40.X(1)(d) of the Town Code, in order to grant a special permit, the Town Board must find that audio privacy shall be maintained by requiring proper standards for party walls that will satisfactorily limit sound transmission between adjoining dwelling units; and

WHEREAS, the Applicant has provided plans to the Planning Board depicting proposed audio privacy; and

WHEREAS, the Town Board, based upon its review of the entire record finds that required audio privacy will be provided as part of the Planning Board site plan review; and

WHEREAS, pursuant to § 355-40.X(1)(e) of the Town Code, in order to grant a special permit, the Town Board must find that private outdoor space shall be provided through the use of decks, terraces, or patios for each unit, if deemed appropriate by the Planning Board; and

WHEREAS, the Applicant has provided plans to the Planning Board depicting proposed private outdoor space; and

WHEREAS, the Town Board, based upon its review of the entire record finds that required private outdoor space will be provided as part of the Planning Board site plan review; and

WHEREAS, pursuant to § 355-40.X(2) of the Town Code, in order to grant a special permit, the Town Board must find that adequate water supply and sewage disposal facilities shall be provided in accordance with the requirements of the Town of North Castle, Westchester County Department of Health, and the New York State Departments of Health and Environmental Conservation; and

WHEREAS, it is anticipated that the site will be developed with 34 residential units containing a total of 68 bedrooms; and

WHEREAS, the property will be served by public water supply, Town of North Castle Water District #4.

WHEREAS, new public water mains and fire hydrants will be installed on the property to serve the proposed development; and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for
The Gateway – 45 Bedford Road
 June 28, 2023
 9 of 13

WHEREAS, the total estimated water requirement for the previously approved project was calculated using the standards set forth in the “New York State Design Standards for Intermediate Sized Wastewater Treatment Systems,” March 5, 2014, by the NYSDEC, with an estimated sanitary demand of 110 gpd per bedroom; and

WHEREAS, the currently proposed development will include a total of 68 bedrooms, which is less than the previously studied 76 bedrooms, which resulted in a water demand of approximately 8,360 gallons of water per day, excluding irrigation; and

WHEREAS, the water demand for irrigation, with conservation measures (estimate of 30% of the property), based on 1” per week per acre is estimated to be approximately 5,500 gallons per day; and

WHEREAS, the previously studied project’s total proposed demand with irrigation was estimated to be 13,860 gallons per day; and

WHEREAS, it is also noted that the original site plan approval included an estimate of 6,000 gallons per day for irrigation; and

WHEREAS, the project’s initial site plan approvals circa 2007 included the following projected estimates considered in the initial site plan approval:

2007 Approval – Water Usage Estimates

USE	ESTIMATED WATER USAGE	DAILY FLOW (GPD)
6,600 s.f. Office	0.1 GPD per S.F.	660
8,557 s.f. Market	0.1 GPD per S.F.	858
16 Seat Accessory Café	35 GPD / Seat	560
Total		2,078

2012 Approval – Water Usage Estimates

In 2012, site plan approval was granted to change the accessory café to a 72-seat wine bar / café use, resulting in an increase of 1,960 gallons per day.

USE	ESTIMATED WATER USAGE	DAILY FLOW (GPD)
6,600 s.f. Office	0.1 GPD per S.F.	660
8,557 s.f. Market	0.1 GPD per S.F.	858
72 Seat Wine Bar / Café	35 GPD / Seat	2,520
Total		4,038

WHEREAS, for the previously studied conditions without irrigation, the increase in domestic water consumption will be approximately 4,322 gallons per day compared to water usage estimates for the site’s previous approvals; and

WHEREAS, based on water usage records discussed with the Water Department, historic water consumption at the site is approximately 3,280 gallons per day; and

WHEREAS, the applicant has entered into a community benefits agreement which will assist in the Town’s ongoing efforts to increase the capacity of Water District #4; and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for
The Gateway – 45 Bedford Road
 June 28, 2023
 10 of 13

WHEREAS, the site will be served by the existing municipal wastewater system maintained by the Town of North Castle; and

WHEREAS, there is an 8” Ductile Iron Pipe in Bedford Road; and

WHEREAS, connection permits will be obtained from the Town of North Castle; and

WHEREAS, a new public sewer main will be constructed on the property to serve the multifamily residences; and

WHEREAS, in accordance with the standards set forth in the “New York State Design Standards for Intermediate Sized Wastewater Treatment Systems,” March 5, 2014, by the NYSDEC, there is an estimated sanitary demand of 110 gpd per proposed bedroom; and

WHEREAS, therefore for the previously studied conditions, it was estimated there would be a total sanitary demand of 8,360 gallons per day generated by the previous project’s proposed 76 bedrooms; and

WHEREAS, the current proposal’s 68 bedrooms will produce less effluent than previously studied given the reduced number of bedrooms; and

WHEREAS, the project’s initial site plan approvals circa 2007 included the following projected estimates considered in the initial site plan approval:

2007 Approval – Sewage Generation Estimates

USE	ESTIMATED SEWAGE GENERATION RATE	DAILY FLOW (GPD)
6,600 s.f. Office	0.1 GPD per S.F.	660
8,557 s.f. Market	0.1 GPD per S.F.	858
16 Seat Accessory Café	35 GPD / Seat	560
Total		2,078

2012 Approval – Sewage Generation Estimates

USE	ESTIMATED SEWAGE GENERATION RATE	DAILY FLOW (GPD)
6,600 s.f. Office	0.1 GPD per S.F.	660
8,557 s.f. Market	0.1 GPD per S.F.	858
72 Seat Wine Bar / Café	35 GPD / Seat	2,520
Total		4,038

WHEREAS, in 2012, site plan approval was granted to change the accessory café to a 72 seat wine bar / café use, resulting in an increase of 1,960 gallons per day; and

WHEREAS, based on the above, the previously studied conditions were estimated to increase sewage flows by 4,322 gallons per day as compared to the site’s prior approval for the existing uses; and

WHEREAS, the applicant has entered into a community benefits agreement which will assist in the Town’s ongoing efforts to increase the capacity of Sewer District #2; and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

11 of 13

WHEREAS, the Town Board, based upon its review of the entire record finds that the proposed project will have adequate water supply and sewage disposal facilities as a condition of any building permit; and

WHEREAS, pursuant to § 355-40.X(3) of the Town Code, in order to grant a special permit, the Town Board must find that “traffic access shall be from a public street of adequate capacity and design to safely and conveniently accommodate the expected traffic;” and

WHEREAS, the Applicant has studied the potential traffic impacts of the proposed action; and

WHEREAS, the modification to the plan has reduced the number of units 34 units; and

WHEREAS, the Town’s Traffic Consultant submitted the following initial findings:

- The intersection of NYS Route 22/Maple Avenue/Business Park Drive during the weekday morning peak hour has a change in Level of Service (LOS) from No-Build to Build of “D” to “E” for the westbound through lane group. However, this is due to a small increase in delay of 1.7 seconds. The change in LOS is because the No-Build condition is very close to the threshold between LOS D and E.
- During the weekday afternoon peak hour, the southbound left turn lane group has a change in the v/c ratio from 0.99 to 1.00, indicating it is at capacity. This lane group operates at LOS F for both conditions. Also, the southbound left turn lane group’s queue in a No-Build condition is 653 feet and with the proposed development it increases to 661 feet (less than a car length) , both of which are through the signalized intersection with Maple Avenue and Bedford Road. Review of the site traffic estimates indicated that during the weekday afternoon peak hour a total of 4 vehicles will be added to this movement by the proposed development, which is not considered a significant increase in traffic. This works out to 1 vehicle every 15 minutes.
- The Town has been investigating improvements to the NYS Route 22/Maple Avenue/Business Park Drive intersection in the form of a southbound double left turn to increase capacity and reduce delays and queuing on that approach. Capacity analysis for these improvements were provided both by this office, as well as the Eagle Ridge Development. A preliminary review with implementing these improvements to the weekday afternoon build condition indicates that any impacts from the proposed development will be mitigated and there will be a significant improvement in operations and queuing on the southbound lane groups during this peak hour. A fair share contribution for these improvements should be considered by the Town.
- Also, it should be noted that the school dismissal peak hour during the mid-afternoon is a concern with traffic impacts at the two signalized intersections along Maple Avenue, with extensive queuing on the southbound approach to NYS Route 22. The previous study prepared by JMC did not look at this peak hour, as the proposed development would generate an insignificant amount of traffic during this peak hour. The study prepared by Langan for the 34-units also did not analyze a school dismissal peak hour. The proposed development will generate an insignificant amount of traffic during this peak hour; therefore, a detailed analysis is not warranted; and

WHEREAS, the Town should plan for future roadway improvements to the Maple/Bedford intersection, as needed, as traffic increases in the area and other developments come online generally along the NYS Route 22 Corridor and NYS Route 120, with some of this development having an indirect impact on the Armonk Hamlet; and

WHEREAS, the Applicant has offered to work with the Town to provide a right-hand turn lane easement from Bedford Road to Maple Avenue and other associated improvements; and

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

12 of 13

WHEREAS, in addition, the Town should plan for future roadway improvements to this intersection, as needed, as traffic increases in the area and other developments come online generally along the NYS Route 22 Corridor and NYS Route 120, with some of this development having an indirect impact on the Armonk Hamlet; and

WHEREAS, based upon the above, the project will adequately mitigate any impact on existing transportation systems; and

WHEREAS, the Town Board, based upon its review of the entire record finds that traffic access is from a public street of adequate capacity and design to safely and conveniently accommodate the expected traffic; and

WHEREAS, pursuant to § 355-40.X(4) of the Town Code, in order to grant a special permit, the Town Board must find that the project provides “vehicular and pedestrian improvements on and around the property necessary to mitigate any vehicular and pedestrian impacts associated with the project;” and

WHEREAS, the Applicant has indicated that it is willing to investigate providing a crosswalk and sidewalk to the Armonk Square project from Bedford Road; and

WHEREAS, the Applicant has indicated that it is willing to provide a sidewalk to the existing adjacent bus stop on Maple Avenue; and

WHEREAS, the Town Board, based upon its review of the entire record finds that required pedestrian improvements around the property will be provided as part of the Planning Board site plan review; and

WHEREAS, pursuant to § 355-40.X(5) of the Town Code, in order to grant a special permit, the Town Board must find that “all exterior lighting shall be located so that the source of the light and any objectionable glare therefrom is not visible from any neighboring property. The height, intensity, spacing and design of all exterior lighting fixtures shall be such that they will be in character with the area in which they are located. The level of lighting shall be limited to that necessary for safety and security purposes;” and

WHEREAS, the Applicant will provide a lighting plan to the satisfaction of the Planning Board; and

WHEREAS, the Town Board, based upon its review of the entire record finds that the required lighting plan will be provided as part of the Planning Board site plan review; and

NOW THEREFORE BE IT RESOLVED, that based upon its review of the full environmental record the Town Board finds that the proposed action will not result in any significant adverse environmental impacts and hereby reconfirms the Negative Declaration adopted by the Town Board on June 12, 2019 pursuant to the requirements of Article 8 of the New York State Environmental Quality Review Law and 6 NYCRR Part 617; and

BE IT FURTHER RESOLVED, that this special permit shall be deemed to authorize only the particular use of uses specified in the permit and shall expire if work is not initiated within one year from the date of issue, or if said use or uses shall cease for more than one year for any reason or if all required improvements are not completed within two years from the date of issue or if all such required improvements are not maintained and all conditions and standards complied with throughout the duration of the use; and

BE IT FURTHER RESOLVED, that the special use permit be, and it hereby is, approved, subject to the conditions set forth below:

Conditions:

1. Compliance with all applicable local laws and ordinances of the Town of North Castle.

Special Use Permit for Attached, Semidetached, Detached, or Multifamily dwellings in the Residential Multifamily—Downtown Armonk (R-MF-DA) District for

The Gateway – 45 Bedford Road

June 28, 2023

13 of 13

2. Adoption of site plan approval by the Town of North Castle Planning Board.
3. The Applicant shall obtain the required floodplain development permit from the Town of North Castle prior to the issuance of a building permit.
4. The Planning Board shall require adequate landscaping along all street frontages.
5. The Planning Board shall require adequate visual privacy pursuant to Section 255-40.X(1)(c) of the Town Code.
6. The Planning Board shall require adequate audio privacy pursuant to Section 255-40.X(1)(d) of the Town Code.
7. The Planning Board shall require private outdoor space to Section 255-40.X(1)(e) of the Town Code.
8. The Applicant shall provide the required pedestrian and vehicular improvements around the property to the satisfaction of the Town Board, including, in particular, an easement for the future construction of a right hand turn lane from Bedford Road to Maple Avenue, the construction of sidewalks from the intersection of Bedford Road and Maple Avenue to the existing Bee-Line bus stop and, provided that approvals are granted in accordance with Chapter 195 of the North Castle Town Code, or on appeal to the Town Board, and assuming necessary easements are granted by affected property owners, sidewalks along the entry road to Armonk Square from Bedford Road.
9. The Applicant shall provide the required lighting plan as part of the Planning Board site plan review.

COUNCILMAN DiGIACINTO
COUNCILMAN BERRA
COUNCILMAN HUSSAIN
COUNCILMAN MILIM
SUPERVISOR SCHILIRO

VOTING NO
VOTING NO
VOTING AYE
VOTING AYE
VOTING AYE

I, Alison Simon, Town Clerk, of the Town of North Castle, do hereby certify that the above resolution was duly adopted at a regularly scheduled meeting of the Town Board of the Town of North Castle held on June 28, 2023 and that the above resolution is a true and correct transcript thereof.



Alison Simon, Town Clerk

Dated: June 30, 2023
Armonk, New York



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

Application for Site Development Plan Approval

Application Name

The Gateway



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

Important General Information

- Prior to submitting an application, the "Notice to Applicants" should be reviewed.
- To appear before the Planning Board, all required application materials shall be submitted not later than **12:00 P.M., Monday, fourteen (14) days** prior to the date of the Planning Board meeting at which the application is scheduled to be heard or as otherwise noted by the Planning Board Secretary. Continuing Business can be submitted 12 days prior to the Next Planning Board meeting by the close of business. Except where noted.
If all required application materials, including the pertinent application fee and escrow monies are not submitted by that deadline, the application shall be automatically removed from the agenda.
At the discretion of the Planning Board Chairman, the application may be rescheduled, if appropriate, for the next available Planning Board meeting or the application may be removed from future agendas altogether. Without prior authorization from the Planning Board, application submissions shall not be accepted at Planning Board meetings.
- At the time of submission, all required application materials shall be submitted. **Piecemeal** submissions **shall not** be accepted. Substitution of previously submitted materials shall not be permitted.
- All submissions shall be dated, with revision dates identified on new submissions.
- All submissions shall be accompanied by a cover letter describing the project and/or any changes as compared to previous submissions.
- To be considered complete for Planning Board hearing purposes, an application package shall contain the information identified in Parts IV and V of this application form.



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

**AT THE TIME OF SUBMISSION TO THE PLANNING DEPARTMENT
PLEASE MAKE SURE THE FOLLOWING IS PROVIDED**

- ✓ SUBMISSION OF A SINGLE PDF FILE (PLANS, APPLICATION FORM, OTHER PAPERWORK) ON A DISK, THUMBDRIVE OR EMAIL

- ✓ COVER LETTER DESCRIBING THE PROJECT OR CHANGES TO THE PROJECT

- ✓ ALL PLANS ARE SIGNED AND SEALED BY A LICENSED NYS PROFESSIONAL

E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Eligible property:TOWN HALL, Bedford Road Historic District
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

NOTICE TO APPLICANTS

In the Town of North Castle, the Planning Board is responsible for the review and approval of all applications concerning site plans, subdivisions and lot line changes; some applications concerning special use permits, wetlands permits and tree removal permits; and the environmental review of those applications over which it has jurisdiction. The Planning Board may also have an advisory role in connection with some applications before the Town Board, such as those involving other categories of special use permits and zoning amendments.

The Planning Board is composed of five volunteer members – all residents of North Castle – who are appointed by the Town Board for five-year terms. As part of the review of some applications, the Planning Board is assisted on an as-needed basis by other lay boards of the Town, such as the Conservation Board (CB), the Zoning Board of Appeals (ZBA), the Open Space Committee and the Architectural Review Board (ARB). As part of the review of most applications, the Planning Board is also assisted by the Director of Planning, the Town Engineer, the Town Attorney and other special consultants when required.

FEES:

If you submit an application for Planning Board review, you will be required to reimburse the Town for the cost of professional review services, including legal and engineering services, incurred in connection with the review of your application. The charges for professional planning review services have been \$120/hour. If other types of professional consultant review services are required, those charges will be in accord with fees usually charged for such services and pursuant to a contractual agreement between the Town and such professional.

At the time of submission of an application, the Planning Board will require the establishment of an escrow account from which withdrawals shall be made to reimburse the Town for the cost of consultant fees and professional staff services.

ESCROW ACCOUNT:

Escrow Accounts are established for each application. Monies will be deducted from the account for professional review services rendered. Monthly escrow disbursement summaries will be mailed for your reference regarding your project. When the balance in such escrow account is reduced to one-third (1/3) of its initial amount, a letter will be mailed to the applicant and the applicant shall deposit additional funds into such account to restore its balance to the amount of the initial deposit. Additional information on these requirements is provided in the North Castle Town Code (see Sections 355-79B and 275-36.C).



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

PROCEDURE:

Prior to submitting an application to the Planning Board for review and approval, prospective applicants should schedule an appointment with the Planning Board Secretary at (914) 273-3542 for a consultation with the Town Planner and the Town Engineer. When the appointment is made, a verbal description of the proposal should be provided to the Planning Board Secretary. The Town of North Castle is providing the services of the Director of Planning and the Town Engineer for *initial* consultation at no cost to the applicant so that it is possible to conduct the application review as efficiently as possible for the benefit of the applicant as well as the Planning Board.

After meeting with the Town Planner and Town Engineer, prospective applicants should prepare one complete set of application documents and plans. This set will be reviewed for completeness by the Town Planner. If determined to be incomplete, the Planning Department will submit a checklist indicating which items have not been adequately addressed. If determined to be complete, the checklist will be initialed and the Applicant should submit the remainder of the required application packages.

Once the checklist has been initialed and all application packages have been submitted, the Planning Board Secretary will schedule the application for the first available opening on the Planning Board's meeting agenda. However, if the required application material packages, including the pertinent application fee are not received at the Planning Board office by 12:00 PM, Monday, 14 days prior to the date of the Planning Board meeting at which you are scheduled to appear (or otherwise scheduled by the Planning Board Secretary), your application will be automatically removed from the agenda. At the discretion of the Planning Board Chairman, your application may be rescheduled, if appropriate, for the next available Planning Board meeting or the application may be removed from future agendas altogether. Additional requirements pertinent to each type of application are provided on the individual application forms, which you should carefully review prior to submitting your application.

When an application is deemed complete and submitted for review, it will be forwarded to the Planning Board Members and its professional advisors in advance of the meeting to allow adequate time for review, preparation of written reports and site inspections as necessary. Your application may also be forwarded to other boards and staff of the Town as well as to agencies outside of the Town, if required. Compliance with State Environmental Quality Review (SEQR) procedures is also required as part of the processing of all applications.

At your first appearance before the Planning Board, the Applicant will describe the project and the Planning Board will discuss any preliminary issues. The Planning Board discussion may be continued at future meetings, or if the Planning Board review has progressed sufficiently, the Application may be scheduled for a public hearing (if one is required) The public hearing may occur at a single Planning Board meeting, or it may be adjourned and continued at another Planning Board meeting. Because the nature and complexity of each application varies



**TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898**

**PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning**

**Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com**

considerably, it is not possible to predict in advance the length of time needed to secure Planning Board approval. There are certain steps that you can take, however, to expedite the review process. These include, but are not limited to, the following:

- Be thoroughly familiar with the requirements pertinent to your application. Carefully review relevant provisions of the North Castle Town Code and the application form for your particular type of application. Be sure to check on what other types of approvals may be required in addition to that of the Planning Board. Approvals by other Town boards or departments as well as agencies outside of the Town may be required before you will be allowed to proceed with your project.
- Make sure that your application materials are accurately prepared and contain all required information. The information that we initially request is required, so make sure that your submission is complete. If supplementary information is requested as the review process continues, make sure that it is submitted in a timely fashion so the Planning Board can continue to move your application along.
- Follow up to make sure that your application materials are being submitted on time, or deliver them to the Planning office yourself.
- Attend the Planning Board meeting at which your application will be discussed and be on time for the meeting. If you cannot appear personally, make sure that your representative will be there and is thoroughly familiar with your application.

If the Application is approved by the Planning Board, a resolution of approval will be adopted by the Planning Board. It is the Applicant's responsibility to address any and all conditions of approval. Permits from the Building Department cannot be issued until all conditions have been addressed and the plans have been signed by the Planning Board Chair and the Town Engineer.

**ON LINE AGENDAS & PLANNING DEPARTMENT MEMORANDA CAN BE
REVIEWED AT**

WWW.NORTHCASTLENY.COM



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

INFORMATION REGARDING PUBLIC HEARINGS

1. The North Castle Assessor's Office shall prepare a list of neighbors to be notified for the neighbor notifications and public hearings - **A minimum of one week's notice is required**. The fee is \$50.00 which includes the list of neighbors and two sets of labels for mailing. The Assessor's Office may be reached Monday – Friday from 8:30 a.m.– 4:30 p.m. at 273-3324. You may also e-mail your request to assessor@northcastleny.com

When requesting your list please reference the list of application types below so that you can tell the Assessor's office how many feet on all sides of the property to create the list for.

Subdivisions - All lots zoned R-10, R-5 and R-2F shall notice all neighbors within 200 feet from all sides of their property. All other zoning districts shall notice neighbors within 500 feet from all sides of their property. Public hearing notice must be published in the newspaper.

Special Use Permit for Structures over 800 sq ft. & Accessory Apartment - All Zoning Districts shall notice all neighbors within 250 feet from all sides of their property. Public hearing notice must be published in the newspaper.

Site Plan, Non Residential - All Zoning Districts shall notice all neighbors within 250 feet from all sides of their property. Public hearing notice must be published in the newspaper.

Site Plan, Residential/ Neighbor Notification – All zoning districts R-3/4A or smaller shall notice all neighbors within 250' from all sides of their property. All zoning districts zoned R-1A or larger shall notice all neighbors within 500' from all sides of the property. No public hearing required, no publication in the newspaper required.

Wetlands Permit - All Zoning Districts shall notice all abutting property owners. Public hearing notice must be published in the newspaper.

2. The Director of Planning will prepare a Public Notice. The applicant and or professional will review, sign, date and return to the Planning Department Secretary. If there are any changes necessary, please edit and return for corrections. The corrections will be made and emailed back to the applicant who will forward it to the Journal Newspaper, when applicable.

If notification to the newspaper is not required, please continue to #3.



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

You may email your public notice to legals@lohud.com. Please request an affidavit of publication which must be submitted to the Planning Board secretary prior to the public hearing. The Journal News requires three days prior notice before 12 noon, not counting weekends and holidays, for ad placement. Make sure the notice placement of the ad in the Greater Westchester Area. This notice cannot be published any sooner than 20 days prior to the meeting and must be published no less than 10 days prior to the meeting.

If you have any questions regarding your publication you may call 888-516-9220:
Email Address: legals@lohud.com

It is suggested that you purchase the newspaper for your records the day the notice is published.

3. Send out the Public Hearing Notice/ Neighbor Notification by First Class Mail. Notice shall be mailed by the applicant in official envelopes provided by the North Castle Planning Department; the list of noticed neighbors will be prepared by the Assessor's Office. This must be sent out no less than 10 days prior to the meeting and no more than 20 days prior to the meeting date. A Certificate of Mailing (PS Form 3817 or 3877) shall be filled out and post marked by the Post Office on the day of mailing. Neighbor Notifications – no publication in the newspaper required.
4. The Friday before the meeting or no later than 12:00 p.m. the day of the meeting the following **must** be submitted.
 - List of Neighbors prepared by the Assessor's Office
 - Certificate of Mailing – PS form 3817 or 3877 post marked by the US Post Office
 - Affidavit of publication from the Newspaper (only if published in the newspaper)



Firm Mailing Book For Accountable Mail

Name and Address of Sender

- Check type of mail or service
- Adult Signature Required
 - Adult Signature Restricted Delivery
 - Certified Mail
 - Certified Mail Restricted Delivery
 - Collect on Delivery (COD)
 - Insured Mail
 - Priority Mail
 - Priority Mail Express
 - Registered Mail
 - Return Receipt for Merchandise
 - Signature Confirmation
 - Signature Confirmation Restricted Delivery

Affix Stamp Here
(if issued as an international certificate of mailing or for additional copies of this receipt).
Postmark with Date of Receipt.

USPS Tracking/Article Number	Addresssee (Name, Street, City, State, & ZIP Code™)	Postage	(Extra Service) Fee	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee
1.														
2.														
3.														
4.														
5.														
6.														
7.														
8.														
Total Number of Pieces Listed by Sender		Postmaster, Per (Name of receiving employee)		Total Number of Pieces Received at Post Office										



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

APPLICATIONS REQUIRING PLANNING BOARD APPROVAL
SCHEDULE OF APPLICATION FEES

<u>Type of Application</u>	<u>Application Fee</u>
Site Development Plan	\$200.00
Each proposed Parking Space	\$10
Special Use Permit (each)	\$200 (each)
Preliminary Subdivision Plat	\$300 1 st Lot \$200 (each additional lot)
Final Subdivision Plat	\$250 1 st Lot \$100 (each additional lot)
Tree Removal Permit	\$75
Wetlands Permit	\$50 (each)
Short Environmental Assessment Form	\$50
Long Environmental Assessment Form	\$100
Recreation Fee	\$10,000 Each Additional Lot
Discussion Fee	\$200.00
Prior to submission of a sketch or preliminary subdivision Plat, an applicant or an applicant's representative wishes to discuss a subdivision proposal to the Planning Board, a discussion fee of \$200.00 shall be submitted for each informal appearance before the board.	

Any amendment to previously approved applications requires new application forms and Fees



TOWN OF NORTH CASTLE
WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

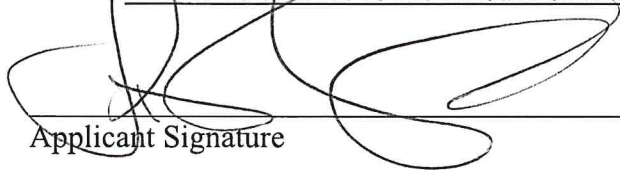
PLANNING DEPARTMENT
Adam R. Kaufman, AICP
Director of Planning

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

PLANNING BOARD SCHEDULE OF ESCROW ACCOUNT DEPOSITS

<u>Type of Application Deposit*</u>	<u>Amount of Initial Escrow Account</u>
Concept Study	\$500.00
Site Plan Waiver for Change of Use	\$500.00
Site Development Plan for:	
Multifamily Developments	\$3,000.00 plus \$100.00 per proposed dwelling unit
Commercial Developments	\$3,000.00 plus \$50.00 for each required parking space
1 or 2 Family Projects	\$2,000.00
Special Use Permit	\$2,000.00 plus \$50.00 for each required parking space
Subdivision:	
Lot Line Change resulting in no new lots	\$1,500.00
All Others	\$3,000.00 plus \$200.00 per proposed new lot in excess of two (2)
Preparation or Review of Environmental Impact Statement	\$15,000.00

* If a proposed action involves multiple approvals, a single escrow account will be established. The total amount of the initial deposit shall be the sum of the individual amounts indicated. When the balance in such escrow account is reduced to one-third (1/3) of its initial amount, the applicant shall deposit additional funds into such account to restore its balance to the amount of the initial deposit.


Applicant Signature

08-03-2023
Date:

I. IDENTIFICATION OF PROPERTY OWNER, APPLICANT AND PROFESSIONAL REPRESENTATIVES

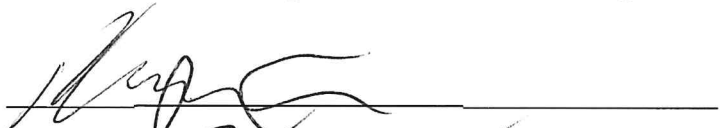
Name of Property Owner: <u>NCD Acquisitions</u>
Mailing Address: <u>399 Knollwood Road, White Plains, NY 10603</u>
Telephone: _____ Fax: _____ e-mail _____
Name of Applicant (if different): <u>Kings Capital Construction</u>
Address of Applicant: <u>660 White Plains Rd. Suite 560 Tarrytown, NY. 10591</u>
Telephone: <u>914-266-8245</u> Fax: _____ e-mail <u>m.carson@kingscapitalgroup.com</u>
Interest of Applicant, if other than Property Owner: <u>General Contractor</u>
Is the Applicant (if different from the property owner) a Contract Vendee? Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, please submit affidavit stating such. If no, application cannot be reviewed by Planning Board
Name of Professional Preparing Site Plan: <u>Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.</u> <u>Michael Finan, P.E.</u>
Address: <u>One North Broadway, Suite 910, White Plains, NY 10601</u>
Telephone: <u>914-323-7400</u> Fax: <u>914-323-7401</u> e-mail <u>mfinan@langan.com</u>
Name of Other Professional: _____
Address: _____
Telephone: _____ Fax: _____ e-mail _____
Name of Attorney (if any): <u>Anthony F. Veneziano, Jr., Esq</u>
Address: <u>84 Business Park Drive, Suite 200, Armonk, NY 10504</u>
Telephone: <u>914-273-1300</u> Fax: _____ e-mail <u>afv@venezianox.com</u>

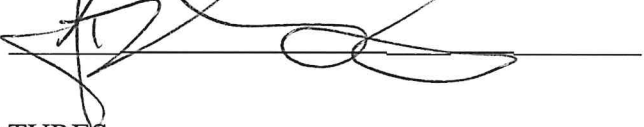
Applicant Acknowledgement

By making this application, the undersigned Applicant agrees to permit Town officials and their designated representatives to conduct on-site inspections in connection with the review of this application.

The Applicant also agrees to pay all expenses for the cost of professional review services required for this application.

It is further acknowledged by the Applicant that all bills for the professional review services shall be mailed to the Applicant, unless the Town is notified in writing by the Applicant at the time of initial submission of the application that such mailings should be sent to a designated representative instead.

Signature of Applicant:  Date: 08-03-2023

Signature of Property Owner:  Date: 08-03-2023

MUST HAVE BOTH SIGNATURES

II. IDENTIFICATION OF SUBJECT PROPERTY

Street Address: 45 Bedford Road

Location (in relation to nearest intersecting street):

 feet (north, south, east or west) of Corner of Bedford Road and Maple Avenue

Abutting Street(s): Bedford Road and Maple Avenue

Tax Map Designation (NEW): Section 108.03 Block 1 Lot 65

Tax Map Designation (OLD): Section Block Lot

Zoning District: R-MF-DA Total Land Area 4.2 Acres

Land Area in North Castle Only (if different)

Fire District(s) Armonk School District(s) Byram Hills

Is any portion of subject property abutting or located within five hundred (500) feet of the following:

The boundary of any city, town or village?

No Yes (adjacent) Yes (within 500 feet)

If yes, please identify name(s):

The boundary of any existing or proposed County or State park or any other recreation area?

No Yes (adjacent) Yes (within 500 feet) Wampus Brook Park

The right-of-way of any existing or proposed County or State parkway, thruway, expressway, road or highway?

No Yes (adjacent) Yes (within 500 feet)

The existing or proposed right-of-way of any stream or drainage channel owned by the County or for which the County has established channel lines?

No Yes (adjacent) Yes (within 500 feet)

The existing or proposed boundary of any county or State owned land on which a public building or institution is situated?

No Yes (adjacent) Yes (within 500 feet)

The boundary of a farm operation located in an agricultural district?

No Yes (adjacent) Yes (within 500 feet)

Does the Property Owner or Applicant have an interest in any abutting property?

No Yes

If yes, please identify the tax map designation of that property:

III. DESCRIPTION OF PROPOSED DEVELOPMENT

Proposed Use: Multi-family residential

Gross Floor Area: Existing +/- 23,000 S.F. Proposed 73,400 S.F.

Proposed Floor Area Breakdown:

Retail _____ S.F.; Office _____ S.F.;

Industrial _____ S.F.; Institutional _____ S.F.;

Other Nonresidential _____ S.F.; Residential 73,400 S.F.;

Number of Dwelling Units: 34

Number of Parking Spaces: Existing 51 Required 75 Proposed 75

Number of Loading Spaces: Existing 0 Required 0 Proposed 0

Earthwork Balance: Cut _____ C.Y. Fill _____ C.Y.

Will Development on the subject property involve any of the following:

Areas of special flood hazard? No _____ Yes X

(If yes, application for a Development Permit pursuant to Chapter 177 of the North Castle Town Code may also be required)

Trees with a diameter at breast height (DBH) of 8" or greater?

No X Yes _____

(If yes, application for a Tree Removal Permit pursuant to Chapter 308 of the North Castle Town Code may also be required.)

Town-regulated wetlands? No _____ Yes X

(If yes, application for a Town Wetlands Permit pursuant to Chapter 340 of the North Castle Town Code may also be required.)

State-regulated wetlands? No X Yes _____

(If yes, application for a State Wetlands Permit may also be required.)

IV. SUBMISSION REQUIREMENTS

The site development plan application package shall include all materials submitted in support of the application, including but not limited to the application form, plans, reports, letters and SEQR Environmental Assessment Form. **Submission of the following shall be required:**

- One (1) PDF set of the site development plan application package in a single PDF file .
- A check for the required application fee and a check for the required Escrow Account, both made payable to "Town of North Castle" in the amount specified on the "Schedule of Application Fees."

(continued next page)

V. INFORMATION TO BE INCLUDED ON SITE DEVELOPMENT PLAN

The following checklist is provided to enable the Applicant to determine if he/she has provided enough information on the site development plan for the Planning Board to review his/her proposal. Applicants are advised to review ARTICLE VIII, Site Development Plan of the North Castle Town Code for a complete enumeration of pertinent requirements and standards prior to making application for site development plan approval.

The application for site development plan approval will not be accepted for Planning Board review unless all items identified below are supplied and **so indicated with a check mark in the blank line provided**. If a particular item is not relevant to the subject property or the development proposal, **the letters "NA" should be entered instead**. In addition, the project will not be scheduled on a Planning Board agenda until the Applicant receives an initialed "site plan checklist" from the Planning Department.

The information to be included on a site development plan shall include:

Legal Data:

- X Name of the application or other identifying title.
- X Name and address of the Property Owner and the Applicant, (if different).
- X Name, address and telephone number of the architect, engineer or other legally qualified professional who prepared the plan.
- X Names and locations of all owners of record of properties abutting and directly across any and all adjoining streets from the subject property, including the tax map designation of the subject property and abutting and adjoining properties, as shown on the latest tax records.
- X Existing zoning, fire, school, special district and municipal boundaries.
- X Size of the property to be developed, as well as property boundaries showing dimensions and bearings as determined by a current survey; dimensions of yards along all property lines; name and width of existing streets; and lines of existing lots, reservations, easements and areas dedicated to public use.
- X Reference to the location and conditions of any covenants, easements or deed restrictions that cover all or any part of the property, as well as identification of the document where such covenants, easements or deed restrictions are legally established.
- X Schedule of minimum zoning requirements, as well as the plan's proposed compliance with those requirements, including lot area, frontage, lot width, lot depth, lot coverage, yards, off-street parking, off-street loading and other pertinent requirements.
- X Locator map, at a convenient scale, showing the Applicant's entire property in relation to surrounding properties, streets, etc., within five hundred (500) feet of the site.
- X North arrow, written and graphic scales, and the date of the original plan and all revisions, with notation identifying the revisions.
- X A signature block for Planning Board endorsement of approval.

Existing Conditions Data:

- X Location of existing use and design of buildings, identifying first floor elevation, and other structures.
- X Location of existing parking and truck loading areas, with access and egress drives thereto.
- X Location of existing facilities for water supply, sanitary sewage disposal, storm water drainage, and gas and electric service, with pipe sizes, grades, rim and inverts, direction of flow, etc. indicated.
- X Location of all other existing site improvements, including pavement, walks, curbing, retaining walls and fences.
- X Location, size and design of existing signs.
- X Location, type, direction, power and time of use of existing outdoor lighting.
- X Location of existing outdoor storage, if any.
- X Existing topographical contours with a vertical interval of two (2) feet or less.
- X Location of existing floodplains, wetlands, slopes of 15% or greater, wooded areas, landscaped areas, single trees with a DBH of 8" or greater, rock outcrops, stone walls and any other significant existing natural or cultural features.

Proposed Development Data:

- X Proposed location of lots, streets, and public areas, and property to be affected by proposed easements, deed restrictions and covenants.
- X Proposed location, use and architectural design of all buildings, including proposed floor elevations and the proposed division of buildings into units of separate occupancy.
- X Proposed means of vehicular and pedestrian access to and egress from the site onto adjacent streets.
- X Proposed sight distance at all points of vehicular access.
- X Proposed number of employees for which buildings are designed
- X Proposed streets, with profiles indicating grading and cross-sections showing the width of the roadway; the location and width of sidewalks; and the location and size of utility lines.
- X Proposed location and design of any pedestrian circulation on the site and off-street parking and loading areas, including handicapped parking and ramps, and including details of construction, surface materials, pavement markings and directional signage.
- X Proposed location and design of facilities for water supply, sanitary sewage disposal, storm water drainage, and gas and electric service, with pipe sizes, grades, rim and inverts, direction of flow, etc. indicated.

- X Proposed location of all structures and other uses of land, such as walks, retaining walls, fences, designated open space and/or recreation areas and including details of design and construction.
- X Location, size and design of all proposed signs.
- X Location, type, direction, power and time of use of proposed outdoor lighting.
- N/A Location and design of proposed outdoor garbage enclosure.
- N/A Location of proposed outdoor storage, if any.
- X Location of proposed landscaping and buffer screening areas, including the type (scientific and common names), size and amount of plantings.
- N/A Type of power to be used for any manufacturing
- N/A Type of wastes or by-products to be produced and disposal method
- X In multi-family districts, floor plans, elevations and cross sections
- X The proposed location, size, design and use of all temporary structures and storage areas to be used during the course of construction.
- X Proposed grade elevations, clearly indicating how such grades will meet existing grades of adjacent properties or the street.
- X Proposed soil erosion and sedimentation control measures.
- X For all proposed site development plans containing land within an area of special flood hazard, the data required to ensure compliance with Chapter 177 of the North Castle Town Code.
- N/A For all proposed site development plans involving clearing or removal of trees with a DBH of 8" or greater, the data required to ensure compliance with Chapter 308 of the North Castle Town Code.
- X For all proposed site development plans involving disturbance to Town-regulated wetlands, the data required to ensure compliance with Chapter 340 of the North Castle Town Code.

**Full Environmental Assessment Form
Part 1 - Project and Setting**

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: The Gateway		
Project Location (describe, and attach a general location map): 45 Bedford Road, Armonk, NY. Tax ID number 108.03-1-65.		
Brief Description of Proposed Action (include purpose or need): Redevelopment of a 4.2-acre site as a 34-unit multi-family residential development and associated site improvements.		
Name of Applicant/Sponsor: Kings Capital Construction		Telephone: 914-266-8245 E-Mail: m.carson@kingscapitalgroup.com
Address: 660 White Plains Rd. Suite 560		
City/PO: Tarrytown	State: NY	Zip Code: 10591
Project Contact (if not same as sponsor; give name and title/role): Same		Telephone: E-Mail:
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Same		Telephone: E-Mail:
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. (“Funding” includes grants, loans, tax relief, and any other forms of financial assistance.)		
Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No or Village Board of Trustees	Special Permit	Obtained
b. City, Town or Village <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Planning Board or Commission	Site Plan Approval	August, 2023
c. City, Town or <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Village Zoning Board of Appeals	Zoning Variance - Lot Coverage	September, 2023
d. Other local agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
e. County agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	County Planning Board Referral	September, 2023
f. Regional agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
g. State agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
h. Federal agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
i. Coastal Resources.		
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
iii. Is the project site within a Coastal Erosion Hazard Area?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

C. Planning and Zoning

C.1. Planning and zoning actions.	
Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> • If Yes, complete sections C, F and G. • If No, proceed to question C.2 and complete all remaining sections and questions in Part 1 	
C.2. Adopted land use plans.	
a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes, identify the plan(s):	

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes, identify the plan(s):	

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. Yes No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Residential - Multifamily - Downtown Armonk (R-MF-DA)

b. Is the use permitted or allowed by a special or conditional use permit? Yes No

c. Is a zoning change requested as part of the proposed action? Yes No
If Yes,

i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Byram Hills School District

b. What police or other public protection forces serve the project site?
North Castle Police Department

c. Which fire protection and emergency medical services serve the project site?
Armonk Fire District

d. What parks serve the project site?
North Castle Community Park, Wampus Brook Park, John A. Lombardi Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Multi-Family Residential

b. a. Total acreage of the site of the proposed action? _____ 4.1 acres
b. Total acreage to be physically disturbed? _____ 3.9 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ 4.2 acres

c. Is the proposed action an expansion of an existing project or use? Yes No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? Yes No

If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? Yes No

iii. Number of lots proposed? _____

iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? Yes No

i. If No, anticipated period of construction: _____ 24 months

ii. If Yes:

- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year

• Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? Yes No
 If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	<u>0</u>	<u>5</u>	<u>0</u>	<u>6</u>
At completion of all phases	<u> </u>	<u> </u>	<u> </u>	<u> </u>

g. Does the proposed action include new non-residential construction (including expansions)? Yes No
 If Yes,

i. Total number of structures 11

ii. Dimensions (in feet) of largest proposed structure: 30' height; 63' width; and 93' length

iii. Approximate extent of building space to be heated or cooled: square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? Yes No
 If Yes,

i. Purpose of the impoundment: Compensatory flood storage

ii. If a water impoundment, the principal source of the water: Ground water Surface water streams Other specify:

Only during flood events

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: 0.5 million gallons; surface area: 0.4 acres

v. Dimensions of the proposed dam or impounding structure: height; length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? Yes No
 (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

If Yes:

i. What is the purpose of the excavation or dredging?

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards):
- Over what duration of time?

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

iv. Will there be onsite dewatering or processing of excavated materials? Yes No
 If yes, describe.

v. What is the total area to be dredged or excavated? acres

vi. What is the maximum area to be worked at any one time? acres

vii. What would be the maximum depth of excavation or dredging? feet

viii. Will the excavation require blasting? Yes No

ix. Summarize site reclamation goals and plan:

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? Yes No
 If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Wetland buffer associated with a non-jurisdictional stream.

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
 No impacts to streams or wetlands, only the 100-foot locally enforced bufferzone.

iii. Will the proposed action cause or result in disturbance to bottom sediments? Yes No
 If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? Yes No
 If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

c. Will the proposed action use, or create a new demand for water? Yes No
 If Yes:

i. Total anticipated water usage/demand per day: _____ 12,980 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? Yes No
 If Yes:

- Name of district or service area: North Castle Water District #4
- Does the existing public water supply have capacity to serve the proposal? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No
- Do existing lines serve the project site? Yes No

iii. Will line extension within an existing district be necessary to supply the project? Yes No
 If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? Yes No
 If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? Yes No
 If Yes:

i. Total anticipated liquid waste generation per day: _____ 7,480 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____
 Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? Yes No
 If Yes:

- Name of wastewater treatment plant to be used: Sewer District #2 wastewater treatment plant
- Name of district: Sewer District #2
- Does the existing wastewater treatment plant have capacity to serve the project? Yes No
- Is the project site in the existing district? Yes No
- Is expansion of the district needed? Yes No

- Do existing sewer lines serve the project site? Yes No
- Will a line extension within an existing district be necessary to serve the project? Yes No

 If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? Yes No
 If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? Yes No
 If Yes:

- How much impervious surface will the project create in relation to total size of project parcel?
 _____ Square feet or 2.74 acres (impervious surface)(Reduction of 1.04 acres)
 _____ Square feet or 4.74 acres (parcel size)
- Describe types of new point sources. Controlled discharges from on-site stormwater management practices.
- Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?
 Groundwater and on-site wetlands/streams.

 - If to surface waters, identify receiving water bodies or wetlands: _____
 - Will stormwater runoff flow to adjacent properties? Yes No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? Yes No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? Yes No
 If Yes, identify:

- Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

- Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

- Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? Yes No
 If Yes:

- Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) Yes No
- In addition to emissions as calculated in the application, the project will generate:
 - _____ Tons/year (short tons) of Carbon Dioxide (CO₂)
 - _____ Tons/year (short tons) of Nitrous Oxide (N₂O)
 - _____ Tons/year (short tons) of Perfluorocarbons (PFCs)
 - _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆)
 - _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydrofluorocarbons (HFCs)
 - _____ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? Yes No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? Yes No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): _____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? Yes No

If Yes:

i. When is the peak traffic expected (Check all that apply): Morning Evening Weekend
 Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing 51 Proposed 75 Net increase/decrease 24

iv. Does the proposed action include any shared use parking? Yes No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: _____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? Yes No

vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? Yes No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? Yes No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? Yes No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____
TBD

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):
Westchester Power

iii. Will the proposed action require a new, or an upgrade, to an existing substation? Yes No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7AM - 5PM
- Saturday: 7AM - 5PM
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: 24 Hours
- Saturday: 24 Hours
- Sunday: 24 Hours
- Holidays: 24 Hours

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? Yes No

If yes:

i. Provide details including sources, time of day and duration:
 Typical construction noise during the construction period, no noticeable noise during operation. _____

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? Yes No
 Describe: _____

n. Will the proposed action have outdoor lighting? Yes No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:
 The outdoor lighting will consist of limited building and pedestrian scale lighting. _____

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? Yes No
 Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? Yes No
 If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? Yes No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? Yes No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? Yes No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? Yes No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ TBD tons per _____ (unit of time)
- Operation : _____ g tons per _____ Month (unit of time) (Assuming +/- 18lbs/unit/day)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: Construction debris will be recycled to the extent possible. _____
- Operation: Recyclable materials will be collected separately and recycled at an appropriate facility. _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: Construction debris will be disposed of at a licensed landfill facility. _____
- Operation: Waste will be picked up and hauled to a licensed landfill facility for disposal. _____

s. Does the proposed action include construction or modification of a solid waste management facility? Yes No

If Yes:

- i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____
- ii. Anticipated rate of disposal/processing:
 - _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
 - _____ Tons/hour, if combustion or thermal treatment
- iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? Yes No

If Yes:

- i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____
- ii. Generally describe processes or activities involving hazardous wastes or constituents: _____
- iii. Specify amount to be handled or generated _____ tons/month
- iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____
- v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? Yes No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility: _____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

Urban Industrial Commercial Residential (suburban) Rural (non-farm)

Forest Agriculture Aquatic Other (specify): _____

ii. If mix of uses, generally describe: _____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	3.17	2.13	- 1.04
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	.10	.10	0
• Non-vegetated (bare rock, earth or fill)	.02	.02	0
• Other Describe: <u>Grass and landscape area</u>	0.91	1.95	+ 1.04

c. Is the project site presently used by members of the community for public recreation? Yes No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? Yes No
If Yes,
i. Identify Facilities:
HC Crittenden Middle School, Wampus Elementary School

e. Does the project site contain an existing dam? Yes No
If Yes:
i. Dimensions of the dam and impoundment:
• Dam height: _____ feet
• Dam length: _____ feet
• Surface area: _____ acres
• Volume impounded: _____ gallons OR acre-feet
ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? Yes No
If Yes:
i. Has the facility been formally closed? Yes No
• If yes, cite sources/documentation: _____
ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? Yes No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? Yes No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: Yes No
 Yes – Spills Incidents database Provide DEC ID number(s): _____
 Yes – Environmental Site Remediation database Provide DEC ID number(s): _____
 Neither database
ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? Yes No
If yes, provide DEC ID number(s): 360005
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

v. Is the project site subject to an institutional control limiting property uses? Yes No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? Yes No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ Over 8 feet

b. Are there bedrock outcroppings on the project site? Yes No
 If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site: UvB - Urban land-Riverhead Comp. _____ 100 %
 _____ %
 _____ %

d. What is the average depth to the water table on the project site? Average: _____ Over 8 feet

e. Drainage status of project site soils: Well Drained: _____ % of site
 Moderately Well Drained: _____ 100 % of site
 Poorly Drained _____ % of site

f. Approximate proportion of proposed action site with slopes: 0-10%: _____ 10% % of site
 10-15%: _____ % of site
 15% or greater: _____ % of site

g. Are there any unique geologic features on the project site? Yes No
 If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? Yes No

ii. Do any wetlands or other waterbodies adjoin the project site? Yes No
 If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? Yes No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 935-106 Classification C
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? Yes No
 If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? Yes No

j. Is the project site in the 100-year Floodplain? Yes No

k. Is the project site in the 500-year Floodplain? Yes No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? Yes No
 If Yes:

i. Name of aquifer: Principal Aquifer

<p>m. Identify the predominant wildlife species that occupy or use the project site: _____</p> <p>Various Birds _____ Skunk _____</p> <p>Raccoon _____</p> <p>Chipmunk _____</p>	
<p>n. Does the project site contain a designated significant natural community? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes:</p> <p>i. Describe the habitat/community (composition, function, and basis for designation): _____</p> <p>ii. Source(s) of description or evaluation: _____</p> <p>iii. Extent of community/habitat:</p> <ul style="list-style-type: none"> • Currently: _____ acres • Following completion of project as proposed: _____ acres • Gain or loss (indicate + or -): _____ acres 	
<p>o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes:</p> <p>i. Species and listing (endangered or threatened): _____</p> <p>_____</p> <p>_____</p>	
<p>p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes:</p> <p>i. Species and listing: _____</p> <p>_____</p>	
<p>q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If yes, give a brief description of how the proposed action may affect that use: _____</p> <p>_____</p>	
E.3. Designated Public Resources On or Near Project Site	
<p>a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes, provide county plus district name/number: _____</p>	
<p>b. Are agricultural lands consisting of highly productive soils present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>i. If Yes: acreage(s) on project site? _____</p> <p>ii. Source(s) of soil rating(s): _____</p>	
<p>c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes:</p> <p>i. Nature of the natural landmark: <input type="checkbox"/> Biological Community <input type="checkbox"/> Geological Feature</p> <p>ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____</p> <p>_____</p> <p>_____</p>	
<p>d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If Yes:</p> <p>i. CEA name: _____</p> <p>ii. Basis for designation: _____</p> <p>iii. Designating agency and date: _____</p>	

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? Yes No

If Yes:
 i. Nature of historic/archaeological resource: Archaeological Site Historic Building or District
 ii. Name: Eligible property: TOWN HALL, Bedford Road Historic District
 iii. Brief description of attributes on which listing is based: _____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? Yes No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? Yes No

If Yes:
 i. Describe possible resource(s): _____
 ii. Basis for identification: _____

h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? Yes No

If Yes:
 i. Identify resource: _____
 ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____
 iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? Yes No

If Yes:
 i. Identify the name of the river and its designation: _____
 ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? Yes No

F. Additional Information

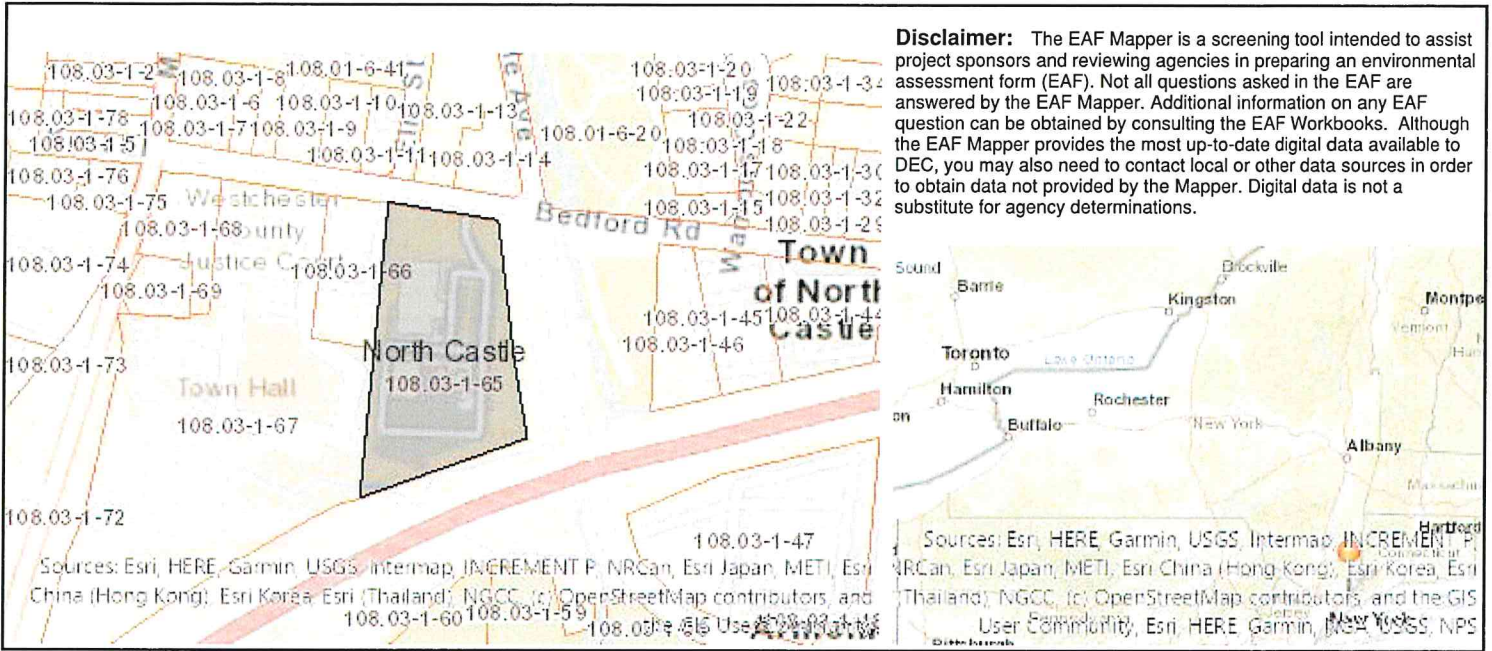
Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Alvin JO SUMMA Date 08-03-2023
 Signature [Signature] Title CEO



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	360005
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	935-106
E.2.h.iv [Surface Water Features - Stream Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Yes



Town of North Castle Planning Department

17 Bedford Road Armonk, New York 10504

(914) 273-3542 (914) 273-3554 (fax)

PRELIMINARY SITE PLAN COMPLETENESS REVIEW FORM

This form represents the standard requirements for a completeness review for all preliminary site plans. Failure to provide all of the information requested will result in a determination that the site plan application is incomplete. The review of the site plan for completeness will be based on the requirements of the Town of North Castle Town Code.

Project Name on Plan: The Gateway

Initial Submittal Revised Preliminary

Street Location: 45 Bedford Road

Zoning District: R-MF-DA Property Acreage: 4.2 Tax Map Parcel ID: 108.03-1-65

Date: 08-07-2023

DEPARTMENTAL USE ONLY

Date Filed: _____ Staff Name: _____

Preliminary Plan Completeness Review Checklist

Items marked with a "☒" are complete, items left blank "☐" are incomplete and must be completed, "NA" means not applicable.

- 1. A complete application for site development plan approval form
- 2. Plan prepared by a registered architect or professional engineer
- 3. Map showing the applicant's entire property and adjacent properties and streets
- 4. A locator map at a convenient scale
- 5. The proposed location, use and design of all buildings and structures
- 6. Proposed division of buildings into units of separate occupancy, detailed breakdowns of all proposed floor space by type of use and floor level
- 7. Existing topography and proposed grade elevations
- 8. Location of drives

PRELIMINARY SITE PLAN COMPLETENESS REVIEW FORM

Page 2

- 9. Location of any outdoor storage
- 10. Location of all existing and proposed site improvements, including drains, culverts, retaining walls and fences
- 11. Description of method of water supply and sewage disposal and location of such facilities
- 12. Location, design and size of all signs
- 13. Location and design of lighting, power and communication facilities
- 14. In an industrial district, specific uses proposed, number of employees for which buildings are designed, type of power to be used for any manufacturing process, type of wastes or by-products to be produced by any manufacturing process and proposed method of disposal of such wastes or by-products
- 15. In a multifamily district, floor plans of each dwelling unit shall be shown, and elevations and cross sections also may be required
- 16. The name and address of the applicant, property owner(s) if other than the applicant and of the planner, engineer, architect, surveyor and/or other professionals engaged to work.
- 17. Submission of a Zoning Conformance Table depicting the plan's compliance with the minimum requirements of the Zoning District
- 18. If a tree removal permit is being sought, submission of a plan depicting the location and graphical removal status of all Town-regulated trees within the proposed area of disturbance. In addition, the tree plan shall be accompanied by a tree inventory includes a unique ID number, the species, size, health condition and removal status of each tree.
- 19. If a wetlands permit is being sought, identification of the wetland and the 100-foot wetland buffer.

More information about the items required herein can be obtained from the North Castle Planning Department. A copy of the Town Code can be obtained from Town Clerk or on the North Castle homepage: <http://www.northcastleny.com>

_____ On this date, all items necessary for a technical review of the proposed site plan have been submitted and constitute a COMPLETE APPLICATION.



Town of North Castle Building Department

17 Bedford Road

Armonk, New York 10504-1898

Telephone: (914) 273-3000 ext. 44 Fax: (914) 273-3554

www.northcastleny.com

Floodplain Development Permit Application

Section I- PROJECT ADDRESS: 45 Bedford Road DATE: 08/07/2023

Section II- CONTACT INFORMATION: (Please print clearly. All information must be current)

APPLICANT: Kings Capital Construction

ADDRESS: 660 White Plains Rd. Suite 560

PHONE: 914-266-8245 MOBILE: _____ EMAIL: m.carson@kingscapitalgroup.com

PROPERTY OWNER: NCD Acquisitions

ADDRESS: 399 Knollwood Road White Plains, NY 10603

PHONE: _____ MOBILE: _____ EMAIL: _____

Architect/ Engineer: Langan Engineering

ADDRESS: 1 N Broadway White Plains NY 10601

PHONE: (914) 323-7400 MOBILE: _____ EMAIL: _____

Section III- DESCRIPTION OF WORK:

Redevelopment of a commercial site as a multi-family residential development.

Section IV- STRUCTURAL DEVELOPMENT AND OTHER ACTIVITIES: (Check all that apply)

- Relocation New Structure Residential (1 & 2 Family) Demolition Alteration Addition
- Multi Family Non residential (Flood Proofing?) Grading Property(Up to 6") Filling Property Excavation
- Water Course Alteration (Including Dredging or Channel Modifications) Drainage Improvements (Including Culvert Work)
- Road, Street, Or Bridge Construction Subdivision Water & Sewer Installation
- Other (Please Specify) _____

Section V- PERMIT FEES: (\$250 and a \$500 escrow if required)

ESTIMATED COST OF CONSTRUCTION (Based on fair market value labor & material) \$ 18,350,000.00

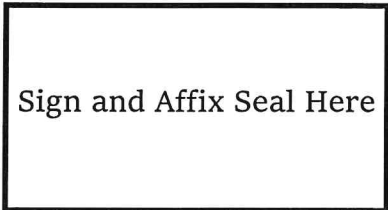
Town of North Castle Building Department

Section VI- (Continued)

AFFIDAVIT OF CONSTRUCTION COST: This affidavit must be completed by the Design Professional if the estimated cost is \$20,000 or more.

I _____ do hereby affirm and certify as follows: (i) I am the architect/engineer (circle one) licensed by the State of New York; (ii) I have reviewed the plans, drawings and specifications for this application and am fully familiar with the proposed construction; (iii) based on my experience, I estimate the total cost of construction including all labor, all materials, all professional fees and all associated costs to be approximately \$ _____, and (iv) pursuant to Penal Law 210.45, I acknowledge that a false statement made knowingly is a Class A misdemeanor.

Signature: _____ Date: _____



Section VII- GENERAL PROVISIONS: (Applicant read and sign)

1. No Work of any kind may start until a permit is issued.
2. The Permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit will expire if no work is commenced within 12 months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state and federal regulatory requirements.
7. Applicant hereby gives consent to the Local Administrator or his/her representative to make reasonable inspections required to verify compliance.

THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

(APPLICANT'S SIGNATURE) _____

DATE 08-03-2023

OFFICE USE ONLY

Flood Plain Determination (To be completed by Local Administrator)

Section VIII- FIRM PANEL: (All Panels Dated September 28, 2007)

The proposed development is located on Firm Panel No. (Choose one)

- 162F 163F 164F 166F 167F 168F 169F 186F 188F 257F
 259F 267F 277F 279F 281 F 286F

Is the proposed development in or adjacent to a Special Flood Hazard Area? Yes No

The property is located in Firm Zone _____.

Town of North Castle Building Department

OFFICE USE ONLY

Flood Plain Determination (To be completed by Local Administrator)

Section VIII- FIRM PANEL: (Continued)

The 100 year flood elevation at this site is _____ ft. NAVD. Height not determined

Is the proposed development located in a floodway? Yes No

Section IX- ADDITIONAL INFORMATION REUIRED: (Check all that apply)

Subm. N/A

A site plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions, and proposed development.

Development plans, drawn to scale, and specifications, including where applicable: details for anchoring structures, proposed elevation of lowest floor (including basement), types of water-resistant materials used below the first floor, details of flood proofing of utilities located below the first floor, and details of enclosures below the first floor.

Also, _____

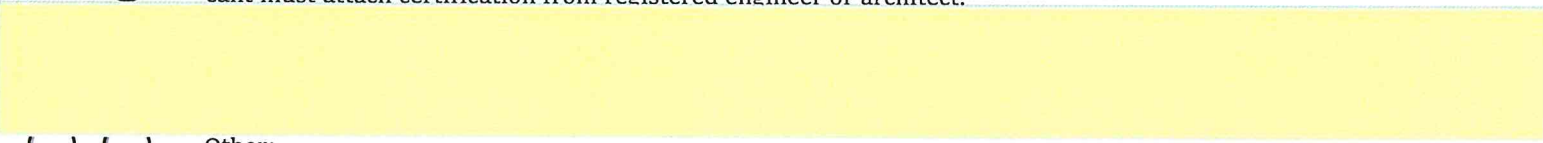
Subdivision or other development plans. (If the subdivision or other development exceeds 50 lots or 5 acres, whichever is lesser, the applicant must provide "100-year" flood elevations if they are not otherwise available).

Plans showing the extent of watercourse relocation and/or landform alterations.

Change in water elevation (in feet) _____. Meets ordinance limits on elevation increases [] YES [] NO

Top of new compacted fill elevation _____ ft. NGVD (MSL).

Flood proofing protection level (non-residential only) _____ ft. NGVD (MSL). For flood proofed structures, applicant must attach certification from registered engineer or architect.



Other: _____

If Box B is checked, the Local Administrator will provide a written summary of deficiencies. Applicant may revise and resubmit an application to the Local Administrator or may request a hearing from the Board of Appeals.

Section X- PERMIT DETERMINATION:

Is the structure within the flood plain? Yes No

I have determined that the proposed activity: A. Is

B. Is Not

In conformance with Town of North Castle code Chapter 177-Flood Damage Prevention. – Flood Damage Prevention, the permit is issued subject to the conditions attached to and made part of this permit.

SIGNED _____ DATE _____

If Box A is checked, the Local Administrator may issue a Development Permit upon payment of designated fee.

Town of North Castle Building Department

OFFICE USE ONLY

Flood Plain Determination (To be completed by Local Administrator)

Section XI- APPEALS BOARD

APPEALS: Appealed to the Town Board? Yes No
Hearing Date: _____
Town Board Decision - Approved? Yes No

Reasons/Conditions: _____

Section XII- AS-BUILT ELEVATIONS: (To be submitted by Applicant before Certificate of Compliance is issued)

1. Actual (As-Built) Elevation of the top of the lowest floor, including basement (in Coastal High Hazard Areas, bottom of lowest structural member of the lowest floor, excluding piling and columns) is: _____ FT. G NGVD 1929/ NAVD 1988 (MSL).
2. Actual (As-Built) Elevation of flood proofing protection is _____ FT. G NGVD 1929/ G NAVD 1988 (MSL)
Attach Flood proofing Certificate FEMA Form 81-65.

Section XIII- COMPLIANCE ACTION: (Inspections)

Date: _____ Inspector: _____ Deficiencies: Yes No
Date: _____ Inspector: _____ Deficiencies: Yes No
Date: _____ Inspector: _____ Deficiencies: Yes No

Section XIV- CERTIFICATE OF COMPLIANCE:

Signature: _____ Date: _____

WETLANDS AND DRAINAGE APPLICATION TOWN OF NORTH CASTLE BUILDING DEPARTMENT

DATE: 08 / 07 / 2023 \$50 (min.) for Residential Apps. FEE: \$ _____
\$250 (min.) for Commercial Apps.

1. **NAME & ADDRESS OF APPLICANT:** Kings Capital Construction
660 White Plains Rd. Suite 560
Tarrytown, NY. 10591
TELEPHONE: (914) 266 - 8245

OWNER (IF DIFFERENT): NCD Acquisitions
399 Knollwood Road
White Plains, NY 10603
TELEPHONE: (_____) _____ - _____

2. **STREET ADDRESS OF PROPERTY:** 45 Bedford Road
SECTION: 108.03 BLOCK: 1 LOT: 65

3. **DESCRIPTION OF PROPOSED WORK & MATERIALS: PLANS & SPECIFICATIONS ANNEXED HERETO. STATE NAME AND OCCUPATION OF PREPARER:**
Grading and landscaping in the 100-foot bufferzone.

4. **IMPACT STATEMENT (IF REQUIRED) PREPARED BY:** _____

DATED: 08/03/2023 APPLICANT'S SIGNATURE: 

NOTE: WETLANDS APPLICATIONS WILL BE REVIEWED BY THE TOWN BOARD, THE PLANNING BOARD, THE CONSERVATION BOARD, OR THE TOWN ENGINEER AT THE DISCRETION OF THE TOWN ENGINEER.

Do you have any intention of tearing down a house to build a new house within the next SIX (6) months?
 Yes No

Do you have any intention to expand a house over 1500 square feet within the next SIX (6) months?
 Yes No

If the Planning Board has granted you approval previously, on what dates were you approved? (List Below)

SITE PLAN APPROVAL DOCUMENTS

THE GATEWAY

45 BEDFORD ROAD

TOWN OF NORTH CASTLE

WESTCHESTER COUNTY, NEW YORK

Project No. 190085001

SITE INFORMATION

ADDRESS: 45 BEDFORD ROAD
ARMONK, NY 10504

SECTION: 108.03
BLOCK: 1
LOT(S): 65

BLOCK: R-MF-DA (MULTIFAMILY
DOWNTOWN ARMONK)

PROPERTY OWNER

NCD ACQUISITIONS

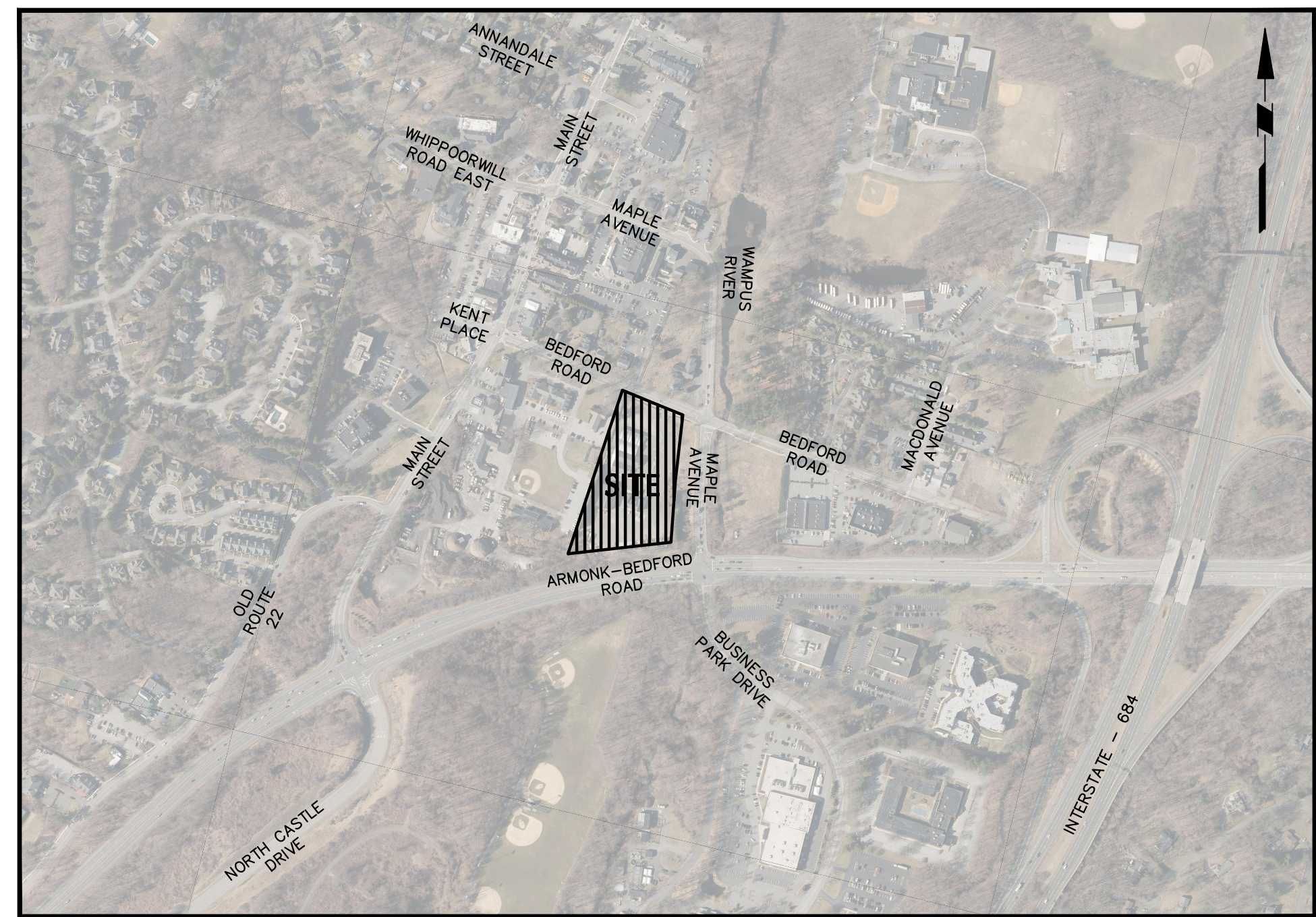
399 KNOLLWOOD ROAD
SUITE 318
WHITE PLAINS, NY 10603

APPLICANT

KINGS CAPITAL CONSTRUCTION GROUP,
INC.

660 WHITE PLAINS ROAD
TARRYTOWN, NY 10591

TELEPHONE: 914-345-6799



LOCATION MAP
1"=500'



ADJACENT PROPERTIES MAP
1"=300'

CIVIL ENGINEER

LANGAN

1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

TEL: 914-323-7400

CONTACT: MICHAEL FINAN, PE

SURVEYOR

SOUND VIEW ENGINEERS AND LAND
SURVEYORS LLC

239 GLENVILLE ROAD
SUITE 100
GREENWICH, CT 06831

TEL: 203-532-1300

CONTACT: AIDAN C. McCANN, PLS

LANDSCAPE ARCHITECT

LANGAN

1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

TEL: 914-323-7400

CONTACT: MICHAEL HUNTON, RLA

DRAWING NO.	SHEET NO.	DRAWING TITLE
CS001	1 OF 16	COVER SHEET
GI101	2 OF 16	LEGEND AND GENERAL NOTES
CD101	3 OF 16	EXISTING CONDITIONS AND REMOVALS PLAN
CS101	4 OF 16	SITE PLAN
CG101	5 OF 16	GRADING AND DRAINAGE PLAN
CG201	6 OF 16	DRAINAGE PROFILES
CU101	7 OF 16	UTILITY PLAN
CU201	8 OF 16	SANITARY SEWER PROFILES
CE101	9 OF 16	EROSION AND SEDIMENT CONTROL PLAN
CS501	10 OF 16	DETAILS (1 OF 3)
CS502	11 OF 16	DETAILS (2 OF 3)
CS503	12 OF 16	DETAILS (3 OF 3)
LP101	13 OF 16	PLANTING PLAN
LP501	14 OF 16	PLANTING DETAILS AND NOTES
LL101	15 OF 16	LIGHTING PLAN
LL501	16 OF 16	LIGHTING DETAILS AND NOTES

MAP #	SECTION	BLOCK	LOT	PROPERTY OWNER	PROPERTY LOCATION
1	108.01	6	41	ASCO LLC	402 Main St
2	108.03	1	13	St Stephens Church	46 Bedford Road
3	108.03	1	14	St Stephens Church	50 Bedford Road
4	108.01	6	20	Town of North Castle	Mt Kisco Road/Maple Avenue
5	108.03	1	66	American Legion	35 Bedford Road
6	108.03	1	67	Town of North Castle	15 Bedford Road
7	108.03	1	46	Town of North Castle	2 Business Park Drive
8	108.03	1	60	Town of North Castle	205 Business Park Drive
9	108.03	1	59	Town of North Castle	Maple Avenue
10	108.03	1	47	Armonk 80 Assoc. LLC	80 Business Park Drive

ZONING COMPLIANCE TABLE			
ZONING DISTRICT: R-MF-DA (Multifamily-Downtown Armonk Residence District)			
TAX MAP ID(S): 108.03-1-65			
PROPOSED USE: Multifamily Dwellings			
DESCRIPTION	REQUIRED/ PERMITTED	PROPOSED	COMPLIES
Minimum Lot Area (Acres)	4	4.17	YES
Minimum Lot Frontage (Feet)	200	260.0	YES
Minimum Lot Width (Feet)	200	330.0	YES
Minimum Lot Depth (Feet)	200	580.0	YES
Maximum Floor Area Ratio	0.4	0.4	YES
Minimum Lot Area/Dwelling Unit (Square Feet)	4200	5342	YES
Land Area/Bedroom (Square Feet)	2350	2671	YES
Principal Building Setbacks (Feet)			
Minimum Front	50	50.0	YES
Minimum Side	25	25.0	YES
Minimum Rear	30	32.1	YES
Maximum Building Height	30	30.0	YES
Maximum Building Coverage	20%	23.7%	NO

Parking Requirements Table		
Use: Multifamily Dwelling Units		
Requirements	Required	Proposed
2 spaces per dwelling unit	68	
10% visitor	6.8	
Total	75	75*

*Includes 2 ADA-accessible spaces

**APPROVED BY A RESOLUTION OF THE NORTH
CASTLE TOWN PLANNING BOARD**

PLANNING BOARD CHAIRPERSON _____ DATE _____
CHRISTOPHER CARTHAY

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
Revisions		

08/07/2023
 PROFESSIONAL ENGINEER NY Lic. No. 081473-1

LANGAN
 Langan Engineering, Environmental, Surveying,
 Landscape Architecture and Geology, D.P.C.
 One North Broadway, Suite 910
 White Plains, NY 10601
 T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
ARMONK
WESTCHESTER COUNTY
NEW YORK

Drawing Title
COVER SHEET

Project No.
190085001

Date
AUGUST 7, 2023

Drawn By
GN

Checked By
MT

Drawing No.
CS001

Sheet **1** of **16**

ABBREVIATIONS	
(TYP)	- TYPICAL
VIF	- VERIFY IN FIELD
NEC.	- NECESSARY
PROP.	- PROPOSED
EXIST.	- EXISTING
HC	- HAND-CAP
SHT.	- SHEET
NO.	- NUMBER
TW	- TOP OF WALL
BW	- BOTTOM OF WALL
WV	- WATER VALVE
HYD	- HYDRANT
YC	- YEAR
AC	- ACRE
SF	- SQUARE FEET
LF	- LINEAR FEET
PT	- POINT OF TANGENT
PC	- POINT OF CURVATURE
HP	- HIGH POINT
LP	- LOW POINT
VC	- VERTICAL CURVE
PVI	- POINT OF VERTICAL INFLECTION
STA.	- STATION
A.D.	- ALGEBRAIC DIFFERENCE
K	- CURVE COEFFICIENT
BVC	- BEGINNING VERTICAL CURVE STATION
EVCE	- BEGINNING VERTICAL CURVE ELEVATION
NC	- END VERTICAL CURVE STATION
EVCE	- END VERTICAL CURVE ELEVATION
ELEV.	- ELEVATION
HORIZ.	- HORIZONTAL
VERT.	- VERTICAL
PERF.	- PERFORATED
HDPE	- HIGH DENSITY POLYETHYLENE
PVC	- POLYVINYL CHLORIDE
DIP	- DUCTILE IRON PIPE
CIP	- CAST IRON PIPE
INV	- INVERT
MIN.	- MINIMUM
ES	- END SECTION
OS	- OUTLET STRUCTURE
N.T.S.	- NOT TO SCALE
UP	- UTILITY POLE
CTGE	- CABLE, TELEPHONE, GAS, ELECTRIC
LSE	- LOWEST SEWERABLE ELEVATION
R	- ARC RADIUS
A	- ARC LENGTH
Δ	- CENTRAL ANGLE
CL	- CHORD LENGTH
CB	- CHORD BEARING

LEGEND	
PROPOSED	
	BUILDING SETBACK
	BUILDING
	CURB
	DOOR ENTRANCE
	CONCRETE PAVEMENT
	WALL
	CONTOUR
	SPOT ELEVATION
	STORMWATER CONVEYANCE PIPE
	CATCH BASIN
	STORMWATER MANHOLE
	OUTLET CONTROL STRUCTURE
	RIP RAP
	SANITARY SEWER
	SANITARY MANHOLE
	SANITARY CLEANOUT
	WATER MAIN
	ELECTRIC/TELECOMM/GAS SERVICE
	FIRE HYDRANT
	GATE VALVE
	LIMIT OF DISTURBANCE
	SILT FENCE
	CONSTRUCTION FENCE
	FIBER ROLL
	DIVERSION DITCH
	STRAW BALE DIKE
	INLET PROTECTION
	CHECK DAM
	CONCRETE WASHOUT
	STABILIZED CONSTRUCTION ENTRANCE
	CONSTRUCTION STAGING AND STORAGE AREA
	SEDIMENT BASIN
	SOIL STOCKPILE
EXISTING	
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	RIGHT-OF-WAY LINE
	EASEMENT LINE
	SANITARY SEWER LINE
	DRAINAGE LINE
	WATER LINE
	GAS LINE
	OVERHEAD ELECTRIC LINE
	EDGE OF PAVEMENT
	EDGE OF GRAVEL
	BUILDING
	WETLAND LINE
	TREE LINE
	CONTOUR
	FENCE LINE
	TREES
	MANHOLE (AS LABELED)
	HYDRANT
	UTILITY POLE
	END SECTION
	CATCH BASIN
	WATER VALVE
	LIGHT
	SIGN

EROSION & SEDIMENT CONTROL NOTES

- REFER TO THE SPDES GENERAL PERMIT COMPLIANCE NOTES FOR ADDITIONAL REQUIREMENTS.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE IN STRICT COMPLIANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, LATEST REVISIONS.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE SCOPE AND DURATION OF SOIL DISRUPTION. EXISTING VEGETATION SHALL BE PRESERVED AS MUCH AS IS PRACTICAL.
- THE CONTRACTOR AND THEIR SUBCONTRACTOR(S) SHALL IDENTIFY THE TRAINED INDIVIDUAL THAT WILL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
- PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL POINTS OF ENTRY ONTO THE PROJECT SITE.
- DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
- STOCKPILED TOPSOIL SHALL BE TEMPORARILY SEEDED, MULCHED, AND ENCLOSED WITH SILT FENCING. ALL GRASS SEED WILL CONTAIN AT LEAST 25 PERCENT RAPID GERMINATING PERENNIAL RYE GRASS.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST BY SPRINKLING EXPOSED SOIL AREAS PERIODICALLY WITH WATER AS REQUIRED. THE CONTRACTOR IS TO SUPPLY ALL EQUIPMENT AND WATER.
- EARTHWORK ACTIVITIES SHALL BE CONSISTENT WITH THE PLANS. THE EARTHWORK OPERATION AREAS SHALL BE STABILIZED ON AN ONGOING BASIS WITH NO AREAS, WHICH ARE NOT CURRENTLY UNDER CONSTRUCTION, LEFT WITHOUT AT LEAST TEMPORARY COVER FOR MORE THAN 48 HOURS.
- EROSIVE MATERIAL TEMPORARILY STOCKPILED ON THE SITE DURING THE CONSTRUCTION PROCESS SHALL BE LOCATED IN AN AREA AWAY FROM STORM DRAINAGE AND SHALL BE PROPERLY PROTECTED BY A SURROUNDING SILT FENCE BARRIER.
- FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES IN ANY PORTION OF THE SITE, PERMANENT VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED LANDSCAPE SOILS.
- IF CONSTRUCTION TAKES PLACE IN "WET SOILS", CURTAIN DRAINS OR SUBSURFACE DRAINAGE SHALL BE INSTALLED TO DEWATER THE SOILS. DEWATERING DISCHARGES WILL NOT BE DIRECTED INTO WETLANDS, WATER COURSES, WATER-BODIES, OR STORM SEWER SYSTEMS.
- TEMPORARY DRAINAGE SWALES WITH A MINIMUM GRADE OF ONE PERCENT SHALL BE INSTALLED TO DIRECT RUNOFF AWAY FROM EXCAVATED AREAS. SWALES SHALL BE INSTALLED WITH STAKED AND SECURED HAY BALE BERMS TO PREVENT DOWNSTREAM SILTATION. LOCATION OF THE DRAINAGE SWALES AND HAY BALES WILL BE AT THE DIRECTION OF THE DESIGN ENGINEER. SILT FENCE SHALL BE PROPERLY INSTALLED DOWN GRADE OF ALL DISTURBED AREAS. SILT FENCE SHALL BE INSTALLED ALONG CONTOURS TO FILTER SEDIMENT FROM RUNOFF. INSPECTION BY CONTRACTOR SHOULD BE FREQUENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED. SILT FENCE SHOULD BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
- TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WHEN ALL DISTURBED AREAS HAVE UNDERGONE FINAL STABILIZATION, UPGRADED SURFACES HAVE BEEN PROPERLY STABILIZED, AND ALL STORMWATER MANAGEMENT SYSTEMS ARE IN PLACE AND OPERABLE. ALL AREAS DISTURBED BY THE REMOVAL OF THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE FILLED IN, TOPSOILED, SEEDED, AND MULCHED. FINAL STABILIZATION IS ACHIEVED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 80 PERCENT COVERAGE IS ESTABLISHED, OR EQUIVALENT STABILIZATION MEASURES, SUCH AS PLACEMENT OF MULCH OR GEOTEXTILE, IS COMPLETED ON ALL AREAS NOT PAVED OR COVERED BY PERMANENT STRUCTURES. ENSURE THAT FINAL STABILIZATION OF ALL TRIBUTARY AREAS IS ACHIEVED PRIOR TO THE CONSTRUCTION OF THE BIORETENTION BASINS.
- THE CONTRACTOR SHALL DELINEATE THE OVERALL LIMIT OF DISTURBANCE WITH ORANGE CONSTRUCTION FENCE PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITIES. ALL EXISTING WETLANDS TO REMAIN SHALL BE PROTECTED.

POLLUTION PREVENTION CONTROL NOTES

GOOD HOUSEKEEPING PRACTICES ARE DESIGNED TO MAINTAIN A CLEAN AND ORDERLY WORK ENVIRONMENT. GOOD HOUSEKEEPING MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS BY THOSE PARTIES INVOLVED WITH THE DIRECT CARE AND DEVELOPMENT OF THE SITE. THE FOLLOWING MEASURES SHOULD BE IMPLEMENTED TO CONTROL THE POSSIBLE EXPOSURE OF HARMFUL SUBSTANCES AND MATERIALS TO STORMWATER RUNOFF:

- MATERIAL RESULTING FROM THE CLEARING AND GRUBBING OPERATION SHALL BE STOCKPILED AWAY FROM STORM DRAINAGE, WATER BODIES AND/OR WATERCOURSES AND SURROUNDED WITH ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES. SOIL STOCKPILE LOCATIONS SHALL BE EXPOSED NO LONGER THAN 14 DAYS BEFORE SEEDING.
- EQUIPMENT MAINTENANCE AREAS SHALL BE PROTECTED FROM STORMWATER FLOWS AND SHALL BE SUPPLIED WITH APPROPRIATE WASTE RECEPTACLES FOR SPENT CHEMICALS, SOLVENTS, OILS, GREASES, GASOLINE, AND ANY POLLUTANTS THAT MIGHT CONTAMINATE THE SURROUNDING HABITAT AND/OR WATER SUPPLY. EQUIPMENT WASH-DOWN ZONES SHALL BE LOCATED WITHIN AREAS DRAINING TO SEDIMENT CONTROL DEVICES.
- THE USE OF DETERGENTS FOR LARGE-SCALE (I.E., VEHICLES, BUILDINGS, PAVEMENT SURFACES, ETC.) WASHING IS PROHIBITED.
- MATERIAL STORAGE LOCATIONS AND FACILITIES (I.E., COVERED STORAGE AREAS, STORAGE SHEDS, ETC.) SHALL BE LOCATED ON-SITE AND SHALL BE STORED ACCORDING TO THE MANUFACTURER'S STANDARDS IN A DEDICATED STAGING AREA. CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER TOXIC MATERIAL MUST BE STORED IN WATERPROOF CONTAINERS. RUNOFF CONTAINING SUCH MATERIALS MUST BE COLLECTED, REMOVED FROM THE SITE, TREATED AND DISPOSED AT AN APPROVED SOLID WASTE OR CHEMICAL DISPOSAL FACILITY.
- HAZARDOUS SPILLS SHALL BE IMMEDIATELY CONTAINED TO PREVENT SUCH POLLUTANTS FROM ENTERING THE SURROUNDING HABITAT AND/OR WATER SUPPLY. SPILL KITS SHALL BE PROVIDED ON-SITE AND SHALL BE DISPLAYED IN A PROMINENT LOCATION FOR EASE OF ACCESS AND USE. SPILLS GREATER THAN FIVE (5) GALLONS SHALL BE REPORTED TO THE NYSDEC RESPONSE UNIT AT 1-800-457-7362. IN ADDITION, A RECORD OF THE INCIDENT(S) AND/OR NOTIFICATIONS SHALL BE DOCUMENTED AND ATTACHED TO THE SWPPP.
- PORTABLE SANITARY WASTE FACILITIES SHALL BE PROVIDED ON-SITE FOR WORKERS AND SHALL BE PROPERLY MAINTAINED.
- DUMPSTERS AND/OR DEBRIS CONTAINERS SHALL BE LOCATED ON-SITE AND SHALL BE OF ADEQUATE SIZE TO MANAGE RESPECTIVE MATERIALS. REGULAR COLLECTION AND DISPOSAL OF WASTES SHALL OCCUR AS REQUIRED.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES. EACH FACILITY SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING. A SIGN SHOULD BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHALL BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED AND DISPOSED OF. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED AND/OR REPAIRED, SEEDED, AND MULCHED FOR FINAL STABILIZATION.
- NON-STORMWATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION, WHICH DISCHARGES FROM THE SITE, MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE. IT CAN BE RETAINED IN THE TEMPORARY SEDIMENT BASINS UNTIL IT EVAPORATES.
- DISCHARGES FROM DEWATERING ACTIVITIES, INCLUDING DISCHARGES FROM DEWATERING TRENCHES AND EXCAVATIONS, MUST BE MANAGED BY APPROPRIATE CONTROL MEASURES.
- WASTEWATER DISCHARGES FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS IS PROHIBITED.

CONSTRUCTION SEQUENCING NOTES

CLEARING AND GRUBBING ACTIVITIES

- FLAG THE DISTURBANCE LIMITS PRIOR TO THE COMMENCEMENT OF CLEARING AND GRUBBING ACTIVITIES.
- ACCESS TO THE SITE WILL BE PROVIDED OFF OF BEDFORD ROAD.
- INSTALL CONSTRUCTION FENCE, PERIMETER SILT FENCE AND TREE PROTECTION MEASURES AS SHOWN ON THE PROJECT PLANS.
- CLEARING AND GRUBBING ACTIVITIES SHALL BE PERFORMED WITHIN THE DISTURBANCE LIMITS. STABILIZE CONCURRENTLY WITH THE CLEARING ACTIVITIES. WOODS CHIPS AND/OR SPRAY MULCH SHALL BE USED TO TEMPORARILY STABILIZE THE CLEARED AREA. CHIPPING TREES AND STUMP GRINDINGS GENERATED AS PART OF THE CLEARING OPERATIONS WILL ALSO BE USED TO PRODUCE WOOD CHIPS.
- INSPECT ALL EROSION CONTROL MEASURES DURING CLEARING AND GRUBBING ACTIVITIES. REPAIR ANY DAMAGED EROSION CONTROL MEASURES UPON DISCOVERY.

BULK GRADING CONSTRUCTION

- STRIP TOP SOIL AND TEMPORARILY STOCKPILE THE MATERIAL ON-SITE. THE LOCATIONS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. HOWEVER, LOCATIONS CAN BE ADJUSTED AS THE EARTHWORK OPERATIONS PROGRESSES. STOCKPILES SHALL BE PROTECTED FROM EROSION WITH SEED/MULCH AND SHALL BE COVERED IN RAIN EVENTS. REFER TO PROJECT DETAILS FOR ADDITIONAL INFORMATION.
- REMOVE EXISTING PAVEMENT, CONCRETE AND OTHER SITE FEATURES IDENTIFIED TO BE REMOVED ON THE PROJECT PLANS.
- DRAINAGE STRUCTURES SHALL HAVE INLET PROTECTION INSTALLED.
- ACTIVELY STABILIZE THE DISTURBED AREAS THAT ARE AT FINAL GRADE OR SUBGRADE ELEVATIONS. AREAS THAT WILL BE VEGETATED IN THE FINAL CONDITIONS SHALL NOT BE STABILIZED WITH STONE. VEGETATED AREAS SHALL BE TEMPORARILY STABILIZED WITH HYDRO-SEEDING, MULCHING, HAYING, OR SPREADING WOOD CHIP. PAVED AREAS AND BUILDING PADS ARE TO BE STABILIZED WITH GRAVEL.
- TEMPORARY SEDIMENT BASINS SHALL REMAIN IN PLACE UNTIL ALL SOIL DISTURBANCE ACTIVITIES THAT CONTRIBUTE TO THE TEMPORARY SEDIMENT BASINS HAVE BEEN COMPLETED.

GENERAL CONSTRUCTION

- INSTALL INLET PROTECTION MEASURES AT ALL INLETS AND AT THE ENDS OF ALL EXPOSED STORMWATER PIPES AND RIP RAP AT THE LOCATIONS SHOWN ON THE PLANS.
- DELIVER BUILDING MATERIALS TO DESIGNED STAGING AREAS FOR CONSTRUCTION.
- INSTALL PROPOSED CURBING AND SIDEWALKS.
- PREPARE PAVEMENT SUBBASE MATERIAL AND INSTALL BINDER COURSE. INLET PROTECTION MEASURES MAY BE REMOVED TEMPORARILY DURING THIS OPERATION, BUT NO MORE THAN 24-HOURS PRIOR TO PLACEMENT OF THE SUBBASE MATERIAL. INLET PROTECTION MEASURES SHALL BE REPLACED ONCE THE SUBBASE MATERIAL HAS BEEN INSTALLED.
- FINISH GRADING AND STABILIZE ALL DISTURBED AREAS. ALL CATCH BASINS, DRAINAGE MANHOLES, AND DRAINAGE LINES SHALL BE CLEANED OF ANY ACCUMULATED SILT AND SEDIMENT.
- REMOVE ALL ACCUMULATED SEDIMENT WITHIN THE TEMPORARY SEDIMENT BASINS. REMOVE THE TEMPORARY PERFORATED RISERS AND CONSTRUCTION FABRIC FROM OUTLET CONTROL STRUCTURES.
- INSTALL ALL PLANTINGS IN ACCORDANCE WITH THE PROJECT PLANS.
- PLACE PAVEMENT TOP COURSE AND PAVEMENT MARKINGS, AS APPROPRIATE.
- REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES. IMMEDIATELY STABILIZE THE AREAS DISTURBED DURING THEIR REMOVAL. ESTABLISH PERMANENT VEGETATIVE COVER AND INSTALL ALL LANDSCAPING.

DEMOLITION NOTES


- CLEARING AND GRUBBING OF ALL TREES (INCLUDING REMOVAL OF ANY ASSOCIATED ROOT SYSTEMS AND STUMPS) AND VEGETATION DESIGNATED FOR REMOVAL SHOULD BE PERFORMED. TOPSOIL SHOULD BE COMPLETELY STRIPPED FROM THE PROPOSED BUILDING FOOTPRINT AND 10 FEET BEYOND THE BUILDING LIMITS AND STORED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. THAT ARE INDICATED ON PLANS.
- CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATION, ORDINANCES, AND STATUTES.
- THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEFINE EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
- UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE OR DISCOVERY, REMOVAL, ABATEMENT, OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES, OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY, OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. HOWEVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT, OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.
- THE CONTRACTOR SHALL DEMOLISH ALL BUILDINGS, PAVEMENT, ETC., WHERE INDICATED WITHIN THE LIMIT OF DISTURBANCE. EDGES OF PAVEMENT DEMOLITION SHALL BE SAW CUT. DEMOLISHED CONCRETE AND ASPHALT SHALL BE CRUSHED TO THE DIMENSIONS INDICATED IN THE PROJECT GEOTECHNICAL REPORT AND STOCKPILED FOR REUSE AS SITE FILL. ALL DEMOLITION AND MATERIAL REUSE SHALL BE IN ACCORDANCE WITH ENVIRONMENTAL REQUIREMENTS FOR THE SITE.
- THE CONTRACTOR SHALL VERIFY THAT A SOIL EROSION AND SEDIMENT CONTROL PERMIT HAS BEEN OBTAINED FOR DEMOLITION ACTIVITIES. CONTRACTOR SHALL COMPLY WITH THE CONDITIONS THEREON BY INSTALLING AND MAINTAINING ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AND MAKING REQUIRED NOTIFICATIONS.

GENERAL NOTES

- THE CONTRACTOR SHALL CALL "DIG SAFELY NEW YORK" PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CALL 1-800-962-7962 OR 811 FOR STAKEOUT REQUESTS.
- ALL EXISTING UTILITY LINES SHALL BE LOCATED/VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING ANY MATERIALS AND/OR STARTING ANY CONSTRUCTION.
- THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER. IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH THESE PLANS DO NOT COMPLETELY REPRESENT NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITE WORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
- THE CONTRACTOR SHALL ACCEPT THE SITE AS IS; THE CONTRACTOR SHALL ASSESS CONDITIONS AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER MAKES NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY AVAILABLE INFORMATION WHICH WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS, CORRELATE CONDITIONS WITH THE DRAWINGS AND RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL MAKE ADDITIONAL TOPOGRAPHIC SURVEYS HE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
- THE CONTRACTOR SHALL, WHEN THEY DEEM NECESSARY, PROVIDE WRITTEN REQUESTS FOR INFORMATION (RFI) TO THE OWNER AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITE WORK ITEM. THE RFI SHALL BE IN A FORM ACCEPTABLE TO OWNER AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF 10 WORK DAYS OR ADDITIONAL REASONABLE TIME FOR A WRITTEN REPLY. THE RFI SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE WORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
- INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO CONSTRUCTION. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO CONSTRUCTION.
- THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL THESE DOCUMENTS.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
01/25/2023	Additional Variances	1
Revisions		



08/07/2023

PROFESSIONAL ENGINEER NY Lic. No. 081473-1



LANGAN
Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.

One North Broadway, Suite 910
White Plains, NY 10601

T: 914.323.7400 F: 914.323.7401 www.langan.com

Project

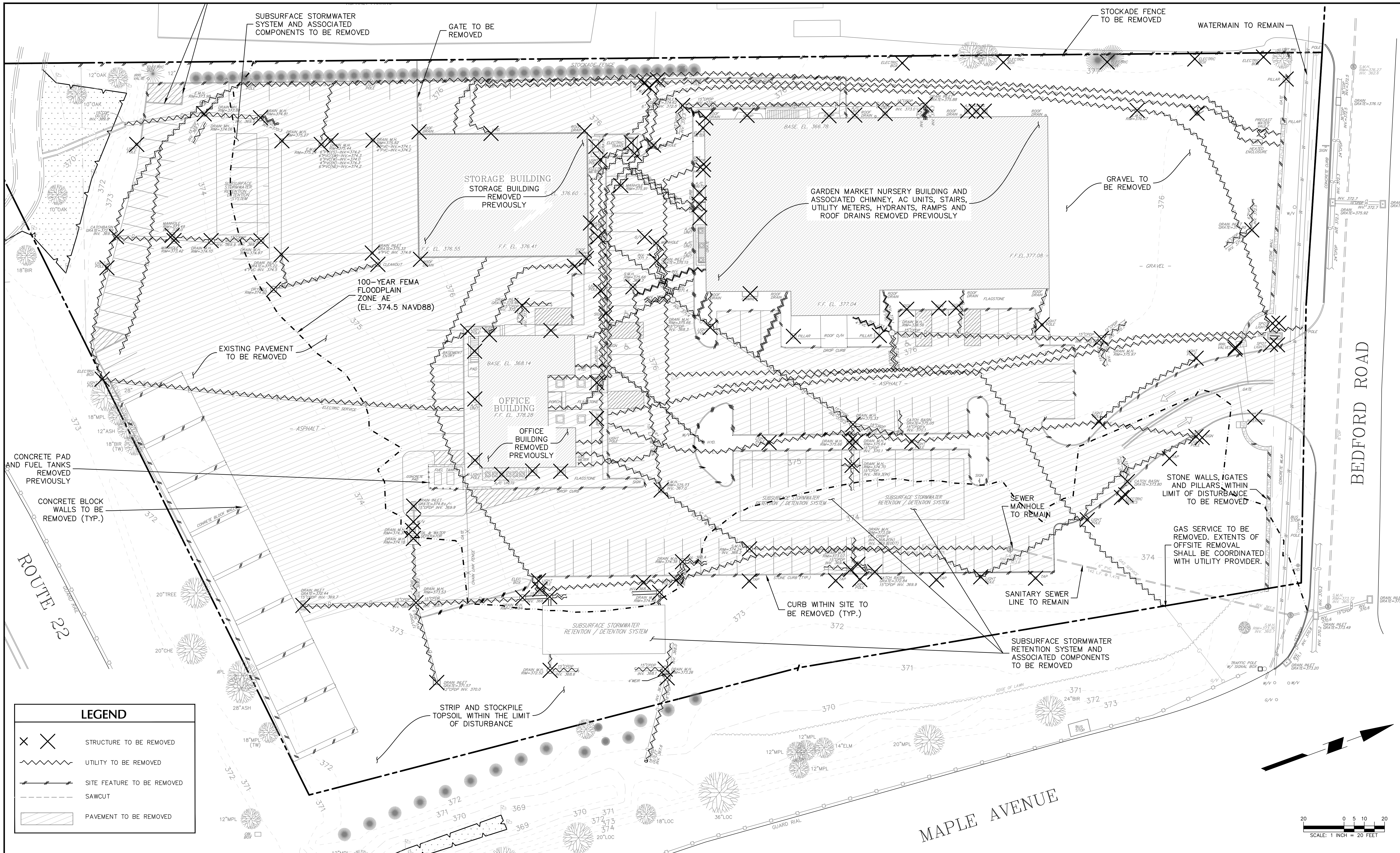
45 BEDFORD ROAD

ARMONK
WESTCHESTER COUNTY
NEW YORK

Drawing Title

LEGEND AND GENERAL NOTES

Project No.	Drawing No.
190085001	GI101
Date	
AUGUST 7, 2023	
Drawn By	
GN	
Checked By	
MT	
Sheet	2 of 16



LEGEND

	STRUCTURE TO BE REMOVED
	UTILITY TO BE REMOVED
	SITE FEATURE TO BE REMOVED
	SAWCUT
	PAVEMENT TO BE REMOVED

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

STATE OF NEW YORK
 MICHAEL J. FINN
 LICENSED PROFESSIONAL ENGINEER
 081473
 08/07/2023
 PROFESSIONAL ENGINEER NY Lic. No. 081473-1

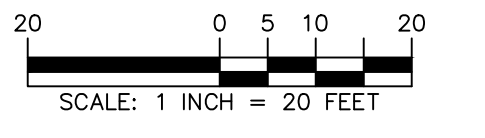
LANGAN
 Langan Engineering, Environmental, Surveying,
 Landscape Architecture and Geology, D.P.C.
 One North Broadway, Suite 910
 White Plains, NY 10601
 T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
 WESTCHESTER COUNTY ARMONK NEW YORK

Drawing Title
EXISTING CONDITIONS AND REMOVALS PLAN

Project No. 190085001	Drawing No. CD101
Date AUGUST 7, 2023	Sheet 3 of 16
Drawn By GN	
Checked By MT	

Date	Description	No.
	Revisions	





Project No. 190085001

BEDFORD ROAD

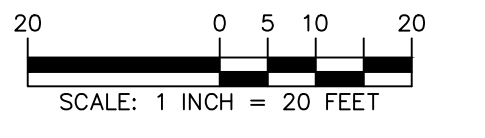
ROUTE 22

MAPLE AVENUE

SIGN LEGEND

R7-8 12"x18"	R7-1 12"x18"	R1-1 30"x30"

NOTE: ALL PROPOSED SIGNAGE SHALL CONFORM TO THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) FOR SIZE, LEGEND AND PLACEMENT.



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
Revisions		

08/07/2023
PROFESSIONAL ENGINEER NY Lic. No. 081473-1

LANGAN
Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, NY 10601
T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
WESTCHESTER COUNTY ARMONK NEW YORK

Drawing Title
SITE PLAN

Project No. 190085001	Drawing No. CS101
Date AUGUST 7, 2023	
Drawn By GN	
Checked By MT	
Sheet 4 of 16	



Project No. 190085001


BEDFORD ROAD

ROUTE 22

MAPLE AVENUE



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.



08/07/2023
PROFESSIONAL ENGINEER NY Lic. No. 081473-1

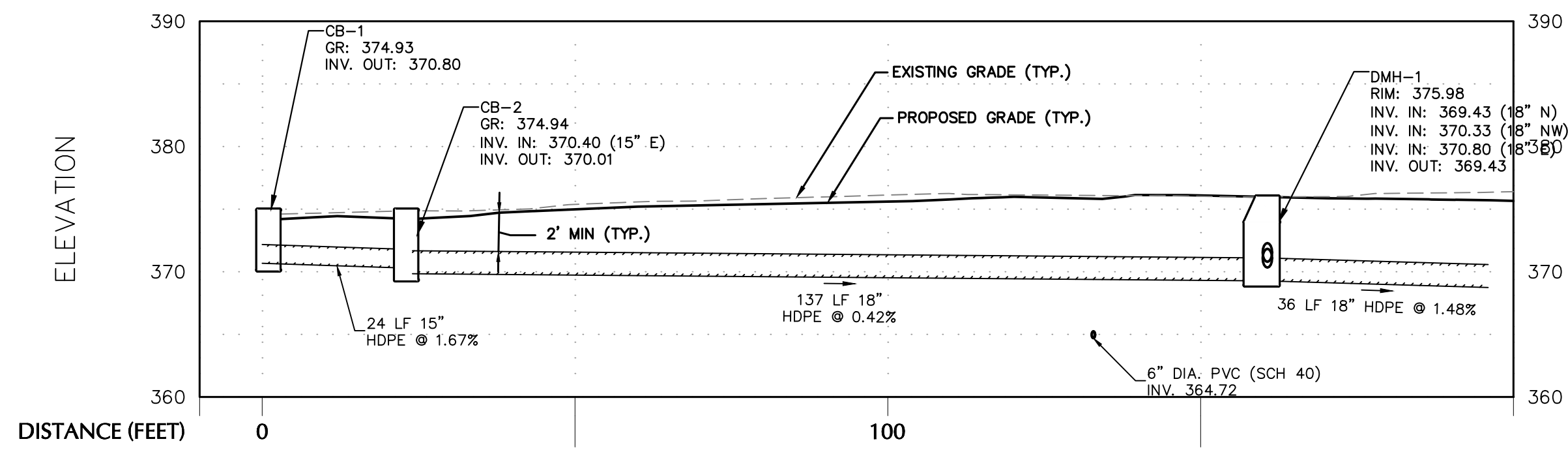
LANGAN
Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, NY 10601
T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
WESTCHESTER COUNTY ARMONK NEW YORK

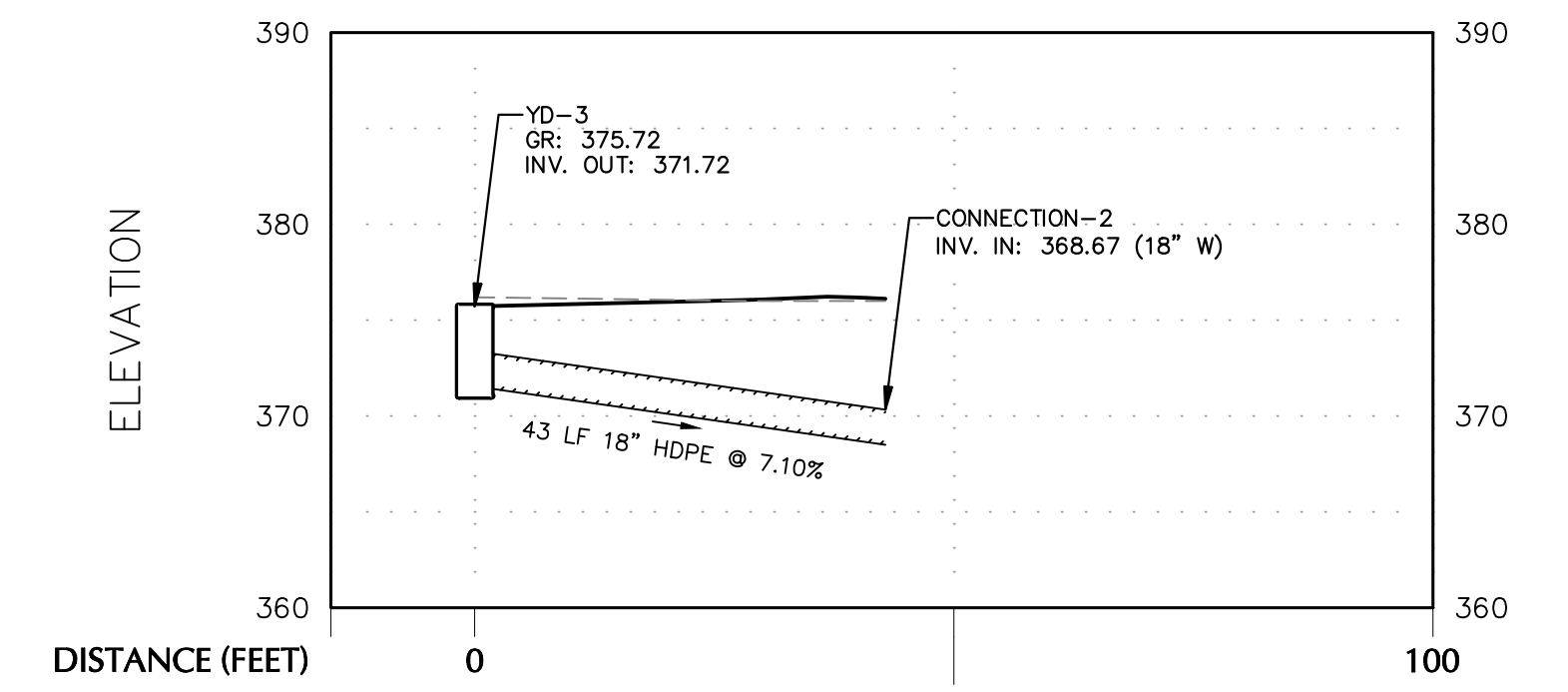
Drawing Title
GRADING AND DRAINAGE PLAN

Project No. 190085001	Drawing No. CG101
Date AUGUST 7, 2023	Sheet 5 of 16
Drawn By GN	
Checked By MT	

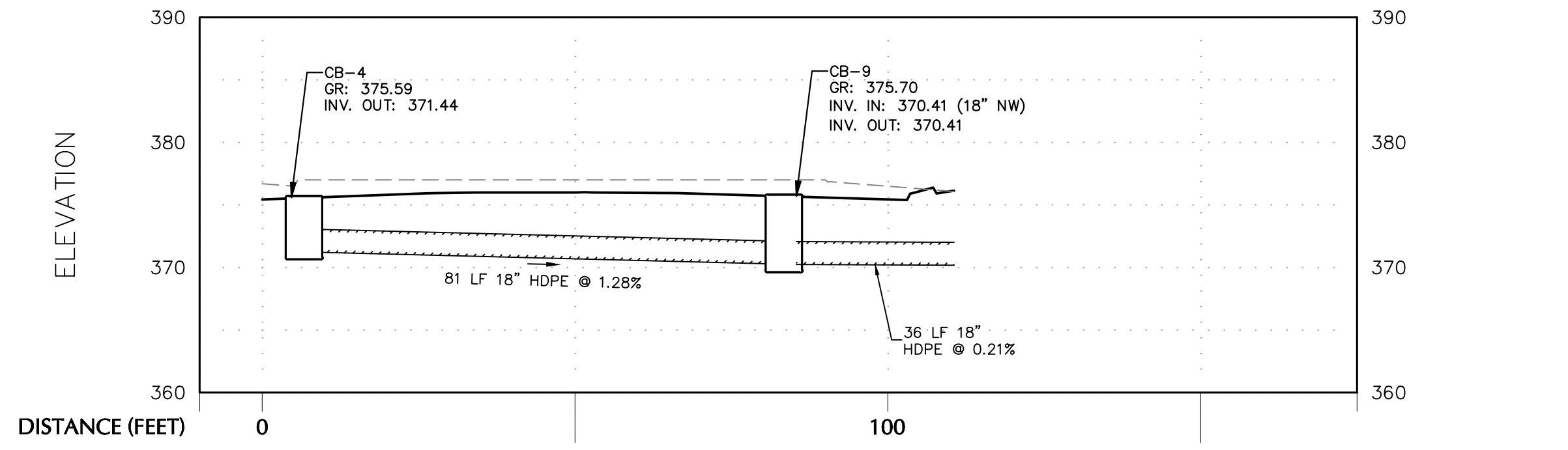
Date	Description	No.	Signature	Date
	Revisions			



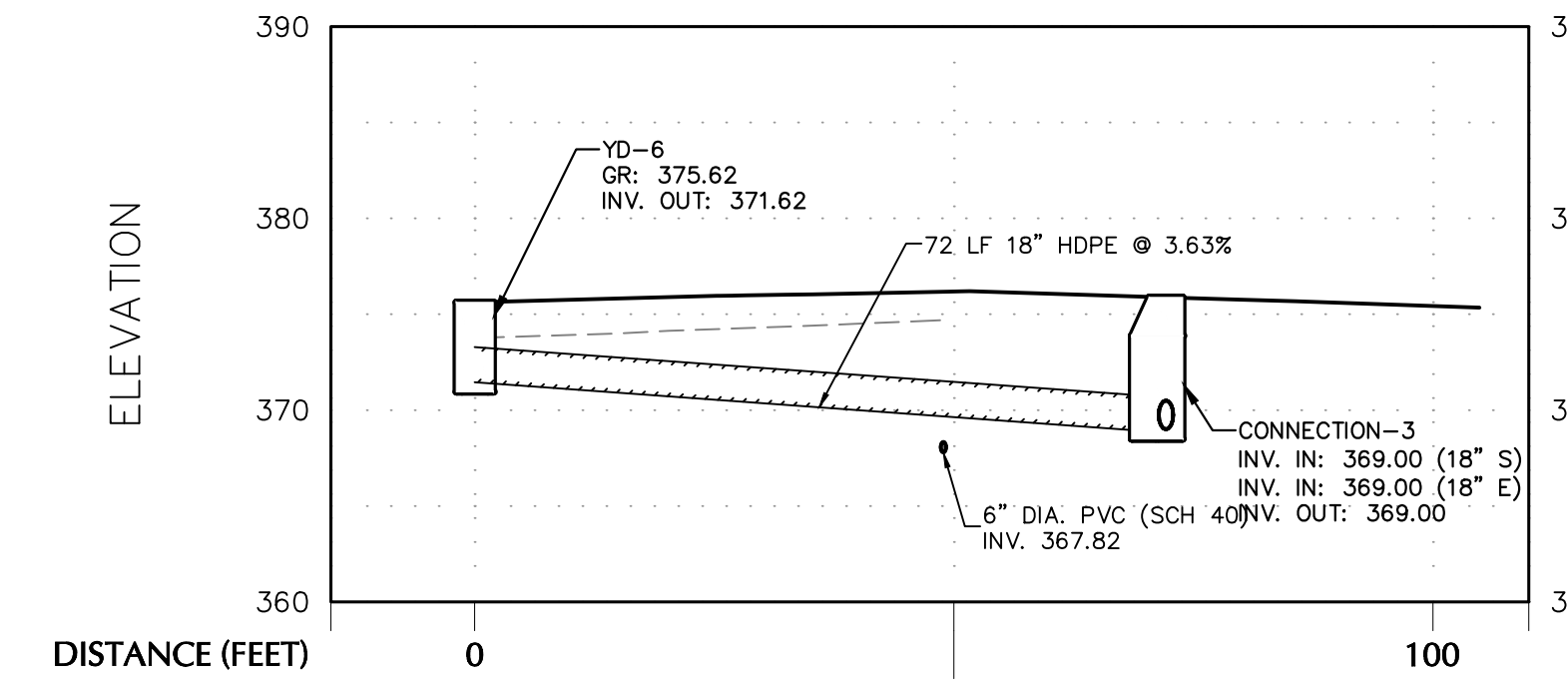
CB-1 TO UNDERGROUND STORAGE PROFILE



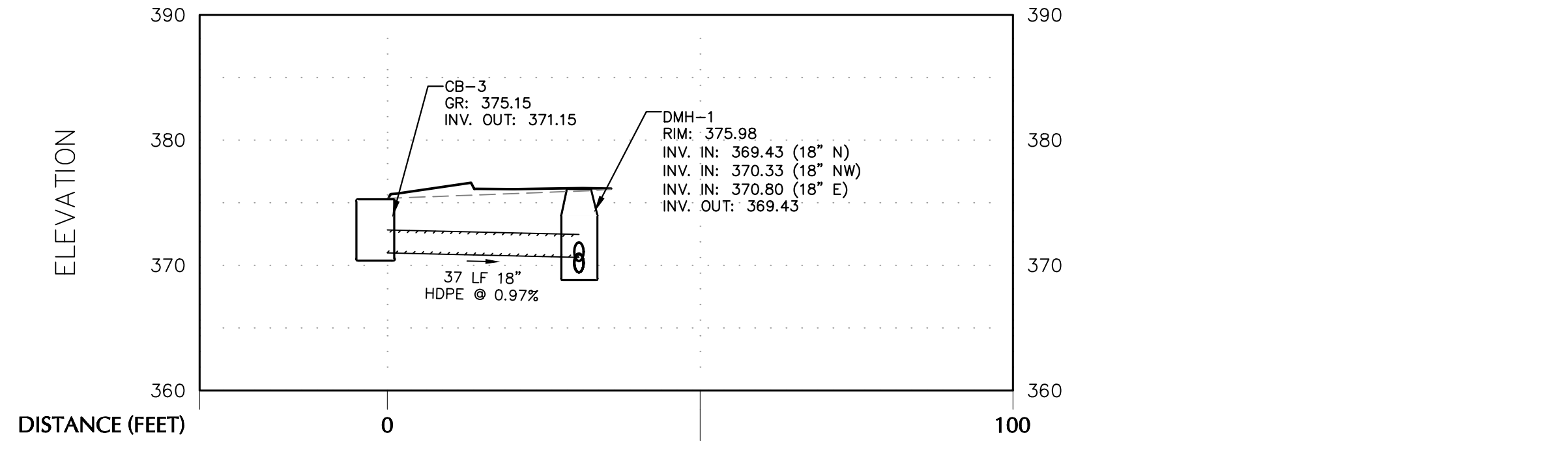
YD-3 TO UNDERGROUND STORAGE PROFILE



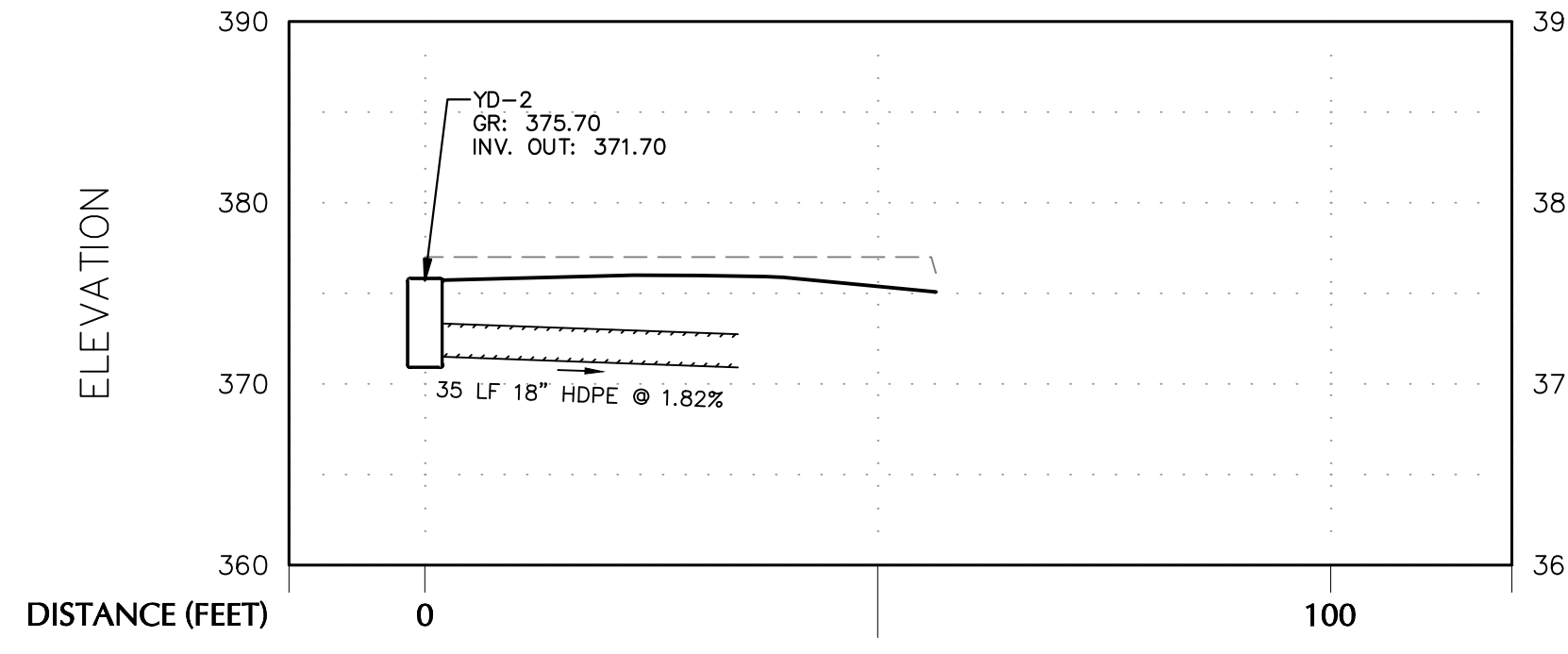
CB-4 TO DMH-1 PROFILE



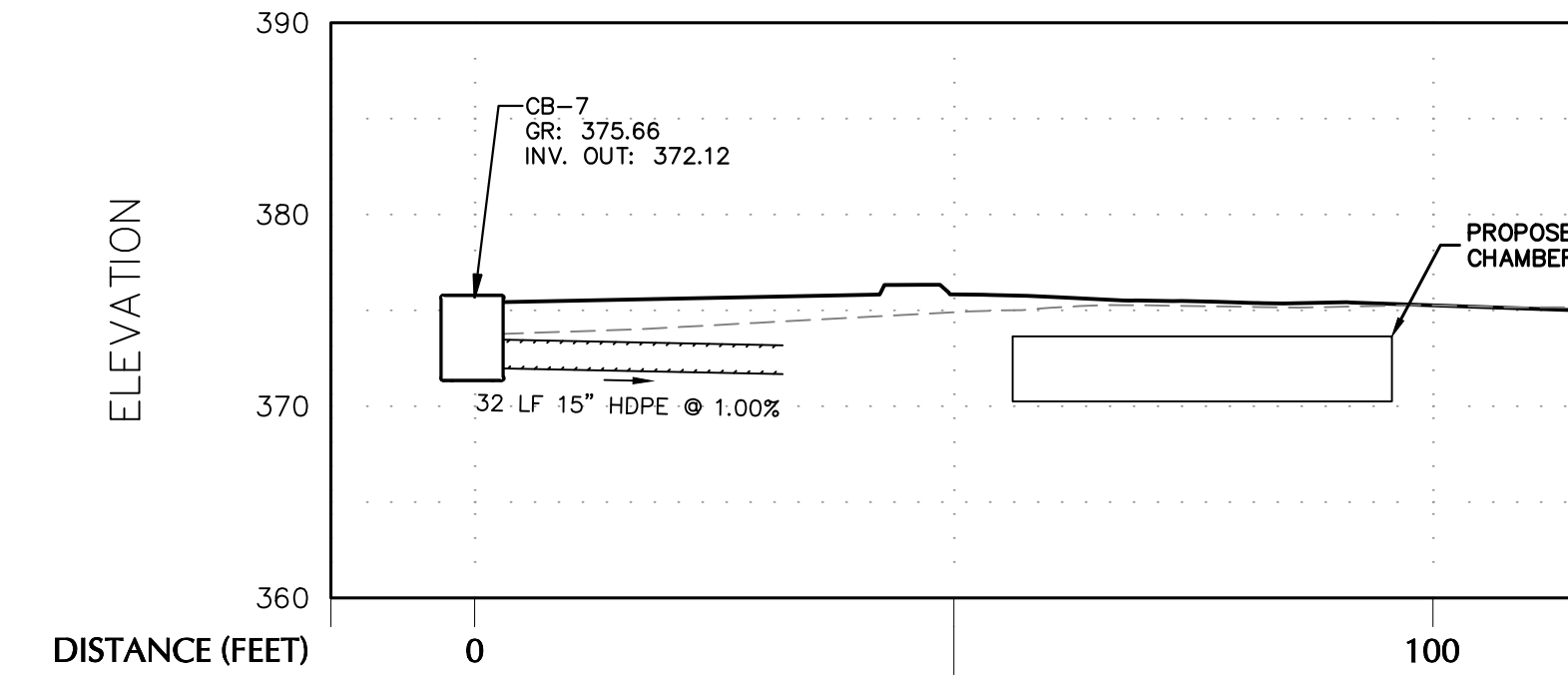
YD-6 TO UNDERGROUND STORAGE PROFILE



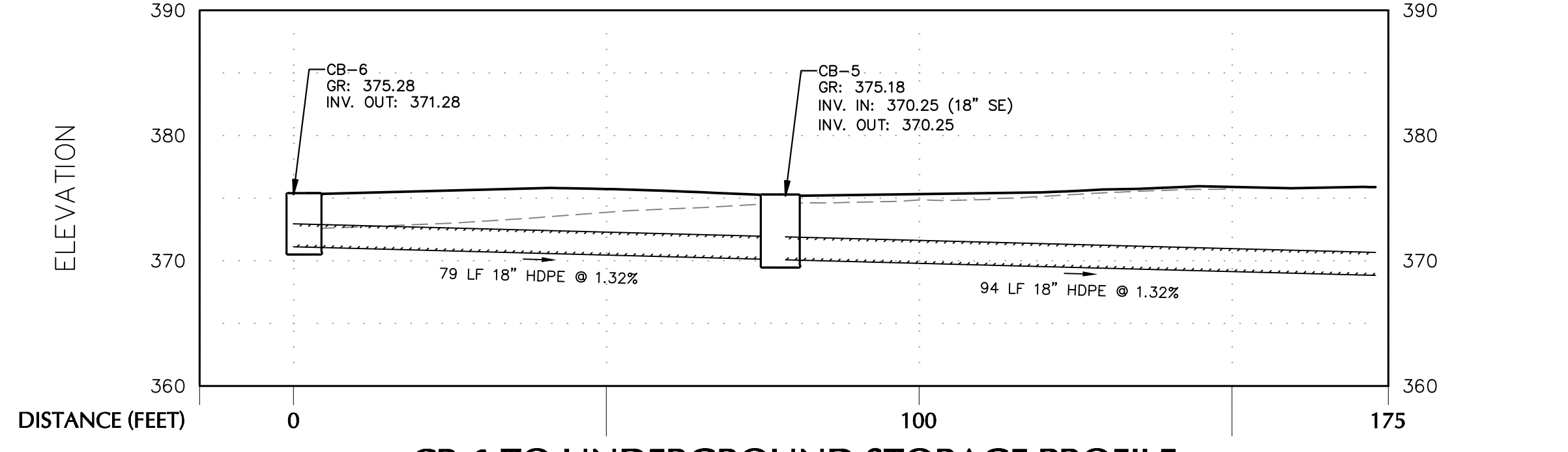
CB-3 TO DMH-1 PROFILE



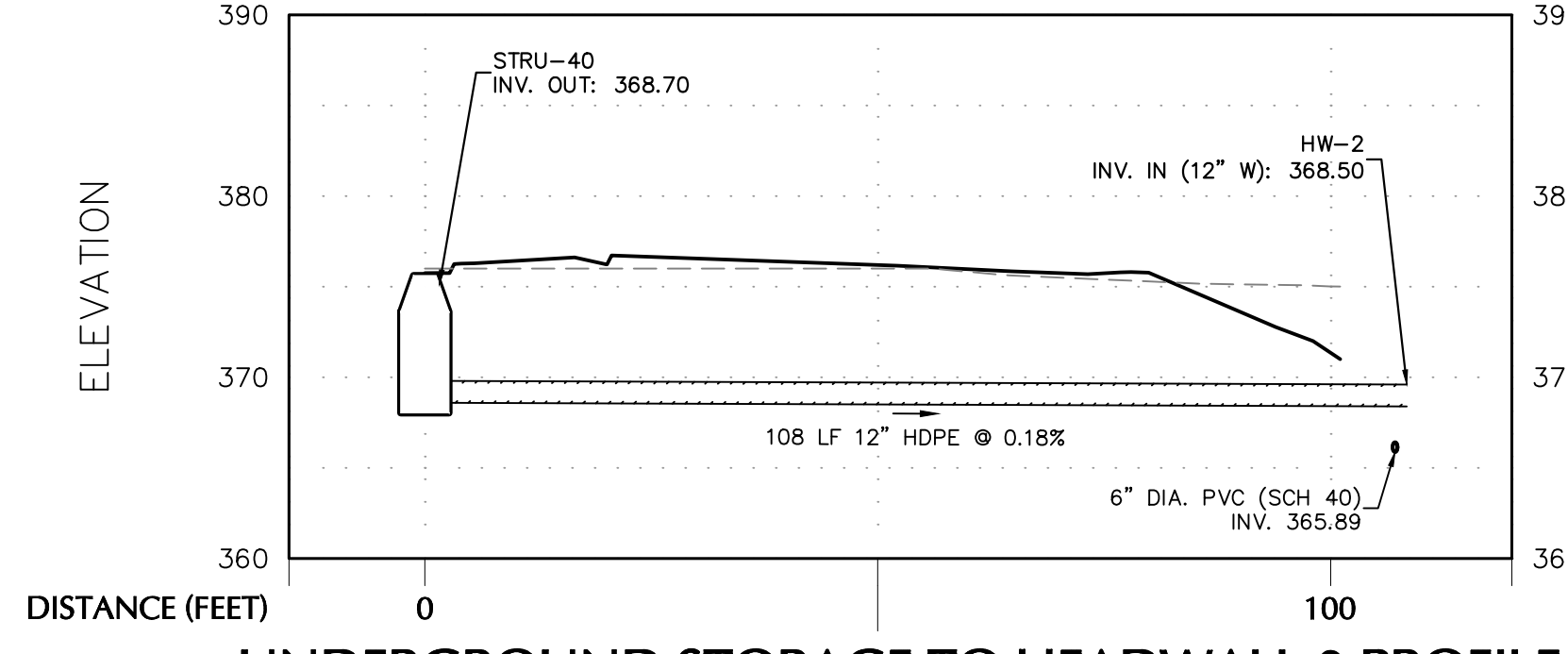
YD-2 TO UNDERGROUND STORAGE PROFILE



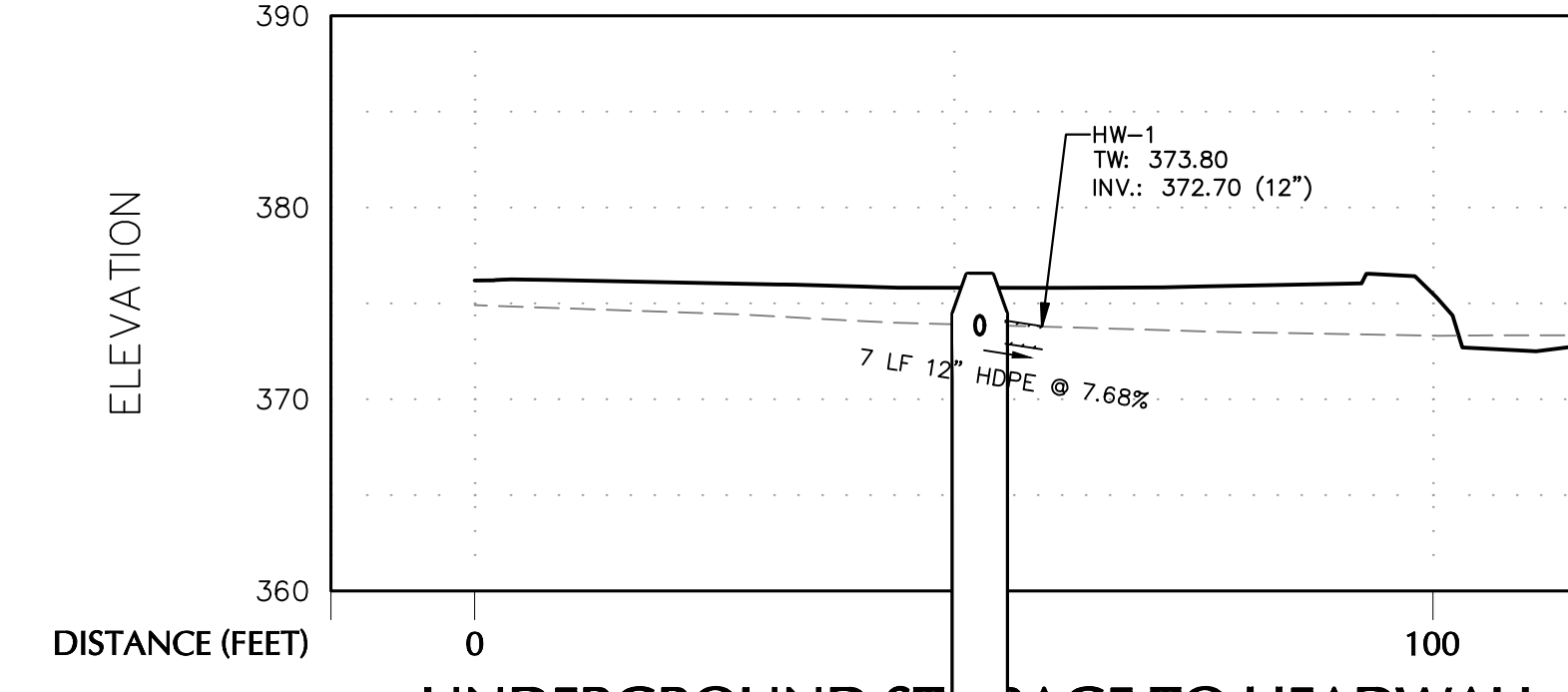
CB-7 TO UNDERGROUND STORAGE PROFILE



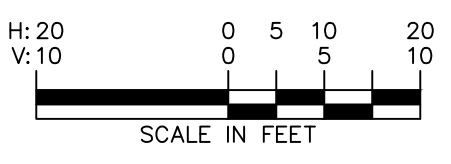
CB-6 TO UNDERGROUND STORAGE PROFILE



UNDERGROUND STORAGE TO HEADWALL 2 PROFILE



UNDERGROUND STORAGE TO HEADWALL 1 PROFILE



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
Revisions		

08/07/2023
PROFESSIONAL ENGINEER NY Lic. No. 081473-1

LANGAN
Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, NY 10601
T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
ARMONK
WESTCHESTER COUNTY
NEW YORK

Drawing Title
**DRAINAGE
PROFILES**

Project No. 190085001	Drawing No. CG201
Date AUGUST 7, 2023	Sheet 6 of 16
Drawn By GN	
Checked By MT	



Project No. 190085001

BEDFORD ROAD

MAPLE AVENUE

ROUTE 22



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
Revisions		

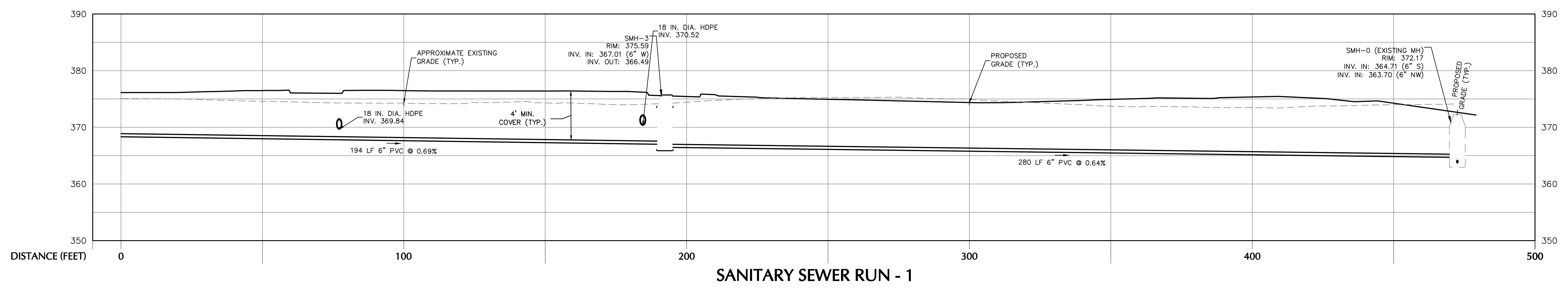
08/07/2023
 PROFESSIONAL ENGINEER NY Lic. No. 081473-1

LANGAN
 Langan Engineering, Environmental, Surveying,
 Landscape Architecture and Geology, D.P.C.
 One North Broadway, Suite 910
 White Plains, NY 10601
 T: 914.323.7400 F: 914.323.7401 www.langan.com

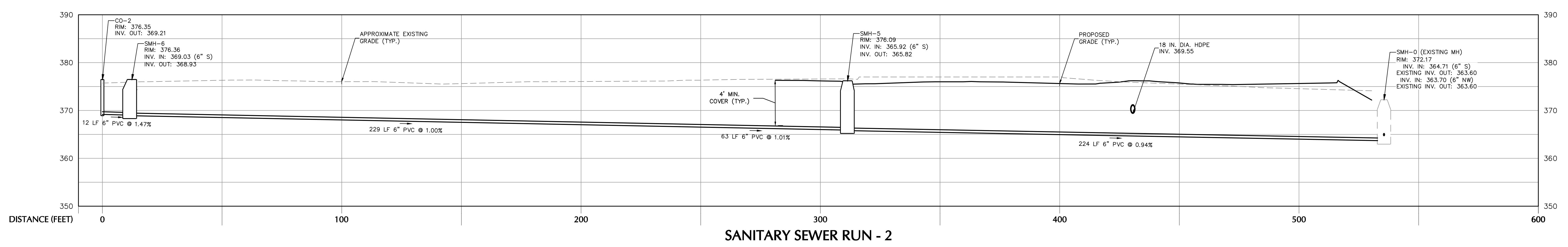
Project
45 BEDFORD ROAD
 WESTCHESTER COUNTY ARMONK NEW YORK

Drawing Title
UTILITY PLAN

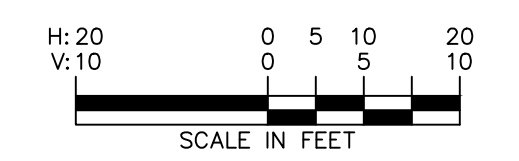
Project No. 190085001	Drawing No. CU101
Date AUGUST 7, 2023	Sheet 7 of 16
Drawn By GN	
Checked By MT	



SANITARY SEWER RUN - 1



SANITARY SEWER RUN - 2



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
Revisions		

08/07/2023
Date

PROFESSIONAL ENGINEER NY Lic. No. 081473

LANGAN
Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, NY 10601
T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
ARMONK
WESTCHESTER COUNTY NEW YORK

Drawing Title
SANITARY SEWER PROFILE

Project No. 190085001	Drawing No. CU201
Date AUGUST 7, 2023	Sheet 8 of 16
Drawn By GN	
Checked By MT	



Project No. 190085001

TEMPORARY CONCRETE WASHOUT FACILITY (TYP.)

STABILIZED CONSTRUCTION ENTRANCE

BEDFORD ROAD

TEMPORARY SEDIMENT TRAP

CONTRACTOR SHALL ENSURE CLEAN DISCHARGE FROM OUTLET CONTROL STRUCTURE DURING CONSTRUCTION

TREE PROTECTION (TYP.)

SOIL STOCKPILE

TEMPORARY DIVERSION SWALE

INLET PROTECTION (TYP.)

LIMIT OF DISTURBANCE (TYP.)

SILT FENCE (TYP.)

100.0' WETLAND BUFFER


ROUTE 22

MAPLE AVENUE



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
Revisions		



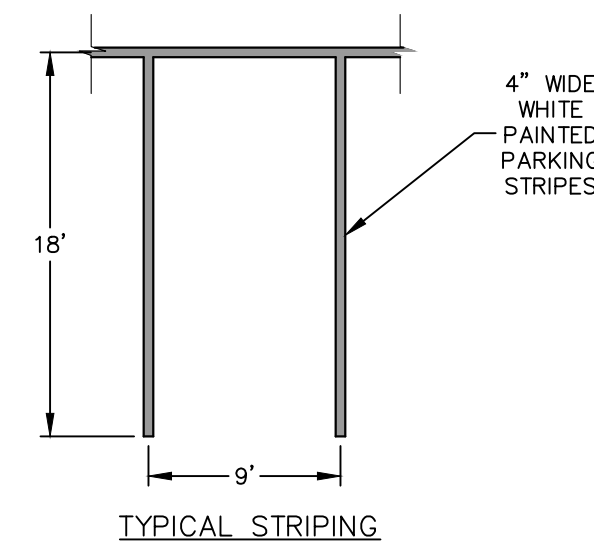
 08/07/2023
 PROFESSIONAL ENGINEER NY Lic. No. 081473-1

LANGAN
 Langan Engineering, Environmental, Surveying,
 Landscape Architecture and Geology, D.P.C.
 One North Broadway, Suite 910
 White Plains, NY 10601
 T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
 WESTCHESTER COUNTY ARMONK NEW YORK

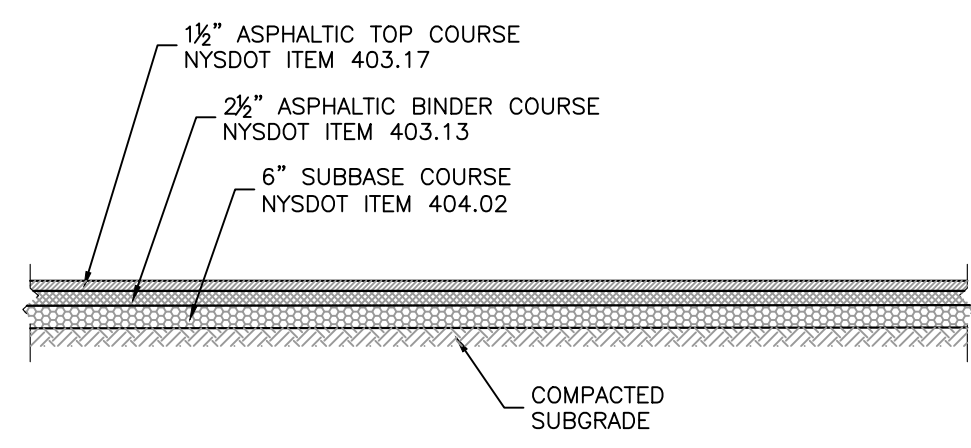
Drawing Title
SOIL EROSION & SEDIMENT CONTROL PLAN

Project No.	190085001	Drawing No.	CE101
Date	AUGUST 7, 2023		
Drawn By	GN	Sheet 9 of 16	
Checked By	MT		



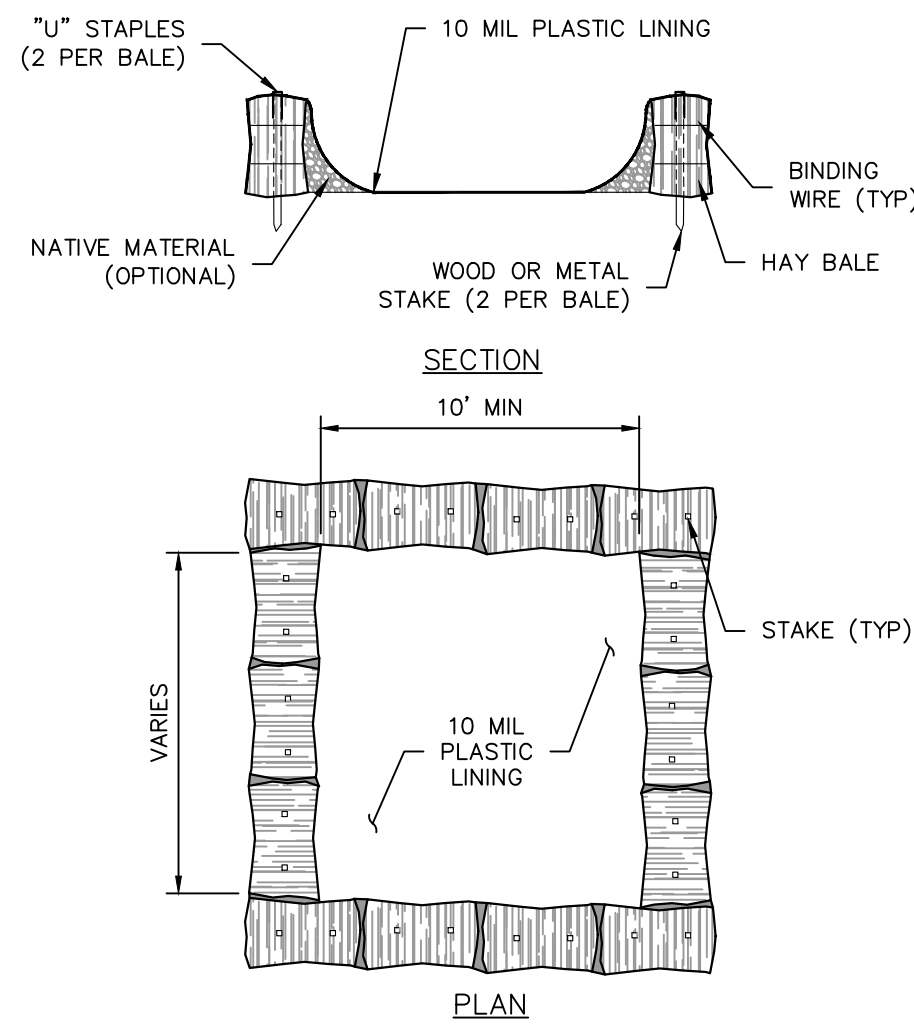
PARKING STRIPING

SCALE: NTS



ASPHALT PAVEMENT DETAIL

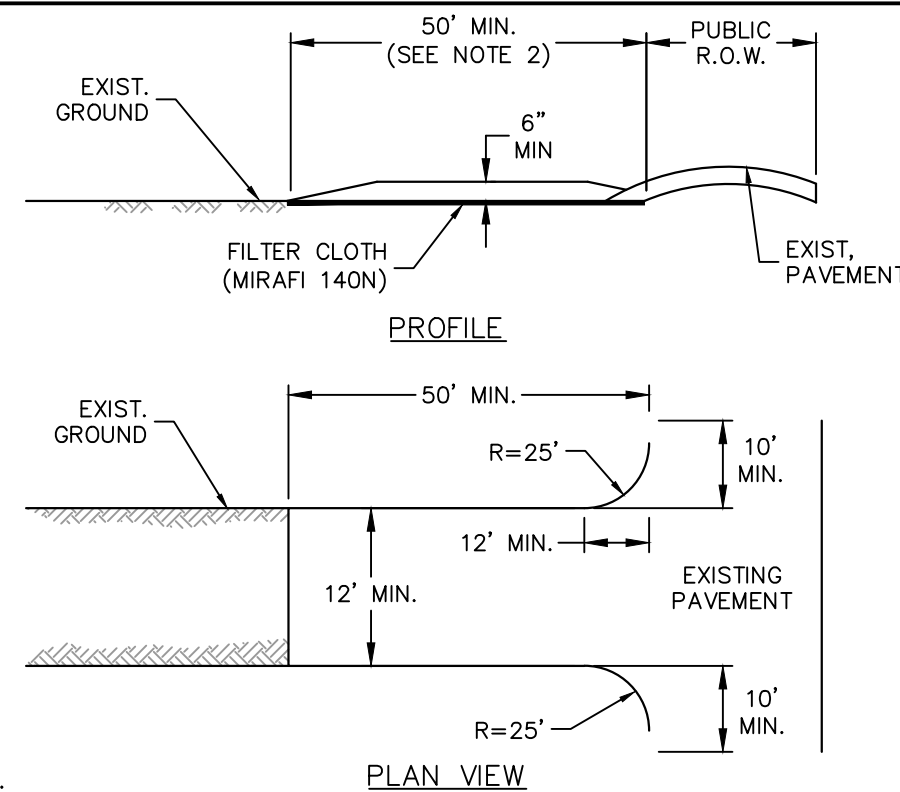
SCALE: NTS



NOTES:
 1. CONCRETE WASHOUT SIGN TO BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 2. REMOVE HARDEN CONCRETE WHEN WITHIN 4" FROM TOP OF STRUCTURE.
 3. CONSTRUCT NEW FACILITIES ONCE CURRENT FACILITIES ARE TWO-THIRDS FULL.
 4. LINERS, HAY BALES, ETC. SHALL BE INSPECTED FOR DAMAGE. ANY DAMAGE SHALL BE REPAIR PROMPTLY.

ABOVE GROUND TEMPORARY CONCRETE WASHOUT FACILITY

SCALE: NTS

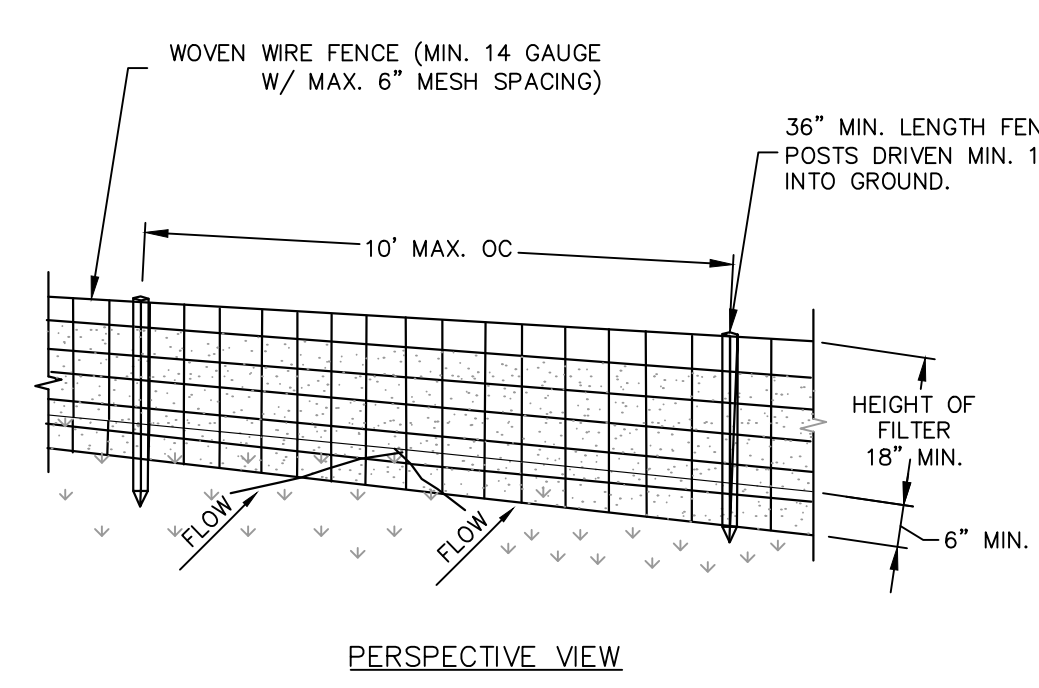


NOTE: PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC R.O.W.

CONSTRUCTION SPECIFICATIONS:
 1. STONE SIZE - USE 3" STONE (NYS DOT ITEM #623.11 SIZE DESIGNATION #2, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT).
 2. LENGTH - NOT LESS THAN 50-FEET (EXCEPT ON SINGLE FAMILY LOT, 30- FEET MINIMUM LENGTH WOULD APPLY).
 3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
 4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SIGHT.
 5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTR. ENTRANCE

SCALE: NTS



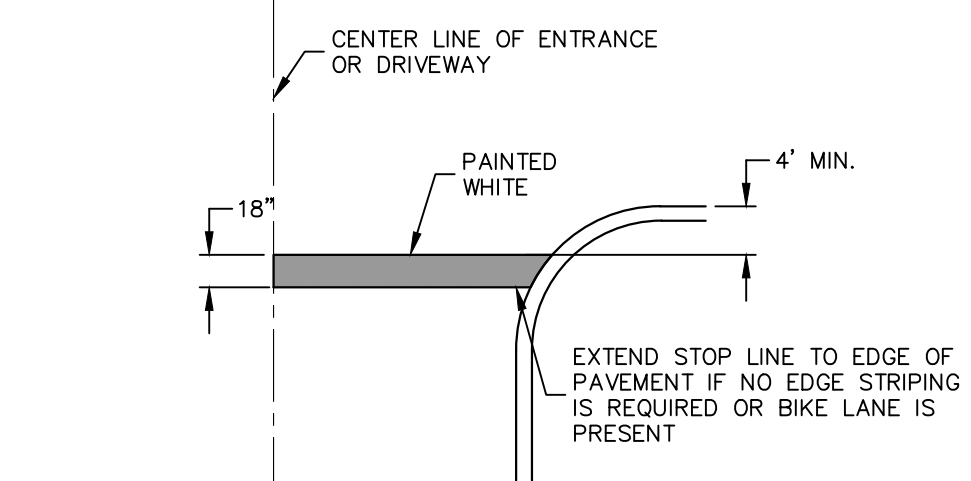
CONSTRUCTION SPECIFICATIONS:
 1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL, EITHER "T" OR "U" TYPE, OR HARDWOOD.
 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 14 GAUGE, 6" MAXIMUM MESH OPENING.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
 4. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
 5. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT THAT MEETS THE MINIMUM REQUIREMENTS SHOWN.
 6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

DETAIL NOTES:
 1. INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL ("THE BLUE BOOK").
 2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE, BUT AT LEAST 10 FEET FROM THE TOE OF A SLOPE STEEPER THAN 3:1. TO ALLOW FOR MAINTENANCE AND ROLL DOWN, THE AREA BEYOND THE FENCE MUST BE UNDISTURBED OR STABILIZED.
 3. THE TYPE OF SILT FENCE SPECIFIED FOR EACH LOCATION ON THE PLAN SHALL NOT EXCEED THE MAXIMUM SLOPE LENGTH AND MAXIMUM FENCE LENGTH REQUIREMENTS SHOWN IN THE TABLE BELOW. IF A TYPE SILT FENCE IS NOT SPECIFIED ON THE PLANS, THE CRITERIA FOR STANDARD SILT FENCE CAN BE APPLIED.
 4. SILT FENCE SHALL BE REMOVED AS SOON AS THE DISTURBED AREA HAS ACHIEVED FINAL STABILIZATION.

SLOPE	STEEPNESS	SLOPE LENGTH/FENCE LENGTH (FT.)		
		STANDARD	REINFORCED	SUPER
<2%	<50:1	300/1500	N/A	N/A
2-10%	50:1 TO 10:1	125/1000	250/2000	300/2500
10-20%	10:1 TO 5:1	100/750	150/1000	200/1000
20-33%	5:1 TO 3:1	60/500	80/750	100/1000
33-50%	3:1 TO 2:1	40/250	70/350	100/500
>50%	>2:1	20/125	30/175	50/250

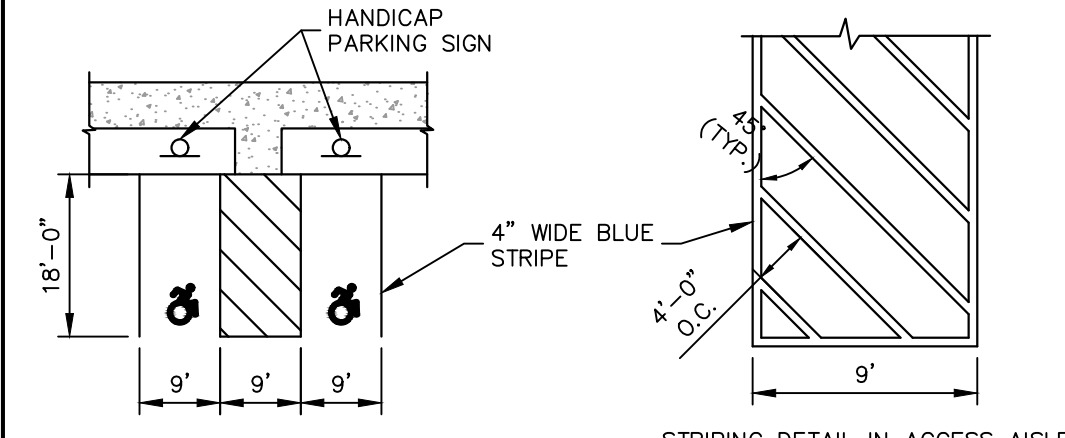
SILT FENCE

SCALE: NTS



STOP BAR STRIPING

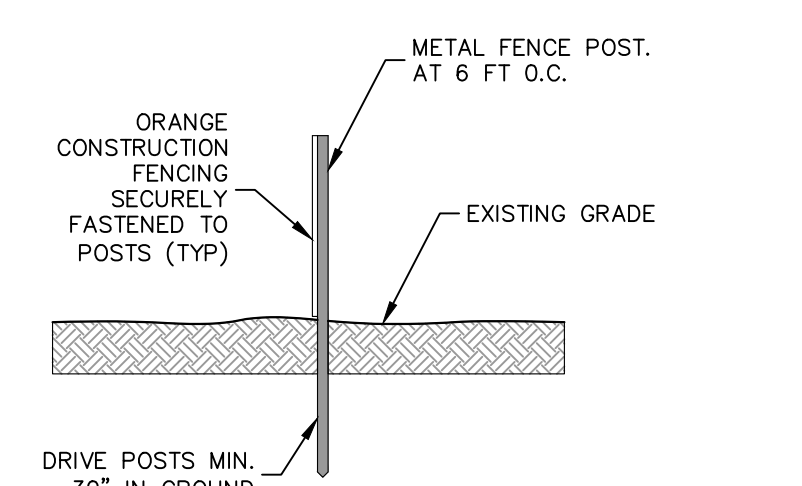
SCALE: NTS



NOTES:
 1. ALL STALLS SHALL BE A MINIMUM OF 8'-0"x18'-0".
 2. SPACES DESIGNATED AS BEING "VAN ACCESSIBLE" SHALL BE ADJACENT TO ACCESS AISLES WITH A MIN. WIDTH OF 8'-0".
 3. PROPOSED STRIPING SHALL BE BLUE IN COLOR.

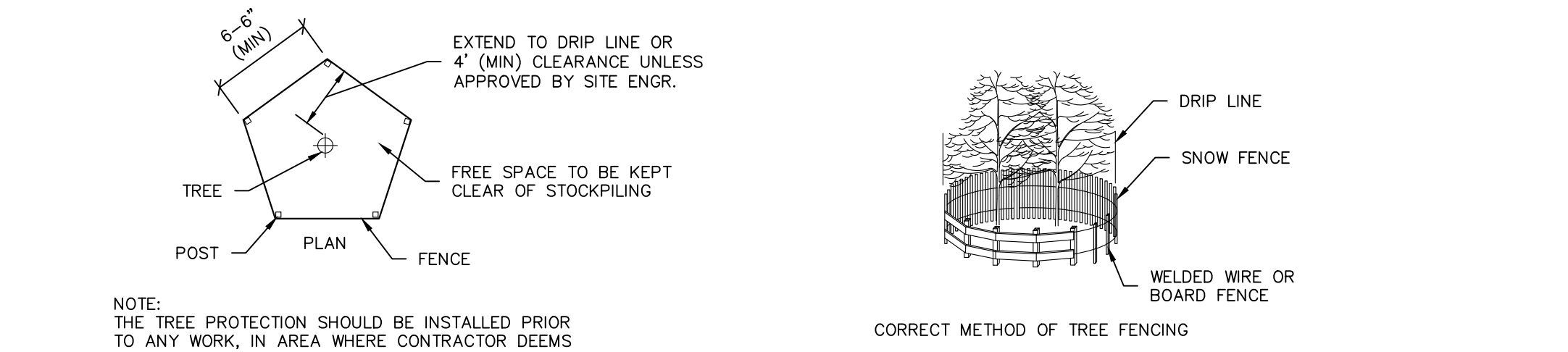
ADA PARKING SPACE STRIPING

SCALE: NTS



ORANGE CONSTRUCTION FENCE

SCALE: NTS



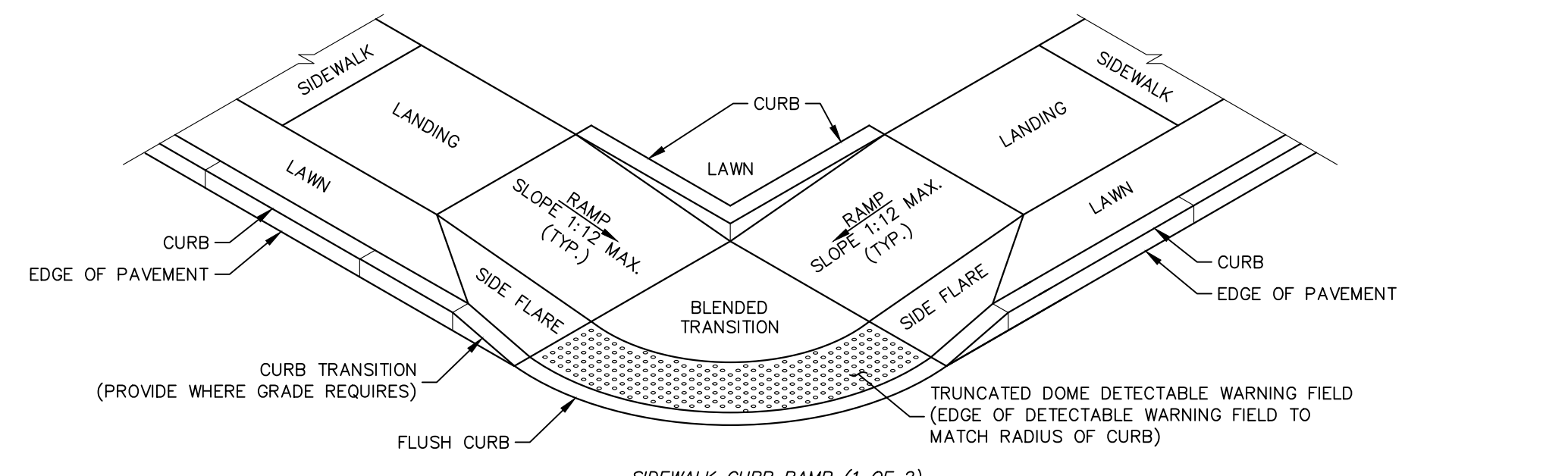
NOTE: THE TREE PROTECTION SHOULD BE INSTALLED PRIOR TO ANY WORK, IN AREA WHERE CONTRACTOR DEEMS NECESSARY, AND REMAIN UNTIL END OF ALL WORK.

SILT FENCE TO BE INSTALLED ON GRADE WITH NO TRENCH. MATTING TO BE INSTALLED OVER SILT FABRIC AND ANCHORED BY MIN 12" LANDSCAPE NAIL @ 1' O.C. SPACING. INSTALLATION TO BE PERFORMED BY A QUALIFIED ARBORIST AND SUPERVISED BY A CERTIFIED ARBORIST.

CONSTRUCTION SPECIFICATIONS:
 1. TREE PROTECTION AREA WILL BE DETERMINED AS PART OF THE PLAN REVIEW PROCESS. EXACT LOCATION, DEPTH AND METHODS OF ROOT PRUNING TO BE DETERMINED IN FIELD BY PROJECT FORESTER.
 2. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING.
 3. TRENCH SHOULD BE BACKFILLED IMMEDIATELY OR INCORPORATED WITH SILT FENCE INSTALLATION.
 4. ROOTS SHOULD BE SEVERED BY TRENCHER, VIBRATORY PLOW OR APPROVED EQUIVALENT. ROOTS OVER 1.5" DIAMETER SHOULD BE CLEANLY CUT BY HAND. ROOT PRUNING ADJACENT TO SPECIMEN TREES MAY REQUIRE SOIL REMOVAL BY SUPERSONIC AIR TOOL TO MINIMIZE TREE AND ROOT IMPACTS.

TREE VEGETATION PROTECTION BARRIER

SCALE: NTS



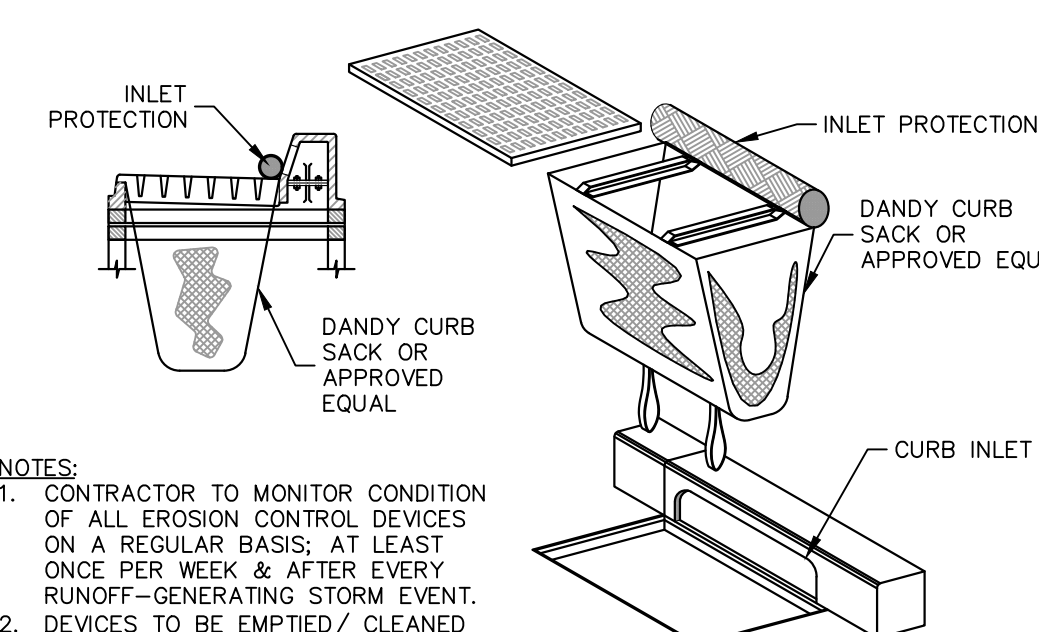
SIDEWALK CURB RAMP NOTES:
 1. THERE SHALL BE A LANDING AT THE TOP OF EACH CURB RAMP.
 2. LANDINGS SHALL HAVE A MINIMUM CLEAR DIMENSION OF 5 FEET BY 5 FEET SQUARE. THE MAXIMUM CROSS SLOPE AT LANDINGS IS 2 PERCENT IN ANY DIRECTION. LANDINGS MAY OVERLAP WITH ADJACENT LANDINGS OR A SINGLE LANDING MAY SERVE MULTIPLE CURB RAMP OR PARALLEL/PERPENDICULAR RAMP.
 3. THE MAXIMUM CROSS SLOPE OF CURB RAMP SHALL BE 2 PERCENT. CURB RAMP SURFACES SHALL GENERALLY LIE IN CONTINUOUS PLANES WITH A MINIMUM OF SURFACE WARP.
 4. THE RUNNING GRADE OF CURB RAMP SHOULD BE AS FLAT AS PRACTICABLE. THE MAXIMUM RUNNING GRADE OF ANY PORTION OF ANY CURB SHALL BE 1:12 (8.33%).
 5. CURB RAMP LOCATED WHERE PEDESTRIANS MAY WALK ACROSS THE CURB RAMP SHALL HAVE FLARED SIDES. THE LENGTH OF THE FLARES SHALL BE AT LEAST TEN (10) TIMES THE CURB HEIGHT, MEASURED ALONG THE CURB LINE. WHEN IMPRACTICABLE TO PROVIDE A LANDING THAT IS AT LEAST 5 FEET WIDE (MEASURED FROM THE TOP OF THE RAMP TO THE BACK OF THE SIDEWALK), THE LENGTH OF THE FLARES SHALL BE TWELVE (12) TIME THE CURB HEIGHT MEASURED ALONG THE CURB LINE.
 6. THE SURFACE OF ALL CURB RAMP SHALL BE STABLE, FIRM AND SLIP RESISTANT. A COARSE BROOM FINISH RUNNING PERPENDICULAR TO THE SLOPE IS RECOMMENDED ON CONCRETE RAMP SURFACES, EXCLUSIVE OF THE DETECTABLE WARNING FIELDS.
 7. RAMP TRANSITIONS BETWEEN WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES.
 8. COORDINATE ALL TRAFFIC CONTROL DEVICES, UTILITY LOCATIONS, SIGNS, STREET FURNITURE AND DRAINAGE TO ENSURE A CONTINUOUS PEDESTRIAN ACCESS ROUTE AT ALL CURB RAMP LOCATIONS. GUIDANCE FOR CROSSWALK MARKINGS AND TRAFFIC CONTROL DEVICES IS PROVIDED IN THE MUTCD. DRAINAGE GRATES AND UTILITY ACCESS COVERS ARE NOT ALLOWED IN RAMP WALKING SURFACES OR LANDINGS UNLESS APPROVE BY THE DESIGN ENGINEER.
 9. AT MARKED CROSSINGS, THE FULL WIDTH OF THE RAMP SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS. THE SIDES OF THE RAMP (THE FLARES) NEED NOT BE WITHIN THE WIDTH OF THE MARKINGS.
 10. DETAILS ILLUSTRATE THAT DETECTABLE WARNINGS ARE REQUIRED. SEE THE CURRENT DETECTABLE WARNING STANDARD DETAIL AND NOTES FOR SPECIFIC DETECTABLE WARNING REQUIREMENTS.
 11. SLOPES ON BLENDED TRANSITIONS SHALL NOT BE STEEPER THAN 2% (1 ON 50) IN ANY DIRECTION.
 12. REFER TO THE SIDEWALK DETAIL FOR REQUIRED CONCRETE STRENGTH.

SIDEWALK CURB RAMP

SCALE: NTS

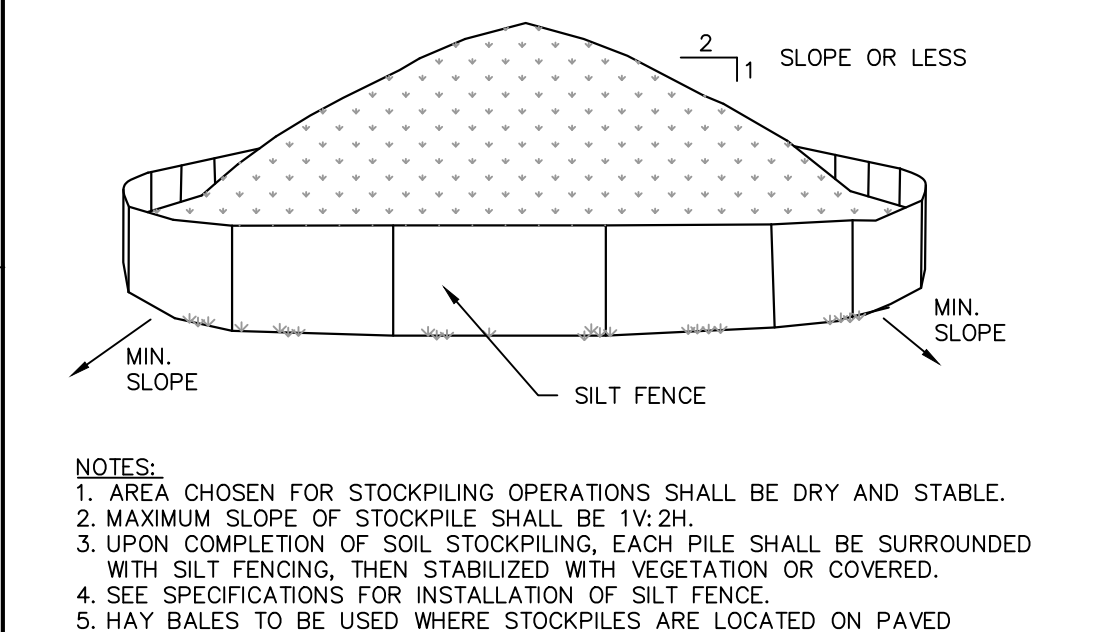
6-INCH CONCRETE CURB

SCALE: NTS



INLET PROTECTION - DANDY SACK

SCALE: NTS



TEMPORARY STOCKPILE

SCALE: NTS

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.



LANGAN

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

One North Broadway, Suite 910
White Plains, NY 10601

T: 914.323.7400 F: 914.323.7401 www.langan.com

Project

45 BEDFORD ROAD

WESTCHESTER COUNTY NEW YORK

Drawing Title

DETAILS (1 OF 3)

Project No.

190085001

Date

AUGUST 7, 2023

Drawn By

GN

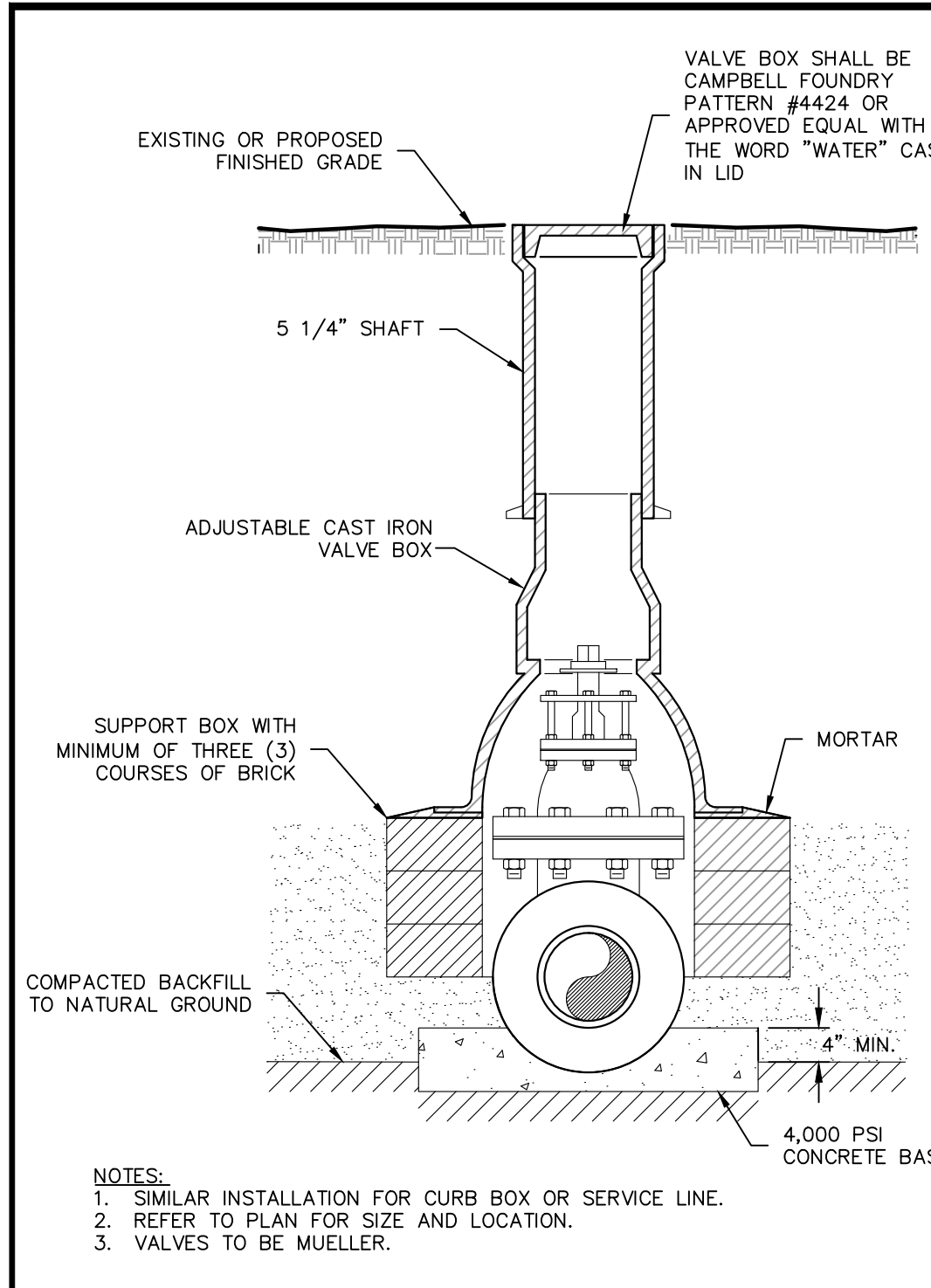
Checked By

MT

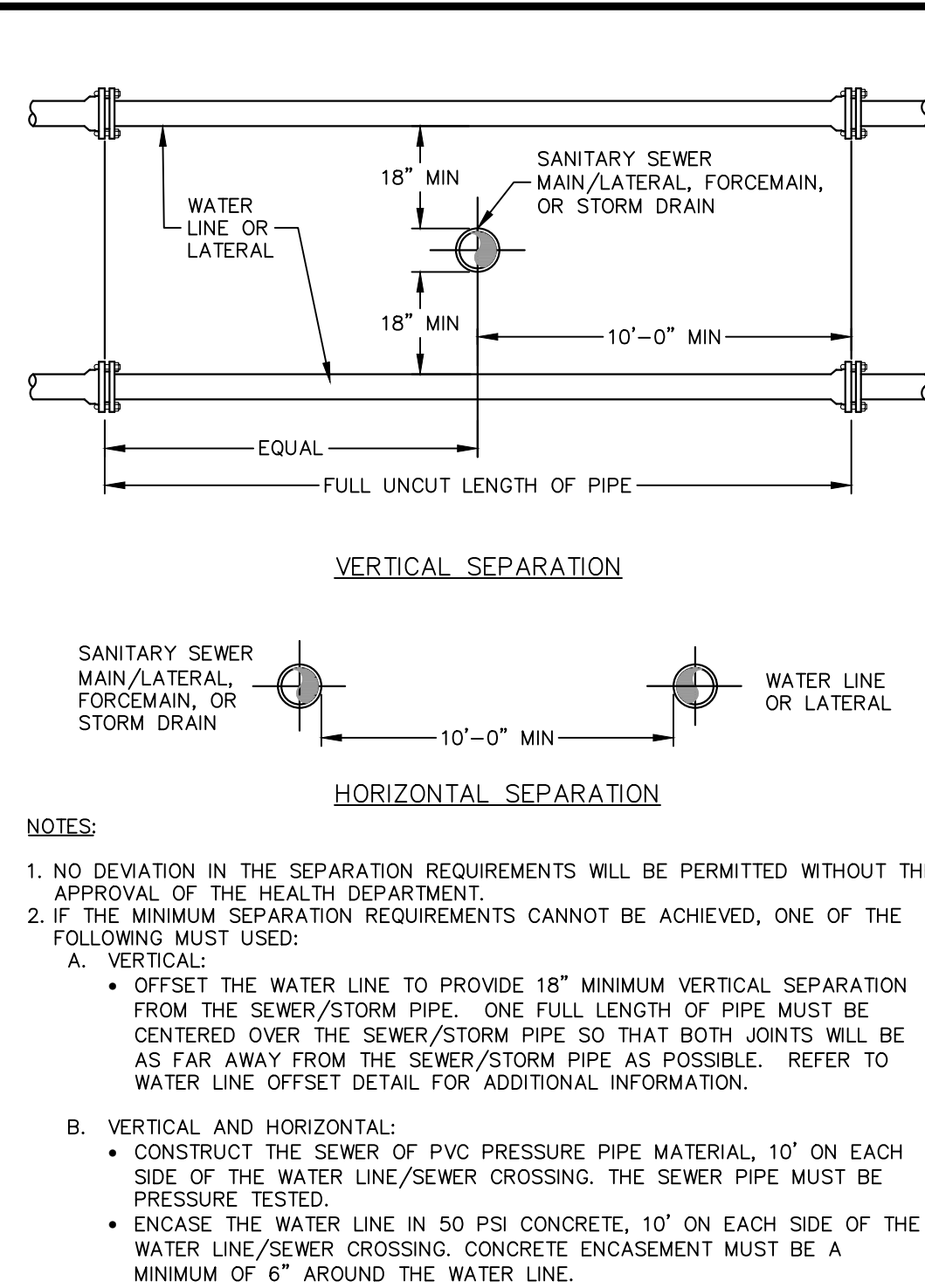
Drawing No.

CS501

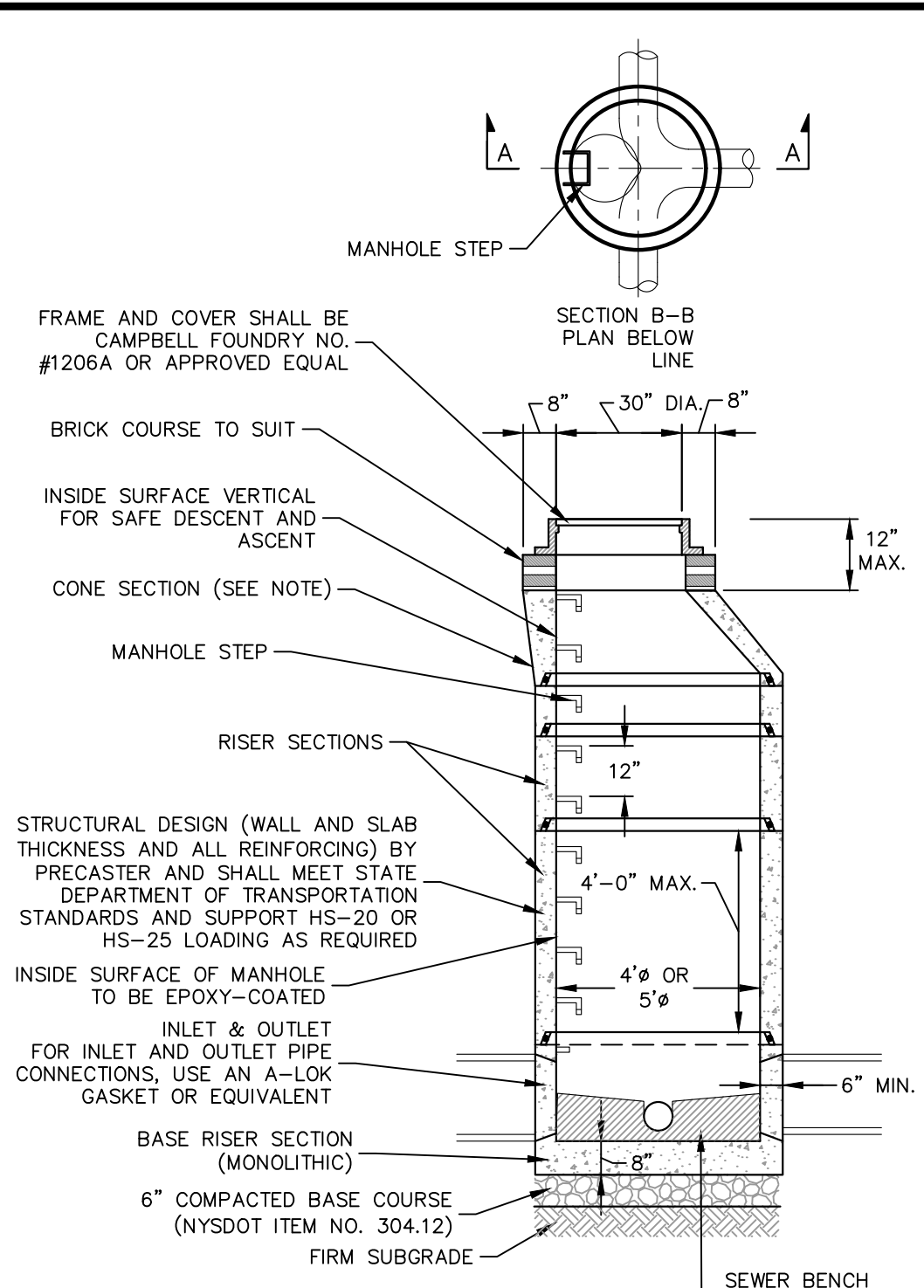
Sheet 10 of 16



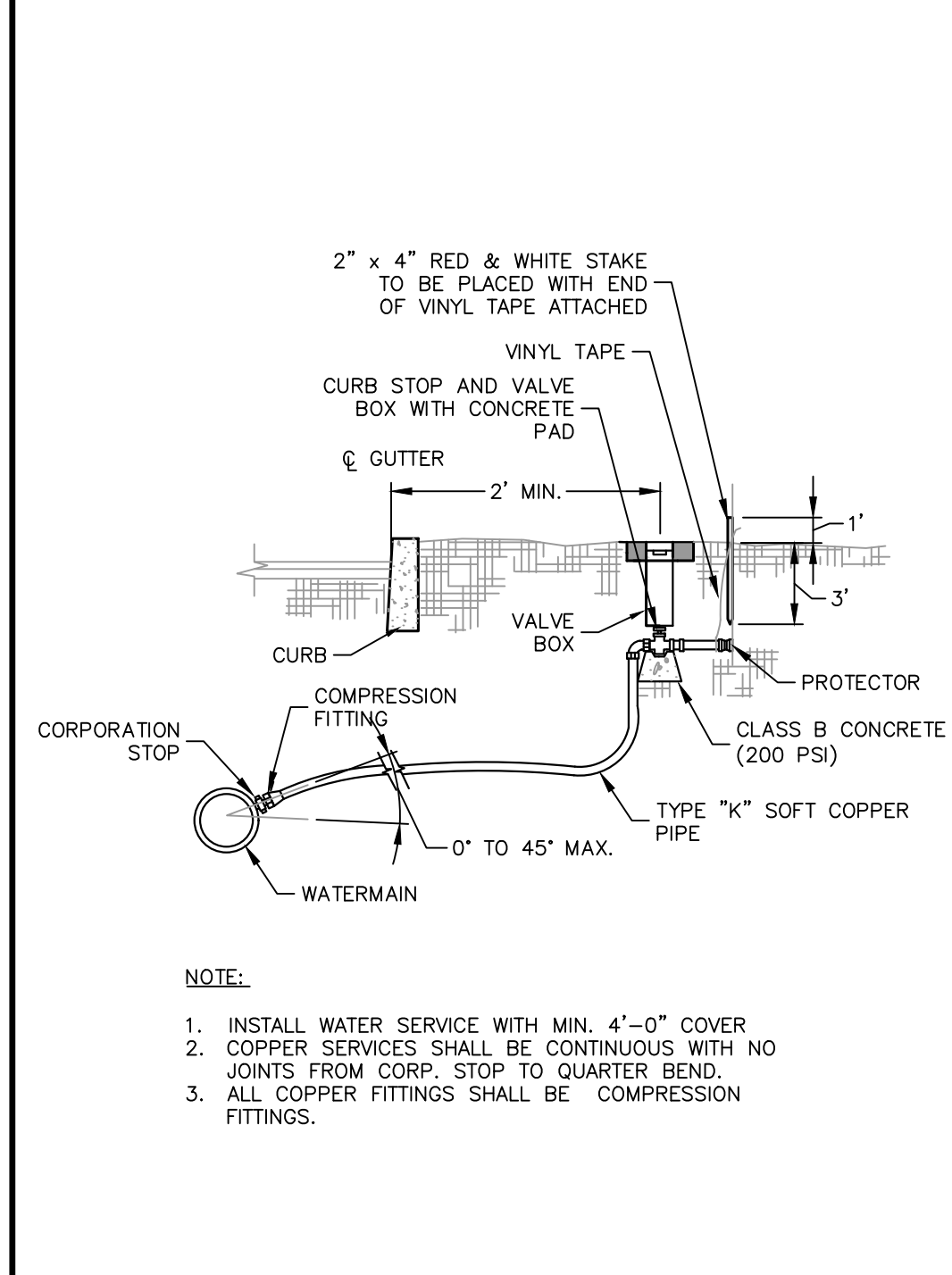
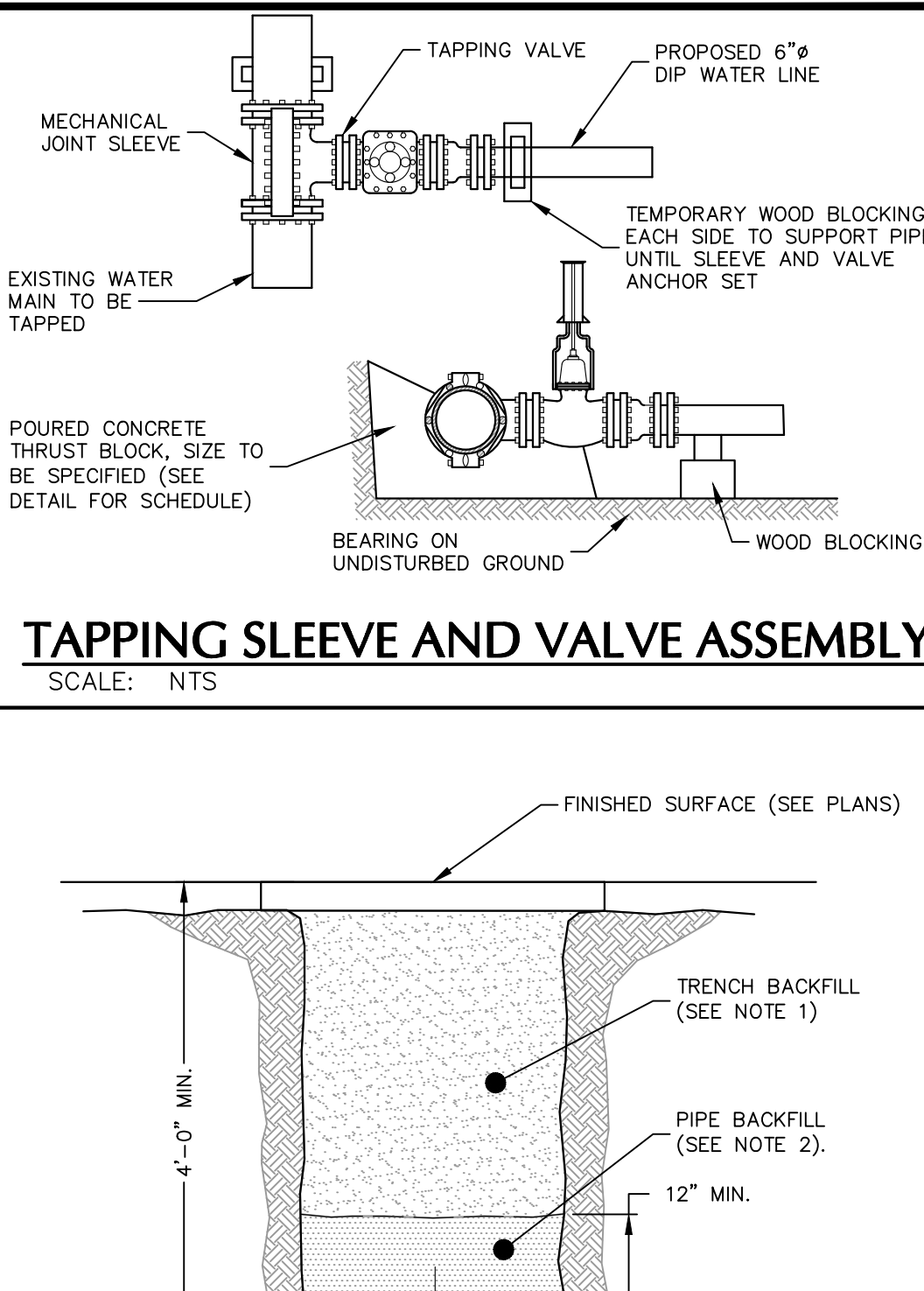
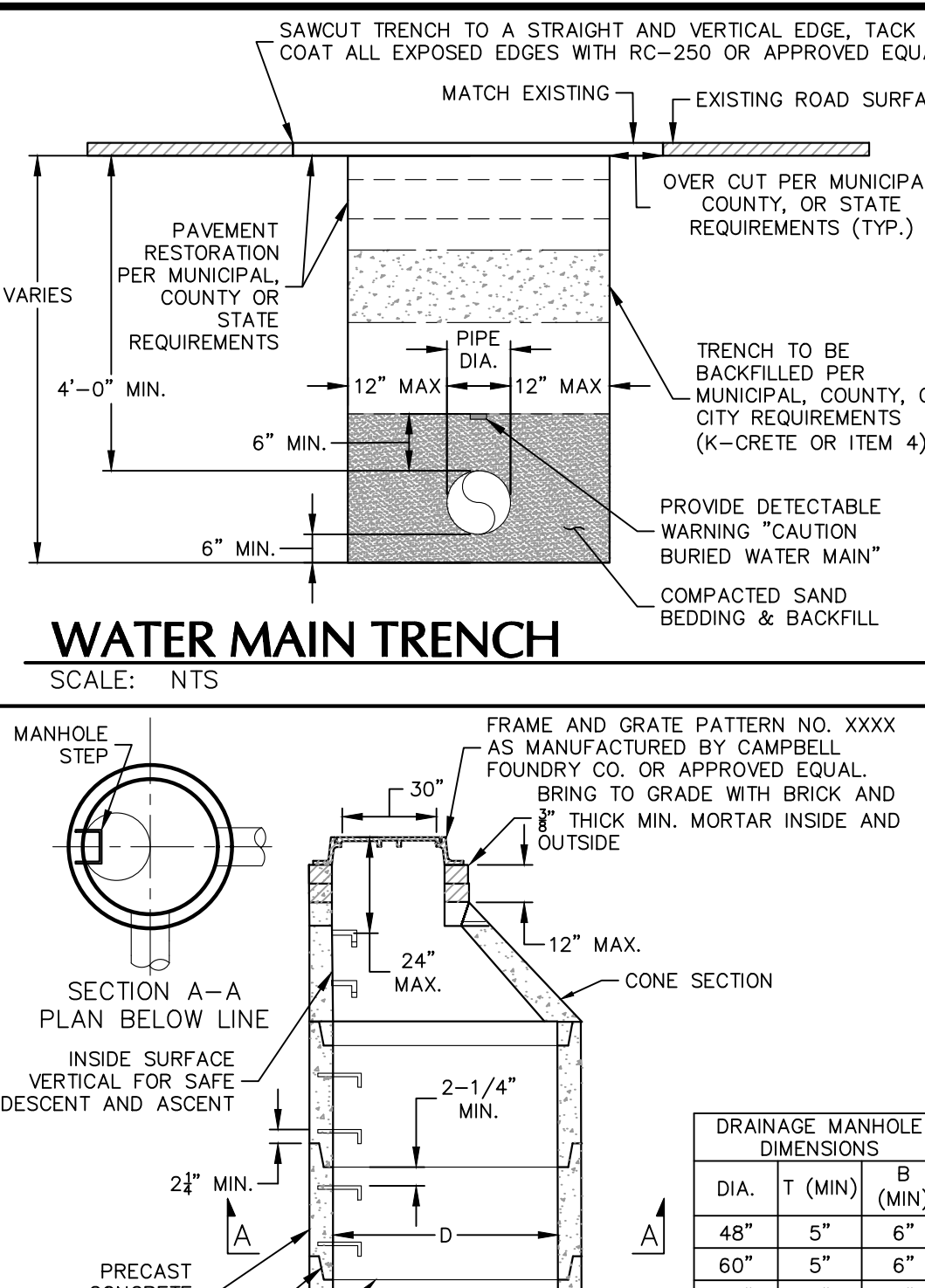
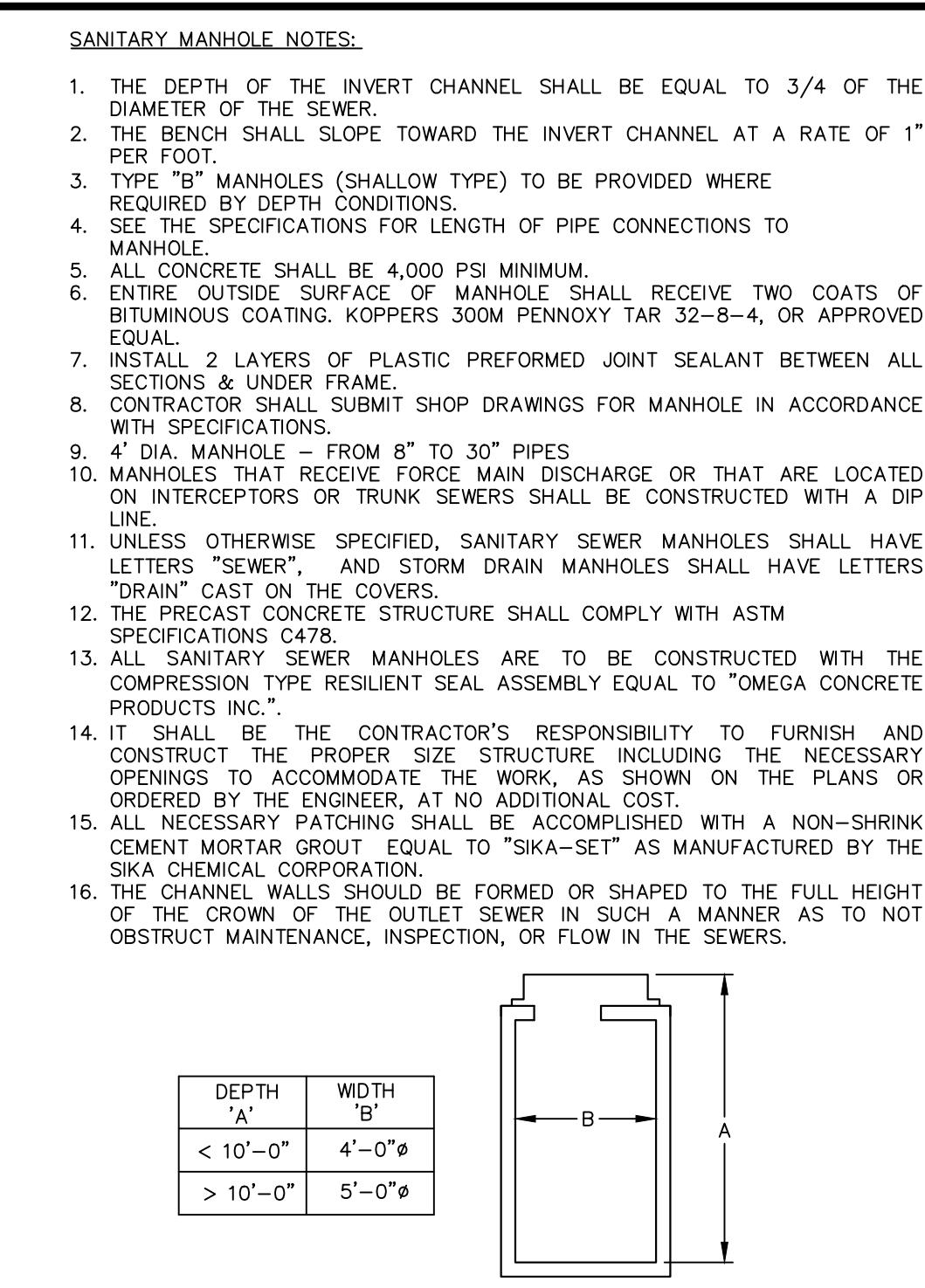
VALVE BOX
SCALE: NTS



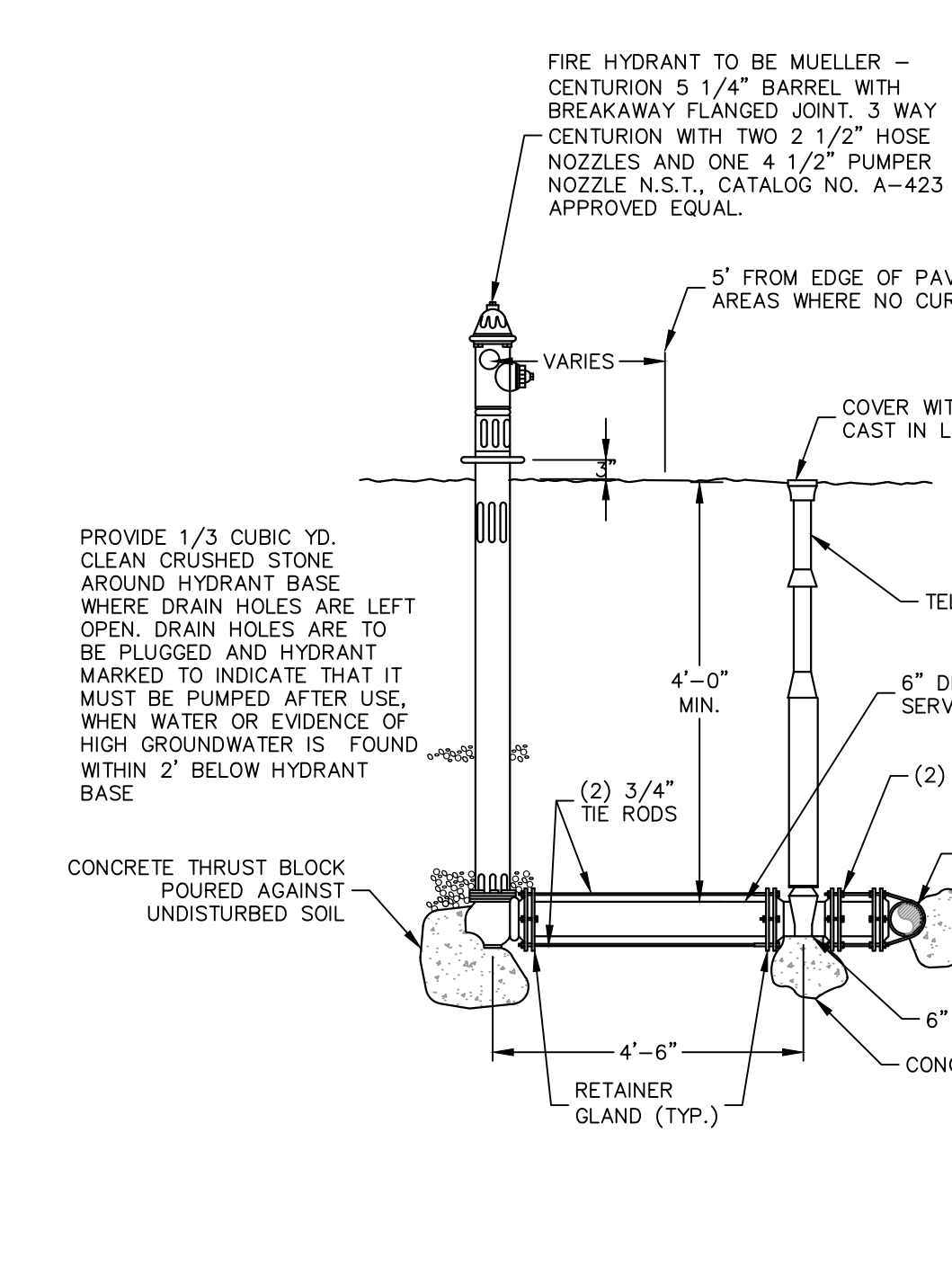
WATER LINE SEPARATION
SCALE: NTS



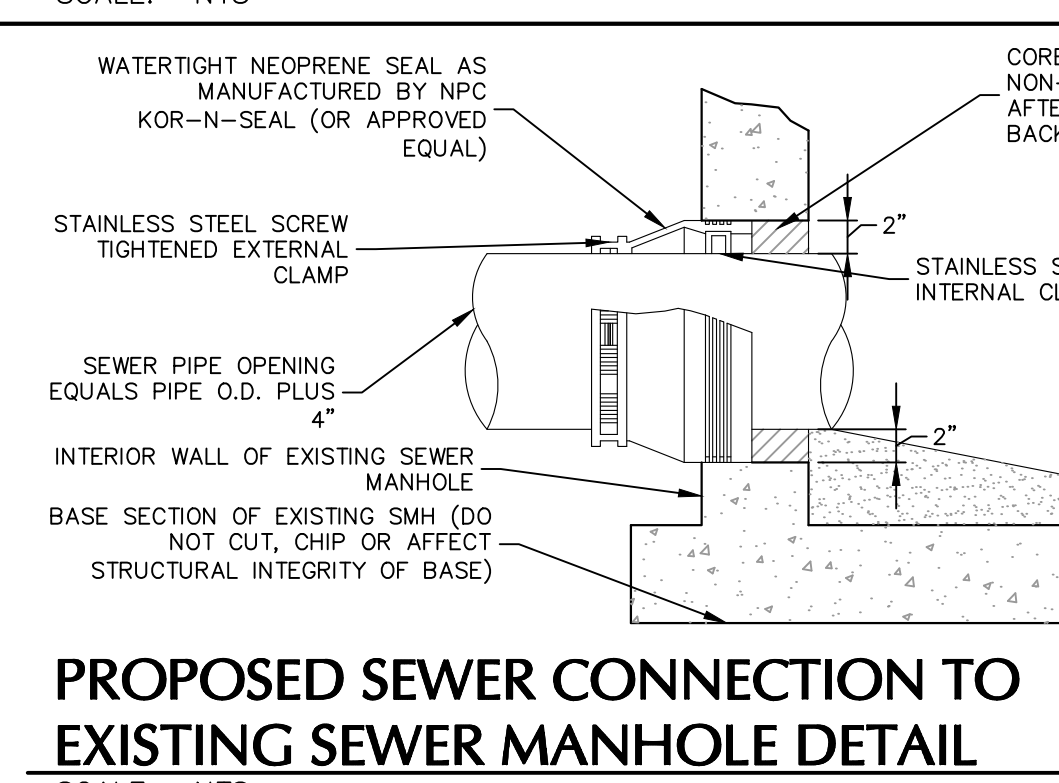
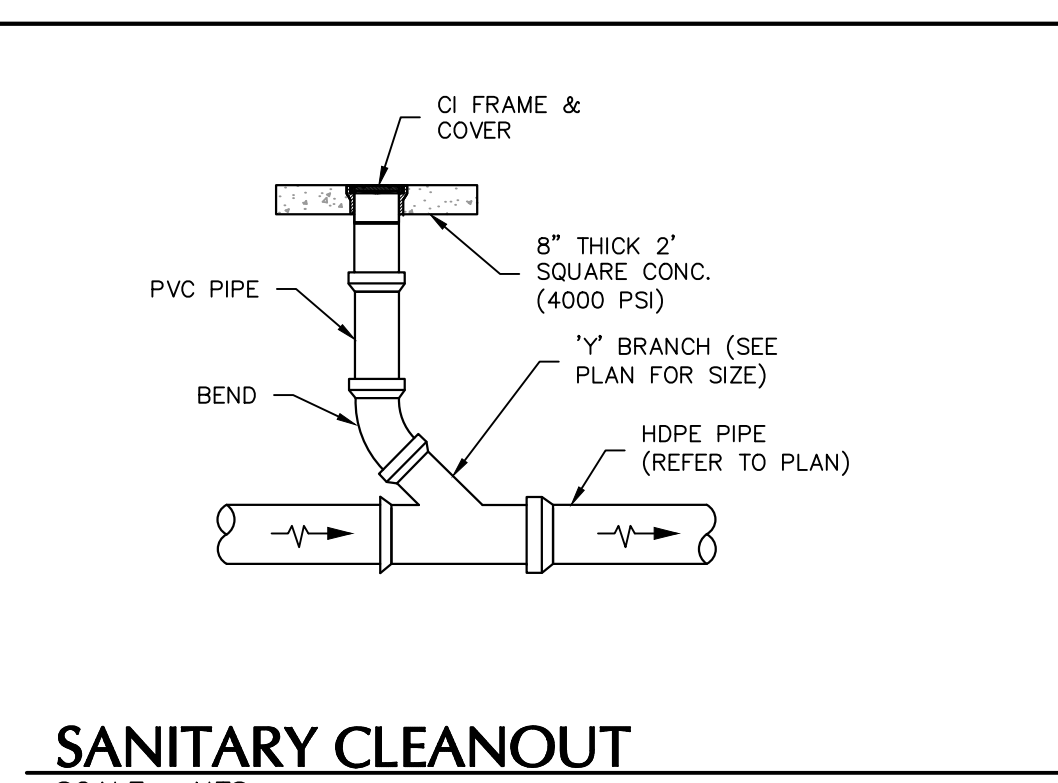
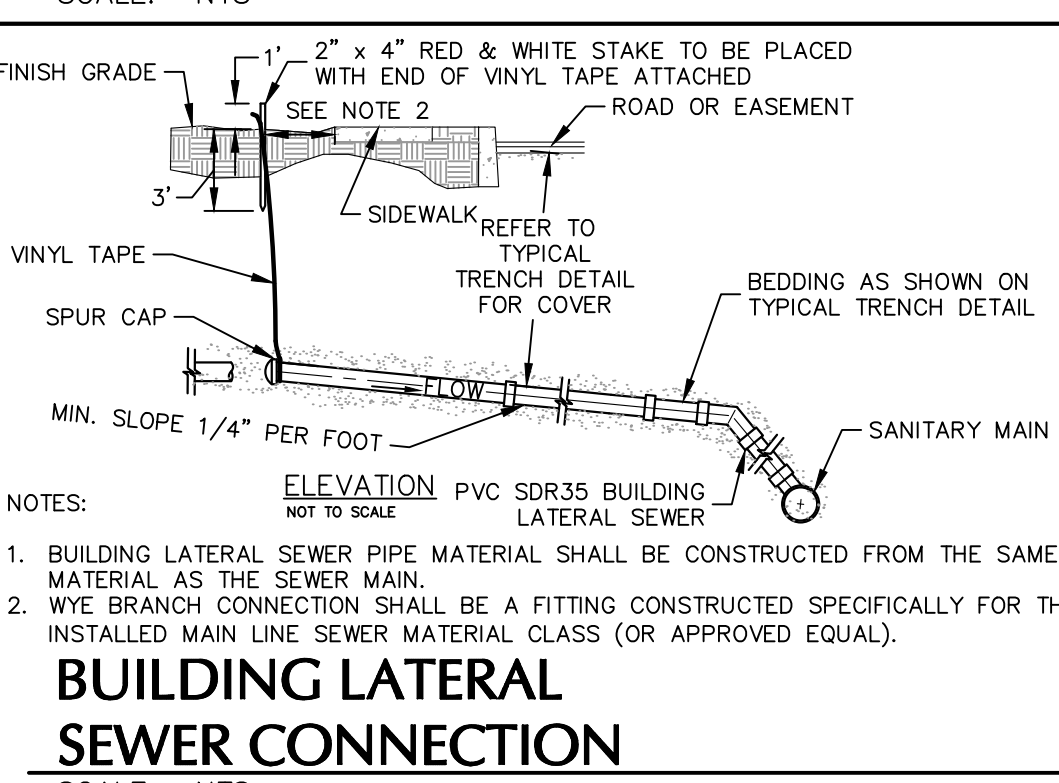
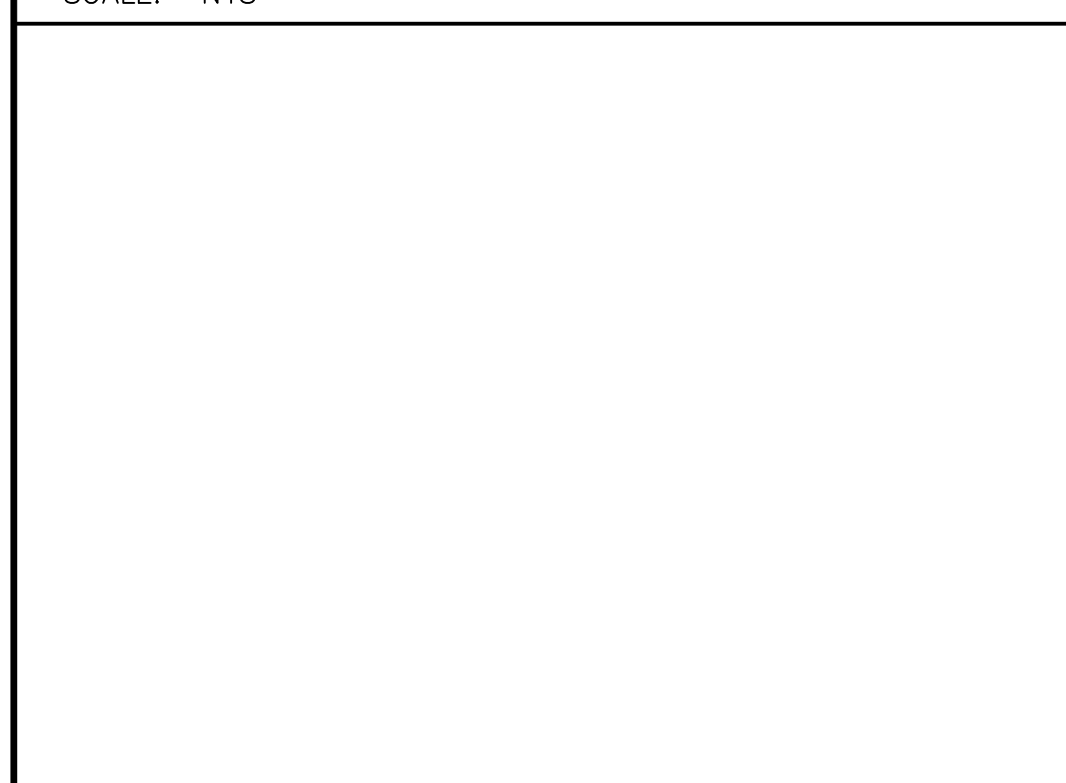
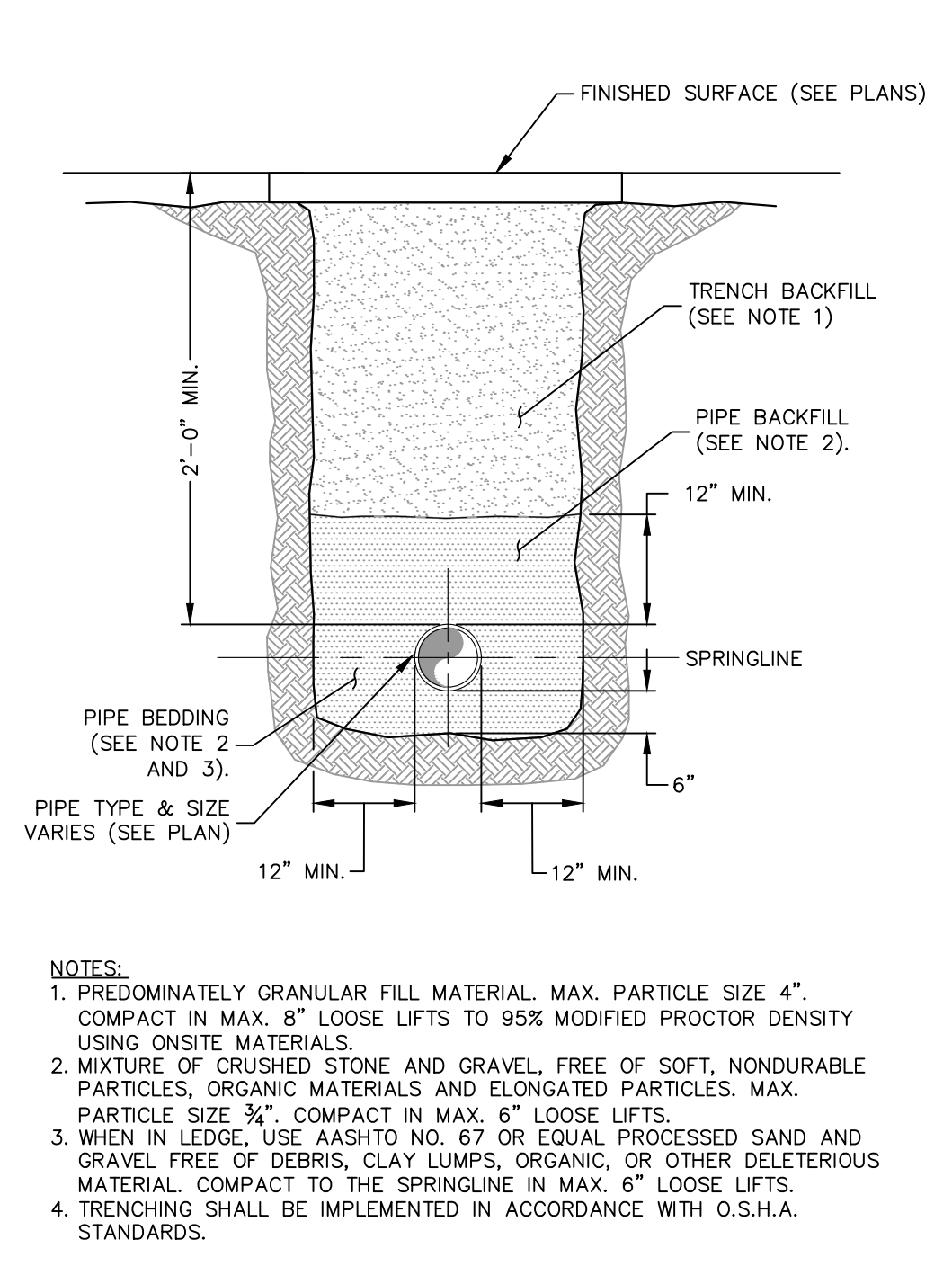
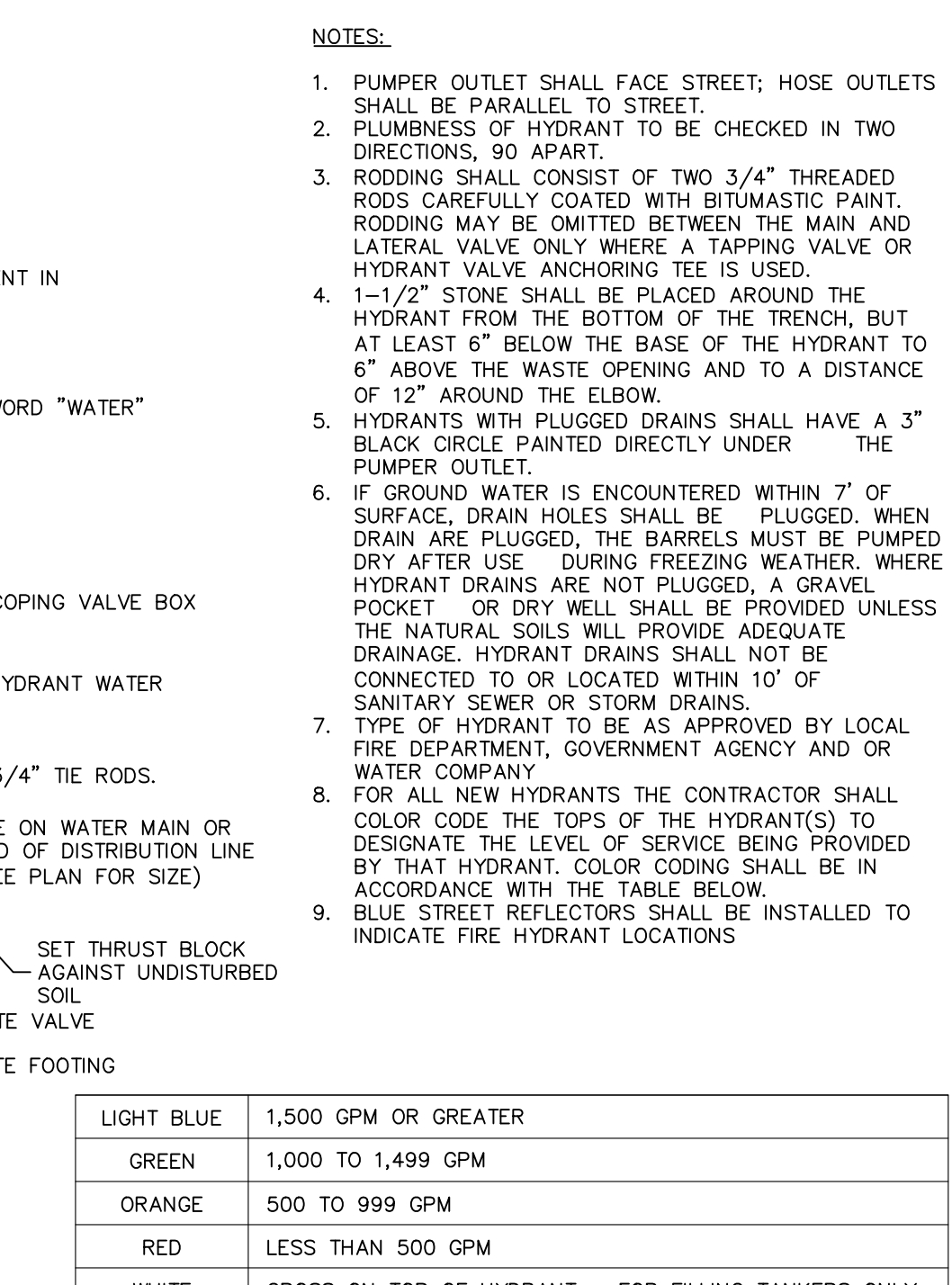
SANITARY MANHOLE
SCALE: NTS



WATER SERVICE LINE
SCALE: NTS



FIRE HYDRANT
SCALE: NTS



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.	Sign	Date
08/07/2023				
	Revisions			

STATE OF NEW YORK
MICHAEL J. FINN
Professional Engineer
081473

PROFESSIONAL ENGINEER NY Lic. No. 081473-1

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

One North Broadway, Suite 910
White Plains, NY 10601

T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
ARMONK
WESTCHESTER COUNTY
NEW YORK

Drawing Title
DETAILS (2 OF 3)

Project No.
190085001

Date
AUGUST 7, 2023

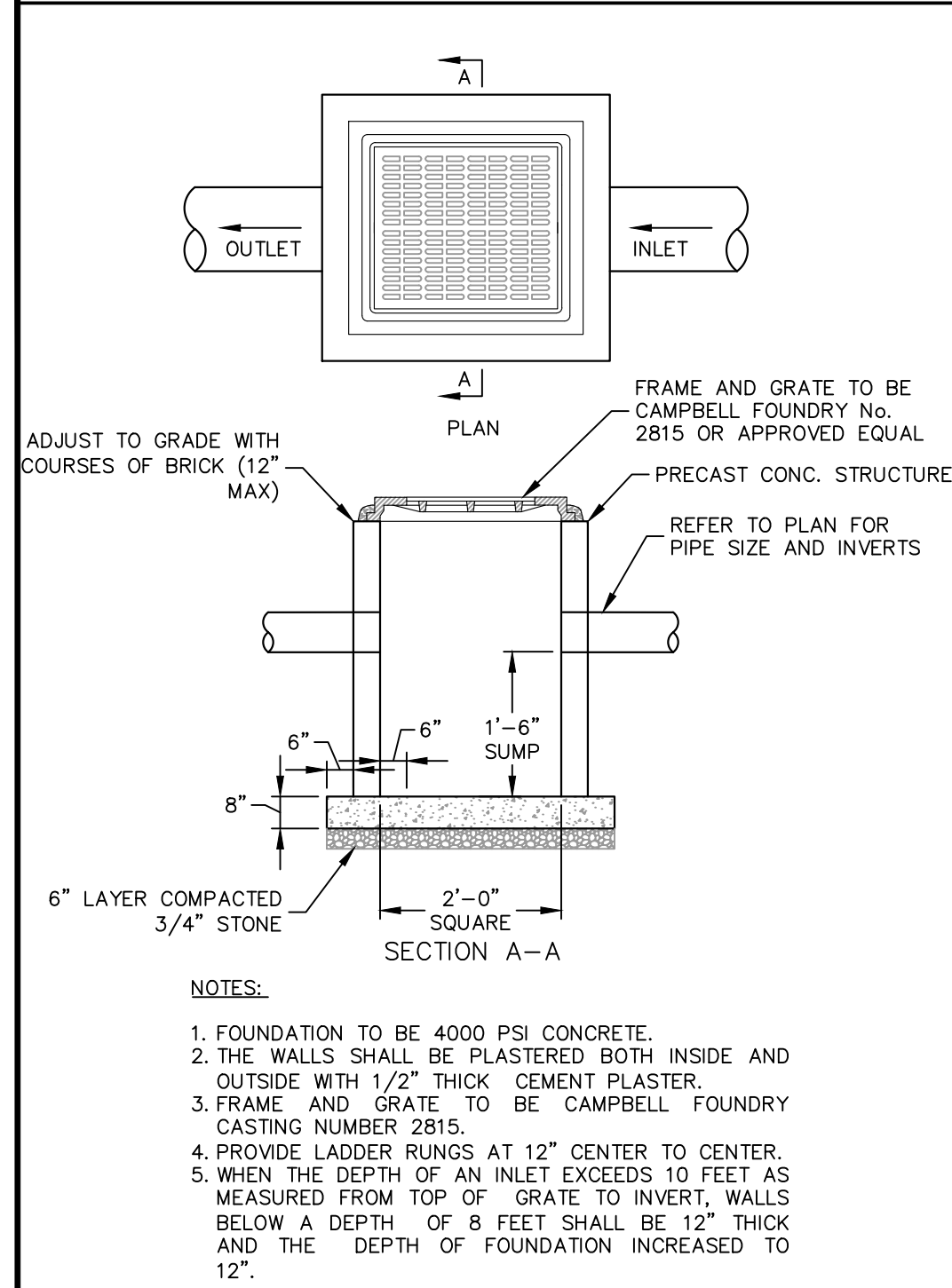
Drawn By
GN

Checked By
MT

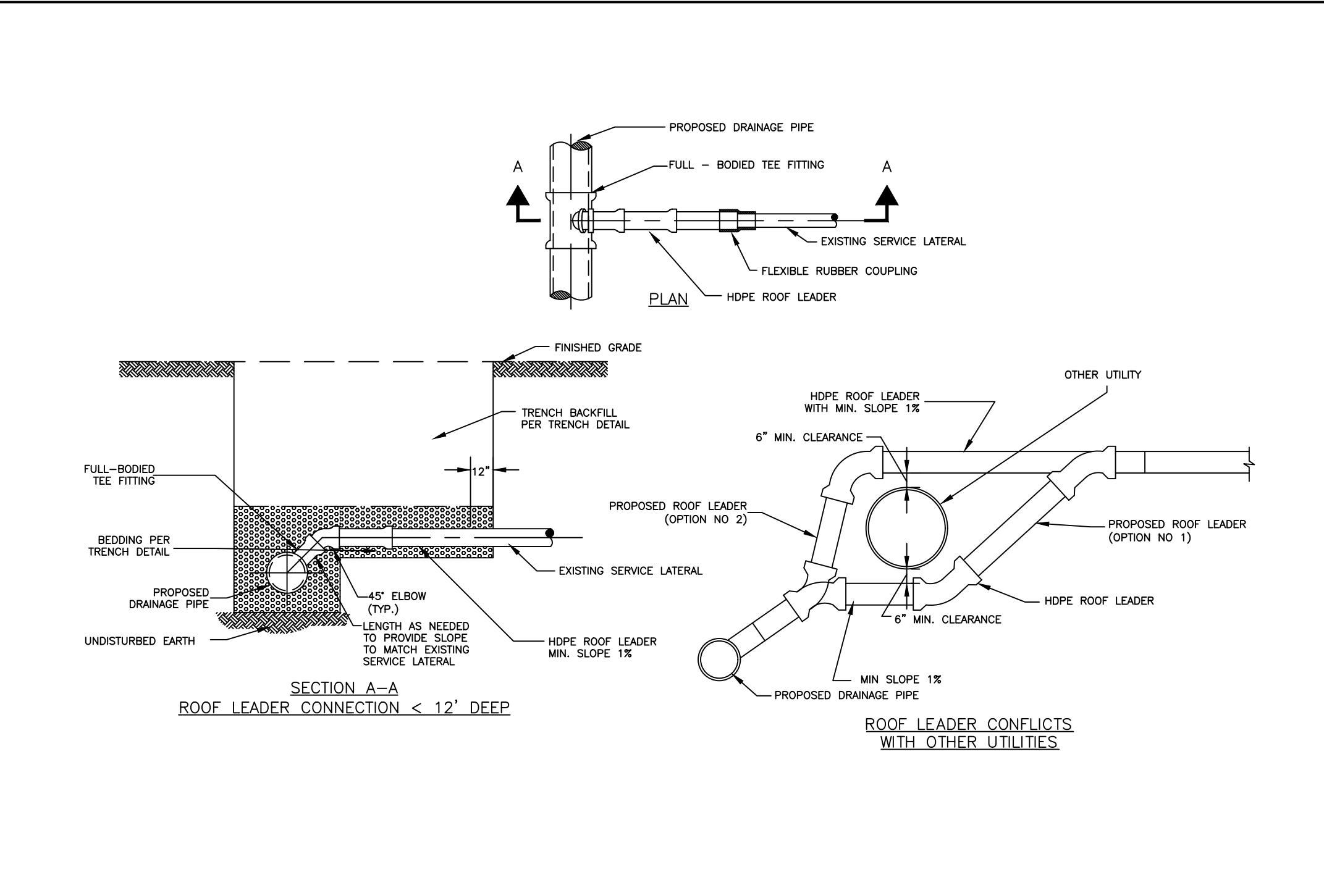
Drawing No.
CS502

Sheet 11 of 16

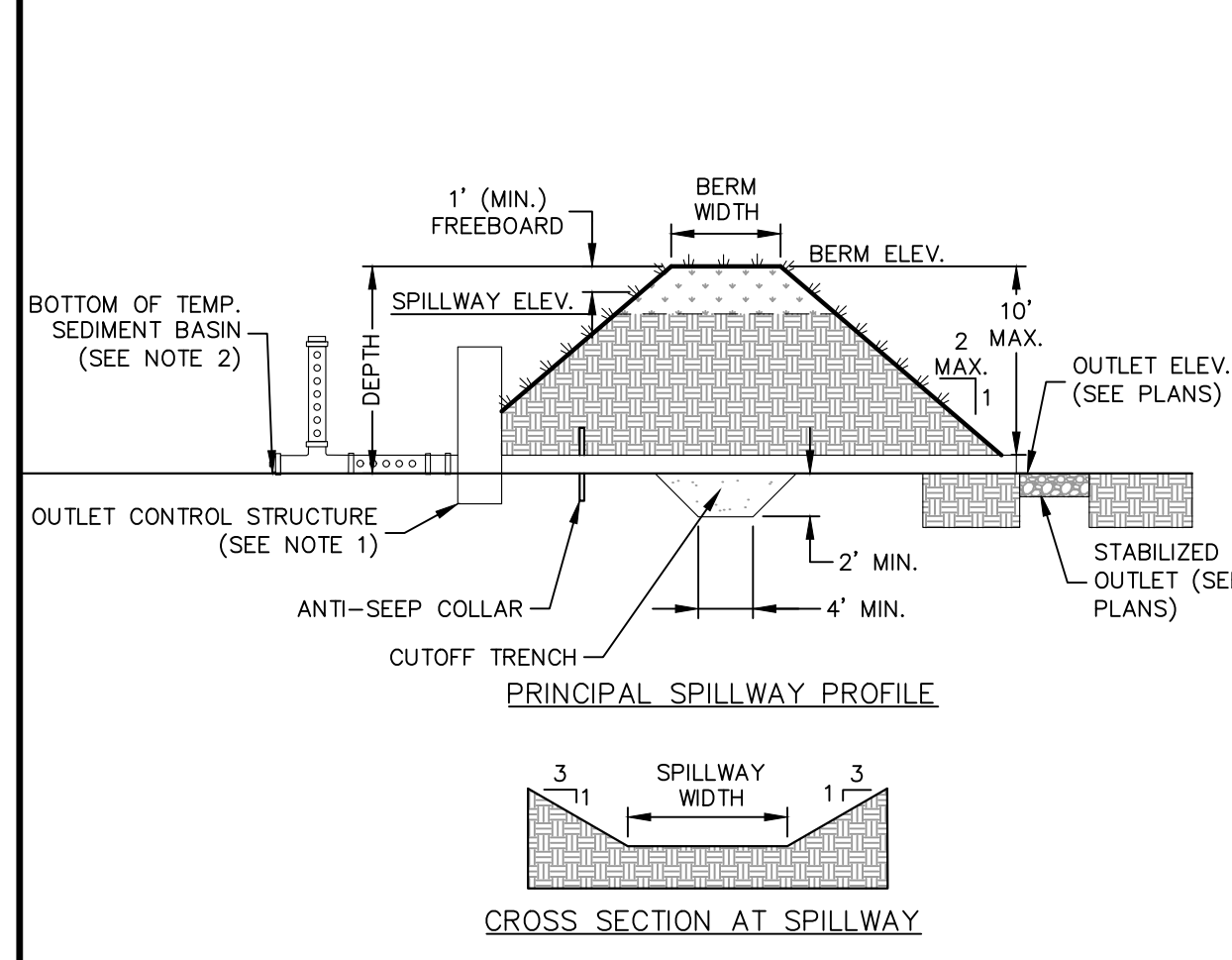
LANEAV
Project No. 190085001
Date: 8/7/2023 Time: 10:50 User: amlu Style Table: Langan.stb Layout: Layout1 Document Code: 190085001-0301-CS501-0102



YARD DRAIN
SCALE: NTS



ROOF LEADER CONNECTION
SCALE: NTS

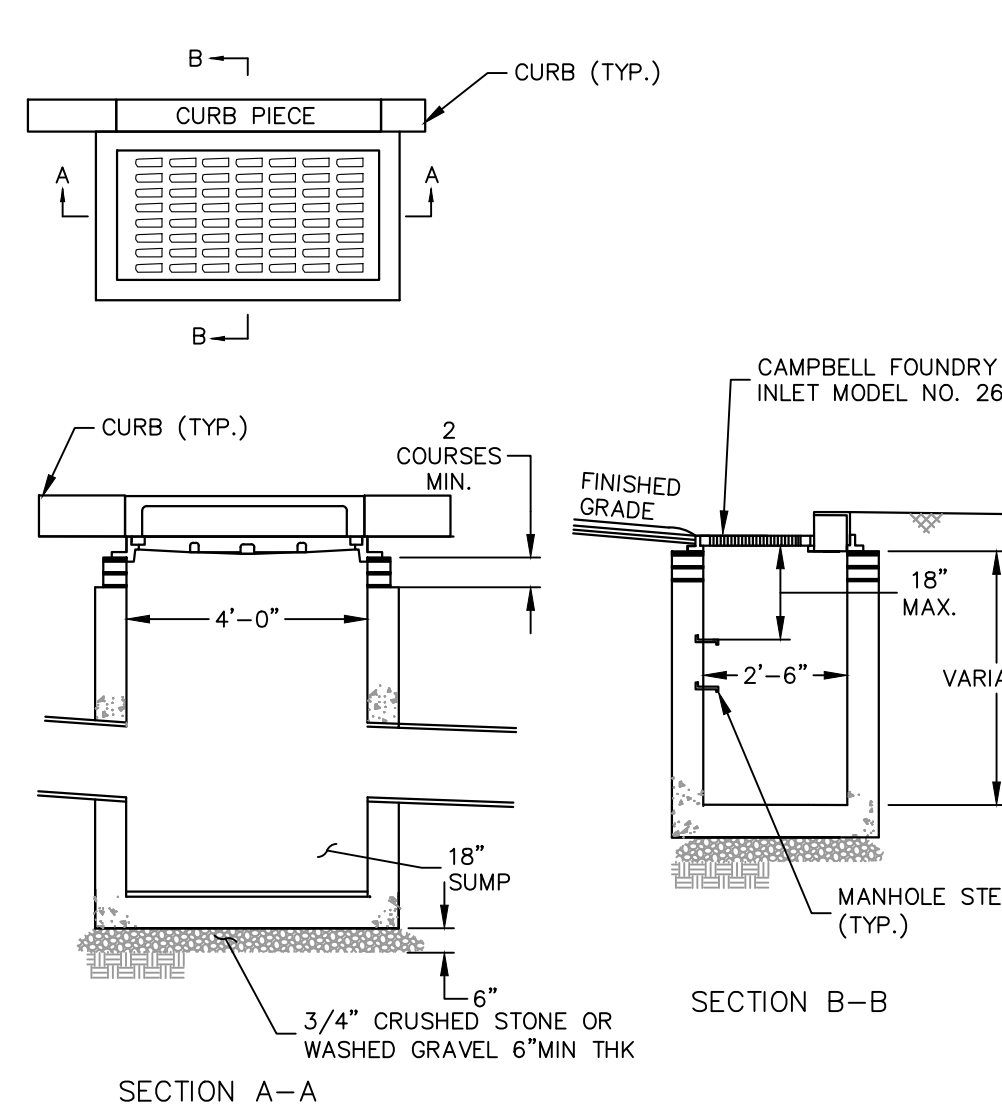


NOTES:

- INSTALL OUTLET CONTROL STRUCTURE, BOARD UP ORIFICES, SLOTS, AND TOP OF STRUCTURE.
- TEMPORARY SEDIMENT BASIN TO BE EXCAVATED TO THE TOP OF THE GRAVEL LAYER OF THE BIORETENTION AREA AND AQUATIC BENCH OF THE STORMWATER POND. SOIL RESTORATION TO BE PERFORMED AS NECESSARY. SOILS TO BE RESTORED SHALL BE AERATED. AERATION INCLUDES THE USE OF MACHINES SUCH AS TRACTOR-DRAWN IMPLEMENTS WITH COULTERS MAKING A NARROW SLIT IN THE SOILS, A ROLLER WITH MAHY SPIKES MAKING INDENTATION IN THE SOILS, OR PRONGS WHICH FUNCTION LIKE A MINI-SUBSOILER.
- ONCE SITE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, THE TEMPORARY SEDIMENT BASIN SHALL BE CLEANED AND EXCAVATED FOR THE INSTALLATION OF THE BIORETENTION AREAS AND STORMWATER POND. ALL ACCUMULATED SEDIMENT WITHIN THE TEMPORARY SEDIMENT BASIN SHALL BE REMOVED.
- SEE SEDIMENT BASIN DEWATERING STRUCTURE FOR ADDITIONAL INFORMATION ON DEWATERING THE TEMPORARY SEDIMENT BASIN.

LOCATION	DRAINAGE AREA (AC)	VOLUME (CF)	DEPTH (FT)	SURFACE AREA (SF)	BASE BOTTOM ELEV (FT)	BERM WIDTH (FT)	BERM ELEV (FT)	SPILLWAY ELEV (FT)	SPILLWAY WIDTH (FT)	OUTLET DIA. (IN)	BASE CLEANOUT ELEV (FT)
BIORETENTION B1a	6.4	67,281	4.25	29,535	422.25	10	427.5	426.5	10	30	424.0
BIORETENTION B1b	10.9	21,000	4.25	27,055	422.25	10	427.5	426.5	10	30	424.0

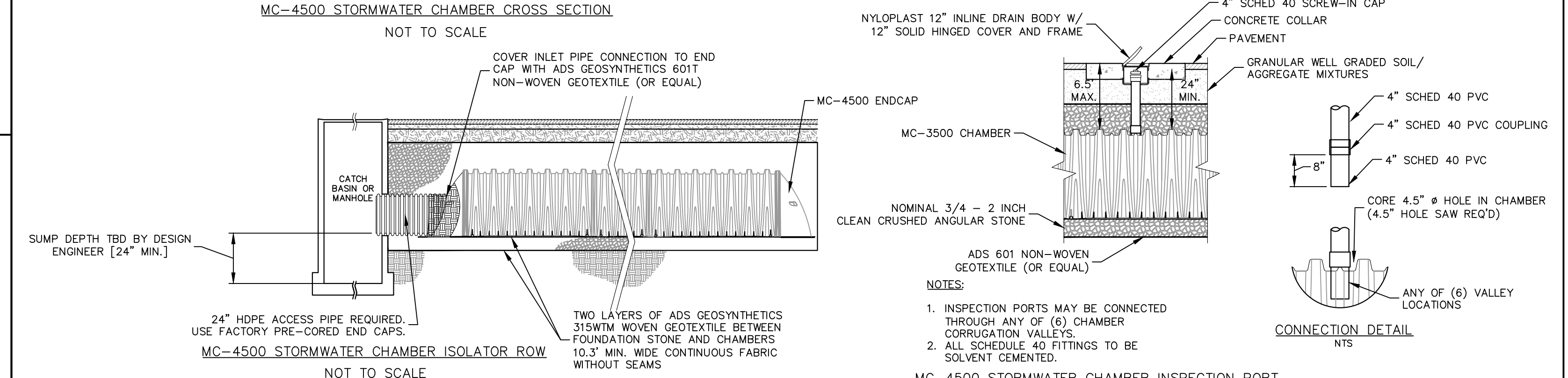
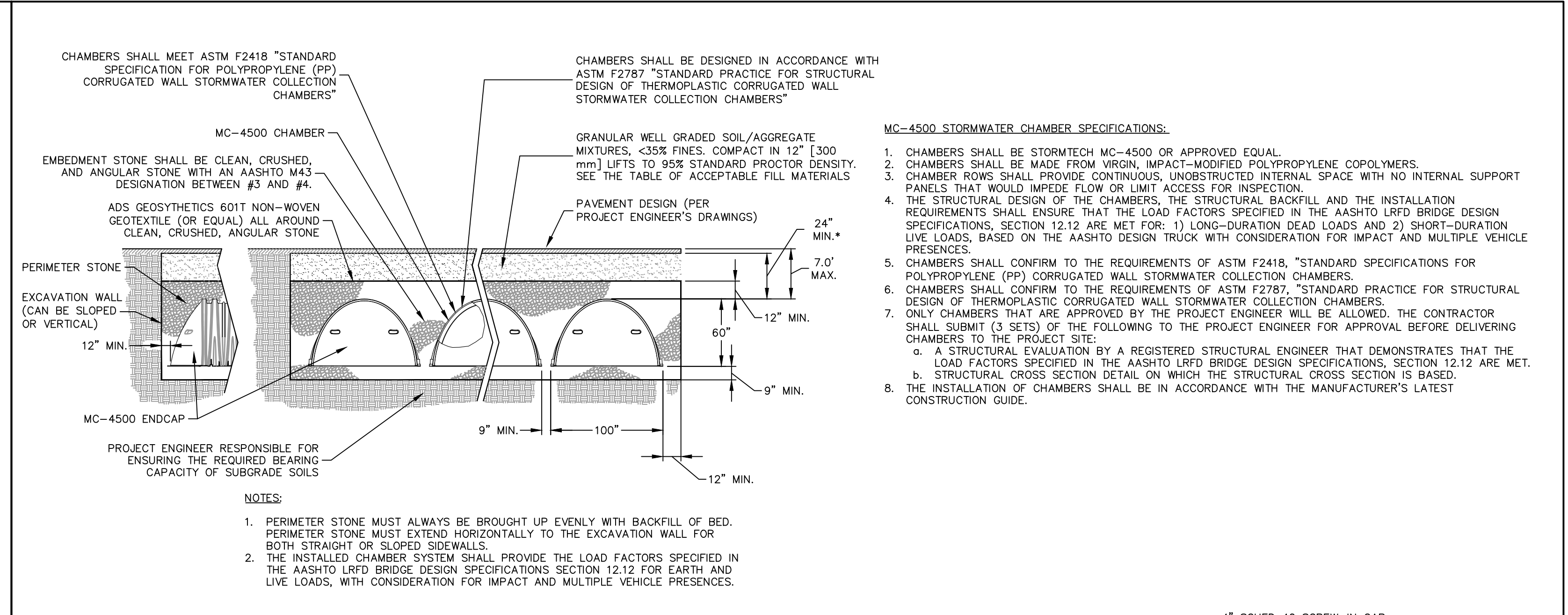
TEMPORARY SEDIMENT TRAP (USING OUTLET CONTROL STRUCTURES)
SCALE: NTS



NOTES:

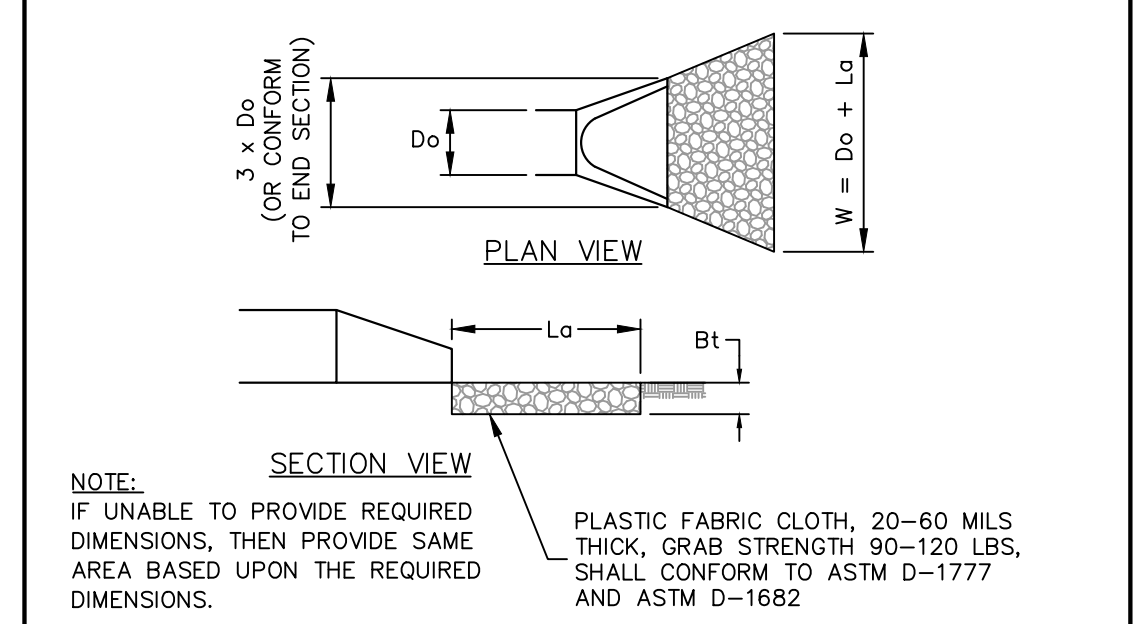
- THE CONTRACTOR SHALL SUBMIT SHOP DWGS. FOR EACH STRUCTURE FOR THE ENGINEER'S APPROVAL PRIOR TO FABRICATION.
- STRUCTURE SHALL BE CERTIFIED AS CONFORMING TO ASTM-C913 LATEST REVISION.
- STEPS NOT REQUIRED FOR STRUCTURES LESS THAN 4' DEEP.
- STRUCTURAL DESIGN (WALL AND SLAB THICKNESS AND ALL REINFORCING) BY PRECASTER AND SHALL MEET STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SUPPORT HS-20 LOADING AS REQUIRED.

CATCH BASIN
SCALE: NTS

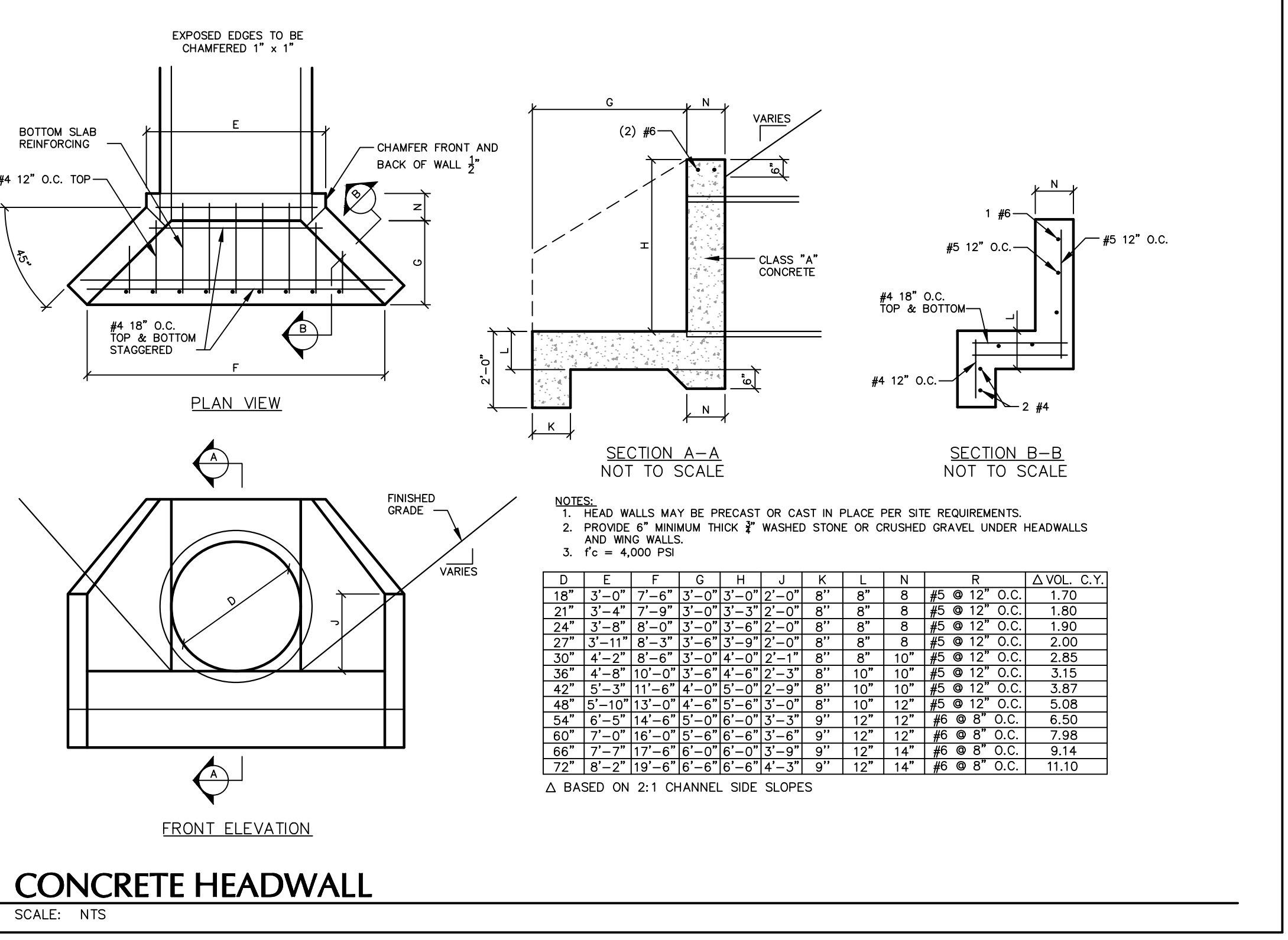


MC-4500 STORMWATER CHAMBER ISOLATOR ROW
SCALE: NTS

STORMTECH MC-4500 STORMWATER CHAMBER
SCALE: NTS



RIP RAP OUTLET PROTECTION
SCALE: NTS



CONCRETE HEADWALL
SCALE: NTS

NOTES:

- HEAD WALLS MAY BE PRECAST OR CAST IN PLACE PER SITE REQUIREMENTS.
- PROVIDE 6" MINIMUM THICK 2" WASHED STONE OR CRUSHED GRAVEL UNDER HEADWALLS AND WING WALLS.
- f_c = 4,000 PSI

D	E	F	G	H	J	K	L	N	R	Δ VOL. C.Y.
18"	3'-0"	7'-6"	3'-0"	3'-0"	2'-0"	8"	8"	8"	#5 @ 12" O.C.	1.70
21"	3'-4"	7'-9"	3'-0"	3'-0"	2'-0"	8"	8"	8"	#5 @ 12" O.C.	1.80
24"	3'-8"	8'-0"	3'-0"	3'-0"	2'-0"	8"	8"	8"	#5 @ 12" O.C.	1.90
27"	3'-11"	8'-3"	3'-6"	3'-6"	2'-0"	8"	8"	8"	#5 @ 12" O.C.	2.00
30"	4'-2"	8'-6"	3'-0"	4'-0"	2'-1"	8"	8"	10"	#5 @ 12" O.C.	2.85
36"	4'-8"	10'-0"	3'-0"	4'-0"	2'-3"	8"	10"	10"	#5 @ 12" O.C.	3.15
42"	5'-3"	11'-6"	4'-0"	5'-0"	2'-6"	8"	10"	10"	#5 @ 12" O.C.	3.87
48"	5'-10"	13'-0"	4'-6"	5'-6"	3'-0"	8"	10"	12"	#5 @ 12" O.C.	5.08
54"	6'-5"	14'-6"	5'-0"	6'-0"	3'-3"	9"	12"	12"	#6 @ 8" O.C.	6.50
60"	7'-0"	16'-0"	5'-6"	6'-6"	3'-6"	9"	12"	12"	#6 @ 8" O.C.	7.98
66"	7'-7"	17'-6"	6'-0"	6'-0"	3'-9"	9"	12"	14"	#6 @ 8" O.C.	9.14
72"	8'-2"	19'-6"	6'-6"	6'-6"	4'-3"	9"	12"	14"	#6 @ 8" O.C.	11.10

Δ BASED ON 2:1 CHANNEL SIDE SLOPES

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
08/07/2023		

STATE OF NEW YORK
MICHAEL J. FINN
Professional Engineer
081473
PROFESSIONAL ENGINEER NY Lic. No. 081473-1

LANGAN
Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, NY 10601
T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
WESTCHESTER COUNTY NEW YORK

Drawing Title
DETAILS (3 OF 3)

Project No.
190085001
Date
AUGUST 7, 2023
Drawing No.
CS503
Checked By
GN
Sheet 12 of 16



CONTRACTOR SHALL ENSURE CLEAN DISCHARGE FROM OUTLET CONTROL STRUCTURE DURING CONSTRUCTION

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREE(S)						
AR	29	ACER RUBRUM	RED MAPLE	3 1/2-5" CAL.	B+B	-
LSR	17	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	SEEDLESS SWEETGUM	3 1/2-5" CAL.	B+B	-
QR	6	QUERCUS RUBRA	RED OAK	3 1/2-5" CAL.	B+B	-
ORNAMENTAL TREE(S)						
BN	9	BETULA NIGRA	MULTI STEM RIVER BIRCH	12-14'	B+B	-
EVERGREEN TREE(S)						
PGL	8	PICEA GLAUCA	WHITE SPRUCE	8-10'	B+B	-
PGNS	11	PICEA GLAUCA 'NORTH STAR'	NORTH STAR WHITE SPRUCE	8-10'	CONTAINER	-
EVERGREEN SHRUB(S)						
IGS	30	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERY HOLLY	24-30"	B=B	-
DECIDUOUS SHRUB(S)						
CA	66	CLETHRA ALNIFOLIA	SUMMERSWEET CLETHRA	24-30"	B+B	-
CEA	235	CEANOTHUS AMERICANUS	NEW JERSEY TEA	2-3'	B+B	spaced @ 18"
CS	35	CORNUS SERICEA (FORMERLY STOLONIFERA)	RED OSIER DOGWOOD	2-3'	B+B	-
CSF	29	CORNUS SERICEA 'FLAVIRAMEA'	YELLOW TWIG DOGWOOD	2-3'	B+B	-
HVCW	10	HAMAMELIS VIRGINIANA	COMMON WITCHHAZEL	3-4'	B+B	-
RAG	63	RHUS AROMATICA 'GRO LOW'	GRO LOW FRAGRANT SUMAC	2-3'	B+B	spaced @ 36"
ORNAMENTAL GRASS(ES)						
BGG	328	BOUTELOUA GRACILIS	BLUE GRAMA GRASS	2 GAL.	CONTAINER	-
SSCO	336	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	2 GAL.	CONTAINER	spaced @ 18"

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

08/07/2023
MICHAEL HUNTER, RLA
LANDSCAPE ARCHITECT NY Lic. No. 2926

LANGAN
Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, NY 10601
T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
ARMONK
WESTCHESTER COUNTY
NEW YORK

Drawing Title
PLANTING PLAN

Project No. 190085001	Drawing No. LP101
Date AUGUST 7, 2023	
Drawn By VC	
Checked By MH	

Sheet 13 of 16

Date	Description	No.
	Revisions	

GENERAL LANDSCAPE PLANTING NOTES

1. NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES" 1994 EDITION, PREPARED BY THE AMERICAN SOCIETY OF HORTICULTURISTS. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
2. ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH THAT WILL PREVENT SOIL EROSION AND THE DRAINAGE OF RUST.
3. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
4. STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND SOIL OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT MATERIAL SHALL HAVE NORMAL HARBOR AND BE FREE FROM DISEASES AND INSECT INFESTATION.
5. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET IN LINES AND SHOWN BEARING THE SAME GRADE AS THE PLANTS TO BE REPLACED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING, BEFORE DIGGING, PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SET IN LINES AND SHOWN BEARING THE SAME GRADE AS THE PLANTS TO BE REPLACED. PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HAT THAT SPECIES.
6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SENIOR LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
7. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER, TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
8. LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL, AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
9. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR SPECIES, VARIETY, SIZE AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS TO BE PLANTED IN PLANTING BEDS AND SYSTEMS, INSECT INFESTATIONS, AND TO RECTIFY UNSATISFACTORY OR UNDESIRABLE MATERIALS. ALL PLANT MATERIAL SHALL BE REJECTED IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
10. DELIVERY, STORAGE, AND HANDLING
 - A. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETRIORATION DURING DELIVERY, AND WHILE STORED AT SITE.
 - B. TREES AND SHRUBS: CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DIGG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BRUSH THE TRUNKS OF TREES IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSPORT. DO NOT DROP BALLETS AND BURLAPPED STOCK DURING DELIVERY AND HANDLING.
 - C. SMALL PLANTS SHALL BE BALLETTED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPINGS AND BINDING MATERIAL MUST BE SYNTHETIC OR PLASTIC. PACKAGED MATERIALS SHALL BE DELIVERED TO THE SITE WITH THE TREE OR SHRUB. THE TREE OR SHRUB SHALL BE CUT FROM THE TOP OF THE BALL. THE TREE OR SHRUB SHALL BE CUT FROM THE TOP OF THE BALL. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE PROTECTED THROUGH THE SURFACE IN TWO LOCATIONS.
 - D. THE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL COVER THE PLANTS WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
11. ALL LANDSCAPED AREAS TO BE CLEARED OF ROOTS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNLEVEL SURFACES PRIOR TO PLANTING OR MULCHING.
12. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
13. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF ONE YEAR FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNLIVING, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT HIS EXPENSE TO THE OWNER.
14. THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY EXCESS MATERIALS, REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
15. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL TREES SHALL BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
16. THE BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER THE SPECIFICATIONS.
17. AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PLACED DOWN ON TOP OF THE ROOT BALL. IF SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
18. MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.
19. ALL FENCE INSTALLATION SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, LAWN AND GRASSES, OR IRRIGATION WORK.
20. FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND PLANTING PLAN THE GRAPHIC QUANTITY SHALL GOVERN.
21. PLANT MATERIALS SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.
22. ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 - JUNE 15 OR AUGUST 15 - NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. SEE LAWN SEEDING DATES IN SEEDING NOTES.

LANDSCAPE MAINTENANCE NOTES

1. MAINTENANCE OPERATIONS BEFORE APPROVAL
 - A. PLANT CARE SHALL BEGON IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED AND SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
 - B. CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RUNCHS OR SAUCERS, MAINTAINING STAKES AND CUES AS ORIGINALLY INSTALLED, WATERING WHEN NEEDED OR DIRECTED, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
 - C. CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.
2. MAINTENANCE DURING CONSTRUCTION
 - A. MAINTENANCE SHALL BEGON IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEEDED, PRUNED, SPRAYED, FERTILIZED, AND MAINTAINED AS SPECIFIED. PROTECTED UNTIL PROVISIONAL ACCEPTANCE. SETTLING PLANTS SHALL BE RESET TO PROPER GRADE AND POSITION. PLANTING SAUCERS RESTORED AND STAKES AND WIRE BASKETS SHALL BE RE-TIGHTENED AND REPAIRED. DEFECTIVE WORK SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
 - B. IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEEMED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
 - C. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST OR THAT WHICH WAS TO BE REPLACED. THEY SHALL BE FURNISHED AND PLANTED AS SPECIFIED. THE COST SHALL BE BORNE BY THE CONTRACTOR. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC. AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
 - D. PLANTS SHALL BE GUARANTEED FOR A PERIOD OF TWO YEARS AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
 - E. AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR UNSATISFACTORY TO THE LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.
3. LAWN MAINTENANCE
 - A. BEGIN MAINTENANCE IMMEDIATELY AFTER EACH PORTION OF LAWN IS PLANTED AND CONTINUE FOR 8 WEEKS AFTER ALL LAWN PLANTING IS COMPLETED.
 - B. WATER TO KEEP SURFACE SOIL MOIST; REPAIR WASHED AWAY AREAS BY FILLING WITH TOPSOIL, LIMING, FERTILIZING AND RE-SEEDING. MOW TO 1/2 - 3/8 INCHES AFTER GRASS REACHES 3 1/2 INCHES IN HEIGHT, AND MOW FREQUENTLY ENOUGH TO KEEP GRASS FROM EXCEEDING 3 1/2 INCHES. WEED BY LOCAL SPOT APPLICATION OF SELECTIVE HERBICIDE ONLY AFTER GRASS IS WELL-ESTABLISHED.

LAWN SEED MIX:

1. LAWN SEED MIX: 3 TURF-TYPE FESCUE GRASSES

NOTES:

 - A. SEED RATE:
 - 1) NEW ESTABLISHMENT: SEED AT A RATE OF 6-8 LBS/1000 SQ FT
 - 2) RENOVATION: 20-30# EXISTING COVER: 5-7 LBS/1000 SQ FT
 - 3) RENOVATION: 20-30# EXISTING COVER: 4-8 LBS/1000 SQ FT
2. SPORTS FIELD MIX (SEED MIX "A"): ATHLETIC FIELD MIX

30.0% FESTUCA ARUNDINACEA FAWN TALL FESCUE, FAWN
 30.0% LOLIUM PERENNE CONNETT II PERENNIAL RYEGRASS, CONNETT II (TURF TYPE)
 15.0% POA PRATENSIS NEST KENTUCKY BLUEGRASS, NEST
 15.0% POA PRATENSIS KELLY KENTUCKY BLUEGRASS, KELLY
 10.0% LOLIUM MULTICOLOR ANNUAL RYEGRASS

 - A. SEED PER SUPPLIER'S RECOMMENDATIONS.
3. GENERAL SEED NOTES
 - A. FINAL SEED MIXTURES, RATES, AND SPECIES TO BE DETERMINED BASED ON PROJECT LANDSCAPE ARCHITECT REVIEW.
 - B. SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 15) OR THE FALL (SEPTEMBER 1 TO OCTOBER 15).
 - C. ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A BROAD-SPECTRUM NON-SELECTIVE HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
 - D. IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRAXX-TYPE DRILL SEEDER WHERE APPLICABLE.
 - E. THERE MUST BE CONTINUOUS SOIL MOISTURE FOR 4-6 WEEKS TO ALLOW FOR PROPER GERMINATION.
 - F. ALL SEED MIXES TO BE 100% PURE LIVE SEED.

LAWN WATERING SCHEDULE

- THE FOLLOWING WATERING SCHEDULE COVERS ROUGHLY 6 WEEKS TO ESTABLISH A HEALTHY STAND OF GRASS FROM SEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE A HEALTHY STAND OF GRASS AT THE END OF THE MAINTENANCE/ROOF PERIOD. ANY BARE OR DEAD AREAS IN THE LAWN SHALL BE PREPARED, RESEEDED AND REESTABLISHED PRIOR TO THE END OF THE MAINTENANCE/ROOF PERIOD AND TO THE SATISFACTION OF THE PROJECT LANDSCAPE ARCHITECT AND THE OWNER.
- IMPORTANT ASPECTS TO ATTAINING AND SUSTAINING A HEALTHY STAND OF GRASS ARE THE INSTALLATION OF TOPSOIL, SEED BED PREPARATION, ATTAINING OPTIMAL pH FOR THE INTENDED PLANT SPECIES, FERTILIZING, MULCH COVERING, AND SUFFICIENT WATERING PER THESE NOTES AND/OR PROJECT SPECIFICATIONS.
1. SEEDING SHALL BE DONE DURING THE SEASONS SPECIFIED IN THE LAWN SEED MIX NOTES AND/OR PROJECT SPECIFICATIONS.
 2. AFTER THE SEEDING IS COMPLETED, SEED IS INSTALLED, AND MULCH IS APPLIED, WATER LIGHTLY TO KEEP THE TOP 2 INCHES OF SOIL CONSISTENTLY MOIST, NOT SATURATED, AT NO TIME SHOULD WATER BE APPLIED TO THE POINT OF RUNOFF OR TOPSOIL DRAINAGE.
 3. DEPENDING ON SOIL TEMPERATURES, IT MAY TAKE SEVERAL WEEKS FOR GERMINATION TO OCCUR. DIFFERENCES IN TEMPERATURES WITHIN THE MIX BEING GRASSED AT DIFFERENT TIMES AND LOCATIONS SHOULD CONTINUE THE LIGHT WATERING, AS DESCRIBED ABOVE, UNTIL THERE IS AT LEAST 2 INCHES OF GROWTH THROUGHOUT THE ENTIRE PROJECT SITE.
 4. AT THIS POINT, WATERING FREQUENCY MAY BE REDUCED TO EVERY 3 TO 5 DAYS. WATER SHALL BE APPLIED TO MET A 6 INCH MINIMUM SOIL DEPTH TO PROMOTE HEALTHY DEEP ROOTS.
 5. BEGON MOWING ONCE PER WEEK AFTER THE GRASS HAS REACHED 3 INCHES HEIGHT. MOW TO A HEIGHT OF NO LESS THAN 2 1/2 INCHES AFTER 3 WEEKS OF MOWING. CONTINUE TO WATER TO A 6 INCH MINIMUM SOIL DEPTH AS NECESSARY PER WEATHER CONDITIONS, AND SOIL MOISTURE SENSORS IF APPLICABLE.

PLANTING SOIL SPECIFICATIONS

1. PLANTING SOIL, ALTERNATIVELY MAY BE REFERRED TO AS TOPSOIL, SHOULD BE FRIABLE, FERTILE, WELL DRAINED, FREE OF ROCKS, STONES, BRICKS AND LIMBS OVER 1/2" DIA. IT SHOULD HAVE A HIGH ORGANIC CONTENT SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING HAVING NO UNDESIRABLE MATERIALS.
2. PLANTING SOIL:
 - A. CRITERIA FOR SOIL STOCKPILE ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING, CLEAN SURFACE AND ALL ROOTS, PLANTS, SOIL, AND GRAVEL OVER 1" IN DIAMETER AND HEAVIER MATERIALS, IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL SUBMIT THROUGH LABORATORY TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANTS AND SPECIFICATIONS.
 - B. SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. SOIL DISPOSED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP, DO NOT OBTAIN FROM AGRICULTURAL, LAND, BOGS, MARSHES OR CONTAMINATED SITES.
3. WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES.
4. CLEAN SOIL FILL IN LANDSCAPE AREAS:
 - A. LANDSCAPE FILL MATERIAL, BELOW PLANTING SOILS, SHALL HAVE THE PHYSICAL PROPERTIES OF A SANDY LOAM WITH AN ORGANIC CONTENT OF LESS THAN 2% AND A PH BETWEEN 5 - 7.
 - B. SOIL PLACEMENT:
 - 1) A CONTRACTOR TO PROVIDE SIX INCHES (6") MINIMUM DEPTH PLANTING SOIL LAYER IN LAWN AREAS, THREE INCHES (3") MINIMUM DEPTH PLANTING SOIL LAYER IN GROUND COVER AND PERENNIAL AREAS, EIGHTEEN INCHES (18") MINIMUM DEPTH PLANTING SOIL LAYER IN SHRUB AREAS, AND THIRTY-SIX INCHES (36") MINIMUM DEPTH PLANTING SOIL LAYER IN TREE PLANTING AREAS.
 - 2) SCARIFY AND/OR TILL COMPACTED SUBSOILS TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOIL INTO THE SUBGRADE PRIOR TO PLACING PLANTING SOIL AT THE DEPTHS INDICATED ABOVE. PLANTING SOIL SHALL BE PLACED IN 12-18" LIFTS AND WATER THOROUGHLY BEFORE INSTALLING NEXT LIFT. BARE SOILS, UNFINISHED GRADES AND FINISH GRADES HAVE BEEN ACHIEVED, NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.
 3. PLANTING SOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE PLANTING SOIL UTILIZED IN ALL PLANTING AREAS.
 - C. SOIL CONDITIONS:
 - 1) ADJUST pH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER pH UNLESS OTHERWISE SPECIFIED. SOILS WITH HIGH PH OR HIGH SALINITY MAY NOT BE USED. ORGANIC MATTER AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH MINIMUM 50% CALCIUM AND MAGNESIUM. SOILS WITH HIGH PH, TOTAL TOSS PASSING THE 10 MESH SEIVE, MINIMUM 80% PASSING 20 MESH SEIVE, AND MINIMUM 60% PASSING 100 MESH SEIVE.
 - 2) MODIFY HEAVY CLAY OR SILT MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED FINE BARK (UP TO 20% BY VOLUME) AND/OR OPSHAM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT MORE THAN 20% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
 - 3) MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR IRVY, SHREDDED CLAY LOAM UP TO 20% OF THE TOTAL MIX.
5. ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

1. THE IRRIGATION CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE IRRIGATION INSTALLATION PLAN AND CUT-SHETS FOR ALL COMPONENTS FOR REVIEW AND APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. THE IRRIGATION INSTALLATION PLAN SHALL COMPRISE WITH ZONE DESIGNATION AND WATER USAGE IN CALLING OUTS AND WATER ZONE RUN TIME SCHEDULE, LEGEND OF COMPONENTS AND PLAN GRAPHS WITH QUANTITIES, MINIMUM SYSTEM REQUIREMENTS INCLUDING STATIC PRESSURE AT THE WATER CONNECTION POINT, ESTIMATED WATER BUDGET, CONSTRUCTION DETAILS AND IRRIGATION NOTES. THE PLAN SHALL ALSO INCLUDE LOCATIONS OF ALL PROPOSED SUBVALVES AND THEIR SIZES, LOCATIONS OF ALL LATERAL LINE SIZE STOP-VALVES WITH SIZE INDICATORS, LOCATION OF ALL SOIL MOISTURE SENSORS, CONTROLLER, VALVES AND ALL OTHER COMPONENTS NECESSARY FOR THE SYSTEM OPERATION.
2. LANDSCAPE AREAS SHALL BE IRRIGATED WITH POP-UP SPRAY AND ROTARY IRRIGATOR HEADS IN SUFFICIENT DENSITY TO COVER THE ENTIRE AREA.
3. CONTRACTOR TO AVOID DISTURBANCE OF EXISTING PLANT MATERIAL, WHICH LOCATIONS AND PIPE LINES, AND PLANT MATERIAL DAMAGED AS A RESULT OF IRRIGATION INSTALLATION SHALL BE REPAIRED AT HIS OWNERS COST TO THE OWNER.
4. ALL EXCAVATION MATERIAL SHALL BE PLACED BACK IN TRENCHES.
5. ALL TRENCHES SHALL BE SUFFICIENT OR PROVIDE A MINIMUM COVER ABOVE THE TOP OF PIPE AS FOLLOWS:
 - 12" OVER NON-PRESSURE LATERAL LINES
 - 18" OVER NON-PRESSURE LATERAL LINES UNDER PAVING
 - 18" OVER CONTROL LINES
 - 18" OVER MAIN LINE
 - 18" OVER MAIN LINE UNDER PAVING
7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION OF THE PLUMBING TRAILING, SLEEVES UNDER PAVEMENTS (AS NECESSARY), AND CONTROL DEVICES WITH THE GENERAL CONTRACTOR, OWNER, AND OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING.
9. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING INSTALLATION WORK.
10. WATERPROOF ALL WIRE CONNECTIONS USING BOTH WATERPROOF CONNECTORS OR EQUIVALENT.
11. SWIRE VALVES ARE TO BE PROVIDED AT SUFFICIENT INTERVALS TO PROVIDE COMPLETE DRAINAGE OF ALL PIPES.
12. COORDINATE THE LOCATION OF CONTROLS, IRRIGATION CONTROLLER, AND SOIL MOISTURE SENSORS WITH THE PROJECT MEP AND OWNER PRIOR TO INSTALLATION AND BEFORE ANY PAVING.
13. IRRIGATION CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO IRRIGATION DESIGN WHERE REQUIRED TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS AS DESIGNATED ON THIS PLAN.
14. INSTALLATION MUST COMPLY WITH ALL LOCAL CODES AND CONDITIONS.
15. ALL IRRIGATION WORK SHALL BE GUARANTEED FOR 1 YEAR AFTER COMPLETION OF ALL WORK.
16. CONTRACTOR TO PROVIDE THREE (3) COPIES OF AS-BUILTS, SERVICE MANUALS AND INSTRUCTIONS TO THE OWNER OR OWNER'S REPRESENTATIVE.
17. ALL SPRINKLER HEADS SHALL BE SET BACK 4" MINIMUM FROM BACK OF ALL CURBS.
18. CONTRACTOR MAY SUBMIT MATERIALS EQUIVALENT MATERIALS FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT.

IRRIGATION NOTES:

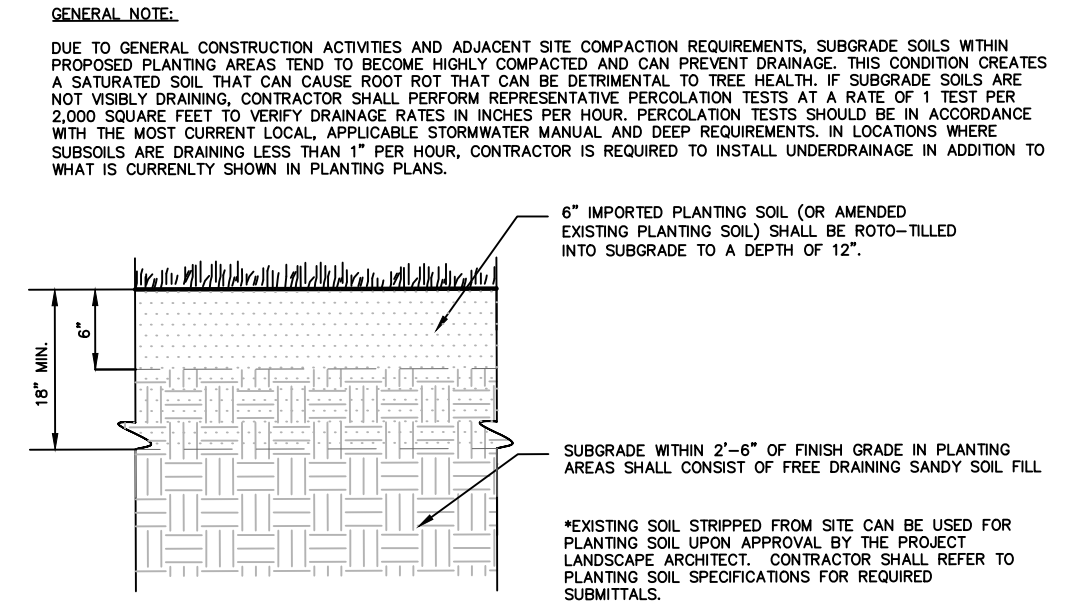
1. THE IRRIGATION CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE IRRIGATION INSTALLATION PLAN AND CUT-SHETS FOR ALL COMPONENTS FOR REVIEW AND APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. THE IRRIGATION INSTALLATION PLAN SHALL COMPRISE WITH ZONE DESIGNATION AND WATER USAGE IN CALLING OUTS AND WATER ZONE RUN TIME SCHEDULE, LEGEND OF COMPONENTS AND PLAN GRAPHS WITH QUANTITIES, MINIMUM SYSTEM REQUIREMENTS INCLUDING STATIC PRESSURE AT THE WATER CONNECTION POINT, ESTIMATED WATER BUDGET, CONSTRUCTION DETAILS AND IRRIGATION NOTES. THE PLAN SHALL ALSO INCLUDE LOCATIONS OF ALL PROPOSED SUBVALVES AND THEIR SIZES, LOCATIONS OF ALL LATERAL LINE SIZE STOP-VALVES WITH SIZE INDICATORS, LOCATION OF ALL SOIL MOISTURE SENSORS, CONTROLLER, VALVES AND ALL OTHER COMPONENTS NECESSARY FOR THE SYSTEM OPERATION.
2. LANDSCAPE AREAS SHALL BE IRRIGATED WITH POP-UP SPRAY AND ROTARY IRRIGATOR HEADS IN SUFFICIENT DENSITY TO COVER THE ENTIRE AREA.
3. CONTRACTOR TO AVOID DISTURBANCE OF EXISTING PLANT MATERIAL, WHICH LOCATIONS AND PIPE LINES, AND PLANT MATERIAL DAMAGED AS A RESULT OF IRRIGATION INSTALLATION SHALL BE REPAIRED AT HIS OWNERS COST TO THE OWNER.
4. ALL EXCAVATION MATERIAL SHALL BE PLACED BACK IN TRENCHES.
5. ALL TRENCHES SHALL BE SUFFICIENT OR PROVIDE A MINIMUM COVER ABOVE THE TOP OF PIPE AS FOLLOWS:
 - 12" OVER NON-PRESSURE LATERAL LINES
 - 18" OVER NON-PRESSURE LATERAL LINES UNDER PAVING
 - 18" OVER CONTROL LINES
 - 18" OVER MAIN LINE
 - 18" OVER MAIN LINE UNDER PAVING
7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION OF THE PLUMBING TRAILING, SLEEVES UNDER PAVEMENTS (AS NECESSARY), AND CONTROL DEVICES WITH THE GENERAL CONTRACTOR, OWNER, AND OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING.
9. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING INSTALLATION WORK.
10. WATERPROOF ALL WIRE CONNECTIONS USING BOTH WATERPROOF CONNECTORS OR EQUIVALENT.
11. SWIRE VALVES ARE TO BE PROVIDED AT SUFFICIENT INTERVALS TO PROVIDE COMPLETE DRAINAGE OF ALL PIPES.
12. COORDINATE THE LOCATION OF CONTROLS, IRRIGATION CONTROLLER, AND SOIL MOISTURE SENSORS WITH THE PROJECT MEP AND OWNER PRIOR TO INSTALLATION AND BEFORE ANY PAVING.
13. IRRIGATION CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO IRRIGATION DESIGN WHERE REQUIRED TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS AS DESIGNATED ON THIS PLAN.
14. INSTALLATION MUST COMPLY WITH ALL LOCAL CODES AND CONDITIONS.
15. ALL IRRIGATION WORK SHALL BE GUARANTEED FOR 1 YEAR AFTER COMPLETION OF ALL WORK.
16. CONTRACTOR TO PROVIDE THREE (3) COPIES OF AS-BUILTS, SERVICE MANUALS AND INSTRUCTIONS TO THE OWNER OR OWNER'S REPRESENTATIVE.
17. ALL SPRINKLER HEADS SHALL BE SET BACK 4" MINIMUM FROM BACK OF ALL CURBS.
18. CONTRACTOR MAY SUBMIT MATERIALS EQUIVALENT MATERIALS FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT.

MEADOW SEED NOTES

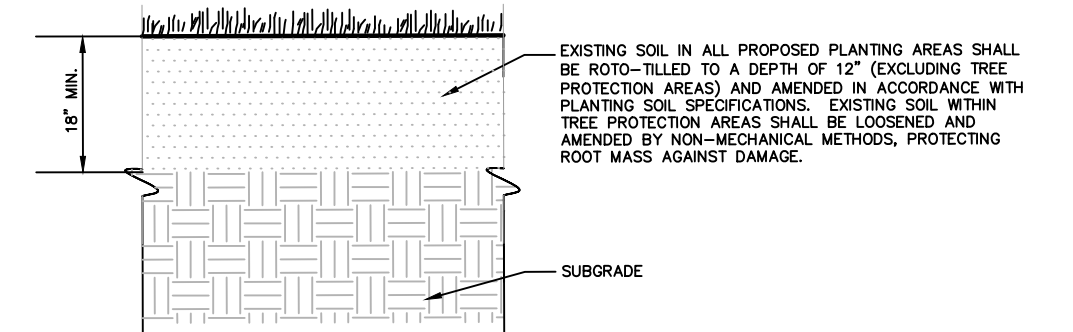
- SEED MIX 1B - LOW-GROWING WILDFLOWER MIX
- 50.0% FESTUCA OVINA SHEEP FESCUE
 21.2% BOUTELOUA CURTENDULA SKEGGS (GRAHA, BUTTE
 17.0% LOLIUM MULTIFLORUM ANNUAL RYEGRASS
 1.0% COREOPSIS LANCEOLATA LANCELEAF COREOPSIS
 4.0% LINAUM PERENNE BLACKHEADED SUSAN
 1.2% CHRYSANTHEMUM MAXIMUM SHASTA DANCY
 1.0% PAPAYER RHIOIDES, RED BUTTERFLY MILKWEED
 0.2% ACLETHA TUBEROSA AROMATIC ASTER, PA ECOTYPE
 0.2% ACLETHA TUBEROSA COMMON YARROW
 0.2% ANEMONE THURIFOLIOUM HARRY BEAUFORTAUGUE
 0.1% ANEMONE THURIFOLIOUM VAR. FRUTICOSA SANDROPS
 0.1% PENTSTEMON HISPIDUS GOLDEN ALEXANDERS
 0.1% Zizia aurea

- NOTES:
- SEED AT A RATE OF 20-40 LB/ACRE OF 100% PURE LIVE SEED - REFER TO SUPPLIER RECOMMENDATIONS FOR ADDITIONAL INFORMATION.
- GENERAL SEEDING NOTES:
1. FINAL SEED MIXTURES, RATES & SPECIES TO BE DETERMINED BASED ON LOCAL SITE CONDITIONS.
 2. ALL SEEDING RATES ARE BASED ON PURE LIVE SEED (PLS) CONTRACTOR SHALL ADJUST ANY SUPPLIER BLK SEEDING RATES (BR) TO PROVIDE PLS EQUIVALENTS.
 3. SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 1) OR THE FALL (SEPTEMBER 1 TO OCTOBER 15).
 4. ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A BROAD-SPECTRUM NON-SELECTIVE HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
 5. IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRAXX-TYPE DRILL WHERE APPLICABLE.
 6. MULCHING/TACKING IS REQUIRED ON ALL SEEDING IN ACCORDANCE WITH THE STANDARDS. AN EROSION CONTROL PLANET WITH A MINIMUM 12-MONTH BIODEGRADABLE LIFE SPAN MAY BE USED IN LIEU OF STANDARD MULCHING/TACKING. PERMANENT PLANETS WILL NOT BE ACCEPTED UNLESS OTHERWISE NOTED.
 7. CONTINUOUS MOISTURE MUST BE ENSURED DURING ESTABLISHMENT TO ALLOW PROPER GERMINATION. SOIL WILL REMAIN CONTINUOUSLY MOIST FOR THE TOP 4 INCHES OF TOPSOIL. DO NOT SATURATE OR WATER TO THE POINT OF RUNOFF OR THE DISPLACEMENT OF SEED.
 8. DEPENDING ON SOIL TEMPERATURES, IT MAY TAKE SEVERAL WEEKS FOR GERMINATION TO OCCUR. DIFFERENCES IN TEMPERATURES WITHIN THE MIX BEING GRASSED AT DIFFERENT TIMES AND LOCATIONS SHOULD CONTINUE THE LIGHT WATERING, AS DESCRIBED ABOVE, UNTIL THERE IS AT LEAST 2 INCHES OF GROWTH THROUGHOUT THE ENTIRE PROJECT SITE.
 9. AT THIS POINT, WATERING FREQUENCY MAY BE REDUCED TO EVERY 2 TO 3 DAYS. WATER SHALL BE APPLIED TO MET A 6 INCH MINIMUM SOIL DEPTH TO PROMOTE HEALTHY DEEP ROOTS.

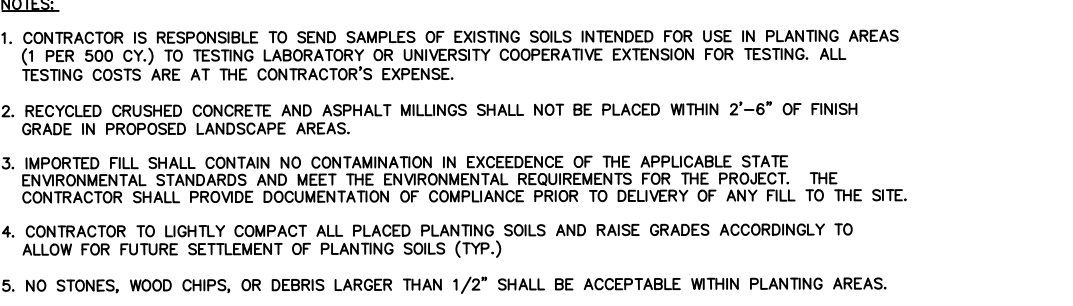
- WEED CONTROL / MAINTENANCE
1. MOWING MEADOW AREAS SHALL BE DONE VIA STRING TRIMMER, WHERE LARGER MACHINES CANNOT REASONABLY BE USED AND WHERE DAMAGE OR RUTTING COULD OCCUR.
 2. DURING THE ESTABLISHMENT YEAR, CONTRACTOR SHALL MOW SEEDING IF WEED HEIGHT EXCEEDS MEADOW MIX HEIGHT, NOW AT A HEIGHT OF 6"-10", DO NOT MOW CLOSER, AS SOME OF THE MEADOW MIX MAY BE DAMAGED.
 3. AFTER THE FIRST GROWING SEASON, AND IF MEADOW MIX IS WELL ESTABLISHED, THE MEADOW MIX SHALL BE MOWED ONLY ONCE ANNUALLY. ANNUAL MAINTENANCE MOWING SHALL BE DONE IN LATE WINTER DURING THE MONTHS OF MARCH.
 4. DURING THE ESTABLISHMENT YEAR, AFTER ESTABLISHMENT DEPENDING ON THE LOOK OF THE MEADOW, SELECTIVE WEEDING WITH A BROADLEAF WEED-KILLING HERBICIDE, OVER-SEEDING BARE SPOTS AND WATERING TO PROMOTE A LUSCIOUS BROAD-TOLENT STAND OF PLANTS MAY BE NECESSARY.
 5. FERTILIZERS ARE NOT GENERALLY NEEDED OR RECOMMENDED FOR NATIVE MEADOWS UNLESS SOIL TEST RESULTS SHOW A SIGNIFICANT LACK OF NUTRIENTS. USE ONLY SLOW-RELEASE FERTILIZERS WITH LITTLE TO NO NITROGEN IN APRIL OR SEPTEMBER.



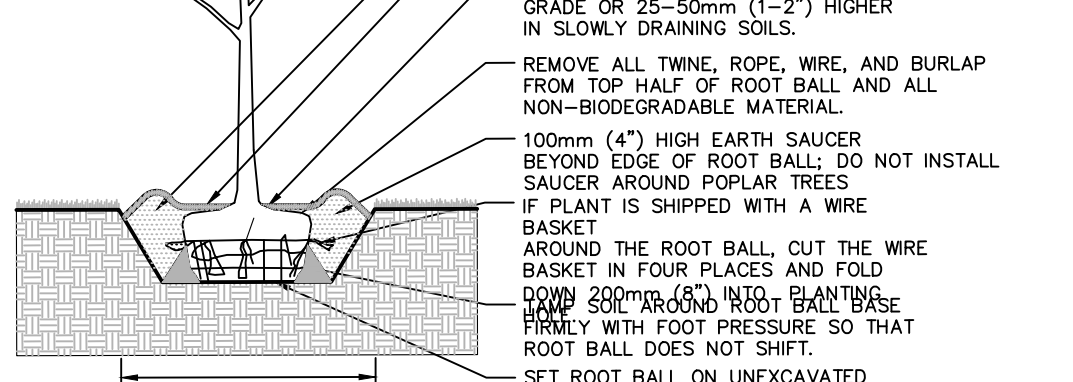
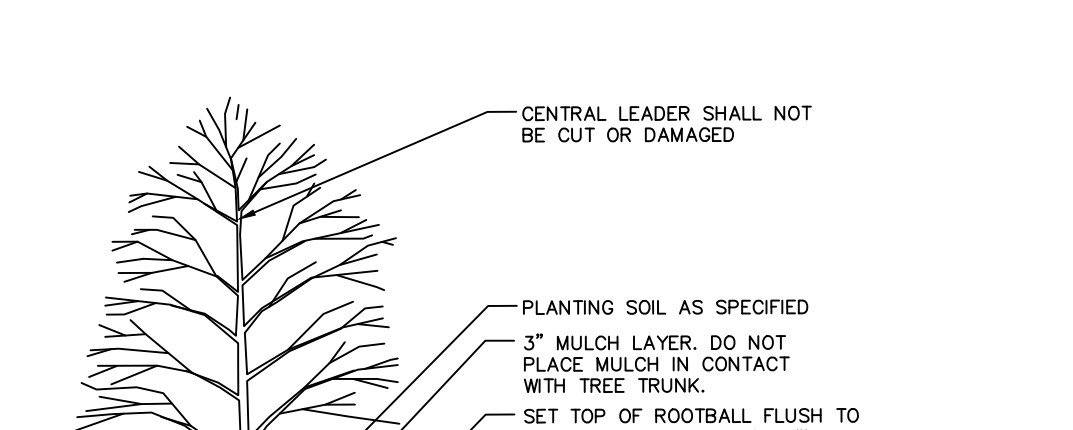
PLANTING SOIL WITHIN AREAS OF CUT OR RAISED GRADE



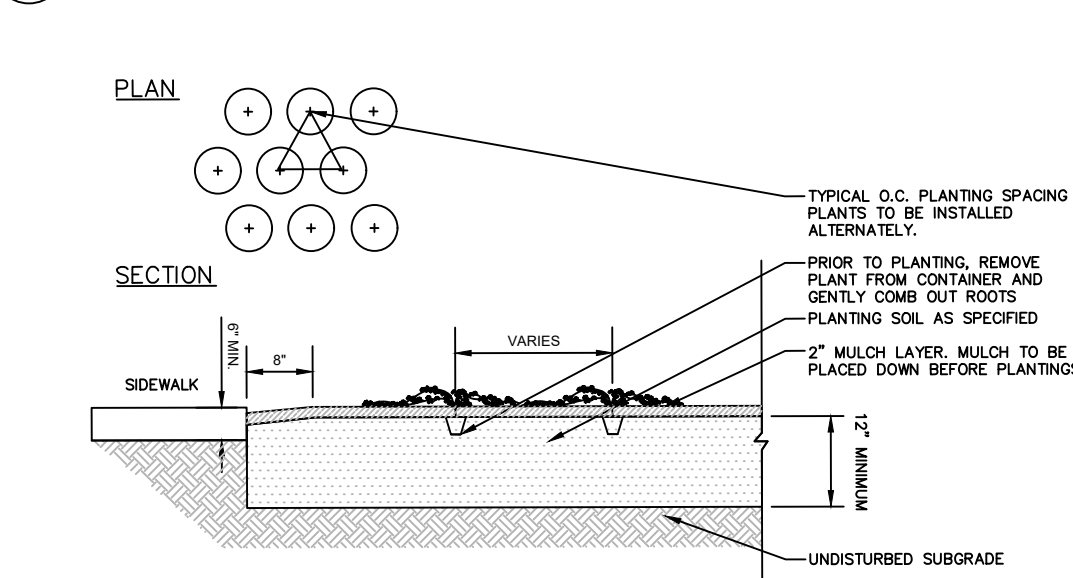
PLANTING SOIL WITHIN AREAS OF UNCHANGED GRADE



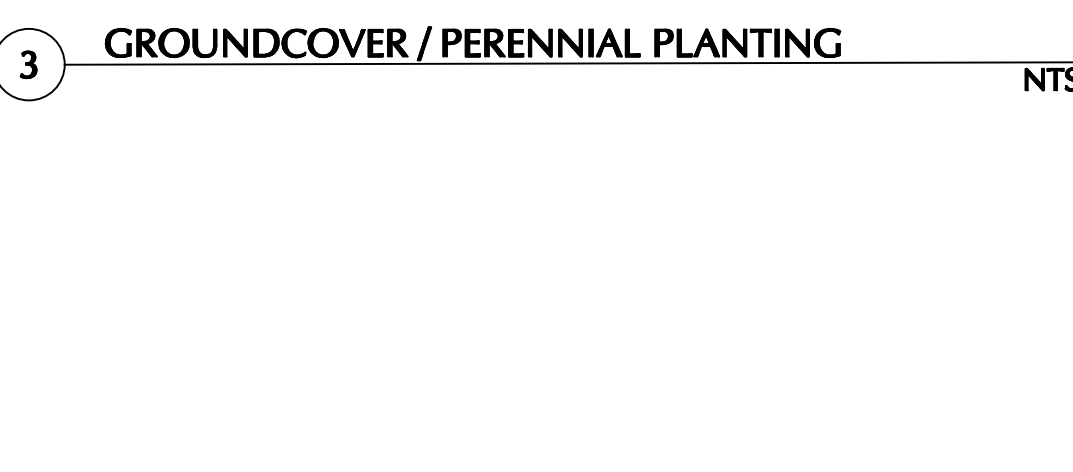
1 PLANTING SOIL



2 TREE PLANTING



3 GROUND COVER / PERENNIAL PLANTING





SITE LIGHTING SCHEDULE

SYMBOL	KEY	QTY.	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	FIXTURE MOUNTING HEIGHT	WATTS	LUMENS	LIGHT LOSS FACTOR	OPTICS	COLOR TEMPERATURE	FIXTURE CATALOGUE NO.	POLE MANUFACTURER	POLE DESCRIPTION	POLE LENGTH	POLE CATALOGUE NO.	NOTES/REMARKS
●	A	25	STERNBERG LIGHTING	1843LED	POLE MOUNTED POST TOP LIGHT; COLOR - BLACK	12'-0"	71	5,710	0.90	TYPE 5	3000 K	1843LED-12L-40-T4-MDL014-CSA	STERNBERG LIGHTING	ROUND TAPERED ALUMINUM WITH DECORATIVE BASE; COLOR - BLACK	12'-0"	4500 DECATUR SERIES	N/A
●	B	10	STERNBERG LIGHTING	1843LED	POLE MOUNTED POST TOP LIGHT; COLOR - BLACK	12'-0"	71	8,212	0.90	TYPE 4	3000 K	1843LED-12L-40-T5-MDL008-CSA	STERNBERG LIGHTING	ROUND TAPERED ALUMINUM WITH DECORATIVE BASE; COLOR - BLACK	12'-0"	4500 DECATUR SERIES	N/A
—	C	52	PERFORMANCE IN LIGHTING	QUASAR 10 1WB	WALL MOUNTED POST TOP LIGHT; COLOR - BLACK	8'-6"	3.5	150	0.90	ROUND	3000 K	QUASAR10-1WB-30335690104	-	-	-	-	N/A

NOTES:
 1. POLES SHALL BE FACTORY CUT TO SPECIFIED LENGTH BY MANUFACTURER.
 2. CONTRACTOR TO CONFIRM AND COORDINATE FINAL LINE VOLTAGE WITH MEP PLANS PRIOR TO PURCHASING FIXTURES.

SITE LIGHTING STATISTICS

DESCRIPTION	AVG. (FC)	MAX. (FC)	MIN. (FC)	MAX./MIN.	AVG./MIN.
PROPERTY LINE	0.02	0.4	0.0	N/A	N/A
NORTH DRIVEWAY	1.75	4.6	0.5	3.50	9.20
SOUTH DRIVEWAY	1.48	4.6	0.5	2.96	8.80

NOTES:
 LIGHT PHOTOMETRY AND CALCULATIONS FOR EXISTING AND ADJACENT LIGHTING TO REMAIN ARE NOT INCLUDED IN THE ABOVE STATISTICS.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

	LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. One North Broadway, Suite 910 White Plains, NY 10601 T: 914.323.7400 F: 914.323.7401 www.langan.com	Project 45 BEDFORD ROAD WESTCHESTER COUNTY NEW YORK	Drawing Title SITE LIGHTING PLAN	Project No. 190085001	Drawing No. LL101
	Date 08/07/2023	Signature MICHAEL HUNTON, RLA LANDSCAPE ARCHITECT NY Lic. No.2926	Date 08/07/2023	Date AUGUST 7, 2023	Drawn By SH
Revisions				Sheet 15 of 16	

SITE LIGHTING NOTES

GENERAL

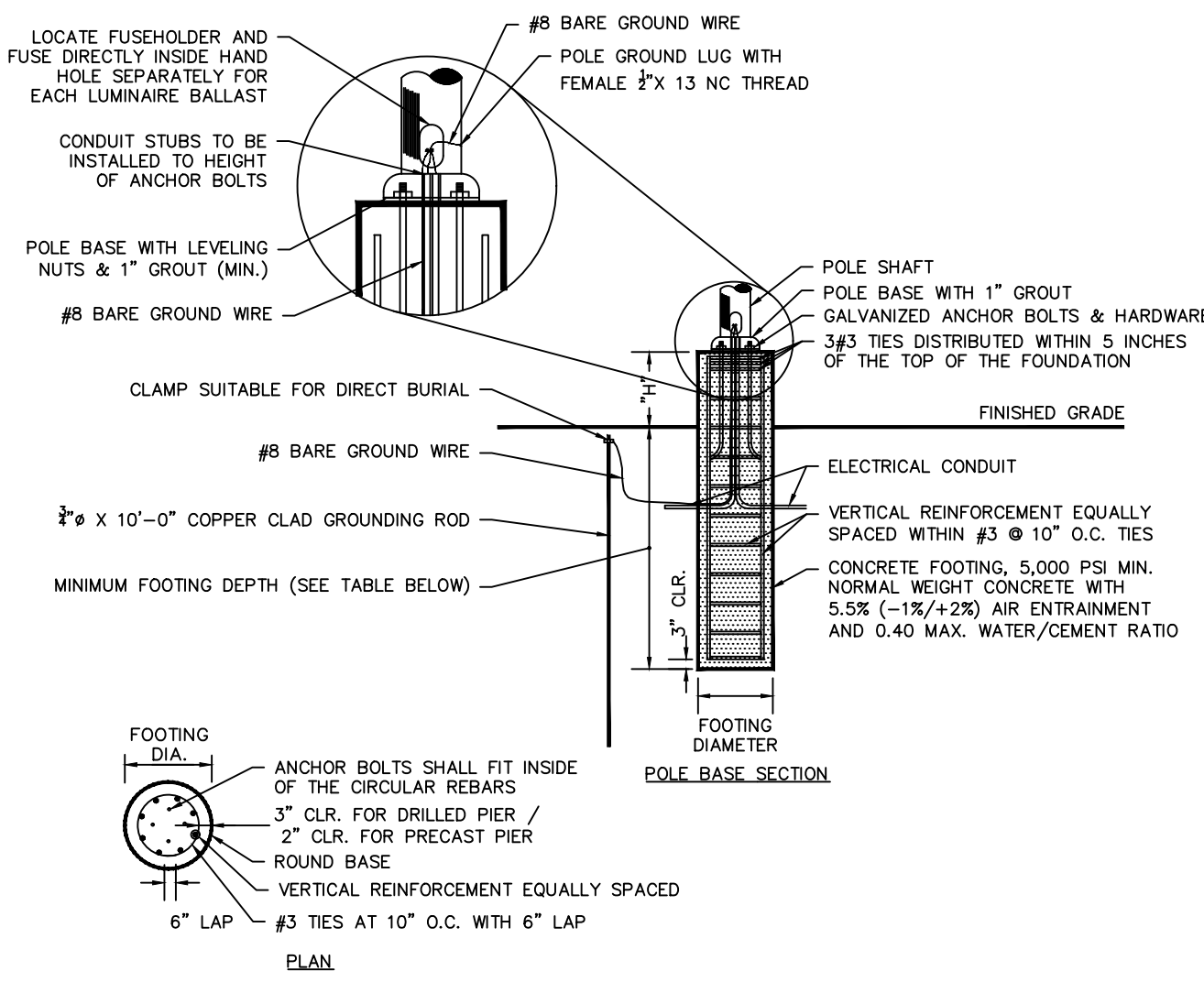
- POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES SHOWN ON THE PLANS ARE NOT AN INDICATION OF THE INITIAL LIGHT INTENSITIES OF THE LAMPS. THESE VALUES ARE AN APPROXIMATION OF THE MAINTAINED INTENSITIES DELIVERED TO THE GROUND PLANE USING INDUSTRY STANDARD LIGHT LOSS FACTORS (LLF) WHICH COVER LAMP DEGRADATION AND NATURAL BUILDUP / DIRT DEGRADATION ON THE FIXTURE LENS. THE LIGHTING PLAN IS DESIGNED WITH AN INDUSTRY STANDARD LLF IN ACCORDANCE WITH GUIDANCE AS PROVIDED BY IESNA. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. THEREFORE, AS-BUILT LIGHT INTENSITIES MAY VARY, IN EITHER DIRECTION, FROM WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS. A GUARANTEE OF LIGHT LEVELS IS EXPRESSED OR IMPLIED BY THE POINT BY POINT CALCULATIONS SHOWN ON THESE PLANS.
- LIGHT LEVEL POINT SPACING IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM. POINT BY POINT CALCULATIONS ARE BASED ON THE LIGHT LOSS FACTOR AS STATED IN THE LIGHTING SCHEDULE.
- COMPLIANCE**
- ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AGENCY REQUIREMENTS.
- LIGHTING LAYOUT COMPLIES WITH THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) SAFETY STANDARDS FOR LIGHT LEVELS.
- COORDINATION**
- CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO ENSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.
- REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.
- CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
- INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.
- CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.
- POLES AND FOOTINGS**
- PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND/OR IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE. THE USE OF ALTERNATE LIGHTING FOUNDATIONS, SUCH AS PRECAST, MAY CHANGE THE SIZING AND REINFORCEMENT REQUIREMENTS FROM THOSE SHOWN ON THESE PLANS. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING ANY SUBSTITUTED PRODUCTS.
- CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.
- POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.
- ALL POLES HIGHER THAN 25 FT. SHALL BE EQUIPPED WITH FACTORY INSTALLED VIBRATION DAMPENERS.

WALL MOUNTED FIXTURES

- CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MEP, ARCHITECT, AND/OR OWNER.
- INSTALLATION AND ELECTRICAL CONNECTIONS FOR WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, UTILITY AND SITE PLANS AND TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES.
- ADJUSTMENT AND INSPECTION**
- CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.
- CONTRACTOR TO AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.
- CONTRACTOR TO CONFIRM THAT LIGHT FIXTURES, TILT ANGLE AND AIMING MATCH SPECIFICATIONS ON THE PLANS.

REQUIREMENTS FOR ALTERNATES

- ALL LIGHTING SUBSTITUTIONS MUST BE MADE WITHIN 14 DAYS PRIOR TO THE BID DATE TO PROVIDE AMPLIFIED TIME FOR REVIEW AND TO ISSUE AN ADDENDUM INCORPORATING THE SUBSTITUTION WITH THE FOLLOWING REQUIREMENTS:
 - ANY SUBSTITUTION TO LIGHTING FIXTURES, POLES, ETC. MUST BE APPROVED BY THE OWNER, ENGINEER AND TENANTS, ANY COST ASSOCIATED WITH REVIEW AND/OR APPROVAL OF THE SUBSTITUTIONS SHALL BE ENTIRELY BORNE BY THE CONTRACTOR.
 - COMPUTER PREPARED PHOTO-METRIC LAYOUT OF THE PROPOSED LIGHTED AREA WHICH INDICATES, BY ISOPHOTOCANDLE, THE SYSTEM'S PERFORMANCE.
 - A PHOTOMETRIC REPORT FROM A NATIONAL INDEPENDENT TESTING LABORATORY WITH REPORT NUMBER, DATE, FIXTURE CATALOG NUMBER, LUMINAIRE AND LAMP SPECIFICATIONS, IES CALCULATIONS, POINT BY POINT FOOT CANDLE PLAN, STATISTIC ZONES SHOWING AVERAGE, MAXIMUM, MINIMUM AND UNIFORMITY RATIOS, SUMMARY, ISOLUX PLOT, AND CATALOGUE CUTS. CATALOGUE CUTS MUST IDENTIFY OPTICS, LAMP TYPE, DISTRIBUTION TYPE, REFLECTOR, LENS, BALLASTS, WATTAGE, VOLTAGE, FINISH HOUSING DESCRIPTION AND ALL OTHER PERTINENT INFORMATION.
 - POLE MANUFACTURER'S ASHTO CALCULATIONS INDICATING THE POLE AND ANCHOR BOLTS BEING SUBMITTED ARE CAPABLE OF SUPPORTING THE POLE AND FIXTURE SYSTEMS BEING UTILIZED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - THE UNDERWRITERS LABORATORY LISTING AND FILE NUMBER FOR THE SPECIFIC FIXTURE(S) TO BE UTILIZED.
 - A COLOR PHOTOGRAPH THAT CLEARLY SHOWS THE REPLACEMENT FIXTURE POLE MOUNTED, THE FIXTURE'S COLOR, FINISH, AND PHYSICAL CHARACTERISTICS.



MOUNTING HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	EXPOSED HEIGHT "H"	VERTICAL REINFORCEMENT
14'-0"	2'-0"	5'-0"	0'-2"	6#5 BARS

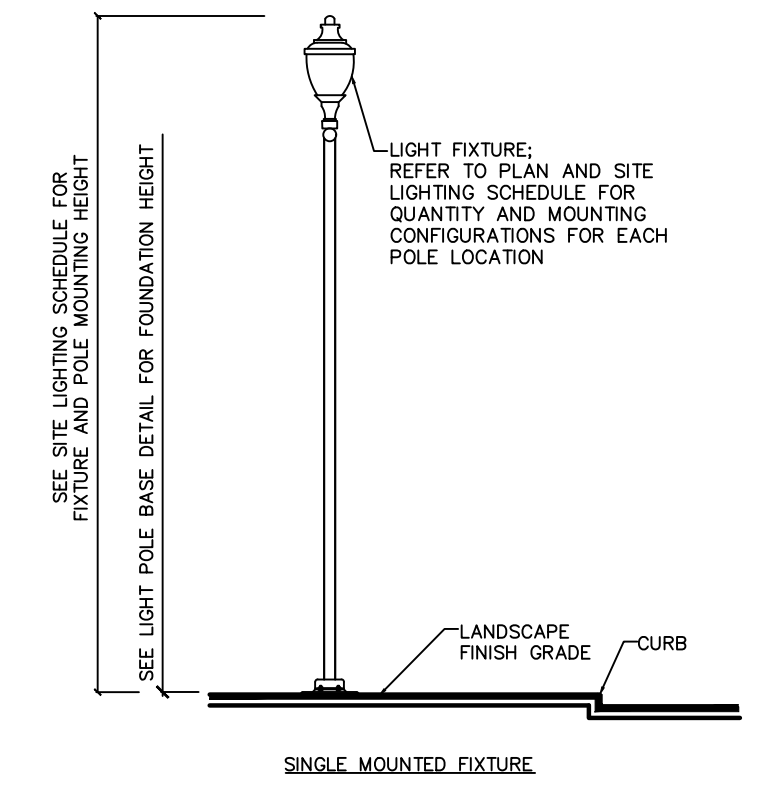
- NOTES:**
- SHAFT CAP, ARMS, BASE FLANGE, ANCHOR BOLTS, LEVELING NUTS, CONNECTION HARDWARE, BOLT COVERS, HANDHOLE COVER, AND BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY POLE MANUFACTURER.
 - EACH STANDARD TO BE PROTECTED AGAINST LIGHTNING WITH AN INTERCONNECTED GROUND ROD. THIS ROD SHALL BE BONDED PER SECTION NUMBER 250-86, N.E.C.
 - CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENT OF ACI 318. CAST-IN-PLACE SHALL HAVE UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI AT 28-DAYS. DEFORMED REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
 - CONTRACTOR TO ENSURE CONCRETE POLE BASES ARE POURED / PLACED ABSOLUTELY VERTICAL & LEVEL.
 - IF POLE BASE IS CAST-IN-PLACE, POLE BASE SHALL BE ONE CONTINUOUS POUR. EXPOSED PORTION OF BASE SHALL BE HAND-RUBBED SMOOTH.
 - CONTRACTOR TO COMPACT SUBGRADE AROUND POLE BASE PER EARTHWORK SPECIFICATIONS / GEOTECH REPORT.
 - IF THE INFORMATION ILLUSTRATED POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES, LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAIL BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
 - CONTRACTOR TO CONFIRM GROUNDING DESIGN WITH MEP.

1 LIGHT POLE BASE

NTS

2 LIGHT FIXTURE AND POLE

NTS



1843LED CARSON CITY SERIES

LED

Mounting Configuration

Fixtures

LED

Color Temperature (K)

Driver

Lenses

Options

Specifications

Finish

Job Name

Fixture Type

Memo

STERNBERGLIGHTING

ESTABLISHED 1923 / EMPLOYEE OWNED

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
info@sternberglighting.com
www.sternberglighting.com

3 POLE MOUNTED LIGHT FIXTURE

NTS

4 WALL MOUNTED LIGHT FIXTURE

NTS

5 LIGHT POLE

NTS

QUASAR 10 1WB

Part number 3033590104

Mounting Configuration

Fixtures

LED

Color Temperature (K)

Driver

Lenses

Options

Specifications

Finish

Job Name

Fixture Type

Memo

STERNBERGLIGHTING

ESTABLISHED 1923 / EMPLOYEE OWNED

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
info@sternberglighting.com
www.sternberglighting.com

4500 DECATUR SERIES

ORNAMENTAL POLE

Mounting Configuration

Fixtures

LED

Color Temperature (K)

Driver

Lenses

Options

Specifications

Finish

Job Name

Fixture Type

Memo

STERNBERGLIGHTING

ESTABLISHED 1923 / EMPLOYEE OWNED

800-621-3376
555 Lawrence Ave., Roselle, IL 60172
info@sternberglighting.com
www.sternberglighting.com

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

08/07/2023

MICHAEL HUNTON, RLA
LANDSCAPE ARCHITECT NY Lic. No.2926

LANGAN

Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.

One North Broadway, Suite 910
White Plains, NY 10601

T. 914.323.7400 F. 914.323.7401 www.langan.com

Project

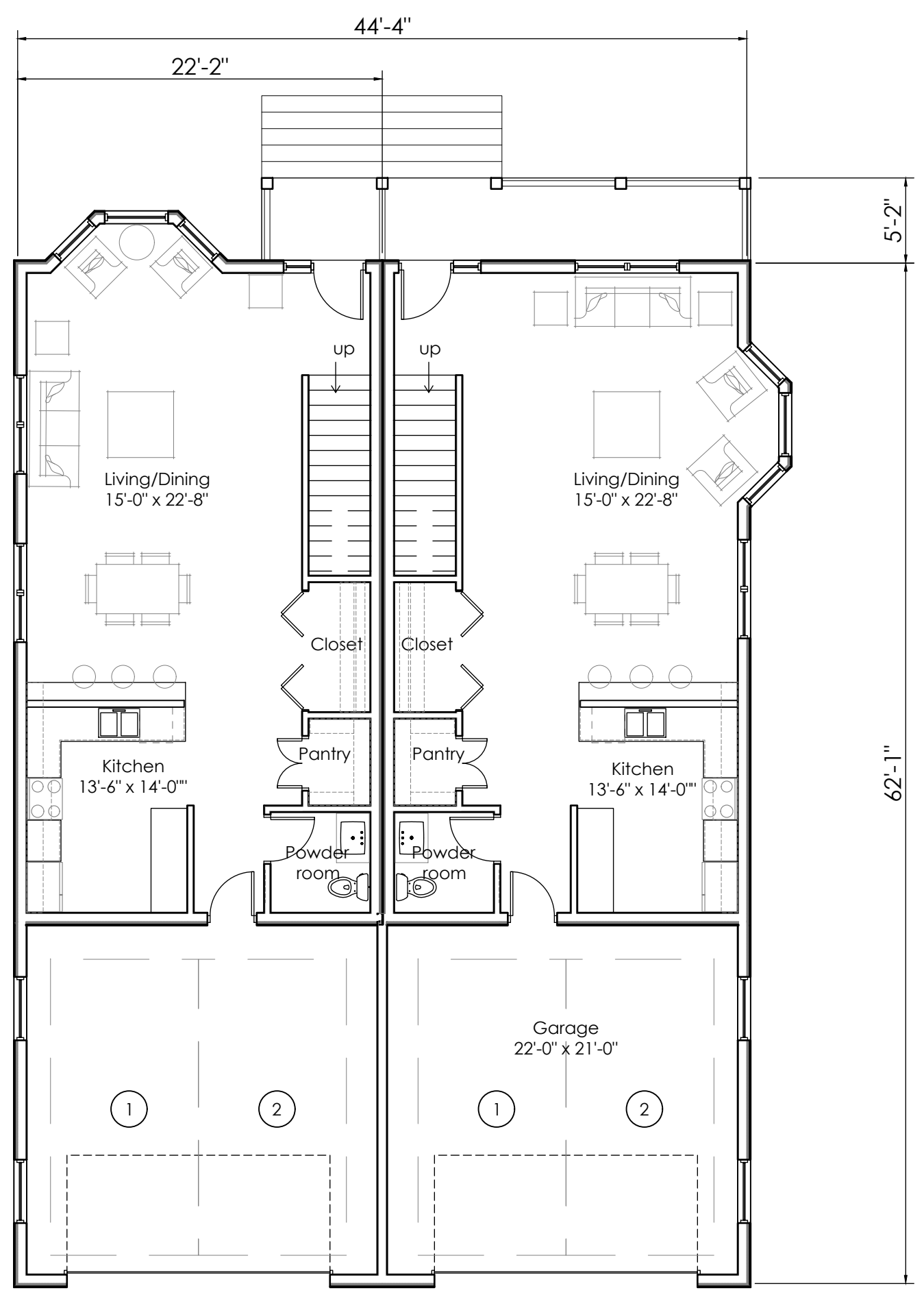
45 BEDFORD ROAD

ARMONK
WESTCHESTER COUNTY
NEW YORK

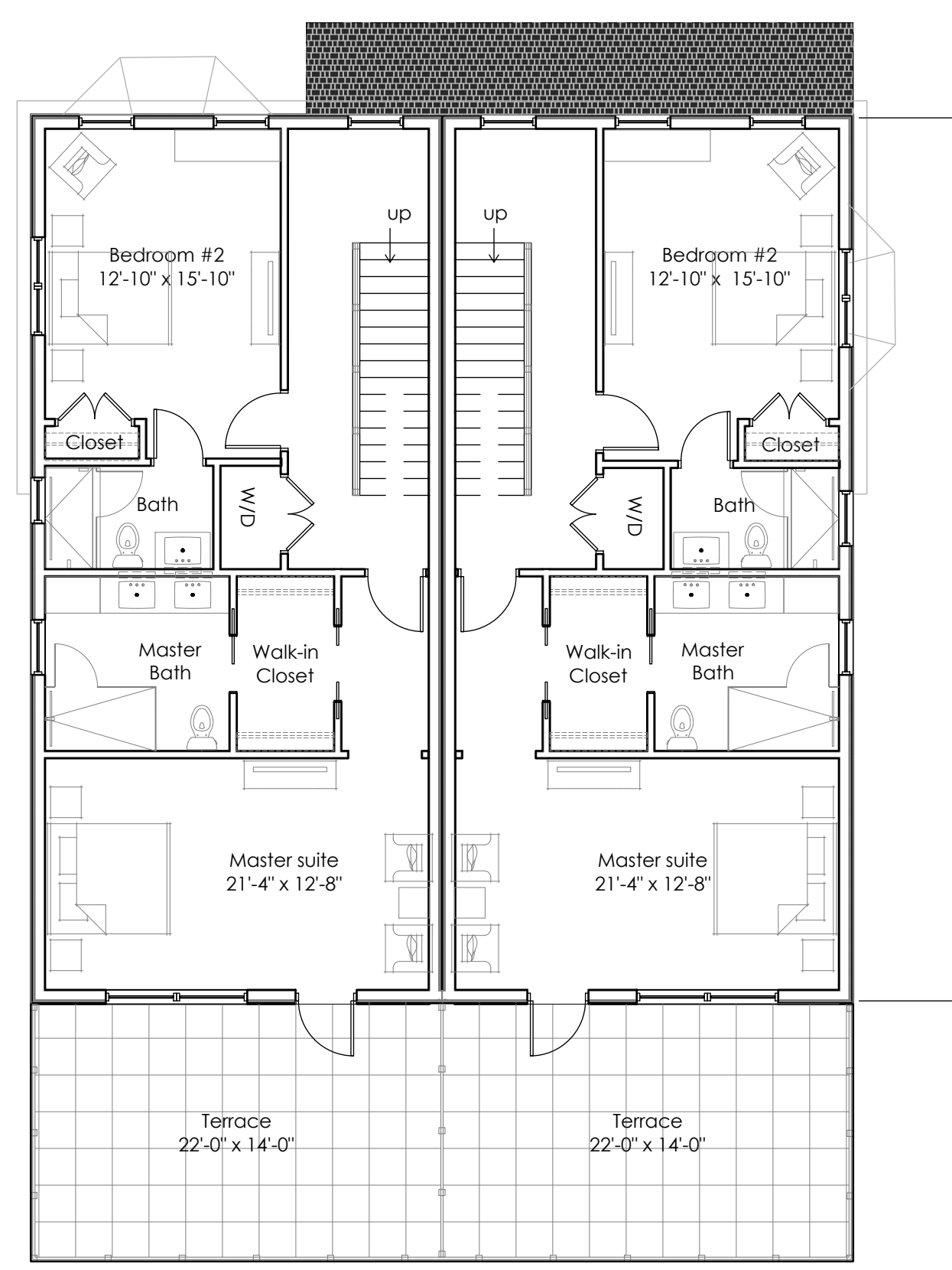
Drawing Title

SITE LIGHTING DETAILS AND NOTES

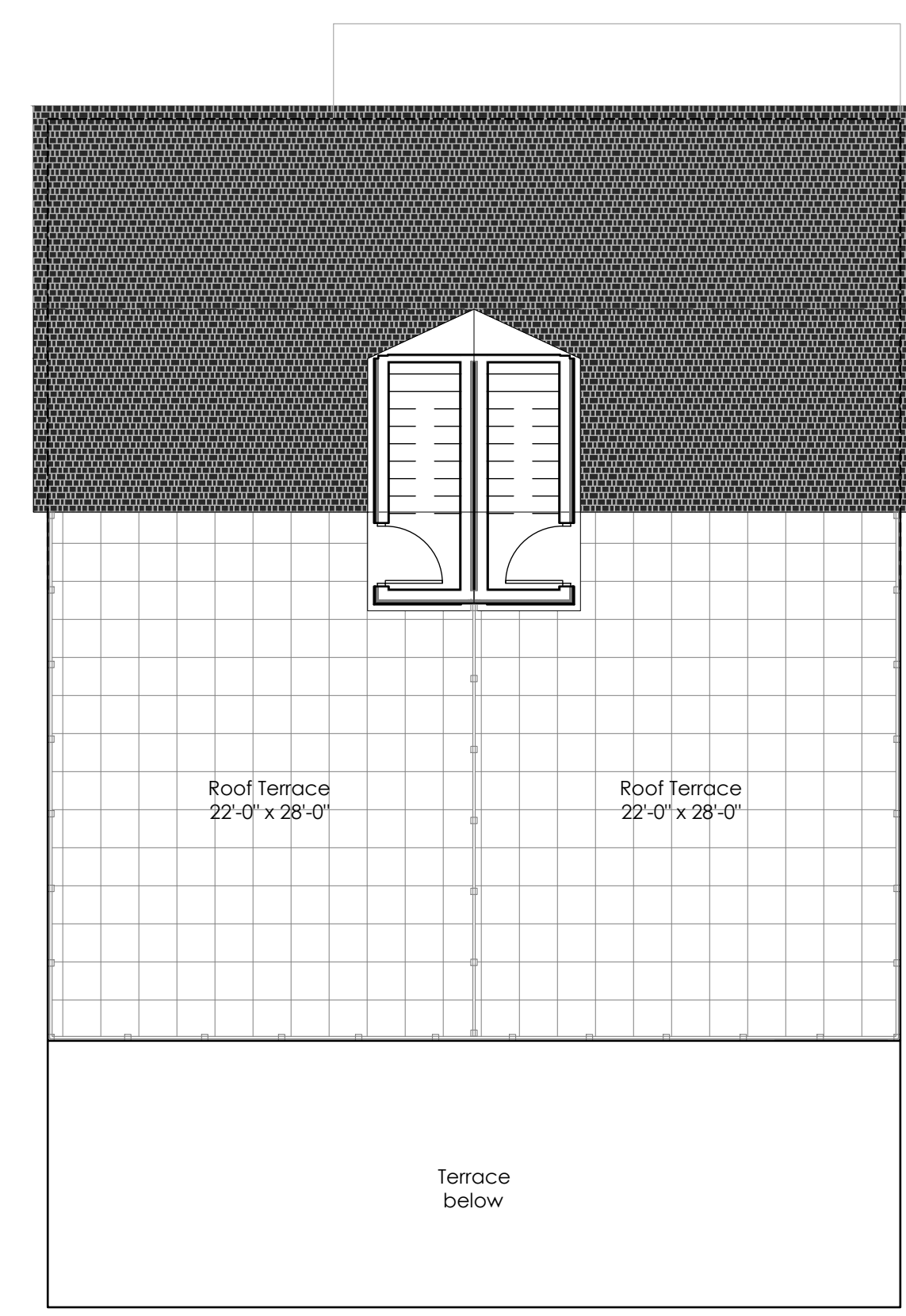
Project No.	190085001	Drawing No.	LL501
Date	AUGUST 7, 2023		
Drawn By	SH		
Checked By	MM		
		Sheet 16 of 16	



1 BEDFORD TOWNHOUSE - GRADE LEVEL
SCALE: 1/8" = 1'-0"



2 BEDFORD TOWNHOUSE - SECOND LEVEL
SCALE: 1/8" = 1'-0"



3 BEDFORD TOWNHOUSE - ROOF LEVEL
SCALE: 1/8" = 1'-0"

PROJECT:
THE GATEWAY
 45 BEDFORD RD
 ARMONK, NY
 KCC-01
 S:108.03 B:1 L:65

OWNER:
45 BEDFORD RD, LLC
 399 KNOLLWOOD ROAD
 SUITE A
 WHITE PLAINS, NY 10603

CONSULTANTS:
 CIVIL ENGINEER:
LANGAN
 1 NORTH BROADWAY
 SUITE 910
 WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

ARCHITECT:

Design Development, p.l.l.c.
 165 Mamaroneck Ave, fl. 2
 White Plains, NY 10601
 914.949.4272 t.
 914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD

0 2 4 8 16
 SCALE: 1/8" = 1'-0"

MARK	DATE	ISSUE
	08/07/23	ISSUED FOR SITE PLAN APPROVAL

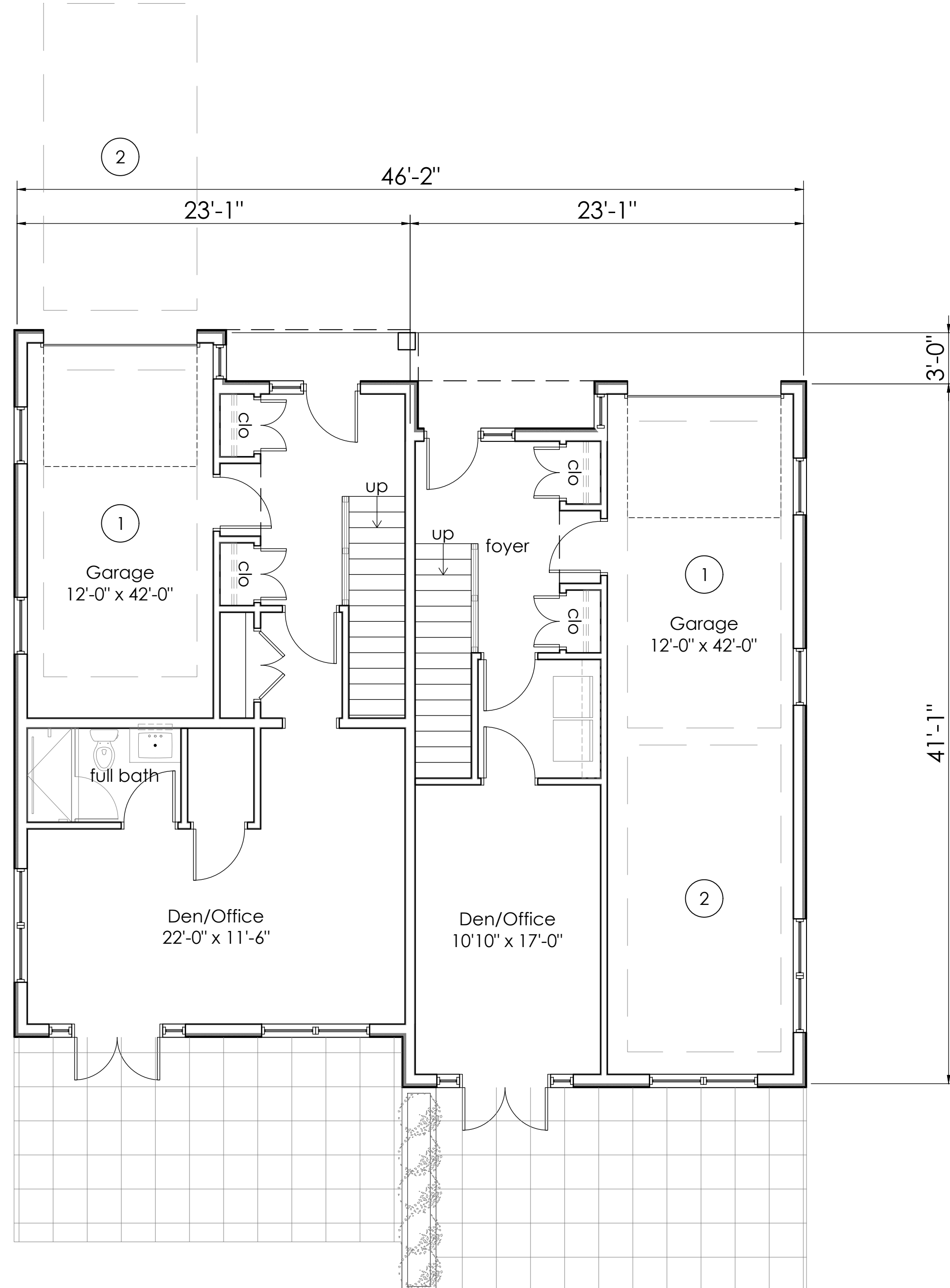
REVISIONS

PROJECT NO: KCC-01
 CAD DWG FILE: A-100 PLANS.DWG
 DRAWN BY:
 CHKD BY:
 SHEET TITLE:
**FLOOR PLANS - TOWNHOUSE
 A - BEDFORD RD**

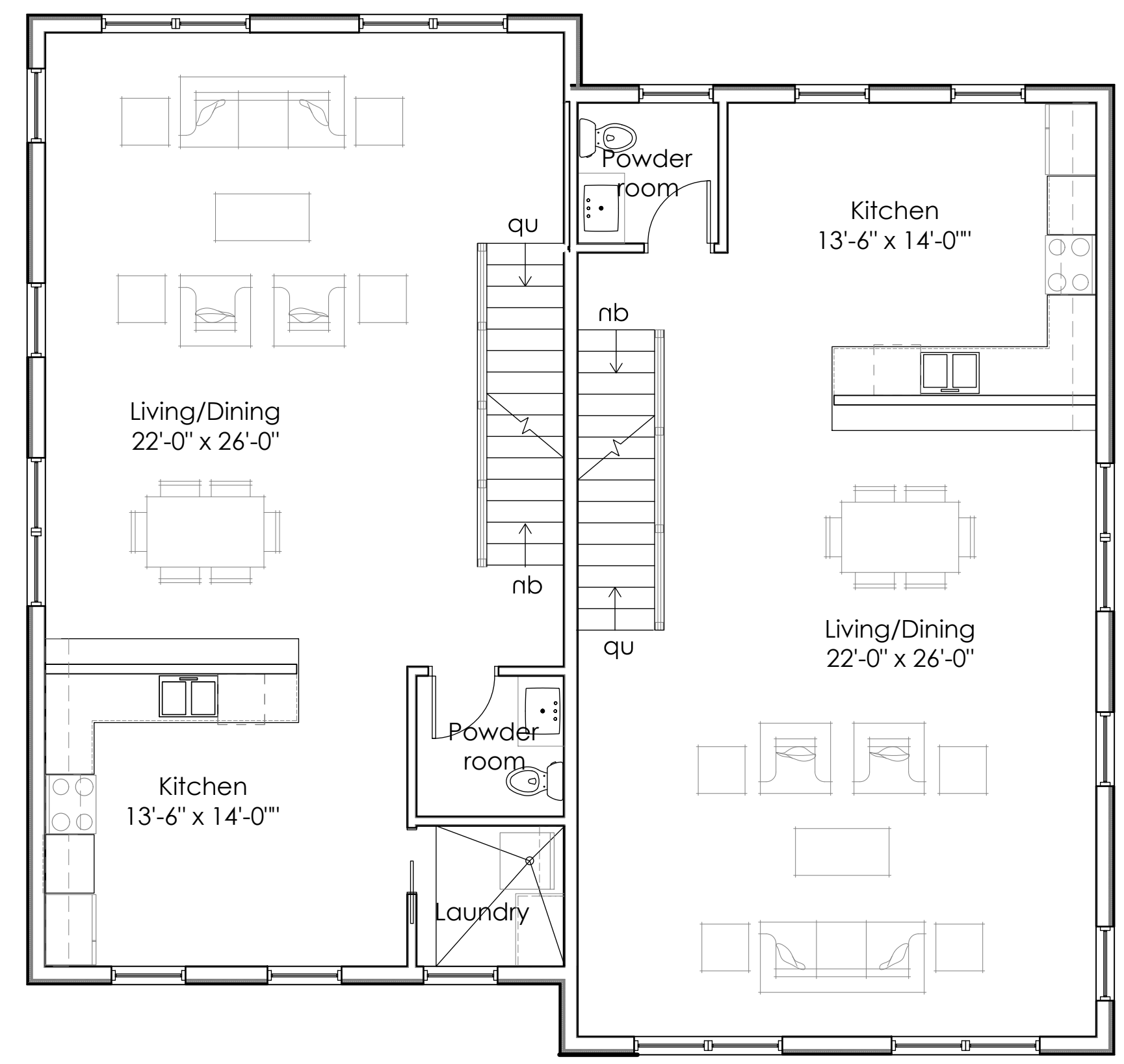
DRAWING NO.:

A-101
 SHEET - OF -

8/4/2023 2:07 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD\SHEETS\A-101 PLANS.DWG



1 MAPLE AVE - GARAGE LEVEL PLAN
SCALE: 1/8" = 1'-0"



2 MAPLE AVE - FIRST LEVEL PLAN
SCALE: 1/8" = 1'-0"

PROJECT:
THE GATEWAY
45 BEDFORD RD
ARMONK, NY
KCC-01
S:108.03 B:1 L:65

OWNER:
45 BEDFORD RD, LLC
399 KNOLLWOOD ROAD
SUITE A
WHITE PLAINS, NY 10603

CONSULTANTS:
CIVIL ENGINEER:
LANGAN
1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

ARCHITECT:
 Design Development, pllc.
165 Mamaroneck Ave, fl. 2
White Plains, NY 10601
914.949.4272 t.
914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD

0 2 4 8 16
SCALE: 1/8" = 1'-0"

MARK	DATE	ISSUE
	08/07/23	ISSUED FOR SITE PLAN APPROVAL

REVISIONS

PROJECT NO: KCC-01

CAD DWG FILE: A-100 PLANS.DWG

DRAWN BY:

CHK'D BY:

SHEET TITLE:
FLOOR PLANS - TOWNHOUSE
TYPE B - MAPLE AVENUE

DRAWING NO.:
A-102
SHEET - OF -

8/4/2023 2:07 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD\SHEETS\A-100 PLANS.DWG

1

2

3

4

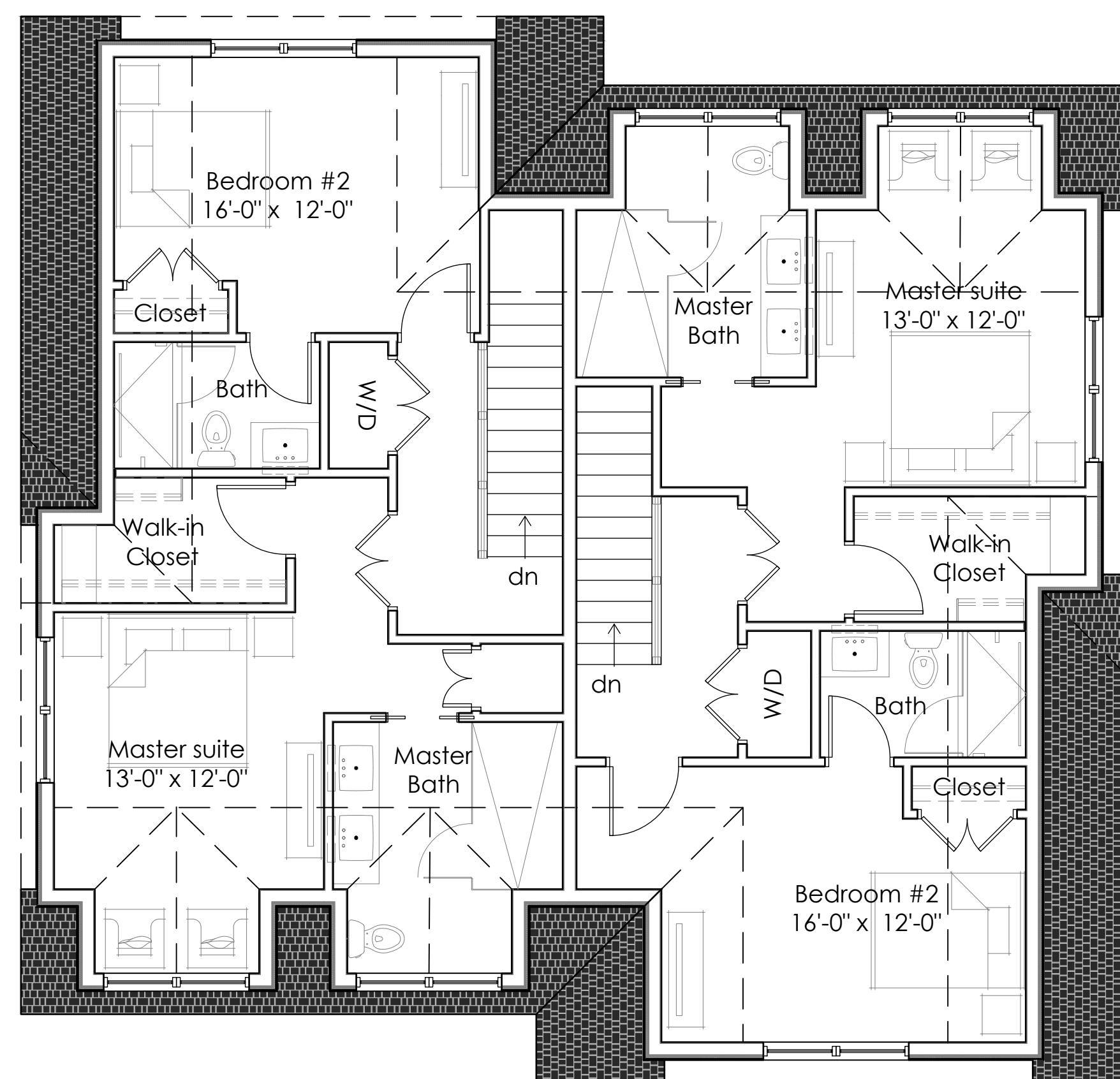
5

D

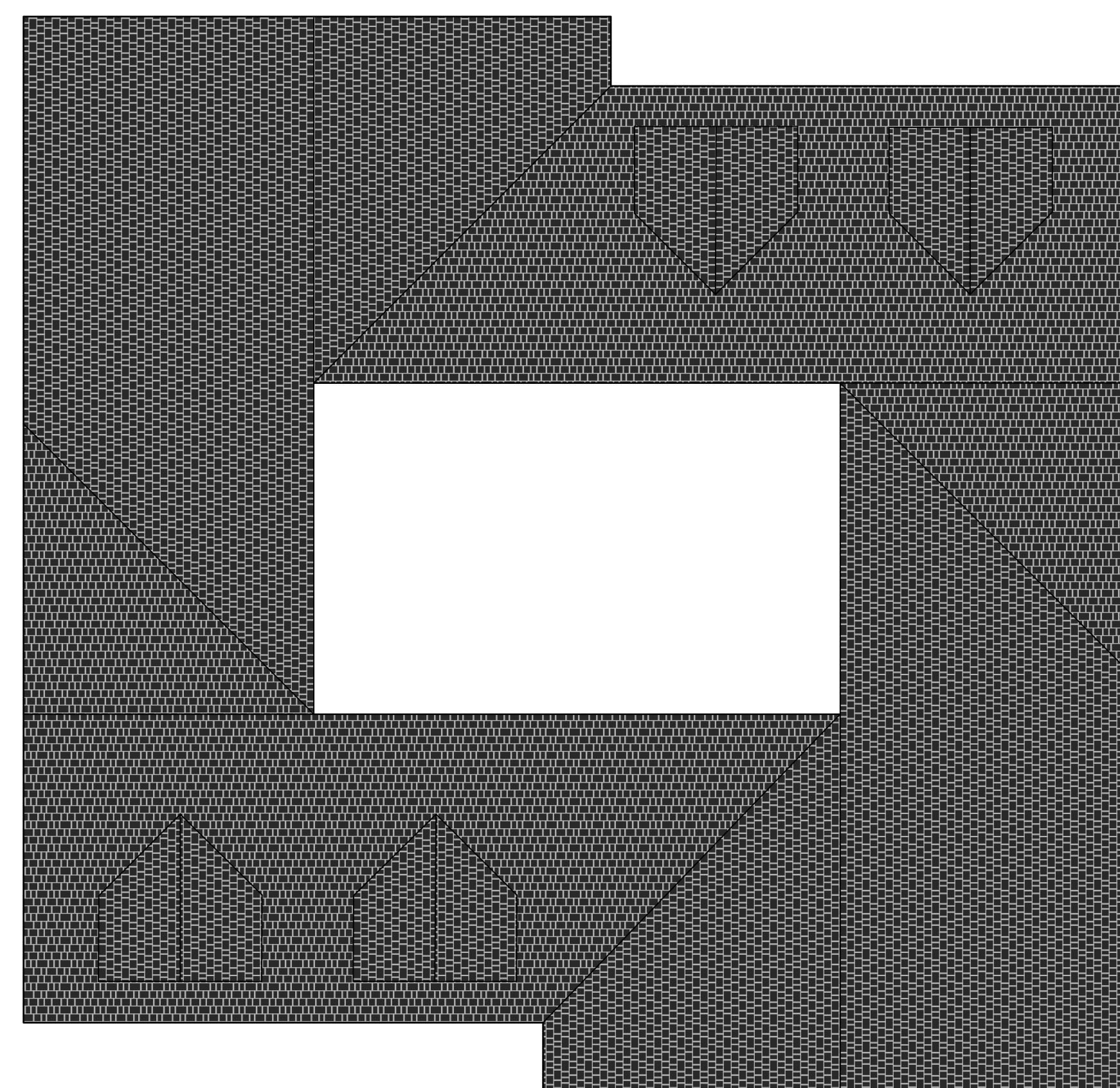
C

B

A



1 MAPLE AVE - SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 MAPLE AVE - ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"

PROJECT:

THE GATEWAY

45 BEDFORD RD
ARMONK, NY

KCC-01
S:108.03 B:1 L:65

OWNER:

45 BEDFORD RD, LLC

399 KNOLLWOOD ROAD
SUITE A
WHITE PLAINS, NY 10603

CONSULTANTS:

CIVIL ENGINEER:

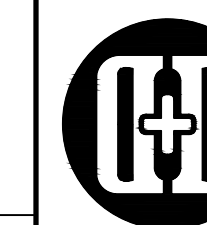
LANGAN

1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

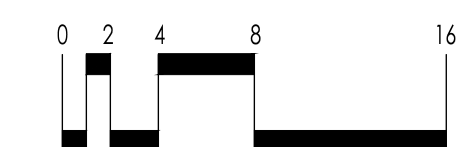
ARCHITECT:



Design Development, p.l.l.c.
165 Mamaroneck Ave, fl. 2
White Plains, NY 10601
914.949.4272 t.
914.949.4278 f.

ALL CONCEPTS, DETAILS AND
INFORMATION CONTAINED, IMPLIED
OR REPRESENTED HEREIN ARE THE
SOLE AND EXCLUSIVE PROPERTY OF
DESIGN DEVELOPMENT PLLC AND
MAY NOT BE REUSED, WHOLE OR IN
PART WITHOUT WRITTEN CONSENT
OF THIS OFFICE.
DRAWING MODIFICATION CAN ONLY
BE MADE UNDER THE SUPERVISION
OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD



SCALE: 1/8" = 1'-0"

08/07/23 ISSUED FOR SITE PLAN APPROVAL

REVISIONS

PROJECT NO: KCC-01

CAD DWG FILE: A-100 PLANS.DWG

DRAWN BY:

CHK'D BY:

SHEET TITLE:

FLOOR PLANS - TOWNHOUSE
B - MAPLE AVENUE

DRAWING NO.:

A-103

SHEET - OF -

8/4/2023 2:07 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD\SHEETS\A-100 PLANS.DWG

PROJECT:

THE GATEWAY

45 BEDFORD RD
ARMONK, NY

KCC-01
S:108.03 B:1 L:65

OWNER:

45 BEDFORD RD, LLC

399 KNOLLWOOD ROAD
SUITE A
WHITE PLAINS, NY 10603

CONSULTANTS:

CIVIL ENGINEER:

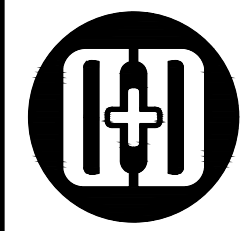
LANGAN

1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

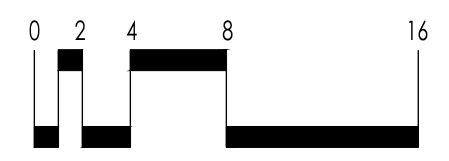
ARCHITECT:



Design Development, pllc.
165 Mamaroneck Ave, fl. 2
White Plains, NY 10601
914.949.4272 t.
914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD



SCALE: 1/8" = 1'-0"

08/07/23 ISSUED FOR SITE PLAN APPROVAL

MARK DATE ISSUE

REVISIONS

PROJECT NO: KCC-01

CAD DWG FILE: A-100 PLANS.DWG

DRAWN BY:

CHKD BY:

SHEET TITLE:

FLOOR PLANS - BUILDING A

DRAWING NO.:

A-104

SHEET - OF -

1

2

3

4

5

D

D

C

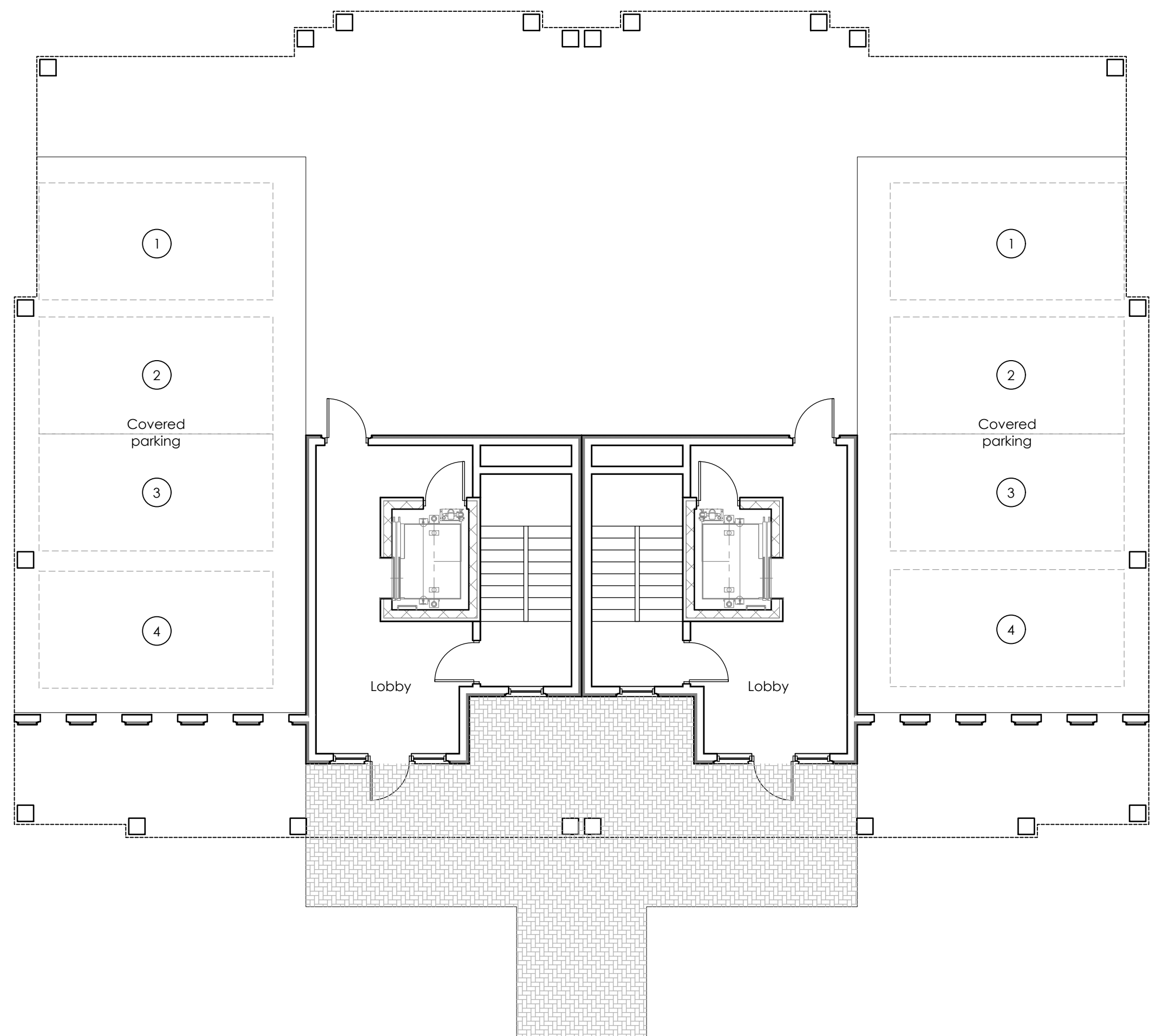
C

B

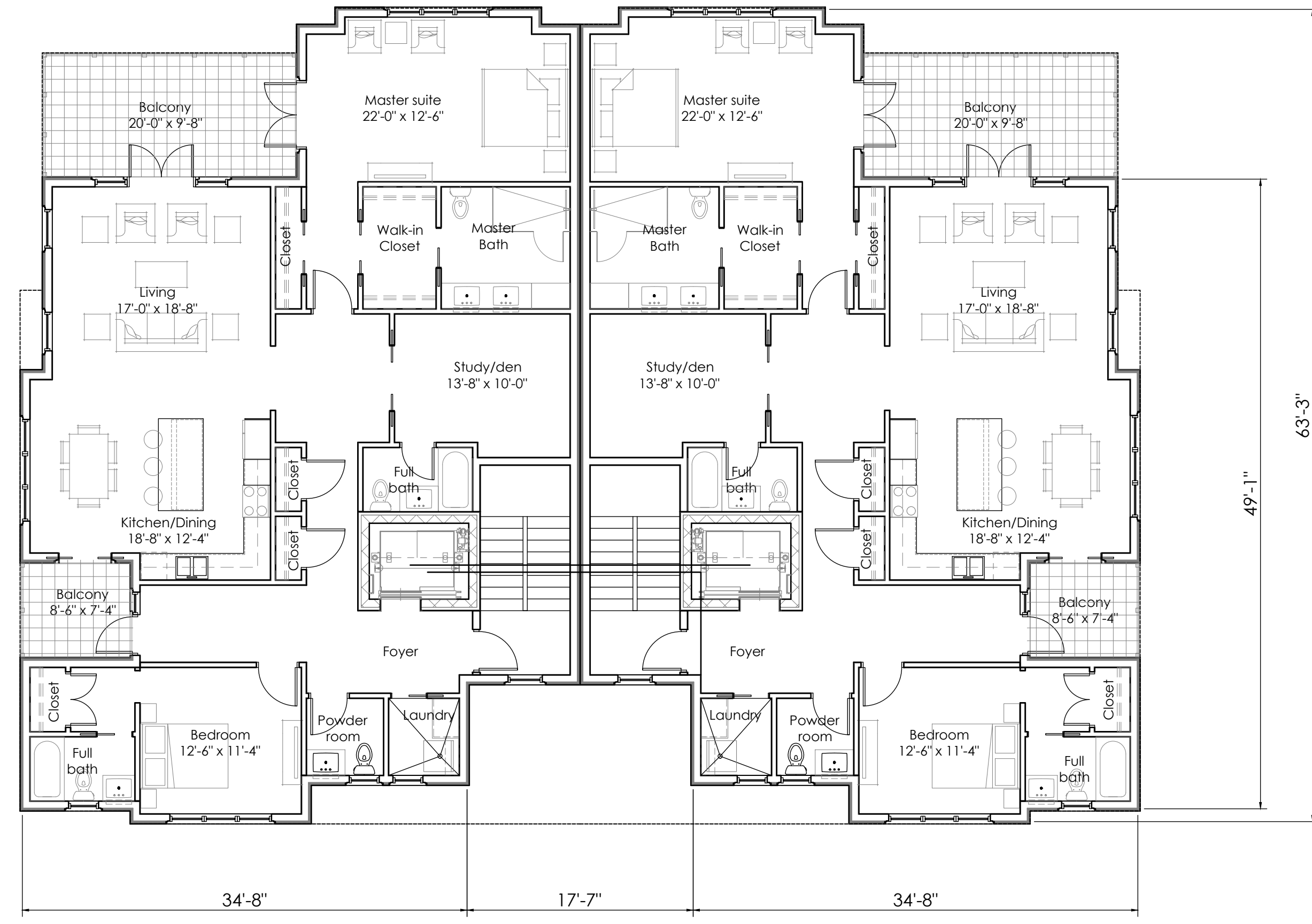
B

A

A



1 BUILDING A - GRADE LEVEL
SCALE: 1/8" = 1'-0"



1 BUILDING A - RESIDENTIAL LEVELS
SCALE: 1/8" = 1'-0"

1

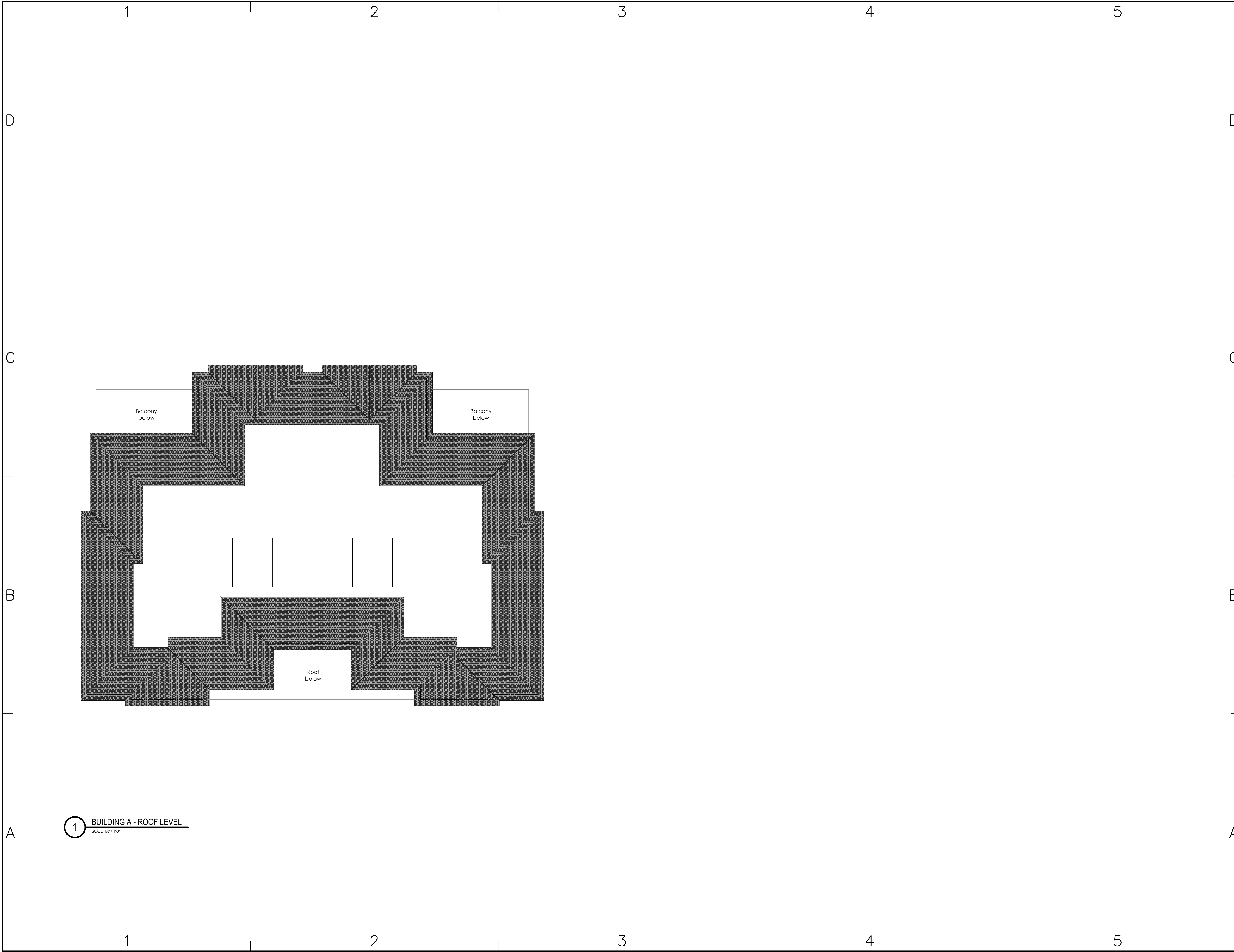
2

3

4

5

8/4/2023 2:08 PM, C:\01 STUDIO\KCC01-45BEDFORD RD\SHEETS\A-100\PLANS\DWG



PROJECT:
THE GATEWAY
 45 BEDFORD RD
 ARMONK, NY
 KCC-01
 S:108.03 B:1 L:65

OWNER:
45 BEDFORD RD, LLC
 399 KNOLLWOOD ROAD
 SUITE A
 WHITE PLAINS, NY 10603

CONSULTANTS:
CIVIL ENGINEER:
LANGAN
 1 NORTH BROADWAY
 SUITE 910
 WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

ARCHITECT:

Design Development, pllc.
 165 Mamaroneck Ave, fl. 2
 White Plains, NY 10601
 914.949.4272 t.
 914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD

0 2 4 8 16
 SCALE: 1/8" = 1'-0"

MARK	DATE	ISSUE
	08/07/23	ISSUED FOR SITE PLAN APPROVAL

REVISIONS

PROJECT NO: KCC-01
 CAD DWG FILE: A-100 PLANS.DWG
 DRAWN BY:
 CHKD BY:
 SHEET TITLE:
FLOOR PLANS - BUILDING A

DRAWING NO.:
A-104
 SHEET - OF -

8/4/2023 2:28 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD\SHEETS\A-100 PLANS.DWG



1 ELEVATION FRONT - TOWNHOUSE
SCALE: 1/8" = 1'-0"



3 ELEVATION SIDE - TOWNHOUSE
SCALE: 1/8" = 1'-0"



2 ELEVATION BACK - TOWNHOUSE
SCALE: 1/8" = 1'-0"



4 ELEVATION SIDE - TOWNHOUSE
SCALE: 1/8" = 1'-0"

PROJECT:
THE GATEWAY
45 BEDFORD RD
ARMONK, NY
KCC-01
S:108.03 B:1 L:65

OWNER:
45 BEDFORD RD, LLC
399 KNOLLWOOD ROAD
SUITE A
WHITE PLAINS, NY 10603

CONSULTANTS:
CIVIL ENGINEER:
LANGAN
1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

ARCHITECT:
 Design Development, p.l.c.
165 Mamaroneck Ave, fl. 2
White Plains, NY 10601
914.949.4272 t.
914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD

0 2 4 8 16
SCALE: 1/8" = 1'-0"

MARK	DATE	ISSUE
	08/07/23	ISSUED FOR SITE PLAN APPROVAL

REVISIONS

PROJECT NO: KCC-01

CAD DWG FILE: A-200 ELEVATIONS.DWG

DRAWN BY:

CHKD BY:

SHEET TITLE:
ELEVATIONS - TOWNHOUSE A
- BEDFORD RD

DRAWING NO.:

A-201
SHEET - OF -

8/4/2023 2:11 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD SHEETS\A-200 ELEVATIONS.DWG



1 SIDE ELEVATION - TOWNHOUSE
SCALE: 1/8" = 1'-0"



3 SIDE ELEVATION - TOWNHOUSE
SCALE: 1/8" = 1'-0"



2 REAR ELEVATION - TOWNHOUSE
SCALE: 1/8" = 1'-0"



4 FRONT ELEVATION - TOWNHOUSE
SCALE: 1/8" = 1'-0"

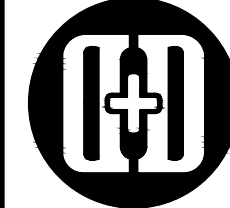
PROJECT:
THE GATEWAY
45 BEDFORD RD
ARMONK, NY
KCC-01
S:108.03 B:1 L:65

OWNER:
45 BEDFORD RD, LLC
399 KNOLLWOOD ROAD
SUITE A
WHITE PLAINS, NY 10603

CONSULTANTS:
CIVIL ENGINEER:
LANGAN
1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

ARCHITECT:
 Design Development, p.l.l.c.
165 Mamaroneck Ave, fl. 2
White Plains, NY 10601
914.949.4272 t.
914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD

0 2 4 8 16
SCALE: 1/8" = 1'-0"

08/07/23 ISSUED FOR SITE PLAN APPROVAL

MARK	DATE	ISSUE

REVISIONS

PROJECT NO: KCC-01

CAD DWG FILE: A-200 ELEVATIONS.DWG

DRAWN BY:

CHKD BY:

SHEET TITLE:
**ELEVATIONS - TOWNHOUSE
TYPE B - MAPLE AVENUE**

DRAWING NO.:

A-202
SHEET - OF -

8/4/2023 2:11 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD SHEETS\A-200 ELEVATIONS.DWG

1

2

3

4

5

D

C

B

A



1 ELEVATION FRONT - BLDG A
SCALE: 3/16" = 1'-0"



2 ELEVATION - REAR - BLDG A
SCALE: 3/16" = 1'-0"

● THIRD LEVEL
ELEV: 19.33'
 ● SECOND LEVEL
ELEV: 9.33'
 ● GRADE LEVEL
ELEV: 0.0'

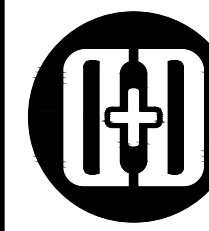
PROJECT:
THE GATEWAY
 45 BEDFORD RD
 ARMONK, NY
 KCC-01
 S:108.03 B:1 L:65

OWNER:
45 BEDFORD RD, LLC
 399 KNOLLWOOD ROAD
 SUITE A
 WHITE PLAINS, NY 10603

CONSULTANTS:
 CIVIL ENGINEER:
LANGAN
 1 NORTH BROADWAY
 SUITE 910
 WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

ARCHITECT:

 Design Development, pllc.
 165 Mamaroneck Ave, fl. 2
 White Plains, NY 10601
 914.949.4272 t.
 914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD

0 2 4 8 16
 SCALE: 1/8" = 1'-0"

MARK	DATE	ISSUE
	08/07/23	ISSUED FOR SITE PLAN APPROVAL
REVISIONS		
PROJECT NO: KCC-01		
CAD DWG FILE: A-200 ELEVATIONS.DWG		
DRAWN BY:		
CHKD BY:		
SHEET TITLE: ELEVATIONS - BUILDING A		
DRAWING NO.:		

A-203
 SHEET - OF -

8/4/2023 2:11 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD SHEETS\A-200 ELEVATIONS.DWG

1

2

3

4

5

D

C

B

A



1 ELEVATION - SIDE (BLDG A)
SCALE: 3/16" = 1'-0"



2 ELEVATION - SIDE (BLDG A)
SCALE: 3/16" = 1'-0"

1

2

3

4

5

PROJECT:

THE GATEWAY

45 BEDFORD RD
ARMONK, NY

KCC-01
S:108.03 B:1 L:65

OWNER:

45 BEDFORD RD, LLC

399 KNOLLWOOD ROAD
SUITE A
WHITE PLAINS, NY 10603

CONSULTANTS:

CIVIL ENGINEER:

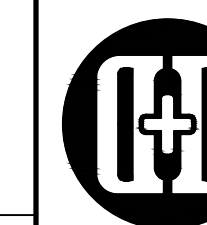
LANGAN

1 NORTH BROADWAY
SUITE 910
WHITE PLAINS, NY 10604

STRUCTURAL ENGINEER:

MEP ENGINEER:

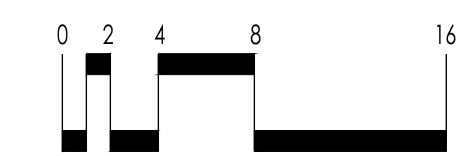
ARCHITECT:



Design Development, p.l.l.c.
165 Mamaroneck Ave, fl. 2
White Plains, NY 10601
914.949.4272 t.
914.949.4278 f.

ALL CONCEPTS, DETAILS AND INFORMATION CONTAINED, IMPLIED OR REPRESENTED HEREIN ARE THE SOLE AND EXCLUSIVE PROPERTY OF DESIGN DEVELOPMENT PLLC AND MAY NOT BE REUSED, WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF THIS OFFICE. DRAWING MODIFICATION CAN ONLY BE MADE UNDER THE SUPERVISION OF A LICENSED ARCHITECT.

ARCHITECT OF RECORD



SCALE: 1/8" = 1'-0"

08/07/23 ISSUED FOR SITE PLAN APPROVAL

MARK DATE ISSUE

REVISIONS

PROJECT NO: KCC-01

CAD DWG FILE: A-200 ELEVATIONS.DWG

DRAWN BY:

CHKD BY:

SHEET TITLE:

ELEVATIONS - BUILDING A

DRAWING NO.:

A-204

SHEET - OF -

8/4/2023 2:17 PM, C:\01 STUDIO PL\KCC01-45BEDFORD RD\SHEETS\A-200 ELEVATIONS.DWG

STORMWATER POLLUTION PREVENTION PLAN

for

**The Gateway
45 Bedford Road
Town of North Castle, New York**

Prepared For:

**Kings Capital Construction
660 White Plains Road
Tarrytown, NY 10591**

Prepared By:

**Langan Engineering, Environmental, Surveying
Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, New York 10601**

August 7th, 2023

LANGAN

Project No.: 190085001

The Gateway
45 Bedford Road
Town of North Castle, New York

August 7th, 2023

Preparer of the SWPPP

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the SPDES General Permit for Stormwater Discharges from Construction Activity. Furthermore, I understand that certifying false, incorrect, or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil or administrative proceedings.

Name: Michael Finan, PE, LEED-AP

Date: August 8th, 2023



Table of Contents

1	Executive Summary.....	1
2	Project Information	2
2.1	Project Summary	2
2.2	Site Conditions.....	3
3	Stormwater Management Plan.....	9
3.1	Stormwater Site Planning	9
3.1.1	Preservation of Natural Features and Conservation	9
3.1.2	Reduction of Impervious Cover	9
3.1.3	Runoff Reduction Techniques	10
3.1.4	Standard Stormwater Management Practices	11
3.2	Hydrologic Analysis.....	12
3.2.1	Stormwater Modeling.....	12
3.2.2	Water Quality Control	13
3.2.3	Runoff Reduction Volume	14
3.2.4	Water Quantity Control.....	14
4	Erosion and Sediment Control Plan.....	15
4.1	Construction Sequencing Schedule and Phasing.....	15
4.2	Erosion and Sediment Control Measures	15
4.3	Pollution Prevention Controls	17
4.4	Soil Stabilization and Restoration	18
5	Stormwater Pollution Prevention Plan Implementation.....	19
5.1	Certification Statements	19
5.2	Pre-Construction Meeting	20
5.3	Construction Site Log	20
5.4	Construction Inspections and Maintenance	20
5.4.1	Contractor Maintenance Inspection Requirements.....	20
5.4.2	Qualified Inspector Inspection Requirements.....	20
6	Termination of Coverage.....	21
7	Post-Construction Requirements.....	22
7.1	Record Retention	22
7.2	Inspection and Maintenance	22
8	Conclusion	22

Table of Contents

Tables

Table 1-1: Overall Summary of Peak Discharge Rates.....	1
Table 2-1: Project Summary	2
Table 2-2: USDA Soil Data.....	5
Table 3-1: Preservation of Natural Features and Conservation	9
Table 3-2: Reduction of Impervious Cover.....	10
Table 3-3: Runoff-Reduction Practices	10
Table 3-4: Standard Stormwater Management Practices	11
Table 3-5: Rainfall Data.....	13
Table 3-6: Total Water Quality Volume	14
Table 3-7: Summary of Channel Protection Volume	14
Table 3-8: Summary of Peak Discharge Rates.....	14
Table 4-1: Soil Restoration	18

Figures

Figure 1: Site Location Map	4
Figure 2: Soils Map	6
Figure 3: Flood Insurance Rate Map.....	7
Figure 4: Cultural Resource Map.....	8
Figure 5: Pre-Development Watershed Map	Appendix D
Figure 6: Post-Development Watershed Map	Appendix E

Appendices

Appendix A: NYSDEC SPDES General Permit
Appendix B: NYSDEC SPDES General Permit Forms
Appendix C: Design Calculations
Appendix D: Pre-Development Stormwater Analysis
Appendix E: Post-Development Stormwater Analysis
Appendix F: Certification Statements
Appendix G: Example Inspection Form
Appendix H: Post-Construction Inspection & Maintenance

1 Executive Summary

This Stormwater Pollution Prevention Plan (SWPPP) and accompanying project plans have been prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (General Permit) latest revision, the *New York State Stormwater Management Design Manual (Design Manual)* latest revision, and the *New York State Standards and Specifications for Erosion and Sediment Control* latest revision. The Applicant, Kings Capital Construction, is proposing to redevelop 4.2-acre property at 45 Bedford Road in the Town of North Castle, New York. The project, The Gateway, is a multi-family residential development that consists of 34 townhouse units and associated site improvements including parking, landscaping, and lighting.

The project is a redevelopment that reduces the existing impervious coverage by a minimum of 25 percent of the total disturbed, existing impervious area. The reduction in the site impervious area will reduce the volume of stormwater runoff generated by the project thus achieving the stormwater management criteria for both water quality and quantity. In addition, the project will maintain existing drainage patterns as much as practical, control the rate of stormwater runoff resulting from the development, and mitigate potential impacts on water quality and erosion generated during and after construction.

Coverage under the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (General Permit) latest revision will be required (see [Appendix A](#)), since the project involves soil disturbance of 1 or more acres. The proposed project is also in a municipal separate storm sewer system (MS4); therefore, the Town of North Castle will review and accept the SWPPP. The Notice of Intent (NOI) form and signed "MS4 SWPPP Acceptance" form will be submitted to the NYSDEC before construction begins to obtain coverage under the SPDES General Permit. The forms have been provided in [Appendix B](#).

The pre-development conditions were analyzed in a previously approved SWPPP dated June 11, 2019, which was used in this analysis. This analysis is provided in [Appendix D](#). Post-development conditions was analyzed using the USDA Soil Conservation Service Publication Technical Release (TR-55) "Urban Hydrology for Small Watersheds", which provides procedures for estimating runoff and peak discharges in small watersheds. The analysis is based upon the watershed areas, land coverage, soil group types, curve numbers (CN), times of concentration (Tc), rainfall distribution type, and rainfall amount for the design storm events. The post-development peak discharge rates of runoff have been evaluated utilizing stormwater modeling software. An overall comparison of the pre- and post-development peak discharge rates for each of the design storms analyzed is provided in the table below.

Table 1-1: Overall Summary of Peak Discharge Rates

Storm Event	Pre (cfs)	Post (cfs)	Diff (cfs)
1-year	0.40	0.10	-0.30
10-year	6.16	1.67	-4.49
100-year	18.29	6.86	-11.43

The overall comparison of the pre- and post-development stormwater runoff peak discharge rates demonstrates no significant adverse impacts to the design points analyzed. In addition, the erosion control, sediment control, pollution-prevention, and stormwater management measures to be implemented during construction as outlined in this SWPPP and project drawings will minimize soil erosion and control sediment transport off site, and after construction will control the water quality and quantity of stormwater runoff.

2 Project Information

2.1 Project Summary

Below is a summary of the project information:

Table 2-1: Project Summary

Project Name:	The Gateway
Project Location:	45 Bedford Road, Armonk, NY Town of North Castle
Property Tax ID No.:	Section 108.03 Block 1 Lot 65
Property Acreage:	4.27 acres
Municipality:	Town of North Castle, which is a municipal separate storm sewer system (MS4).
Project Description:	Residential development that consists of 34 townhouse units and associated site developments including parking, landscaping and lighting.
Estimated Disturbed Area:	3 acres, which does require coverage under the SPDES General Permit.
Existing Site Conditions:	Grass (fair condition), impervious area (gravel, pavement, existing buildings) 3.18 acres of existing impervious area
Proposed Site Conditions:	Grass (fair condition), meadow (good condition), impervious area (gravel, pavement, buildings) 2.23 acres of proposed impervious area (30% decrease)
Stormwater Management Practices:	Underground infiltration
Construction Duration:	From April 2024 to April 2025, including planned winter shutdowns.

2.2 Site Conditions

The Site is bounded by Bedford Road to the North; Maple Avenue to the east; Armonk-Bedford Road (NY State Highway 22) to the south; and commercial properties, a baseball field, and Town of North Castle offices to the west. (See [Figure 1](#)).



SCALE: 1 INCH = 500 FEET

<p>LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C. One North Broadway, Suite 910 White Plains, NY 10601 T: 914.323.7400 F: 914.323.7401 www.langan.com</p>	Project	Drawing Title	Project No.	Figure
	45 BEDFORD ROAD	SITE LOCATION MAP	190085001	FG01
	TOWN OF NORTH CASTLE WESTCHESTER COUNTY NEW YORK		Date 01/30/2023	
			Drawn By GN Checked By MT	Sheet 1 of 1

Site Soils

The United States Department of Agriculture (USDA) Soil Conservation Service Soil Survey for Westchester County has been reviewed. The surficial soil conditions are shown in [Figure 2](#) and are summarized in the table below.

Table 2-2: USDA Soil Data

Map Symbol	Description	Depth to Groundwater (ft.)	Depth to Bedrock (in)	Hydrologic Soil Group
UvB	Urban land – Riverhead complex, 2 to 8 percent slopes	>6	>78	-- ¹

1. A hydrological soil group is not given for Urban land – Riverhead complex. The hydrologic soils group will be assumed to be the same as the surrounding soil groups. In this instance, the surrounding soil groups are Type B and A/D; therefore, the hydrological soil group will be assumed to be Type B.

Water Resources

One wetland - a stream - was identified within the property area, in the southwest. This wetland is USACE jurisdictional. The stream is classified by the NYSDEC as a Class C waterbody. Although classified by the NYSDEC, Class C waterbodies are not regulated by the NYSDEC, therefore the stream is not subject to NYSDEC setback requirements.

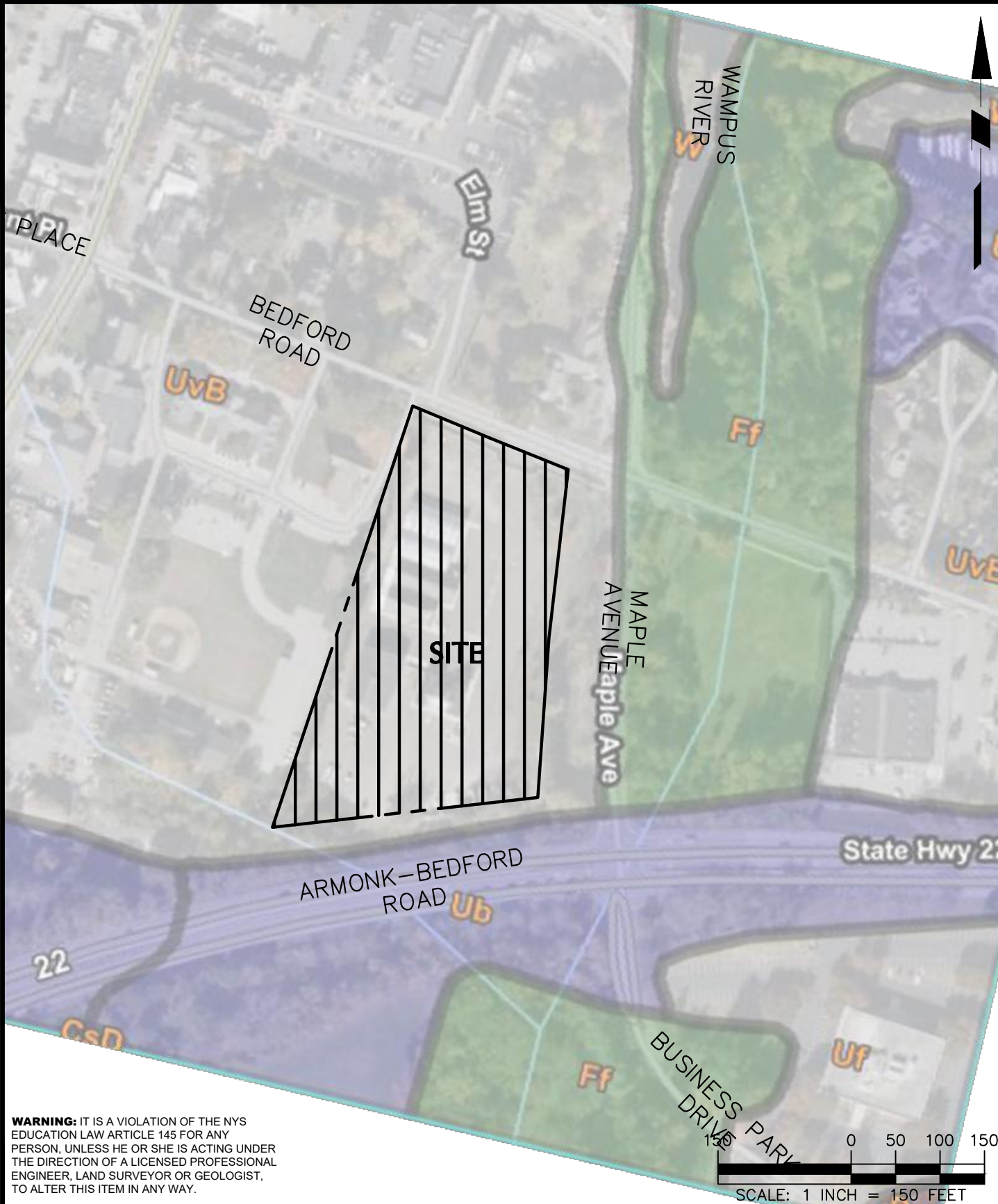
Aquifer mapping was reviewed to determine whether the site is over a sole source, primary or principal aquifer. According to the Environmental Protection Agency "Sole Source Aquifers" map, the site is not over a sole-source aquifer. According to the NYSDEC "Primary and Principal Aquifers in New York State" map, the site is not over a primary aquifer or a principal aquifer.

Floodplains

The Flood Insurance Rate Map (FIRM) was reviewed, and parts of the property is located within a floodplain (see [Figure 3](#)). The base flood elevation is 374.5 ft (NAVD88).

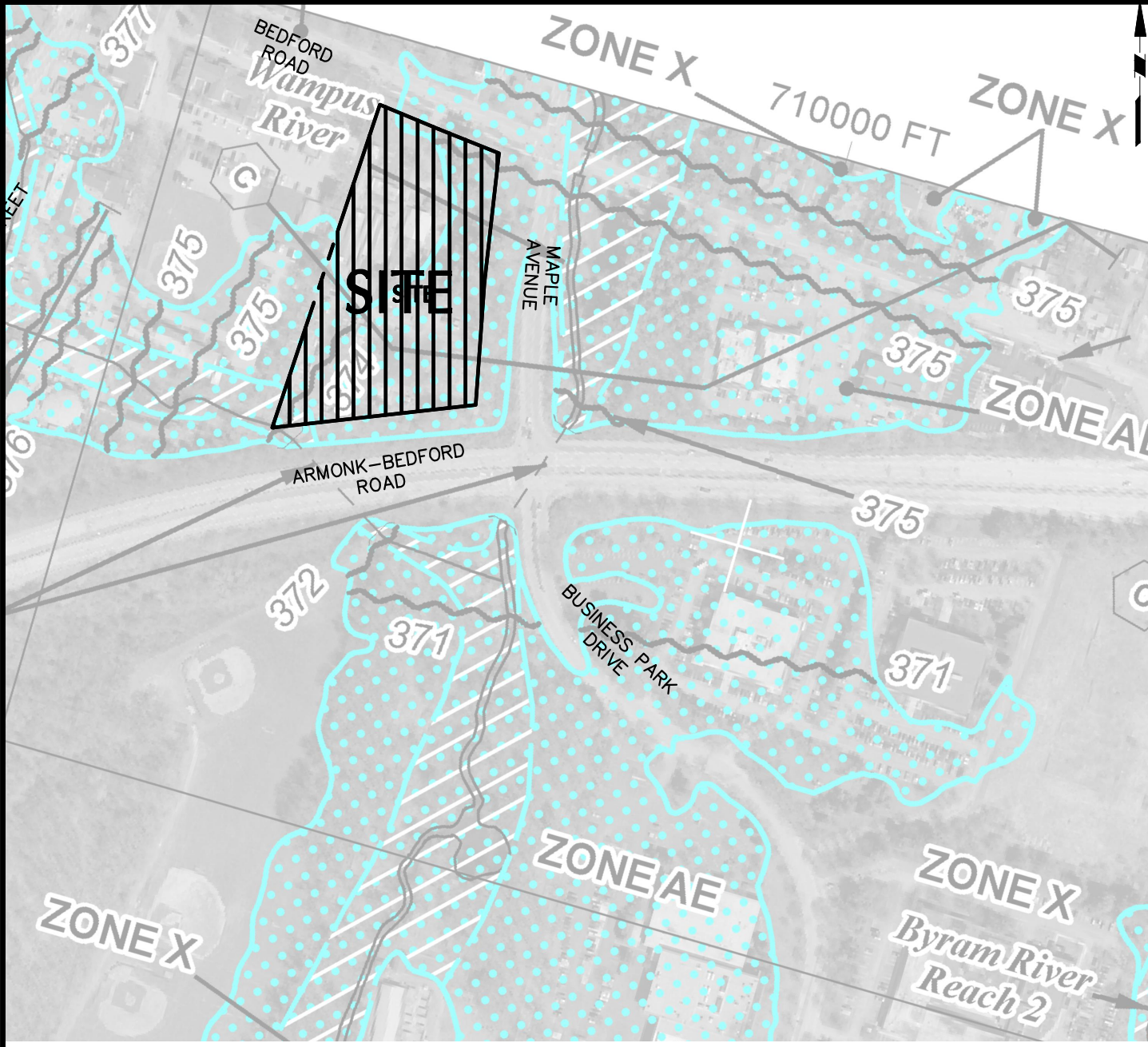
Cultural Resources

According to the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) Cultural Resource Information System (CRIS) database, the site is within an archaeologically sensitive area (see [Figure 4](#)). NYSOPRHP has been consulted and it has been concluded that no adverse impacts are anticipated because of this development.



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

<p>LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C. One North Broadway, Suite 910 White Plains, NY 10601 T: 914.323.7400 F: 914.323.7401 www.langan.com</p>	Project	Drawing Title	Project No.	Figure
	<p>45 BEDFORD ROAD</p> <p>ARMONK WESTCHESTER COUNTY NEW YORK</p>	<p>SOILS MAP</p>	<p>190085001</p>	<p>FG02</p>
			Date	
			Drawn By	
			Checked By	
				Sheet 2 of 6



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

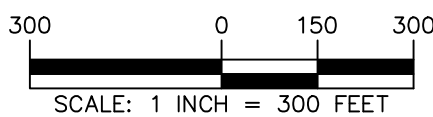
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

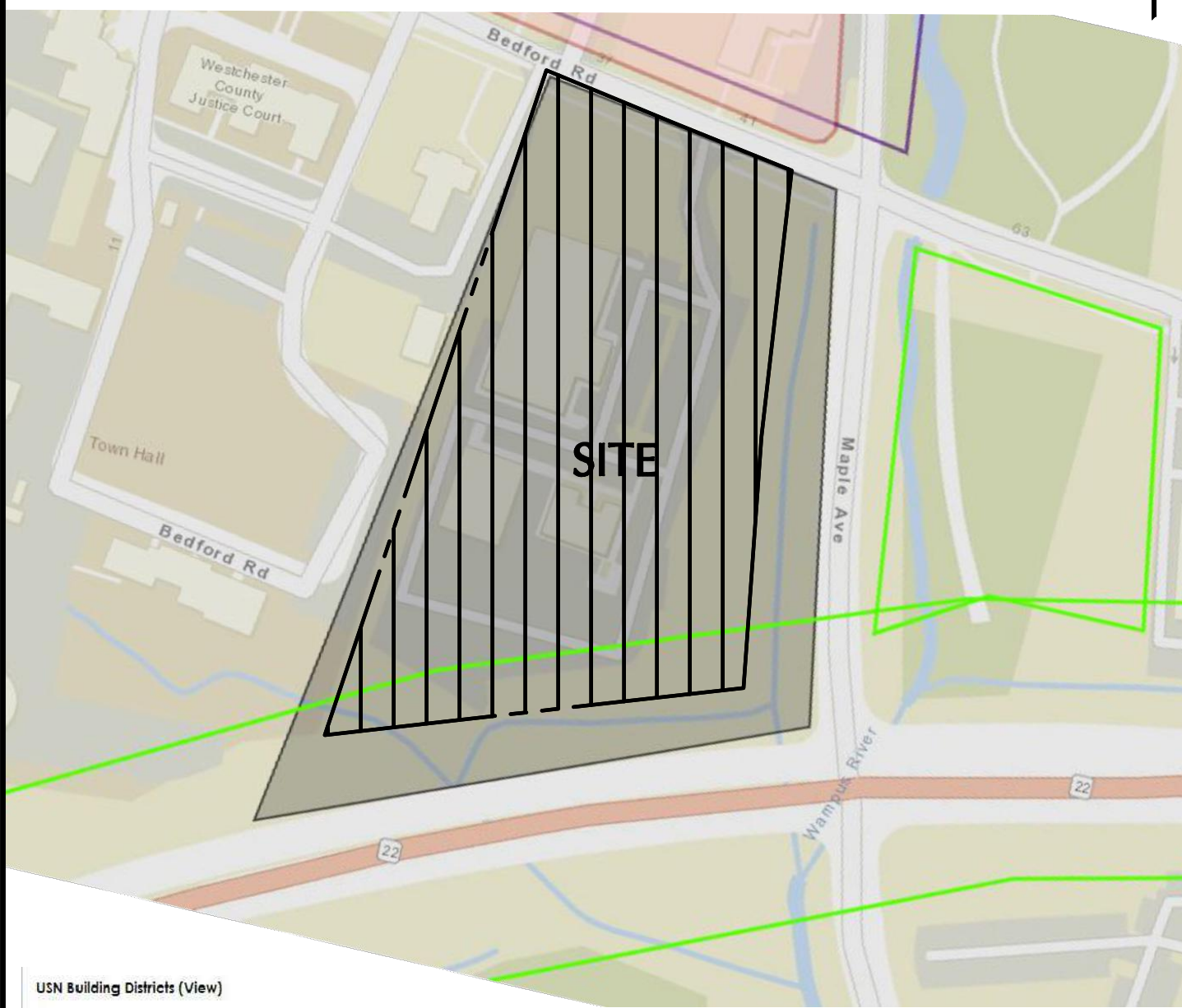


LANGAN
 Langan Engineering, Environmental, Surveying,
 Landscape Architecture, and Geology, D.P.C.
 One North Broadway, Suite 910
 White Plains, NY 10601
 T: 914.323.7400 F: 914.323.7401 www.langan.com



Project
45 BEDFORD ROAD
 TOWN OF NORTH CASTLE
 WESTCHESTER COUNTY NEW YORK

Drawing Title
FLOOD INSURANCE RATE MAP

Project No. 190085001	Figure FG03 Sheet 1 of 1
Date 01/30/2023	
Drawn By GN	
Checked By MT	



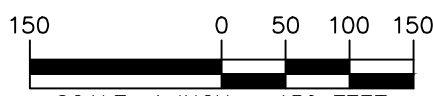
USN Building Districts (View)

-  Eligible
-  Other Statuses


National Register Building Sites (View)



Survey Archaeology Areas (View)



SCALE: 1 INCH = 150 FEET

 Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C. One North Broadway, Suite 910 White Plains, NY 10601 T: 914.323.7400 F: 914.323.7401 www.langan.com	Project	Drawing Title	Project No.	Figure
	45 BEDFORD ROAD	CULTURAL RESOURCES MAP	190085001	FG04
	TOWN OF NORTH CASTLE WESTCHESTER COUNTY NEW YORK		Date 01/30/2023	Sheet 1 of 1
			Drawn By GN Checked By MT	

3 Stormwater Management Plan

3.1 Stormwater Site Planning

3.1.1 Preservation of Natural Features and Conservation

Preservation of natural features includes techniques to identify and preserve natural areas that can be used to protect water, habitat, and vegetative resources. Conservation includes designing elements of the development in a way that the site design takes advantage of a site’s natural features, preserves sensitive areas, and identifies constraints and opportunities to prevent or reduce negative effects of a development. An evaluation of the preservation of natural features and conservation planning practices is provided in the table below.

Table 3-1: Preservation of Natural Features and Conservation

Practice	Description	Incorporated	Reason
Preservation of Undisturbed Areas	Delineate and place into permanent conservation undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.	N/A	Most of the site is already developed.
Preservation of Buffers	Define, delineate, and preserve naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.	Considered and Not Applied	The project has minimal unavoidable disturbance in the 100-foot buffer of adjacent streams. Mitigation measures have been taken to preserve the wetlands and buffers.
Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	N/A	Most of the site is already developed.
Locating Development in Less Sensitive Areas	Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	N/A	Most of the site is in the flood plain.
Open Space Design	Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	Considered and Applied	The proposed development will reduce existing impervious area.
Soil Restoration	Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of post construction practices.	Considered and Applied	N/A

3.1.2 Reduction of Impervious Cover

Reduction of impervious cover includes methods to reduce the amount of rooftops, parking lots, roadways, sidewalks, and other surfaces that do not allow rain to infiltrate into the soil. An evaluation of the reduction of impervious cover techniques is provided in the table below.

Table 3-2: Reduction of Impervious Cover

Practice	Description	Incorporated	Reason
Roadway Reduction	Minimize roadway widths and lengths to reduce site impervious area	N/A	
Sidewalk Reduction	Minimize sidewalk lengths and widths to reduce site impervious area	N/A	
Driveway Reduction	Minimize driveway lengths and widths to reduce site impervious area	N/A	
Cul-de-sac Reduction	Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	N/A	There are no cul-de-sacs in the proposed development.
Building Footprint Reduction	Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	Considered and Applied.	The project proposes two- and three-story buildings.
Parking Reduction	Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, minimizing stall dimensions, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	Considered and Applied.	The project proposes compact parking spaces below some buildings to avoid creating more impervious area for those parking spaces.

3.1.3 Runoff Reduction Techniques

Green infrastructure techniques use the natural features of the site and promote runoff reduction through micromanaging runoff, promoting groundwater recharge, increasing losses through evapotranspiration, and emulating the existing hydrology. An evaluation of the runoff reduction practices is provided in the table below.

Table 3-3: Runoff-Reduction Practices

Practice	Description	Incorporated	Reason
Conservation of Natural Areas	Retain the pre-development hydrologic and water quality characteristics of undisturbed natural areas, stream and wetland buffers by restoring and/or permanently conserving these areas on a site.	N/A	The wetland buffers are preserved as much as practical, but they are not placed in a permanent conservation easement.
Sheet flow to Riparian Buffers or Filter Strips	Undisturbed natural areas such as forested conservation areas and stream buffers or vegetated filter strips and riparian buffers can be used to treat and control stormwater runoff from some areas of a development project.	N/A	The project area is not big enough to incorporate undisturbed natural areas with sheet flow.
Vegetated Open Swale	The natural drainage paths, or properly designed vegetated channels, can be used instead of constructing underground storm sewers or concrete open channels to increase time of concentration, reduce the peak discharge, and provide infiltration.	N/A	The project area does not have enough space to incorporate an open swale.
Tree Planting/ Tree Box	Plant or conserve trees to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. Trees can be used for applications such as landscaping, stormwater management practice areas, conservation areas and erosion and sediment control.	Considered and applied.	The project includes new trees in the project area as part of the landscaping plan.

Practice	Description	Incorporated	Reason
Disconnection of Rooftop Runoff	Direct runoff from residential rooftop areas and upland overland runoff flow to designated pervious areas.	Considered and not applied.	The project area does not have enough space to have significant overland flow from rooftops.
Stream Daylighting for Redevelopment Projects	Stream daylight previously culverted/ piped streams to restore natural habitats, better attenuate runoff by increasing the storage size and promoting infiltration.	N/A	
Rain Garden	Manage and treat small volumes of stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression.	N/A	The project area does not have enough space to incorporate a rain garden.
Green Roof	Capture runoff through a layer of vegetation and soil installed on top of a conventional flat or sloped roof.	N/A	
Stormwater Planter	Small, landscaped stormwater treatment devices that can be designed as infiltration or filtering practices.	N/A	
Rain Tank/Cistern	Capture and store stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities.	N/A	
Porous Pavement	Pervious types of pavements that provide an alternative to conventional paved surfaces, designed to infiltrate rainfall through the surface.	Considered and not applied.	

3.1.4 Standard Stormwater Management Practices

Standard stormwater management practices (SMPs) are structural practices that are designed to capture and treat the water quality volume. Some of the standard SMPs can also provide runoff reduction or water quantity controls. An evaluation of the standard SMPs is provided in the table below.

Table 3-4: Standard Stormwater Management Practices

Practice	Description	Incorporated	Reason
Stormwater Ponds	Constructed stormwater retention basins that have a permanent pool (or micropool). Runoff from each rain event is detained and treated in the pool. Can be used to treat hotspot runoff if 2 feet minimum separation to seasonally groundwater is provided or if a permeable liner is provided.	N/A	There is not enough space in the project area to construct a stormwater pond.
Stormwater Wetlands	Constructed stormwater wetlands that are structural practices that incorporate wetland plants to store and treat runoff. Can be used to treat hotspot runoff if 2 feet minimum separation to seasonally groundwater is provided.	N/A	There is not enough space in the project area to construct a stormwater wetland.

Practice	Description	Incorporated	Reason
Stormwater Infiltration	Excavated trench or basin used to capture and allow for infiltration into the surrounding soils from the bottom and sides of the basin or trench. Also, a standard stormwater practice that also provides runoff reduction volume capacity.	N/A	There is not enough space in the project area to construct an open stormwater infiltration trench or basin.
Underground Infiltration System	An underground perforated piping or chambers used to capture and allow for infiltration into the surrounding soils from the bottom and sides. Also, a standard stormwater practice that also provides runoff reduction volume capacity.	Considered and applied.	Stormtech chambers are proposed for this project.
Stormwater Filtering Systems – Sand or Organic	Aboveground or underground multi-chamber practice designed to treat stormwater runoff through filtration using a sediment forebay, primary filter media and underdrain. Can be used to treat hotspot runoff if a permeable liner is provided.	Considered and not applied.	Other practices were chosen for the site.
Stormwater Filtering Systems – Bioretention	Shallow basin or landscaped area that uses engineered soils and vegetation to capture and treat runoff. Can be used to treat hotspot runoff if a permeable liner is provided. Also, a standard stormwater practice that also provides runoff reduction volume capacity.	Considered and not applied.	Other practices were chosen for the site.
Stormwater Open Channel Systems - Dry Swale	Vegetated channel that captures and treats runoff within dry cells formed by check dams or other means. Can be used to treat hotspot runoff if a permeable liner is provided. Also, a standard stormwater practice that also provides runoff reduction volume capacity.	N/A	There is not enough space in the project area to construct an open swale.
Stormwater Open Channel Systems - Wet Swale	Vegetated channel that captures and treats runoff within wet cells formed by check dams or other means.	N/A	There is not enough space in the project area to construct an open swale.

3.2 Hydrologic Analysis

3.2.1 Stormwater Modeling

The USDA Soil Conservation Service Publication Technical Release (TR-55) “Urban Hydrology for Small Watersheds” has been used to analyze the pre- and post-development rainfall runoff rates and volumes. Watershed areas, curve numbers (CN), and times of concentration (T_c) were calculated for each contributing watershed. The curve number is a land-sensitive coefficient that dictates the relationship between total rainfall depth and direct storm runoff. Based on the land coverage and soil group types, the average CN has been determined for each of the subcatchments for both the existing and proposed conditions.

The T_c is defined as the time for runoff to travel from the hydraulically most distant point in the watershed to a Design Point (DP). Values of the time of concentration were determined for both the pervious and impervious area of each watershed for the proposed conditions based on land cover and slope of the flow path using methods outlined in TR-55. As per TR-55, the minimum T_c used is 0.1 hours (or 6 minutes).

An overall watershed boundary was developed for the post-development conditions (see [Figure 6](#)). The pre-development watershed boundary and conditions are in the previously approved SWPPP shown in [Appendix D](#). The overall watershed was broken down into smaller watersheds, or subcatchments to allow for analysis of runoff conditions at several locations. Each of these locations is defined as a Design Point (DP) to compare the proposed development to the existing conditions. Descriptions of each of the selected design points are provided below:

- [Design Point 1](#): Stream south-west of the site.
- [Design Point 2](#): Wetland south-east of the site.
- [Design point 3](#): Catch basin on Bedford Road northeast of the site.

Rainfall data used in the modeling and analysis was obtained from the isohyet maps provided in the *Design Manual* and the Northeast Regional Climate Center (NRCC). A Type III rainfall distribution was used to evaluate the pre- and post-development stormwater runoff conditions for the 1-, 10-, and 100-year 24-hour storm events. The rainfall data used in the stormwater management design and analysis is provided in the table below.

Table 3-5: Rainfall Data

Storm Event	24-Hour Rainfall
90 th Percentile ^(1,2)	1.50 inches
1-year	2.80 inches
2-year ⁽³⁾	3.43 inches
10-year	5.13 inches
100-year	9.16 inches

1. The 90th percentile 24-hour rainfall value was taken from the *New York State Stormwater Management Design Manual*. The other 24-hour rainfall values are taken from NRCC.
2. The 90th percentile 24-hour rainfall amount was used to calculate the required total water quality volume.
3. The 2-year 24-hour rainfall amount was used to calculate the sheet flow component in the time of concentration.

The rainfall data used in the stormwater management design and analysis is provided in [Appendix C](#). The results of the computer modeling used to analyze the post-development watershed conditions are provided in [Appendix E](#). The pre-development watershed conditions analysis is provided in the previously approved SWPPP in [Appendix D](#).

3.2.2 Water Quality Control

The water quality volumes have been determined based on the methodology described in the Design Manual. The total water quality volume is provided in the table below.

Table 3-6: Total Water Quality Volume

Subcatchment	Area (ac)	Impervious Area (ac)	WQ_v (cf)
10	0.56	0.33	1,781
20	3.39	1.86	10,023
Total	3.95	2.19	11,804

Detailed design calculations have been provided in [Appendix C](#).

Subcatchment 30 was not included as part of the total water quality volume calculations, since it has a smaller post-development total area and impervious area than in pre-development conditions. This subcatchment discharges to an existing catch basin on Bedford Road to the northeast of the site.

3.2.3 Runoff Reduction Volume

Runoff reduction is achieved by infiltration, groundwater recharge, reuse, recycle, evaporation and evapotranspiration of 100 percent of the post-development water quality volumes to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow, discharge volume, and minimizing concentrated flow by using runoff-control techniques to provide treatment in a distributed manner before runoff reaches the collection system. The runoff-reduction-volume techniques that were used to reduce the total required water quality volume are in the table below.

3.2.4 Water Quantity Control

A comparison of the required and provided channel protection volume is provided in the table below.

Table 3-7: Summary of Channel Protection Volume

Water Quantity Parameter	Required (cf)	Provided (cf)
Channel Protection Volume	9,918	16,339

Detailed channel protection volume calculations have been provided in [Appendix C](#).

A comparison of the pre- and post-development peak discharge rates is provided in the table below.

Table 3-8: Summary of Peak Discharge Rates

Storm Event	Design Point	Pre (cfs)	Post (cfs)	Diff (cfs)
1-year	1	0.00	0.00	0.00
	2	0.07	0.02	-0.05
	3	0.33	0.08	-0.25
10-year	1	2.53	1.16	-1.37
	2	2.85	0.24	-2.61
	3	0.78	0.27	-0.51
100-year	1	4.89	3.02	-1.87
	2	11.84	3.19	-8.65
	3	1.56	0.65	-0.91

Comparison of the peak discharge rates for pre- and post-development watershed conditions demonstrates that the peak rate of runoff from the proposed development will not be increased. The pre-development stormwater model is provided in the previously approved SWPPP submission in [Appendix D](#). The post-development stormwater model is provided in [Appendix E](#).

4 Erosion and Sediment Control Plan

4.1 Construction Sequencing Schedule and Phasing

The project will be completed in one phase. The general construction sequencing is shown on the project plans. In addition, the Applicant is not requesting to disturb more than 5 acres of soil at any one time.

4.2 Erosion and Sediment Control Measures

Temporary erosion and sediment control measures to be used during construction will include the following:

- **Stabilized Construction Access** - Before construction, the stabilized construction access shall be installed as shown on the plans to reduce the tracking of sediment onto adjacent roadways. Construction traffic must enter and exit the site at the stabilized construction access. The stabilized construction access shall be maintained in good condition to control tracking of sediment onto rights-of-way or streets. When necessary, the placement of additional aggregate atop the filter fabric shall be done to maintain the minimum thickness. Sediments and soils spilled, dropped, or washed onto the public rights-of-way shall be removed immediately.
- **Dust Control** - Water trucks or other approved water source shall be used, as needed, during construction to reduce dust generated on the site. Dust control shall be provided by the general contractor to a degree acceptable to the owner/operator, and in compliance with the applicable local and state dust control requirements.
- **Temporary Soil Stockpile** - Materials, such as topsoil, shall be temporarily stockpiled (if necessary) on site during construction. Stockpiles shall be located away from storm drainage, water bodies or courses, and shall be properly protected from erosion in accordance with the NYSDEC standard detail.
- **Silt Fencing** - Before initiation of and during construction, silt fencing shall be established along the perimeter of areas to be disturbed because of the construction up gradient of water courses or adjacent properties. These barriers may extend into non-impact areas to adequately protect adjacent lands. Clearing and grubbing shall be performed only as necessary for the installation of the sediment control barrier. To maximize effectiveness of the silt fencing, daily inspections shall be performed by site personnel. Maintenance of the fence shall be performed as needed and when directed by the Qualified Inspector.
- **Temporary Seeding** - Within seven days after construction ceases on any particular area of the site, all disturbed areas where there shall be no construction for longer than 14

days shall be temporarily seeded and mulched to minimize erosion and sediment loss. Other stabilization methods maybe approved by the Qualified Inspector.

- **Inlet Protection** – Inlet protection shall be installed around existing and proposed catch basins (once installed) to keep sediment from entering the storm-sewer system. During construction, the inlet protection measures shall be replaced as needed to ensure proper function of the structure.
- **Temporary Sediment Basins and Traps** - Temporary sediment basins and traps shall be constructed to intercept sediment laden runoff, reduce the amount of sediment leaving the disturbed areas, and protect drainage ways, properties, and rights-of-way. Projects that have proposed stormwater ponds can be used as temporary sediment basins during construction. Temporary sediment basins and traps shall be inspected at least every seven days. All damage caused by soil erosion and construction equipment shall be repaired upon discovery. Accumulated sediment shall be removed from the sediment basin or trap when it reaches 50 percent of the design capacity and must not exceed 50 percent. Sediment must not be placed downstream from the embankment, adjacent to a stream, or floodplain.
- **Dewatering** - Dewatering, if required, must not be discharged directly into wetlands, water courses, water bodies, and storm sewer systems without appropriate protection or authorizations. Proper methods and devices shall be used to the extent permitted by law, such as pumping water into temporary sediment basins, providing surge protection at the inlet and outlet of pumps, floating the intake of the pump, or other methods to minimize and retain the suspended solids.

Permanent erosion and sediment control measures to be used after construction generally include the following:

- **Establish Permanent Vegetation** - Disturbed areas not covered by impervious surfaces shall be seeded in accordance with the accompanying plans. The type of seed, mulch, and maintenance measures shall be followed. All areas at final grade shall be seeded and mulched within 14 days after completion of the major construction. All seeded areas shall be protected with mulch or hay. Final site stabilization is achieved when soil-disturbing activities have been completed and a uniform, perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on the disturbed unpaved areas and areas not covered by permanent structures.
- **Rock Outlet Protection** - Rock outlet protection shall be installed at the locations as shown on the accompanying plans. The installation of rock outlet protection will reduce the depth, velocity, and energy of water, such that the flow will not erode the receiving water course or water body.

Specific erosion and sediment control measures, inspection frequency, and remediation procedures are provided in the subsequent sections and on the accompanying project plans.

4.3 Pollution Prevention Controls

Good housekeeping practices are designed to maintain a clean and orderly work environment. Good housekeeping measures shall be maintained throughout the construction process by those parties involved with the direct care and development of the site. The following measures shall be implemented to control the possible exposure of harmful substances and materials to stormwater runoff:

1. Material resulting from the clearing and grubbing operation shall be stockpiled away from storm drainage, water bodies or watercourses and surrounded with adequate erosion and sediment control measures. Soil stockpile locations shall be exposed no longer than 14 days before seeding.
2. Equipment maintenance areas shall be protected from stormwater flows and shall be supplied with appropriate waste receptacles for spent chemicals, solvents, oils, greases, gasoline, and any pollutants that might contaminate the surrounding habitat or water supply. Equipment wash-down zones shall be within areas draining to sediment control devices.
3. The use of detergents for large-scale (e.g., vehicles, buildings, pavement surfaces) washing is prohibited.
4. Material storage locations and facilities (e.g., covered storage areas, storage sheds) shall be on-site and shall be stored according to the manufacturer's standards in a dedicated staging area. Chemicals, paints, solvents, fertilizers, and other toxic material shall be stored in waterproof containers. Runoff containing such materials shall be collected, removed from the site, treated and disposed of at an approved solid waste or chemical disposal facility.
5. Hazardous spills shall be immediately contained to prevent pollutants from entering the surrounding habitat or water supply. Spill Kits shall be provided on site and shall be displayed in a prominent location for ease of access and use. Spills greater than 5 gallons shall be reported to the NYSDEC Response Unit at 1-800-457-7362. In addition, a record of the incidents or notifications shall be documented and attached to the SWPPP.
6. Portable sanitary waste facilities shall be provided on site for workers and shall be properly maintained.
7. Dumpsters or debris containers shall be on site and shall be of adequate size to manage respective materials. Regular collection and disposal of wastes must occur as required.
8. Temporary concrete washout facilities shall be a minimum of 50 feet from storm drain inlets, open drainage facilities, and watercourses. Each facility should be away from construction traffic or access areas to prevent disturbance or tracking. A sign shall be installed adjacent to each washout facility to inform concrete equipment operators to use the proper facilities. When temporary concrete washout facilities are no longer required for the work, the hardened concrete shall be removed and disposed of. Materials used to construct the temporary concrete washout facilities shall be removed and disposed of. Holes, depressions, or other ground disturbance caused by the removal of the temporary

concrete washout facilities shall be backfilled or repaired, seeded, and mulched for final stabilization. Wastewater discharges from washout of concrete is prohibited.

9. Non-stormwater components of site discharge shall be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or approved private well. Water used for construction that does not originate from an approved public supply must not discharge from the site.
10. Discharges from dewatering activities, including discharges from dewatering trenches and excavations, shall be managed by appropriate control measures.
11. Wastewater discharges from washout and cleanout of stucco, paint, form-release oils, curing compounds, and other construction materials is prohibited.

4.4 Soil Stabilization and Restoration

Stabilization

In areas where soil disturbance has temporarily or permanently ceased, the application of soil stabilization measures shall be initiated by the end of the next business day and completed within 14 days from the date the current soil disturbance ceased. The soil-stabilization measures shall be in conformance with the *New York State Standards and Specifications for Erosion and Sediment Control*, latest edition.

Restoration

Soil restoration shall be performed in the disturbed areas. The soils shall be restored in accordance with the table below.

Table 4-1: Soil Restoration

Type of Soil Disturbance	Soil Restoration Requirement
No Soil Disturbance (e.g., preservation of natural features)	Restoration not required.
Minimal Soil Disturbance (e.g., clearing and grubbing)	Restoration not required.
Areas where topsoil is stripped only (e.g., no change in grade)	Apply 6 inches of topsoil in Type A and B soils
Areas of cut or fill	Aerate and apply 6 inches of topsoil in Type A and B soils
Heavy traffic areas on site (Especially in 5 to 25 feet around buildings, but not within a 5-foot perimeter around foundation walls)	Apply full soil restoration (see below).
Areas where runoff reduction or infiltration practices are applied	Restoration not required, but can be applied to enhance soil infiltration.
Redevelopment projects	Soil restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.

Full Soil Restoration

Before applying full soil restoration, all construction, including construction equipment and material storage, site cleanup and trafficking, should be finished and the site closed to further disturbance. Full soil restoration should be performed with a heavy-duty agricultural-grade deep ripper, deep angled-leg subsoiler, or equivalent machinery to achieve de-compaction.

Full soil restoration is implemented in a two-phase process:

1. Deep rip the affected thickness of exposed subsoil, aggressively fracturing it before the protected topsoil is reapplied on the site.
2. De-compact simultaneously through the restored topsoil layer and upper half of the affected subsoil.

Low to Moderate Subsoil Moisture

The disturbed soils are returned to rough grade and the following is applied:

1. Apply 3 inches of compost over the subsoil.
2. Till compost a minimum of 12 inches into the subsoil using a cat-mounted ripper, tractor-mounted disc, or tiller mixing and circulating air and compost into subsoils.
3. Rock-pick until uplifted stone and rock of 4 inches or larger size are cleaned off the site. All construction material and foreign debris and existing root masses shall be removed from proposed planting areas.
4. Apply 6 inches of topsoil. Newly installed planting soils shall be mixed with existing soils where they meet in order to create a transitional gradient to allow for proper drainage.
5. Install plants and vegetation in accordance with the Landscaping Plan.

5 Stormwater Pollution Prevention Plan Implementation

5.1 Certification Statements

Before starting construction, the owner/operator, contractors, and subcontractors are required to sign the certification statements provided in [Appendix G](#).

The owner/operator must sign a copy of the Owner's/Operator's certification before submitting the Notice of Intent. The owner/operator acknowledges that the SWPPP has been developed and will be implemented as the first element of construction and agrees to comply with the terms and conditions of the general permit for which the Notice of Intent is being submitted.

The owner/operator must identify the contractors and subcontractors that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices; and constructing the post-construction stormwater management practices included in the SWPPP. The contractors and subcontractors must identify at least one trained individual from their company who will be responsible for implementation of the SWPPP. This person will be known as the trained contractor. At least one trained contractor will be on site daily when soil disturbing activities are being performed. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has begun, they must also sign the certification statement and identify their responsibilities.

5.2 Pre-Construction Meeting

Before beginning construction, the owner/operator must set up a pre-construction meeting with the Town representative, qualified professional, qualified inspector, contractors, and subcontractors. The primary purpose of the pre-construction meeting is to discuss the responsibilities of each party as they relate to the implementation of the SWPPP and to clarify any questions.

5.3 Construction Site Log

The owner/operator must maintain a copy of the following, including but not limited to: General Permit, signed NOI, signed MS4 Acceptance form, NOI Acknowledgement Letter, SWPPP, signed certification statements, and inspections reports. The documents must be maintained in a secure location on site. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

5.4 Construction Inspections and Maintenance

5.4.1 Contractor Maintenance Inspection Requirements

The trained contractor must inspect the erosion and sediment control practices and pollution-prevention measures to verify that they are being maintained in effective operating condition. The inspections will be conducted as follows:

- For construction sites where soil disturbance is on-going, the trained contractor must inspect the measures within the active work area daily. If deficiencies are identified, the contractor will begin implementing corrective actions within one business day and must complete the corrective actions by the end of the day.
- For construction sites where soil disturbance activities have been temporarily suspended (e.g., winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the trained contractor can stop conducting the maintenance inspections. The trained contractor must conduct the daily maintenance inspections as soil disturbance resumes.
- For construction sites where soil disturbance has been shut down with partial project completion, the trained contractor can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed part of the project have been constructed in conformance with the SWPPP and are operational.

5.4.2 Qualified Inspector Inspection Requirements

The owner/operator must have a Qualified Inspector conduct site inspections to verify the stability and effectiveness of protective measures and practices employed during construction. The site inspections will be conducted as follows:

- For construction sites where soil disturbance is ongoing, the Qualified Inspector must conduct a site inspection at least once every seven days.
- For construction sites where soil disturbance activities have been temporarily suspended (e.g., winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the Qualified Inspector must conduct a site inspection at least once every 30 days. The owner/operator must notify the NYSDEC or MS4 in writing before reducing the frequency of the inspections.
- For construction sites where soil disturbance activities have been shut down with partial project completion, the Qualified Inspector can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices are operational. The owner/operator must notify the NYSDEC or the MS4 in writing before the shutdown.

All erosion and sediment control inspections shall be performed in accordance with this SWPPP, accompanying project plans, latest revision of *New York State Standards and Specifications for Erosion and Sediment Control*, and procedures outlined in Appendix H of the latest revision of the *New York State Stormwater Management Design Manual*. Inspection reports must identify and document the maintenance of the erosion and sediment control measures. An Example inspection report has been provided in Appendix H.

Specific maintenance components, schedule frequency, inspection parameters and remediation procedures are provided on the accompanying project plans. Any adjustments or modifications to the maintenance plan shall be noted in the inspection reports and submitted to the Town for approval.

6 Termination of Coverage

The owner/operator may terminate coverage when:

- a. Total project completion has occurred.
- b. A planned shutdown with partial project completion has occurred.
- c. Property ownership changes or when there is a change in operational control over the construction plans and specifications; and the new owner/operator has obtained coverage under the SPDES General Permit.
- d. Coverage under an alternative SPDES general permit or an individual SPDES permit has been obtained.

The completed NOT must be submitted to the NYSDEC to cancel coverage. A blank copy of the NOT has been provided in Appendix B.

7 Post-Construction Requirements

7.1 Record Retention

Following construction, the owner/operator must retain a copy of the signed NOI, signed MS4 SWPPP Acceptance, NOI Acknowledgement Letter, SWPPP, project plans, and any inspection reports that were prepared in conjunction with the General Permit for at least five years from the date that the NYSDEC receives a complete NOT.

7.2 Inspection and Maintenance

Post-construction inspections and maintenance will be performed by Kings Capital Construction. Inspections and maintenance for the various site components and stormwater management facilities shall be performed in accordance with the accompanying project plans and this SWPPP. Detailed post-construction inspections and maintenance procedures are provided in [Appendix I](#).

8 Conclusion

This Stormwater Pollution Prevention Plan has been developed in accordance with the requirements of the Town of North Castle and the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) Phase II technical guidelines. This SWPPP identifies the erosion control, sediment control, pollution-prevention, and stormwater management measures to be implemented during construction to minimize soil erosion and control sediment transport off site, and after construction to control and treat stormwater runoff from the developed site.

In the opinion of the SWPPP preparer, the proposed project will not have adverse impacts if the measures for erosion control, sediment control, pollution prevention, and stormwater management measures are properly constructed and maintained in accordance with the requirements outlined herein and on the accompanying project plans.

The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix A: NYSDEC SPDES General Permit



Department of
Environmental
Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

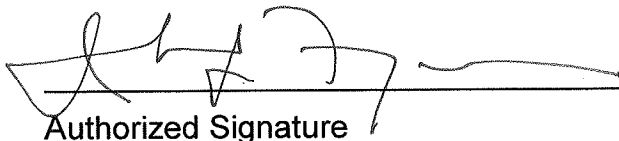
Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator



Authorized Signature

1-23-20

Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (“CWA”), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System (“NPDES”)* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of “*construction activity*”, as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM
CONSTRUCTION ACTIVITIES**

Table of Contents

Part 1. PERMIT COVERAGE AND LIMITATIONS	1
A. Permit Application	1
B. Effluent Limitations Applicable to Discharges from Construction Activities	1
C. Post-construction Stormwater Management Practice Requirements	4
D. Maintaining Water Quality	8
E. Eligibility Under This General Permit.....	9
F. Activities Which Are Ineligible for Coverage Under This General Permit	9
Part II. PERMIT COVERAGE	12
A. How to Obtain Coverage	12
B. Notice of Intent (NOI) Submittal	13
C. Permit Authorization	13
D. General Requirements For Owners or Operators With Permit Coverage	15
E. Permit Coverage for Discharges Authorized Under GP-0-15-002.....	17
F. Change of Owner or Operator	17
Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP).....	18
A. General SWPPP Requirements	18
B. Required SWPPP Contents	20
C. Required SWPPP Components by Project Type.....	24
Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS	24
A. General Construction Site Inspection and Maintenance Requirements	24
B. Contractor Maintenance Inspection Requirements	24
C. Qualified Inspector Inspection Requirements	25
Part V. TERMINATION OF PERMIT COVERAGE	29
A. Termination of Permit Coverage	29
Part VI. REPORTING AND RETENTION RECORDS	31
A. Record Retention	31
B. Addresses	31
Part VII. STANDARD PERMIT CONDITIONS.....	31
A. Duty to Comply.....	31
B. Continuation of the Expired General Permit.....	32
C. Enforcement.....	32
D. Need to Halt or Reduce Activity Not a Defense.....	32
E. Duty to Mitigate	33
F. Duty to Provide Information.....	33
G. Other Information	33
H. Signatory Requirements.....	33
I. Property Rights	35
J. Severability.....	35

K.	Requirement to Obtain Coverage Under an Alternative Permit.....	35
L.	Proper Operation and Maintenance	36
M.	Inspection and Entry	36
N.	Permit Actions	37
O.	Definitions	37
P.	Re-Opener Clause	37
Q.	Penalties for Falsification of Forms and Reports	37
R.	Other Permits	38
APPENDIX A – Acronyms and Definitions		39
	Acronyms.....	39
	Definitions.....	40
APPENDIX B – Required SWPPP Components by Project Type		48
	Table 1.....	48
	Table 2.....	50
APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal.....		52
APPENDIX D – Watersheds with Lower Disturbance Threshold		58
APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)		59
APPENDIX F – List of NYS DEC Regional Offices		65

Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges to surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants to surface waters of the State*.
3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize the discharge of pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* (“SWPPP”) the reason(s) for the

deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

- a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:
- (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*;
 - (ii) Control stormwater *discharges*, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;
 - (iii) *Minimize* the amount of soil exposed during *construction activity*;
 - (iv) *Minimize* the disturbance of *steep slopes*;
 - (v) *Minimize* sediment *discharges* from the site;
 - (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, unless *infeasible*;
 - (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;
 - (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
 - (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.
- b. **Soil Stabilization.** In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

- c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

- d. **Pollution Prevention Measures.** Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:
 - (i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

 - (ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and

 - (iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

- e. **Prohibited Discharges.** The following *discharges* are prohibited:
 - (i) Wastewater from washout of concrete;

 - (ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

- (iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;
 - (iv) Soaps or solvents used in vehicle and equipment washing; and
 - (v) Toxic or hazardous substances from a spill or other release.
- f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual (“Design Manual”), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices (“SMPs”) are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

- (i) Runoff Reduction Volume (“RRv”): Reduce the total Water Quality Volume (“WQv”) by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.
- (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual.

The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (“Cpv”): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site discharges directly to tidal waters, or fifth order or larger streams.

- (iv) *Overbank* Flood Control Criteria (“Qp”): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

- (v) Extreme Flood Control Criteria (“Qf”): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

b. Sizing Criteria for New Development in Enhanced Phosphorus Removal Watershed

- (i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

- (ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site *discharges* directly to tidal waters, or fifth order or larger streams.
- (iv) *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

- (i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.
- (1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
 - (2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or
 - (3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
 - (4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

- (ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.
2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.
3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: “Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned”; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.
4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;
2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;
3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;
4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;
6. *Construction activities* for residential, commercial and institutional projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase “E” or “F” (regardless of the map unit name), or a combination of the three designations.
7. *Construction activities* for linear transportation projects and linear utility projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase “D” (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase “E” or “F” (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:
- a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.
 - 1-5 acres of disturbance - 20 feet
 - 5-20 acres of disturbance - 50 feet
 - 20+ acres of disturbance - 100 feet, or
 - b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
 - (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
 - (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
 - (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
 - (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or
 - c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

- (i) No Affect
- (ii) No Adverse Affect
- (iii) Executed Memorandum of Agreement, or

d. Documentation that:

- (i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.
9. *Discharges from construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.
2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the “MS4 SWPPP Acceptance” form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.
3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (<http://www.dec.ny.gov/>). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

**NOTICE OF INTENT
NYS DEC, Bureau of Water Permits
625 Broadway, 4th Floor
Albany, New York 12233-3505**

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.
3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.
4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.
2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:
 - a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (<http://www.dec.ny.gov/>) for more information,
 - b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators of construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

- c. the final SWPPP has been prepared, and
 - d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.
3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:
- a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or
 - (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;
 - (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

- b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed “MS4 SWPPP Acceptance” form, or
 - (ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed “MS4 SWPPP Acceptance” form.
4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (“NOT”) has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.
2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor’s or subcontractor’s certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.
3. The *owner or operator of a construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

- use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity). At a minimum, the owner or operator must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:*
- a. The *owner or operator* shall have a *qualified inspector* conduct **at least two** (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.
 - c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
 - d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.
 - e. The *owner or operator* shall include the requirements above in their SWPPP.
4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..
 5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
 6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of a *construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4*, the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.
2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.
3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.
2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:
 - a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

- b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, the Department or other regulatory authority; and
 - d. to document the final construction conditions.
5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.
6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:
 - a. Background information about the scope of the project, including the location, type and size of project

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge(s)*;
- c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;
- i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

- j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;
 - k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and
 - l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

The post-construction stormwater management practice component of the SWPPP shall include the following:

- a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

- b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;
- c. A Stormwater Modeling and Analysis Report that includes:
 - (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;
 - (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;
 - (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;
 - (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;
 - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and
 - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;
- d. Soil testing results and locations (test pits, borings);
- e. Infiltration test results, when required; and
- f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria*, Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators of construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators of the construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.
2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.
3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
 - Certified Professional in Erosion and Sediment Control (CPESC),
 - New York State Erosion and Sediment Control Certificate Program holder
 - Registered Landscape Architect, or
 - someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:
 - a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

- b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;
 - c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and
 - d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:
- a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.
 - b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

- d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the “*Final Stabilization*” and “*Post-Construction Stormwater Management Practice*” certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.
 - e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization*, all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.
 4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

- a. Date and time of inspection;
- b. Name and title of person(s) performing inspection;
- c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;
- f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;
- g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
- h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;
- i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
- j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);
- k. Identification and status of all corrective actions that were required by previous inspection; and

- I. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
6. All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.
2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:
 - a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

- b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;
 - c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.
 - d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.
3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the “*Final Stabilization*” and “*Post-Construction Stormwater Management Practice certification statements*” on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.
4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the “*MS4 Acceptance*” statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector’s* final site inspection certification(s) required in Part V.A.3. of this permit.
5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:
 - a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

- b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),
- c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,
- d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator*, its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:
 - a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (i) the chief executive officer of the agency, or
 - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

- c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge(s)*, the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.
4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer

BMP – Best Management Practice

CPESC – Certified Professional in Erosion and Sediment Control

Cpv – Channel Protection Volume

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)

DOW – Division of Water

EAF – Environmental Assessment Form

ECL - Environmental Conservation Law

EPA – U. S. Environmental Protection Agency

HSG – Hydrologic Soil Group

MS4 – Municipal Separate Storm Sewer System

NOI – Notice of Intent

NOT – Notice of Termination

NPDES – National Pollutant Discharge Elimination System

OPRHP – Office of Parks, Recreation and Historic Places

Qf – Extreme Flood

Qp – Overbank Flood

RRv – Runoff Reduction Volume

RWE – Regional Water Engineer

SEQR – State Environmental Quality Review

SEQRA - State Environmental Quality Review Act

SHPA – State Historic Preservation Act

SPDES – State Pollutant Discharge Elimination System

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total Maximum Daily Load

UPA – Uniform Procedures Act

USDA – United States Department of Agriculture

WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State” prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both “sewage” and “stormwater”.

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for “*Construction Activity(ies)*” also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for “*Commence (Commencement of) Construction Activities*” and “*Larger Common Plan of Development or Sale*” also.

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department’s rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a *combined sewer*, and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the “Required Elements” sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank Flood* (Qp), and *Extreme Flood* (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint sources*, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

<p>The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:</p> <ul style="list-style-type: none">• Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not directly discharging</u> to one of the 303(d) segments listed in Appendix E• Single family residential subdivisions with 25% or less impervious cover at total site build-out and <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E• Construction of a barn or other <i>agricultural building</i>, silo, stock yard or pen.
<p>The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:</p> <p>All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.</p>
<p>The following construction activities that involve soil disturbances of one (1) or more acres of land:</p> <ul style="list-style-type: none">• Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains• Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects• Pond construction• Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover• Cross-country ski trails and walking/hiking trails• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.• Slope stabilization projects• Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State”, excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover*, and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual (“Design Manual”).

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

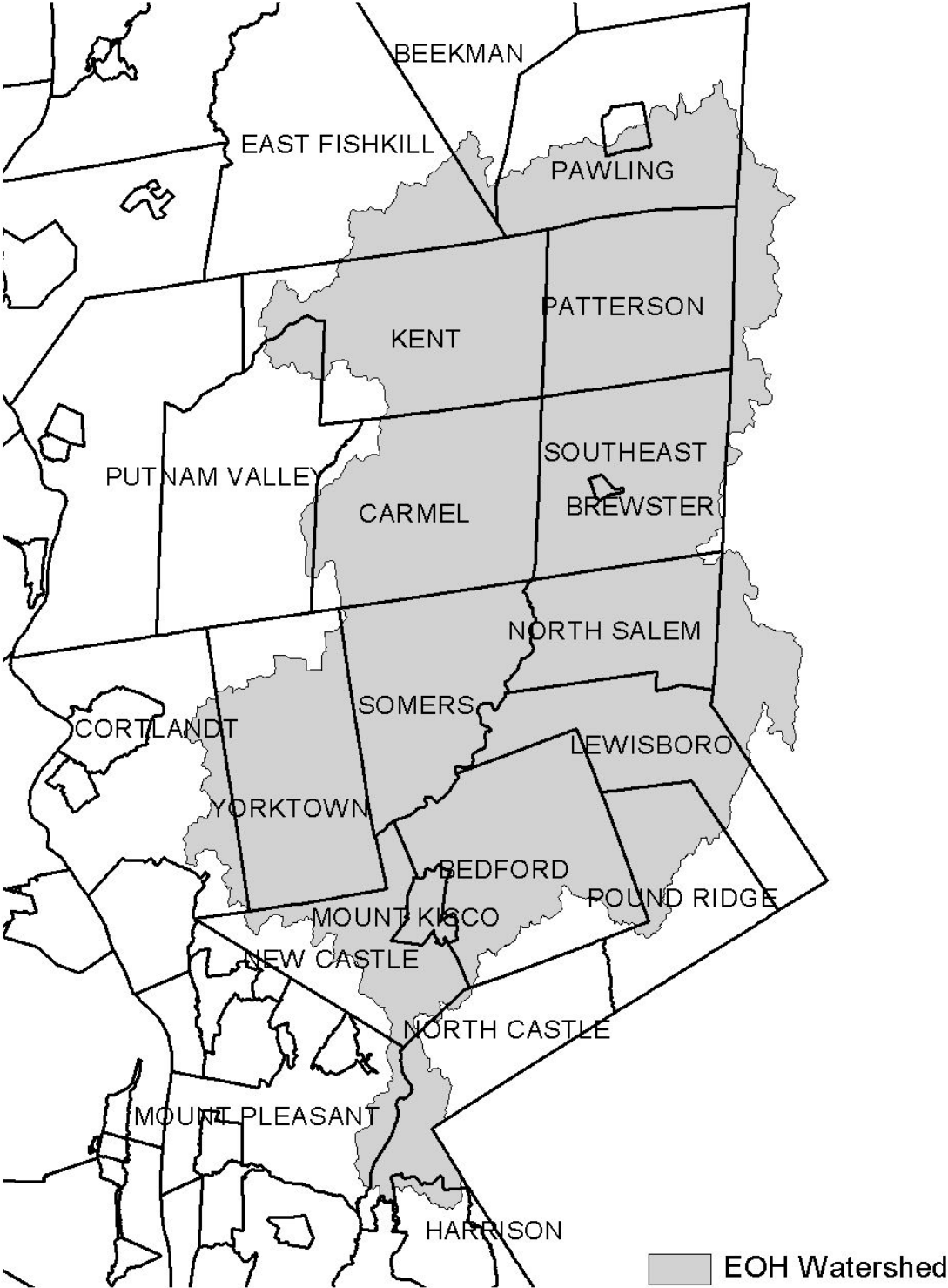


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed



Figure 4 - Oscawana Lake Watershed

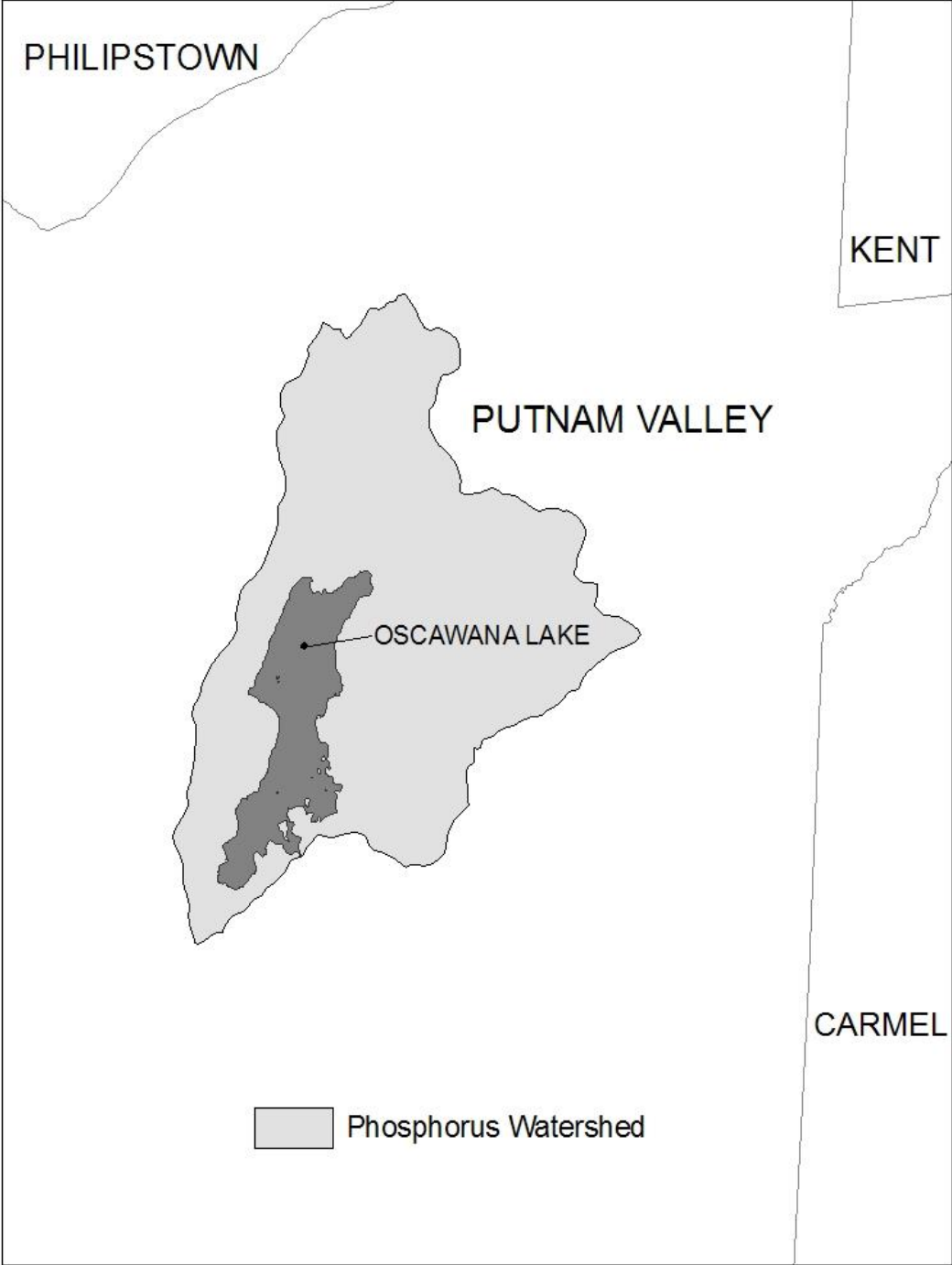
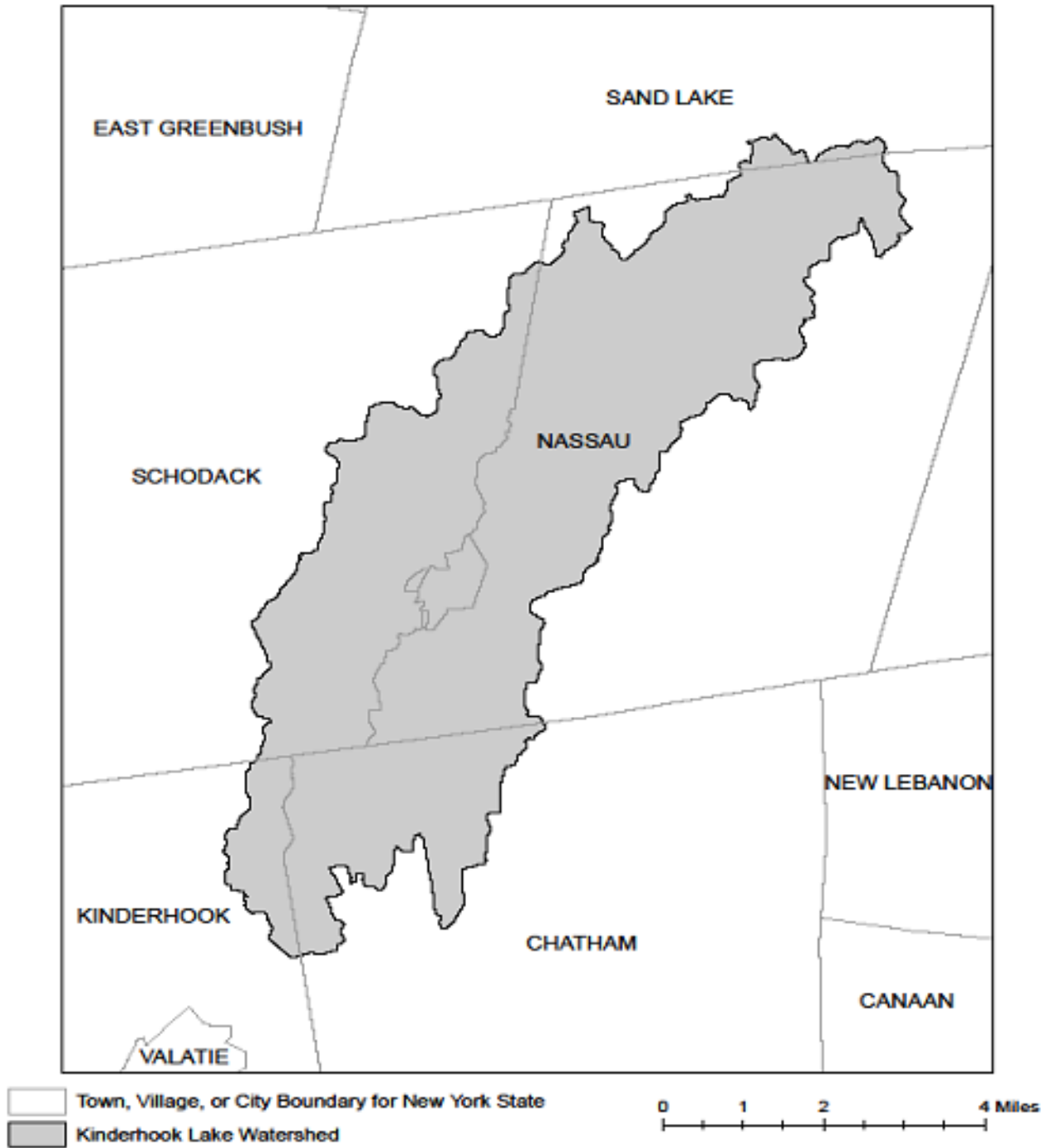


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

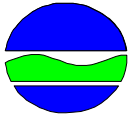
APPENDIX F – List of NYS DEC Regional Offices

<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, Po Box 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix B: NYSDEC SPDES General Permit Forms

NOTICE OF INTENT



**New York State Department of Environmental Conservation
 Division of Water
 625 Broadway, 4th Floor
 Albany, New York 12233-3505**

NYR
 (For DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001
 All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

- IMPORTANT -
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)

K I N G S C A P I T A L C O N S T R U C T I O N

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

S P E R D U T I

Owner/Operator Contact Person First Name

J O H N

Owner/Operator Mailing Address

6 6 0 W H I T E P L A I N S R O A D

City

T A R R Y T O W N

State

N Y

Zip

1 0 5 9 1 -

Phone (Owner/Operator)

9 7 3 - 2 2 9 - 4 1 0 3

Fax (Owner/Operator)

- -

Email (Owner/Operator)

j . s p e r d u t i @ k i n g s c a p i t a l g r o u p . c o m

FED TAX ID

- (not required for individuals)

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

**Pre-Development
Existing Land Use**

- FOREST
- PASTURE/OPEN LAND
- CULTIVATED LAND
- SINGLE FAMILY HOME
- SINGLE FAMILY SUBDIVISION
- TOWN HOME RESIDENTIAL
- MULTIFAMILY RESIDENTIAL
- INSTITUTIONAL/SCHOOL
- INDUSTRIAL
- COMMERCIAL
- ROAD/HIGHWAY
- RECREATIONAL/SPORTS FIELD
- BIKE PATH/TRAIL
- LINEAR UTILITY
- PARKING LOT
- OTHER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Post-Development
Future Land Use**

- SINGLE FAMILY HOME
- SINGLE FAMILY SUBDIVISION
- TOWN HOME RESIDENTIAL
- MULTIFAMILY RESIDENTIAL
- INSTITUTIONAL/SCHOOL
- INDUSTRIAL
- COMMERCIAL
- MUNICIPAL
- ROAD/HIGHWAY
- RECREATIONAL/SPORTS FIELD
- BIKE PATH/TRAIL
- LINEAR UTILITY (water, sewer, gas, etc.)
- PARKING LOT
- CLEARING/GRADING ONLY
- DEMOLITION, NO REDEVELOPMENT
- WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- OTHER

Number of Lots

--	--	--	--

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

***Note:** for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area																								
<table border="1" style="width: 100%; height: 25px;"> <tr> <td></td><td></td><td></td><td>4</td><td>.</td><td>2</td> </tr> </table>				4	.	2	<table border="1" style="width: 100%; height: 25px;"> <tr> <td></td><td></td><td></td><td>3</td><td>.</td><td>7</td> </tr> </table>				3	.	7	<table border="1" style="width: 100%; height: 25px;"> <tr> <td></td><td></td><td></td><td>3</td><td>.</td><td>2</td> </tr> </table>				3	.	2	<table border="1" style="width: 100%; height: 25px;"> <tr> <td></td><td></td><td></td><td>2</td><td>.</td><td>2</td> </tr> </table>				2	.	2
			4	.	2																						
			3	.	7																						
			3	.	2																						
			2	.	2																						

5. Do you plan to disturb more than 5 acres of soil at any one time? Yes No

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D																
<table border="1" style="width: 60px; height: 25px;"><tr><td></td><td></td><td></td><td>0</td></tr></table> %				0	<table border="1" style="width: 60px; height: 25px;"><tr><td>1</td><td>0</td><td>0</td><td></td></tr></table> %	1	0	0		<table border="1" style="width: 60px; height: 25px;"><tr><td></td><td></td><td></td><td>0</td></tr></table> %				0	<table border="1" style="width: 60px; height: 25px;"><tr><td></td><td></td><td></td><td>0</td></tr></table> %				0
			0																
1	0	0																	
			0																
			0																

7. Is this a phased project? Yes No

8. Enter the planned start and end dates of the disturbance activities.

Start Date	-	End Date																				
<table border="1" style="width: 100%; height: 25px;"><tr><td>0</td><td>5</td><td>/</td><td>0</td><td>1</td><td>/</td><td>2</td><td>0</td><td>2</td><td>4</td></tr></table>	0	5	/	0	1	/	2	0	2	4		<table border="1" style="width: 100%; height: 25px;"><tr><td>0</td><td>5</td><td>/</td><td>0</td><td>1</td><td>/</td><td>2</td><td>0</td><td>2</td><td>5</td></tr></table>	0	5	/	0	1	/	2	0	2	5
0	5	/	0	1	/	2	0	2	4													
0	5	/	0	1	/	2	0	2	5													

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? Yes No Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

T O W N O F N O R T H C A S T L E

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? Yes No Unknown

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? Yes No

19. Is this property owned by a state authority, state agency, federal government or local government? Yes No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) Yes No

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? Yes No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? Yes No
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? Yes No

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- Preservation of Undisturbed Areas
- Preservation of Buffers
- Reduction of Clearing and Grading
- Locating Development in Less Sensitive Areas
- Roadway Reduction
- Sidewalk Reduction
- Driveway Reduction
- Cul-de-sac Reduction
- Building Footprint Reduction
- Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

. acre-feet

29. Identify the RR techniques (Area Reduction), RR techniques (Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required (#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

<u>RR Techniques (Area Reduction)</u>	<u>Total Contributing Area (acres)</u>		<u>Total Contributing Impervious Area(acres)</u>	
<input type="radio"/> Conservation of Natural Areas (RR-1) ...	<input type="text"/>	<input type="text"/>	and/or	<input type="text"/>
<input type="radio"/> Sheetflow to Riparian Buffers/Filters Strips (RR-2)	<input type="text"/>	<input type="text"/>	and/or	<input type="text"/>
<input type="radio"/> Tree Planting/Tree Pit (RR-3)	<input type="text"/>	<input type="text"/>	and/or	<input type="text"/>
<input type="radio"/> Disconnection of Rooftop Runoff (RR-4) ..	<input type="text"/>	<input type="text"/>	and/or	<input type="text"/>
<u>RR Techniques (Volume Reduction)</u>				
<input type="radio"/> Vegetated Swale (RR-5)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Rain Garden (RR-6)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Stormwater Planter (RR-7)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Rain Barrel/Cistern (RR-8)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Porous Pavement (RR-9)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Green Roof (RR-10)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<u>Standard SMPs with RRv Capacity</u>				
<input type="radio"/> Infiltration Trench (I-1)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Infiltration Basin (I-2)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Dry Well (I-3)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Underground Infiltration System (I-4)	<input type="text"/>	<input type="text"/>	2	1 9
<input type="radio"/> Bioretention (F-5)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Dry Swale (O-1)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<u>Standard SMPs</u>				
<input type="radio"/> Micropool Extended Detention (P-1)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Wet Pond (P-2)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Wet Extended Detention (P-3)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Multiple Pond System (P-4)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Pocket Pond (P-5)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Surface Sand Filter (F-1)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Underground Sand Filter (F-2)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Perimeter Sand Filter (F-3)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Organic Filter (F-4)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Shallow Wetland (W-1)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Extended Detention Wetland (W-2)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Pond/Wetland System (W-3)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Pocket Wetland (W-4)	<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="radio"/> Wet Swale (O-2)	<input type="text"/>	<input type="text"/>		<input type="text"/>

**Table 2 - Alternative SMPs
(DO NOT INCLUDE PRACTICES BEING
USED FOR PRETREATMENT ONLY)**

<u>Alternative SMP</u>	<u>Total Contributing Impervious Area(acres)</u>	
<input type="radio"/> Hydrodynamic	<input type="text"/>	<input type="text"/>
<input type="radio"/> Wet Vault	<input type="text"/>	<input type="text"/>
<input type="radio"/> Media Filter	<input type="text"/>	<input type="text"/>
<input type="radio"/> Other <input type="text"/>	<input type="text"/>	<input type="text"/>

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name

Manufacturer

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

0 . 2 7 1 acre-feet

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

Yes No

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

. acre-feet

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

Yes No

If Yes, go to question 33.

Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.

If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

--	--	--	--	--	--	--	--

 .

--	--	--	--

 acre-feet

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).

--	--	--	--

 .

--	--	--	--

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? Yes No

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required	CPv Provided																
<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 0 . 3 7 5 acre-feet									<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 0 . 3 8 acre-feet								

36a. The need to provide channel protection has been waived because:

- Site discharges directly to tidal waters or a fifth order or larger stream.
- Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development	Post-development														
<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 6 . 1 6 CFS								<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 2 . 5 4 CFS							

Total Extreme Flood Control Criteria (Qf)

Pre-Development	Post-development														
<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 1 8 . 2 9 CFS								<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 9 . 7 9 CFS							



Department of
Environmental
Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information

8. SWPPP Reviewed by:

9. Title/Position:

10. Date Final SWPPP Reviewed and Accepted:

IV. Regulated MS4 Information

11. Name of MS4:

12. MS4 SPDES Permit Identification Number: NYR20A

13. Contact Person:

14. Street Address:

15. City/State/Zip:

16. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

MS4 Signatory Authorization

Your SPDES permit requires you to annually submit a report. The Municipal Compliance Certification Form (MCC) must be signed as follows:

- 1.) For a municipality, state, federal, or other public agency: by either a principal or executive officer or ranking elected official. A principal executive officer includes:
 - (i) the chief executive officer of the agency, or
 - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or
- 2.) A duly authorized representative of the person described in item (1).

NOTE: A person is a duly authorized representative only if

- (i) the authorization is made in writing by a person described in paragraph 1 above; and
- (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- (iii) the written authorization is submitted to the Department.

Initial authorization or changes to authorization: The initial authorization should be submitted to the Department with any reports to be signed by an authorized representative. If an authorization under paragraph (2) is no longer accurate because a different individual, or position, has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (2) must be submitted to the Department with any reports to be signed by an authorized representative.

Signature Authorization Form

Permittee Name:

SPDES NO. NYR20A

Date:

Name of person described in paragraph (1):	Title:
Signature of person described in paragraph (1):	Date:

THE PERMITTEE MUST NOTIFY THE DEPARTMENT OF ANY CHANGE IN THIS INFORMATION. THIS FORM SHOULD ONLY BE SENT IN WITH THE ANNUAL REPORT.

Name and/or title of person responsible for signing and submitting official documents including reports, certifications or information required by the NYS Small MS4 General Permit:	Phone:		
Signature (if individual named above):			
Mailing Address:	City:	State:	Zip:

* Note: Notices of Intent (NOI) associated with permit coverage under the NYS Small MS4 General Permit must be signed by a principal executive officer or ranking elected official. See paragraph (1) for definition of a principal executive officer.

Return to: MS4 Coordinator
Bureau of Water Permits
New York State Department of Environmental Conservation 625
Broadway
Albany, NY 12233-3505



SWPPP Preparer Certification Form

*SPDES General Permit for Stormwater
Discharges From Construction Activity
(GP-0-20-001)*

Project Site Information

Project/Site Name

The Gateway - 45 Bedford Road

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Kings Capital Construction

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First name

MI

Last Name

Signature

Date



Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: The Gardens - 45 Bedford Road

eNOI Submission Number: _____

eNOI Submitted by: Owner/Operator SWPPP Preparer Other

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Owner/Operator First Name

M.I. Last Name

Signature

Date

**New York State Department of Environmental Conservation
 Division of Water
 625 Broadway, 4th Floor
 Albany, New York 12233-3505**

(NOTE: Submit completed form to address above)

**NOTICE OF TERMINATION for Storm Water Discharges Authorized
 under the SPDES General Permit for Construction Activity**

Please indicate your permit identification number: NYR _____

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. *Date final stabilization completed (month/year): _____

9b. Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR _____

(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? yes no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? yes no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? yes no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.
- For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____
(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? yes
 no
(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:
(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix C: Design Calculations

Practice Water Quality Volume Calculation Worksheet

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....								no
Design Point(s): 1,2		<i>Manually enter the information below.</i>						
P=	1.50 inch							
Breakdown of Subcatchments								
Subcatchment Number	Subcatchment Model Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Description	
1	10	0.56	0.33	59%	0.59	1,781	Underground Infiltration System	
2	20A	2.34	1.86	79%	0.76	9,736	Underground Infiltration System	
3	20B	1.05	0.00	0%	0.05	287		
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
Total		3.95	2.19	55%	0.55	11,804	Initial WQv	

Underground Infiltration System Worksheet

Design Point(s):	1,2							
Enter Site Data For Drainage Area to be Treated by Practice								
Subcatchment Number	Subcatchment Model Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
1	10	0.56	0.33	0.59	0.59	1,781	1.50	Underground Infiltration System
Enter Impervious Area Reduced by Disconnection of Rooftops				59%	0.59	1,781	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						0	ft ³	
Design Elements								
Pretreatment Techniques to Prevent Clogging								
Infiltration Rate					2.00	in/hour	Okay	
Pretreatment Sizing					25	% WQv	25% minimum; 50% if >2 in/hr; 100% if >5in/hour	
Pretreatment Required Volume					445	ft ³		
Pretreatment Provided					450	ft ³		
Pretreatment Techniques utilized					Other		Isolator Row	
Size An Infiltration Basin								
Design Volume		1,781	ft ³	WQv				
Volume Provided		2,275	ft ³	Storage Volume provided in underground infiltration system (not including pretreatment)				
Sizing v		OK	The underground infiltration system must provide storage equal to or greater than the WQv of the contributing area.					
Determine Runoff Reduction								
Runoff Reduction			1,781	ft ³	100% of the storage provided in the basin or WQv, whichever is smaller			
Volume Treated			0	ft ³	This is the portion of the WQv that is not reduced/infiltrated			

Underground Infiltration System Worksheet

Design Point(s):	1,2							
Enter Site Data For Drainage Area to be Treated by Practice								
Subcatchment Number	Subcatchment Model Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
2	20A	2.34	1.86	0.79	0.76	9,736	1.50	Underground Infiltration System
Enter Impervious Area Reduced by Disconnection of Rooftops				79%	0.76	9,736	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						0	ft ³	
Design Elements								
Pretreatment Techniques to Prevent Clogging								
Infiltration Rate					2.00	in/hour	<i>Okay</i>	
Pretreatment Sizing					25	% WQv	<i>25% minimum;</i>	
Pretreatment Required Volume					2,434	ft ³		
Pretreatment Provided					2,550	ft ³		
Pretreatment Techniques utilized					<i>Other</i>		<i>Isolator Row</i>	
Size An Infiltration Basin								
Design Volume		9,736	ft ³	WQv				
Volume Provided		42,509	ft ³	Storage Volume provided in underground infiltration system (not including pretreatment)				
Sizing v		OK	The underground infiltration system must provide storage equal to or greater					
Determine Runoff Reduction								
Runoff Reduction			9,736	ft³	100% of the storage provided in the basin or WQv, whichever is smaller			
Volume Treated			0	ft³	This is the portion of the WQv that is not reduced/infiltrated			

The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix D: Pre-Development Stormwater Analysis

(Previously Approved from the SWPPP prepared by JMC dated June 11, 2019.)

PRELIMINARY STORMWATER POLLUTION PREVENTION PLAN

MARIANI GARDENS REDEVELOPMENT

**45 BEDFORD ROAD
TOWN OF NORTH CASTLE
WESTCHESTER COUNTY, NEW YORK**

Prepared for: **45 Bedford Road, LLC**
45 Bedford Road
Armonk, NY 10504

Prepared by:



120 Bedford Road
Armonk, NY 10504
JMC Project 18053

Date: June 11, 2019

Project Description

The proposed Project consists of application for the following:

(1) Zoning petition to the Town of North Castle Town Board to create a new zoning district for the subject property (R-MF-DA, Residential-Multi-Family-Downtown Armonk) which would permit the development of a 43 unit residential project on the site;

(2) amending Chapter 355 by adding a new section to be known as §355-25.1 entitled “Additional R-MF-DA Residence District Regulations”;

(3) amending §355-21 “Schedule of Residence District Regulations” by adding bulk and area requirements;

(4) amending the Town Zoning Map to re-zone the approximately 4 acre site for the property known as 45 Bedford Road, and designated on the Tax Assessment Map of the Town of North Castle as lot 108.03-1-65;

(5) amending the definition of “Floor Area, Gross” in §355-4 to eliminate an inconsistency in the existing code to reflect the Town’s consistent interpretation of gross floor area to include floor area for off-street parking for all residential buildings, not just one and two family residences, and to exclude any attic space with a floor to ceiling height of less than 7.5 feet for all residential buildings, and not just one and two family residences;

(6) site plan approval from the Town of North Castle Planning Board.

The applicant for this Proposed Action is 45 Bedford Road LLC with offices at present located at 45 Bedford Road (“Mariani Gardens”). This proposed multi-family residential development will consist of 43 residential units with a mix of styles including townhomes adjacent to Bedford Road (the A-Units) and two three-level buildings. The B-Building is proposed adjacent to the eastern property line and includes 16 apartments and the C-Building is proposed adjacent to Route 22 and

includes 23. Both three-level apartment buildings include parking below the living space at ground level and include terraces as private amenity space for many of the proposed units.

The proposal is to improve the 4.21 acre site with a high quality multi-family community consisting of a mix of housing styles and options. There will be 43 units totaling approximately 71,691 square feet of gross floor area. Ingress and egress will be from Bedford Road with the curb cut being reconstructed approximately 30' east of its present location.

Stormwater Management Design Criteria

This Preliminary Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with Chapter 267 - "Stormwater Management" of the Town of North Castle Code and the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002 for Stormwater Discharges from Construction Activity, effective January 29, 2015.

The project is a redevelopment and therefore will comply with the strategies outlined within.

Chapter 9: Redevelopment Projects of the Design Manual.

Existing Conditions

The site currently contains a Garden Center, consisting of an existing Garden Center Building, an office building, storage, operations area, display areas and parking. The existing stormwater improvements capture and treat the Water Quality Volume as required by the NYSDEC in the New York State Stormwater Design Manual August 2003 and the General Permit GP-02-01.

The site is divided into four Drainage Areas (EDA-1, EDA-2a, EDA-2b and EDA-2c). Drainage Area EDA-1 discharges stormwater runoff to Design Point #1 and Drainage Areas EDA-2a, EDA-2b and EDA-2c all discharge stormwater runoff to Design Point #2 under Existing conditions. Each of these drainage areas are treated with a CDS Precast Manhole Stormwater Unit (PMSU) water quality device which provides pre-treatment of the runoff to remove pollutants before runoff

is directed to the existing infiltration practices. Each of the three existing infiltration facilities consist of Cultech 330 HD Recharger units with overflow structures with outlets for any overflow. Refer to Appendix C for an Existing Conditions Drainage Area Map.

Existing Drainage Area 1 (EDA-1) is 0.68 acres in size and is located at the southwest corner of the property. This drainage area includes the Storage building and the portion of the operations area adjacent to the existing brook and wetlands. This drainage area discharges to Subsurface Retention / Detention System #1 and overflows into the existing brook at the southwest corner of the property.

Existing Drainage Area 2a (EDA-1-a) is 0.70 acres in size and is located at the southeast corner of the property. This drainage area includes the majority of the existing facility's operations area. The drainage area discharges to Subsurface Retention / Detention System #2a and overflows into the existing drainage channel adjacent to Maple Avenue.

Existing Drainage Area 2b (EDA-2b) is 1.96 acres in size and includes developed areas at the center of the northern portion of the property. This drainage area includes the existing Garden Center, most of the existing parking areas, the mulched display area adjacent to Bedford Road, the front portions of the office building and a portion of the access drive. The drainage area discharges to a Subsurface Retention / Detention system and overflows into the existing drainage channel adjacent to Maple Avenue.

Existing Drainage Area 2c (EDA-2c) is 0.68 acres in size and is located adjacent to Maple Avenue. This drainage area includes the mulched display area for ornamental trees and shrubs. This drainage area discharges to the existing drainage swale along Maple Avenue and is undetained. Water Quality treatment is not required because this drainage area does not include any impervious areas.

The peak rates of runoff to the design point of each of the drainage areas for each storm are shown on the table below:

Table 1
Summary of Peak Rates of Runoff in Existing Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2	DP-3
1-year	0.00	0.07	0.33
10-year	2.53	2.85	0.78
100-year	4.89	11.84	1.56

Proposed Conditions

The project’s SWPPP will consider conveyance of runoff from redeveloped areas of the site to proposed stormwater management practices. Stormwater runoff will receive water quality treatment through a combination of green practices and standard practices with runoff reduction capabilities.

Since the project is classified as a redevelopment project, Runoff Reduction Volume is not required. Stream Channel Protection Volume Requirements (CPv) are also not required in redevelopment projects, and are not proposed as part of this project. However, both are being provided by the proposed stormwater management system.

The site has been graded so that the proposed drainage patterns remain similar to existing conditions. Water quality measures incorporated into the stormwater management design will include a surface infiltration pond, porous pavement infiltration systems and hydrodynamic separators.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Ponds are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM) Table 7.2 "Physical Feasibility Matrix".
2. Conveyance – The design conveys runoff to the designed pond in a manner that is safe, minimizes

erosion and disruption to natural drainage channel and promotes filtering and infiltration.

3. Pretreatment – All ponds provide pretreatment in accordance with NYSSMDM design guidelines.
4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines noted Table 6.1 "Water Quality Volume Distributing in Pond Design".
5. Environmental/Landscaping – Extensive landscaping has been provided for each proposed practice to enhance pollutant removal and provide aesthetic enhancement to the property.
6. Maintenance – Maintenance for the environmental practices has been provided and is detailed in the SWPPP Report as required. Maintenance access is provided in the design plans.

All piped stormwater runoff from the parking lots will be treated with a hydrodynamic separator to achieve the required removal of total suspended solids based on the redevelopment criteria in the NYS Stormwater Manual (75% WQv). The plan also proposes to reduce runoff from the site by application of green infrastructure techniques.

Proposed Stormwater Practices for the project will include:

Hydrodynamic Water Quality Separators

Hydrodynamic water quality separators will be used to provide pretreatment of the water quality flow rate for separating sediment, debris, floatables, etc. from the runoff prior to discharge to the SMP's. These practices will be used in the vicinity of the C-Building.

Infiltration Systems

Infiltration practices provide runoff reduction and water quality enhancements by filtering runoff through soils below the proposed practice. Both surface infiltration ponds and porous pavement infiltration systems are being proposed for the project to provide water quality enhancements and to reduce peak runoff flows discharged from the site.

The infiltration pond will be a subtle depression to the east of the central driveway which will infiltrate runoff from the central portions of the property. This depression is graded so it will not be look like a typical stormwater pond and will be lawn. Also included is porous pavement for the driveway from Bedford Road to the C-Building and for the driveways in front of the proposed B-Buildings.

The site is divided into nine Drainage Areas (PDA-1A, PDA-1B, PDA-2A, PDA 2B, PDA-2C, PDA-2D, PDA-2E, PDA-2F and PDA-3). Drainage Area PDA-1A and PDA-1B discharges stormwater runoff to Design Point #1, Drainage Areas PDA-2A, PDA 2B, PDA-2C, PDA-2D, PDA-2E, PDA-2F all discharge stormwater runoff to Design Point #2 and Drainage Area PDA-3 drain to Design Point #3, which are the same design points studied in existing conditions.

The following is a description is each drainage area analyzed in proposed conditions:

Proposed Drainage Area PDA-1A is 0.10 acres in size and is located along the western side of the property. This drainage area includes pervious and landscaped areas behind the B-building and between the C-Building parking area and the western property line. This drainage area drains towards the proposed water quality structure in the southeast corner of the property before being discharged into the existing watercourse in this corner of the property.

Proposed Drainage Area PDA-1B is 0.39 acres in size and consists of parking areas located along the southern and western side of the proposed C-Building. This drainage area drains towards the porous pavement along the western and southern edges of the parking lots. The porous pavement overflows via catch basins to a water quality structure before being discharged into the existing watercourse at the southwest corner of the property.

Proposed Drainage Area PDA-2A is 0.39 acres in size and consists the proposed C-Building. Stormwater runoff from this building drains to the proposed infiltration system and does not require pretreatment since it is consist of entirely building area. Although the invert of pipe from

the C-Building at the pond is at elevation 374, the pond routing of this basin does not begin until elevation 375 to accommodate the 100-year flood elevation of 375.

Proposed Drainage Area PDA-2B is 1.63 acres in size and consists the A and B-Buildings, pervious / landscaped areas adjacent to the proposed A and B-Buildings as well as the center driveway which will be porous pavement. Stormwater runoff from this area drains to the proposed infiltration system. Pre-treatment is provided by a grass filter strip for the areas from the porous pavement area and by hydrodynamic separators for the piped runoff into this basin. Although water is conveyed via a pipe with an invert at the pond of elevation 374, the pond routing of this basin does not begin until elevation 375 to accommodate the 100-year flood elevation of 375.

Proposed Drainage Area PDA-2C is 0.49 acres in size and consists of porous / landscaped areas along the eastern edge of the adjacent to Maple Avenue. Stormwater runoff from this area drains undetained towards the existing swale located along eastern portion of the property which drains to the existing culvert under 22 located at the southeast corner of the property.

Proposed Drainage Area PDA-2D is 0.19 acres in size and consists the pervious paved and landscaped areas adjacent to the western proposed A-Buildings. Stormwater runoff from this area is piped to the proposed infiltration system. Although water is conveyed via a pipe with an invert at the pond of elevation 374, the pond routing of this basin does not begin until elevation 375 to accommodate the 100-year flood elevation of 375.

Proposed Drainage Area PDA-2E is 0.12 acres in size and consists the pervious paved and landscaped areas adjacent to the eastern proposed A-Buildings. Stormwater runoff from this area is piped to the proposed infiltration system. Although water is conveyed via a pipe with an invert at the pond of elevation 374, the pond routing of this basin does not begin until elevation 375 to accommodate the 100-year flood elevation of 375.

Proposed Drainage Area PDA-2F is 0.16 acres in size and consists of standard and porous pavement at the eastern side of proposed C-Building. Runoff is treated by the porous pavement

section and storms greater than the 10-year storm will discharge undetained via a pipe to the existing culvert under Route 22.

Proposed Drainage Area PDA-2G is 0.37 acres in size and consists the area adjacent to the graded depression proposed for flood plain compensatory storage. This area will not create runoff as the area has capacity to store the 100 year storm from its contributing areas since it is approximately 2' feet deep

Proposed Drainage Area PDA-3 is 0.12 acres in size and consists of a small portion of the proposed driveway and the pervious area between the reconstructed wall along the front of the property and Bedford Road. Stormwater runoff from this area flows undetained to Bedford Road's drainage system.

Please refer to the Proposed Conditions Drainage Area Map in Appendix C.

The peak rates of runoff to the design point of each of the drainage areas for each storm in proposed are shown on the table below:

Table 2
Summary of Peak Rates of Runoff in Proposed Conditions
 (Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2	DP-3
1-year	0.00	0.07	0.05
10-year	0.00	0.68	0.23
100-year	0.00	3.78	0.63

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

Table 3
Percent Reductions in Peak Rates of Runoff (%)
 (Existing vs. Proposed Conditions)

Storm Recurrence Interval	DP-1	DP-2	DP-3
1-year	0	0	84.8
10-year	100	76.1	71.5
100-year	10	68.1	59.6

SOIL EROSION & SEDIMENT CONTROL

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction and continuing throughout its course, as outlined in the "New York State Standards and Specifications for Erosion and Sediment Control," dated November 2016. A continuing maintenance program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.

The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days and at least two site inspections every seven calendar days when greater than five acres of soil is disturbed at any one time.

Soil Description

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

A soil's tendency to erode is described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight," "moderate," or "severe." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "severe" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed. The onsite soils include sand and gravel and the slope of the site is moderate. Therefore, the site can be considered slight to moderate in terms of sediment and erosion control risk.

Descriptions of the temporary sediment & erosion controls that will be used during the development of the site including silt fence, stabilized construction entrance, seeding, mulching and inlet protection are as follows:

1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas

which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.

2. Stabilized Construction Entrance consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 20 feet in width by 8 inches in depth.

3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 70% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.

4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.

5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using “Silt Sacks” inside the structures.

6. Erosion Control Matting will be utilized on slopes and within swales, where applicable, to provide stabilization in advance of vegetation being established. Such matting will be biodegradable to facilitate long term growth of vegetation in swales, on slopes and within stormwater management facilities.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:

1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).
2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.
3. Sediment deposits shall be removed when they reach approximately $\frac{1}{3}$ the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner's Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.
4. Rake all exposed areas parallel to the slope during earthwork operations.
5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for fourteen or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction of proposed redevelopment, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project:

1. Catch Basins will be used to remove some of the coarse sand and grit sediment before entering the drainage system. Each catch basin will be constructed with an 18 inch deep sump.

2. Seeding of at least 70% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket.
3. Porous Pavement is proposed to retain and infiltrate stormwater runoff in the central portions of the property as well as adjacement to the proposed C-Building. These practices are located in areas where groundwater and rock elevations are acceptable to provide the required separation. According to Section 3.6 of the Design Manual, 100% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.
4. Infiltration Basin are proposed to treat and retain and infiltrate runoff from the portions of the Site which are being developed. These practices are located in areas where groundwater and rock elevations are acceptable to provide the required separation. The existing slopes in these areas also do not exceed 15 percent. According to Section 3.6 of the Design Manual, 100% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.
5. Hydrodynamic Separators are structural stormwater practices which enhance stormwater quality by removing suspended solids from stormwater runoff. These practices will be used as pre-treatment before paved / parking areas without other means of water quality enhancement is provided.

Stormwater Conclusion

With the proper implementation of the project's stormwater management plan and long-term maintenance of all stormwater practices by the applicant / property owner, the project will meet and in many instances exceed the regulatory requirements of the NYSDEC and the Town North Castle, during and after construction, and the project will not have an adverse impact on downstream properties.

- I. APPENDICES
 - A. Existing Conditions Calculations
 - B. Proposed Conditions Calculations
 - C. Drainage Area Maps and Drawings

APPENDIX A

EXISTING CONDITIONS CALCULATIONS

APPENDIX B

PROPOSED CONDITIONS CALCULATIONS

APPENDIX C

DRAINAGE AREA MAPS

- I. APPENDICES
 - A. Existing Conditions Calculations
 - B. Proposed Conditions Calculations
 - C. Drainage Area Maps and Drawings

APPENDIX A

EXISTING CONDITIONS CALCULATIONS

Table of Contents

***** WARNING MSG *****

WARNING..... WARNING MESSAGES 1.01

***** MASTER SUMMARY *****

Watershed..... Master Network Summary 2.01

***** TC CALCULATIONS *****

EDA-1..... Tc Calcs 3.01

EDA-2A..... Tc Calcs 3.02

EDA-2B..... Tc Calcs 3.03

EDA-2C..... Tc Calcs 3.04

EDA-3..... Tc Calcs 3.05

***** CN CALCULATIONS *****

EDA-1..... Runoff CN-Area 4.01

EDA-2A..... Runoff CN-Area 4.02

EDA-2B..... Runoff CN-Area 4.03

EDA-2C..... Runoff CN-Area 4.04

EDA-3..... Runoff CN-Area 4.05

WARNING: For weighted average inflow, the approximate total travel time through entire reach is shorter than the inflow hydrograph time step. Consider reducing calculation time step.

Wtd.Avg.Q = .00 cfs Approx.Total Tt = .0000 hrs
Check output for: Modified Puls REACH 2B-1 1 YR

WARNING: Pond [] -- Storm [TypeIII 24hr Tag: 1 YR]
<2S/t-O> term less than zero for one or more ordinates. To view this parameter in your output reports, use menu Options/Project Options/Report Filter and turn on Pond Route Calcs. This warning may be eliminated in some cases by reducing Output Increment on the Go dialog.

WARNING: For weighted average inflow, the approximate total travel time through entire reach is shorter than the inflow hydrograph time step. Consider reducing calculation time step.

Wtd.Avg.Q = .00 cfs Approx.Total Tt = .0000 hrs
Check output for: Modified Puls REACH 2B-2 1 YR

WARNING: Pond [] -- Storm [TypeIII 24hr Tag: 1 YR]
<2S/t-O> term less than zero for one or more ordinates. To view this parameter in your output reports, use menu Options/Project Options/Report Filter and turn on Pond Route Calcs. This warning may be eliminated in some cases by reducing Output Increment on the Go dialog.

WARNING: For weighted average inflow, the approximate total travel time through entire reach is shorter than the inflow hydrograph time step. Consider reducing calculation time step.
Wtd.Avg.Q = 2.15 cfs Approx.Total Tt = .0076 hrs
Check output for: Modified Puls REACH 2B-1 10 YR

WARNING: Pond [] -- Storm [TypeIII 24hr Tag: 10 YR]
<2S/t-O> term less than zero for one or more ordinates. To view this parameter in your output reports, use menu Options/Project Options/Report Filter and turn on Pond Route Calcs. This warning may be eliminated in some cases by reducing Output Increment on the Go dialog.

WARNING: VOLUME/OUTFLOW DATA EXCEEDED DURING ROUTING.
Check routing calculations for: POND 2B OUT 100 YR

WARNING: E-Q-Vol data overtopped... routing results invalid.
Check output for: Pond Routing Summary POND 2B OUT 100 YR

WARNING: For weighted average inflow, the approximate total travel time through entire reach is shorter than the inflow hydrograph time step. Consider reducing calculation time step.
Wtd.Avg.Q = 6.98 cfs Approx.Total Tt = .0054 hrs
Check output for: Modified Puls REACH 2B-1 100 YR

Type.... WARNING MESSAGES

Page 1.03

Name.... WARNING

Event: 100 yr

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

WARNING: Pond [] -- Storm [TypeIII 24hr Tag: 100 YR]
<2S/t-O> term less than zero for one or more ordinates. To view this parameter
in your output reports, use menu Options/Project Options/Report Filter and turn on
Pond Route Calcs. This warning may be eliminated in some cases by reducing Output
Increment on the Go dialog.

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Westchester-JMC

Return Event	Total Depth in	Rainfall Type	RNF ID
1 YR	2.8000	Synthetic Curve	TypeIII 24hr
10 YR	5.1300	Synthetic Curve	TypeIII 24hr
100 YR	9.1600	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*DP-1	JCT	1	0		.0200	.00		
*DP-1	JCT	10	2229		12.1200	2.53		
*DP-1	JCT	100	7466		12.1000	4.89		
*DP-2	JCT	1	573		12.3800	.07		
*DP-2	JCT	10	7976		12.4800	2.85		
*DP-2	JCT	100	33863		12.3400	11.84		
*DP-3	JCT	1	1135		12.1000	.33		
*DP-3	JCT	10	2785		12.1000	.78		
*DP-3	JCT	100	5858		12.1000	1.56		
EDA-1	AREA	1	6341		12.1000	1.58		
EDA-1	AREA	10	12077		12.1000	2.92		
EDA-1	AREA	100	22016		12.1000	5.24		
EDA-2A	AREA	1	5728		12.1000	1.52		
EDA-2A	AREA	10	11557		12.1000	2.94		
EDA-2A	AREA	100	21743		12.1000	5.35		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
EDA-2B	AREA	1	11139		12.1800	2.58		
EDA-2B	AREA	10	26252		12.1800	5.99		
EDA-2B	AREA	100	53947		12.1600	11.89		
EDA-2C	AREA	1	573		12.3800	.07		
EDA-2C	AREA	10	2837		12.2600	.55		
EDA-2C	AREA	100	8529		12.2600	1.78		
EDA-3	AREA	1	1135		12.1000	.33		
EDA-3	AREA	10	2785		12.1000	.78		
EDA-3	AREA	100	5858		12.1000	1.56		
JUNC 2B-1	JCT	1	0		.0200	.00		
JUNC 2B-1	JCT	10	3672		12.3600	3.13		
JUNC 2B-1	JCT	100	18926		12.1400	9.07		
JUNC 2B-2	JCT	1	0		.0200	.00		
JUNC 2B-2	JCT	10	3672		12.3800	3.11		
JUNC 2B-2	JCT	100	18926		12.1600	9.07		
POND 1	IN POND	1	6341		12.1000	1.58		
POND 1	IN POND	10	12077		12.1000	2.92		
POND 1	IN POND	100	22016		12.1000	5.24		
POND 1	OUT POND	1	0		1.7400	.00	373.31	1544
POND 1	OUT POND	10	2229		12.1200	2.53	373.89	1933
POND 1	OUT POND	100	7466		12.1000	4.89	374.07	2063
POND 2A	IN POND	1	5728		12.1000	1.52		
POND 2A	IN POND	10	11557		12.1000	2.94		
POND 2A	IN POND	100	21743		12.1000	5.35		
POND 2A	OUT POND	1	0		3.9600	.00	370.52	1207
POND 2A	OUT POND	10	1483		12.1600	1.86	371.77	2320
POND 2A	OUT POND	100	6424		12.1000	4.91	372.03	2537

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
POND 2B	IN	POND 1	11139		12.1800	2.58		
POND 2B	IN	POND 10	26252		12.1800	5.99		
POND 2B	IN	POND 100	53947		12.1600	11.89		
POND 2B	OUT	POND 1	0		7.9800	.00	370.81	1902
POND 2B	OUT	POND 10	3672		12.3600	3.13	372.39	5505
POND 2B	OUT	POND 100	18926		12.1400	9.07	372.80	6370

Type.... Tc Calcs
Name.... EDA-1

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0833 hrs

=====
Total Tc: .0833 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

Type.... Tc Calcs
Name.... EDA-2A

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0833 hrs

=====
Total Tc: .0833 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: TR-55 Sheet

Mannings n .2400
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .020000 ft/ft

Avg.Velocity .12 ft/sec

Segment #1 Time: .2274 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 34.00 ft
Slope .002000 ft/ft
Unpaved

Avg.Velocity .72 ft/sec

Segment #2 Time: .0131 hrs

Segment #3: Tc: TR-55 Channel

Flow Area 1.2300 sq.ft
Wetted Perimeter 3.93 ft
Hydraulic Radius .31 ft
Slope .005000 ft/ft
Mannings n .0110
Hydraulic Length 238.00 ft

Avg.Velocity 4.42 ft/sec

Segment #3 Time: .0150 hrs

=====
Total Tc: .2555 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: TR-55 Sheet

Mannings n .2400
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .013000 ft/ft

Avg.Velocity .10 ft/sec

Segment #1 Time: .2702 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 166.00 ft
Slope .020000 ft/ft
Unpaved

Avg.Velocity 2.28 ft/sec

Segment #2 Time: .0202 hrs

Segment #3: Tc: TR-55 Channel

Flow Area 6.0000 sq.ft
Wetted Perimeter 9.00 ft
Hydraulic Radius .67 ft
Slope .014000 ft/ft
Mannings n .0500
Hydraulic Length 496.00 ft

Avg.Velocity 2.69 ft/sec

Segment #3 Time: .0512 hrs

Total Tc: .3416 hrs

Type.... Tc Calcs
Name.... EDA-3

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

=====
Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
IMPERVIOUS	98	.680			98.00
COMPOSITE AREA & WEIGHTED CN --->		.680			98.00 (98)

.....

Type.... Runoff CN-Area
Name.... EDA-2A

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.550			98.00
GRAVEL GOOD COND. HSG B	85	.150			85.00
COMPOSITE AREA & WEIGHTED CN --->		.700			95.21 (95)
.....

Type.... Runoff CN-Area
Name.... EDA-2B

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	1.400			98.00
GRASS GOOD COND. HSG B	61	.560			61.00
COMPOSITE AREA & WEIGHTED CN --->		1.960			87.43 (87)
.....

Type.... Runoff CN-Area
Name.... EDA-2C

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
GRASS GOOD COND. HSG B	61	.540			61.00
COMPOSITE AREA & WEIGHTED CN --->		.540			61.00 (61)

.....

Type.... Runoff CN-Area
Name.... EDA-3

File.... P:\2018\18053\DRAINAGE\PONDPACK\EDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.140			98.00
GRASS GOOD COND. HSG B	61	.080			61.00
COMPOSITE AREA & WEIGHTED CN --->		.220			84.55 (85)

.....

Index of Starting Page Numbers for ID Names

----- E -----
EDA-1... 3.01, 4.01
EDA-2A... 3.02, 4.02
EDA-2B... 3.03, 4.03
EDA-2C... 3.04, 4.04
EDA-3... 3.05, 4.05

----- W -----
WARNING... 1.01
Watershed... 2.01

APPENDIX B

PROPOSED CONDITIONS CALCULATIONS

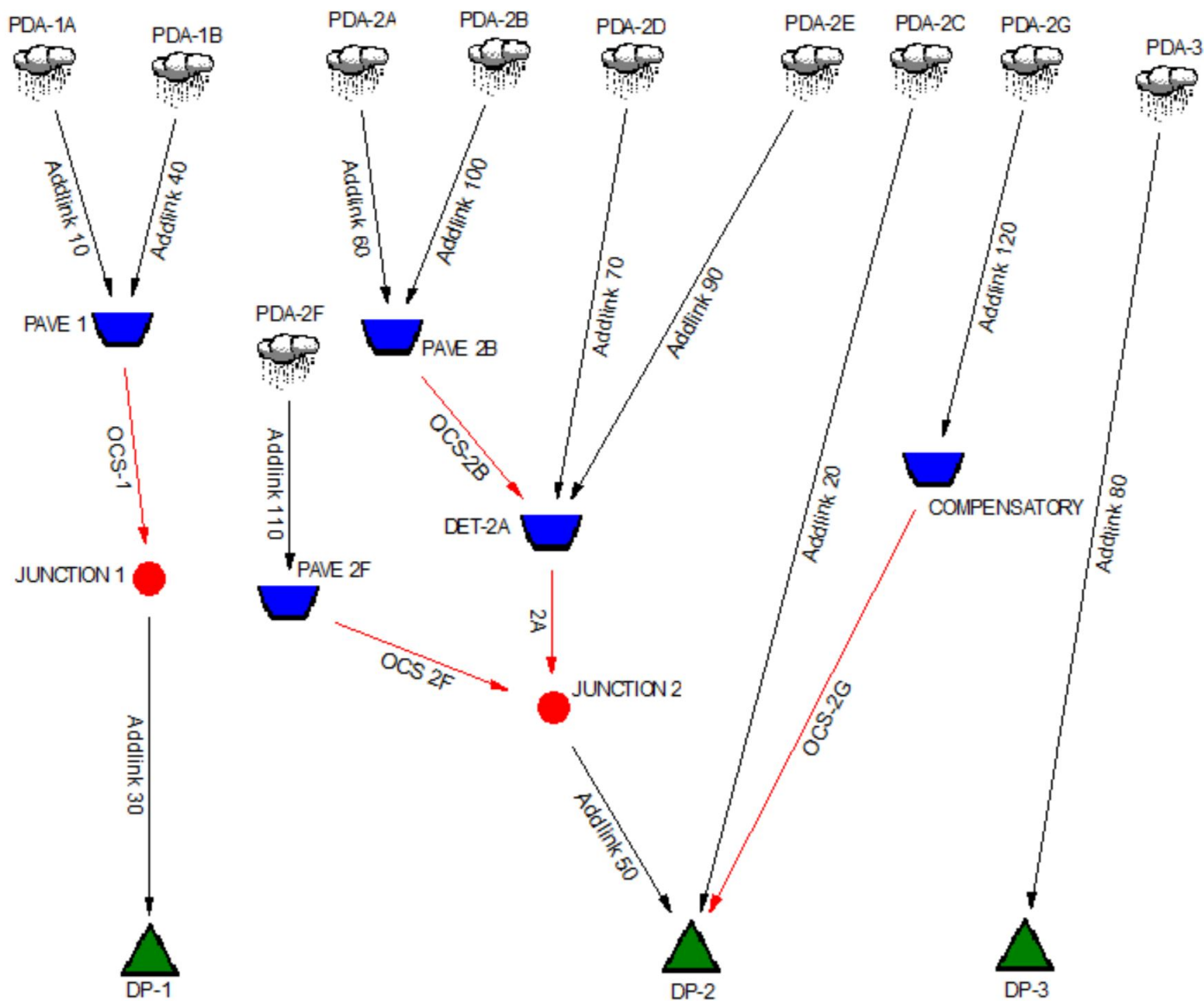


Table of Contents

***** MASTER SUMMARY *****

Watershed..... Master Network Summary 1.01

***** DESIGN STORMS SUMMARY *****

Westchester-JMC Design Storms 2.01

***** TC CALCULATIONS *****

PDA-1A..... Tc Calcs 3.01

PDA-1B..... Tc Calcs 3.02

PDA-2A..... Tc Calcs 3.03

PDA-2B..... Tc Calcs 3.04

PDA-2C..... Tc Calcs 3.05

PDA-2D..... Tc Calcs 3.06

PDA-2E..... Tc Calcs 3.07

PDA-2F..... Tc Calcs 3.08

PDA-2G..... Tc Calcs 3.09

PDA-3..... Tc Calcs 3.10

***** CN CALCULATIONS *****

PDA-1A..... Runoff CN-Area 4.01

Table of Contents (continued)

PDA-1B.....	Runoff CN-Area	4.02
PDA-2A.....	Runoff CN-Area	4.03
PDA-2B.....	Runoff CN-Area	4.04
PDA-2C.....	Runoff CN-Area	4.05
PDA-2D.....	Runoff CN-Area	4.06
PDA-2E.....	Runoff CN-Area	4.07
PDA-2F.....	Runoff CN-Area	4.08
PDA-2G.....	Runoff CN-Area	4.09
PDA-3.....	Runoff CN-Area	4.10

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Westchester-JMC

Return Event	Total Depth in	Rainfall Type	RNF ID
1	2.8000	Synthetic Curve	TypeIII 24hr
10	5.1300	Synthetic Curve	TypeIII 24hr
100	9.1600	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
COMPENSATORY	IN	POND	1		12.1200	.06		
COMPENSATORY	IN	POND	10		12.1200	.54		
COMPENSATORY	IN	POND	100		12.1000	1.68		
COMPENSATORY	OUT	POND	1		11.9800	.00	374.99	24747
COMPENSATORY	OUT	POND	10		11.1200	.00	374.99	24747
COMPENSATORY	OUT	POND	100		8.9800	.00	374.99	24747
DET-2A	IN	POND	1		12.1000	.42		
DET-2A	IN	POND	10		12.1000	1.03		
DET-2A	IN	POND	100		12.0400	16.34		
DET-2A	OUT	POND	1		8.1200	.00	374.99	3384
DET-2A	OUT	POND	10		5.4400	.00	374.99	3384
DET-2A	OUT	POND	100		12.4400	2.87	376.09	10939
*DP-1	JCT		1		.0200	.00		
*DP-1	JCT		10		.0200	.00		
*DP-1	JCT		100		.0200	.00		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*DP-2	JCT	1	520		12.1400	.07		
*DP-2	JCT	10	2575		12.1200	.68		
*DP-2	JCT	100	16564		12.3400	3.78		
*DP-3	JCT	1	213		12.1000	.05		
*DP-3	JCT	10	825		12.1000	.23		
*DP-3	JCT	100	2221		12.1000	.63		
JUNCTION 1	JCT	1	0		.0200	.00		
JUNCTION 1	JCT	10	0		.0200	.00		
JUNCTION 1	JCT	100	0		.0200	.00		
JUNCTION 2	JCT	1	0		.0200	.00		
JUNCTION 2	JCT	10	0		.0200	.00		
JUNCTION 2	JCT	100	8825		12.4400	2.87		
PAVE 1	IN POND	1	3153		12.1000	.84		
PAVE 1	IN POND	10	6805		12.1000	1.77		
PAVE 1	IN POND	100	13522		12.1000	3.42		
PAVE 1	OUT POND	1	0		4.8400	.00	372.21	1150
PAVE 1	OUT POND	10	0		2.8200	.00	372.56	3073
PAVE 1	OUT POND	100	0		1.5600	.00	373.40	7686
PAVE 2B	IN POND	1	10510		12.1000	2.87		
PAVE 2B	IN POND	10	25271		12.1000	6.88		
PAVE 2B	IN POND	100	53119		12.1000	14.04		
PAVE 2B	OUT POND	1	0		1.8800	.00	374.06	1868
PAVE 2B	OUT POND	10	0		.9800	.00	375.95	8223
PAVE 2B	OUT POND	100	14707		12.0400	14.28	376.12	8789
PAVE 2F	IN POND	1	1366		12.0800	.36		
PAVE 2F	IN POND	10	2706		12.0800	.68		
PAVE 2F	IN POND	100	5040		12.0800	1.22		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
PAVE 2F	OUT POND	1	0		4.1600	.00	372.07	146
PAVE 2F	OUT POND	10	0		2.2200	.00	372.23	492
PAVE 2F	OUT POND	100	0		1.1400	.00	372.64	1345
PDA-1A	AREA	1	100		12.1000	.01		
PDA-1A	AREA	10	525		12.1000	.14		
PDA-1A	AREA	100	1579		12.1000	.45		
PDA-1B	AREA	1	3053		12.1000	.83		
PDA-1B	AREA	10	6280		12.1000	1.62		
PDA-1B	AREA	100	11943		12.1000	2.97		
PDA-2A	AREA	1	3636		12.0800	.90		
PDA-2A	AREA	10	6926		12.0800	1.67		
PDA-2A	AREA	100	12627		12.1000	3.00		
PDA-2B	AREA	1	6874		12.1000	1.96		
PDA-2B	AREA	10	18345		12.1000	5.20		
PDA-2B	AREA	100	40492		12.1000	11.04		
PDA-2C	AREA	1	520		12.1400	.07		
PDA-2C	AREA	10	2575		12.1200	.68		
PDA-2C	AREA	100	7739		12.1200	2.16		
PDA-2D	AREA	1	720		12.1000	.20		
PDA-2D	AREA	10	2009		12.1000	.57		
PDA-2D	AREA	100	4549		12.1000	1.25		
PDA-2E	AREA	1	747		12.1000	.21		
PDA-2E	AREA	10	1695		12.1000	.46		
PDA-2E	AREA	100	3409		12.1000	.88		
PDA-2F	AREA	1	1366		12.0800	.36		
PDA-2F	AREA	10	2706		12.0800	.68		
PDA-2F	AREA	100	5040		12.0800	1.22		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
PDA-2G	AREA	1	393		12.1200	.06		
PDA-2G	AREA	10	1944		12.1200	.54		
PDA-2G	AREA	100	5844		12.1000	1.68		
PDA-3	AREA	1	213		12.1000	.05		
PDA-3	AREA	10	825		12.1000	.23		
PDA-3	AREA	100	2221		12.1000	.63		

Name... Westchester-JMC

File... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

Title... Project Date: 6/30/2006
 Project Engineer: Robert Aiello, P.E.
 Project Title: Mariani's Garden Market
 Project Comments:
 Proposed Conditions Hydrological Calculations

JMC Project 5087
 Mariani's Garden Market
 45 Bedford Road
 North Castle (Armonk), NY

DESIGN STORMS SUMMARY

Design Storm File, ID = Westchester-JMC

Storm Tag Name = 1

 Data Type, File, ID = Synthetic Storm TypeIII 24hr
 Storm Frequency = 1 yr
 Total Rainfall Depth= 2.8000 in
 Duration Multiplier = 1
 Resulting Duration = 24.0000 hrs
 Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 10

 Data Type, File, ID = Synthetic Storm TypeIII 24hr
 Storm Frequency = 10 yr
 Total Rainfall Depth= 5.1300 in
 Duration Multiplier = 1
 Resulting Duration = 24.0000 hrs
 Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 100

 Data Type, File, ID = Synthetic Storm TypeIII 24hr
 Storm Frequency = 100 yr
 Total Rainfall Depth= 9.1600 in
 Duration Multiplier = 1
 Resulting Duration = 24.0000 hrs
 Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0833 hrs

=====
Total Tc: .0833 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

Type.... Tc Calcs
Name.... PDA-1B

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0833 hrs

=====
Total Tc: .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0833 hrs

=====
Total Tc: .0833 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

=====
Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: TR-55 Shallow

Hydraulic Length 200.00 ft
Slope .020000 ft/ft
Unpaved

Avg.Velocity 2.28 ft/sec

Segment #1 Time: .0243 hrs

Segment #2: Tc: TR-55 Sheet

Mannings n .1500
Hydraulic Length 150.00 ft
2yr, 24hr P 3.3000 in
Slope .200000 ft/ft

Avg.Velocity .47 ft/sec

Segment #2 Time: .0885 hrs

=====
Total Tc: .1129 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

=====
Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

=====
Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

=====
Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

=====
Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

.....
TIME OF CONCENTRATION CALCULATOR
.....

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

=====
Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
=====

Type.... Runoff CN-Area
Name.... PDA-1A

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
GRASS GOOD COND. HSG B	61	.100			61.00
COMPOSITE AREA & WEIGHTED CN --->		.100			61.00 (61)

.....

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
IMPERVIOUS	98	.350			98.00
Pasture, grassland, or range - good	61	.040			61.00
COMPOSITE AREA & WEIGHTED CN --->		.390			94.21 (94)

.....

Type.... Runoff CN-Area
Name.... PDA-2A

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.390			98.00
COMPOSITE AREA & WEIGHTED CN --->		.390			98.00 (98)
.....					

Type.... Runoff CN-Area
Name.... PDA-2B

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.860			98.00
GRASS GOOD COND. HSG B	61	.770			61.00

COMPOSITE AREA & WEIGHTED CN ---> 1.630 80.52 (81)
.....

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
GRASS GOOD COND. HSG B	61	.490			61.00
COMPOSITE AREA & WEIGHTED CN --->		.490			61.00 (61)

.....

Type.... Runoff CN-Area
Name.... PDA-2D

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.090			98.00
GRASS GOOD COND. HSG B	61	.100			61.00

COMPOSITE AREA & WEIGHTED CN ---> .190 78.53 (79)
.....

Type.... Runoff CN-Area
Name.... PDA-2E

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.090			98.00
GRASS GOOD COND. HSG B	61	.030			61.00

COMPOSITE AREA & WEIGHTED CN ---> .120 88.75 (89)

.....

Type.... Runoff CN-Area
Name.... PDA-2F

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.150			98.00
PERVIOUS	61	.010			61.00

COMPOSITE AREA & WEIGHTED CN ---> .160 95.69 (96)
.....

Type.... Runoff CN-Area
Name.... PDA-2G

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
GRASS GOOD COND. HSG B	61	.370			61.00
COMPOSITE AREA & WEIGHTED CN --->		.370			61.00 (61)

.....

Type.... Runoff CN-Area
Name.... PDA-3

File.... P:\2018\18053\DRAINAGE\PONDPACK\2019-06-06_jy\PDA.ppw

RUNOFF CURVE NUMBER DATA

.....

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
-----	-----	-----	-----	-----	-----
IMPERVIOUS	98	.020			98.00
GRASS GOOD COND. HSG B	61	.100			61.00

COMPOSITE AREA & WEIGHTED CN ---> .120 67.17 (67)

.....

Index of Starting Page Numbers for ID Names

----- P -----
PDA-1A... 3.01, 4.01
PDA-1B... 3.02, 4.02
PDA-2A... 3.03, 4.03
PDA-2B... 3.04, 4.04
PDA-2C... 3.05, 4.05
PDA-2D... 3.06, 4.06
PDA-2E... 3.07, 4.07
PDA-2F... 3.08, 4.08
PDA-2G... 3.09, 4.09
PDA-3... 3.10, 4.10

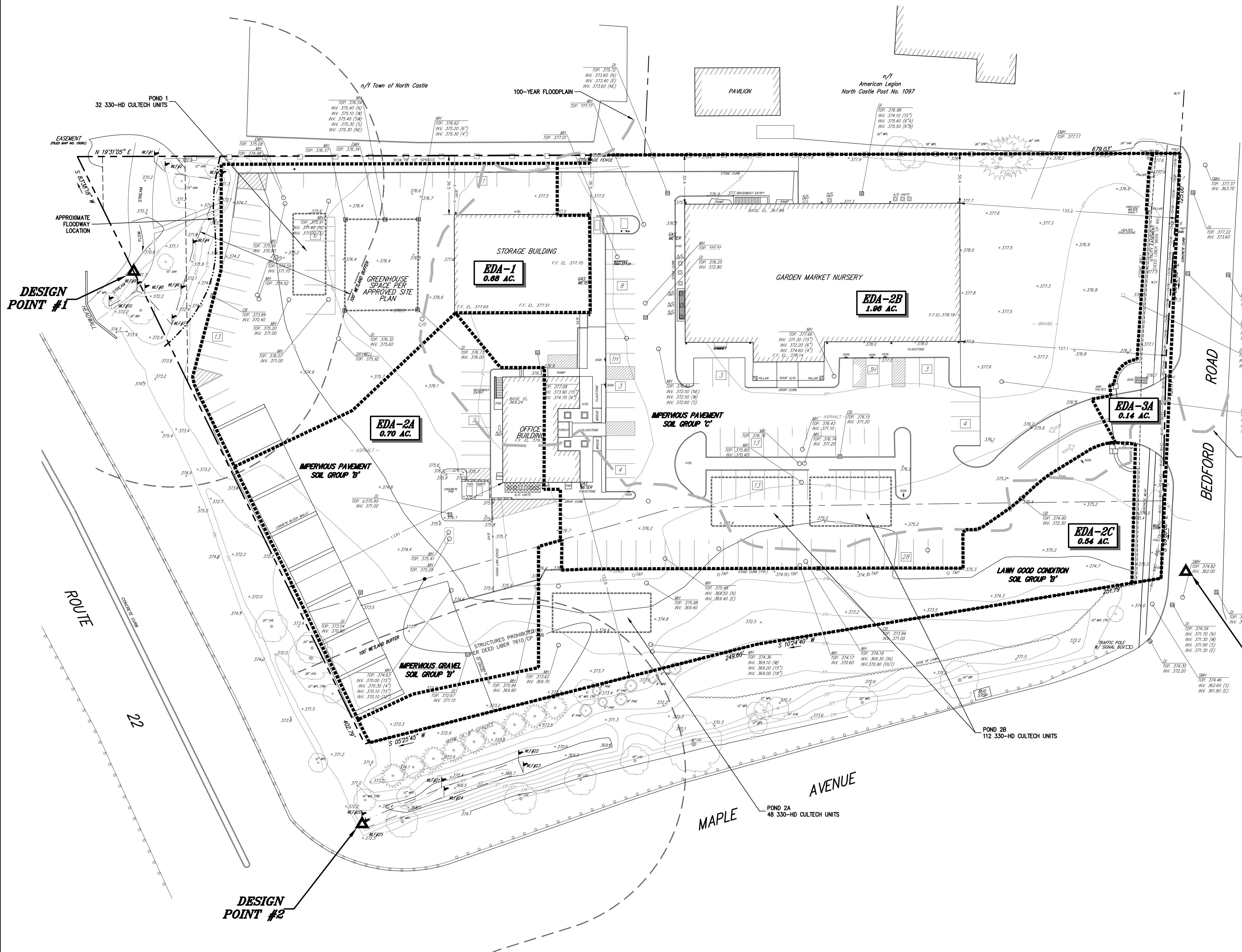
----- W -----
Watershed... 1.01
Westchester-JMC... 2.01

APPENDIX C

DRAINAGE AREA MAPS AND DRAWINGS

NOT FOR CONSTRUCTION

COPYRIGHT © 2018 BY JMC. All Rights Reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of JMC. ANY UNLAWFUL REPRODUCTION OF THIS DOCUMENT IS STRICTLY PROHIBITED. JMC, JMC PLANNING, ARCHITECTURE & LAND SURVEYING, P.L.L.C. IS AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER. ALL RIGHTS RESERVED. JMC PLANNING, ARCHITECTURE & LAND SURVEYING, P.L.L.C. IS AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER. ALL RIGHTS RESERVED.



EXISTING DRAINAGE LEGEND

	EXISTING GRADE
	FLAGGED WETLANDS WITH FLAG NUMBERS
	EXISTING STONE WALL
	WATERSHED BOUNDARY LINE
	BOUNDARY OF COVER TYPE LINE
	LIMIT OF SOIL GROUPS LINE

SOIL TYPE TABLE

DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
UvB	B	URBAN LAND-RIVERHEAD COMPLEX 2 TO 8 PERCENT SLOPES

NOTES:

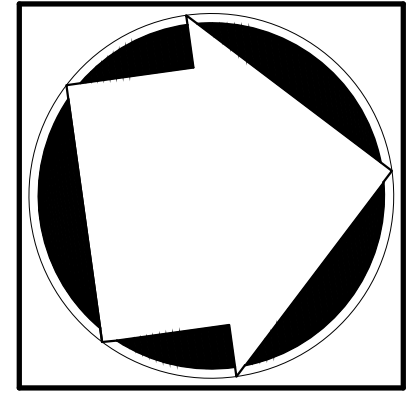
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY," PREPARED BY SOUND VIEW ENGINEERS & LAND SURVEYORS LLC, DATED 06/04/2018.

45 BEDFORD ROAD LLC
45 BEDFORD ROAD
TOWN OF NORTH CASTLE, NY

HALPER ARCHITECTS LLC
225 MILL STREET
GREENWICH, CT 06830

JMC Planning, Engineering, Landscape Architecture & Land Surveying, P.L.L.C.
JMC Site Development Consultants, LLC

John Meyer Consulting, Inc.
120 BEDFORD ROAD - ARMONK, NY 10504
voice 914.273.6225 • fax 914.273.2102
www.jmcplic.com



EXISTING DRAINAGE AREA MAP

MARIANI GARDENS REDEVELOPMENT
45 BEDFORD ROAD
TOWN OF NORTH CASTLE, NEW YORK

PROGRESS PLOTTING

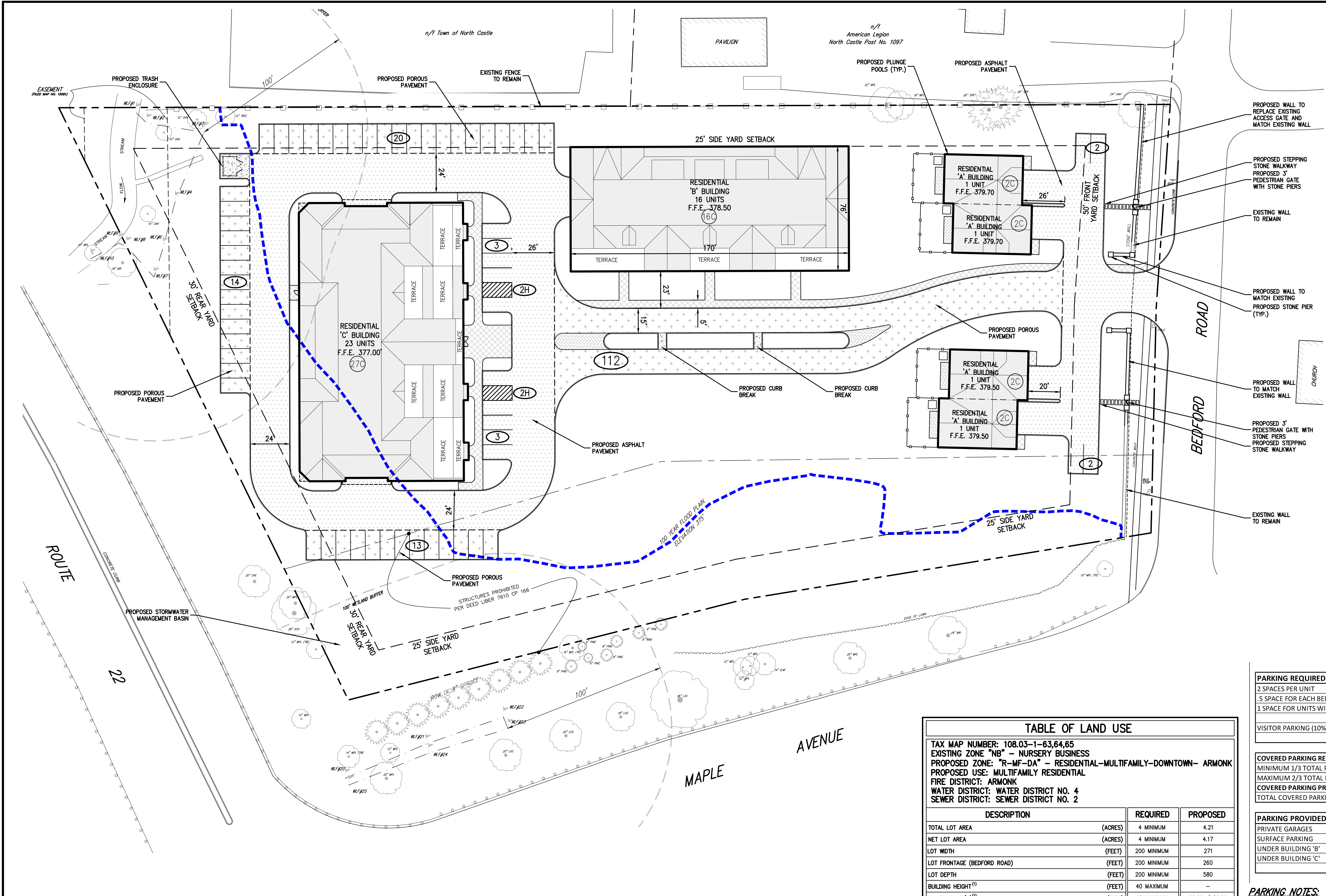
Drawing: 18053-DRAINAGE-TK
Date: 2019-02-26
Time: 1:30 PM
By:

Drawn: TK	Approved: RA
Scale: 1" = 30'	
Date: 11/28/2018	
Project No: 18053	
18053-DRAINAGE-TK	EDA EDALS
Drawing No:	
DA-1	

No.	Revision	Date	By

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

Previous Editions Obsolete



LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SETBACK LINE
- EXISTING EASEMENT LINE
- EXISTING ROADWAY CENTER LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED ACCESSIBLE PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
- PROPOSED PARKING SPACES WITH NUMBER OF SPACES INDICATED (REFER TO STRIPING DETAILS)
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAVEMENT
- PROPOSED POROSITY PAVEMENT
- PROPOSED PAVERS
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- PROPOSED GAS LINE
- PROPOSED 12" WIDE WHITE STOP LINE
- PROPOSED ARROW MARKING ON PAVEMENT
- PROPOSED WORD MARKING ON PAVEMENT
- TRAFFIC SIGN LOCATION & DESIGNATION

GENERAL NOTES:
 1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM A SURVEY TITLED, "TOPOGRAPHIC SURVEY," PREPARED BY SOUND VIEW ENGINEERS & LAND SURVEYORS LLC, DATED 06/04/2018.

PARKING REQUIRED		43 UNITS	86	SPACES
2 SPACES PER UNIT		43 UNITS	86	SPACES
.5 SPACE FOR EACH BEDROOM OVER 2 (3 BR UNITS)		6 UNITS	3	SPACES
1 SPACE FOR UNITS WITH 3 AND 4TH BR (4 BR UNITS)		4 UNITS	4	SPACES
		SUB TOTAL	93	SPACES
VISITOR PARKING (10% OF TOTAL)			9	SPACES
		TOTAL PARKING REQUIRED	109	SPACES

COVERED PARKING REQUIRED		36	SPACES
MINIMUM 1/3 TOTAL PARKING REQUIRED		36	SPACES
MAXIMUM 2/3 TOTAL PARKING REQUIRED		73	SPACES

COVERED PARKING PROVIDED		51	SPACES
TOTAL COVERED PARKING		51	SPACES

PARKING PROVIDED		8	SPACES
PRIVATE GARAGES		8	SPACES
SURFACE PARKING		61	SPACES
UNDER BUILDING 'B'		16	SPACES
UNDER BUILDING 'C'		27	SPACES
		TOTAL PARKING PROVIDED	112

PARKING NOTES:
 1. DOES NOT INCLUDE DRIVEWAY APRONS IN FRONT OF THE A TYPE UNITS.

TABLE OF LAND USE

TAX MAP NUMBER: 108.03-1-63,64,65
 EXISTING ZONE "NB" - NURSERY BUSINESS
 PROPOSED ZONE: "R-MF-DA" - RESIDENTIAL-MULTIFAMILY-DOWNTOWN- ARMONK
 PROPOSED USE: MULTIFAMILY RESIDENTIAL
 FIRE DISTRICT: ARMONK
 WATER DISTRICT: WATER DISTRICT NO. 4
 SEWER DISTRICT: SEWER DISTRICT NO. 2

DESCRIPTION	REQUIRED	PROPOSED
TOTAL LOT AREA (ACRES)	4 MINIMUM	4.21
NET LOT AREA (ACRES)	4 MINIMUM	4.17
LOT WIDTH (FEET)	200 MINIMUM	271
LOT FRONTAGE (BEDFORD ROAD) (FEET)	200 MINIMUM	260
LOT DEPTH (FEET)	200 MINIMUM	580
BUILDING HEIGHT ⁽¹⁾ (FEET)	40 MAXIMUM	-
BUILDING 'A' ⁽¹⁾ (FEET)	40 MAXIMUM	29.80 / 30.00
BUILDING 'B' ⁽¹⁾ (FEET)	40 MAXIMUM	30.00
BUILDING 'C' ⁽¹⁾ (FEET)	40 MAXIMUM	37.00
FLOOR AREA RATIO ⁽²⁾	0.5 MAXIMUM	.395
BUILDING COVERAGE ⁽²⁾ (PERCENT)	30 MAXIMUM	19.7
GROSS LAND COVERAGE ⁽²⁾⁽³⁾ (PERCENT)	-	47.3

YARDS	REQUIRED	PROPOSED
FRONT BUILDING SETBACK (FEET)	50 MINIMUM	50
REAR BUILDING SETBACK (FEET)	30 MINIMUM	30
SIDE BUILDING SETBACK (FEET)	25 MINIMUM	25

TABLE OF LAND USE NOTES:
 1. BUILDING HEIGHT IS CALCULATED BASED ON THE VERTICAL DISTANCE BETWEEN THE WEIGHTED MEAN LEVEL OF THE EAVES AND THE AVERAGE ELEVATION OF THE LOWEST STREET. (BEDFORD ROAD @ 376.60)
 2. CALCULATIONS ARE BASED ON NET LOT AREA WHICH IS DEFINED AS THE LOT AREA MINUS 75% OF THE AREA OF ANY WETLANDS, WATER BODIES, AND WATERCOURSES, BUT EXCLUDING ANY ADJACENT AREAS, ALL AS DEFINED IN CHAPTER 340, WETLANDS AND WATERCOURSE PROTECTION, OF THE TOWN CODE. NOTE THERE ARE NO STEEP SLOPES ON THE SUBJECT PROPERTY. (183,519 SF = 1.875 SF = 181,644 SF)
 3. THAT PERCENTAGE OF THE LAND AREA COVERED BY THE COMBINED AREA OF ALL BUILDINGS, STRUCTURES, AND PAVED, GRAVEL, SEMIPERVIOUS PAVERS AREAS ON A LOT, WALLS UNDER FOUR FEET IN HEIGHT AND FENCES SHALL NOT BE CONSIDERED GROSS LAND COVERAGE.

BUILDING	TYPE/STYLE	# UNITS	# BEDROOMS PER UNIT	TOTAL BEDROOMS	APPROXIMATE UNIT SIZE (SF)
'A'	Townhomes	4	4	16	3,709
'B'	Flats	10	1	10	710 to 958
'B'	Duplex	2	2	4	1,633
'B'	Duplex	4	3	12	1,988 to 2,235
'C'	Flats	14	1*	14	773 to 1,677
'C'	Flats	7	2*	14	1,335 to 1,999
'C'	Flats	2	3*	6	1,683 to 1,836
TOTAL		43		76	

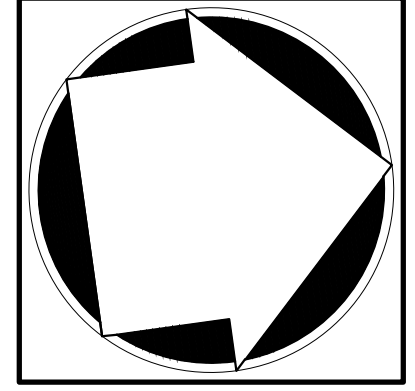
	'A' Bldgs.	'B' Bldgs.	'C' Bldg.	TOTAL UNITS
1 BEDROOM UNITS	-	10	14*	24
2 BEDROOM UNITS	-	2	7*	9
3 BEDROOM UNITS	-	4	2*	6
4 BEDROOM UNITS	4	-	-	4
TOTAL UNITS	4	16	23	43

* Includes three (3) 1-bedroom, one (1) 2-bedroom, and one (1) 3-bedroom Affordable Affirmatively Furthering Fair Housing (AFFH) Units.

APPLICANT/TOWNER:
45 BEDFORD ROAD LLC
 45 BEDFORD ROAD
 TOWN OF NORTH CASTLE, NY

ARCHITECT:
HALPER ARCHITECTS LLC
 225 MILL STREET
 GREENWICH, CT 06630

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
 JMC Site Development Consultants, LLC
 John Meyer Consulting, Inc.
 120 BEDFORD ROAD - ARMONK, NY 10504
 voice 914.273.5225 - fax 914.273.2102
 www.jmcplic.com



LAYOUT PLAN

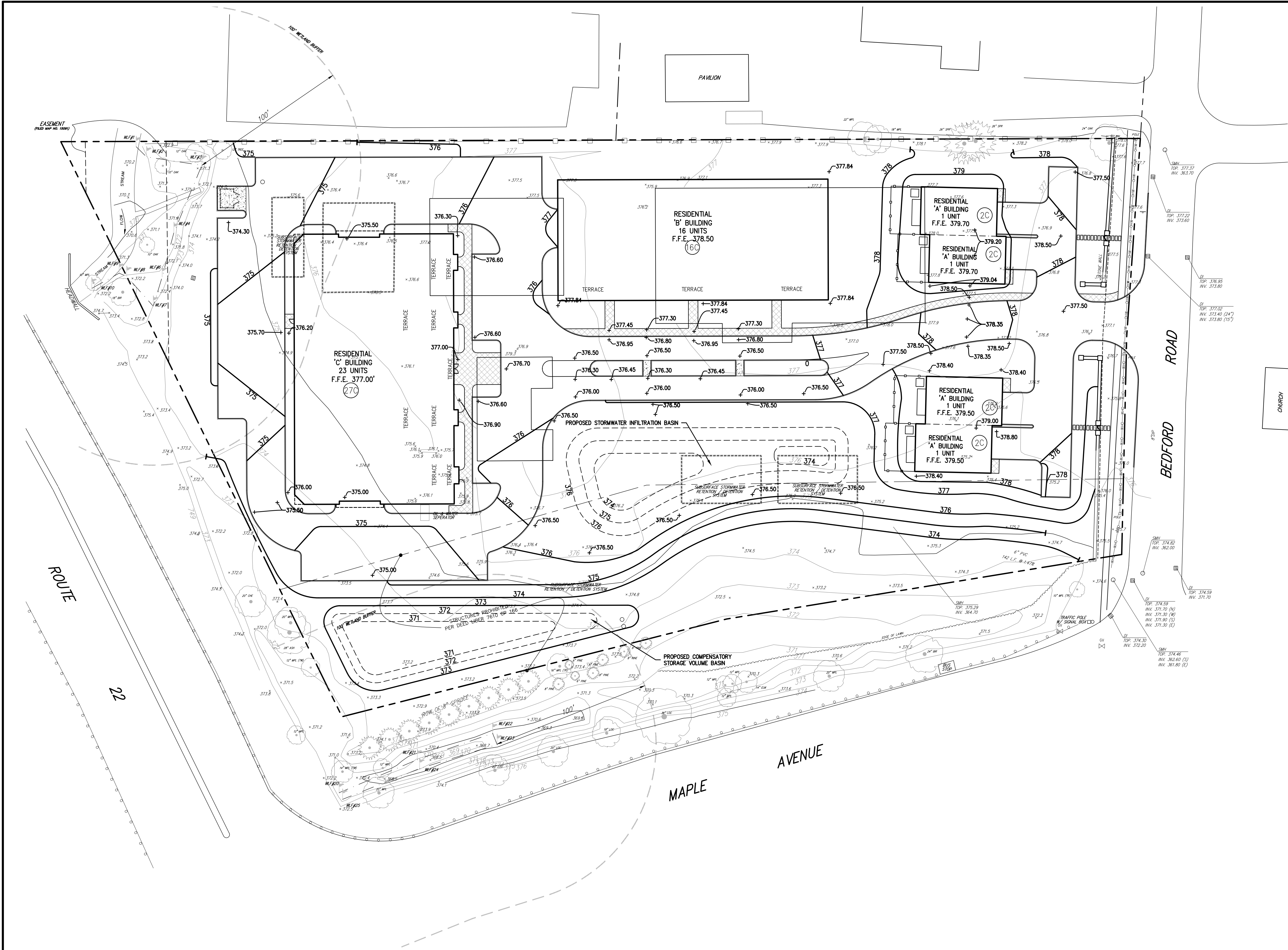
MARIANI GARDENS REDEVELOPMENT
 45 BEDFORD ROAD
 TOWN OF NORTH CASTLE, NEW YORK

No.	Revision	Date	By
1.	TOWN BOARD SUBMISSION	12/05/2018	JJ
2.	PLANNING BOARD SUBMISSION	12/17/2018	JJ
3.	ISSUED TO ARB	01/09/2019	JJ
4.	TOWN BOARD SUBMISSION	05/03/2019	JJ
5.	TOWN BOARD SUBMISSION	06/07/2019	JJ
6.	REVISED PER TOWN ENGINEERS COMMENTS	06/11/2019	JJ

Drawn: JJ Approved: RA
 Scale: 1" = 30'
 Date: 12/05/2018
 Project No: 18053
 HRS-9E C-100 LAT-SC
 Drawing No:
C-100
 Previous Editions Obsolete

NOT FOR CONSTRUCTION

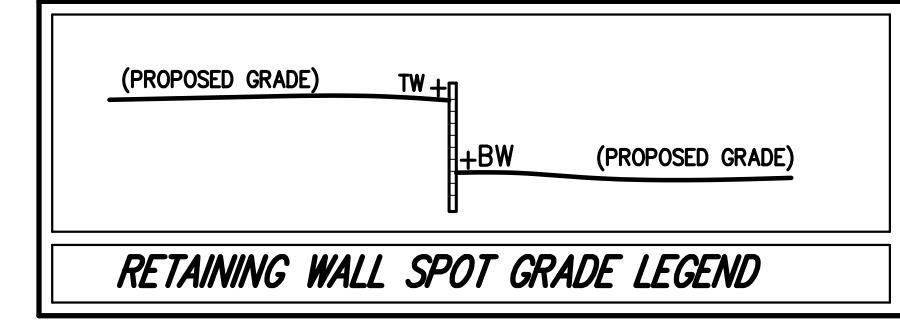
COPYRIGHT © 2018 JMC. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of JMC PLANNING, ENGINEERING, LANDSCAPE ARCHITECTURE & LAND SURVEYING, PLLC. THIS SITE DEVELOPMENT CONCEPT PLAN IS THE PROPERTY OF JMC PLANNING, ENGINEERING, LANDSCAPE ARCHITECTURE & LAND SURVEYING, PLLC. ANY REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF JMC PLANNING, ENGINEERING, LANDSCAPE ARCHITECTURE & LAND SURVEYING, PLLC IS PROHIBITED.



LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING WETLAND BUFFER
- EXISTING FLOOD AREA LINE
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING SPOT GRADE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DROP CURB AND RAMP
- PROPOSED FINISHED GRADE
- PROPOSED SPOT GRADE
- SMH PROPOSED SANITARY SEWER MANHOLE
- MH PROPOSED STORM DRAIN MANHOLE
- CI PROPOSED TYPE CI DRAIN INLET
- DI PROPOSED TYPE DI DRAIN INLET
- LI PROPOSED TYPE LI DRAIN INLET
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)

- GENERAL NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY," PREPARED BY SOUND VIEW ENGINEERS & LAND SURVEYORS LLC, DATED 06/04/2018.
 - ALL AREAS WHERE STORMWATER MANAGEMENT PRACTICES ARE PROPOSED SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
 - ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT SETTLEMENT.
 - EXCAVATIONS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTIES, NOR DIVERT WATER ONTO THE PROPERTY OF OTHERS AT ANY TIME DURING THE COURSE OF CONSTRUCTION.
 - CONTRACTOR SHALL REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR FURTHER DIRECTION REGARDING SITE STABILIZATION THROUGHOUT THE COURSE OF CONSTRUCTION.



ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

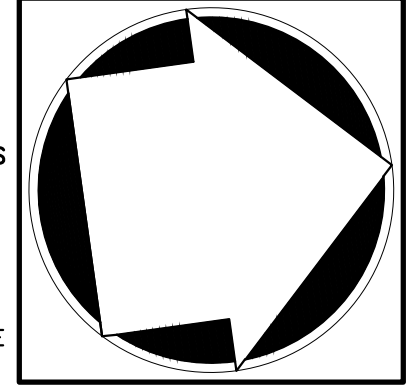
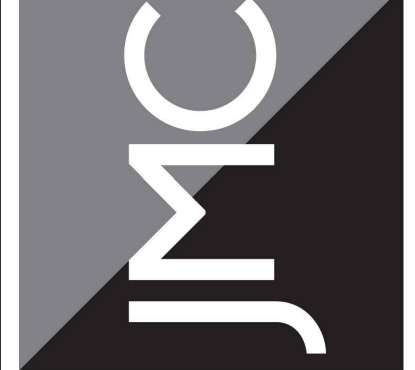
No.	Revision	Date	By
1.	TOWN BOARD SUBMISSION	12/05/2018	JJ
2.	PLANNING BOARD SUBMISSION	12/17/2018	JJ
3.	ISSUED TO ARB	01/09/2019	JJ
4.	TOWN BOARD SUBMISSION	06/07/2019	JJ
5.	REVISED PER TOWN ENGINEERS COMMENTS	06/11/2019	JJ

Scale: 1" = 30'
 Date: 12/05/2018
 Project No: 18053
 1805-GR0 C-200 GR0.scr
 Drawing No: C-200

APPLICANT/OWNER:
45 BEDFORD ROAD LLC
 45 BEDFORD ROAD
 TOWN OF NORTH CASTLE, NY

ARCHITECT:
HALPER ARCHITECTS LLC
 225 MILL STREET
 GREENWICH, CT 06630

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
 JMC Site Development Consultants, LLC
 John Meyer Consulting, Inc.
 120 BEDFORD ROAD - ARMONK, NY 10504
 voice 914.273.5225 • fax 914.273.2102
 www.jmcpllc.com



GRADING PLAN

MARIANI GARDENS REDEVELOPMENT
 45 BEDFORD ROAD
 TOWN OF NORTH CASTLE, NEW YORK

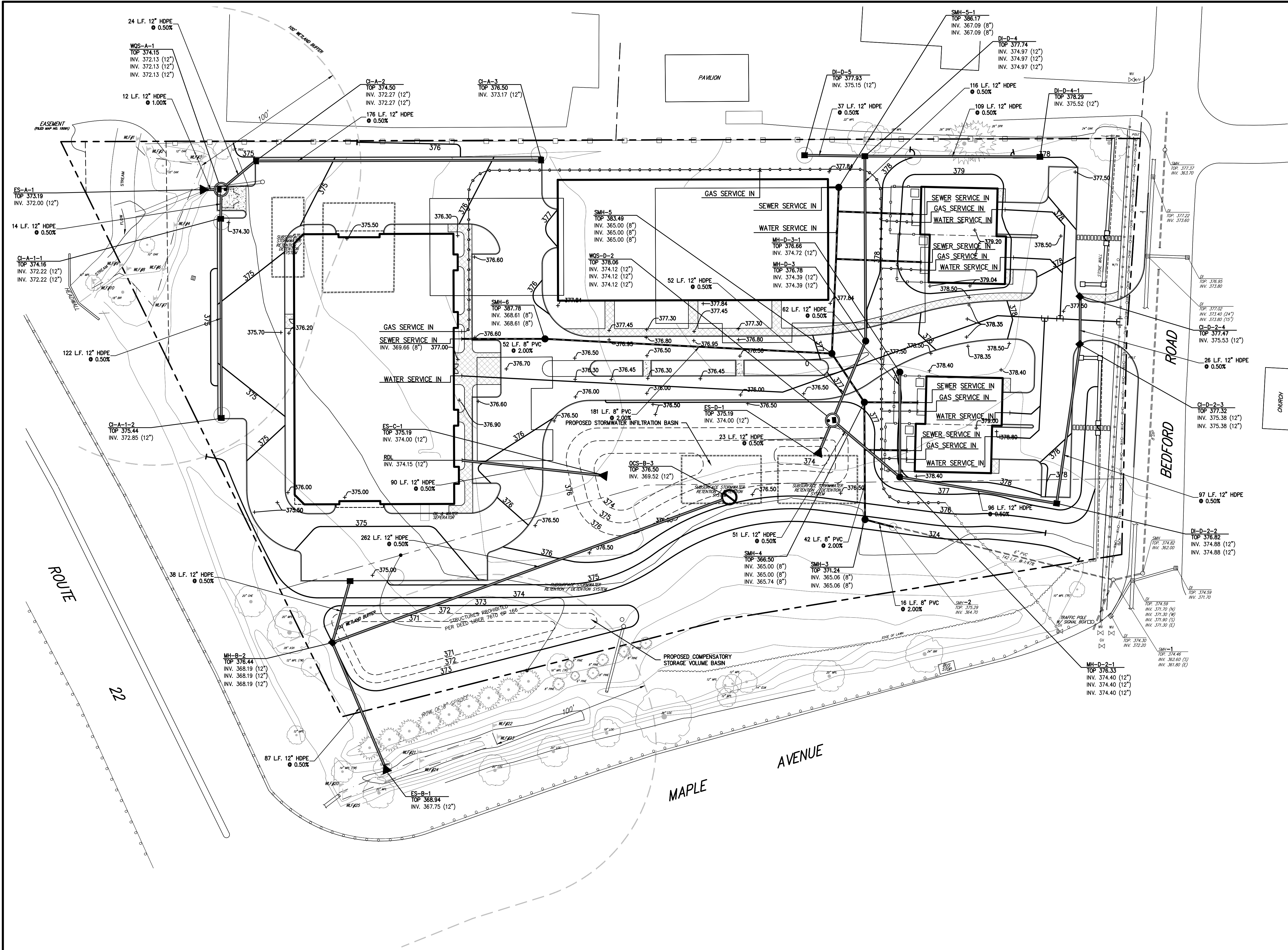
Drawn: JJ Approved: RA
 Scale: 1" = 30'
 Date: 12/05/2018
 Project No: 18053
 1805-GR0 C-200 GR0.scr
 Drawing No: C-200

C-200

Previous Editions Obsolete

NOT FOR CONSTRUCTION

COPYRIGHT © 2011 BY JMC. All Rights Reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of JMC. JMC PLANNING, ENGINEERING, LANDSCAPE ARCHITECTURE AND SURVEYING, PLLC, HAS THE SOLE DEVELOPMENT AND DESIGN RIGHTS IN THIS PROJECT. ANY REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF JMC IS STRICTLY PROHIBITED.



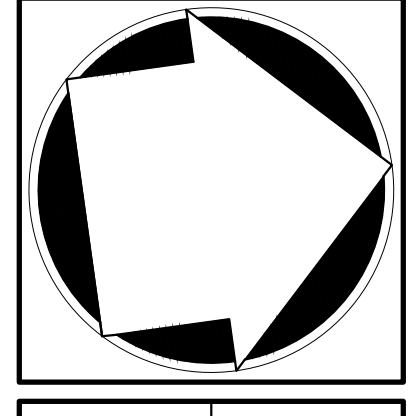
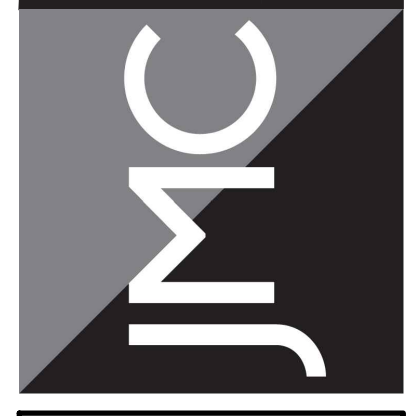
LEGEND

- ADJACENT PROPERTY LINE
- ADJACENT EASEMENT LINE
- - - - - EXISTING WETLAND LINE AND DELINEATION
- - - - - EXISTING WETLAND BUFFER
- - - - - EXISTING BUILDING OVERHANG
- - - - - EXISTING PAVEMENT EDGE
- - - - - EXISTING CURB LINE
- - - - - EXISTING STONE WALL
- - - - - EXISTING RETAINING WALL
- - - - - EXISTING FENCE RAIL
- - - - - EXISTING GUIDE
- - - - - EXISTING STORM DRAIN LINE AND SIZE
- - - - - EXISTING SANITARY LINE AND SIZE
- - - - - EXISTING WATER LINE
- - - - - EXISTING GAS LINE
- - - - - EXISTING OVERHEAD WRES
- - - - - EXISTING DRAIN INLET
- - - - - EXISTING MANHOLE
- - - - - EXISTING FIRE HYDRANT
- - - - - EXISTING GAS VALVE
- - - - - EXISTING WATER VALVE
- - - - - EXISTING UTILITY POLE
- - - - - EXISTING LIGHT POLE
- - - - - EXISTING SIGN
- - - - - PROPOSED BUILDING LINE
- - - - - PROPOSED CONCRETE CURB
- - - - - PROPOSED EASEMENT LINE
- - - - - PROPOSED CONCRETE SIDEWALK
- - - - - PROPOSED DROP CURB AND RAMP
- SMH PROPOSED SANITARY SEWER MANHOLE
- MH PROPOSED STORM DRAIN MANHOLE
- CI PROPOSED TYPE CI DRAIN INLET
- DI PROPOSED TYPE DI DRAIN INLET
- LI PROPOSED TYPE LI DRAIN LAWN INLET
- TRENCH DRAIN
- PROPOSED TYPE A HEADWALL
- PROPOSED TYPE B HEADWALL
- WQS PROPOSED WATER QUALITY STRUCTURE
- OCS PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- OXS PROPOSED OUTLET CONTROL STRUCTURE
- CD PROPOSED CLEANOUT
- HYD PROPOSED HYDRANT
- 15" HDPE PROPOSED STORM DRAIN LINE & SIZE
- 8" PVC PROPOSED SANITARY SEWER LINE & SIZE
- 6" WATER PROPOSED WATER LINE & SIZE
- PROPOSED GAS LINE
- PROPOSED ELECTRIC/TELEPHONE/CABLE
- PROPOSED WATER VALVE
- PROPOSED GAS VALVE
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- PROPOSED DOUBLE ARM LIGHTING STANDARD (DESIGN BY OTHERS)
- PROPOSED SINGLE ARM LIGHTING STANDARD (DESIGN BY OTHERS)
- PROPOSED UTILITY POLE
- EXISTING FEATURE TO BE REMOVED

APPLICANT/OWNER:
45 BEDFORD ROAD LLC
 45 BEDFORD ROAD
 TOWN OF NORTH CASTLE, NY

ARCHITECT:
HALPER ARCHITECTS LLC
 225 MILL STREET
 GREENWICH, CT 06630

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
 JMC Site Development Consultants, LLC
 John Meyer Consulting, Inc.
 120 BEDFORD ROAD - ARMONK, NY 10504
 voice 914.273.5225 - fax 914.273.2102
 www.jmcplic.com



UTILITIES PLAN

MARIANI GARDENS REDEVELOPMENT
 45 BEDFORD ROAD
 TOWN OF NORTH CASTLE, NEW YORK

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

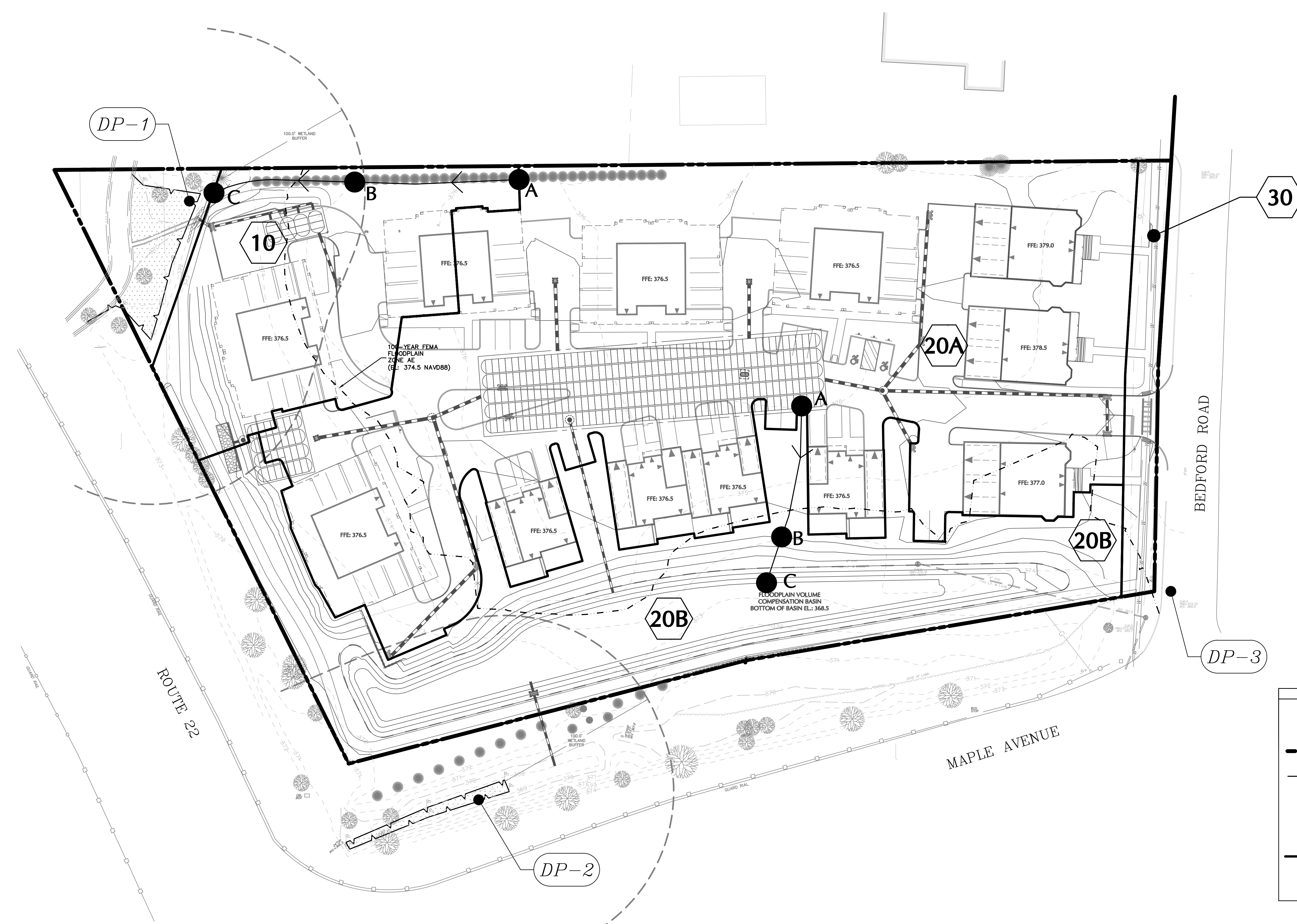
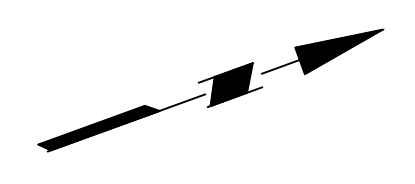
No.	Revision	Date	By

Drawn: JJC	Approved: RA
Scale: 1" = 30'	
Date: 06/11/2019	
Project No: 18053	
18053-UTL	UTL_Scr
Drawing No:	
C-300	

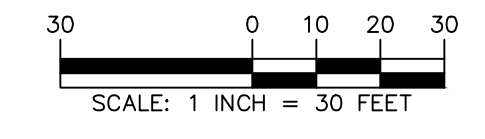
Previous Editions Obsolete

The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix E: Post-Development Stormwater Analysis



LEGEND	
HvE (C)	SOIL CLASSIFICATION AND HYDROLOGIC SOIL GROUP
-----	HYDROLOGIC SOIL GROUP BOUNDARY
→ → → →	TIME OF CONCENTRATION
10	SUB-CATCHMENT ID
-----	SUBCATCHMENT BOUNDARY
● DP-1	DISCHARGE POINT



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
Revisions		

Signature
MICHAEL FINAN, PE, LEED-AP
 PROFESSIONAL ENGINEER NY Lic. No. 081473-1

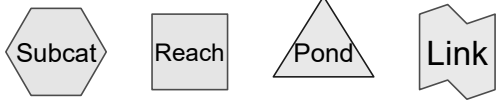
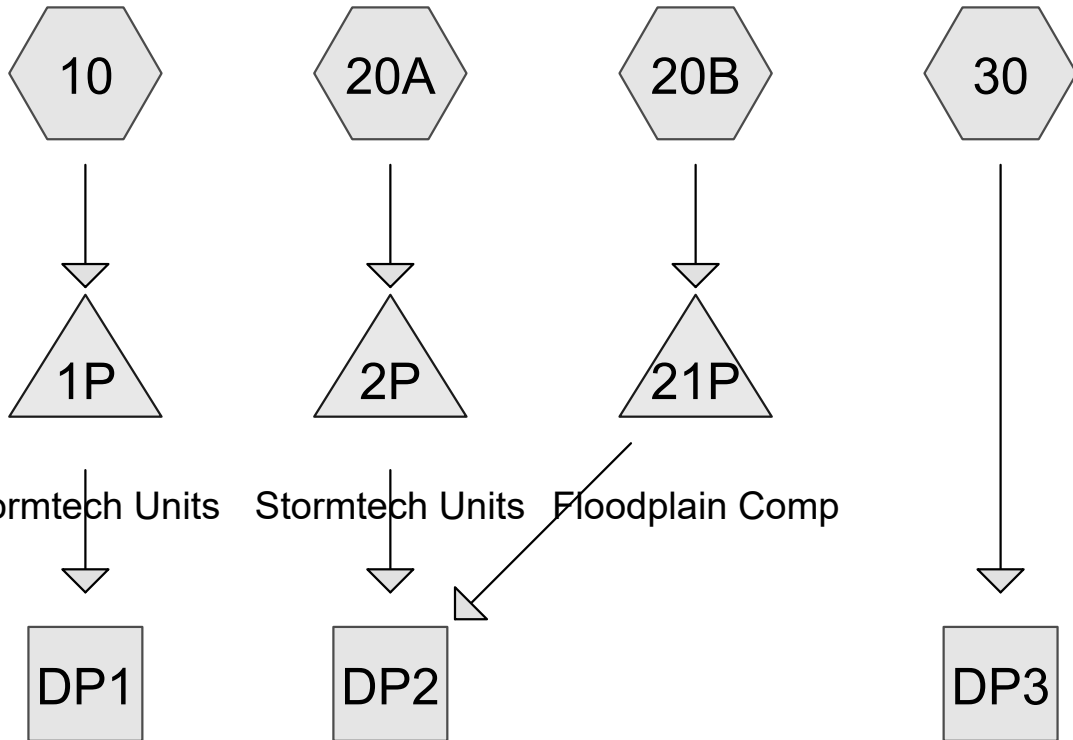
LANGAN
 Langan Engineering, Environmental, Surveying,
 Landscape Architecture, and Geology, D.P.C.
 One North Broadway, Suite 910
 White Plains, NY 10601
 T: 914.323.7400 F: 914.323.7401 www.langan.com

Project
45 BEDFORD ROAD
 ARMONK
 WESTCHESTER COUNTY NEW YORK

Drawing Title
POST DEVELOPMENT WATERSHED MAP

Project No.
190085001
 Date
01/30/2023
 Drawn By
GN
 Checked By
MT

Figure
FG06
 Sheet 1 of 6



07-28-2023 Post Development Watershed Analysis

Prepared by Langan Engineering

HydroCAD® 10.20-3c s/n 08223 © 2023 HydroCAD Software Solutions LLC

Printed 8/7/2023

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.848	61	>75% Grass cover, Good, HSG B (10, 20A, 20B, 30)
2.230	98	Impervious (10, 20A, 30)
4.078	81	TOTAL AREA

07-28-2023 Post Development Watershed Analysis Type III 24-hr 1 yr-24hr Rainfall=2.81"

Prepared by Langan Engineering

Printed 8/7/2023

HydroCAD® 10.20-3c s/n 08223 © 2023 HydroCAD Software Solutions LLC

Page 3

Time span=0.00-72.00 hrs, dt=0.15 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Runoff Area=0.560 ac 58.93% Impervious Runoff Depth=1.30"
Flow Length=187' Slope=0.0100 '/' Tc=14.6 min CN=83 Runoff=0.60 cfs 0.060 af

Subcatchment20A: Runoff Area=102,144 sf 79.32% Impervious Runoff Depth=1.81"
Tc=6.0 min CN=90 Runoff=3.92 cfs 0.354 af

Subcatchment20B: Runoff Area=45,882 sf 0.00% Impervious Runoff Depth=0.30"
Flow Length=110' Tc=14.1 min CN=61 Runoff=0.14 cfs 0.026 af

Subcatchment30: Runoff Area=0.120 ac 33.33% Impervious Runoff Depth=0.74"
Tc=6.0 min CN=73 Runoff=0.08 cfs 0.007 af

Reach DP1: Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach DP2: Inflow=0.02 cfs 0.024 af
Outflow=0.02 cfs 0.024 af

Reach DP3: Inflow=0.08 cfs 0.007 af
Outflow=0.08 cfs 0.007 af

Pond 1P: Stormtech Units Peak Elev=368.85' Storage=1,352 cf Inflow=0.60 cfs 0.060 af
Discarded=0.04 cfs 0.060 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.060 af

Pond 2P: Stormtech Units Peak Elev=366.28' Storage=5,731 cf Inflow=3.92 cfs 0.354 af
Discarded=0.48 cfs 0.354 af Primary=0.00 cfs 0.000 af Outflow=0.48 cfs 0.354 af

Pond 21P: Floodplain Comp Peak Elev=368.58' Storage=587 cf Inflow=0.14 cfs 0.026 af
Outflow=0.02 cfs 0.024 af

Total Runoff Area = 4.078 ac Runoff Volume = 0.448 af Average Runoff Depth = 1.32"
45.32% Pervious = 1.848 ac 54.68% Impervious = 2.230 ac

Summary for Subcatchment 10:

Runoff = 0.60 cfs @ 12.22 hrs, Volume= 0.060 af, Depth= 1.30"
 Routed to Pond 1P : Stormtech Units

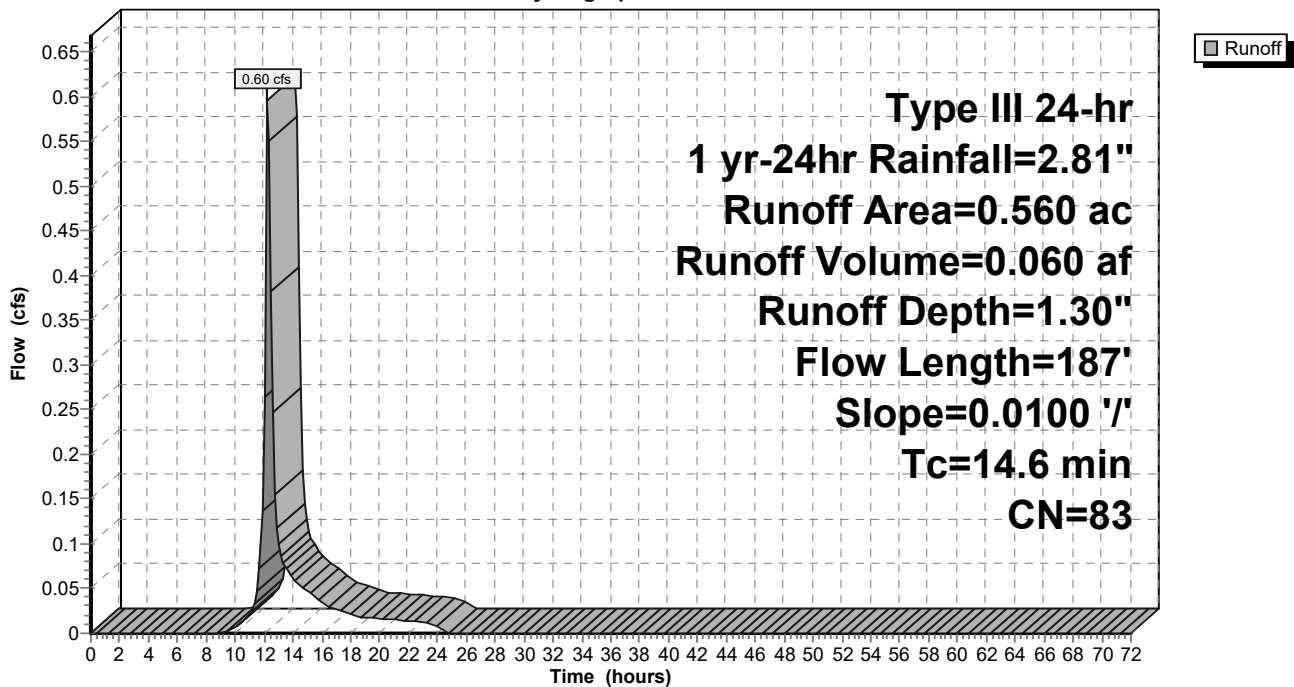
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 1 yr-24hr Rainfall=2.81"

Area (ac)	CN	Description
0.230	61	>75% Grass cover, Good, HSG B
* 0.330	98	Impervious
0.560	83	Weighted Average
0.230		41.07% Pervious Area
0.330		58.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	100	0.0100	0.13		Sheet Flow, a-b Grass: Short n= 0.150 P2= 3.43"
2.1	87	0.0100	0.70		Shallow Concentrated Flow, b-c Short Grass Pasture Kv= 7.0 fps
14.6	187	Total			

Subcatchment 10:

Hydrograph



Summary for Subcatchment 20A:

Runoff = 3.92 cfs @ 12.12 hrs, Volume= 0.354 af, Depth= 1.81"
 Routed to Pond 2P : Stormtech Units

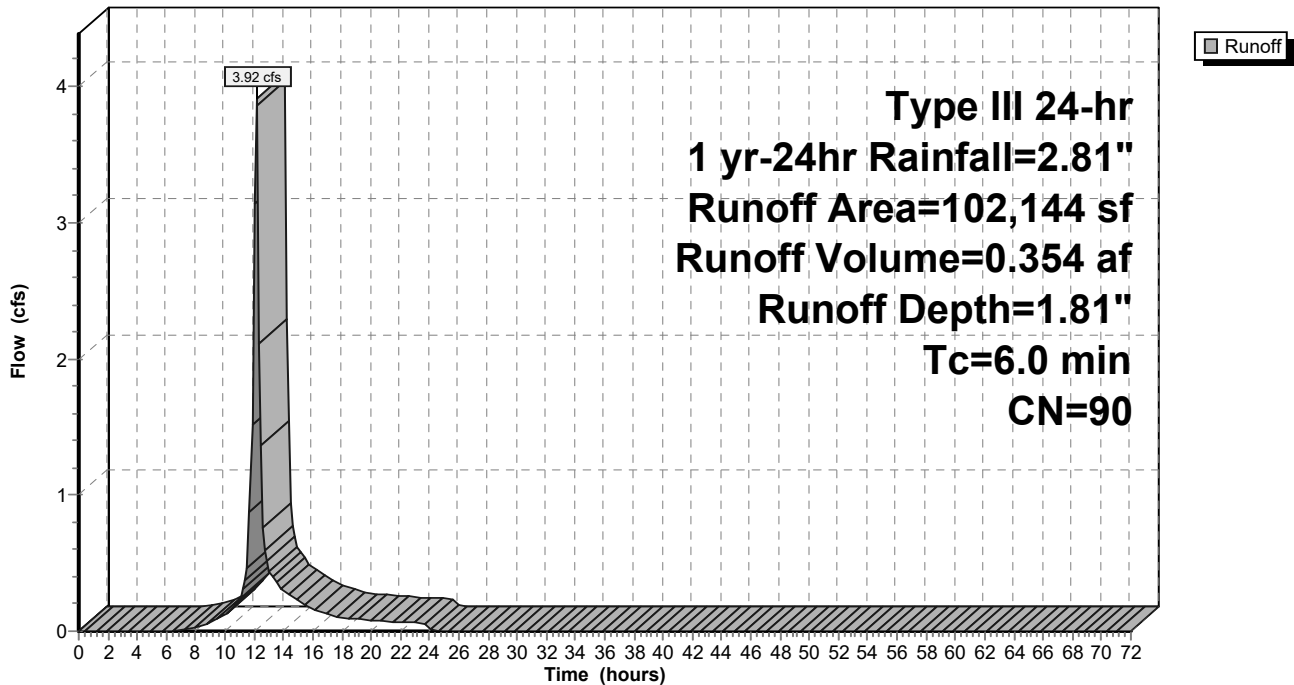
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 1 yr-24hr Rainfall=2.81"

	Area (sf)	CN	Description
*	81,022	98	Impervious
	21,122	61	>75% Grass cover, Good, HSG B
	102,144	90	Weighted Average
	21,122		20.68% Pervious Area
	81,022		79.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 20A:

Hydrograph



Summary for Subcatchment 20B:

Runoff = 0.14 cfs @ 12.39 hrs, Volume= 0.026 af, Depth= 0.30"
 Routed to Pond 21P : Floodplain Comp

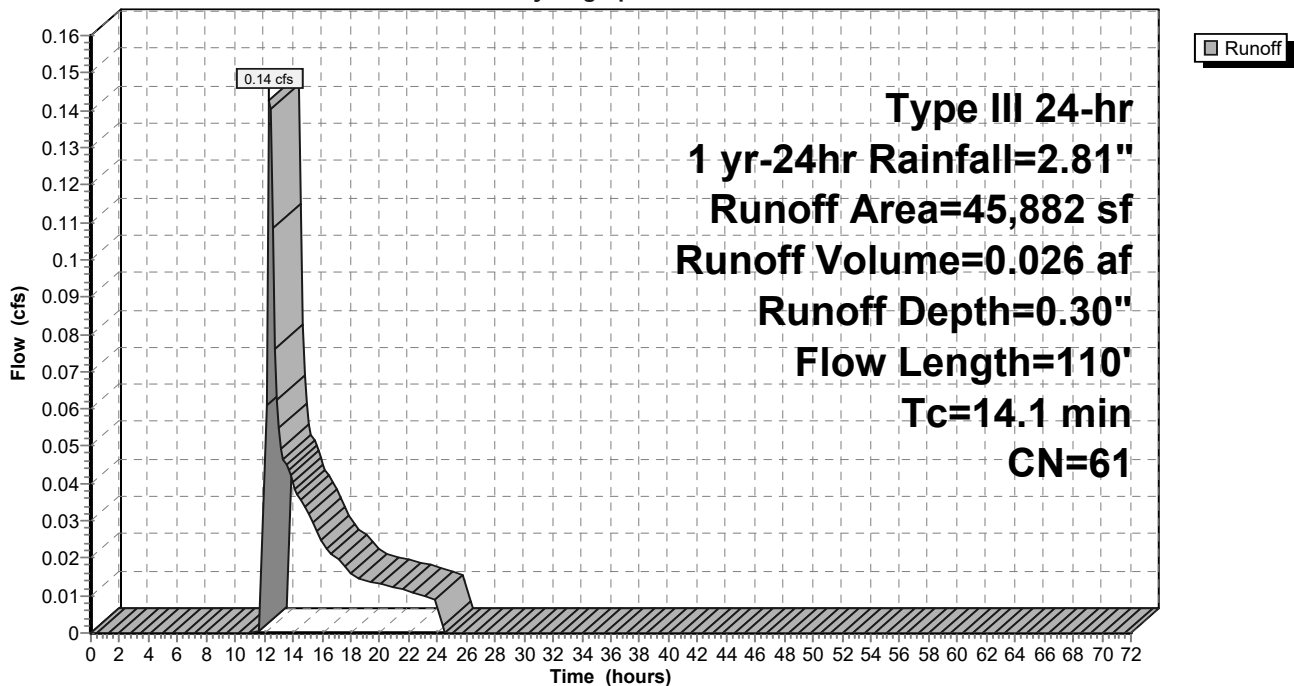
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 1 yr-24hr Rainfall=2.81"

Area (sf)	CN	Description
45,882	61	>75% Grass cover, Good, HSG B
45,882		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	81	0.0050	0.10		Sheet Flow, a-b Grass: Short n= 0.150 P2= 3.43"
0.2	29	0.1700	2.89		Shallow Concentrated Flow, b-c Short Grass Pasture Kv= 7.0 fps
14.1	110	Total			

Subcatchment 20B:

Hydrograph



Summary for Subcatchment 30:

Runoff = 0.08 cfs @ 12.15 hrs, Volume= 0.007 af, Depth= 0.74"
 Routed to Reach DP3 :

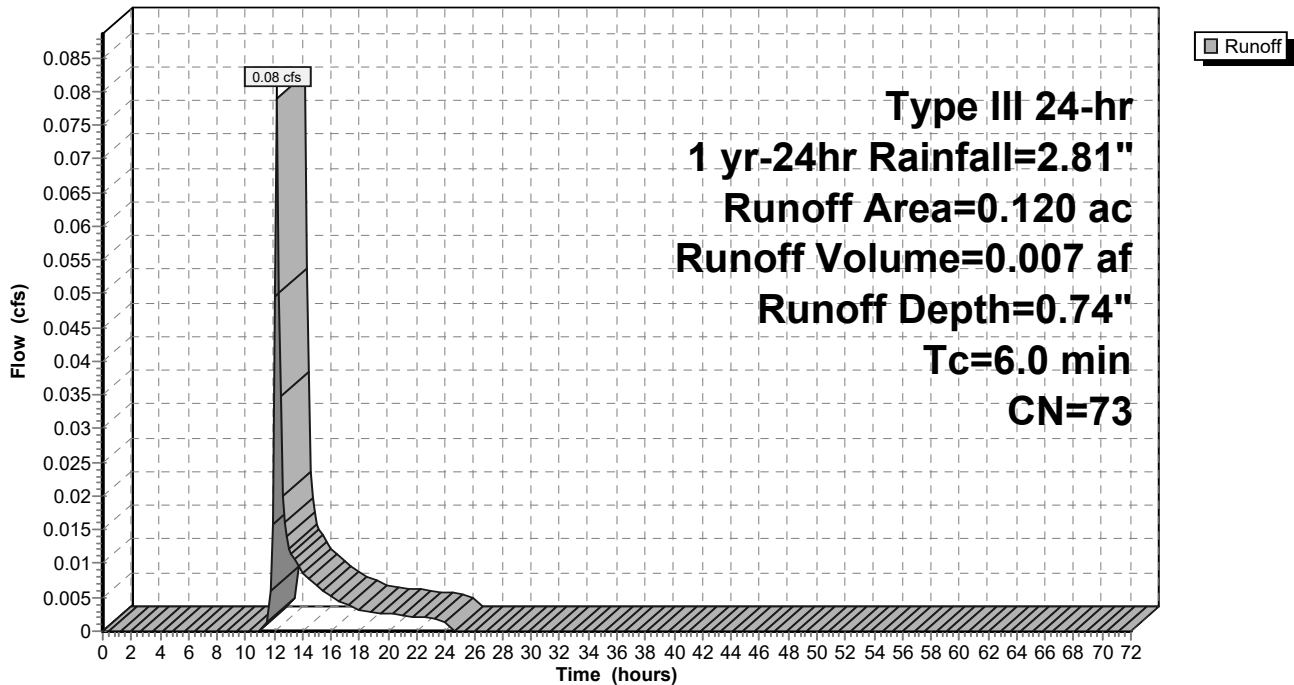
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 1 yr-24hr Rainfall=2.81"

Area (ac)	CN	Description
* 0.040	98	Impervious
0.080	61	>75% Grass cover, Good, HSG B
0.120	73	Weighted Average
0.080		66.67% Pervious Area
0.040		33.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 30:

Hydrograph

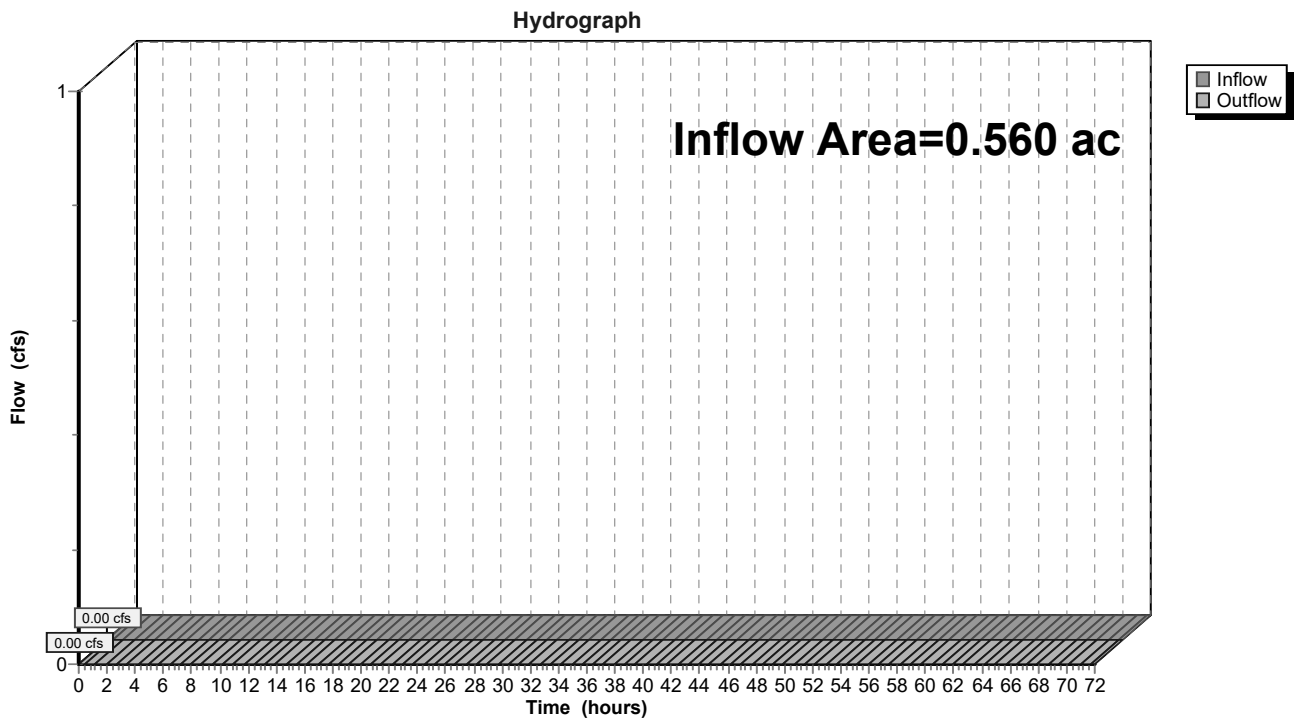


Summary for Reach DP1:

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 0.00" for 1 yr-24hr event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP1:



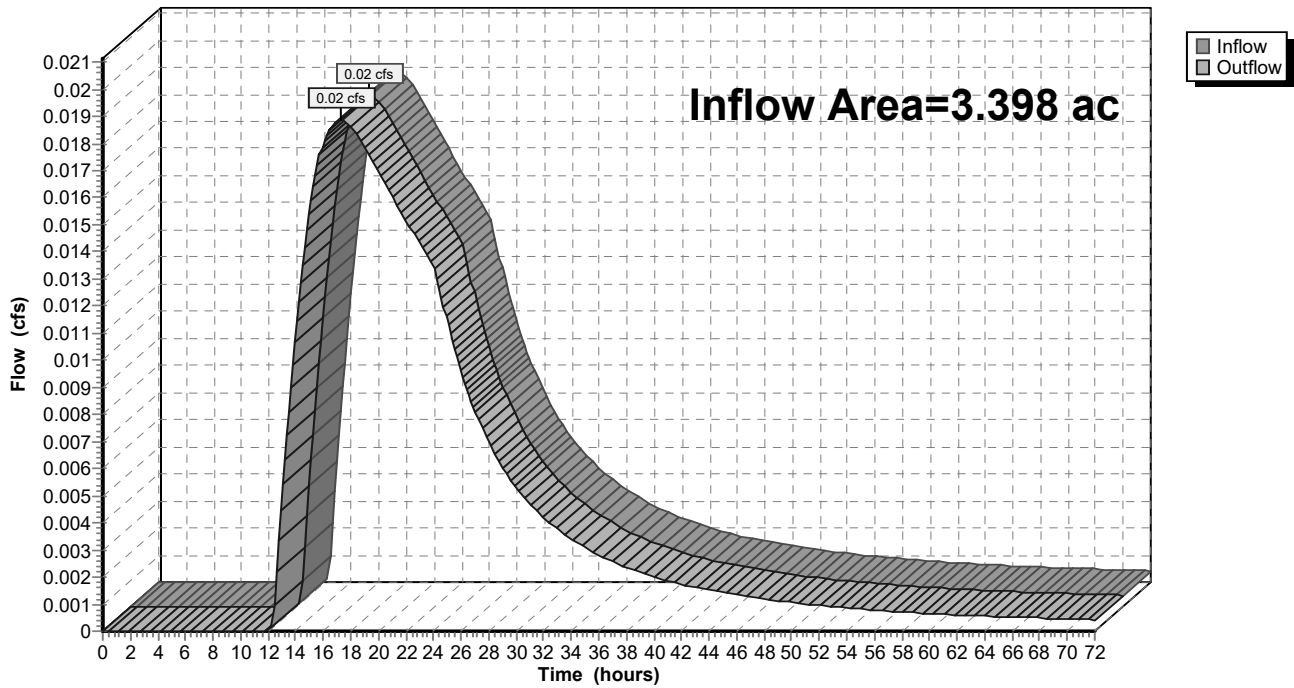
Summary for Reach DP2:

Inflow Area = 3.398 ac, 54.73% Impervious, Inflow Depth > 0.08" for 1 yr-24hr event
Inflow = 0.02 cfs @ 17.28 hrs, Volume= 0.024 af
Outflow = 0.02 cfs @ 17.28 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP2:

Hydrograph



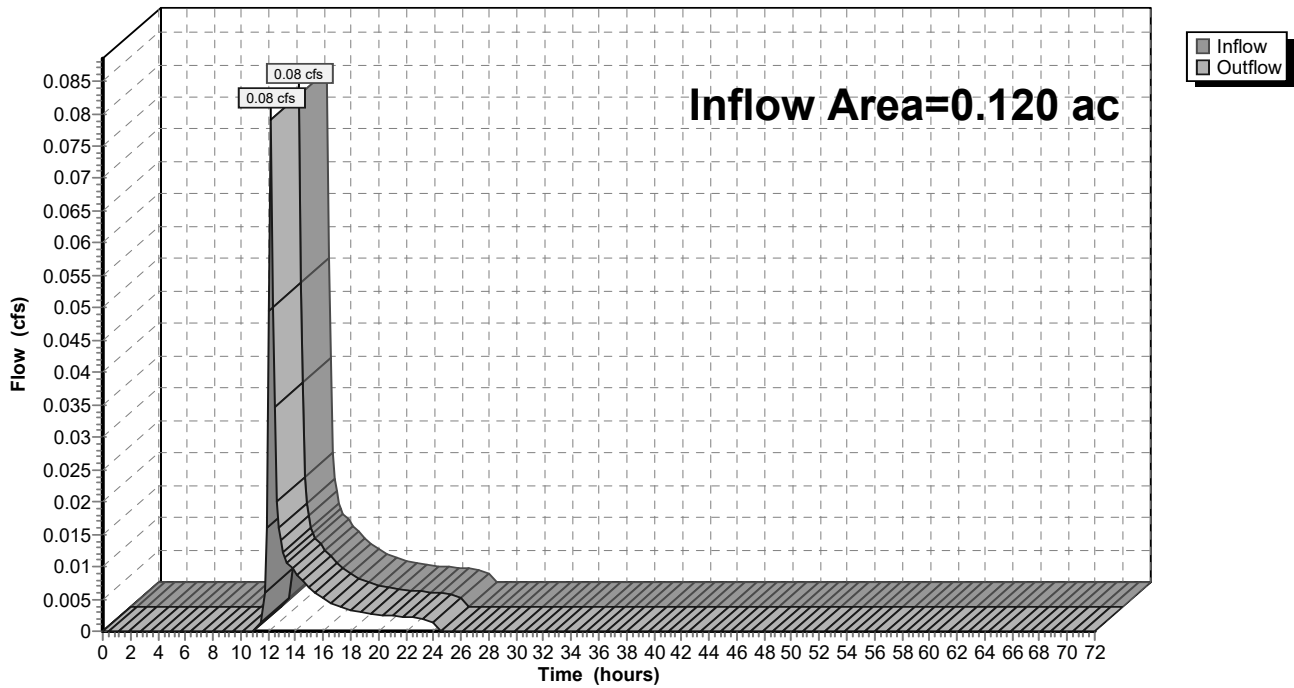
Summary for Reach DP3:

Inflow Area = 0.120 ac, 33.33% Impervious, Inflow Depth = 0.74" for 1 yr-24hr event
Inflow = 0.08 cfs @ 12.15 hrs, Volume= 0.007 af
Outflow = 0.08 cfs @ 12.15 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP3:

Hydrograph



Summary for Pond 1P: Stormtech Units

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 1.30" for 1 yr-24hr event
 Inflow = 0.60 cfs @ 12.22 hrs, Volume= 0.060 af
 Outflow = 0.04 cfs @ 15.19 hrs, Volume= 0.060 af, Atten= 93%, Lag= 178.0 min
 Discarded = 0.04 cfs @ 15.19 hrs, Volume= 0.060 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach DP1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 368.85' @ 15.19 hrs Surf.Area= 583 sf Storage= 1,352 cf

Plug-Flow detention time= 343.4 min calculated for 0.060 af (100% of inflow)
 Center-of-Mass det. time= 343.9 min (1,191.1 - 847.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.25'	1,107 cf	37.58'W x 15.52'L x 6.75'H Field A 3,936 cf Overall - 1,168 cf Embedded = 2,768 cf x 40.0% Voids
#2A	366.00'	1,168 cf	ADS_StormTech MC-4500 b +Cap x 8 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 8 Chambers in 4 Rows Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf
		2,275 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	370.00'	12.0" Round Culvert L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 369.00' / 370.00' S= -0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.25'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.04 cfs @ 15.19 hrs HW=368.85' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=365.25' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Controls 0.00 cfs)

Pond 1P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

2 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 13.52' Row Length +12.0" End Stone x 2 = 15.52' Base Length

4 Rows x 100.0" Wide + 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

8 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 4 Rows = 1,167.9 cf Chamber Storage

3,936.4 cf Field - 1,167.9 cf Chambers = 2,768.5 cf Stone x 40.0% Voids = 1,107.4 cf Stone Storage

Chamber Storage + Stone Storage = 2,275.3 cf = 0.052 af

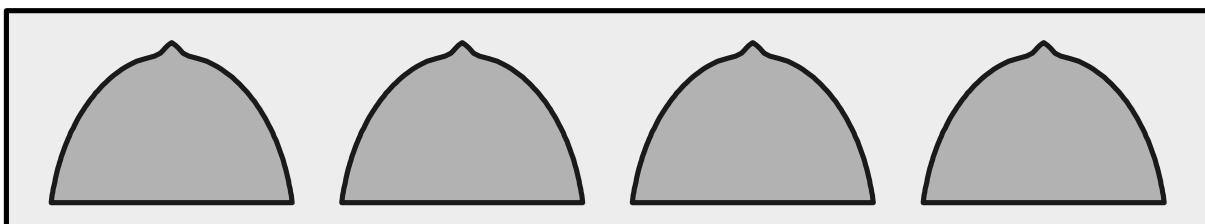
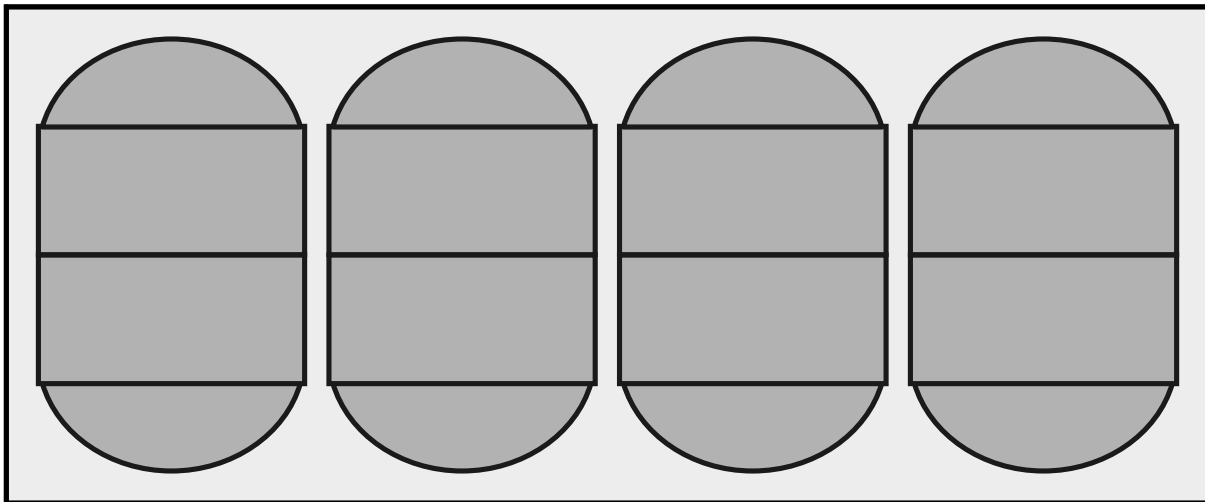
Overall Storage Efficiency = 57.8%

Overall System Size = 15.52' x 37.58' x 6.75'

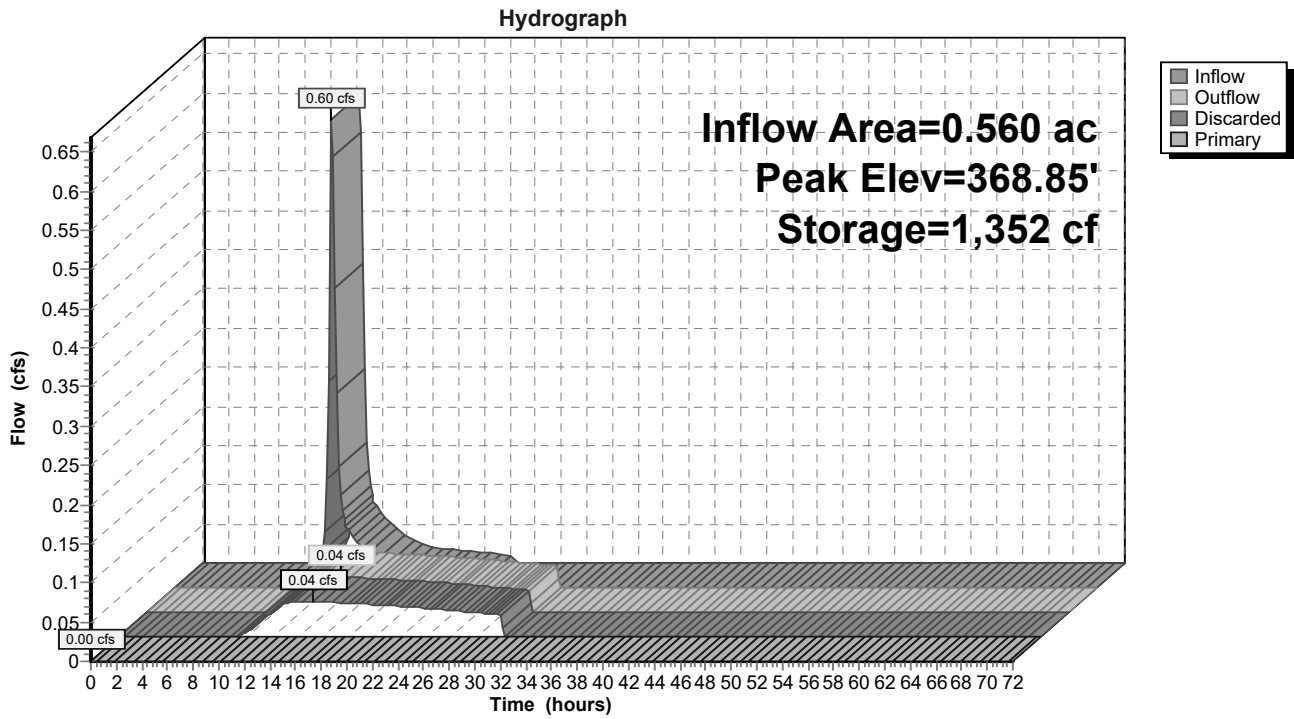
8 Chambers

145.8 cy Field

102.5 cy Stone



Pond 1P: Stormtech Units



Summary for Pond 2P: Stormtech Units

Inflow Area = 2.345 ac, 79.32% Impervious, Inflow Depth = 1.81" for 1 yr-24hr event
 Inflow = 3.92 cfs @ 12.12 hrs, Volume= 0.354 af
 Outflow = 0.48 cfs @ 12.99 hrs, Volume= 0.354 af, Atten= 88%, Lag= 52.0 min
 Discarded = 0.48 cfs @ 12.99 hrs, Volume= 0.354 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 366.28' @ 12.99 hrs Surf.Area= 9,740 sf Storage= 5,731 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 97.3 min (909.3 - 812.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.20'	15,491 cf	46.67'W x 208.72'L x 6.75'H Field A 65,746 cf Overall - 27,018 cf Embedded = 38,728 cf x 40.0% Voids
#2A	365.95'	27,018 cf	ADS_StormTech MC-4500 b +Cap x 250 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 250 Chambers in 5 Rows Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf
		42,509 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	368.70'	12.0" Round Culvert L= 96.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.70' / 368.50' S= 0.0021 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.20'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.48 cfs @ 12.99 hrs HW=366.28' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=365.20' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Controls 0.00 cfs)

Pond 2P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

50 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 206.72' Row Length +12.0" End Stone x 2 = 208.72' Base Length

5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

250 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 5 Rows = 27,017.6 cf Chamber Storage

65,745.8 cf Field - 27,017.6 cf Chambers = 38,728.1 cf Stone x 40.0% Voids = 15,491.3 cf Stone Storage

Chamber Storage + Stone Storage = 42,508.9 cf = 0.976 af

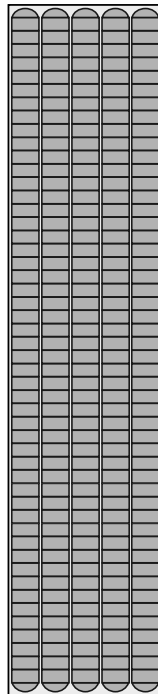
Overall Storage Efficiency = 64.7%

Overall System Size = 208.72' x 46.67' x 6.75'

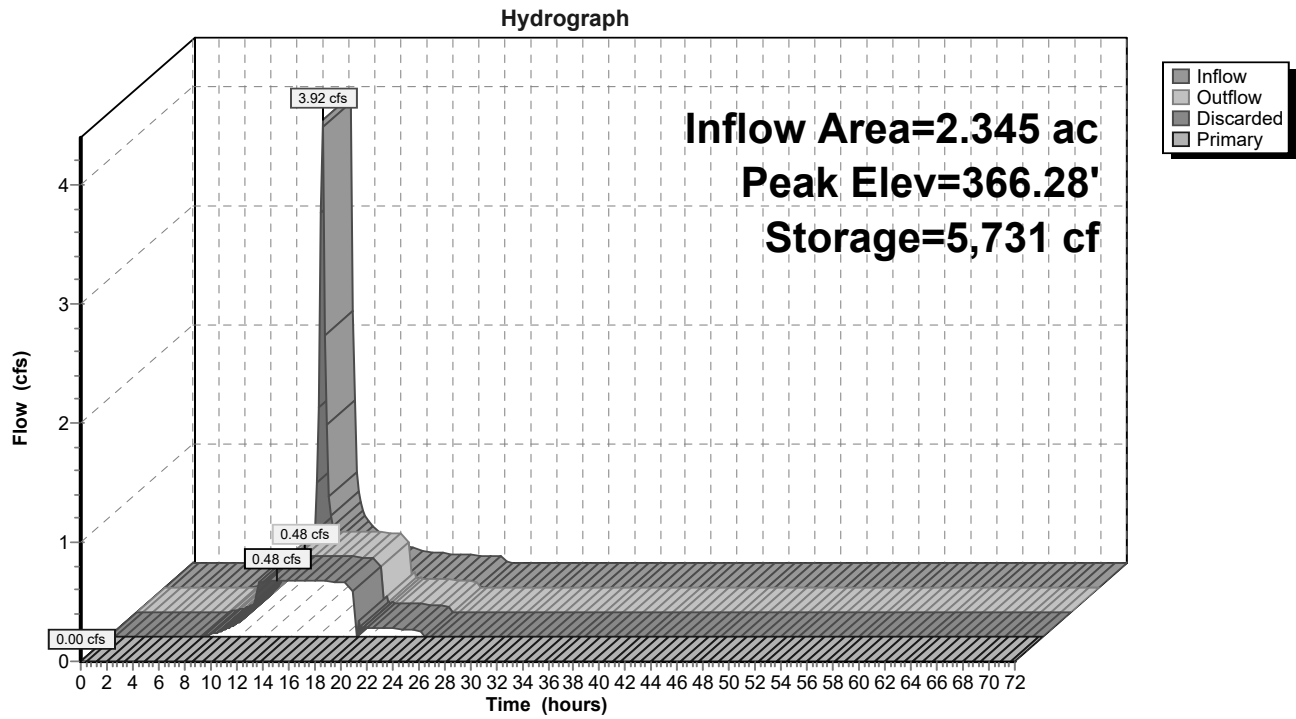
250 Chambers

2,435.0 cy Field

1,434.4 cy Stone



Pond 2P: Stormtech Units



Summary for Pond 21P: Floodplain Comp

Inflow Area = 1.053 ac, 0.00% Impervious, Inflow Depth = 0.30" for 1 yr-24hr event
 Inflow = 0.14 cfs @ 12.39 hrs, Volume= 0.026 af
 Outflow = 0.02 cfs @ 17.28 hrs, Volume= 0.024 af, Atten= 87%, Lag= 293.5 min
 Primary = 0.02 cfs @ 17.28 hrs, Volume= 0.024 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 368.58' @ 17.28 hrs Surf.Area= 7,644 sf Storage= 587 cf

Plug-Flow detention time= 605.5 min calculated for 0.024 af (91% of inflow)
 Center-of-Mass det. time= 569.9 min (1,511.1 - 941.2)

Volume	Invert	Avail.Storage	Storage Description
#1	368.50'	43,235 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.50	7,430	0	0
370.00	11,550	14,235	14,235
372.00	17,450	29,000	43,235

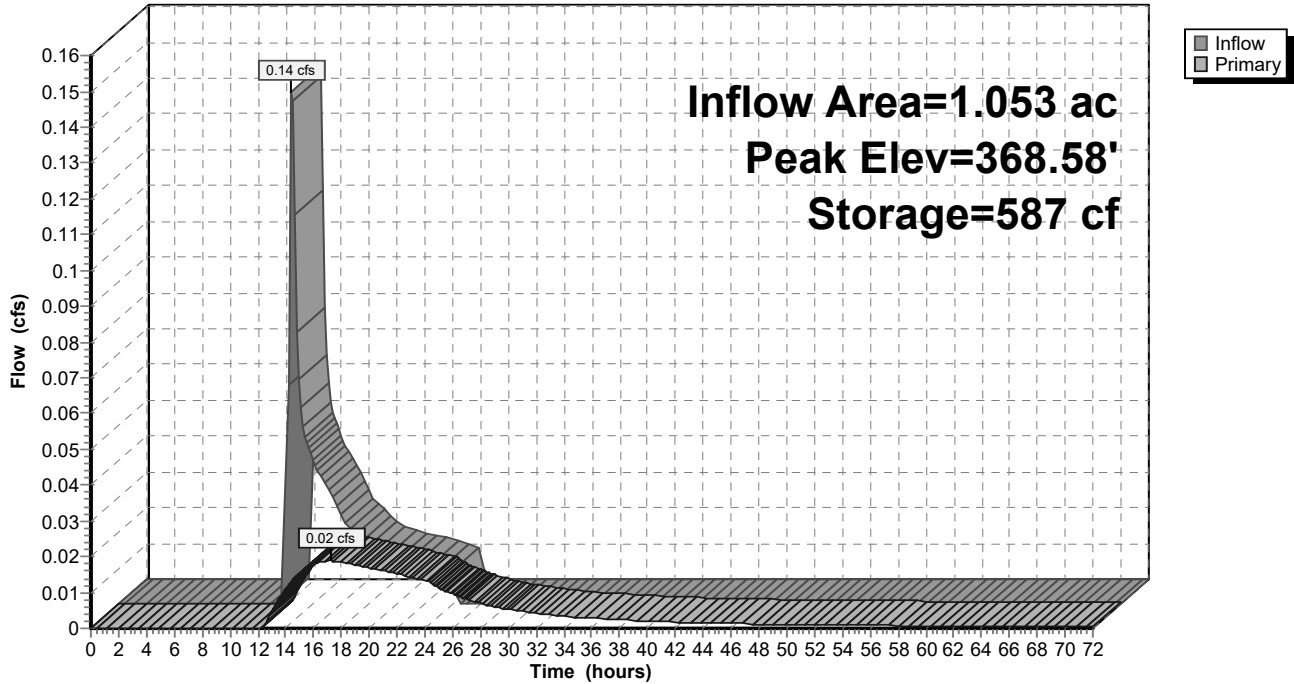
Device	Routing	Invert	Outlet Devices
#1	Primary	368.50'	12.0" Round Culvert L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.50' / 368.20' S= 0.0065 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	371.00'	24.0" x 36.0" Horiz. Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	368.50'	12.0" Vert. Orifice C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 17.28 hrs HW=368.58' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Barrel Controls 0.02 cfs @ 1.02 fps)
- 2=Grate (Controls 0.00 cfs)
- 3=Orifice (Passes 0.02 cfs of 0.03 cfs potential flow)

Pond 21P: Floodplain Comp

Hydrograph



07-28-2023 Post Development Watershed Analysis Type III 24-hr 10 yr-24 hr Rainfall=5.13"

Prepared by Langan Engineering

Printed 8/7/2023

HydroCAD® 10.20-3c s/n 08223 © 2023 HydroCAD Software Solutions LLC

Page 19

Time span=0.00-72.00 hrs, dt=0.15 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Runoff Area=0.560 ac 58.93% Impervious Runoff Depth=3.29"
Flow Length=187' Slope=0.0100 '/' Tc=14.6 min CN=83 Runoff=1.53 cfs 0.154 af

Subcatchment20A: Runoff Area=102,144 sf 79.32% Impervious Runoff Depth=4.00"
Tc=6.0 min CN=90 Runoff=8.33 cfs 0.782 af

Subcatchment20B: Runoff Area=45,882 sf 0.00% Impervious Runoff Depth=1.45"
Flow Length=110' Tc=14.1 min CN=61 Runoff=1.13 cfs 0.127 af

Subcatchment30: Runoff Area=0.120 ac 33.33% Impervious Runoff Depth=2.38"
Tc=6.0 min CN=73 Runoff=0.27 cfs 0.024 af

Reach DP1: Inflow=1.16 cfs 0.062 af
Outflow=1.16 cfs 0.062 af

Reach DP2: Inflow=0.24 cfs 0.125 af
Outflow=0.24 cfs 0.125 af

Reach DP3: Inflow=0.27 cfs 0.024 af
Outflow=0.27 cfs 0.024 af

Pond 1P: Stormtech Units Peak Elev=370.65' Storage=1,956 cf Inflow=1.53 cfs 0.154 af
Discarded=0.05 cfs 0.091 af Primary=1.16 cfs 0.062 af Outflow=1.21 cfs 0.154 af

Pond 2P: Stormtech Units Peak Elev=367.62' Storage=16,790 cf Inflow=8.33 cfs 0.782 af
Discarded=0.51 cfs 0.782 af Primary=0.00 cfs 0.000 af Outflow=0.51 cfs 0.782 af

Pond 21P: Floodplain Comp Peak Elev=368.77' Storage=2,121 cf Inflow=1.13 cfs 0.127 af
Outflow=0.24 cfs 0.125 af

Total Runoff Area = 4.078 ac Runoff Volume = 1.087 af Average Runoff Depth = 3.20"
45.32% Pervious = 1.848 ac 54.68% Impervious = 2.230 ac

Summary for Subcatchment 10:

Runoff = 1.53 cfs @ 12.20 hrs, Volume= 0.154 af, Depth= 3.29"
 Routed to Pond 1P : Stormtech Units

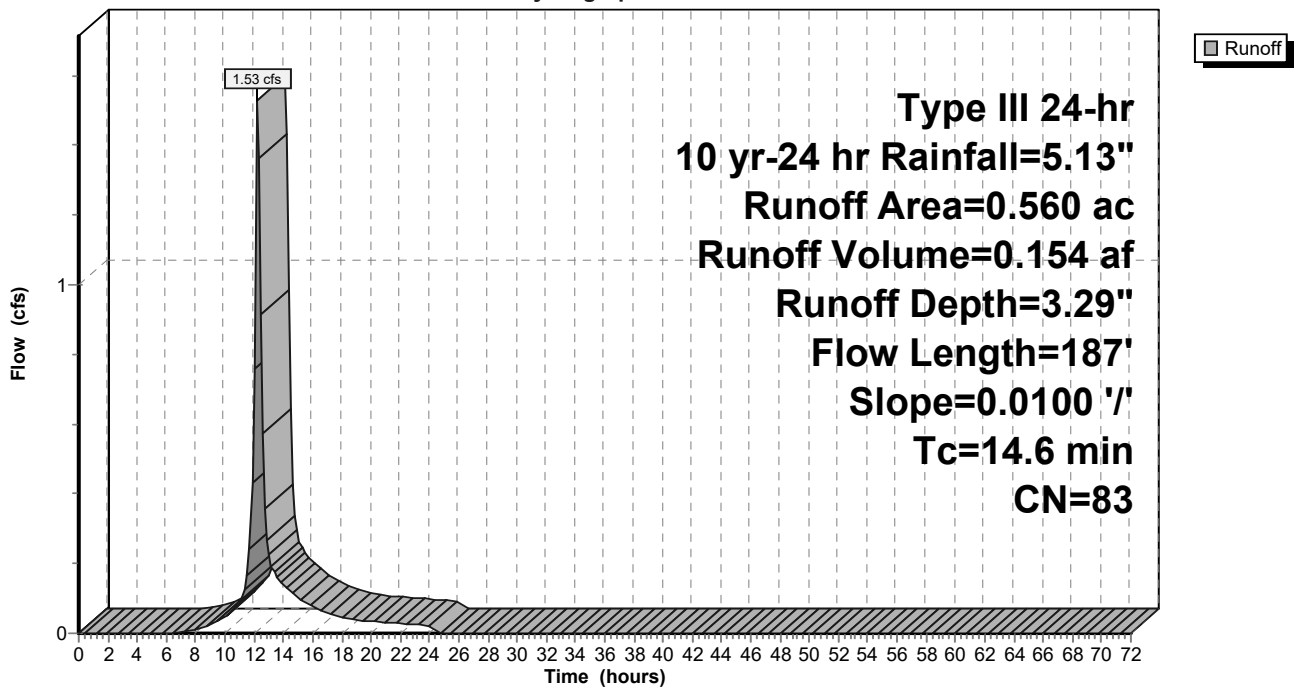
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 10 yr-24 hr Rainfall=5.13"

Area (ac)	CN	Description
0.230	61	>75% Grass cover, Good, HSG B
* 0.330	98	Impervious
0.560	83	Weighted Average
0.230		41.07% Pervious Area
0.330		58.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	100	0.0100	0.13		Sheet Flow, a-b
					Grass: Short n= 0.150 P2= 3.43"
2.1	87	0.0100	0.70		Shallow Concentrated Flow, b-c
					Short Grass Pasture Kv= 7.0 fps
14.6	187	Total			

Subcatchment 10:

Hydrograph



Summary for Subcatchment 20A:

Runoff = 8.33 cfs @ 12.11 hrs, Volume= 0.782 af, Depth= 4.00"
 Routed to Pond 2P : Stormtech Units

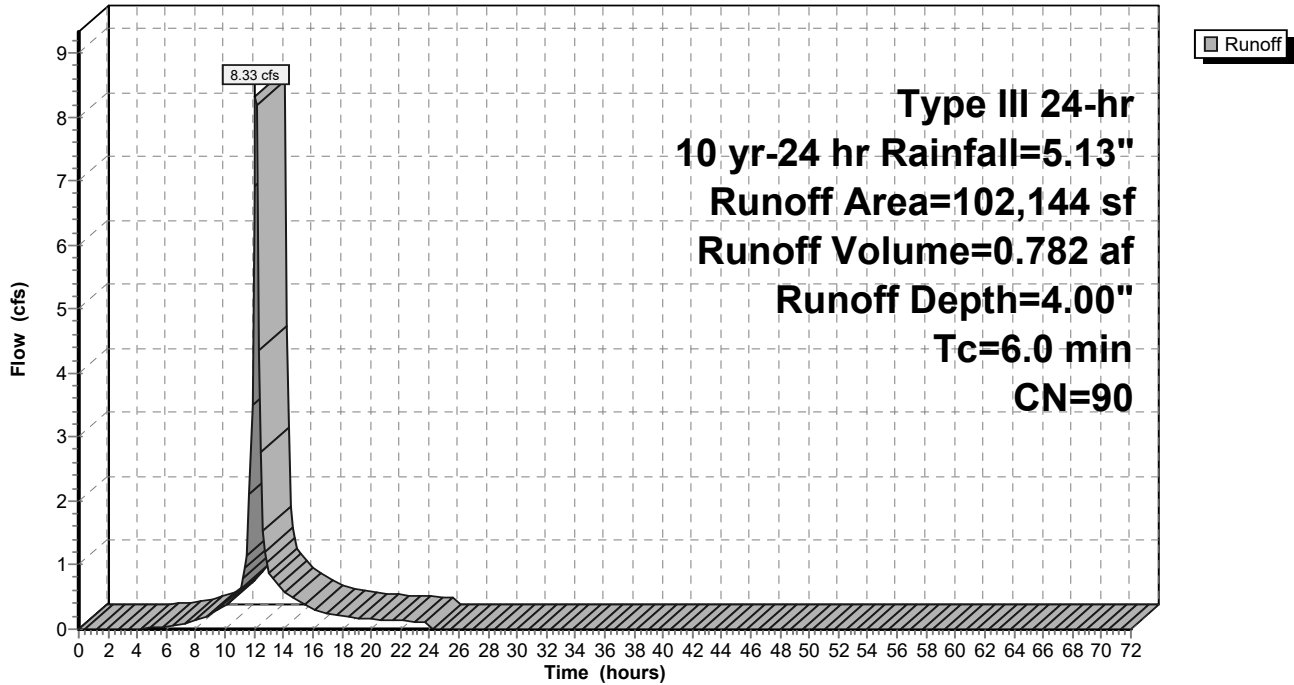
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 10 yr-24 hr Rainfall=5.13"

	Area (sf)	CN	Description
*	81,022	98	Impervious
	21,122	61	>75% Grass cover, Good, HSG B
	102,144	90	Weighted Average
	21,122		20.68% Pervious Area
	81,022		79.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 20A:

Hydrograph



Summary for Subcatchment 20B:

Runoff = 1.13 cfs @ 12.25 hrs, Volume= 0.127 af, Depth= 1.45"
 Routed to Pond 21P : Floodplain Comp

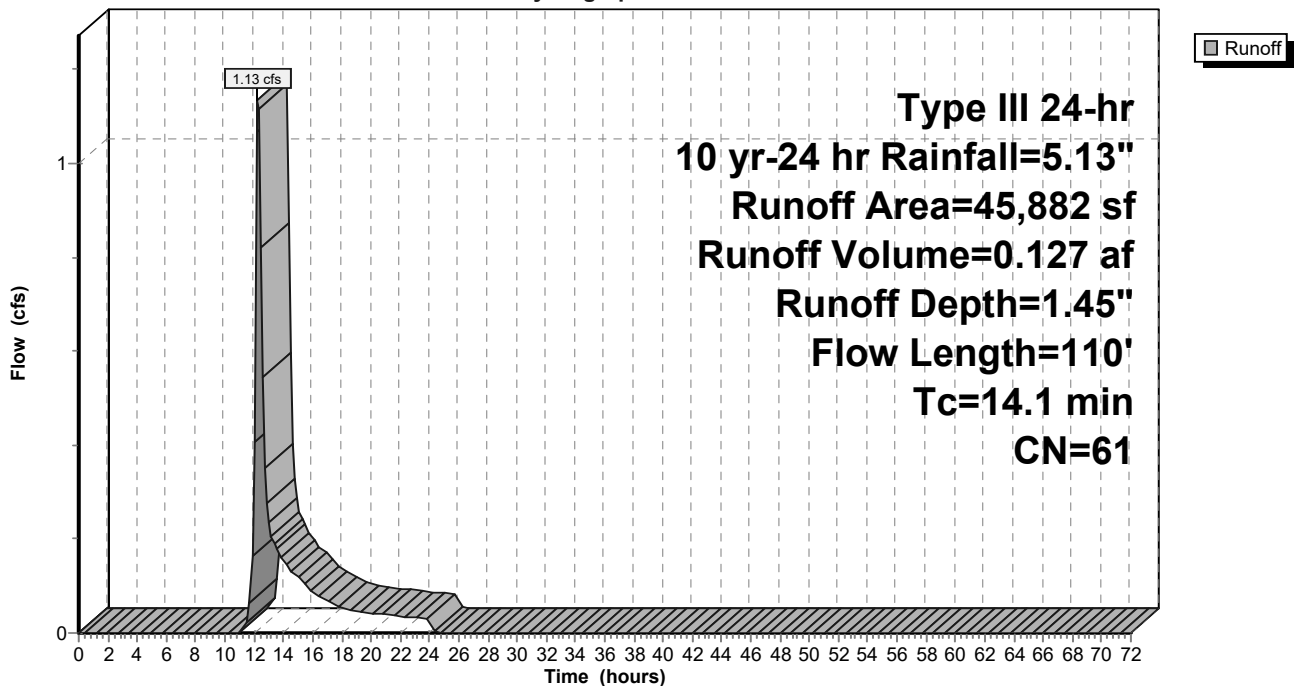
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 10 yr-24 hr Rainfall=5.13"

Area (sf)	CN	Description
45,882	61	>75% Grass cover, Good, HSG B
45,882		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	81	0.0050	0.10		Sheet Flow, a-b Grass: Short n= 0.150 P2= 3.43"
0.2	29	0.1700	2.89		Shallow Concentrated Flow, b-c Short Grass Pasture Kv= 7.0 fps
14.1	110	Total			

Subcatchment 20B:

Hydrograph



Summary for Subcatchment 30:

Runoff = 0.27 cfs @ 12.13 hrs, Volume= 0.024 af, Depth= 2.38"
 Routed to Reach DP3 :

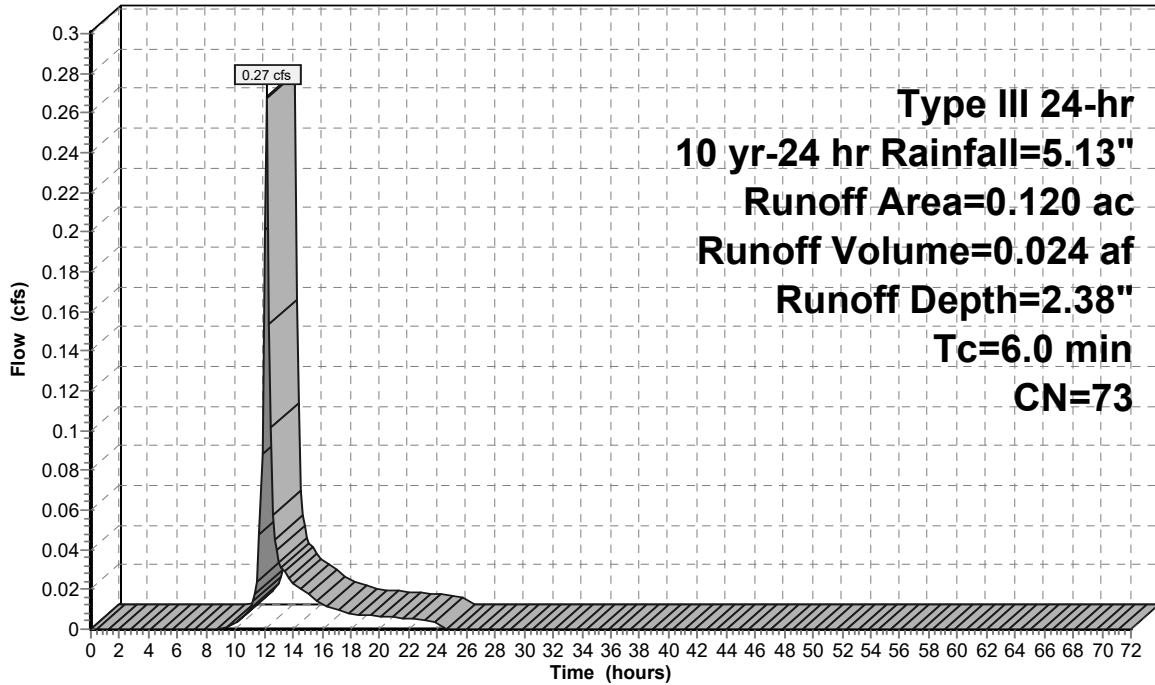
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 10 yr-24 hr Rainfall=5.13"

Area (ac)	CN	Description
* 0.040	98	Impervious
0.080	61	>75% Grass cover, Good, HSG B
0.120	73	Weighted Average
0.080		66.67% Pervious Area
0.040		33.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 30:

Hydrograph



**Type III 24-hr
 10 yr-24 hr Rainfall=5.13"
 Runoff Area=0.120 ac
 Runoff Volume=0.024 af
 Runoff Depth=2.38"
 Tc=6.0 min
 CN=73**

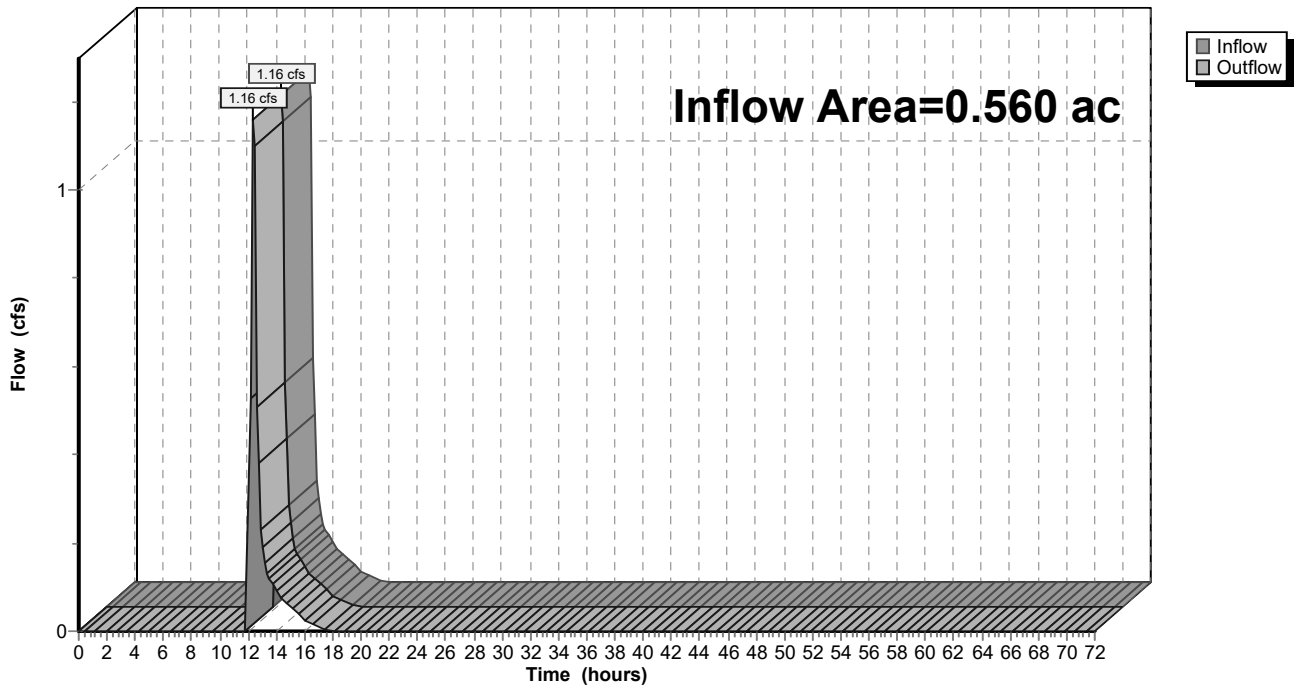
Summary for Reach DP1:

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 1.34" for 10 yr-24 hr event
Inflow = 1.16 cfs @ 12.39 hrs, Volume= 0.062 af
Outflow = 1.16 cfs @ 12.39 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP1:

Hydrograph



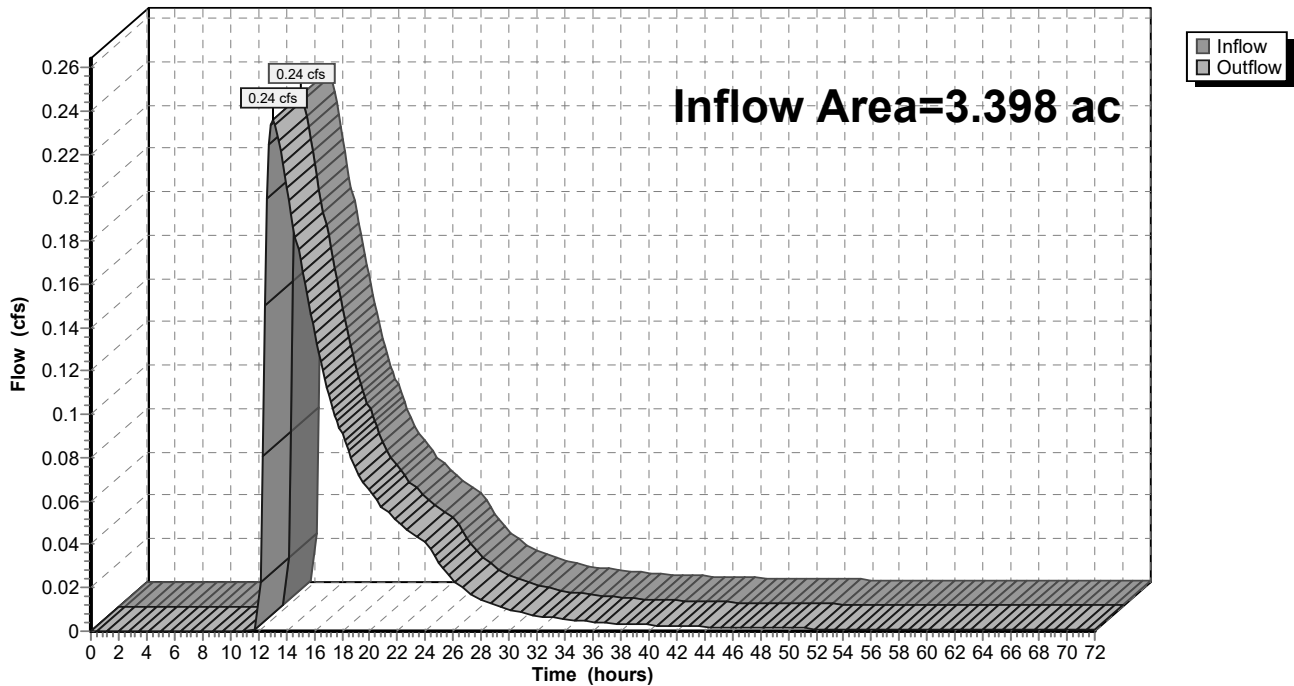
Summary for Reach DP2:

Inflow Area = 3.398 ac, 54.73% Impervious, Inflow Depth > 0.44" for 10 yr-24 hr event
Inflow = 0.24 cfs @ 13.06 hrs, Volume= 0.125 af
Outflow = 0.24 cfs @ 13.06 hrs, Volume= 0.125 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP2:

Hydrograph



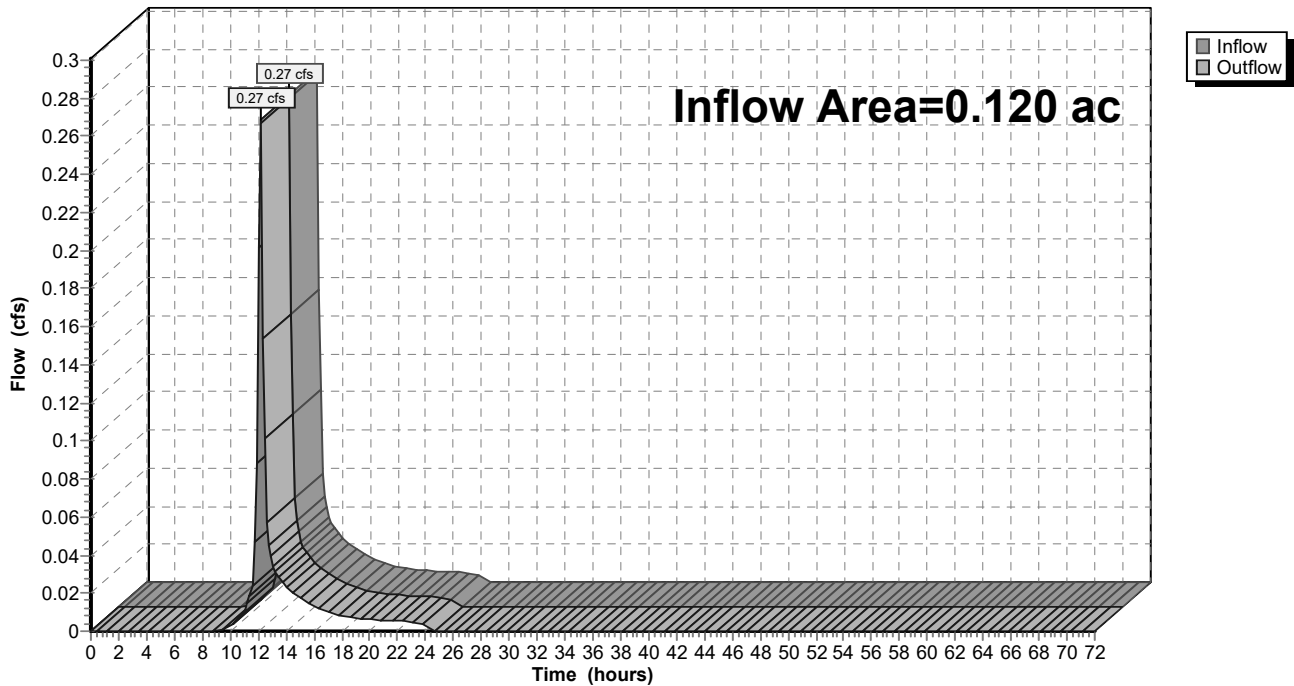
Summary for Reach DP3:

Inflow Area = 0.120 ac, 33.33% Impervious, Inflow Depth = 2.38" for 10 yr-24 hr event
Inflow = 0.27 cfs @ 12.13 hrs, Volume= 0.024 af
Outflow = 0.27 cfs @ 12.13 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP3:

Hydrograph



Summary for Pond 1P: Stormtech Units

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 3.29" for 10 yr-24 hr event
 Inflow = 1.53 cfs @ 12.20 hrs, Volume= 0.154 af
 Outflow = 1.21 cfs @ 12.39 hrs, Volume= 0.154 af, Atten= 21%, Lag= 10.9 min
 Discarded = 0.05 cfs @ 12.39 hrs, Volume= 0.091 af
 Primary = 1.16 cfs @ 12.39 hrs, Volume= 0.062 af
 Routed to Reach DP1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 370.65' @ 12.39 hrs Surf.Area= 583 sf Storage= 1,956 cf

Plug-Flow detention time= 252.4 min calculated for 0.153 af (100% of inflow)
 Center-of-Mass det. time= 253.3 min (1,073.6 - 820.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.25'	1,107 cf	37.58"W x 15.52"L x 6.75"H Field A 3,936 cf Overall - 1,168 cf Embedded = 2,768 cf x 40.0% Voids
#2A	366.00'	1,168 cf	ADS_StormTech MC-4500 b +Cap x 8 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 8 Chambers in 4 Rows Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf
		2,275 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	370.00'	12.0" Round Culvert L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 369.00' / 370.00' S= -0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.25'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.05 cfs @ 12.39 hrs HW=370.62' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=1.08 cfs @ 12.39 hrs HW=370.62' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Inlet Controls 1.08 cfs @ 2.12 fps)

Pond 1P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

2 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 13.52' Row Length +12.0" End Stone x 2 = 15.52' Base Length

4 Rows x 100.0" Wide + 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

8 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 4 Rows = 1,167.9 cf Chamber Storage

3,936.4 cf Field - 1,167.9 cf Chambers = 2,768.5 cf Stone x 40.0% Voids = 1,107.4 cf Stone Storage

Chamber Storage + Stone Storage = 2,275.3 cf = 0.052 af

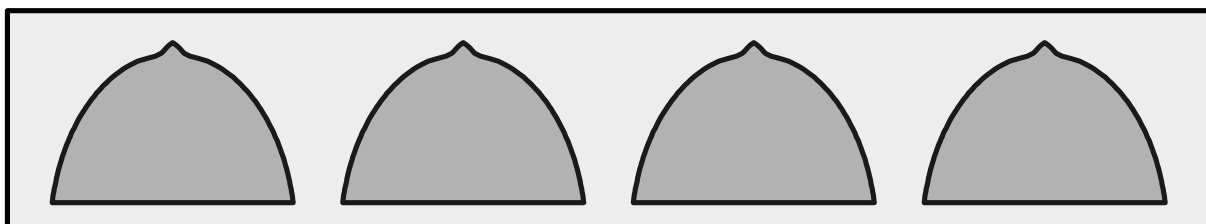
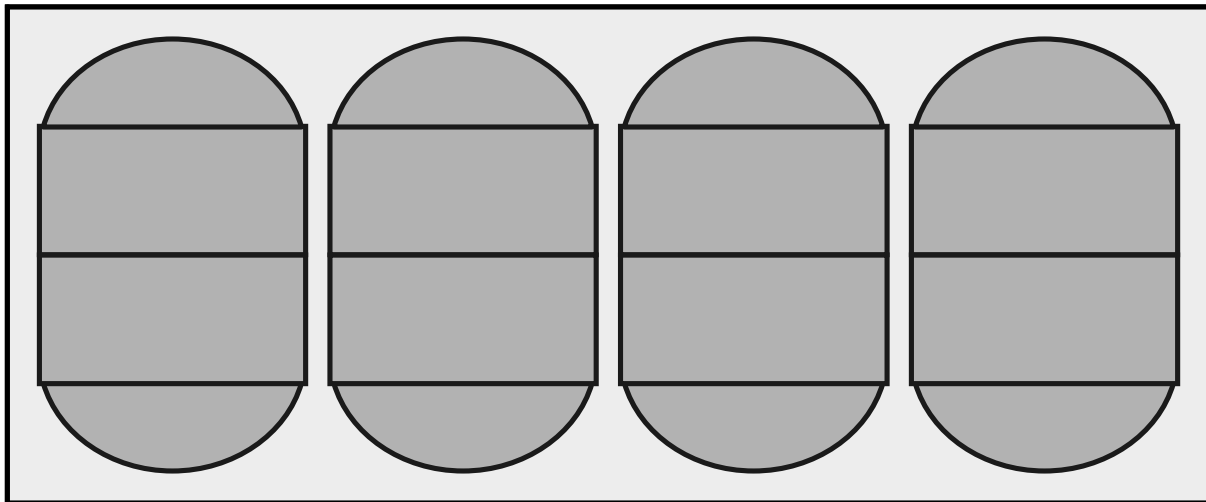
Overall Storage Efficiency = 57.8%

Overall System Size = 15.52' x 37.58' x 6.75'

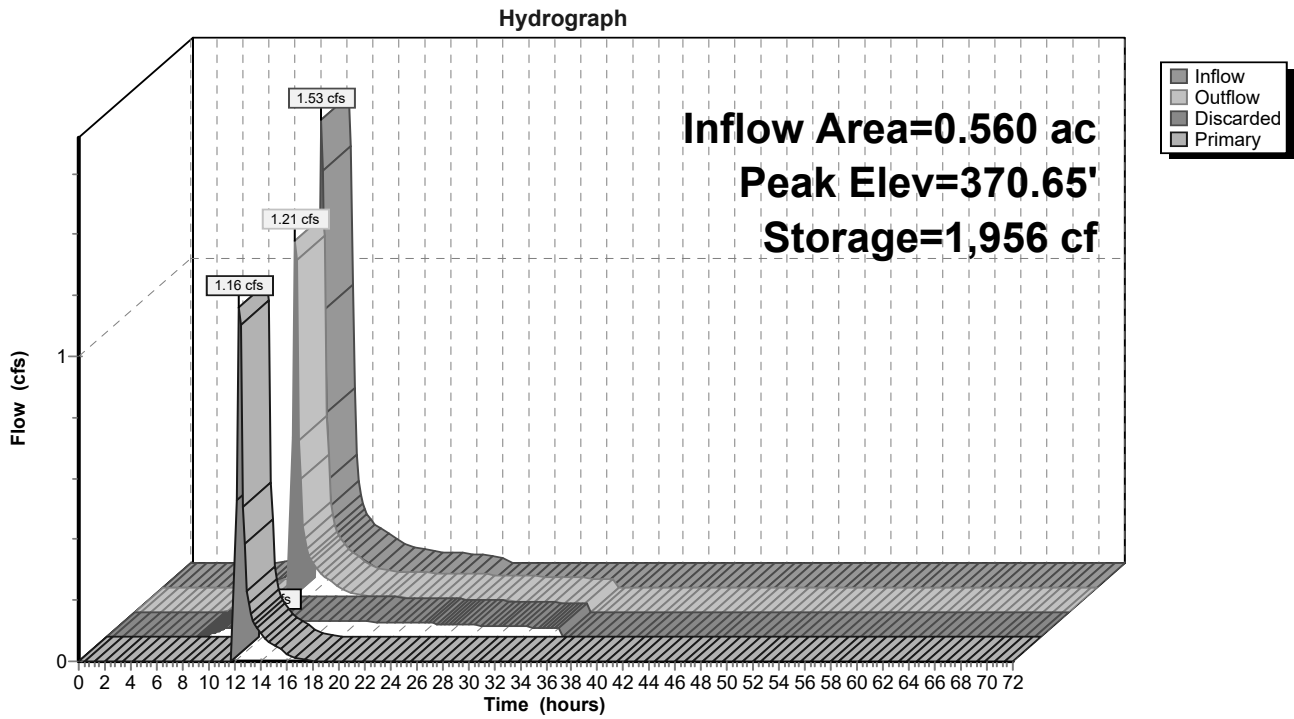
8 Chambers

145.8 cy Field

102.5 cy Stone



Pond 1P: Stormtech Units



Summary for Pond 2P: Stormtech Units

Inflow Area = 2.345 ac, 79.32% Impervious, Inflow Depth = 4.00" for 10 yr-24 hr event
 Inflow = 8.33 cfs @ 12.11 hrs, Volume= 0.782 af
 Outflow = 0.51 cfs @ 14.53 hrs, Volume= 0.782 af, Atten= 94%, Lag= 145.3 min
 Discarded = 0.51 cfs @ 14.53 hrs, Volume= 0.782 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 367.62' @ 14.53 hrs Surf.Area= 9,740 sf Storage= 16,790 cf

Plug-Flow detention time= 307.0 min calculated for 0.780 af (100% of inflow)
 Center-of-Mass det. time= 307.0 min (1,096.8 - 789.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.20'	15,491 cf	46.67'W x 208.72'L x 6.75'H Field A 65,746 cf Overall - 27,018 cf Embedded = 38,728 cf x 40.0% Voids
#2A	365.95'	27,018 cf	ADS_StormTech MC-4500 b +Cap x 250 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 250 Chambers in 5 Rows Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf
		42,509 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	368.70'	12.0" Round Culvert L= 96.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.70' / 368.50' S= 0.0021 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.20'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.51 cfs @ 14.53 hrs HW=367.62' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.51 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=365.20' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Controls 0.00 cfs)

Pond 2P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

50 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 206.72' Row Length +12.0" End Stone x 2 = 208.72' Base Length

5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

250 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 5 Rows = 27,017.6 cf Chamber Storage

65,745.8 cf Field - 27,017.6 cf Chambers = 38,728.1 cf Stone x 40.0% Voids = 15,491.3 cf Stone Storage

Chamber Storage + Stone Storage = 42,508.9 cf = 0.976 af

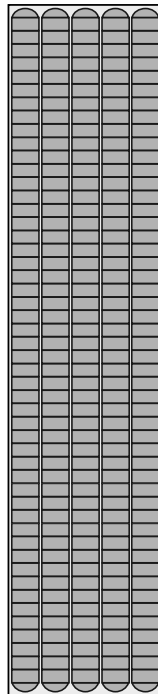
Overall Storage Efficiency = 64.7%

Overall System Size = 208.72' x 46.67' x 6.75'

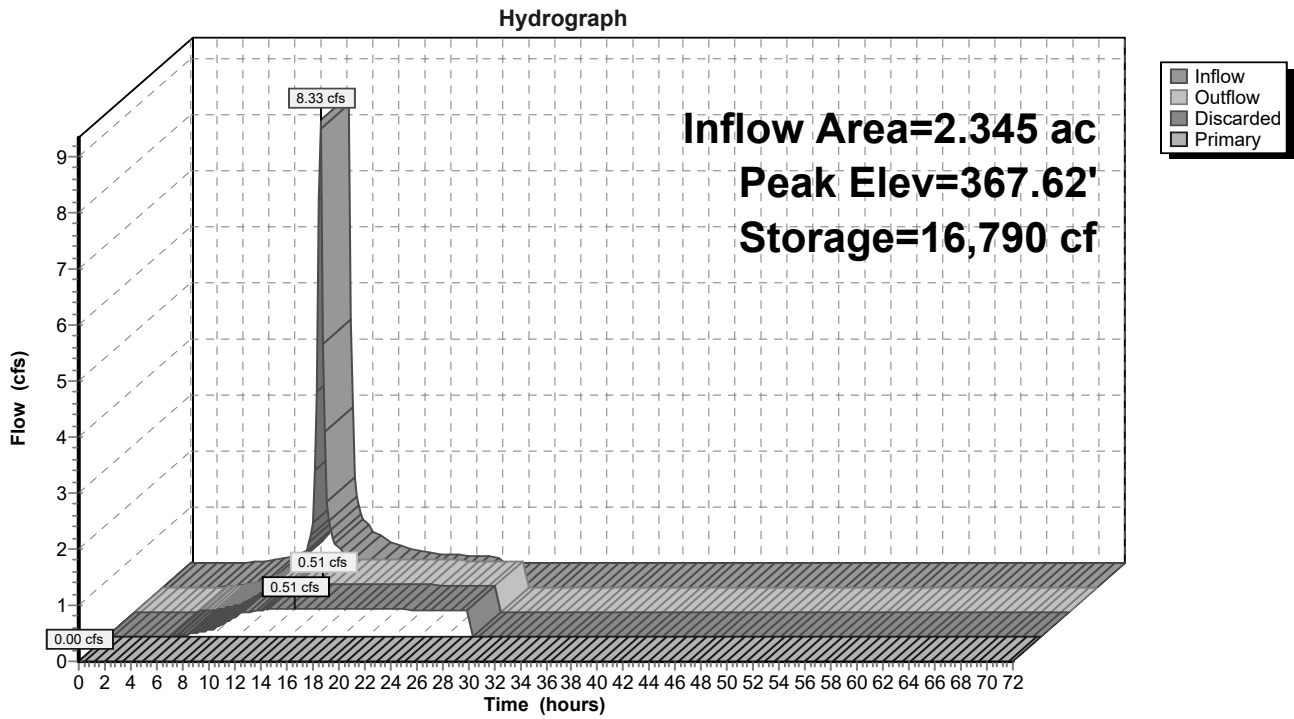
250 Chambers

2,435.0 cy Field

1,434.4 cy Stone



Pond 2P: Stormtech Units



Summary for Pond 21P: Floodplain Comp

Inflow Area = 1.053 ac, 0.00% Impervious, Inflow Depth = 1.45" for 10 yr-24 hr event
 Inflow = 1.13 cfs @ 12.25 hrs, Volume= 0.127 af
 Outflow = 0.24 cfs @ 13.06 hrs, Volume= 0.125 af, Atten= 79%, Lag= 48.8 min
 Primary = 0.24 cfs @ 13.06 hrs, Volume= 0.125 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 368.77' @ 13.06 hrs Surf.Area= 8,177 sf Storage= 2,121 cf

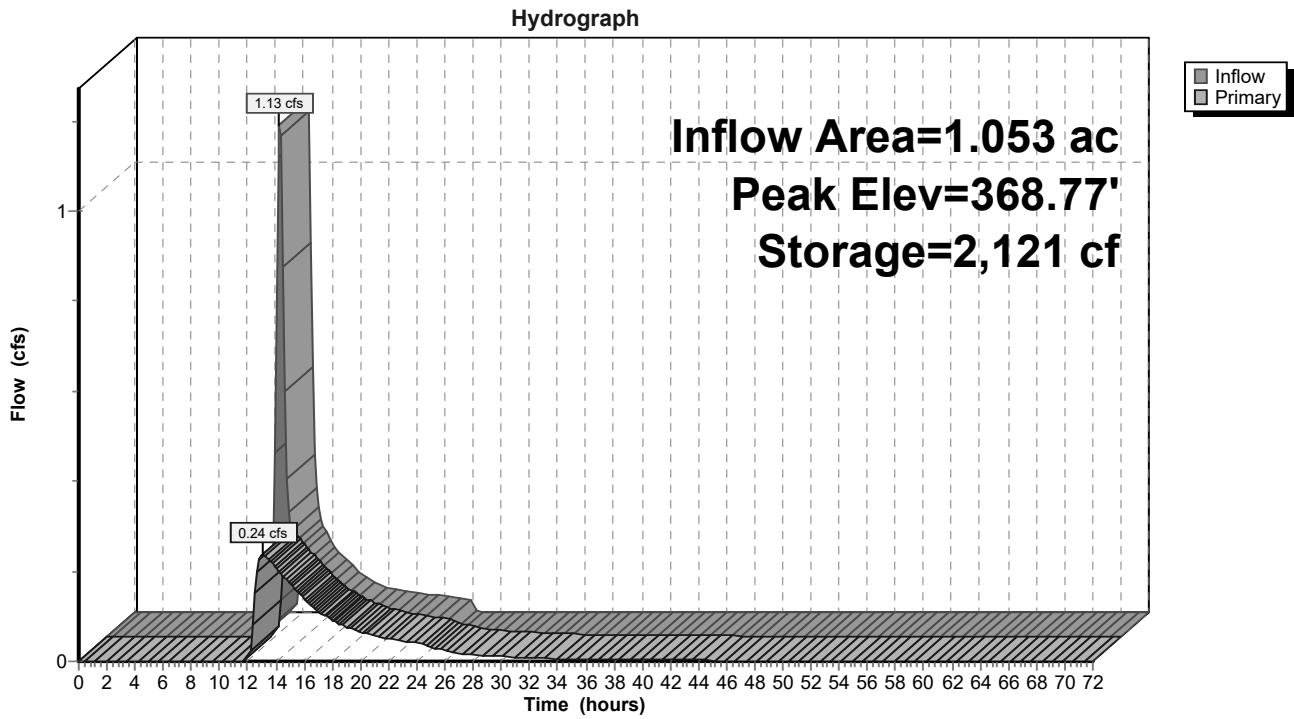
Plug-Flow detention time= 252.2 min calculated for 0.125 af (98% of inflow)
 Center-of-Mass det. time= 241.7 min (1,119.7 - 878.0)

Volume	Invert	Avail.Storage	Storage Description
#1	368.50'	43,235 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.50	7,430	0	0
370.00	11,550	14,235	14,235
372.00	17,450	29,000	43,235

Device	Routing	Invert	Outlet Devices
#1	Primary	368.50'	12.0" Round Culvert L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.50' / 368.20' S= 0.0065 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	371.00'	24.0" x 36.0" Horiz. Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	368.50'	12.0" Vert. Orifice C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.24 cfs @ 13.06 hrs HW=368.77' TW=0.00' (Dynamic Tailwater)
 1=Culvert (Barrel Controls 0.24 cfs @ 2.05 fps)
 2=Grate (Controls 0.00 cfs)
 3=Orifice (Passes 0.24 cfs of 0.31 cfs potential flow)

Pond 21P: Floodplain Comp



Time span=0.00-72.00 hrs, dt=0.15 hrs, 481 points x 3
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Runoff Area=0.560 ac 58.93% Impervious Runoff Depth=7.09"
 Flow Length=187' Slope=0.0100 '/' Tc=14.6 min CN=83 Runoff=3.22 cfs 0.331 af

Subcatchment20A: Runoff Area=102,144 sf 79.32% Impervious Runoff Depth=7.95"
 Tc=6.0 min CN=90 Runoff=15.86 cfs 1.553 af

Subcatchment20B: Runoff Area=45,882 sf 0.00% Impervious Runoff Depth=4.35"
 Flow Length=110' Tc=14.1 min CN=61 Runoff=3.84 cfs 0.382 af

Subcatchment30: Runoff Area=0.120 ac 33.33% Impervious Runoff Depth=5.85"
 Tc=6.0 min CN=73 Runoff=0.65 cfs 0.059 af

Reach DP1: Inflow=3.02 cfs 0.222 af
 Outflow=3.02 cfs 0.222 af

Reach DP2: Inflow=3.19 cfs 0.715 af
 Outflow=3.19 cfs 0.715 af

Reach DP3: Inflow=0.65 cfs 0.059 af
 Outflow=0.65 cfs 0.059 af

Pond 1P: Stormtech Units Peak Elev=371.51' Storage=2,162 cf Inflow=3.22 cfs 0.331 af
 Discarded=0.06 cfs 0.109 af Primary=3.02 cfs 0.222 af Outflow=3.07 cfs 0.331 af

Pond 2P: Stormtech Units Peak Elev=369.79' Storage=32,691 cf Inflow=15.86 cfs 1.553 af
 Discarded=0.56 cfs 1.217 af Primary=1.85 cfs 0.336 af Outflow=2.41 cfs 1.553 af

Pond 21P: Floodplain Comp Peak Elev=369.23' Storage=6,121 cf Inflow=3.84 cfs 0.382 af
 Outflow=1.35 cfs 0.379 af

Total Runoff Area = 4.078 ac Runoff Volume = 2.325 af Average Runoff Depth = 6.84"
45.32% Pervious = 1.848 ac 54.68% Impervious = 2.230 ac

Summary for Subcatchment 10:

Runoff = 3.22 cfs @ 12.20 hrs, Volume= 0.331 af, Depth= 7.09"
 Routed to Pond 1P : Stormtech Units

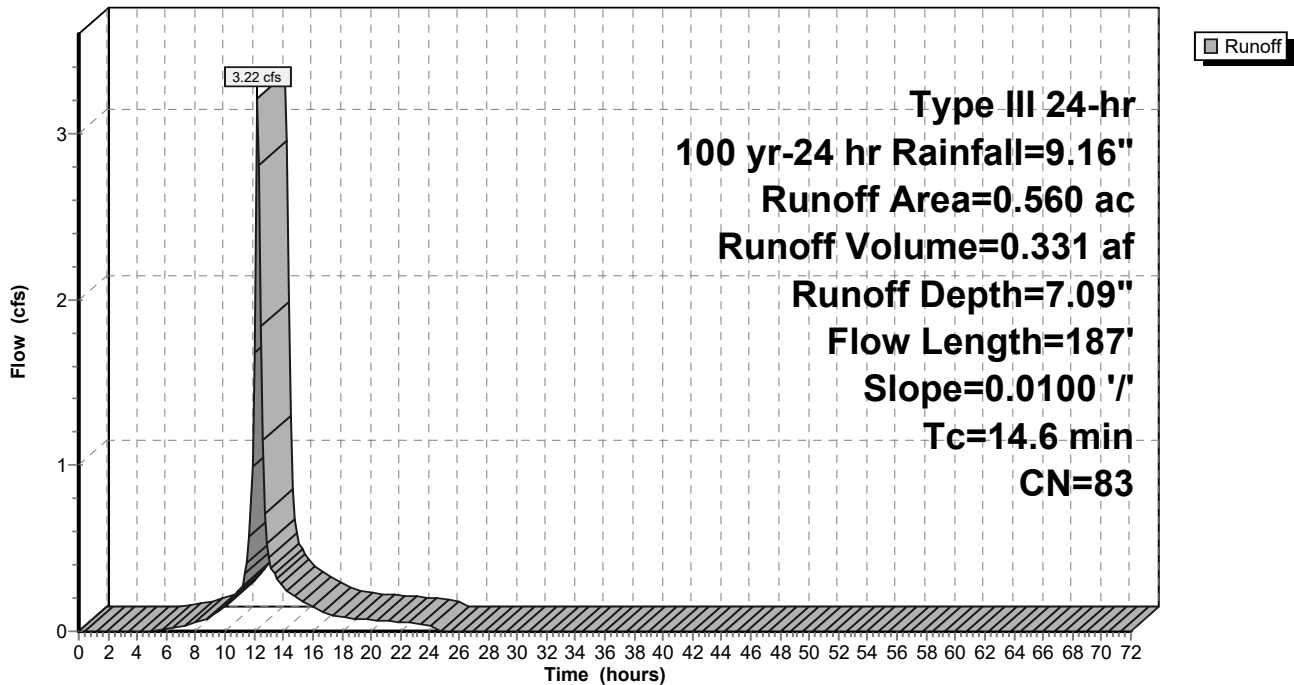
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 100 yr-24 hr Rainfall=9.16"

Area (ac)	CN	Description
0.230	61	>75% Grass cover, Good, HSG B
* 0.330	98	Impervious
0.560	83	Weighted Average
0.230		41.07% Pervious Area
0.330		58.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	100	0.0100	0.13		Sheet Flow, a-b
					Grass: Short n= 0.150 P2= 3.43"
2.1	87	0.0100	0.70		Shallow Concentrated Flow, b-c
					Short Grass Pasture Kv= 7.0 fps
14.6	187	Total			

Subcatchment 10:

Hydrograph



Summary for Subcatchment 20A:

Runoff = 15.86 cfs @ 12.11 hrs, Volume= 1.553 af, Depth= 7.95"
 Routed to Pond 2P : Stormtech Units

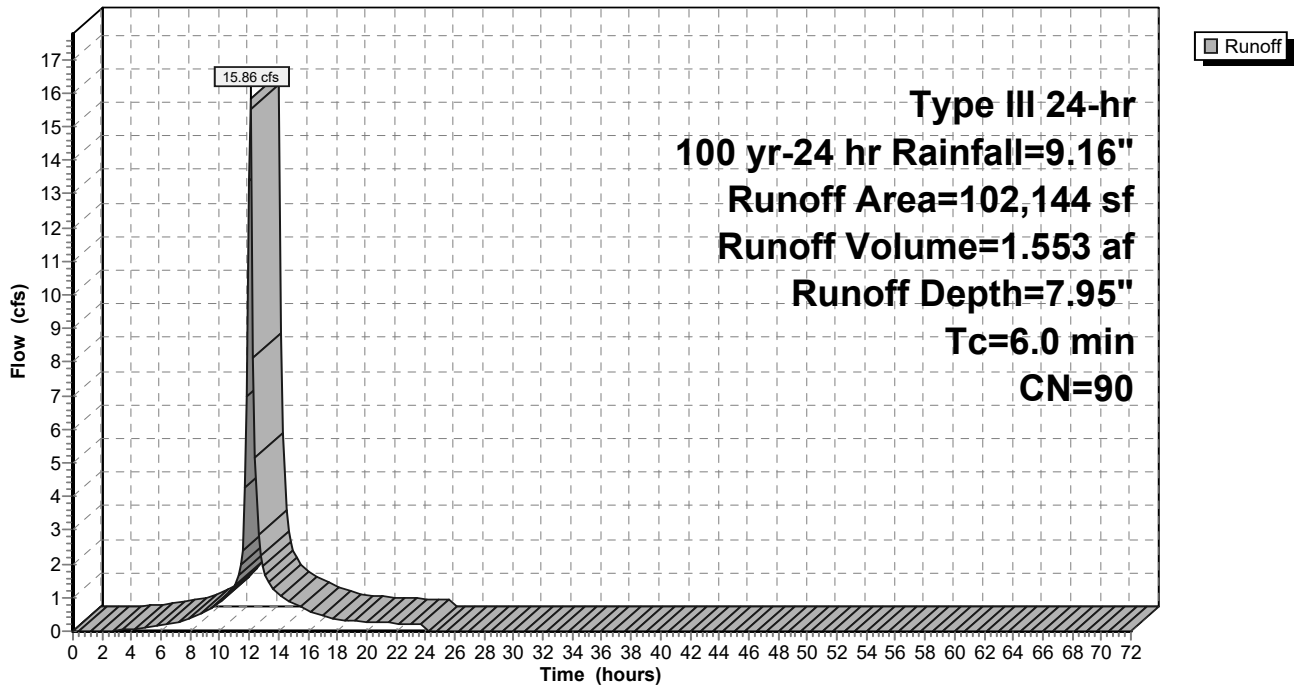
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 100 yr-24 hr Rainfall=9.16"

	Area (sf)	CN	Description
*	81,022	98	Impervious
	21,122	61	>75% Grass cover, Good, HSG B
	102,144	90	Weighted Average
	21,122		20.68% Pervious Area
	81,022		79.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 20A:

Hydrograph



Summary for Subcatchment 20B:

Runoff = 3.84 cfs @ 12.21 hrs, Volume= 0.382 af, Depth= 4.35"
 Routed to Pond 21P : Floodplain Comp

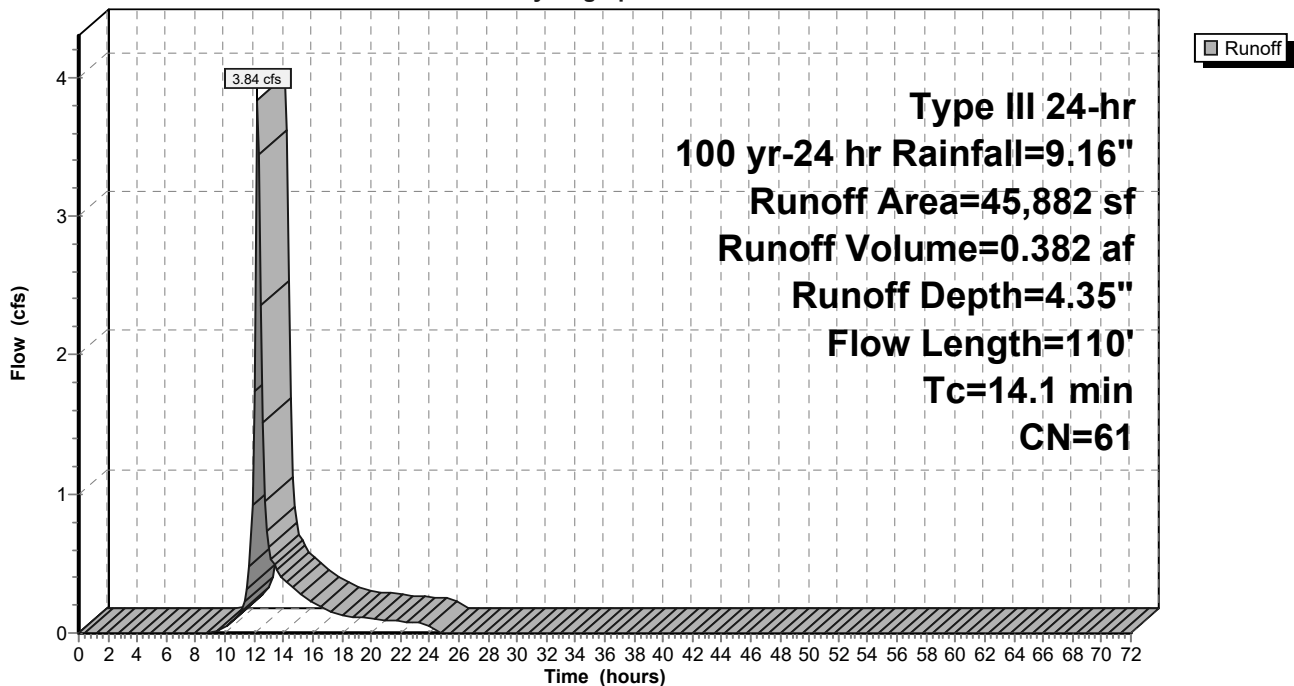
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 100 yr-24 hr Rainfall=9.16"

Area (sf)	CN	Description
45,882	61	>75% Grass cover, Good, HSG B
45,882		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	81	0.0050	0.10		Sheet Flow, a-b
					Grass: Short n= 0.150 P2= 3.43"
0.2	29	0.1700	2.89		Shallow Concentrated Flow, b-c
					Short Grass Pasture Kv= 7.0 fps
14.1	110	Total			

Subcatchment 20B:

Hydrograph



Summary for Subcatchment 30:

Runoff = 0.65 cfs @ 12.12 hrs, Volume= 0.059 af, Depth= 5.85"
 Routed to Reach DP3 :

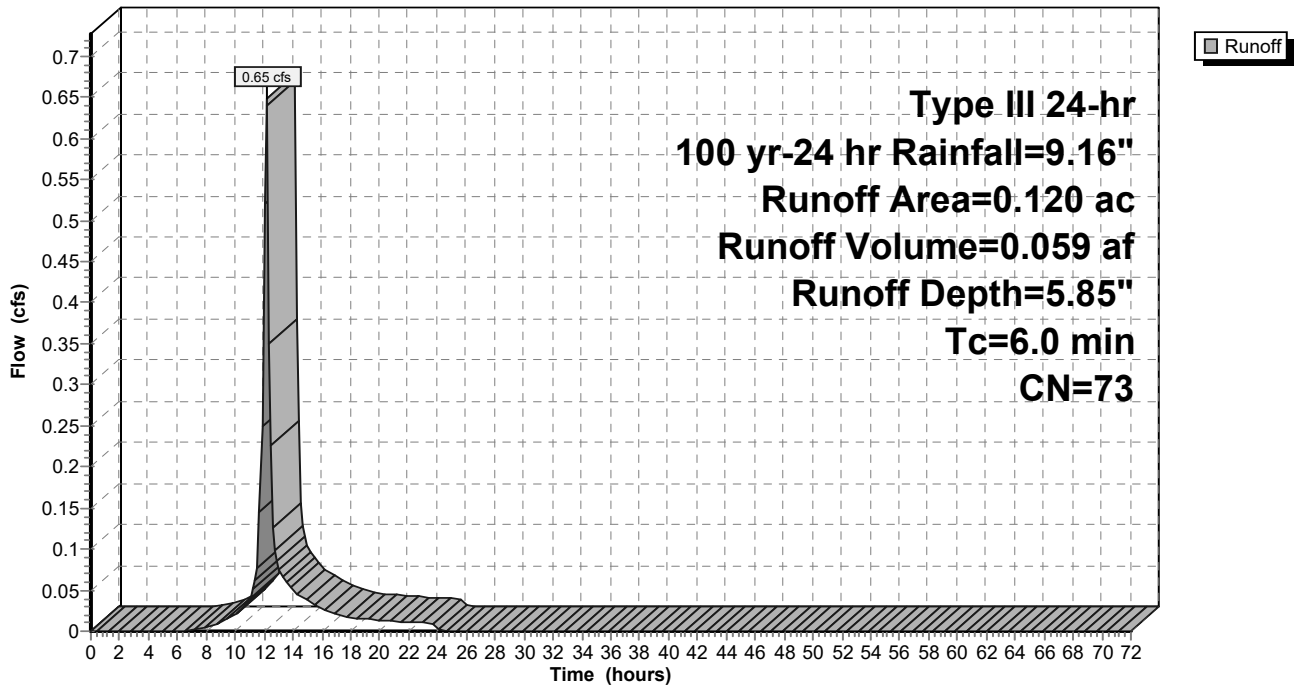
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr 100 yr-24 hr Rainfall=9.16"

Area (ac)	CN	Description
* 0.040	98	Impervious
0.080	61	>75% Grass cover, Good, HSG B
0.120	73	Weighted Average
0.080		66.67% Pervious Area
0.040		33.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 30:

Hydrograph



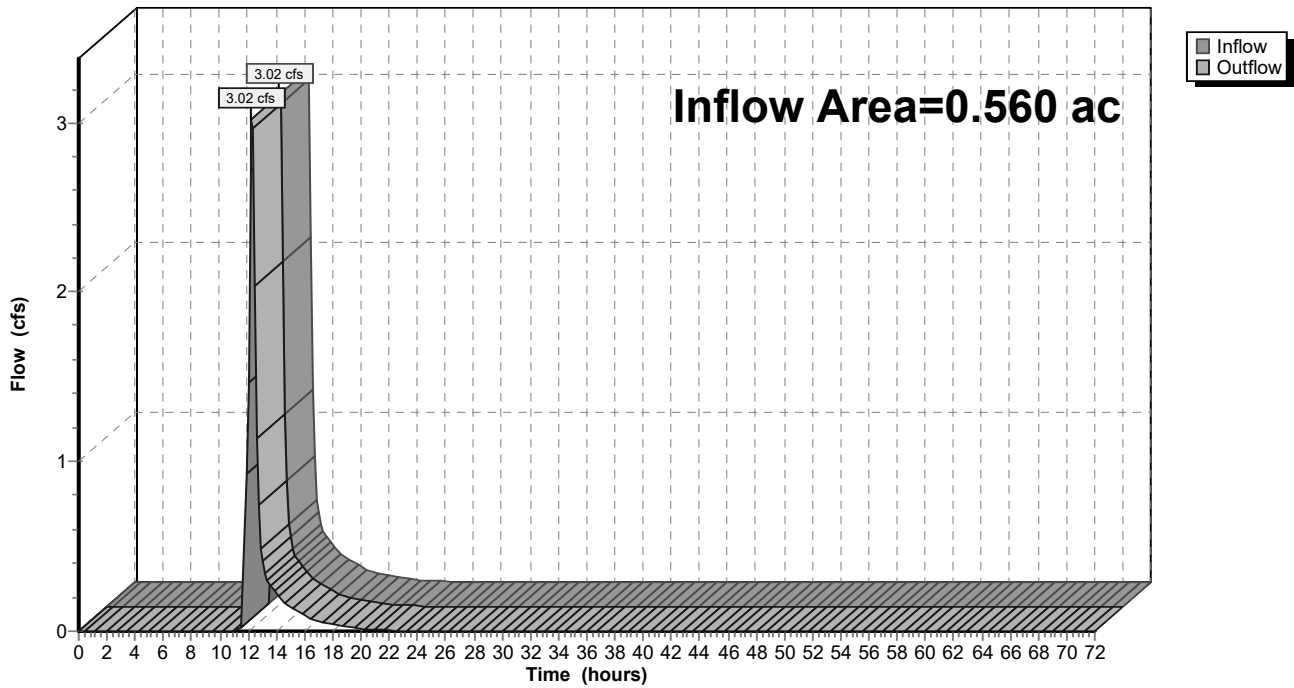
Summary for Reach DP1:

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 4.76" for 100 yr-24 hr event
Inflow = 3.02 cfs @ 12.26 hrs, Volume= 0.222 af
Outflow = 3.02 cfs @ 12.26 hrs, Volume= 0.222 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP1:

Hydrograph



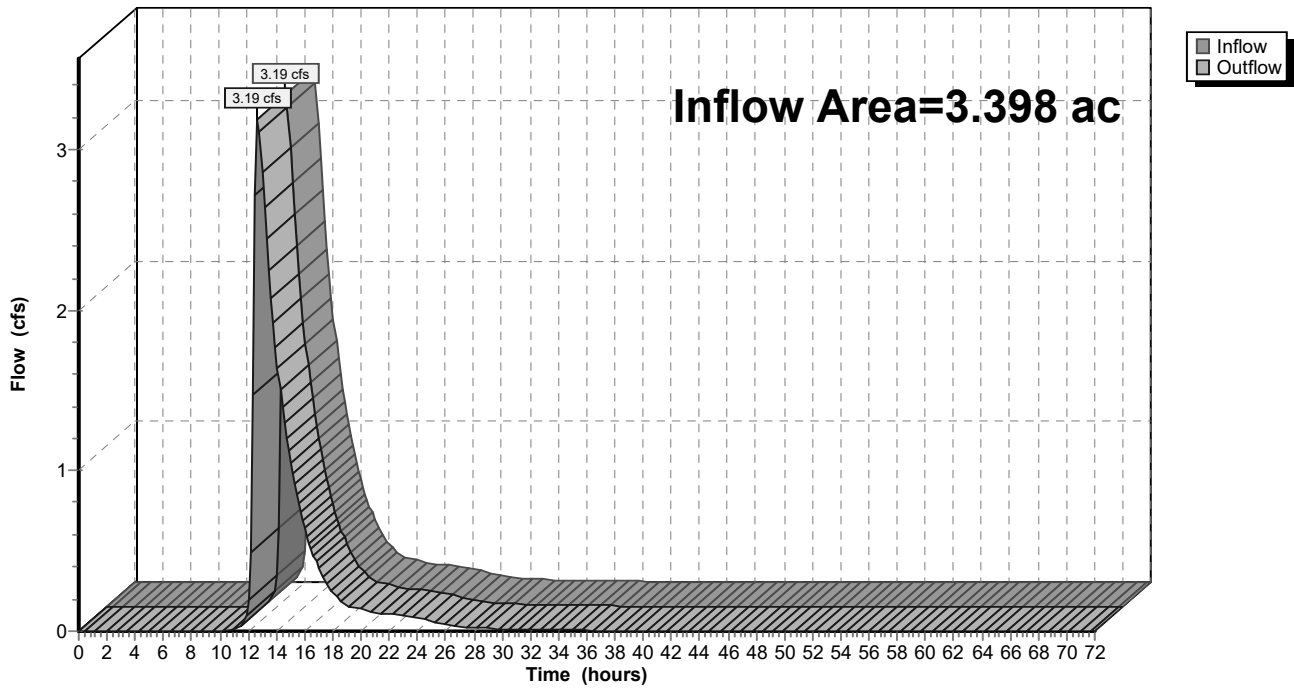
Summary for Reach DP2:

Inflow Area = 3.398 ac, 54.73% Impervious, Inflow Depth > 2.53" for 100 yr-24 hr event
Inflow = 3.19 cfs @ 12.68 hrs, Volume= 0.715 af
Outflow = 3.19 cfs @ 12.68 hrs, Volume= 0.715 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP2:

Hydrograph



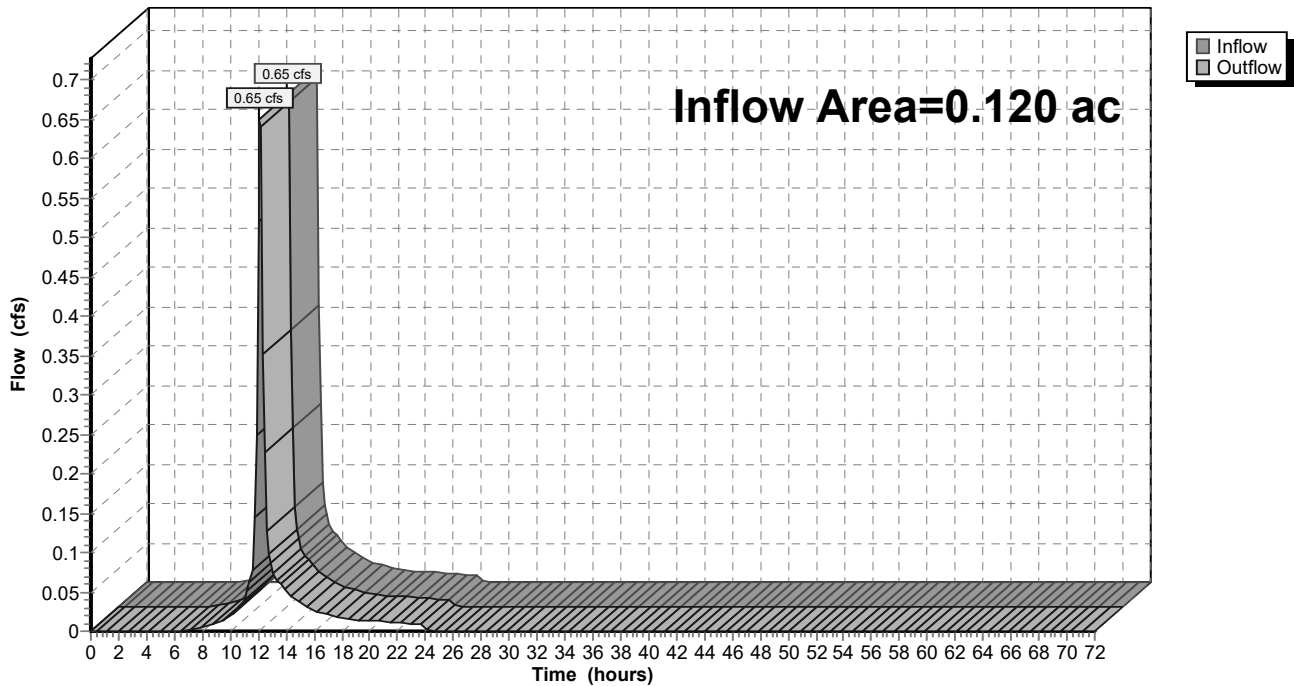
Summary for Reach DP3:

Inflow Area = 0.120 ac, 33.33% Impervious, Inflow Depth = 5.85" for 100 yr-24 hr event
Inflow = 0.65 cfs @ 12.12 hrs, Volume= 0.059 af
Outflow = 0.65 cfs @ 12.12 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP3:

Hydrograph



Summary for Pond 1P: Stormtech Units

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 7.09" for 100 yr-24 hr event
 Inflow = 3.22 cfs @ 12.20 hrs, Volume= 0.331 af
 Outflow = 3.07 cfs @ 12.26 hrs, Volume= 0.331 af, Atten= 4%, Lag= 3.5 min
 Discarded = 0.06 cfs @ 12.26 hrs, Volume= 0.109 af
 Primary = 3.02 cfs @ 12.26 hrs, Volume= 0.222 af
 Routed to Reach DP1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 371.51' @ 12.26 hrs Surf.Area= 583 sf Storage= 2,162 cf

Plug-Flow detention time= 145.0 min calculated for 0.330 af (100% of inflow)
 Center-of-Mass det. time= 146.5 min (945.4 - 798.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.25'	1,107 cf	37.58"W x 15.52'L x 6.75'H Field A 3,936 cf Overall - 1,168 cf Embedded = 2,768 cf x 40.0% Voids
#2A	366.00'	1,168 cf	ADS_StormTech MC-4500 b +Cap x 8 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 8 Chambers in 4 Rows Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf
		2,275 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	370.00'	12.0" Round Culvert L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 369.00' / 370.00' S= -0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.25'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.06 cfs @ 12.26 hrs HW=371.44' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=2.90 cfs @ 12.26 hrs HW=371.44' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Inlet Controls 2.90 cfs @ 3.69 fps)

Pond 1P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

2 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 13.52' Row Length +12.0" End Stone x 2 = 15.52' Base Length

4 Rows x 100.0" Wide + 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

8 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 4 Rows = 1,167.9 cf Chamber Storage

3,936.4 cf Field - 1,167.9 cf Chambers = 2,768.5 cf Stone x 40.0% Voids = 1,107.4 cf Stone Storage

Chamber Storage + Stone Storage = 2,275.3 cf = 0.052 af

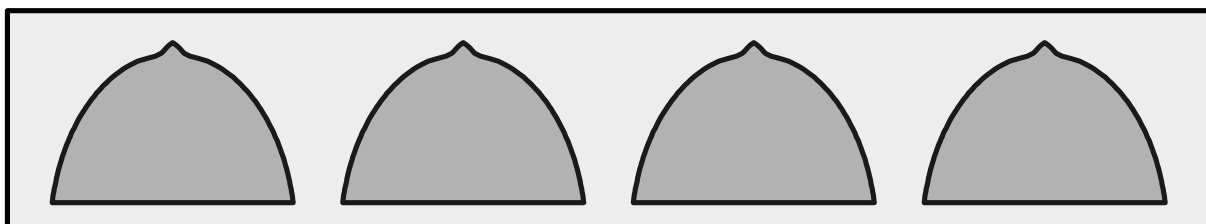
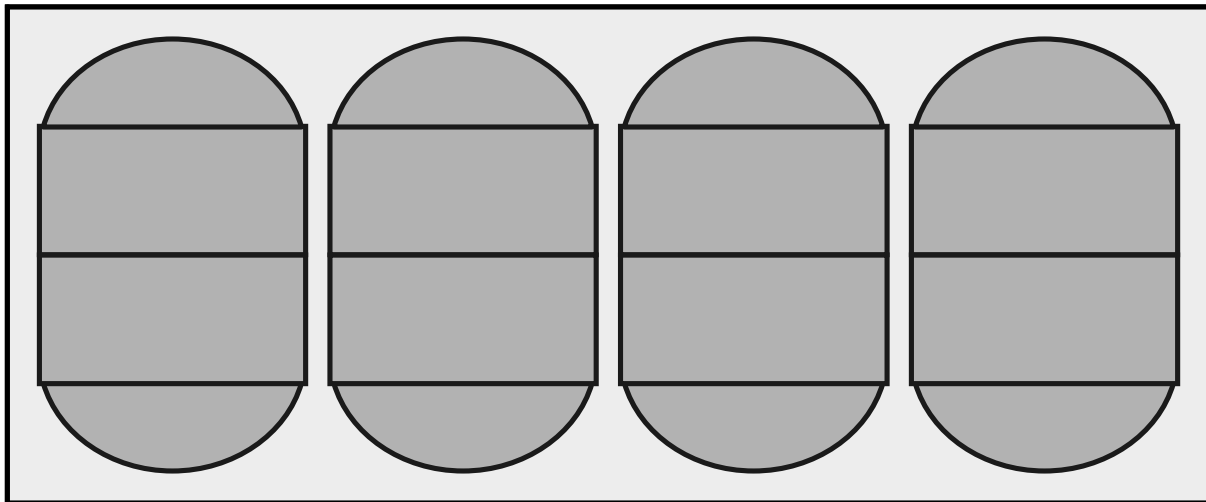
Overall Storage Efficiency = 57.8%

Overall System Size = 15.52' x 37.58' x 6.75'

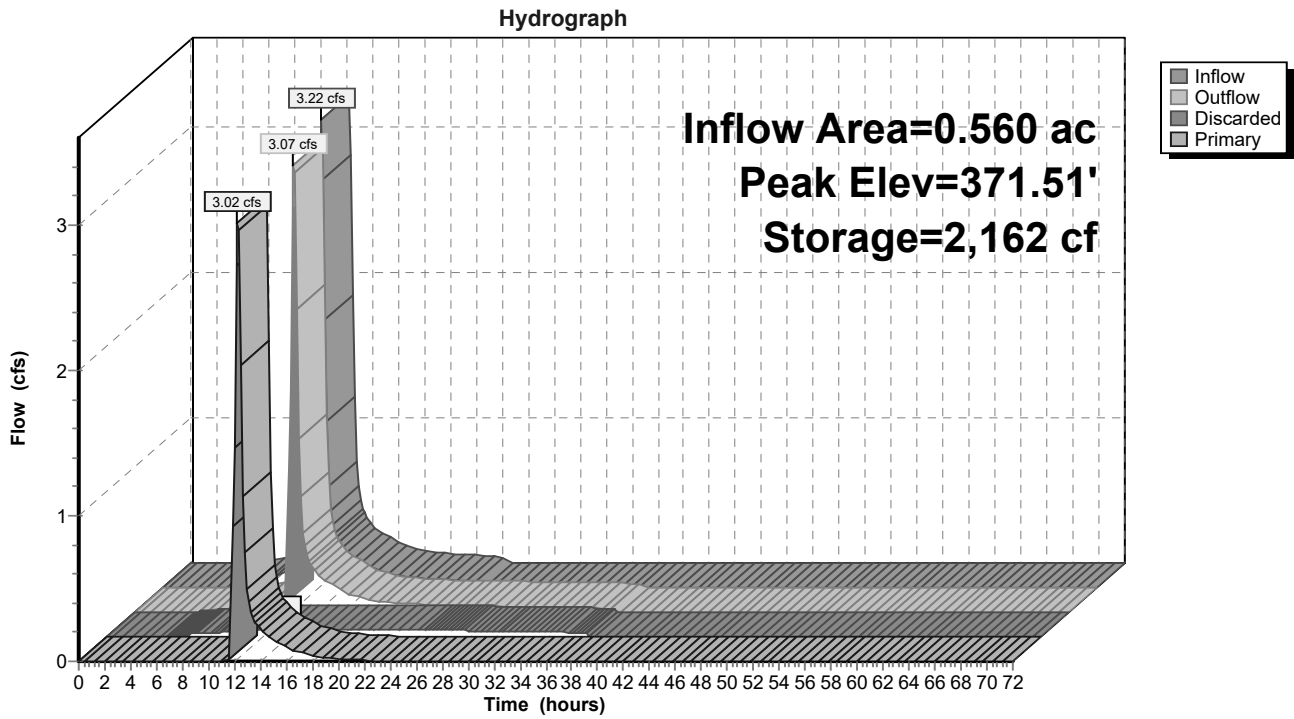
8 Chambers

145.8 cy Field

102.5 cy Stone



Pond 1P: Stormtech Units



Summary for Pond 2P: Stormtech Units

Inflow Area = 2.345 ac, 79.32% Impervious, Inflow Depth = 7.95" for 100 yr-24 hr event
 Inflow = 15.86 cfs @ 12.11 hrs, Volume= 1.553 af
 Outflow = 2.41 cfs @ 12.72 hrs, Volume= 1.553 af, Atten= 85%, Lag= 36.9 min
 Discarded = 0.56 cfs @ 12.72 hrs, Volume= 1.217 af
 Primary = 1.85 cfs @ 12.72 hrs, Volume= 0.336 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 369.79' @ 12.72 hrs Surf.Area= 9,740 sf Storage= 32,691 cf

Plug-Flow detention time= 389.1 min calculated for 1.550 af (100% of inflow)
 Center-of-Mass det. time= 389.8 min (1,161.8 - 772.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.20'	15,491 cf	46.67'W x 208.72'L x 6.75'H Field A 65,746 cf Overall - 27,018 cf Embedded = 38,728 cf x 40.0% Voids
#2A	365.95'	27,018 cf	ADS_StormTech MC-4500 b +Cap x 250 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 250 Chambers in 5 Rows Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf
		42,509 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	368.70'	12.0" Round Culvert L= 96.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.70' / 368.50' S= 0.0021 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.20'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.56 cfs @ 12.72 hrs HW=369.79' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.56 cfs)

Primary OutFlow Max=1.84 cfs @ 12.72 hrs HW=369.79' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Barrel Controls 1.84 cfs @ 2.69 fps)

Pond 2P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

50 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 206.72' Row Length +12.0" End Stone x 2 = 208.72' Base Length

5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

250 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 5 Rows = 27,017.6 cf Chamber Storage

65,745.8 cf Field - 27,017.6 cf Chambers = 38,728.1 cf Stone x 40.0% Voids = 15,491.3 cf Stone Storage

Chamber Storage + Stone Storage = 42,508.9 cf = 0.976 af

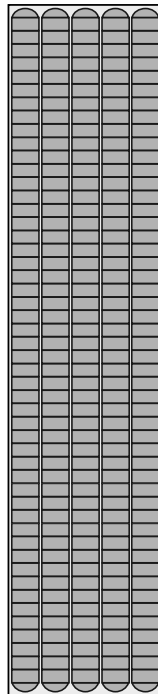
Overall Storage Efficiency = 64.7%

Overall System Size = 208.72' x 46.67' x 6.75'

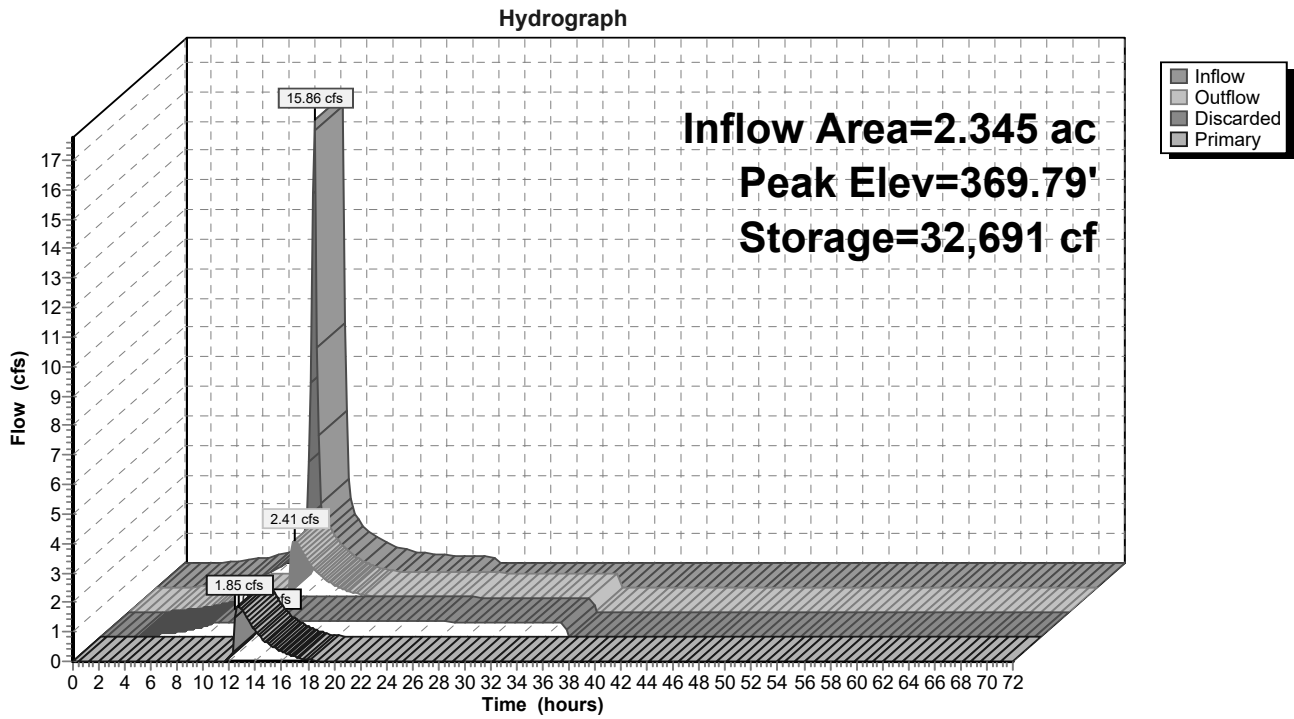
250 Chambers

2,435.0 cy Field

1,434.4 cy Stone



Pond 2P: Stormtech Units



Summary for Pond 21P: Floodplain Comp

Inflow Area = 1.053 ac, 0.00% Impervious, Inflow Depth = 4.35" for 100 yr-24 hr event
 Inflow = 3.84 cfs @ 12.21 hrs, Volume= 0.382 af
 Outflow = 1.35 cfs @ 12.65 hrs, Volume= 0.379 af, Atten= 65%, Lag= 26.7 min
 Primary = 1.35 cfs @ 12.65 hrs, Volume= 0.379 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 369.23' @ 12.65 hrs Surf.Area= 9,425 sf Storage= 6,121 cf

Plug-Flow detention time= 136.8 min calculated for 0.379 af (99% of inflow)
 Center-of-Mass det. time= 137.7 min (982.3 - 844.6)

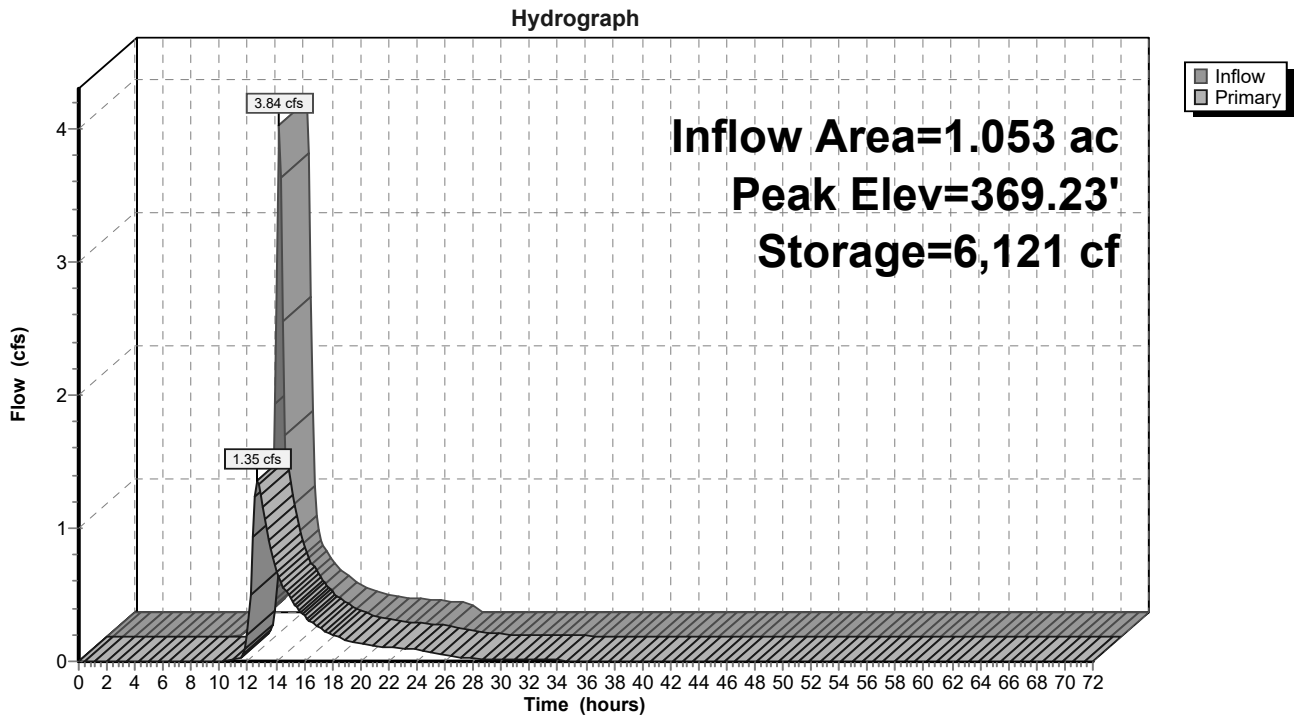
Volume	Invert	Avail.Storage	Storage Description
#1	368.50'	43,235 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.50	7,430	0	0
370.00	11,550	14,235	14,235
372.00	17,450	29,000	43,235

Device	Routing	Invert	Outlet Devices
#1	Primary	368.50'	12.0" Round Culvert L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.50' / 368.20' S= 0.0065 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	371.00'	24.0" x 36.0" Horiz. Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	368.50'	12.0" Vert. Orifice C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.34 cfs @ 12.65 hrs HW=369.22' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Barrel Controls 1.34 cfs @ 3.08 fps)
- 2=Grate (Controls 0.00 cfs)
- 3=Orifice (Passes 1.34 cfs of 1.75 cfs potential flow)

Pond 21P: Floodplain Comp



07-28-2023 Post Development Watershed A Type III 24-hr Water quality storm Rainfall=1.50"

Prepared by Langan Engineering

Printed 8/7/2023

HydroCAD® 10.20-3c s/n 08223 © 2023 HydroCAD Software Solutions LLC

Page 51

Time span=0.00-72.00 hrs, dt=0.15 hrs, 481 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10: Runoff Area=0.560 ac 58.93% Impervious Runoff Depth=0.38"
Flow Length=187' Slope=0.0100 '/' Tc=14.6 min CN=83 Runoff=0.15 cfs 0.018 af

Subcatchment20A: Runoff Area=102,144 sf 79.32% Impervious Runoff Depth=0.68"
Tc=6.0 min CN=90 Runoff=1.50 cfs 0.134 af

Subcatchment20B: Runoff Area=45,882 sf 0.00% Impervious Runoff Depth=0.01"
Flow Length=110' Tc=14.1 min CN=61 Runoff=0.00 cfs 0.001 af

Subcatchment30: Runoff Area=0.120 ac 33.33% Impervious Runoff Depth=0.13"
Tc=6.0 min CN=73 Runoff=0.01 cfs 0.001 af

Reach DP1: Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach DP2: Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach DP3: Inflow=0.01 cfs 0.001 af
Outflow=0.01 cfs 0.001 af

Pond 1P: Stormtech Units Peak Elev=366.12' Storage=225 cf Inflow=0.15 cfs 0.018 af
Discarded=0.03 cfs 0.018 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.018 af

Pond 2P: Stormtech Units Peak Elev=365.52' Storage=1,236 cf Inflow=1.50 cfs 0.134 af
Discarded=0.46 cfs 0.134 af Primary=0.00 cfs 0.000 af Outflow=0.46 cfs 0.134 af

Pond 21P: Floodplain Comp Peak Elev=368.50' Storage=28 cf Inflow=0.00 cfs 0.001 af
Outflow=0.00 cfs 0.000 af

Total Runoff Area = 4.078 ac Runoff Volume = 0.153 af Average Runoff Depth = 0.45"
45.32% Pervious = 1.848 ac 54.68% Impervious = 2.230 ac

Summary for Subcatchment 10:

Runoff = 0.15 cfs @ 12.27 hrs, Volume= 0.018 af, Depth= 0.38"
 Routed to Pond 1P : Stormtech Units

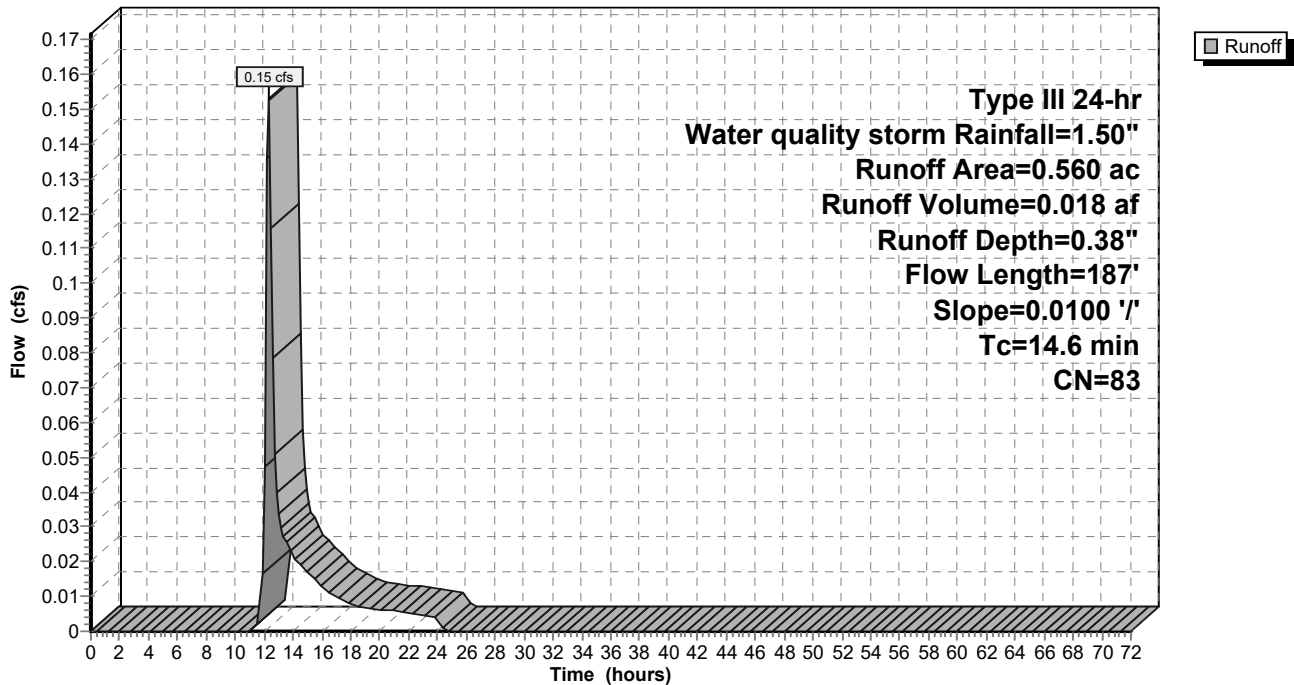
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr Water quality storm Rainfall=1.50"

Area (ac)	CN	Description
0.230	61	>75% Grass cover, Good, HSG B
* 0.330	98	Impervious
0.560	83	Weighted Average
0.230		41.07% Pervious Area
0.330		58.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	100	0.0100	0.13		Sheet Flow, a-b
					Grass: Short n= 0.150 P2= 3.43"
2.1	87	0.0100	0.70		Shallow Concentrated Flow, b-c
					Short Grass Pasture Kv= 7.0 fps
14.6	187	Total			

Subcatchment 10:

Hydrograph



Summary for Subcatchment 20A:

Runoff = 1.50 cfs @ 12.13 hrs, Volume= 0.134 af, Depth= 0.68"
 Routed to Pond 2P : Stormtech Units

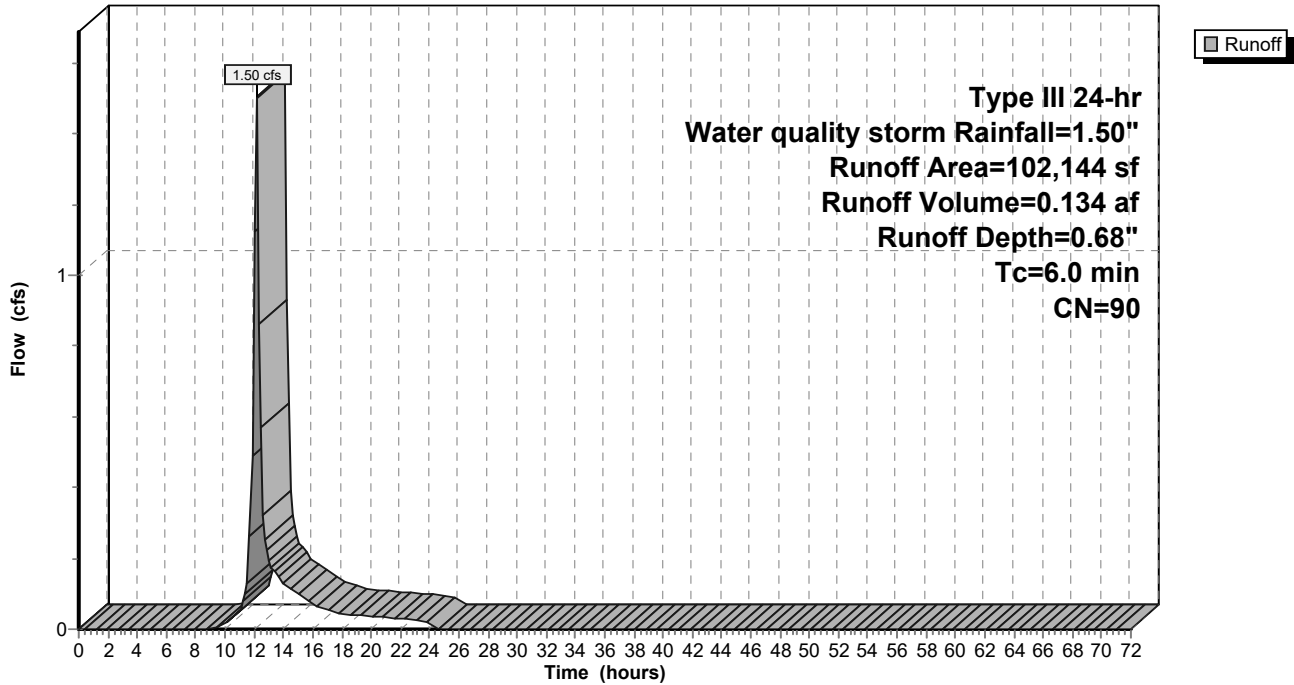
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr Water quality storm Rainfall=1.50"

	Area (sf)	CN	Description
*	81,022	98	Impervious
	21,122	61	>75% Grass cover, Good, HSG B
	102,144	90	Weighted Average
	21,122		20.68% Pervious Area
	81,022		79.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 20A:

Hydrograph



Summary for Subcatchment 30:

Runoff = 0.01 cfs @ 12.32 hrs, Volume= 0.001 af, Depth= 0.13"
 Routed to Reach DP3 :

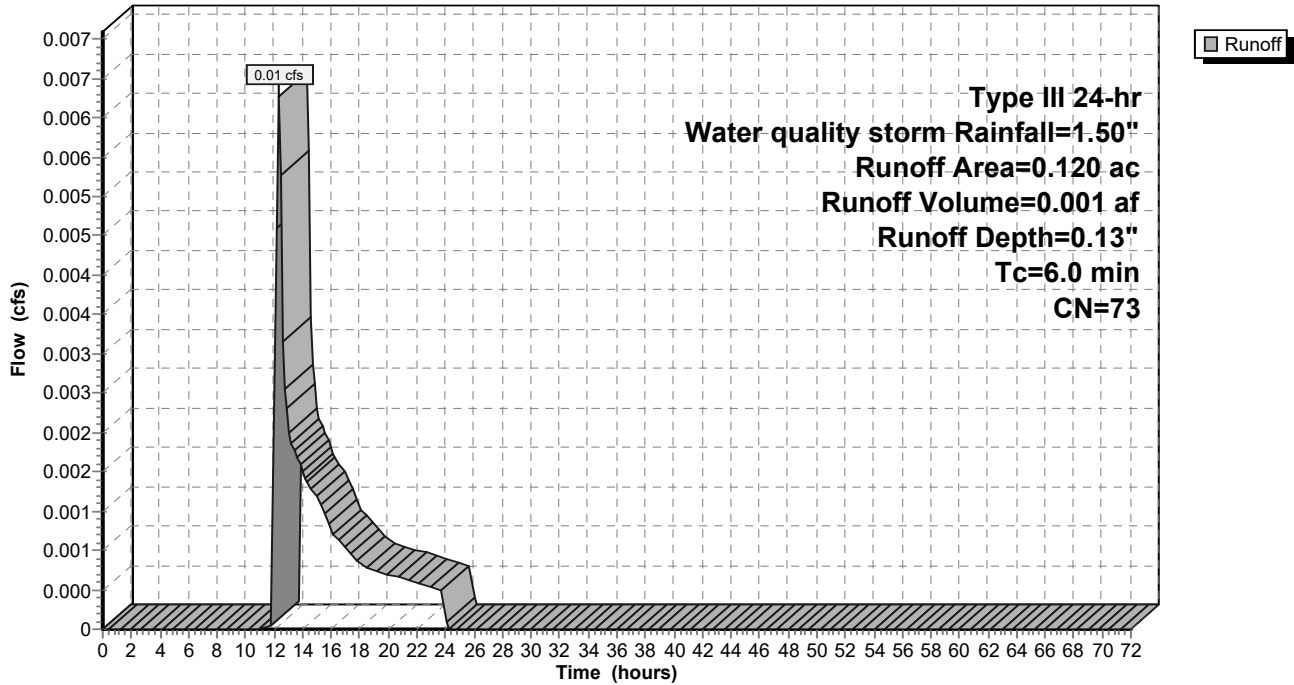
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs
 Type III 24-hr Water quality storm Rainfall=1.50"

Area (ac)	CN	Description
* 0.040	98	Impervious
0.080	61	>75% Grass cover, Good, HSG B
0.120	73	Weighted Average
0.080		66.67% Pervious Area
0.040		33.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 30:

Hydrograph

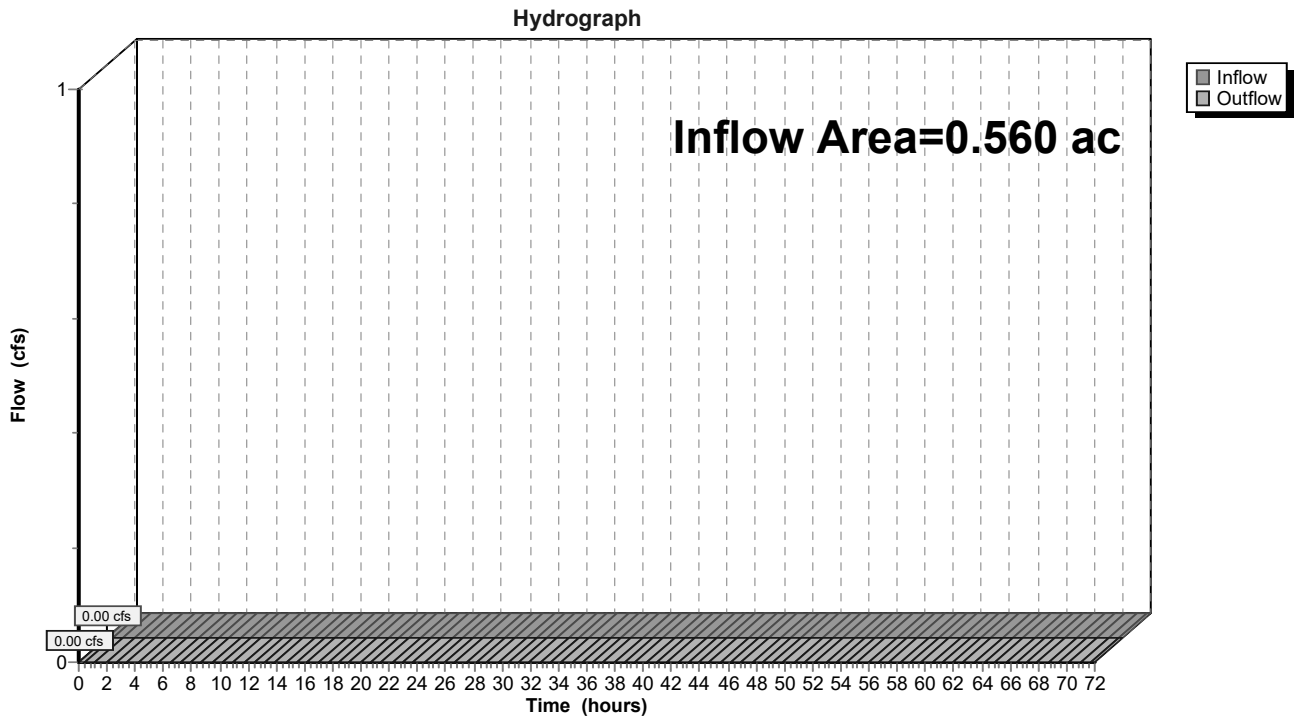


Summary for Reach DP1:

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 0.00" for Water quality storm event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP1:



Summary for Reach DP2:

Inflow Area = 3.398 ac, 54.73% Impervious, Inflow Depth > 0.00" for Water quality storm event
Inflow = 0.00 cfs @ 24.51 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 24.51 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP2:

Hydrograph



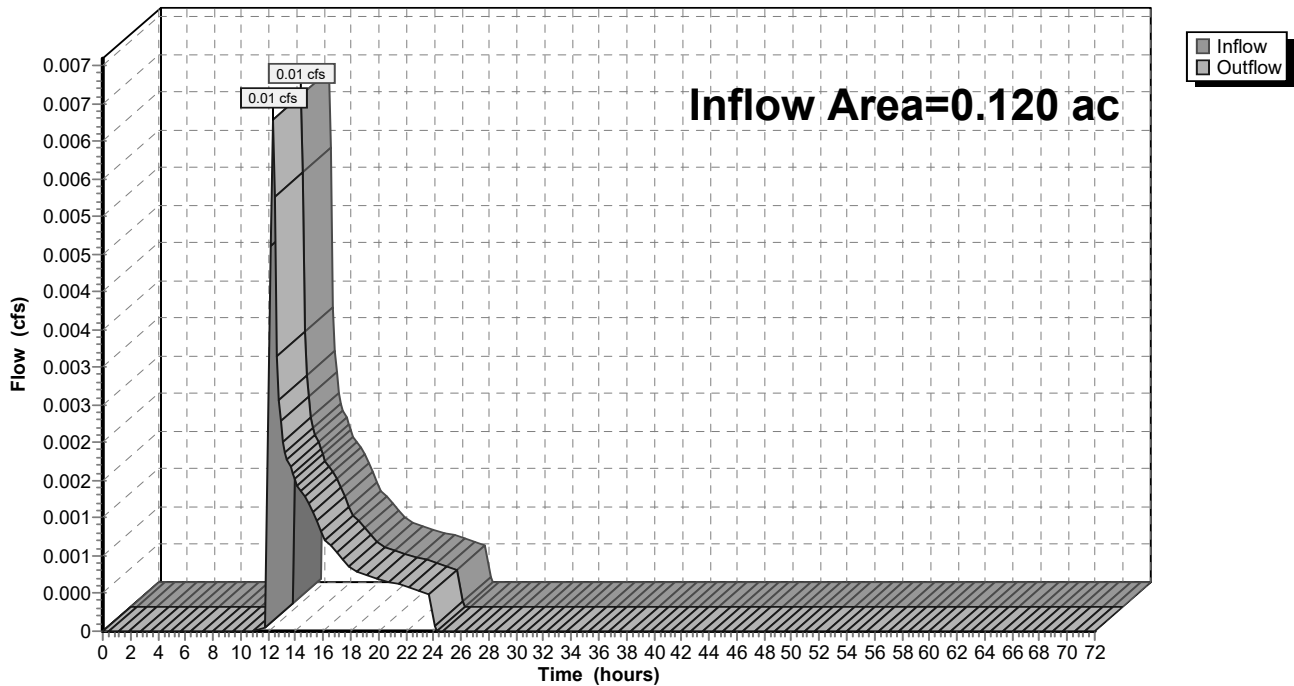
Summary for Reach DP3:

Inflow Area = 0.120 ac, 33.33% Impervious, Inflow Depth = 0.13" for Water quality storm event
Inflow = 0.01 cfs @ 12.32 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.32 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3

Reach DP3:

Hydrograph



Summary for Pond 1P: Stormtech Units

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth = 0.38" for Water quality storm event
 Inflow = 0.15 cfs @ 12.27 hrs, Volume= 0.018 af
 Outflow = 0.03 cfs @ 13.14 hrs, Volume= 0.018 af, Atten= 80%, Lag= 52.1 min
 Discarded = 0.03 cfs @ 13.14 hrs, Volume= 0.018 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach DP1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 366.12' @ 13.14 hrs Surf.Area= 583 sf Storage= 225 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 62.3 min (947.5 - 885.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.25'	1,107 cf	37.58'W x 15.52'L x 6.75'H Field A 3,936 cf Overall - 1,168 cf Embedded = 2,768 cf x 40.0% Voids
#2A	366.00'	1,168 cf	ADS_StormTech MC-4500 b +Cap x 8 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 8 Chambers in 4 Rows Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf
		2,275 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	370.00'	12.0" Round Culvert L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 369.00' / 370.00' S= -0.0286 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.25'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.03 cfs @ 13.14 hrs HW=366.12' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=365.25' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Controls 0.00 cfs)

Pond 1P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 4 rows = 316.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

2 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 13.52' Row Length +12.0" End Stone x 2 = 15.52' Base Length

4 Rows x 100.0" Wide + 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

8 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 4 Rows = 1,167.9 cf Chamber Storage

3,936.4 cf Field - 1,167.9 cf Chambers = 2,768.5 cf Stone x 40.0% Voids = 1,107.4 cf Stone Storage

Chamber Storage + Stone Storage = 2,275.3 cf = 0.052 af

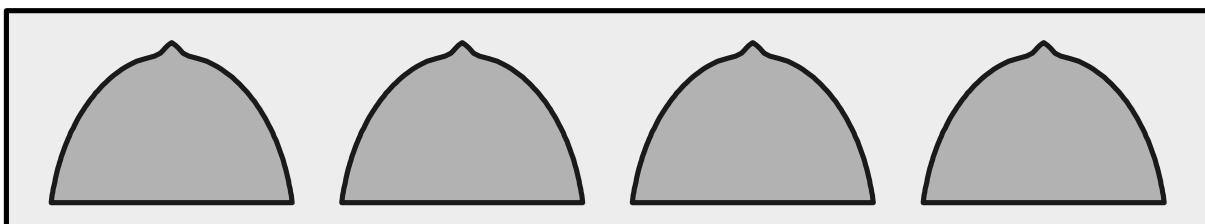
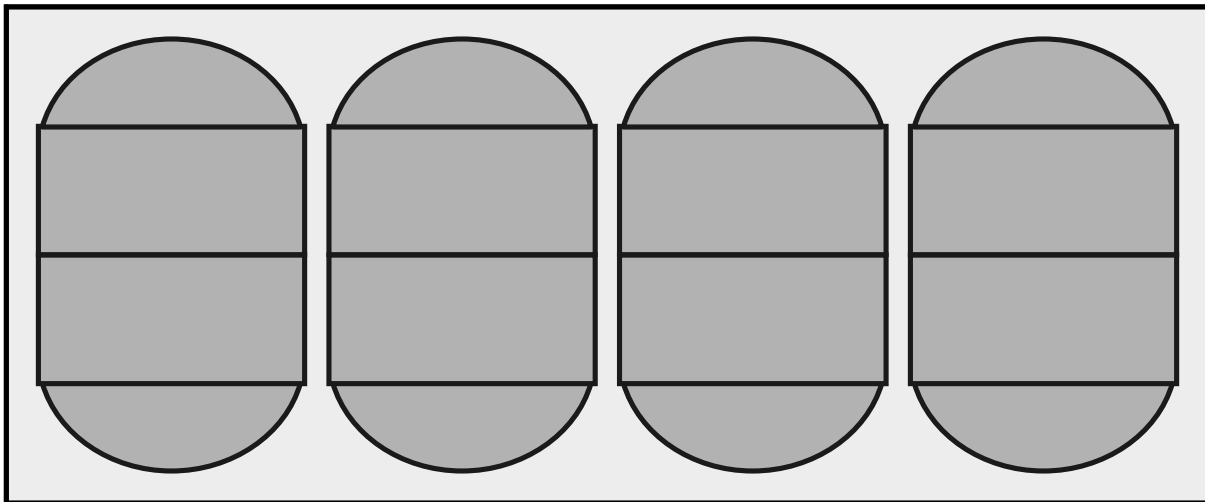
Overall Storage Efficiency = 57.8%

Overall System Size = 15.52' x 37.58' x 6.75'

8 Chambers

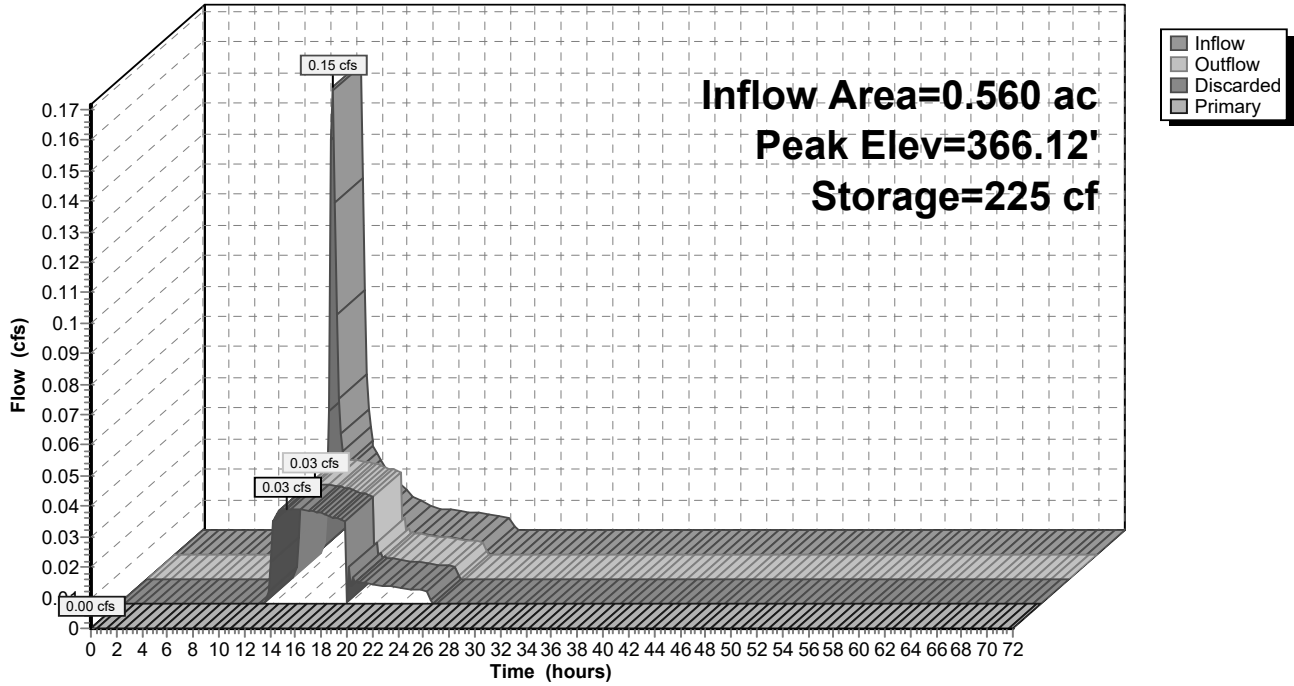
145.8 cy Field

102.5 cy Stone



Pond 1P: Stormtech Units

Hydrograph



Summary for Pond 2P: Stormtech Units

Inflow Area = 2.345 ac, 79.32% Impervious, Inflow Depth = 0.68" for Water quality storm event
 Inflow = 1.50 cfs @ 12.13 hrs, Volume= 0.134 af
 Outflow = 0.46 cfs @ 12.52 hrs, Volume= 0.134 af, Atten= 70%, Lag= 23.2 min
 Discarded = 0.46 cfs @ 12.52 hrs, Volume= 0.134 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 365.52' @ 12.52 hrs Surf.Area= 9,740 sf Storage= 1,236 cf

Plug-Flow detention time= 15.3 min calculated for 0.133 af (100% of inflow)
 Center-of-Mass det. time= 15.3 min (855.4 - 840.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	365.20'	15,491 cf	46.67'W x 208.72'L x 6.75'H Field A 65,746 cf Overall - 27,018 cf Embedded = 38,728 cf x 40.0% Voids
#2A	365.95'	27,018 cf	ADS_StormTech MC-4500 b +Cap x 250 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 250 Chambers in 5 Rows Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf
		42,509 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	368.70'	12.0" Round Culvert L= 96.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.70' / 368.50' S= 0.0021 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	365.20'	2.000 in/hr Infiltration over Wetted area Phase-In= 0.01'

Discarded OutFlow Max=0.46 cfs @ 12.52 hrs HW=365.51' (Free Discharge)
 ↑**2=Infiltration** (Exfiltration Controls 0.46 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=365.20' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Controls 0.00 cfs)

Pond 2P: Stormtech Units - Chamber Wizard Field A

Chamber Model = ADS_StormTechMC-4500 b +Cap (ADS StormTech®MC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

50 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 206.72' Row Length +12.0" End Stone x 2 = 208.72' Base Length

5 Rows x 100.0" Wide + 9.0" Spacing x 4 + 12.0" Side Stone x 2 = 46.67' Base Width

9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

250 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 5 Rows = 27,017.6 cf Chamber Storage

65,745.8 cf Field - 27,017.6 cf Chambers = 38,728.1 cf Stone x 40.0% Voids = 15,491.3 cf Stone Storage

Chamber Storage + Stone Storage = 42,508.9 cf = 0.976 af

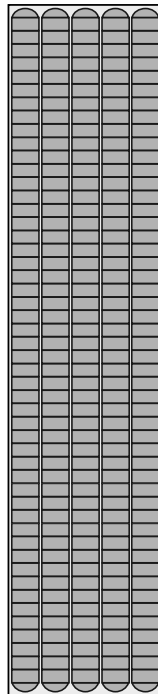
Overall Storage Efficiency = 64.7%

Overall System Size = 208.72' x 46.67' x 6.75'

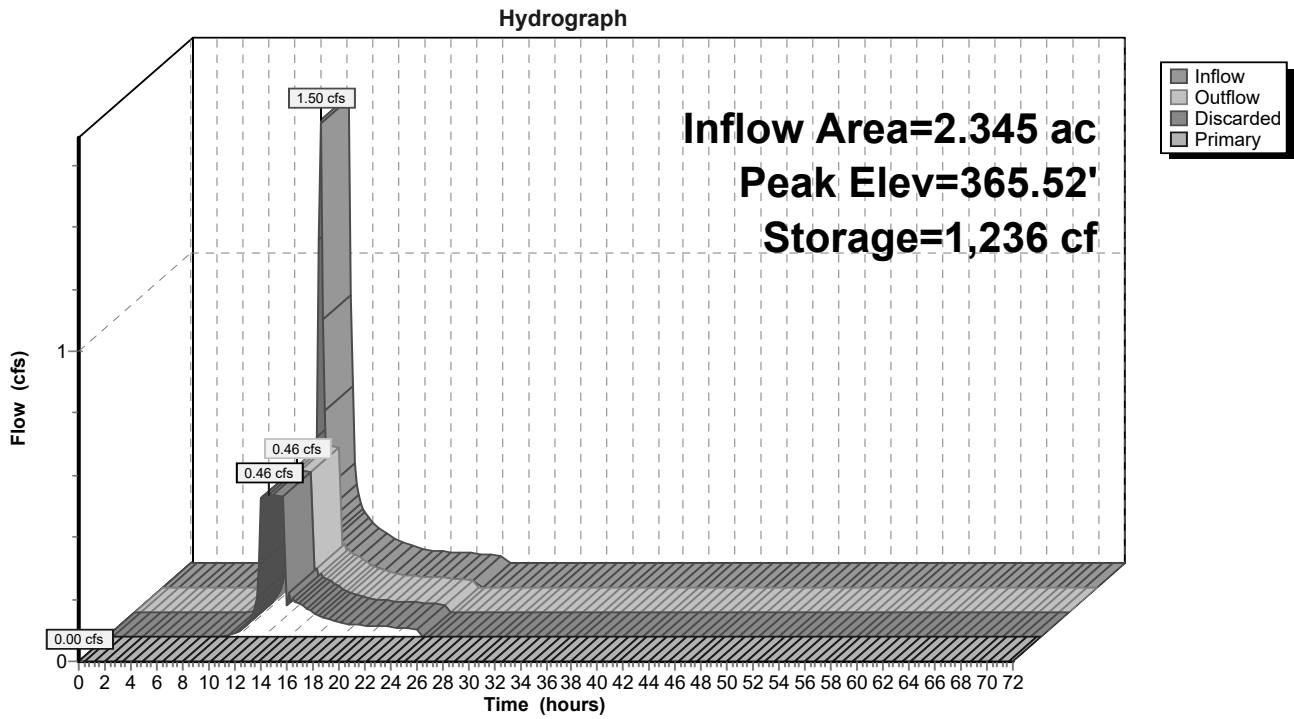
250 Chambers

2,435.0 cy Field

1,434.4 cy Stone



Pond 2P: Stormtech Units



Summary for Pond 21P: Floodplain Comp

Inflow Area = 1.053 ac, 0.00% Impervious, Inflow Depth = 0.01" for Water quality storm event
 Inflow = 0.00 cfs @ 21.32 hrs, Volume= 0.001 af
 Outflow = 0.00 cfs @ 24.51 hrs, Volume= 0.000 af, Atten= 97%, Lag= 191.4 min
 Primary = 0.00 cfs @ 24.51 hrs, Volume= 0.000 af
 Routed to Reach DP2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.15 hrs / 3
 Peak Elev= 368.50' @ 24.51 hrs Surf.Area= 7,440 sf Storage= 28 cf

Plug-Flow detention time= 1,728.3 min calculated for 0.000 af (15% of inflow)
 Center-of-Mass det. time= 1,512.1 min (2,717.4 - 1,205.3)

Volume	Invert	Avail.Storage	Storage Description
#1	368.50'	43,235 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.50	7,430	0	0
370.00	11,550	14,235	14,235
372.00	17,450	29,000	43,235

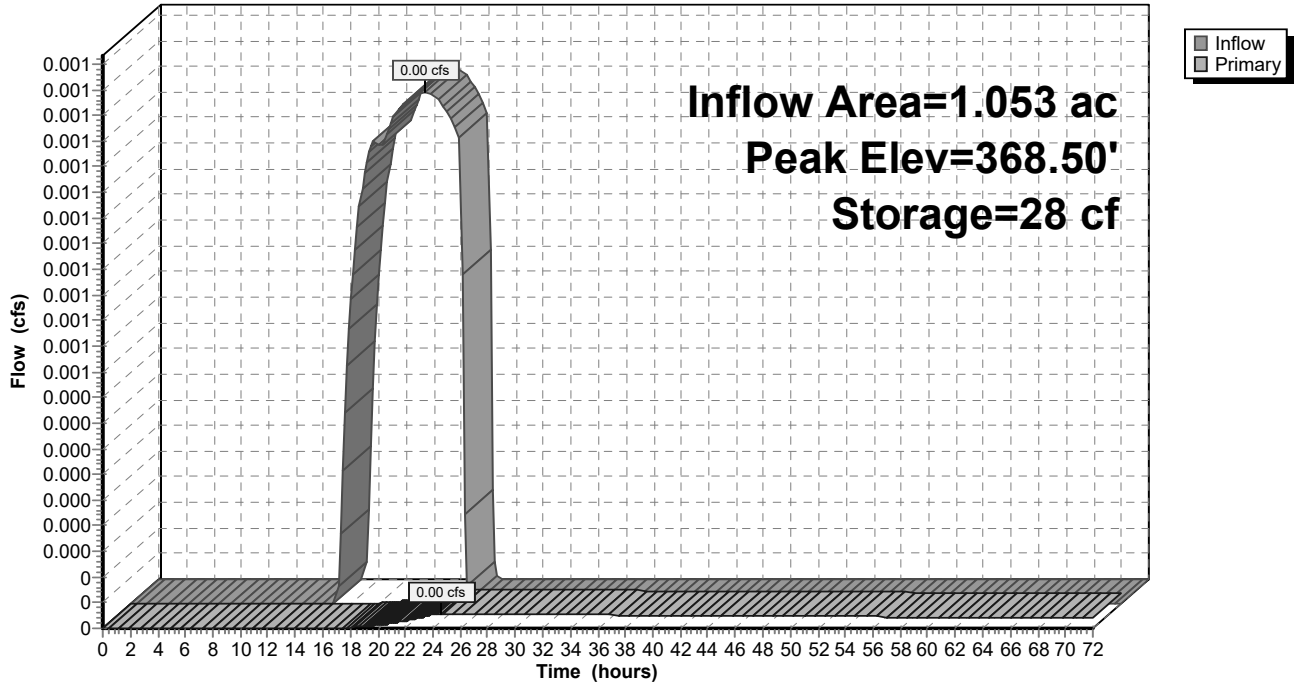
Device	Routing	Invert	Outlet Devices
#1	Primary	368.50'	12.0" Round Culvert L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 368.50' / 368.20' S= 0.0065 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	371.00'	24.0" x 36.0" Horiz. Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	368.50'	12.0" Vert. Orifice C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 24.51 hrs HW=368.50' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Barrel Controls 0.00 cfs @ 0.14 fps)
- 2=Grate (Controls 0.00 cfs)
- 3=Orifice (Passes 0.00 cfs of 0.00 cfs potential flow)

Pond 21P: Floodplain Comp

Hydrograph



The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix F: Certification Statements

The Gateway
45 Bedford Road, Armonk NY
Town of North Castle, New York

Owner's/Operator's Certification

"I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted."

Name (please print) _____

Title _____ **Date** _____

Address _____

Phone _____ **Email** _____

Signature _____

The Gateway
45 Bedford Road, Armonk NY
Town of North Castle, New York

Contractor's Certification

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

Contracting Firm Name _____

Address _____

Phone _____ **Fax** _____

Name (please print) _____

Title _____ **Date** _____

Signature _____

SWPPP Responsibilities _____

Trained Individual Name (please print) _____

Title _____ **Date** _____

Signature _____

SWPPP Responsibilities _____

Note: All Contractors involved with Stormwater related activities shall sign a Contractor's Certification.

The Gateway
45 Bedford Road, Armonk NY
Town of North Castle, New York

Subcontractor's Certification

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

Subcontracting Firm Name _____

Address _____

Phone _____ **Fax** _____

Name (please print) _____

Title _____ **Date** _____

Signature _____

SWPPP Responsibilities _____

Trained Individual Name (please print) _____

Title _____ **Date** _____

Signature _____

SWPPP Responsibilities _____

Note: All subcontractors involved with Stormwater related activities shall sign a Subcontractor's Certification.

The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix G: Example Inspection Form

EXAMPLE EROSION CONTROL REPORT

PROJECT NO: _____ PROJECT NAME: _____ DATE: _____

MUNICIPALITY: _____ LOCATION: _____

CONTRACTOR: _____ OWNER: _____

DATE OF PREVIOUS INSPECTION: _____ INSPECTOR'S NAME: _____

DATE OF MOST RECENT STORM 0.5" OR GREATER: _____ DATE OF INSPECTION: _____

LAST RAIN EVENT: _____ DEPTH: _____

WEATHER: _____ TEMPERATURE: _____ °F

SPECIAL NOTES: _____

EROSION CONTROL CHECKLIST

ADDITIONAL ACTION REQUIRED BY PROJECT MANAGER OR PROJECT ENGINEER YES NO

PHOTOS OR SKETCHES ATTACHED ADDITIONAL REMARKS ATTACHED

Inspector (print name)

Inspection Date

Qualified Professional (print name)

Qualified Professional Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA

- Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- Is there residue from oil and floating substances, visible oil film, or globules of grease?
- All disturbance is within the limits of the approved plans.
- Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA

- Is construction site litter and debris appropriately managed?
- Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- Is construction impacting the adjacent properties?
- Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA

- Maximum diameter pipes necessary to span creek without dredging are installed.
- Installed non-woven geotextile fabric beneath approaches
- Is fill composed of aggregate (no earth or soil)?
- Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering

Yes No NA

- Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- Clean water from upstream pool is being pumped to the downstream pool.
- Sediment laden water from work area is being discharged to a silt-trapping device.
- Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

Yes No NA

- Installed per plan.
- Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

- Installed per plan with minimum side slopes 2H:1V or flatter.
- Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- Sediment-laden runoff directed to sediment trapping structure.

4. Stone Check Dam

Yes No NA

- Is channel stable? (flow is not eroding soil underneath or around the structure).
- Check is in good condition (rocks in place and no permanent pools behind the structure).
- Has accumulated sediment been removed?

5. Rock Outlet Protection

Yes No NA

- Installed per plan.
- Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

- Stockpiles are stabilized with vegetation and/or mulch.
- Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

- Temporary seedings and mulch have been applied to idle areas.
- 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Stabilized Construction Entrance

Yes No NA

- Stone is clean enough to effectively remove mud from vehicles.
- Installed per standards and specifications?
- Does all traffic use the stabilized entrance to enter and leave the site?
- Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence

Yes No NA

- Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
- Joints constructed by wrapping the two ends together for continuous support.
- Fabric buried 6 inches minimum.
- Posts are stable, fabric is tight and without rips or frayed areas.

Sediment accumulation is ____% of design capacity.

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

Yes No NA

- Installed concrete blocks lengthwise so open ends face outward, not upward.
- Place wire screen between No. 3 crushed stone and concrete blocks.
- Drainage area is 1 acre or less.
- Excavated area is 900 cubic feet.
- Excavated side slopes should be 2:1.
- 2" x 4" frame is constructed and structurally sound.
- Posts 3-foot maximum spacing between posts.
- Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
- Posts are stable, fabric is tight and without rips or frayed areas.

Sediment accumulation is ____% of design capacity.

4. Temporary Sediment Trap

Yes No NA

- Outlet structure is constructed per the approved plan or drawing.
- Geotextile fabric has been placed beneath rock fill.

Sediment accumulation is ____% of design capacity.

5. Temporary Sediment Basin

Yes No NA

- Basin and outlet structure constructed per the approved plan.
- Basin side slopes are stablized with seed/mulch.
- Drainage structure is flushed and basin surface restored upon removal of sediment basin facility.

Sediment accumulation is ____% of design capacity.

The Gateway
45 Bedford Road
Town of North Castle, New York

Appendix H: Post-Construction Inspection & Maintenance

Post Construction Inspection and Maintenance Checklist Underground Infiltration System

1. Inlet and Outlet Structures (Frequency: Annual)

	Yes	No	NA
a. Concrete structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. In good condition, no need for repairs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. Cracks or displacement. <i>Maintenance: Repair any minor cracks. If minor displacement is observed, re-inspect in 6 months. Replace structure if major cracks or significant displacement is observed.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Minor spalling (<1"). <i>Maintenance: Repair any minor spalling.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Major spalling (rebars exposed). <i>Maintenance: Replace structure.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Joint failures. <i>Maintenance: Replace structure.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Water tightness. <i>Maintenance: Reseal structure for water tightness if minor leaks are observed. Replace structure if significant leaks are observed.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Clear of sediment. <i>Maintenance: Remove and properly dispose of any accumulated sediment when at 50% of sump height.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Clear of debris and trash. <i>Maintenance: Remove and properly dispose of any debris and trash.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Pipes free from damage, corrosion, and sediment. <i>Maintenance: Immediately repair any damaged pipes. If pipes are severely damaged and cannot be repaired, replace the pipes. Remove and properly dispose of any sediment.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Header System (Frequency: Annual)

	Yes	No	NA
a. Clear of debris and litter. <i>Maintenance: Use a high pressure nozzle with rear facing jets to wash the sediment and debris into the upstream structure. Remove sediment and debris from the sump of the upstream structure.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Clear of sediment. <i>Maintenance: Remove and properly dispose of sediment when accumulated over 4 inches. Use a high pressure nozzle with rear facing jets to wash the sediment into the upstream structure. Remove sediment from the sump of the upstream structure.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**3. Isolator/Containment Row
(Frequency: Annual)**

- | | Yes | No | NA |
|--|--------------------------|--------------------------|--------------------------|
| a. Clear of debris and litter.
<i>Maintenance: Remove and properly dispose of any debris and trash. Use a high pressure nozzle with rear facing jets to wash the debris into the upstream structure. Remove debris from the sump of the upstream structure.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Clear of sediment.
<i>Maintenance: Remove and properly dispose of sediment when accumulated over 4 inches. Use a high pressure nozzle with rear facing jets to wash the sediment into the upstream structure. Remove sediment from the sump of the upstream structure.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**4. Underground Chambers
(Frequency: Annual)**

- | | Yes | No | NA |
|--|--------------------------|--------------------------|--------------------------|
| a. Chambers are in good condition.
<i>Maintenance: Inspect the interior of the chambers using a CCTV or comparable inspection method through the inspection port. If deficiencies are noted immediately contact a NYS licensed Professional Engineer.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Clear of debris and litter.
<i>Maintenance: Remove and properly dispose of any debris and trash. Use a high pressure nozzle with rear facing jets to wash the debris into the upstream structure. Remove debris from the sump of the upstream structure.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Clear of sediment.
<i>Maintenance: Remove and properly dispose of sediment when accumulated over 4 inches. Use a high pressure nozzle with rear facing jets to wash the sediment into the upstream structure. Remove sediment from the sump of the upstream structure.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Dewaterers between storms.
<i>Maintenance: If standing water during inspection, recheck after 48 hours. If standing water is still present, contact a NYS licensed Professional Engineer.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**5. Surrounding Site
(Frequency: Monthly)**

- | | Yes | No | NA |
|---|--------------------------|--------------------------|--------------------------|
| a. Vegetation and ground cover adequate.
<i>Maintenance: Reseed bare areas. Remove any unauthorized plants or any nuisance weeds and vegetation, including their roots. Do not use any herbicides. Topsoil, rake and seed the disturbed area by their removal.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Area free from depressions.
<i>Maintenance: Immediately repair. Re-grade and compact the soil. Topsoil, rake and seed the area. Re-inspect in 6 months.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

	Yes	No	NA
c. Unauthorized plants over system. <i>Maintenance: Remove any unauthorized plants, including roots. Do not use herbicides. Topsoil, rake and seed the area disturbed by their removal.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Unauthorized structures over system. <i>Maintenance: Remove any unauthorized structures. Immediately inspect the interior of the chambers using a CCTV or comparable inspection method through the inspection port. If deficiencies are noted immediately contact a NYS licensed Professional Engineer.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

1. The site must be returned to the approved conditions when any repairs are made.
2. All seed mixtures shall meet the seed mixture requirements specified on the approved plans.

Comments:

Actions to be taken:
