


CITY OF BEACON, NEW YORK THE PLANNING BOARD WILL MEET ON TUESDAY, AUGUST 11, 2020 AT 7:00 PM. A WORK SESSION WILL TAKE PLACE AT 7:00 PM FOR A TRAINING WORKSHOP, DISCUSSION OF AGENDA ITEMS AND/OR TOPICS OF INTEREST TO THE PLANNING BOARD. THE REGULAR MEETING WILL BEGIN IMMEDIATELY THEREAFTER, BUT NOT LATER THAN 7:30 PM. DUE TO PUBLIC HEALTH AND SAFETY CONCERNS RELATED TO COVID-19, THE PLANNING BOARD WILL NOT BE MEETING IN-PERSON. IN ACCORDANCE WITH THE GOVERNORâ€™S EXECUTIVE ORDER 202.1, THE AUGUST 11, 2020 MEETING WILL BE HELD VIA VIDEOCONFERENCING, AND A TRANSCRIPT WILL BE PROVIDED AT A LATER DATE. THE PUBLIC CAN WATCH THE LIVE MEETING ONLINE AT YOUTUBE AT HTTPS://WWW.YOUTUBE.COM/CHANNEL/UCVPPIGGWZDERSUDXG. IF ANY INTERESTED MEMBERS OF THE PUBLIC WOULD LIKE TO PROVIDE COMMENTS ON THE APPLICATION, COMMENTS CAN BE CALLED IN DURING THE MEETING AT (929) 205-6099; WEBINAR ID: 837 3256 4372; PASSWORD: 201333. COMMENTS CAN ALSO BE PROVIDED VIA EMAIL NO

Len Warner
Karen Quiana
Kevin Byrne
Jill Reynolds
J. Randall Williams
Richard Muscat
Chair John Gunn

LATER THAN 5PM ON AUGUST
11, 2020 TO ETHA GROGAN,

**August 11, 2020**
**7:00 PM**
**Planning Board Agenda**

**Regular Meeting**

1. Continue public hearing for SEQRA environmental review on applications for Subdivision and Site Plan Approval, "Beacon Views Townhouses" 40 units, Conklin Street, submitted by Beacon Views, LLC
2. Public hearing for SEQRA environmental review on applications for Site Plan Approval and Subdivision Approval (lot merger), retail/residential, 416-420 Main Street, mixed-use commercial, office & residential development, submitted by 416 Main Street Beacon, LLC & 420 Main Street, LLC (d/b/a 420 Main St., LLC)

**Miscellaneous Business**

1. Zoning Board of Appeals - August Agenda

**Architectural Review**

1. Certificate of Appropriateness - 25 East Main Street
2. Certificate of Appropriateness - 424 Main Street; new facade color
3. Certificate of Appropriateness - 1183 North Avenue (amendment)
4. Single Family House - Willow Street (corner of Verplanck)
5. Single Family House - 16 Coyne Hill Road

**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

Continue public hearing for SEQRA environmental review on applications for Subdivision and Site Plan Approval, "Beacon Views Townhouses" 40 units, Conklin Street, submitted by Beacon Views, LLC

**ATTACHMENTS**

Beacon Views Sheet 17 Details 5.pdf

Beacon Views Sheet 18 Building Plans Front Garage.pdf

Beacon Views Sheet 19 Building Plans Rear Garage.pdf

Beacon Views Sheet 20 Building Elevations.pdf

Beacon Views Sustainablility Report.pdf

Beacon Views SWPPP - SS.pdf

Beacon Views WWER - SS.pdf

Beacon Views Cover Letter.pdf

Beacon Views Environmental Resource Mapper Information.pdf

Beacon Views Green Plan Response.pdf

Beacon Views Sheet 1 Cover Sheet.pdf

Beacon Views Sheet 2 Existing Conditions.pdf

Beacon Views Sheet 3 Layout & Landscape.pdf

Beacon Views Sheet 4 Grading & Drainage.pdf

Beacon Views Sheet 5 Utilities.pdf

Beacon Views Sheet 6 Erosion & Seditment Control.pdf

Beacon Views Sheet 7 Enlarged Plans.pdf

Beacon Views Sheet 8 Off Site Improvements.pdf

Beacon Views Sheet 9 Vehicle Maneuvering.pdf

Beacon Views Sheet 10 Lighting.pdf

Beacon Views Sheet 11 Drainage Profiles.pdf

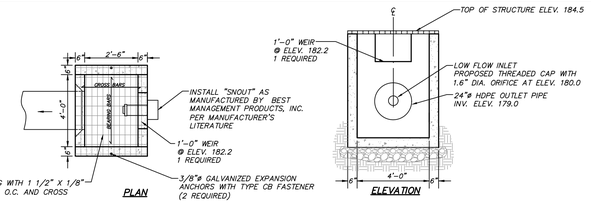
Beacon Views Sheet 12 Water & Sewer Profiles.pdf

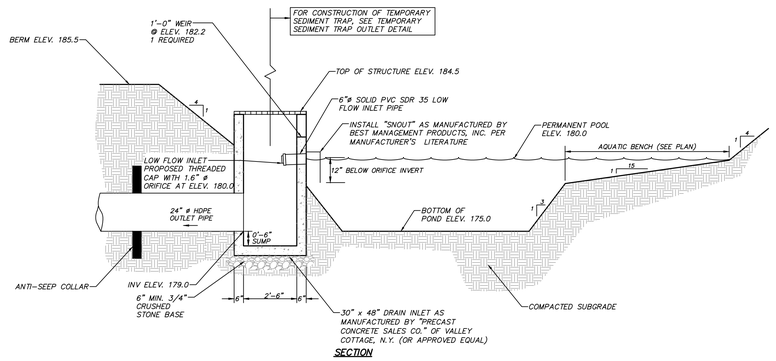
Beacon Views Sheet 13 Details 1.pdf

Beacon Views Sheet 14 Details 2.pdf

Beacon Views Sheet 15 Details 3.pdf

Beacon Views Sheet 16 Details 4.pdf



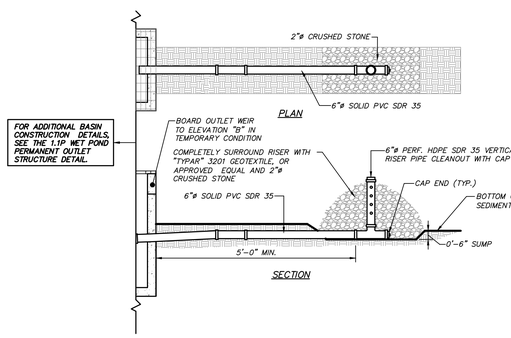

NOTE: THE "SNOUT" ON THE OUTLET STRUCTURE IS PROVIDED AS AN ANTI-CLOGGING DEVICE TO MEET THE REQUIREMENTS OF THE "NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL".

## 1.1P POCKET POND (NYSDEC DESIGN P-5) PERMANENT OUTLET STRUCTURE DETAIL

(N.T.S.)

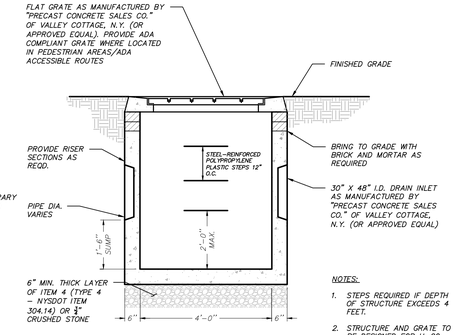
### POCKET POND OUTLET NOTES

1. THE POCKET POND (1.1P) BASIN IS PROPOSED TO BE UTILIZED AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION.
2. AFTER THE CONTRIBUTING AREAS TO THE BASIN HAS BEEN PERMANENTLY STABILIZED, THE FOLLOWING SHALL BE ACCOMPLISHED:
   - A. CLEAN BASIN AND OUTLET STRUCTURE AND REMOVE 6"ø PERFORATED VERTICAL RISER PIPE, CRUSHED STONE AND FILTER FABRIC.
   - B. ADD THREADED CAP WITH ORIFICE AT DISCHARGE END OF 6"ø SOLID PVC SDR 35 PIPES PER DETAIL.
   - C. REPLACE THE PERFORATED PIPE AND CRUSHED STONE. DO NOT REPLACE FILTER FABRIC.
   - D. ESTABLISH THE FINAL VEGETATION IN THE BASIN IN ACCORDANCE WITH THE TYPICAL P-2 WET POND BASIN PLANTING DETAIL.
3. FOLLOWS: * WHEN INITIALLY USED AS THE TEMPORARY SEDIMENT BASIN DEWATERING DEVICE THE RISER SHALL BE WRAPPED WITH TYPAR 3201 GEOTEXTILE OR APPROVED EQUAL AND SURROUNDED WITH 2"ø STONE. THE TOP OF THE RISER SHALL BE SET AT THE SAME ELEVATION AS THE WEIRS AS SHOWN IN THE STORMWATER BASIN OUTLET STRUCTURE DETAILS.




## TEMPORARY SEDIMENT TRAP OUTLET STRUCTURE DETAIL

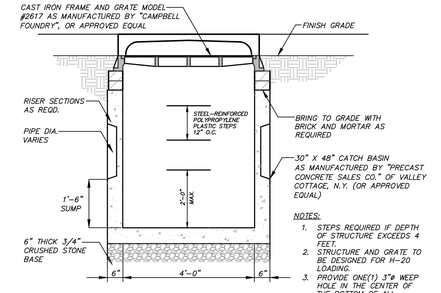
(N.T.S.)




## 30" X 48" DRAIN INLET DETAIL

(N.T.S.)

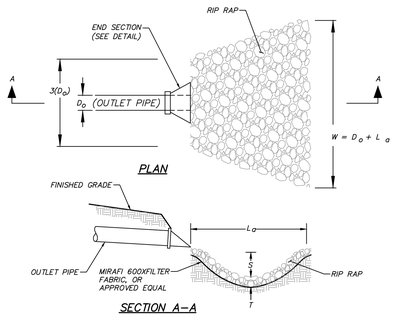
NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.




## CATCH BASIN DETAIL

(N.T.S.)

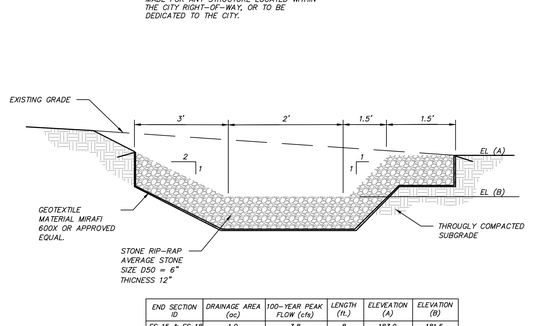
NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.




| END SECTION ID | OUTLET PIPE DIAMETER ($D_o$) | CONTRIBUTING DRAINAGE AREA (AC.) | DISCHARGE (100-YEAR) | D50 RIP RAP SIZE | MAX. RIP RAP SIZE | THICKNESS RIP RAP (T) | LENGTH ($L_a$)MIN. | SUMP DEPTH (S) |
|---|---|---|---|---|---|---|---|---|
| ES 1 | 18" | 3.4 | 8.1 CFS | 6" | 9" | 14" | 11 FT | 2 FT. |
| ES 8 | 15" | 4.3 | 8.3 CFS | 6" | 9" | 14" | 8 FT | 2 FT. |
| ES 13 | 24" | 4.4 | 8.4 CFS | 6" | 9" | 14" | 12 FT | 2 FT. |
| ES 23 | 15" | 0.8 | 4.1 CFS | 6" | 9" | 14" | 8 FT | 2 FT. |
| ES 26 | 12" | 0.2 | 1.1 CFS | 6" | 9" | 14" | 6 FT | 2 FT. |

## ROCK OUTLET PROTECTION DETAIL

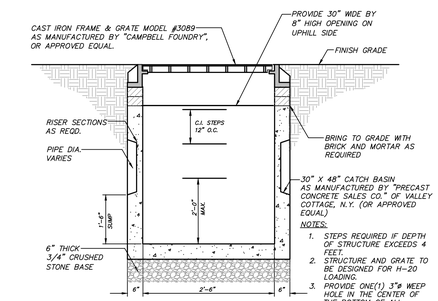
(N.T.S.)




| END SECTION ID | DRAINAGE AREA (ac) | 100-YEAR PEAK FLOW (cfs) | LENGTH (ft.) | ELEVEATION (A) | ELEVATION (B) |
|---|---|---|---|---|---|
| ES 15 & ES 18 | 1.0 | 3.8 | 8 | 183.0 | 181.5 |
| ES 21 | 2.2 | 4.2 | 9 | 186.0 | 184.5 |
| ES 25 | 3.5 | 8.9 | 18 | 178.5 | 177.0 |
| ES 29 | 1.5 | 2.9 | 6 | 185.5 | 184.0 |

## LEVEL SPREADER DETAIL

(N.T.S.)

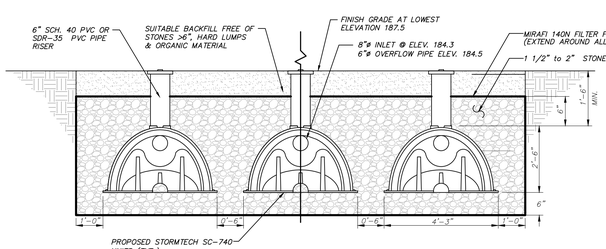



## SIDE DRAIN INLET DETAIL

(N.T.S.)

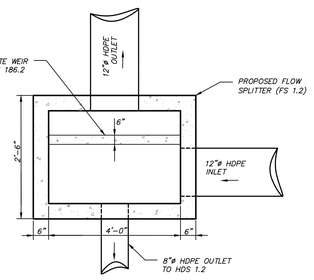
(STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING)

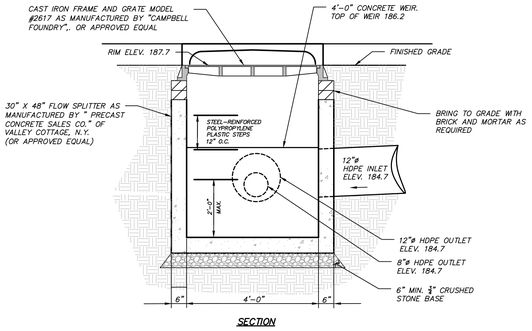
NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.




## STORMWATER INFILTRATION SYSTEM 1.2P (NYSDEC DESIGN I-4) DETAIL

(N.T.S.)

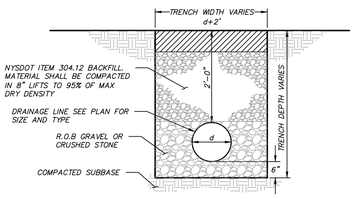



## FLOW SPLITTER FS 1.2 DETAIL

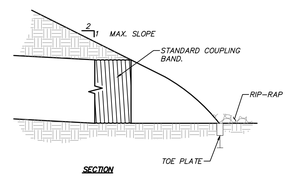
(N.T.S.)

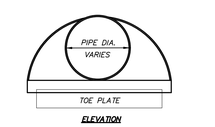
NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.

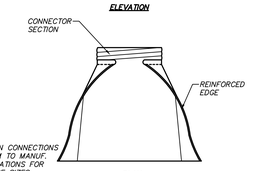



## DRAINAGE LINE TRENCH DETAIL

(N.T.S.)



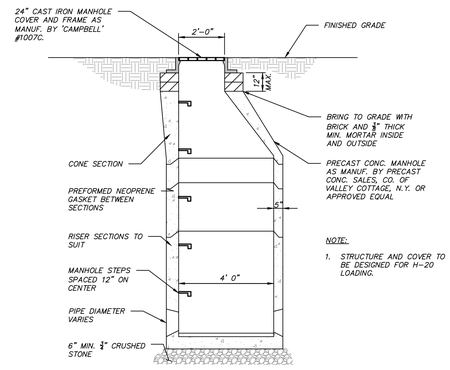




NOTE: END SECTION CONNECTIONS TO CONFORM TO MANUF. RECOMMENDATIONS FOR VARIOUS PIPE SIZES

## END SECTION DETAIL

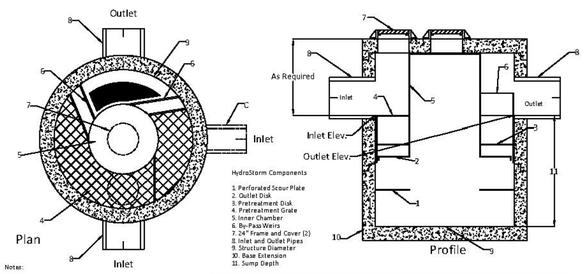
(N.T.S.)




## DRAINAGE MANHOLE DETAIL

(N.T.S.)

NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.




Notes:

A. Use a headloss K factor of 1.04 for hydraulic gradeline calculations
B. Sump depths shown are minimums. Additional depth can be added for site specific capacities
C. Multiple inlet pipes allowed
D. Drops allowed
E. Inlet invert elevations should be the same or higher than the outlet invert elevation. Inlet can be up to 12" lower than outlet if pretreatment area is omitted but 12" must be added to sump depth to maintain overall treatment volume
F. Solid Cover shown. HydroStorm can be designed with an inlet grate if required.
G. Oil capacities given are spill capacities. Oil should be removed from the unit once an oil depth of 2" or more is measured in the inner chamber
H. Sediment depths are maximum holding capacities and not recommended capacities for regular maintenance. Maintenance is recommended annually or once every 2 years.
I. Capacities are rounded down to nearest 5 gal or ft3
J. Base Extensions not provided on standard units. Extensions can be provided if required due to groundwater/buoyancy concerns at the request of the engineer of record

HydroStorm by Hydroworks, LLC
Patent Pending
www.hydroworks.com
888-290-7900

| HydroStorm Dimensions / Capacities | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | Diameter (ft) (I) | Sump Depth (ft) (LL) | Inner Chamber (ft) (S) | Max. Pipe (in) (B) | Volume (gal) | Oil (gal) | Sediment (ft3) |
| HS 7 | 7 | 6 | 3.5 | 42 | 1725 | 410 | 140 |
| HS 8 | 8 | 7 | 4 | 48 | 2530 | 615 | 220 |
| HS 9 | 9 | 7.5 | 4.5 | 54 | 3505 | 850 | 295 |
| HS 10 | 10 | 8 | 5 | 60 | 4700 | 1130 | 385 |
| HS 12 | 12 | 9.5 | 6 | 72 | 8035 | 1875 | 665 |

## HDS 1.2 HYDROWORKS HYDROSTORM HS 6 HYDRODYNAMIC SEPARATOR DETAIL

(N.T.S.)

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

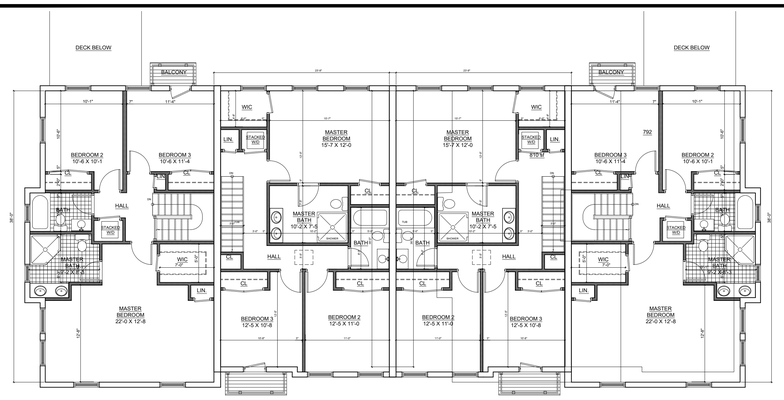
PROJECT: BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING: DETAILS

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET |
| DATE | 8-27-19 | DRAWN BY | J.F.R. | D-5 | 17 / 20 |
| SCALE | AS NOTED | CHECKED BY | A.D.T. | | |

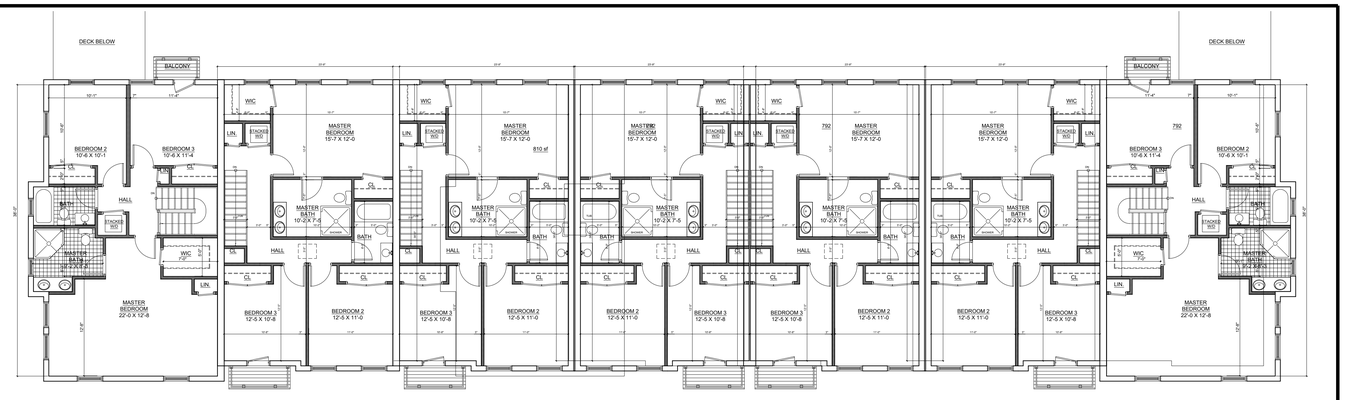
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVE\19131.100 Asbuilt\D-5 1.1P & HDS 1.2 DETAILS.dwg, 7/28/2020 11:58:31 AM, jmoss



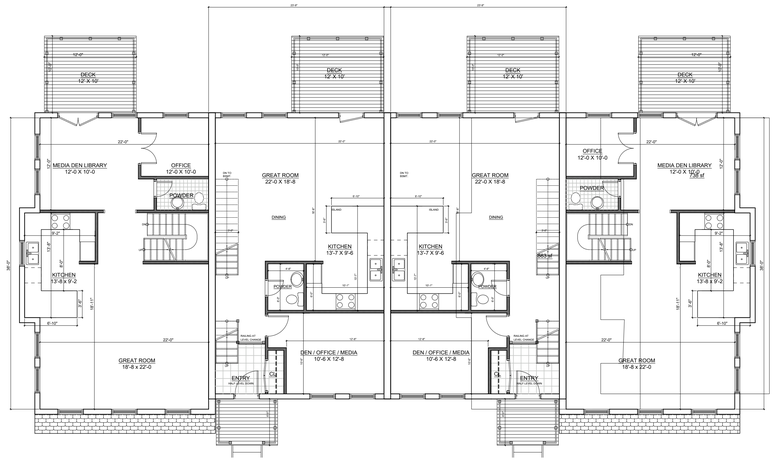

## 2nd Floor Plan

Scale: $\frac{1}{8}$" = 1'-0"



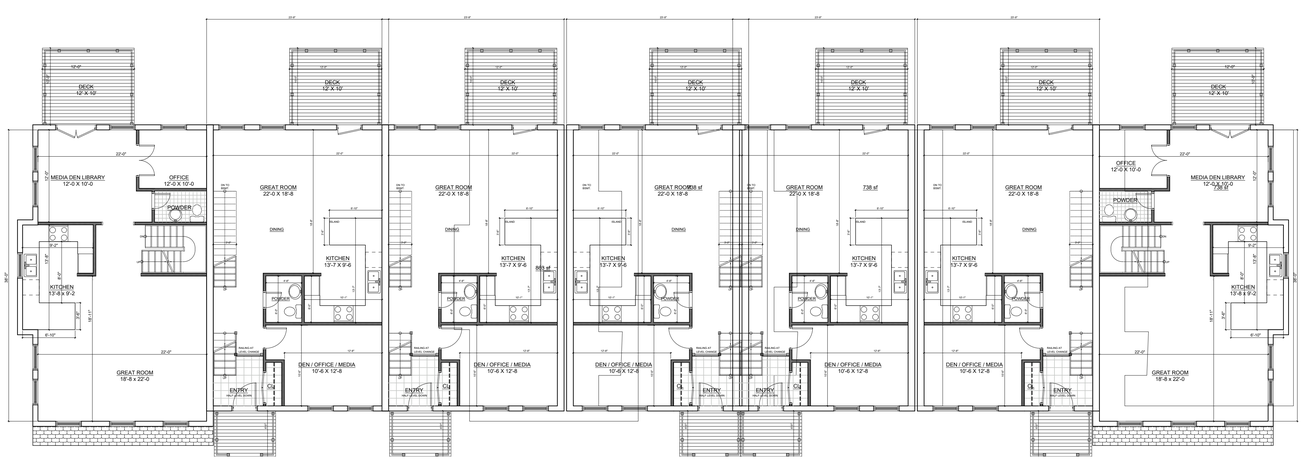

## 2nd Floor Plan

Scale: $\frac{1}{8}$" = 1'-0"



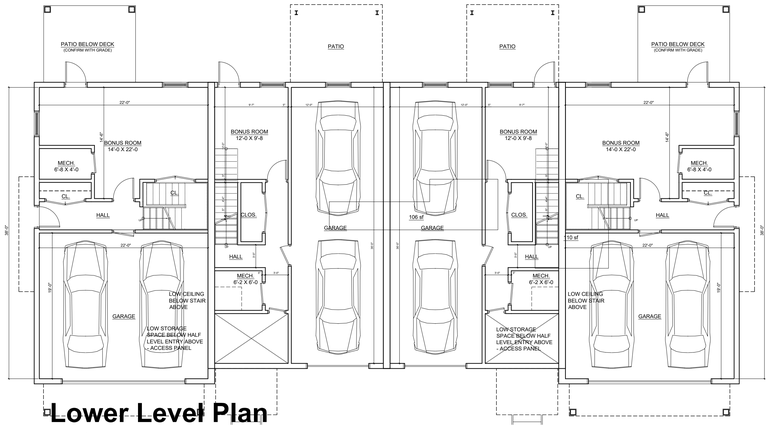

## 1st Floor Plan

Scale: $\frac{1}{8}$" = 1'-0"



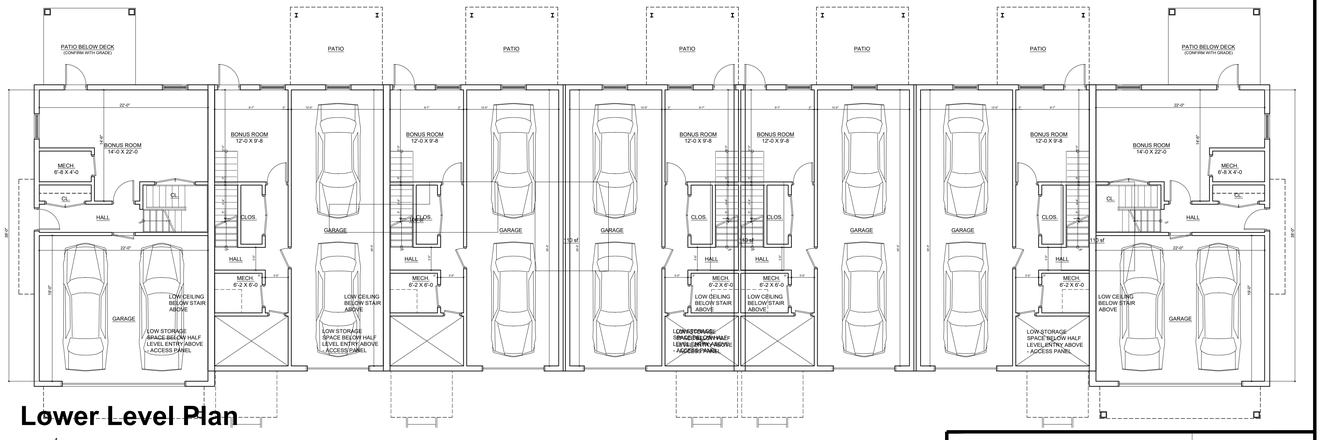

## 1st Floor Plan

Scale: $\frac{1}{8}$" = 1'-0"




## Lower Level Plan

Scale: $\frac{1}{8}$" = 1'-0"




## Lower Level Plan

Scale: $\frac{1}{8}$" = 1'-0"

## 4 Unit Townhouse Plans - Front Garage

## 7 Unit Townhouse Plans - Front Garage

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20 _____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 5 | 7/28/20 | NO CHANGE | AJS |
| 4 | 6/30/20 | NO CHANGE | AJS |
| 3 | 5/26/20 | NO CHANGE | AJS |
| 2 | 4/28/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 1 | 2/25/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |

*Architect:*
***Aryeh Siegel, Architect***
*84 Mason Circle*
*Beacon, New York 12508*

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

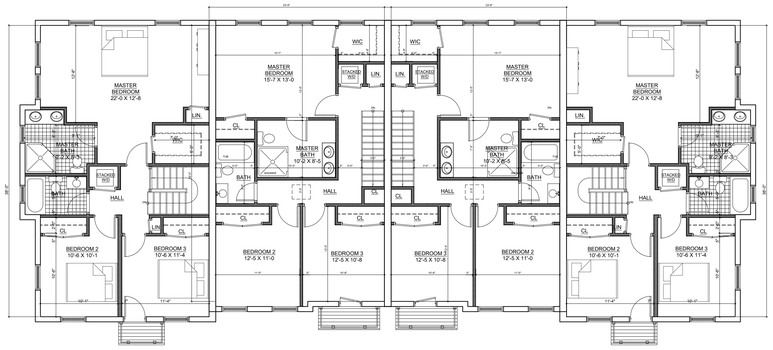
PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
Building Plans – Front Garage

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | |
| DATE | 10-29-19 | DRAWN BY | AJS |
| SCALE | Not to Scale | CHECKED BY | |

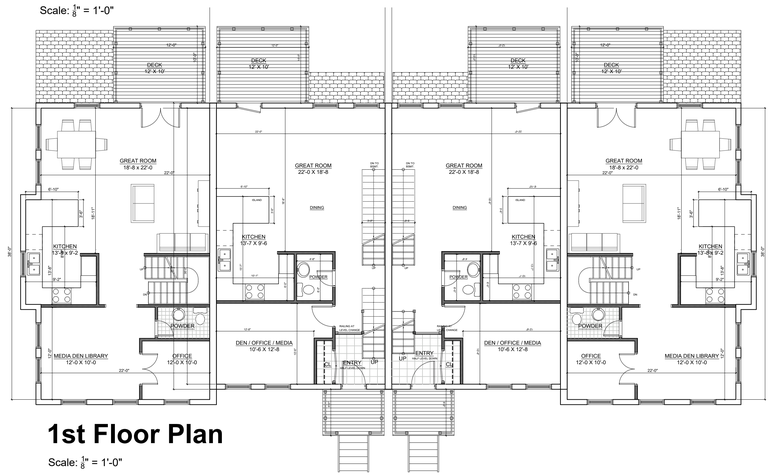
DRAWING NO. A-1

SHEET 18 / 20



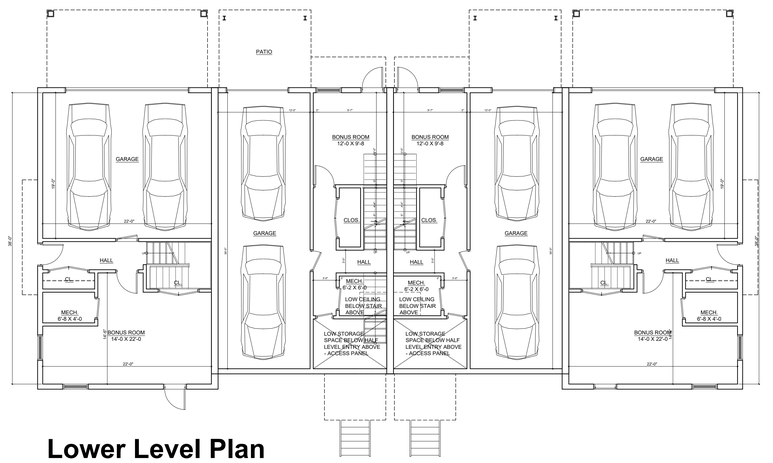

## 2nd Floor Plan

Scale: $\frac{1}{8}$" = 1'-0"




## 1st Floor Plan

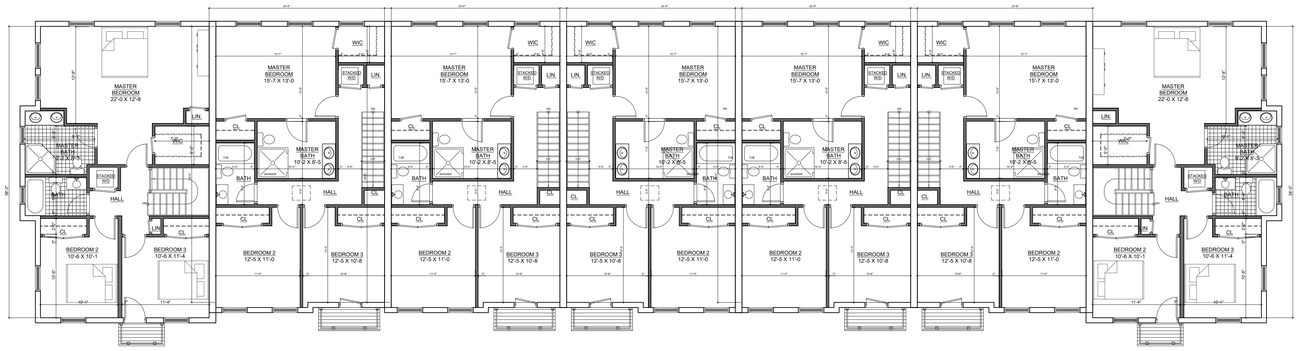
Scale: $\frac{1}{8}$" = 1'-0"




## Lower Level Plan

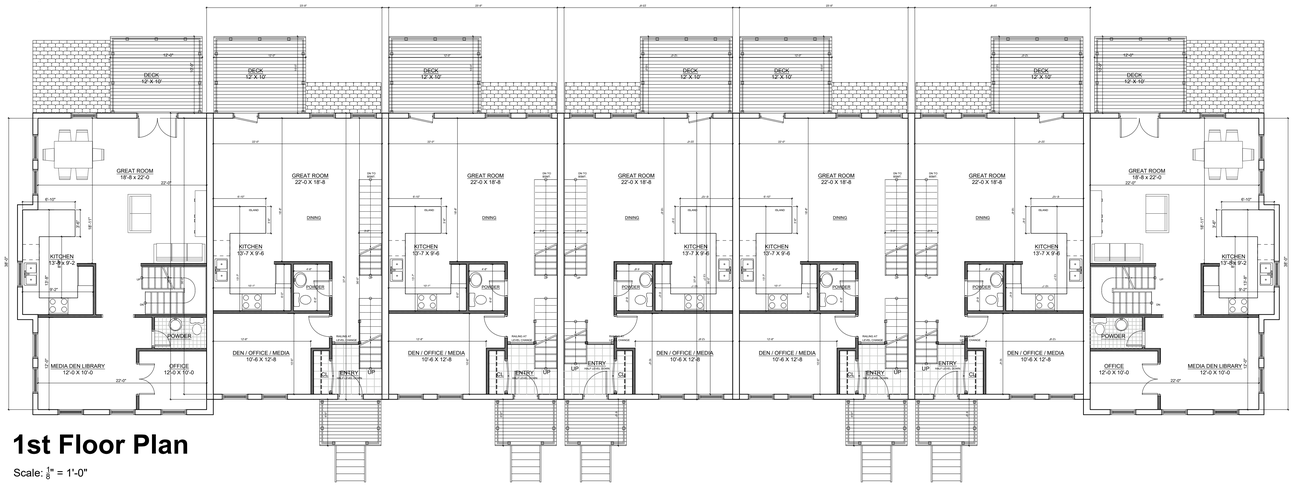
Scale: $\frac{1}{8}$" = 1'-0"

# 4 Unit Townhouse Plans - Rear Garage



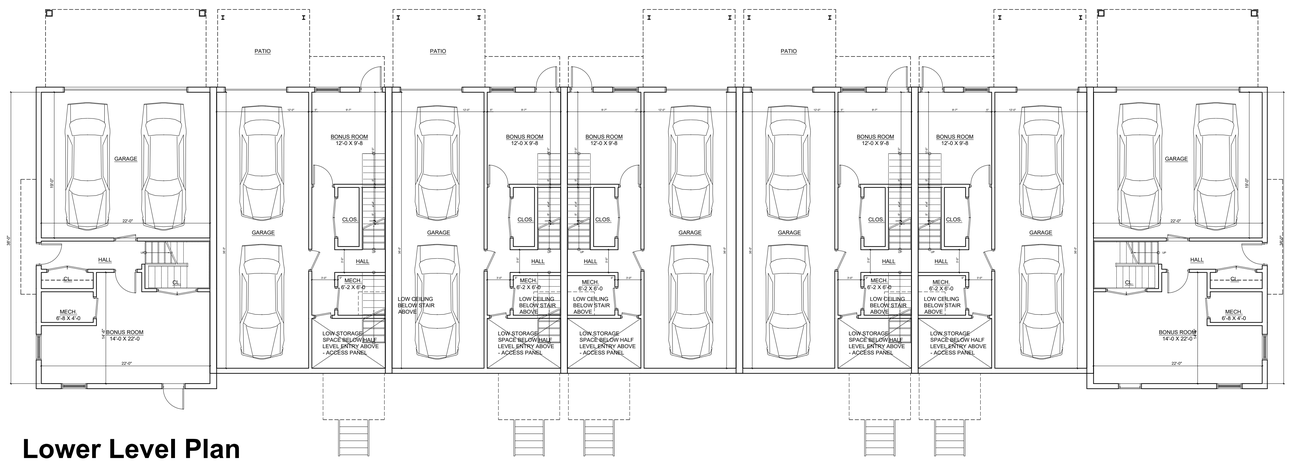

## 2nd Floor Plan

Scale: $\frac{1}{8}$" = 1'-0"




## 1st Floor Plan

Scale: $\frac{1}{8}$" = 1'-0"




## Lower Level Plan

Scale: $\frac{1}{8}$" = 1'-0"

# 7 Unit Townhouse Plans - Rear Garage

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20_____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

*ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.*

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 5 | 7/28/20 | NO CHANGE | AJS |
| 4 | 6/30/20 | NO CHANGE | AJS |
| 3 | 5/26/20 | NO CHANGE | AJS |
| 2 | 4/28/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 1 | 2/25/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |

*Architect:*
***Aryeh Siegel, Architect***
*84 Mason Circle*
*Beacon, New York 12508*

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
*3 Garrett Place*
*Carmel, NY 10512*
*(845) 225-9690*
*(845) 225-9717 fax*
*www.insite-eng.com*

PROJECT: BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING: Building Plans – Rear Garage

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | |
| DATE | 10-29-19 | DRAWN BY | AJS |
| SCALE | Not to Scale | CHECKED BY | |

DRAWING NO. A-2 | SHEET 19/20

**ROOF:**
ARCHITECTURAL ASPHALT SHINGLES. COLOR: GRAY

**PARAPETS:**
SHEET METAL FLASHING. COLOR: LEAD GRAY

**WINDOWS:**
VINYL CLAD DOUBLE HUNG WINDOWS BY ANDERSEN OR APPROVED EQUAL. COLOR: WHITE

**SIDING:**
HORIZONTAL VINYL SIDING. COLOR: VARIATIONS ON LIGHT GRAY SHADES. NOTE THAT EACH BUILDING GROUP WILL BE ONE COLOR, BUT THERE WILL BE 3 COLORS OF SIDING THROUGHOUT THE PROJECT

**WINDOW TRIM:**
AZEK. COLOR: WHITE

**PORCH & BALCONY TRIM:**
AZEK. COLOR: LIGHT GRAY




Elevation: Front

**BRICK:**
GLEN GARY THIN BRICK. COLOR: 56DD OR APPROVED EQUAL




Elevation: Right Side



Elevation: Left Side

**RAILING:**
TREX RAILING SYSTEM AND DECKING, OR APPROVED EQUAL. COLOR: LIGHT GRAY

**GARAGE DOOR:**
AUTOMATIC ROLLUP GARAGE DOOR. PANELS AND GLAZING SIMILAR TO DRAWING. COLOR: LIGHT GRAY



Elevation: Rear

## Elevations: Rear Garage Entrance

Scale: $\frac{1}{16}$" = 1'-0"



View at Garage Side

Not to Scale

**ROOF:**
ARCHITECTURAL ASPHALT SHINGLES. COLOR: GRAY

**PARAPETS:**
SHEET METAL FLASHING. COLOR: LEAD GRAY

**WINDOWS:**
VINYL CLAD DOUBLE HUNG WINDOWS BY ANDERSEN OR APPROVED EQUAL. COLOR: WHITE

**SIDING:**
HORIZONTAL VINYL SIDING. COLOR: VARIATIONS ON LIGHT GRAY SHADES. NOTE THAT EACH BUILDING GROUP WILL BE ONE COLOR, BUT THERE WILL BE 3 COLORS OF SIDING THROUGHOUT THE PROJECT

**WINDOW TRIM:**
AZEK. COLOR: WHITE

**PORCH & BALCONY TRIM:**
AZEK. COLOR: LIGHT GRAY




Elevation: Front

**BRICK:**
GLEN GARY THIN BRICK. COLOR: 56DD OR APPROVED EQUAL



Elevation: Right Side



Elevation: Left Side

**RAILING:**
TREX RAILING SYSTEM AND DECKING, OR APPROVED EQUAL. COLOR: LIGHT GRAY

**GARAGE DOOR:**
AUTOMATIC ROLLUP GARAGE DOOR. PANELS AND GLAZING SIMILAR TO DRAWING. COLOR: LIGHT GRAY



Elevation: Rear

## Elevations: Front Garage Entrance

Scale: $\frac{1}{16}$" = 1'-0"



View at Entry Side

Not to Scale

NOTE THAT THE RENDERINGS ARE ARTISTIC INTERPRETATIONS OF THE PROPOSED BUILDING DESIGN TO AID IN REVIEWING THE PROPOSED DESIGN OF THE BUILDINGS ONLY; AND ARE NOT INTENDED AS DETAILED REPRESENTATIONS OF SITE CONDITIONS. CHANGES TO DESIGN ELEMENTS MAY OCCUR IN THE FINAL CONSTRUCTION DOCUMENTS TO SUIT TENANT LAYOUTS AND BUILDING CODE REQUIREMENTS

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE

_____ DAY OF _____, 20____, SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20____ BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 5 | 7/28/20 | UPDATE ELEVATIONS | AJS |
| 4 | 6/30/20 | UPDATE RENDERING | AJS |
| 3 | 5/26/20 | NO CHANGE | AJS |
| 2 | 4/28/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 1 | 2/25/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |

*Architect:*
***Aryeh Siegel, Architect***
*84 Mason Circle*
*Beacon, New York 12508*

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
Elevations / Views

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | |
| DATE | 10-29-19 | DRAWN BY | AJS |
| SCALE | Not to Scale | CHECKED BY | |

DRAWING NO. A-3

SHEET 20 / 20

# Sustainability Report

Beacon Views
Beacon, New York
July 28, 2020

**Summary**
The Proposed Project will conserve energy resources by utilizing sustainability measures and energy saving measures such as energy saving appliances, smart HVAC controls, energy efficient window specifications, and increased insulation values. Additionally, when this attached residential project is compared to a similarly scaled detached single-family residential development, the attached townhouse proposal provides inherent energy efficiencies because of shared demising walls, shared utility resources, and a more compact overall footprint.

**BUILDING ENVELOPE:**
The building thermal envelope for all buildings will meet or exceed the requirements of the International Energy Conservation Code for residential buildings. Target values for building envelope components are as follows, and will be further modified by mandatory provisions of the New York Stretch Code overlay to the Energy Conservation Code as adopted by the City of Beacon:

- Windows/fenestration U-Factor: 0.32 or less.
- Glazed fenestration SHGC: 0.25 or less
- Attic/Roof R-Value: 49 or greater
- Wood frame wall R-Value: R-21 (cavity insulation) plus R-5 continuous insulation
- Floor R-Value: R-30
- Basement wall R-Value: R-10
- Crawl space wall R-Value R-10

The Applicant has also researched low embodied carbon concrete. It appears that the material is not yet available for general use in the New York market, but if it becomes available by the time the project is constructed, the Applicant will consider using this material if it's feasible in terms of structure and cost. Embodied carbon refers to the carbon emissions generated as a result of the manufacturing and transportation of material and the construction of building and infrastructure projects. Low embodied concrete is defined as concrete that has been verified, as measured by Global Warming

84 Mason Circle | ajs@ajsarch.com | *Tel* 845 838 2490
Beacon, New York 12508 | www.ajsarch.com | *Fax* 845 838 2657

Potential metric, to embody lower carbon emissions as compared to the baseline embodied carbon emissions of conventional concrete.

**MECHANICAL / ELECTRICAL / PLUMBING SYSTEMS:**
The building mechanical systems will meet or exceed the requirements of the International Energy Conservation Code for residential buildings. A further goal will be to meet targets for Energy Star.

Although detailed specifications of each of these systems have not been determined at this time, systems will meet the requirements of the International Energy Conservation Code. Examples of requirements are as follows:

- Controls: One thermostat shall be provided for each separate heating and cooling system (each home to have 2 zones). Programmable thermostats will be utilized.

- Hot water boilers: When supplying heat to each home through one or two-pipe heating systems, they shall have an outdoor setback control that lowers the boiler water temperature based on the outdoor temperature.

- Ducts and air handlers: Supply & return ducts with a size of 3" dia. or greater shall be insulated to a minimum of R-8, and those with a size of less than 3" dia. shall be insulated to a minimum of R-6. Ducts, air handlers and filter boxes shall be sea le d.

- Mechanical system piping insulation: Mechanical system piping capable of carrying fluids above I 05 degrees F or below 55 degrees F shall be insulated to a min. of R- 3.

- Heated water circulation & temperature maintenance systems: Heated water circulation systems shall be provided with a circulation pump. Controls shall start the pump based on demand, and shall automatically turn off the pump when the water reaches the desired temperature and when there is no longer demand for hot water r.

- Demand recirculation systems: A water distribution system having one or more recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold-water supply pi pe. Pumps shall have controls that start on-demand from a user/fixture or sense the flow of hot or tempered water to a fixture fitting or appliance.

- Hot water pipe insulation: Insulation for hot water pipe with a minimum thermal resistance of R-3 shall apply to ¾" dia. or larger piping, piping serving more than (I) dwelling un it , piping located outside the conditioned space, piping from the water heater to a distribution manifold, piping located under a floor slab, or buried piping.

- Mechanical ventilation: The building shall be provided with ventilation that meets the requirements of the International Residential Code or the International Mechanical Code. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

- HVAC equipment sizing & efficiency rating: Shall be sized in accordance with ACCA Manual S based on building load ds. New or replaced HVAC equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed. Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the IECC - Commercial Provisions in lieu of Section R40 3.

- Lighting equipment: Lamps in permanently installed lighting fixtures shall be high efficacy lamps (LED), with the exception of low-voltage lighting in certain locations.

**INTERIOR FINISHES, EQUIPMENT:**

Finishes: Although the specific interior finishes have not been selected at this time, they will be designed to meet sustainability standards such as Greengard Indoor Air Quality. Products with a high natural material content, as well as a high recycled content and a non-VOC content will be selected. Also, every effort will be made to select products manufactured within the United States, and if possible, within a 500- mile radius of the project site.

Appliances: All selected appliances will be Energy Star rated.

**GREENHOUSE GAS EMISSIONS**

Greenhouse gas emissions for the 40-unit townhouse project are projected to be less than a similarly situated single family home project. On a per-unit basis, single family homes generally have a 45-50 percent higher carbon utilization than for attached residential units.

INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.

# STORMWATER POLLUTION PREVENTION PLAN

**Prepared For**

## BEACON VIEWS

**City of Beacon, New York**

**July 28, 2020**




**Applicant Information:**

Beacon Views, LLC
500 River Avenue
Wakefield, New Jersey 08701

**Note: This report in conjunction with the project plans make up the complete Stormwater Pollution Prevention Plan.**

Prepared by:
Insite Engineering, Surveying & Landscape Architecture, P.C.
3 Garrett Place
Carmel, New York 10512

# CONTENTS

**PAGE**

**1.0 INTRODUCTION ..... 1**
1.1 Project Description ..... 1
1.2 Existing Stormwater Runoff Conditions ..... 1
1.3 Proposed Stormwater Runoff Conditions ..... 1

**2.0 STORMWATER MANAGEMENT ..... 2**
2.1 NYSDEC Runoff Reduction Volume, RRv ..... 3
2.2 Water Quality Volume, $WQ_v$ ..... 5
2.3 Stream Channel Protection Volume, $CP_v$ ..... 7
2.4 Overbank Flood Control, $Q_p$, and Extreme Flood Control, $Q_f$ ..... 7

**3.0 STORMWATER CONVEYANCE SYSTEM ..... 8**

**4.0 EROSION AND SEDIMENT CONTROL ..... 8**
4.1 Temporary Erosion and Sediment Control Facilities ..... 8
4.2 Permanent Erosion and Sediment Control Facilities ..... 9

**5.0 IMPLEMENTATION, MAINTENANCE & GENERAL HOUSEKEEPING ..... 9**
5.1 Construction Phase ..... 9
5.2 Soil Restoration ..... 10
5.3 Long Term Maintenance Plan ..... 12

**APPENDICES**

| | |
|---|---|
| Appendix A | NYSDEC Water Quality Volume and Runoff Reduction Calculations |
| Appendix B | Pre-Development Computer Data |
| Appendix C | Post-Development Computer Data |
| Appendix D | Project and Owner information |
| Appendix E | NYSDEC SPDES for Construction Activities Construction Site Log Book |
| Appendix F | NYSDEC Stormwater Design Manual Chapter 5 Analysis |
| Appendix G | NYSDEC Stormwater Management Practice Construction and Maintenance Inspection Checklist |
| Appendix H | Hydrodynamic Separator Sizing and Maintenance Manual |
| Appendix I | NYSDEC Full Environmental Assessment Form |
| Appendix J | Pipe Sizing Calculations |
| Appendix K | Swale Sizing Calculations |
| Appendix L | Draft NYSDEC Notice of Intent |

**FIGURES**

Figure 1: Location Map
Figure 2: Pre-Development Drainage Map
Figure 3: Post-Development Drainage Map
Figure 4: Testing Plan

## 1.0 INTRODUCTION

### 1.1 Project Description

The proposed project is located off of Conklin Street in the City of Beacon. The site is approximately 8.6 acres and is identified as Tax Map No. 6055-03-331123. The parcel is located in the RD-5 zoning district. The subject parcel and surroundings are shown on Figure 1. The project proposes seven (7) multi-family townhouse buildings (40 total townhouse units) and associated appurtenances. The primary access to the site will be off Hastings Drive, through the adjoining the former St. Francis Hospital property. An emergency access drive will be provided to the north, through the adjacent parcel. It is proposed to capture and treat the stormwater runoff associated with the proposed improvements.

### 1.2 Existing Stormwater Runoff Conditions

The subject project is located on one tax parcel off of Conklin Street, immediately north of Hastings Drive. The existing ground cover on the site is characterized as a mixture of woods, open grassed meadow areas and impervious surfaces from the adjacent properties. The property generally drains from north to south down to the onsite wetland.

The hydrologic soils groups for the project consists of C/D soils. The designations of the onsite soils located within the proposed limits of disturbance consist of Bernardston Silt Loam (BeB), Canandigua Silt Loam (Ca), and Nassau-Cardigan Complex (NwC) as identified on the Soil Conservation Service Web Soil Survey. The soils boundaries are shown on Figure 2 and 3 of this report.

As previously stated, the stormwater runoff from the existing property generally drains from north to south towards the existing onsite wetland. Approximately 20 acres of offsite stormwater runoff is conveyed through the subject property from offsite runoff. The analysis included in the project SWPPP utilizes one design line, Design Line 1, to assess the stormwater runoff from the property and any potential impacts from development to the existing natural resources on the property. Design Line 1 is located along a portion of the proposed wetland boundary in the post-development condition in order to analyze the stormwater runoff from all developed areas in the post-development condition. The Pre-Development Drainage Map (Figure 2 of this report) shows the location of Design Line 1. The contributing area to Design Line 1 is identified as subcatchment PRE.

### 1.3 Proposed Stormwater Runoff Conditions

As previously stated, the proposed application includes the construction of seven (7) multi-family town house buildings, asphalt driveway, parking areas and associated appurtenances. Stormwater mitigation for the newly created impervious surfaces will be provided in the form of proposed stormwater management practices (SMP's) discussed further in later sections of this report. The proposed SMP's will be designed to capture and treat runoff from the impervious surfaces associated with the proposed buildings, driveway, parking areas and pedestrian walkways.

It is proposed to maintain the existing drainage patterns on the site to the maximum extent practical in the proposed condition to minimize the impact to the existing downstream wetland. As previously discussed, the stormwater analysis included in the SWPPP utilizes one design line, Design Line 1. Design Line 1, is located along the proposed wetland boundary line in order to analyze the stormwater runoff from all areas of the propose development. Stormwater treatment for the subject project will be accomplished with two different practices including a subsurface infiltration system and a P-5 Pocket Pond. The stormwater management practices have been sized to capture and treat the Water Quality Volume from the developed area. A hydrodynamic separator is proposed upstream of the subsurface infiltration system for pretreatment only to satisfy the requirements of the Design Manual.

The stormwater runoff from the proposed development will be captured in a collection system and conveyed to the stormwater management practices. The stormwater runoff will be treated by two (2) stormwater management practices, including a I-4 Subsurface Infiltration System (1.2P) and a P-5 Pocket Pond (1.1P). Pretreatment of the stormwater runoff will be provided with a hydrodynamic separator upstream of the proposed subsurface infiltration system, and a forebay in the pocket pond. A flow splitter is proposed upstream of the subsurface infiltration system to discharge the water quality volume to the practice for treatment and bypass the larger storm events.

The contributing area to the subsurface infiltration system (1.2P) is shown as subcatchment 1.2S. Subcatchment 1.2S consists of proposed impervious surface on the southeast side of the project site including townhouse units 35-40 and associated parking area and is collected and conveyed to the proposed infiltration system through roof drains, drain inlets and drainage piping. The contributing area to the pocket pond (1.1P) is shown as subcatchment 1.1S. Subcatchment 1.2S consists of the majority of the proposed impervious area that is collected and conveyed through roof drains, drainage structures and drainage piping. The untreated/undeveloped area directly tributary to Design Line 1 in the post-development condition is shown as subcatchment 1.0S. The subcatchments are shown in Figure 3 of this report. A summary of the subcatchments in the post-development condition including the downstream treatment practice, total area and amount of impervious area within the subcatchment is shown in Table 1.3.1 below.

**Table 1.3.1 – Post Development Subcatchment Summary**

| Subcatchment | Stormwater Management Practice | Total Area[1] (ac) | Impervious Area[1] (ac) |
|---|---|---|---|
| 1.0S | Not Treated | 18.4 | 0.5[2] |
| 1.1S | 1.1P | 3.55 | 2.35 |
| 1.2S | 1.2P | 0.55 | 0.45 |

[1] Refer to subcatchment areas in Appendix C.
[2] The impervious area within subcatchment 1.0S is existing from the properties adjacent to the project site that are also tributary to Design Line 1.

As shown in the following sections of this report, the stormwater quality and quantity for the proposed development have been mitigated to the maximum extent practicable to minimize the impacts to the existing conditions of the downstream, onsite wetland. Additionally, an erosion and sediment control plan has been prepared in accordance with the *New York State Standards and Specifications for Erosion and Sediment Control* to protect the existing waterbodies and drainage features during construction activities and in the post development condition.

## 2.0 STORMWATER MANAGEMENT

The proposed stormwater management system for the Beacon Views has been designed to meet the requirements of local, city, and state stormwater ordinances and guidelines, including but not limited to those of the City of Beacon and the NYSDEC.

Since the subject project proposes the disturbance of more than one (1) acre, coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001 is required. In order to meet the requirements, set forth by this permit, the latest edition of the NYSDEC *New York State Stormwater Management Design Manual* (NYSSMDM) was referenced for the design of the proposed stormwater management system. The NYSSMDM specifies five design criteria that are discussed in detail below. They are Runoff Reduction Volume, Water Quality Volume, Stream Channel Protection Volume, Overbank Flood Control, and Extreme Flood Control. The first two of the requirements relates to treating water quality, while the later pertain to stormwater quantity (peak flow) attenuation.

To address stormwater quantity requirements of the NYSDEC, the “HydroCAD” Stormwater Modeling System,” by HydroCAD Software Solutions LLC in Tamworth, New Hampshire, was used to model and

assess the peak stormwater flows for the subject project. HydroCAD is a computer aided design program for modeling the hydrology and hydraulics of stormwater runoff. It is based primarily on hydrology techniques developed by the United States Department of Agriculture, Soil Conservation Service (USDA, SCS) TR-20 method combined with standard hydraulic calculations. For details on the input data for the subcatchments and design storms, please refer to Appendices B and C.

The input requirements for the HydroCAD computer program are as follows:

Subcatchments (contributing watershed/sub-watersheds)

- Design storm rainfall in inches
- CN (runoff curve number) values which are based on soil type and land use/ground cover
- Tc (time of concentration) flow path information
- Watershed Area in Acres

Stormwater Basins

- Surface area at appropriate elevations
- Flood elevation
- Outlet structure information

The precipitation values and intensity duration frequency (IDF) curves for the 1-Year, 10-Year, 100-Year 24-hour design storm events and rainfall distribution curves utilized for this report were obtained from the information provided by Northeast Regional Climate Center (NRCC) and the Natural Resources Conservation Service (NRCS) which is available online at *www.precip.eas.cornell.edu.* The values provided for all design storms analyzed have been listed below.

**Table 2.0.1 – Precipitation Values for Corresponding Design Storms**

| Design Storm | 24-Hour Rainfall |
|---|---|
| 1-Year | 2.6” |
| 10-Year | 4.7” |
| 100-Year | 8.3” |

The CN (runoff curve number) values utilized in this report were referenced from the USDA, SCS publication *Urban Hydrology for Small Watersheds*. The following is a summary of the various land uses/ground covers and their associated CN values utilized in this report.

**Table 2.0.2 – Project Ground Cover and Associated Curve Numbers (CN)**

| Land Use/Ground Cover | CN Value |
|---|---|
| Woods, D Soil | 77 |
| Meadow, D Soil | 78 |
| >75% Grass Cover, D Soil | 80 |
| Impervious Surface | 98 |

## 2.1 NYSDEC Runoff Reduction Volume, $RR_v$

The Runoff Reduction Volume ($RR_v$) criterion is intended to replicate pre-development hydrology by maintaining preconstruction infiltration, peak flow runoff, discharge volume, as well as minimizing concentrated stormwater flow. As stated in Chapter 4 of the Design Manual, $RR_v$ may be treated with standard SMP’s with $RR_v$ capacity sized in accordance with the Chapter 4/6 requirements, or with green infrastructure practices (GIP’s) sized in accordance with the requirements set forth in Chapter 5. Runoff reduction is achieved when runoff from a site is captured, directed to a

SMP or a GIP, infiltrated to the ground, reused, or removed by evapotranspiration, so it does not contribute to the stormwater discharge from the site. The goal for each site is to reduce the entire $WQ_v$ (100%) through the implementation of GIP's and standard SMP's with $RR_v$ capacity. However, if 100% of the $WQ_v$ cannot be reduced by applying a combination of green infrastructure techniques and standard SMP's with $RR_v$ capacity, "they must, at a minimum, reduce runoff from a percentage of the impervious area constructed as part of the project using the green infrastructure techniques and standard SMPs with $RR_v$ capacity. In addition, the designer must provide justification in the SWPPP that evaluates each of the green infrastructure techniques listed in Table 3.2 and identify the specific site limitations that make application of the technique(s) infeasible."

The project SWPPP cannot provide 100% of the $WQ_v$ through the implementation of GIP's or standard SMP's with $RR_v$ capacity. This is because the onsite soils conditions and depth to groundwater in portions of the site, thus minimizing the area where infiltration practices for treatment of the $RR_v$ / $WQ_v$ is possible. With respect to runoff volume, the project SWPPP addresses and satisfies the $RR_V$ requirements of the Design Manual. In order to meet these requirements to the maximum extent practicable, the project SWPPP has minimized the creation of impervious surfaces to the maximum extent practicable. The types of GIP's and standard SMP's with $RR_v$ capacity that can be employed onsite are limited. The project SWPPP as required by the Design Manual meets and exceeds the $RR_v$ minimum required. In addition, as required by the Design Manual, an analysis evaluating each of the green infrastructure techniques in Table 3.2 has been provided in Appendix F. For this project there is one proposed infiltration practice employed towards meeting the $RR_v$ requirements.

The project proposes an I-4 Subsurface Infiltration System in an area of the project site where the soil conditions meet the Design Manual requirements. These stormwater practice, sized in accordance with the Design Manual, will be applied as a GIP/SMP with volume reduction towards meeting the $RR_v$ minimum. Sizing calculations for the subsurface infiltration practice are provided in Section 2.2 below.

For a calculation of the Initial $WQ_v$ / $RR_v$, the $RR_v$ minimum, the $RR_v$ / $WQ_v$ required, and the $RR_v$ provided, refer to Appendix A. In calculating the $RR_v$ minimum, onsite soils belongs to the Hydrologic Soil Groups D. These soil groups have a specific reduction factor of 0.20. The table below summarizes the $RR_v$ requirements for the site, as calculated in Appendix A.

**Table 2.1.1 Runoff Reduction Volume Summary**

| Design Line | Initial $WQ_v$ / $RR_v$ (c.f.)[1] | $RR_v$ Minimum (c.f.) | $WQ_v$ $RR_v$ Required (Initial $WQ_v$ / $RR_v$ minus $RR_v$ provided through GIP with Area Reduction) (c.f.) | $RR_v$ Provided (c.f.) | $WQ_v$ Required for Downstream SMP (c.f.) |
|---|---|---|---|---|---|
| Design Line 1 | 13,300 | 2,704 | 13,300 | 3,572 | 9,728 |

[1] Refer to Appendix A for Initial $WQ_v$ Calculations

As noted in the table above the project has provided greater than the $RR_v$ minimum. By implementing GIP's to the greatest extent practicable, and exceeding the $RR_v$ minimum, the NYSDEC $RR_v$ requirement has been addressed. As previously stated, 100% of the $WQ_v$/$RR_v$ required could not be provided due to onsite soil conditions and the limited area where infiltration is feasible. As 100% of the $WQ_v$ / $RR_v$ required was not provided for the subcatchments, a downstream standard SMP must be provided to treat the difference between the $WQ_v$ / $RR_v$ required and the $RR_v$ provided. A P-5 Pocket Pond will be provided as the primary downstream stormwater management practice to treat the remaining $WQ_v$ for the subcatchments. As the WQv for subcatchment 1.1S, shown in Table

2.2.1, is greater than the remaining WQv required, the Pocket Pond has been sized to treat the greater $WQ_v$. The proposed Pocket Pond is being provided to meet stormwater quality/quantity requirements of the NYSDEC.

2.2 NYSDEC Water Quality Volume, $WQ_v$

The stormwater management practices have been designed in accordance with the *Performance Criteria* (Chapter 4) of the NYSSMDM. As outlined in Chapter 4, the WQv is the runoff volume produced during the 90% storm. The proposed infiltration practices have been designed to treat the WQv in accordance with the NYSSMDM. The following equation, per Chapter 4, was used to determine the water quality volume for the 90% storm for each of the contributing areas to the treatment practices:

$$\text{The water quality volume shall be } WQ_v = \frac{(P)(R_v)(A)}{12}$$

Where,

$WQ_v$ = water quality volume (in acre-feet)
P = 90% Rainfall Event Number
$R_v$ = 0.05 + 0.009(I), where I is percent impervious cover
A = site area in acres

The stormwater management practices have been designed in accordance with the *Performance Criteria* (Chapter 4) of the NYSSMDM. As outlined in Chapter 4, the WQv is the runoff volume produced during the 90% storm. The proposed infiltration practices have been designed to treat the WQv in accordance with the NYSSMDM. The equation above, per Chapter 4, was used to determine the water quality volume for the 90% storm for each of the contributing areas to the treatment practices:

**Table 2.2.1 - Water Quality Volume Calculation Summary**

| Subcatchment | $WQ_v$[1] (cf) |
|---|---|
| 1.1S | 11,163 |
| 1.2S | 2,136 |

[1] For detailed calculations see Appendix A

As previously stated, there are two stormwater management practices proposed as part of the development of the site to meet both the WQv and RRv requirements. Each practice has been designed to treat the Water Quality Volume from the contributing area. The subsurface infiltration practice is designed as an offline practice with a flow splitter upstream of the practice. The infiltration practice is sized to treat at a minimum the WQv from the contributing area, while allowing portions of larger storms to discharge from the infiltration practice through an overflow pipe as allowed by the NYSSMDM. The overflow pipe is set to allow the full WQv storage within the practice as required by the Design Manual. The calculation of the WQv is performed per the methods of the NYSSMDM in Appendix A.

Soil testing was performed in the location of the proposed stormwater management practices. Infitlration testing was performed for the proposed subsurface infiltration system. Testing results can be found on Figure 4. Soil and infiltration test results meet the stormwater infiltration practice requirements set forth in the Design Manual for separation to distances and an infiltration rate greater than 0.5 inches per hour.

Pretreatment has been provided for the proposed subsurface infiltration system in the form of a hydrodynamic separator. The hydrodynamic separator is proposed for pretreatment only and is not deisnged as a proprietary stormwater management practice to treat the stormwater runoff. The peak

flow for the 1-year storm was used to size the hydrodynamic separator used as pretreatment for the infiltration system. Per the Design Manual requirements a minimum pretreatment volume of 100% of the $WQ_v$ must be provided for an infiltration facility where the infiltration rate for the underlaying soils is greater than 5.0 inches per hour. By sizing the hydrodynamic separator for the peak flow from the 1-year storm event, pretreatment for greater than 100% of the $WQ_v$ is provided. The data (including capacities) for the hydrodynamic separator is included in Appendix H. Although the Hydroworks HydroStorm HS 6 does not meet the NYSDEC requirements of TSS and phosphorous removal to be used as a proprietary practice to treat new impervious development, it is a verified proprietary practice to be used for pretreatment. The table below summarizes the WQv-year peak flows and hydrodynamic separate flow rates.

**Table 2.2.2 – Pretreatment Hydrodynamic Separator Summary**

| Stormwater Management Practice | WQv[1] Peak Flow (C.F.S). | Hydrodynamic Separator Model | Hydrodynamic Separator Capacity (C.F.S.) |
|---|---|---|---|
| 1.2P | 1.84 | HydroStorm HS 6 | 1.98 CFS |

[1] For detailed calculations see Appendix A

As noted in the table above the capacity of the hydrodynamic separator exceeds the calculated WQv peak flow. The hydrodynamic separator has an internal bypass capable of passing the flows from the contributing areas from the larger storm events.

The P-5 pocket pond has been sized in accordance with Chapter 6 of the Design Manual as shown in the table below. The P-5 Pocket Pond has been sized to store a minimum of 50% of the WQv in the permanent pool and a maximum of 50% in extended detention. As previously stated, the P-5 Pocket Pond has been sized for the WQv calculated in Appendix A as the WQv from the contributing area. The provided volume for the P-5 Pocket Pond can be verified in the stage storage tables contained in Appendix C. A P-5 Pocket Pond was chosen due to the overall contributing area to the proposed basin.

**Table 2.1.3 P-5 Pocket Pond Summary**

| Design Elements | Required | Provided | Remarks |
|---|---|---|---|
| Pond Location | Not within Jurisdictional Waters | Outside of Jurisdictional Waters | See Project Plans |
| Forebay Volume | 10% of WQv (1,116 cubic feet) | 18% of WQv (2,050 cubic feet) | See Appendix C |
| Forebay Depth | 4' Min. – 6' Max. | 5' Provided | See Project Plans |
| WQv Storage | 50% Min. within Permanent Pool (5,582 cubic feet) | 50%+ within Permanent Pool (10,715 cubic feet) | See Appendix C |
| Minimum Length to Width Ratio | 1.5 : 1 | Greater than 2 : 1 | See Project Plans |
| Minimum Surface Area to Drainage Area Ratio | 1 : 100 | 1 : 39 | See Project Plans |
| Benches at Water Level | Aquatic Bench | Aquatic Bench | See Project Plans |
| Landscaping | Pond and Buffer Plantings Required | Pond and Buffer Plantings Provided | See Project Plans |
| Center-of-Mass Detention Time (1-Year, 24-Hour Storm Event) | 1,440 minutes | 1,512 minutes | See Appendix C |

## 2.3 NYSDEC Stream Channel Protection Volume, $CP_v$

The Stream Channel Protection ($CP_v$) criterion is intended to protect stream channels from erosion and is accomplished by the 24-hour extended detention of the 1-year, 24-hour storm event or by fully infiltrating the stormwater runoff from the 1-year, 24-hour storm event. The Stream Channel Protection Volume is calculated using the runoff volume from 1-year, 24-hour storm event from the HydroCAD modeling in Appendix C. Table 2.3.1 below provides a summary of the peak flow rate from each stormwater management practice proposed to provide $CP_v$ for the 1-year, 24-hour storm event. The table provides the maximum allowable discharge rate based on the 1-year, 24-hour runoff volume over a 24-hour period, and the design discharge rate from each practice as shown in Appendix C. As shown in Appendix C, the proposed I-4 Subsurface Infiltration System has been designed to fully infiltrate the stormwater runoff from the 1-year, 24-hour design storm and the P-5 Pocket Pond has been designed to provide 24-hour extended detention of the 1-year, 24-hour storm, therefore the CPv criterion has been met for the proposed areas of new development.

**Table 2.2.1 – Stream Channel Protection Volume Summary**

| Subcatchment | Stormwater Management Practice | 1-Year, 24-Hour Runoff Volume (af) | Maximum Allowable Discharge Rate (cfs) | Provided Discharge Rate (cfs) |
|---|---|---|---|---|
| 1.1S | 1.1P | 0.531 | 0.27 | 0.11 |
| 1.2S | 1.2P | 0.095 | 0.05 | 0.0 |

[1] See Appendix C for the runoff volume from the 1-Year, 24-Hour Storm Event

## 2.4 NYSDEC Overbank Flood Control, $Q_p$, and Extreme Flood Control, $Q_f$

The Overbank Flood Control ($Q_p$) requirement is intended to prevent an increase in the frequency and magnitude of out-of-bank flooding events generated by urban development. Overbank control requires storage to attenuate the post-development 10-year, 24-hour peak discharge to pre-development rates. The Extreme Flood Control ($Q_f$) requirement is intended to prevent the increased risk of flood damage from large storm events, maintain the boundaries of the pre-development 100-year flood plain, and protect the physical integrity of stormwater management practices. Extreme flood control requires storage to attenuate the post-development 100-year, 24-hour peak discharge to pre-development rates. As shown in Table 2.4.1 attenuation for both the 10-year and 100-year 24-hour storms has been provided thus satisfying the $Q_p$ and $Q_f$ requirements. As requested by the City of Beacon, in addition to the requirements of the Design Manual, attenuation of the peak flows for the 1-year, 24-hour design storm has been provided as shown in Table 2.4.1. The following table summarizes the pre and post development peak flows expected for the proposed project.

**Table 2.4.1– Pre and Post-Development Peak Flows**

| **24-HOUR DESIGN STORM PEAK FLOWS (c.f.s.)** | | | | | | |
|---|---|---|---|---|---|---|
| | 1-YEAR | | 10-YEAR (Overbank Flood Control) | | 100-YEAR (Extreme Flood Control) | |
| | Pre | Post | Pre | Post | Pre | Post |
| Design Line 1 | 14.1 | 12.6 | 39.7 | 35.2 | 84.5 | 78.7 |

As shown in the above table the peak flows discharging to the design line in the proposed condition have been mitigated to slightly below the existing condition levels. Since the rate of runoff in the proposed condition is less than the existing condition, the proposed onsite stormwater improvements will mitigate the potential impact of the peak flows downstream in the final condition.

## 3.0 STORMWATER CONVEYANCE SYSTEM

The stormwater collection and conveyance systems for the project will consist of catch basins, drain inlets, drainage manholes, swales and HDPE pipe. The system will be sized to collect and convey at minimum the 100-year, 1-hour design storm using the Rational Method. The Rational Method is a standard method used by engineers to develop flow rates for sizing collection systems. The Rational Method calculates flows based on a one-hour design storm. Calculations are provided in Appendix J and K.

## 4.0 EROSION AND SEDIMENT CONTROL

Erosion and sediment control should be accomplished by four basic principles: diversion of clean water, containment of sediment, treatment of dirty water, and stabilization of disturbed areas. Diversion of clean water should be accomplished with swales. This diverted water should be safely conveyed around the construction area as necessary and discharged downstream of the disturbed areas. Sediment should be contained with the use of silt fence at the toe of disturbed slopes and excavation of the temporary sediment basin. Disturbed areas should be permanently stabilized within 14 days of final grading to limit the required length of time that the temporary facilities must be utilized. The owner will be responsible for the maintenance of the temporary erosion control facilities.

### 4.1 Temporary Erosion and Sediment Control Facilities

Temporary erosion and sediment control facilities should be installed and maintained as required to reduce the impacts to off-site properties. The owner will be required to provide maintenance for the temporary erosion and sediment control facilities. In general, the following temporary methods and materials should be used to control erosion and sedimentation from the project site:

- Stabilized Construction Entrance
- Silt Fence Barriers
- Storm Drain Inlet Protection

A stabilized construction entrance should be installed at the entrance to the site as shown on the plan. The design drawings will include details to guide the contractor in the construction of this entrance. The intent of the stabilized construction entrance is to prevent the “tracking” of soil from the site. Dust control should be accomplished with water sprinkling trucks if required. During dry periods, sprinkler trucks should wet all exposed earth surfaces as required to prevent the transport of air-borne particles to adjoining areas.

Siltation barriers constructed of geosynthetic filter cloth should be installed at the toe of all disturbed slopes. The intent of these barriers is to contain silt and sediment at the source and inhibit its transport by stormwater runoff. The siltation barriers will also help reduce the rate of runoff by creating filters through which the stormwater must pass.

### 4.2 Permanent Erosion and Sediment Control Facilities

Permanent erosion and sediment control will be accomplished by diverting stormwater runoff from steep slopes, controlling/reducing stormwater runoff velocities and volumes, and vegetative and structural surface stabilization. All of the permanent facilities are relatively maintenance free and only require periodic inspections. The owner will provide maintenance for all the permanent erosion and sediment control facilities.

The temporary sediment trap shall be cleaned of all sediment and debris, and converted to an extended detention dry stormwater basin per the final elevations and dimensions, and stabilized with the vegetation as indicated on the project drawings. Riprap aprons will be used at the discharge end of all piped drainage systems. Runoff velocities will be reduced to levels that are non-erosive to the receiving waterbodies through use of these aprons.

Other than the buildings and paved surfaces, disturbed surfaces will be stabilized with vegetation. The vegetation will control stormwater runoff by preventing soil erosion, reducing runoff volume and velocities, and providing a filter medium. Permanent seeding should optimally be undertaken in the spring from March 21st through May 20th and in late summer from August 15th to October 15th.

## 5.0 IMPLEMENTATION, MAINTENANCE & GENERAL HOUSEKEEPING

### 5.1 Construction Phase

Details associated with the implementation and maintenance of the proposed stormwater facilities and erosion control measures during construction are shown on the project drawings. A Construction Sequence has been provided on the project plans to guide the contractor in the installation of the erosion control measures as well as the site plan features. In accordance with NYSDEC SPDES General Permit GP-0-20-001 no phase will exceed the maximum of 5 acres of disturbance at any given time as less than 5 acres of disturbance is proposed. The erosion control plan includes associated details and notes to aid the contractor in implementing the plan.

During construction, a Site Log Book, Appendix E, is required to be kept per NYSDEC SPDES General Permit GP-0-20-001. Erosion and sediment control inspections are required to be conducted as necessary under coverage of the permit (minimum twice a week) and an updated logbook and a copy of the SWPPP is required to be kept on site for the duration of the construction activities. The Construction Site Log Book is an appendix taken from the *New York Standards and Specifications for Erosion and Sediment Control* (Blue Book).

In addition to the proposed erosion and sediment control facilities, the following good housekeeping best management practices shall be implemented to mitigate potential pollution during the construction phase of the project. The general contractor overseeing the day-to-day site operation shall be responsible for the good housekeeping best management practices included in the following general categories:

- Material Handling and Waste Management
- Establishment of Building Material Staging Areas
- Establishment of Washout Areas
- Proper Equipment Fueling and Maintenance Practices
- Spill Prevention and Control Plan

All construction waste materials shall be collected and removed from the site regularly by the general contractor. The general contractor shall supply waste barrels for proper disposal of waste materials. All personnel working on the site shall be instructed of the proper procedures for construction waste disposal.

Although it is not anticipated any hazardous waste materials will be utilized during construction, any hazardous waste materials shall be disposed of in accordance with federal, state, and local regulations. No hazardous waste shall be disposed of on-site. Hazardous waste materials shall be stored in appropriate and clearly marked containers and segregated from the other non-waste materials. All hazardous waste shall be stored in a structurally sound and sealed shipping containers located in the staging areas. Material safety data sheets, material inventory, and emergency contact numbers will be maintained in the office trailer. All personnel working on the site shall be instructed of the proper procedures for hazardous waste disposal.

Temporary sanitary facilities (portable toilets) shall be provided on site during the entire length of construction. The sanitary facilities shall be in an alternate area away from the construction activities on the site. The portable toilets shall be inspected weekly for evidence of leaking holding tanks.

All recyclables, including wood pallets, cardboard boxes, and all other recyclable construction scraps shall be disposed of in a designated recycling barrel provided by the contractor and removed from the site

regularly. All personnel working on the site shall be instructed of the proper procedures for construction waste recycling.

All construction equipment and maintenance materials shall be stored in a designated staging area. Silt fence shall be installed down gradient of the construction staging area. Shipping containers shall be utilized to store hand tools, small parts, and other construction materials, not taken off site daily. Construction waste barrels, recycling barrels and if necessary hazardous waste containers shall be located within the limits of the construction staging area.

Throughout the construction of the project, several types of vehicles and equipment will be used on-site. Fueling of the equipment shall occur within the limits of the construction staging area. Fuel will be delivered to the site as needed, by the general contractor, or a party chosen by the general contractor. Only minor vehicle equipment maintenance shall occur on-site, all major maintenance shall be performed off-site. All equipment fluids generated from minor maintenance activities shall be disposed of into designated drums and stored in accordance with the hazardous waste storage as previously discussed.

Vehicles and equipment shall be inspected on each day of use. Any leak discovered shall be repaired immediately. All leaking equipment unable to be repaired shall be removed from the site. Ample supplies of absorbent, spill-cleanup materials, and spill kits shall be located in the construction staging area. All spills shall be cleaned up immediately upon discovery. Spent absorbent materials and rags shall be hauled off-site immediately after the spill is cleaned for disposal at a local landfill. All personnel working on the site shall be instructed of the proper procedures for spill prevention and control. Any spill large enough to discharge to surface water will be immediately reported to the local fire / police departments and the National Response Center 1-800-424-8802.

During the initial year of planting, the plants may require watering to germinate and establish. Note that several seedings may be required during the first year to completely establish vegetation on the site.

As shown in the NYSDEC Full Environmental Assessment Form in Appendix I of this report, the project site is located in an area with threatened or endangered animals. The Indiana Bat and is listed as a threatened or endangered animal in the area of the proposed project site. Additional care should be taken during construction to monitor for the Indiana Bat and appropriate measures should be taken for protection of the Indiana Bat if one is to be observed onsite. The following conservation measures are proposed for the project:

- Tree clearing will only occur between the period of October 1 through March 31 when bats are not in the vicinity of the site.
- Lighting on the site will use City of Beacon Planning Board approved light fixtures that have tops that direct light down to minimize light pollution and not interfere with potential bat foraging activities.
- Implementing soil conservation and dust control best management practices, such as watering dry disturbed soil areas to keep dust down, recessed silt fence and anti-tracking pads to prevent erosion and sediment in surface waters on the site.
- Stormwater pond(s) will not be maintained with any chemicals that might adversely affect bats or insect populations on which they may feed.

## 5.2 Soil Restoration

Soil Restoration is required to be applied across areas of the development site where soils have been disturbed and will be vegetated. The purpose is to recover the original properties and porosity of the soil compacted during construction activity. Soil Restoration is applied in the cleanup, restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate, deep-rooted groundcover to help maintain the restored soil structure. Soil restoration includes mechanical decompaction and compost amendment. The table below describes various soil

disturbance activities related to land development, soil types and the requirements for soil restoration for each activity as identified in the Design Manual. Restoration is applied across areas of a development site where soils have been compacted and will be vegetated according to the criteria defined in the table below:

<table>
<tr><th colspan="4">Soil Restoration Requirements[1, 2,4]<br>(Onsite soils within the limit of disturbance belong to Hydrologic Soil Groups (HSG) D)</th></tr>
<tr><th>Type of Soil Disturbance</th><th colspan="2">Soil Restoration Requirement</th><th>Comments/Examples</th></tr>
<tr><td>No soil disturbance</td><td colspan="2">Restoration not permitted</td><td>Preservation of Natural Features</td></tr>
<tr><td>Minimal soil disturbance</td><td colspan="2">Restoration not required</td><td>Clearing and grubbing</td></tr>
<tr><td rowspan="2">Areas where topsoil is stripped only - no change in grade</td><td>HSG A & B</td><td>HSG C&D</td><td rowspan="2">Protect area from any ongoing construction activities.</td></tr>
<tr><td>Apply 6 inches of topsoil</td><td>Aerate[3] and apply 6 inches of topsoil</td></tr>
<tr><td rowspan="2">Areas of cut or fill</td><td>HSG A &B</td><td>HSG C&D</td><td rowspan="2"></td></tr>
<tr><td>Aerate[1] and apply 6 inches of topsoil</td><td>Apply full Soil Restoration [2]</td></tr>
<tr><td>Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5-foot perimeter around foundation walls)</td><td colspan="2">Apply full Soil Restoration (decompaction and compost Enhancement[6])</td><td></td></tr>
<tr><td>Areas where Runoff Reduction and/or Infiltration practices are applied</td><td colspan="2">Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.</td><td>Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area</td></tr>
<tr><td>Redevelopment projects</td><td colspan="2">Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.</td><td></td></tr>
</table>

1. Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
2. Per "Deep Ripping and De-compaction, DEC 2008".
3. Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which functions like a mini-subsoiler.
4. During periods of relatively low to moderate subsoil moisture, the disturbed soils are returned to rough grade and the following Soil Restoration steps applied:
   - 5.1. Apply 3 inches of compost over subsoil.
   - 5.2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.
   - 5.3. Rock-pick until uplifted stone/rock materials of four inches and larger size area cleaned off the site.
   - 5.4. Apply topsoil to a depth of 6 inches.
   - 5.5. Vegetate as required by seeding notes located on the project drawings.
   - 5.6. Tilling should not be performed within the drip line of any existing trees or over any utility installations that are within 24 inches of the surface.
6. Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.

After soil restoration is completed an inspector should be able to push a 3/8" metal bar twelve inches into the soil with just body weight. Following decompaction/soil restoration activities, the following maintenance is anticipated during the first year:

- Initial inspections for the first six months (once after each storm greater than a half-inch).
- Reseeding to repair bare or eroding areas to assure grass stabilization.
- Water once every three days for first month, and then provide a half inch of water per week during first year. Irrigation plan may be adjusted according to the rain event.
- Fertilization may be needed in the fall after the first growing season to increase plant vigor.

In order to ensure the soil remains decompacted the following ongoing maintenance is recommended:

- Planting the appropriate ground cover with deep roots to maintain the soil structure.
- Keeping the site free of vehicular and foot traffic or other weight loads. Consider pedestrian footpaths (sometimes it may be necessary to de-thatch the turf every few years).

5.3 Long Term Maintenance Plan

Each spring the paved areas should be cleaned to remove the winter's accumulation of traction sand. After this is completed, all drain inlets sumps and the stormwater basins should be cleaned. All pipes should be checked for debris and blockages and cleaned as required. During the cleaning process, the drain inlets, catch basins, and pipes should be inspected for structural integrity and overall condition; repairs and/or replacement will be made as required.

The stormwater facilities for the subject project have been designed to minimize the required maintenance. This section discusses the minimum maintenance requirements to insure long-term performance of the stormwater facilities. Initially the stormwater facilities will require an increased maintenance and inspection schedule until all portions of the site are stable. Generally, the stormwater facilities consist of either collection and conveyance components or treatment components.

The stormwater collection and conveyance system is composed of HDPE, drainage pipe and precast concrete drainage structures. The owner will assume the maintenance responsibilities for the drainage system. Minimal maintenance is typically required for these facilities. All pipes should be checked for debris and blockages and cleaned as required. All drain inlet sumps, including the sumps within the hydrodynamic separators, shall be inspected bi-annually and cleaned to removed deposited sediment. During the cleaning process, the pipes should be inspected for structural integrity and overall condition; repairs and/or replacement should be made as required. Additionally, the detention systems shall be checked for deposited sediment as well. Visual inspection of system through the inspection ports shall take place yearly, and the system shall be cleaned / jetted as necessary to remove deposited sediment.

The stormwater facilities have been designed to limit the routine maintenance requirements. Initially the filter will require regular maintenance until the permanent vegetation is established. Permanent vegetation is considered established when 80% of the final plant density is established. Vegetation should be inspected weekly during construction as part of coverage under NYSDEC SPDES General Permit GP-0-20-001 during construction and in the permanent condition. Damaged areas should be immediately re-seeded and re-mulched. The floor of the filter will be planted with a seed mixture that contains plants that are tolerant of occasional flooding. The seed mixtures contain several plant species that vary slightly in their needs for survival. It is expected that not all of the species will survive within the basin due to variations such as water, nutrients, and light. During the initial year of planting, the plants may require watering to germinate and become established. Note that several seedings may be required during the first year to completely establish vegetation within the basin. After the initial year of establishment, the filter does not need to be fertilized or watered. A natural selection process will occur over the first few years, such that the species within the seed mixture most suitable to the conditions will survive.

Refer to the Infiltration Trench and Basin Inspection & Maintenance checklist found in Appendix G of this report prepared for all portions of this project the requirements to insure long-term performance of all stormwater facilities

Refer to the Hydroworks Hydrostorm Operations & Maintenance Manual in Appendix H of this report for the manufacture maintenance requirements for the proposed hydrodynamic separator.

# APPENDIX A

**NYSDEC Water Quality Volume and Runoff Reduction Calculations**

**WQv Calculation Worksheet**

Project: Beacon Views, LLC
Project #: 19131.100
Date: 7/28/2020

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

*The following calculation determines the water quality flow rate for the 90% Water Quality Event using the Small Storm Hydrology Method specified in Appendix B of the New York State Stormwater Management Design Manual.*

**Subcatchment ID: 1.1**

1.Water Quality Volume $=WQ_v = \frac{P * R_v * A}{12}$

| | | | |
|---|---|---|---|
| P = WQv 24-hour Rainfall Amount | = | 1.4 | in. |
| A = Subcatchment Area | = | 151880 | SF |
| Ai= Impervious Area within Subcatchment Area | = | 98640 | |
| I = Ai/A | = | 64.9 | % |
| Rv = 0.05 + 0.009 (I%) | = | 0.63 | |
| WQv = Water Quality Volume | = | 11,163 | CF |

**Subcatchment ID: 1.2**

1.Water Quality Volume $=WQ_v = \frac{P * R_v * A}{12}$

| | | | |
|---|---|---|---|
| P = WQv 24-hour Rainfall Amount | = | 1.4 | in. |
| A = Subcatchment Area | = | 21800 | SF |
| Ai= Impervious Area within Subcatchment Area | = | 19100 | |
| I = Ai/A | = | 87.6 | % |
| Rv = 0.05 + 0.009 (I%) | = | 0.84 | |
| WQv = Water Quality Volume | = | 2,136 | CF |

## RRv Calculation Worksheet - Design Line 1

Project: Beacon Views, LLC
Project #: 19131.100
Date: 7/28/2020

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

*1. RRv Initial = Water Quality Volume (WQv)* *0.305 ac-ft* = *13,300 c.f.*
(refer to Water Quality Volume Calculation Sheet)

2. *RRv Minimum* = [ (P) (Rv) (S) (Aic)] /12 where…

| | | | |
|---|---|---|---|
| P = Rainfall (in.) | = | 1.40 | in. |
| Rv = 0.05 + 0.009 (100%) | = | 0.95 | |
| S = Hydrologic Soil Group Specific Reduction Factor | = | 0.20 | |
| [HSG A = 0.55] [HSG B = 0.40] [HSG C = 0.30] [HSG D = 0.20] | | | |
| Aic = Total area of new impervious cover | = | 2.8 | Acres |
| *RRv Minimum* | = | *2,704* | *c.f.* |

3. *RRv Required* = RRv Initial - Green Infrastructure Practice (GIP) with Area Reduction

| GIP with Area Reduction Applied in Project | | |
|---|---|---|
| 5.3.1 Conservation of Natural Area | N/A | |
| 5.3.2 Sheet Flow to Riparian Buffers or Filter Strips | N/A | |
| 5.3.4 Tree Planting / Tree Box (37 trees at 100 s.f. per tree) | | c.f. |
| 5.3.5 Disconnection of Rooftop Runoff | - | |
| 5.3.6 Stream Daylighting | N/A | |
| RRv Required(=WQv-RRV by area) | = 13,300 | c.f. |

4. *RRv Provided*

| GIP with Volume Reduction Applied in Project | WQv Treated (c.f.) | % of WQv Applied to *RRv Provided* | *RRv Provided (c.f.)* |
|---|---|---|---|
| 5.3.3 Vegetated Open Swales | | 20% | 0 |
| [HSG A / B = 20%] [HSG C / D = 10%] {Modified HSG C - D = 15% - 12%] | | 10% | 0 |
| 5.3.7 Rain Garden | | 40% | 0 |
| [No underdrains / Good Soils = 100%] [With underdrains / Poor Soils = 40%] | | | |
| 5.3.8 Green Roof | | 100% | N/A |
| [RRv provided equals volume provided in Green Roof] | | | |
| 5.3.9 Stormwater Planters | | 45% | N/A |
| [Infiltration Planters = 100%] [Flow Through HSG C = 45%] [Flow Though HSG D = 30%] | | | |
| 5.3.10 Rain Tank / Cisterns | | 100% | N/A |
| 5.3.11 Porous Pavement | | 100% | 0 |
| Infiltration Practice (Standard SMP) | 3572 | 100% | 3,572 |
| Bioretention Practice (Standard SMP) | | 40% | 0 |
| [Without Underdrains HSG A/B = 80%] [With Underdrain HSG C\D = 40%] | | | |
| Dry Swale (Open Channel Practice) (Standard SMP) | | 20% | N/A |
| [HSG A/B = 40%] [HSG C/D = 20%] | | | |
| *RRv Provided =* | | | *3,572* |

5. Summary

| | | | |
|---|---|---|---|
| RRv Initial | = | 13,300 | c.f. |
| RRv Required | = | 13,300 | c.f. |
| RRv Minimum | = | 2,704 | c.f. |
| RRv Provided | = | 3,572 | c.f. |
| WQv Required for Downstream SMP | = | 9,728 | c.f. (= RRv Required - RRv Provided) |

Is RRv Provided greater than or equal to RRv Minimum? Yes

# APPENDIX B

**Pre-Development Computer Data**




Subcat Reach Pond Link

**Routing Diagram for Pre Development**

Prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., Printed 7/27/2020

HydroCAD® 10.00-15 s/n 02171 © 2015 HydroCAD Software Solutions LLC

## Summary for Subcatchment PRE:

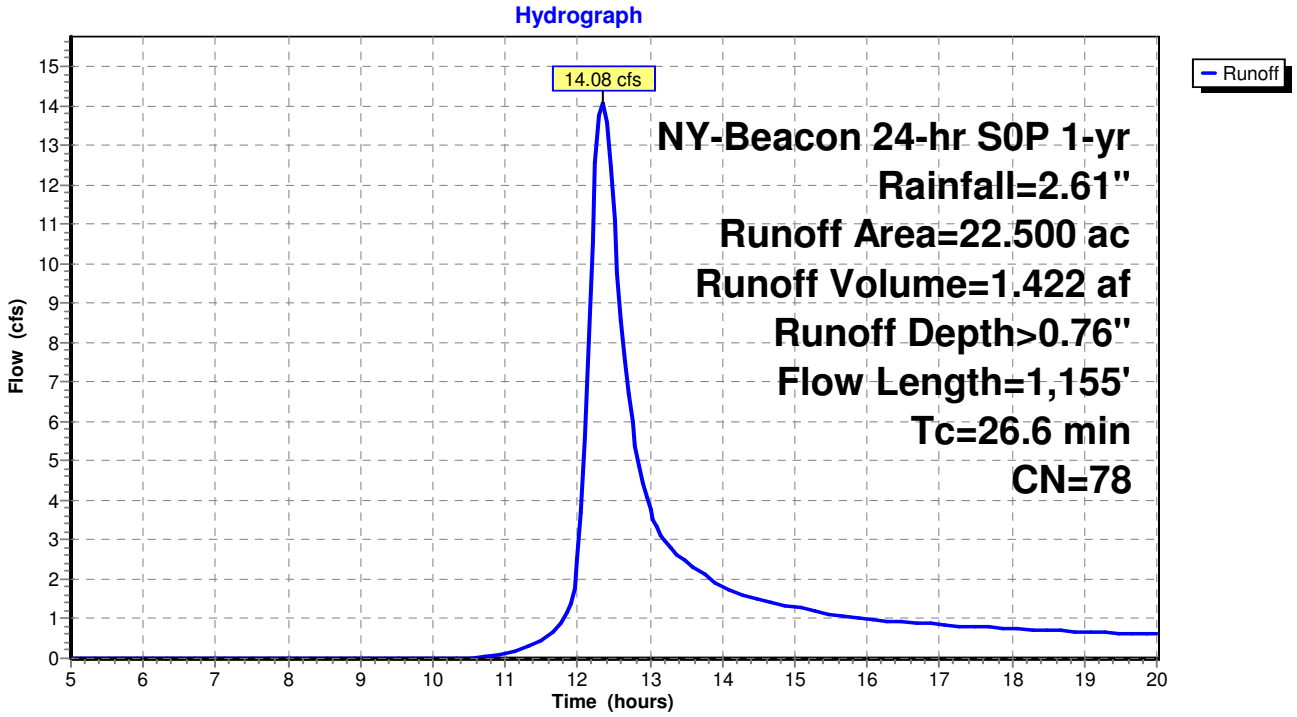
Runoff = 14.08 cfs @ 12.34 hrs, Volume= 1.422 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

| Area (ac) | CN | Description |
|---|---|---|
| 15.700 | 77 | Woods, Good, HSG D |
| 5.800 | 78 | Meadow, non-grazed, HSG D |
| 0.500 | 80 | >75% Grass cover, Good, HSG D |
| 0.500 | 98 | Paved parking, HSG D |
| 22.500 | 78 | Weighted Average |
| 22.000 | | 97.78% Pervious Area |
| 0.500 | | 2.22% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.9 | 100 | 0.0600 | 0.12 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 4.7 | 345 | 0.0600 | 1.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 170 | 0.0800 | 1.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 340 | 0.1000 | 1.58 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.0 | 200 | 0.0500 | 1.12 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 26.6 | 1,155 | Total | | | |

## Subcatchment PRE:



## Summary for Subcatchment PRE:

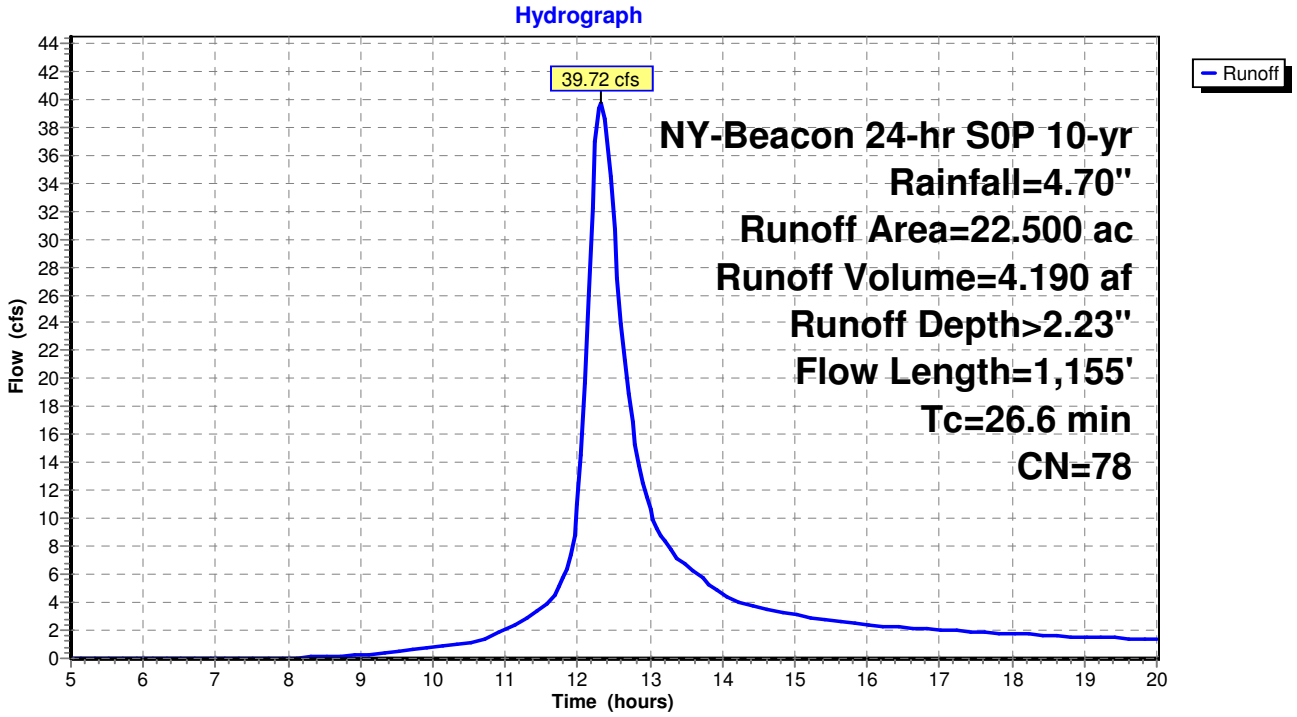
Runoff = 39.72 cfs @ 12.33 hrs, Volume= 4.190 af, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

| Area (ac) | CN | Description |
|---|---|---|
| 15.700 | 77 | Woods, Good, HSG D |
| 5.800 | 78 | Meadow, non-grazed, HSG D |
| 0.500 | 80 | >75% Grass cover, Good, HSG D |
| 0.500 | 98 | Paved parking, HSG D |
| 22.500 | 78 | Weighted Average |
| 22.000 | | 97.78% Pervious Area |
| 0.500 | | 2.22% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.9 | 100 | 0.0600 | 0.12 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 4.7 | 345 | 0.0600 | 1.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 170 | 0.0800 | 1.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 340 | 0.1000 | 1.58 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.0 | 200 | 0.0500 | 1.12 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 26.6 | 1,155 | Total | | | |

## Subcatchment PRE:



## Summary for Subcatchment PRE:

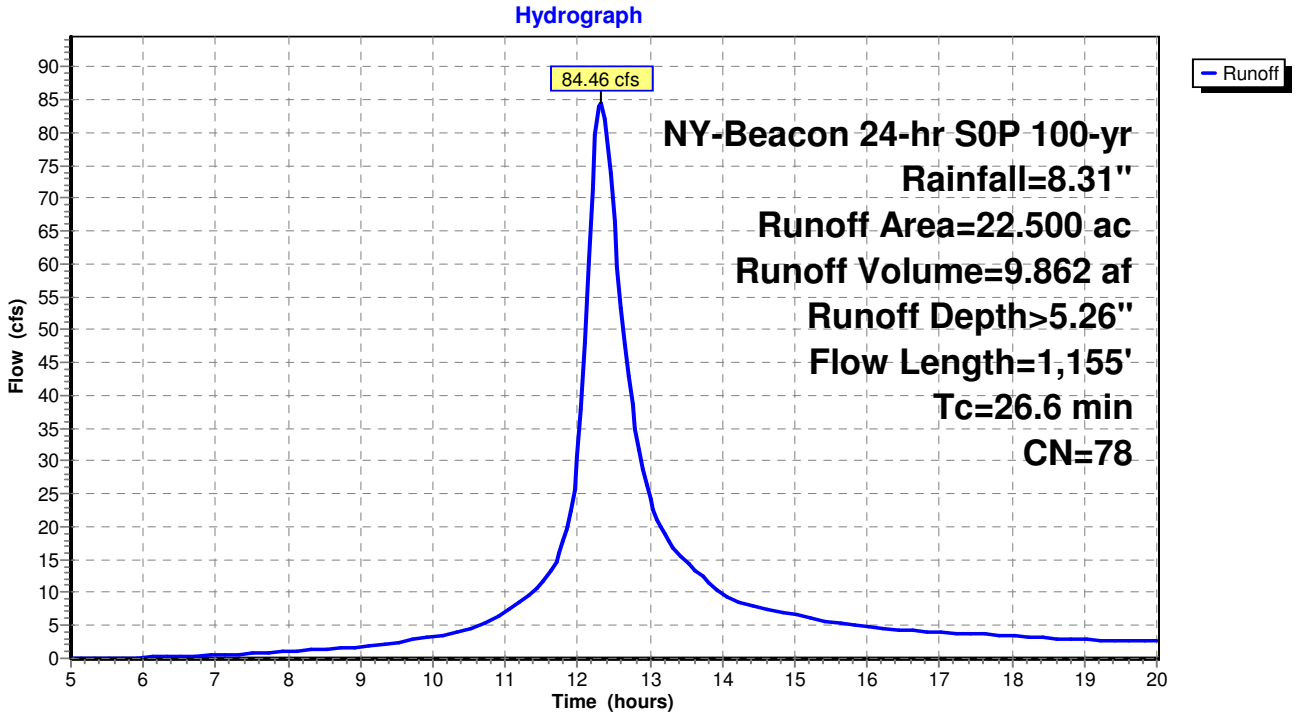
Runoff = 84.46 cfs @ 12.32 hrs, Volume= 9.862 af, Depth> 5.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

| Area (ac) | CN | Description |
|---|---|---|
| 15.700 | 77 | Woods, Good, HSG D |
| 5.800 | 78 | Meadow, non-grazed, HSG D |
| 0.500 | 80 | >75% Grass cover, Good, HSG D |
| 0.500 | 98 | Paved parking, HSG D |
| 22.500 | 78 | Weighted Average |
| 22.000 | | 97.78% Pervious Area |
| 0.500 | | 2.22% Impervious Area |

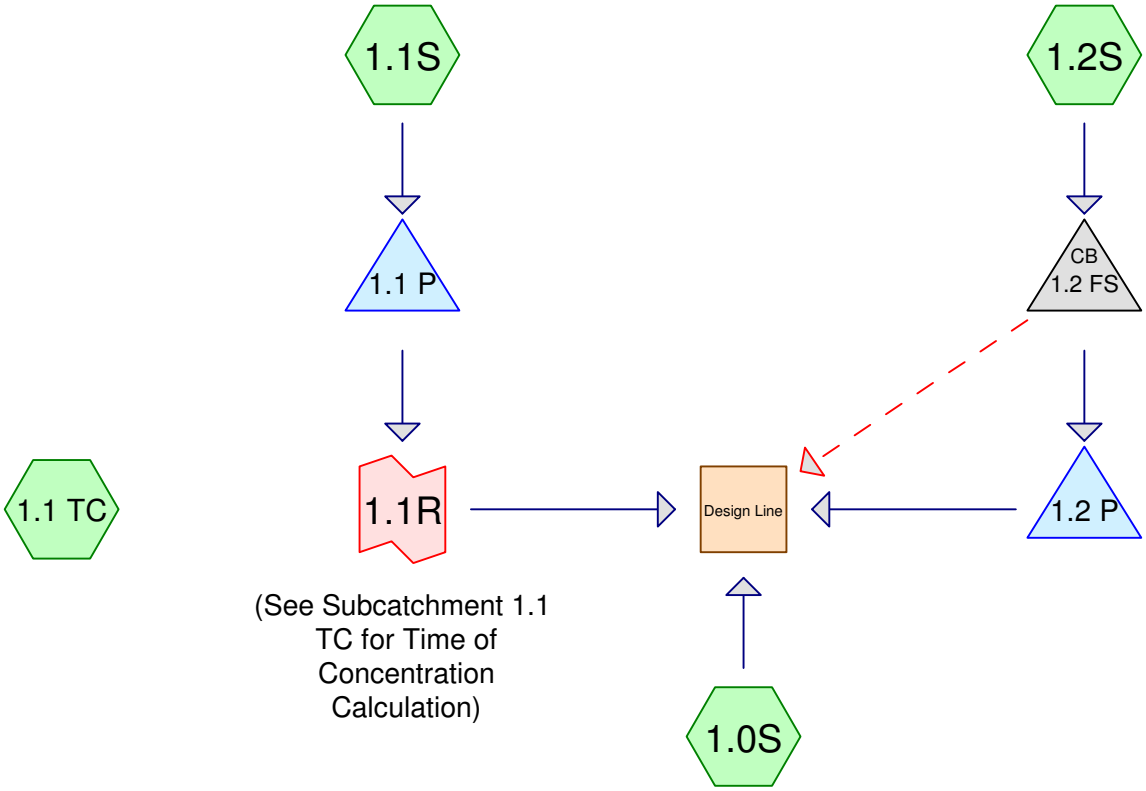
| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.9 | 100 | 0.0600 | 0.12 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 4.7 | 345 | 0.0600 | 1.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 170 | 0.0800 | 1.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.6 | 340 | 0.1000 | 1.58 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 3.0 | 200 | 0.0500 | 1.12 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 26.6 | 1,155 | Total | | | |

## Subcatchment PRE:



# APPENDIX C

**Post-Development Computer Data**




Subcat Reach Pond Link

**Routing Diagram for Post Development**

Prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., Printed 7/27/2020

HydroCAD® 10.00-15 s/n 02171 © 2015 HydroCAD Software Solutions LLC

## Summary for Subcatchment 1.0S:

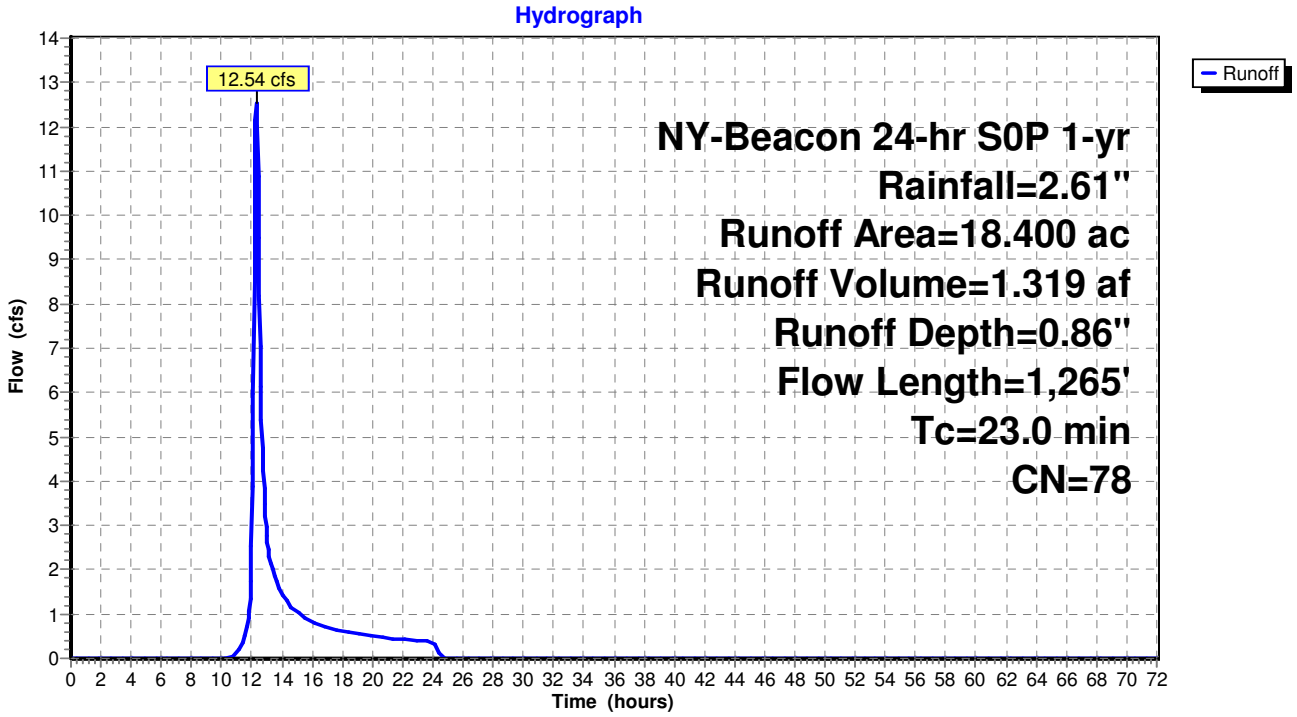
Runoff = 12.54 cfs @ 12.30 hrs, Volume= 1.319 af, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

| Area (ac) | CN | Description |
|---|---|---|
| 11.100 | 77 | Woods, Good, HSG D |
| 5.800 | 78 | Meadow, non-grazed, HSG D |
| 1.000 | 80 | >75% Grass cover, Good, HSG D |
| 0.500 | 98 | Paved parking, HSG D |
| 18.400 | 78 | Weighted Average |
| 17.900 | | 97.28% Pervious Area |
| 0.500 | | 2.72% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.4 | 100 | 0.0800 | 0.13 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 4.7 | 345 | 0.0600 | 1.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 170 | 0.0800 | 1.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 280 | 0.0900 | 1.50 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.2 | 235 | 0.0500 | 3.35 | | **Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps |
| 0.1 | 55 | 0.0450 | 11.17 | 13.70 | **Pipe Channel, SDI 14A TO DI 14** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior |
| 0.1 | 80 | 0.0410 | 14.58 | 45.81 | **Pipe Channel, DI 14 TO ES 13** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior |
| 23.0 | 1,265 | Total | | | |

## Subcatchment 1.0S:



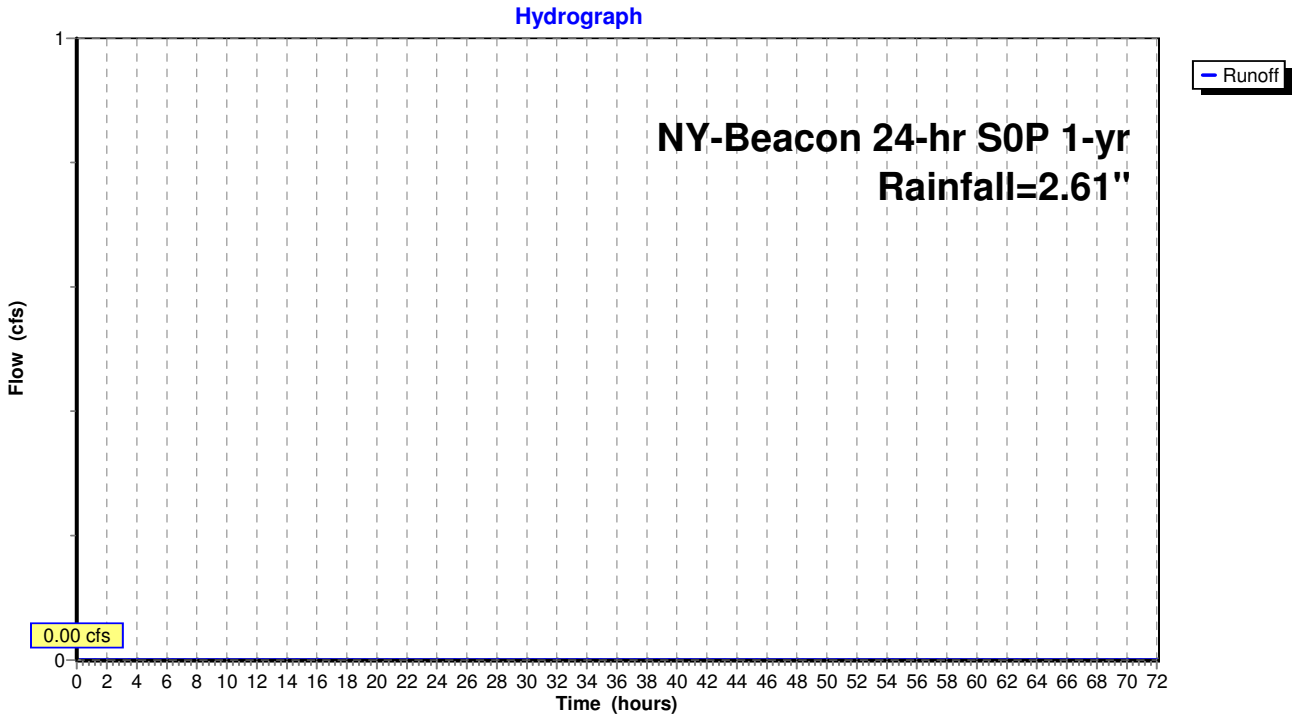
## Summary for Subcatchment 1.1 TC:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.4 | 100 | 0.0300 | 0.09 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 0.6 | 30 | 0.0300 | 0.87 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.0 | 130 | Total | | | |

## Subcatchment 1.1 TC:



## Summary for Subcatchment 1.1S:

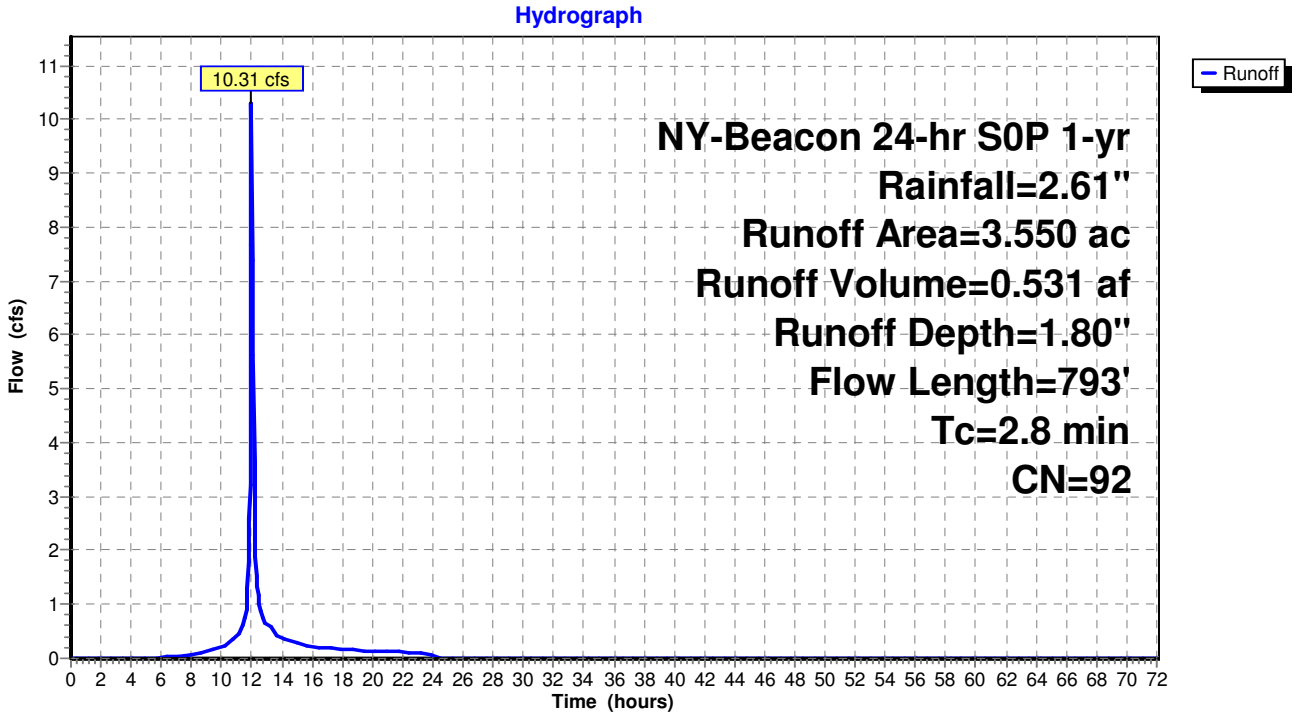
Runoff = 10.31 cfs @ 12.00 hrs, Volume= 0.531 af, Depth= 1.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

| Area (ac) | CN | Description |
|---|---|---|
| 2.350 | 98 | Paved parking, HSG D |
| 1.200 | 80 | >75% Grass cover, Good, HSG D |
| 3.550 | 92 | Weighted Average |
| 1.200 | | 33.80% Pervious Area |
| 2.350 | | 66.20% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 100 | 0.0600 | 2.12 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16" |
| 0.7 | 200 | 0.0500 | 4.54 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.1 | 35 | 0.0120 | 4.97 | 3.90 | **Pipe Channel, CB 6 TO CB 5** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior |
| 0.5 | 183 | 0.0130 | 6.00 | 7.37 | **Pipe Channel, CB 5 TO CB 4** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior |
| 0.4 | 136 | 0.0100 | 5.94 | 10.50 | **Pipe Channel, CB 4 TO CB 3** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 0.2 | 63 | 0.0100 | 5.94 | 10.50 | **Pipe Channel, CB 3 TO CB 2** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 0.1 | 76 | 0.0360 | 11.28 | 19.93 | **Pipe Channel, CB 2 TO ES 1** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 2.8 | 793 | Total | | | |

## Subcatchment 1.1S:



## Summary for Subcatchment 1.2S:

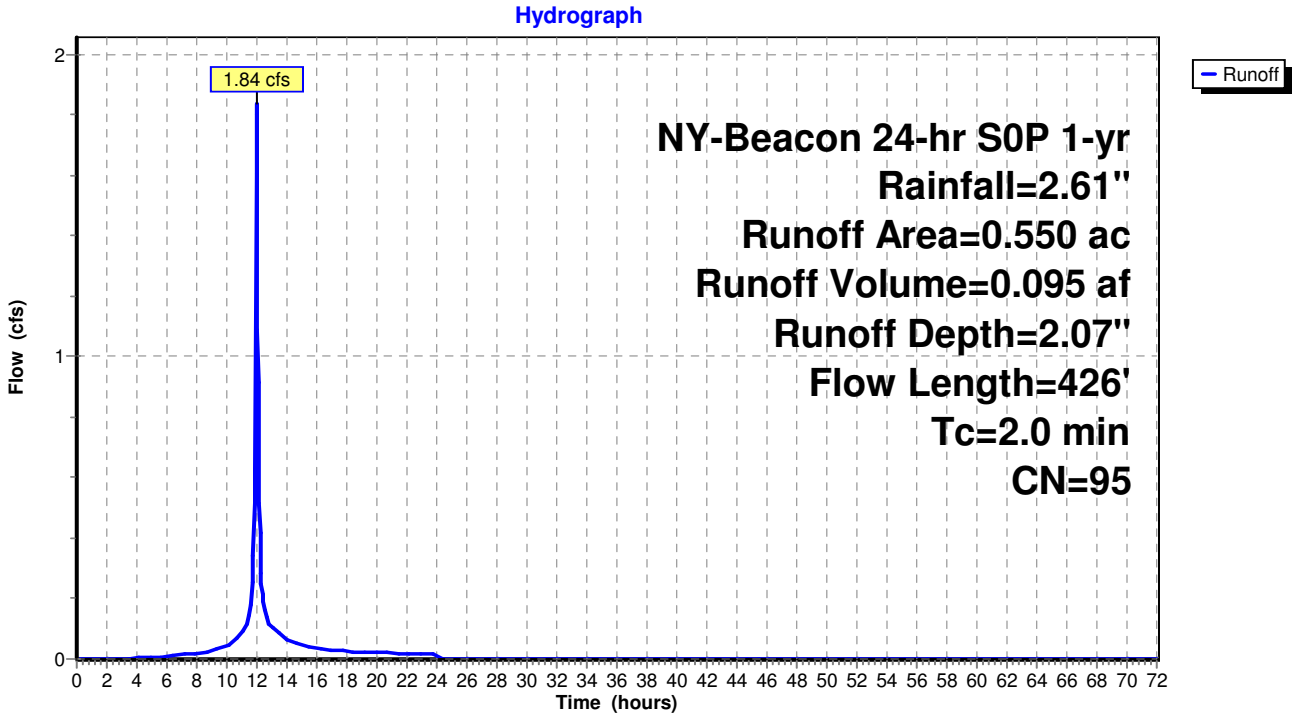
Runoff = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 1-yr Rainfall=2.61"

| Area (ac) | CN | Description |
|---|---|---|
| 0.450 | 98 | Paved parking, HSG D |
| 0.100 | 80 | >75% Grass cover, Good, HSG D |
| 0.550 | 95 | Weighted Average |
| 0.100 | | 18.18% Pervious Area |
| 0.450 | | 81.82% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 100 | 0.0600 | 2.12 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16" |
| 0.4 | 120 | 0.0600 | 4.97 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.7 | 160 | 0.0350 | 3.80 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.1 | 46 | 0.0300 | 7.86 | 6.17 | **Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior |
| 2.0 | 426 | Total | | | |

## Subcatchment 1.2S:

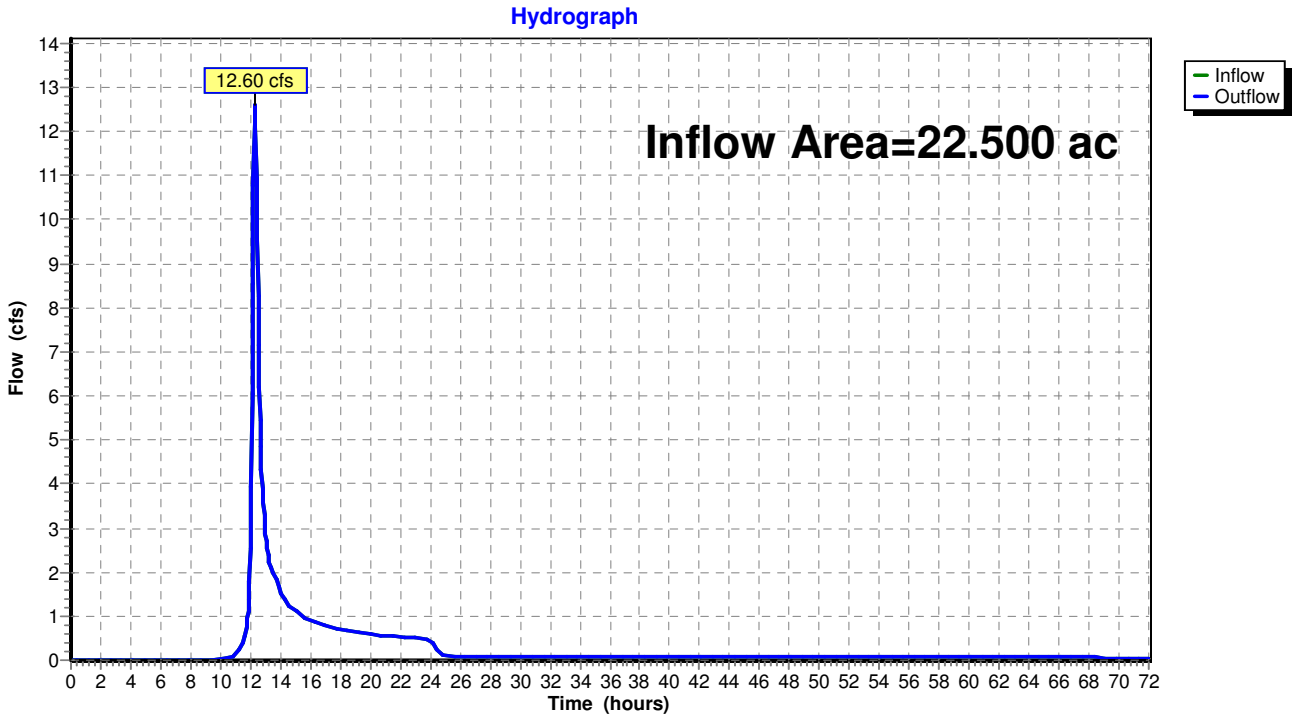


## Summary for Reach Design Line:

Inflow Area = 22.500 ac, 14.67% Impervious, Inflow Depth > 0.93" for 1-yr event
Inflow = 12.60 cfs @ 12.30 hrs, Volume= 1.737 af
Outflow = 12.60 cfs @ 12.30 hrs, Volume= 1.737 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Reach Design Line:



## Summary for Pond 1.1 P:

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth = 1.80" for 1-yr event
Inflow = 10.31 cfs @ 12.00 hrs, Volume= 0.531 af
Outflow = 0.11 cfs @ 23.08 hrs, Volume= 0.420 af, Atten= 99%, Lag= 665.1 min
Primary = 0.11 cfs @ 23.08 hrs, Volume= 0.420 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Starting Elev= 180.00' Surf.Area= 7,640 sf Storage= 10,715 cf
Peak Elev= 182.22' @ 23.08 hrs Surf.Area= 13,499 sf Storage= 29,210 cf (18,495 cf above start)
Flood Elev= 184.50' Surf.Area= 19,225 sf Storage= 60,459 cf (49,744 cf above start)

Plug-Flow detention time= 2,709.8 min calculated for 0.174 af (33% of inflow)
Center-of-Mass det. time= 1,511.7 min ( 2,320.7 - 809.1 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 175.00' | 2,050 cf | **Forebay (Prismatic)** Listed below (Recalc) |
| #2 | 175.00' | 67,360 cf | **Custom Stage Data (Prismatic)** Listed below (Recalc) |
| | | 69,410 cf | Total Available Storage |

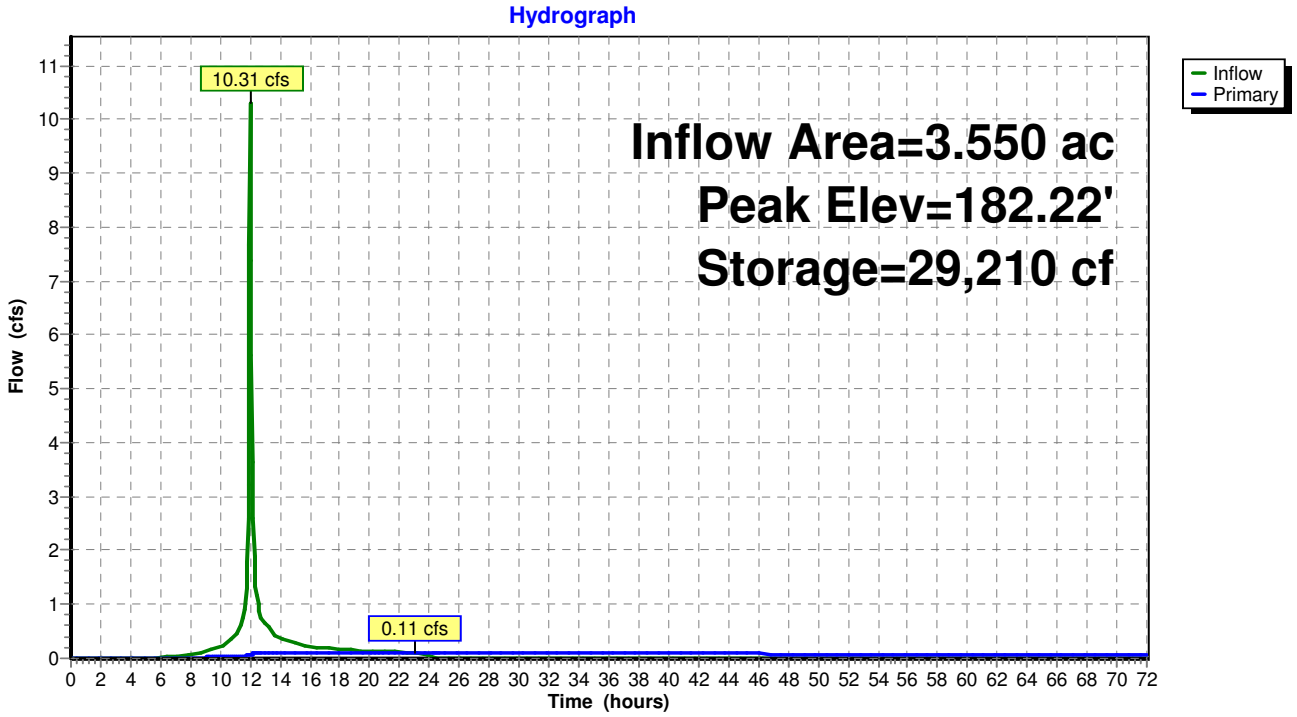
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 175.00 | 5 | 0 | 0 |
| 177.00 | 110 | 115 | 115 |
| 179.00 | 450 | 560 | 675 |
| 180.00 | 2,300 | 1,375 | 2,050 |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 175.00 | 500 | 0 | 0 |
| 177.00 | 1,180 | 1,680 | 1,680 |
| 179.00 | 2,090 | 3,270 | 4,950 |
| 180.00 | 5,340 | 3,715 | 8,665 |
| 182.00 | 10,730 | 16,070 | 24,735 |
| 184.00 | 14,970 | 25,700 | 50,435 |
| 185.00 | 18,880 | 16,925 | 67,360 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 179.00' | **24.0" Round Culvert**<br>L= 37.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 179.00' / 178.50' S= 0.0135 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf |
| #2 | Device 1 | 180.00' | **1.6" Vert. Orifice/Grate** C= 0.600 |
| #3 | Device 1 | 182.20' | **1.0' long x 0.5' breadth Broad-Crested Rectangular Weir**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=0.11 cfs @ 23.08 hrs HW=182.22' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.11 cfs of 22.54 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.10 cfs @ 7.07 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.41 fps)

## Pond 1.1 P:


Hydrograph
Inflow Area=3.550 ac
Peak Elev=182.22'
Storage=29,210 cf
10.31 cfs
0.11 cfs
Inflow
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0 1 2 3 4 5 6 7 8 9 10 11

## Stage-Area-Storage for Pond 1.1 P:

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---|---|---|---|
| 175.00 | 0 | 180.20 | 11,837 |
| 175.10 | 52 | 180.30 | 12,438 |
| 175.20 | 109 | 180.40 | 13,067 |
| 175.30 | 169 | 180.50 | 13,722 |
| 175.40 | 233 | 180.60 | 14,404 |
| 175.50 | 302 | 180.70 | 15,113 |
| 175.60 | 374 | 180.80 | 15,849 |
| 175.70 | 450 | 180.90 | 16,612 |
| 175.80 | 530 | 181.00 | 17,403 |
| 175.90 | 613 | 181.10 | 18,219 |
| 176.00 | 701 | 181.20 | 19,063 |
| 176.10 | 793 | 181.30 | 19,934 |
| 176.20 | 889 | 181.40 | 20,832 |
| 176.30 | 988 | 181.50 | 21,757 |
| 176.40 | 1,092 | 181.60 | 22,709 |
| 176.50 | 1,199 | 181.70 | 23,687 |
| 176.60 | 1,310 | 181.80 | 24,693 |
| 176.70 | 1,426 | 181.90 | 25,725 |
| 176.80 | 1,545 | 182.00 | 26,785 |
| 176.90 | 1,668 | 182.10 | 27,869 |
| 177.00 | 1,795 | 182.20 | 28,973 |
| 177.10 | 1,927 | 182.30 | 30,099 |
| 177.20 | 2,065 | 182.40 | 31,247 |
| 177.30 | 2,210 | 182.50 | 32,415 |
| 177.40 | 2,361 | 182.60 | 33,605 |
| 177.50 | 2,518 | 182.70 | 34,815 |
| 177.60 | 2,681 | 182.80 | 36,047 |
| 177.70 | 2,851 | 182.90 | 37,301 |
| 177.80 | 3,027 | 183.00 | 38,575 |
| 177.90 | 3,209 | 183.10 | 39,871 |
| 178.00 | 3,398 | 183.20 | 41,187 |
| 178.10 | 3,592 | 183.30 | 42,525 |
| 178.20 | 3,793 | 183.40 | 43,885 |
| 178.30 | 4,000 | 183.50 | 45,265 |
| 178.40 | 4,214 | 183.60 | 46,667 |
| 178.50 | 4,433 | 183.70 | 48,089 |
| 178.60 | 4,659 | 183.80 | 49,533 |
| 178.70 | 4,891 | 183.90 | 50,999 |
| 178.80 | 5,130 | 184.00 | 52,485 |
| 178.90 | 5,374 | 184.10 | 54,002 |
| 179.00 | 5,625 | 184.20 | 55,557 |
| 179.10 | 5,904 | 184.30 | 57,152 |
| 179.20 | 6,235 | 184.40 | 58,786 |
| 179.30 | 6,617 | 184.50 | 60,459 |
| 179.40 | 7,049 | 184.60 | 62,171 |
| 179.50 | 7,533 | 184.70 | 63,922 |
| 179.60 | 8,067 | 184.80 | 65,712 |
| 179.70 | 8,652 | 184.90 | 67,542 |
| 179.80 | 9,289 | 185.00 | **69,410** |
| 179.90 | 9,977 | | |
| 180.00 | 10,715 | | |
| 180.10 | 11,262 | | |

## Summary for Pond 1.2 FS:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 2.07" for 1-yr event
Inflow = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af
Outflow = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min
Primary = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

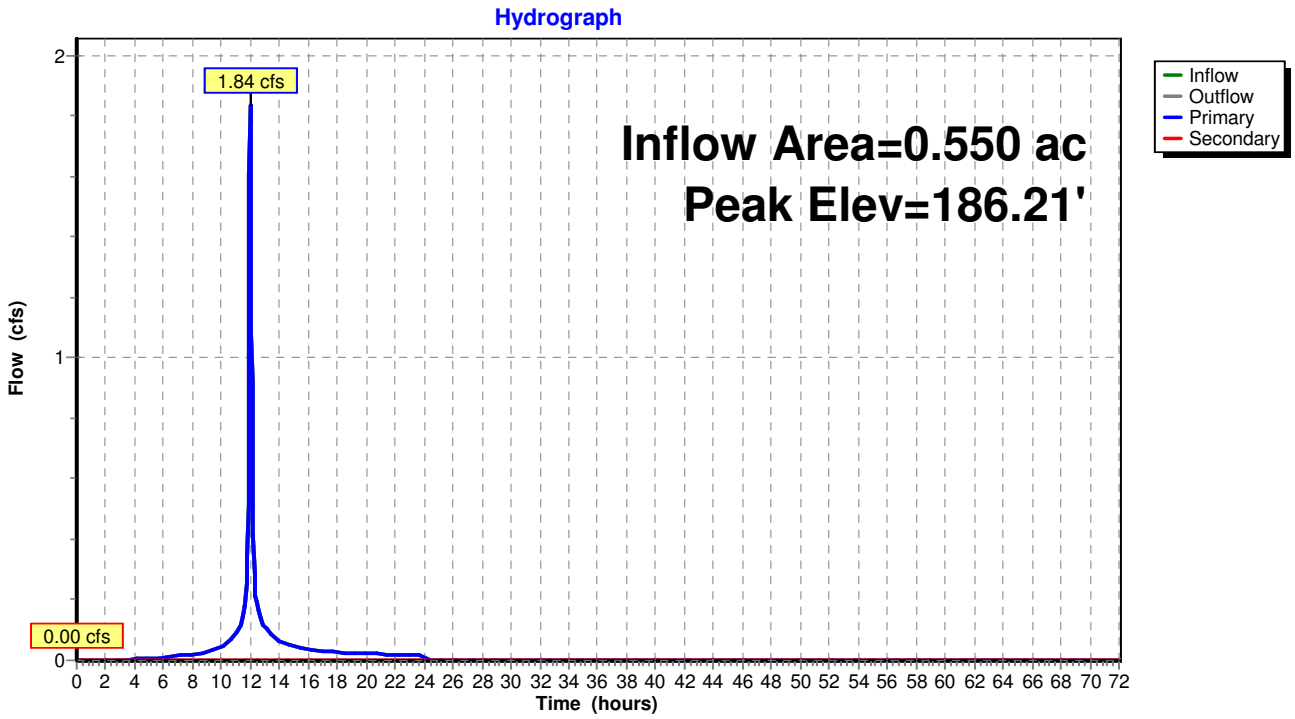
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 186.21' @ 11.99 hrs
Flood Elev= 187.70'

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 184.70' | **8.0" Round Culvert**<br>L= 12.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.70' / 184.50' S= 0.0167 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf |
| #2 | Secondary | 184.70' | **12.0" Round Culvert**<br>L= 30.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.70' / 184.00' S= 0.0233 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #3 | Device 2 | 186.20' | **4.0' long x 0.5' breadth Broad-Crested Rectangular Weir**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=1.75 cfs @ 11.99 hrs HW=186.11' TW=182.48' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.75 cfs @ 5.00 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=184.70' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** ( Controls 0.00 cfs)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Pond 1.2 FS:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=186.21'
1.84 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 1 2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

## Stage-Area-Storage for Pond 1.2 FS:

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---|---|---|---|---|---|
| 184.70 | **0** | 185.74 | 0 | 186.78 | 0 |
| 184.72 | 0 | 185.76 | 0 | 186.80 | 0 |
| 184.74 | 0 | 185.78 | 0 | 186.82 | 0 |
| 184.76 | 0 | 185.80 | 0 | 186.84 | 0 |
| 184.78 | 0 | 185.82 | 0 | 186.86 | 0 |
| 184.80 | 0 | 185.84 | 0 | 186.88 | 0 |
| 184.82 | 0 | 185.86 | 0 | 186.90 | 0 |
| 184.84 | 0 | 185.88 | 0 | 186.92 | 0 |
| 184.86 | 0 | 185.90 | 0 | 186.94 | 0 |
| 184.88 | 0 | 185.92 | 0 | 186.96 | 0 |
| 184.90 | 0 | 185.94 | 0 | 186.98 | 0 |
| 184.92 | 0 | 185.96 | 0 | 187.00 | 0 |
| 184.94 | 0 | 185.98 | 0 | 187.02 | 0 |
| 184.96 | 0 | 186.00 | 0 | 187.04 | 0 |
| 184.98 | 0 | 186.02 | 0 | 187.06 | 0 |
| 185.00 | 0 | 186.04 | 0 | 187.08 | 0 |
| 185.02 | 0 | 186.06 | 0 | 187.10 | 0 |
| 185.04 | 0 | 186.08 | 0 | 187.12 | 0 |
| 185.06 | 0 | 186.10 | 0 | 187.14 | 0 |
| 185.08 | 0 | 186.12 | 0 | 187.16 | 0 |
| 185.10 | 0 | 186.14 | 0 | 187.18 | 0 |
| 185.12 | 0 | 186.16 | 0 | 187.20 | 0 |
| 185.14 | 0 | 186.18 | 0 | 187.22 | 0 |
| 185.16 | 0 | 186.20 | 0 | 187.24 | 0 |
| 185.18 | 0 | 186.22 | 0 | 187.26 | 0 |
| 185.20 | 0 | 186.24 | 0 | 187.28 | 0 |
| 185.22 | 0 | 186.26 | 0 | 187.30 | 0 |
| 185.24 | 0 | 186.28 | 0 | 187.32 | 0 |
| 185.26 | 0 | 186.30 | 0 | 187.34 | 0 |
| 185.28 | 0 | 186.32 | 0 | 187.36 | 0 |
| 185.30 | 0 | 186.34 | 0 | 187.38 | 0 |
| 185.32 | 0 | 186.36 | 0 | 187.40 | 0 |
| 185.34 | 0 | 186.38 | 0 | 187.42 | 0 |
| 185.36 | 0 | 186.40 | 0 | 187.44 | 0 |
| 185.38 | 0 | 186.42 | 0 | 187.46 | 0 |
| 185.40 | 0 | 186.44 | 0 | 187.48 | 0 |
| 185.42 | 0 | 186.46 | 0 | 187.50 | 0 |
| 185.44 | 0 | 186.48 | 0 | 187.52 | 0 |
| 185.46 | 0 | 186.50 | 0 | 187.54 | 0 |
| 185.48 | 0 | 186.52 | 0 | 187.56 | 0 |
| 185.50 | 0 | 186.54 | 0 | 187.58 | 0 |
| 185.52 | 0 | 186.56 | 0 | 187.60 | 0 |
| 185.54 | 0 | 186.58 | 0 | 187.62 | 0 |
| 185.56 | 0 | 186.60 | 0 | 187.64 | 0 |
| 185.58 | 0 | 186.62 | 0 | 187.66 | 0 |
| 185.60 | 0 | 186.64 | 0 | 187.68 | 0 |
| 185.62 | 0 | 186.66 | 0 | 187.70 | 0 |
| 185.64 | 0 | 186.68 | 0 | | |
| 185.66 | 0 | 186.70 | 0 | | |
| 185.68 | 0 | 186.72 | 0 | | |
| 185.70 | 0 | 186.74 | 0 | | |
| 185.72 | 0 | 186.76 | 0 | | |

## Summary for Pond 1.2 P:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 2.07" for 1-yr event
Inflow = 1.84 cfs @ 11.99 hrs, Volume= 0.095 af
Outflow = 0.64 cfs @ 11.95 hrs, Volume= 0.095 af, Atten= 65%, Lag= 0.0 min
Discarded = 0.64 cfs @ 11.95 hrs, Volume= 0.095 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 182.77' @ 12.14 hrs Surf.Area= 0.030 ac Storage= 0.013 af

Plug-Flow detention time= 4.0 min calculated for 0.095 af (100% of inflow)
Center-of-Mass det. time= 4.0 min ( 792.2 - 788.2 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 182.00' | 0.028 af | **34.75'W x 38.04'L x 3.50'H Field A**<br>0.106 af Overall - 0.037 af Embedded = 0.069 af x 40.0% Voids |
| #2A | 182.50' | 0.037 af | **ADS_StormTech SC-740** x 35 Inside #1<br>Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf<br>Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap<br>Row Length Adjustment= +0.44' x 6.45 sf x 7 rows |
| | | 0.065 af | Total Available Storage |

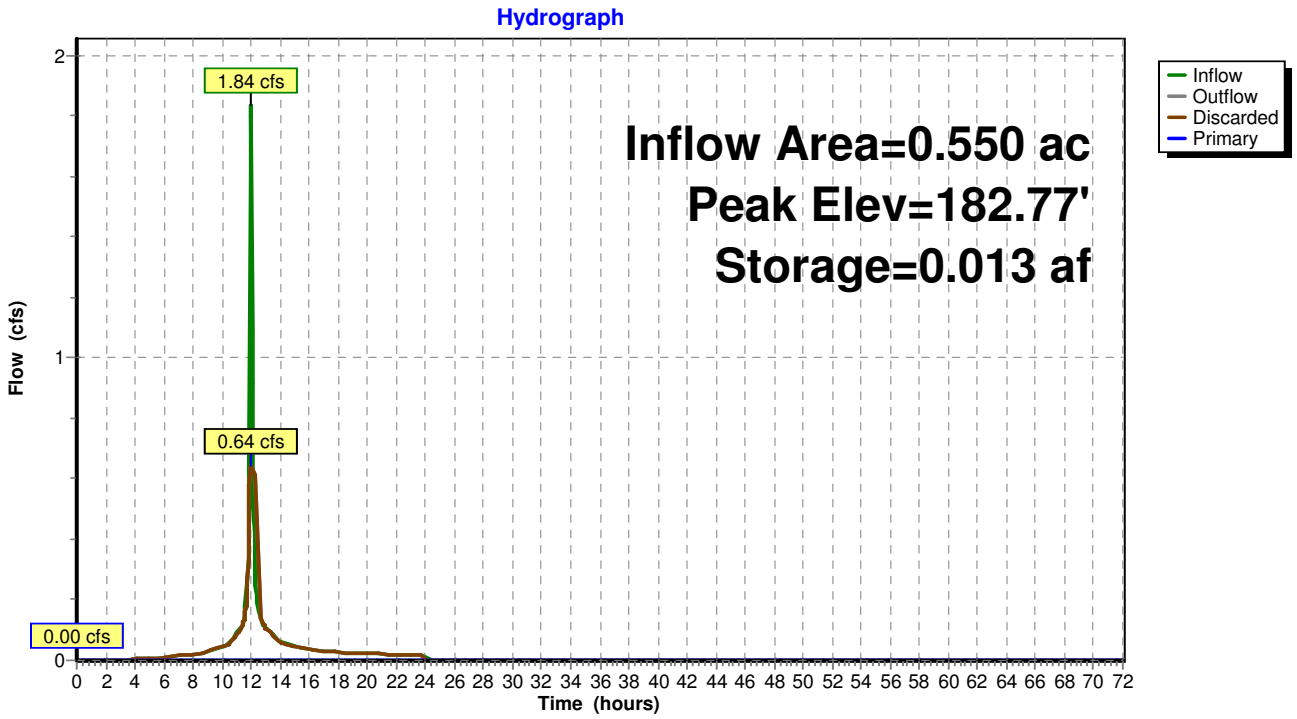
Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 182.00' | **21.000 in/hr Exfiltration over Horizontal area** Phase-In= 0.10' |
| #2 | Primary | 184.50' | **6.0" Round Culvert**<br>L= 17.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.50' / 184.30' S= 0.0118 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf |

**Discarded OutFlow** Max=0.64 cfs @ 11.95 hrs HW=182.26' (Free Discharge)
**1=Exfiltration** (Exfiltration Controls 0.64 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=182.00' TW=0.00' (Dynamic Tailwater)
**2=Culvert** ( Controls 0.00 cfs)

## Pond 1.2 P:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=182.77'
Storage=0.013 af
1.84 cfs
0.64 cfs
0.00 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0
1
2

## Stage-Area-Storage for Pond 1.2 P:

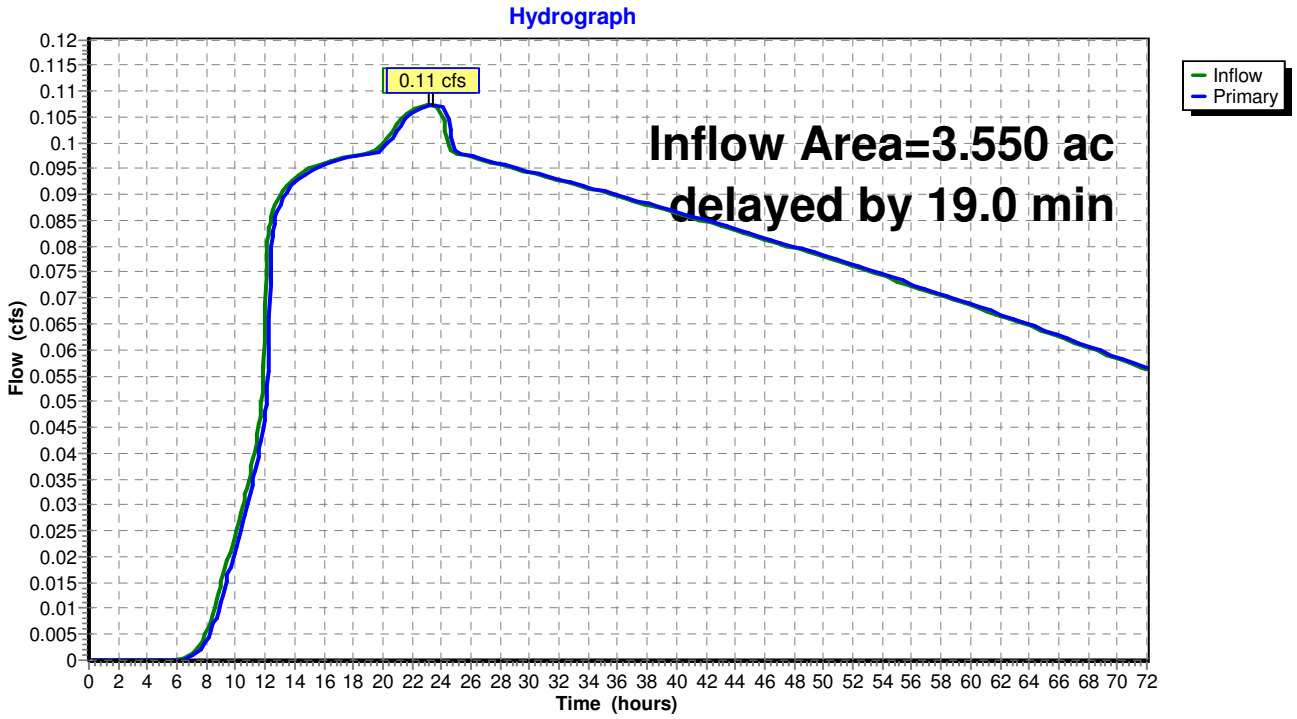
| Elevation (feet) | Horizontal (acres) | Storage (acre-feet) |
|---|---|---|
| 182.00 | **0.030** | 0.000 |
| 182.05 | 0.030 | 0.001 |
| 182.10 | 0.030 | 0.001 |
| 182.15 | 0.030 | 0.002 |
| 182.20 | 0.030 | 0.002 |
| 182.25 | 0.030 | 0.003 |
| 182.30 | 0.030 | 0.004 |
| 182.35 | 0.030 | 0.004 |
| 182.40 | 0.030 | 0.005 |
| 182.45 | 0.030 | 0.005 |
| 182.50 | 0.030 | 0.006 |
| 182.55 | 0.030 | 0.007 |
| 182.60 | 0.030 | 0.009 |
| 182.65 | 0.030 | 0.010 |
| 182.70 | 0.030 | 0.011 |
| 182.75 | 0.030 | 0.012 |
| 182.80 | 0.030 | 0.014 |
| 182.85 | 0.030 | 0.015 |
| 182.90 | 0.030 | 0.016 |
| 182.95 | 0.030 | 0.017 |
| 183.00 | 0.030 | 0.018 |
| 183.05 | 0.030 | 0.020 |
| 183.10 | 0.030 | 0.021 |
| 183.15 | 0.030 | 0.022 |
| 183.20 | 0.030 | 0.023 |
| 183.25 | 0.030 | 0.024 |
| 183.30 | 0.030 | 0.026 |
| 183.35 | 0.030 | 0.027 |
| 183.40 | 0.030 | 0.028 |
| 183.45 | 0.030 | 0.029 |
| 183.50 | 0.030 | 0.030 |
| 183.55 | 0.030 | 0.032 |
| 183.60 | 0.030 | 0.033 |
| 183.65 | 0.030 | 0.034 |
| 183.70 | 0.030 | 0.035 |
| 183.75 | 0.030 | 0.036 |
| 183.80 | 0.030 | 0.037 |
| 183.85 | 0.030 | 0.038 |
| 183.90 | 0.030 | 0.039 |
| 183.95 | 0.030 | 0.040 |
| 184.00 | 0.030 | 0.041 |
| 184.05 | 0.030 | 0.043 |
| 184.10 | 0.030 | 0.044 |
| 184.15 | 0.030 | 0.045 |
| 184.20 | 0.030 | 0.046 |
| 184.25 | 0.030 | 0.047 |
| 184.30 | 0.030 | 0.048 |
| 184.35 | 0.030 | 0.049 |
| 184.40 | 0.030 | 0.050 |
| 184.45 | 0.030 | 0.050 |
| 184.50 | 0.030 | 0.051 |
| 184.55 | 0.030 | 0.052 |
| 184.60 | 0.030 | 0.053 |
| 184.65 | 0.030 | 0.054 |
| 184.70 | 0.030 | 0.055 |
| 184.75 | 0.030 | 0.056 |
| 184.80 | 0.030 | 0.056 |
| 184.85 | 0.030 | 0.057 |
| 184.90 | 0.030 | 0.058 |
| 184.95 | 0.030 | 0.058 |
| 185.00 | 0.030 | 0.059 |
| 185.05 | 0.030 | 0.059 |
| 185.10 | 0.030 | 0.060 |
| 185.15 | 0.030 | 0.061 |
| 185.20 | 0.030 | 0.061 |
| 185.25 | 0.030 | 0.062 |
| 185.30 | 0.030 | 0.062 |
| 185.35 | 0.030 | 0.063 |
| 185.40 | 0.030 | 0.064 |
| 185.45 | 0.030 | 0.064 |
| 185.50 | 0.030 | **0.065** |

## Summary for Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth > 1.42" for 1-yr event
Inflow = 0.11 cfs @ 23.08 hrs, Volume= 0.420 af
Primary = 0.11 cfs @ 23.40 hrs, Volume= 0.418 af, Atten= 0%, Lag= 19.0 min

Primary outflow = Inflow delayed by 19.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)



## Summary for Subcatchment 1.0S:

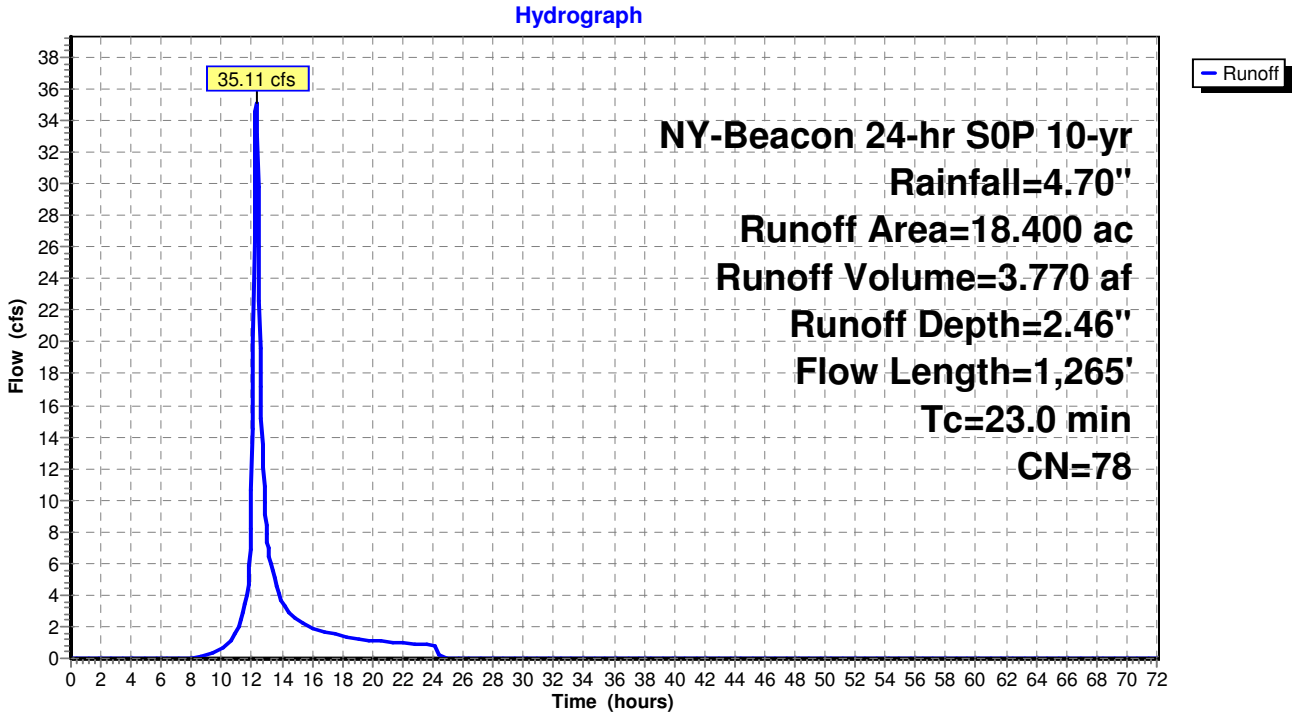
Runoff = 35.11 cfs @ 12.28 hrs, Volume= 3.770 af, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

| Area (ac) | CN | Description |
|---|---|---|
| 11.100 | 77 | Woods, Good, HSG D |
| 5.800 | 78 | Meadow, non-grazed, HSG D |
| 1.000 | 80 | >75% Grass cover, Good, HSG D |
| 0.500 | 98 | Paved parking, HSG D |
| 18.400 | 78 | Weighted Average |
| 17.900 | | 97.28% Pervious Area |
| 0.500 | | 2.72% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.4 | 100 | 0.0800 | 0.13 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 4.7 | 345 | 0.0600 | 1.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 170 | 0.0800 | 1.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 280 | 0.0900 | 1.50 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.2 | 235 | 0.0500 | 3.35 | | **Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps |
| 0.1 | 55 | 0.0450 | 11.17 | 13.70 | **Pipe Channel, SDI 14A TO DI 14** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior |
| 0.1 | 80 | 0.0410 | 14.58 | 45.81 | **Pipe Channel, DI 14 TO ES 13** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior |
| 23.0 | 1,265 | Total | | | |

## Subcatchment 1.0S:



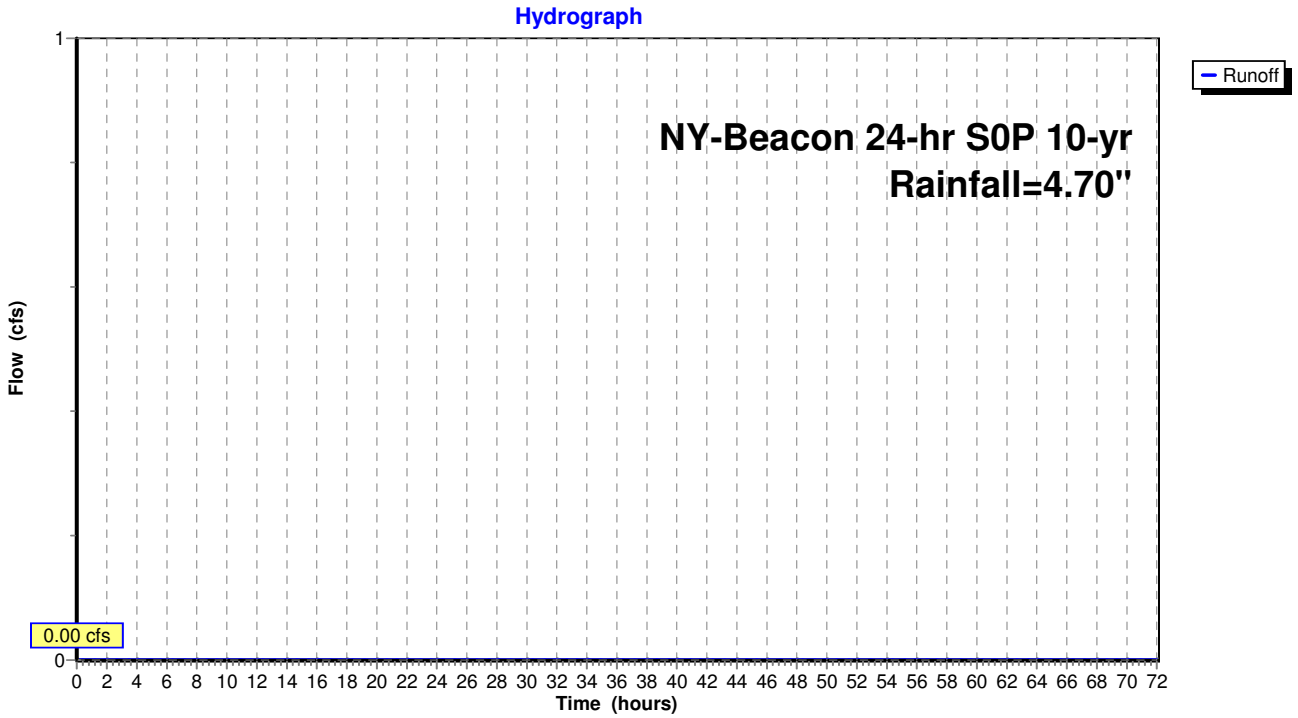
## Summary for Subcatchment 1.1 TC:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.4 | 100 | 0.0300 | 0.09 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 0.6 | 30 | 0.0300 | 0.87 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.0 | 130 | Total | | | |

## Subcatchment 1.1 TC:



## Summary for Subcatchment 1.1S:

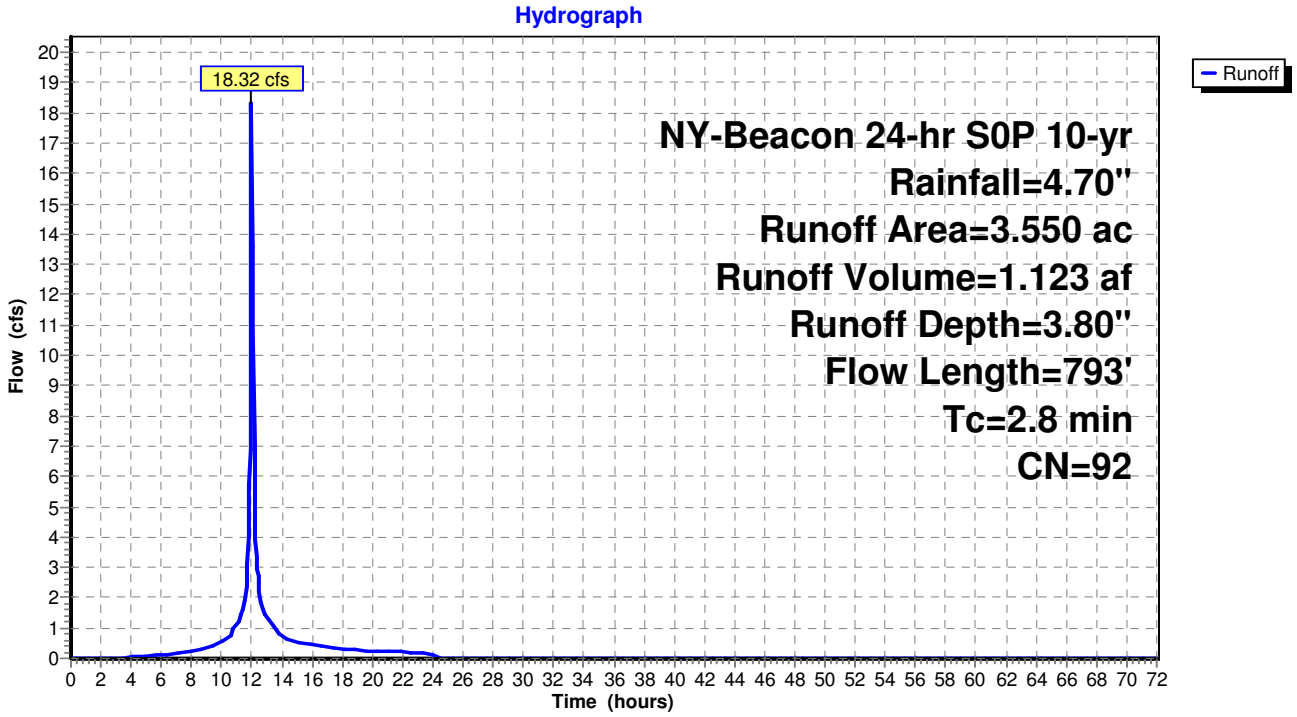
Runoff = 18.32 cfs @ 12.00 hrs, Volume= 1.123 af, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

| Area (ac) | CN | Description |
|---|---|---|
| 2.350 | 98 | Paved parking, HSG D |
| 1.200 | 80 | >75% Grass cover, Good, HSG D |
| 3.550 | 92 | Weighted Average |
| 1.200 | | 33.80% Pervious Area |
| 2.350 | | 66.20% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 100 | 0.0600 | 2.12 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16" |
| 0.7 | 200 | 0.0500 | 4.54 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.1 | 35 | 0.0120 | 4.97 | 3.90 | **Pipe Channel, CB 6 TO CB 5** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior |
| 0.5 | 183 | 0.0130 | 6.00 | 7.37 | **Pipe Channel, CB 5 TO CB 4** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior |
| 0.4 | 136 | 0.0100 | 5.94 | 10.50 | **Pipe Channel, CB 4 TO CB 3** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 0.2 | 63 | 0.0100 | 5.94 | 10.50 | **Pipe Channel, CB 3 TO CB 2** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 0.1 | 76 | 0.0360 | 11.28 | 19.93 | **Pipe Channel, CB 2 TO ES 1** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 2.8 | 793 | Total | | | |

## Subcatchment 1.1S:



## Summary for Subcatchment 1.2S:

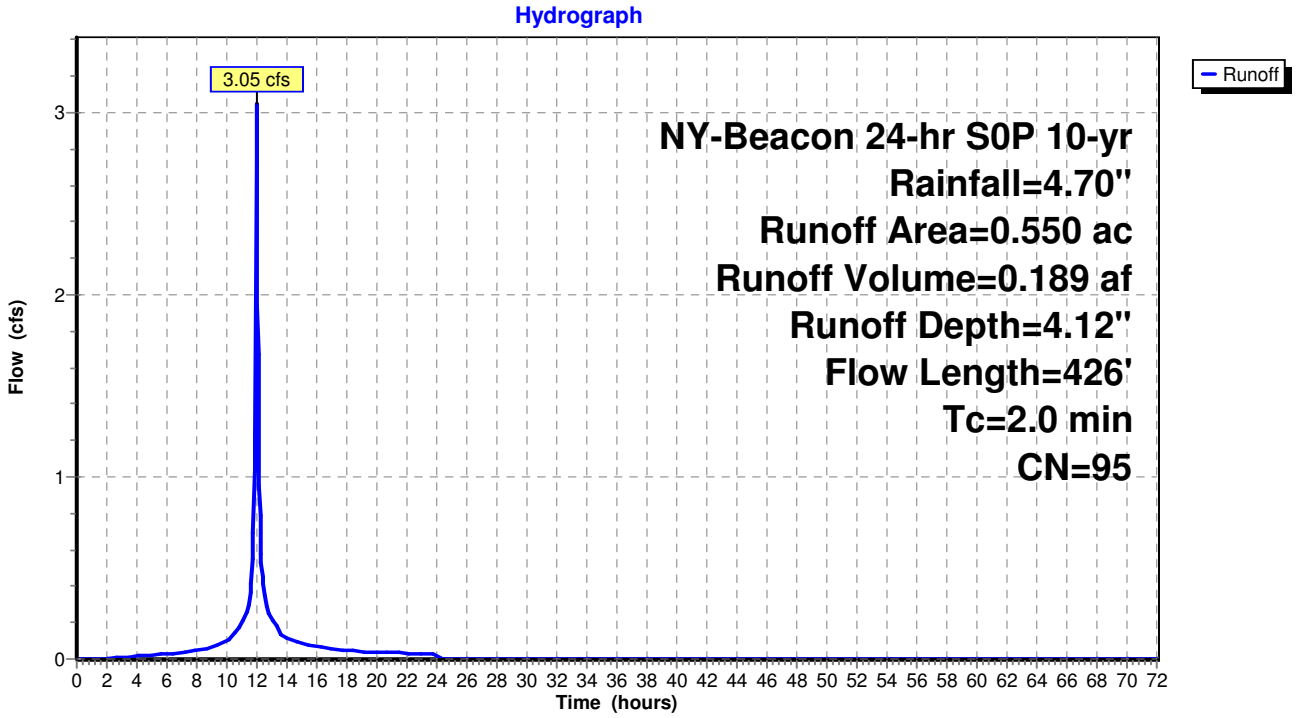
Runoff = 3.05 cfs @ 11.99 hrs, Volume= 0.189 af, Depth= 4.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 10-yr Rainfall=4.70"

| Area (ac) | CN | Description |
|---|---|---|
| 0.450 | 98 | Paved parking, HSG D |
| 0.100 | 80 | >75% Grass cover, Good, HSG D |
| 0.550 | 95 | Weighted Average |
| 0.100 | | 18.18% Pervious Area |
| 0.450 | | 81.82% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 100 | 0.0600 | 2.12 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16" |
| 0.4 | 120 | 0.0600 | 4.97 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.7 | 160 | 0.0350 | 3.80 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.1 | 46 | 0.0300 | 7.86 | 6.17 | **Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior |
| 2.0 | 426 | Total | | | |

## Subcatchment 1.2S:

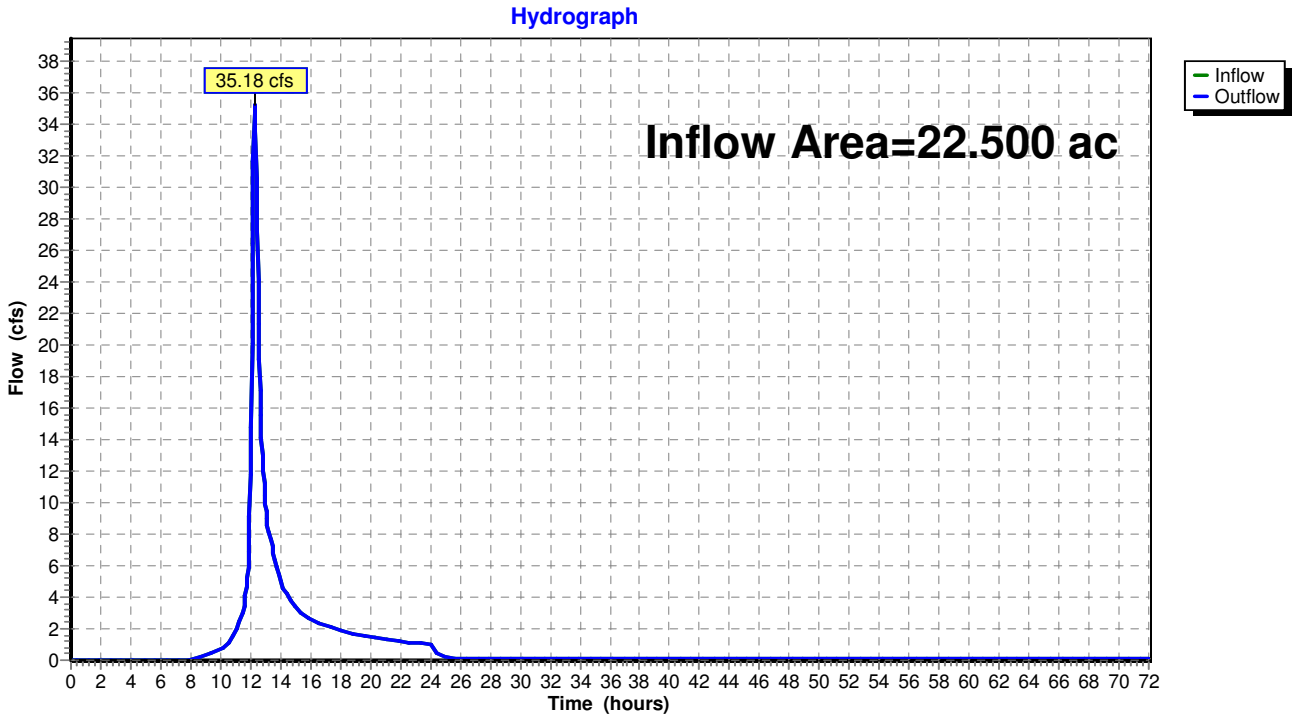


## Summary for Reach Design Line:

Inflow Area = 22.500 ac, 14.67% Impervious, Inflow Depth > 2.55" for 10-yr event
Inflow = 35.18 cfs @ 12.29 hrs, Volume= 4.779 af
Outflow = 35.18 cfs @ 12.29 hrs, Volume= 4.779 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Reach Design Line:



## Summary for Pond 1.1 P:

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth = 3.80" for 10-yr event
Inflow = 18.32 cfs @ 12.00 hrs, Volume= 1.123 af
Outflow = 2.11 cfs @ 12.55 hrs, Volume= 1.002 af, Atten= 88%, Lag= 33.1 min
Primary = 2.11 cfs @ 12.55 hrs, Volume= 1.002 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Starting Elev= 180.00' Surf.Area= 7,640 sf Storage= 10,715 cf
Peak Elev= 182.93' @ 12.55 hrs Surf.Area= 14,995 sf Storage= 37,641 cf (26,926 cf above start)
Flood Elev= 184.50' Surf.Area= 19,225 sf Storage= 60,459 cf (49,744 cf above start)

Plug-Flow detention time= 1,085.8 min calculated for 0.756 af (67% of inflow)
Center-of-Mass det. time= 731.9 min ( 1,516.9 - 785.0 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 175.00' | 2,050 cf | **Forebay (Prismatic)** Listed below (Recalc) |
| #2 | 175.00' | 67,360 cf | **Custom Stage Data (Prismatic)** Listed below (Recalc) |
| | | 69,410 cf | Total Available Storage |

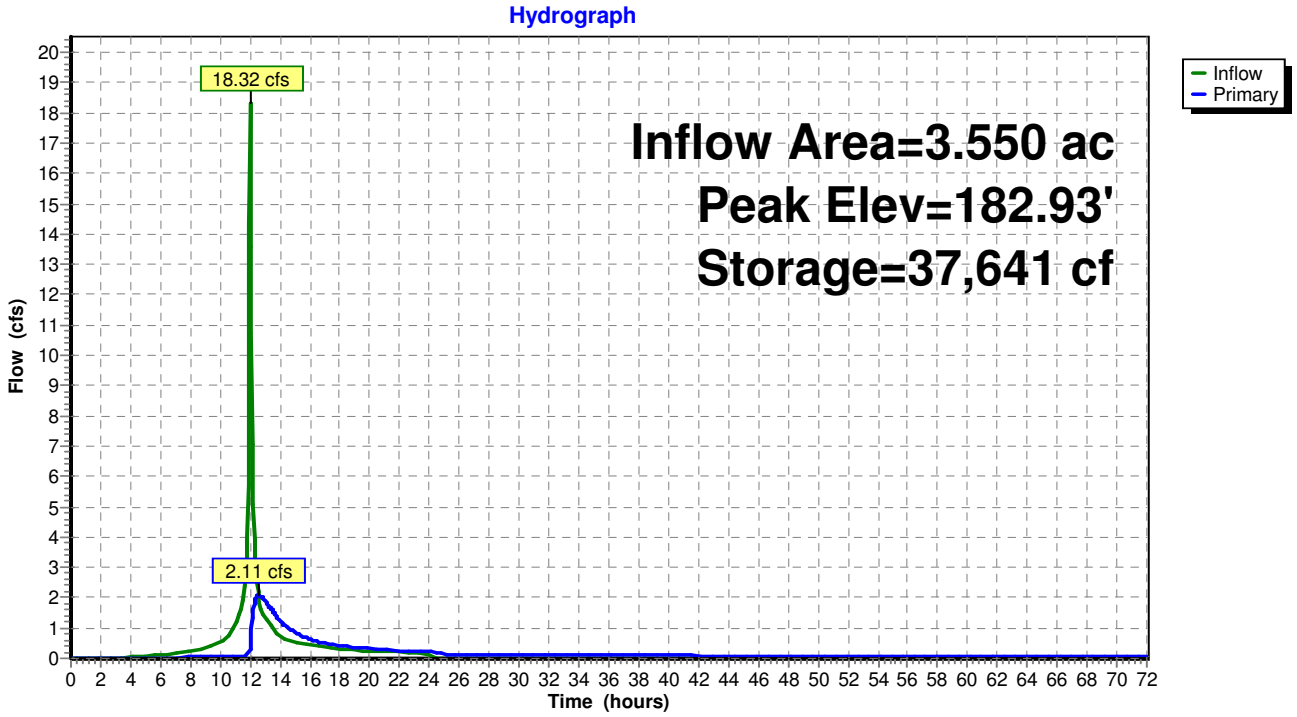
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 175.00 | 5 | 0 | 0 |
| 177.00 | 110 | 115 | 115 |
| 179.00 | 450 | 560 | 675 |
| 180.00 | 2,300 | 1,375 | 2,050 |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 175.00 | 500 | 0 | 0 |
| 177.00 | 1,180 | 1,680 | 1,680 |
| 179.00 | 2,090 | 3,270 | 4,950 |
| 180.00 | 5,340 | 3,715 | 8,665 |
| 182.00 | 10,730 | 16,070 | 24,735 |
| 184.00 | 14,970 | 25,700 | 50,435 |
| 185.00 | 18,880 | 16,925 | 67,360 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 179.00' | **24.0" Round Culvert**<br>L= 37.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 179.00' / 178.50' S= 0.0135 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf |
| #2 | Device 1 | 180.00' | **1.6" Vert. Orifice/Grate** C= 0.600 |
| #3 | Device 1 | 182.20' | **1.0' long x 0.5' breadth Broad-Crested Rectangular Weir**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=2.11 cfs @ 12.55 hrs HW=182.93' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.11 cfs of 25.88 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.11 cfs @ 8.14 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 2.00 cfs @ 2.74 fps)

## Pond 1.1 P:


Hydrograph
Inflow Area=3.550 ac
Peak Elev=182.93'
Storage=37,641 cf
18.32 cfs
2.11 cfs
Inflow
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

## Stage-Area-Storage for Pond 1.1 P:

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---|---|---|---|
| 175.00 | 0 | 180.20 | 11,837 |
| 175.10 | 52 | 180.30 | 12,438 |
| 175.20 | 109 | 180.40 | 13,067 |
| 175.30 | 169 | 180.50 | 13,722 |
| 175.40 | 233 | 180.60 | 14,404 |
| 175.50 | 302 | 180.70 | 15,113 |
| 175.60 | 374 | 180.80 | 15,849 |
| 175.70 | 450 | 180.90 | 16,612 |
| 175.80 | 530 | 181.00 | 17,403 |
| 175.90 | 613 | 181.10 | 18,219 |
| 176.00 | 701 | 181.20 | 19,063 |
| 176.10 | 793 | 181.30 | 19,934 |
| 176.20 | 889 | 181.40 | 20,832 |
| 176.30 | 988 | 181.50 | 21,757 |
| 176.40 | 1,092 | 181.60 | 22,709 |
| 176.50 | 1,199 | 181.70 | 23,687 |
| 176.60 | 1,310 | 181.80 | 24,693 |
| 176.70 | 1,426 | 181.90 | 25,725 |
| 176.80 | 1,545 | 182.00 | 26,785 |
| 176.90 | 1,668 | 182.10 | 27,869 |
| 177.00 | 1,795 | 182.20 | 28,973 |
| 177.10 | 1,927 | 182.30 | 30,099 |
| 177.20 | 2,065 | 182.40 | 31,247 |
| 177.30 | 2,210 | 182.50 | 32,415 |
| 177.40 | 2,361 | 182.60 | 33,605 |
| 177.50 | 2,518 | 182.70 | 34,815 |
| 177.60 | 2,681 | 182.80 | 36,047 |
| 177.70 | 2,851 | 182.90 | 37,301 |
| 177.80 | 3,027 | 183.00 | 38,575 |
| 177.90 | 3,209 | 183.10 | 39,871 |
| 178.00 | 3,398 | 183.20 | 41,187 |
| 178.10 | 3,592 | 183.30 | 42,525 |
| 178.20 | 3,793 | 183.40 | 43,885 |
| 178.30 | 4,000 | 183.50 | 45,265 |
| 178.40 | 4,214 | 183.60 | 46,667 |
| 178.50 | 4,433 | 183.70 | 48,089 |
| 178.60 | 4,659 | 183.80 | 49,533 |
| 178.70 | 4,891 | 183.90 | 50,999 |
| 178.80 | 5,130 | 184.00 | 52,485 |
| 178.90 | 5,374 | 184.10 | 54,002 |
| 179.00 | 5,625 | 184.20 | 55,557 |
| 179.10 | 5,904 | 184.30 | 57,152 |
| 179.20 | 6,235 | 184.40 | 58,786 |
| 179.30 | 6,617 | 184.50 | 60,459 |
| 179.40 | 7,049 | 184.60 | 62,171 |
| 179.50 | 7,533 | 184.70 | 63,922 |
| 179.60 | 8,067 | 184.80 | 65,712 |
| 179.70 | 8,652 | 184.90 | 67,542 |
| 179.80 | 9,289 | 185.00 | **69,410** |
| 179.90 | 9,977 | | |
| 180.00 | 10,715 | | |
| 180.10 | 11,262 | | |

## Summary for Pond 1.2 FS:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 4.12" for 10-yr event
Inflow = 3.05 cfs @ 11.99 hrs, Volume= 0.189 af
Outflow = 3.05 cfs @ 11.99 hrs, Volume= 0.189 af, Atten= 0%, Lag= 0.0 min
Primary = 1.97 cfs @ 11.98 hrs, Volume= 0.181 af
Secondary = 1.07 cfs @ 11.99 hrs, Volume= 0.008 af

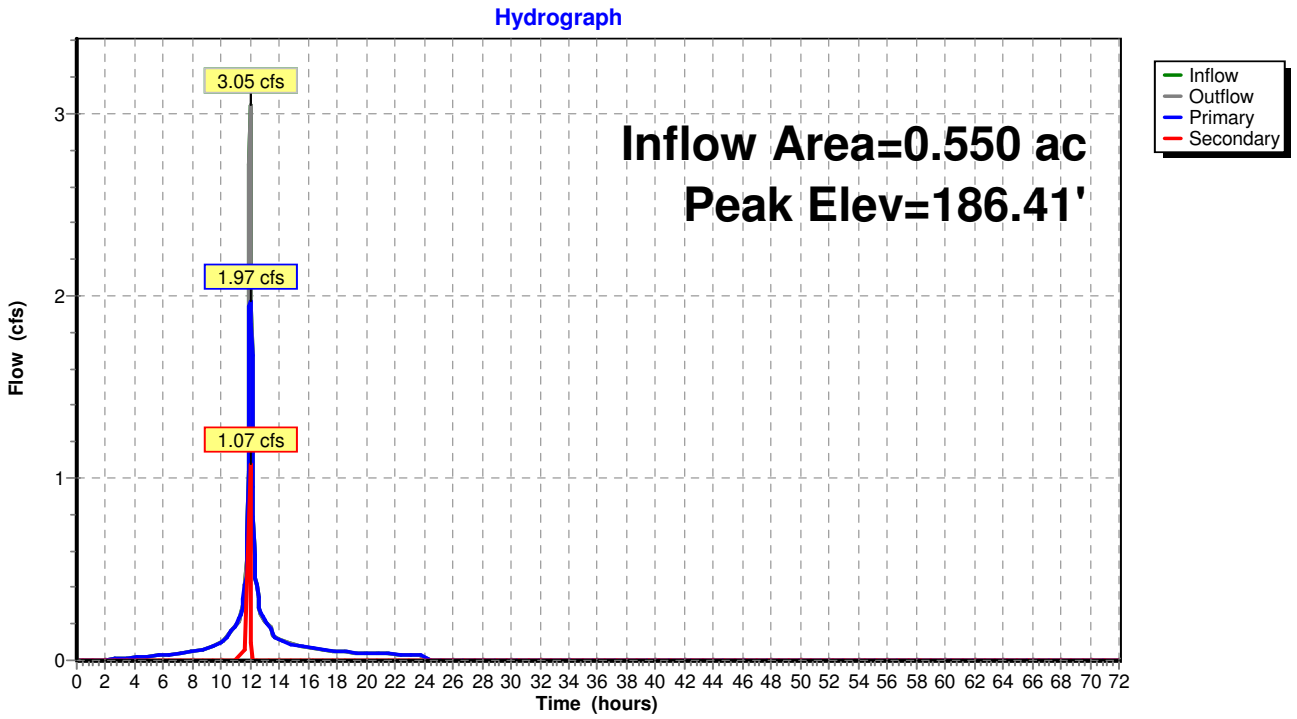
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 186.41' @ 11.98 hrs
Flood Elev= 187.70'

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 184.70' | **8.0" Round Culvert**<br>L= 12.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.70' / 184.50' S= 0.0167 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf |
| #2 | Secondary | 184.70' | **12.0" Round Culvert**<br>L= 30.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.70' / 184.00' S= 0.0233 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #3 | Device 2 | 186.20' | **4.0' long x 0.5' breadth Broad-Crested Rectangular Weir**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=1.96 cfs @ 11.98 hrs HW=186.39' TW=182.73' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.96 cfs @ 5.61 fps)

**Secondary OutFlow** Max=0.95 cfs @ 11.99 hrs HW=186.39' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.95 cfs of 4.13 cfs potential flow)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.95 cfs @ 1.23 fps)

## Pond 1.2 FS:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=186.41'
3.05 cfs
1.97 cfs
1.07 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 1 2 3
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

## Stage-Area-Storage for Pond 1.2 FS:

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---|---|---|---|---|---|
| 184.70 | **0** | 185.74 | 0 | 186.78 | 0 |
| 184.72 | 0 | 185.76 | 0 | 186.80 | 0 |
| 184.74 | 0 | 185.78 | 0 | 186.82 | 0 |
| 184.76 | 0 | 185.80 | 0 | 186.84 | 0 |
| 184.78 | 0 | 185.82 | 0 | 186.86 | 0 |
| 184.80 | 0 | 185.84 | 0 | 186.88 | 0 |
| 184.82 | 0 | 185.86 | 0 | 186.90 | 0 |
| 184.84 | 0 | 185.88 | 0 | 186.92 | 0 |
| 184.86 | 0 | 185.90 | 0 | 186.94 | 0 |
| 184.88 | 0 | 185.92 | 0 | 186.96 | 0 |
| 184.90 | 0 | 185.94 | 0 | 186.98 | 0 |
| 184.92 | 0 | 185.96 | 0 | 187.00 | 0 |
| 184.94 | 0 | 185.98 | 0 | 187.02 | 0 |
| 184.96 | 0 | 186.00 | 0 | 187.04 | 0 |
| 184.98 | 0 | 186.02 | 0 | 187.06 | 0 |
| 185.00 | 0 | 186.04 | 0 | 187.08 | 0 |
| 185.02 | 0 | 186.06 | 0 | 187.10 | 0 |
| 185.04 | 0 | 186.08 | 0 | 187.12 | 0 |
| 185.06 | 0 | 186.10 | 0 | 187.14 | 0 |
| 185.08 | 0 | 186.12 | 0 | 187.16 | 0 |
| 185.10 | 0 | 186.14 | 0 | 187.18 | 0 |
| 185.12 | 0 | 186.16 | 0 | 187.20 | 0 |
| 185.14 | 0 | 186.18 | 0 | 187.22 | 0 |
| 185.16 | 0 | 186.20 | 0 | 187.24 | 0 |
| 185.18 | 0 | 186.22 | 0 | 187.26 | 0 |
| 185.20 | 0 | 186.24 | 0 | 187.28 | 0 |
| 185.22 | 0 | 186.26 | 0 | 187.30 | 0 |
| 185.24 | 0 | 186.28 | 0 | 187.32 | 0 |
| 185.26 | 0 | 186.30 | 0 | 187.34 | 0 |
| 185.28 | 0 | 186.32 | 0 | 187.36 | 0 |
| 185.30 | 0 | 186.34 | 0 | 187.38 | 0 |
| 185.32 | 0 | 186.36 | 0 | 187.40 | 0 |
| 185.34 | 0 | 186.38 | 0 | 187.42 | 0 |
| 185.36 | 0 | 186.40 | 0 | 187.44 | 0 |
| 185.38 | 0 | 186.42 | 0 | 187.46 | 0 |
| 185.40 | 0 | 186.44 | 0 | 187.48 | 0 |
| 185.42 | 0 | 186.46 | 0 | 187.50 | 0 |
| 185.44 | 0 | 186.48 | 0 | 187.52 | 0 |
| 185.46 | 0 | 186.50 | 0 | 187.54 | 0 |
| 185.48 | 0 | 186.52 | 0 | 187.56 | 0 |
| 185.50 | 0 | 186.54 | 0 | 187.58 | 0 |
| 185.52 | 0 | 186.56 | 0 | 187.60 | 0 |
| 185.54 | 0 | 186.58 | 0 | 187.62 | 0 |
| 185.56 | 0 | 186.60 | 0 | 187.64 | 0 |
| 185.58 | 0 | 186.62 | 0 | 187.66 | 0 |
| 185.60 | 0 | 186.64 | 0 | 187.68 | 0 |
| 185.62 | 0 | 186.66 | 0 | 187.70 | 0 |
| 185.64 | 0 | 186.68 | 0 | | |
| 185.66 | 0 | 186.70 | 0 | | |
| 185.68 | 0 | 186.72 | 0 | | |
| 185.70 | 0 | 186.74 | 0 | | |
| 185.72 | 0 | 186.76 | 0 | | |

## Summary for Pond 1.2 P:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 3.95" for 10-yr event
Inflow = 1.97 cfs @ 11.98 hrs, Volume= 0.181 af
Outflow = 0.64 cfs @ 11.80 hrs, Volume= 0.181 af, Atten= 67%, Lag= 0.0 min
Discarded = 0.64 cfs @ 11.80 hrs, Volume= 0.181 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 183.37' @ 12.24 hrs Surf.Area= 0.030 ac Storage= 0.027 af

Plug-Flow detention time= 8.1 min calculated for 0.181 af (100% of inflow)
Center-of-Mass det. time= 8.1 min ( 778.3 - 770.1 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 182.00' | 0.028 af | **34.75'W x 38.04'L x 3.50'H Field A**<br>0.106 af Overall - 0.037 af Embedded = 0.069 af x 40.0% Voids |
| #2A | 182.50' | 0.037 af | **ADS_StormTech SC-740** x 35 Inside #1<br>Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf<br>Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap<br>Row Length Adjustment= +0.44' x 6.45 sf x 7 rows |
| | | 0.065 af | Total Available Storage |

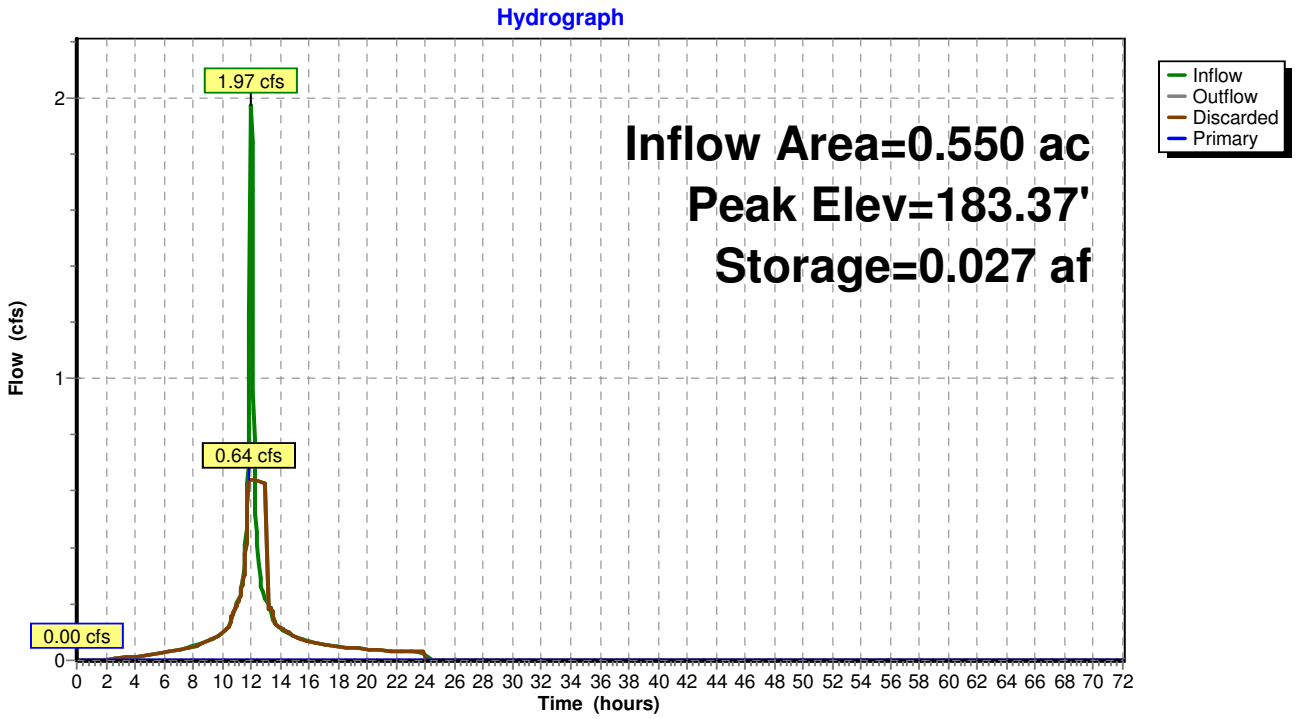
Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 182.00' | **21.000 in/hr Exfiltration over Horizontal area** Phase-In= 0.10' |
| #2 | Primary | 184.50' | **6.0" Round Culvert**<br>L= 17.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.50' / 184.30' S= 0.0118 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf |

**Discarded OutFlow** Max=0.64 cfs @ 11.80 hrs HW=182.11' (Free Discharge)
**1=Exfiltration** (Exfiltration Controls 0.64 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=182.00' TW=0.00' (Dynamic Tailwater)
**2=Culvert** ( Controls 0.00 cfs)

## Pond 1.2 P:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=183.37'
Storage=0.027 af
1.97 cfs
0.64 cfs
0.00 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0
1
2

## Stage-Area-Storage for Pond 1.2 P:

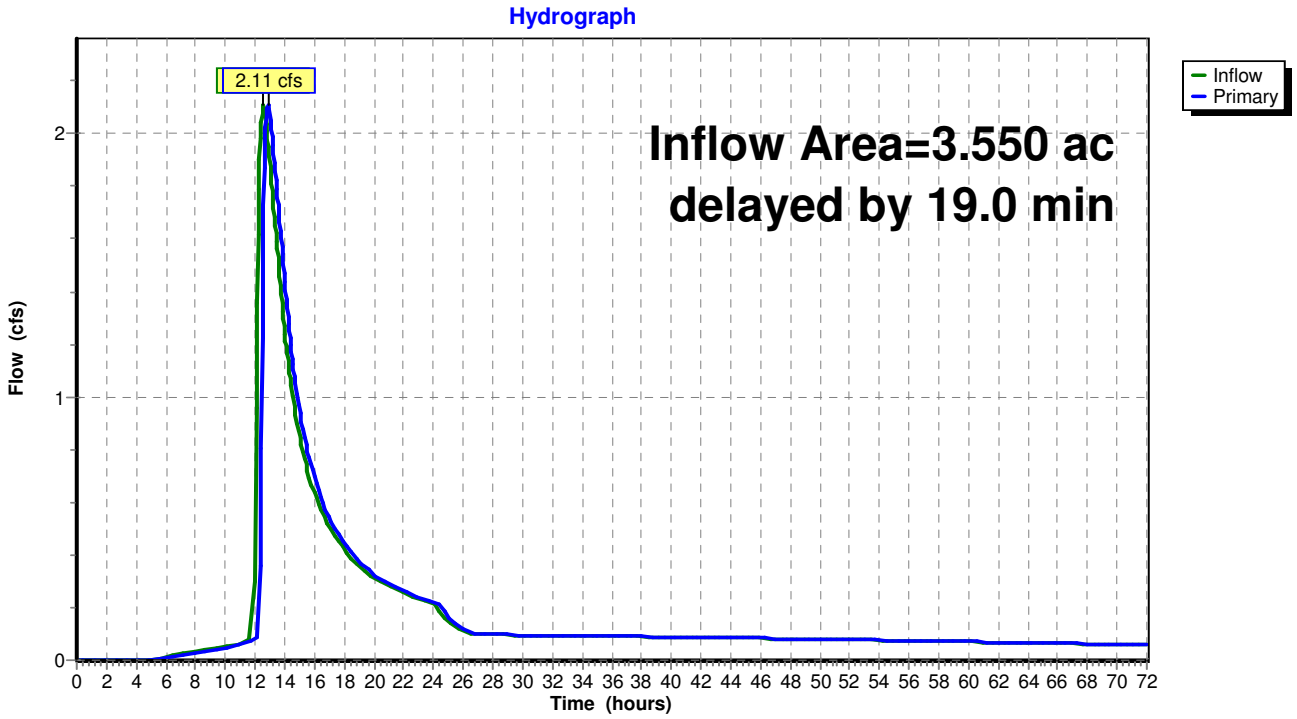
| Elevation (feet) | Horizontal (acres) | Storage (acre-feet) |
|---|---|---|
| 182.00 | **0.030** | 0.000 |
| 182.05 | 0.030 | 0.001 |
| 182.10 | 0.030 | 0.001 |
| 182.15 | 0.030 | 0.002 |
| 182.20 | 0.030 | 0.002 |
| 182.25 | 0.030 | 0.003 |
| 182.30 | 0.030 | 0.004 |
| 182.35 | 0.030 | 0.004 |
| 182.40 | 0.030 | 0.005 |
| 182.45 | 0.030 | 0.005 |
| 182.50 | 0.030 | 0.006 |
| 182.55 | 0.030 | 0.007 |
| 182.60 | 0.030 | 0.009 |
| 182.65 | 0.030 | 0.010 |
| 182.70 | 0.030 | 0.011 |
| 182.75 | 0.030 | 0.012 |
| 182.80 | 0.030 | 0.014 |
| 182.85 | 0.030 | 0.015 |
| 182.90 | 0.030 | 0.016 |
| 182.95 | 0.030 | 0.017 |
| 183.00 | 0.030 | 0.018 |
| 183.05 | 0.030 | 0.020 |
| 183.10 | 0.030 | 0.021 |
| 183.15 | 0.030 | 0.022 |
| 183.20 | 0.030 | 0.023 |
| 183.25 | 0.030 | 0.024 |
| 183.30 | 0.030 | 0.026 |
| 183.35 | 0.030 | 0.027 |
| 183.40 | 0.030 | 0.028 |
| 183.45 | 0.030 | 0.029 |
| 183.50 | 0.030 | 0.030 |
| 183.55 | 0.030 | 0.032 |
| 183.60 | 0.030 | 0.033 |
| 183.65 | 0.030 | 0.034 |
| 183.70 | 0.030 | 0.035 |
| 183.75 | 0.030 | 0.036 |
| 183.80 | 0.030 | 0.037 |
| 183.85 | 0.030 | 0.038 |
| 183.90 | 0.030 | 0.039 |
| 183.95 | 0.030 | 0.040 |
| 184.00 | 0.030 | 0.041 |
| 184.05 | 0.030 | 0.043 |
| 184.10 | 0.030 | 0.044 |
| 184.15 | 0.030 | 0.045 |
| 184.20 | 0.030 | 0.046 |
| 184.25 | 0.030 | 0.047 |
| 184.30 | 0.030 | 0.048 |
| 184.35 | 0.030 | 0.049 |
| 184.40 | 0.030 | 0.050 |
| 184.45 | 0.030 | 0.050 |
| 184.50 | 0.030 | 0.051 |
| 184.55 | 0.030 | 0.052 |
| 184.60 | 0.030 | 0.053 |
| 184.65 | 0.030 | 0.054 |
| 184.70 | 0.030 | 0.055 |
| 184.75 | 0.030 | 0.056 |
| 184.80 | 0.030 | 0.056 |
| 184.85 | 0.030 | 0.057 |
| 184.90 | 0.030 | 0.058 |
| 184.95 | 0.030 | 0.058 |
| 185.00 | 0.030 | 0.059 |
| 185.05 | 0.030 | 0.059 |
| 185.10 | 0.030 | 0.060 |
| 185.15 | 0.030 | 0.061 |
| 185.20 | 0.030 | 0.061 |
| 185.25 | 0.030 | 0.062 |
| 185.30 | 0.030 | 0.062 |
| 185.35 | 0.030 | 0.063 |
| 185.40 | 0.030 | 0.064 |
| 185.45 | 0.030 | 0.064 |
| 185.50 | 0.030 | **0.065** |

## Summary for Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth > 3.39" for 10-yr event
Inflow = 2.11 cfs @ 12.55 hrs, Volume= 1.002 af
Primary = 2.11 cfs @ 12.87 hrs, Volume= 1.000 af, Atten= 0%, Lag= 19.0 min

Primary outflow = Inflow delayed by 19.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

### Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)



## Summary for Subcatchment 1.0S:

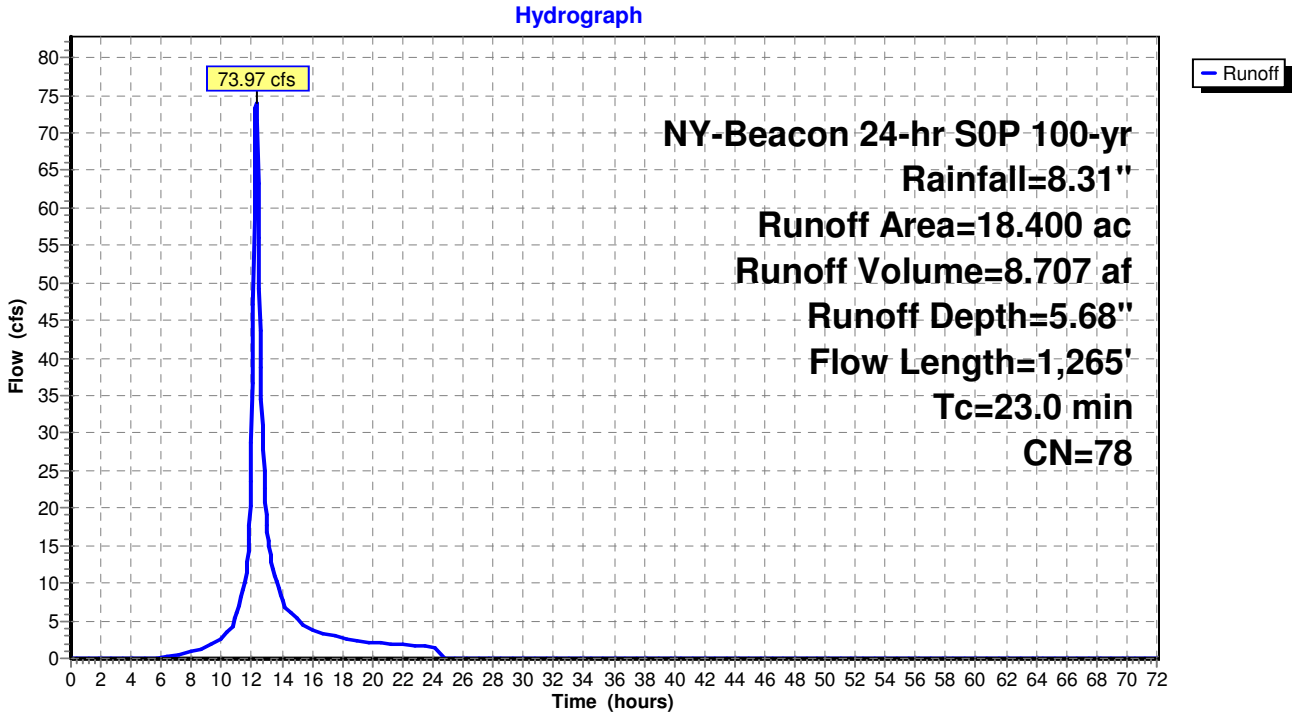
Runoff = 73.97 cfs @ 12.28 hrs, Volume= 8.707 af, Depth= 5.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

| Area (ac) | CN | Description |
|---|---|---|
| 11.100 | 77 | Woods, Good, HSG D |
| 5.800 | 78 | Meadow, non-grazed, HSG D |
| 1.000 | 80 | >75% Grass cover, Good, HSG D |
| 0.500 | 98 | Paved parking, HSG D |
| 18.400 | 78 | Weighted Average |
| 17.900 | | 97.28% Pervious Area |
| 0.500 | | 2.72% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.4 | 100 | 0.0800 | 0.13 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 4.7 | 345 | 0.0600 | 1.22 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.4 | 170 | 0.0800 | 1.98 | | **Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps |
| 3.1 | 280 | 0.0900 | 1.50 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 1.2 | 235 | 0.0500 | 3.35 | | **Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps |
| 0.1 | 55 | 0.0450 | 11.17 | 13.70 | **Pipe Channel, SDI 14A TO DI 14** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior |
| 0.1 | 80 | 0.0410 | 14.58 | 45.81 | **Pipe Channel, DI 14 TO ES 13** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior |
| 23.0 | 1,265 | Total | | | |

## Subcatchment 1.0S:



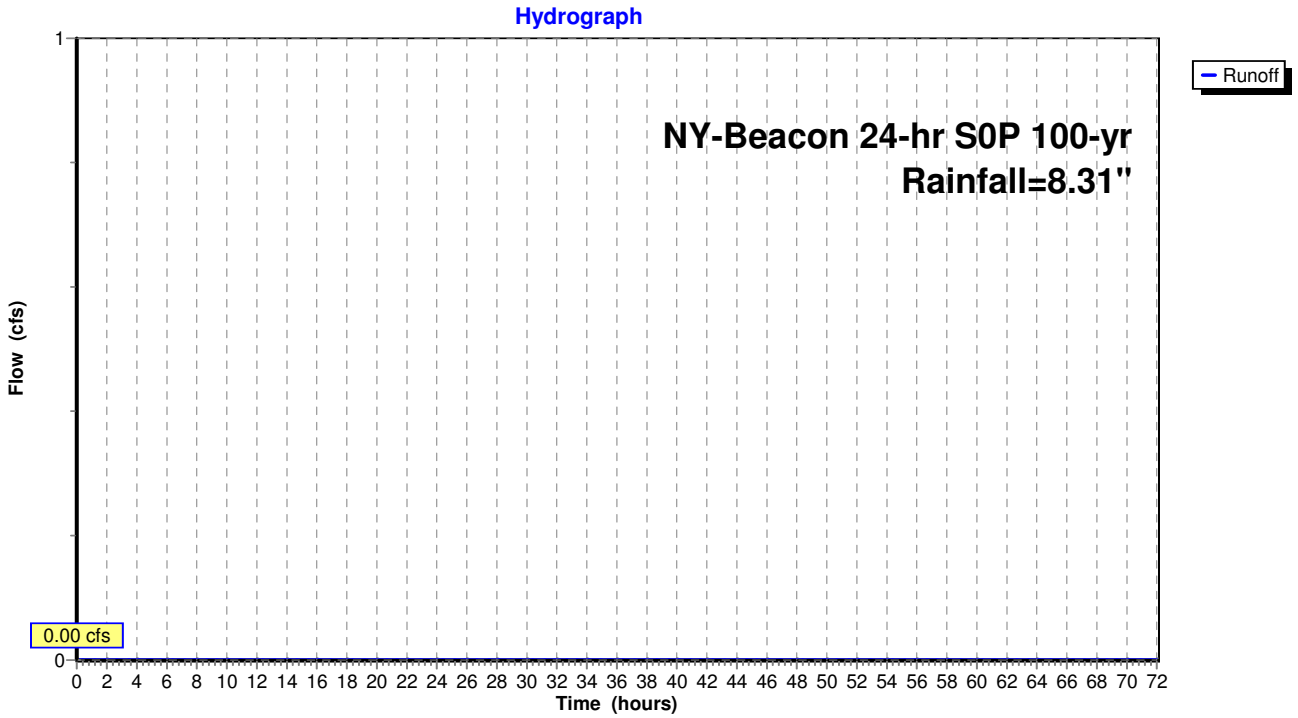
## Summary for Subcatchment 1.1 TC:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.4 | 100 | 0.0300 | 0.09 | | **Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.16" |
| 0.6 | 30 | 0.0300 | 0.87 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 19.0 | 130 | Total | | | |

## Subcatchment 1.1 TC:



## Summary for Subcatchment 1.1S:

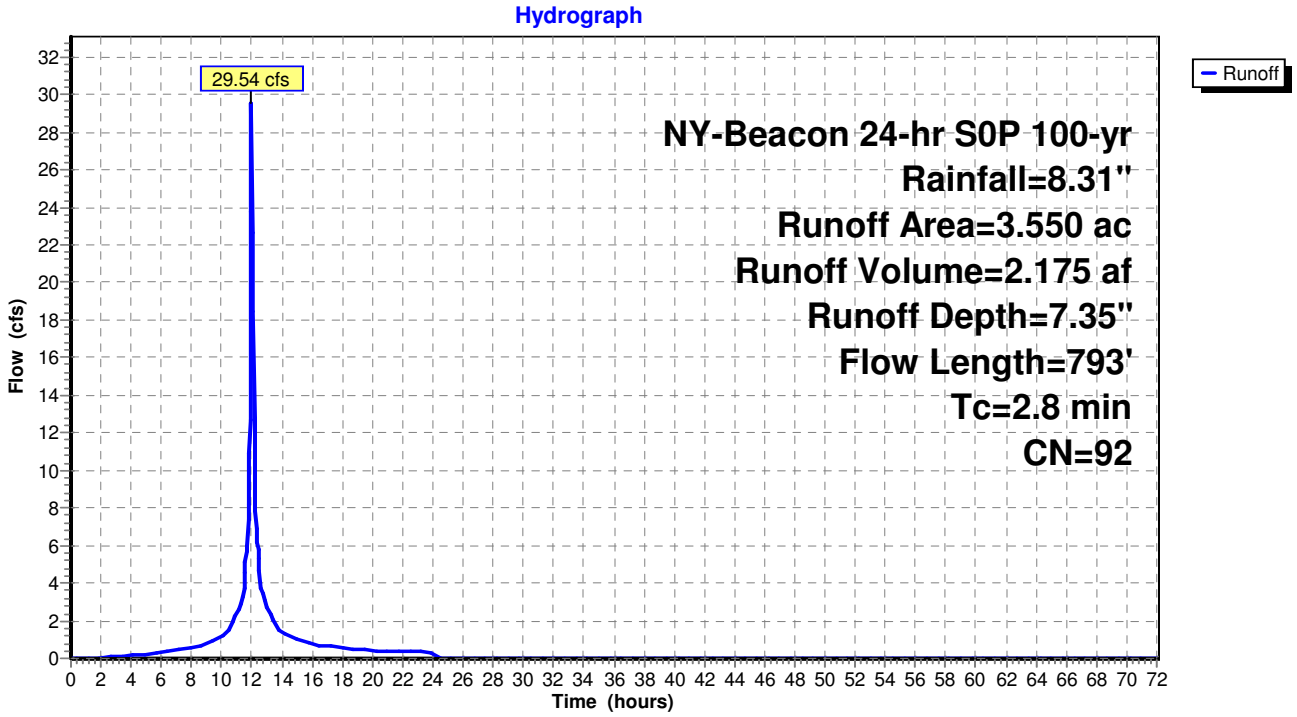
Runoff = 29.54 cfs @ 12.00 hrs, Volume= 2.175 af, Depth= 7.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

| Area (ac) | CN | Description |
|---|---|---|
| 2.350 | 98 | Paved parking, HSG D |
| 1.200 | 80 | >75% Grass cover, Good, HSG D |
| 3.550 | 92 | Weighted Average |
| 1.200 | | 33.80% Pervious Area |
| 2.350 | | 66.20% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 100 | 0.0600 | 2.12 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16" |
| 0.7 | 200 | 0.0500 | 4.54 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.1 | 35 | 0.0120 | 4.97 | 3.90 | **Pipe Channel, CB 6 TO CB 5** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior |
| 0.5 | 183 | 0.0130 | 6.00 | 7.37 | **Pipe Channel, CB 5 TO CB 4** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior |
| 0.4 | 136 | 0.0100 | 5.94 | 10.50 | **Pipe Channel, CB 4 TO CB 3** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 0.2 | 63 | 0.0100 | 5.94 | 10.50 | **Pipe Channel, CB 3 TO CB 2** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 0.1 | 76 | 0.0360 | 11.28 | 19.93 | **Pipe Channel, CB 2 TO ES 1** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior |
| 2.8 | 793 | Total | | | |

## Subcatchment 1.1S:



## Summary for Subcatchment 1.2S:

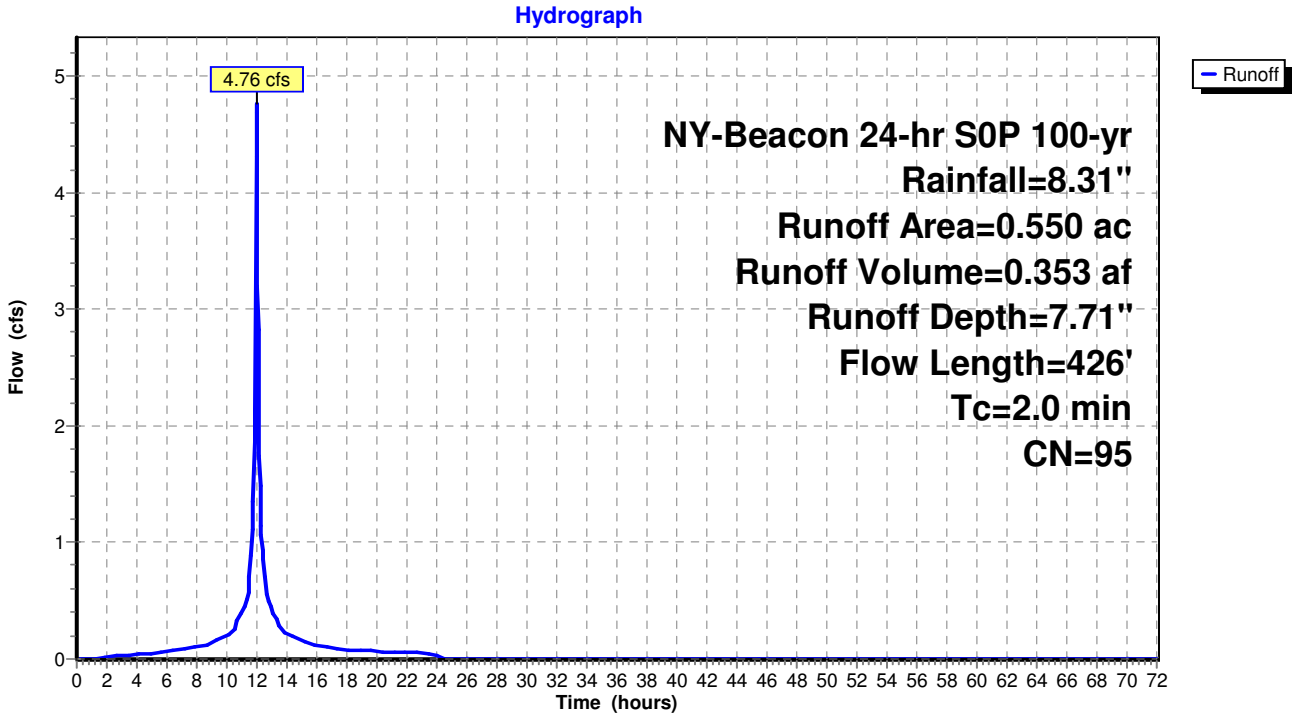
Runoff = 4.76 cfs @ 11.99 hrs, Volume= 0.353 af, Depth= 7.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NY-Beacon 24-hr S0P 100-yr Rainfall=8.31"

| Area (ac) | CN | Description |
|---|---|---|
| 0.450 | 98 | Paved parking, HSG D |
| 0.100 | 80 | >75% Grass cover, Good, HSG D |
| 0.550 | 95 | Weighted Average |
| 0.100 | | 18.18% Pervious Area |
| 0.450 | | 81.82% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.8 | 100 | 0.0600 | 2.12 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16" |
| 0.4 | 120 | 0.0600 | 4.97 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.7 | 160 | 0.0350 | 3.80 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 0.1 | 46 | 0.0300 | 7.86 | 6.17 | **Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior |
| 2.0 | 426 | Total | | | |

## Subcatchment 1.2S:

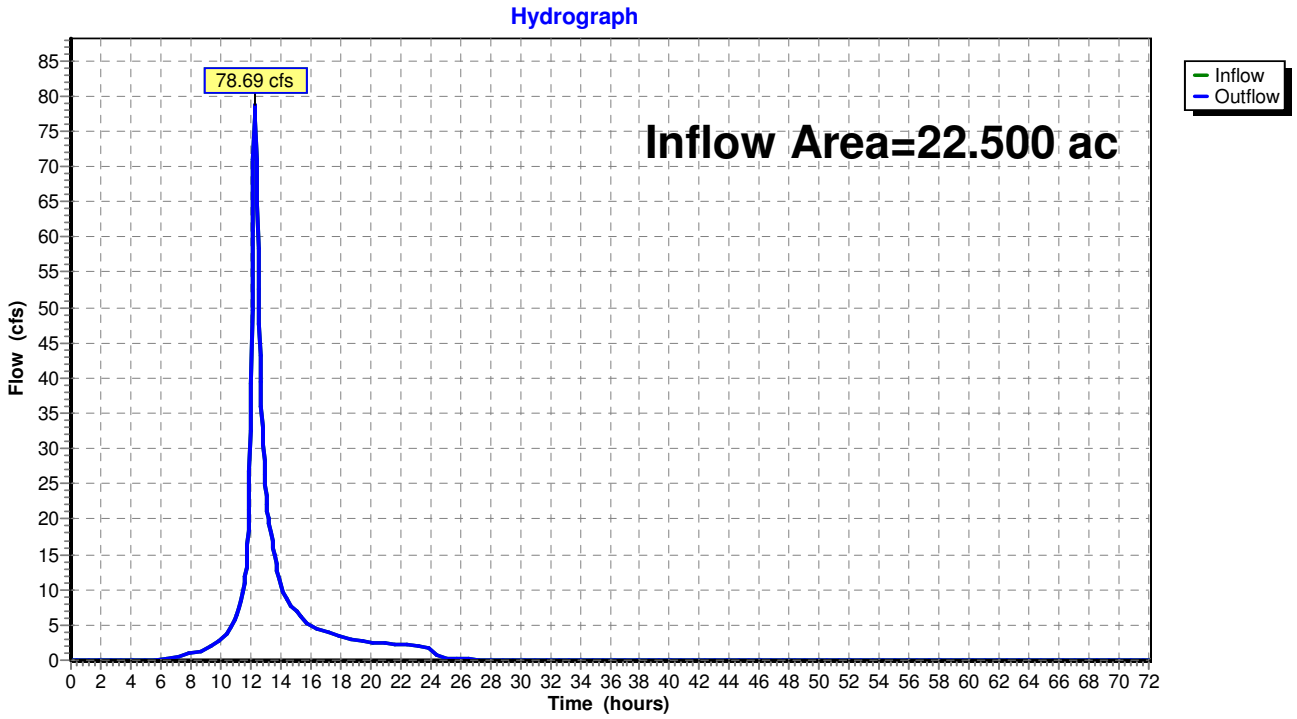


## Summary for Reach Design Line:

Inflow Area = 22.500 ac, 14.67% Impervious, Inflow Depth > 5.75" for 100-yr event
Inflow = 78.69 cfs @ 12.30 hrs, Volume= 10.788 af
Outflow = 78.69 cfs @ 12.30 hrs, Volume= 10.788 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Reach Design Line:



## Summary for Pond 1.1 P:

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth = 7.35" for 100-yr event
Inflow = 29.54 cfs @ 12.00 hrs, Volume= 2.175 af
Outflow = 8.92 cfs @ 12.22 hrs, Volume= 2.049 af, Atten= 70%, Lag= 13.5 min
Primary = 8.92 cfs @ 12.22 hrs, Volume= 2.049 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Starting Elev= 180.00' Surf.Area= 7,640 sf Storage= 10,715 cf
Peak Elev= 184.11' @ 12.22 hrs Surf.Area= 17,710 sf Storage= 54,193 cf (43,478 cf above start)
Flood Elev= 184.50' Surf.Area= 19,225 sf Storage= 60,459 cf (49,744 cf above start)

Plug-Flow detention time= 545.5 min calculated for 1.803 af (83% of inflow)
Center-of-Mass det. time= 406.2 min ( 1,172.2 - 766.0 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 175.00' | 2,050 cf | **Forebay (Prismatic)** Listed below (Recalc) |
| #2 | 175.00' | 67,360 cf | **Custom Stage Data (Prismatic)** Listed below (Recalc) |
| | | 69,410 cf | Total Available Storage |

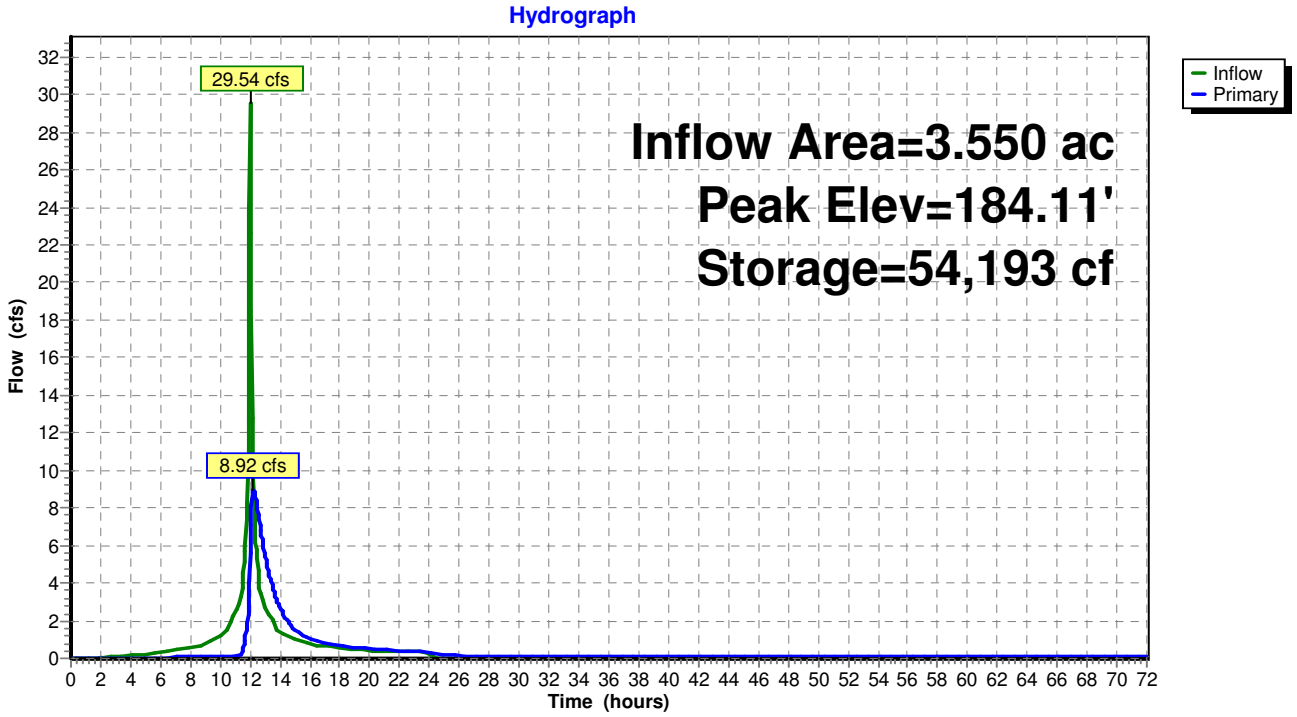
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 175.00 | 5 | 0 | 0 |
| 177.00 | 110 | 115 | 115 |
| 179.00 | 450 | 560 | 675 |
| 180.00 | 2,300 | 1,375 | 2,050 |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 175.00 | 500 | 0 | 0 |
| 177.00 | 1,180 | 1,680 | 1,680 |
| 179.00 | 2,090 | 3,270 | 4,950 |
| 180.00 | 5,340 | 3,715 | 8,665 |
| 182.00 | 10,730 | 16,070 | 24,735 |
| 184.00 | 14,970 | 25,700 | 50,435 |
| 185.00 | 18,880 | 16,925 | 67,360 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 179.00' | **24.0" Round Culvert**<br>L= 37.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 179.00' / 178.50' S= 0.0135 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf |
| #2 | Device 1 | 180.00' | **1.6" Vert. Orifice/Grate** C= 0.600 |
| #3 | Device 1 | 182.20' | **1.0' long x 0.5' breadth Broad-Crested Rectangular Weir**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=8.89 cfs @ 12.22 hrs HW=184.11' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 8.89 cfs of 30.66 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.14 cfs @ 9.68 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 8.75 cfs @ 4.59 fps)

## Pond 1.1 P:


Hydrograph
Inflow Area=3.550 ac
Peak Elev=184.11'
Storage=54,193 cf
29.54 cfs
8.92 cfs
Inflow
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

## Stage-Area-Storage for Pond 1.1 P:

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---|---|---|---|
| 175.00 | 0 | 180.20 | 11,837 |
| 175.10 | 52 | 180.30 | 12,438 |
| 175.20 | 109 | 180.40 | 13,067 |
| 175.30 | 169 | 180.50 | 13,722 |
| 175.40 | 233 | 180.60 | 14,404 |
| 175.50 | 302 | 180.70 | 15,113 |
| 175.60 | 374 | 180.80 | 15,849 |
| 175.70 | 450 | 180.90 | 16,612 |
| 175.80 | 530 | 181.00 | 17,403 |
| 175.90 | 613 | 181.10 | 18,219 |
| 176.00 | 701 | 181.20 | 19,063 |
| 176.10 | 793 | 181.30 | 19,934 |
| 176.20 | 889 | 181.40 | 20,832 |
| 176.30 | 988 | 181.50 | 21,757 |
| 176.40 | 1,092 | 181.60 | 22,709 |
| 176.50 | 1,199 | 181.70 | 23,687 |
| 176.60 | 1,310 | 181.80 | 24,693 |
| 176.70 | 1,426 | 181.90 | 25,725 |
| 176.80 | 1,545 | 182.00 | 26,785 |
| 176.90 | 1,668 | 182.10 | 27,869 |
| 177.00 | 1,795 | 182.20 | 28,973 |
| 177.10 | 1,927 | 182.30 | 30,099 |
| 177.20 | 2,065 | 182.40 | 31,247 |
| 177.30 | 2,210 | 182.50 | 32,415 |
| 177.40 | 2,361 | 182.60 | 33,605 |
| 177.50 | 2,518 | 182.70 | 34,815 |
| 177.60 | 2,681 | 182.80 | 36,047 |
| 177.70 | 2,851 | 182.90 | 37,301 |
| 177.80 | 3,027 | 183.00 | 38,575 |
| 177.90 | 3,209 | 183.10 | 39,871 |
| 178.00 | 3,398 | 183.20 | 41,187 |
| 178.10 | 3,592 | 183.30 | 42,525 |
| 178.20 | 3,793 | 183.40 | 43,885 |
| 178.30 | 4,000 | 183.50 | 45,265 |
| 178.40 | 4,214 | 183.60 | 46,667 |
| 178.50 | 4,433 | 183.70 | 48,089 |
| 178.60 | 4,659 | 183.80 | 49,533 |
| 178.70 | 4,891 | 183.90 | 50,999 |
| 178.80 | 5,130 | 184.00 | 52,485 |
| 178.90 | 5,374 | 184.10 | 54,002 |
| 179.00 | 5,625 | 184.20 | 55,557 |
| 179.10 | 5,904 | 184.30 | 57,152 |
| 179.20 | 6,235 | 184.40 | 58,786 |
| 179.30 | 6,617 | 184.50 | 60,459 |
| 179.40 | 7,049 | 184.60 | 62,171 |
| 179.50 | 7,533 | 184.70 | 63,922 |
| 179.60 | 8,067 | 184.80 | 65,712 |
| 179.70 | 8,652 | 184.90 | 67,542 |
| 179.80 | 9,289 | 185.00 | **69,410** |
| 179.90 | 9,977 | | |
| 180.00 | 10,715 | | |
| 180.10 | 11,262 | | |

## Summary for Pond 1.2 FS:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 7.71" for 100-yr event
Inflow = 4.76 cfs @ 11.99 hrs, Volume= 0.353 af
Outflow = 4.76 cfs @ 11.99 hrs, Volume= 0.353 af, Atten= 0%, Lag= 0.0 min
Primary = 2.09 cfs @ 11.98 hrs, Volume= 0.324 af
Secondary = 2.67 cfs @ 11.99 hrs, Volume= 0.030 af

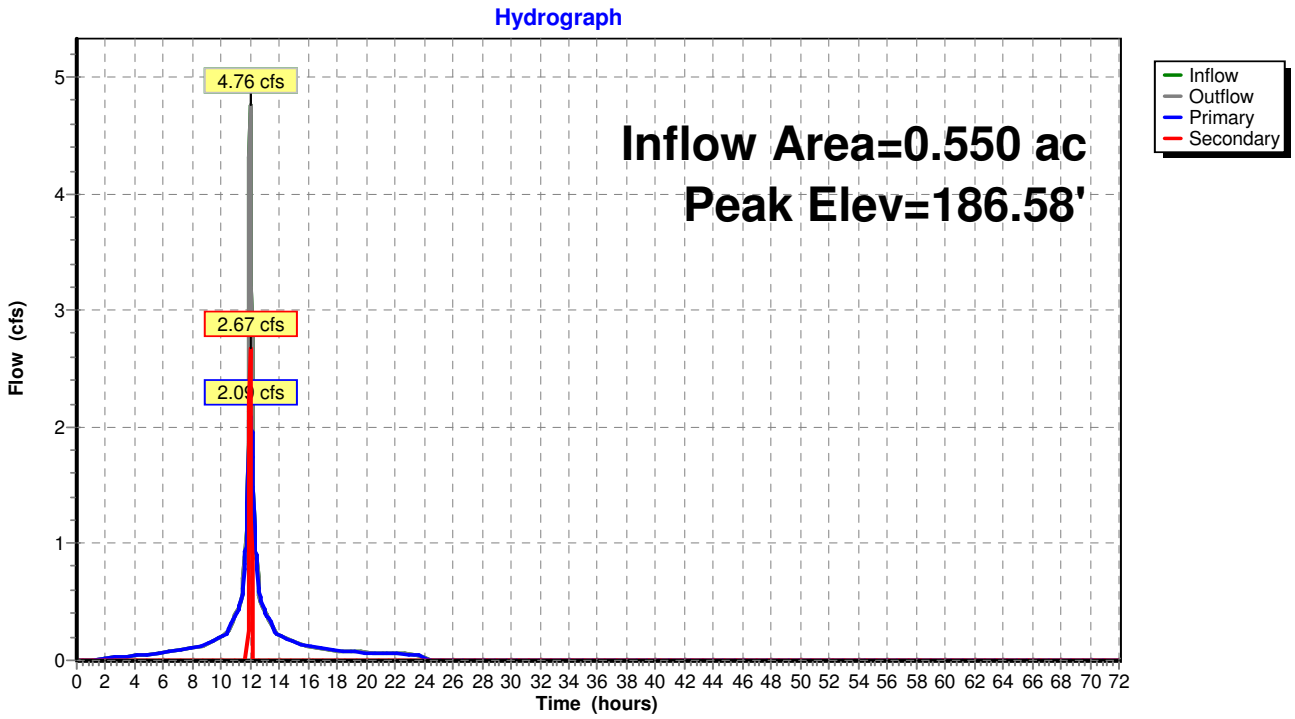
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 186.58' @ 11.98 hrs
Flood Elev= 187.70'

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 184.70' | **8.0" Round Culvert**<br>L= 12.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.70' / 184.50' S= 0.0167 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf |
| #2 | Secondary | 184.70' | **12.0" Round Culvert**<br>L= 30.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.70' / 184.00' S= 0.0233 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #3 | Device 2 | 186.20' | **4.0' long x 0.5' breadth Broad-Crested Rectangular Weir**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=2.08 cfs @ 11.98 hrs HW=186.56' TW=183.38' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 2.08 cfs @ 5.95 fps)

**Secondary OutFlow** Max=2.49 cfs @ 11.99 hrs HW=186.56' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 2.49 cfs of 4.41 cfs potential flow)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 2.49 cfs @ 1.73 fps)

## Pond 1.2 FS:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=186.58'
4.76 cfs
2.67 cfs
2.09 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0 1 2 3 4 5
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

## Stage-Area-Storage for Pond 1.2 FS:

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---|---|---|---|---|---|
| 184.70 | **0** | 185.74 | 0 | 186.78 | 0 |
| 184.72 | 0 | 185.76 | 0 | 186.80 | 0 |
| 184.74 | 0 | 185.78 | 0 | 186.82 | 0 |
| 184.76 | 0 | 185.80 | 0 | 186.84 | 0 |
| 184.78 | 0 | 185.82 | 0 | 186.86 | 0 |
| 184.80 | 0 | 185.84 | 0 | 186.88 | 0 |
| 184.82 | 0 | 185.86 | 0 | 186.90 | 0 |
| 184.84 | 0 | 185.88 | 0 | 186.92 | 0 |
| 184.86 | 0 | 185.90 | 0 | 186.94 | 0 |
| 184.88 | 0 | 185.92 | 0 | 186.96 | 0 |
| 184.90 | 0 | 185.94 | 0 | 186.98 | 0 |
| 184.92 | 0 | 185.96 | 0 | 187.00 | 0 |
| 184.94 | 0 | 185.98 | 0 | 187.02 | 0 |
| 184.96 | 0 | 186.00 | 0 | 187.04 | 0 |
| 184.98 | 0 | 186.02 | 0 | 187.06 | 0 |
| 185.00 | 0 | 186.04 | 0 | 187.08 | 0 |
| 185.02 | 0 | 186.06 | 0 | 187.10 | 0 |
| 185.04 | 0 | 186.08 | 0 | 187.12 | 0 |
| 185.06 | 0 | 186.10 | 0 | 187.14 | 0 |
| 185.08 | 0 | 186.12 | 0 | 187.16 | 0 |
| 185.10 | 0 | 186.14 | 0 | 187.18 | 0 |
| 185.12 | 0 | 186.16 | 0 | 187.20 | 0 |
| 185.14 | 0 | 186.18 | 0 | 187.22 | 0 |
| 185.16 | 0 | 186.20 | 0 | 187.24 | 0 |
| 185.18 | 0 | 186.22 | 0 | 187.26 | 0 |
| 185.20 | 0 | 186.24 | 0 | 187.28 | 0 |
| 185.22 | 0 | 186.26 | 0 | 187.30 | 0 |
| 185.24 | 0 | 186.28 | 0 | 187.32 | 0 |
| 185.26 | 0 | 186.30 | 0 | 187.34 | 0 |
| 185.28 | 0 | 186.32 | 0 | 187.36 | 0 |
| 185.30 | 0 | 186.34 | 0 | 187.38 | 0 |
| 185.32 | 0 | 186.36 | 0 | 187.40 | 0 |
| 185.34 | 0 | 186.38 | 0 | 187.42 | 0 |
| 185.36 | 0 | 186.40 | 0 | 187.44 | 0 |
| 185.38 | 0 | 186.42 | 0 | 187.46 | 0 |
| 185.40 | 0 | 186.44 | 0 | 187.48 | 0 |
| 185.42 | 0 | 186.46 | 0 | 187.50 | 0 |
| 185.44 | 0 | 186.48 | 0 | 187.52 | 0 |
| 185.46 | 0 | 186.50 | 0 | 187.54 | 0 |
| 185.48 | 0 | 186.52 | 0 | 187.56 | 0 |
| 185.50 | 0 | 186.54 | 0 | 187.58 | 0 |
| 185.52 | 0 | 186.56 | 0 | 187.60 | 0 |
| 185.54 | 0 | 186.58 | 0 | 187.62 | 0 |
| 185.56 | 0 | 186.60 | 0 | 187.64 | 0 |
| 185.58 | 0 | 186.62 | 0 | 187.66 | 0 |
| 185.60 | 0 | 186.64 | 0 | 187.68 | 0 |
| 185.62 | 0 | 186.66 | 0 | 187.70 | 0 |
| 185.64 | 0 | 186.68 | 0 | | |
| 185.66 | 0 | 186.70 | 0 | | |
| 185.68 | 0 | 186.72 | 0 | | |
| 185.70 | 0 | 186.74 | 0 | | |
| 185.72 | 0 | 186.76 | 0 | | |

## Summary for Pond 1.2 P:

Inflow Area = 0.550 ac, 81.82% Impervious, Inflow Depth = 7.06" for 100-yr event
Inflow = 2.09 cfs @ 11.98 hrs, Volume= 0.324 af
Outflow = 0.82 cfs @ 12.46 hrs, Volume= 0.324 af, Atten= 61%, Lag= 28.5 min
Discarded = 0.64 cfs @ 11.55 hrs, Volume= 0.319 af
Primary = 0.17 cfs @ 12.46 hrs, Volume= 0.004 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 184.77' @ 12.46 hrs Surf.Area= 0.030 ac Storage= 0.056 af

Plug-Flow detention time= 18.7 min calculated for 0.323 af (100% of inflow)
Center-of-Mass det. time= 18.7 min ( 774.4 - 755.7 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 182.00' | 0.028 af | **34.75'W x 38.04'L x 3.50'H Field A**<br>0.106 af Overall - 0.037 af Embedded = 0.069 af x 40.0% Voids |
| #2A | 182.50' | 0.037 af | **ADS_StormTech SC-740** x 35 Inside #1<br>Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf<br>Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap<br>Row Length Adjustment= +0.44' x 6.45 sf x 7 rows |
| | | 0.065 af | Total Available Storage |

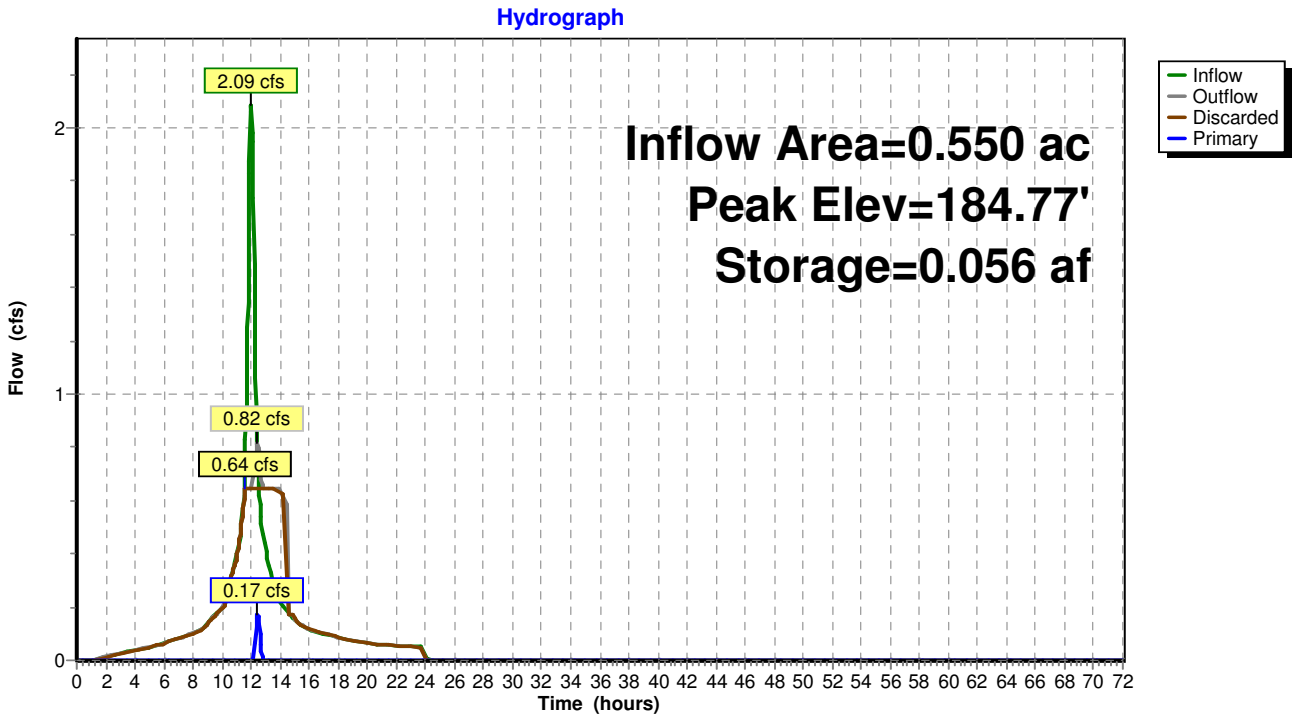
Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 182.00' | **21.000 in/hr Exfiltration over Horizontal area** Phase-In= 0.10' |
| #2 | Primary | 184.50' | **6.0" Round Culvert**<br>L= 17.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 184.50' / 184.30' S= 0.0118 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf |

**Discarded OutFlow** Max=0.64 cfs @ 11.55 hrs HW=182.12' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.64 cfs)

**Primary OutFlow** Max=0.17 cfs @ 12.46 hrs HW=184.77' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Barrel Controls 0.17 cfs @ 2.34 fps)

## Pond 1.2 P:


Hydrograph
Inflow Area=0.550 ac
Peak Elev=184.77'
Storage=0.056 af
2.09 cfs
0.82 cfs
0.64 cfs
0.17 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
0
1
2

## Stage-Area-Storage for Pond 1.2 P:

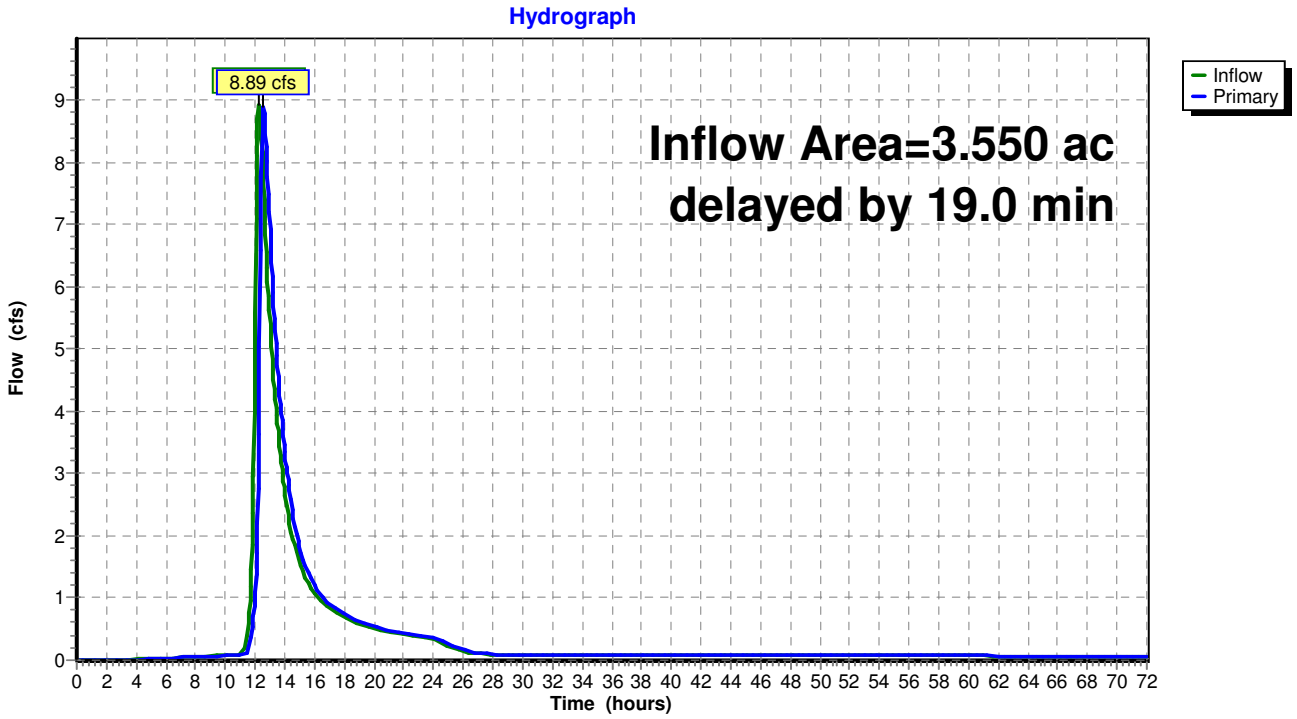
| Elevation (feet) | Horizontal (acres) | Storage (acre-feet) |
|---|---|---|
| 182.00 | **0.030** | 0.000 |
| 182.05 | 0.030 | 0.001 |
| 182.10 | 0.030 | 0.001 |
| 182.15 | 0.030 | 0.002 |
| 182.20 | 0.030 | 0.002 |
| 182.25 | 0.030 | 0.003 |
| 182.30 | 0.030 | 0.004 |
| 182.35 | 0.030 | 0.004 |
| 182.40 | 0.030 | 0.005 |
| 182.45 | 0.030 | 0.005 |
| 182.50 | 0.030 | 0.006 |
| 182.55 | 0.030 | 0.007 |
| 182.60 | 0.030 | 0.009 |
| 182.65 | 0.030 | 0.010 |
| 182.70 | 0.030 | 0.011 |
| 182.75 | 0.030 | 0.012 |
| 182.80 | 0.030 | 0.014 |
| 182.85 | 0.030 | 0.015 |
| 182.90 | 0.030 | 0.016 |
| 182.95 | 0.030 | 0.017 |
| 183.00 | 0.030 | 0.018 |
| 183.05 | 0.030 | 0.020 |
| 183.10 | 0.030 | 0.021 |
| 183.15 | 0.030 | 0.022 |
| 183.20 | 0.030 | 0.023 |
| 183.25 | 0.030 | 0.024 |
| 183.30 | 0.030 | 0.026 |
| 183.35 | 0.030 | 0.027 |
| 183.40 | 0.030 | 0.028 |
| 183.45 | 0.030 | 0.029 |
| 183.50 | 0.030 | 0.030 |
| 183.55 | 0.030 | 0.032 |
| 183.60 | 0.030 | 0.033 |
| 183.65 | 0.030 | 0.034 |
| 183.70 | 0.030 | 0.035 |
| 183.75 | 0.030 | 0.036 |
| 183.80 | 0.030 | 0.037 |
| 183.85 | 0.030 | 0.038 |
| 183.90 | 0.030 | 0.039 |
| 183.95 | 0.030 | 0.040 |
| 184.00 | 0.030 | 0.041 |
| 184.05 | 0.030 | 0.043 |
| 184.10 | 0.030 | 0.044 |
| 184.15 | 0.030 | 0.045 |
| 184.20 | 0.030 | 0.046 |
| 184.25 | 0.030 | 0.047 |
| 184.30 | 0.030 | 0.048 |
| 184.35 | 0.030 | 0.049 |
| 184.40 | 0.030 | 0.050 |
| 184.45 | 0.030 | 0.050 |
| 184.50 | 0.030 | 0.051 |
| 184.55 | 0.030 | 0.052 |
| 184.60 | 0.030 | 0.053 |
| 184.65 | 0.030 | 0.054 |
| 184.70 | 0.030 | 0.055 |
| 184.75 | 0.030 | 0.056 |
| 184.80 | 0.030 | 0.056 |
| 184.85 | 0.030 | 0.057 |
| 184.90 | 0.030 | 0.058 |
| 184.95 | 0.030 | 0.058 |
| 185.00 | 0.030 | 0.059 |
| 185.05 | 0.030 | 0.059 |
| 185.10 | 0.030 | 0.060 |
| 185.15 | 0.030 | 0.061 |
| 185.20 | 0.030 | 0.061 |
| 185.25 | 0.030 | 0.062 |
| 185.30 | 0.030 | 0.062 |
| 185.35 | 0.030 | 0.063 |
| 185.40 | 0.030 | 0.064 |
| 185.45 | 0.030 | 0.064 |
| 185.50 | 0.030 | **0.065** |

## Summary for Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)

Inflow Area = 3.550 ac, 66.20% Impervious, Inflow Depth > 6.92" for 100-yr event
Inflow = 8.92 cfs @ 12.22 hrs, Volume= 2.049 af
Primary = 8.89 cfs @ 12.55 hrs, Volume= 2.047 af, Atten= 0%, Lag= 19.4 min

Primary outflow = Inflow delayed by 19.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 1.1R: (See Subcatchment 1.1 TC for Time of Concentration Calculation)



# APPENDIX D

**Project and Owner information**

**Site Data:**

Beacon Views
City of Beacon
Dutchess County, New York

**Owner Information:**

Highlands @ Beacon, LLC
2847 Church Street
Pine Plains, New York 12567

**Applicant Information:**

Beacon Views, LLC
500 River Avenue
Wakefield, New Jersey 08701

**Party Responsible for Implementation of the Stormwater Pollution Prevention Plan (Including Maintenance During and After Construction):**

Beacon Views, LLC
500 River Avenue
Wakefield, New Jersey 08701

**Qualified Professional Responsible for Inspection of the Stormwater Pollution Prevention Plan:**

Inspector to be determined at time of construction

# APPENDIX E

**NYSDEC SPDES for Construction Activities Construction Site Log Book**

# APPENDIX F
# CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG BOOK

**STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES**

## SAMPLE CONSTRUCTION SITE LOG BOOK

Table of Contents


I. Pre-Construction Meeting Documents
   a. Preamble to Site Assessment and Inspections
   b. Pre-Construction Site Assessment Checklist

II. Construction Duration Inspections
   a. Directions
   b. Modification to the SWPPP

I. **PRE-CONSTRUCTION MEETING DOCUMENTS**

**Project Name** _____

**Permit No.** _____ **Date of Authorization** _____

**Name of Operator** _____

**Prime Contractor** _____

a. **Preamble to Site Assessment and Inspections**

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector[1] conduct an assessment of the site prior to the commencement of construction[2] and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization[3] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to "Qualified Inspector" inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.
2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.
3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

**b. Pre-construction Site Assessment Checklist**
**(NOTE: Provide comments below as necessary)**

1. Notice of Intent, SWPPP, and Contractors Certification:

**Yes No NA**

[ ] [ ] [ ] Has a Notice of Intent been filed with the NYS Department of Conservation?
[ ] [ ] [ ] Is the SWPPP on-site? Where?_____
[ ] [ ] [ ] Is the Plan current? What is the latest revision date?_____
[ ] [ ] [ ] Is a copy of the NOI (with brief description) onsite? Where?_____
[ ] [ ] [ ] Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

**Yes No NA**

[ ] [ ] [ ] Are construction limits clearly flagged or fenced?
[ ] [ ] [ ] Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
[ ] [ ] [ ] Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

**Yes No NA**

[ ] [ ] [ ] Clean stormwater runoff has been diverted from areas to be disturbed.
[ ] [ ] [ ] Bodies of water located either on site or in the vicinity of the site have been identified and protected.
[ ] [ ] [ ] Appropriate practices to protect on-site or downstream surface water are installed.
[ ] [ ] [ ] Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Access

**Yes No NA**

[ ] [ ] [ ] A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
[ ] [ ] [ ] Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
[ ] [ ] [ ] Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Sediment Controls

**Yes No NA**

[ ] [ ] [ ] Silt fence material and installation comply with the standard drawing and specifications.
[ ] [ ] [ ] Silt fences are installed at appropriate spacing intervals
[ ] [ ] [ ] Sediment/detention basin was installed as first land disturbing activity.
[ ] [ ] [ ] Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

**Yes No NA**

[ ] [ ] [ ] The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
[ ] [ ] [ ] The plan is contained in the SWPPP on page _____
[ ] [ ] [ ] Appropriate materials to control spills are onsite. Where? _____

## II. CONSTRUCTION DURATION INSPECTIONS

### a. Directions:

**Inspection Forms will be filled out during the entire construction phase of the project.**

Required Elements:

1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and

6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

**SITE PLAN/SKETCH**

| | |
|---|---|
| **Inspector (print name)** | **Date of Inspection** |
| **Qualified Inspector (print name)** | **Qualified Inspector 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 at the outfalls?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease at the outfalls?
[ ] [ ] [ ] 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, debris and spoils 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 property?
[ ] [ ] [ ] 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.

3. Stabilized Construction Access

**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 site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

**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.

**Runoff Control Practices (continued)**

2. Flow 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. Silt Fence and Linear Barriers

**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.

**Sediment Control Practices (continued)**

2. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated; Filter Sock or Manufactured practices)

**Yes No NA**

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre 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.
[ ] [ ] [ ] Manufactured insert fabric is free of tears and punctures.
[ ] [ ] [ ] Filter Sock is not torn or flattened and fill material is contained within the mesh sock.

Sediment accumulation ___% of design capacity.

3. 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 trap slopes and disturbed areas are stabilized.

Sediment accumulation is ___% of design capacity.

4. Temporary Sediment Basin

**Yes No NA**

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
[ ] [ ] [ ] Sediment basin dewatering pool is dewatering at appropriate rate.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design. All practices shall be maintained in accordance with their respective standards.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

**CONSTRUCTION DURATION INSPECTIONS**

**b. Modifications to the SWPPP (To be completed as described below)**

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

**Modification & Reason:**

# APPENDIX F

## NYSDEC Stormwater Design Manual Chapter 5 Analysis

Table Key: ● = Practice Used in Accordance with Chapter 5 Requirements
o = Practice Not Used
- = Practice is Not Applicable

| NYSDEC Chapter 5 Requirements | Subcatchments | | Remarks |
|---|---|---|---|
| | 1.1 | 1.2 | |
| Chapter 5, Section 5.1: Preservation if Natural Features and Conservation Design | | | |
| Practices | | | |
| Preservation of Undisturbed Areas | ● | ● | See Note #2 |
| Preservation of Buffers | - | - | |
| Reduction of Clearing & Grading | ● | ● | See Note #4 |
| Locating Development in Less Sensitive Areas | ● | ● | See Note #4 |
| Open Space Design | - | - | |
| Soil Restoration | ● | ● | See Note #5 |
| Chapter 5, Section 5.2: Reduction of Impervious Cover | | | |
| Practices | | | |
| Roadway Reduction | ● | - | See Note #1 |
| Sidewalk Reduction | ● | ● | |
| Driveway Reduction | ● | ● | See Note #1 |
| Cul-de-sac Reduction | - | - | |
| Building Footprint Reduction | ● | ● | See Note #3 |
| Parking Reduction | ● | ● | See Note #4 |
| Conservation of Natural Areas | ● | ● | See Note #2 |
| Sheetflow to Riparian Buffers or Filter Strips | - | - | |
| Vegetated Swale | ● | ● | |
| Tree Planting / Tree Pit | - | - | |
| Disconnection of Rooftop Runoff | - | - | |
| Stream Daylighting | - | - | |
| Rain Gardens | - | - | |
| Green Roofs | - | - | |
| Stormwater Planters | - | - | |
| Rain Barrels / Cisterns | - | - | |
| Porous Pavement | - | - | |

Notes:

1. The proposed driveways and road have been designed to provide a minimum width for safe ingress and egress for the development.
2. Although no formal calculations have been provided, the subject project has provided conservation of natural areas to the maximum extent practical.
3. The proposed buildings are multi-story, thus minimize the building footprints.
4. The reduction in clearing and grading, as well as the driveway and parking areas foot print reduction will be enforced with the approval of the project SWPPP. Notes on the project plans, establish that any changes in the project plans would require an amended approval from the necessary regulatory agencies
5. Soil restoration requirements per NYSDEC stantards shown on project plans.

# APPENDIX G

**NYSDEC Stormwater Management Practice Construction and Maintenance Inspection Checklist**

# Stormwater/Wetland Pond Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

| CONSTRUCTION SEQUENCE | SATISFACTORY/ UNSATISFACTORY | COMMENTS |
|---|---|---|
| **Pre-Construction/Materials and Equipment** | | |
| Pre-construction meeting | | |
| Pipe and appurtenances on-site prior to construction and dimensions checked | | |
| 1. Material (including protective coating, if specified) | | |
| 2. Diameter | | |
| 3. Dimensions of metal riser or pre-cast concrete outlet structure | | |
| 4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans | | |
| 5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope | | |
| 6. Number and dimensions of prefabricated anti-seep collars | | |
| 7. Watertight connectors and gaskets | | |
| 8. Outlet drain valve | | |
| Project benchmark near pond site | | |
| Equipment for temporary de-watering | | |

| CONSTRUCTION SEQUENCE | SATISFACTORY/ UNSATISFACTORY | COMMENTS |
|---|---|---|
| **2. Subgrade Preparation** | | |
| Area beneath embankment stripped of all vegetation, topsoil, and organic matter | | |
| **3. Pipe Spillway Installation** | | |
| Method of installation detailed on plans | | |
| A. Bed preparation | | |
| Installation trench excavated with specified side slopes | | |
| Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation) | | |
| Invert at proper elevation and grade | | |
| B. Pipe placement | | |
| Metal / plastic pipe | | |
| 1. Watertight connectors and gaskets properly installed | | |
| 2. Anti-seep collars properly spaced and having watertight connections to pipe | | |
| 3. Backfill placed and tamped by hand under “haunches” of pipe | | |
| 4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached | | |

| CONSTRUCTION SEQUENCE | SATISFACTORY/ UNSATISFACTORY | COMMENTS |
|---|---|---|
| **3. Pipe Spillway Installation** | | |
| Concrete pipe | | |
| 1. Pipe set on blocks or concrete slab for pouring of low cradle | | |
| 2. Pipe installed with rubber gasket joints with no spalling in gasket interface area | | |
| 3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set | | |
| 4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant | | |
| 5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix | | |
| 6. Upper half of anti-seep collar(s) formed with reinforcing steel set | | |
| 7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary) | | |
| 8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary. | | |
| C. Backfilling | | |
| Fill placed in maximum 8 inch lifts | | |
| Backfill taken minimum 2 feet above top of anti-seep collar elevation before traversing with heavy equipment | | |

| CONSTRUCTION SEQUENCE | SATISFACTORY/ UNSATISFACTORY | COMMENTS |
|---|---|---|
| **4. Riser / Outlet Structure Installation** | | |
| Riser located within embankment | | |
| A. Metal riser | | |
| Riser base excavated or formed on stable subgrade to design dimensions | | |
| Set on blocks to design elevations and plumbed | | |
| Reinforcing bars placed at right angles and projecting into sides of riser | | |
| Concrete poured so as to fill inside of riser to invert of barrel | | |
| B. Pre-cast concrete structure | | |
| Dry and stable subgrade | | |
| Riser base set to design elevation | | |
| If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely | | |
| Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway | | |
| C. Poured concrete structure | | |
| Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set | | |
| Structure formed to design dimensions, with reinforcing steel set as per plan | | |
| Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary) | | |
| Forms stripped & inspected for “honeycomb” prior to backfilling; parge if necessary | | |

| CONSTRUCTION SEQUENCE | SATISFACTORY/ UNSATISFACTORY | COMMENTS |
|---|---|---|
| **5. Embankment Construction** | | |
| Fill material | | |
| Compaction | | |
| Embankment | | |
| 1. Fill placed in specified lifts and compacted with appropriate equipment | | |
| 2. Constructed to design cross-section, side slopes and top width | | |
| 3. Constructed to design elevation plus allowance for settlement | | |
| **6. Impounded Area Construction** | | |
| Excavated / graded to design contours and side slopes | | |
| Inlet pipes have adequate outfall protection | | |
| Forebay(s) | | |
| Pond benches | | |
| **7. Earth Emergency Spillway Construction** | | |
| Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc. | | |
| Excavated to proper cross-section, side slopes and bottom width | | |
| Entrance channel, crest, and exit channel constructed to design grades and elevations | | |

| CONSTRUCTION SEQUENCE | SATISFACTORY / UNSATISFACTORY | COMMENTS |
|---|---|---|
| **8. Outlet Protection** | | |
| A. End section | | |
| Securely in place and properly backfilled | | |
| B. Endwall | | |
| Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified | | |
| Endwall formed to design dimensions with reinforcing steel set as per plan | | |
| Concrete of an approved mix and vibrated into place (protected from freezing, if necessary) | | |
| Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary | | |
| C. Riprap apron / channel | | |
| Apron / channel excavated to design cross-section with proper transition to existing ground | | |
| Filter fabric in place | | |
| Stone sized as per plan and uniformly place at the thickness specified | | |
| **9. Vegetative Stabilization** | | |
| Approved seed mixture or sod | | |
| Proper surface preparation and required soil amendments | | |
| Excelsior mat or other stabilization, as per plan | | |

| CONSTRUCTION SEQUENCE | SATISFACTORY/ UNSATISFACTORY | COMMENTS |
|---|---|---|
| **10. Miscellaneous** | | |
| Drain for ponds having a permanent pool | | |
| Trash rack / anti-vortex device secured to outlet structure | | |
| Trash protection for low flow pipes, orifices, etc. | | |
| Fencing (when required) | | |
| Access road | | |
| Set aside for clean-out maintenance | | |
| **11. Stormwater Wetlands** | | |
| Adequate water balance | | |
| Variety of depth zones present | | |
| Approved pondscaping plan in place<br>Reinforcement budget for additional plantings | | |
| Plants and materials ordered 6 months prior to construction | | |
| Construction planned to allow for adequate planting and establishment of plant community<br>(April-June planting window) | | |
| Wetland buffer area preserved to maximum extent possible | | |

## Comments:

## Actions to be Taken:

# Infiltration Trench Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

| CONSTRUCTION SEQUENCE | SATISFACTORY/ UNSATISFACTORY | COMMENTS |
|---|---|---|
| **1. Pre-Construction** | | |
| Pre-construction meeting | | |
| Runoff diverted | | |
| Soil permeability tested | | |
| Groundwater / bedrock sufficient at depth | | |
| **2. Excavation** | | |
| Size and location | | |
| Side slopes stable | | |
| Excavation does not compact subsoils | | |
| **3. Filter Fabric Placement** | | |
| Fabric specifications | | |
| Placed on bottom, sides, and top | | |

| CONSTRUCTION SEQUENCE | SATISFACTORY / UNSATISFACTORY | COMMENTS |
|---|---|---|
| **4. Aggregate Material** | | |
| Size as specified | | |
| Clean / washed material | | |
| Placed properly | | |
| **5. Observation Well** | | |
| Pipe size | | |
| Removable cap / footplate | | |
| Initial depth =_____feet | | |
| **6. Final Inspection** | | |
| Pretreatment facility in place | | |
| Contributing watershed stabilized prior to flow diversion | | |
| Outlet | | |

## Comments:

## Actions to be Taken:

# Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

| Maintenance Item | Satisfactory/ Unsatisfactory | Comments |
|---|---|---|
| **1. Embankment and emergency spillway (Annual, After Major Storms)** | | |
| 1. Vegetation and ground cover adequate | | |
| 2. Embankment erosion | | |
| 3. Animal burrows | | |
| 4. Unauthorized planting | | |
| 5. Cracking, bulging, or sliding of dam | | |
| a. Upstream face | | |
| b. Downstream face | | |
| c. At or beyond toe | | |
| downstream | | |
| upstream | | |
| d. Emergency spillway | | |
| 6.Pond, toe & chimney drains clear and functioning | | |
| 7.Seeps/leaks on downstream face | | |
| 8.Slope protection or riprap failure | | |
| 9. Vertical/horizontal alignment of top of dam “As-Built” | | |
| | | |

| Maintenance Item | Satisfactory/ Unsatisfactory | Comments |
|---|---|---|
| 10. Emergency spillway clear of obstructions and debris | | |
| 11. Other (specify) | | |
| **2. Riser and principal spillway (Annual)** | | |
| Type: Reinforced concrete _____<br>Corrugated pipe _____<br>Masonry _____<br>1. Low flow orifice obstructed | | |
| 2. Low flow trash rack.<br>a. Debris removal necessary | | |
| b. Corrosion control | | |
| 3. Weir trash rack maintenance<br>a. Debris removal necessary | | |
| b. corrosion control | | |
| 4. Excessive sediment accumulation insider riser | | |
| 5. Concrete/masonry condition riser and barrels<br>a. cracks or displacement | | |
| b. Minor spalling (<1" ) | | |
| c. Major spalling (rebars exposed) | | |
| d. Joint failures | | |
| e. Water tightness | | |
| 6. Metal pipe condition | | |
| 7. Control valve<br>a. Operational/exercised | | |
| b. Chained and locked | | |
| 8. Pond drain valve<br>a. Operational/exercised | | |
| b. Chained and locked | | |
| 9. Outfall channels functioning | | |
| 10. Other (specify) | | |

| Maintenance Item | Satisfactory/ Unsatisfactory | Comments |
|---|---|---|
| **3. Permanent Pool (Wet Ponds) (monthly)** | | |
| 1. Undesirable vegetative growth | | |
| 2. Floating or floatable debris removal required | | |
| 3. Visible pollution | | |
| 4. Shoreline problem | | |
| 5. Other (specify) | | |
| **4. Sediment Forebays** | | |
| 1.Sedimentation noted | | |
| 2. Sediment cleanout when depth < 50% design depth | | |
| **5. Dry Pond Areas** | | |
| 1. Vegetation adequate | | |
| 2. Undesirable vegetative growth | | |
| 3. Undesirable woody vegetation | | |
| 4. Low flow channels clear of obstructions | | |
| 5. Standing water or wet spots | | |
| 6. Sediment and / or trash accumulation | | |
| 7. Other (specify) | | |
| **6. Condition of Outfalls (Annual , After Major Storms)** | | |
| 1. Riprap failures | | |
| 2. Slope erosion | | |
| 3. Storm drain pipes | | |
| 4.Endwalls / Headwalls | | |
| 5. Other (specify) | | |
| **7. Other ( Monthly)** | | |
| 1. Encroachment on pond, wetland or easement area | | |

| Maintenance Item | Satisfactory/ Unsatisfactory | Comments |
|---|---|---|
| 2. Complaints from residents | | |
| 3.Aesthetics<br>a. Grass growing required | | |
| b. Graffiti removal needed | | |
| c. Other (specify) | | |
| 4. Conditions of maintenance access routes. | | |
| 5. Signs of hydrocarbon build-up | | |
| 6. Any public hazards (specify) | | |
| **8. Wetland Vegetation (Annual)** | | |
| 1. Vegetation healthy and growing<br>Wetland maintaining 50% surface area coverage of wetland plants after the second growing season.<br>(If unsatisfactory, reinforcement plantings needed) | | |
| 2. Dominant wetland plants:<br>Survival of desired wetland plant species<br>Distribution according to landscaping plan? | | |
| 3. Evidence of invasive species | | |
| 4. Maintenance of adequate water depths for desired wetland plant species | | |
| 5. Harvesting of emergent plantings needed | | |
| 6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment | | |
| 7. Eutrophication level of the wetland. | | |
| 8. Other (specify) | | |

## Comments:

## Actions to be Taken:

# Infiltration Trench Operation, Maintenance, and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

| MAINTENANCE ITEM | SATISFACTORY / UNSATISFACTORY | COMMENTS |
|---|---|---|
| **1. Debris Cleanout (Monthly)** | | |
| Trench surface clear of debris | | |
| Inflow pipes clear of debris | | |
| Overflow spillway clear of debris | | |
| Inlet area clear of debris | | |
| **2. Sediment Traps or Forebays (Annual)** | | |
| Obviously trapping sediment | | |
| Greater than 50% of storage volume remaining | | |
| **3. Dewatering (Monthly)** | | |
| Trench dewaters between storms | | |
| **4. Sediment Cleanout of Trench (Annual)** | | |
| No evidence of sedimentation in trench | | |
| Sediment accumulation doesn't yet require cleanout | | |
| **5. Inlets (Annual)** | | |

| MAINTENANCE ITEM | SATISFACTORY / UNSATISFACTORY | COMMENTS |
|---|---|---|
| Good condition | | |
| No evidence of erosion | | |
| **6. Outlet/Overflow Spillway (Annual)** | | |
| Good condition, no need for repair | | |
| No evidence of erosion | | |
| **7. Aggregate Repairs (Annual)** | | |
| Surface of aggregate clean | | |
| Top layer of stone does not need replacement | | |
| Trench does not need rehabilitation | | |

## Comments:

## Actions to be Taken:

# APPENDIX H

**Hydrodynamic Separator Sizing and Maintenance Manual**

State of New Jersey

PHILIP D. MURPHY
*Governor*

SHEILA Y. OLIVER
*Lt. Governor*

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code – 401-02B
Division of Water Quality
Bureau of Nonpoint Pollution Control
P.O. Box 420 – 401 E. State St.
Trenton, NJ 08625-0420
Phone: (609) 633-7021 / Fax: (609) 777-0432
http://www.state.nj.us/dep/dwq/bnpc_home.htm

CATHERINE R. McCABE
*Acting Commissioner*

**March 27, 2018**

Graham Bryant, M.Sc., P.E.
President
Hydroworks, LLC
136 Central Avenue
Clark, NJ 07066

Re: MTD Lab Certification
HydroStorm Hydrodynamic Separator by Hydroworks, LLC
Online Installation

**TSS Removal Rate 50%**

Dear Mr. Bryant:

The Stormwater Management rules under N.J.A.C. 7:8-5.5(b) and 5.7 (c) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by the New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP). Hydroworks, LLC has requested an MTD Laboratory Certification for the Hydroworks HydroStorm Hydrodynamic Separator.

The project falls under the "Procedure for Obtaining Verification of a Stormwater Manufactured Treatment Device from New Jersey Corporation for Advance Technology" dated January 25, 2013. The applicable protocol is the "New Jersey Laboratory Testing Protocol to Assess Total Suspended Solids Removal by a Hydrodynamic Sedimentation Manufactured Treatment Device" dated January 25, 2013.

NJCAT verification documents submitted to the NJDEP indicate that the requirements of the aforementioned protocol have been met or exceeded. The NJCAT letter also included a recommended certification TSS removal rate and the required maintenance plan. The NJCAT Verification Report with the Verification Appendix (dated February 2018) for this device is published online at http://www.njcat.org/verification-process/technology-verification-database.html.

**The NJDEP certifies the use of the HydroStorm by Hydroworks, LLC at a TSS removal rate of 50% when designed, operated, and maintained in accordance with the information provided in the Verification Appendix and the following conditions:**



*New Jersey is an Equal Opportunity Employer*
*Printed on Recycled Paper and Recyclable*

1. The maximum treatment flow rate (MTFR) for the manufactured treatment device (MTD) is calculated using the New Jersey Water Quality Design Storm (1.25 inches in 2 hrs) in N.J.A.C. 7:8-5.5.

2. The HydroStorm shall be installed using the same configuration reviewed by NJCAT and shall be sized in accordance with the criteria specified in item 6 below.

3. This HydroStorm cannot be used in series with another MTD or a media filter (such as a sand filter) to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.

4. Additional design criteria for MTDs can be found in Chapter 9.6 of the New Jersey Stormwater Best Management Practices (NJ Stormwater BMP) Manual, which can be found online at www.njstormwater.org.

5. The maintenance plan for a site using this device shall incorporate, at a minimum, the maintenance requirements for the Hydrostorm. A copy of the maintenance plan is attached to this certification. However, it is recommended to review the maintenance website at http://www.hydroworks.com/hydrostormo&m.pdf for any changes to the maintenance requirements.

6. Sizing Requirement:

   The example below demonstrates the sizing procedure for the Hydrostorm:

   Example: A 0.25-acre impervious site is to be treated to 50% TSS removal using a HydroStorm. The impervious site runoff (Q) based on the New Jersey Water Quality Design Storm was determined to be 0.79 cfs.

   Maximum Treatment Flow Rate (MTFR) Evaluation:

   The site runoff (Q) was based on the following:
   time of concentration = 10 minutes
   i = 3.2 in/hr (page 5-8, Fig. 5-3 of the NJ Stormwater BMP Manual)
   c = 0.99 (runoff coefficient for impervious)
   Q = ciA = 0.99 x 3.2 x 0.25 = 0.79 cfs

   Given the site runoff is 0.79 cfs and based on Table 1 below, the HydroStorm Model HS4 with a MTFR of 0.88 cfs could be used for this site to remove 50% of the TSS from the impervious area without exceeding the MTFR.

   The sizing table corresponding to the available system models is noted below. Additional specifications regarding each model can be found in the Verification Appendix under Table A-1.

**Table 1 HydroStorm Sizing Information**

| HydroStorm Model | NJDEP 50% TSS Maximum Treatment Flow Rate (cfs) | Treatment Area ($ft^2$) | Hydraulic Loading Rate ($gpm/ft^2$) | 50% Maximum Sediment Storage ($ft^3$) |
|---|---|---|---|---|
| HS3 | 0.50 | 7.1 | 31.4 | 3.6 |
| HS4 | 0.88 | 12.6 | 31.4 | 6.3 |
| HS5 | 1.37 | 19.6 | 31.4 | 9.8 |
| HS6 | 1.98 | 28.3 | 31.4 | 14.2 |
| HS7 | 2.69 | 38.5 | 31.4 | 19.3 |
| HS8 | 3.52 | 50.3 | 31.4 | 25.2 |
| HS9 | 4.45 | 63.6 | 31.4 | 31.8 |
| HS10 | 5.49 | 78.5 | 31.4 | 39.3 |
| HS11 | 6.65 | 95.0 | 31.4 | 47.5 |
| HS12 | 7.91 | 113.0 | 31.4 | 56.5 |

A detailed maintenance plan is mandatory for any project with a Stormwater BMP subject to the Stormwater Management Rules, N.J.A.C. 7:8. The plan must include all of the items identified in the Stormwater Management Rules, N.J.A.C. 7:8-5.8. Such items include, but are not limited to, the list of inspection and maintenance equipment and tools, specific corrective and preventative maintenance tasks, indication of problems in the system, and training of maintenance personnel. Additional information can be found in Chapter 8: Maintenance and Retrofit of Stormwater Management Measures.

If you have any questions regarding the above information, please contact Brian Salvo or Nick Grotts of my office at (609) 633-7021.

Sincerely,

James J. Murphy, Chief
Bureau of Nonpoint Pollution Control

Attachment: Maintenance Plan

cc: Chron File
Richard Magee, NJCAT
Vince Mazzei, NJDEP - DLUR
Ravi Patraju, NJDEP - BES
Gabriel Mahon, NJDEP - BNPC
Brian Salvo, NJDEP – BNPC
Nick Grotts, NJDEP – BNPC

# Hydroworks® HydroStorm

## Operations & Maintenance Manual

Version 1.0

Please call Hydroworks at 888-290-7900 or email us at support@hydroworks.com if you have any questions regarding the Inspection Checklist. Please fax a copy of the completed checklist to Hydroworks at 888-783-7271 for our records.

## Introduction

The HydroStorm is a state of the art hydrodynamic separator. Hydrodynamic separators remove solids, debris and lighter than water (oil, trash, floating debris) pollutants from stormwater. Hydrodynamic separators and other water quality measures are mandated by regulatory agencies (Town/City, State, Federal Government) to protect storm water quality from pollution generated by urban development (traffic, people) as part of new development permitting requirements.

As storm water treatment structures fill up with pollutants they become less and less effective in removing new pollution. Therefore, it is important that storm water treatment structures be maintained on a regular basis to ensure that they are operating at optimum performance. The HydroStorm is no different in this regard and this manual has been assembled to provide the owner/operator with the necessary information to inspect and coordinate maintenance of their HydroStorm.

## Hydroworks® HydroStorm Operation

The Hydroworks HydroStorm (HS) separator is a unique hydrodynamic by-pass separator. It incorporates a protected submerged pretreatment zone to collect larger solids, a treatment tank to remove finer solids, and a dual set of weirs to create a high flow bypass. High flows are conveyed directly to the outlet and do not enter the treatment area, however, the submerged pretreatment area still allows removal of coarse solids during high flows.

Under normal or low flows, water enters an inlet area with a horizontal grate. The area underneath the grate is submerged with openings to the main treatment area of the separator. Coarse solids fall through the grate and are either trapped in the pretreatment area or conveyed into the main treatment area depending on the flow rate. Fines are transported into the main treatment area. Openings and weirs in the pretreatment area allow entry of water and solids into the main treatment area and cause water to rotate in the main treatment area creating a vortex motion. Water in the main treatment area is forced to rise along the walls of the separator to discharge from the treatment area to the downstream pipe.

The vortex motion forces solids and floatables to the middle of the inner chamber. Floatables are trapped since the inlet to the treatment area is submerged. The design maximizes the retention of settled solids since solids are forced to the center of the inner chamber by the vortex motion of water while water must flow up the walls of the separator to discharge into the downstream pipe.

A set of high flow weirs near the outlet pipe create a high flow bypass over both the pretreatment area and main treatment chamber. The rate of flow into the treatment area is regulated by the number and size of openings into the treatment chamber and the height of by-pass weirs. High flows flow over the weirs directly to the outlet pipe preventing the scour and resuspension of any fines collected in the treatment chamber.

A central access tube is located in the structure to provide access for cleaning. The arrangement of the inlet area and bypass weirs near the outlet pipe facilitate the use of multiple inlet pipes.

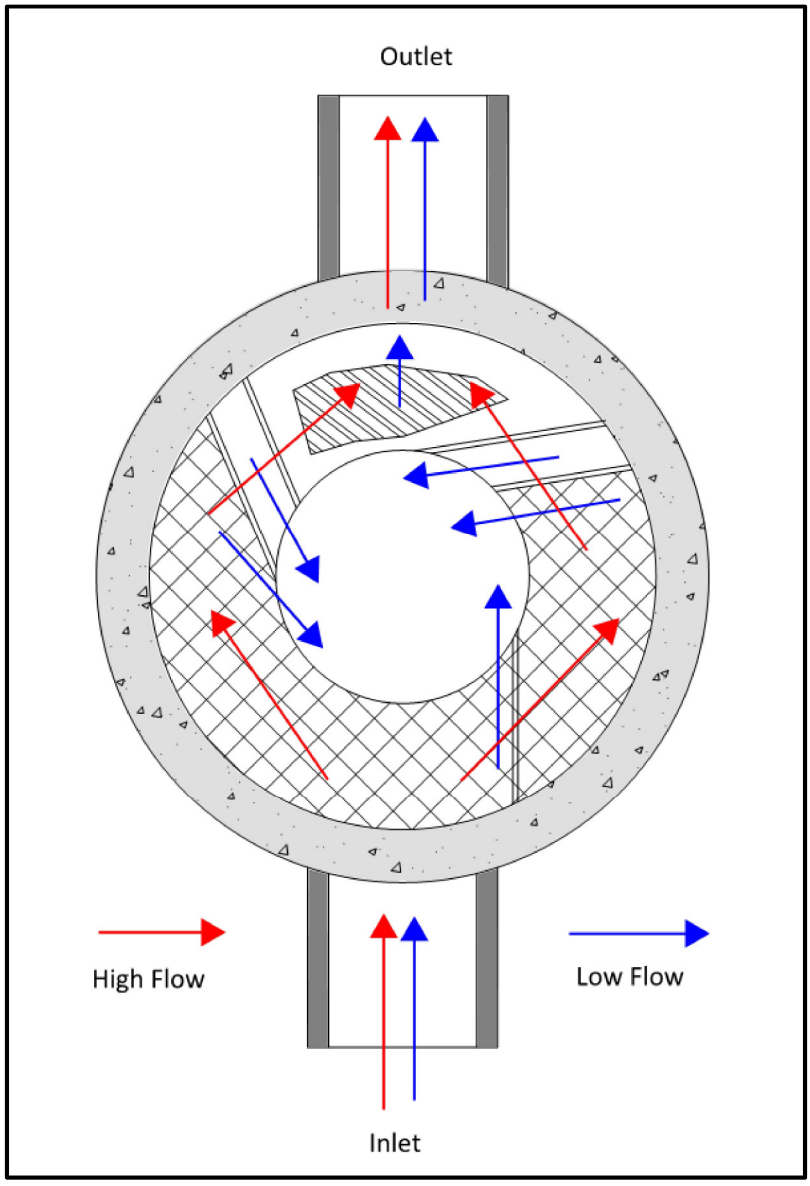



**Figure 1. Hydroworks HydroStorm Operation – Plan View**

Figure 2 is a profile view of the HydroStorm separator showing the flow patterns for low and high flows.

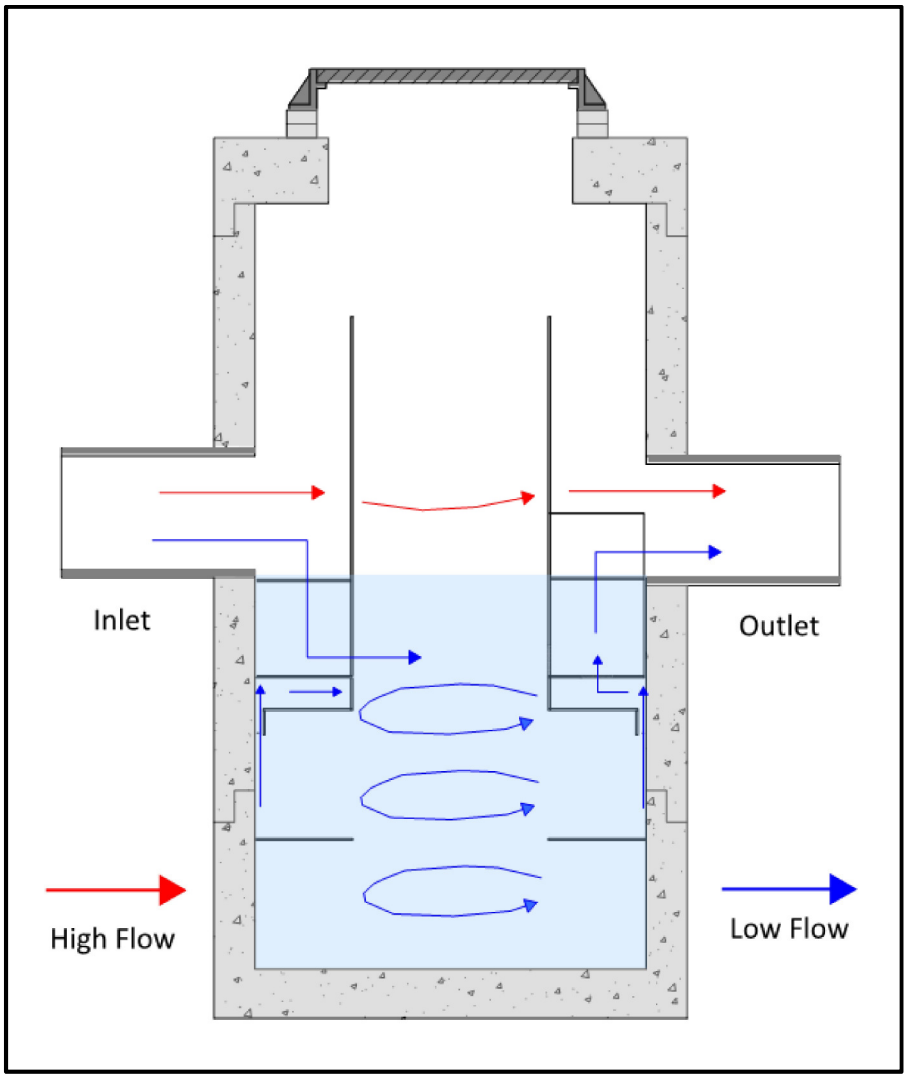



**Figure 2. Hydroworks HydroStorm Operation – Profile View**

The HS 4i is an inlet version of the HS 4 separator. There is a catch-basin grate on top of the HS 4i. A funnel sits sits underneath the grate on the frame and directs the water to the inlet side of the separator to ensure all lows flows are properly treated. The whole funnel is removed for inspection and cleaning.

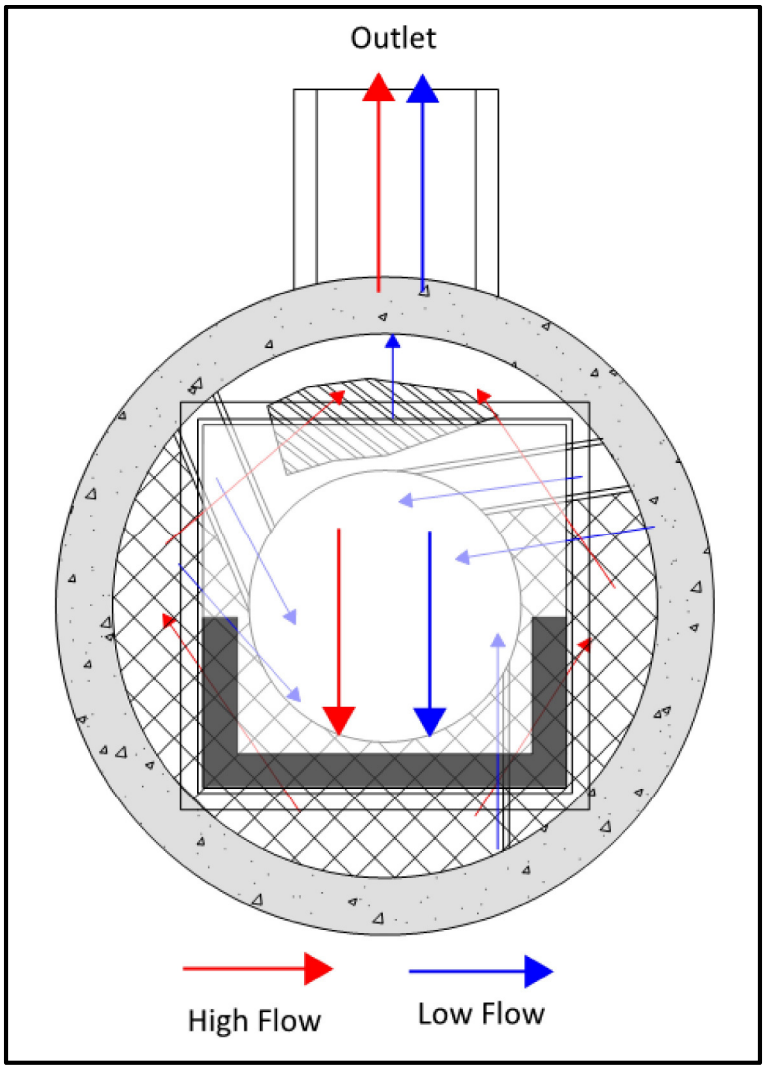



**Figure 3. Hydroworks HS 4i Funnel**

## Inspection

### Procedure

Floatables

A visual inspection can be conducted for floatables by removing the covers and looking down into the center access tube of the separator. Separators with an inlet grate (HS 4i or custom separator) will have a plastic funnel located under the grate that must be removed from the frame prior to inspection or maintenance. If you are missing a funnel please contact Hydroworks at the numbers provided at the end of this document.

TSS/Sediment

Inspection for TSS build-up can be conducted using a Sludge Judge®, Core Pro®, AccuSludge® or equivalent sampling device that allows the measurement of the depth of TSS/sediment in the unit. These devices typically have a ball valve at the bottom of the tube that allows water and TSS to flow into the tube when lowering the tube into the unit. Once the unit touches the bottom of the device, it is quickly pulled upward such that the water and TSS in the tube forces the ball valve closed allowing the user to see a full core of water/TSS in the unit. The unit should be inspected for TSS through each of the access covers. Several readings (2 or 3) should be made at each access cover to ensure that an accurate TSS depth measurement is recorded.

**Frequency**

Construction Period

The HydroStorm separator should be inspected every four weeks and after every large storm (over 0.5" (12.5 mm) of rain) during the construction period.

Post-Construction Period

The Hydroworks HydroStorm separator should be inspected during the first year of operation for normal stabilized sites (grassed or paved areas). If the unit is subject to oil spills or runoff from unstabilized (storage piles, exposed soils) areas the HydroStorm separator should be inspected more frequently (4 times per year). The initial annual inspection will indicate the required future frequency of inspection and maintenance if the unit was maintained after the construction period.

**Reporting**

Reports should be prepared as part of each inspection and include the following information:

1. Date of inspection
2. GPS coordinates of Hydroworks unit
3. Time since last rainfall
4. Date of last inspection
5. Installation deficiencies (missing parts, incorrect installation of parts)
6. Structural deficiencies (concrete cracks, broken parts)
7. Operational deficiencies (leaks, blockages)
8. Presence of oil sheen or depth of oil layer
9. Estimate of depth/volume of floatables (trash, leaves) captured
10. Sediment depth measured
11. Recommendations for any repairs and/or maintenance for the unit
12. Estimation of time before maintenance is required if not required at time of inspection

A sample inspection checklist is provided at the end of this manual.

## Maintenance

### Procedure

The Hydroworks HydroStorm unit is typically maintained using a vacuum truck. There are numerous companies that can maintain the HydroStorm separator. Maintenance with a vacuum truck involves removing all of the water and sediment together. The water is then separated from the sediment on the truck or at the disposal facility.

A central access opening (24” or greater) is provided to the gain access to the lower treatment tank of the unit. This is the primary location to maintain by vacuum truck. The pretreatment area can also be vacuumed and/or flushed into the lower treatment tank of the separator for cleaning via the central access once the water level is lowered below the pretreatment floor.

In instances where a vacuum truck is not available other maintenance methods (i.e. clamshell bucket) can be used, but they will be less effective. If a clamshell bucket is used the water must be decanted prior to cleaning since the sediment is under water and typically fine in nature. Disposal of the water will depend on local requirements. Disposal options for the decanted water may include:

1. Discharge into a nearby sanitary sewer manhole
2. Discharge into a nearby LID practice (grassed swale, bioretention)
3. Discharge through a filter bag into a downstream storm drain connection

The local municipality should be consulted for the allowable disposal options for both water and sediments prior to any maintenance operation. Once the water is decanted the sediment can be removed with the clamshell bucket.

Disposal of the contents of the separator depend on local requirements. Maintenance of a Hydroworks HydroStorm unit will typically take 1 to 2 hours based on a vacuum truck and longer for other cleaning methods (i.e. clamshell bucket).

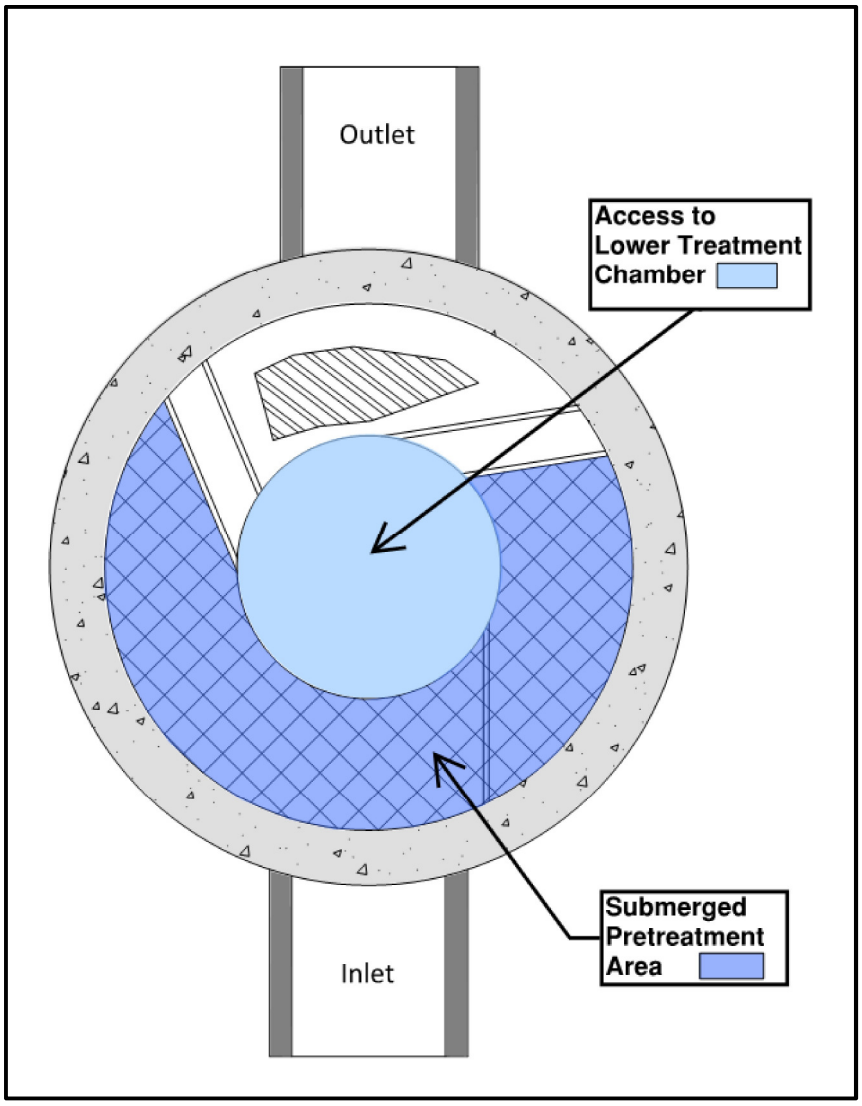



**Figure 3. Maintenance Access**

**Frequency**

Construction Period

A HydroStorm separator can fill with construction sediment quickly during the construction period. The HydroStorm must be maintained during the construction period when the depth of TSS/sediment reaches 24" (600 mm). It must also be maintained during the construction period if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the area of the separator

The HydroStorm separator should be maintained at the end of the construction period, prior to operation for the post-construction period.

Post-Construction Period

The HydroStorm was independently tested by Alden Research Laboratory in 2017. A HydroStorm HS 4 was tested for scour with a 50% sediment depth of 0.5 ft. Therefore, maintenance for sediment accumulation is required if the depth of sediment is 1 ft or greater in separators with standard water (sump) depths (Table 1).

There will be designs with increased sediment storage based on specifications or site-specific criteria. A measurement of the total water depth in the separator through the central access tube should be taken and compared to water depth given in Table 1. The standard water depth from Table 1 should be subtracted from the measured water depth and the resulting extra depth should be added to the 1 ft to determine the site-specific sediment maintenance depth for that separator.

For example, if the measured water depth in the HS-7 is 7 feet, then the sediment maintenance depth for that HS-7 is 2 ft (= 1 + 7 – 6) and the separator does not need to be cleaned for sediment accumulation until the measure sediment depth is 2 ft.

The HydroStorm separator must also be maintained if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the water surface of the separator.

**Table 1 Standard Dimensions for Hydroworks HydroStorm Models**

| Model | Diameter (ft) | Total Water Depth (ft) | Sediment Maintenance Depth for Table 1 Total Water Depth(ft) |
|---|---|---|---|
| HS-3 | 3 | 3 | 1 |
| HS-4 | 4 | 4 | 1 |
| HS-5 | 5 | 4 | 1 |
| HS-6 | 6 | 4 | 1 |
| HS-7 | 7 | 6 | 1 |
| HS-8 | 8 | 7 | 1 |
| HS-9 | 9 | 7.5 | 1 |
| HS-10 | 10 | 8 | 1 |
| HS-11 | 11 | 9 | 1 |
| HS-12 | 12 | 9.5 | 1 |

# HYDROSTORM INSPECTION SHEET

**Date** _____
**Date of Last Inspection** _____

**Site** _____
**City** _____
**State** _____
**Owner** _____

**GPS Coordinates** _____

**Date of last rainfall** _____

| **Site Characteristics** | **Yes** | **No** |
|---|---|---|
| Soil erosion evident | ☐ | ☐ |
| Exposed material storage on site | ☐ | ☐ |
| Large exposure to leaf litter (lots of trees) | ☐ | ☐ |
| High traffic (vehicle) area | ☐ | ☐ |

| **HydroStorm** | **Yes** | **No** |
|---|---|---|
| Obstructions in the inlet or outlet | ☐ * | ☐ |
| Missing internal components | ☐ ** | ☐ |
| Improperly installed inlet or outlet pipes | ☐ *** | ☐ |
| Internal component damage (cracked, broken, loose pieces) | ☐ ** | ☐ |
| Floating debris in the separator (oil, leaves, trash) | ☐ | ☐ |
| Large debris visible in the separator | ☐ * | ☐ |
| Concrete cracks/deficiencies | ☐ *** | ☐ |
| Exposed rebar | ☐ ** | ☐ |
| Water seepage (water level not at outlet pipe invert) | ☐ *** | ☐ |

Water level depth below outlet pipe invert _____"

**Routine Measurements**

| | | | | |
|---|---|---|---|---|
| Floating debris depth | **< 0.5" (13mm)** | ☐ | **>0.5" 13mm)** | ☐ * |
| Floating debris coverage | **< 50% of surface area** | ☐ | **> 50% surface area** | ☐ * |
| Sludge depth | **< 12" (300mm)** | ☐ | **> 12" (300mm)** | ☐ * |

* Maintenance required
** Repairs required
*** Further investigation is required

Hydroworks

**Other Comments:**

# Hydroworks® HydroStorm

## One Year Limited Warranty

Hydroworks, LLC warrants, to the purchaser and subsequent owner(s) during the warranty period subject to the terms and conditions hereof, the Hydroworks HydroStorm to be free from defects in material and workmanship under normal use and service, when properly installed, used, inspected and maintained in accordance with Hydroworks written instructions, for the period of the warranty. The standard warranty period is 1 year.

The warranty period begins once the separator has been manufactured and is available for delivery. Any components determined to be defective, either by failure or by inspection, in material and workmanship will be repaired, replaced or remanufactured at Hydroworks' option provided, however, that by doing so Hydroworks, LLC will not be obligated to replace an entire insert or concrete section, or the complete unit. This warranty does not cover shipping charges, damages, labor, any costs incurred to obtain access to the unit, any costs to repair/replace any surface treatment/cover after repair/replacement, or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to any material that has been disassembled or modified without prior approval of Hydroworks, LLC, that has been subjected to misuse, misapplication, neglect, alteration, accident or act of God, or that has not been installed, inspected, operated or maintained in accordance with Hydroworks, LLC instructions and is in lieu of all other warranties expressed or implied. Hydroworks, LLC does not authorize any representative or other person to expand or otherwise modify this limited warranty.

The owner shall provide Hydroworks, LLC with written notice of any alleged defect in material or workmanship including a detailed description of the alleged defect upon discovery of the defect. Hydroworks, LLC should be contacted at 136 Central Ave., Clark, NJ 07066 or any other address as supplied by Hydroworks, LLC. (888-290-7900).

This limited warranty is exclusive. There are no other warranties, express or implied, or merchantability or fitness for a particular purpose and none shall be created whether under the uniform commercial code, custom or usage in the industry or the course of dealings between the parties. Hydroworks, LLC will replace any goods that are defective under this warranty as the sole and exclusive remedy for breach of this warranty.

Subject to the foregoing, all conditions, warranties, terms, undertakings or liabilities (including liability as to negligence), expressed or implied, and howsoever arising, as to the condition, suitability, fitness, safety, or title to the Hydroworks HydroStorm are hereby negated and excluded and Hydroworks, LLC gives and makes no such representation, warranty or undertaking except as expressly set forth herein. Under no circumstances shall Hydroworks, LLC be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the HydroStorm, or the cost of other goods or services related to the purchase and installation of the HydroStorm. For this Limited Warranty to apply, the HydroStorm must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Hydroworks' written installation instructions.

Hydroworks, LLC expressly disclaims liability for special, consequential or incidental damages (even if it has been advised of the possibility of the same) or breach of expressed or implied warranty. Hydroworks, LLC shall not be liable for penalties or liquidated damages, including loss of production and profits; labor and materials; overhead costs; or other loss or expense incurred by the purchaser or any third party. Specifically excluded from limited warranty coverage are damages to the HydroStorm arising from ordinary wear and tear; alteration, accident, misuse, abuse or neglect; improper maintenance, failure of the product due to improper installation of the concrete sections or improper sizing; or any other event not caused by Hydroworks, LLC. This limited warranty represents Hydroworks' sole liability to the purchaser for claims related to the HydroStorm, whether the claim is based upon contract, tort, or other legal basis.

# APPENDIX I

**NYSDEC Full Environmental Assessment Form**

## 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 1is accurate and complete.

**A. Project and Applicant/Sponsor Information.**

| | | |
|---|---|---|
| Name of Action or Project:<br>Beacon Views Townhouses | | |
| Project Location (describe, and attach a general location map):<br>100 Conklin Street, Beacon, NY 12508 | | |
| Brief Description of Proposed Action (include purpose or need):<br>Application for Site Development Plan approval proposing the development of 40 townhomes subdivided into individual townhouse lots, and supporting improvements including a road, stormwater management facilities and public utility connections. | | |
| Name of Applicant/Sponsor:<br>Beacon Views, LLC | Telephone: 718-258-9027<br>E-Mail: ctadult@aol.com | |
| Address: 500 River Avenue, Suite 145 | | |
| City/PO: Lakewood | State: NJ | Zip Code: 08701 |
| Project Contact (if not same as sponsor; give name and title/role):<br>Greg Kamedulski | Telephone: 203-313-9412<br>E-Mail: gkamedulsky@gmail.com | |
| Address:<br>500 River Avenue, Suite 145 | | |
| City/PO:<br>Lakewood | State:<br>NJ | Zip Code:<br>08701 |
| Property Owner (if not same as sponsor):<br>Highlands at Beacon LLC | Telephone: 917-539-7132<br>E-Mail: ctadult@aol.com | |
| Address:<br>2847 Church Street | | |
| City/PO: Pine Plains | State: NY | Zip Code: 12567 |

**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, or Village Board of Trustees ☐Yes ☑No | | |
| b. City, Town or Village Planning Board or Commission ☑Yes ☐No | City of Beacon Planning Board - Site Plan Approval & Subdivision Approval | 8/27/19 |
| c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No | | |
| d. Other local agencies ☐Yes ☑No | | |
| e. County agencies ☑Yes ☐No | Dutchess County Planning<br>Dutchess County Department of Health | 10/1/19 |
| f. Regional agencies ☐Yes ☑No | | |
| g. State agencies ☑Yes ☐No | NYSDEC GP-0-20-001 Stormwater General Permit | 10/1/19 |
| h. Federal agencies ☑Yes ☐No | ACOE Wetland General Permit | 10/1/19 |

i. Coastal Resources.

*i*. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

*ii*. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes ☐No

*iii*. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑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? ☐Yes ☑No

- **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? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑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?) ☐Yes ☑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? ☐Yes ☑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?
RD-5 - Designed Residence District

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? Beacon City Schools

b. What police or other public protection forces serve the project site?
City of Beacon Police

c. Which fire protection and emergency medical services serve the project site?
City of Beacon Fire Department

d. What parks serve the project site?
City of Beacon Parks and Recreation, Memorial 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)? Residential

b. a. Total acreage of the site of the proposed action? 8.6 acres
b. Total acreage to be physically disturbed? 4.26 onsite, 1.44 addl for offsite access and utility improvements acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 8.6 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)
Residential, Creation of townhouse lots.
*ii.* Is a cluster/conservation layout proposed? ☐ Yes ☑ No
*iii.* Number of lots proposed? 42 (40 Townhouses/2 Common)
*iv.* Minimum and maximum proposed lot sizes? Minimum 1,800 Maximum 3.2 ac

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.

| | One Family | Two Family | Three Family | Multiple Family (four or more) |
|---|---|---|---|---|
| Initial Phase | 40 | | | |
| At completion of all phases | 40 | | | |

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

If Yes,

*i.* Total number of structures _____

*ii.* Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ 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: Stormwater Management

*ii.* If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Stormwater runoff

*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: 5'-6" height; 390' length

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

**D.2. Project Operations**

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

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): Federal flagged wetland PF01E

*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:
The proposed project would fill the existing wetland by approximately 13,880.

*iii.* Will the proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: In order to limit disturbance into the wetland, retaining walls will be installed.

*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: .22 ac±
- expected acreage of aquatic vegetation remaining after project completion: 2.33 ac±
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Site grading.
- proposed method of plant removal: Excavation
- if chemical/herbicide treatment will be used, specify product(s): None

*v.* Describe any proposed reclamation/mitigation following disturbance:
1 to 1 creation of wetlands

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: 13,200 (max day) 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: City of Beacon
- 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: 13,200 (max day) 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: City of Beacon
- Name of district: City of Beacon
- 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:

*i.* How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 2.26 acres (impervious surface)

_____ Square feet or 8.6 acres (parcel size)

*ii.* Describe types of new point sources. Roadway catch basins, roof drain connections, cut off swales

*iii.* 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)?

Onsite stormwater management facilities

- If to surface waters, identify receiving water bodies or wetlands: Onsite wetland
- 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:

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

Heavy equipment during construction.

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

None.

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

Natural gas boilers for each residential unit.

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:

*i.* 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

*ii.* In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide ($CO_2$)
- _____Tons/year (short tons) of Nitrous Oxide ($N_2O$)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride ($SF_6$)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (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 0 Proposed _____ Net increase/decrease _____

*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

N/A

If Yes:

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

_____

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

_____

*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: 7 am - 5 pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

*ii.* During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

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 noise associated with excavation and general construction during business hours.

*ii.* Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☑ Yes ☐ No

Describe: Limited tree clearing for improvements. New landscape screening will be installed.

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:

Roadway pole mounted lights at 18' high with house side shields.

*ii.* Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☑ Yes ☐ No

Describe: Limited tree clearing for improvements. New landscape screening will be installed.

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

N/A

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

N/A

If Yes:

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

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

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

- Construction: _____
- Operation: _____

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

- Construction: _____
- Operation: _____

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 | | 2.1 ac± | |
| • Forested | 6.0 ac± | 2.6 ac± | |
| • Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural) | | | |
| • Agricultural (includes active orchards, field, greenhouse etc.) | | | |
| • Surface water features (lakes, ponds, streams, rivers, etc.) | | | |
| • Wetlands (freshwater or tidal) | 2.6 ac± | 2.3 ac± | |
| • Non-vegetated (bare rock, earth or fill) | | | |
| • Other Describe: Slope, Lawn and Landscape Areas | | 1.6 ac± | |

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:

Beacon High School, Roundbout Middle School, Wingate at Beacon, Hedgewood Home for Adults, and Highland Meadows Senior Housing.

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): _____

*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? 6.5 feet average 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:

| | |
|---|---|
| Bernardston Silt (BeB) (BeC) | 52 % |
| Canandaigua Silt (Ca) | 29 % |
| Nassau Cardigan Complex (NwC) | 19 % |

d. What is the average depth to the water table on the project site? Average: 2 feet average feet

e. Drainage status of project site soils:
☑ Well Drained: 66 % of site
☐ Moderately Well Drained: _____ % of site
☑ Poorly Drained 34 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 50 % of site
☑ 10-15%: 15 % of site
☑ 15% or greater: 35 % 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 _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Wetland PF01E Approximate Size 2.55 ac onsite
- 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: _____

m. Identify the predominant wildlife species that occupy or use the project site:
Whitetail Deer, Gray Squirrel
Racoon

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No
If Yes:
*i.* Describe the habitat/community (composition, function, and basis for designation): _____
*ii.* Source(s) of description or evaluation: _____
*iii.* Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

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? ☑ Yes ☐ No
If Yes:
*i.* Species and listing (endangered or threatened): _____
Indiana Bat

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? ☐ Yes ☑ No
If Yes:
*i.* Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No
If yes, give a brief description of how the proposed action may affect that use: _____

**E.3. Designated Public Resources On or Near Project Site**

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? ☐ Yes ☑ No
If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No
*i.* If Yes: acreage(s) on project site? _____
*ii.* Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No
If Yes:
*i.* Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
*ii.* Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No
If Yes:
*i.* CEA name: _____
*ii.* Basis for designation: _____
*iii.* Designating agency and date: _____

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: Matteawan State Hospital

*iii.* Brief description of attributes on which listing is based:
Area of social history, health and medicine and institutional architecture

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 fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

*i.* Identify resource: Hudson Highlands Scenic Area

*ii.* Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Hudson River Valley Scenic Area of Statewide Significance

*iii.* Distance between project and resource: 2.4 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 Jeffrey J. Contelmo, P.E. Date 6/30/20

Insite Engineering, Surveying & Landscape Architecture, P.C.

Signature _____ Title Senior Principal Engineer

PRINT FORM




**Disclaimer:** The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.




| | |
|---|---|
| B.i.i [Coastal or Waterfront Area] | No |
| B.i.ii [Local Waterfront Revitalization Area] | Yes |
| 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] | No |
| 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 - Wetlands Name] | Federal Waters |
| E.2.h.v [Impaired Water Bodies] | No |
| E.2.i. [Floodway] | No |
| E.2.j. [100 Year Floodplain] | No |
| E.2.k. [500 Year Floodplain] | No |
| E.2.l. [Aquifers] | No |
| E.2.n. [Natural Communities] | No |
| E.2.o. [Endangered or Threatened Species] | Yes |

| | |
|---|---|
| E.2.o. [Endangered or Threatened Species - Name] | Indiana Bat |
| 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] | Digital mapping data are not available or are incomplete. Refer to EAF Workbook. |
| E.3.f. [Archeological Sites] | Yes |
| E.3.i. [Designated River Corridor] | No |

# APPENDIX J

**Pipe Sizing Calculations**

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

**DRAINAGE SYSTEM CALCULATIONS**
Design Storm: 100-Year

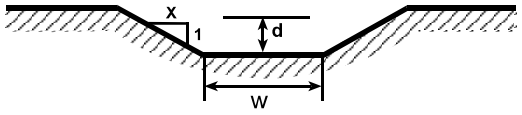
**PROJECT:** **Beacon Views**
**JOB NUMBER:** **19131.100**
BY: EJP DATE: 7-28-2020
CHK: ZMP

| STRUCTURE | | IMPERVIOUS AREA | | | PERVIOUS AREA | | | CA | TIME OF CONC. (min.) | | | I | Q (cfs) | | PIPE DESIGN | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FROM | TO | A (ac.) | C | CA | A (ac.) | C | CA | | INLET | PIPE | TOTAL | | DESIGN | CAP. | V(ft/s) | n | s (%) | L (ft) | DIA (in) |
| DI 7 | CB 6 | **0.20** | 0.9 | 0.18 | **0.02** | 0.3 | 0.01 | 0.19 | **6** | - | 6 | **9.2** | 1.7 | 5.9 | 6.5 | **0.012** | **2.3** | **97** | **12** |
| CB 6 | CB 5 | **0.16** | 0.9 | 0.14 | **0.02** | 0.3 | 0.01 | 0.34 | **6** | - | 6 | **9.2** | 3.1 | 4.2 | 5.9 | **0.012** | **1.2** | **35** | **12** |
| CB 5 | CB 4 | **0.10** | 0.9 | 0.09 | **0.06** | 0.3 | 0.02 | 0.47 | **6** | - | 6 | **9.2** | 4.3 | 8.0 | 6.6 | **0.012** | **1.3** | **183** | **15** |
| CB 4 | CB 3 | **0.40** | 0.9 | 0.36 | **0.10** | 0.3 | 0.03 | 0.92 | **6** | - | 6 | **9.2** | 8.5 | 11.4 | 7.1 | **0.012** | **1.0** | **136** | **18** |
| CB 3 | CB 2 | **0.15** | 0.9 | 0.14 | **0.06** | 0.3 | 0.02 | 2.01 | **6** | - | 6 | **9.2** | 18.5 | 47.1 | 14.1 | **0.012** | **3.7** | **63** | **24** |
| CB 2 | ES 1 | **0.11** | 0.9 | 0.10 | **0.00** | 0.3 | 0.00 | 2.20 | **6** | - | 6 | **9.2** | 20.2 | 46.5 | 14.3 | **0.012** | **3.6** | **76** | **24** |
| CB 5A | CB 5 | **0.02** | 0.9 | 0.02 | **0.00** | 0.3 | 0.00 | 0.02 | **6** | - | 6 | **9.2** | 0.2 | 5.0 | 3.1 | **0.012** | **1.7** | **18** | **12** |
| CB 4A | CB 4 | **0.07** | 0.9 | 0.06 | **0.00** | 0.3 | 0.00 | 0.06 | **6** | - | 6 | **9.2** | 0.6 | 5.3 | 4.4 | **0.012** | **1.9** | **26** | **12** |
| CB 2A | CB 2 | **0.10** | 0.9 | 0.09 | **0.00** | 0.3 | 0.00 | 0.09 | **6** | - | 6 | **9.2** | 0.8 | 5.5 | 5.0 | **0.012** | **2.0** | **25** | **12** |
| CB 3C | CB 3B | **0.48** | 0.9 | 0.43 | **0.22** | 0.3 | 0.07 | 0.50 | **6** | - | 6 | **9.2** | 4.6 | 7.3 | 6.3 | **0.012** | **1.1** | **151** | **15** |
| CB 3B | CB 3A | **0.20** | 0.9 | 0.18 | **0.02** | 0.3 | 0.01 | 0.69 | **6** | - | 6 | **9.2** | 6.3 | 7.0 | 6.5 | **0.012** | **1.0** | **68** | **15** |
| CB 3A | CB 3 | **0.23** | 0.9 | 0.21 | **0.10** | 0.3 | 0.03 | 0.93 | **6** | - | 6 | **9.2** | 8.6 | 11.9 | 7.4 | **0.012** | **1.1** | **115** | **18** |
| SDI 22 | ES 21 | **0.00** | 0.9 | 0.00 | **2.20** | 0.3 | 0.66 | 0.66 | **15** | - | 15 | **6.4** | 4.2 | 7.7 | 6.4 | **0.012** | **1.2** | **52** | **15** |
| SDI 12 | SDI 11 | **0.00** | 0.9 | 0.00 | **1.60** | 0.3 | 0.48 | 0.48 | **15** | - | 15 | **6.4** | 3.1 | 11.7 | 12.6 | **0.012** | **9.2** | **22** | **12** |
| SDI 11 | DMH 10 | **0.00** | 0.9 | 0.00 | **2.70** | 0.3 | 0.81 | 1.29 | **15** | - | 15 | **6.4** | 8.3 | 16.9 | 13.7 | **0.012** | **5.8** | **57** | **15** |
| DMH 10 | DMH 9 | **0.00** | 0.9 | 0.00 | **0.00** | 0.3 | 0.00 | 1.29 | **15** | - | 15 | **6.4** | 8.3 | 11.9 | 10.5 | **0.012** | **2.9** | **110** | **15** |
| DMH 9 | ES 8 | **0.00** | 0.9 | 0.00 | **0.00** | 0.3 | 0.00 | 1.29 | **15** | - | 15 | **6.4** | 8.3 | 20.2 | 15.6 | **0.012** | **8.3** | **60** | **15** |
| SDI 14A | DI 14 | **0.00** | 0.9 | 0.00 | **4.30** | 0.3 | 1.29 | 1.29 | **15** | - | 15 | **6.4** | 8.3 | 14.8 | 12.4 | **0.012** | **4.5** | **55** | **15** |
| DI 14 | ES 13 | **0.00** | 0.9 | 0.00 | **3.30** | 0.3 | 0.99 | 2.28 | **15** | - | 15 | **6.4** | 14.6 | 49.6 | 13.8 | **0.012** | **4.1** | **80** | **24** |
| 25 TOWNSEND | DI 14 | **18" DIAMETER HDPE (TAKEN FROM 25 TOWNSEND STREET APPROVED PLANS)** | | | | | | | | | | | | | | | | | |
| SDI 17 | DMH 16 | **0.00** | 0.9 | 0.00 | **0.40** | 0.3 | 0.12 | 0.12 | **15** | - | 15 | **6.4** | 0.8 | 10.4 | 7.8 | **0.012** | **7.3** | **45** | **12** |
| DMH 16 | ES 15 | **0.00** | 0.9 | 0.00 | **0.00** | 0.3 | 0.00 | 0.12 | **15** | - | 15 | **6.4** | 1.1 | 5.0 | 5.1 | **0.012** | **1.7** | **47** | **12** |
| CB 19 | FS 1.1 | **0.25** | 0.9 | 0.23 | **0.01** | 0.3 | 0.00 | 0.23 | **6** | - | 6 | **9.2** | 2.1 | 6.8 | 7.7 | **0.012** | **3.1** | **46** | **12** |
| FS 1.1 | ES 18 | **SIZED IN HYDROCAD** | | | | | | | | | | | | | | | | | |
| FS 1.1 | HDS 1.1 | **SIZED IN HYDROCAD** | | | | | | | | | | | | | | | | | |
| HDS 1.1 | 1.2P | **SIZED IN HYDROCAD** | | | | | | | | | | | | | | | | | |
| 1.2P | DMH 16 | **SIZED IN HYDROCAD (0.29 CFS)** | | | | | | | | | | | | | | | | | |
| ES 24 | ES 23 | **0.50** | 0.9 | 0.45 | **0.30** | 0.3 | 0.09 | 0.54 | **10** | - | 10 | **7.5** | 4.1 | 7.3 | 6.1 | **0.012** | **1.1** | **44** | **15** |
| OS 1.1P | ES 25 | **SIZED IN HYDROCAD** | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| CB 28 | CB 27 | **0.07** | 0.9 | 0.06 | **0.00** | 0.3 | 0.00 | 0.06 | **6** | - | 6 | **9.2** | 0.6 | 6.5 | 5.0 | **0.012** | **2.8** | **18** | **12** |
| CB 27 | ES 26 | **0.07** | 0.9 | 0.06 | **0.00** | 0.3 | 0.00 | 0.12 | **6** | - | 6 | **9.2** | 1.1 | 7.5 | 6.9 | **0.012** | **3.8** | **136** | **12** |
| SDI 30 | ES 29 | **0.00** | 0.9 | 0.00 | **1.50** | 0.3 | 0.45 | 0.45 | **15** | - | 15 | **6.4** | 2.9 | 4.4 | 6.0 | **0.012** | **1.3** | **61** | **12** |

# APPENDIX K

**Swale Sizing Calculations**

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.




## Appendix K
### SWALE SIZING CALCULATIONS

Design Storm: 100-Year
Project: Beacon Views
Job #: 19131.100
Date: 7/28/2020
By: EJP
Sheet: 1 of 1

| SMP ID | Swale Type | Q (cfs) | w (ft) | d (ft) | x | n | S (%) | A ($ft^2$) | $W_p$ (ft) | $R_h$ (ft) | V (ft/s) | Q (cfs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | design flow | swale bottom width | depth of flow | swale side slope (x:1) | Manning's "n" | swale slope | swale area | wetted perimeter | hydraulic radius | swale velocity | swale capacity |
| A | Grass | 0.8 | 1.00 | 0.3 | 2.00 | 0.035 | 2.00 | 0.40 | 2.16 | 0.18 | 1.9 | **0.8** |
| A | Grass | 0.8 | 1.00 | 0.1 | 2.00 | 0.035 | 20.00 | 0.18 | 1.63 | 0.11 | 4.4 | **0.8** |
| B | Grass | 8.3 | 1.00 | 0.8 | 2.00 | 0.035 | 2.00 | 2.27 | 4.78 | 0.48 | 3.7 | **8.3** |
| B | Grass | 8.3 | 1.00 | 0.5 | 2.00 | 0.035 | 13.00 | 1.14 | 3.43 | 0.33 | 7.3 | **8.3** |
| C | Grass | 3.1 | 1.00 | 0.5 | 2.00 | 0.035 | 2.00 | 1.09 | 3.37 | 0.32 | 2.8 | **3.1** |
| C | Grass | 3.1 | 1.00 | 0.4 | 2.00 | 0.035 | 10.00 | 0.61 | 2.59 | 0.23 | 5.1 | **3.1** |
| D | Grass | 5.2 | 1.00 | 0.7 | 2.00 | 0.035 | 2.00 | 1.60 | 4.04 | 0.40 | 3.3 | **5.2** |
| D | Grass | 5.2 | 1.00 | 0.5 | 2.00 | 0.035 | 5.00 | 1.14 | 3.44 | 0.33 | 4.6 | **5.2** |
| E | Rip Rap | 1.3 | 1.00 | 0.3 | 2.00 | 0.050 | 5.00 | 0.55 | 2.48 | 0.22 | 2.4 | **1.3** |
| E | Rip Rap | 1.3 | 1.00 | 0.2 | 2.00 | 0.050 | 20.00 | 0.34 | 2.03 | 0.17 | 4.0 | **1.3** |
| F | Grass | 3.0 | 1.00 | 0.6 | 2.00 | 0.035 | 1.00 | 1.39 | 3.77 | 0.37 | 2.2 | **3.0** |
| F | Grass | 3.0 | 1.00 | 0.5 | 2.00 | 0.035 | 2.00 | 1.06 | 3.33 | 0.32 | 2.8 | **3.0** |
| G | Grass | 1.5 | 1.00 | 0.4 | 2.00 | 0.035 | 1.00 | 0.83 | 2.97 | 0.28 | 1.8 | **1.5** |
| G | Grass | 1.5 | 1.00 | 0.4 | 2.00 | 0.035 | 2.00 | 0.64 | 2.65 | 0.24 | 2.3 | **1.5** |

Swale A is located behind Units 35-40 and is tributary to SDI 17
Swale B is located behind Units 27-34 and is tributary to SDI 14A
Swale C is located behind Units 21-26 and is tributary to SDI 12
Swale D is located behind Units 14-20 and is tributary to SDI 11
Swale E is located along between the western property line and proposed retaining wall and is tributary to SDI 22
Swale F is located along the entrance drive off Hastings Drive and is tributary to SDI 22
Swale G is located along the entrance drive off Hastings Drive and is tributary to SDI 30

# APPENDIX L

**Draft NYSDEC Notice of Intent**

NEW YORK STATE OF OPPORTUNITY | 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: | BEACON VIEWS, LLC |
| 2. Contact Person: | GREGORY KAMEDULSKI |
| 3. Street Address: | 500 RIVER AVENUE, SUITE 145 |
| 4. City/State/Zip: | LAKEWOOD, NEW JERSEY 08701 |
| **II. Project Site Information** | |
| 5. Project/Site Name: | BEACON VIEWS |
| 6. Street Address: | 100 CONKLIN STREET |
| 7. City/State/Zip: | BEACON, NEW YORK 12508 |
| **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**

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

0644089821

# 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)
BEACON VIEWS, LLC

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
KAMEDULSKI

Owner/Operator Contact Person First Name
GREGORY

Owner/Operator Mailing Address
500 RIVER AVENUE, SUITE 145

City
LAKEWOOD

State
NJ

Zip
08701-____

Phone (Owner/Operator)
203-313-9412

Fax (Owner/Operator)
___-___-____

Email (Owner/Operator)
GKAMEDULSKI@GMAIL.COM

FED TAX ID
__-_____ (not required for individuals)

**Project Site Information**

Project/Site Name
BEACON VIEWS

Street Address (NOT P.O. BOX)
100 CONKLIN STREET

Side of Street
● **North** ○ **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
BEACON

State: NY
Zip: 12508-
County: DUTCHESS
DEC Region: 3

Name of Nearest Cross Street
DESOTO AVENUE

Distance to Nearest Cross Street (Feet)
100

Project In Relation to Cross Street
○ **North** ○ **South** ○ **East** ● **West**

Tax Map Numbers
Section-Block-Parcel
6055-03-331123

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

**https://gisservices.dec.ny.gov/gis/stormwater/**

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

**X Coordinates (Easting)**
-73.955
**Ex. -73.749**

**Y Coordinates (Northing)**
41.512
**Ex. 42.652**

2. What is the nature of this construction project?

● **New Construction**

○ **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
**SELECT ONLY ONE CHOICE FOR EACH**

| **Pre-Development Existing Land Use** | **Post-Development Future Land Use** |
|---|---|
| ● FOREST | ○ SINGLE FAMILY HOME |
| ○ PASTURE/OPEN LAND | ● SINGLE FAMILY SUBDIVISION |
| ○ CULTIVATED LAND | ○ TOWN HOME RESIDENTIAL |
| ○ SINGLE FAMILY HOME | ○ MULTIFAMILY RESIDENTIAL |
| ○ SINGLE FAMILY SUBDIVISION | ○ INSTITUTIONAL/SCHOOL |
| ○ TOWN HOME RESIDENTIAL | ○ INDUSTRIAL |
| ○ MULTIFAMILY RESIDENTIAL | ○ COMMERCIAL |
| ○ INSTITUTIONAL/SCHOOL | ○ MUNICIPAL |
| ○ INDUSTRIAL | ○ ROAD/HIGHWAY |
| ○ COMMERCIAL | ○ RECREATIONAL/SPORTS FIELD |
| ○ ROAD/HIGHWAY | ○ BIKE PATH/TRAIL |
| ○ RECREATIONAL/SPORTS FIELD | ○ LINEAR UTILITY (water, sewer, gas, etc.) |
| ○ BIKE PATH/TRAIL | ○ PARKING LOT |
| ○ LINEAR UTILITY | ○ CLEARING/GRADING ONLY |
| ○ PARKING LOT | ○ DEMOLITION, NO REDEVELOPMENT |
| ○ OTHER | ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.) |
| | ○ OTHER |

Number of Lots: 42

***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** |
|---|---|---|---|
| 8.6 | 5.7 | 0.0 | 2.8 |

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** |
|---|---|---|---|
| 0 % | 0 % | 0 % | 100 % |

7. Is this a phased project? ● **Yes** ○ **No**

8. Enter the planned start and end dates of the disturbance activities.

**Start Date** 08/01/2020 – **End Date** 12/01/2022

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

USACE WETLAND PF01E

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ● Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ● Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ○ **Yes** ● **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
**If no, skip question 13.**

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ○ **No**
**If Yes, what is the acreage to be disturbed?**

. 

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

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?

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**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer
INSITE ENGINEERING

Contact Name (Last, Space, First)
CONTELMO, JEFFREY

Mailing Address
3 GARRETT PLACE

City
CARMEL

State NY Zip 10512-

Phone 845-225-9690 Fax --- - --- - ----

Email
JCONTELMO@INSITE-ENG.COM

**SWPPP Preparer Certification**

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** JEFFREY **MI** J

**Last Name** CONTELMO, PE

**Signature**

**Date** __ / __ / ____

25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

## Temporary Structural

- ● Check Dams
- ○ Construction Road Stabilization
- ● Dust Control
- ○ Earth Dike
- ● Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ● Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ● Stabilized Construction Entrance
- ● Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ● Temporary Stormdrain Diversion
- ● Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

## Biotechnical

- ○ Brush Matting
- ○ Wattling

## Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ● Grassed Waterway
- ● Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ● Topsoiling
- ○ Vegetating Waterways

## Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ● Retaining Wall
- ○ Riprap Slope Protection
- ● Rock Outlet Protection
- ○ Streambank Protection

Other

**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**

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 0 | . | 3 | 0 | 5 |

**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)**

| | Total Contributing Area (acres) | | Total Contributing Impervious Area (acres) |
|---|---|---|---|
| **RR Techniques (Area Reduction)** | | | |
| ○ Conservation of Natural Areas (RR-1) | | and/or | |
| ○ Sheetflow to Riparian Buffers/Filters Strips (RR-2) | | and/or | |
| ○ Tree Planting/Tree Pit (RR-3) | | and/or | |
| ○ Disconnection of Rooftop Runoff (RR-4) | | and/or | |
| **RR Techniques (Volume Reduction)** | | | |
| ○ Vegetated Swale (RR-5) | | | |
| ○ Rain Garden (RR-6) | | | |
| ○ Stormwater Planter (RR-7) | | | |
| ○ Rain Barrel/Cistern (RR-8) | | | |
| ○ Porous Pavement (RR-9) | | | |
| ○ Green Roof (RR-10) | | | |
| **Standard SMPs with RRv Capacity** | | | |
| ○ Infiltration Trench (I-1) | | | |
| ○ Infiltration Basin (I-2) | | | |
| ○ Dry Well (I-3) | | | |
| ● Underground Infiltration System (I-4) | | | 0.45 |
| ○ Bioretention (F-5) | | | |
| ○ Dry Swale (O-1) | | | |
| **Standard SMPs** | | | |
| ○ Micropool Extended Detention (P-1) | | | |
| ○ Wet Pond (P-2) | | | |
| ○ Wet Extended Detention (P-3) | | | |
| ○ Multiple Pond System (P-4) | | | |
| ● Pocket Pond (P-5) | | | 2.35 |
| ○ Surface Sand Filter (F-1) | | | |
| ○ Underground Sand Filter (F-2) | | | |
| ○ Perimeter Sand Filter (F-3) | | | |
| ○ Organic Filter (F-4) | | | |
| ○ Shallow Wetland (W-1) | | | |
| ○ Extended Detention Wetland (W-2) | | | |
| ○ Pond/Wetland System (W-3) | | | |
| ○ Pocket Wetland (W-4) | | | |
| ○ Wet Swale (O-2) | | | |

**Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)**

| Alternative SMP | Total Contributing Impervious Area(acres) |
|---|---|
| ○ **Hydrodynamic** ..... | |
| ○ **Wet Vault** ..... | |
| ○ **Media Filter** ..... | |
| ○ **Other** [ ] ..... | |

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**

0.082 **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**

0.062 **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**

0.245 **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). 0.334

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**

0.626 **acre-feet**

**CPv Provided**

0.626 **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**

39.7 **CFS**

**Post-development**

35.2 **CFS**

**Total Extreme Flood Control Criteria (Qf)**

**Pre-Development**

84.5 **CFS**

**Post-development**

78.7 **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ● **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

BEACON VIEWS, LLC

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP [N][Y][R][ ][ ][ ][ ][ ][ ]
- ○ Other [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ● **Yes** ○ **No**
**If Yes, Indicate Size of Impact.** [ ][ ][ ][ ][0].[3]

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ● **Yes** ○ **No**
**(If No, skip question 43)**

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. [N][Y][R][ ][ ][ ][ ][ ][ ]

## Owner/Operator 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.

**Print First Name**

GREGORY

**MI**

**Print Last Name**

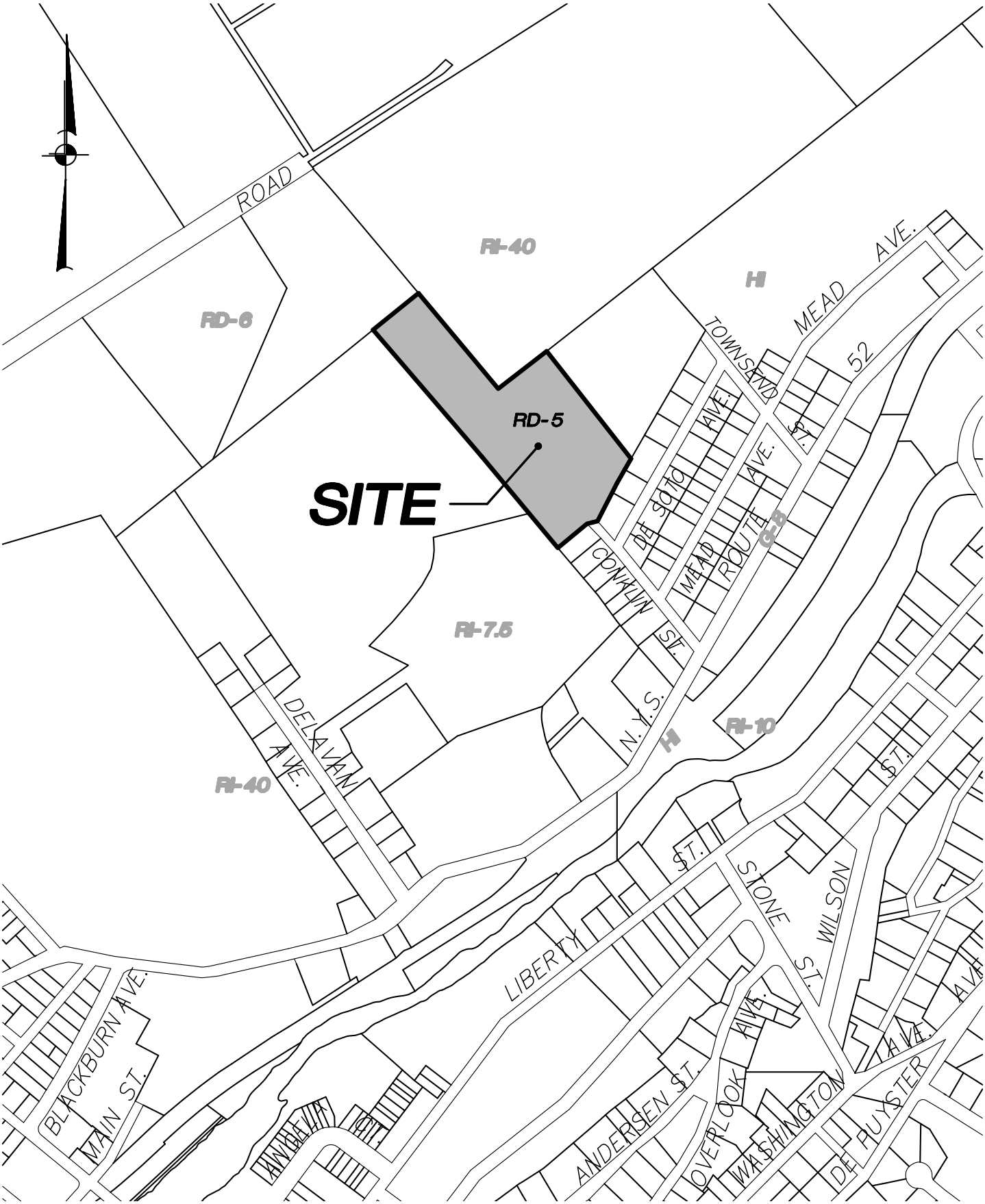
KAMEDULSKI

**Owner/Operator Signature**

**Date**

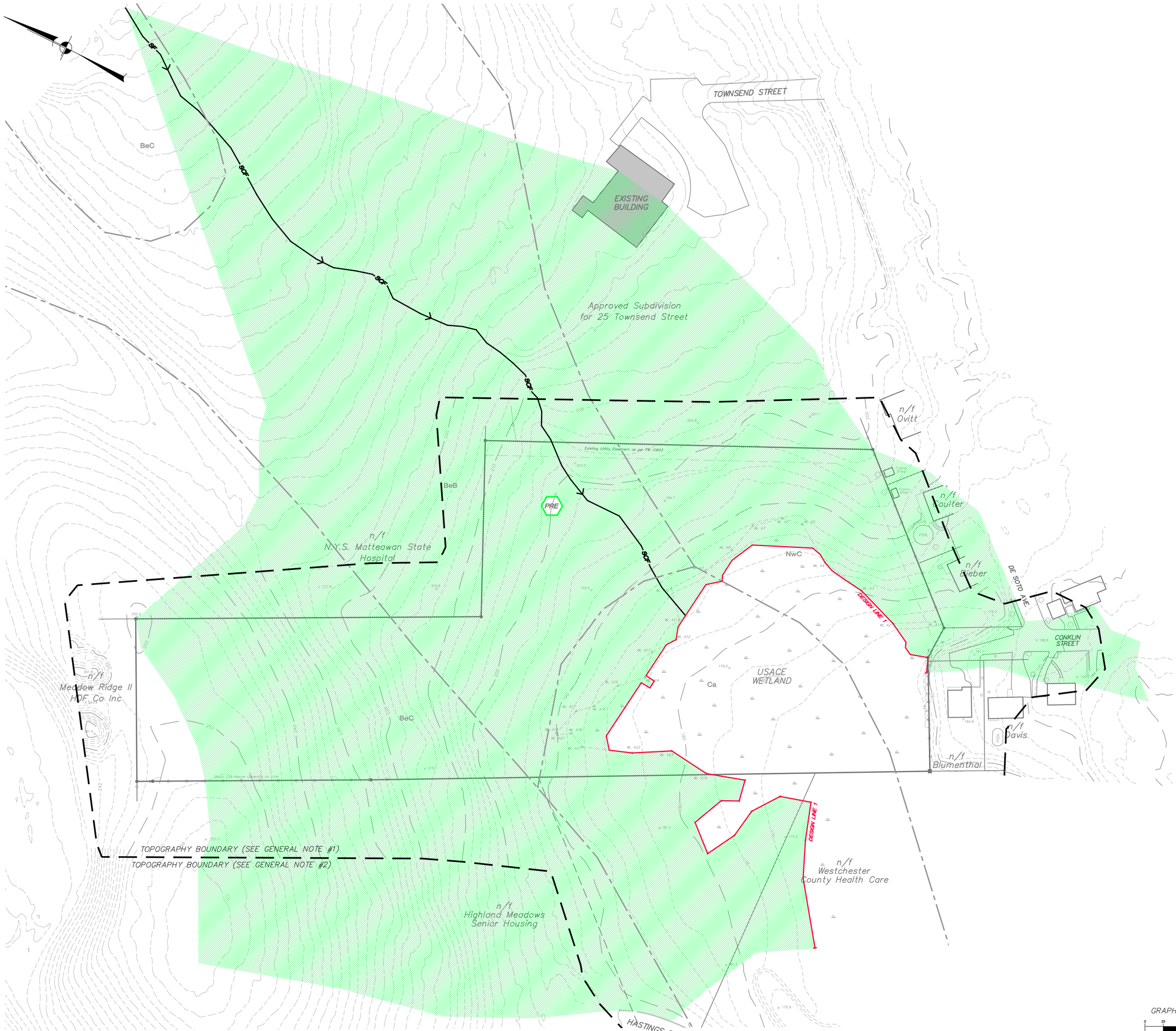
/ /

**FIGURES**




| | | |
|---|---|---|
| PROJECT: BEACON VIEWS<br>CITY OF BEACON, DUTCHESS COUNTY, NEW YORK | PREPARED BY: INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.<br>3 Garrett Place • Carmel, New York 10512<br>Phone (845) 225-9690 • Fax (845) 225-9717<br>www.insite-eng.com | DATE: 8-26-19 |
| | | SCALE: 1" = 500' |
| | | PROJECT NO.: 19131.100 |
| DRAWING: LOCATION MAP | | FIGURE: 1 |

Z:\E\19131100\Stormwater\Figures\Figure 1 - Location Map.dwg, 8/26/2019 7:56:56 AM, ependleton, 1:1




## SOILS LEGEND

| SOILS | DESCRIPTION | HYDROLOGICAL GROUP |
|---|---|---|
| BeB | Bernardston Silt Loam, 3% to 8% slope | C/D |
| BeC | Bernardston Silt Loam, 8% to 15% slope | C/D |
| Ca | Canandaigua Silt Loam, Nuetral Substratum | C/D |
| NwC | Nassau–Cardigan Complex, Rolling, Very Rocky | D |
| | NRCS Soil Boundary Line | |

## LEGEND

| | |
|---|---|
| PRE | SUBCATCHMENT |
| SF → | TIME OF CONCENTRATION SHEET FLOW |
| SCF → | TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW |
| DESIGN LINE | DESIGN LINE |
| | SUBCATCHMENT CONTRIBUTING AREA |

## General Notes:

1. Topography shown hereon within the project site and topography boundary are based upon aerial photography dated April 14, 2003 and is photogrametrically compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D. 1988) as derived by GPS observation. The contour interval is 2'.
2. Topography shown hereon outside of the topography boundary are based upon Dutchess County 2' contour, GIS data.
3. Design Line 1 generally follows the wetland boundary on the project site. Portions of the Design Line were adjusted within the wetland to include all drainage areas in the post–development condition in the stormwater analysis.

GRAPHIC SCALE

0 25 50 100

( IN FEET )
1 inch = 50 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 2 | 6–30–20 | REVISED PER PLANNING BOARD COMMENTS | EJP |
| 1 | 5–26–20 | REVISED PER PLANNING BOARD COMMENTS | EJP |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
**BEACON VIEWS**
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
**PRE–DEVELOPMENT DRAINAGE MAP**

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8–26–19 | DRAWN BY | E.J.P. |
| SCALE | 1" = 50' | CHECKED BY | Z.M.P. |

FIGURE NO. 2

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E\19131\00 Admin\Stormwater\Figures\Figure 2 - Pre Development.dwg, 8/30/2020 1:09:02 AM, ejpadilla, 1:1

TOWNSEND STREET

EXISTING BUILDING

Approved Subdivision for 25 Townsend Street

FOR OFFSITE IMPROVEMENTS SEE DRAWING SP-4

n/f Ovitt

n/f Coulter

n/f N.Y.S. Matteawan State Hospital

n/f Meadow Ridge II HDF Co Inc

n/f Weber

n/f Davis

n/f Blumenthal

n/f Westchester County Health Care

n/f Highland Meadows Senior Housing

USACE WETLAND

DESIGN LINE 1

DESIGN LINE 1

CONKLIN STREET

DE SOTO AVE

HASTINGS DRIVE

TOPOGRAPHY BOUNDARY (SEE GENERAL NOTE #1)

TOPOGRAPHY BOUNDARY (SEE GENERAL NOTE #2)

BeC

BeB

NwC

Ca

SF

SCF

PF

CF

1OS

1.1P

1.2P

1.1R

1.2S

## SOILS LEGEND

| SOILS | DESCRIPTION | HYDROLOGICAL GROUP |
|---|---|---|
| BeB | Bernardston Silt Loam, 3% to 8% slope | C/D |
| BeC | Bernardston Silt Loam, 8% to 15% slope | C/D |
| Ca | Canandaigua Silt Loam, Nuetral Substratum | C/D |
| NwC | Nassau–Cardigan Complex, Rolling, Very Rocky | D |
| | NRCS Soil Boundary Line | |

## LEGEND

- 1OS — SUBCATCHMENT
- 1.1P — STORMWATER MANAGEMENT PRACTICE
- SF — TIME OF CONCENTRATION SHEET FLOW
- SCF — TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
- PF — TIME OF CONCENTRATION PIPE FLOW
- CF — TIME OF CONCENTRATION CHANNEL FLOW
- DESIGN LINE — DESIGN LINE
- SUBCATCHMENT CONTRIBUTING AREA
- STORMWATER MANAGEMENT PRACTICE AREA

## General Notes:

1. Topography shown hereon within the project site and topography boundary are based upon aerial photography dated April 14, 2003 and is photogrametrically compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D. 1988) as derived by GPS observation. The contour interval is 2'.
2. Topography shown hereon outside of the topography boundary are based upon Dutchess County 2' contour, GIS data.
3. Design Line 1 generally follows the wetland boundary on the project site. Portions of the Design Line were adjusted within the wetland to include all drainage areas in the post–development condition in the stormwater analysis.

GRAPHIC SCALE

0 25 50 100

( IN FEET )

1 inch = 50 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7–28–20 | REVISED PER PLANNING BOARD COMMENTS | EJP |
| 3 | 6–30–20 | REVISED PER PLANNING BOARD COMMENTS | EJP |
| 2 | 5–26–20 | REVISED PER PLANNING BOARD COMMENTS | EJP |
| 1 | 4–28–20 | RESUBMISSION TO PLANNING BOARD | EJP |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT: BEACON VIEWS

CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

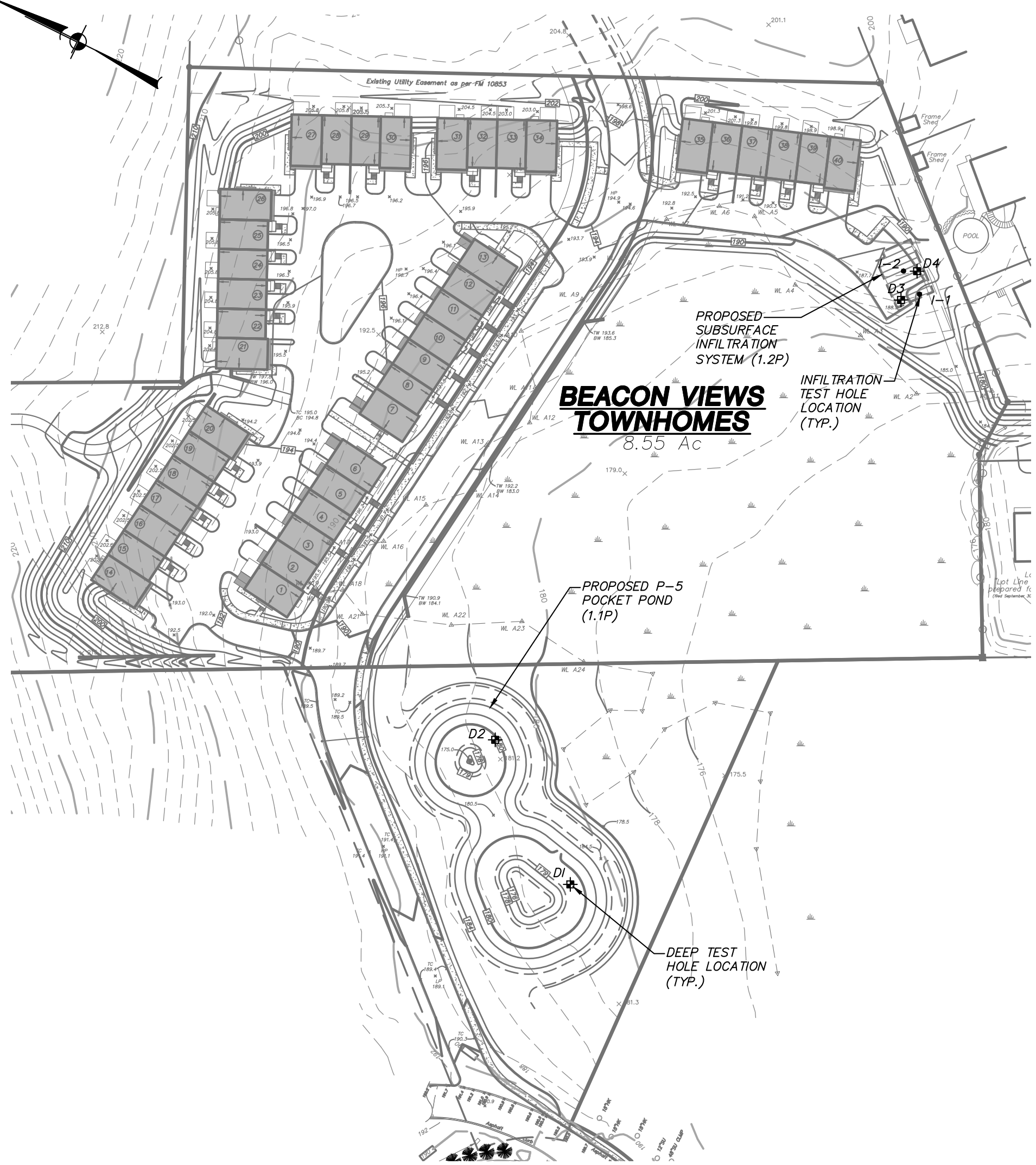
DRAWING: POST–DEVELOPMENT DRAINAGE MAP

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8–26–19 | DRAWN BY | E.J.P. |
| SCALE | 1" = 50' | CHECKED BY | Z.M.P. |

FIGURE NO. 3

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\CIVIL\19131.100 Main\Stormwater\Figures\Figure 3 - Post Development.dwg, 7/27/2020 8:40:43 AM, openlibrary.13




*DEEP HOLE TEST RESULTS:*

*DEEP TESTS PERFORMED: 12-16-2019 (D-1, D-2, D-3) & 6-24-2020 (D-4)*
*DEEP TESTS WITNESSED BY:*
*EVAN PENDLETON (INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.) & CASSANDRA BIBBO AND SCOTT SICINA (LANC AND TULLY ENGINEERING AND SURVEYING, P.C.)*

| | | |
|---|---|---|
| D-1: | 0"-2" | TOPSOIL |
| | 2"-64"+ | BROWN SILTY LOAM |
| | | GROUNDWATER @ 36". NO ROCK. |
| D-2: | 0"-2" | TOPSOIL |
| | 2"-48"+ | BROWN SILTY LOAM |
| | | GROUNDWATER @ 18". NO ROCK. |
| D-3: | 0"-2" | TOPSOIL |
| | 2"-84"+ | BROWN LOAM |
| | | GROUNDWATER @ 84". NO ROCK. |
| D-4: | 0"-6" | TOPSOIL |
| | 6"-48" | COMPACT BROWN LOAM |
| | 48"-102"+ | BROWN LOAM |

*INFILTRATION TEST RESULTS:*
*INFILTRATION TEST PERFORMED: 6-25-20*
*INFILTRATION TESTS PERFORMED BY: EVAN PENDLETON (INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.)*
*WITNESSED BY: STEVEN PADIN (LANC AND TULLY ENGINEERING AND SURVEYING, P.C.)*

| | |
|---|---|
| I-3: | 60" IN./HR. |
| I-4: | 21" IN./HR. |

GRAPHIC SCALE
0 40 80 160
( IN FEET )
1 inch = 80 ft.

PROJECT: BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING: TESTING PLAN

PREPARED BY:
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place • Carmel, New York 10512
Phone (845) 225-9690 • Fax (845) 225-9717
www.insite-eng.com

DATE: 7-28-20
SCALE: 1" = 80'
PROJECT NO.: 19131.100
FIGURE: FIG - 4

Z:\E\19131100 Kahn\Stormwater\Figures\Figure 4 - Testing Plan.dwg, 7/27/2020 8:41:34 AM, ependleton, 1:1

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

# PRELIMINARY WATER & WASTEWATER ENGINEERING REPORT

**For**

**Beacon Views**
**City of Beacon, New York**

**July 28, 2020**




Prepared By

Insite Engineering, Surveying & Landscape Architecture, P.C.
3 Garrett Place
Carmel, New York 10512

PAGE

**1.0 INTRODUCTION ..... 1**

**2.0 WATER AND WASTEWATER DESIGN FLOWS ..... 1**

**3.0 PROPOSED WATER CONNECTION TO CITY OF BEACON SYSTEM ..... 2**
3.1 System Characteristics ..... 2
3.2 Service Connection ..... 2

**4.0 PROPOSED WASTEWATER CONNECTIONS TO CITY OF BEACON SYSTEM ..... 2**

**APPENDICES**

Appendix A City of Beacon – Town of Fishkill Water Agreement

Appendix B HDR Memo Addressing Sewer Impacts

Appendix C Email correspondence from the Town of Fishkill

## 1.0 INTRODUCTION

The Beacon Views project is located on a parcel adjacent to Conklin Street and Hastings Drive. The subject property is in the City's RD-5 District and is identified as Tax Map No. 6055-03-331123. The applicant, Beacon Views, LLC wishes to construct nine buildings containing 40 townhomes.

The project is in the City of Beacon Water and Sewer area. Water for the development will be provided by an 8" diameter watermain connection to the existing watermain running through the site. The existing 12" diameter onsite watermain is the subject of a water agreement between the City of Beacon and Town of Fishkill (see Appendix A). It is proposed to install an 8" City of Beacon watermain extension to provide water service to the development.

Sewer will be provided with an 8" diameter gravity main through the site that will collect service connections from each unit. The 8" diameter gravity main will discharge to the existing city sewer system in Conklin Street. The City's Consultant HDR has performed an analysis of the existing sewer system and concluded the system can handle the project sewer flows (see Appendix B).

## 2.0 PROJECT DESIGN FLOWS AND ANTICIPATED FLOWS

Design maximum daily wastewater flows for the proposed project, Beacon Views, are based on the hydraulic loading rates given in the New York State Department of Environmental Conservation (NYSDEC) publication *Design Standards for Intermediate Sized Wastewater Treatment Works – 2014* (DEC 14). The design maximum daily water use is a conservative design flow on which the water infrastructure will be designed. This value does not represent the average daily flow which is expected to be substantially less.

The following table calculates the hydraulic loading rates and the design flow rates (gallons per day or gpd) for the proposed project.

**Table 1: Beacon Views Project Design Maximum Daily Flow Rate**

| Proposed Use | Hydraulic Loading Rate | Design Maximum Daily Flow (gpd) |
|---|---|---|
| 40 –Three Bedroom Townhome | 330 gpd/dwelling | 13,200 |
| | **Total** | **13,200** |

The anticipated design average daily flows for the project are expected to be significantly less than the design maximum daily design flow. The design maximum daily flows represent conservative flows to ensure that the proposed sewer infrastructure is designed with an ample factor of safety. The anticipated average daily flows are based on occupancy rates and measured data for water use. Statistical data (obtained from *Rutgers University, Center for Urban Policy Research*, *Residential Demographic Multipliers*, June 2006) for the average number of occupants in rental units (based on number of bedrooms) is 3.0. In order to provide a conservative estimate and average occupancy rate of 3.5 people per unit was used to calculate the expected number of residents anticipated for the project as shown in the table below. Data from the American Water Works Association (AWWA) shows that the average in home water use is 69 gpd per person. This number is reduced to 45 gpd per person when water saving fixtures are used, which is the case for this project.

**Table 2: Design Average Daily Flow**

| Proposed Use | Average Occupancy Rate | Total Anticipated Residents | Water Use Per Resident (gpd) | Water Use (gpd) |
|---|---|---|---|---|
| 40 –Three Bedroom Townhome | 3.5 people/unit | 140 | 45 | 6,300 |
| | | | **Total Anticipated Water Use (gpd)** | **6,300** |

As demonstrated above, through the use of water saving fixtures as required by current building code, a design maximum flow of 13,200 gpd is proposed for the project, while the design average daily flows are anticipated to be substantially less 6,300 gpd.

The peak hourly flow is calculated using a peaking factor that is based on the population of the subject project. A peaking factor of four will be used for the project based on Figure 1 from *Recommended Standards for Wastewater Facilities* (RRWW).

Peak Hourly Domestic Flow

13,200 gpd ÷ (24 hr/day) ÷ (60 min/hr) = 9.2 gallons per minute (gpm)

Peak Hourly Flow = 9.2 gpm x 4 = 36.8 gpm

Although the anticipated flows (design average daily flow) for the project are lower than the design maximum daily flows, the design maximum daily flows are used for the design of the system. This provides an additional factor of safety in the proposed design.

## 3.0 PROPOSED WATER CONNECTION TO THE CITY OF BEACON SYSTEM

### 3.1 System Characteristics

Based on review of existing system in vicinity of the subject project, there is an existing 12" diameter watermain located on the subject property. It is proposed to extend an 8" watermain from the existing 12" diameter watermain on the property to service the proposed development. The dynamics of the system in the project area are not yet known and will be addressed as the project advances.

### 3.2 Proposed Water Service Connection

The existing watermain which the project proposes to connect to is a City watermain used to transport water to the Town of Fishkill. Discussions with the City of Beacon Water and Sewer Department will be required regarding the potential connection to the existing watermain in this location. The project proposes one (1) 8" diameter DIP watermain extension from the existing watermain. The water service lines to the buildings will be sized for each of the residential building units.

Two (2) centrally located fire hydrants are proposed throughout the proposed development. All hydrants will be manufactured by Mueller as required by the City.

Restrained joint connections will be provided at all pipe bends. Upon completion of the water service installation pressure testing, disinfection, and flushing will be performed in accordance with AWWA standards.

RSWW recommends that the normal working pressure not be below 35 psi, and both the RSWW and the *American Water Works Association* (AWWA) M 31 recommend that a minimum of 20 psi be maintained at all points in the water distribution system during fire flows.

## 4.0 PROPOSED WASTEWATER CONNECTION TO THE CITY OF BEACON SYSTEM

Sanitary sewer connection for the Beacon Views development will be provided via a gravity sewer main through the development with a connection to the gravity sewer system located east of the project site, on Conklin Street. The proposed onsite gravity sewer main will be 8" PVC SDR 35. The sewer main will convey the wastewater flows from the project site to the existing sewer manhole on the corner of Conklin Street and De Soto Avenue.

Wastewater flow from each building will be conveyed by 4" diameter PVC SDR 35 sewer service lines to the proposed 8" main. The service connections will be installed with a minimum slope of ¼" per foot slope meeting the requirements of DEC14. All PVC pipe will contain rubber push on gaskets at pipe connections. Cleanouts will be provided on each sewer service connection just outside of each building. Upon installation of the sewer mains will be tested with low pressure air tests in conformance with ASTM F1417-92 and the sewer manholes shall be vacuum tested in conformance with ASTM 1244-02, per the notes on the project plans. As stated above all sewer service lines will be 4" PVC SDR 35 at a minimum of 2% slope.

# APPENDIX A

**City of Beacon – Town of Fishkill Water Agreement**

# AGREEMENT

THIS AGREEMENT, made this 13th day of November, 2001, among the CITY OF BEACON, New York, a municipal corporation with offices at One Municipal Plaza, Beacon, New York 12508 (hereinafter called the "City" and sometimes referred to as the "Seller"), the TOWN OF FISHKILL, a municipal corporation with offices at the Town Hall, 807 Route 52, Fishkill, New York 12524 (hereinafter called the "Town"), the Rombout Water District, a special improvement district established by the Town, also with offices at the Town Hall, 401 Route 52, Fishkill, New York 12524 (hereinafter called the "District"), the Town and the District being sometimes referred to herein collectively as "the Purchasers".

**WITNESSETH:**

**WHEREAS,** the City has a water supply and distribution system that can accommodate a portion of the water requirements of the Town and the District; and

**WHEREAS,** the Town and the District desire to purchase part of the existing and future unused capacity of the City water supply under a program that will benefit the parties; and

**WHEREAS,** the implementation of this Agreement will serve the regional water needs of two growing municipalities through economies of scale; and

**WHEREAS,** the City agrees to sell water to the Purchasers, and the Purchasers agree to purchase water from the City under the following terms and conditions:

1. **Area To Be Serviced.** The service area, which shall be the subject of this contract, will be the (*current*) franchise area of the Hudson View Water Works Transportation Corporation as currently defined within Water Supply Permit No. 8463, dated November 21, 1991.

2. **Term of the Agreement.**

(a) The duration of this Agreement shall be for a period of forty (40) years

from the effective date as hereafter defined.

(b) The Purchasers shall have a right to terminate this Agreement for any reason after twenty (20) years or more elapse from the effective date, provided that the Purchasers have communicated a written notice of such intention to terminate to the City not less than one (1) year prior to the stated date of termination. Notice of such termination must be served on the City Administrator or on the City Mayor either personally or by registered mail or certified mail. Such termination shall be without penalty to the Purchasers.

(c) In the event of termination notice by the Purchaser, the City shall have the right to continuation of this Agreement in the event the City promptly offers to match the cost of the Purchaser's acquisition of an alternative source of supply from another source.

**3. Maximum Quantity.** Purchaser shall be limited to a maximum daily usage of 500,000 gallons (6,100,000 cf/quarter/annually).

**4. Minimum Percentage Consumption.** No later than the fifth (5th) anniversary of the effective date of this agreement, the Purchaser will purchase a quantity of water amounting to no less than fifty (50%) of the Rombout Water District's total customer consumption.

5. **Minimum Quantity.** Between the effective date of this agreement and the end of the calendar year which includes the third (3rd) anniversary of the effective date, Purchaser shall purchase from the City a minimum of 60,000 gallons per day (which is the equivalent of 731,000 cf/quarter/annually). Effective for the calendar year which follows the third (3rd) anniversary of the effective date, the minimum quantity to be purchased shall be adjusted annually, but shall never fall below 60,000 gallons per day. Each annual adjustment to the minimum quantity required to be purchased shall be based upon the Purchaser's average monthly metered usage, measured at the master meter hereinafter described in paragraph "16", for the twelve (12) month period of August 31 through September 1 (the "measurement period") preceding the calendar year for which the adjustment shall be

made, so as to allow the Purchaser the opportunity to budget for each calendar year in advance. The adjusted minimum quantity required to be purchased, for each succeeding calendar year, shall be sixty-five (65%) of the averaged monthly metered usage during the preceding twelve (12) month measurement period.

6. **Engineering Specifications.**

(a) All plans, design and specifications for new transmission and connection lines to be installed for the Rombout Water District, or any other new transmission lines and connections shall be subject to review and comment of the City and the City's engineering consultants (but such right of review shall extend only to those lines which are direct connections to City mains).

(b) the Purchasers agree that the design and construction of the improvements related to connection of the Rombout Water District to the City system shall be compatible with the City's existing water transmission lines. All such plans, design and specifications as required herein shall be made available to the City's engineering consultants routinely throughout the design phase of such improvements.

(c) The City and the Purchasers shall at all reasonable times, upon prior notice, have reciprocal rights to inspect the other party's water supply facilities and transmissions lines.

7. **Permits**. The Purchaser's shall be responsible, at their sole expense, for obtaining all requisite permits or approvals from any county or state agency pertaining to the subject matter of this Agreement. (Except that the Purchasers shall not be responsible for obtaining permits directly related to the City's operation of its water supply system, or improvements/modifications to the City's system mandated by county, state, or federal agencies.) Copies of applications for permits or approvals from such agencies shall be provided to the City simultaneous to filing with the pertinent county or state agency. The City shall on reasonable notice of the Purchaser, promptly make available any information or documents necessary to aid the Purchaser in obtaining regulatory agency approvals.

8. **Quality**. The City covenants that as a condition to the performance of this Agreement by the Purchasers, the City shall produce water that conforms in all respects to the requirements of Chapter I, the New York State Sanitary Code, Sub-part 5-1 as amended; the Dutchess County Sanitary Code and the requirements of the Dutchess County Department of Health. The City covenants that at all times a chlorine residual of not less than 0.2 mg./l will be maintained at the point of connection of the Purchaser's meter and conveyance facilities to be determined by the City Engineer and the Town Engineer.

9. **Purchase Price**. The Town of Fishkill proposes the following price terms for the purchase of water:

(a) 1.25 times the non-commercial in-city customer rate (currently ~~$2.875/ccf~~ 2.67 / ccf), with that rate to apply until Town usage reaches 60,000 gallons per day (the equivalent of 722,000 cf/quarter/annually);

(b) A rate of 1.2 times the non-commercial in-city customer rate for all usage once the Town exceeds 60,000 gallons per day;

(c) A rate of 1.1 times the non-commercial in-city rate for all usage once the Town exceeds 120,000 gallons per day (the equivalent of 1.4 million cf/quarter/annually);

(d) A rate of 1.0 times the non-commercial in-city rate for all usage when usage reaches the threshold of 180,000 gallons per day (the equivalent of 2.1 million cf/quarter/annually);

(e) Upon reaching the 240,000 gallons per day threshold, the rate for all usage shall fall to 0.90 times the non-commercial in-City rate, but in no event shall the rate paid by the purchasers fall below, or be less than, the commercial user rate charged by the City.

The non-commercial in-city rate in effect as of the making of this Agreement shall not be upwardly adjusted by the City, insofar as that rate affects the purchase prices set forth in this Agreement,

to reflect any future debt service or capital expenditures incurred by the City under the following circumstances: (a) for the design and/or making of capital improvements to the City's water supply system to make additional capacity available to proposed future user(s), other than the Purchasers, pursuant to a water use or purchase agreements, and (b) such user(s) default in obligations owed to the City under such water use or purchase agreements which induced the City to undertake such design and capital improvement expenditures.

**10. No Additional Charges.** All costs sustained by the City under this contract are included in the purchase price stated herein. There shall be no additional costs charged to the Purchasers.

**11. Access to Meter.** The Purchaser and the City shall have shared access to the meters described in paragraph "13" through the respective duly authorized representatives of each, in order to monitor the flow of water and the accuracy of the meters.

**12. Water Conservation.**

(a) The Parties acknowledge their obligation to promote water conservation measures each in their own respective jurisdictions. This commitment to conservation coincides with the policy imperatives contained in the Environmental Conservation Law that all agencies must conduct their affairs with an awareness that they are stewards of the air, water and land and that they have an obligation to protect the environment for the use and enjoyment of future generations.

(b) On and after the date of this Agreement, the Purchasers shall require all users who connect to any of the Purchasers' distribution systems to obtain a water line connection permit from the Purchasers prior to connection, such permit to be granted upon such conditions as the Town and the District may from time to time establish. The Purchasers shall not issue such permit if it would cause the total water volume entering the Purchasers' distribution system from the City distribution system to exceed the Purchaser's maximum reserved capacity established in this Agreement.

(c) The specific scope and methods of water conservation are left to each Party to be satisfied as dictated by local authority. This Agreement shall not be interpreted to require any specific conservation measures in order to achieve the goal of water conservation, except where the City has declared a water emergency as set forth below.

(d) In the event that the lawful authority of the City declares a water shortage or emergency and imposes water usage restrictions on City water users, it is expressly prohibited from limiting the supply of public water delivered to the Purchasers during such period except in accordance with the following procedure in paragraph "13".

**13. Water Emergency Procedure.**

(a) Where the City has declared a water emergency and has imposed mandatory supply and usage reductions on its residents, the City shall serve official notice on the Town Supervisor of the Town of Fishkill of said emergency declaration, citing specifically the reasons for mandatory conservation measures, the nature of restrictions imposed and the official date of commencement of such restrictions. The Purchasers shall then decide whether to impose the same, or similar, water restrictions on Town residents served pursuant to this Agreement, and, in addition, shall specify such conservation measures as are practicable, and shall otherwise regulate water use within the Town in a manner consistent with applicable Town conservation regulations.

(b) In the event that water consumption in the Town and the District falls below the minimum usage established in paragraph "3" of this Agreement, due to a formal declaration of water emergency by the City and Town Board, the minimum consumption requirements in paragraph "3" shall be suspended until such water emergency order is rescinded by the City and Town.

(c) In addition, the Parties acknowledge that water supply shortages may cause decreased pressure in the water supplied to Purchasers, due to pressure reductions system-wide. Such system-wide decreases in water pressure shall not constitute a breach of this Agreement. However,

actual mechanical reductions in the supply by the City are expressly prohibited under the terms of this Agreement.

**14. Reserved Capacity.**

(a) The Purchasers represent that the estimated total demand upon the Rombout Water District, as of full build out of the properties located therein, is 600,000 gallons per day, and that an entity known as AVR Realty is actively pursuing build-out of nearly all of the remaining unimproved property of the district pursuant to rezoning and site development plan approvals previously granted for the "Waterfront at Fishkill" project.

(b) Under paragraph "4" of this agreement, the Purchasers are required to purchase, as of the fifth ($5^{th}$) anniversary of the effective date, fifty (50%) percent of the total customer consumption of the Rombout Water District from the City.

(c) Consequently, upon full build-out of the properties of the Rombout Water District, the Purchasers may possess an obligation to purchase an estimated sum of 300,000 gallons per day under this agreement, i.e., 50% of 600,000 gallons per day.

(d) Under paragraph "5" of this agreement, the Purchasers have committed to the eventual phased escalation of an initial 60,000 gallons per day minimum purchase obligation, i.e., to make minimum purchases of 65% of the monthly usage during a 12 month measurement period.

(e) The Purchasers are concerned with assuring the City's maintenance of the ability to provide the water supply which the Purchasers become committed to purchase hereunder, and that concern is amplified by the Purchasers' need to construct, at an estimated cost in excess of $500,000, a transmission pipeline to connect to the City's water supply system.

(f) The City is concerned with assuming an indefinite obligation to hold in reserve its finite current surplus capacity, represented by the City to currently amount to approximately 500,000 gallons per day, for the Purchasers under this agreement which has a maximum duration of 40

years, given the potential of demands upon that capacity arising from future development or changes of use of properties situated in the City.

(g) To reconcile these concerns, and in lieu of City's committing over the full duration of this agreement to reservation of 500,000 gallons per day for the Purchasers, the parties agree as follows.

(h) The parties shall regularly keep each other advised of significant actual or potential future demands for customer use affecting the remaining capacity of the City's water supply system. No later than September 1 of each year of this agreement's duration, the parties shall meet to disclose, share and review any available information or projections of increased water usage of their respective systems, at which time the City shall report its actual remaining excess capacity.

(i) For the period of three (3) years following the effective date, the Purchasers shall be entitled to an unconditional 500,000 gallons per day of capacity reserved by the City for their use. Thereafter, and for the duration of this agreement, the Purchasers shall have a conditional reserved capacity of 500,000 per day, in that

(i) the City shall retain water supply capacity sufficient to meet 500,000 gallons per day usage by the Purchasers upon demand, until and unless the City experiences demand from new or expanded use, or change of use, of city properties which would result in the need to make use of any of the Purchasers' remaining reserved capacity;

(ii) in that event, the City shall upon written notice of not less than sixty (60) days give the Purchasers the right to commit to make actual use, within one (1) year, of the amount of the Purchasers' reserved capacity which would need to be taken back by the City to satisfy the new demand by in-city properties; the Purchasers shall have the option, exercisable within 60 days of receipt of the City's notice, to commit to make such actual use within one (1) year, or to consent to the City's taking back of that portion of the Town's reserved, but unused capacity;

(iii) in the event that the Purchasers elect to commit to use of the subject amount of reserved capacity, and the City is consequently required to make capital improvements to its system specifically to establish added capacity to meet the new in-city demand of which notice was given, then the Purchasers at their option shall at the close of the (1) year period either "take or pay" for subject amount of water, or defray and reimburse as liquidated damages the actual unit costs of the City in making the capital improvements necessary to service the new in-city demand of which notice was given; upon the exercise of either payment option, the subject amount of capacity shall be deemed unconditionally reserved to the Purchasers by the City for the duration of the agreement;

(iv) in the event, and to the extent, that the City takes back any of the Purchasers' reserved capacity under the above circumstances, the City shall be obligated, within one (1) year of written notice by the Purchasers to make any capital improvements to its water supply system necessary to meet the Purchasers' actual subsequent demand up to 500,000 gallons per day, and the actual costs of such improvements shall be not be surcharged against the Purchasers, but shall instead be recaptured per customary factoring into the City's generally prevailing water rates; in the event that the Purchasers make demand, and to the extent that the City expends to make the capital improvements necessary to meet the demand, the Purchasers shall at the end of one (1) year "take or pay" for the capacity demanded, or at the Purchasers' option, shall defray and reimburse the City as liquidated damages the actual unit costs of the City in making the capital improvements necessary to satisfy the Purchasers' demand; upon the exercise of either payment option, the subject amount of capacity shall be deemed unconditionally reserved to the Purchasers by the City for the duration of the agreement;

**15. Third-Party Use of Purchasers' Transmission Line.**

(a) Purchasers will be constructing a transmission line, at their expense, to reach the water supply system of the City, and a significant portion of that line shall be located in the City. After completion of the transmission line, Purchasers shall transfer

ownership of the portion of the line between Purchasers' meter pit and its connection point to the City's water supply system (the "Transferred Line") to the City.

(b) The Transferred Line will pass through or adjacent to City properties which may in the future connect to the City's water supply system through the Transferred Line. Purchasers shall be entitled to recover a portion of their capital expenditure on the construction of the Transferred Line from properties connecting to that line. No applicant for connection shall be permitted to connect to the Transferred Line by the City of Beacon unless the applicant has paid a one time capital cost reduction fee (the "Connection Fee") to Purchasers. The Connection Fee for each such property connection shall be calculated as set forth in subparagraph (c).

(c) Each Connection Fee shall be calculated as follows:

(i) each City property to be connected to the Transferred Line shall be assigned the number of benefit units prescribed by the Benefit Unit Formulation Chart annexed hereto as Exhibit "A".

(ii) the Connection Fee per Benefit Unit shall be derived by dividing the total cost of the construction of the Transferred Line (the "Total Cost") by 11,133, the total number of benefit units assigned in the District as of the date of this Agreement. (Total Cost ÷ 11,133 = Connection Fee per Benefit Unit)

(iii) Total Cost is calculated by determining the actual cost of construction of the Transferred Line as of the date of completion of construction and adding to it nine percent (9%) for professional services. (Total Cost = cost of construction plus 9%)

(iv) An applicant's Connection Fee shall be the number of benefits units assigned to the applicant's property multiplied by the Connection Fee per Benefit Unit. (Connection Fee = Benefit Units x Connection Fee per Benefit Unit)

(v) An applicant's Connection Fee shall be increased by eight percent (8%) for each year that has passed at the time of applicant's payment of the Connection Fee since the date of completion of the Transferred Line.

(d) City property owners connected to the Transferred Line shall be and shall remain the exclusive customers of the City of Beacon for the purchase of water.

**16. Meters.**

(a) All water supplied to the Purchasers by the City shall be metered. Such meters shall be installed at no cost to the City, and shall be of a type and arrangement which are acceptable to the City and the Purchasers. The Purchasers shall cause the meters used for billing purposes under this Agreement to be maintained, calibrated and certified in accordance with the manufacturer's recommended schedule, but not less than one time per year. Copies of the certification shall be filed with the City Administrator.

(b) In the event that any of the meters are found to read incorrectly or are out of service, the City will bill the Town for each day the meter is not functioning at the average daily consumption rate as determined by the records for the previous four (4) quarters of water actually consumed by the Purchasers. If four (4) quarters of data is not available, the calculation will employ all of the data that is available. The charge shall be added to the quarterly billing to the Purchasers.

(c) The point of delivery of water by the City shall be at or about a meter pit generally located in close proximity to the corporate boundary line separating the parties, and to be further determined by the parties.

**17. Representations and Warranties by the City.** The City hereby represents and warrants as follows:

(a) The City facility, including, without limitation, its pipes, well mechanisms and pumping stations, have the mechanical capacity and shall be maintained adequately so

that they draw and transmit the water purchased under this Agreement and the design capacity is sufficient to service the reserved capacity to the Purchasers as provided herein; the facility is in compliance with all applicable laws, rules and regulations of any state, federal or municipal agency or body having jurisdiction, and all permits, licenses and approvals issued pursuant to same.

(b) The City shall maintain and operate its supply facility and distribution system in full compliance with all applicable laws, rules and regulations of any state, federal or municipal agency or body having jurisdiction and all permits, licenses and approvals issued pursuant to same. The City shall provide the Purchasers with notice of any unusual occurrences, system malfunctions or improvements which may affect normal service.

**18. Representations and Warranties by the Purchasers.**

(a) Purchasers shall, through the term of this Agreement, maintain a permit system for any users who connect to any distribution system serviced under this Agreement; and no user shall be allowed to connect to the system without first obtaining a water line connection permit from the Town. The Town represents and warrants that it will adequately police the system so as to prevent unlawful connection to the distribution system serviced under this Agreement.

(b) The Purchasers shall maintain and operate their respective distribution systems in full compliance with all applicable laws, rules and regulations of any state, federal or municipal agency or body having jurisdiction and all permits, licenses and approvals issued pursuant to same. The Purchasers shall provide the City with notice of any unusual occurrences, system malfunctions or improvements which may affect demand for water supply under this Agreement.

(c) The Purchasers covenant that all reasonable steps will be taken to keep their distribution systems in good repair, so as to prevent substantial water loss during the term of this Agreement.

**19. Indemnification.**

(a) The Purchasers shall indemnify, defend and hold harmless the City, its agents and employees, from and against all losses, damages, suits, claims, judgements and decrees, including reasonable attorneys' fees and court costs, resulting from breach by, and any material inaccuracy of the representations of the Purchasers set forth herein.

(b) The City shall indemnify, defend and hold harmless the Purchasers, its agents and employees, from and against all losses, costs, damages, suits, claims, judgements, decrees and reasonable attorney's fees and litigation costs, resulting from breach by the City of any material provision of this Agreement.

**20. Compliance with Laws.**

(a) The Parties shall comply with all applicable laws, rules, and regulations of any county, state or federal agency with respect to the water pipes and facilities within their municipal boundaries.

(b) Each party shall exercise due diligence to prosecute, or seek prosecution for the violation of such laws, rules and regulations against persons or entities who damage the distribution system or facility within such parties' boundaries or who endanger any portion of the water supply as transmitted through the respective distribution system belonging to the Parties.

(c) In the event that the City becomes aware that a maximum contaminant level is exceeded under the regulations contained in Chapter I of the New York State Sanitary Code Sub-part 5-1, Section 5-1.52 Tables 1 through 7 as amended, the City shall immediately notify the Town Supervisor about the source and nature of the contaminant. The City covenants that it will transmit such notice by telephone in advance of, or concurrently with, the transmission of such notice to the Department of Health in accord with the notification requirements indicated in that same Sub-part, Section 5-1.52 Table 13.

**21. Waiver of Right of Termination.** Except as expressly provided herein to the contrary or by law, if at any time during the term of this Agreement the City or Purchasers materially breach this Agreement, neither party may terminate this Agreement and each party expressly waives any right of termination.

**22. Municipal Approvals.** This Agreement has been agreed to and approved by formal resolutions of the Town Board of the Town of Fishkill, the Board of Commissioners of the Rombout Water District and the Common Council of the City of Beacon, New York.

**23. Assignability.** This Agreement may not be assigned by a party without the express written consent by the other parties hereto.

**24. Severability.** Should any provision of this Agreement be found by a court of competent jurisdiction to be for any reason whatsoever, invalid, void or unenforceable, it shall be deemed severed from the balance of this Agreement and the balance of the Agreement shall remain in full force and effect.

**25. Waiver.** The Waiver by either party of the breach of any one or more of the covenants of this Agreement is not a waiver of any other provision hereof or of a subsequent breach of the same covenant or covenants.

**26. No Oral Modification.** This document contains the entire Agreement among the parties and may not be changed, modified or in any way amended, except by agreement in writing.

**27. No Implication of Joint Venture.** The Parties agree that the execution, delivery and performance of this Agreement does not constitute a joint venture, partnership or other joint association of the Parties, and that except as limited by this Agreement, the City has sole control of the operation of the wells and distribution system in the City.

**28. Notices.** All notices hereunder shall be in writing sent by certified mail, return receipt requested, or by personal delivery to the address of the respective parties set forth above and

hereafter designated by such party in the manner required for the giving of notice hereunder.

**29. Effective Date.** The date on which all transmission facilities and related improvements constructed by the purchasers to connect the Rombout Water District to the City's water system are approved for usage by all relevant state or local regulatory agencies.

**IN WITNESS WHEREOF,** the undersigned have hereunto subscribed their names, the date and year set forth above.

**TOWN OF FISHKILL**

By: _____
HON. JOAN A. PAGONES
Supervisor

**ROMBOUT WATER DISTRICT**

By: _____
HON. JOAN A. PAGONES
Chairman of the Board of Commissioners

**CITY OF BEACON**

By: _____
HON. CLARA LOU GOULD
Mayor

By: _____
JOSEPH BRAUN
City Administrator

STATE OF NEW YORK )
County of Dutchess )ss:

On November 7, 2001, before me personally came **JOAN A. PAGONES**, to be known, who, being by me duly sworn, did depose and says that she resides in the Town of Fishkill, County of Dutchess, State of New York and she is the Supervisor of the Town of Fishkill, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

RONALD C. BLASS, JR.
Notary Public, State of New York
No. 4954821
Qualified in Dutchess County
Commission Expires August 21, ~~19~~ 2005

NOTARY PUBLIC

STATE OF NEW YORK )
County of Dutchess )ss:

On November 13, 2001, before me personally came **CLARA LOU GOULD**, to be known, who, being by me duly sworn, did depose and says that he resides in the City of Beacon, Dutchess County, State of New York and she is the Mayor of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

NOTARY PUBLIC

STATE OF NEW YORK )
County of Dutchess )ss:

On November 13, 2001, before me personally came **JOSEPH BRAUN**, to be known, who, being by me duly sworn, did depose and says that he resides in the Town of Marlborough, Dutchess County, State of New York and he is the City Administrator of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

NOTARY PUBLIC

K:\WPDOCS\Fishkill (0060)\Rombout Water District (330)\Beacon (525)\08.01.01 Beacon water agreement amended.wpd

RIDER TO AGREEMENT BETWEEN CITY OF BEACON ("CITY") AND TOWN OF FISHKILL ("TOWN") AND ROMBOUT WATER DISTRICT ("DISTRICT")

WHEREAS, on even date herewith, the parties entered into an agreement (the "main agreement") for sale of water by the City to the Town and the District; and

WHEREAS, the effective date of the main agreement is the completion of construction by the District of certain permanent subsurface transmission facilities connecting the District's facilities to the water supply facilities of the City (see paragraph "20" of the main agreement); and

WHEREAS, during the formulation of the main agreement, the District has experienced a water supply shortage which requires redress immediately, and in advance of the District's undertaking of construction of the transmission facilities contemplated within the main agreement; and

WHEREAS, by this rider to the main agreement, the parties undertake to arrange a source of water supply to the District's facilities by the City in advance of construction of the transmission facilities contemplated in the main agreement, and the parties do so by this rider to avoid triggering the effective date of all terms of the main agreement;

NOW, IT IS HEREBY AGREED, by and between the parties for mutual and valuable consideration that:

1. The City agrees to sell water to the District on an as needed basis, effective the date of this rider, up to the maximum sum of 500,000 gallons per day at the purchase prices set forth in paragraph "9" of the main agreement for transmission by the District by means of temporary facilities over or through the lands and improvements of the New York State Bridge Authority near with the easterly terminus to the Beacon-Newburgh Bridge, and the means of connection of the Beacon water supply system to the District by this means, and the metering of the District's usage by this means, shall be subject to the advance approval of the City, said approval not to be unreasonably withheld.

2. The Town and the District shall exercise good faith and due diligence to construct and to complete the permanent subsurface facilities contemplated within the main agreement, at which time that main agreement shall become effective, and upon that event the District shall discontinue and hold in reserve until necessary due to emergency at some future time, if at all, the transmission of water purchased from the City over and through the property of the Bridge Authority. Said future

transmission over the property of the Bridge Authority shall be subject to the advance consent of the City, said consent not to be unreasonably witheld.

3. In the event of future use of the transmission of water over or through the property of the Bridge Authority after the effective date of the main agreement, all terms of the main agreement shall govern.

4. The terms of this rider shall have a duration commencing with its execution by the parties, and ceasing as of the expiration or earlier termination of the main agreement.

**IN WITNESS WHEREOF**, the undersigned have hereunto subscribed their names, the date and year set forth above.

TOWN OF FISHKILL

By: _____
HON. JOAN A. PAGONES
Supervisor

ROMBOUT WATER DISTRICT

By: _____
HON. JOAN A. PAGONES
Chairman, Board of Commissioners

CITY OF BEACON

By: _____
HON. CLARA LOU GOULD
Mayor

By: _____
JOSEPH BRAUN
City Administrator

STATE OF NEW YORK )
) ss.:
COUNTY OF DUTCHESS )

On November 7, 2001 before me personally came **JOAN A. PAGONES**, to me known, who, being by me duly sworn, did depose and says that she resides in the Town of Fishkill, County of Dutchess, State of New York and she is the Supervisor of the Town of Fishkill, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that ait was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

RONALD C. BLASS, JR.
Notary Public, State of New York
No. 4954821
Qualified in Dutchess County
Commission Expires August 21, ~~1920~~ 2005

_____
NOTARY PUBLIC

STATE OF NEW YORK )
) ss.:
COUNTY OF DUTCHESS )

On November 13, 2001, before me personally came **CLARA LOU GOULD**, to me known, who, being by me duly sworn, did depose and says that she resides in the City of Beacon, Dutchess County, State of New York and she is the Mayor of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

_____
NOTARY PUBLIC

STATE OF NEW YORK )
) ss.:
COUNTY OF DUTCHESS )

On November 13, 2001, before me personally came **JOSEPH BRAUN**, to me known, who, being by me duly sworn, did depose and says that he resides in the Town of Marlborough, Dutchess County, State of New York and he is the City Administrator of the City of Beacon, a municipal corporation and described in and which executed, the foregoing instrument; deponent knows the seal of said corporation; the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of said corporation; deponent signed deponent's name thereto by like order.

GERARD J. PISANELLI
NOTARY PUBLIC, State of New York
Reg. No. 4517013
Qualified in Dutchess County
Commission Expires Sept. 30, ~~19~~ 2002

NOTARY PUBLIC

K:\WPDOCS\Fishkill (0060)\Rombout Water District (330)\Beacon (525)\Rider to Beacon contract-latest version.wpd

# APPENDIX B

**HDR Memo Addressing Sewer Impacts**

# Memo

| | |
|---|---|
| Date: | Monday, July 13, 2020 |
| To: | Anthony Ruggiero, Ed Balicki, Nick Ward Willis, John Russo |
| From: | Nitin Katiyar, PE<br>Yingying Wu |
| Subject: | Hydraulic Impact Analyses of Proposed Development with Sewer Connection at Beacon Views ( Conklin St at De Soto Ave) |

Henningson, Durham & Richardson Architecture and Engineering, PC (HDR) evaluated the impact of the development proposed for connection at Beacon Views development on the hydraulic capacity of the City of Beacon's (City) sanitary sewer system during critical conditions. This memorandum presents a high-level summary of the results and conclusions of that analysis.

**Methodology**

HDR applied the City's InfoWorks CS sanitary sewer system model to evaluate the impact of the development proposed for connection at Conklin St at De Soto Ave on sewer system hydraulics from the point of connection to the Sewage Treatment Plant (STP). This development represent an additional average daily flow of 13,200 gpd, or additional peak hourly flow of 56,760 gpd using a peaking factor of 4.3 (in accordance with the Ten State Standards.) In order to analyze the impact of this additional flow on the sewer system hydraulics, HDR expanded the existing model, which previously extended only to Townsend St, to extend to the point of connection at Conklin St at De Soto Ave. For purposes of this analysis, and to be consistent with previous similar analyses, HDR applied conditions associated with a large, 5.6-inch rainfall event from September 27, 2011 (a one-in-17-year storm event). These analyses also assume that previously approved developments at 25 Townsend Ave and 511 Fishkill Ave would also be in place.

The results of the analysis indicate that no sanitary sewer overflows (SSOs) are expected to occur anywhere in the sewer system from the proposed connection point through to the STP, with or without the proposed development. Table 1 summarizes the calculated increases in peak water levels at locations from the point of connection to the STP. In segments where the sewer pipe is 8 inches (Hanna Street to Conklin St), the proposed development is expected to increase peak water levels as much as 1.27 ft.

**Conclusions**

1. The additional flow from development proposed for connection to Beacon's sewer system at Beacon Views development is not expected to cause SSOs, even during extreme conditions associated with a large (5.6-inch, 1-in-17-year) storm.

2. During extreme wet-weather conditions, the proposed developments are expected to increase hydraulic grade lines by as much as 1.27 ft. along Fishkill Ave near Delevan

St. Table 1 provides the differences in hydraulic grade lines expected at several locations from the point of connection to the STP.

**Table 1.**
**Model Results for Peak Water Levels, With and Without Proposed Development, During Critical Conditions (5.6-inch Storm)**

| Location | Manhole ID | Peak Water Level (ft) | | |
|---|---|---|---|---|
| | | Future Baseline | Future With Proposed Development | Difference |
| Fishkill Ave at Townsend | 7380 | 172.48 | 172.53 | 0.05 |
| Fishkill Ave at Delevan | 7054 | 149.87 | 151.14 | 1.27 |
| Herbert and Main St | 3214 | 119.18 | 119.25 | 0.08 |
| S. Interceptor north of Wolcott | 8277 | 74.35 | 74.41 | 0.06 |
| S. Interceptor near Heaney | 8125 | 61.52 | 61.62 | 0.10 |
| S. Interceptor near Kristy | 8325 | 51.55 | 51.61 | 0.06 |
| S. Interceptor near South Ave | 8809 | 27.88 | 28.00 | 0.12 |
| Sewage Treatment Plant | STP_Junction | 13.02 | 13.03 | 0.01 |

Please do not hesitate to contact us with any questions that you may have regarding this analysis.

# APPENDIX C

**Email Correspondence from the Town of Fishkill**

**Evan Pendleton**

**From:** Sharon Mitchell <smitchell@fishkill-ny.gov>
**Sent:** Friday, July 24, 2020 2:34 PM
**To:** Jeff Contelmo
**Cc:** Gregory Kamedulski
**Subject:** RE: Town of Fishkill/City of Beacon

Jeff,

I have been able to ascertain that the total cost of construction only for the transferred line is Four Hundred Twenty Thousand Eight Hundred Ninety Three dollars ($420,893). These expenditures were incurred in 2002.

Please let me know if you need any additional information. My apologies for the delay in obtaining a confirmation of the amount for you.


Sharon A Mitchell
Town of Fishkill
Comptroller
845-831-7800 ext. 3331 | smitchell@fishkill-ny.gov
807 Route 52, Fishkill, NY 12524
www.fishkill-ny.gov


*Office hours: Monday - Friday: 8:00am - 4:30pm*

---

**From:** Jeff Contelmo [mailto:JContelmo@insite-eng.com]
**Sent:** Friday, July 24, 2020 2:10 PM
**To:** Sharon Mitchell <smitchell@fishkill-ny.gov>
**Cc:** Gregory Kamedulski <gkamedulski@gmail.com>
**Subject:** RE: Town of Fishkill/City of Beacon

Sharon,
Is there any updates you can provide?
Thanks,
Jeff


**Jeffrey J. Contelmo, PE**
Senior Principal Engineer

***INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.***
3 Garrett Place
Carmel, New York 10512
(845) 225-9690 x114
(845) 225-9717 Fax
www.insite-eng.com

*This email is intended for the sole use of the addressee(s). Any attached file(s) have been issued for convenience only and at the specific request of the client or their agent. It is specifically understood that any attached file(s) are not certified by Insite Engineering, Surveying, and Landscape Architecture, P.C. (Insite). No use or reproduction of the information provided is permitted without the written consent of Insite.*

---

**From:** Sharon Mitchell <smitchell@fishkill-ny.gov>
**Sent:** Friday, July 17, 2020 4:18 PM
**To:** Jeff Contelmo <JContelmo@insite-eng.com>
**Subject:** Town of Fishkill/City of Beacon

Jeff,

I just wanted to touch base with you, I had promised to reach out by the end of the week. We have been reviewing the Town files and I believe that we have found the cost of construction for the transmission to connect to the City of Beacon's water supply to the Town's Rombout Water District. (Beacon High school was completed before the transmission line was completed).

Before I give you the information, I just want to confirm with the Town's engineer and water/sewer operator.

Thank you for your patience. Have a great weekend!

## Sharon A Mitchell

Town of Fishkill
Comptroller
845-831-7800 ext. 3331 | smitchell@fishkill-ny.gov
807 Route 52, Fishkill, NY 12524
www.fishkill-ny.gov

*Office hours: Monday - Friday: 8:00am - 4:30pm*

INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.

July 28, 2020

City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

RE: Beacon Views Site Plan and Conservation Subdivision
Conklin Street
Beacon, New York
Tax Parcel ID: 6055-03-331123

Dear Chairman Gunn and Members of the Board:

Enclosed please find the following documents in support of the subject application:

- Revised Site Plan Set and Architectural Plans (consisting of 20 sheets).
- Stormwater Pollution Prevention Plan, revised July 28, 2020.
- Preliminary Water and Wastewater Engineering Report, dated July 28, 2020.
- Letter in response to the June 26, 2020 letter from Greenplan, Inc.
- NYSDEC Mapper.
- Sustainability Report, provided by Aryeh Seigel, Architect, dated July 28, 2020.

In response to the comments provided in a letter from John Clarke Planning and Design, dated July 9, 2020, we offer the following responses:

1. The Drawing List on Sheet CS-1 has been revised to include the architectural plans, which have been combined into a single set.

2. The lot area square footage on EX-1 and SP-1 have been reconciled. The note under Unit Density Calculations has been revised to cite the new code.

3. The central landscape island behind Units 7 to 13, has been revised to a useable green.

4. The elevation drawings have been revised as requested.

5. The potential additional wetland disturbance that could be created by the alternate grading plan at Conklin Street in the event it must be used as the emergency access point has been called out in the plan and the additional wetland mitigation area has been preemptively included in the plans.

6. The following updates are provided for the items requested:

   a. The project attorney is discussing the applicant's rights within the easement with the City attorney.

   b. The plans have been forwarded to the Fire Department Chief, and we are awaiting comments.

c. The wetland consultant is making progress in assembling materials for coverage under the nationwide USACE permit. Permit documents will be provided with a future submission when available.

In response to the comments provided in a letter from Lanc & Tully Engineering and Surveying, P.C., dated May 11, 2020, we offer the following responses:

General Comments

1. The Site Access Notes have been revised to describe the contingency for the alternative emergency access point at Conklin Street in the event that the 25 Townsend Street access was unavailable, and the proposed road through Highland Meadows property were to function as the primary access to the site.
2. An Off-Site Improvements Plan has been added on Drawing SP-5.
3. The wetland mitigation area is shown both on the subject property and the neighboring parcel within the easement area. The project attorney is discussing the applicant's rights within the easement with the City attorney.
4. The plans have been submitted to the Fire Department Chief, and we are awaiting comment.
5. The architecture plan set has been incorporated to the site plan set and the sheet list on Sheet CS-1 has been revised as requested.
6. The wetland consultant is making progress in seeking coverage under the nationwide USACE permit. Permit documents will be provided with a future submission when available.
7. It is acknowledged that water and sewer system improvements will require review by the DCDOH, and the Planning Board and City Engineer will be copied on all correspondence relating to same.

Water & Sewer Report Comments:

1. The subject report has been updated to indicate watermain sizes.
2. The average population per household in the City of Beacon is reported at 2.6. The average population per unit has been increased to 3.5 in the subject report.
3. The subject report has been updated to indicate watermain sizes.
4. It is understood that the report will need to be updated once the flow testing is completed and system dynamics are determined.
5. The ongoing discussions with the Town of Fishkill are specific to the calculation of the Connection Fee as establish in the Beacon / Fishkill agreement attached in Appendix A.
6. It is understood that the report will need to be updated once the flow testing is completed and system dynamics are determined.
7. It is understood that the report will need to be updated once the flow testing is completed and system dynamics are determined.
8. The City's Consultant (HDR Engineers) has completed their analysis and concluded the project will not significantly impact the City sewer system (See Appendix B).

Threatened & Endangered Species Report Comments:

1. The NYSDEC Mapper has been included with this submission.

Preliminary Subdivision Plat:

1. The final plat will include bearings and distances for the proposed property lines.
2. Written descriptions will be provided with the final plat submission.

Layout & Landscape Plan:

1. The Red Maple has been removed from this area.

Grading and Drainage Plan:

1. The project attorney is corresponding with the City attorney to finalize the legal mechanism by which these rights can be guaranteed to the City.
2. Additional top and bottom of wall elevations have been provided along all retaining walls.

Utilities Plan:

1. The lowest sewerable elevation for each proposed dwelling unit has been indicated on Drawing SP-2.2.
2. Proposed sewer manhole SMH 5B has been relocated as requested to reduce the lengths and bends for the proposed sewer laterals.
3. Cleanouts have been added to all proposed sewer laterals. A construction detail for the proposed cleanout has been added to Drawing D-4.
4. The proposed watermain has been indicated as 8" diameter Class 52 ductile iron pipe on the project plans.

Enlarged Plans

1. The road alignment, sidewalk layout, proposed grades, utilities, and proposed drainage modifications have been shown entering and running the extent of the pending City right of way on the 25 Townsend Street property. It is the applicant's understanding that the realignment of the 25 Townsend Street road, and how that road would connect to the right of way, including the potential elimination of the cul-de-sac, is the obligation of the owners of 25 Townsend Street.

Vehicle Maneuvering Plans

1. The details for the vehicles have been enlarged for legibility.
2. The road alignment, sidewalk layout, proposed grades, utilities, and proposed drainage modifications have been shown entering and running the extent of the pending City right of way on the 25 Townsend Street property. It is the applicant's understanding that the realignment of the 25 Townsend Street road, and how that road would connect to the right of way, including the potential elimination of the cul-de-sac, is the obligation of the owners of 25 Townsend Street.

Water & Sewer Profiles

1. Vertical and horizontal watermain bends have been labeled on the plans and profiles.
2. The water profile has been revised as requested to minimize high points.
3. The watermain profiles have been updated to show the sewer service crossings.

Detail Sheets (Now Sheets 16 & 17 of 20)

1. The requested note regarding manhole and catch basin castings has been added to all applicable details.

SWPPP Comments

1. The permanent pool for the proposed pocket pond is designed to be between elevation 175.0 (bottom of pond) and 180.0 (elevation of the orifice). There are no outlet conditions for the proposed pond below the elevation of the proposed orifice and based on soil conditions the stormwater runoff within the pond, it is not anticipated to infiltrate through the bottom of the practice. As shown in Appendix C of the project SWPPP, the pocket pond provides 10,715 cf of storage below elevation 180.0, therefore greater than 50% of the contributing water quality volume as required in the Design Manual.

2. The permanent pool elevation for the proposed P-5 Pocket Pond is designed at elevation 180.0. The aquatic bench is between elevation 179.0 and 180.0 in the Pocket Pond.

3. The proposed aquatic bench for the P-5 Pocket Pond rises 12 inches. Grading for the pocket pond has been clarified on the project plans.

4. Landscaping for the proposed pocket pond has been provided on sheet SP-4.

5. The channel protection volume calculation and allowable discharge rate have been indicated in the project SWPPP.

6. The pipe between DI 14 and ES 13 has been sized to convey the contributing area from the 25 Townsend project site in the pre-development condition. It is assumed that the 25 Townsend project will mitigate the peak flows at their discharge point onto the subject site based on the Design Manual requirements. Therefore, by sizing for the pre-development conditions, the pipe between DI 14 and ES 13 has been conservatively sized.

7. The maximum flow rate anticipated for the grass swale behind the townhouse units 35-40 is 0.8 cfs during the 100-year storm event. The flow rate was conservatively calculated using the contributing area from the 25 Townsend project site in the pre-development condition. Based on the proposed 25 Townsend project plans, the offsite contributing area to the swale will substantially decrease after construction of the 25 Townsend project. Based on the grading of the swale, a maximum flow rate of 2.8 cfs can be conveyed in the swale prior to the stormwater runoff overtopping out of the side of the swale.

We request appearance before the Board at their August 11, 2020 meeting to further discuss the revised materials we have provided and closing of the SEQRA Public Hearing.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: _____
Jeffrey J. Contelmo, PE
Senior Principal Engineer

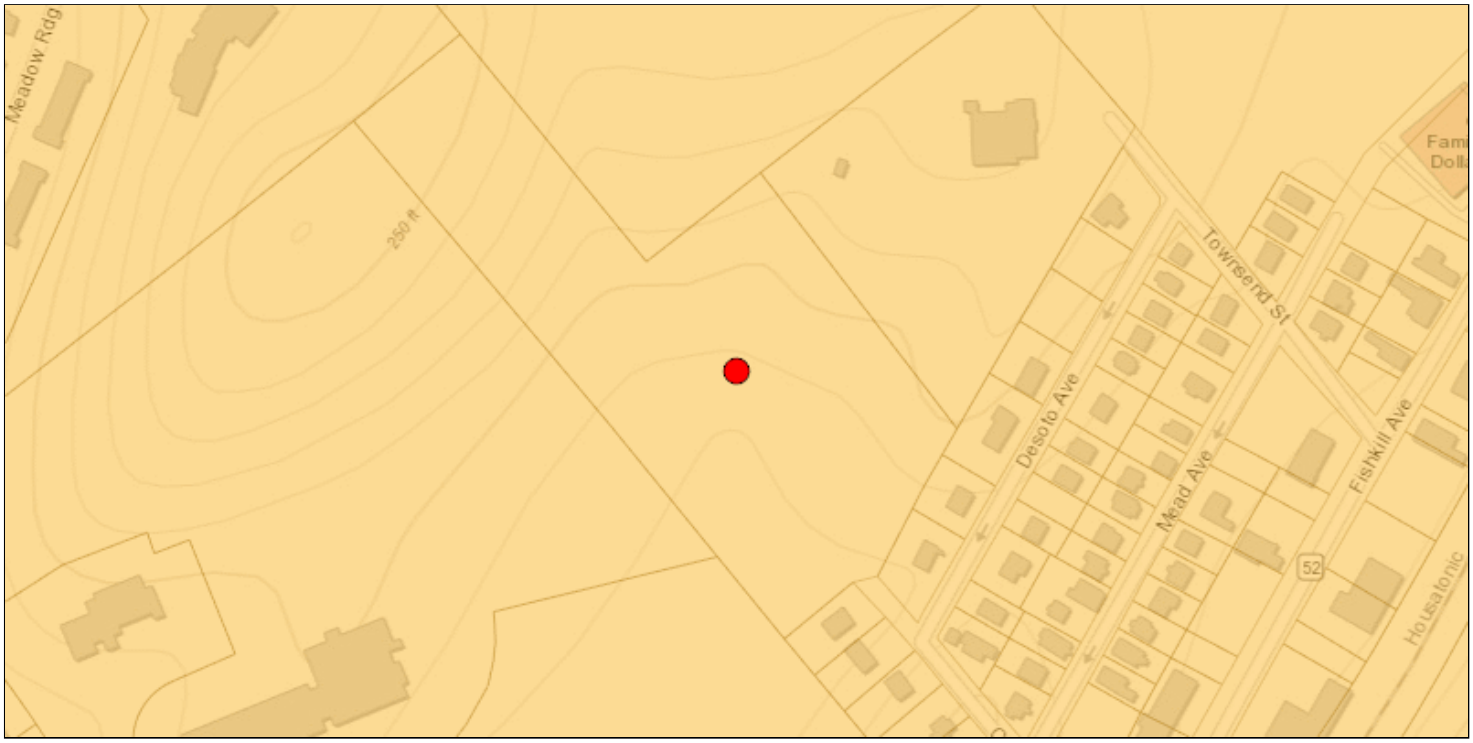
JJC/adt

Enclosures

cc: Nathan Kahn
Greg Kamedulski
Richard Cantor, Esq. (Email Only
Aryeh Siegel (Email Only)
Phil Grealy, P.E. (Email Only)

Insite File No. 19131.100

# Environmental Resource Mapper




**The coordinates of the point you clicked on are:**

| | | | | |
|---|---|---|---|---|
| **UTM 18** | **Easting:** | 587184.2601892019 | **Northing:** | 4596163.144303416 |
| **Longitude/Latitude** | **Longitude:** | -73.95522135529778 | **Latitude:** | 41.5123670635135 |

**The approximate address of the point you clicked on is:**
Beacon, New York

**County:** Dutchess
**City:** Beacon
**USGS Quad:** WAPPINGERS FALLS

**DEC Region**

**Region 3**:
(Lower Hudson Valley) Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester counties. For more information visit **http://www.dec.ny.gov/about/607.html**.

**Rare Plants and Rare Animals**

**This location is in the vicinity of** Bats Listed as Endangered or Threatened -- Contact NYSDEC Regional Office

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

**Disclaimer:** If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.

July 28, 2020

City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

RE: Beacon Views
Green Plan Comments

Dear Chairman Gunn and Members of the Board:

On June 26, 2020, J. Theodore Fink of Greenplan Inc submitted a letter to the Planning Board on behalf of the owner of the Highland Meadows Senior Housing property. It should be noted that many of the answers to Green Plan's questions are available in the reports that have been provided to the Planning Board to supplement the Full Environmental Assessment Form (EAF). The applicant has provided the Board the following reports:

- An updated Full Environmental Assessment Form, dated June 30, 2020.
- Wetlands Evaluation and Impact Report, provided by Ecological Solutions, LLC, dated May 18, 2020.
- Threatened & Endangered Species Habitat Suitability Assessment Report, provided by Ecological Solutions, LLC, dated June 12, 2020.
- Preliminary Water & Wastewater Engineering Report, dated July 28, 2020
- Stormwater Pollution Prevention Plan, dated July 28, 2020.
- Traffic Impact Study, provided by Maser Consulting, revised March 2020, and subsequent response documents.
- Phase 1A and Phase 1B Archaeological Reports, Hudson Valley Cultural Resource Consultants, LTD, dated August 2019 & Letter of No Impact, from the New York State Department of Historic Preservation, dated October 21, 2019.
- School Impact Analysis, provided by AKRF, Inc, dated August 21, 2019.
- Sustainability Report, provided by Aryeh Seigel, Architect, dated July 28, 2020.

In response to the comments made in the Greenplan letter, we offer the following:

- Comments on Beacon Views Traffic Study

  In regard to all comments related to the Traffic Study, please refer to the response letter provided by Phil Grealy, of Maser Consulting, PA, dated June 30, 2020.

- Comments on Beacon Views Part 1 Environmental Assessment Form

  As the Board is aware, we submitted an updated Full Environmental Assessment Form dated June 30, 2020, which addresses many of the Green Plan comments. For specific responses to each point we offer the following:

A. The total number of units has been updated from the initially proposed 42 units to the currently proposed 40 units. Also, the Owner's contact information has been added.

B. As noted in the EAF, coverage is being sought under the Nationwide Wetlands Permit as provided by the Army Corp of Engineers (USACE). Additional information has been provided in the Wetlands Reports and attachments submitted to the Board.

C. Item C.2.a. of the EAF asks whether the municipality has an adopted Comprehensive Plan, which the City of Beacon does. It further asks whether the plan includes specific recommendations for the site of the proposed action. Having reviewed the Comprehensive Plan, there does not appear to be specific recommendations for the subject property.

D. Item D1.d.iii. The current plans propose 40 units and 42 lots. Two of the lots are to be common lots controlled by the homeowner's association. This has been updated in the EAF.

Item D.1.h.ii. More detailed information regarding the size of the stormwater basins has been provided in the EAF.

Item D.1.h.vi. The anticipated source material of "Earth Fill" for the construction of the stormwater basins is regraded site soil.

Items D.2.b.i-v. For questions presented by Greenplan related to this section, but not asked in any specific item on the EAF, we offer the following:

- Though there is no requirement within this section of the EAF to identify the source of fill, the fill will be regraded site soil.
- Though the required permit and conditions thereto are not required in this section of the EAF, the required Nationwide Permit is NWP #29 Residential. A description and conditions of this Nationwide Permit is available on the USACE website.
- Several alternatives have been explored in the preceding months of coordination with the Planning Board. Several Concept Plans have been provided to the Board, and after extensive correspondence the project has evolved to its current state, which meets the general requirements of the Board & applicant while minimizing wetland impacts to the degree practicable.
- For more information on the effects of filling on the quantity and quality of wetland resources, refer to the Wetlands Report.
- It is the applicant's understanding that there is not a watershed plan to assess impacts, but the subject SWPPP address stormwater conditions.

Item D.2.b.v. For more information on the 1:1 creation of wetland mitigation, refer to the Wetlands Report and project plans.

Item D.2.f.iii. For questions regarding energy usage and emissions please refer to the Sustainability Report provided by Aryeh Siegel, Architect, dated July 28, 2020.

Item D.2.j. The NYSDEC Full EAF Workbook identifies a "substantial" increase in traffic as the potential for the project to add 100 or more peak hour trips, which in the

case of townhouses would be generated by 190 or more units based on the table in the workbook. This project proposes 40 units. As stated previously, for any other questions or comments related to the Traffic Study, please refer to the response letter provided by Phil Grealy, of Maser Consulting, PA, dated June 30, 2020.

Item D.2.k. This item is required for industrial and commercial uses, and not applicable to the subject action.

Item D.2.m. During construction additional noise from the site will be abated by existing vegetation. Tree clearing can be limited to an as needed basis, based upon the stage of construction and within the constraints of tree clearing limits for habitat protection.

Item D.2.k. This item is required for industrial, commercial, and recreational uses, and is not applicable to the subject action.

E. Item D.2.b.ii. The acreage of proposed wetland disturbance has been updated to reflect the evolution of the project since the initial submission. Though we have worked to minimize the wetland disturbance to extent practicable, the changes to the site plan that precipitated the gradual shifts in wetland disturbance since the initial submission of the EAF, have been in the interest of improving the overall design and function of the proposed site. It should be noted that regardless of the percentage of change, the wetland disturbance remains small enough to qualify for coverage under a Nationwide permit under the USACE.

Item E.1.d. This response has been revised to include the Highland Meadows Senior Housing facility.

Item E.2.a. This response has been revised to show the average depth to bedrock over the site.

Item E.2.d. This response has been revised to show the average depth to ground water over the site.

Item E.2.o. Indiana Bat has been and remains listed in the response to this item. For items related to threatened and endangered species and mitigation measures, refer to the Threatened and Endangered Species Habitat Suitability Assessment Report, provided by Ecological Solutions, LLC, dated June 12, 2020.

Item E.3.e&f. Please refer to the Phase 1A and Phase 1B Archaeological Report prepared by Hudson Valley Cultural Resource Consultants, LTD, dated August 2019. Also refer to the findings letter from the New York State Historic Preservation Office, from October 21, 2019, which states the determination that "no historic properties, including archaeological and/or historic resources, will be affected by this undertaking."

We believe the revised EAF, dated June 30, 2020, and supplemental reports submitted to date provide a complete assessment of environmental conditions.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: _____
Jeffrey J. Contelmo, PE
Senior Principal Engineer

JJC/adt

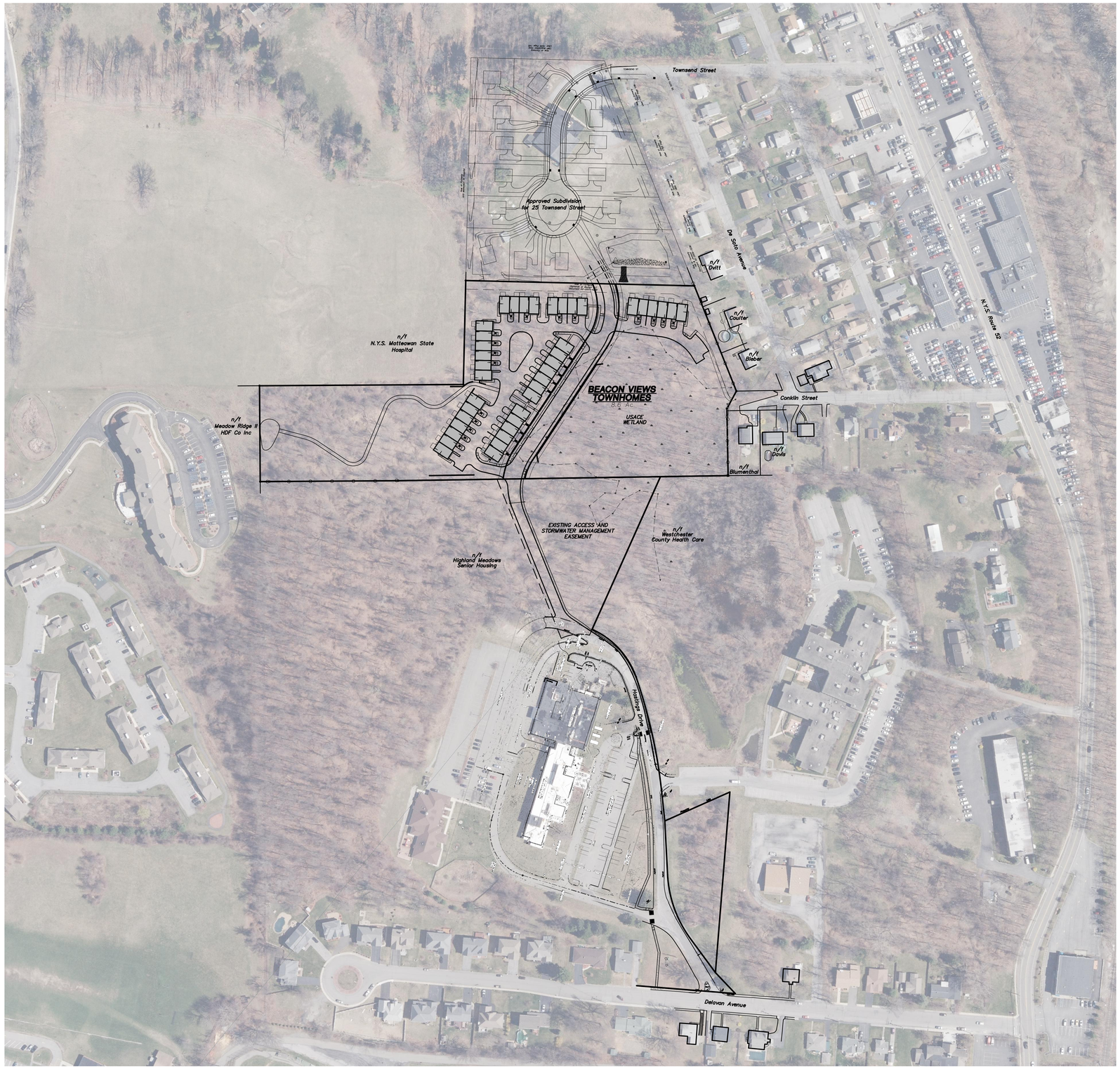
Enclosures

cc: Nathan Kahn
Greg Kamedulski
Richard Cantor, Esq. (Email Only
Aryeh Siegel (Email Only)
Phil Grealy, P.E. (Email Only)

Insite File No. 19131.100

# BEACON VIEWS

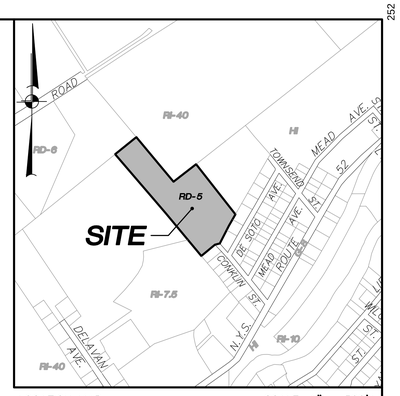
## HASTINGS DRIVE / CONKLIN STREET
## CITY OF BEACON, NY




ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

### SITE PLAN DRAWING LIST

| DRAWING NO. | DRAWING NAME | SHEET NO. |
|---|---|---|
| CS-1 | COVER SHEET | 1 |
| EX-1 | EXISTING CONDITIONS & REMOVALS PLAN | 2 |
| SP-1 | LAYOUT & LANDSCAPE PLAN | 3 |
| SP-2.1 | GRADING & DRAINAGE PLAN | 4 |
| SP-2.2 | UTILITIES PLAN | 5 |
| SP-3 | EROSION & SEDIMENT CONTROL PLAN | 6 |
| SP-4 | ENLARGED PLANS | 7 |
| SP-5 | OFF-SITE IMPROVEMENTS PLAN | 8 |
| SP-6 | VEHICLE MANEUVERING PLAN | 9 |
| LP-1 | LIGHTING PLAN | 10 |
| PR-1 | DRAINAGE PROFILES | 11 |
| PR-2 | WATER & SEWER PROFILES | 12 |
| D-1 | DETAILS | 13 |
| D-2 | DETAILS | 14 |
| D-3 | DETAILS | 15 |
| D-4 | DETAILS | 16 |
| D-5 | DETAILS | 17 |
| A-1 | BUILDING PLANS - FRONT GARAGE | 18 |
| A-2 | BUILDING PLANS - REAR GARAGE | 19 |
| A-3 | ELEVATIONS / VIEWS | 20 |




LOCATION MAP SCALE: 1" = 500'±

**Applicant:**
Beacon Views, LLC
500 River Avenue, Suite 145
Wakefield, NJ 08701

**Record Owner:**
Highlands at Beacon, LLC
2847 Church Street
Pine Plains, NY 12567

**Site Data:**

| | |
|---|---|
| Tax Map No.: | 6055-03-331123 |
| Total Lot Area: | 8.6 AC. |
| Zone: | RD-5 |

**General Notes:**

1. Property line shown on these plans is based upon a map entitled "Boundary and Topographic Survey of Property prepared for Beacon Community Foundation, Inc.", dated March 22, 2005 as prepared by Insite Engineering, Surveying & Landscape Architecture, P.C.
2. Topography shown on these plans are based upon aerial photography dated April 14, 2003 and is photogrametrically compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D. 1988) as derived by GPS observation. The contour interval is 2'.
3. Site features and topography at the boundary of the access and stormwater easement where it meets Hastings Drive were field located on August 8, 2019 by Insite Engineering, Surveying & Landscape Architecture, P.C.
4. The existing wetland limit line as shown on these plans is based on a field delineation performed by Ecological Solutions, LLC on April 15, 2019 and survey located by Insite Engineering, Surveying & Landscape Architecture, P.C. The area of the wetland on the subject property is 2.55 acres.

**Site Access Notes:**

1. The applicant seeks to utilize the proposed connection to the right of way through the approved subdivision on 25 Townsend Street as its primary means of access for the Beacon Views Properties.
2. The road shown in the existing easement on the Highland Meadows Senior Housing Property would be utilized as an emergency access only, in this case.
3. In the event there is a delay in the construction of the road in the approved 25 Townsend Street right of way, the applicant would exercise the easement over the Highland Meadows Senior Housing Property, and utilize the proposed road thereon as the primary access to the site, until such time as the 25 Townsend Street road was constructed. In this event, the proposed alternate grading plan for Conklin Street emergency access on sheet SP-4 would be constructed. When access becomes available through the 25 Townsend Subdivision, the road through the Highland Meadows Senior Housing Property easement would be gated and transitioned to emergency access only, as stated above.
4. In the event that the road through the 25 Townsend Street subdivision is not built, the applicant and subsequent owner will retain ownership of the main road shown within the proposed right of way, and will be responsible for maintaining it. When the 25 Townsend Street access is constructed, the right of way will be dedicated to the city, as proposed.

**Affordable-Workforce-Housing Notes:**

1. The project shall comply with the requirements of city code Chapter 223 Zoning, Article IVB Affordable Workforce Housing.
2. Based on the proposed unit count of 40 townhomes, there shall be four (4) townhomes meeting the requirements for below-market-rate requirements of the code.

**Habitat Protection Notes:**

1. Trees clearing will only occur between the period of October 1 through March 31 when bats are not in the vicinity of the site.
2. Lighting on the site will use City of Beacon Planning Board approved light fixtures that have tops that direct light down to minimize light pollution and not interfere with potential bat foraging activities.
3. Implementing soil conservation and dust control best management practices, such as watering dry disturbed soil areas to keep dust down, and using staked, recessed silt fence and anti tracking pads to prevent erosion and sedimentation in surface waters on the site.
4. Stormwater pond/s will not be maintained with any chemicals that might adversely affect bats or insect populations on which they may feed.

GRAPHIC SCALE
100 0 50 100 200 400
( IN FEET )
1 inch = 100 ft.

**Site Plan**

Approved by resolution of the Beacon Planning Board on the 30th day of June, 2020.

Chairman, City Planning Board — Date

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

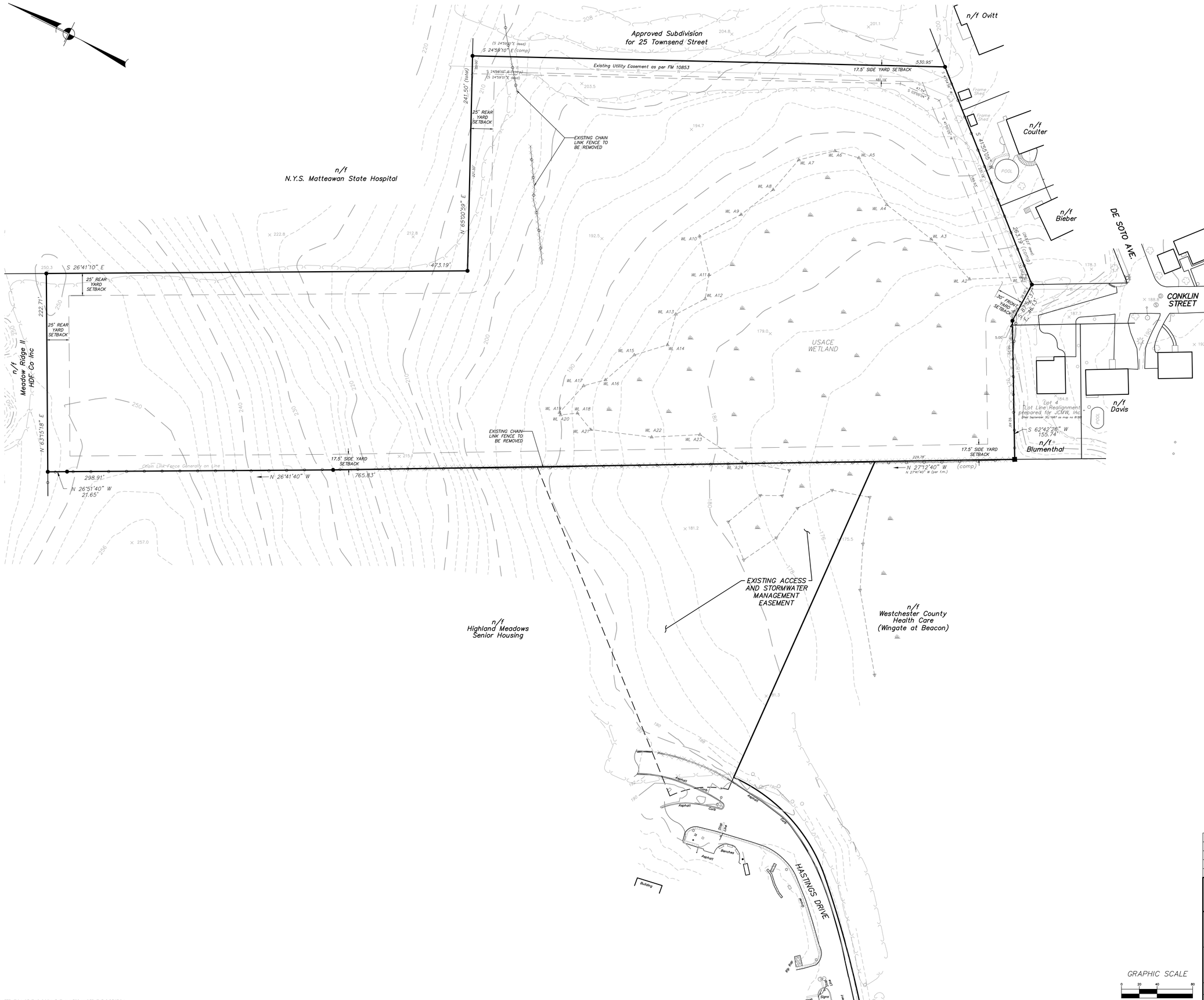
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-enp.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
COVER SHEET

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET |
| DATE | 8-27-19 | DRAWN BY | J.F.R. | CS-1 | 1 / 20 |
| SCALE | 1" = 100' | CHECKED BY | A.D.T. | | |

Z:\19131\100\dwg\01 CS-1.dwg, 7/28/2020 12:42:17 PM, jrubin, 1:1




## LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- WL A23 / WL A24 — EXISTING WETLAND FLAG
- EXISTING TREE LINE
- 190 — EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- × 215.1 — EXISTING SPOT GRADE
- EXISTING ITEMS TO BE REMOVED

## General Notes:

1. Property line shown on these plans is based upon a map entitled "Boundary and Topographic Survey of Property prepared for Beacon Community Foundation, Inc.", dated March 22, 2005 as prepared by Insite Engineering, Surveying & Landscape Architecture, P.C.
2. Topography shown on these plans are based upon aerial photography dated April 14, 2003 and is photogrametricaly compiled. Elevations shown hereon conform to the North American Vertical Datum of 1988 (N.A.V.D. 1988) as derived by GPS observation. The contour interval is 2'.
3. Site features and topography at the boundary of the access and stormwater easement where it meets Hastings Drive were field located on August 8, 2019 by Insite Engineering, Surveying & Landscape Architecture, P.C.
4. The existing wetland limit line as shown on these plans is based on a field delineation performed by Ecological Solutions, LLC on April 15, 2019 and survey located by Insite Engineering, Surveying & Landscape Architecture, P.C. The area of the wetland on the subject property is 2.55 acres.

## UNIT DENSITY CALCULATIONS (RD–5)

Based on note "H" of Chapter 223–17D Schedule of Regulations for Residential Districts

| | |
|---|---|
| Total Parcel (8.6 acres) | = 374,518 SF± |
| Wetland | = 111,078 SF± |
| Slopes 25% or Greater | = 8,500 SF± |
| Buildable Area | = 254,940 SF |
| Permitted Units @ 5,000 SF per Unit | = 50 Units |
| Proposed Units | = 40 Units |

* Pursuant to article IVB of the city code, four (4) units of the proposed forty (40) are to be below–market–rate.

GRAPHIC SCALE
0 20 40 80
( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7–28–20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6–30–20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5–26–20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4–28–20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

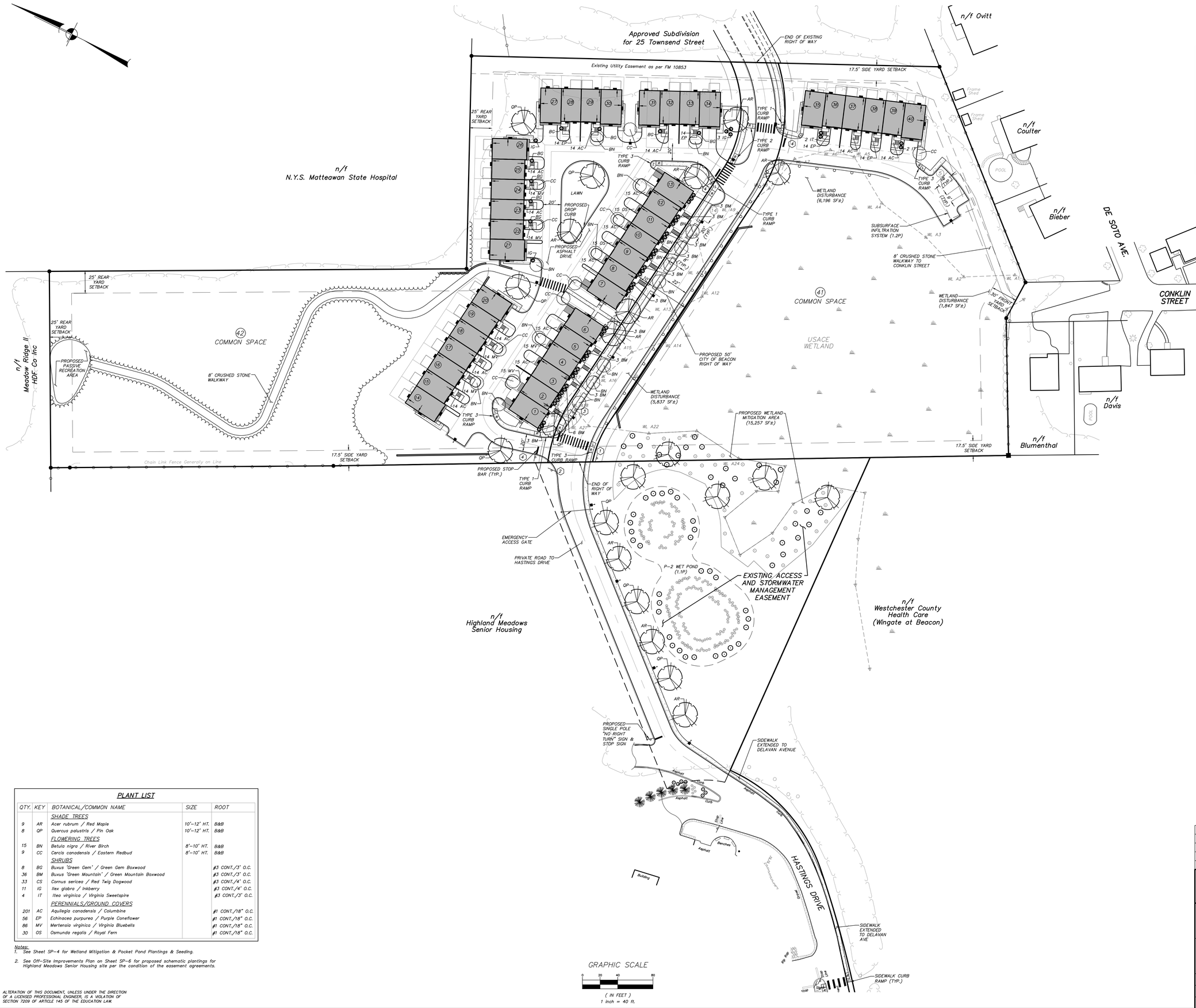
PROJECT:
**BEACON VIEWS**
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
**EXISTING CONDITIONS & REMOVALS PLAN**

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET |
| DATE | 8–27–19 | DRAWN BY | J.F.R. | EX–1 | 2 / 20 |
| SCALE | 1" = 40' | CHECKED BY | A.D.T. | | |

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVERYONE\2019\19131.100\CAD\EX-1.dwg, 7/28/2020 10:33:14 PM, jmatt.11




## GENERAL NOTES:

1) Trash and recycling to be collected at each unit by a privately hired waste management contractor.

## RD-5 ZONE REQUIREMENTS:

| | Required/Permitted: | Provided: |
|---|---|---|
| Minimum Lot Area: | 5,000 SF | 374,518 SF± |
| Minimum Lot Width: | 50' | 440'± |
| Minimum Lot Depth: | 100' | 848'± |
| Minimum Yard Setbacks: | | |
| Front: | 30' | 30' |
| Minimum Side: | 17.5' | 35' |
| Total of 2: | 20' | 75' |
| Rear: | 25' | 25' |
| Minimum Distance Between Buildings on the Same Lot: | 30' | 20'* |
| Maximum Building Height: | 3 Stories or 35' | Less than 35' |
| Minimum Building Height: | 1 Story and 12' | More than 12' |
| Maximum Building Coverage | | |
| Multi-family: | 20% | 8.1% |
| Other uses: | 30% | 0% |
| Maximum No. of Dwelling Units per Building | 16 | 7 |

* Seeking relief from minimum distance as part of terms of conservation subdivision.

## PARKING REQUIREMENTS:

| | |
|---|---|
| 2 per Dwelling Unit + .25 Spaces per Bedroom | = 110 Spaces |
| Garage Spaces | = 80 Spaces |
| Driveway Spaces | = 40 Spaces |
| Visitor Spaces | = 19 Spaces |
| | = 139 Spaces Provided |

## RECREATION AREAS SUMMARY

| | |
|---|---|
| Required SF @ 2,000 for First 20 Units<br>Required 100 SF for Each Additional Unit | = 4,000 SF Required |
| Western Trail Passive Recreation Area | = 7,590 SF |
| Southern Trail to Conklin Street Area | = 1,385 SF |
| | = 8,975 SF Provided |

## WETLANDS SUMMARY

**U.S.A.C.E. WETLAND PF01E**

TOTAL PROPOSED DISTURBANCE = 13,880 SF

POTENTIAL WETLAND DISTURBANCE PER ALTERNATE GRADING PLAN FOR ACCESS TO CONKLIN STREET ON SHEET SP-4 = 1,377 SF±

PROPOSED MITIGATION AREA DISTURBANCE = 15,257 SF

*SEE WETLAND MITIGATION NOTES ON SP-4

## LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG (WL A23 – WL A24)
- EXISTING TREE LINE
- PROPOSED SIGN (1)
- PROPOSED DOOR LOCATION
- PROPOSED # OF STALLS TO BE STRIPED (9)
- PROPOSED CONCRETE CURB
- PROPOSED EDGE OF SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED PAINTED STOPBAR
- PROPOSED CROSSWALK
- PROPOSED PARKING STRIPING
- PROPOSED LANDSCAPING
- PROPOSED GUIDE RAIL
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED BUILDING MOUNTED LIGHT

## SIGN DATA TABLE

| LOCATION NO. | TEXT | M.U.T.C.D. NUMBER | SIZE OF SIGN (s.f.) | DESCRIPTION |
|---|---|---|---|---|
| 1 | | R3-1 | 30" x 30" | White Background Black Arrow Red Symbol Black Border |
| 2 | NO OUTLET | | 12" x 18" | Red on White |
| 3 | RIGHT LANE MUST TURN RIGHT | R3-32C | 30" x 30" | Black on White |
| 4 | STOP | R1-1C | 30" x 30" | White on Red |

## PLANT LIST

| QTY. | KEY | BOTANICAL/COMMON NAME | SIZE | ROOT |
|---|---|---|---|---|
| | | SHADE TREES | | |
| 9 | AR | Acer rubrum / Red Maple | 10'-12' HT. | B&B |
| 8 | QP | Quercus palustris / Pin Oak | 10'-12' HT. | B&B |
| | | FLOWERING TREES | | |
| 15 | BN | Betula nigra / River Birch | 8'-10' HT. | B&B |
| 9 | CC | Cercis canadensis / Eastern Redbud | 8'-10' HT. | B&B |
| | | SHRUBS | | |
| 8 | BG | Buxus 'Green Gem' / Green Gem Boxwood | | #3 CONT./3' O.C. |
| 36 | BM | Buxus 'Green Mountain' / Green Mountain Boxwood | | #3 CONT./3' O.C. |
| 33 | CS | Cornus sericea / Red Twig Dogwood | | #3 CONT./4' O.C. |
| 11 | IG | Ilex glabra / Inkberry | | #3 CONT./4' O.C. |
| 4 | IT | Itea virginica / Virginia Sweetspire | | #3 CONT./3' O.C. |
| | | PERENNIALS/GROUND COVERS | | |
| 201 | AC | Aquilegia canadensis / Columbine | | #1 CONT./18" O.C. |
| 56 | EP | Echinacea purpurea / Purple Coneflower | | #1 CONT./18" O.C. |
| 86 | MV | Mertensia virginica / Virginia Bluebells | | #1 CONT./18" O.C. |
| 30 | OS | Osmunda regalis / Royal Fern | | #1 CONT./18" O.C. |

Notes:
1. See Sheet SP-4 for Wetland Mitigation & Pocket Pond Plantings & Seeding.
2. See Off-Site Improvements Plan on Sheet SP-6 for proposed schematic plantings for Highland Meadows Senior Housing site per the condition of the easement agreements.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
**BEACON VIEWS**
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

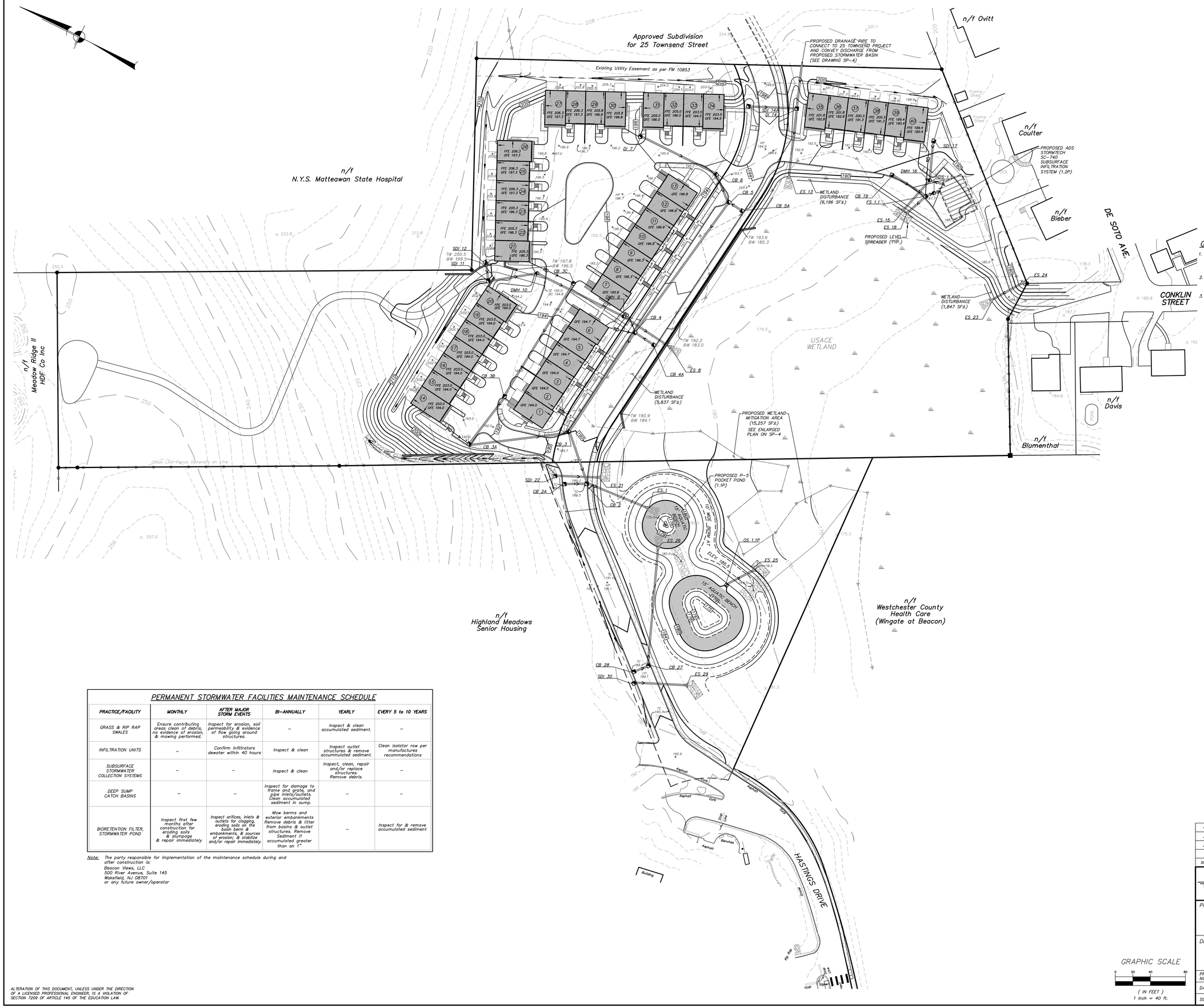
DRAWING:
**LAYOUT & LANDSCAPE PLAN**

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 191.31.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8-27-19 | DRAWN BY | J.F.R. |
| SCALE | AS SHOWN | CHECKED BY | A.D.T. |

DRAWING NO. SP-1 SHEET 3 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVE\191000 Admin\03 SP-1.dwg, 7/29/2020 1:49:29 PM, jfrank, 1:1




## LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TOP OF WALL & BOTTOM OF WALL ELEVATIONS
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED HDPE DRAINAGE PIPE (SIZE AS NOTED)
- PROPOSED GRASS SWALE

## General Notes:

1. Stormwater management facilities located within the access and utility easement on the Highland Meadows property are to be maintained by the applicant and subsequent ownership of the proposed project. Maintenance of these facilities will not fall on the City, or the Highland Meadows ownership.
2. In an emergency event the City of Beacon will have the right to maintain the drainage between CB3 and ES1, if the applicant or subsequent owners fail to fulfill their maintenance obligations.
3. All drainage improvements within the proposed City right of way are to be dedicated to the City of Beacon.

## PROPOSED DRAINAGE TABLE

| STRUCTURE | RIM | INV. | PIPE | LENGTH | SLOPE |
|---|---|---|---|---|---|
| DI 7 | 195.8 | 192.6 | | | |
| CB 6 | 193.6 | 190.4 | 12" HDPE | 97 L.F. | 2.3% |
| CB 5 | 193.5 | IN 190.0 \| OUT 189.8 | 12" HDPE | 35 L.F. | 1.2% |
| CB 4 | 191.2 | IN 187.3 \| OUT 187.0 | 15" HDPE | 183 L.F. | 1.3% |
| CB 3 | 190.2 | IN 185.6 \| OUT 185.4 | 18" HDPE | 136 L.F. | 1.0% |
| CB 2 | 189.0 | 182.7 | 24" HDPE | 63 L.F. | 3.7% |
| ES 1 | -- | 180.0 | 24" HDPE | 76 L.F. | 3.6% |
| | | | | | |
| CB 5A | 193.5 | 190.3 | 12" HDPE | 18 L.F. | 1.7% |
| CB 5 | 193.5 | 190.0 | | | |
| | | | | | |
| CB 4A | 191.2 | 188.0 | 12" HDPE | 26 L.F. | 1.9% |
| CB 4 | 191.2 | 187.5 | | | |
| | | | | | |
| CB 2A | 189.0 | 185.8 | 12" HDPE | 25 L.F. | 2.0% |
| CB 2 | 189.0 | 185.3 | | | |
| | | | | | |
| CB 3C | 195.2 | 189.5 | 15" HDPE | 151 L.F. | 1.1% |
| CB 3B | 192.7 | 187.9 | 15" HDPE | 68 L.F. | 1.0% |
| CB 3A | 193.2 | IN 187.2 \| OUT 186.9 | 18" HDPE | 115 L.F. | 1.1% |
| CB 3 | 190.2 | 185.6 | | | |
| | | | | | |
| SDI 22 | 190.0 | 186.6 | 15" HDPE | 52 L.F. | 1.2% |
| ES 21 | -- | 186.0 | | | |
| | | | | | |
| SDI 12 | 202.9 | 198.8 | 12" HDPE | 22 L.F. | 9.2% |
| SDI 11 | 199.9 | IN 196.8 \| OUT 195.8 | 15" HDPE | 57 L.F. | 5.8% |
| DMH 10 | 195.9 | 192.5 | 15" HDPE | 110 L.F. | 2.9% |
| DMH 9 | 192.9 | IN 189.3 \| OUT 187.7 | 15" HDPE | 60 L.F. | 8.3% |
| ES 8 | -- | 182.5 | | | |
| | | | | | |
| SDI 14A | 196.0 | 192.6 | 15" HDPE | 55 L.F. | 4.5% |
| DI 14 | 193.8 | IN 190.1 \| OUT 189.7 | 24" HDPE | 80 L.F. | 4.1% |
| ES 13 | -- | 186.0 | | | |
| | | | | | |
| SDI 17 | 190.5 | 187.1 | 12" HDPE | 45 L.F. | 7.3% |
| DMH 16 | 188.1 | 183.8 | 12" HDPE | 47 L.F. | 1.7% |
| ES 15 | -- | 183.0 | | | |
| | | | | | |
| CB 19 | 189.3 | 186.1 | 12" HDPE | 46 L.F. | 3.1% |
| FS 1.1 | 187.7 | 184.7 | 12" HDPE | 30 L.F. | 5.7% |
| ES 18 | -- | 183.0 | | | |
| | | | | | |
| FS 1.1 | 187.7 | 184.7 | 8" HDPE | 10 L.F. | 2.0% |
| HDS 1.1 | 187.8 | 184.5 | 8" HDPE | 9 L.F. | 2.2% |
| 1.2P | -- | 184.3 | | | |
| | | | | | |
| 1.2P | -- | 184.5 | 6" HDPE | 17 L.F. | 1.2% |
| DMH 16 | 188.1 | 184.3 | | | |
| | | | | | |
| ES 24 | -- | 176.0 | 15" HDPE | 44 L.F. | 1.1% |
| ES 23 | -- | 175.5 | | | |
| | | | | | |
| OS 1.1P | 184.5 | 179.0 | 18" HDPE | 37 L.F. | 1.4% |
| ES 25 | -- | 178.5 | | | |
| | | | | | |
| CB 28 | 188.9 | 185.7 | 12" HDPE | 18 L.F. | 2.8% |
| CB 27 | 188.9 | 185.2 | 12" HDPE | 136 L.F. | 3.8% |
| ES 26 | -- | 180.0 | | | |
| | | | | | |
| SDI 30 | 189.5 | 186.3 | 12" HDPE | 61 L.F. | 1.3% |
| ES 29 | -- | 185.5 | | | |

## PERMANENT STORMWATER FACILITIES MAINTENANCE SCHEDULE

| PRACTICE/FACILITY | MONTHLY | AFTER MAJOR STORM EVENTS | BI-ANNUALLY | YEARLY | EVERY 5 to 10 YEARS |
|---|---|---|---|---|---|
| GRASS & RIP RAP SWALES | Ensure contributing areas clean of debris, no evidence of erosion, & mowing performed. | Inspect for erosion, soil permeability & evidence of flow going around structures. | – | Inspect & clean accumulated sediment. | – |
| INFILTRATION UNITS | – | Confirm infiltrators dewater within 40 hours | Inspect & clean | Inspect outlet structures & remove accummulated sediment. | Clean isolator row per manufactures recommendations |
| SUBSURFACE STORMWATER COLLECTION SYSTEMS | – | – | Inspect & clean | Inspect, clean, repair and/or replace structures. Remove debris. | – |
| DEEP SUMP CATCH BASINS | – | – | Inspect for damage to frame and grate, and pipe inlets/outlets. Clean accumulated sediment in sump. | – | – |
| BIORETENTION FILTER, STORMWATER POND | Inspect first few months after construction for eroding soils & slumpage & repair immediately | Inspect orifices, inlets & outlets for clogging, eroding soils on the basin berm & embankments, & sources of erosion; & stabilize and/or repair immediately. | Mow berms and exterior embankments Remove debris & litter from basins & outlet structures. Remove Sediment if accumulated greater than an 1" | – | Inspect for & remove accumulated sediment |

Note: The party responsible for implementation of the maintenance schedule during and after construction is:
Beacon Views, LLC
500 River Avenue, Suite 145
Wakefield, NJ 08701
or any future owner/operator

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
GRADING & DRAINAGE PLAN

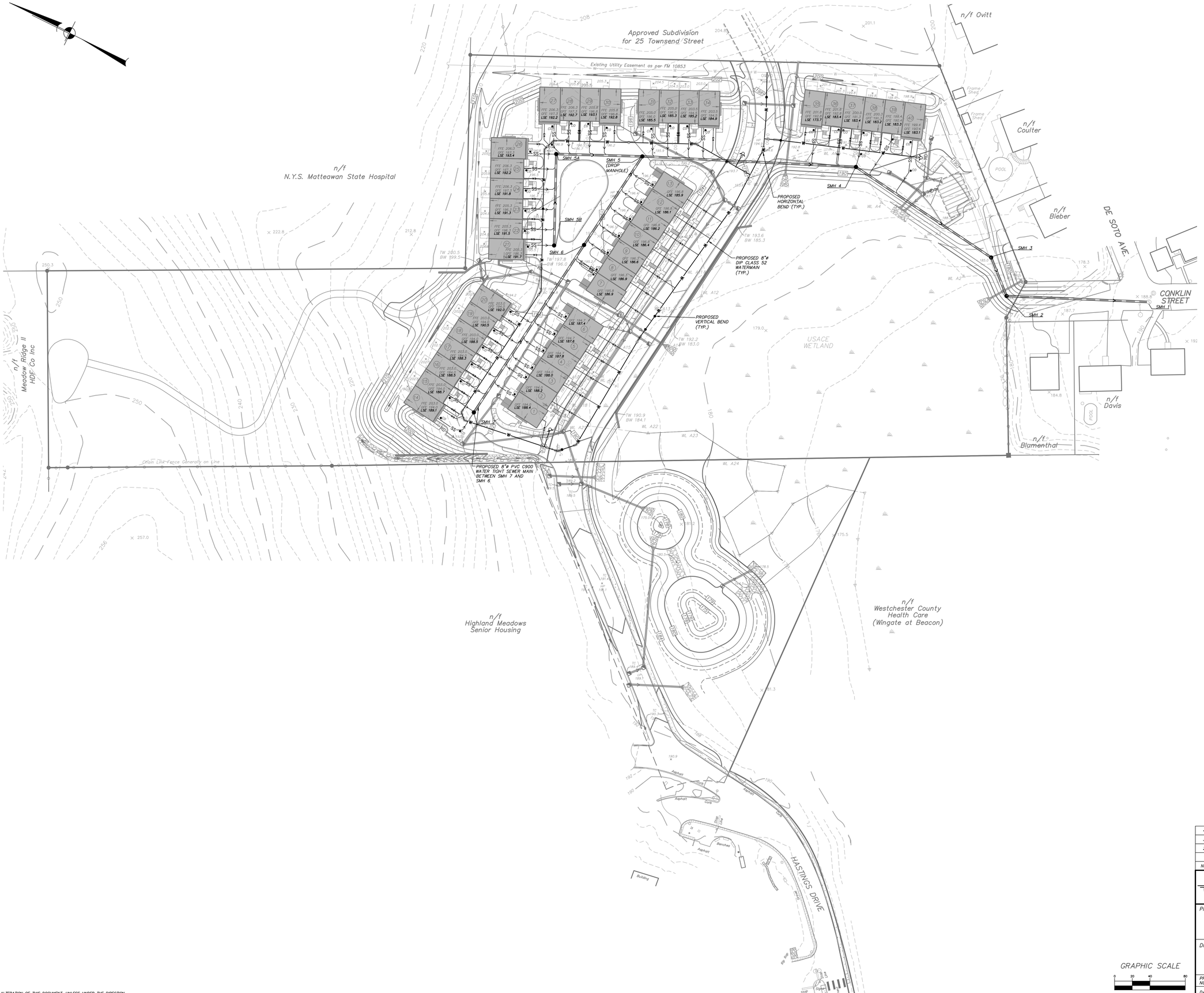
GRAPHIC SCALE
0 20 40 80
( IN FEET )
1 inch = 40 ft.

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 191.31.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8-27-19 | DRAWN BY | J.F.R. |
| SCALE | 1" = 40' | CHECKED BY | A.D.T. |

DRAWING NO. SP-2.1
SHEET 4 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\DEVELOPMENT\Active\SA SP-2.1.dwg, 7/28/2020 1:12:46 PM, jmann, 11




## LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE
- EXISTING 12"ø WATER MAIN
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TOP OF WALL & BOTTOM OF WALL ELEVATIONS
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED WATER GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED HDPE DRAINAGE PIPE (SIZE AS NOTED)
- PROPOSED 8"ø PVC SDR 35 SEWER MAIN (UNLESS OTHERWISE NOTED)
- PROPOSED 4"ø PVC SDR 35 SEWER SERVICE WITH CLEANOUT
- PROPOSED 8"ø DIP CLASS 52 WATER MAIN
- PROPOSED 1"ø DIP WATER SERVICE LINE
- PROPOSED GRASS SWALE

## PROPOSED SEWER TABLE

| STRUCTURE | RIM | INV. | PIPE | LENGTH | SLOPE |
|---|---|---|---|---|---|
| SMH 7 | 192.5 | 188.0 | | | |
| SMH 6 | 194.7 | IN 186.2 \| OUT 186.0 | 8" PVC | 227 L.F. | 0.8% |
| SMH 5 | 196.0 | IN 185.1 \| OUT 185.0 | 8" PVC | 120 L.F. | 0.8% |
| SMH 4 | 190.4 | IN 182.4 \| OUT 182.2 | 8" PVC | 242 L.F. | 1.1% |
| SMH 3 | 185.0 | IN 180.8 \| OUT 180.3 | 8" PVC | 184 L.F. | 0.8% |
| SMH 2 | 184.5 | IN 180.3 \| OUT 180.2 | 8" PVC | 47 L.F. | 0.9% |
| SMH 1 | 188.8 | 178.9 | 8" PVC | 161 L.F. | 0.8% |
| | | | | | |
| SMH 5B | 195.2 | 191.0 | | | |
| SMH 5A | 196.6 | IN 190.1 \| OUT 190.0 | 8" PVC | 104 L.F. | 0.9% |
| SMH 5 | 196.1 | IN 189.1 \| OUT 185.0 | 8" PVC | 97 L.F. | 0.9% |

## General Notes:

1. The City of Beacon shall own, operate and maintain the water main and all hydrants/stubs.
2. All sanitary sewer mains and manholes up to the existing manhole shall be owned, operated, and maintained by the City of Beacon.
3. Blanket agreements and easements to be granted to the City of Beacon for access and utility maintenance purposes.

GRAPHIC SCALE

0 20 40 80

( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

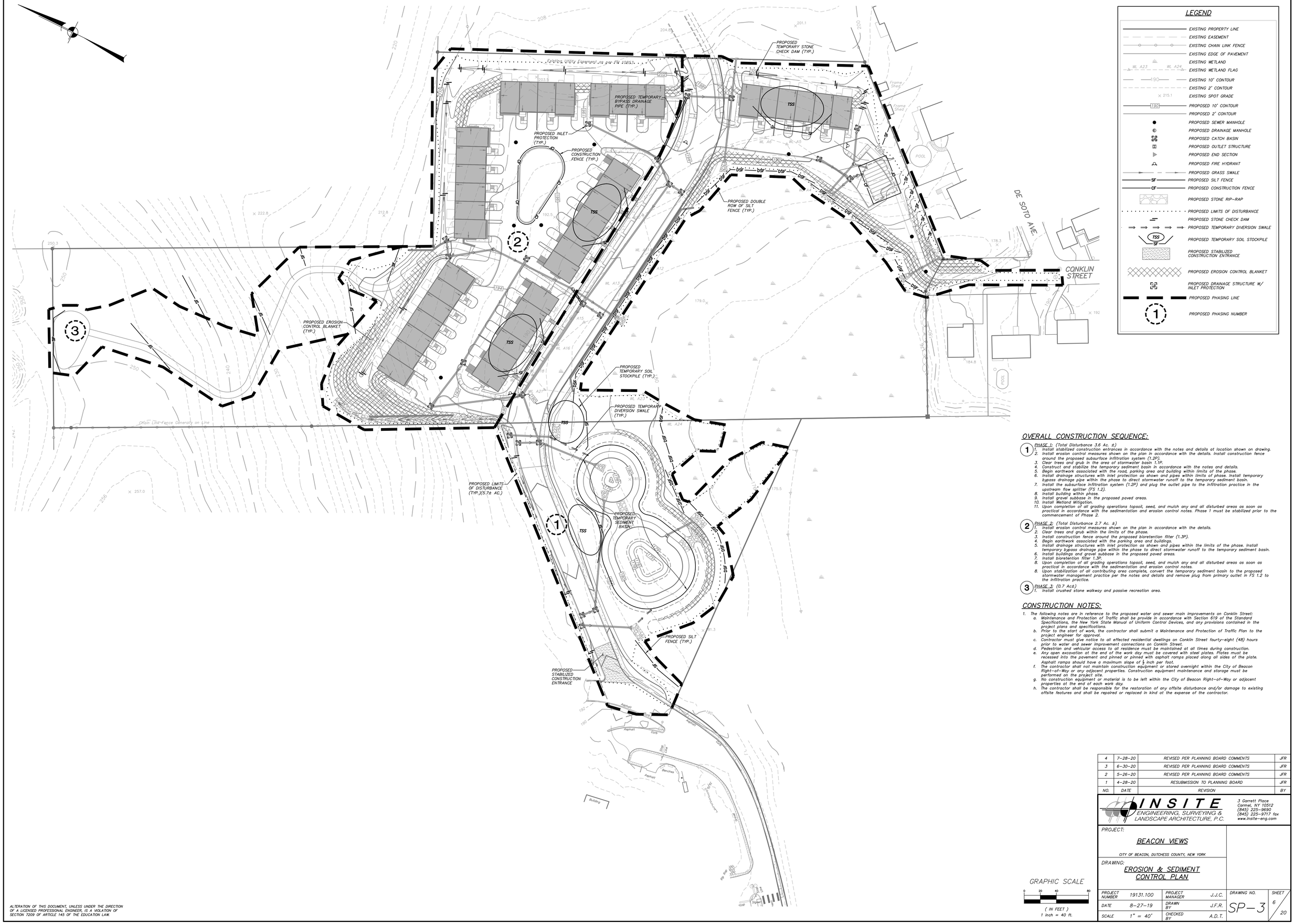
DRAWING:
UTILITIES PLAN

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 191.31.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8-27-19 | DRAWN BY | J.F.R. |
| SCALE | 1" = 40' | CHECKED BY | A.D.T. |

DRAWING NO. SP-2.2
SHEET 5 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E\191\100\dwg\SP-2.2.dwg, 7/28/2020 12:21:16, jfraire, 1:1




## LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED FIRE HYDRANT
- PROPOSED GRASS SWALE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION FENCE
- PROPOSED STONE RIP-RAP
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED STONE CHECK DAM
- PROPOSED TEMPORARY DIVERSION SWALE
- PROPOSED TEMPORARY SOIL STOCKPILE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED DRAINAGE STRUCTURE W/ INLET PROTECTION
- PROPOSED PHASING LINE
- PROPOSED PHASING NUMBER

## OVERALL CONSTRUCTION SEQUENCE:

**1** PHASE 1: (Total Disturbance 3.6 Ac. ±)
1. Install stabilized construction entrances in accordance with the notes and details at location shown on drawing.
2. Install erosion control measures shown on the plan in accordance with the details. Install construction fence around the proposed subsurface infiltration system (1.2P).
3. Clear trees and grub in the area of stormwater basin 1.1P.
4. Construct and stabilize the temporary sediment basin in accordance with the notes and details.
5. Begin earthwork associated with the road, parking area and building within limits of the phase.
6. Install drainage structures with inlet protection as shown and pipes within limits of phase. Install temporary bypass drainage pipe within the phase to direct stormwater runoff to the temporary sediment basin.
7. Install the subsurface infiltration system (1.2P) and plug the outlet pipe to the infiltration practice in the upstream flow splitter (FS 1.2).
8. Install building within phase.
9. Install gravel subbase in the proposed paved areas.
10. Install Wetland Mitigation.
11. Upon completion of all grading operations topsoil, seed, and mulch any and all disturbed areas as soon as practical in accordance with the sedimentation and erosion control notes. Phase 1 must be stabilized prior to the commencement of Phase 2.

**2** PHASE 2: (Total Disturbance 2.7 Ac. ±)
1. Install erosion control measures shown on the plan in accordance with the details.
2. Clear trees and grub within the limits of the phase.
3. Install construction fence around the proposed bioretention filter (1.3P).
4. Begin earthwork associated with the parking area and buildings.
5. Install drainage structures with inlet protection as shown and pipes within the limits of the phase. Install temporary bypass drainage pipe within the phase to direct stormwater runoff to the temporary sediment basin.
6. Install buildings and gravel subbase in the proposed paved areas.
7. Install bioretention filter 1.3P.
8. Upon completion of all grading operations topsoil, seed, and mulch any and all disturbed areas as soon as practical in accordance with the sedimentation and erosion control notes.
8. Upon stabilization of all contributing area complete, convert the temporary sediment basin to the proposed stormwater management practice per the notes and details and remove plug from primary outlet in FS 1.2 to the infiltration practice.

**3** PHASE 3: (0.7 Ac±)
1. Install crushed stone walkway and passive recreation area.

## CONSTRUCTION NOTES:

1. The following notes are in reference to the proposed water and sewer main improvements on Conklin Street:
   a. Maintenance and Protection of Traffic shall be provide in accordance with Section 619 of the Standard Specifications, the New York State Manual of Uniform Control Devices, and any provisions contained in the project plans and specifications.
   b. Prior to the start of work, the contractor shall submit a Maintenance and Protection of Traffic Plan to the project engineer for approval.
   c. Contractor must give notice to all effected residential dwellings on Conklin Street fourty-eight (48) hours prior to water and sewer improvement connections on Conklin Street.
   d. Pedestrian and vehicular access to all residence must be maintained at all times during construction.
   e. Any open excavation at the end of the work day must be covered with steel plates. Plates must be recessed into the pavement and pinned or pinned with asphalt ramps placed along all sides of the plate. Asphalt ramps should have a maximum slope of ½ inch per foot.
   f. The contractor shall not maintain construction equipment or stored overnight within the City of Beacon Right-of-Way or any adjacent properties. Construction equipment maintenance and storage must be performed on the project site.
   g. No construction equipment or material is to be left within the City of Beacon Right-of-Way or adjacent properties at the end of each work day.
   h. The contractor shall be responsible for the restoration of any offsite disturbance and/or damage to existing offsite features and shall be repaired or replaced in kind at the expense of the contractor.

GRAPHIC SCALE
0 20 40 80
( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

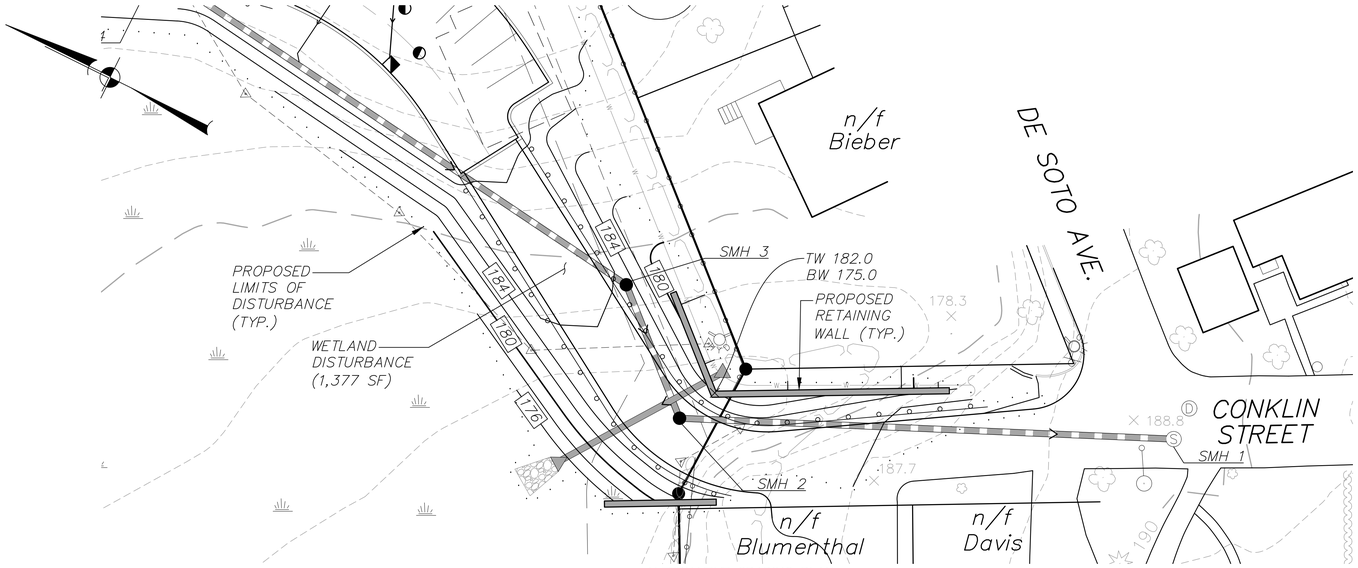
DRAWING:
EROSION & SEDIMENT CONTROL PLAN

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8-27-19 | DRAWN BY | J.F.R. |
| SCALE | 1" = 40' | CHECKED BY | A.D.T. |

DRAWING NO. SP-3
SHEET 6 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVERYONE\Admin\SP-3.dwg, 7/28/2020 12:20:33 PM, jmabe, 1:1




## ALTERNATIVE GRADING PLAN FOR CONKLIN STREET EMERGENCY ACCESS

Notes:
1. The above grading is proposed in the event that an emergency access must be connected through to Conklin Street. See Site Access Notes for primary and contingency options for accessing the subdivision.
2. This contingency emergency access point will generate 1,377 SF± of additional wetland disturbance. The wetland mitigation area shown in this plan set accounts for the potential additional disturbance on a 1:1 basis.
3. See site access notes on sheet CS-1.

GRAPHIC SCALE
0 10 20 40
( IN FEET )
1 inch = 20 ft.

## LEGEND

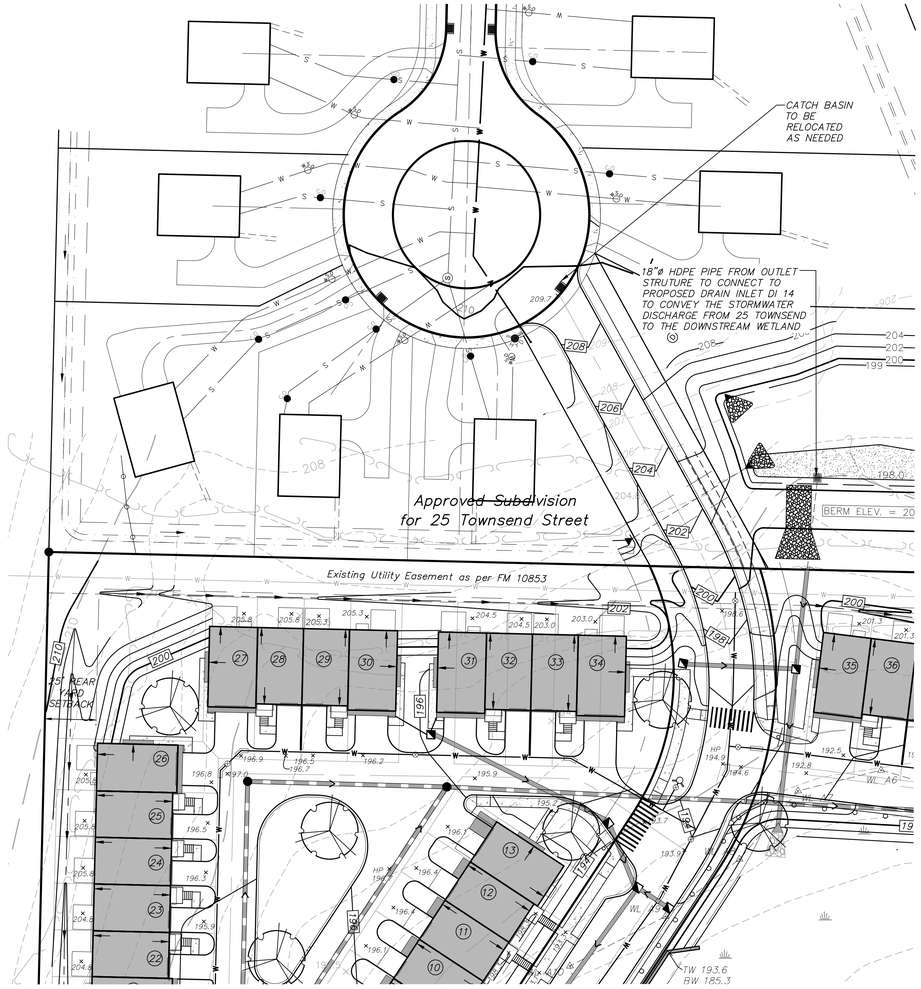
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND (WL A23 / WL A24)
- EXISTING WETLAND FLAG
- EXISTING TREE LINE
- PROPOSED SIGN
- PROPOSED DOOR LOCATION
- PROPOSED # OF STALLS TO BE STRIPED
- PROPOSED CONCRETE CURB
- PROPOSED EDGE OF SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED PAINTED STOPBAR
- PROPOSED CROSSWALK
- PROPOSED PARKING STRIPING
- PROPOSED LANDSCAPING
- PROPOSED GUIDE RAIL
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED BUILDING MOUNTED LIGHT

## WETLAND MITIGATION NOTES:

1. Limits of the wetland mitigation area will be staked prior to the commencement of mitigation.
2. In addition to the plantings shown hereon the mitigation area is to be seeded at a rate of 25 lbs. per acre: New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites from New England Wetland Plants, Inc. of Amherst, MA. See seeding notes for additional information.
3. All plant material to be nursery grown.
4. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
5. Plants shall be taken from healthy nursery stock.
6. Plants shall be grown under climate conditions similar to those in the locality of the project.
7. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
8. Provide a 3" layer of shredded mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
9. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.
10. All landscape and mitigation plantings shall be installed by hand. No mechanical equipment shall be permitted.

## WETLAND MITIGATION & POCKET POND PLANT LIST

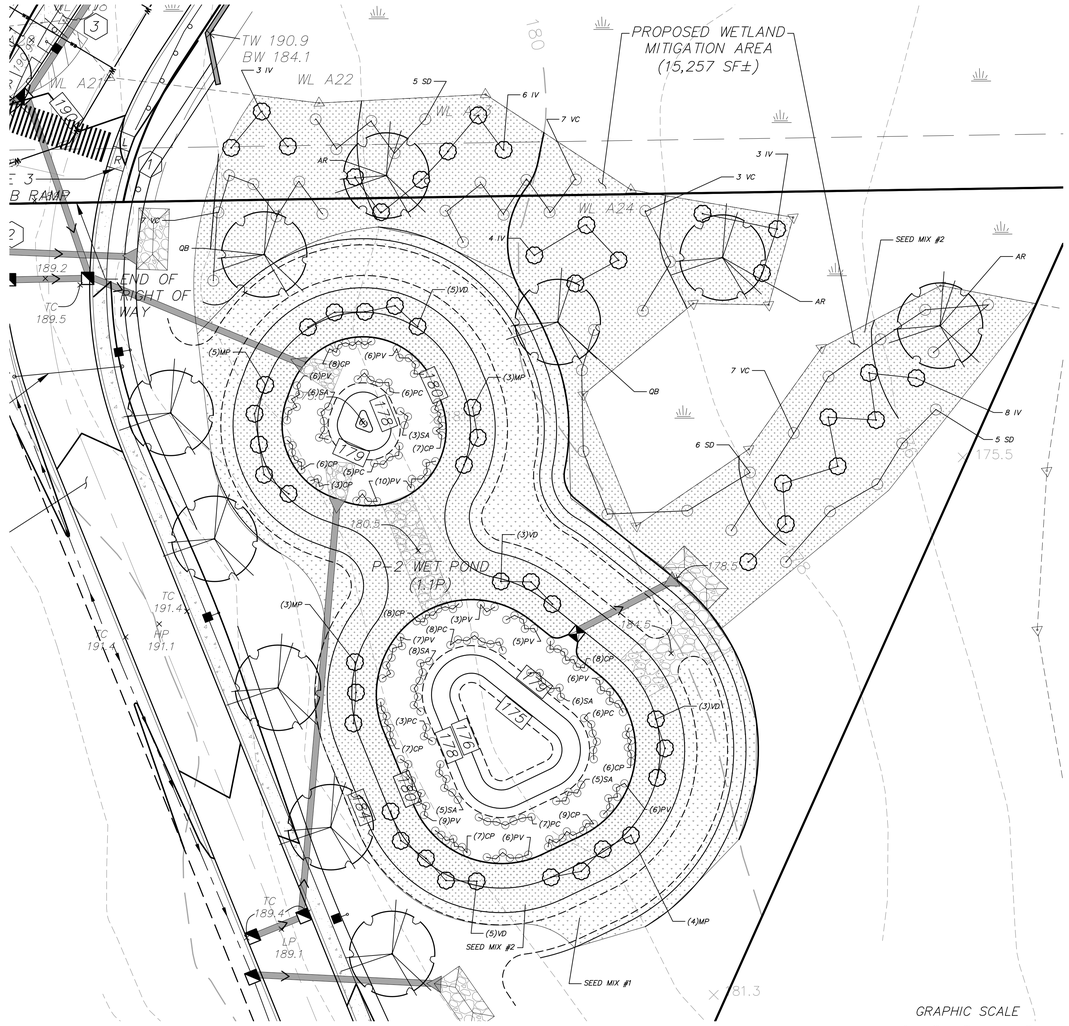
| QTY. | KEY | BOTANICAL/COMMON NAME | SIZE | ROOT |
|---|---|---|---|---|
| | | SHADE TREES | | |
| 3 | AR | Acer rubrum / Red Maple | 10'-12' HT. | B&B |
| 2 | QB | Quercus bicolor / Swamp White Oak | 10'-12' HT. | B&B |
| | | SHRUBS | | |
| 24 | IV | Ilex verticillata / Winterberry | | #5 CONT./15" O.C. |
| 15 | MP | Myrica pensylvanica / Bayberry | | #2 CONT./10" O.C. |
| 16 | SD | Salix discolor / Pussy Willow | | #5 CONT./15" O.C. |
| 24 | VC | Vaccinium corymbosum / Highbush Blueberry | | #5 CONT./15" O.C. |
| 16 | VD | Viburnum dentatum / Arrowwood Viburnum | | #2 CONT./10" O.C. |
| | | PERENNIALS/GRASSES/GROUND COVERS | | |
| 35 | PC | Pontederia cordata / Pickerelweed | | #1 CONT./36" O.C. |
| 33 | SA | Schoenoplectus acutus / Hard Stem Bulrush | | #1 CONT./36" O.C. |
| 64 | PV | Panicum virgatum / Switchgrass | | #1 CONT./36" O.C. |
| 69 | CP | Carex pensylvanica / Pennsylvania Sedge | | #1 CONT./24" O.C. |




## 25 TOWNSEND STREET THROUGH CONNECTION

Note: See site access notes on sheet CS-1.

GRAPHIC SCALE
0 15 30 60
( IN FEET )
1 inch = 30 ft.




## WETLAND MITIGATION & POCKET POND PLANTINGS & SEEDING PLAN

GRAPHIC SCALE
0 10 20 40
( IN FEET )
1 inch = 20 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 2 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
**BEACON VIEWS**
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
**ENLARGED PLANS**

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET 7 / 20 |
| DATE | 5-26-20 | DRAWN BY | J.F.R. | SP-4 | |
| SCALE | AS SHOWN | CHECKED BY | A.D.T. | | |

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVERSION\Admin\07-SP-4.dwg, 7/28/2020 1:56:58 PM, jmateo, 1:1




## LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CHAIN LINK FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING WETLAND
- EXISTING WETLAND FLAG (Wt. A23 / Wt. A24)
- EXISTING TREE LINE
- PROPOSED SIGN
- PROPOSED DOOR LOCATION
- PROPOSED # OF STALLS TO BE STRIPED
- PROPOSED CONCRETE CURB
- PROPOSED EDGE OF SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED PAINTED STOPBAR
- PROPOSED CROSSWALK
- PROPOSED PARKING STRIPING
- PROPOSED LANDSCAPING
- PROPOSED GUIDE RAIL
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED BUILDING MOUNTED LIGHT

## General Note:

1. Property line information for the Kerrigan and Bronson lots were taken from the Dutchess County Tax Map.
2. Layout information for the Highland Meadows Senior Housing property was taken from design plans by The Schwartz Architectural Group, P.C., dated November 3, 2011.

## OFF-SITE IMPROVEMENTS PLAN

Notes:
1. See Site Access Notes on Sheet CS-1.

GRAPHIC SCALE

0 20 40 80

( IN FEET )
1 inch = 40 ft.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

| NO. | DATE | REVISION | BY |
|---|---|---|---|

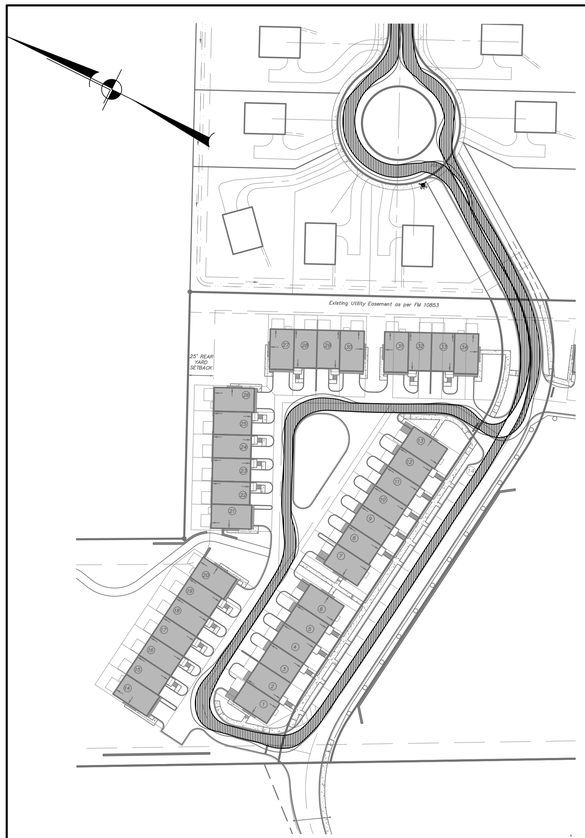
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT: BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

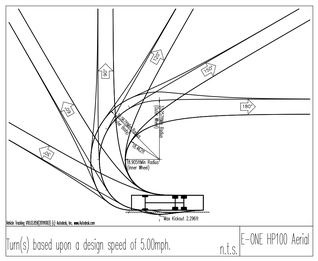
DRAWING: OFF SITE IMPROVEMENTS PLAN

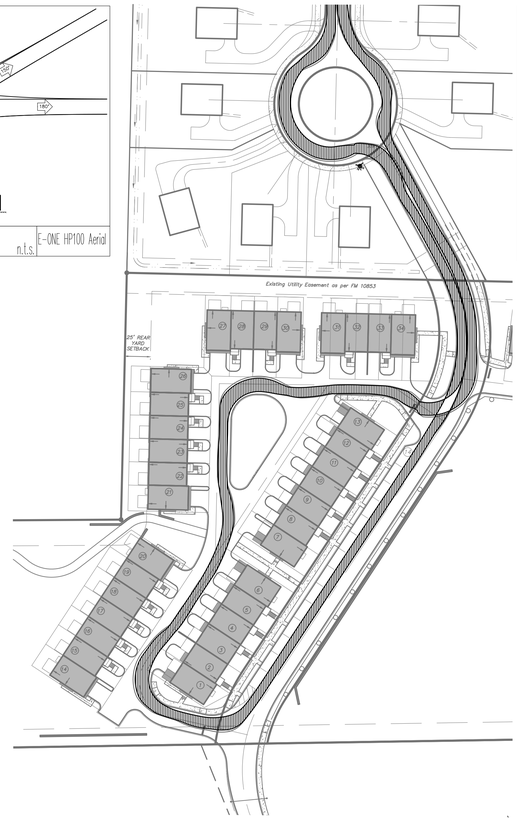
| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET |
| DATE | 7-28-20 | DRAWN BY | J.F.R. | SP-5 | 8 / 20 |
| SCALE | AS SHOWN | CHECKED BY | A.D.T. | | |

Z:\19131000 Admin\19131 SP-5.dwg, 7/28/2020 2:22:05 PM, jmann, 1:1

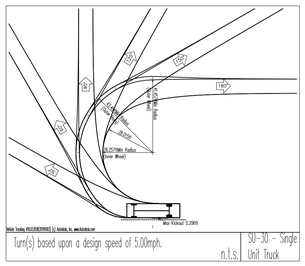


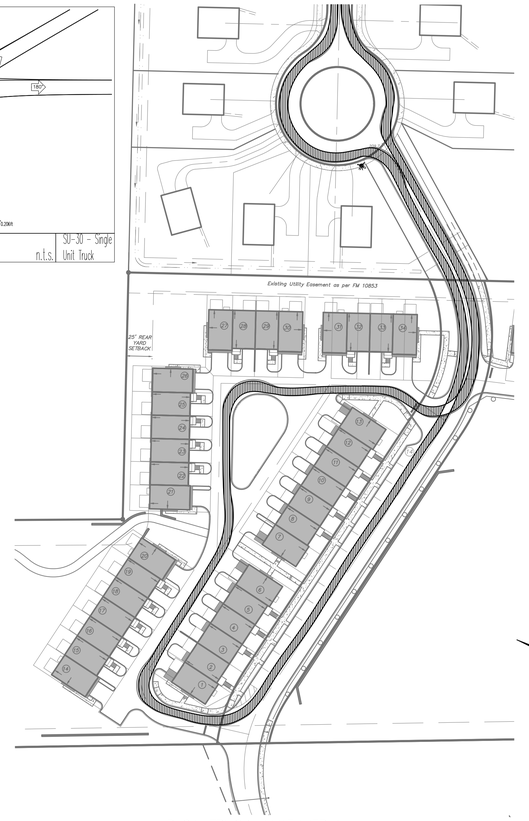

FIRE TRUCK MANEUVER 1
SCALE : 1" = 60'



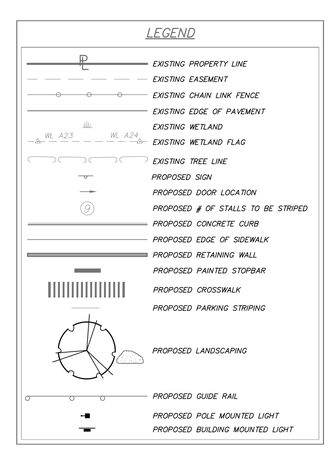




DELIVERY TRUCK MANEUVER 1
SCALE : 1" = 60'




PLOW TRUCK MANEUVER 1
SCALE : 1" = 60'



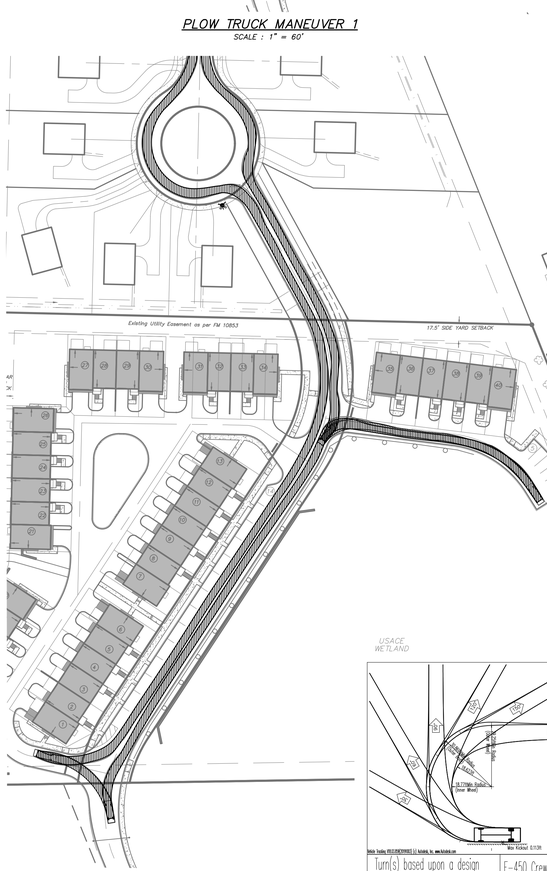




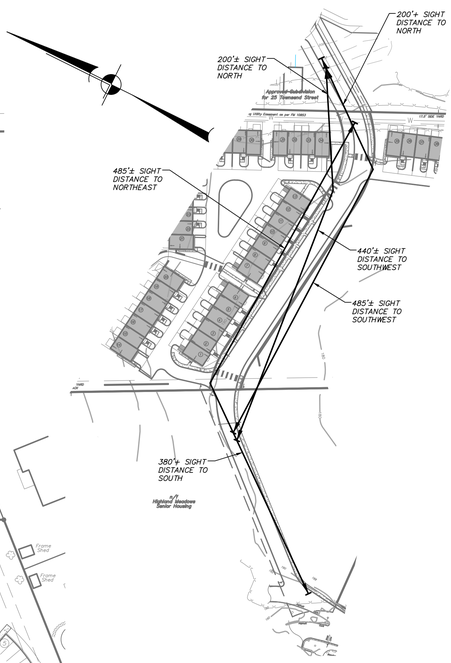
FIRE TRUCK MANEUVER 2
SCALE : 1" = 60'



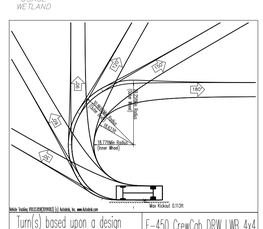

DELIVERY TRUCK MANEUVER 2
SCALE : 1" = 60'




PLOW TRUCK MANEUVER 2
SCALE : 1" = 60'




SIGHT DISTANCE ANALYSIS
SCALE : 1" = 100'




*REFER TO CS-1 FOR SITE ACCESS NOTES*

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 2 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
VEHICLE MANEUVERING PLAN

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 6-30-20 | DRAWN BY | J.F.R. |
| SCALE | AS SHOWN | CHECKED BY | A.D.T. |

DRAWING NO. SP-6
SHEET 9 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVERYBODY\Acad\09-SP-6.dwg, 7/28/2020 12:07:13 PM, jr.plot1.1




## Streetworks

**DESCRIPTION**

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

**GAN**=Galleon
**AF**=1A Drive Current
**01**=1
**LED**=Solid
**U**=Universal (120-277V)
**T4W**=Type IV Wide
**8030**=80 CRI 3000K[1]




**DIMENSIONS**






**GAN**
GALLEON LED

**1-10 Light Squares**
**Solid State LED**

**AREA / ROADWAY LUMINAIRE**
**GAN-AF-01-LED-U-T4W-8030**

## 1-Light Zinc Outdoor Wall Barn Light Sconce Lantern

by **Hampton Bay**

**Details**

| | | | |
|---|---|---|---|
| Compatible Bulb Type | CFL,Incandescent,LED | Exterior Lighting Product Type | Outdoor Lanterns |
| Fixture Color/Finish | Zinc | Fixture Material | Stainless Steel |
| Glass/Lens Type | No Glass/Lens | Included | Hardware Included |
| Light Bulb Base Code | E26 | Light Bulb Type Included | No Bulbs Included |
| Maximum Bulb Wattage | 60 | Maximum Wattage (watts) | 0 |
| Number of Lights | 1 Light | Outdoor Lighting Features | Dark Sky,Dimmable,Weather Resistant |
| Power Type | Hardwired | Power Type | Hardwired |
| Product Size | Small | Product Size | Medium |
| Product Weight (lb.) | 1.756 | Recommended Light Bulb Shape Code | A19 |
| Returnable | 180-Day | Sconce Type | Barn Light |
| Size | Medium | Style | Farmhouse,Industrial,Rustic |
| UL Listing | 1-UL Listed | Voltage Type | Line Voltage |



## LIGHTING NOTES:

1. All lighting shall be as noted on the plan or approved equal.
2. Style and finish of all luminaires to be selected by owner and approved by the Planning Board.
3. Site lights will be on photocells and will run from dusk to dawn.
4. Photometrics for building mounted lights are not depicted in this plan.
5. Type, location, and shading of all proposed lighting shall prevent the spillover of light onto all adjacent residential properties.

## LIGHT CONTOUR LEGEND

| | |
|---|---|
| 0.1 | 0.10 Foot Candles |
| 0.5 | 0.50 Foot Candles |
| 1 | 1.00 Foot Candles |

* Photometric calculations shown on plan are in foot candles.

## LUMINAIRE SCHEDULE

| Symbol | Qty | Catalog Number | Description | Lamp | Mounting Height |
|---|---|---|---|---|---|
| ▪■ | 14 | GAN-AF-01-LED --U--T4W-8030 | Galleon Area and Roadway Luminaire, 80 CRI, 3000K, Type 4 Distribution | LED | 12' – 0" |
| ▬ | 120 | – | 1-Light Zinc Outdoor Wall Barn Sconce Lantern Outfitted with 2700K 9W LED Bulbs CRI 80 | LED | 7' – 0" |

GRAPHIC SCALE
0 20 40 80
( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
**BEACON VIEWS**
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

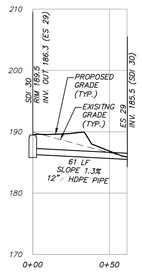
DRAWING:
**LIGHTING PLAN**

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8-27-19 | DRAWN BY | J.F.R. |
| SCALE | 1" = 40' | CHECKED BY | A.D.T. |

DRAWING NO. LP-1
SHEET 10 / 20

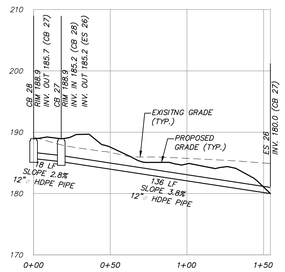
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E19\19100 Ashcroft LP\1 dwg, 7/30/2020 12:06:19 PM, jnunes, 1:1



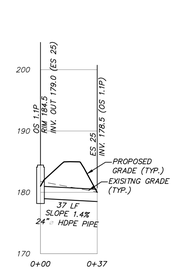

SDI 30 TO ES 29

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



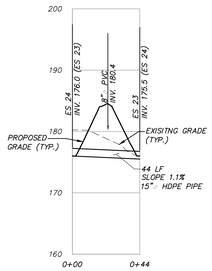

CB 28 TO ES 26

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



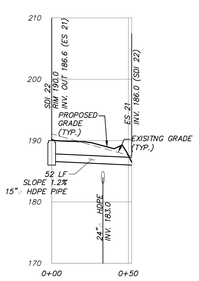

OS 1.1P TO ES 25

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



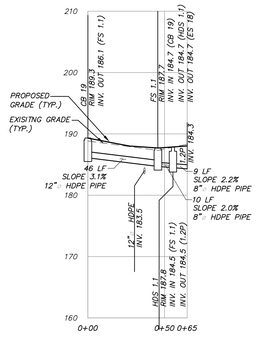

ES 24 TO ES 23

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



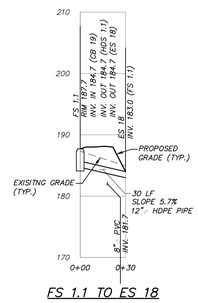

SDI 22 TO ES 21

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



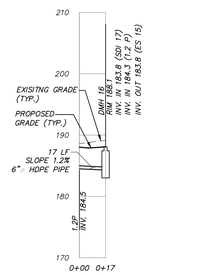

CB 19 TO INFILTRATION SYSTEM 1.2P

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



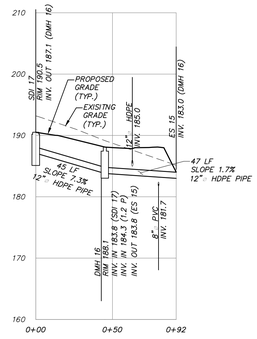

FS 1.1 TO ES 18

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



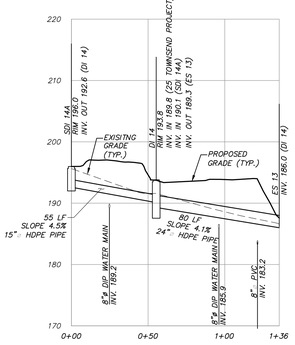

INFILTRATION SYSTEM 1.1P TO DMH 16

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



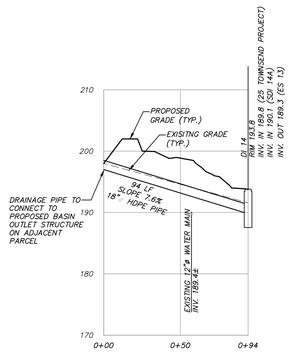

SDI 17 TO ES 15

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



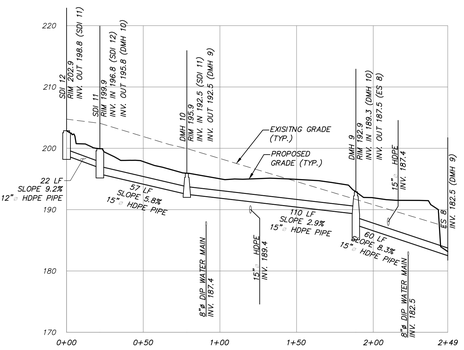

SDI 14A TO ES 13

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



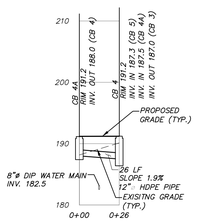

DRAINAGE EXTENSION FROM ADJACENT PROJECT TO DI 14

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



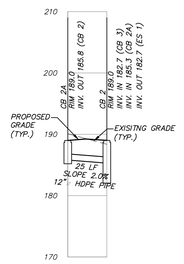

SDI 12 TO ES 8

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



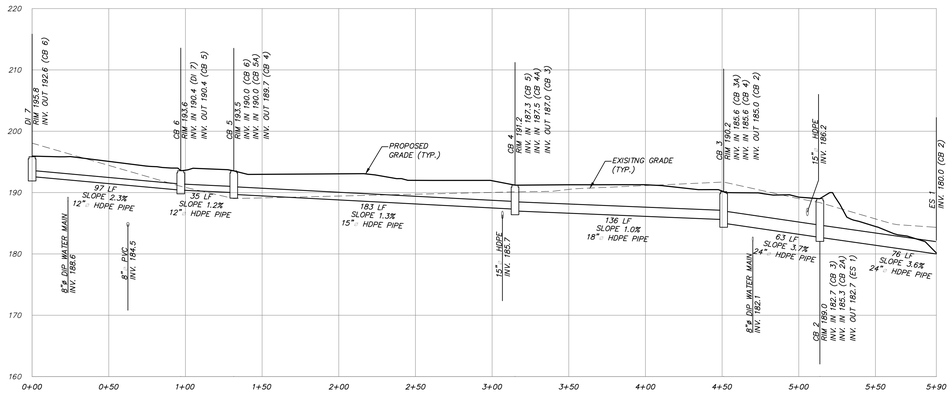

CB 4A TO CB 4

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



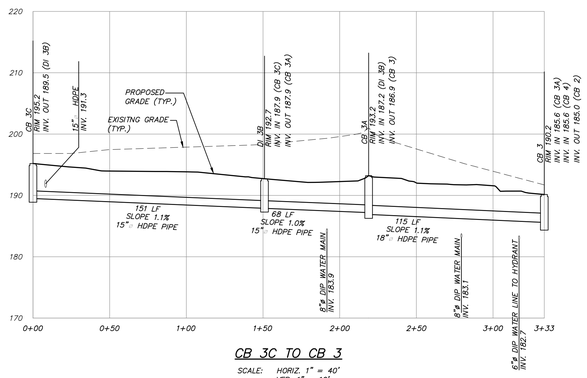

CB 2A TO CB 2

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



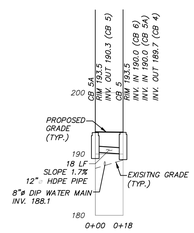

DI 7 TO ES 1

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'




CB 3C TO CB 3

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'




CB 5A TO CB 5

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'

GRAPHIC SCALE

0 20 40 80

( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 2 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

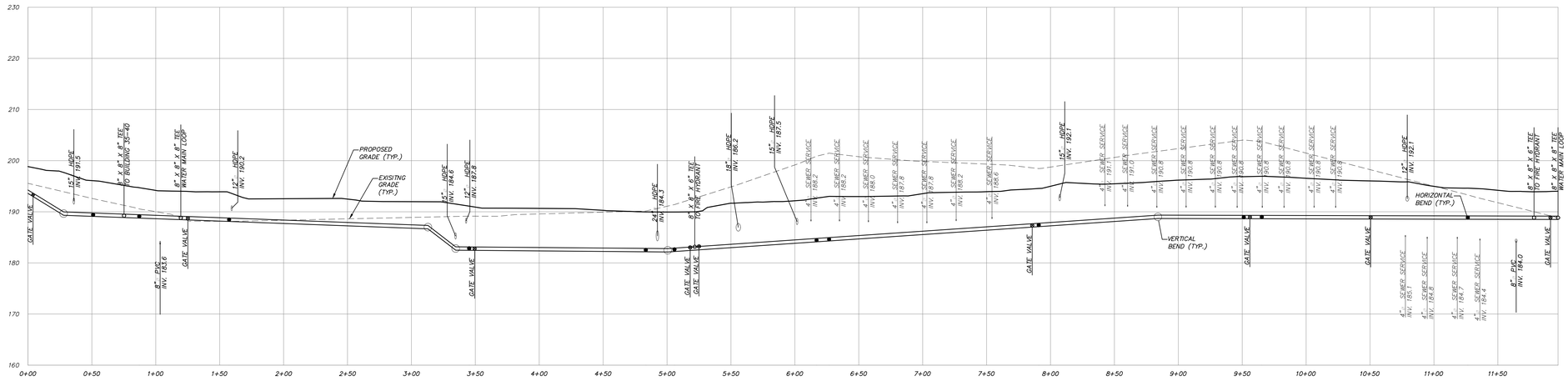
PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DRAINAGE PROFILES

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET |
| DATE | 8-27-19 | DRAWN BY | E.J.P. | PR-1 | 11 / 20 |
| SCALE | AS SHOWN | CHECKED BY | Z.M.P. | | |

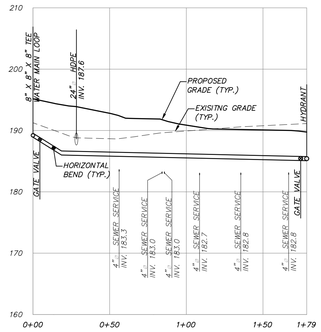
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\2019\19100 Kahn\11 PR 1-2.dwg, 7/28/2020 12:54:43 PM, jmann, 11



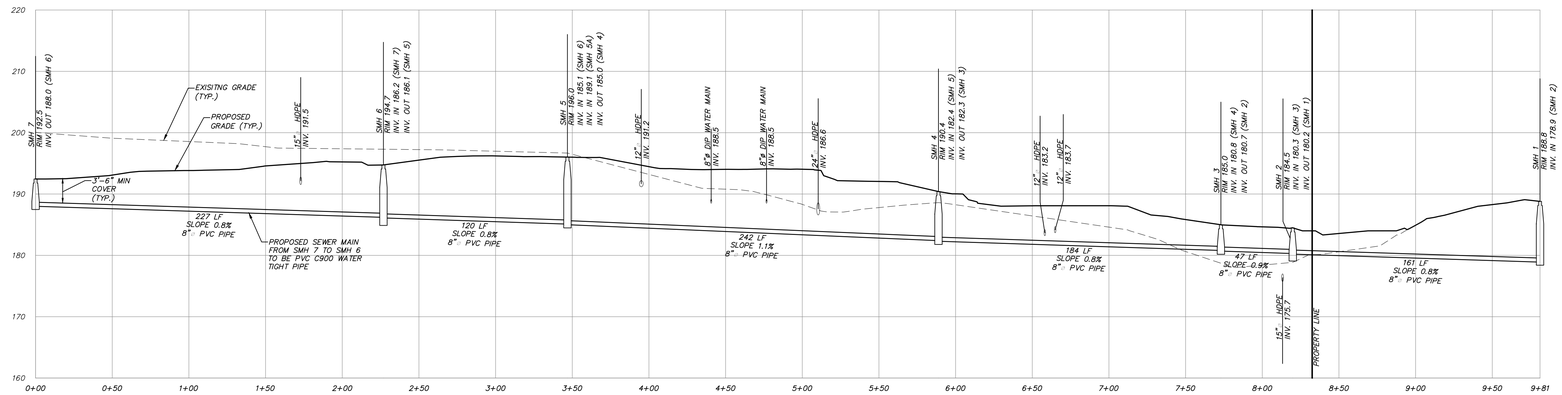

## PROPOSED WATER MAIN LOOP PROFILE

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'



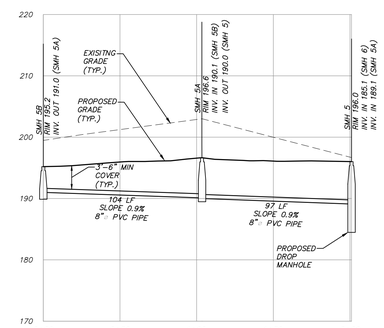

## PROPOSED WATER MAIN EXTENSION TO BUILDING 35-40

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'




## SMH 7 TO SMH 1

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'




## SMH 5B TO SMH 5

SCALE: HORIZ. 1" = 40'
VER. 1" = 10'

GRAPHIC SCALE
0 20 40 80
( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 2 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9090
(845) 225-9717 fax
www.insite-eng.com

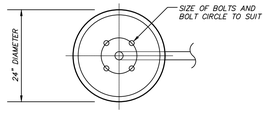
PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
WATER & SEWER PROFILES

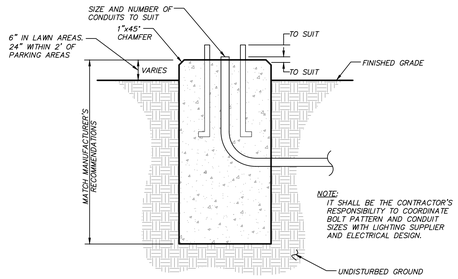
| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 1931.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET |
| DATE | 8-27-19 | DRAWN BY | E.J.P. | PR-2 | 12 / 20 |
| SCALE | AS SHOWN | CHECKED BY | Z.M.P. | | |

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\DATA\1931\00\Admin\1931.12.dwg, 7/28/2020 12:04:16 PM, Jmain, 1:1



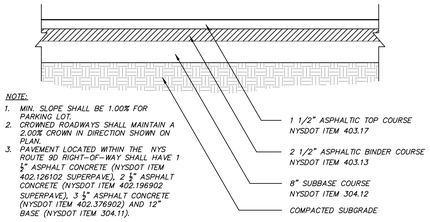

PLAN VIEW




SECTION

## LIGHT POLE BASE DETAIL

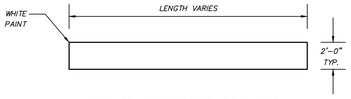
(N.T.S.)




NOTE:
1. MIN. SLOPE SHALL BE 1.00% FOR PARKING LOT.
2. CROWNED ROADWAYS SHALL MAINTAIN A 2.00% CROWN IN DIRECTION SHOWN ON PLAN.
3. PAVEMENT LOCATED WITHIN THE NYS ROUTE 9D RIGHT-OF-WAY SHALL HAVE 1 ½" ASPHALT CONCRETE (NYSDOT ITEM 402.126102 SUPERPAVE), 2 ½" ASPHALT CONCRETE (NYSDOT ITEM 402.196902 SUPERPAVE), 3 ½" ASPHALT CONCRETE (NYSDOT ITEM 402.376902) AND 12" BASE (NYSDOT ITEM 304.11).

## SITE PAVEMENT DETAIL

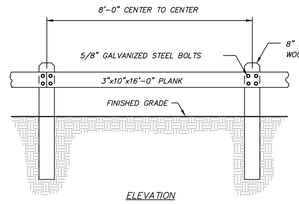
(N.T.S.)



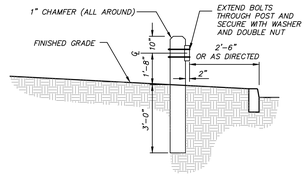

NOTE: INSTALLATION TO CONFORM WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS.

## PAINTED STOP BAR DETAIL

(N.T.S.)




ELEVATION

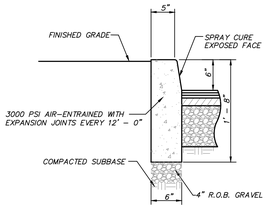



SECTION

NOTES:
1. ALL WOOD TO BE SEASONED NO.1 DOUGLAS FIR, SOUTHERN PINE OR OTHER APPROVED STRUCTURAL LUMBER.
2. ALL WOOD TO BE TREATED WITH AN APPROVED WOOD PRESERVATIVE SUITABLE FOR INSTALLATION IN AND ADJACENT TO GROUND SURFACES.

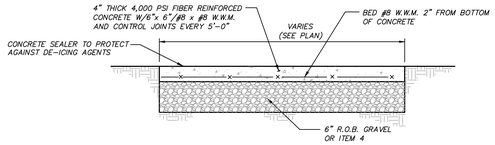
## WOOD GUIDE RAIL DETAIL

(N.T.S.)




## CONCRETE CURB DETAIL

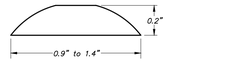
(N.T.S.)



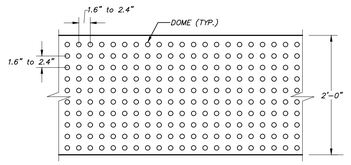

NOTE: INSTALL EXPANSION JOINTS EVERY 10'-0" AND CONTROL JOINTS EVERY 5'-0"

## CONCRETE SIDEWALK DETAIL

(N.T.S.)




TRUNCATED DOME SECTION



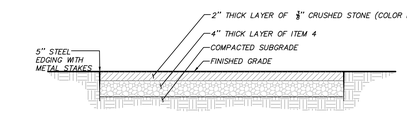

TRUNCATED DOME SPACING

## TRUNCATED DOME DETAIL

(N.T.S.)

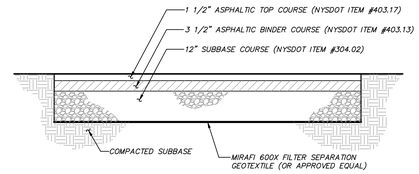
## TRUNCATED DOME DETECTABLE WARNING FIELD NOTES:

1. The detectable warning field shall consist of raised truncated domes with a nominal diameter of 0.9 inches, a nominal height of 0.2 inches, and a nominal spacing of 2.35 inches on center in accordance with the most recent version of ANSI ICC A117.1.
2. The details provided are not drawn to scale. The quantity of domes depicted on the detectable warning field (the domes and the entire 24 inch level surface) is for illustration only.
3. The size of the detectable warning field shall be 24 inches in the direction of travel and shall extend the full width of the curb ramp or flush surface, exclusive of side flares.
4. Detectable warnings shall be located so that the edge of the warning field nearest to the roadway or street surface is 6 inches to 9 inches from the edge of the roadway/street, or from the front of the dropped curb, where a dropped curb continues across the bottom of the sidewalk curb ramp.
5. Domes shall be aligned on a square grid in the predominant direction of travel.
6. The detectable warning field shall be yellow.



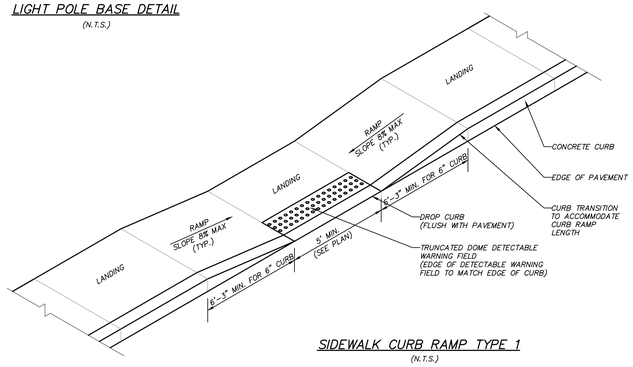

## GRAVEL WALKWAY DETAIL

(N.T.S.)



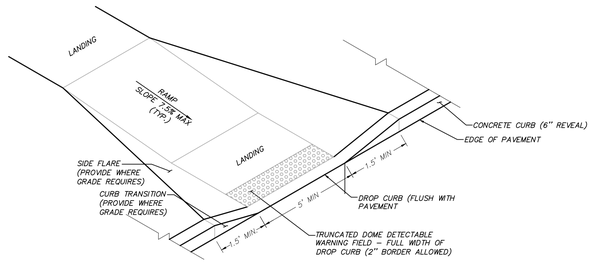

## RIGHT OF WAY ASPHALT DETAIL

(N.T.S.)



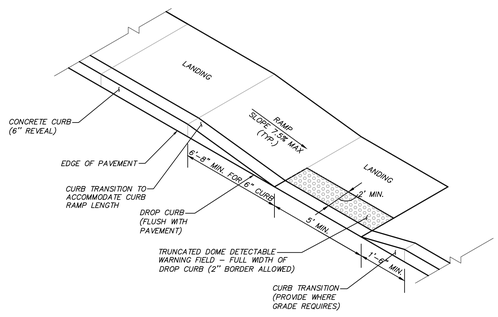

## SIDEWALK CURB RAMP TYPE 1

(N.T.S.)



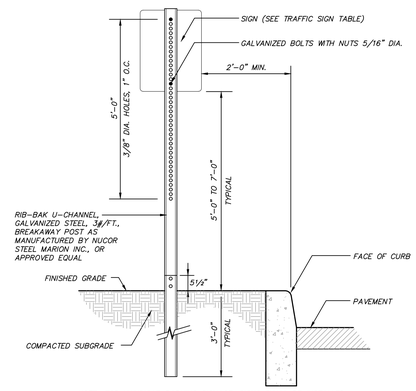

## SIDEWALK CURB RAMP TYPE 2

(N.T.S.)




## SIDEWALK CURB RAMP TYPE 3

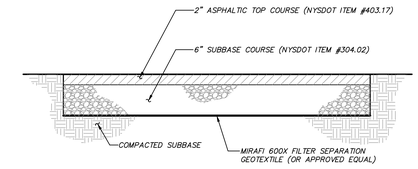
(N.T.S.)




NOTE: FOR HANDICAP PARKING SIGNAGE, SIGNS SHALL BE INSTALLED AT A CLEAR HEIGHT OF BETWEEN 5'-0" AND 7'-0" ABOVE GRADE OF PARKING SPACE AND SUCH THAT SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.

## TRAFFIC SIGN DETAIL

(N.T.S.)




## PRIVATE DRIVEWAY ASPHALT DETAIL

(N.T.S.)

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-emp.com

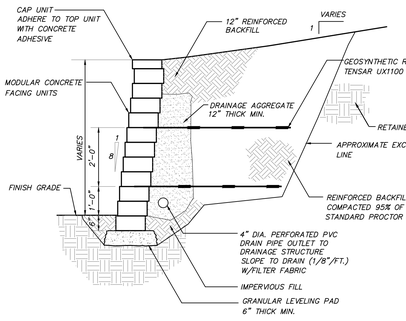
PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DETAILS

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. | DRAWING NO. | SHEET |
| DATE | 8-27-19 | DRAWN BY | J.F.R. | D-1 | 13 / 20 |
| SCALE | AS NOTED | CHECKED BY | A.D.T. | | |

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E\19131\00\dwg\13 D-1 Details.dwg, 7/28/2020 12:03:51 PM, jfrankel

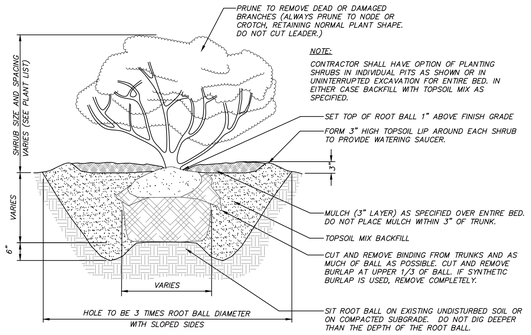



NOTES:

1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6".
8. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
9. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
10. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
11. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
12. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
13. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
14. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
15. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
16. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. MODULAR BLOCK RETAINING WALL AT STEPS TO BE INSTALLED VERTICALLY (NO BATTER)
18. MODULAR BLOCK RETAINING WALL MANUFACTURER TO SUPPLY CONSTRUCTION DETAILS OF WALL SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF NEW YORK.

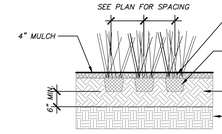
## MODULAR BLOCK RETAINING WALL DETAIL

(N.T.S.)



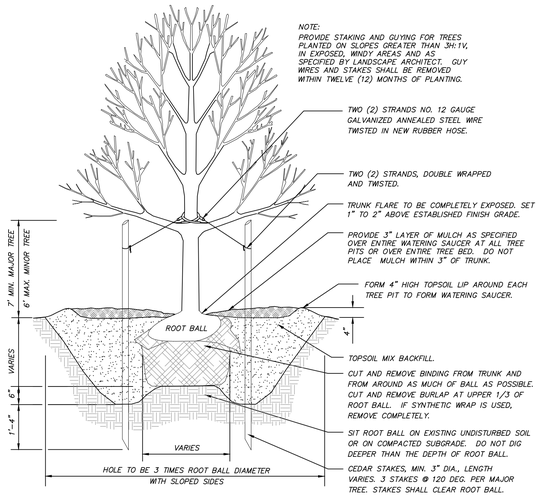

## SHRUB PLANTING DETAIL

(N.T.S.)



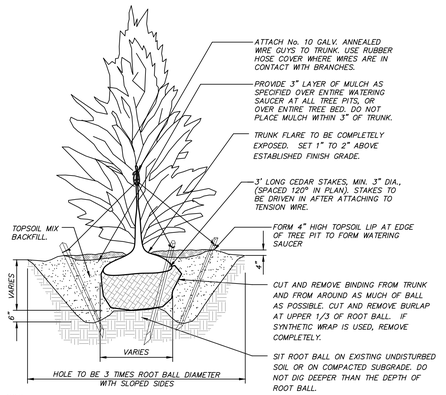

## PERENNIAL / ORNAMENTAL GRASS PLANTING DETAIL

(N.T.S.)




## TREE PLANTING DETAIL

(N.T.S.)




NOTE:
PROVIDE STAKING AND GUYING FOR TREES PLANTED ON SLOPES GREATER THAN 3H:1V, IN EXPOSED, WINDY AREAS AND AS SPECIFIED BY LANDSCAPE ARCHITECT. GUY WIRES AND STAKES SHALL BE REMOVED WITHIN TWELVE MONTHS OF PLANTING.

## EVERGREEN TREE PLANTING DETAIL

(N.T.S.)

## GENERAL SITE SEEDING NOTES:

1. All proposed seeded areas to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
   - select seed mixture per drawings and seeding notes.
   - fertilizer applied at the manufacturer's recommended rate using Lesco 10-0-18 (no phosphorous) fertilizer or equivalent.
   - mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000 s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
   - If the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
3. The seed mixes as specified on these drawings are as follows:
   A. Seed Mix for lawn areas and mow strip along roads at a rate of 100 lbs. per acre:

| | |
|---|---|
| Kentucky Bluegrass | 20% |
| Creeping Red Fescue | 40% |
| Perennial Ryegrass | 20% |
| Annual Ryegrass | 20% |

4. Seed Mix #2 for areas as shown on the drawings, including tops of berms and backslopes of embankments of stormwater basins at a rate of 25 lbs. per acre: New England Conservation/Wildlife Mix from New England Wetland Plants, Inc. of Amherst, MA.
5. Seed Mix #3 for areas as shown on the drawings in the biofiltration filter at a rate of 18 lbs per acre: Erosion Control/ Restoration Mix for Detention Basins and Moist Sites from New England Wetland Plants, Inc. of Amherst MA.

## GENERAL PLANTING NOTES:

1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded pine bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.

## GENERAL SITE SEEDING NOTES:

1. All proposed seeded areas to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
   - select seed mixture per drawings and seeding notes.
   - fertilizer applied at the manufacturer's recommended rate using Lesco 10-0-18 (no phosphorous) fertilizer or equivalent.
   - mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
   - If the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
3. Seed Mix #1 for areas as shown on the drawings, including tops of berms and backslopes of embankments of stormwater basins at a rate of 25 lbs. per acre: New England Conservation/Wildlife Mix from New England Wetland Plants, Inc. of Amherst, MA.
4. Seed Mix #2 for areas as shown on the drawings in stormwater basins with no standing water at a rate of 18 lbs per acre: Erosion Control/ Restoration Mix for Detention Basins and Moist Sites from New England Wetland Plants, Inc. of Amherst MA.
5. Seed Mix #3 for all other disturbed areas not specified as seed mix #1 or #2. Primarily for lawn areas and mow strip along roads at a rate of 100 lbs. per acre:

| | |
|---|---|
| Kentucky Bluegrass | 20% |
| Creeping Red Fescue | 40% |
| Perennial Ryegrass | 20% |
| Annual Ryegrass | 20% |

6. Seed mixes to be planted between March 21 and May 20, or between August 15 and October 15 or as directed by project representative.
7. Mulch: Salt hay or small grain straw applied at a rate of 90 lbs./1000 S.F. or 2 tons/acre, to be applied and anchored according to "New York Standards and Specification For Erosion and Sediment Control," latest edition.
8. Grass seed mix may be applied by either mechanical or hydroseeding methods. Seeding shall be performed in accordance with the current edition of the "NYSDOT Standard Specification, Construction and Materials, Section 610-3.02, Method No. 1". Hydroseeding shall be performed using materials and methods as approved by the site engineer.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

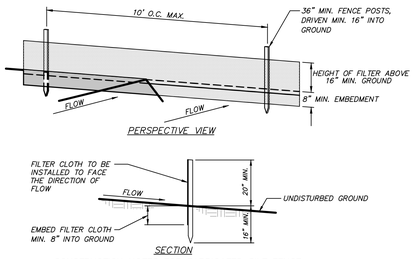
DRAWING:
DETAILS

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8-27-19 | DRAWN BY | J.F.R. |
| SCALE | AS NOTED | CHECKED BY | A.D.T. |

DRAWING NO. D-2
SHEET 14 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\ENTER\2020 Admin\13-1-3.dwg, 7/28/2020 10:00:30 PM, jfrankel, 1:1




CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

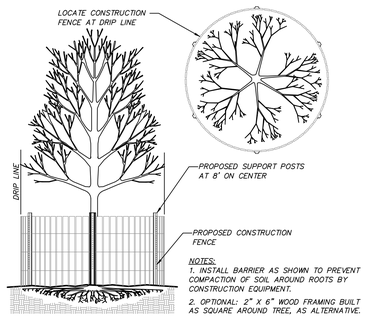
POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FILTER CLOTH: FILTER X, MIRAFI 100X, STABLINKA T140N, OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

## SILT FENCE DETAIL

(N.T.S.)

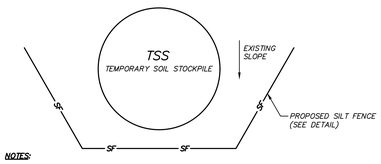



## TREE PROTECTION DETAIL

(N.T.S.)

## TREE PROTECTION NOTES:

1. Trees to be preserved in proximity to disturbance areas shall be marked in the field by the Landscape Architect prior to start of construction.
2. Install tree protection measures prior to start of site clearing & construction.
3. No construction equipment shall be parked and no earth or construction materials shall be stockpiled or stored under the canopy of trees to be preserved.
4. During tree removal operations associated with construction, do not damage adjacent trees to remain. Lower limbs and tree trunks, do not drop them.
5. Carefully tie back any tree branches that conflict with construction equipment.
6. Where trenching for utilities is required within a root zone, tunneling under and around roots shall be by hand digging. If roots 3" or larger are encountered immediately adjacent to the location of new construction and relocation is not practical, the roots shall be hand pruned under the supervision of a Certified Arborist or Landscape Architect to 6" back from the new construction limit. All exposed roots to receive appropriate treatment prior to backfilling.
7. If tree protection fencing to protect the root zone is not possible, six to eight inches of wood chip mulch and 3/4 inch plywood shall be placed over the entire affected root zone area to prevent soil compaction.
8. Any tree damaged during construction activities must be immediately repaired by a qualified arborist at no additional cost to the owner.

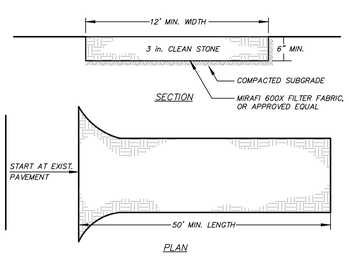



NOTES:

1. AREA CHOSEN FOR STOCKPILE LOCATION SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE IMMEDIATELY SEEDED WITH K31 PERENNIAL TALL FESCUE.
4. ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED ON THE DOWNGRADIENT SIDE.

## TEMPORARY SOIL STOCKPILE DETAIL

(N.T.S.)

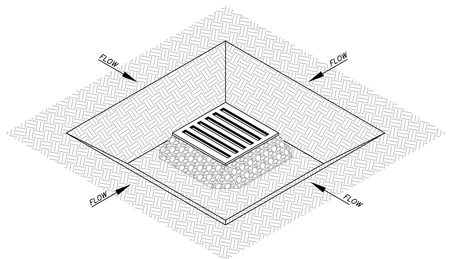


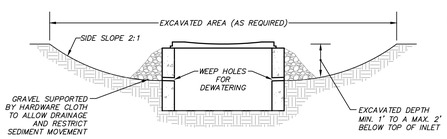

INSTALLATION NOTES

1. STONE SIZE – USE 3" STONE
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.)
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF SPING 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 RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. 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 CONSTRUCTION ENTRANCE DETAIL

(N.T.S.)




1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY, AND STABILIZE WITH PERMANENT SEEDING
5. MAXIMUM DRAINAGE AREA = 1 ACRE

## EXCAVATED DROP INLET PROTECTION DETAIL

(N.T.S.)

## REQUIRED EROSION CONTROL SWPPP CONTENTS:

Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-20-001), all Stormwater Pollution Prevention Plan's (SWPPP) shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of required SWPPP components is provided in accordance with Part III.B.1a–1 of General Permit GP-0-20-001:

a. Background Information: The subject project consists of the construction of (7) townhome buildings with appurtenances and utilities.

b. Site map / construction drawing: These plans serve to satisfy this SWPPP requirement.

c. Description of the soils present at the site: Onsite soils located within the proposed limits of disturbance consist of Bernardston Silt Loam (BaB), Canandigua Silt Loam (Ca), and Nassau–Cardigan Complex (NwC) as identified on the Soil Conservation Service Websoil Survey. These soil types belong to the Hydrologic Soil Group "C/D" and "D".

d. Construction phasing plan / sequence of operations: The Construction Sequence and phasing found on these plans provide the required phasing. A Construction Sequence and Erosion and Sediment Control Maintenance Schedule has been provided. The Sedimentation and Erosion Control Notes contained hereon outline a general sequence of operations for the proposed project. In general all erosion and sediment control facilities shall be installed prior to commencement with land disturbing activities, and areas of disturbance shall be limited to the shortest period of time as practicable.

e. Description of erosion and sediment control practices: This plan, and details / notes shown hereon serve to satisfy this SWPPP requirement.

f. Temporary and permanent soil stabilization plan: The Sedimentation and Erosion Control Notes and Details provided heron identify temporary and permanent stabilization measures to be employed with respect to specific elements of the project, and at the various stages of development.

g. Site map / construction drawing: This plan set serves to satisfy this SWPPP requirement.

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices: The details, Erosion and Sediment Control Notes, and Erosion and Sediment Control Maintenance Schedule serve to satisfy this SWPPP requirement.

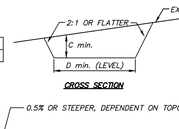
i. An inspection schedule: Inspections are to be performed twice weekly and by a qualified professional as required by the General Permit GP-0-20-001. In addition the NYSDEC Trained Contractor shall perform additional inspections as cited in the Erosion and Sediment Control Notes.

j. A description of pollution prevention measures that will be used to control litter, construction chemicals and construction debris: In general, all construction litter / debris shall be collected and removed from the site. The general contractor shall supply either waste barrels or dumpster for proper waste disposal. Any construction chemicals utilized during construction shall either be removed from site daily by the contractor or stored in a structurally sound and weatherproof building. No hazardous waste shall be disposed of onsite, and shall ultimately be disposed of in accordance with all federal, state and local regulations. Material Safety Data Sheets (MSDS), material inventory, and emergency contact numbers shall be maintained by the general contractor for all construction chemicals utilized onsite. Finally, temporary sanitary facilities (portable toilets) shall be provided onsite during the entire length of construction, and inspected weekly for evidence of leaking holding tanks.

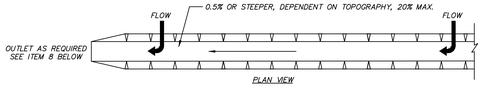
k. A description and location of any stormwater discharges associated with industrial activity other than construction at the site: There are no known industrial stormwater discharges present or proposed at the site.

l. Identification of any elements of the design that are not in conformance with the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." All proposed elements of this SWPPP have been designed in accordance with the "New York Standards and Specifications for Erosion and Sediment Control."

| SWALE A (< 5 AC.) | SWALE B (5–10 AC.) |
|---|---|
| C: 1' | 1' |
| D: 4' | 6' |




CROSS SECTION




CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTION-ABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.
9. STABILIZATION SHALL BE AS PER THE CHART BELOW:

FLOW CHANNEL STABILIZATION

| TYPE OF TREATMENT | CHANNEL GRADE | A (5 AC. OR LESS) | B (5–10 AC.) |
|---|---|---|---|
| 1 | 0.5–3.0% | SEED AND STRAW MULCH | SEED AND STRAW MULCH |
| 2 | 3.1–5.0% | SEED AND STRAW MULCH | SEED USING JUTE OR EXCELSIOR |
| 3 | 5.1–8.0% | SEED WITH JUTE OR EXCELSIOR; SOD | LINED RIP–RAP 4–8" RECYCLED CONCRETE EQUIVALENT |
| 4 | 8.1–20% | LINED 4–8" RIP–RAP | ENGINEERED DESIGN |

## TEMPORARY SWALE DETAIL

(N.T.S.)

## REQUIRED POST–CONSTRUCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP–0–20–001), all construction projects needing post–construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post–construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a–g and III.B.3:

   a. Identification of all post–construction stormwater management practices to be constructed as part of the project; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

   b. A site map/construction drawing(s) showing the specific location and size of each post–construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

A Stormwater Modeling and Analysis Report including pre–development conditions, post–development conditions, the results of the stormwater modeling, a summary table demonstrating that each practice has been designed in conformance with the sizing criteria, identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required. The required analysis will be provided in a Preliminary Stormwater Pollution Prevention Plan.

   c. Soil testing results and locations. This SWPPP requirement will be provided in the Preliminary Stormwater Pollution Prevention Plan.

   d. Infiltration testing results. This SWPPP requirement will be provided in the Preliminary Stormwater Pollution Prevention Plan.

   e. 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. The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.

2. Enhanced Phosphorus Removal Standards – Beginning on September 30, 2008, 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 Enhanced Phosphorus Removal Standards included in the most current version of the technical standard, New York Stormwater Management Design Manual. At a minimum, the post–construction stormwater management practice component of the SWPPP shall include items 2.a – 2.1 above: These standards do not apply to the subject project.

## EROSION & SEDIMENT CONTROL NOTES:

1. The Erosion and Sediment Control Plan is only to be referred to for the installation of erosion and sediment control measures. For all other construction related activities, including, but not limited to, grading and utilities, refer to the appropriate drawings.
2. Each contractor or subcontractor responsible for soil disturbance shall have a NYSDEC trained contractor onsite during soil disturbing activities. The NYSDEC trained contractor will be responsible to comply with the stormwater pollution prevention plan and for the implementation and maintenance of erosion and sediment control measures on this site prior to and during construction. The NYSDEC trained contractor shall sign a certification statement required by GP–0–20–001.
3. All construction activities involving the removal or disposition of soil are to be provided with appropriate protective measures to minimize erosion and contain sediment disposition within. Minimum soil erosion and sediment control measures shall be implemented as shown on the plans and shall be installed in accordance with "New York Standards and Specifications For Erosion and Sediment Control," latest edition.
4. Wherever feasible, natural vegetation should be retained and protected. Disturbance shall be minimized in the areas required to perform construction. No more than 5 acres of unprotected soil shall be exposed at any one time, unless prior authorization is granted by the MS4.
5. When land is exposed during development, the exposure shall be kept to the shortest practical period of time, but in no case more than 7 days after the construction activity in that portion of the site has ceased. Disturbance shall be minimized in the areas required to perform construction.
6. All construction vehicles shall be kept clear of the watercourses and wetland control areas and outside the areas of proposed development. Silt fence and orange construction fence shall be installed in the areas where the grading is in close proximity of the watercourses or wetland control areas.
7. The stabilized construction entrance and silt fence shall be installed as shown on the plans prior to beginning any clearing, grubbing or earthwork.
8. All topsoil to be stripped from the area being developed shall be stockpiled and immediately seeded with a rye grass mixture having a quick germination time.
9. Any graded areas not subject to further disturbance or construction traffic shall, within 7 days of final grading, receive permanent vegetation cover in combination with a suitable mulch. Refer to "Site Seeding Notes" for additional detail and application rate.
10. Grass seed mix may be applied by either mechanical or hydroseeding methods. Turf establishment shall be performed in accordance with the current edition of the NYSDOT Standard Specification, Construction and Materials, Section 610–3.02, Method No. 1".
11. Cut or fill (all) slopes steeper than 3:1 shall be stabilized immediately after grading with a rolled erosion control product (RECP) such as, Curlex I Single Net Erosion Control Blanket, or approved equal.
12. Paved roadways shall be kept clean at all times.
13. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
14. All storm drainage outlets shall be stabilized, as required, before the discharge points become operational.
15. Stormwater from disturbed areas must be passed through erosion control barriers before discharge beyond disturbed areas or discharged into other drainage systems.
16. Erosion and sediment control measures shall be inspected and maintained on a daily basis by the NYSDEC Trained Contractor. to insure that channels, temporary and permanent ditches and pipes are clear of debris, that embankments and berms have not been breached and that all straw bales and silt fences are intact. Any failure of erosion and sediment control measures shall be immediately repaired by the contractor and inspected for approval by the site engineer.
17. Dust shall be controlled by sprinkling or other approved methods as necessary, or as directed by the trained contractor or site engineer.
18. Cut and fills shall not endanger adjoining property, nor divert water onto the property of others.
19. All fills shall be placed and compacted in 6" lifts to provide stability of material and to prevent settlement.
20. The NYSDEC Trained Contractor shall inspect downstream conditions for evidence of sedimentation on a weekly basis and after rainstorms.
21. As warranted by field conditions, special additional erosion and sediment control measures, as specified by the site engineer and the Town Engineer shall be installed by the contractor.
22. Erosion and sediment control measures shall remain in place until all disturbed areas are suitably stabilized.
23. After completion of the site improvements, the owner will assume responsibility for maintenance of the access drive, parking lot, drainage system and stormwater facilities. Each spring the paved areas shall be cleaned to remove the winter accumulation of traction sand. After this is completed all drain inlet and catch basin sumps should be cleaned. All pipes should be checked for debris and blockage and cleaned as required. During the cleaning process, the drain inlets, catch basins and pipes should be inspected for structural integrity and overall condition. Repairs and/or replacements should be made as required.
24. Inspection of the stormwater basin should be performed every 6 months and after large storm events. These inspections should, at a minimum, check the outlet pipes for blockage and the general overall integrity of the basin and appurtenances.
25. Maintain basin vegetation including removal of trees and replacement of vegetation that should die. Remove any litter which accumulates as necessary. Typically, the accumulated silt will be required to be removed every 10 to 20 years. Any accumulated silt shall be removed from the stormwater basins once the site has been stabilized.
26. Refer to the Stormwater Pollution Prevention Plan for additional details regarding long–term maintenance of the storm drainage facilities.

## EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

| | MONITORING REQUIREMENTS | | | MAINTENANCE REQUIREMENTS | |
|---|---|---|---|---|---|
| PRACTICE | DAILY | WEEKLY | AFTER RAINFALL | DURING CONSTRUCTION | AFTER CONSTRUCTION |
| SILT FENCE BARRIER | – | Inspect | Inspect | Clean/Replace | Remove |
| STABILIZED CONSTRUCTION ENTRANCE | Inspect | – | Inspect | Clean/Replace Stone and Fabric | Remove |
| DUST CONTROL | Inspect | – | Inspect | Mulching/ Spraying Water | N/A |
| *VEGETATIVE ESTABLISHMENT | – | Inspect | Inspect | Water/Reseed/ Remulch | Reseed to 80% Coverage |
| INLET PROTECTION | – | Inspect | Inspect | Clean/Repair/ Replace | Remove |
| SOIL STOCKPILES | – | Inspect | Inspect | Mulching/ Silt Fence Repair | Remove |
| SWALES | – | Inspect | Inspect | Clean/Mulch/ Repair | Mow Permanent Grass/Replace/ Repair Rip Rap |
| CHECK DAMS | – | Inspect | Inspect | Clean/Replace Stones/Repair | Clean/Replace Stones/Repair |
| CONCRETE DRAINAGE STRUCTURES | – | Inspect | Inspect | Clean Sumps/ Remove Debris/ Repair/Replace | Clean Sumps/ Remove Debris/ Repair/Replace |
| DRAINAGE PIPES | – | Inspect | Inspect | Clean/Repair | Clean/Repair |
| ROAD & PAVEMENT | – | Inspect | Inspect | Clean | Clean |

* Permanent vegetation is considered stabilized when 80% of the plant density is established. Erosion control measures shall remain in place until all disturbed areas area permanently stabilized.

Note: The party responsible for implementation of the maintenance schedule during and after construction is:

BEACON VIEWS, LLC
500 RIVER AVENUE
WAKEFIELD, NEW JERSEY 08701

and/or the current owner(s) of the subject property.

## SOIL RESTORATION REQUIREMENTS[1,2]

(ONSITE SOILS WITHIN THE LIMIT OF DISTURBANCE BELONG TO THE HYDROLOGIC SOIL GROUP (HSG) C/D)

| TYPE OF SOIL DISTURBANCE | SOIL RESTORATION REQUIREMENT | | COMMENTS/EXAMPLES |
|---|---|---|---|
| No soil disturbance | Restoration not permitted | | Preservation of Natural Features |
| Minimal soil disturbance | Restoration not required | | Clearing and grubbing |
| Areas where topsoil is stripped only – no change in grade | ~~HSG A & B~~ ~~Apply 6" of topsoil~~ | HSG C & D Aerate[3] and apply 6" of topsoil | Protect area from any ongoing construction activities |
| Areas of cut or fill | ~~HSG A & B~~ ~~Aerate and apply 6" of topsoil~~ | HSG C & D Apply full Soil Restoration[4] | |
| Heavy traffic areas on site (especially in a zone 5–25 feet around buildings but not within a 5 foot perimeter around foundation walls.) | Apply full Soil Restoration[5] (de–compaction and compost enhancement)[6] | | |
| Areas where runoff reduction and/or infiltration practices are applied | Restoration not required, but may be applied for appropriate practices. | | Keep construction equipment from crossing these areas. To protect newly installed practices from any ongoing construction activities construction a single phase operation fence area. |
| ~~Redevelopment projects~~ | ~~Soil restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.~~ | | |

1. Table taken from Chapter 5 of the "New York State Stormwater Management Design Manual"
2. Items struck out on the table are items that are not applicable to this project.
3. Aeration includes the use of machines such as tractor–drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which functions like a mini–subsoiler.
4. Per "Deep Ripping and Decompaction, DEC 2008"
5. During periods of relatively low to moderate subsoil moisture, the disturbed soils are returned to rough grade and the following Soil Restoration steps applied:
   5.1. Apply 3 inches of compost over subsoil.
   5.2. Till compost into subsoil to a depth of at least 12 inches using a cat–mounted ripper, tractor–mounted disc, or tiller, mixing, and circulating air and compost into subsoils.
   5.3. Rock–pick until uplifted stone/rock materials of four inches and larger size area cleaned off the site.
   5.4. Apply topsoil to a depth of 6 inches.
   5.5. Vegetate as required by Erosion & Sediment Control Note #9.
   5.6. Tilling should not be performed within the drip line of any existing trees or over any utility installations that are within 24 inches of the surface
6. Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7–28–20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6–30–20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5–26–20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4–28–20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT: BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING: DETAILS

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8–27–19 | DRAWN BY | J.F.R. |
| SCALE | AS NOTED | CHECKED BY | A.D.T. |

DRAWING NO. D–3
SHEET 15 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E\19131\100 Admin\13 Sh - S Amy_7\26\20201119 9:52 AM_jrosen.11

# SEWER TESTING PROCEDURES

## TESTS FOR NON-PRESSURE PIPELINES FOR TRANSPORT OF SEWAGE

*The leakage shall be determined by exfiltration, infiltration or low pressure air.*

A. *Exfiltration Testing*

1. *Exfiltration tests shall be made by filling a section of pipeline with water and measuring the quantity of leakage.*
2. *The head of water at the beginning of the test shall be at least 2 feet above the highest pipe within the section being tested.*
   a. *Should groundwater be present within the section being tested, the head of water for the test shall be 2 feet above the hydraulic gradient of the groundwater.*
   b. *Should the requirement of 2 feet of water above the highest pipe subject any joint at the lower end of the test section to a differential head of greater than 11.5 feet, another method of testing shall be employed.*

B. *Infiltration Testing*

1. *Infiltration tests will be allowed only when the water table gauges determine the groundwater level to be 2 feet or more above the highest pipe of the section being tested.*
2. *Infiltration test shall be made by measuring the quantity of water leaking into a section of pipeline.*
3. *Measurement of the infiltration shall be by means of a calibrated weir constructed at the outlet of the section being tested.*

C. *Allowable Leakage for Non-Pressure Pipelines*

1. *The allowable leakage (exfiltration or infiltration) for non-pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per 1000 feet of pipe:*

| Type of Pipe | Leakage |
|---|---|
| Ductile iron – mechanical or push-on joints | 100 |
| Polyvinyl chloride, thermal plastic or fiberglass with rubber joints | 100 |
| Cast iron soil pipe | 0 |

2. *Regardless of the above allowable leakage, any spurting leaks detected shall be permanently stopped.*

D. *Low Pressure Air Testing*

1. *Air testing for acceptance shall not be performed until the backfilling has been completed.*
2. *Low pressure air tests shall conform to ASTM F1417-92, Section 8.2.2, Time-Pressure Drop Method for a 0.5 psi drop, except as specified herein and shall not be limited to type or size of pipe.*
3. *All sections of pipelines shall be cleaned and flushed prior to testing.*
4. *The air test shall be based on the starting pressure of 3.5 to 4.0 psi gauge. The time allowed for the 0.5 psi drop in pressure, measured in seconds, will be computed based on the size and length of the test section by the Engineer.*
   a. *When groundwater is present, the average test pressure of 3 psig shall be above any back pressure due to the groundwater level.*
   b. *The maximum pressure allowed under any condition in air testing shall be 10 psig. The maximum groundwater level for air testing is 13 feet above the top of the pipe.*
5. *The equipment required for air testing shall be furnished by the Contractor and shall include the necessary compressor, valves, gauges and plugs to allow for the monitoring of the pressure, release of pressure and a separable test gauge.*
   a. *The test gauge shall be sized to allow for the measuring of the 0.5 psig loss allowed during the test period and shall be on a separate line to the test section.*

E. *Deflection Testing*

1. *Deflection testing shall be performed 30 days after backfilling. The test shall be made by passing a ball or cylinder no less than 95% of the pipe diameter through the pipe. The test shall be performed without mechanical pulling devices.*

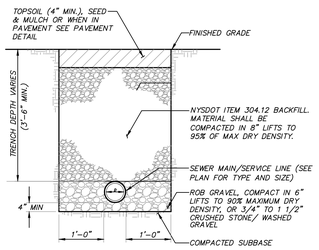
F. *Manhole Testing*

1. *General*
   a. *Each manhole shall be tested by vacuum testing.*
2. *Vacuum testing shall be performed after backfilling in accordance with the latest revision of ASTM C1244-11 as follows:*
   a. *The test head shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.*
   b. *A vacuum of 10 in. of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 in. of mercury.*
   c. *The manhole shall pass if the time for the vacuum reading to drop from 10 in. of mercury to 9 in. of mercury meets or exceeds the values indicated below:*

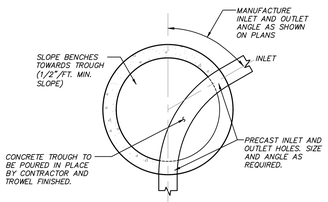
*Minimum Test Times for Various Manhole Diameters in Seconds:*

| Depth (ft) | Diameter (inches) 48 | 60 |
|---|---|---|
| | Time (seconds) | |
| 8 or less | 20 | 26 |
| 10 | 25 | 33 |
| 12 | 30 | 39 |
| 14 | 35 | 46 |
| 16 | 40 | 52 |
| 18 | 45 | 59 |
| 20 | 50 | 65 |

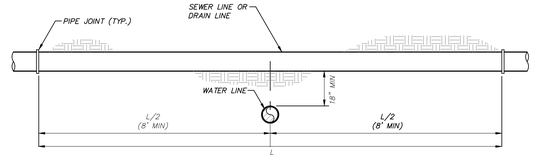
   d. *If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.*




SANITARY SEWER / SANITARY SERVICE LINE TRENCH DETAIL
(N.T.S.)



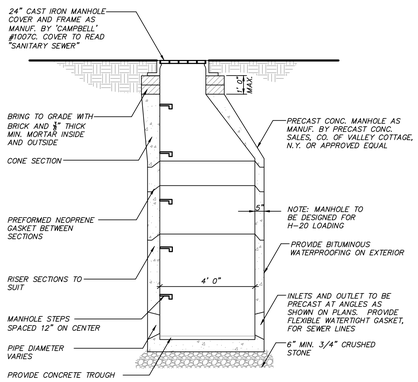

MANHOLE TROUGH DETAIL
(N.T.S.)




WATER LINE CROSSING UNDER SANITARY SEWER LINE OR STORM DRAIN LINE

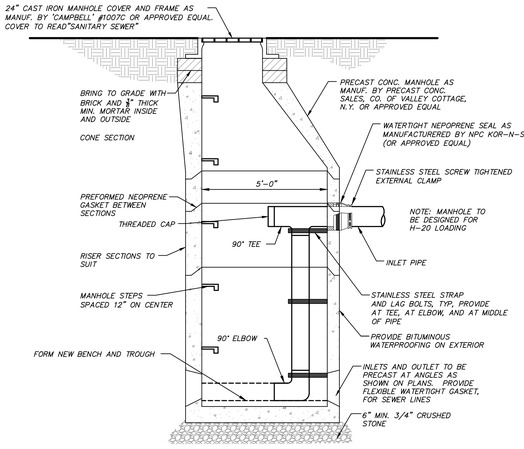
NOTES:
1. WHEN 18" SEPARATION CANNOT BE MAINTAINED, THE WATER LINE SHALL BE ENCASED IN CONCRETE (SEE DETAIL) ONLY WITH PRIOR APPROVAL OF THE DESIGN ENGINEER AND DEPARTMENT OF HEALTH.
2. PROVIDE PIPE AND FITTING RESTRAINT AS REQUIRED.
3. THE 18" SEPARATION APPLIES TO WATER MAINS AND WATER SERVICE CONNECTIONS.

WATER LINE CROSSING DETAIL
(N.T.S.)

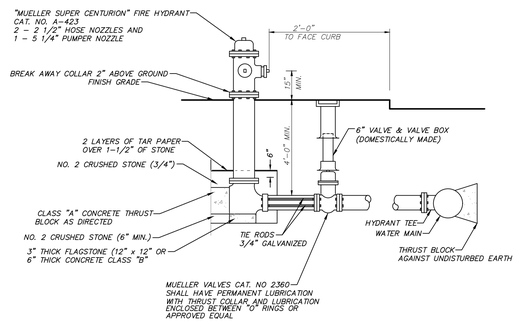



SANITARY MANHOLE DETAIL
(N.T.S.)

NOTE: ALL MANHOLE CASTINGS AND CATCH BASIN CASTINGS ARE TO BE DOMESTICALLY MADE FOR ANY STRUCTURE LOCATED WITHIN THE CITY RIGHT-OF-WAY, OR TO BE DEDICATED TO THE CITY.




INTERNAL DROP SANITARY MANHOLE DETAIL
(N.T.S.)




HYDRANT NOTES:
1. PUMPER OUTLET SHALL FACE STREET;
2. HOSE OUTLETS SHALL BE PARALLEL TO STREET.
3. 1-1/2" STONE SHALL BE PLACED AROUND THE HYDRANT FROM THE BOTTOM OF THE TRENCH, BUT AT LEAST 6" BELOW THE BASE OF THE HYDRANT TO 6" ABOVE THE WASTE OPENING AND TO A DISTANCE OF 12" AROUND THE ELBOW.
4. IF GROUND WATER IS ENCOUNTERED WITHIN 7' OF SURFACE, THEN HYDRANT DRAINS SHOULD BE PLUGGED. WHEN THE DRAINS ARE PLUGGED, THE BARRELS MUST BE PUMPED DRY AFTER USE DURING FREEZING WEATHER. WHERE HYDRANT DRAINS ARE NOT PLUGGED, A GRAVEL POCKET OR DRY WELL SHALL BE PROVIDED UNLESS THE NATURAL SOILS WILL PROVIDE ADEQUATE DRAINAGE. HYDRANT DRAINS SHALL NOT BE CONNECTED TO OR LOCATED WITHIN 10 FEET OF SANITARY SEWERS OR STORM DRAINS.

HYDRANT DETAIL
(N.T.S.)

# DUCTILE IRON PIPE WATER TESTING PROCEDURES

## TESTS ON PRESSURE PIPING FOR TRANSPORT OF WATER

A. *Hydrostatic Pressure Test*
*Hydrostatic testing shall be performed in accordance with the revision of AWWA C600, Section 5.2, "Hydrostatic Testing":*

1. *Test pressure shall be as scheduled or, where no pressure is scheduled, shall be 150 psi, or 1.25 times the static operating pressure, whichever is higher.*
2. *Test pressure shall be held on the piping for a period of at least 2 hours, unless a longer period is requested by the Engineer.*
3. *The test medium shall be water.*

B. *Hydrostatic Leakage Test*

1. *The leakage test shall be conducted concurrently with the pressure test.*
2. *The rate of leakage shall be determined at 15-minute intervals by means of volumetric measurement of the makeup water added to maintain the test pressure. The test shall proceed until the rate of leakage has stabilized or is decreasing below an allowable value, for three consecutive 15-minute intervals. After this, the test pressure shall be maintained for at least another 15 minutes.*
   a. *At the completion of the test, the pressure shall be released at the furthermost point from the point of application.*
3. *All exposed piping shall be examined during the test and all leaks, defective material or joints shall be repaired or replaced before repeating the tests.*
4. *The allowable leakage will be determined by the following formula.*

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

*Where:*
*Q = quantity of makeup water, in gallons per hour*
*L = length of pipe tested, in feet*
*D = nominal diameter of the pipe, in inches*
*P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)*

5. *Regardless of the above allowables, any visible leaks shall be permanently stopped.*
6. *The test medium shall be water.*

C. *Disinfection*
*Prior to placing the water main into service, the new pipe shall be cleaned and disinfected in accordance with the latest revision of AWWA C651, Section 4.4.3, "The Continuous Feed Method". The "Tablet Method" will not be accepted.*

1. *All work under this section shall be performed in the presence of the Design Engineer, and a representative of the public health authority having jurisdiction, as required.*
2. *Chlorination shall be scheduled such that sampling and flushing will be performed during normal daylight working hours. The contractor shall provide acceptable backflow prevention on all supply water to prevent any potential backflow contamination or cross connection.*
3. *Chlorination shall be by the use of a solution of water and liquid chlorine, calcium hypochlorite or sodium hypochlorite and the solution shall be contained in the pipe or structure as specified.*
4. *Prior to chlorination, all dirt and foreign matter shall be removed by a thorough cleaning and flushing of the pipeline or structure.*
5. *The chlorine solution shall be introduced to pipelines through corporation stops placed in the horizontal axis of the pipe, to structures by means of tubing extending directly into the structure, or other approved methods.*
6. *The application of the chlorine solution shall be by means of a controlled solution feed device. The rate of chlorine solution flow shall be in such proportion to the rate of water entering the pipe or structure that the resulting free chlorine residual shall be between 25 and 50 parts per million (PPM) or milligrams per liter (mg/l).*
7. *The chlorine treated water shall be retained in the pipe or structure at least 24 hours, unless otherwise directed. During the retention period, all valves and hydrants within the treated sections shall be operated.*
8. *The chlorine residual shall be not less than 10 PPM (or mg/l) at any point in the pipe or structure at the end of the 24-hour retention period.*
9. *When making repairs to, or when specified, structures and portions of pipelines shall be chlorinated by a concentrated chlorine solution containing not less than 200 PPM (mg/l) of free chlorine. The solution shall be applied with a brush or sprayed on the entire inner surface of the empty pipes or structures. The structures disinfected shall remain in contact with the strong chlorine solution for at least 30 minutes.*
10. *After the required retention of chlorinated water in the pipe or structures, they shall be thoroughly flushed until the replacement water shall, upon test, both chemically and bacteriological, be proven equal to water quality served by the public from the existing water supply system.*
11. *The disposal of chlorinated water from any pipe or structure shall be such that it will not cause damage to any vegetation, fish, or animal life.*
12. *The Contractor shall make all arrangements for the testing of water quality by an approved independent laboratory. Two acceptable bacteriological test, taken at least 24 hours apart, shall be collected from the new water main. At least 1 set of samples must be collected from every 1,000 LF of the new water main, plus one set from the end of the line and at least one set from each branch. The results for all tests shall be forwarded to the Design Engineer and the public health authority having jurisdiction.*
13. *All water quality requirements shall be fulfilled prior to the passage of any water through the new system to a public supply or the use of the new system.*

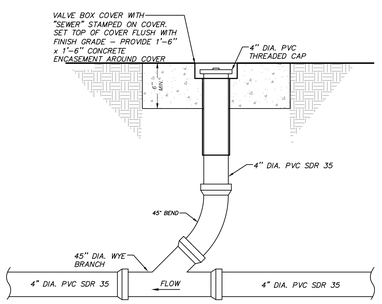
## Dutchess County Department of Health Notes:

*Standard Notes for Projects with Central Water & Sewer*

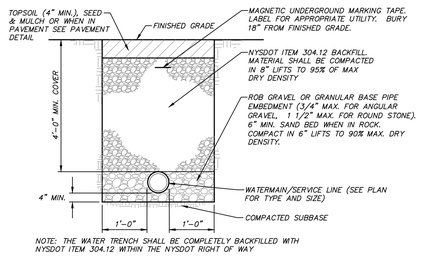
1. *The design, construction and installation shall be in accordance with this plan and generally accepted standards in effect at the time of construction which include:*
   - *"New York State Design Standards for Intermediate Sized Wastewater Treatment Systems", NYSDEC*
   - *"Recommended Standards for Sewage Treatment Works, (Ten States)."*
   - *"Recommended Standards for Water Works, (Ten States)."*
   - *"New York State Department of Health and Dutchess County Environmental Health Services Division policies, procedures and standards."*
   - *"Dutchess County and New York State Sanitary Codes."*
   - *"Dutchess County Environmental Health Services Division Certificate of Approval letter."*
2. *This plan is approved as meeting the appropriate and applied technical standards, guidelines, policies and procedures for arrangement of sewage disposal and water supply facilities.*
3. *Upon completion of the facilities, the finished works shall be inspected, tested, and certified complete to the DC EHSD by the New York State licensed Professional Engineer supervising construction. No part of the facilities shall be placed into service until accepted by the DC EHSD.*
4. *Approval of any plan(s) or amendment thereto shall be valid for a period of five (5) years from the date of approval. Following the expiration of said approval, the plan(s) shall be re-submitted to the Commissioner of Health for consideration for re-approval. Re-submission or revised submission of plans and/or associated documents shall be subject to compliance with the technical standards, guidelines, policies and procedures in effect at the time of the re-submission.*
5. *No cellar, footing, floor, garage, cooler or roof drains shall be discharged into the sewage collection system.*
6. *All buildings shall be constructed at an elevation high enough to ensure gravity flow to the sewage collection system.*
7. *All required Erosion & Sediment Control and Stormwater Pollution Prevention Water Quality & Quantity Control structures, permanent and temporary, are shown on the plans.*
8. *The DC EHSD shall be notified sixty days prior to any change in use; use changes may require re-approval by the DC EHSD.*
9. *No buildings are to be occupied and the new water system shall not be placed into service, until a "Completed Works Approval" is issued under section 5-1.22(d) of Part 5 of the New York State Sanitary Code (10NYCRRS).*
10. *No buildings are to be occupied and the new wastewater collection system shall not be placed into service until, a "Certificate of Construction Compliance" is issued under section 19.7 of Article 19 of the Dutchess County Sanitary Code.*
11. *All service lines are the responsibility of the owner up to the property line. The water and sewer companies shall be responsible for all valves and pipes which are not on the owner's property.*
12. *The retaining wall / slope stabilization details shown on the project plans are not certified for structural integrity by the DC EHSD.*
13. *The undersigned owners of the property hereon state that they are familiar with this map, its contents and its legends and hereby consent to all sold terms and conditions as stated hereon.*

_____ Owner Signature

_____ Date

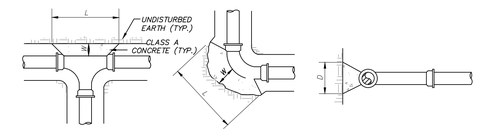


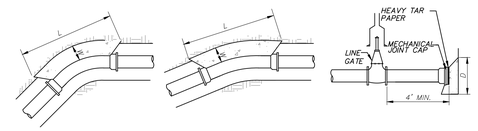

SEWER LINE CLEANOUT DETAIL
(N.T.S.)

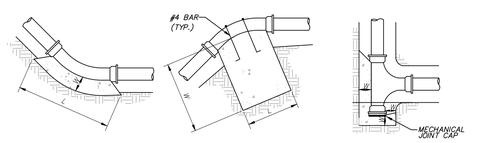



NOTE: THE WATER TRENCH SHALL BE COMPLETELY BACKFILLED WITH NYSDOT ITEM 304.12 WITHIN THE NYSDOT RIGHT OF WAY

WATERMAIN/SERVICE LINE TRENCH DETAIL
(N.T.S.)



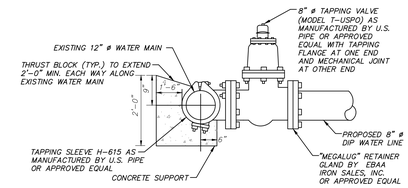




THRUST BLOCK SCHEDULE

| PIPE SIZE | CAP/TEE L | CAP/TEE D | 22 1/2° L | 22 1/2° D | 45° L | 45° D | 90° L | 90° D | W |
|---|---|---|---|---|---|---|---|---|---|
| 6" | 2' | 1.5' | 2' | 1.5' | 2' | 1.5' | 2' | 1.5' | 1.5' |

THRUST BLOCK DETAILS
( N.T.S. )




TAPPING SLEEVE, VALVE, AND THRUST BLOCK DETAIL
(N.T.S.)

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 4 | 7-28-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 3 | 6-30-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 2 | 5-26-20 | REVISED PER PLANNING BOARD COMMENTS | JFR |
| 1 | 4-28-20 | RESUBMISSION TO PLANNING BOARD | JFR |

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BEACON VIEWS
CITY OF BEACON, DUTCHESS COUNTY, NEW YORK

DRAWING:
DETAILS

| | | | |
|---|---|---|---|
| PROJECT NUMBER | 19131.100 | PROJECT MANAGER | J.J.C. |
| DATE | 8-27-19 | DRAWN BY | J.F.R. |
| SCALE | AS NOTED | CHECKED BY | A.D.T. |

DRAWING NO. D-4
SHEET 16 / 20

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\EVS\19100\Admin\13 D-1 - S.dwg, 7/28/2020 11:08:56 AM, jmain.ctb

**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

Public hearing for SEQRA environmental review on applications for Site Plan Approval and Subdivision Approval (lot merger), retail/residential, 416-420 Main Street, mixed-use commercial, office & residential development, submitted by 416 Main Street Beacon, LLC & 420 Main Street, LLC (d/b/a 420 Main St., LLC)

**ATTACHMENTS**

416-420 Main Street Attorney Cover Letter.pdf

416-420 Main Street Engineer Cover Letter.pdf

416-420 Main Street Site Plan.pdf

416-420 Main Street Traffic Engineer Cover Letter.pdf

416-420 Main Street Architect Cover Letter.pdf

CUDDY +FEDER LLP

445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
T 914 761 1300
F 914 761 5372
cuddyfeder.com

Taylor M. Palmer, Esq.
tpalmer@cuddyfeder.com

July 28, 2020

**VIA E-MAIL**

Hon. John Gunn
And Members of the Planning Board
City of Beacon
1 Municipal Plaza
Beacon, New York 12508

Re: Application for Special Use Permit, Subdivision (Lot Line Change) & Site Plan Approvals
Supplemental Submission
Premises: 416-420 Main Street, Beacon, New York
Tax Parcel IDs: (6054-29-056780 & 6054-29-056774)

Dear Chairman Gunn and Members of the Planning Board:

On behalf of 416 Main Street Beacon, LLC and 420 Main Street, LLC, D/B/A 420 Main St. Beacon, LLC (collectively, the "Applicant"), the owners of the above-referenced Premises, we respectfully submit this letter and referenced enclosures in furtherance of the pending Application.

Since we last appeared before your Board on July 14th, the Applicant further revised the site plan, improved the building program including refinements to the corner of the mixed-use building and updated the parking study in response to comments from the Planning Board and its consultants.

**UPDATED SITE PLAN & REFINED BUILDING PROGRAM:**

As is more fully detailed in the updated site plans included in the enclosed updated site plan set, the Applicant has made the following changes to the building program in response to the Planning Board's comments:

1) The entrance driveway to the proposed two (2) car off-street parking area was reduced from 24.0' to 12.0' wide;
2) The corner of the proposed mixed-use building was refined architecturally to provide variation and prominence in the design;
3) The design of the northern end of the Schenck Avenue façade was updated to integrate it with the rest of the Schenck Avenue façade approaching Main Street;
4) The overhead door openings at the first floor along Schenck Avenue and along the rear of the mixed-use building were modified to include a solid base; and
5) The fourth floor apartment layout was revised to meet the required 15.0' setback in the rear of the building, and the step in the fourth floor along Main Street was eliminated to square off the building.

In support of this supplemental submission, we respectfully submit copies of the revised site plans and renderings entitled "Site Plan Application – 416-420 Main Street", prepared by Aryeh Siegel, Architect, and Hudson Land Design Professional Engineering, P.C., dated April 28, 2020, last revised July 28, 2020 and numbered and titled as follows:

- Sheet 1 of 1 – Preliminary Subdivision Plat;
- Sheet 1 of 10 – Site Plan;
- Sheet 2 of 10 – Existing Conditions & Demolition Plan;
- Sheet 3 of 10 – Landscape Plan & Planting Schedule;
- Sheet 4 of 10 – Building Plans;
- Sheet 5 of 10 – Building Plans & Renderings;
- Sheet 6 of 10 – Grading & Utility Plan;
- Sheet 7 of 10 – Erosion and Sediment Control Details;
- Sheet 8 of 10 – Utility Profiles;
- Sheet 9 of 10 – Construction Details; and
- Sheet 10 of 10 – Construction Details.

Please also see the enclosed Response to Comments Letter Dated July 28, 2020, enclosed as **Exhibit A**, prepared by Aryeh Siegel Architect, in response to the letters prepared by Lanc & Tully and John Clarke Planning and Design both dated July 9, 2020, which includes additional details regarding the refined building program and site plan layout.

**UPDATED TRAFFIC IMPACT AND PARKING STUDY:**

Additionally, following the Applicant's presentation at the July 14th Planning Board meeting, the Applicant's traffic consultant reviewed additional parking data related to the updated entry drive, as well as regarding on-street parking along Schenck Avenue and the City's recent proposal to add parking on-street parking along Fishkill Avenue.

As is noted above, and as is shown on Sheet 2 of 10 of the enclosed site plan set, the entry drive to the Premises was reduced from 24.0' to 12.0'. Further, as is more fully detailed in the Response to Comments letter enclosed as **Exhibit B**, which was prepared by Maser Consulting in response to the comments in the letter prepared by Creighton Manning dated July 10, 2020, Maser's review of the existing parking along Schenck Avenue confirmed that there are four (4) existing on-street parking spaces along the west side of Schenck. *See* **Exhibit B**, Sheet 1 of 2, Existing On-Street Parking – 4 Spaces. Based on discussions with this Board and field review, Maser further developed a concept that would allow for six (6) total on-street parking spaces along Schenck Avenue that would increase the available (and legal) on-street parking spaces on Schenck Avenue

between Main Street and South Street by two (2) spaces. *See* **Exhibit B**, Sheet 2 of 2, Proposed On-Street Parking – Six Spaces.

Additionally, the Applicant's parking consultant also confirmed that City of Beacon has a project currently under development for improvements to Fishkill Avenue between Wolcott Avenue boundary of the City at Prospect Street. Maser Consulting confirmed that the design plans for this project will involve resurfacing and restriping of Fishkill Avenue for its entire length along with other related pavement, utility and sidewalk improvements. *See* **Exhibit B**. We have been advised that the Fishkill Avenue roadway project is anticipated to be put out to bid later this summer (2020) with construction expected to commence in February 2021.

As it relates to the instant application, the Applicant's parking consultant confirmed that six (6) additional on-street parking spaces are proposed to be added along the east side of Fishkill Avenue. These six (6) additional parking spaces will fall within the 800 ft. radius from the Premises. Accordingly, the two (2) additional proposed spaces along Schenck Avenue, taken together with the additional six (6) spaces along Fishkill Avenue and the other on-street parking evaluated by Maser Consulting would increase the total additional available on-street parking within 800 ft. of the Premises to sixteen (16) total parking spaces. *See* **Exhibit B**.

Given the above, the Applicant respectfully reiterates its request for a parking waiver consistent with the findings in its updated Traffic & Parking Study that concludes that the parking needs for the proposed development can be accommodated by the public parking in the vicinity of the Premises during both Weekday and Weekend peak parking periods.

**ADDITIONAL RESPONSE TO COMMENTS MEMORANDUM & INDEX OF ENCLOSURES:**

Additionally, in further support of this Application, enclosed please find copies of the following Response to Comments letter prepared by the Applicant's Engineering Consultant, Hudson Land Design:

- Hudson Land Design Response to Comments Letter Dated July 28, 2020, in response to the letters prepared by Lanc & Tully and John Clarke Planning and Design both dated July 9, 2020 (**Exhibit C**).

For ease of reference, in addition to the updated site plan sheets referenced above, the following documents are enclosed herein for consideration in advance of the Planning Board's August 11th meeting Agenda:[1]

**Exhibit A:** Aryeh Seigel Architect Response to Comments Letter Dated July 28, 2020, in response to the letters prepared by Lanc & Tully and John Clarke Planning and Design both dated July 9, 2020;

**Exhibit B:** Maser Consulting Response to Comments Letter Prepared in Response to the Comments in the Letter Prepared by Creighton Manning dated July 10, 2020; and

**Exhibit C:** Hudson Land Design Response to Comments Letter Dated July 28, 2020, in response to the letters prepared by Lanc & Tully and John Clarke Planning and Design both dated July 9, 2020.

We look forward to appearing at the Planning Board's August 11th regular meeting for the SEQRA public hearing and for the continued review of the Project.

In the meantime, should the Planning Board or City Staff have any questions or comments with regard to the foregoing, please do not hesitate to contact me.

Very truly yours,

Taylor M. Palmer

Enclosures

Cc: Jennifer L. Gray, Esq.
John Clarke Planning and Design
Lanc & Tully Engineering and Surveying, P.C.
Aryeh J. Seigel Architect
Michael A. Bodendorf, P.E. – Hudson Land Design Professional Engineering, P.C.
Maser Consulting P.A.

[1] Note: Pursuant to our communications with the City of Beacon Building Department, only electronic submissions are requested at this time.

*Civil & Environmental Engineering Consultants*
*174 Main Street, Beacon, New York 12508 (Main Office and Mailing Address)*
*13 Chambers Street, Newburgh, NY 12550 (Satellite Office)*
*Phone: 845-440-6926 Fax: 845-440-6637*
*www.HudsonLandDesign.com*

July 28, 2020

Hon. John Gunn, Chairman
City of Beacon Planning Board
1 Municipal Plaza
Beacon, NY 12508

Re: 416-420 Main Street Subdivision, Site Plan and Special Use Permit
416-420 Main Street
Tax parcels: 6054-29-056780, ±0.18 ac. (416 Main Street)
6054-29-056774, ±0.07 ac. (418-420 Main Street)
City of Beacon, NY

Dear Chairman Gunn and Members of the Planning Board:

On behalf of the Applicant for the above referenced project, Hudson Land Design (HLD) has revised the plan set in response to John Clark Planning and Design's July 9, 2020 comment letter and Lanc & Tully's July 9, 2020 comment letter. Below is a point-by-point response to the comments received. Please note that Aryeh Siegel has prepared Sheets 1 through 5 of the plan set and has responded to certain comments that pertain his sheets under separate cover.

**John Clarke Planning and Design July 9, 2020 Comment Letter**

1. The zoning district label has been changed to the T – Transitional District.
2. Aryeh Siegel has responded to this comment.
3. Aryeh Siegel has responded to this comment.
4. Aryeh Siegel has responded to this comment.
5. Handling of trash is still being thought out and will be provided in a future submission.
6. Comment noted. The Applicant will further discuss parking arrangements with the board. Parking striping is being prepared by the traffic consultant.

**Lanc & Tully July 9, 2020 Comment Letter**

General Comments

1. Comment noted. Maser will provide the offsite traffic and parking striping on a separate plan.
2. Comment noted. As was discussed at the Planning Board's July 14, 2020 meeting, the Building Inspector determined that the artist live/work building in connection with our application is a nonresidential use, and therefore the proposed buildings can be located on the same lot in compliance with Beacon City Code Section 223-12(A).

Preliminary Plat

1. The zoning district label has been changed to the T – Transitional District.
2. The label has been corrected. The shortest distances were used to be conservative for lot depth and width. The table has been updated to reflect the common lot width and depth.
3. Comment noted. TEC Land Surveying is the surveyor of record and is noted under "Map References" on the plan. A surveyor's certification signature block has been added to the plat bearing TEC's information.
4. TEC will provide this information under separate cover.

Site Plan (Sheet 1 of 10)

1. Aryeh Siegel has responded to this comment.
2. Aryeh Siegel has responded to this comment.
3. Aryeh Siegel has responded to this comment.

Existing Conditions & Demolition Plan (Sheet 2 of 10)

1. Aryeh Siegel has responded to this comment.
2. Aryeh Siegel has responded to this comment.
3. Aryeh Siegel has responded to this comment.

Landscape & Lighting Plan (Sheet 3 of 10)

1. Aryeh Siegel has responded to this comment.
2. Aryeh Siegel has responded to this comment.

Grading Plan (Sheet 6 of 10)

1. The title of the sheet has bene changed to "Grading & Utility Plan".
2. The LSE has been labeled on the plan.

Utility Profiles (Sheet 8 of 10)

1. The utility crossing has been checked and corrected on the profile.

Construction Details (Sheet 9 of 10)

1. The ADA parking details have been removed from the parking and striping detail.

Construction Details (Sheet 10 of 10)

1. A core and boot detail has been added to the sheet.

Enclosed electronically for your continued review is the following:

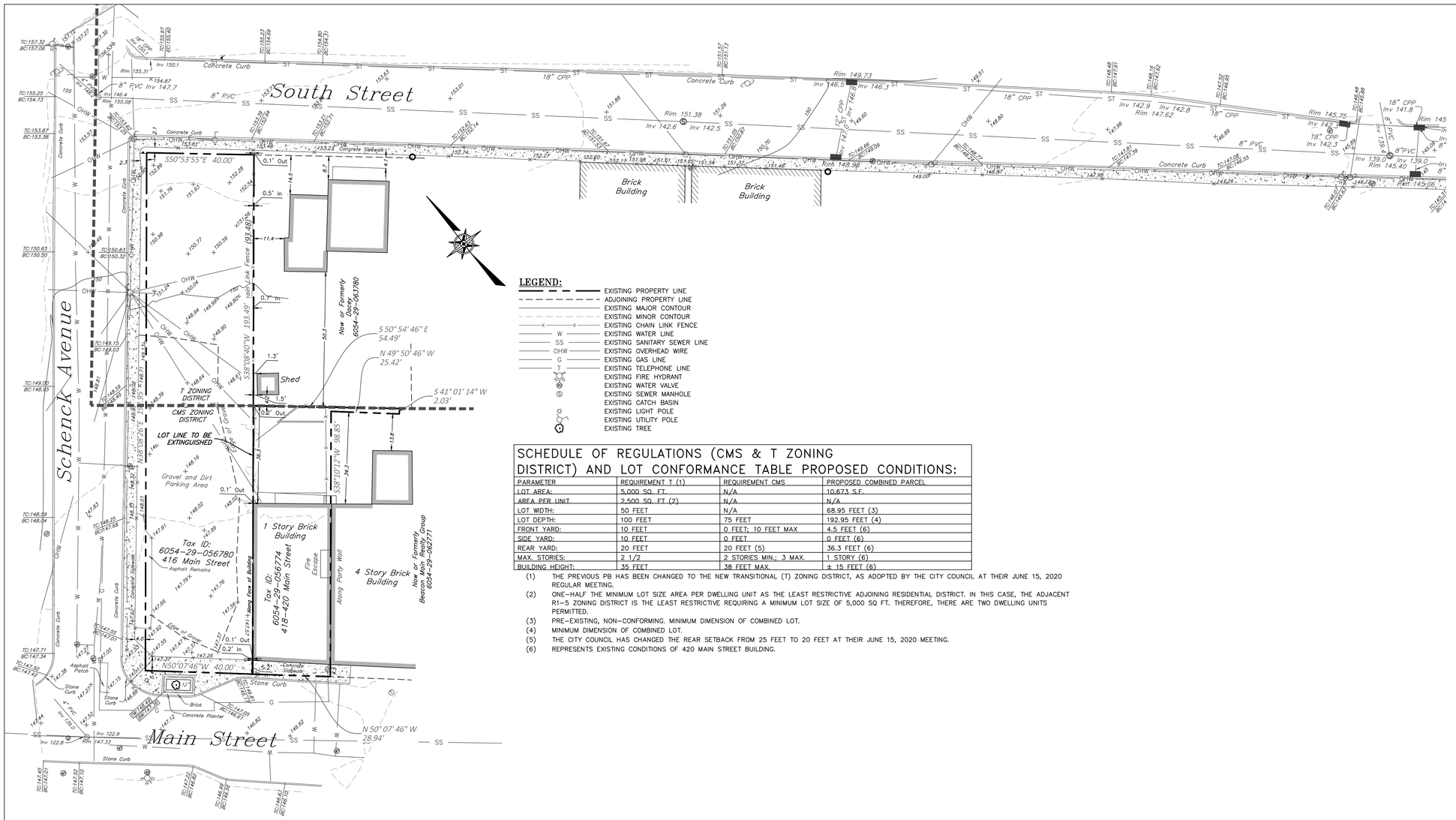
- Preliminary Subdivision Plat Sheet 1 of 1 (1 copy), and
- Site Plan set consisting of 10 sheets (1 copy).

Please note that HLD has prepared Sheets 6 through 10 of the site plan set, and Aryeh Siegel has prepare Sheets 1 through 5. We look forward to discussing this project at your next available planning board agenda. Should you have any questions, please feel free to contact me at 845-440-6926.

Sincerely,

Michael A. Bodendorf, P.E.
Principal

cc: 416 Main Street Beacon, LLC & 420 Main Street Beacon, LLC
Taylor Palmer, Esq.
Aryeh Siegel, AIA
Daniel G. Koehler, P.E. (HLD file)




**LEGEND:**

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING CHAIN LINK FENCE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING OVERHEAD WIRE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SEWER MANHOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING TREE

## SCHEDULE OF REGULATIONS (CMS & T ZONING DISTRICT) AND LOT CONFORMANCE TABLE PROPOSED CONDITIONS:

| PARAMETER | REQUIREMENT T (1) | REQUIREMENT CMS | PROPOSED COMBINED PARCEL |
|---|---|---|---|
| LOT AREA: | 5,000 SQ. FT. | N/A | 10,673 S.F. |
| AREA PER UNIT | 2,500 SQ. FT (2) | N/A | N/A |
| LOT WIDTH: | 50 FEET | N/A | 68.95 FEET (3) |
| LOT DEPTH: | 100 FEET | 75 FEET | 192.95 FEET (4) |
| FRONT YARD: | 10 FEET | 0 FEET; 10 FEET MAX | 4.5 FEET (6) |
| SIDE YARD: | 10 FEET | 0 FEET | 0 FEET (6) |
| REAR YARD: | 20 FEET | 20 FEET (5) | 36.3 FEET (6) |
| MAX. STORIES: | 2 1/2 | 2 STORIES MIN.; 3 MAX. | 1 STORY (6) |
| BUILDING HEIGHT: | 35 FEET | 38 FEET MAX. | ± 15 FEET (6) |

(1) THE PREVIOUS PB HAS BEEN CHANGED TO THE NEW TRANSITIONAL (T) ZONING DISTRICT, AS ADOPTED BY THE CITY COUNCIL AT THEIR JUNE 15, 2020 REGULAR MEETING.
(2) ONE-HALF THE MINIMUM LOT SIZE AREA PER DWELLING UNIT AS THE LEAST RESTRICTIVE ADJOINING RESIDENTIAL DISTRICT. IN THIS CASE, THE ADJACENT R1-5 ZONING DISTRICT IS THE LEAST RESTRICTIVE REQUIRING A MINIMUM LOT SIZE OF 5,000 SQ FT. THEREFORE, THERE ARE TWO DWELLING UNITS PERMITTED.
(3) PRE-EXISTING, NON-CONFORMING. MINIMUM DIMENSION OF COMBINED LOT.
(4) MINIMUM DIMENSION OF COMBINED LOT.
(5) THE CITY COUNCIL HAS CHANGED THE REAR SETBACK FROM 25 FEET TO 20 FEET AT THEIR JUNE 15, 2020 MEETING.
(6) REPRESENTS EXISTING CONDITIONS OF 420 MAIN STREET BUILDING.

## PRELIMINARY SUBDIVISION PLAT

SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.




SITE LOCATION MAP SCALE: 1" = 400'

## MAP REFERENCES:

1. EXISTING FEATURES AS SHOWN ON THIS PLAN PROVIDED BY A SURVEY COMPLETED IN DECEMBER 22, 2019, BY TEC LAND SURVEYING P.C..

## SURVEY NOTES:

1. COPYRIGHT TEC LAND SURVEYING. ALL RIGHTS RESERVED. REPRODUCTION OR COPYING OF THIS DOCUMENT MAY BE A VIOLATION OF COPYRIGHT LAW UNLESS PERMISSION OF THE AUTHOR AND / OR COPYRIGHT HOLDER IS OBTAINED.
2. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
3. ONLY BOUNDARY SURVEY MAPS WITH THE SURVEYOR'S EMBOSSED OR RED INKED SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE SURVEYOR'S ORIGINAL WORK AND OPINION. A COPY OF THIS DOCUMENT WITHOUT A PROPER APPLICATION OF THE SURVEYOR'S EMBOSSED OR RED INKED SEAL SHOULD BE ASSUMED TO BE AN UNAUTHORIZED COPY.
4. CERTIFICATIONS ON THIS BOUNDARY SURVEY MAP SIGNIFY THAT THE MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC. THE CERTIFICATION IS LIMITED TO PERSONS FOR WHOM THE BOUNDARY SURVEY MAP IS PREPARED, TO THE TITLE COMPANY, TO THE GOVERNMENTAL AGENCY, AND TO THE LENDING INSTITUTION LISTED ON THIS BOUNDARY SURVEY MAP.
5. THE CERTIFICATIONS HEREIN ARE NOT TRANSFERABLE.
6. THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE NOT ALWAYS KNOWN AND OFTEN MUST BE ESTIMATED. IF ANY UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS EXIST OR ARE SHOWN, THE IMPROVEMENTS OR ENCROACHMENTS ARE NOT COVERED BY THIS CERTIFICATE.
7. SUBJECT TO THE FINDINGS OF A CURRENT TITLE SEARCH.
8. SUBJECT TO COVENANTS, EASEMENTS, RESTRICTIONS, CONDITIONS AND AGREEMENTS OF RECORD.
9. SUBJECT TO ANY RIGHT, TITLE OR INTEREST THE PUBLIC MAY HAVE FOR HIGHWAY USE.
10. BEARINGS AND NORTH SHOWN HEREON ARE REFERENCED TO NAD 83-NY EAST USING NYSNET RTN GPS.
11. CONTOUR INTERVAL IS ONE FOOT. ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD 88 USING NYSNET RTN GPS.

## DEED REFERENCE

Doc. #02 2016 8895
DTE Diverified LLC
To
McDermott Properties
December 15, 2016

Doc. #02 2014 5391
Fir Properties, Inc.
To
EB 1 LLC
September 10, 2014

## TAX PARCEL NUMBER

City of Beacon, Dutchess County, New York
6054-29-056774
6054-29-056780

## AREA

6054-29-056744
2,947 Square Feet
0.068 Acres

6054-29-056780
7,726 Square Feet
0.177 Acre

## DATE OF SURVEY

Field Completion: December 22, 2019

## OWNERS

416 Main Street Beacon, LLC
420 Main Street, LLC D/B/A 420 Main Street Beacon, LLC

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

## SURVEYOR CERTIFICATION:

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED ON DECEMBER 22, 2019.

BY: _____
*Tom E. Cerchiara N.Y. State Lic. no. 050732*

## DCDOH STANDARD NOTE:

FOR PERMISSION TO FILE
THIS PLAN DOES NOT CONSTITUTE A REALTY SUBDIVISION AS DEFINED BY ARTICLE XI, TITLE II, SECTION 1115 OF THE PUBLIC HEALTH LAW OF THE STATE OF NEW YORK, AND ARTICLE XI OF THE DUTCHESS COUNTY SANITARY CODE. PERMISSION IS HEREBY GRANTED FOR THE FILING OF THIS MAP WITH THE CLERK OF DUTCHESS COUNTY. APPROVAL FOR ARRANGEMENTS FOR WATER SUPPLY AND/OR SEWAGE DISPOSAL IS NEITHER SOUGHT NOR GRANTED.

_____ AUTHORIZED REPRESENTATIVE OF THE COMMISSIONER OF HEALTH

_____ DATE

| DRAWN BY: CMB | | | | CHECKED BY: MAB | | | |
|---|---|---|---|---|---|---|---|
| REVISIONS: | | | | REVISIONS: | | | |
| NO. | DATE | DESCRIPTION | BY | NO. | DATE | DESCRIPTION | BY |
| 1 | 06/30/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |
| 2 | 07/28/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |

## OWNER'S CONSENT:

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON.

_____ TOM LEE

_____ DATE

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

PRELIMINARY SUBDIVISION PLAT

# 416 MAIN STREET

416-420 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-29-056780 & 056774

JOB #: 2020:005
DATE: 4/28/2020
SCALE: 1" = 20'
TITLE: SUB-1
SHEET: 1 OF 1

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

## Bulk Zoning Regulations Table - Main Building

| | Required Setbacks | | | Proposed Setbacks | | | Main Street Frontage Required | Main Street Frontage Required | Minimum Lot Depth | Proposed Lot Depth | Allowable Building Height | Proposed Building Height | Minimum Landscaped Area | Proposed Landscaped Area | Lot Area | Proposed Floor Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Front | Side | Rear | Front | Side | Rear | | | | | | | | | | |
| **Zoning District** | | | | | | | | | | | | | | | | |
| **CMS*** | 0'-10' | 0' | 20' | 6'-3" - 7'-3" ** | 0' | 118' | 100% | 100% | 75' | Varies: 105' - 192'-11" | 3 \| 38' & 4th Story w/ Special Permit | 4 Stories *** | 10% 5% if open to public | 25% (2,743 sf) | 10,673 SF | 11,715 SF |

Lot 6054-29-056780 (416 Main Street) is located in both CMS & T Zoning Districts
* Main Building lies within the CMS District
** Front setback varies along Main Street
*** Seeking special permit for 4th-Story w/ 15' Building stepback

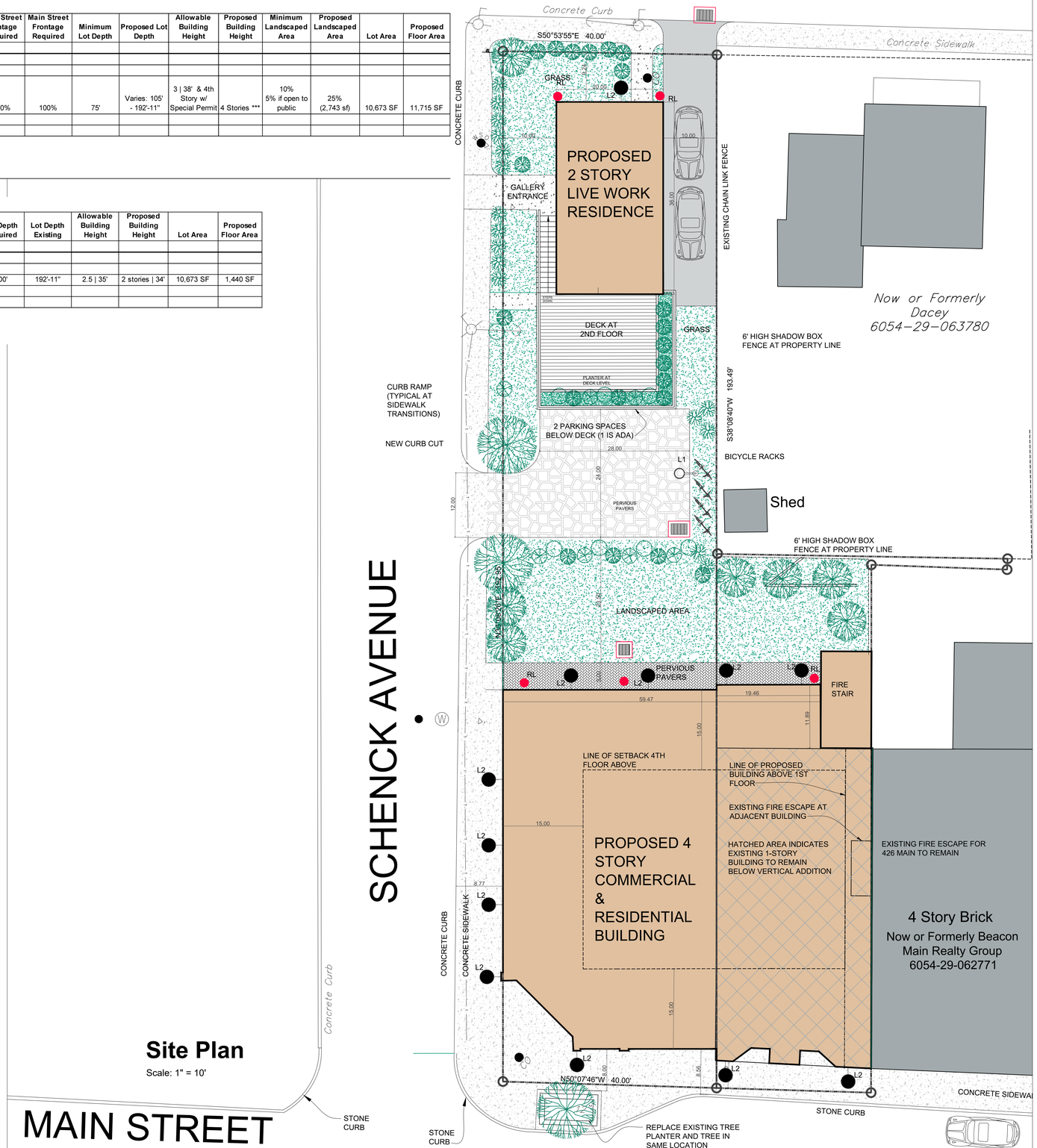
## Bulk Zoning Regulations Table - Live/Work Residence

| | Required Setbacks | | | Proposed Setbacks | | | Lot Depth Required | Lot Depth Existing | Allowable Building Height | Proposed Building Height | Lot Area | Proposed Floor Area |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Front | Side | Rear | Front | Side | Rear | | | | | | |
| **Zoning District** | | | | | | | | | | | | |
| **T*** | 10' | 10' | 20' | 10' | 10'/10' | 146' | 100' | 192'-11" | 2.5 \| 35' | 2 stories \| 34' | 10,673 SF | 1,440 SF |

Lot 6054-29-056780 (416 Main Street) is located in both CMS & T Zoning Districts
* Live/Work Residence lies within the T District.
** 10' side yard towards neighbor. 10' side yard towards Schenck Ave.

## Parking & Loading

| Use & Parking Requirements | Proposed Area | Current Parking Requirement |
|---|---|---|
| | | |
| **Residential** | | |
| (1) space per unit (CMS) | (1) Apartments in Main Building | 1 parking space |
| (2) spaces per dwelling unit | (1) Live/Work Residence | 2 parking spaces |
| | | |
| **Commercial** | | |
| (2) spaces per 1,000 SF (CMS) for Retail | 3,707 sf | 8 parking spaces |
| (2) spaces per 1,000 SF (CMS) for Office | 5,997 sf | 12 parking spaces |
| | | |
| **Total Required** | | **23 parking spaces** |
| | | |
| **Total Provided** | | **4 parking spaces** |




## Site Plan

Scale: 1" = 10'

| REVISIONS: | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |
| 1 | 06/24/20 | CITY COUNCIL PRESENTATION | AJS |
| 2 | 06/30/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 3 | 07/28/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |



## Location Map

Scale: 1" = 400'

## Zoning Summary

| | |
|---|---|
| Zoning District: | CMS (Central Main Street) & T (Transition Zone) |
| Tax Map No.: | 6054-29-056780 (416 Main Street) & 6054-29-056774 (418-420 Main Street) |
| Lot Area: | 0.177 Acres & 0.068 Acres = 0.245 Acres Total |
| Building Footprint: | 4,616 SF (Front Building) & 720 SF (Back Building) = 5,336 SF Total Footprint |
| Historical Overlay District: | Yes |
| Parking Overlay District: | Partial, not the portion of the lot in the T District where the Back Building will be located. |
| Existing Use: | Vacant (416 Main Street) & Commercial (Restaurant/Coffee House) |
| Proposed Use: | Mixed-Use: Retail/Office/Residential (Front Building) & Artist Live Work Residential (Back Building) |

## Parking & Loading

| Use & Parking Requirements | Proposed Area | Current Parking Requirement |
|---|---|---|
| | | |
| **Residential** | | |
| (1) space per unit (CMS) | (1) Apartments in Front Building | 1 parking spaces |
| (1) space for each dwelling unit, plus 1/4 space for each bedroom, plus 1/2 space for each live/work space containing retail area | (1) one-bedroom Artist Live Work with retail | 2 parking spaces |
| | | |
| **Commercial** | | |
| (2) spaces per 1,000 SF (CMS) for Retail | 4,295 sf | 8 parking spaces |
| (2) spaces per 1,000 SF (CMS) for Office | 6,220 sf | 12 parking spaces |
| | | |
| **Total Required** | | **23 parking spaces** |
| | | |
| **Total Provided** | | **4 parking spaces** See Note 1 |

**Notes:**

1. The Applicant proposes to provide 4 parking spaces for the residential uses and requests a waiver of the parking for commercial uses. A Zoning Variance to provide 6 parking spaces where 36 were required was granted for a previously approved project in 2013. Zoning Variance #2013-09
2. There are public parking lots within 800' of the property.
3. No signage is proposed as part of this application. Retail tenants will apply separately to the Planning Board for their own signage

## Index of Drawings


| | |
|---|---|
| Sheet 1 of 1 | Subdivision Plat |
| Sheet 1 of 10 | Site Plan |
| Sheet 2 of 10 | Existing Conditions & Demolition Plan |
| Sheet 3 of 10 | Landscape Plan & Planting Schedule |
| Sheet 4 of 10 | Building Plans |
| Sheet 5 of 10 | Building Elevations & Renderings |
| Sheet 6 of 10 | Grading & Utility Plan |
| Sheet 7 of 10 | Erosion and Sediment Control Plan |
| Sheet 8 of 10 | Utility Profiles |
| Sheet 9 of 10 | Construction Details |
| Sheet 10 of 10 | Construction Details |


# Site Plan Application

**Sheet 1 of 10 - Site Plan**

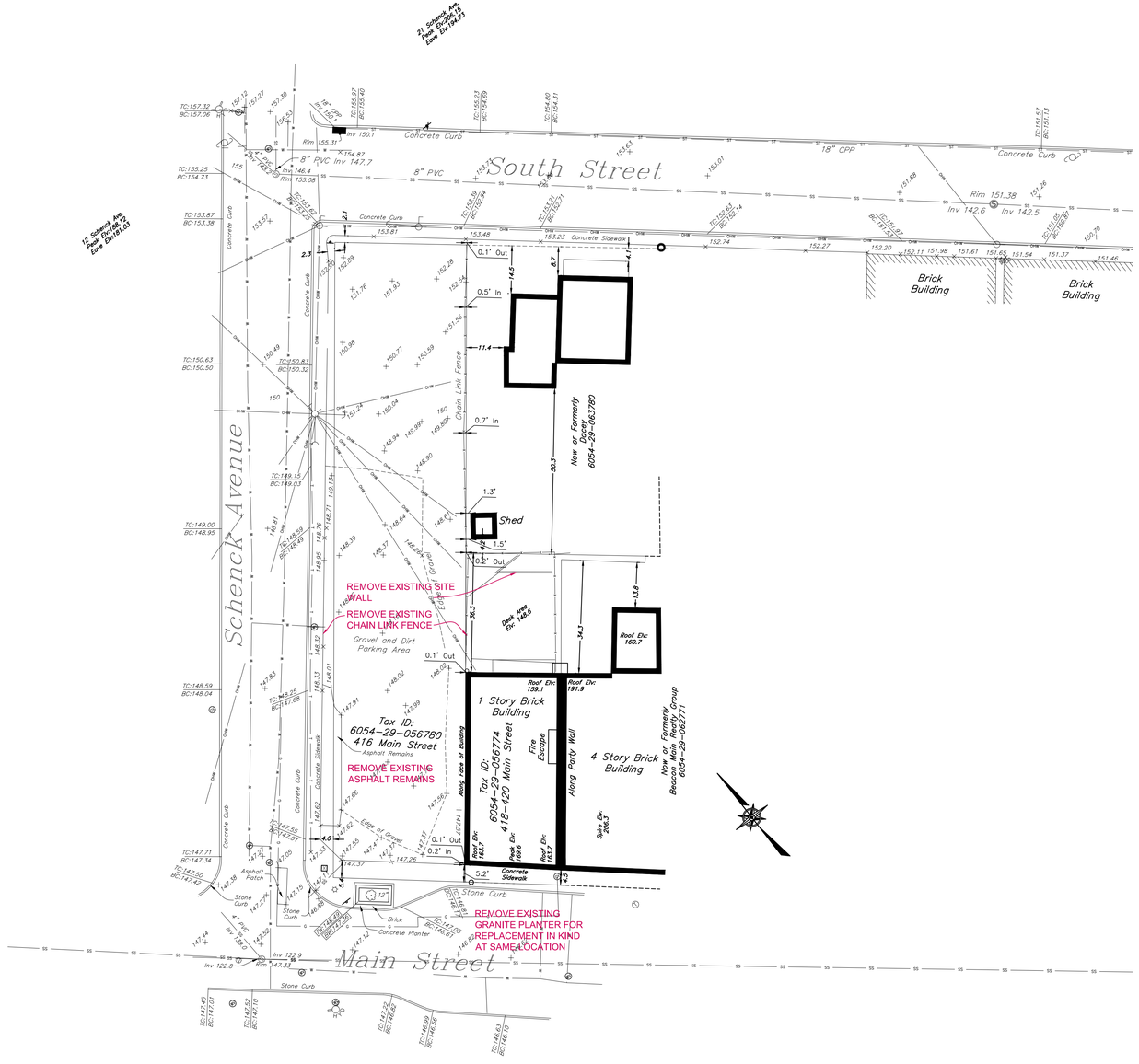

*Owner:*
**416 Main Street Beacon, LLC and 420 Main St. Beacon, LLC**
C/O Cuddy & Feder LLP
445 Hamilton Avenue
White Plains, NY 10601

*Architect:*
**Aryeh Siegel, Architect**
84 Mason Circle
Beacon, New York 12508

*Site / Civil Engineer:*
**Hudson Land Design**
174 Main Street
Beacon, New York 12508

*Surveyor:*
**TEC Surveying**
831 Route 52, Suite 2C
Fishkill, New York 12524


**416-420 Main Street**
Beacon, New York
Scale: 1" = 10'
April 28, 2019




| REVISIONS: | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |
| 1 | 06/24/20 | CITY COUNCIL PRESENTATION | AJS |
| 2 | 06/30/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 3 | 07/28/20 | NO CHANGE | AJS |

## Existing Conditions & Demolition Plan

Scale: 1" = 20'

# Site Plan Application

**Sheet 2 of 10 -Existing Conditions & Demolition Plan**

*Owner:*
**416 Main Street Beacon, LLC and 420 Main St. Beacon, LLC**
C/O Cuddy & Feder LLP
445 Hamilton Avenue
White Plains, NY 10601

*Architect:*
**Aryeh Siegel, Architect**
84 Mason Circle
Beacon, New York 12508

*Site / Civil Engineer:*
**Hudson Land Design**
174 Main Street
Beacon, New York 12508

*Surveyor:*
**TEC Surveying**
831 Route 52, Suite 2C
Fishkill, New York 12524

**416-420 Main Street**
Beacon, New York
Scale: 1/16" = 1'-0"
April 28, 2019



POLE MOUNTED LIGHT (L1)

SELUX LIGHTING "BETA PENDANT" POLE MOUNTED 100W FIXTURE. MODEL #BPC-L-R2-1-H100-BK-120-HS-PC WITH LOW GLARE CUTOFF SHIELD. COLOR: BLACK. PHOTOCELL CONTROL. OR APPROVED EQUAL. MOUNTING HEIGHT ON A35 SERIES BLACK ALUMINUM POLE = 12 FEET

NOTE: AS AN ALTERNATE, THE OWNER MAY INSTALL EQUIVALENT WATTAGE LED FIXTURES CONFORMING TO THE COLOR TEMPERATURES SPECIFIED IN THE CITY OF BEACON ZONING CODE IN PLACE OF THE INCANDESCENT FIXTURES SHOWN. LED LIGHTING WILL MEET THE SAME SPECIFICATIONS FOR LOW GLARE CUT OFF CONTROLS, EITHER BY SHIELDING OR INTERNAL CONTROLS.



WALL MOUNTED HOUSE LIGHT (L2)

BARNLIGHT ELECTRIC WALL MOUNTED FIXTURE. MODEL "WESCO GOOSENECK", 100W, COLOR: DARK GREEN METAL SHADE, OR APPROVED EQUAL. MOUNTING HEIGHT = 7 FEET.

NOTE THAT THE MANUFACTURER DOES NOT PROVIDE FOOTCANDLE DIAGRAMS FOR THIS FIXTURE. THE FIXTURE IS SHADED AND DOES NOT EMIT GLARE

## LIGHTING NOTES:

ALL EXTERIOR LIGHTING ON THE SITE SHALL CONFORM TO BEACON ZONING CODE SECTION 223-14B: EXTERIOR LIGHTING. ALL EXTERIOR LIGHTING ACCESSORY TO A RESIDENTIAL, INDUSTRIAL, MULTIFAMILY OR NONRESIDENTIAL USE, INCLUDING THE LIGHTING OF SIGNS, SHALL BE SUBJECT TO THE FOLLOWING STANDARDS: [AMENDED 12-9-2019 BY L.L. NO. 11-2019]

(1) THE TYPE, LOCATION, AND SHADING OF SUCH LIGHTING SHALL PREVENT THE SPILLOVER OF LIGHT ONTO ANY ADJACENT RESIDENTIAL OR MULTIFAMILY PROPERTY OR DIRECT GLARE ONTO ANY PUBLIC SIDEWALK OR STREET.

(2) SUCH LIGHTING SHALL USE FULL CUTOFF FIXTURES THAT DO NOT EMIT LIGHT ABOVE THE HORIZONTAL PLANE INTO THE NIGHT SKY, EXCEPT FOR LIGHTING FOR SHORT-TERM EVENTS OR HOLIDAYS, FLAGPOLE LIGHTING, DECORATIVE LIGHT SOURCES UNDER 600 LUMENS, PUBLIC PARKS AND OTHER PUBLIC SPECIALTY LIGHTING, AS DETERMINED BY THE BUILDING INSPECTOR.

(3) HOURS OF LIGHTING AND FIXTURE HEIGHT, TYPE, DESIGN, INTENSITY, AND COLOR TEMPERATURE MAY BE DETERMINED BY THE PLANNING BOARD IN ACTING ON ANY SITE DEVELOPMENT PLAN UPON CONSIDERATION OF THE FOLLOWING CONSIDERATIONS:

(a) LIGHTING FIXTURES IN PEDESTRIAN AREAS SHOULD BE A MAXIMUM OF 15 FEET IN HEIGHT AND PARKING LOT LIGHTING FIXTURES SHOULD BE A MAXIMUM OF 20 FEET.

(b) PEDESTRIAN AND PARKING LOT AREAS SHOULD AVERAGE APPROXIMATELY ONE FOOTCANDLE. ONLY HIGH SECURITY AREAS MAY REQUIRE LIGHTING IN THE TWO TO FIVE FOOTCANDLE RANGE, WHILE OVER FIVE FOOTCANDLES IS USUALLY A WASTE OF ENERGY AND A SOURCE OF GLARE.

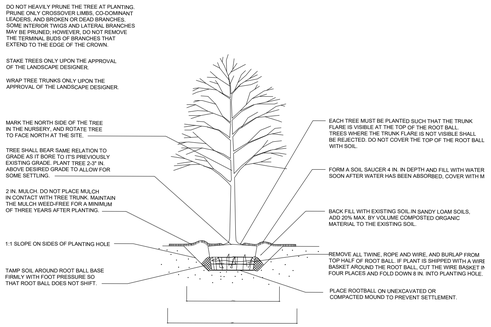
(c) COLOR TEMPERATURES SHOULD BE IN THE RANGE OF 2,400 TO 4,000 KELVIN DEGREES.

(d) THE COLOR RENDERING INDEX SHOULD BE IN THE RANGE OF 80 TO 100.

(e) ADAPTIVE CONTROLS, SUCH AS DIMMERS, TIMERS, AND MOTION SENSOR SHUT-OFF LIGHTING, SHOULD BE USED WHENEVER APPROPRIATE.

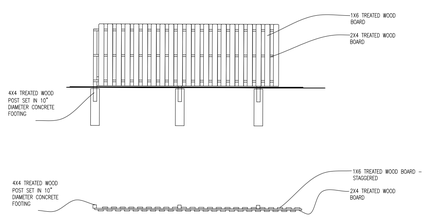
**HATCHING & LANDSCAPE LEGEND**

- CONCRETE SIDEWALK
- ASPHALT PAVING
- GRAVEL PATH (STEEL EDGING)
- CONSERVATION BUFFER – WEST
- CONSERVATION BUFFER – EAST
- WETLAND RESTORATION AREA
- NATIVE MEADOW
- INDIAN SWITCHGRASS (G-PV)
- CUSTOM GRASS MIX – (ERNMX-CUS1)
- SEDGE (G-CP)
- EVERGREEN SHRUB (S-IG)
- BIO-RETENTION AREA MIX
- PROPOSED NEW ORNAMENTAL NATIVE TREE
- PROPOSED NATIVE EVERGREEN
- EXISTING TREE TO REMAIN (WITH CALIPER)




## Tree Planting Detail

Scale: NTS




## Shadowbox Fence Detail

Scale: NTS




## Landscaping & Lighting Plan

Scale: 1" = 20'

| REVISIONS: | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |
| 1 | 06/24/20 | CITY COUNCIL PRESENTATION | AJS |
| 2 | 06/30/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 3 | 07/28/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |

# Site Plan Application

**Sheet 3 of 10 - Landscaping & Lighting Plan**

*Owner:*
**416 Main Street Beacon, LLC and 420 Main St. Beacon, LLC**
C/O Cuddy & Feder LLP
445 Hamilton Avenue
White Plains, NY 10601

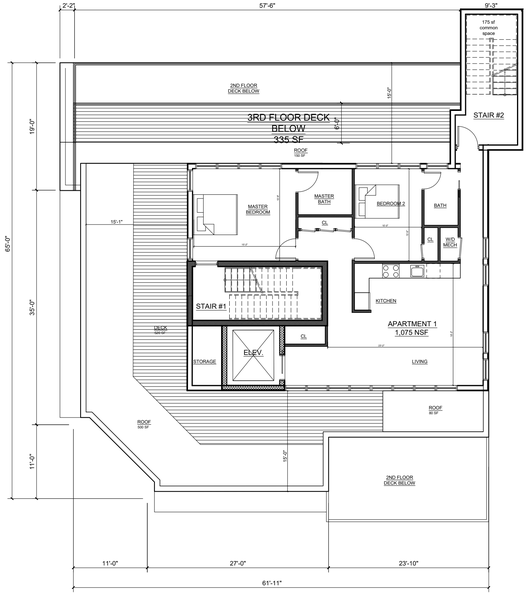
*Architect:*
**Aryeh Siegel, Architect**
84 Mason Circle
Beacon, New York 12508

*Site / Civil Engineer:*
**Hudson Land Design**
174 Main Street
Beacon, New York 12508

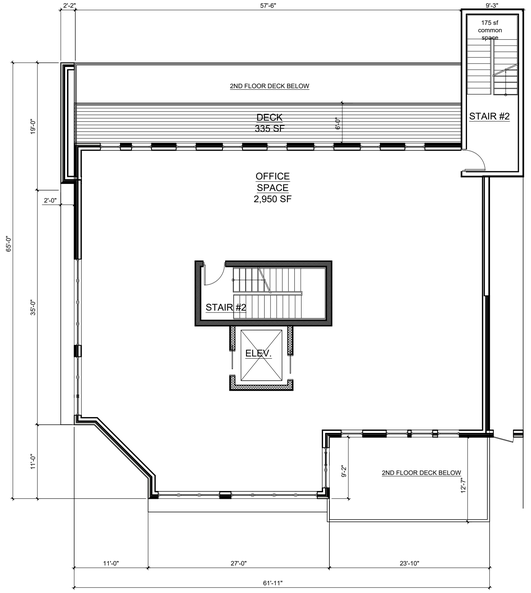
*Surveyor:*
**TEC Surveying**
831 Route 52, Suite 2C
Fishkill, New York 12524

**416-420 Main Street**
Beacon, New York
Scale: 1/16" = 1'-0"
April 28, 2019

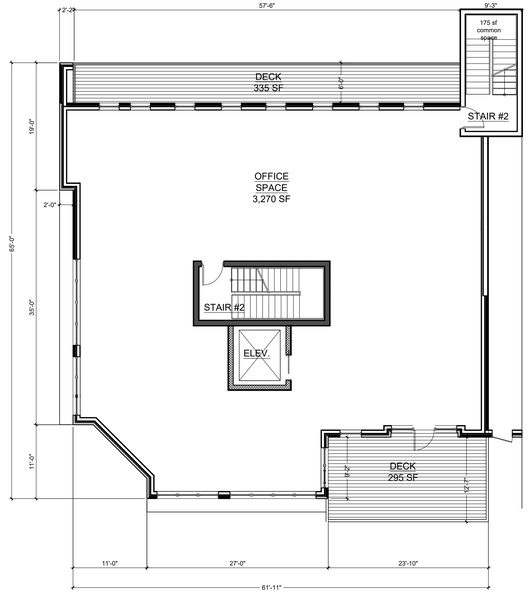
| REVISIONS: | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |
| 1 | 06/24/20 | CITY COUNCIL PRESENTATION | AJS |
| 2 | 06/30/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 3 | 07/28/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



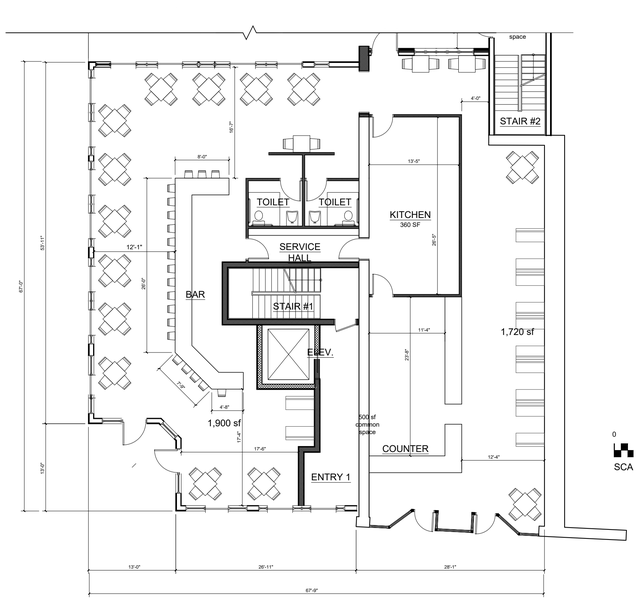

## 4th Floor Plan




## 3rd Floor Plan




## 2nd Floor Plan




## 1st Floor Plan

## Main Building Floor Plans

# Site Plan Application

**Sheet 4 of 10 - Building Plans**

*Owner:*
**416 Main Street Beacon, LLC and 420 Main St. Beacon, LLC**
C/O Cuddy & Feder LLP
445 Hamilton Avenue
White Plains, NY 10601

*Architect:*
**Aryeh Siegel, Architect**
84 Mason Circle
Beacon, New York 12508

*Site / Civil Engineer:*
**Hudson Land Design**
174 Main Street
Beacon, New York 12508

*Surveyor:*
**TEC Surveying**
831 Route 52, Suite 2C
Fishkill, New York 12524

## 416-420 Main Street

Beacon, New York
Scale: $^{3}/_{32}$" = 1'-0"
April 28, 2019

**ROOF:**
STANDING SEAM METAL.
COLOR: ZINC

**CORNICE:**
PAINTED AZEK TRIM AND
PAINTED FIBERGLASS
CORBELS.

**WINDOWS:**
CASEMENT WINDOWS BY
ANDERSEN OR APPROVED
EQUAL. COLOR: BLACK

**SIDING:**
STANDING SEAM METAL
TO MATCH ROOF AT 4TH
FLOOR.

GLEN GARY 56DD BRICK
AT EXTERIOR WALLS

**CANOPY:**
SHEET METAL. COLOR:
BRICK RED

**STOREFRONTS:**
ALUMINUM & GLASS.
COLOR: GRAY



## Elevation: Main Street

Scale: $\frac{1}{16}$" = 1'-0"



## Elevation: Rear

Scale: $\frac{1}{16}$" = 1'-0"

**CORNICE:**
PAINTED AZEK TRIM AND
PAINTED FIBERGLASS
CORBELS.

**WINDOWS:**
CASEMENT WINDOWS BY
ANDERSEN OR APPROVED
EQUAL. COLOR: BLACK

**SIDING:**
STANDING SEAM METAL
TO MATCH ROOF AT 4TH
FLOOR.

GLEN GARY 56DD BRICK
AT EXTERIOR WALLS

**CANOPY:**
SHEET METAL. COLOR:
BRICK RED



## Elevation: Schenck Avenue

Scale: $\frac{1}{16}$" = 1'-0"

| REVISIONS: | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |
| 1 | 06/24/20 | CITY COUNCIL PRESENTATION | AJS |
| 2 | 06/30/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| 3 | 07/28/20 | REVISED PER PLANNING BOARD COMMENTS | AJS |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



## View from Main Street



## View from Main Street



## View from Schenck Avenue



## View from Corner

# Site Plan Application

**Sheet 5 of 10 - Building Elevations & Renderings**

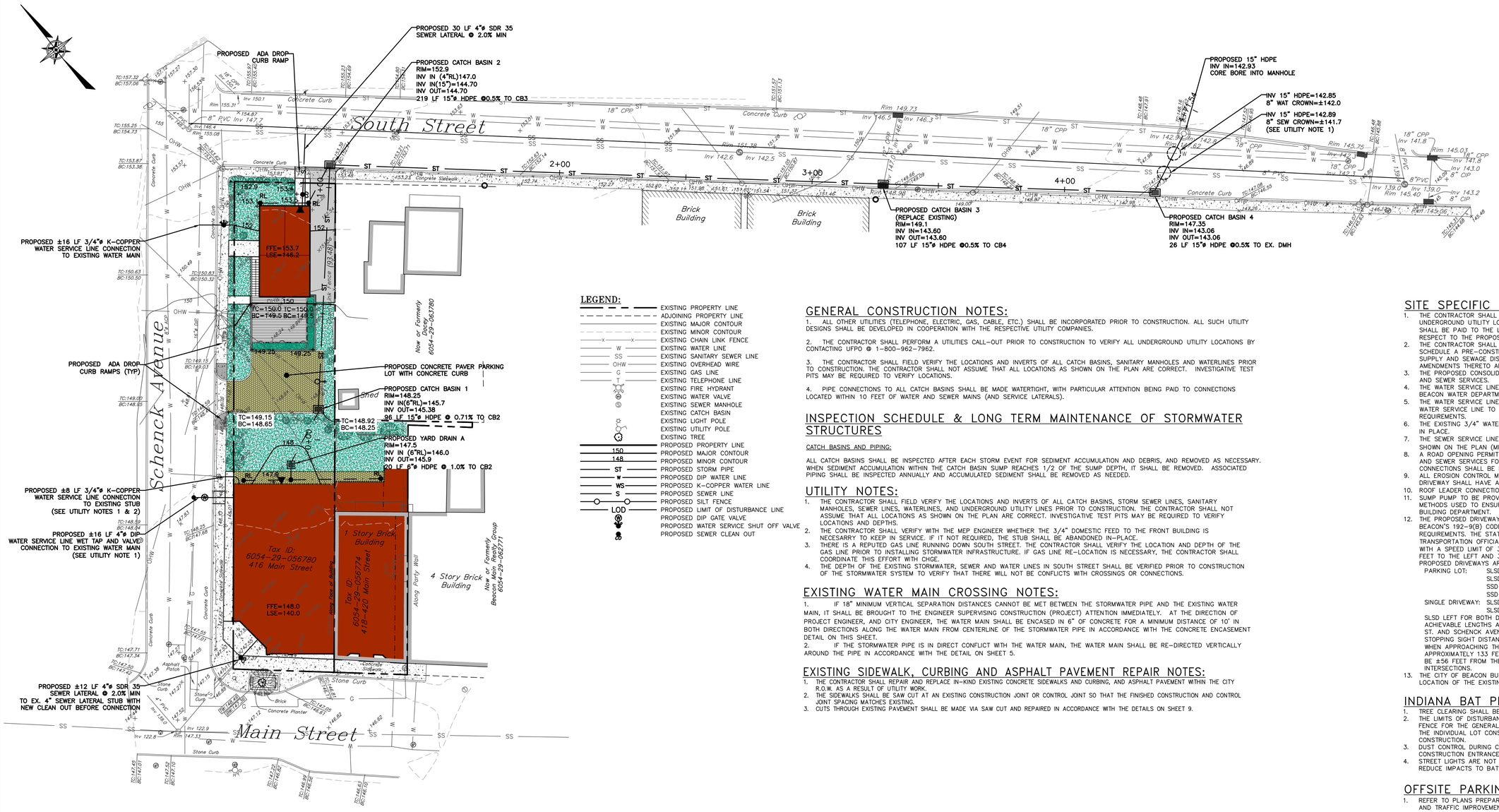
*Owner:*
**416 Main Street Beacon, LLC and 420 Main St. Beacon, LLC**
C/O Cuddy & Feder LLP
445 Hamilton Avenue
White Plains, NY 10601

*Architect:*
**Aryeh Siegel, Architect**
84 Mason Circle
Beacon, New York 12508

*Site / Civil Engineer:*
**Hudson Land Design**
174 Main Street
Beacon, New York 12508

*Surveyor:*
**TEC Surveying**
831 Route 52, Suite 2C
Fishkill, New York 12524

**416-420 Main Street**
Beacon, New York
Scale: $\frac{1}{16}$" = 1'-0"
April 28, 2019




GRADING AND UTILITY PLAN

SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )

1 inch = 20 ft.

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING CHAIN LINK FENCE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING OVERHEAD WIRE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SEWER MANHOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING TREE
- PROPOSED PROPERTY LINE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STORM PIPE
- PROPOSED DIP WATER LINE
- PROPOSED K-COPPER WATER LINE
- PROPOSED SEWER LINE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE LINE
- PROPOSED DIP GATE VALVE
- PROPOSED WATER SERVICE SHUT OFF VALVE
- PROPOSED SEWER CLEAN OUT

## GENERAL CONSTRUCTION NOTES:

1. ALL OTHER UTILITIES (TELEPHONE, ELECTRIC, GAS, CABLE, ETC.) SHALL BE INCORPORATED PRIOR TO CONSTRUCTION. ALL SUCH UTILITY DESIGNS SHALL BE DEVELOPED IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANIES.
2. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962.
3. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL CATCH BASINS, SANITARY MANHOLES AND WATERLINES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT. INVESTIGATIVE TEST PITS MAY BE REQUIRED TO VERIFY LOCATIONS.
4. PIPE CONNECTIONS TO ALL CATCH BASINS SHALL BE MADE WATERTIGHT, WITH PARTICULAR ATTENTION BEING PAID TO CONNECTIONS LOCATED WITHIN 10 FEET OF WATER AND SEWER MAINS (AND SERVICE LATERALS).

## INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES

CATCH BASINS AND PIPING:

ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION AND DEBRIS, AND REMOVED AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED. ASSOCIATED PIPING SHALL BE INSPECTED ANNUALLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NEEDED.

## UTILITY NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND INVERTS OF ALL CATCH BASINS, STORM SEWER LINES, SANITARY MANHOLES, SEWER LINES, WATERLINES, AND UNDERGROUND UTILITY LINES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOT ASSUME THAT ALL LOCATIONS AS SHOWN ON THE PLAN ARE CORRECT. INVESTIGATIVE TEST PITS MAY BE REQUIRED TO VERIFY LOCATIONS AND DEPTHS.
2. THE CONTRACTOR SHALL VERIFY WITH THE MEP ENGINEER WHETHER THE 3/4" DOMESTIC FEED TO THE FRONT BUILDING IS NECESARRY TO KEEP IN SERVICE. IF IT NOT REQUIRED, THE STUB SHALL BE ABANDONED IN-PLACE.
3. THERE IS A REPUTED GAS LINE RUNNING DOWN SOUTH STREET. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE GAS LINE PRIOR TO INSTALLING STORMWATER INFRASTRUCTURE. IF GAS LINE RE-LOCATION IS NECESSARY, THE CONTRACTOR SHALL COORDINATE THIS EFFORT WITH CHGE.
4. THE DEPTH OF THE EXISTING STORMWATER, SEWER AND WATER LINES IN SOUTH STREET SHALL BE VERIFIED PRIOR TO CONSTRUCTION OF THE STORMWATER SYSTEM TO VERIFY THAT THERE WILL NOT BE CONFLICTS WITH CROSSINGS OR CONNECTIONS.

## EXISTING WATER MAIN CROSSING NOTES:

1. IF 18" MINIMUM VERTICAL SEPARATION DISTANCES CANNOT BE MET BETWEEN THE STORMWATER PIPE AND THE EXISTING WATER MAIN, IT SHALL BE BROUGHT TO THE ENGINEER SUPERVISING CONSTRUCTION (PROJECT) ATTENTION IMMEDIATELY. AT THE DIRECTION OF PROJECT ENGINEER, AND CITY ENGINEER, THE WATER MAIN SHALL BE ENCASED IN 6" OF CONCRETE FOR A MINIMUM DISTANCE OF 10' IN BOTH DIRECTIONS ALONG THE WATER MAIN FROM CENTERLINE OF THE STORMWATER PIPE IN ACCORDANCE WITH THE CONCRETE ENCASEMENT DETAIL ON THIS SHEET.
2. IF THE STORMWATER PIPE IS IN DIRECT CONFLICT WITH THE WATER MAIN, THE WATER MAIN SHALL BE RE-DIRECTED VERTICALLY AROUND THE PIPE IN ACCORDANCE WITH THE DETAIL ON SHEET 5.

## EXISTING SIDEWALK, CURBING AND ASPHALT PAVEMENT REPAIR NOTES:

1. THE CONTRACTOR SHALL REPAIR AND REPLACE IN-KIND EXISTING CONCRETE SIDEWALKS AND CURBING, AND ASPHALT PAVEMENT WITHIN THE CITY R.O.W. AS A RESULT OF UTILITY WORK.
2. THE SIDEWALKS SHALL BE SAW CUT AT AN EXISTING CONSTRUCTION JOINT OR CONTROL JOINT SO THAT THE FINISHED CONSTRUCTION AND CONTROL JOINT SPACING MATCHES EXISTING.
3. CUTS THROUGH EXISTING PAVEMENT SHALL BE MADE VIA SAW CUT AND REPAIRED IN ACCORDANCE WITH THE DETAILS ON SHEET 9.

## SITE SPECIFIC NOTES:

1. THE CONTRACTOR SHALL PERFORM A UTILITIES CALL-OUT PRIOR TO CONSTRUCTION TO VERIFY ALL UNDERGROUND UTILITY LOCATIONS BY CONTACTING UFPO @ 1-800-962-7962. SPECIFIC ATTENTION SHALL BE PAID TO THE LOCATIONS OF THE GAS (IF APPLICABLE), WATER AND SEWER MAINS WITH RESPECT TO THE PROPOSED LOCATIONS FOR THE SERVICE LINES.
2. THE CONTRACTOR SHALL CONTACT THE CITY OF BEACON WATER AND SEWER DEPARTMENTS TO SCHEDULE A PRE-CONSTRUCTION MEETING TO ENSURE THAT THE ARRANGEMENTS FOR WATER SUPPLY AND SEWAGE DISPOSAL ARE COMMENCED IN ACCORDANCE WITH THE APPROVED PLANS AND AMENDMENTS THERETO AND GENERALLY ACCEPTED STANDARDS.
3. THE PROPOSED CONSOLIDATED LOT SHALL BE SERVED BY THE CITY OF BEACON MUNICIPAL WATER AND SEWER SERVICES.
4. THE WATER SERVICE LINE AND METER SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BEACON WATER DEPARTMENT REQUIREMENTS.
5. THE WATER SERVICE LINE FOR THE SINGLE FAMILY HOUSE SHALL BE 3/4"ø K-COPPER, AND THE WATER SERVICE LINE TO THE FRONT BUILDING SHALL BE PER MEP ENGINEER TO MEET SPRINKLER REQUIREMENTS.
6. THE EXISTING 3/4" WATER SERVICE STUB TO THE FRONT BUILDING MAY BE USED OR ABANDONED IN PLACE.
7. THE SEWER SERVICE LINE FOR BOTH BUILDINGS SHALL BE 4"ø SCH-40 PVC PIPE WITH PITCH AS SHOWN ON THE PLAN (MINIMUM OF ¼" PER FOOT SHALL BE MAINTAINED).
8. A ROAD OPENING PERMIT SHALL BE REQUIRED FOR THE INSTALLATION OF THE PROPOSED WATER AND SEWER SERVICES FOR EACH LOT. STREET CLOSURE FOR WATER AND SEWER SERVICE CONNECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF BEACON REQUIREMENTS.
9. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. THE PROPOSED DRIVEWAY SHALL HAVE A STABILIZED CONSTRUCTION ENTRANCE.
10. ROOF LEADER CONNECTIONS TO BE MINIMUM 4"ø PVC OR HDPE @ 2.0% MIN.
11. SUMP PUMP TO BE PROVIDED FOR FOOTING DRAIN, IF NECESSARY. THE TYPE OF PUMP AND METHODS USED TO ENSURE PROPER DRAINAGE SHALL BE ACCEPTABLE TO THE CITY OF BEACON BUILDING DEPARTMENT.
12. THE PROPOSED DRIVEWAY SIGHT DISTANCE MEETS OR EXCEEDS COMPLIANCE WITH THE CITY OF BEACON'S 192-9(B) CODE AND THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. THE STATE UTILIZES THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) GUIDELINES FOR INTERSECTION SIGHT DISTANCES. FOR ROADS WITH A SPEED LIMIT OF 30 MPH, AASHTO DESIGN TABLES CALL FOR A SIGHT DISTANCE OF 290 FEET TO THE LEFT AND 335 FEET TO THE RIGHT. THE MEASURED SIGHT DISTANCE AT THE PROPOSED DRIVEWAYS ARE AS FOLLOWS:
    - PARKING LOT: SLSD LEFT = ±133 FEET (TO INTERSECTION OF MAIN STREET); SLSD RIGHT = ±324 FEET (TO CREST IN HILL); SSD LEFT = ±133 FEET (TO INTERSECTION OF MAIN STREET); SSD RIGHT = ±324 FEET (TO CREST IN HILL)
    - SINGLE DRIVEWAY: SLSD LEFT = ±56 FEET (TO INTERSECTION OF SCHENCK AVENUE); SLSD RIGHT = N/A – ONE WAY STREET

    SLSD LEFT FOR BOTH DRIVEWAYS ARE DEFICIENT; HOWEVER THESE WERE THE MAXIMUM ACHIEVABLE LENGTHS AS THE SLSD LEFT WAS MEASURED TO A T-TYPE INTERSECTION WITH MAIN ST. AND SCHENCK AVENUE.
    STOPPING SIGHT DISTANCE (SSD) WAS OBSERVED TO BE IN EXCESS OF THE REQUIRED 200 FEET WHEN APPROACHING THE PROPOSED PARKING LOT DRIVEWAY FROM THE RIGHT, AND APPROXIMATELY 133 FEET FROM THE LEFT. SSD FOR THE SINGLE DRIVEWAY WAS OBSERVED TO BE ±56 FEET FROM THE LEFT. BOTH SSD FROM THE LEFT ARE MEASURED FROM T-TYPE INTERSECTIONS.
13. THE CITY OF BEACON BUILDING DEPARTMENT SHALL BE PROVIDED ACCESS TO VERIFY THE LOCATION OF THE EXISTING ROOF LEADERS AND SUMP PUMPS AND THE AREA THEY DRAIN TO.

## INDIANA BAT PROTECTION NOTES:

1. TREE CLEARING SHALL BE RESTRICTED TO THE PERIOD BETWEEN OCTOBER 1 AND MARCH 31.
2. THE LIMITS OF DISTURBANCE SHALL BE DEMARCATED BY INSTALLING ORANGE CONSTRUCTION FENCE FOR THE GENERAL IMPROVEMENT AND INFRASTRUCTURE CONSTRUCTION ACTIVITIES AND FOR THE INDIVIDUAL LOT CONSTRUCTION. THESE LIMITS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. DUST CONTROL DURING CONSTRUCTION SHALL BE IMPLEMENTED. THIS INCLUDES USE OF CONSTRUCTION ENTRANCES, APPLYING LIGHT WATER, AND ESTABLISHING VEGETATION.
4. STREET LIGHTS ARE NOT PERMITTED. RESIDENTIAL LIGHTING SHALL BE DIRECTED DOWNWARD TO REDUCE IMPACTS TO BATS FORAGING FOR FOOD.

## OFFSITE PARKING AND TRAFFIC IMPROVEMENT NOTE:

1. REFER TO PLANS PREPARED BY MASER CONSULTING DATED 7/16/2020 FOR OFFSITE PARKING AND TRAFFIC IMPROVEMENTS.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

| DRAWN BY: CMB | | | | CHECKED BY: MAB | | | |
|---|---|---|---|---|---|---|---|
| REVISIONS: | | | | REVISIONS: | | | |
| NO. | DATE | DESCRIPTION | BY | NO. | DATE | DESCRIPTION | BY |
| 1 | 06/30/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |
| 2 | 07/28/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |

Dig Safely. New York Call 811 before you dig

STATE OF NEW YORK MICHAEL A. BIDERMAN 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST, NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

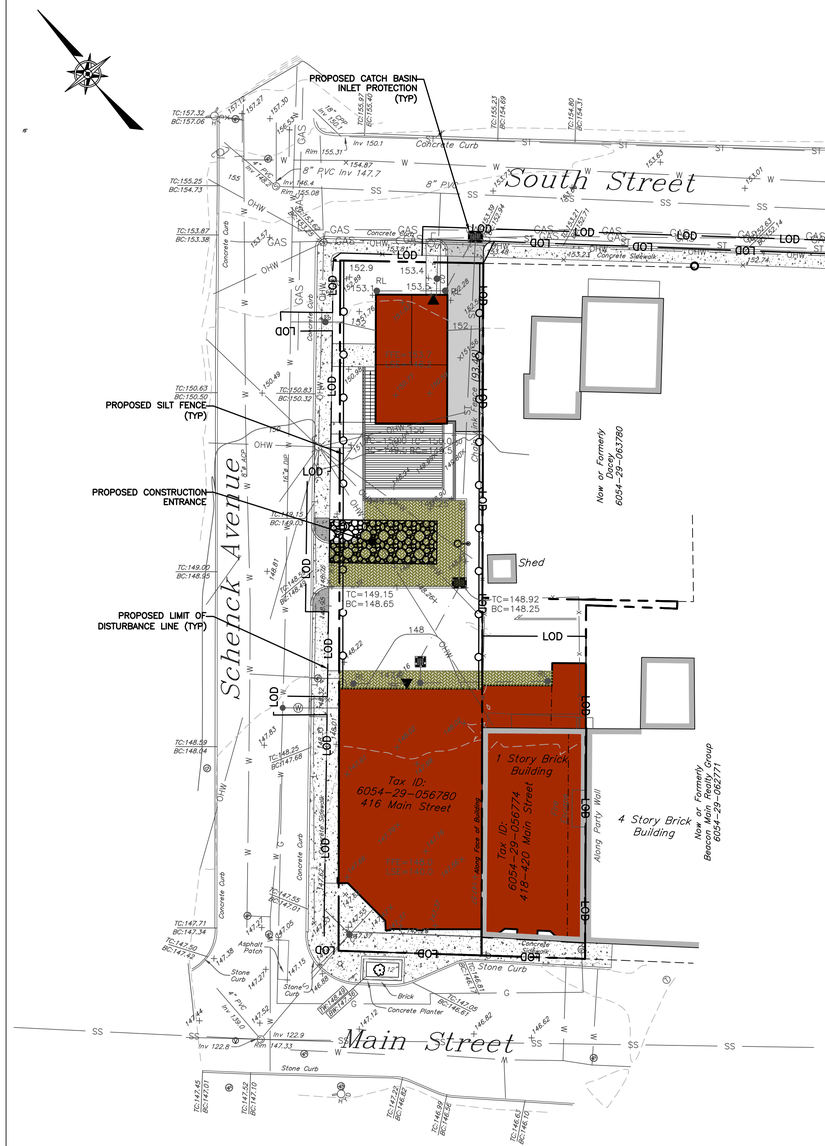
GRADING & UTILITY PLAN

416 MAIN STREET

416-420 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-29-056780 & 056774

JOB #: 2020:005
DATE: 4/28/2020
SCALE: 1" = 20'
TITLE: GU-1
SHEET: 6 OF 10

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW




EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

LEGEND:

- EXISTING PROPERTY LINE
- ADJOINING PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING CHAIN LINK FENCE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING OVERHEAD WIRE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SEWER MANHOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING TREE
- PROPOSED PROPERTY LINE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STORM PIPE
- PROPOSED DIP WATER LINE
- PROPOSED K-COPPER WATER LINE
- PROPOSED SEWER LINE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE LINE
- PROPOSED DIP GATE VALVE
- PROPOSED WATER SERVICE SHUT OFF VALVE
- PROPOSED SEWER CLEAN OUT

## EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE PROVIDED ON THIS SHEET. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.

2. ALL STORMWATER MANAGEMENT STRUCTURES (E.G., SWALES, CULVERTS) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. SEDIMENT AND TRASH SHALL BE REMOVED, AS NECESSARY.

3. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

4. ANY PILE OF POTENTIALLY 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 FROM EROSION BY A SURROUNDING SILT FENCE.

5. PERMANENT SEEDED AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THE DETAIL SHEET.

6. AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND WILL NOT BE REDISTURBED FOR A PERIOD OF 21 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE COVER WITHIN 14 DAYS.

7. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY STANDARD METHODS OF LIGHTLY WATERING ALL EXPOSED SOIL AND RAPIDLY STABILIZING THE REGRADED AREAS WITH TOPSOIL, LOAM AND/OR SEEDING.

8. THE PROJECT ENGINEER SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE START OF ANY SITE WORK, AND BY SUCH NOTIFICATION, SHALL BE PROVIDED WITH THE NAME AND TELEPHONE NUMBER OF THE GENERAL CONTRACTOR RESPONSIBLE FOR SUCH WORK.

THE CITY MAY INSPECT EROSION AND SEDIMENT CONTROL PRACTICES ON THE SITE DURING CONSTRUCTION AND RECOMMEND THAT THE CONTRACTOR INSTALL ADDITIONAL EROSION CONTROL MEASURES IF DEEMED NECESSARY TO PROTECT ANY UNDISTURBED AREAS OF THE SITE. ANY SUCH REQUESTS SHALL BE MADE DIRECTLY TO THE CONTRACTOR AND QUALIFIED PROFESSIONAL AND FOLLOWED UP WITH A WRITTEN NOTIFICATION TO THE DEVELOPER. IN ADDITION, THE CITY SHALL BE CONSULTED ON ANY SPECIAL ADDITIONS OR DELETIONS OF EROSION CONTROL MEASURES WARRANTED BY CHANGING FIELD CONDITIONS.

9. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (AKA SUMP PIT) TO FILTER WATER FOR PUMPING TO A SUITABLE LOCATION.

10. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED PER THE APPROVAL OF THE ENGINEER SUPERVISING CONSTRUCTION.

## INSPECTION SCHEDULE & MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES

PERMANENT AND TEMPORARY VEGETATION:

INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:

INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. REGRADE PAD AS NEEDED FOR RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE AS DIRECTED BY PROJECT ENGINEER.

SILT FENCE:

INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

SOIL STOCKPILE:

INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY STORM EVENT WITH RAINFALL THAT EQUALS OR EXCEEDS 0.5 INCH. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCKPILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:

SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORK. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

DEWATERING PITS:

(IF REQUIRED) -- INSPECT DAILY DURING OPERATION FOR CLOGGING OR OVERFLOW. CLEAR INLET AND DISCHARGE PIPES OF OBSTRUCTIONS. IF A FILTER MATERIAL BECOMES CLOGGED WITH SEDIMENT, PIT SHALL BE DISMANTLED AND NEW PITS SHALL BE CONSTRUCTED AS NEEDED.

CATCH BASINS:

ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION AND DEBRIS, AND REMOVED AS NECESSARY. THE INLET PROTECTION SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND REPLACED AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED.

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE CITY OF BEACON, NEW YORK, ON THE _____ DAY OF _____, 20_____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____, 20_____, BY

_____ CHAIRMAN

_____ SECRETARY

IN ABSENCE OF THE CHAIRMAN OR SECRETARY, THE ACTING CHAIRMAN OR ACTING SECRETARY RESPECTIVELY MAY SIGN IN THIS PLACE.

| DRAWN BY: CMB | | | | CHECKED BY: MAB | | | |
|---|---|---|---|---|---|---|---|
| REVISIONS: | | | | REVISIONS: | | | |
| NO. | DATE | DESCRIPTION | BY | NO. | DATE | DESCRIPTION | BY |
| 1 | 06/30/2020 | NO CHANGE | MAB | | | | |
| 2 | 07/28/2020 | NO CHANGE | MAB | | | | |

Dig Safely. New York Call 811 before you dig

STATE OF NEW YORK MICHAEL A. BIONDO 084466 LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

EROSION AND SEDIMENT CONTROL PLAN

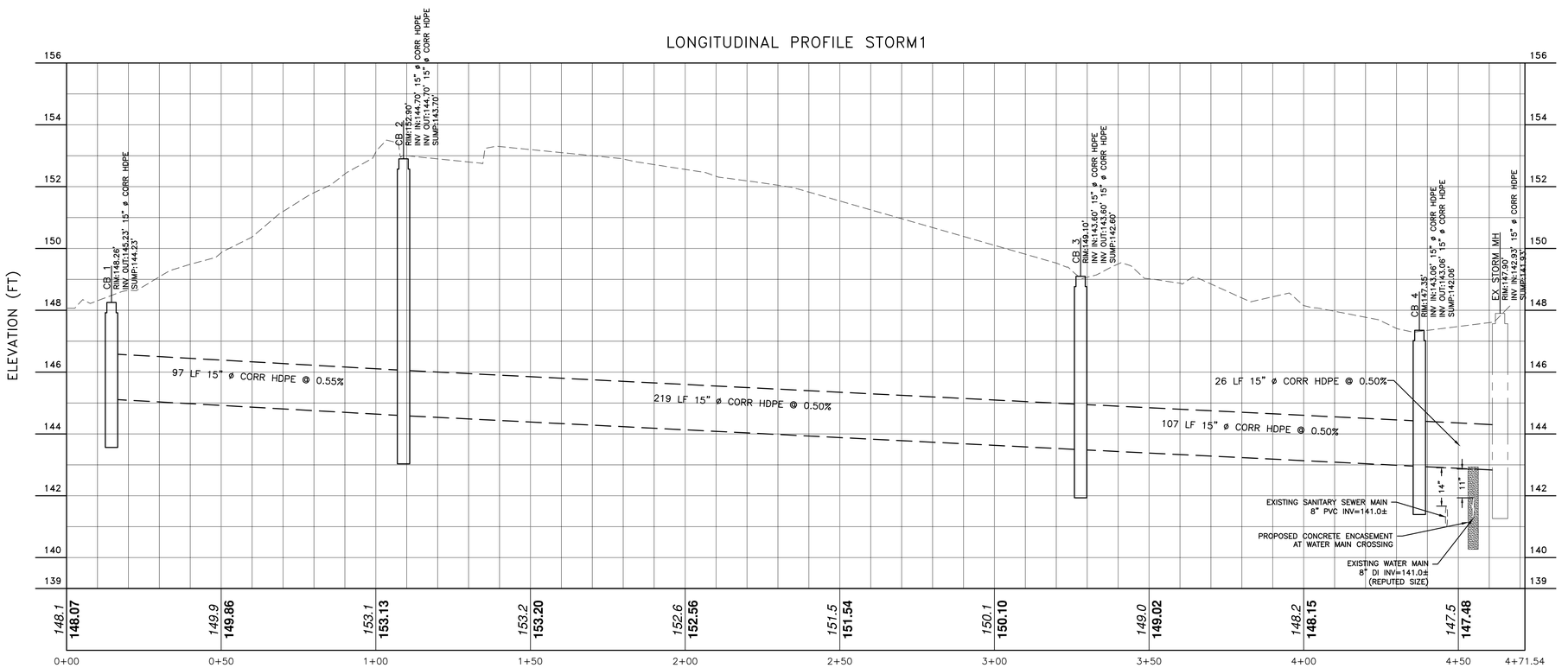
416 MAIN STREET

416-420 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-29-056780 & 056774

| | |
|---|---|
| JOB #: | 2020:005 |
| DATE: | 4/28/2020 |
| SCALE: | 1" = 20' |
| TITLE: | ESC-1 |
| SHEET: | 7 OF 10 |

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

## LONGITUDINAL PROFILE STORM1




PROPOSED STORM PROFILE
SCALE: 1" = 20' H
1" = 2' V

| DRAWN BY: CMB | | | | CHECKED BY: MAB | | | |
|---|---|---|---|---|---|---|---|
| REVISIONS: | | | | REVISIONS: | | | |
| NO. | DATE | DESCRIPTION | BY | NO. | DATE | DESCRIPTION | BY |
| 1 | 06/30/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |
| 2 | 07/28/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |

Dig Safely. New York Call 811 before you dig

STATE OF NEW YORK · MICHAEL A. BODENDORF · 084466 · LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

UTILITY PROFILES

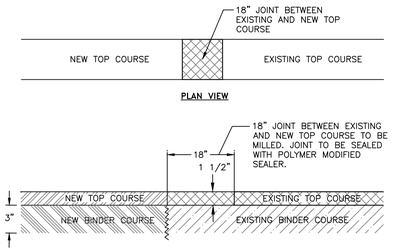
416 MAIN STREET

416-420 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-29-056780 & 056774

| | |
|---|---|
| JOB #: | 2020:005 |
| DATE: | 4/28/2020 |
| SCALE: | 1" = 20' |
| TITLE: | PR-1 |
| SHEET: | 8 OF 10 |

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

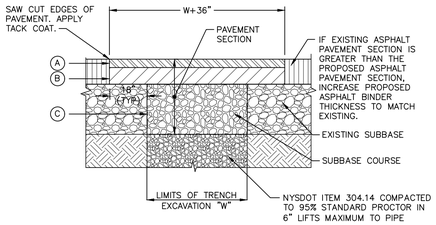
# SITE DETAILS




**NOTES:**

1. 3" BINDER COURSE AND 1½" TOP COURSE TO BE USED FOR RESTORATION OF PAVEMENT WITHIN CITY ROADS.
2. EXCAVATIONS ARE TO BE SAW CUT SMOOTH, ALL EDGES TACK COATED, AND ALL SEAMS SEALED WITH A HOT POLYMER MODIFIED CRACK SEALANT.
3. IF EXISTING ASPHALT PAVEMENT DEPTH IS GREATER THAN THE PROPOSED ASPHALT PAVEMENT SECTION, INCREASE PROPOSED ASPHALT BINDER THICKNESS TO MATCH EXISTING.

## MILLED KEYWAY DETAIL
NOT TO SCALE



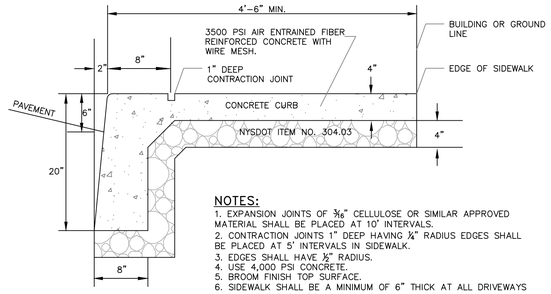

LEGEND

- (A) 1–1/2" ASPHALT CONCRETE TOP COURSE– NYSDOT TYPE 6F
- (B) 3" ASPHALT CONCRETE BINDER COURSE– NYSDOT TYPE 3
- (C) 10" GRANULAR SUBBASE COURSE– NYSDOT ITEM 304.14

**NOTES:**

1. SAW CUT MIN. 18" BEYOND EXCAVATION WITH SMOOTH EDGES. 18" JOINT BETWEEN EXISTING AND NEW TOP COURSE TO BE MILLED. JOINT TO BE SEALED WITH POLYMER MODIFIED SEALER.
2. FURNISH, PLACE, AND COMPACT SUBBASE.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.

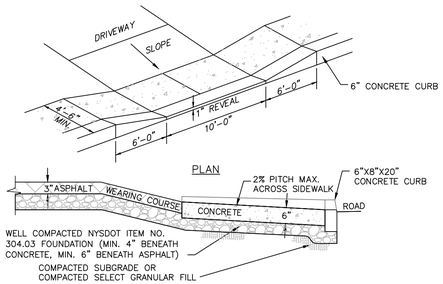
## STREET PAVEMENT RESTORATION DETAIL
NOT TO SCALE




**NOTES:**

1. EXPANSION JOINTS OF 3/8" CELLULOSE OR SIMILAR APPROVED MATERIAL SHALL BE PLACED AT 10' INTERVALS.
2. CONTRACTION JOINTS 1" DEEP HAVING ¼" RADIUS EDGES SHALL BE PLACED AT 5' INTERVALS IN SIDEWALK.
3. EDGES SHALL HAVE ½" RADIUS.
4. USE 4,000 PSI CONCRETE.
5. BROOM FINISH TOP SURFACE.
6. SIDEWALK SHALL BE A MINIMUM OF 6" THICK AT ALL DRIVEWAYS AND HANDICAP RAMPS.
7. MAXIMUM SLOPE OF 1 ON 12 TO BE USED WHERE SIDEWALK TERMINATES AT HANDICAP RAMPS.

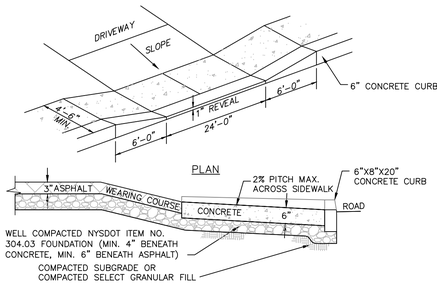
## MONOLITHIC CURB AND SIDEWALK DETAIL
NOT TO SCALE




**NOTE:**

1. PRE–MOLDED EXPANSION JOINTS TO BE USED AT ALL JOINTS.
2. DRIVEWAY SHALL BE PAVED AFTER THE CONCRETE APRON TO THE RIGHT–OF–WAY LINE (MINIMUM).
3. SIDEWALK WIDTH SHALL MATCH EXISTING SIDEWALK, BUT NO LESS THAN 4'–6".

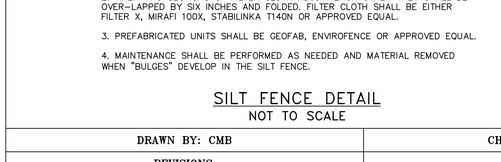
## ONE WAY DRIVEWAY ENTRANCE DETAIL
NOT TO SCALE




**NOTE:**

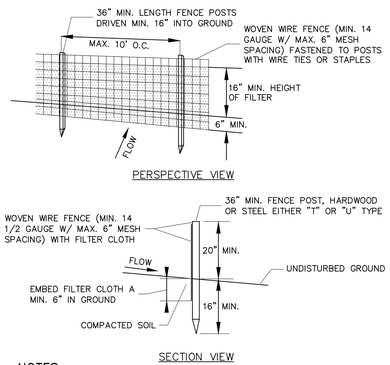
1. PRE–MOLDED EXPANSION JOINTS TO BE USED AT ALL JOINTS.
2. DRIVEWAY SHALL BE PAVED AFTER THE CONCRETE APRON TO THE RIGHT–OF–WAY LINE (MINIMUM).
3. SIDEWALK WIDTH SHALL MATCH EXISTING SIDEWALK, BUT NO LESS THAN 4'–6".

## TWO WAY DRIVEWAY ENTRANCE DETAIL
NOT TO SCALE




NOTE:
THE CONCRETE PAVER DRIVE SHALL SUPPORT A MINIMUM OF 75,000 POUNDS PER APPENDIX "D" OF THE 2015 INTERNATIONAL BUILDING CODE

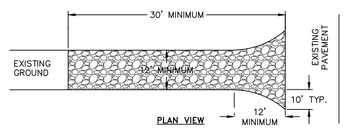
## CONCRETE PAVER DETAIL
NOT TO SCALE




**NOTES:**

1. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

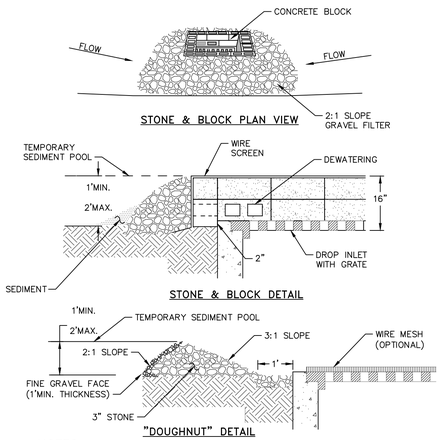
## SILT FENCE DETAIL
NOT TO SCALE




**NOTES:**

1) STONE SIZE – USE 1–4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2) LENGTH – NOT LESS THAN 30 FEET FOR A SINGLE RESIDENCE LOT.
3) THICKNESS – NOT LESS THAN SIX (6) INCHES.
4) WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.
5) GEOTEXTILE – 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 BENEATH 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. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED 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.

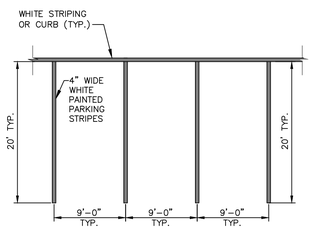
## STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE




**NOTES:**

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2–3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS. MAXIMUM DRAINAGE AREA 1 ACRE

## CATCH BASIN INLET PROTECTION DETAIL
NOT TO SCALE

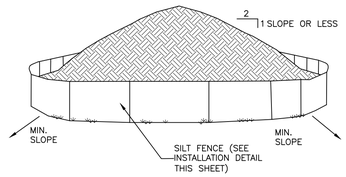



TYPICAL
PARKING STRIPING

**NOTES:**

1. ALL DIMENSIONS SUBJECT TO CURRENT MUNICIPALITY ZONING AND SITE REGULATIONS.
2. IF PARKING ABUTS A SIDEWALK, THEN THE REGULATORY SIGNS SHALL BE PLACED BEHIND THE SIDEWALK.

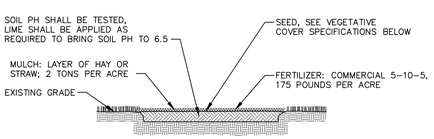
## PARKING AND STRIPING DETAIL
NOT TO SCALE




*NOTES:*

*1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.*
*2. EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.*

## TEMPORARY SOIL STOCKPILE DETAIL
NOT TO SCALE




**NOTES:**

1. TOPSOIL, SEED, MULCH, AND FERTILIZE DISTURBED SOIL AREAS THAT WILL BE LEFT EXPOSED FOR 14 DAYS OR MORE.
2. SEED MIXTURE FOR USE ON LAWNS IN SUNNY AREAS:
   - 65% KENTUCKY BLUE GRASS BLEND — 114 POUNDS PER ACRE
   - 20% PERENNIAL RYEGRASS — 35 POUNDS PER ACRE
   - 15% FINE FESCUE — 26 POUNDS PER ACRE
   - 175 POUNDS PER ACRE
3. SEED MIXTURE FOR USE IN SHADY AREAS:
   - 80% BLEND OF SHADE TOLERANT KENTUCKY BLUEGRASS — 138 POUNDS PER ACRE
   - 20% FINE FESCUE — 37 POUNDS PER ACRE
   - 175 POUNDS PER ACRE
4. SEED BETWEEN APRIL 1ST AND MAY 15TH OR AUGUST 15TH AND OCTOBER 15TH. SEEDING MAY OCCUR BETWEEN MAY 15TH AND AUGUST 15TH IF ADEQUATE IRRIGATION IS PROVIDED.
5. TOPSOIL SHALL HAVE AT LEAST 6% BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATERIAL, AND NO GREATER THAN 20%. TOPSOIL SHALL HAVE NOT LESS THAN 20% FINE TEXTURED MATERIAL (PASSING THE NO. 200 SIEVE) AND NOT MORE THAN 15% CLAY.

## TOPSOIL, SEED AND MULCH DETAIL
NOT TO SCALE

| DRAWN BY: CMB | | | | CHECKED BY: MAB | | | |
|---|---|---|---|---|---|---|---|
| REVISIONS: | | | | REVISIONS: | | | |
| NO. | DATE | DESCRIPTION | BY | NO. | DATE | DESCRIPTION | BY |
| 1 | 06/30/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |
| 2 | 07/28/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |

Dig Safely. New York — Call 811 before you dig

STATE OF NEW YORK — MICHAEL A. BODENSTEIN — 084456 — LICENSED PROFESSIONAL ENGINEER

SEAL

HUDSON LAND DESIGN
HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845–440–6926
F: 845–440–6637

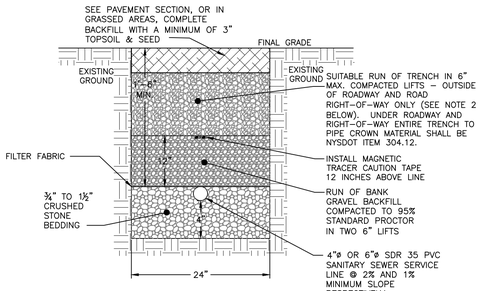
CONSTRUCTION DETAILS

416 MAIN STREET

416–420 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054–29–056780 & 056774

| | |
|---|---|
| JOB #: | 2020:005 |
| DATE: | 4/28/2020 |
| SCALE: | NTS |
| TITLE: | CD–1 |
| SHEET: | 9 OF 10 |

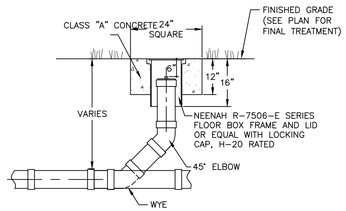
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW



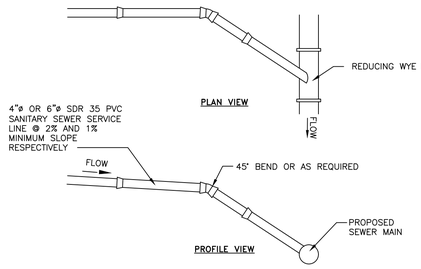

NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

## SANITARY SEWER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



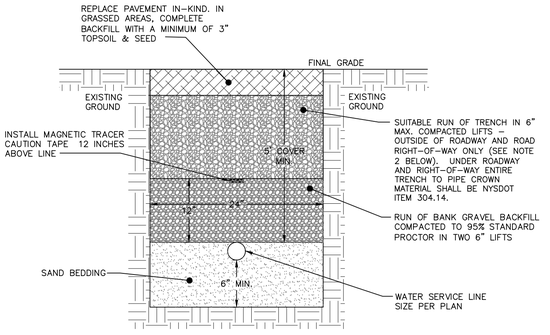

## CLEANOUT DETAIL
NOT TO SCALE




NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

## SANITARY SEWER SERVICE CONNECTION DETAIL
NOT TO SCALE

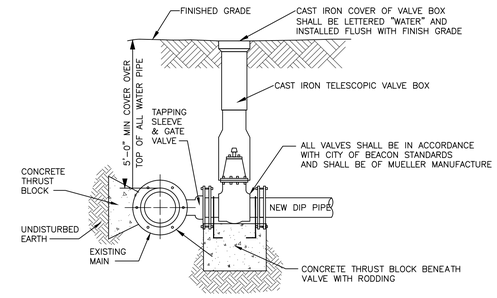



NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ENLOGATED PARTICLES, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.

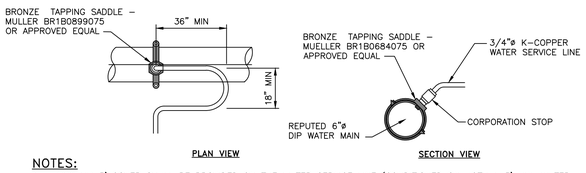
3. IN AREAS WHERE 5' COVER REQUIREMENT CANNOT BE MET, THE CONTRACTOR SHALL PROVIDE PIPE INSULATION TO PREVENT FREEZING.

## WATER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



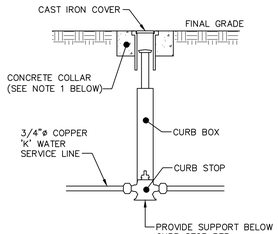

NOTES:
1. TAPPING SLEEVE SHALL BE USED IT THE SECTION OF WATER MAIN IN THE VICINITY OF THE CONNECTION CANNOT BE SHUT DOWN AND ISOLATED.
2. ALL VALVES SHALL OPEN BY TURNING LEFT (COUNTERCLOCKWISE) AND HAVE A 2-INCH SQUARE-OPERATING NUT PAINTED RED.
3. ALL VALVES SHALL BE M.J. RESILIENT WEDGE TYPE WITH "O" RING PACKING, DESIGNED FOR A WORKING PRESSURE OF 150 PSI AND BE IN FULL CONFORMANCE WITH AWWA C500.
4. TAPPING SLEEVE AND GATE VALVE SHOWN ARE MUELLER H-615, AND T-2630 RESPECTIVELY.

## TAPPING SLEEVE DETAIL
NOT TO SCALE



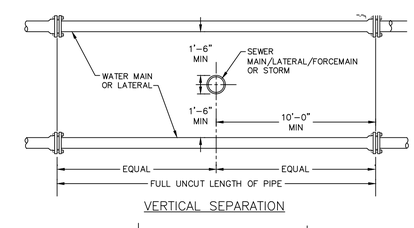

NOTES:
1. A MINIMUM 5' COVER SHALL BE PROVIDED ON THE WATER SERVICE LINE (CONDITIONED ON ACTUAL 5' MIN. WATER MAIN DEPTH).
2. CORPORATION STOP TO BE COMPRESSION TYPE BY MUELLER.
3. WATER SERVICE LINE TO HAVE A 'GOOSENECK' NEAR CORPORATION STOP.
4. CORPORATION STOP TO BE INSTALLED IN THE UPPER HALF OF THE WATER MAIN AT AN ANGLE OF APPROXIMATELY 45° FROM HORIZONTAL.
5. THE CONTRACTOR SHALL INSTALL A FULL BODIED STAINLESS STEEL TAPPING SLEEVE AT THE PROPOSED WATER SERVICE LOCATION.

## WATER SERVICE CONNECTION DETAIL
NOT TO SCALE



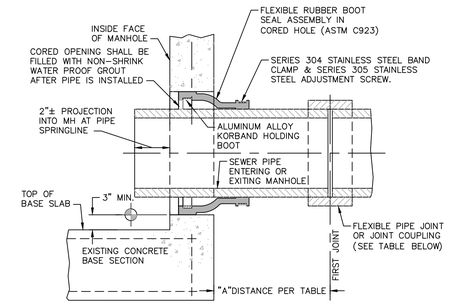

NOTES:
1. CONCRETE COLLAR TO BE PROVIDED IN AREAS THAT ARE NOT PAVED. THE COLLAR SHALL BE 6" FROM THE COVER AND SHALL EXTEND 6" BELOW FINAL GRADE.
2. CURB STOP TO BE COMPRESSION TYPE BY MUELLER.
3. AREA AROUND CURB BOX TO BE BACKFILLED WITH GRAVELLY MATERIAL.

## WATER SHUT-OFF VALVE DETAIL
NOT TO SCALE




NOTE:
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DUTCHESS COUNTY DEPARTMENT OF HEALTH AND THE CITY OF BEACON. CONCRETE ENCASEMENT OF WATERLINE OR OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.

## WATER LINE SEPARATION DETAIL
NOT TO SCALE

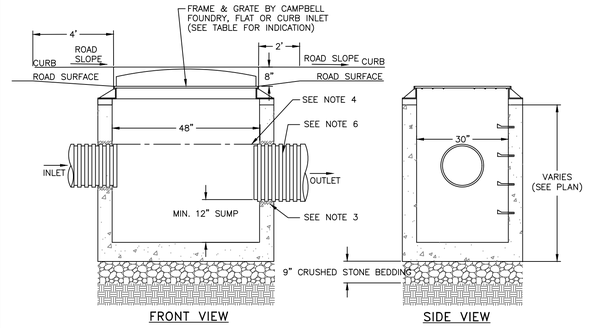



FLEXIBLE JOINT REQUIREMENTS

| SEWER PIPE TYPE | FLEXIBLE JOINT TYPE IN & OUT | "A"DISTANCE (FEET) |
|---|---|---|
| DUCTILE IRON | STD RUBBER GASKET PIPE JOINT ONLY | 10' MAX |
| PVC | STD RUBBER GASKET PIPE JOINT ONLY | 3' MAX |

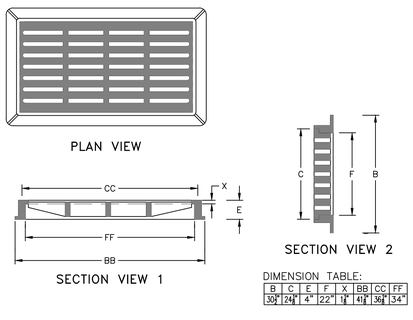
NOTE:
REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION.

## CORED HOLE AND INSERTED BOOT DETAIL
NOT TO SCALE




NOTES:
1. PRECAST CONCRETE CATCH BASIN WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. CONNECTIONS MADE WITHIN 10 FEET OF A WATER MAIN (OR SERVICE LINE) OR A SEWER MAIN (OR SERVICE LATERAL) SHALL BE MADE WATERTIGHT.
4. PROVIDE A MINIMUM 0.1' DROP BETWEEN INLET AND OUTLET INVERTS (MATCH CROWNS FOR PIPES WITH DIFFERENT SIZE) UNLESS OTHERWISE NOTED ON THE PLAN.
5. CATCH BASINS WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.
6. HDPE PIPE SHALL BE PROVIDED WITH WATERTIGHT CONNECTIONS. ADS MODEL N12 WT IB OR APPROVED EQUAL.

## CATCH BASIN DETAIL
NOT TO SCALE

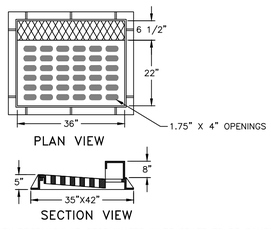



DIMENSION TABLE:

| B | C | E | F | X | BB | CC | FF |
|---|---|---|---|---|---|---|---|
| 30" | 24" | 4" | 22" | 1" | 41" | 36" | 34" |

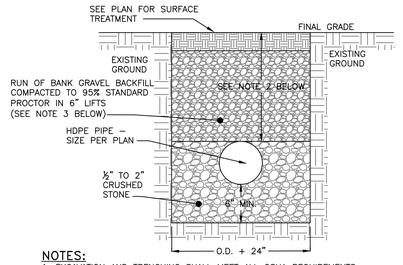
NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 3433, OR APPROVED EQUAL.
2. CB 1 SHALL RECEIVE A FLAT INLET. CATCH BASINS 2 & 3 RECEIVE CURB INLETS (RE-USE EXISTING CURB INLET ON CB 3)

## CAST IRON STORMWATER FLAT INLET GRATE DETAIL
NOT TO SCALE



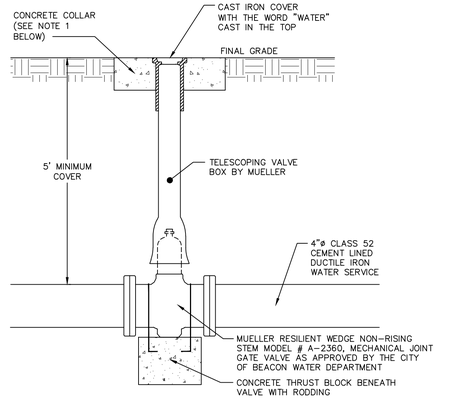

NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 2541, OR APPROVED EQUAL.
2. CATCH BASINS TO RECEIVE CURB INLETS ARE CB 2 AND CB 3 WITHIN SOUTH STREET.

## CAST IRON STORMWATER CURB INLET GRATE DETAIL
NOT TO SCALE




NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. MINIMUM COVER SHALL BE 18 INCHES WITHIN THE SOUTH STREET RIGHT-OF-WAY.
3. BACKFILL WITHIN THE RIGHT-OF-WAY SHALL BE NYSDOT ITEM 304.14 SUBBABSE COURSE TYPE 2 FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT OR GRASS, PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO 95% STANDARD PROCTOR.

## STORMWATER PIPE IN TRENCH DETAIL
NOT TO SCALE




NOTES:
1. CONCRETE COLLAR TO BE PROVIDED IN AREAS THAT ARE NOT PAVED. THE COLLAR SHALL BE 6" FROM THE COVER AND SHALL EXTEND 6" BELOW FINAL GRADE.

## GATE VALVE DETAIL
NOT TO SCALE

| DRAWN BY: CMB | | | | CHECKED BY: MAB | | | |
|---|---|---|---|---|---|---|---|
| REVISIONS: | | | | REVISIONS: | | | |
| NO. | DATE | DESCRIPTION | BY | NO. | DATE | DESCRIPTION | BY |
| 1 | 06/30/2020 | NO CHANGE | MAB | | | | |
| 2 | 07/28/2020 | PER PLANNING BOARD COMMENTS | MAB | | | | |

Dig Safely. New York Call 811 before you dig

SEAL

HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

CONSTRUCTION DETAILS

# 416 MAIN STREET

416-420 MAIN STREET
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-29-056780 & 056774

| | |
|---|---|
| JOB #: | 2020:005 |
| DATE: | 4/28/2020 |
| SCALE: | NTS |
| TITLE: | CD-2 |
| SHEET: | 10 OF 10 |

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW

Engineers
Planners
Surveyors
Landscape Architects
Environmental Scientists

400 Columbus Avenue, Suite 180E
Valhalla, NY 10595
T: 914.347.7500
F: 914.347.7266
www.maserconsulting.com

July 28, 2020

**VIA EMAIL**

Chairman John Gunn
City of Beacon Planning Board
City of Beacon City Hall
1 Municipal Plaza
Beacon, NY 12508

Re: 416-420 Main Street
City of Beacon, Dutchess County, New York
MC Project No. 20000282A

Dear Chairman Gunn and Members of the Planning Board:

The following items are provided in response to the comments provided by Creighton Manning Engineering (CME) in their letter dated July 10, 2020. The items are numbered according to their review comments.

**Site Plan**

1. CM has no further comments in regard to Traffic Impact Study items 1-3. With regard to item 4, which deal with the parking analysis, we have the following comments:

    a. The City of Beacon may want to consider creating a system to track parking variances/waivers in the downtown core. With the potential for multiple mixed-use proposals, such a system would enable the City to determine how surplus public parking is allocated to private development projects that are seeking to utilize it to satisfy individual parking minimums. Hypothetically, a project that received a variance/waiver from a Beacon land-use board but is yet to be constructed and occupied is not being factored in the instant parking analysis. This could create the appearance of a surplus in the near term. CM's recommendation is not made to encumber good projects, such as the 416-420 Main Street application, rather act as a tool the City can utilize when dealing with parking management in general. Mixed-use projects in downtowns tend to generate less parking demand due to the synergies created both internally and externally and can result in more foot traffic than vehicular traffic.

***Response:*** ***Comment noted. As indicated in the Traffic Impact Study and our prior correspondence, the traffic and parking analysis conducted by our office accounts for traffic associated with other proposed developments in the area while there are no known currently proposed developments that will significantly impact parking conditions in the vicinity of the Site. The Applicant for the 416-420 Main Street project would support any effort by City to create parking tracking system for the downtown area, but as noted in the comment this is beyond the scope and capability of the 416-420 Main Street project.***

b. In response to our initial review, Maser's revised analysis considered a 5% adjustment to account for seasonality. Maser should substantiate this adjustment factor and/or cite other available data to shed light on how parking/traffic fluctuates throughout the year.

***Response:*** ***Historical traffic volume data collected by our office for other projects within the City of Beacon have indicated that typical traffic volumes along the major corridors in the City are typically between 10-15% lower during the summer months (July/August) than during the other times of the year when schools are in session and people are not on vacation. Due to a lack of further available data and the inability to conduct additional parking occupancy data due the atypical conditions created by the COVID-19 pandemic a 5% adjustment was applied to account for seasonal variations in parking. It is the professional opinion of Maser Consulting, based on our significant experience with traffic and parking conditions within the City of Beacon, that this is a reasonable adjustment to account for potentially higher parking occupancy rates during the warmer times of the year.***

c. With regard to item 5, which dealt with proposed parking along Schenck Avenue, clarification is needed as to whether the applicant is still seeking to propose on-street parking along the east side of the roadway between Main Street and South Street. The width of Schenck Avenue in this section is too narrow to safely allow two-way traffic and on-street parking on both sides.

***Response:*** ***A detailed review of the existing parking along Schenck Avenue indicates that there are currently four (4) available legal on-street parking spaces along the west side of Schenck Avenue as well as two (2) available legal on-street parking spaces along the east side of the roadway approaching South***

***Street (See attached Schenck Avenue Existing Parking Plan). It should be noted that there are two locations along the east and west side of Schenck Avenue that are known to be utilized as parking spaces on occasion, but per the City Code should not be considered usable parking spaces an therefore were not accounted for in the existing parking analysis conducted by our office.***

***Based on discussions with the Board and in consideration of the need to maintain adequate access to the Site as well as for access of emergency vehicles to Schenck Avenue and the need to maintain adequate two-way traffic flow, we have developed a concept that would maintain the existing three (3) parking spaces on the west side of Schenck Avenue nearest Main Street while closer to South Street three (3) on-street parking spaces would be striped on the west side of the roadway (See attached Schenck Avenue Proposed Parking Plan). This would maintain the same number of available on-street parking spaces along Schenck Avenue between Main Street and South Street while formally delineating the available parking spaces and providing delineation of the travel lanes along the roadway. The additional on-street parking space along the east side of Schenck Avenue takes into consideration the proposed narrowing of the Site Access driveway to 12 ft. As an alternate, the existing fourth parking space on the west of Schenck Avenue near South Street could continue to be maintain, which would provide seven (7) total on-street spaces between Main Street & South Street and provide similar configuration to existing conditions.***

***It should also be noted that the City of Beacon has a project currently under development for improvements to Fishkill Avenue between Wolcott Avenue and the City line at Prospect Street. Based on discussion with WSP Global, Inc. (WSP), who is preparing the design plans for this project. The project will ultimately involve a resurfacing and restriping of Fishkill Avenue for its entire length along with other related pavement, utility and sidewalk improvements along the roadway. The project is anticipated to be advertised for bidding later this summer with construction expected to commence in February 2021. As part of this project, six (6) additional on-street parking spaces are proposed to be added along the east side of Fishkill Avenue. These six (6) additional parking spaces will fall within the 800 ft. radius***

***from the 416-420 Main Street property. Excerpts of the draft Signing and Striping plans for Fishkill Avenue in the area of Main Street are attached for your information.***

***It is the opinion of Maser Consulting that additional parking spaces along Fishkill Avenue approaching Verplanck Avenue could be obtained as part to the Fishkill Avenue improvement project by continuing a similar roadway cross section further north along the Fishkill Avenue. As shown on the attached Fishkill Avenue Proposed Parking Plan approximately 10 additional on-street parking spaces could be obtained in this area which would be within reasonable proximity to Main Street and would fall within the 800 ft. radius from the proposed project. This would increase the total additional available on-street parking spaces in the vicinity of Site by 16 total spaces. This potential modification to the proposed Fishkill Avenue plans has been discussed with WSP by our office and it is our understanding that this will be discussed further with the City prior to finalizing the plans for construction.***

**General**

1. CM has no further comment in regard to General item 1.

   ***Response: Noted. Item closed.***

2. In regard to Maser's response to comments General item 2 and 3, we generally agree with the measures being proposed. In addition, CM recommends that the proposed pedestrian safety countermeasures adhere to Detail 3 found in the attached New York State Department of Transportation (NYSDOT) Traffic Safety and Mobility Instruction Official Issuance 17-07 (see attached excerpt).

   ***Response: Comment noted. The appropriate signage as noted has now been shown on the attached Schenck Avenue Proposed Parking Plan. These signing and striping improvements will be incorporated into the Final Site Plans.***

If you have any questions regarding the above, please do not hesitate to contact us.

Very truly yours,

MASER CONSULTING P.A.

Richard G. D'Andrea, P.E., PTOE
Principal Associate/Project Manager

RGD/ces
Enclosures

r:\projects\2020\20000282a_416-420 main street\correspondence\out\200728rgd_cme 7.10.20 response.docx

THIS SPACE SHOULD NOT BE CONSIDERED A USABLE PARKING SPACE PER CITY CODE IN ORDER TO MAINTAIN SIGHT DISTANCE FOR SOUTH STREET.

THIS SPACE SHOULD NOT BE CONSIDERED A USABLE PARKING SPACE PER CITY CODE APPROX. 15 FT. BETWEEN DRIVEWAYS

4 EXISTING PARKING SPACES ALONG WEST SIDE OF SCHENCK AVENUE BETWEEN MAIN STREET AND SOUTH STREET (SPACES SHOWN AS STRIPED FOR CLARITY, SPACES NOT CURRENTLY STRIPED)

SOUTH STREET

SCHENCK AVENUE

2 EXISTING PARKING SPACES ALONG EAST SIDE OF SCHENCK AVENUE BETWEEN MAIN STREET AND SOUTH STREET (SPACES SHOWN AS STRIPED FOR CLARITY, SPACES NOT CURRENTLY STRIPED)

EXISTING SIGN
NO PARKING BETWEEN SIGNS

EXISTING SIGN
NO PARKING HERE TO CORNER

EXISTING SIGN
NO PARKING HERE TO CORNER
NO PARKING BETWEEN SIGNS

Now or Formerly Beacon
Main Realty Group
6054-29-062771

MAIN STREET

30 0 30
SCALE : 1" = 30'

N
E
W
S


MASER CONSULTING P.A.
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com

Office Locations:
- NEW JERSEY
- NEW YORK
- PENNSYLVANIA
- FLORIDA
- NORTH CAROLINA
- NEW MEXICO
- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO
- VIRGINIA

State of N.Y. C.O.A.: 0008671/0008821



Copyright © 2020 Maser Consulting P.A. All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Maser Consulting P.A.


811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTHS SURFACE ANYWHERE IN ANY STATE
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

| REV | DATE | DRAWN BY | DESCRIPTION |
|---|---|---|---|
| . | . | . | . |

CONCEPT PLAN
FOR
# 416-420 MAIN STREET

MAIN STREET AT
SCHENCK AVENUE
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK


WESTCHESTER OFFICE
400 Columbus Avenue
Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
Fax: 914.347.7266


| SCALE: | DATE: | DRAWN BY: | CHECKED BY: |
|---|---|---|---|
| AS SHOWN | 7/16/20 | RGD | PJG |

PROJECT NUMBER: 20000282A
DRAWING NAME: 200716RGD_PARKING CONCEPTS
SHEET TITLE: SCHENCK AVENUE EXISTING PARKING
SHEET NUMBER: 1 of 3



0282A_416-420 Main Street\Plans (Maser PDFs)\200716RGD_Parking Concepts.dwg\R-01-EXIST. PARKING By: RDANDREA

SCHENCK AVENUE

SOUTH STREET

3 PROPOSED STRIPED SPACES EAST SIDE OF SCHENCK, NO PARKING WEST SIDE OF SCHENCK

STRIPED DOUBLE YELLOW CENTERLINE FOR DELINEATION OF TRAVEL LANES

3 EXISTING SPACES WEST SIDE OF SCHENCK TO REMAIN, STRIPING TO BE ADDED FOR DELINEATION OF SPACES, NO PARKING ON EAST SIDE OF SCHENCK

EXISTING SIGN
NO PARKING HERE TO CORNER

INSTALL SIGN
STOP
R1-1 (30"x30")

INSTALL SIGNS BACK-TO-BACK
W11-2(R) (30"x30")
W11-2(L) (30"x30")
W16-7P(R) (24"x12")
W16-7P(L) (24"x12")

MAIN STREET

W11-2(L) (30"x30")
AHEAD
W16-9P (24"x12")

20'

18'

REMOVE SIGN
NO PARKING BETWEEN SIGNS

INSTALL SIGN
PARKING ANY TIME
NYP1-2 (12"x18")

REMOVE SIGN
NO PARKING HERE TO CORNER
NO PARKING BETWEEN SIGNS

INSTALL SIGN
PARKING ANY TIME
NYP1-2 (12"x18")

Now or Formerly Beacon Main Realty Group 6054-29-062771

EXIST. HATCHED STRIPING TO BE REMOVED

INSTALL PAINTED WHITE STOP BAR TO BE PLACED 4 FT. PRIOR TO CROSSWALK LINE

W11-2(L) (30"x30")
AHEAD
W16-9P (24"x12")

30 0 30
SCALE : 1" = 30'

By: RDANDREA

0282A_416-420 Main Street\Plans (Maser PDFs)\20071 6RGD_Parking Concepts.dwg\R-02-PROP. PARKING (ALT 1)


MASER CONSULTING P.A.
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com

Office Locations:
- NEW JERSEY
- NEW YORK
- PENNSYLVANIA
- FLORIDA
- **NORTH CAROLINA**
- NEW MEXICO
- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO
- VIRGINIA

State of N.Y. C.O.A.: 0008671/0008821



Copyright © 2020 Maser Consulting P.A. All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Maser Consulting P.A.


811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTHS SURFACE ANYWHERE IN ANY STATE
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

| REV | DATE | DRAWN BY | DESCRIPTION |
|---|---|---|---|
| | | | |

CONCEPT PLAN
FOR
# 416-420 MAIN STREET

MAIN STREET AT
SCHENCK AVENUE
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK


WESTCHESTER OFFICE
400 Columbus Avenue
Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
Fax: 914.347.7266


| SCALE: | DATE: | DRAWN BY: | CHECKED BY: |
|---|---|---|---|
| AS SHOWN | 7/16/20 | RGD | PJG |

PROJECT NUMBER: 20000282A
DRAWING NAME: 200716RGD_PARKING CONCEPTS

SHEET TITLE:
SCHENCK AVENUE
PROPOSED PARKING
(6 SPACES)

SHEET NUMBER:
2 of 3




MASER CONSULTING P.A.
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com

Office Locations:
- NEW JERSEY
- NEW YORK
- PENNSYLVANIA
- FLORIDA
- **NORTH CAROLINA**
- NEW MEXICO
- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO
- VIRGINIA

State of N.Y. C.O.A.: 0008671/0008821

Copyright © 2020 Maser Consulting P.A. All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Maser Consulting P.A.

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTHS SURFACE ANYWHERE IN ANY STATE
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

| REV | DATE | DRAWN BY | DESCRIPTION |
|---|---|---|---|
| | | | |

CONCEPT PLAN
FOR
# 416-420 MAIN STREET

MAIN STREET AT
SCHENCK AVENUE
CITY OF BEACON
DUTCHESS COUNTY
NEW YORK

WESTCHESTER OFFICE
400 Columbus Avenue
Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
Fax: 914.347.7266

| SCALE: | DATE: | DRAWN BY: | CHECKED BY: |
|---|---|---|---|
| AS SHOWN | 7/16/20 | RGD | PJG |

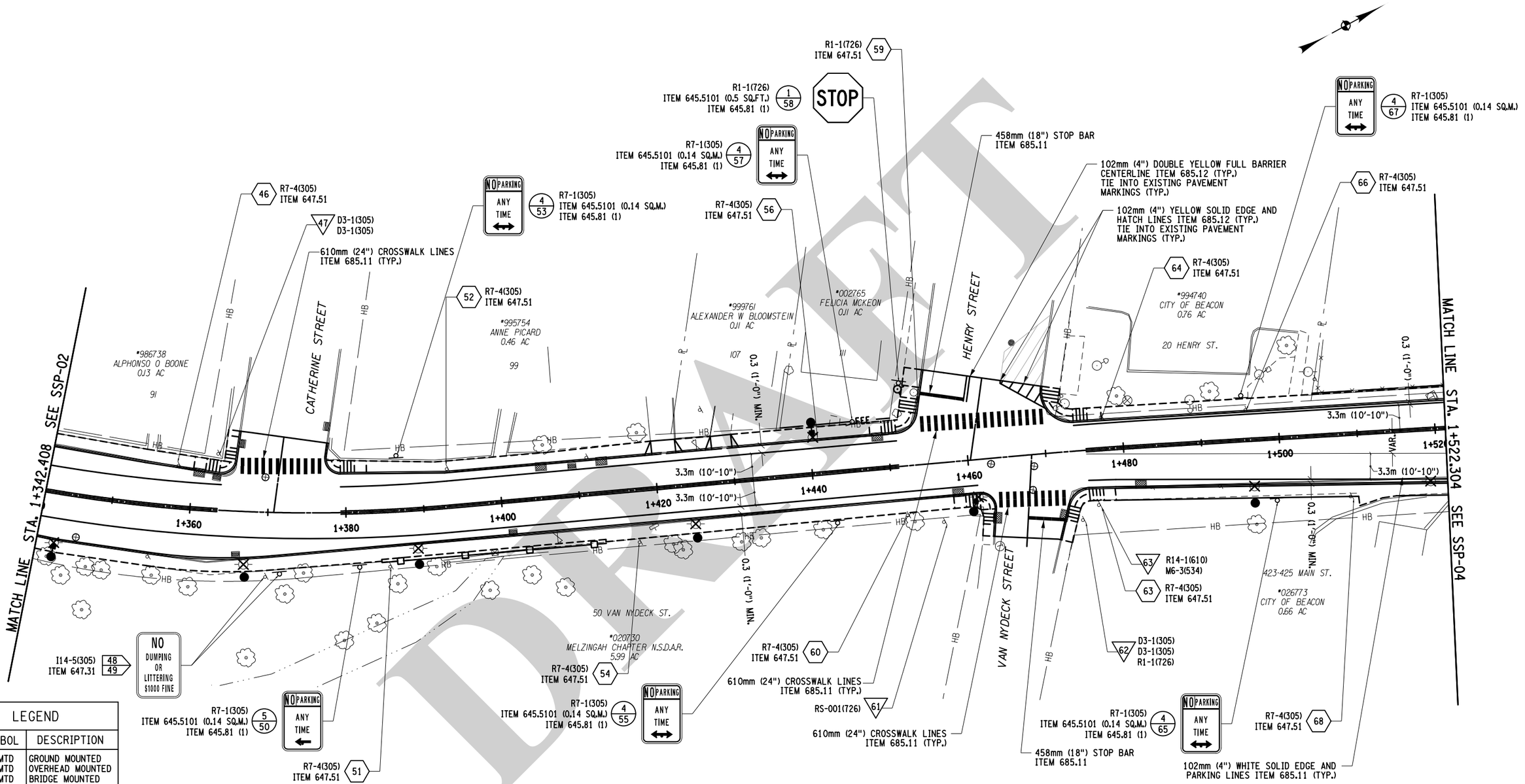
PROJECT NUMBER: 20000282A
DRAWING NAME: 200716RGD_PARKING CONCEPTS

SHEET TITLE:
FISHKILL AVENUE
PROPOSED PARKING

SHEET NUMBER:
3 of 3



0282A_416-420 Main Street\Plans (Maser PDFs)\200716RGD_Parking Concepts.dwg\R-03-FISHKILL PROP. PARKING By: RDANDREA




| LEGEND | |
|---|---|
| SYMBOL | DESCRIPTION |
| GR MTD | GROUND MOUNTED |
| OH MTD | OVERHEAD MOUNTED |
| BR MTD | BRIDGE MOUNTED |
| PO MTD | POLE MOUNTED |
| B-B | BACK TO BACK |
| L/T | NEW SIGN LOCATION NUMBER TEXT NUMBER |
| L | SIGN REMOVAL |
| L/T | RELOCATE TO POSITION SHOWN |
| R | TO REMAIN |

5 0 5 10 15 m
SCALE

WSP

CITY OF BEACON

DATE: MAY 2020

PROJECT: PIN 8757.80 & PIN 8757.30
REHABILITATION OF TELLER & FISHKILL AVENUES

NO: SSP-03

PE DB | DE SM | PM DW

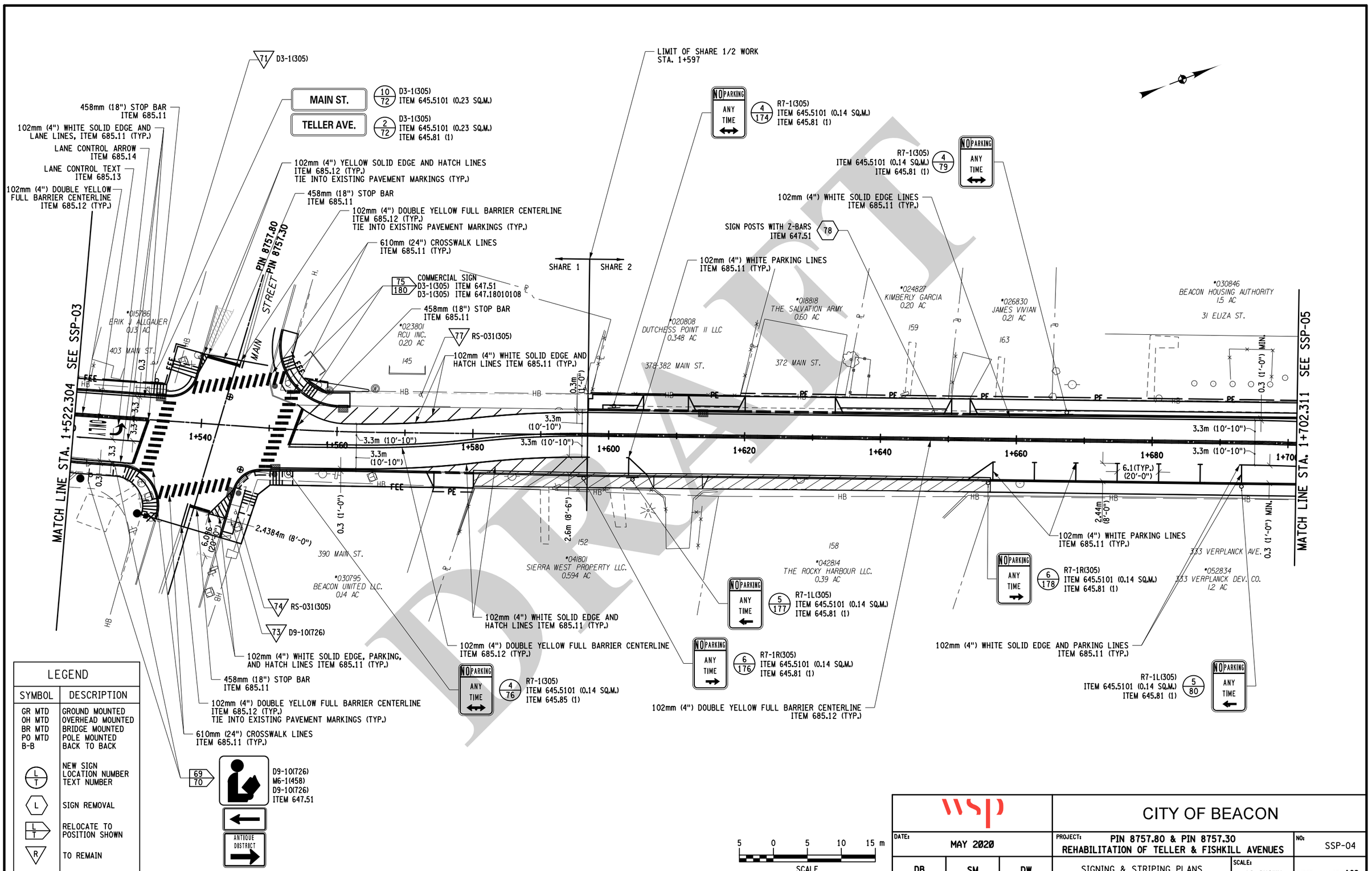
SIGNING & STRIPING PLANS

SCALE: AS SHOWN

SHEET OF 133

FILE NAME = DGN$SPEC0123456789012345678901234567890123456
DATE/TIME = DGN$SYSTIME0123456
USER = DGN$USERNAME

DRAFT



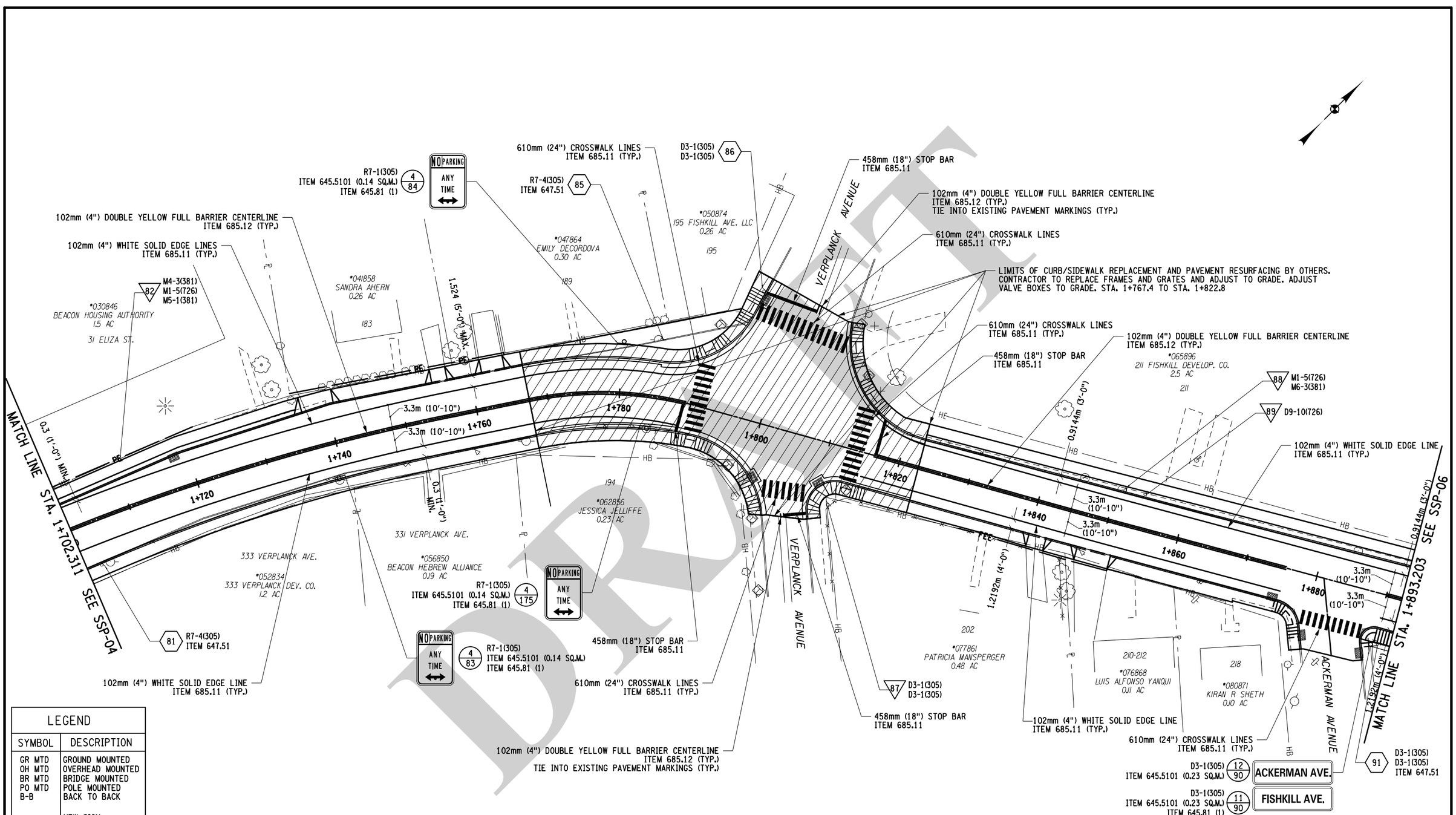

| LEGEND | |
|---|---|
| SYMBOL | DESCRIPTION |
| GR MTD | GROUND MOUNTED |
| OH MTD | OVERHEAD MOUNTED |
| BR MTD | BRIDGE MOUNTED |
| PO MTD | POLE MOUNTED |
| B-B | BACK TO BACK |
| L/T | NEW SIGN LOCATION NUMBER TEXT NUMBER |
| L | SIGN REMOVAL |
| L/T | RELOCATE TO POSITION SHOWN |
| R | TO REMAIN |

5 0 5 10 15 m
SCALE

| | | | |
|---|---|---|---|
| wsp | | CITY OF BEACON | |
| DATE: MAY 2020 | | PROJECT: PIN 8757.80 & PIN 8757.30 REHABILITATION OF TELLER & FISHKILL AVENUES | NO: SSP-04 |
| PE DB | DE SM PM DW | SIGNING & STRIPING PLANS | SCALE: AS SHOWN |
| | | | SHEET OF |

FILE NAME = DGN$SPEC01234567890123456789012345678901234
DATE/TIME = DGN$STIME0123456
USER = DGN$USERNAME

DRAFT




| LEGEND | |
|---|---|
| SYMBOL | DESCRIPTION |
| GR MTD | GROUND MOUNTED |
| OH MTD | OVERHEAD MOUNTED |
| BR MTD | BRIDGE MOUNTED |
| PO MTD | POLE MOUNTED |
| B-B | BACK TO BACK |
| L/T | NEW SIGN LOCATION NUMBER TEXT NUMBER |
| L | SIGN REMOVAL |
| L/T | RELOCATE TO POSITION SHOWN |
| R | TO REMAIN |

5 0 5 10 15 m
SCALE

WSP

CITY OF BEACON

DATE: MAY 2020

PROJECT: PIN 8757.80 & PIN 8757.30
REHABILITATION OF TELLER & FISHKILL AVENUES

NO: SSP-05

PE DB | DE SM | PM DW

SIGNING & STRIPING PLANS

SCALE: AS SHOWN

SHEET OF

FILE NAME = DGN$SPEC0123456789012345678901234567890123456
DATE/TIME = DGN$SYSTIME0123456
USER = DGN$USERNAME

DRAFT

**ARYEH SIEGEL**
ARCHITECT

John Gunn - Planning Board Chairman
City of Beacon
One Municipal Plaza
Beacon, NY 12508

**Re: 416-420 Main STreet, Beacon, New York**
*Site Plan Application – Responses to Comments*

July 28, 2020

Dear Chairman Gunn and Members of the Planning Board,

Below please find our responses to the comments included in John Clarke Planning and Design's Memorandum, dated July 9, 2020, and Lanc & Tully's letter dated July, 2020. Please find additional responses in Hudson Land Design's separate letter

**John Clarke Planning and Design Comment Responses:**

1. For the Plat, the district line will be labeled T Zoning District

2. For Sheet 1 – Site Plan:
   a The CMS Zoning Table has been corrected
   b The T Zoning Table has been corrected
   c The Parking Table has been corrected
   d The Planning Board indicated a preference at the July meeting that the green space should be maintained to the extent possible in relation to the provision of parking spaces.
   e The bike racks have been relocated to avoid interference with vehicle traffic
   f The Applicant proposes to provide a new, updated planter to replace the existing dated and damaged one. A Landscape Designer has been retained and will provide additional information regarding the existing street tree at the corner of Main Street.

   g The 4th floor setbacks are indicated on the Site Plan

3. For Sheet 3 Landscaping
   a A Landscape Schedule will be provided in a future submission.
   b The light fixture information is being researched and will be provided in a future submission.

84 Mason Circle | ajs@ajsarch.com | *Tel* 845 838 2490
Beacon, New York 12508 | www.ajsarch.com | *Fax* 845 838 2657

4. For Sheet 4 and 5 – Building Plans
    a Comment acknowledged.
    b The 4th floor plan has been revised to include a 15' step back at the rear. The plan has been revised to accommodate the required 15' front step back.
    c Plans have been revised to show major dimensions
    d Elevation labeling has been corrected
    e Elevations for the Live Work building will be provided in future submissions
    f The corner has been re-designed to respond to comments received from the Planning Board
    g Comment acknowledged. Once the Board is in general agreement about the design approach, the project will be referred to the ARB Subcommittee.

5. The plans will address how trash is handled.

6. Comment acknowledged. The Applicant will review the plans for Schenck Avenue with the Board.

**Lanc & Tully Comment Responses:**

**General Comments:**

1. Proposed traffic improvements will be included on the site plan when an approach has been discussed and accepted by the Planning Board

2. The Applicant will provide further information to the Board regarding the question of a lot for every building.

**Preliminary Subdivision Plat:**
Please refer to Hudson Land Design's response letter

**Site Plan (Sheet 1 of 10):**

1. Note #1 has been revised to refer to the previously approved Zoning Variance for parking.

2. The site plan has been provided at a larger scale for clarity

3. The site plan notes the number of parking spaces below the deck.

**Existing Conditions & Demolition Plan (Sheet 2 of 10):**

1. The note regarding the concrete planter has been corrected to note that it is a granite plan that will be replaced in-kind.

2. The entire chain link fence is intended to be replaced by a new wood privacy fence

3. A north arrow has been added to the plan

**Landscape & Lighting Plan (Sheet 3 of 10):**

1. A Landscape Designer has been retained. A planting schedule and landscape plan will be provided in future submissions.

2. Plantings shall be provided outside the City's right of way unless a license agreement is obtained from the City.

Thank you. Please let me know if you have any questions.

Sincerely,



Aryeh Siegel
*Aryeh Siegel, Architect*

**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

Zoning Board of Appeals - August Agenda

**ATTACHMENTS**

**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

Certificate of Appropriateness - 25 East Main Street

**ATTACHMENTS**

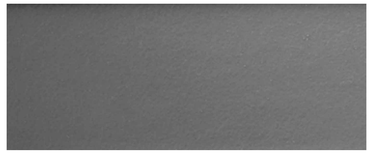
25 East Main Street Revised.pdf



Existing Photo with Outline of Bulkhead Envelope



Existing Photo with Outline of Bulkhead Envelope



HardiePlank - Gray Slate



Sherwin Williams - Gray Matters #7066



Double-Hung Window Color - Hartford Green



Armstrong - Clark - Driftwood Stain

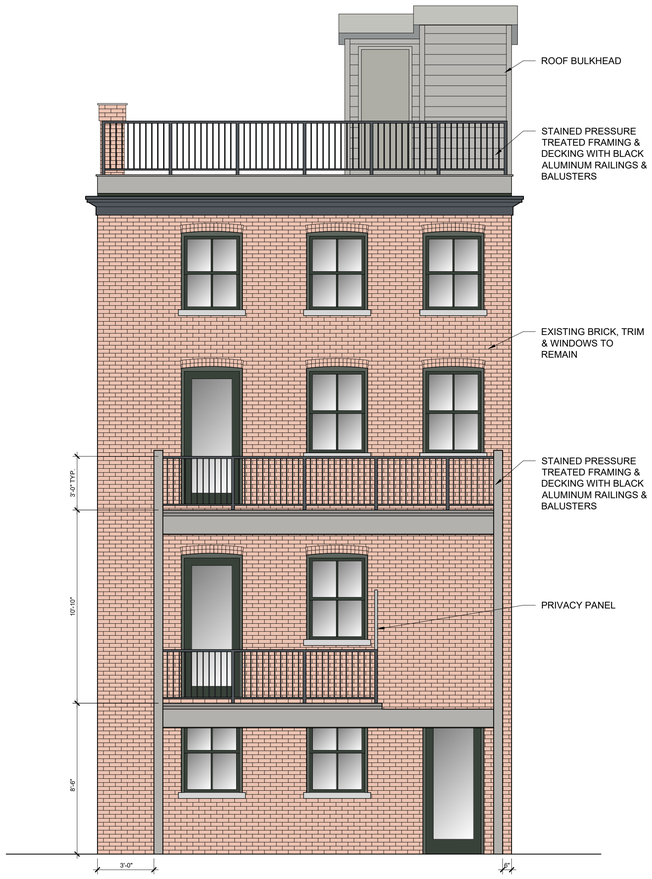


Black Aluminum

**ROOF BULKHEAD:**
HARDIEPLANK - SMOOTH LAP SIDING - GRAY SLATE
TRIM - SHERWIN WILLIAMS - GRAY MATTERS #7066
EPDM ROOF
DOUBLE-HUNG BULKHEAD WINDOWS - HARTFORD GREEN TO MATCH EXISTING BUILDING WINDOWS

**ROOF DECK:**
WOOD DECKING & FRAMING - ARMSTRONG-CLARK DRIFTWOOD STAIN
36" HIGH BLACK ALUMINUM RAILINGS AND VERTICAL BALUSTERS

**BALCONIES:**
PRESSURE TREATED DECKING & FRAMING W/ 6x6 PRESSURE TREATED POSTS - ARMSTRONG-CLARK DRIFTWOOD STAIN
36" HIGH BLACK ALUMINUM RAILINGS AND VERTICAL BALUSTERS
PRIVACY PANEL AT 1ST FLOOR - ARMSTRONG-CLARK DRIFTWOOD STAIN




## WEST ELEVATION




## NORTH ELEVATION




EXISTING FACADE TO REMAIN

## EAST ELEVATION

# ARB Application

*Owner:*
**Weber Projects II, LLC**
11 Creek Drive
Beacon, NY 12508

*Architect:*
**Aryeh Siegel, Architect**
84 Mason Circle
Beacon, New York 12508

## 25 East Main Street

Beacon, New York
Scale: Not to Scale
July 28, 2020

**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

Certificate of Appropriateness - 424 Main Street; new facade color

**ATTACHMENTS**

424 Main Street Proposal.pdf

424 Main Street Proposed Colors.pdf

424 Main Street - Application.pdf

424 Main Street Existing.pdf




PROPOSED


Mayo Teal
CW-570


Temptation
1609

# ARCHITECTURAL REVIEW BOARD APPLICATION

Date: 5/26/20

Project Address: 424 main street Beacon (Restaurant)

Project Architect/Engineer: Lani Lautner

Owner/Builder: Gregory Trautman

Contact Phone No.: (845) 584-2023

Approval Requested: _____Certificate of Appropriateness _____New Single Family House

Color/Materials:

Siding: Mayo Teal CW-570

Roofing: _____

Windows: Color: _____ Type: _____

Trim: Temptation 1609

Garage Door: _____

Stone/Brick: _____

_____

Signature of Owner

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

_____

_____

FEE: $100.00




EXISTING




EXISTING

**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

Certificate of Appropriateness - 1183 North Avenue (amendment)

**ATTACHMENTS**

1183 Cover Letter.pdf

1183 North Avenue Application.pdf

1183 North Avenue Plans.pdf

7/22/20

Etha,

Please add me to the next planning board agenda to make the following changes to my building at 1183 N. Ave:

① Siding changed from wood cedar siding to Hardie Board Lap and Shingle Siding. Siding color pattern will remain as unchanged as possible using available Hardie Board siding colors as follows:
- lower Lap Siding color - Iron Gray
- upper Shingle Siding color - Gray Slate
- see www.jameshardie.com for color reference

② Exterior Door Colors will either remain unchanged or may be upgraded to a dark wood oak or mahogany finish. Applicant feels the stained wood finish on the doors would bring a more traditional victorian appearance to the building. He is investigating durability of proposed finishes.

Sincerely,

Mary Stafford

# ARCHITECTURAL REVIEW BOARD APPLICATION

Date: July 24, 2020

Project Address: 1183 North Avenue

Project Architect/Engineer: Day & Stokosa Engineering

Owner/Builder: North Avenue Properties, LLC

Contact Phone No.: 845-797-3796

Approval Requested: X Certificate of Appropriateness _____ New Single Family House

Color/Materials: colors can be seen: www.jameshardie.com

Siding: HardieBoard - Lower lap in Iron Gray / Upper lap in Gray Slate

Roofing: Certainteed Grand Manor Asphalt Roof Shingles - Colonial Slate

Windows: Color: White Type: Anderson 200

Trim: _____

Exterior
~~Garage~~ Door: Dark Wood Oak or Mahagony

Stone/Brick: _____

_____
Signature of Owner

---

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

_____

_____

FEE: $100.00

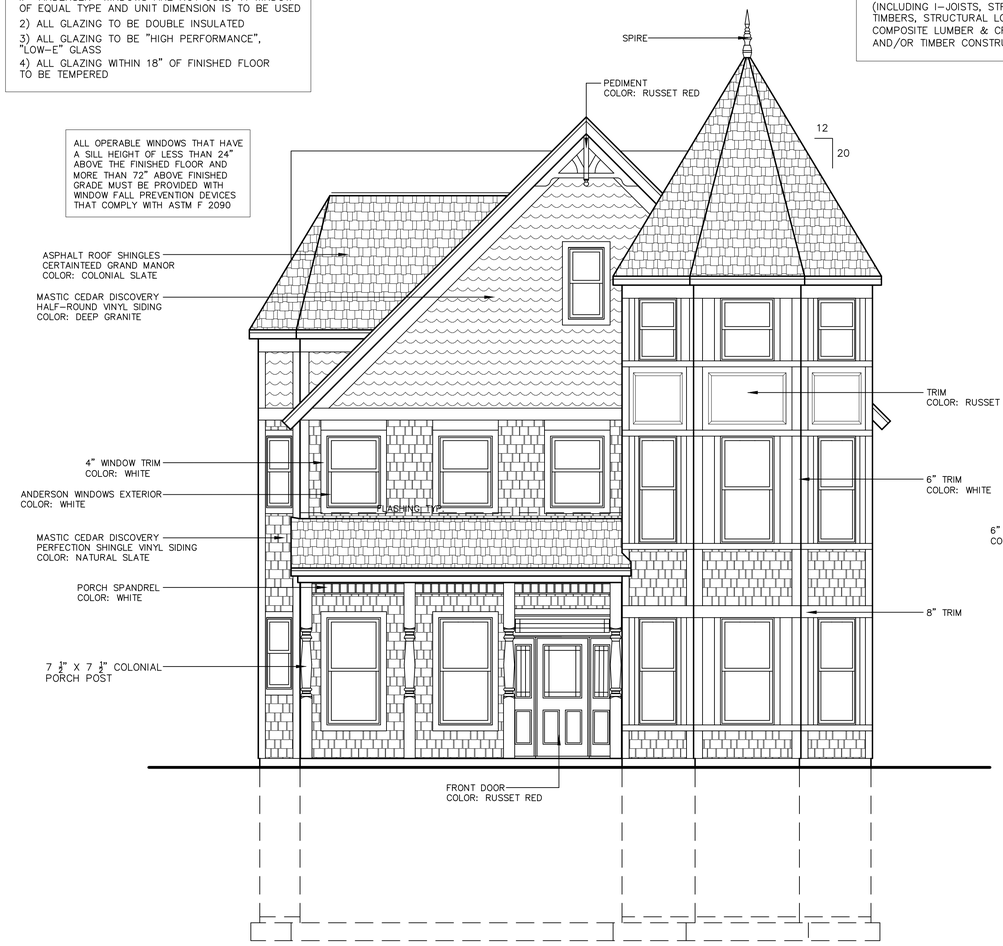
NOTES:

1) ALL WINDOW SIZES CALLED OUT ON FLOOR PLANS ARE "ANDERSEN 200 SERIES UNIT NUMBERS", IF "ANDERSEN" WINDOWS ARE NOT USED, A WINDOW OF EQUAL TYPE AND UNIT DIMENSION IS TO BE USED
2) ALL GLAZING TO BE DOUBLE INSULATED
3) ALL GLAZING TO BE "HIGH PERFORMANCE", "LOW-E" GLASS
4) ALL GLAZING WITHIN 18" OF FINISHED FLOOR TO BE TEMPERED

ALL OPERABLE WINDOWS THAT HAVE A SILL HEIGHT OF LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE MUST BE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH ASTM F 2090

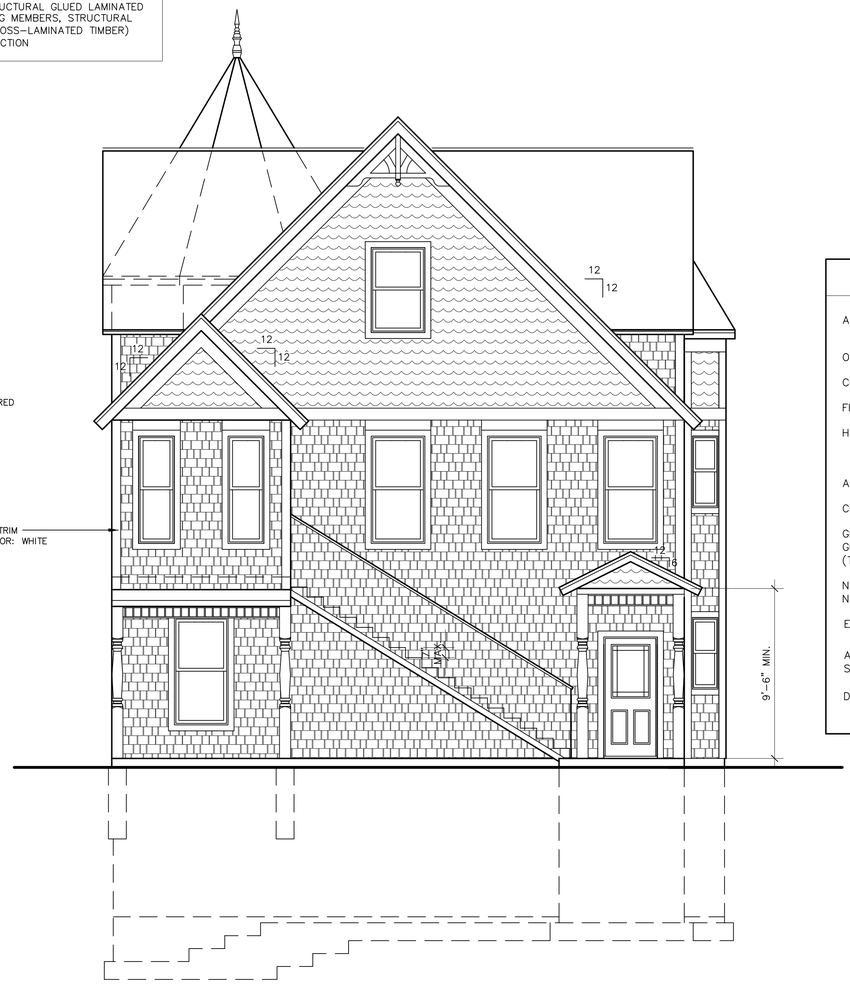
CONTRACTOR TO AFFIX AN APPROVED SIGN/SYMBOL TO THE EXTERIOR ELECTRIC BOX AT THE SERVICE POINT. THE SIGN IS TO INDICATE THE USE OF TRUSSES, PRE-ENGINEERED WOOD GIRDERS, BEAMS OR JOISTS THAT ARE BONDED WITH ADHESIVES (INCLUDING I-JOISTS, STRUCTURAL GLUED LAMINATED TIMBERS, STRUCTURAL LOG MEMBERS, STRUCTURAL COMPOSITE LUMBER & CROSS-LAMINATED TIMBER) AND/OR TIMBER CONSTRUCTION

| SQUARE FOOTAGE: | |
|---|---|
| 1st FLOOR: | 1,416 |
| 2nd FLOOR: | 1,446 |
| TOTAL: | 2,862 |




FRONT ELEVATION

SCALE: 1/4" = 1'-0"




REAR ELEVATION

SCALE: 1/4" = 1'-0"

## DESIGN CRITERIA

| | | |
|---|---|---|
| 1. | FLOOR LIVE LOAD<br>ROOF LIVE LOAD | 50 PSF<br>20 PSF |
| 2. | GROUND SNOW LOAD | Pg = 30 PSF |
| 3. | ULTIMATE DESIGN WIND SPEED<br>NOMINAL DESIGN WIND SPEED<br>WIND EXPOSURE | Vult = 115 MPH<br>Vasd = 89<br>B |
| 4. | SEISMIC DESIGN CATEGORY<br>SITE CLASS | B<br>D |
| 5. | FLOOD DESIGN DATA | FIRM 36027C0463E 05/02/12 |
| 6. | SOIL LOAD-BEARING | DESIGN ASSUMES 2,000 PSF |

SPECIAL INSPECTIONS (1704) – NOT REQUIRED FOR BUILDINGS OF CONVENTIONAL LIGHT-FRAMED CONSTRUCTION (1704.2)

## CODE CONFORMANCE

| | |
|---|---|
| AREA OF BUILDING | 2,862 SQ. FT. (GROSS)<br>2 STORY |
| OCCUPANCY | BUSINESS GROUP "B" (304.1) |
| CONSTRUCTION TYPE | TYPE VB CONSTRUCTION (602.5) |
| FIRE RESISTANCE RATING | 0 HR. (TABLE 601) |
| HEIGHT AND BUILDING AREAS | B 3 STORY MAX. (TABLE 504.4)<br>36,000 SQ. FT. MAX. (TABLE 506.2) |
| AUTOMATIC SPRINKLER SYSTEM | N/R |

COMMERCIAL GRADE FIRE ALARM/DETECTION SYSTEM TO BE INSTALLED AS REQUIRED

GROSS AREA FIRST FLOOR/100 SQ. FT./OCCUPANT = 14 OCCUPANTS MAX.
GROSS AREA SECOND FLOOR/100 SQ.FT./OCCUPANT = 14 OCCUPANTS MAX.
(TABLE 1004.1.2)

NUMBER OF EXITS REQUIRED FIRST FLOOR: (1) EXIT REQUIRED, (2) EXISTS PROVIDED
NUMBER OF EXITS REQUIRED SECOND FLOOR: (1) EXIT REQUIRED, (1) PROVIDED

EXITS SIGNS ARE TO BE PROVIDED FOR BUILDING AS INDICATED

ALL CEILING AND WALL FINISHES ARE TO BE CLASS C FLAME SPREAD 76-200 SMOKE-DEVELOPED 0-450 (TABLE 803.11)

DRAFT STOPPING IN ATTIC NOT REQUIRED 1,416 < 3,000 SQ. FT. (1718.4.3).

RAILING & STAIR NOTES:

STAIRS SHALL BE PROVIDED WITH HANDRAILS. HANDRAILS SHALL BE A MINIMUM OF 34" IN HEIGHT AND NOT MORE THAN 38" IN HEIGHT. RAILS ARE TO BE MEASURED VERTICALLY FROM THE NOSING OF THE TREADS. CIRCULAR HANDRAILS SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1 1/4" AND NOT GREATER THAT 2". IF THE HANDRAIL IS NOT CIRCULAR IT SHALL HAVE A PERIMETER OF AT LEAST 4" AND NOT MORE THAN 6 1/4".

PORCHES, DECKS, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDS A MINIMUM OF 42" HIGH.

RISERS ARE TO BE CLOSED SUCH THAT THE OPENING BETWEEN THE TREADS DOES NOT PERMIT THE PASSAGE OF A 4" DIAMETER SPHERE.

## WINDOW SCHEDULE

| TAG/UNIT# | NO. | TYPE | MANUF. | U-FACTOR | ROUGH OPENING | MEETS EGRESS REQUIREMENTS | TEMPERED GLASS |
|---|---|---|---|---|---|---|---|
| 3040 | 1 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 36" X 48" | NO | YES |
| 3040 | 3 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 36" X 48" | NO | NO |
| 3049 | 1 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 36" X 57" | YES | NO |
| 2040 | 7 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 24" X 48" | NO | NO |
| 3036 | 4 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 36" X 42" | NO | NO |
| 2060 | 3 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 24" X 72" | NO | YES |
| 3060 | 32 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 36" X 72" | YES | NO |
| 2860 | 4 | DOUBLE HUNG | ANDERSON 200 SERIES | 0.30 | 32" X 72" | NO | NO |
| BSMT WINDOW | 2 | BASEMENT | TAFCO | | 31 3/4" X 15 3/4" UNIT SIZE | NO | |

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

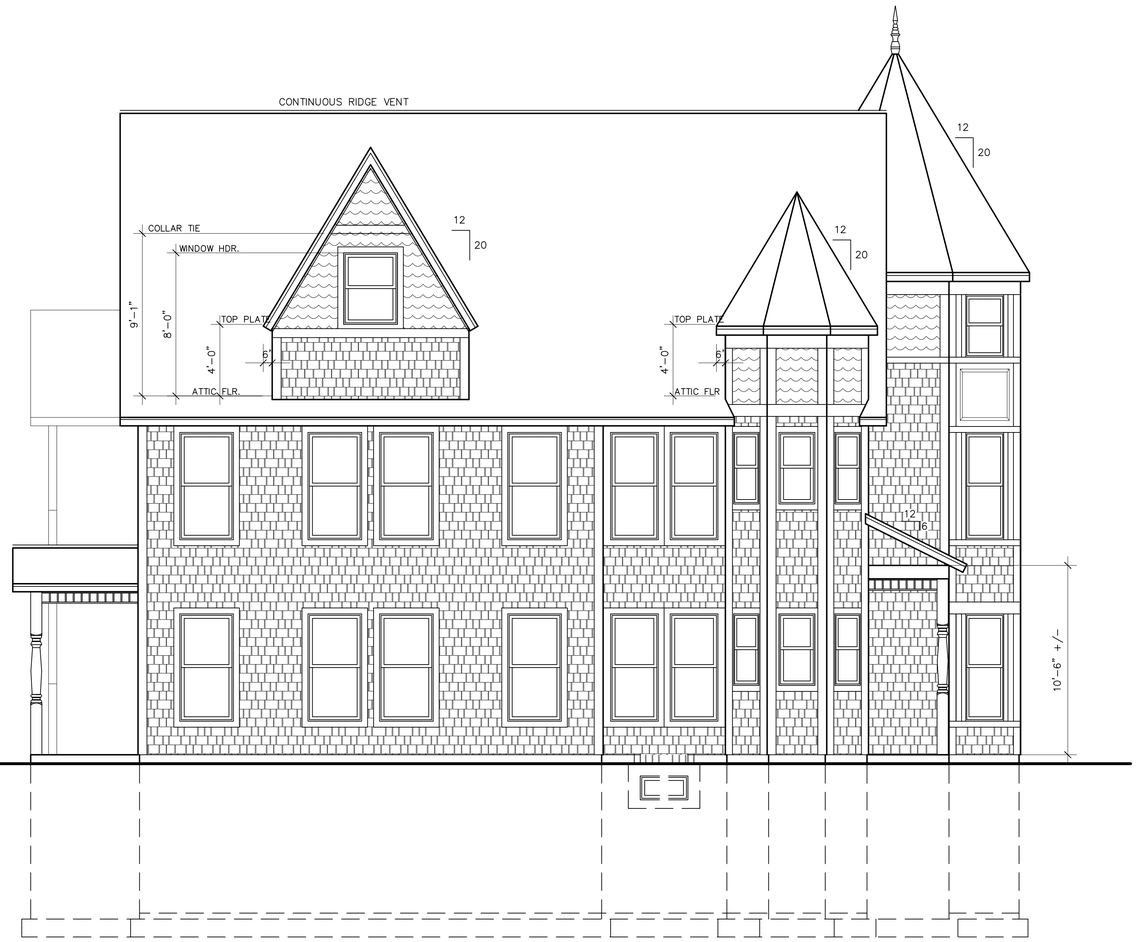
| | Brian J. Stokosa, PE |
|---|---|
| | |
| 06-04-20 | |
| 06-03-20 | |
| 11-06-19 | |
| 06-06-19 | |
| 05-30-19 | |
| 05-17-19 | |
| Revisions 04-08-19 | |
| Project No. 2019:049 | License No. 083970 |

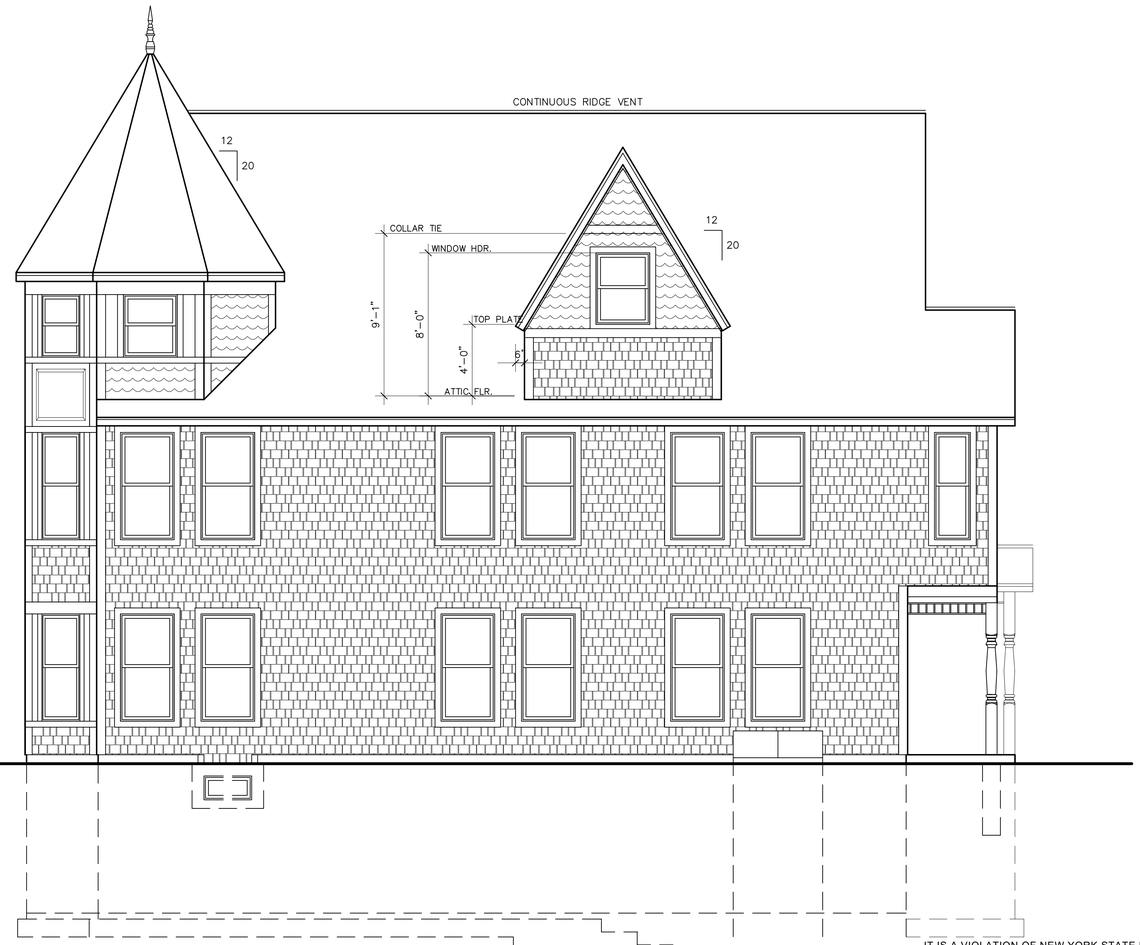
DAY | STOKOSA
ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT
New Building Design
North Avenue, City of Beacon
Dutchess County, New York

North Avenue Properties, LLC

| SCALE | DRAWN BY | DRAWING No. |
|---|---|---|
| 1/4" = 1'-0" | S.M.M. | E1 |
| DATE 03-20-19 | CHECKED BY B.J.S. | |



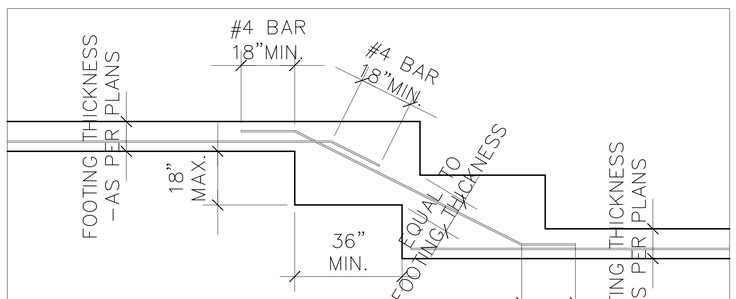




## LEFT SIDE ELEVATION

SCALE: 1/4" = 1'-0"

## RIGHT SIDE ELEVATION

SCALE: 1/4" = 1'-0"




## STEPPED FOOTING DETAIL SCALE: 1/2"= 1'-0"

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

| | Brian J. Stokosa, PE |
|---|---|
| | |
| | |
| 06-04-20 | |
| 06-03-20 | |
| 11-06-19 | |
| 06-06-19 | |
| 05-30-19 | |
| 05-17-19 | |
| Revisions 04-08-19 | |
| Project No. 2019:049 | License No. 083970 |

DAY | STOKOSA
ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT

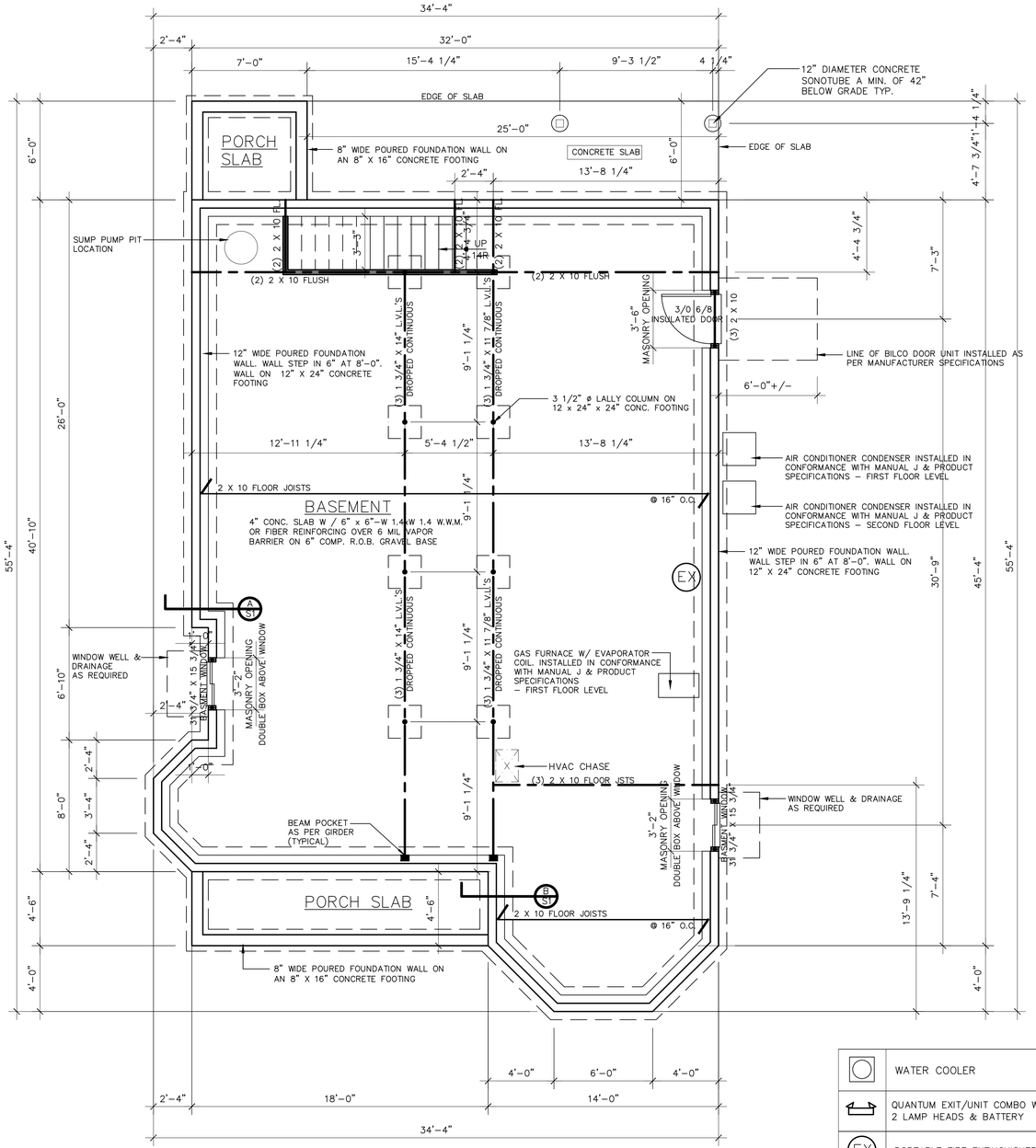
New Building Design
North Avenue, City of Beacon
Dutchess County, New York

North Avenue Properties, LLC

| SCALE | DRAWN BY | DRAWING No. |
|---|---|---|
| 1/4" = 1'-0" | S.M.M. | E2 |
| DATE 03-20-19 | CHECKED BY B.J.S. | |



Z:\2010 AutoCad Dwgs\Schofiled, Norm\Dwg\2019049.dwg

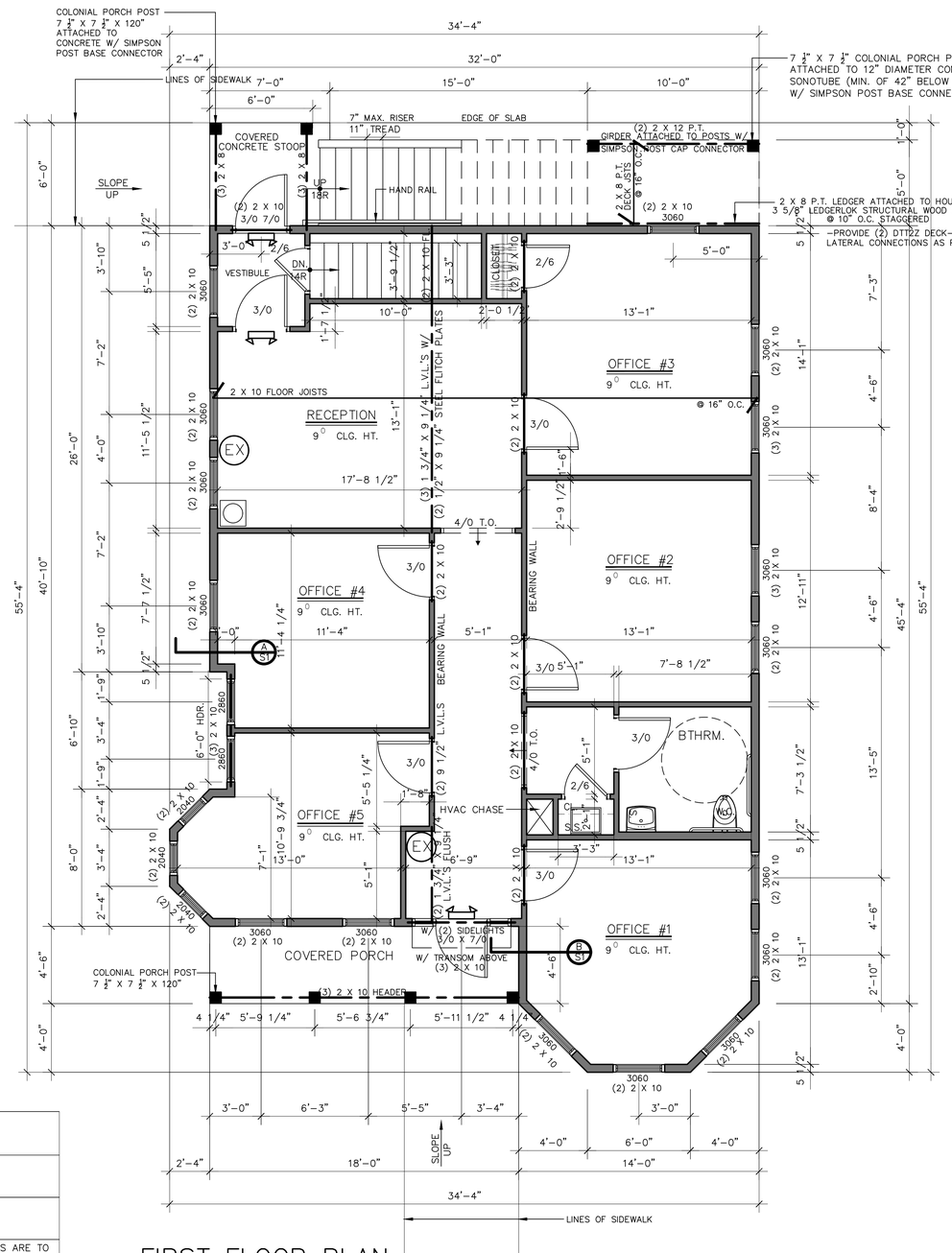



## BASEMENT PLAN

SCALE: 1/4" = 1'-0"

| | |
|---|---|
| | WATER COOLER |
| | QUANTUM EXIT/UNIT COMBO W/ 2 LAMP HEADS & BATTERY |
| EX | PORTABLE FIRE EXTINGUISHER |

THE REQUIRED PORTABLE FIRE EXTINGUISHERS ARE TO BE LOCATED IN PLAIN VIEW. THE EXTINGUISHERS ARE TO BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE. THE EXTINGUISHERS MAY BE HOUSED IN A CABINET, BUT MAY NOT BE LOCKED. EXTINGUISHER THAT WEIGHTS 40 POUNDS OR LESS CAN BE INSTALLED SO THAT THE TOP IS NOT MORE THAN 5 FEET ABOVE THE FLOOR. EXTINGUISHER THAT WEIGHTS MORE THAN 40 POUNDS SHALL BE INSTALLED SO THAT THE TOP IS NOT MORE THAN 3 1/2 FEET ABOVE THE FLOOR.




## FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

### FRAMING NOTES:

ALL EXTERIOR WALLS ARE TO BE 2X6 WOOD STUDS

ALL INTERIOR WALLS ARE TO BE 2X4 WOOD STUDS

DOUBLE ALL FLOOR JOISTS UNDER WALLS ABOVE, THAT ARE FRAMED PARALLEL TO FLOOR FRAMING UNLESS OTHERWISE NOTED ON PLAN.

ALL FLOOR JOISTS, CEILING JOISTS & RAFTERS ARE TO BE S.P.F.

ALL BEAMS, GIRDERS AND HEADERS ARE TO BE DOUG FIR LARCH #2 OR BETTER WITH A Fb RATING OF 875 AND A MODULUS OF ELASTICITY OF 1600000 MINIMUM UNLESS OTHERWISE NOTED ON PLAN.

ALL LAMINATED VENEER LUMBER (L.V.L.) BEAMS, GIRDERS AND HEADERS, LABELED ON PLAN, TO HAVE A Fb RATING OF 2950 AND A MODULUS OF ELASTICITY OF 2,000,000 MINIMUM UNLESS OTHERWISE NOTED ON PLAN. STRUCTURAL LAMINATED BEAMS TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS.

CUTS, NOTCHES & HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE LUMBER, STRUCTURAL GLUE–LAMINATED MEMBERS OR I–JOISTS ARE PROHIBITED EXCEPT WHERE PERMITTED BY THE MANUFACTURER'S RECOMMENDATIONS.

FOR LOAD–BEARING PARTITIONS INSTALL DOUBLE JAMB STUDS UNDER HEADER FOR OPENINGS 6' AND LESS IN WIDTH. TRIPLE JAMB STUDS FOR WIDER OPENINGS. FOR NON–BEARING PARTITIONS INSTALL ONE JAMB STUD FOR OPENINGS LESS THAN 4' IN WIDTH AND DOUBLE JAMS STUDS FOR WIDER OPENINGS.

CONTRACTOR TO PROVIDE SOLID 2 X 10 BLOCKING TO BE LOCATED BETWEEN FLOOR JOISTS WERE POSTS, FROM ABOVE, CARRYING STRUCTURAL HEADERS LAND BETWEEN FLOOR JOISTS BELOW. BLOCKING TO BE BUILT UP TO THE SAME WIDTH AS POST IT IS CARRYING ABOVE.

ALL JOISTS TO OVER LAP GIRDER OR BEARING WALL A MINIMUM OF 3".

ALL DIMENSIONS MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES ON THE PLANS, OR SPECIFICATIONS, MUST BE REPORTED TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

| | Brian J. Stokosa, PE |
|---|---|
| | |
| 06-04-20 | |
| 06-03-20 | |
| 11-06-19 | |
| 06-06-19 | |
| 05-30-19 | |
| 05-17-19 | |
| Revisions 04-08-19 | |
| Project No. 2019:049 | License No. 083970 |

DAY | STOKOSA ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT

# New Building Design

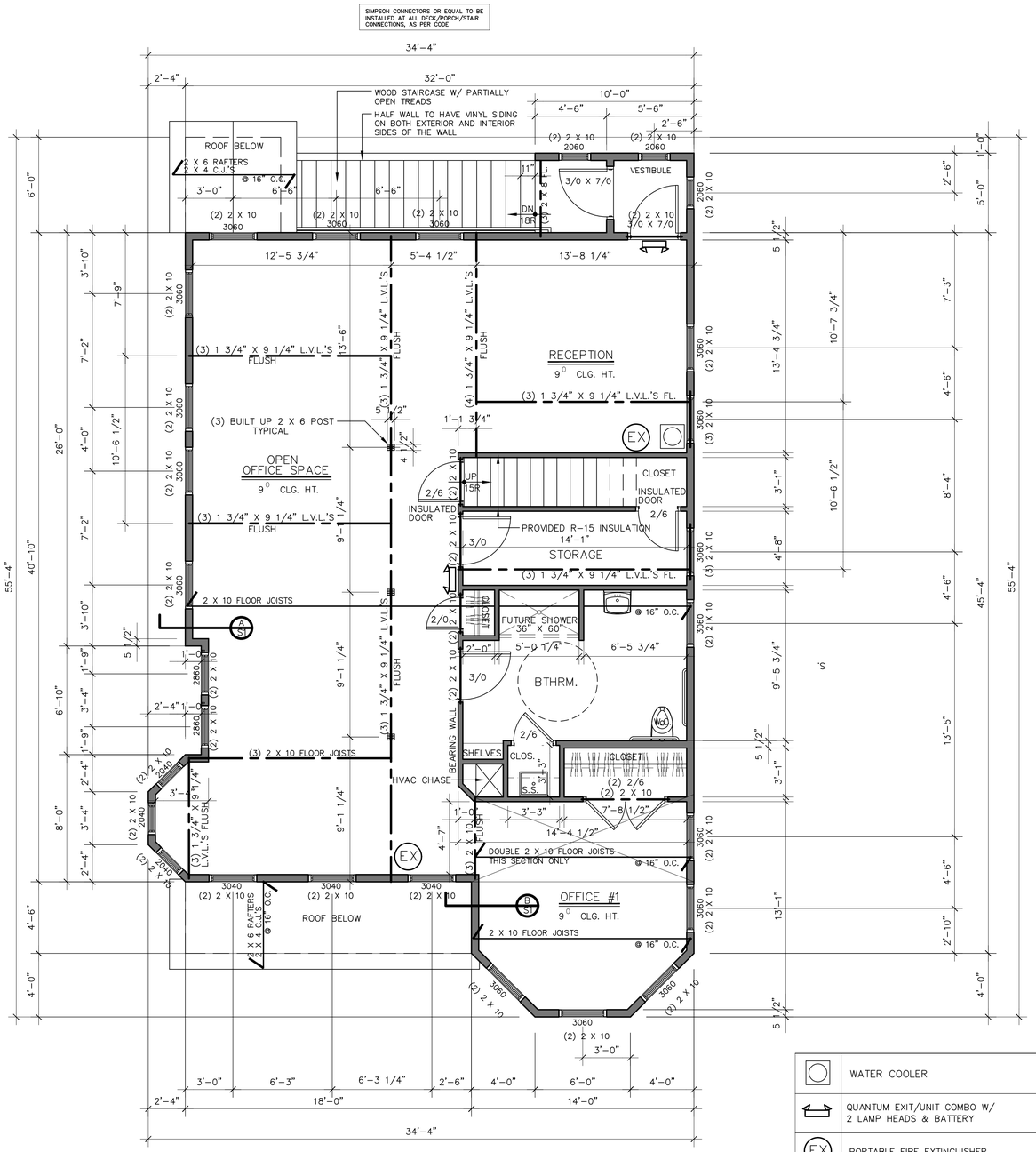
North Avenue, City of Beacon
Dutchess County, New York

## North Avenue Properties, LLC

| SCALE | DRAWN BY | DRAWING No. |
|---|---|---|
| 1/4" = 1'-0" | S.M.M. | P1 |
| DATE | CHECKED BY | |
| 03-20-19 | B.J.S. | |



Z:\2010 AutoCad Dwgs\Schofiled, Norm\Dwg\2019049.dwg

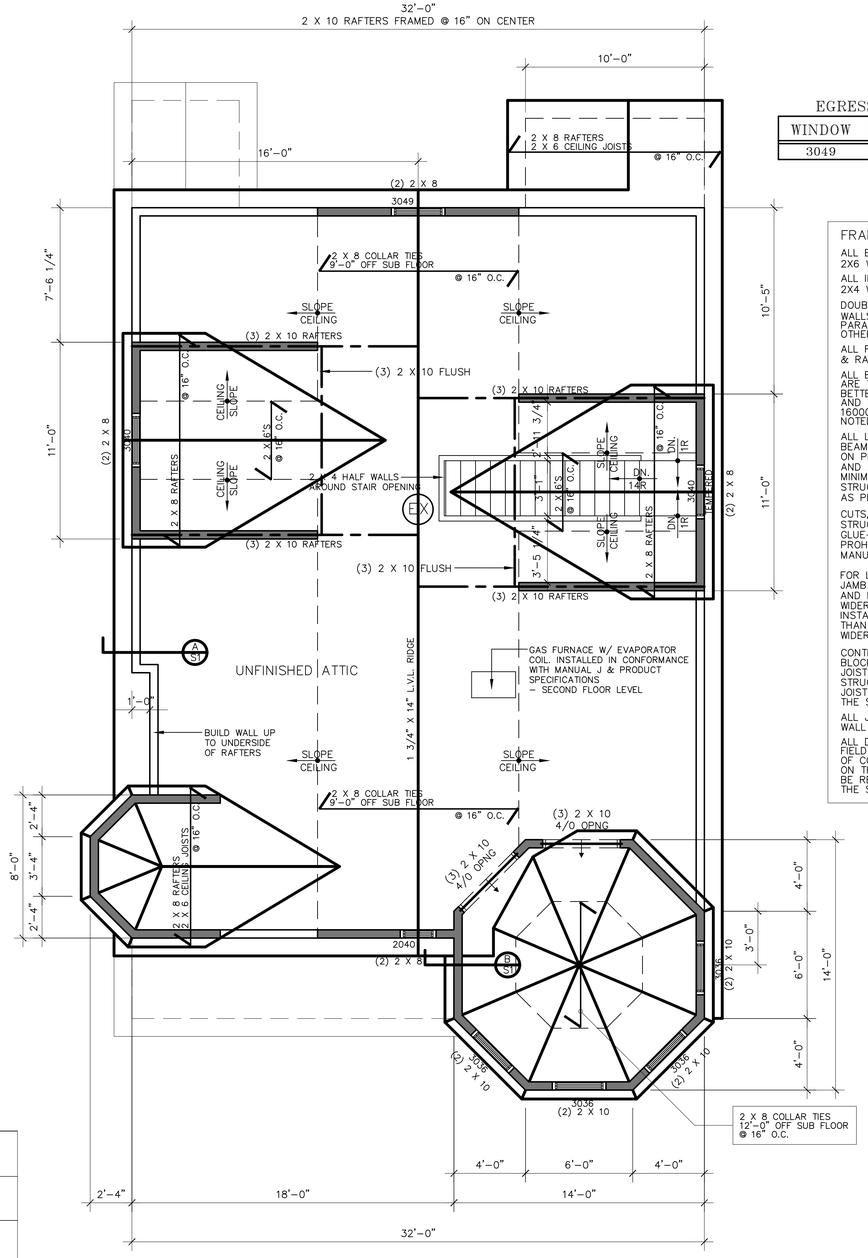



## SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

| | |
|---|---|
| ◯ | WATER COOLER |
| ⟷ | QUANTUM EXIT/UNIT COMBO W/ 2 LAMP HEADS & BATTERY |
| EX | PORTABLE FIRE EXTINGUISHER |

THE REQUIRED PORTABLE FIRE EXTINGUISHERS ARE TO BE LOCATED IN PLAIN VIEW. THE EXTINGUISHERS ARE TO BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE. THE EXTINGUISHERS MAY BE HOUSED IN A CABINET, BUT MAY NOT BE LOCKED. EXTINGUISHER THAT WEIGHTS 40 POUNDS OR LESS CAN BE INSTALLED SO THAT THE TOP IS NOT MORE THAN 5 FEET ABOVE THE FLOOR. EXTINGUISHER THAT WEIGHTS MORE THAN 40 POUNDS SHALL BE INSTALLED SO THAT THE TOP IS NOT MORE THAN 3 1/2 FEET ABOVE THE FLOOR.




## ROOF/ATTIC PLAN

SCALE: 1/4" = 1'-0"

### EGRESS REQUIREMENTS

| WINDOW | SQ.FT. CLEAR | WIDTH CLEAR | HEIGHT CLEAR |
|---|---|---|---|
| 3049 | 5.7 | 32.56" | 25.20" |

### FRAMING NOTES:

ALL EXTERIOR WALLS ARE TO BE 2X6 WOOD STUDS

ALL INTERIOR WALLS ARE TO BE 2X4 WOOD STUDS

DOUBLE ALL FLOOR JOISTS UNDER WALLS ABOVE, THAT ARE FRAMED PARALLEL TO FLOOR FRAMING UNLESS OTHERWISE NOTED ON PLAN.

ALL FLOOR JOISTS, CEILING JOISTS & RAFTERS ARE TO BE S.P.F.

ALL BEAMS, GIRDERS AND HEADERS ARE TO BE DOUG FIR LARCH #2 OR BETTER WITH A Fb RATING OF 875 AND A MODULUS OF ELASTICITY OF 1600000 MINIMUM UNLESS OTHERWISE NOTED ON PLAN.

ALL LAMINATED VENEER LUMBER (L.V.L.) BEAMS, GIRDERS AND HEADERS, LABELED ON PLAN, TO HAVE A Fb RATING OF 2950 AND A MODULUS OF ELASTICITY OF 2,000,000 MINIMUM UNLESS OTHERWISE NOTED ON PLAN. STRUCTURAL LAMINATED BEAMS TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS.

CUTS, NOTCHES & HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE LUMBER, STRUCTURAL GLUE-LAMINATED MEMBERS OR I-JOISTS ARE PROHIBITED EXCEPT WHERE PERMITTED BY THE MANUFACTURER'S RECOMMENDATIONS.

FOR LOAD-BEARING PARTITIONS INSTALL DOUBLE JAMB STUDS UNDER HEADER FOR OPENINGS 6' AND LESS IN WIDTH. TRIPLE JAMB STUDS FOR WIDER OPENINGS. FOR NON-BEARING PARTITIONS INSTALL ONE JAMB STUD FOR OPENINGS LESS THAN 4' IN WIDTH AND DOUBLE JAMS STUDS FOR WIDER OPENINGS.

CONTRACTOR TO PROVIDE SOLID 2 X 10 BLOCKING TO BE LOCATED BETWEEN FLOOR JOISTS WERE POSTS, FROM ABOVE, CARRYING STRUCTURAL HEADERS LAND BETWEEN FLOOR JOISTS BELOW. BLOCKING TO BE BUILT UP TO THE SAME WIDTH AS POST IT IS CARRYING ABOVE.

ALL JOISTS TO OVER LAP GIRDER OR BEARING WALL A MINIMUM OF 3".

ALL DIMENSIONS MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES ON THE PLANS, OR SPECIFICATIONS, MUST BE REPORTED TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

| | |
|---|---|
| | Brian J. Stokosa, PE |
| | |
| 06-04-20 | |
| 06-03-20 | |
| 11-06-19 | |
| 06-06-19 | |
| 05-30-19 | |
| 05-17-19 | |
| Revisions 04-08-19 | |
| Project No. 2019:049 | License No. 083970 |

DAY | STOKOSA
ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT
New Building Design
North Avenue, City of Beacon
Dutchess County, New York

North Avenue Properties, LLC

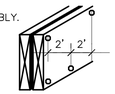
| SCALE | DRAWN BY | DRAWING No. |
|---|---|---|
| 1/4" = 1'-0" | S.M.M. | P2 |
| DATE 03-20-19 | CHECKED BY B.J.S. | |



Z:\2010 AutoCad Dwgs\Schofiled, Norm\Dwg\2019049.dwg

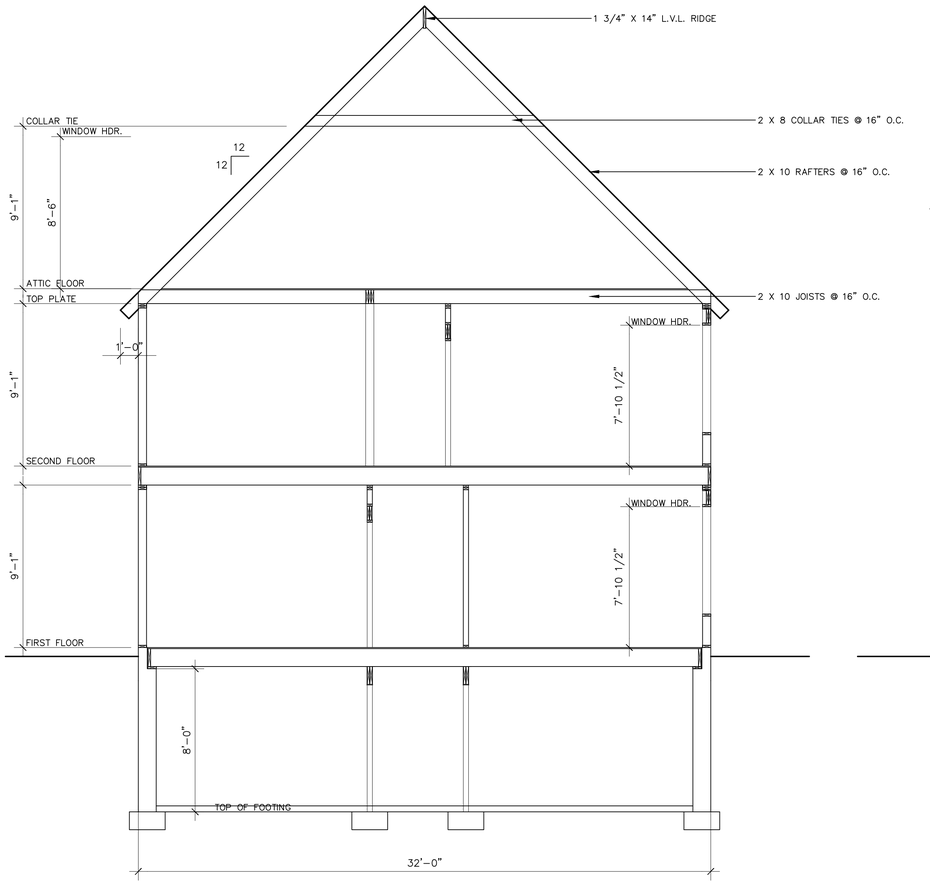
NOTES:

L.V.L.'S AND STEEL PLATE ARE TO BE BOLTED TOGETHER @ EVERY 2'-0". BOLTS ARE TO BE STAGGERED FROM BOTTOM TO TOP. AT A MIN. OF 1" OFF BOTH TOP & BOTTOM EDGE OF ASSEMBLY. A BOLT IS TO BE @ BOTH TOP AND BOTTOM OF OF EACH END OF ASSEMBLY.



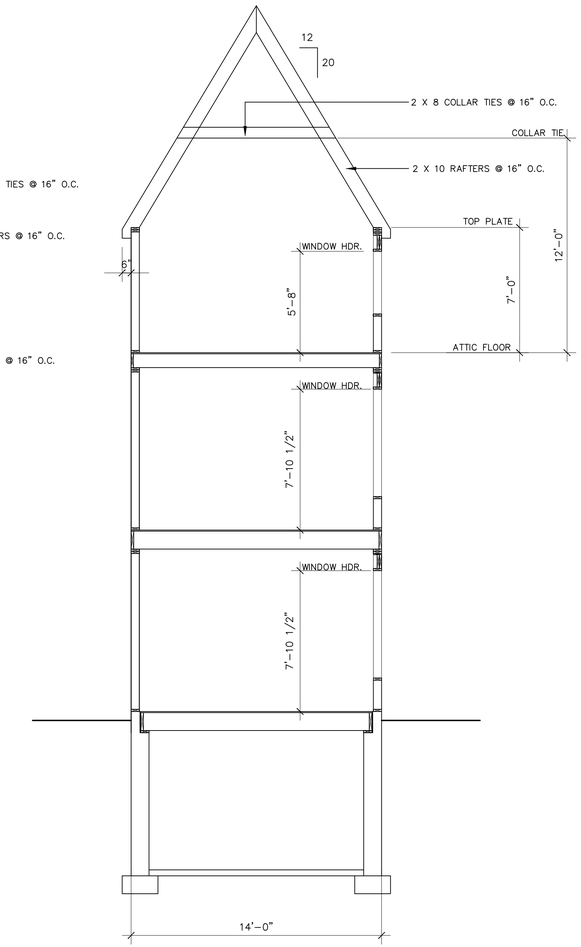

# TYPICAL FLITCH PLATE DETAIL

SCALE: N.T.S.



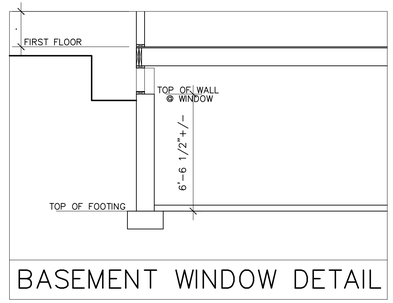

## SECTION – A

SCALE: 1/4" = 1'-0"




## SECTION – B

SCALE: 1/4" = 1'-0"




## BASEMENT WINDOW DETAIL

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

| | Brian J. Stokosa, PE |
|---|---|
| | |
| 06-04-20 | |
| 06-03-20 | |
| 11-06-19 | |
| 06-06-19 | |
| 05-30-19 | |
| 05-17-19 | |
| Revisions 04-08-19 | |
| Project No. 2019:049 | License No. 083970 |

DAY | STOKOSA
ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT

New Building Design
North Avenue, City of Beacon
Dutchess County, New York

North Avenue Properties, LLC

| SCALE | DRAWN BY | DRAWING No. |
|---|---|---|
| 1/4" = 1'-0" | S.M.M. | S1 |
| DATE 03-20-19 | CHECKED BY B.J.S. | |



Z:\2010 AutoCad Dwgs\Schofiled, Norm\Dwg\2019049.dwg

# ENERGY CODE / HVAC NOTES

2015 INTERNATIONAL ENERGY CONSERVATION CODE

BUILDING TYPE: 2-STORY COMMERCIAL – OFFICE
CODE DESIGN METHOD: COMCHECK
CLIMATE ZONE: 5A

HEATING EQUIPMENT TYPE: SHALL BE DESIGNED BY THE H.V.A.C. CONTRACTOR

I, BRIAN J. STOKOSA CERTIFY THAT THESE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE SECTIONS OF THE INTERNATIONAL ENERGY CONSERVATION CODE.

| COMPONENT | PROVIDED |
|---|---|
| CEILING | R-30 |
| WOOD FRAMED WALL | R-21 |
| FLOOR FRAMING | R-30 |
| U-FACTOR | U-.30 |

THE BUILDING ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE FOR THE SECOND FLOOR APARTMENT. THE ENVELOPE SHALL BE TESTED AND VERIFIED TO HAVE AN AIR LEAKAGE RATE NOT EXCEEDING 3 AIR CHANGES PER HOUR AND A REPORTED PRESSURE OF 0.2 INCH W.G. (50 PASCALS). ALL DUCTS, AIR HANDLERS AND FILTER BOXES ARE TO BE SEALED. DUCTS ARE TO BE PRESSURE TESTED TO DETERMINE LEAKAGE.

A VENTILATION SYSTEM IS TO BE INSTALLED FOR THE NEW BUILDING. THE SYSTEM IS TO BE DESIGNED IN ACCORDANCE WITH M1507.3, THE SQUARE FOOTAGE OF THE DWELLING AND THE NUMBER OF BEDROOMS. OUTDOOR AIR INTAKES AND EXHAUSTS ARE TO HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN SYSTEM IS NOT IN OPERATION.

FIREBLOCKING SHALL BE PROVIDED TO CUT OFF VERTICLE AND HORIZONTAL DRAFT OPENINGS AND TO FORM A FIRE BARRIER BETWEEN STORIES AND THE TOP STORY AND ROOF SPACE.

FIREBLOCKING IS TO BE PROVIDED IN THE FOLLOWING LOCATIONS:
– IN CONCEALED STUD WALLS VERTICALLY AT CEILING & FLOOR LEVELS AND INTERVALS NOT EXCCEDING 10'
– AT INERCONNECTIONS BETWEEN CONCEALED VERTICLE AND HORIZONTAL SPACES, SUCH AS SOFFITS, DROP CEILINGS, COVE CEILINGS
– IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP & BOTTOM OF THE RUN.
FIREBLOCKING SHALL CONSIST OF NOMINAL TWO-INCH LUMBER, $23/32$" PLYWOOD, ¾" PARTICAL BOARD, ½" GYPSUM BOARD, ¼" CEMENT BASED MILLBOARD OR BATTS/BLANKETS OF MINERAL WOOL OR GLASS FIBER SECURELY RETAINED IN PLACE.

AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES, AND WIRES AT THE CEILING AND FLOOR LEVEL AN APPROVED MATERAIL IS TO BE INSTALLED TO RESIST THE FREE PASSAGE OF FLAME & PRODUCTS OF COMBUSTION.

# GENERAL NOTES

DIVISION 1 – GENERAL CONDITIONS:

CODES: ALL WORK & MATERIALS MUST CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE, LOCAL BUILDING CODES, NATIONAL BOARD OF FIRE UNDERWRITERS CODE AND TO THE REQUIREMENTS OF THE BOARD OF HEALTH & 2015 INTERNATIONAL ENERGY CONSERVATION CODE.

OMISSION: ANYTHING NOT SPECIFICALLY SHOWN HEREON AND/OR SPECS, BUT WHICH IS REASONABLY IMPLIED, SHALL BE FURNISHED AS THOUGH SET FORTH IN THE PLANS AND/OR SPECIFICATIONS. ALL WRITTEN FIGURES, NOTES & DIMENSIONS ON THE FLOOR PLANS, OR SPECIFICATIONS SHALL TAKE PRECEDENCE OVER ANY DRAWN FIGURES. DO NOT SCALE PRINTS. ALL DIMENSIONS MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES ON THE PLANS, OR SPECIFICATIONS, MUST BE REPORTED TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.

ALL PERMITS ARE NOT THE RESPONSIBILITY OF THE ENGINEER.

MATERIALS: ALL MATERIALS SHALL BE NEW AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

SUBSTITUTIONS: SUBSTITUTIONS MADE FOR STRUCTURAL MATERIALS SPECIFIED BY NAME MAY BE MADE ONLY IF APPROVED BY ENGINEER.

OWNERSHIP OF PLANS: THESE PLANS ARE PROPERTY OF DAY & STOKOSA ENGINEERING, P.C. ANY USE OR REPRODUCTION, IN WHOLE OR PART, WITHOUT THE WRITTEN CONSENT OF DAY & STOKOSA IS PROHIBITED. ANY PERSON, OR CORPORATION, USING PLANS WITHOUT CONSENT WILL BE RESPONSIBLE TO COMPENSATE DAY & STOKOSA.

ENGINEER's STATUS: THE ENGINEER HAS NOT BEEN RETAINED BY OWNER TO PROVIDE PERIODIC JOB INSPECTIONS OR JOB ADMINISTRATION AND SHALL NOT BE RESPONSIBLE FOR CHANGES MADE IN THE FIELD WITHOUT WRITTEN OR GRAPHIC AUTHORIZATION.

DIVISION 2 – SITE WORK:

FOOTINGS: IF SOIL BEARING CONDITIONS ARE QUESTIONABLE, THE CONTRACTOR SHALL CONSULT A SOILS ENGINEER FOR PROPER FOOTING DESIGN. THE PLANS ARE BASED ON A MINIMUM SOIL BEARING CAPACITY 2,000 PSF.

FINISHED GRADING: FINISHED GRADING SHALL BE PERFORMED SO AS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.

DIVISION 3 – CONCRETE:

ALL CONCRETE USED SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS UNLESS OTHERWISE NOTED. ALL CONCRETE WORK SHALL BE DONE IN COMPLETE CONFORMANCE TO APPLICABLE ACI CODES.

DIVISION 5 – METALS:

STRUCTURAL STEEL: ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATIONS A-36 FOR STRUCTURAL STEEL. ALL STEEL PIPE COLUMNS SHALL BE OF STANDARD WEIGHT PIPE UNLESS OTHERWISE NOTED. STRUCTURAL STEEL HAS BEEN DESIGNED FOR A MAXIMUM BENDING STRESS OF 24,000 PSI, IN ACCORDANCE WITH THE 9TH EDITION OF THE AISC. ALL STEEL BEAMS SHAL BE FACTORY PRIMED WITH A RUST PROHIBITOR AND FIELD PAINTED WHERE EXPOSED TO WEATHER. ALL BEAM CONNECTIONS SHALL BE THROUGH BOLTED UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE DRILLED OR PUNCHED. TORCHED HOLES SHALL NOT BE PERMITTED.

REINFORCING STEEL: ALL REINFORCING STEEL BARS SHALL BE GRADE 60.

DIVISION 6 – WOOD & PLASTICS:

LUMBER: ALL STRUCTURAL LUMBER SHALL HAVE A MINIMUM BENDING STRESS OF 1,200 PSI.

FRAMING: FRAMING SHALL BE ERECTED PLUMB, LEVEL, TRUE AND SECURELY NAILED. JOISTS, STUDS AND RAFTERS ARE TO BE DOUBLED AT ALL OPENINGS. ALL FLUSH JOIST HEADERS TO BE CONNECTED WITH GALVANIZED METAL JOIST HANGERS. ALL FLUSH BEAM CONNECTIONS SHALL HAVE HEAVY DUTY JOIST HANGERS. DOUBLE FRAME UNDER ALL PARTITIONS PARALLEL TO FRAMING. SIZES OF JOISTS AND RAFTERS ARE SHOWN ON THE PLAN. IF A WOOD DECK IS PROVIDED, ALL STRUCTURAL MEMBERS SHALL BE PRESSURE TREATED LUMBER.

SHEATHING & SUBFLOOR: SHEATHING & SUBFLOOR SHALL BE APA ORIENTED STRAND BOARD WITH EXTERIOR GLUE AND NAILED TO EACH FRAMING MEMBER UNLESS OTHERWISE NOTED.

JOIST HANGERS: JOIST HANGERS SHALL BE GALVANIZED STEEL OR IRON, SIZED TO FIT THE SUPPORTED MEMBER AND OF SUFFICIENT STRENGTH TO DEVELOP THE FULL STRENGTH OF THE SUPPORTED MEMBER, AND FURNISHED COMPLETE WITH ANY SPECIAL FASTENERS REQUIRED. MANUFACTURES SHALL BE "SIMPSON" STRONG-TIE, OR EQUAL.

DIVISION 7 – THERMAL & MOISTURE PROTECTION:

ROOFING: ALL CHIMNEYS SHALL BE PROPERLY FLASHED WITH GALVANIZED STEP FLASHING. VALLEY AND VERTICAL ROOF SECTIONS SHALL BE PROPERLY SUPPORTED. ALL ROOFING SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE MANUFACTURER'S SPECIFICATIONS.

ASPHALT SHINGLES: TO BE SELECTED BY OWNER OR CONTRACTOR.

VENTS: VENTILATE ALL ATTIC, RAFTER AND CRAWL SPACE AREAS WITH PROPER SIZED SCREENED VENTS AND/OR LOUVERS.

INSULATION: ALL INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH THE 2015 IECC.

CAULKING: ALL EXTERIOR JOINTS BETWEEN WINDOWS, DOORS AND OTHER SURFACES SHALL BE CAULKED USING A WEATHERPROOF CAULKING.

DIVISION 8 – DOORS & WINDOWS:

WINDOWS: ALL WINDOWS SHALL MEET THE MINIMUM REQUIREMENTS FOR LIGHT, VENTILATION AND EGRESS. ALL WINDOWS SHALL BE OF SUFFICIENT CONSTRUCTION SO AS TO MEET THE 2015 IECC.

INTERIOR DOORS: ALL INTERIOR DOORS SHALL COME COMPLETE WITH HARDWARE. ALL DOORS SHALL MEET THE MINIMUM REQUIREMENTS OF THE 2015 IECC, IF APPLICABLE.

DIVISION 9 – FINISHES:

DRYWALL: DRYWALL SHALL BE 1/2" GYPSUM BOARD SECURELY SCREWED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. ALL JOINTS ARE TO BE TAPED AND SHALL RECEIVE (3) COATS OF JOINT COMPOUND. FINISHES TO BE SMOOTH, EVEN AND READY FOR PAINTING.

DIVISION 15 – MECHANICAL:

HEATING: THE CONTRACTOR SHALL FURNISH & INSTALL A HEATING SYSTEM WHICH MEETS THE 2015 IECC.

FLASHING: ALL PIPES PASSING THROUGH ROOF SHALL BE MADE WATER-TIGHT.

ALL PIPES CARRYING WATER OVER 105 DEGREES MUST BE INSULATED WITH A MINIMUM OF R-3.

TESTING: THE CONTRACTOR SHALL TEST ALL WATER SUPPLY AND DRAIN, WASTE AND VENT PIPING IN ACCORDANCE WITH ALL CODES.

DIVISION 16 – ELECTRICAL:

ALL ELECTRICAL WORK SHALL BE DONE IN STRICT CONFORMANCE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS AND LOCAL CODES. THE SERVICE SIZE SHALL BE A MINIMUM OF 100 AMPS.

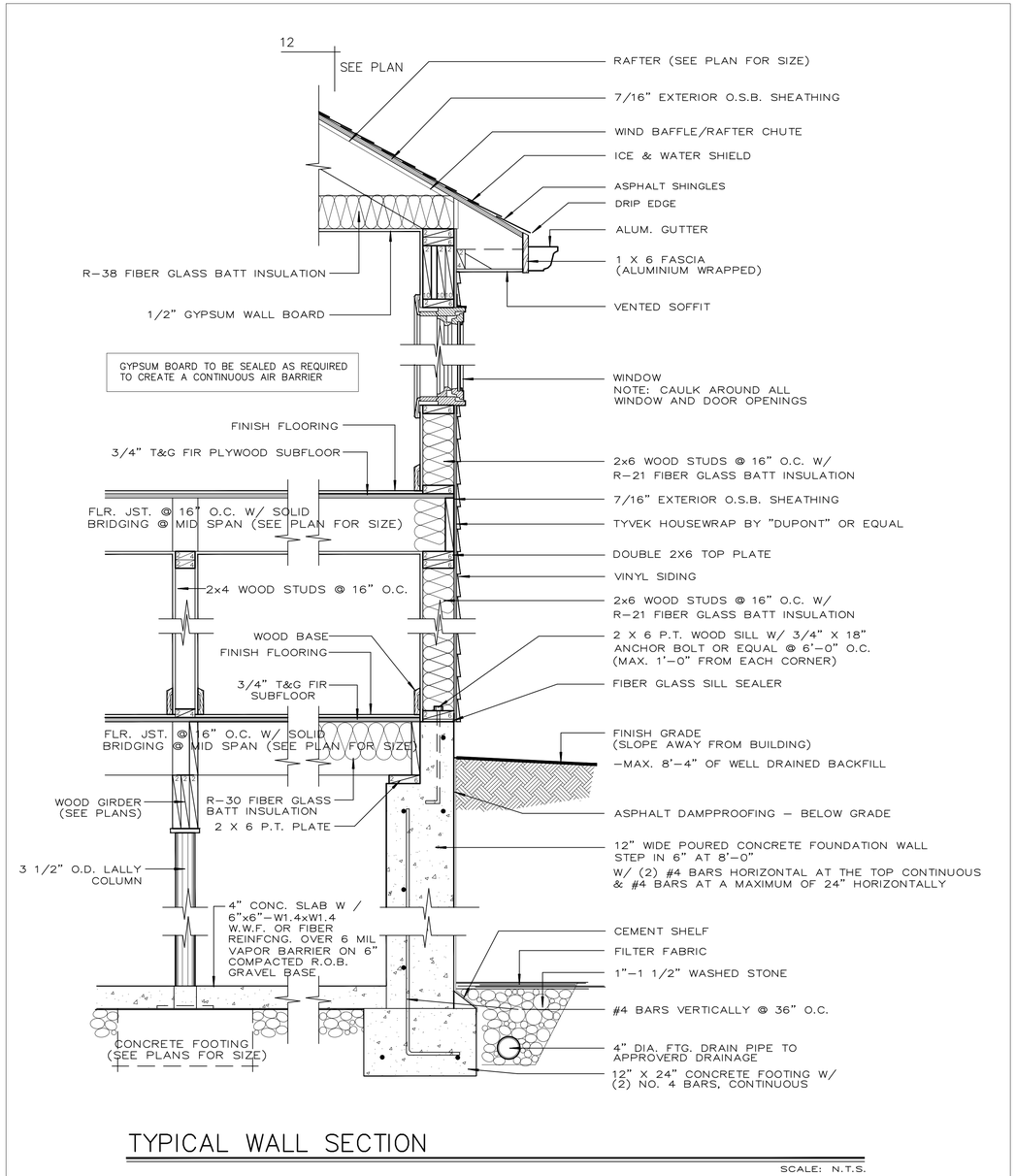
ROOF NOTES:

ICE & WATER SHIELD IS TO BE INSTALLED AT ALL ROOF EAVES FROM THE LOWEST EDGE OF THE ROOF TO A POINT 24" INSIDE THE EXTERIOR WALL LINE. ICE & WATER SHIELD IS ALSO TO BE INSTALLED AT ALL VALLEY LOCATIONS.

CONTRACTOR TO PROVIDE FLASHING AT WALL AND ROOF INTERSECTIONS, AT GUTTERS, WHERE THEIR IS A CHANGE IN ROOF SLOPE OR DIRECTION, AND AROUND ROOF OPENINGS. ALL VALLEYS TO BE FLASHED AND DRIP EDGE TO BE PROVIDED AT EAVES AND GABLES.

FOR ASPHALT SHINGLED ROOFS, IN ADDITION TO MEETING THE REQUIREMENTS OF SECTIONS R905.2 ASPHALT SHINGLES OF THE 2015 IRC, SHINGLES SHALL ALSO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS & RECOMMENDATIONS.

HURRICANE CLIPS ARE TO BE INSTALLED AT RAFTER TOP PLATE CONNECTIONS FOR ALL AREAS WITH VAULTED, CATHEDRAL CEILINGS OR WHERE A CEILING JOIST IS NOT PRESENT.




TYPICAL WALL SECTION

SCALE: N.T.S.

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

| | Brian J. Stokosa, PE |
|---|---|
| | |
| 06-04-20 | |
| 06-03-20 | |
| 11-06-19 | |
| 06-06-19 | |
| 05-30-19 | |
| 05-17-19 | |
| Revisions 04-08-19 | |
| Project No. 2019:049 | License No. 083970 |

DAY | STOKOSA
ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT
New Building Design
North Avenue, City of Beacon
Dutchess County, New York

North Avenue Properties, LLC

| SCALE | DRAWN BY | DRAWING No. |
|---|---|---|
| 1/4" = 1'-0" | S.M.M. | S2 |
| DATE 03-20-19 | CHECKED BY B.J.S. | |



Z:\2010 AutoCad Dwgs\Schofiled, Norm\Dwg\2019049.dwg

## FINISH SCHEDULE

1) ALL INTERIOR WALL FINISHES TO BE 1/2" GYPSUM WALL BOARD.
2) ALL PAINT TO BE BENJAMIN MOORE OR EQUAL. COLOR TO BE SELECTOR BY OWNER.
3) ALL FLOORING TO BE LOCATED AS PER OWNER. COLORS AND TYPES TO BE SELECTED BY OWNER.
4) ALL CARPET TO BE A HEAVY DUTY COMMERCIAL CARPET. MANUFACTURER TO BE CONTRACTORS CHOICE, COLOR TO BE SELECTED BY OWNER. CONTRACTOR TO SUBMIT SAMPLE TO OWNER PRIOR TO INSTILLATION. CARPET NOT TO BE LESS THAN CLASS II MATERIALS AND TO BE LABELED AS SUCH.
5) ALL TRIM AS PER OWNER, COLOR AND STYLE TO BE SELECTED BY OWNER.
6) ALL FIRE EXTINGUISHER CABINETS, BRACKETS AND FIRE EXTINGUISHERS AS SUPPLIED BY "LARSEN" OR EQUAL.
7) PROVIDE VINYL SIGNS IN BOTH WRITTEN AND BRAILLE AT THE DOORS OF THE REST ROOMS

## PLUMBING NOTES

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES (TABLE 2902.1):
BUSINESS:
WATER CLOSETS: 1 PER 25 – REQUIRED: (1) ACTUAL: (1)
LAVATORIES: 1 PER 40 – REQUIRED: (1) ACTUAL: (1)
DRINKING FOUNTAINS: 1 PER 100 – (1) REQUIRED, ACTUAL (1) WATER COOLER (WATER COOLERS PERMITTED TO BE SUBSTITUTED FOR NOT MORE THAN 50% OF THE REQUIRED DRINKING FOUNTAINS)
OTHER: 1 SERVICE SINK REQUIRED, ACTUAL (1)

GENERAL PLUMBING NOTES:

PLUMBING FIXTURES SHALL BE CONSTRUCTED OF APPROVED MATERIALS, WITH SMOOTH, IMPERVIOUS SURFACES, FREE FROM DEFECTS AND CONCEALED FOULING SURFACES.

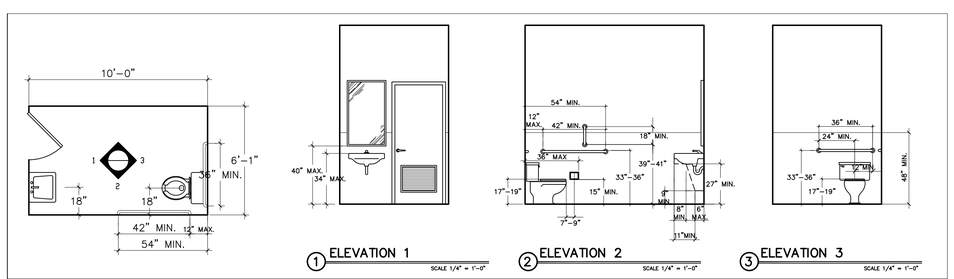
WALLS WITHIN 24" OF WATER CLOSETS ARE TO HAVE A SMOOTH, HARD, NON–ABSORBANT SURFACE TO A HEIGHT OF 4 FEET ABOVE THE FLOOR.

THE SUPPLY LINES AND FITTINGS FOR EVERY PLUMBING FIXTURE SHALL BE INSTALLED AS TO PREVENT BACKFLOW.

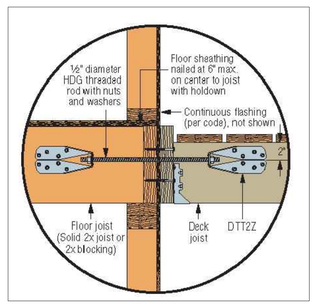
FIXTURES SHALL BE SET LEVEL AND IN ALIGNMENT WITH REFERENCE TO ADJACENT WALLS. JOINTS FORMED WHERE FIXTURES COME IN CONTACT WITH WALLS OR FLOORS SHALL BE SEALED.

LAVATORIES SHALL HAVE WASTE OUTLETS OF NOT LESS THAN 1.25 INCHES IN DIAMETER, A STRAINER, CROSSBAR OR OTHER DEVICE SHALL BE PROVIDED TO RESTRICT THE CLEAR OPENING OF THE OUTLET.

WATER CLOSET CONNECTIONS. A 4–INCH BY 3–INCH CLOSET BEND SHALL BE ACCEPTABLE. WHERE A 3–INCH BEND IS UTILIZED, A 4–INCH BY 3–INCH FLANGE SHALL BE INSTALLED TO RECEIVE THE FIXTURE. EACH WATER CLOSET SHALL BE PROVIDED WITH A FLUSH TANK DESIGNED AND INSTALLED TO SUPPLY WATER IN QUANTITY AND RATE OF FLOW TO FLUSH THE CONTENTS OF THE FIXTURE, CLEANSE THE FIXTURE, AND REFILL THE FIXTURE TRAP.




## TYPICAL BATHROOM DIMENSIONS




DECK–TO–STRUCTURE LATERAL CONNECTION

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

| | |
|---|---|
| | Brian J. Stokosa, PE |
| | |
| 06-04-20 | |
| 06-03-20 | |
| 11-06-19 | |
| 06-06-19 | |
| 05-30-19 | |
| 05-17-19 | |
| Revisions 04-08-19 | |
| Project No. 2019:049 | License No. 083970 |

DAY | STOKOSA
ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT
New Building Design
North Avenue, City of Beacon
Dutchess County, New York

North Avenue Properties, LLC

| SCALE | DRAWN BY | DRAWING No. |
|---|---|---|
| 1/4" = 1'-0" | S.M.M. | S3 |
| DATE 03-20-19 | CHECKED BY B.J.S. | |



Z:\2010 AutoCad Dwgs\Schofiled, Norm\Dwg\2019049.dwg

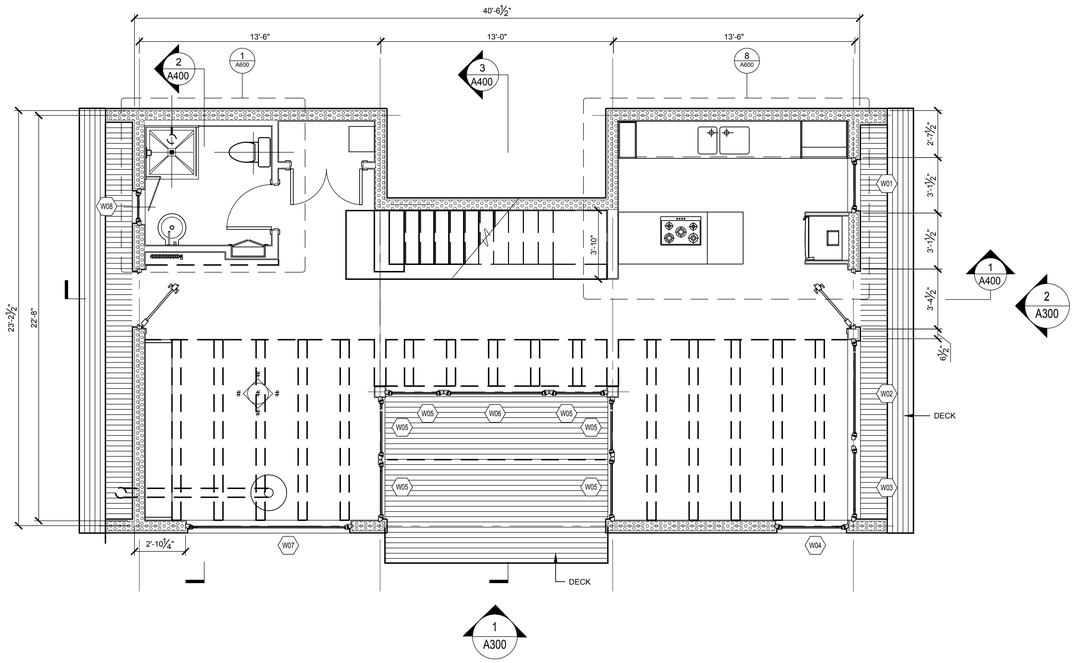
**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

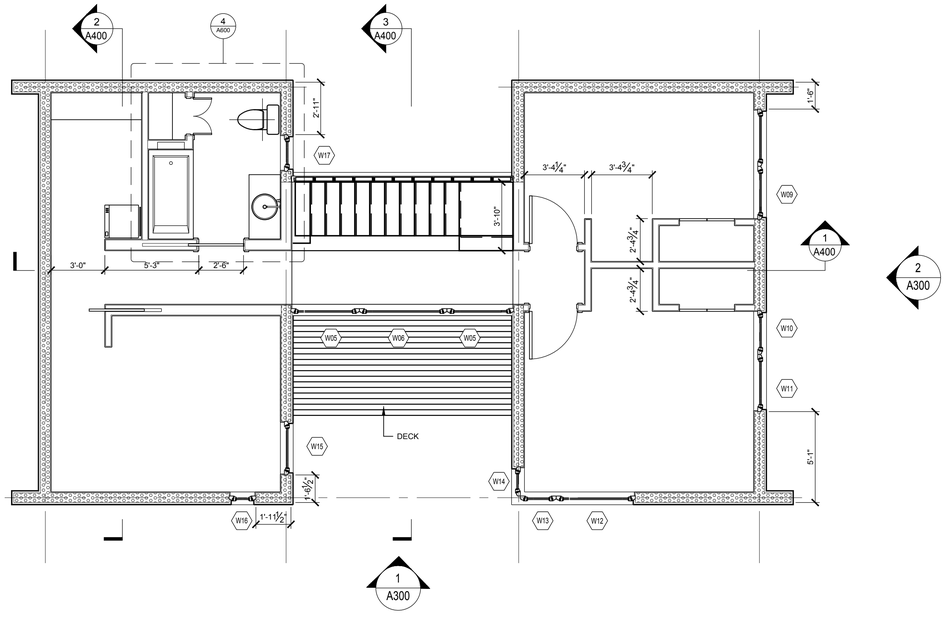
Single Family House - Willow Street (corner of Verplanck)

**ATTACHMENTS**

Willow Street Submission.pdf




1 First Floor Plan
SCALE 1/4" = 1'-0"




2 Second Floor Plan
SCALE 1/4" = 1'-0"

COPYRIGHT© ALL RIGHTS RESERVED

BAR DOWN STUDIO
257b Main Street, Beacon NY 12508
845.559.3187

Consultant

Project Title
WILLOW STREET RESIDENCE
BEACON NY 12508

| No | Date | Revision | By |
|---|---|---|---|
| 4 | | | |
| 3 | | | |
| 2 | | | |
| 1 | 7/27/2020 | Issue ARB Review | DH |

| | |
|---|---|
| Drawn By: | dh |
| Checked By: | - |
| BDS Proj. #: | - |
| Date: | June 5, 2020 |

Sheet Title
FLOOR PLANS

Sheet No.
A101

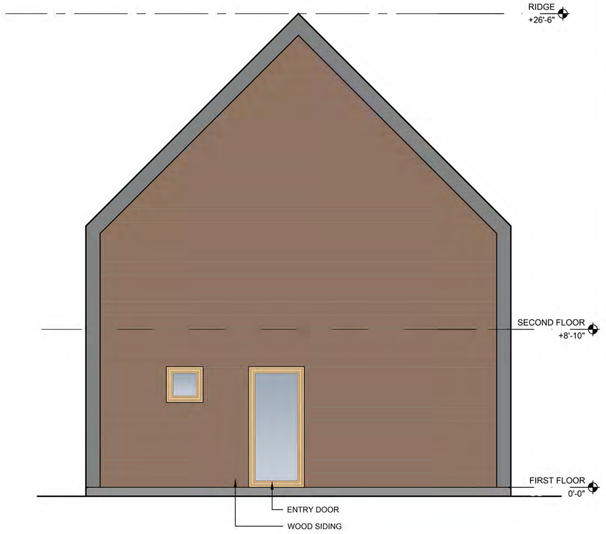
CONSTRUCTION DOCUMENTS




1 East Elevation (Willow Street)
SCALE ############



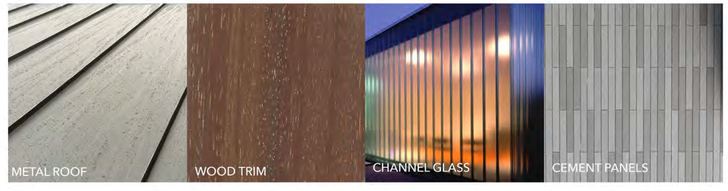

2 North Elevation
SCALE 1/4" = 1'-0"




3 South Elevation (Verplanck Ave.)
SCALE ############




4 West Elevation
SCALE 1/4" = 1'-0"




BAR DOWN STUDIO
257b Main Street, Beacon NY 12508
845.559.3187

Consultant

Project Title
WILLOW STREET RESIDENCE
BEACON NY 12508

| No | Date | Revision | By |
|---|---|---|---|
| 4 | | | |
| 3 | | | |
| 2 | | | |
| 1 | 6/8/2020 | Issue for Permit | DH |

| | |
|---|---|
| Drawn By: | dh |
| Checked By: | - |
| BDS Proj. #: | - |
| Date: | June 6, 2020 |

Sheet Title
EXTERIOR ELEVATIONS

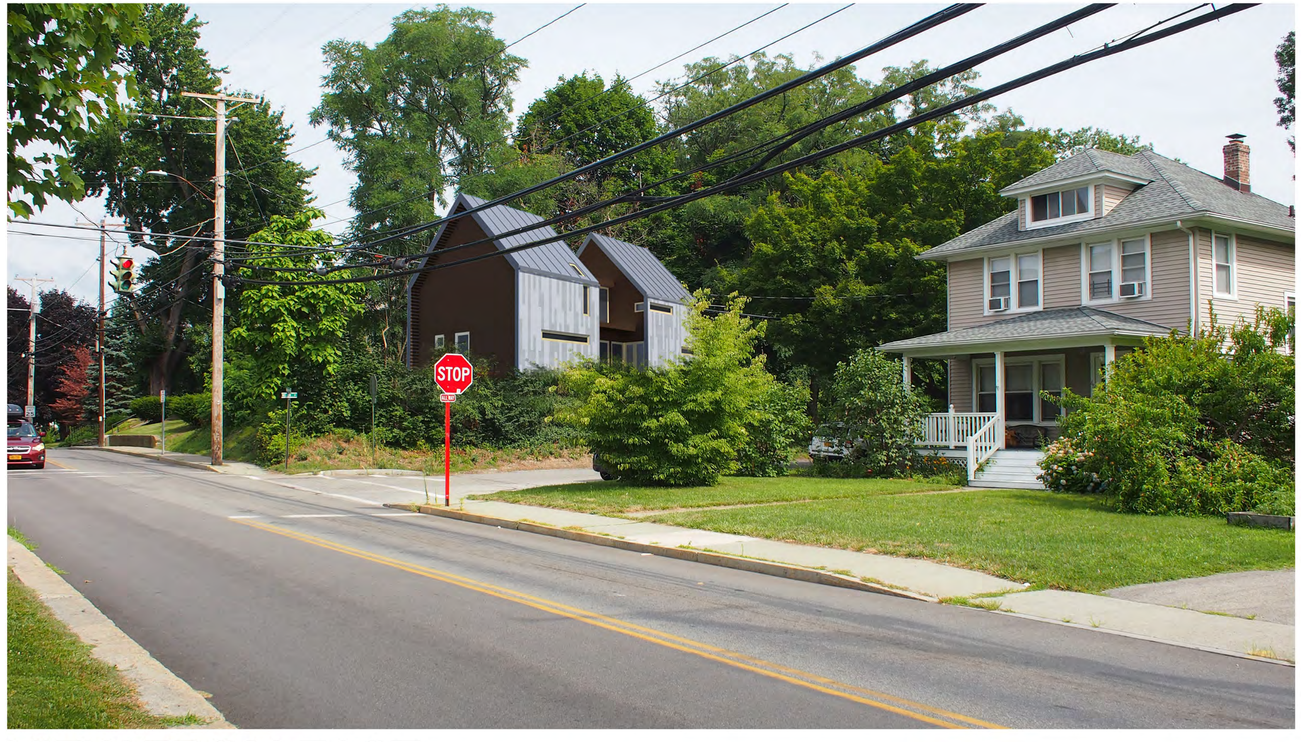
Sheet No.
A300

CONSTRUCTION DOCUMENTS

COPYRIGHT© ALL RIGHTS RESERVED



VIEW FROM WEST




VIEW FROM EAST

COPYRIGHT© ALL RIGHTS RESERVED

BAR DOWN STUDIO
257b Main Street, Beacon NY 12508
845.559.3187

Consultant

Project Title

WILLOW STREET RESIDENCE
BEACON NY 12508

| No | Date | Revision | By |
|---|---|---|---|
| 4 | | | |
| 3 | | | |
| 2 | | | |
| 1 | | | |

| | |
|---|---|
| Drawn By: | dh |
| Checked By: | - |
| BDS Proj. #: | - |
| Date: | June 6, 2020 |

Sheet Title

EXTERIOR RENDERINGS

Sheet No.

A301

CONSTRUCTION DOCUMENTS

**City of Beacon Planning Board Agenda**
**08/11/2020**

**Title:**

Single Family House - 16 Coyne Hill Road

**ATTACHMENTS**

16 Coyne Hill Road Application.pdf

16 Coyne Hill Road Elevations.pdf

# ARCHITECTURAL REVIEW BOARD APPLICATION

Date: July 15, 2020

Project Address: 16 Coyne Hill Road

Project Architect/Engineer: Roy Fredricksen

Owner/Builder: Stephen Spaccarelli/ Claire Tipley

Contact Phone No.: (845) 264-4239

Approval Requested: ____Certificate of Appropriateness ___X___New Single Family House

Color/Materials:

Siding: 8" Fiber Cement Ship-lap Siding, Behr 'Iron Mountain' gray

Roofing: Cedar Shingle Roofing

Windows: Color: "Jet Black" Type: Weathershield Contemporary Collection

Trim: 2.5" Fiber Cement, Behr 'Iron Mountain' gray

Garage Door: N/A

Stone/Brick: N/A

Signature of Owner

FOR OFFICE USE ONLY:

The Architectural Review Board has reviewed the plans submitted for approval for the project listed above and has determined:

Plan Denied _____
(Date)

Plan Approved _____
(Date)

Subject to the following:

FEE: $100.00




## RIGHT SIDE ELEVATION

| | | | | |
|---|---|---|---|---|
| **TIPLEY/ SPACCARELLI**<br>16 COYNE HILL ROAD, BEACON,<br>DUTCHESS COUNTY, NEW YORK | project NEW SINGLE FAMILY HOUSE<br>drawing ELEVATIONS FOR ARCH REVIEW | date JULY 2020<br>scale NTS | | page 2/4 |

FRONT ELEVATION

**TIPLEY/ SPACCARELLI**

16 COYNE HILL ROAD, BEACON,
DUTCHESS COUNTY, NEW YORK

project NEW SINGLE FAMILY HOUSE

drawing ELEVATIONS FOR ARCH REVIEW

date JULY 2020

scale NTS

page 1/4

## REAR ELEVATION

**TIPLEY/ SPACCARELLI**

16 COYNE HILL ROAD, BEACON,
DUTCHESS COUNTY, NEW YORK

project NEW SINGLE FAMILY HOUSE

drawing ELEVATIONS FOR ARCH REVIEW

date JULY 2020

scale NTS

page 3/4




## LEFT SIDE ELEVATION

| | | | | |
|---|---|---|---|---|
| **TIPLEY/ SPACCARELLI**<br>16 COYNE HILL ROAD, BEACON,<br>DUTCHESS COUNTY, NEW YORK | project NEW SINGLE FAMILY HOUSE<br>drawing ELEVATIONS FOR ARCH REVIEW | date JULY 2020<br>scale NTS | | page 4/4 |