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OCTOBER 16, 2018 MEETING

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TOWN OF LEWISBORO
Westchester County, New York

Planning Board
79 Bouton Road
South Salem, New York 10590

Tel: (914) 763-5592
Fax: (914) 875-9148
Email: planning@lewisborogov.com

AGENDA

Tuesday, October 16, 2018 **79 Bouton Road, South Salem**

Note: Meeting will start at 7:30 p.m. and end at or before 11:00 p.m.

I. DECISION

Cal #11-15PB, Cal#04-16 SW, Cal#09-16 WP
Elegant Banquets – Le Chateau, 1410 Route 35, South Salem, NY 10590, Sheet 39, Block 10549, Lot 17 (1410 Rte. 35 LLC, owner of record) – Application for amendment of site development plan for shed installation.

II. PUBLIC HEARINGS

Cal #08-17PB, 16-17SW
Oakridge Commons, 450 Oakridge Common, South Salem, NY 10590, Sheet 49D, Block 9829, Lot 10 (Smith Ridge Associates, owner of record) - Application for Site Plan Review for installation of a car wash.

Cal# 8-02PB
JVG Estates (formerly Popoli Subdivision), 1437 Route 35, South Salem, NY 10590 Sheet 0040, Block 10552, Lot 003 (John Luciano, owner of record) - Request for subdivision bond reduction and referral to the Town Board.

Cal #06-18PB
King Lumber, Meadow Street, Goldens Bridge, NY 10526, Sheet 4A, Block 11111, Lot 2, Sheet 4A, Block 11113, Lots 7 & 9, Sheet 4A, Block 12035, Lot 5 (King Lumber Realty and King Meadow Street Realty – owners of record) - Application for Site Plan Review for lumber yard and U-Haul rental facility.

III. WETLAND PERMIT REVIEWS

Cal# 78-18WP
Handler Residence, 25 Woodway Road, South Salem, NY 10590, Sheet 38, Block 10549, Lots 12 & 20 (Martha and Richard Handler, owners of record) – Application for habitat restoration and herbicide application.

Cal #56-18WP, #09-18SW
Hidden Point Farms, 153 Silver Springs Road, South Salem, NY 10590, Sheet 48, Block 10057, Lot 46 (Hidden Point Farms, LLC, owner of record) – Application for a pool, related structures, utilities and construction access road.

IV. SKETCH PLAN REVIEWS

Cal #06-17PB
Wolf Conservation Center, Buck Run, South Salem, NY 10590, Sheet 21, Block 10803, Lots 3, 65, 67, 81, 82, 83, 86 & 88 (Wolf Conservation Center, owner of record) - Application for a Subdivision and Special Use Permit associated with a private nature preserve.

Cal #10-17PB
Mercedes Benz of Goldens Bridge, 321 Main Street, Goldens Bridge, NY 10526, Sheet 4E, Block 11135, Lots 1, 2, 3, 4, 5, 6, 7 & Block 11137, Lot 42 (Charisma Holding Corp., owner of record) – Application for Site Plan Review for additions to existing auto showroom and service buildings, additional parking spaces and construction of a parking garage.

V. SITE DEVELOPMENT PLAN

Cal #10-15 PB, Cal #20-17WP, Cal #5-17SW
Wilder Balter Partners, NY State Route 22, Goldens Bridge, NY 10526, Sheet 5, Block 10776, Lots 19, 20 & 21 (Property Group Partners, LLC, owner of record) – Application for a 46 unit MF development on a ±35.4 acre parcel.

VI. WETLAND VIOLATIONS

Cal #3-16WV, 06-17WP
McGuinness Residence, 17 Schoolhouse Road, South Salem, NY 10590, Sheet 22, Block 10802, Lot 35 (Annette and Peter McGuinness, owners of record)

Cal #02-18WV, Cal# 79-18WP
Lupienski Residence, 23 Elmwood Road, South Salem, NY 10590, Sheet 43, Block 10067, Lot 23 and 24 (Jeffrey Lupienski, owner of record)

Cal #04-18WV
Lordi Residence, 2 Cheyenne Court, Katonah, NY 10536, Sheet 10, Block 11152, Lot 140 (William and Marieanne Lordi, owners of record)

VII. REQUESTS FOR RELAXATION ON SEPTIC REQUIREMENTS PER PLANNING BOARD RESOLUTIONS AND WETLAND PERMITS

VIII. DISCUSSION

Press Requests

Distribution of late materials to the Planning Board and its consultants

Adjournments and Wetland Violations

Hardcopies of Materials

IX. EXTENSION OF TIME REQUEST

Cal# 3-13PB, 03-16WP
"Silvermine Preserve," Silvermine Drive & Lockwood Road, South Salem, NY, 10590 Sheet 48, Block 10057, Lot 15 and Sheet 51, Block 10057, Lot 104 (Ridgeview Designer Builders, Inc. & Daniel Higgins, owners of record)- Applications for Subdivision, Wetland Activity and Stormwater Permits for the construction of a 13-lot subdivision.

Cal #8-12PB
Petruccelli/Badagliacca, Oscaleta Road, South Salem, NY 10590 Sheet 33B, Block 11157, Lot 46 (Steven Petruccelli and Teresa Badagliacca, owners of record) - Request for a 90-day Extension of Time to resolution granting Preliminary/Final Subdivision Plat, Negative Declaration Under SEQRA, dated October 21, 2014.

Cal #1-16 SW, Cal#1-16 WP
Lichtman Residence, 192 Kitchawan Road, South Salem, NY 10590, Sheet 45, Block 10300, Lot 012 (Aaron Lichtman, owners of record) - Application for demolition and removal of existing five-bedroom house and cottage. Application for Wetland Activity Permit and Stormwater Permit for the construction of a new five-bedroom house, garage, courtyard and modified driveway.

X. MINUTES OF January 16, 2018; MINUTES OF February 27, 2018; MINUTES OF March 20, 2018; MINUTES OF March 27, 2018; MINUTES OF April 17, 2018, MINUTES OF June 19, 2018, MINUTES OF July 21, 2018 MINUTES OF August 14, 2018; MINUTES OF August 21, 2018 and MINUTES OF September 11, 2018.

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
Town Consulting Professionals

DATE: October 11, 2018

RE: Wetland Permit and Stormwater Permit
Hidden Point Farm, LLC
153 Silver Spring Road
Sheet 48, Block 10057, Lot 46

PROJECT DESCRIPTION

The subject property totals ±11 acres of land, ±2.1 acres are located within the Town of Wilton, Connecticut and ±8.8 acres are located within the Town of Lewisboro. The application involves the construction of a pool located within the Town of Lewisboro; the existing residence is located in the Town of Wilton. The pool is proposed to be ±19,423 s.f. in surface area and will contain ±875,514 gallons of water; the project will result ±2.9 acres of land disturbance and ±12,470 s.f. of additional impervious cover, not including the pool surface area. While the pool is located outside of the wetland buffer, the proposed temporary construction access road is located within the wetland buffer and will cross a watercourse via an existing culvert; underground utilities (electric/gas/water) are proposed along the access driveway and within the wetland buffer.

SEQRA

The proposed action is a Type II Action and is categorically exempt from the State Environmental Quality Review Act (SEQRA).

REQUIRED APPROVALS AND REFERRALS

1. A Wetland Permit is required from the Planning Board; a public hearing is required to be held on the Wetland Permit.

2. A Town Stormwater Permit is required from the Planning Board.

3. It is our understanding that an area variance is required from the Zoning Board of Appeals (size of accessory structure).

4. Coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) is required.

COMMENTS

1. As previously requested, the Wetland Delineation Report must be revised to include the items required, as per Section 217-7A(5) and (6) of the Wetland Ordinance; a revised report has not been provided to this office.

2. As previously requested, the applicant shall quantify the area of disturbance within the wetland buffer and quantify the area of proposed mitigation (1:1 mitigation is required). This office is in general agreement with the mitigation plan; however, without the calculations referenced above, we are unable to determine compliance.

3. Note 8 on the mitigation plan references the establishment of a new meadow/limited mow zone; however, this area does not appear to be depicted on the plans.

4. We continue to question access to the pool from the east as a proposed wall appears to prevent access from the construction staging area.

5. The site plans, pool construction plans, and building construction plans are inconsistent and must be coordinated in terms of layout of walls, stairs, patios, and access.

6. The Access Route Cross-Section at Culvert Crossing Detail shall be revised to include the minimum required separation between the culvert invert and the proposed utilities, as well as minimum required cover to be maintained above the culvert, both during and after construction. Further, provide backfill requirements of utilities below the culvert to ensure proper compaction and support of the existing culvert.

7. The project will result in a significant amount of earthwork and concrete. In an effort to better understand impacts to the wetland/buffer crossing and also to construction-related traffic, the applicant shall estimate the amount of material to be imported to the site (soil, gravel, sand,

concrete, water, etc.) and the anticipated number of truck trips per material type. Further, an off-site construction vehicle access/routing plan shall be provided.

8. The applicant shall provide a construction detail for the Makeup Water Tank, including any pump system; illustrate any proposed electrical service connections.

9. As previously indicated, the proposed infiltration galleys are shown to be installed entirely in fill. The NYSDEC requires that only 25% of the galley height be within a fill section. The inverts of the system shall be revised to meet this requirement and still meet the 3' vertical separation from groundwater and/or rock. We note that given the depth to bedrock an alternative location for the infiltration system will likely be required.

10. Note #1 on the Concrete Galley Detail shall be revised to state 4,000 psi concrete.

11. There is a floor sump shown on the architectural plans for the vacuum plenum building; the discharge location of the sump shall be shown on the plans.

12. Provide construction details for the proposed decks, gravel walks and concrete walks.

13. Given the proposed retained height of the un-grouted stone retaining walls, a concrete footing should be considered by the applicant. Further, walls over four (4) feet in height shall be designed and certified by a New York Licensed Professional Engineer prior to the issuance of a Certificate of Occupancy.

14. The backslope noted on the retaining wall detail (3:1) shall be coordinated with the proposed grading shown on the plan (2:1).

15. The construction description mentions rock blasting in the SWPPP Report. This reference shall be removed, unless otherwise approved by the Town. If blasting is anticipated, a blasting report must be provided and the applicant will need to obtain a blasting permit.

16. All references to SPDES Permit GP-0201 shall be removed and updated with GP-0-15-002.

17. The SWPPP shall include project specific inspection and maintenance requirements for the post-construction stormwater practices.

18. As required by GP-0-15-002, the applicant shall provide correspondence from the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) that the project is not with an archeologically sensitive area.

19. The SWPPP shall include the requirements to have a Trained Contractor on-site daily when soil disturbance activated are being performed. The criteria for the Trained Contractor shall also be include in the SWPPP Report.

20. All rainfall data for the project location shall be obtained from the Northeast Regional Climate Center (NRCC).

21. The following comments pertain to the Notice of Intent (NOI):

    - Page 2, Question 1: The project location coordinates shall be provided.
    - Page 5, Question 22: The applicant shall mark "no" and skip Questions 23 and 27-39.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

PLANS REVIEWED, PREPARED BY D'ANDREA SURVEYING & ENGINEERING, P.C., DATED SEPTEMBER 17, 2018:

- Cover Sheet
- Overall Development Plan (1 of 5)
- Development Plan (2 of 5, 3 of 5)
- Construction Notes & Details (4 of 5)
- Notes & Details (5 of 5)

PLANS REVIEWED, PREPARED BY PATRELL ENGINEERING GROUP, INC., DATED JULY 24, 2018:

- Site Layout Plan (S-1)
- Therapy Pool Layout Plan (WP-1)
- Therapy Pool Piping Plan (WP-2)
- Therapy Pool Underwater Lighting Plan (WP-3)
- Therapy Pool Section (WP-4 and WP-5)

PLAN REVIEWED, PREPARED BY ENVIRONMENTAL LAND SOLUTIONS, LLC, DATED SEPTEMBER 25, 2018:

- Wetland Mitigation Plan (LP.1)

DOCUMENTS REVIEWED:

- Letter, prepared by D'Andrea Surveying & Engineering P.C., dated September 27, 2018
- Letter, prepared by Rucci Law Group, dated June 6, 2018
- Stormwater Pollution Prevention Plan, prepared by D'Andrea Surveying & Engineering, P.C., dated September 17, 2018

JKJ/JMC/dc

RUCCI
LAW GROUP

JOSEPH J. RUCCI, JR.
AMY S. ZABETAKIS
MARIANNE C. CIRILLO
MICHELE D. GARTLAND
GEORGE A. REILLY
KATHRYN E. DIEHM
COLETTE SYMON HANRATTY
JOHN W. HETHERINGTON
ALBERTO N. MORIS

September 26, 2018

Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board
79 Bouton Road
South Salem, NY 10590

Re: Wetland Permit and Stormwater Permit
Hidden Point Farm, LLC
153 Silver Spring Road
Sheet 48, Block 10057, Lot 46

Dear Mr. Kerner,

We represent Hidden Point Farm LLC with respect to their property at 153 Silver Spring Road which is located partially in Wilton, CT and partially in Lewisboro, NY. As per your request our client has sent notice of the pending application to all neighbors with property within 500 feet of the subject property. The list of notified neighbors is attached.

Also attached is the aerial view of 153 Silver Spring Road. As you can see, the Lewisboro portion of this property (and the surrounding properties) is densely wooded and there are no structures, residential or otherwise, on any neighboring lot within 500 feet of the proposed pool. Further, all residential structures on neighboring lots are well in excess of 500 feet from the proposed pool location.

Under the circumstances we do not anticipate any impact on the neighbors from the temporary wetlands disturbance or the construction or use of the pool. We urge you and your fellow Planning Board members to schedule a visit to the site at which time we believe that you will agree that that referral of the pending application to the Wetlands Inspector for approval is appropriate.

Sincerely,

Amy S. Zabetakis

19 OLD KINGS HIGHWAY SOUTH, DARIEN, CT 06820
(203) 202-9686
WWW.RUCCILAWGROUP.COM
AZABETAKIS@RUCCILAWGROUP.COM

SHOEMAKER, KEITH & MARY
SILVER SPRING RD
SOUTH SALEM, NY 10590

BICKFORD, PETER & KATRINA
153 SILVER SPRING RD
SOUTH SALEM, NY 10590

O'GRADY, MICHAEL & KELLEY
SILVER SPRING RD
SOUTH SALEM, NY 10590

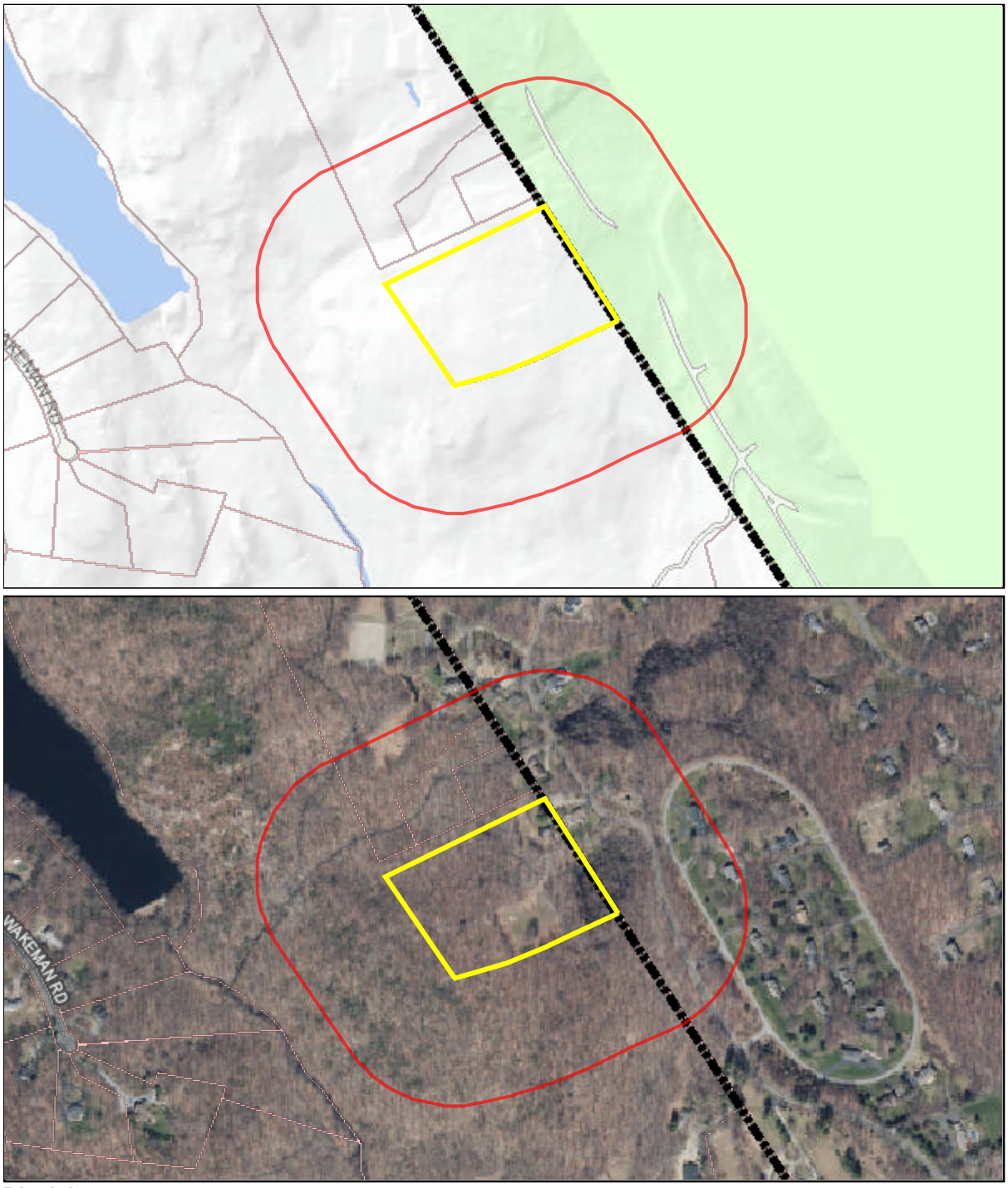
BAXENDALE, ANTHONY B. & TRACEY F.
183 SILVER SPRING RD
SOUTH SALEM, NY 10590

SJK, LLC & PVK, LLC %PEGGY VANDERVOORT
93 SILVER SPRING RD
SOUTH SALEM, NY 10590

Tax Parcel Maps

Address: 153 SILVER SPRING RD

Print Key: 66.4-4-7 **SBL:** 06600400040070000000



Disclaimer:

This tax parcel map is provided as a public service to Westchester County residents for general information and planning purposes only, and should not be relied upon as a sole informational source. The County of Westchester hereby disclaims any liability from the use of this GIS mapping system by any person or entity. Tax parcel boundaries represent approximate property line location and should NOT be interpreted as or used in lieu of a survey or property boundary description. Property

D'ANDREA SURVEYING & ENGINEERING, PC

LAND PLANNERS • ENGINEERS • SURVEYORS

SIX NEIL LANE • P.O. BOX 549
RIVERSIDE, CONNECTICUT 06878
TELEPHONE: 203 637-1779
FAX: 203 637-1770
EMAIL: info@rvdi.com

September 27, 2018

Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board
79 Bouton Road
South Salem, NY 10590

Re: Wetland Permit and Stormwater Permit
Hidden Point Farm, LLC
153 Silver Spring Road
Sheet 48, Block 10057, Lot 46

Dear Mr. Kerner,

Enclosed please find the following material in response to Kellard Sessions comments dated September 6, 2018:

- Six (6) copies of the Revised Development Plan Set, entitled, "Construction Plan Review Set, Proposed Pool, 153 Silver Spring Road Wilton, Connecticut and Lewisboro, New York, prepared for Hidden Point Farms, LLC", as revised through September 17, 2018.
- Six (6) copies of the Stormwater Pollution Prevention Plan (Including the Notice of Intent) dated September 17, 2018, as prepared by our firm.
- Six (6) copies of the Architectural plans dated August 8, 2018, as prepared by SRG Architects (Sheets A101, A102 and A103).
- Six (6) copies of the pool design plans dated June 20, 2018 as revised through July 24, 2018, prepared by Patrell Engineering Group, Inc. (Sheets S-1, and WP-1 through WP-5).
- Six (6) copies of the Wetland Mitigation Plan dated September 25, 2018, as prepared by Environmental Land Solutions, LLC.
- Three (3) reduced copies of the plans noted above
- Six (6) copies of the email communications with the Town of Wilton, Connecticut.
- CD containing PDF's of the items listed above.

The following is a summary of revisions enumerated to the comments dated September 6, 2018

1. The area at the south end of the pool labeled, "Top of Structure El=208.6+/-" is a flat concrete slab with pool mechanics below. This area is intended to remain clear and access will be gated. The adjacent structure to the east labeled, "Pool Mechanic and Equipment Structure", is a roofed mechanical structure with several entrance doors intended for maintenance workers only. Please see attached drawings prepared by Patrell Engineering Group.

2. Pool depths relative to the static water elevation have been added to the site plan. Pool depths area also shown on the attached drawings prepared by Patrell Engineering Group.

3. Pool and mechanical structure dimensions are provided within the provided pool plans as well as the attached architectural plans prepared by SRG Architects.

4. The Wetland Delineation Report has been revised to include required items, as per Section 217-7A(5) and (6) of the Wetland Ordinance and are attached herewith.

5. A wetland mitigation plan is attached.

6. The 18-inch corrugated plastic culvert pipe has been inspected and appears to be in good condition with adequate cover to protect it during construction. The removal of topsoil, placement of crushed stone, and the placement of steel plates over the culvert will provide more than adequate protection throughout construction. When the proposed utilities are installed at the culvert crossing further inspection will be made along with proper backfilling and haunching. In addition, PVC sleeves will be installed for all utilities at the culvert crossing, which will provide additional protection.

7. Proposed grading has been added to the construction access way and staging areas, where required. A note has been added to clarify that the access way is temporary in nature and shall be removed prior to the issuance of a certificate of occupancy. Note No.24 on sheet 4 of 5 has also been added to further clarify how these area shall be restored.

8. A combined utility trench detail has been provided on sheet 5 of 5 showing a cross-section of the access way at the culvert crossing and includes all utilities. Sufficient cover over the utilities is provided, as well as protective measures for the existing sanitary sewer force main. Additional protection measures were added to the detail for water service installation.

9. A Stormwater Pollution Prevention Plan (SWPPP) has been prepared per state and local requirements and is included with this package. Included with the SWPPP is the NYSDEC NOI and MS4 SWPPP acceptance form.

10. The proposed stormwater mitigation system has been sized to mitigate the net increase in peak stormwater runoff rates up to the 25-year storm event. The system also provides adequate capacity for pool filter backwash as approved by Jan Johannessen of Kellard Sessions. Hydraulic calculations are provided within the revised Drainage Summary Report included with the SWPPP.

11. Additional labels including rim and invert elevations have been added for clarity to sheet 2 of 5. The mechanical building will contain roof drains that will connect to the proposed detention system. The structure at the south end of the pool will consist of shallow pitched concrete, which will shed runoff to the south and west toward a proposed level spreader around the perimeter of the structure, which will then collect runoff and route it to the proposed detention system.

12. The proposed drywell system has been lowered 2 feet, which places the system more directly within virgin soil. All related inverts and elevations have been modified, including the HydroCad model within the revised Drainage Summary Report.

13. Both the limit of disturbance and the silt fence locations have been modified so as the erosion controls are located within the limit of disturbance.

14. The proposed silt fence has been modified to run parallel to the existing contours and the proposed orange construction fence will lie outside the silt fence along the limit of disturbance.

15. The limit of disturbance has been adjusted to accommodate the proposed stockpile area.

16. Note No. 15 on sheet 1 of 5 was added to regarding "bathroom and sanitary connections".

17. A note was added to sheet 3 of 5 addressing the removal of the sports court and restoring it with lawn following the removal of the temporary construction access road.

18. The proposed stone retaining wall has been emboldened to clarify its location. The detail for the retaining wall is located on sheet 4 of 5.

19. A fence has been proposed on top of the retaining wall located in the vicinity of the mechanical building and patio. The concrete structure at the south end of the pool will not have access and therefore will not have a railing.

20. There are two main points of entry to the pool from the east and west sides. A gravel walkway will be provided on the west side while a concrete walk will be on the east side.

21. Note No. 9 on sheet 1 of 5 has been modified to clarify that no additional well or bathrooms are proposed with this project.

22. Note No. 10 and 11 on sheet 1 of 5 have been modified as specified regarding existing and proposed utilities.

23. Note No. 16 on sheet 1 of 5 has been added stating that no tree removal or construction shall commence until a Building Permit is issued by the Town of Lewisboro.

24. The concrete washout area has been specified on the plans next to the construction vehicle parking area, which is located outside of the wetland buffer.

25. No approval by the Town of Wilton is required for the proposed project as specified in the attached email communications.

26. The site contractor estimates that there will be approximately 150 - 200 trucks delivering concrete, gravel and water to the site. The construction vehicle access and routing will be strictly as marked on development plans. Construction is anticipated to last approximately 4 and a half months.

27. All drawings submitted to the Town of Lewisboro are signed and sealed by a design professional

Thank you for your time in reviewing the project. If you have any questions, please feel free to contact us.

Sincerely,

ROCCO V. D'ANDREA, INC.

Bryan A. French

18DA_TRANS_0
Enclosures

cc: Jan Johannessen
Hidden Point Farms, LLC

Communication with the

Town of Wilton, Connecticut

Bryan French

From: Root, Robert <Robert.Root@WILTONCT.ORG>
Sent: Tuesday, September 18, 2018 12:15 PM
To: Joe Cerrone
Subject: RE: lewisboro NY poool

Joseph Cerrone:

The Wilton Connecticut Building Department does not have any right to regulate structures being built in Lewisboro New York.

Robert Root
Chief Building Official
Town of Wilton, CT 06897

From: Joe Cerrone [mailto:Joe@rdcdesignbuild.com]
Sent: Monday, September 17, 2018 2:36 PM
To: Root, Robert
Subject: lewisboro NY poool

Robert,
Thanks you for your time, as we discussed, The town of Lewisboro NY wants to make sure that Wilton CT. doesn't want to see the plans or permit for the pool that is being built on the NY side of the property.

Property is located at 153 Silver springs Road, Walton CT. – Lewisboro NY.

Thanks you.

Joseph Cerrone, III, President & CEO
Recreational Design & Construction, Inc.
3990 North Powerline Road I Fort Lauderdale, FL 33309
T: 954-566-3885 x 208 I **F:** 954-566-3335
E: Joe@RDCDesignBuild.com
W: RDCDesignBuild.com

THIS COMMUNICATION IS PRIVILEGED AND SHOULD BE TREATED IN A CONFIDENTIAL MANNER.
Please consider the environment before printing this e-mail or attachments.

Bryan French

From: Zbell, Jennifer <Jennifer.Zbell@WILTONCT.ORG>
Sent: Friday, September 14, 2018 1:00 PM
To: Bryan French
Subject: RE: 153 Silver Spring Rd

Hi Bryan
If all proposed work is in New York, Wilton CT does not have any requirements.
Jennifer

-----Original Message-----
From: Bryan French [mailto:bryan@rvdi.com]
Sent: Wednesday, September 12, 2018 2:25 PM
To: Zbell, Jennifer
Subject: 153 Silver Spring Rd

Hi Jenn,

I'm writing to confirm that no approvals are required from the Wilton Health Department for a proposed project at 153 Silver Spring Road. The property lies within both Wilton, CT and Lewisboro, NY, and the project will consist of a proposed pool located completely within New York. The septic tank and pump chamber are on the opposite side of the dwelling from where construction access will be. The leach field is located completely within New York and will be protected throughout construction. Feel free to reach out with any questions.

Bryan

--
Bryan French
Rocco V. D'Andrea, Inc.
D'Andrea Surveying & Engineering, PC
Riverside, CT
203-637-1779 (voice)
203-637-1770 (fax)
bryan@rvdi.com
www.rvdi.com

TOWN OF LEWISBORO
Westchester County, New York

Building Department
79 Bouton Road
South Salem, New York 10590

Tel: (914) 763-3060
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Email: jangiello@lewisborogov.com

Hidden Point Farm Plan Review 9/25/18
Application # 0233-2018

1) The pool equipment building is over 600 square feet in area and requires a zoning variance per 220-23(D)11. Please fill out and submit an Application to the Board of Appeals.
2) The original ink or embossed seal and signature of the design professional are required on each page of the plans.
3) Provide climatic and geographic design criteria for the pool equipment building per Table R301.2(1).The Town of Lewisboro is located in a Special Wind Region. The design professional is to ascertain if wind speeds higher than 115 mph exist at the project location.
4) Provide revised structural plans for pool equipment building as discussed. If any manufactured lumber is to be utilized, submit a Utilization Notice of Truss Type Construction form (Pre-engineered wood construction and/or timber construction in residential structures in accordance with Title 19 NYCRR Part 1265).
5) Provide building insulation details.
6) Indicate a concrete encased electrode for building electrical service per E3608.1.2.
7) Provide elevations that show height of deck/patio above finished grade. Areas over 30" above grade require a railing.
8) Indicate that pool is designed in conformance with ANSI/NSPI-5.
9) Indicate a temporary barrier per R326.5.2.
10) Indicate pool barrier (fence) and platform on site plan.
11) Provide specific pool barrier, gate and gate latch details in compliance with R326.5.3.
12) Provide pool equipment specifications and listings.
13) Indicate pool alarm compliance per R326.7 and ASTM F2208. How will alarm sound poolside and in dwelling?
14) Indicate the use of a safety vacuum release system conforming to ASME A112.19.17 or provide details of an engineered gravity drainage system.
15) Indicate suction fittings conforming to ANSI/ASME A112.19.8M.
16) Indicate gas pool heater has been tested in accordance with ANSI Z21.56.
17) Indicate compliance with R403.10 for energy consumption.
18) Indicate that pool is designed in conformance with APSP-15a.
19) Will any toilet or shower facilities be provided?
20) If someone inadvertently swam into the caisson and became disoriented, how would they get out?
21) How is access prevented to top of pressure plenum/blower room/caisson?

THERAPY POOL DATA

SURFACE AREA	=	19,423 SQ. FT
PERIMETER	=	678'-4"
DEPTHS	=	2'-10" TO 9'-10"
VOLUME	=	875,514 GAL.
TURNOVER RATE	=	1320 GPM

BALANCE OF FENCING TO BE CRITTERFENCE 650 AS MANUFACTURED BY CRITTERFENCE 1-855-321-7900 CUSTOMERSERVICE@CRITTERFENCE.COM

23'-4 3/4"

29'-3 1/4"

39'-2 5/8"

51'-10 5/8"

41'-11 1/4"

41'-11 1/4"

ENTRANCE DECK

GRAVEL WALKWAY

THERAPY POOL (1/WP-1)

POOL DECK

92'-9 3/4"

ENTRANCE DECK

CONCRETE WALKWAY

SEE ARCH. & MEP PLANS FOR BUILDING DESIGN

MECHANICAL ROOM (1/WP-9)

PATIO DECK

34'-10 3/8"

86'-3 3/4"

15'-4 1/2"

85'-0 5/8"

89'-5 5/8"

15'-1 5/8"

20'

20'

3/WP-15

2/WP-15

N

NOTE:
SEE CIVIL PLANS FOR MORE SITE INFORMATION SUCH AS CONTOURS, ELEVATIONS, ETC.

1/16" = 1'-0"

1 SITE LAYOUT PLAN

Rev.	Date
1	7-24-18

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Patrell
Engineering Group, Inc.
751 Sunny Grove Lane, Glendora, CA 91741
Ph. 626.335.4362 Fax 626.963.4812

HIDDEN POINT FARMS LLC
THERAPY POOL
153 SILVER SPRING ROAD
WILTON, CT / LEWISBORO, NY

STATE OF NEW YORK
DOUGLAS R. FERRERI
076694
LICENSED PROFESSIONAL ENGINEER

6-20-18	N.T.S
Date	Scale

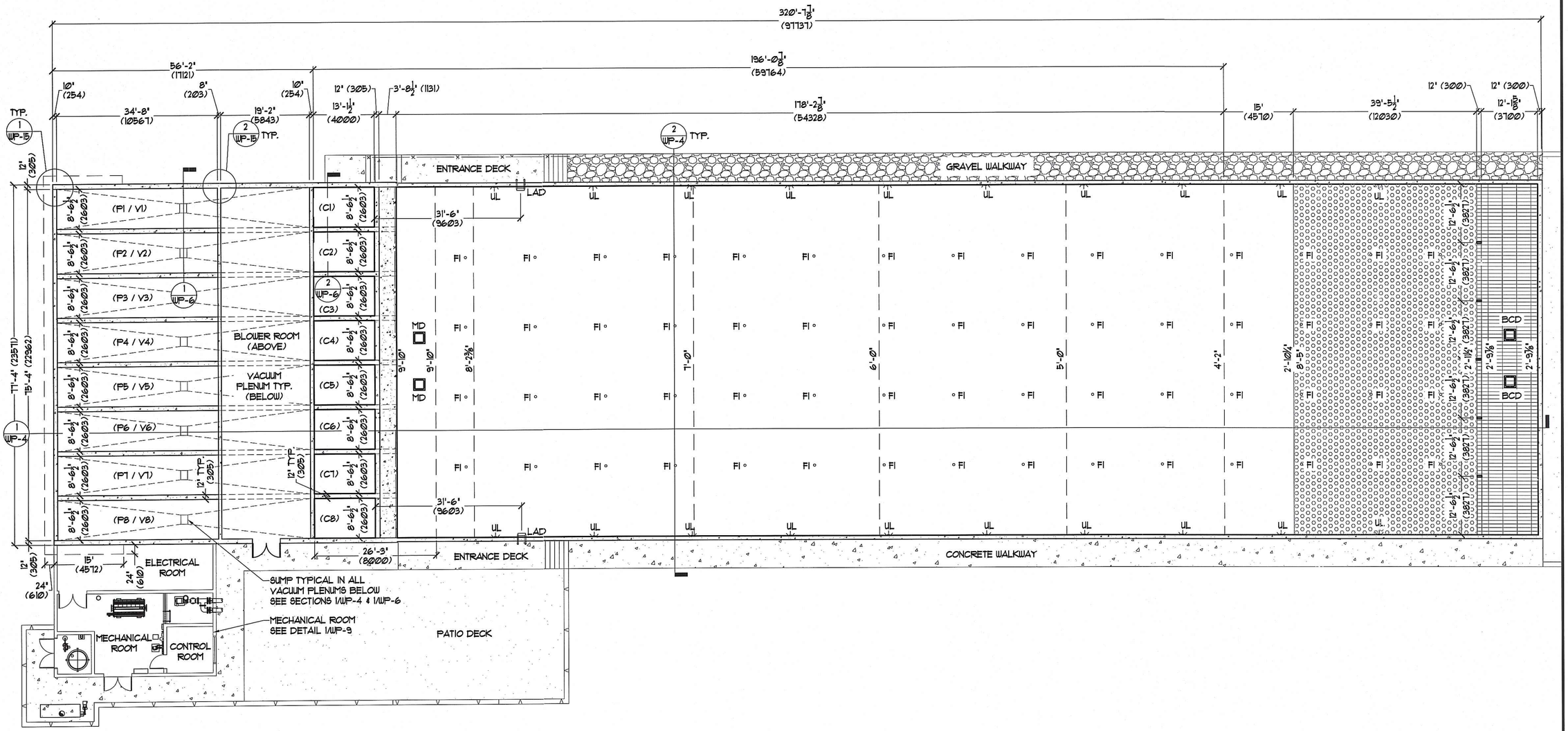
S-1
Sheet

THERAPY POOL DATA

SURFACE AREA	=	19,423 SQ. FT
PERIMETER	=	678'-4"
DEPTHS	=	2'-10" TO 9'-10"
VOLUME	=	875,514 GAL.
TURNOVER RATE	=	1,320 GPM

THERAPY POOL LEGEND

MD	=	MAIN DRAIN — 2/WP-15, 1/WP-15
FI	=	FLOOR INLET — 2/WP-15
BCD	=	BEACH CATCHMENT DRAIN — 2/WP-15, 3/WP-15
UL	=	UNDERWATER LIGHT
LAD	=	LADDER — 4/WP-15
P*	=	PRESSURE PLENUM * UPPER LEVEL
V*	=	VACUUM PLENUM * LOWER LEVEL
C*	=	CAISSON *



1 THERAPY POOL LAYOUT PLAN

3/32" = 1'-0"

Rev.	Date

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HIDDEN POINT FARMS LLC
THERAPY POOL
153 SILVER SPRING ROAD
WILTON, CT / LEWISBORO, NY

STATE OF NEW YORK
DOUGLAS R. PESTOL
076884
LICENSED PROFESSIONAL ENGINEER

6-20-18 Date | N.T.S Scale

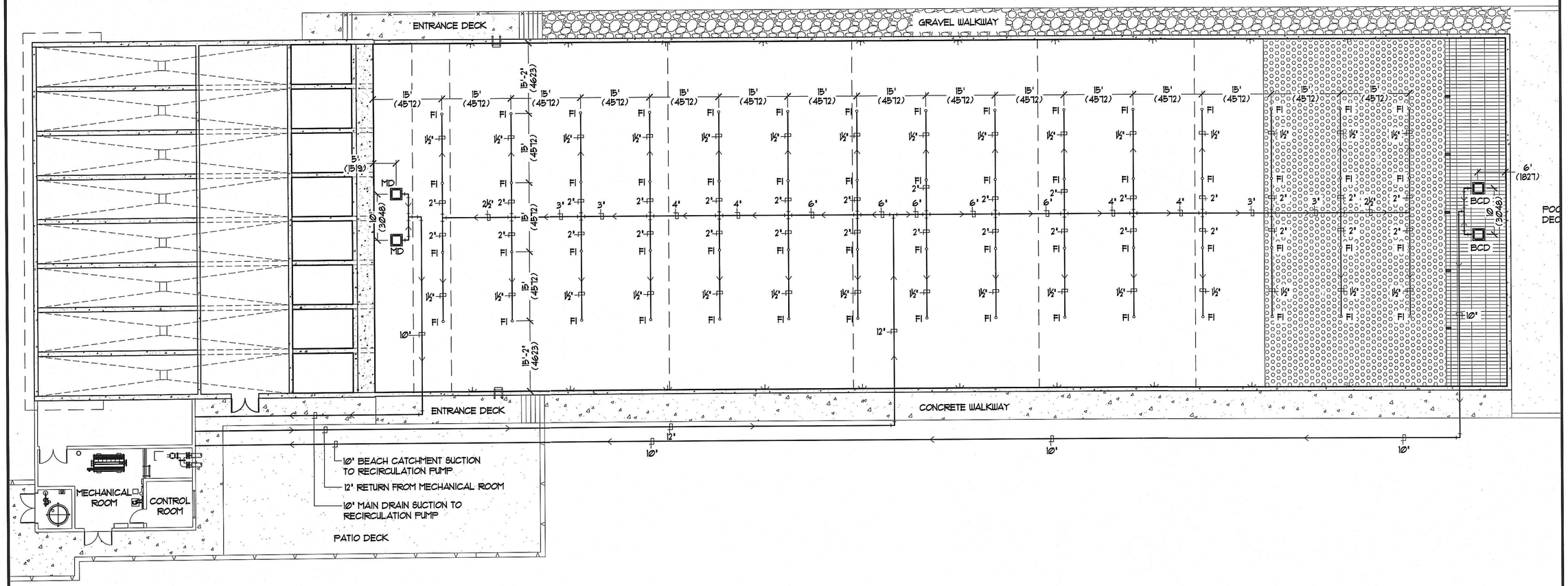
WP-1 Sheet

THERAPY POOL DATA

SURFACE AREA	=	19,423 SQ. FT
PERIMETER	=	678'-4"
DEPTHS	=	2'-10" TO 9'-10"
VOLUME	=	875,514 GAL.
TURNOVER RATE	=	1,320 GPM

THERAPY POOL PIPING LEGEND

MD	=	MAIN DRAIN — 2 / LP-13 — 1 / LP-13
FI	=	FLOOR INLET — 2 / LP-13
BCD	=	BEACH CATCHMENT DRAIN



1 THERAPY POOL PIPING PLAN

3/32" = 1'-0"

Rev.	Date
1	7-24-18

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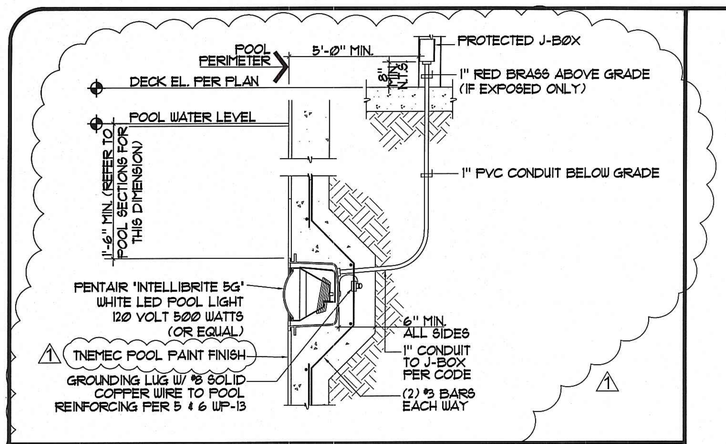
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HIDDEN POINT FARMS LLC
THERAPY POOL
153 SILVER SPRING ROAD
WILTON, CT / LEWISBORO, NY

STATE OF NEW YORK
DOUGLAS R. FENNELL
070694
LICENSED PROFESSIONAL ENGINEER

6-20-18 Date | N.T.S Scale

WP-2
Sheet



(2) UNDERWATER LIGHT DETAIL N.T.S.

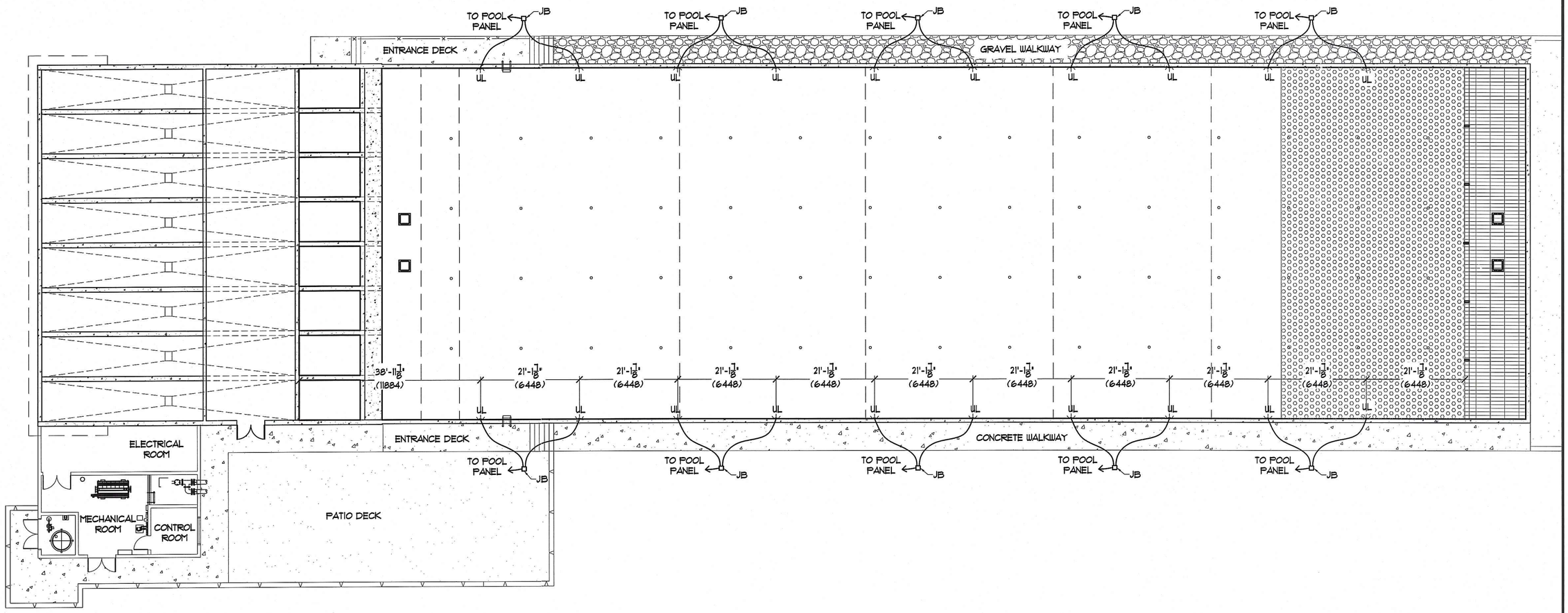
THERAPY POOL DATA

SURFACE AREA	=	19,423 SQ. FT
PERIMETER	=	678'-4"
DEPTHS	=	2'-10" TO 9'-10"
VOLUME	=	875,514 GAL.
TURNOVER RATE	=	1,320 GPM

THERAPY POOL UNDERWATER LIGHTING LEGEND

UL	=	UNDERWATER LIGHT
JB	=	JUNCTION BOX (TO BE FIELD LOCATED)

1 2 WP-3 2 WP-3



NOTE:
SITE SHEET SLLITCT-40-D-030-REVC FOR POOL INSTRUMENTATION DIAGRAMS.

(1) THERAPY POOL UNDERWATER LIGHTING PLAN 3/32" = 1'-0"

Rev.	Date
1	7-24-18

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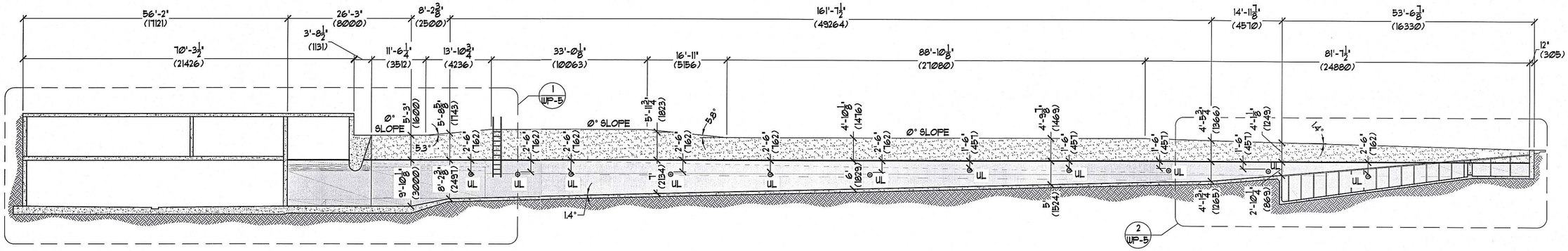
Patrell
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HIDDEN POINT FARMS LLC
THERAPY POOL
153 SILVER SPRING ROAD
WILTON, CT / LEWISBORO, NY

STATE OF NEW YORK
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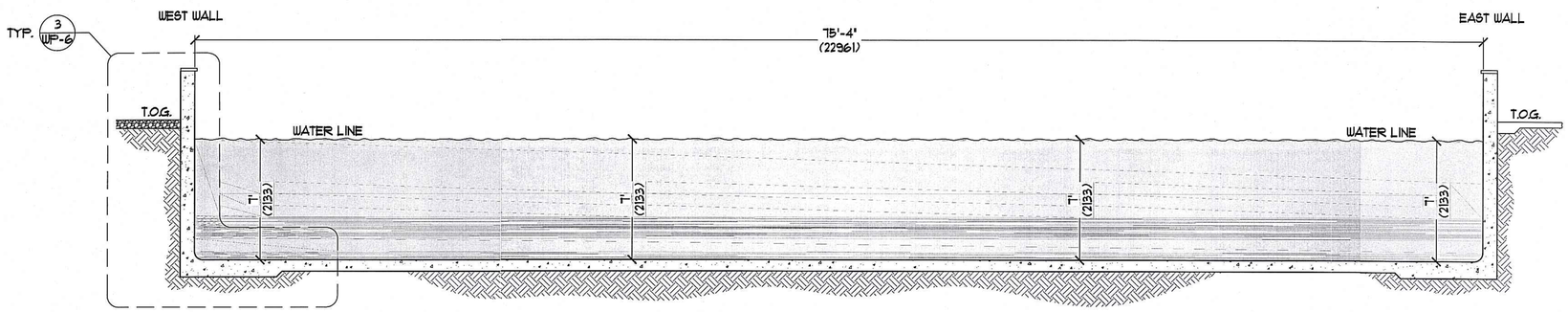
6-20-18 Date	N.T.S Scale

WP-3
Sheet



① PLENUM / CAISSON / THERAPY POOL SECTION

3/32" = 1'-Ø"



② THERAPY POOL SECTION

1/4" = 1'-Ø"

Rev.	Date

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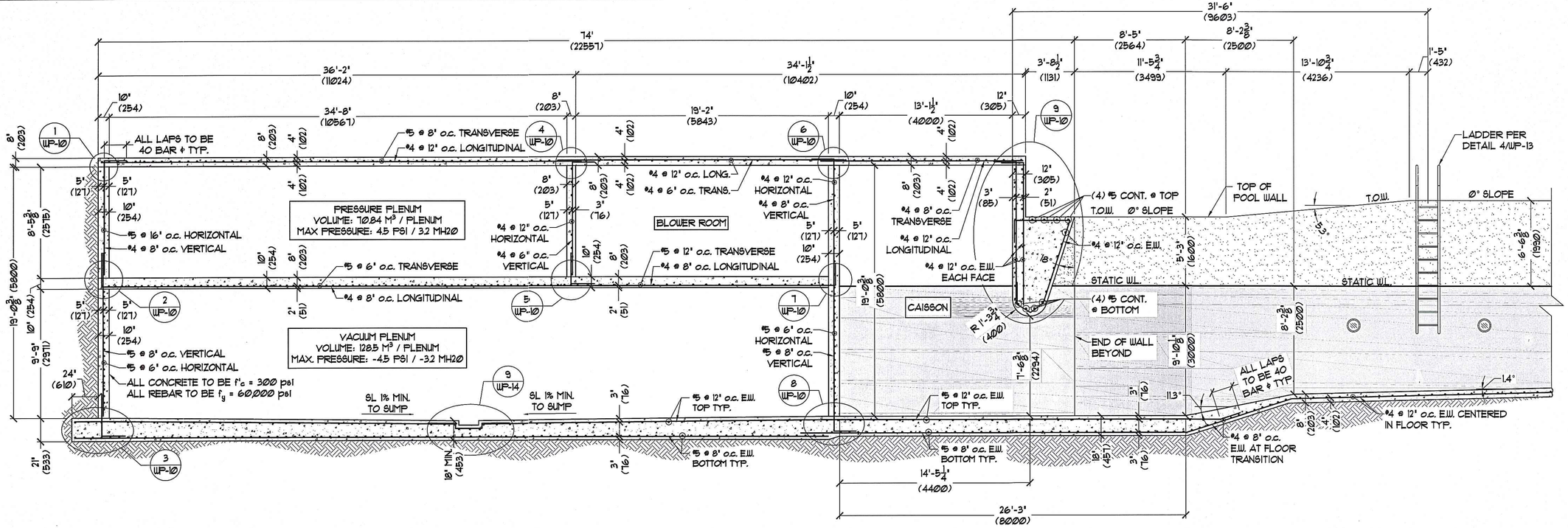
HIDDEN POINT FARMS LLC
THERAPY POOL
153 SILVER SPRING ROAD
WILTON, CT / LEWISBORO, NY

STATE OF NEW YORK
DOUGLAS R. FERRY
LICENSED PROFESSIONAL ENGINEER
076694

6-20-18	N.T.S
Date	Scale

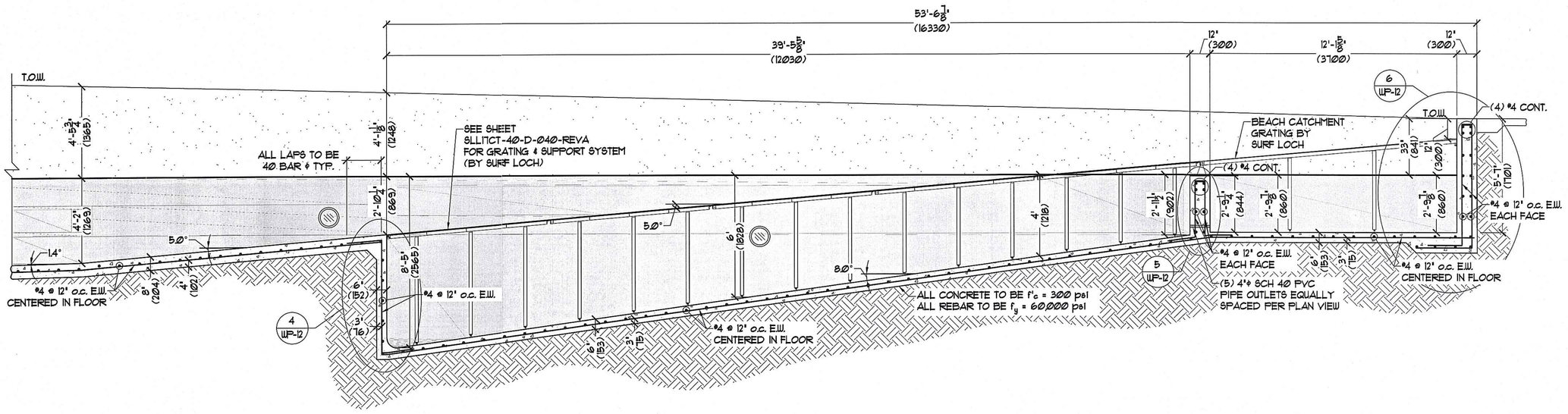
WP-4

Sheet



1 PLENUM / CAISSON / THERAPY POOL SECTION

1/4" = 1'-Ø"



2 THERAPY POOL SECTION

3/8" = 1'-Ø"

Rev.	Date

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HIDDEN POINT FARMS LLC
THERAPY POOL
153 SILVER SPRING ROAD
WILTON, CT / LEWISBORO, NY

STATE OF NEW YORK
DOUGLAS R. PERROTT
070894
LICENSED PROFESSIONAL ENGINEER

6-20-18	N.T.S
Date	Scale

WP-5

Sheet

WILTON TAX MAP 133 LOT 1
LEWISBORO TAX SHEET 48, BLOCK 10057, LOT 46
153 SILVER SPRING ROAD, WILTON

CONSTRUCTION PLAN REVIEW SET

PROPOSED POOL

LOCATION

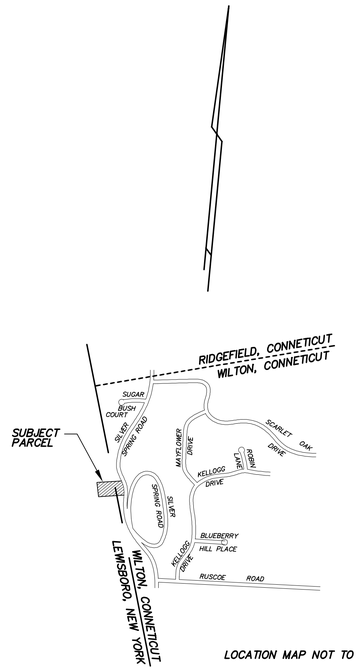
153 SILVER SPRING ROAD
WILTON, CONNECTICUT

AND

LEWISBORO, NEW YORK

PREPARED FOR

HIDDEN POINT FARMS, LLC



LOCATION MAP NOT TO SCALE

SHEET INDEX

SHEET	TITLE	REVISION	DATE
1 OF 5	OVERALL DEVELOPMENT PLAN	3	9–17–18
2 OF 5	DEVELOPMENT PLAN	3	9–17–18
3 OF 5	DEVELOPMENT PLAN	3	9–17–18
4 OF 5	CONSTRUCTION NOTES & DETAILS	2	9–17–18
5 OF 5	NOTES & DETAILS	1	9–17–18

ENGINEERING PLANS PREPARED BY:

D'ANDREA SURVEYING & ENGINEERING, PC.
RICHARD A. REGAN, NY PE No. 61598

9–17–18
DATE

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REV.	DATE	DESCRIPTION
3	9–17–18	ADDRESS ENGINEERING COMMENTS
2	8–8–18	ADDITIONAL NOTES & LABELS
1	7–23–18	WETLAND / UTILITIES / FENCING
0	6–22–18	PROPOSED POOL

D'ANDREA SURVEYING & ENGINEERING, PC
• LAND PLANNERS
• ENGINEERS
• SURVEYORS
P.O. BOX 549
RIVERSIDE, CT 06878
6 NEIL LANE
TEL. 637–1779

PROJECT	PROPOSED POOL
PREPARED FOR	HIDDEN POINT FARMS, LLC.
LOCATION	153 SILVER SPRING ROAD WILTON, CONNECTICUT AND LEWISBORO, NEW YORK

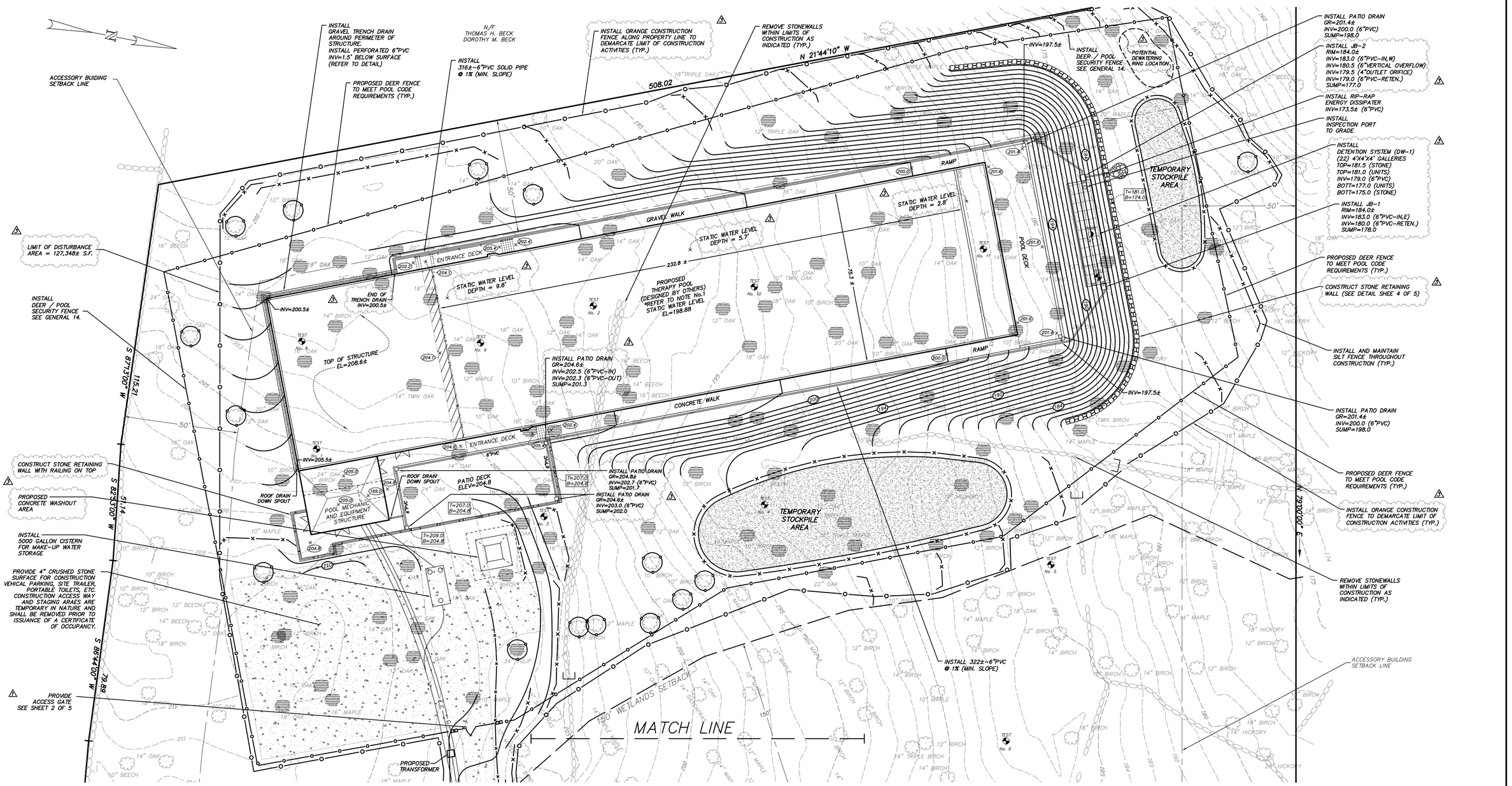
18DA

18DA_COVER_03_REV03.DWG (B4F)

NOTE:

1. Refer to pool design plans entitled, "Pool, Plennum & Caisson Design, Hidden Point Farms LLC, 153 Silver Spring Road, Wilton, CT.", as prepared by Patrell Engineering Group, Inc.

WILTON TAX MAP 133 LOT 1
LEWISBORO TAX SHEET 48, BLOCK 10057, LOT 46
153 SILVER SPRING ROAD, WILTON



TEST PIT DATA
153 Silver Springs Road, Wilton, Connecticut
Test Pits TP#1-6 by Rocco V. D'Andrea, Inc., on March 27, 2018

Test Pit: TP#1	Test Pit: TP#2	Test Pit: TP#3	Test Pit: TP#4	Test Pit: TP#5	Test Pit: TP#6
0" Topsoil	0" Topsoil	0" Topsoil	0" Top Soil	0" Top Soil	0" Top Soil
6" Light Brown Sandy Loam	4" Orange Brown Sandy Loam	6" Orange Brown Sandy Loam	4" Light Brown Sandy Loam	6" Orange Brown Sandy Loam	6" Orange Brown Sandy Loam
30" Grey Loamy Sand	20" No Mottles	30" No Mottles	36" Grey Loamy Sand w/ Gravel	40" Grey Loamy Sand w/ Gravel	20" Grey Loamy Sand w/ Gravel
40" No Mottles	No Water	No Water	120" No Mottles	90" No Mottles	60" No Mottles
No Water	Ledge @ 20"	Ledge @ 30"	Water @ 84"	Water @ 40"	Water @ 26"
Ledge @ 40"			Ledge @ 84"	Ledge @ 90"	Ledge @ 60"

TEST PIT DATA
153 Silver Springs Road, Wilton, Connecticut
Test Pits TP#8-12 by Rocco V. D'Andrea, Inc. and Witnessed by Kellard Sessions for the Town of Lewisboro on June 12, 2018

Test Pit: TP#8	Test Pit: TP#9	Test Pit: TP#10	Test Pit: TP#11	Test Pit: TP#12
0" Topsoil	0" Topsoil	0" Topsoil	0" Top Soil	0" Top Soil
6" Orange Brown Sandy Loam	6" Orange Brown Sandy Loam	6" Orange Brown Sandy Loam	6" Orange Brown Sandy Loam	6" Orange Brown Sandy Loam
40" Grey Loamy Sand	38" Grey Loamy Sand	30" Light Brown Sandy Loam	48" Light Brown Sandy Loam	40" No Mottles
60" No Mottles	60" No Mottles	60" No Mottles	60" No Mottles	No Water
No Water	No Water	No Water	No Water	Ledge @ 40"
Ledge @ 60"	Ledge @ 60"	Ledge @ 60"	Ledge @ 60"	

PERC TEST "A"			
TIME (MIN)	SCALE (IN)	DROP (IN)	RATE (IN/MIN)
0	6.25		
5	13.25	7.0	1" IN 0.7 MIN
10	15.625	2.375	1" IN 2.1 MIN
REFILL			
0	5.125		
5	9.375	4.25	1" IN 1.2 MIN
10	11.625	2.25	1" IN 2.2 MIN
15	13.0	1.375	1" IN 3.6 MIN
20	14.0	1.0	1" IN 5.0 MIN
		USE=1" IN 5.0 MIN	

PERCOLATION TEST WAS CONDUCTED ON JUNE 12, 2018 BY ROCCO V. D'ANDREA, INC.
TEST HOLE WAS PRESOAKED
DEPTH OF TEST HOLE: "A" = 24"

1 INCH = 20 FEET
SCALE
20 0 20
IN FEET

LEGEND:

-30-	EXISTING CONTOUR	UP	UTILITY POLE
× 25.3	EXISTING SPOT ELEVATION	TEST	TEST PIT
× T=88.8 B=88.8	EXISTING WALL/CURB SPOT GRADE	PERC	PERCOLATION TEST
30	PROPOSED CONTOUR	AD	AREA DRAIN
× 25.3	PROPOSED SPOT ELEVATION	JB	JUNCTION BOX
	TREE TO REMAIN	CB	CATCH BASIN
	CONIFEROUS TREE	C.O	CLEANOUT
	TREE TO BE REMOVED	PVC	POLYVINYL CHLORIDE
		T.O.W.	TOP OF WALL
		SDMH	STORM DRAIN MANHOLE
	TREE PROTECTION	A.O.B.E.	AS ORDERED BY ENGINEER
WG	WATER GATE		HAY BALE
GG	GAS GATE		

3	9-17-18	ENGINEERING COMMENTS DATED 9-6-18
2	8-8-18	ADDITIONAL NOTES & LABELS
1	7-23-18	WETLAND / UTILITIES / FENCING
0	6-22-18	SUBMIT FOR BUILDING PERMIT
REV.	DATE	DESCRIPTION

RICHARD A. REGAN, NY PE No. 61598
9-17-18
ENGINEER DATE

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P.O. BOX 549 RIVERSIDE, CT 06878
6 NEIL LANE TEL. 637-1779

PROJECT	PROPOSED POOL
PREPARED FOR	HIDDEN POINT FARMS, LLC
LOCATION	153 SILVER SPRING ROAD WILTON, CONNECTICUT AND LEWISBORO, NEW YORK
2 OF 5	DEVELOPMENT PLAN

180A_DP_05_REVISIONS (SHEET 2 OF 5) (BMP)
180A

WILTON TAX MAP 133 LOT 1
LEWISBORO TAX SHEET 48, BLOCK 10057, LOT 46
153 SILVER SPRING ROAD, WILTON

GENERAL NOTES

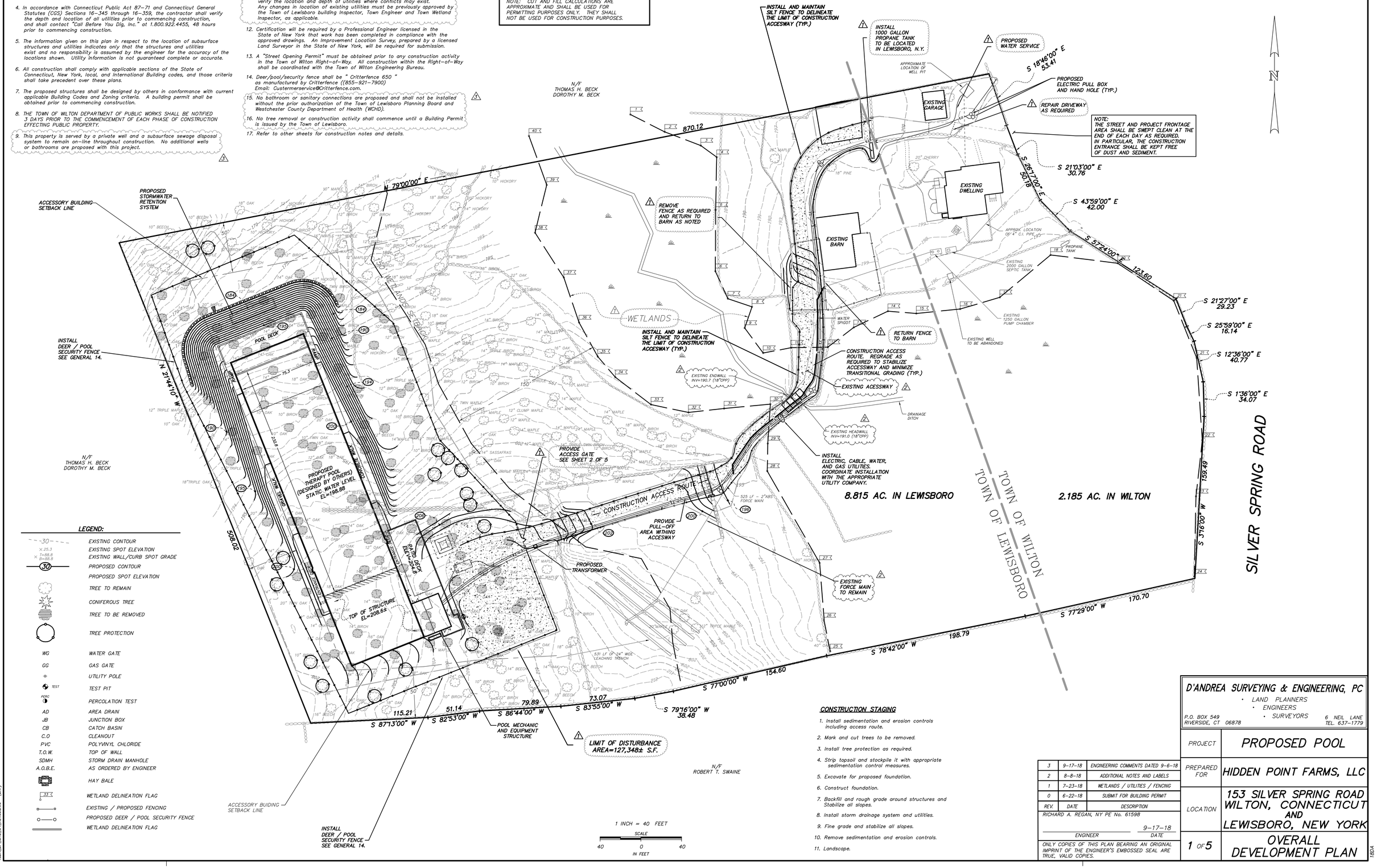
1. Existing features and topography were taken from a map entitled "Topographic Map prepared for Hidden Point Farms, LLC, Wilton, Connecticut & Lewisboro, New York, Westchester County Block 10057– Sheet 219", as prepared by RKW Land Surveying, and dated April 25, 2018.
2. Wetlands designated by the soils and wetland science, LLC, Otto Theall, on July 17, 2018 and field located and mapped by R K W land surveying on July 18, 2018.
3. Contours and elevations depicted hereon are based on an assumed datum.
4. In accordance with Connecticut Public Act 87–71 and Connecticut General Statutes (CGS) Sections 16–345 through 16–359, the contractor shall verify the depth and location of all utilities prior to commencing construction, and shall contact "Call Before You Dig, Inc." at 1.800.922.4455, 48 hours prior to commencing construction.
5. The information given on this plan in respect to the location of subsurface structures and utilities indicates only that the structures and utilities exist and no responsibility is assumed by the engineer for the accuracy of the locations shown. Utility information is not guaranteed complete or accurate.
6. All construction shall comply with applicable sections of the State of Connecticut, New York, local, and international Building codes, and those criteria shall take precedent over these plans.
7. The proposed structures shall be designed by others in conformance with current applicable Building Codes and Zoning criteria. A building permit shall be obtained prior to commencing construction.
8. THE TOWN OF WILTON DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED 3 DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION EFFECTING PUBLIC PROPERTY.
9. This property is served by a private well and a subsurface sewage disposal system to remain on–line throughout construction. No additional wells or bathrooms are proposed with this project. 3
10. Proposed services such as electric, cable, gas, and water are shown schematically only. Final design for all utilities, other than drainage shall be provided by the respective utility company. Any changes in location (from that shown on the approved plans) must be previously approved by the Town of Lewisboro building inspector, Town Engineer and Town Wetland Inspector, as applicable. 3
11. Existing utilities in conflict with the proposed development as depicted on this plan shall be relocated as directed by the appropriate utility company and/or the owner. The contractor shall excavate test pits as required to verify the location and depth of utilities where conflicts may exist. Any changes in location of existing utilities must be previously approved by the Town of Lewisboro building inspector, Town Engineer and Town Wetland Inspector, as applicable.
12. Certification will be required by a Professional Engineer licensed in the State of New York that work has been completed in compliance with the approved drawings. An Improvement Location Survey, prepared by a licensed Land Surveyor in the State of New York, will be required for submission.
13. A "Street Opening Permit" must be obtained prior to any construction activity in the Town of Wilton Right–of–Way. All construction within the Right–of–Way shall be coordinated with the Town of Wilton Engineering Bureau.
14. Deer/pool/security fence shall be " Critterfence 650 " as manufactured by Critterfence ((855–921–7900) Email: Custermerservice@Critterfence.com.
15. No bathroom or sanitary connections are proposed and shall not be installed without the prior authorization of the Town of Lewisboro Planning Board and Westchester County Department of Health (WCHD). 3
16. No tree removal or construction activity shall commence until a Building Permit is issued by the Town of Lewisboro.
17. Refer to other sheets for construction notes and details.

APPROXIMATE EARTHWORK VOLUMES

SUMMARY:

FILL = 6,990 C.Y.
CUT = 6,430 C.Y.
NET = 560 C.Y. (FILL)

NOTE: CUT AND FILL CALCULATIONS ARE APPROXIMATE AND SHALL BE USED FOR PERMITTING PURPOSES ONLY. THEY SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.



LEGEND:

30	EXISTING CONTOUR
× 25.3	EXISTING SPOT ELEVATION
× T=88.8 I=88.8	EXISTING WALL/CURB SPOT GRADE
30	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	TREE TO REMAIN
	CONIFEROUS TREE
	TREE TO BE REMOVED
	TREE PROTECTION
WG	WATER GATE
GG	GAS GATE
	UTILITY POLE
TEST	TEST PIT
PERC	PERCOLATION TEST
AD	AREA DRAIN
JB	JUNCTION BOX
CB	CATCH BASIN
C.O	CLEANOUT
P.V.C	POLYVINYL CHLORIDE
T.O.W.	TOP OF WALL
SDMH	STORM DRAIN MANHOLE
A.O.B.E.	AS ORDERED BY ENGINEER
	HAY BALE
33	WETLAND DELINEATION FLAG
	EXISTING / PROPOSED FENCING
	PROPOSED DEER / POOL SECURITY FENCE
	WETLAND DELINEATION FLAG

CONSTRUCTION STAGING

1. Install sedimentation and erosion controls including access route.
2. Mark and cut trees to be removed.
3. Install tree protection as required.
4. Strip topsoil and stockpile it with appropriate sedimentation control measures.
5. Excavate for proposed foundation.
6. Construct foundation.
7. Backfill and rough grade around structures and Stabilize all slopes.
8. Install storm drainage system and utilities.
9. Fine grade and stabilize all slopes.
10. Remove sedimentation and erosion controls.
11. Landscape.

REV.	DATE	DESCRIPTION
3	9–17–18	ENGINEERING COMMENTS DATED 9–6–18
2	8–8–18	ADDITIONAL NOTES AND LABELS
1	7–23–18	WETLANDS / UTILITIES / FENCING
0	6–22–18	SUBMIT FOR BUILDING PERMIT

RICHARD A. REGAN, NY PE No. 61598
ENGINEER — 9–17–18 DATE

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• ENGINEERS
• SURVEYORS
P.O. BOX 549 RIVERSIDE, CT 06878
6 NEIL LANE TEL. 637–1779

PROJECT	PROPOSED POOL
PREPARED FOR	HIDDEN POINT FARMS, LLC
LOCATION	153 SILVER SPRING ROAD WILTON, CONNECTICUT AND LEWISBORO, NEW YORK
1 OF 5	OVERALL DEVELOPMENT PLAN

NOTE:

1. A "STREET OPENING PERMIT" MUST BE OBTAINED PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE TOWN OF WILTON RIGHT-OF-WAY. ALL CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL BE COORDINATED WITH THE TOWN OF WILTON ENGINEERING BUREAU.

WILTON TAX MAP 133 LOT 1
LEWISBORO TAX SHEET 48, BLOCK 10057, LOT 46
153 SILVER SPRING ROAD, WILTON

MATCH LINE

150' WETLANDS SETBACK

⚠ WETLANDS

LIMIT OF FLAGGED WETLAND SOILS SEE GENERAL NOTE 2, SHEET 1 OF 5.

INSTALL AND MAINTAIN SILT FENCE TO DELINEATE THE LIMIT OF CONSTRUCTION ACCESS (TYP.)

⚠2 EXISTING ENDWALL INV=190.7 (18"CPP)

TEMPORARY CONSTRUCTION ACCESS ROUTE

CONSTRUCTION ACCESS WAY AND STAGING ARAES ARE TEMPORARY IN NATURE AND SHALL BE REMOVED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

PROVIDE PULL-OFF AREA WITHIN ACCESSWAY

⚠2 EXISTING FORCE MAIN TO REMAIN

ELECTRIC PULL BOX & HAND HOLE (No.4)

⚠2 EXISTING SEPTIC AREA SHALL BE FENCED OFF AND PROTECTED WITH ORANGE CONSTRUCTION FENCNING THROUGHOUT CONSTRUCTION.

⚠3 INSTALL ORANGE CONSTRUCTION FENCE TO DEMARCATE LIMIT OF CONSTRUCTION ACTIVITIES (TYP.)

APPROXIMATE LOCATION OF EXISTING LEACH FIELD PER WESTCHESTER COUNTY DEPT. OF HEALTH RECORDS (531 LF OF 24"WIDE LEACHING TRENCHES)

CONSTRUCTION ACCESS ROUTE. REGRADE AS REQUIRED TO STABILIZE ACCESSWAY AND MINIMIZE TRANSITIONAL GRADING. (TYP.)

PROVIDE PULL-OFF AREA WITHIN ACCESSWAY

ELECTRIC PULL BOX & HAND HOLE (No.3)

PLATES (6'X10') SHALL BE PLACED AND MAINTAINED OVER CULVERT CROSSING TO PROTECT CULVERT THROUGHOUT CONSTRUCTION

⚠2 EXISTING HEADWALL INV=191.0 (18"CPP)

525 LF - 2"ABS FORCE MAIN

DRAINAGE DITCH

INSTALL WATER SERVICE TO PROPOSED POOL

⚠2 EXISTING ACESSWAY

CONTRACTOR SHALL HAVE EXISTING FORCEMAIN LOCATED AND FLAGGED PRIOR TO THE START OF CONSTRUCTION.

EXISTING WELL TO BE ABANDONED

⚠3 INSTALL ORANGE CONSTRUCTION FENCE TO DEMARCATE LIMIT OF CONSTRUCTION ACTIVITIES (TYP.)

INSTALL AND MAINTAIN SILT FENCE (TYP.)

INSTALL AND MAINTAIN ANTI-TRACKING PAD IN THE CONSTRUCTION ENTRANCE

⚠2 SPORTS COURT SHALL BE REMOVED AND RESTORED TO LAWN FOLLOWING THE REMOVAL OF TEMPORARY CONSTRUCTION ACCESS ROAD

⚠1 INSTALL 1000 GALLON PROPANE TANK TO BE LOCATED IN LEWISBORO, N.Y.

INSTALL UNDERGROUD ELECTRIC, TELEPHONE, AND CABLE SERVICES. COORDINATE INSTALLATION WITH THE APPROPRIATE UTILITY COMPANY (TYP.)

ELECTRIC PULL BOX & HAND HOLE (No.2)

⚠1 PROPOSED WATER SERVICE

APPROXIMATE LOCATION OF WELL PIT

EXISTING GARAGE

EXISTING BARN

SPORTS COURT

WATER SPIGOT

WELL

APPROX. LOC. WATER LINE

UTILITY POLE

ELECTRIC PULL BOX & HAND HOLE (No.1)

S 18°46'00" E 53.41

COVERED PORCH

EXISTING DWELLING

HOT TUB

PATIO

APPROX. LOCATION OF 4" C.I. PIPE

EXISTING 2000 GALLON SEPTIC TANK

EXISTING 1250 GALLON PUMP CHAMBER

PROPANE TANK

S 21°37'00" E 30.76

S 26°17'00" E 50.18

S 43°39'20" E 42.06

SILVER SPRING ROAD

NOTE:
THE STREET AND PROJECT FRONTAGE AREA SHALL BE SWEPT CLEAN AT THE END OF EACH DAY AS REQUIRED. IN PARTICULAR, THE CONSTRUCTION ENTRANCE SHALL BE KEPT FREE OF DUST AND SEDIMENT.

1 INCH = 20 FEET
SCALE
20 0 20
IN FEET

LEGEND:

30	EXISTING CONTOUR		UTILITY POLE
× 25.3	EXISTING SPOT ELEVATION	TEST	TEST PIT
T=88.8 B=88.6	EXISTING WALL/CURB SPOT GRADE	PERC	PERCOLATION TEST
30	PROPOSED CONTOUR	AD	AREA DRAIN
× 25.3	PROPOSED SPOT ELEVATION	JB	JUNCTION BOX
	TREE TO REMAIN	CB	CATCH BASIN
	CONIFEROUS TREE	C.O	CLEANOUT
	TREE TO BE REMOVED	PVC	POLYVINYL CHLORIDE
		T.O.W.	TOP OF WALL
	TREE PROTECTION	SDMH	STORM DRAIN MANHOLE
		A.O.B.E.	AS ORDERED BY ENGINEER
WG	WATER GATE		HAY BALE
GG	GAS GATE		

REV.	DATE	DESCRIPTION
3	9-17-18	ENGINEERING COMMENTS DATED 9-6-18
2	8-8-18	ADDITIONAL NOTES & LABELS
1	7-23-18	WETLAND / UTILITIES / FENCING
0	6-22-18	SUBMIT FOR BUILDING PERMIT

RICHARD A. REGAN, NY PE No. 61598

9-17-18
ENGINEER DATE

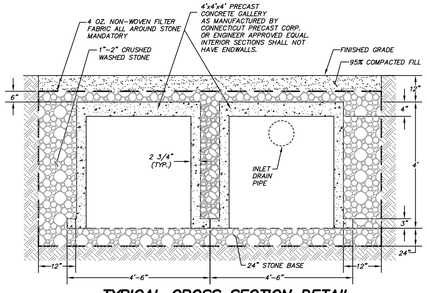
ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

D'ANDREA SURVEYING & ENGINEERING, PC
• LAND PLANNERS
• ENGINEERS
• SURVEYORS
P.O. BOX 549
RIVERSIDE, CT 06878
6 NEIL LANE
TEL. 637-1779

PROJECT	PROPOSED POOL
PREPARED FOR	HIDDEN POINT FARMS, LLC
LOCATION	153 SILVER SPRING ROAD WILTON, CONNECTICUT AND LEWISBORO, NEW YORK
3 OF 5	DEVELOPMENT PLAN

CONSTRUCTION NOTES:

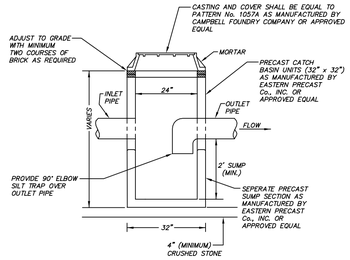
1. In accordance with New York State Code Rule 753, excavators and contractors MUST contact New York 811 at least two working days but no more than 10 days before beginning any excavation project.
2. In accordance with Connecticut Public Act 87–71 and Connecticut General Status (CGS) Section 16–345 through 16–359, the contractor shall verify the depth and location of all utilities prior to commencing construction, and shall contact "Call Before You Dig, Inc." at 1.800.922.4455, 48 hours prior to commencing construction.
3. THE TOWN OF WILTON DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED THREE DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION AFFECTING PUBLIC PROPERTY.
4. All construction shall comply with applicable sections of the State of New York, Local, and International Building codes, and those criteria shall take precedent over these plans.
5. All construction shall be inspected by a professional engineer prior to backfill and as the work progresses.
6. The project engineer shall be notified a minimum of three working days prior to the commencement of each phase of construction.
7. Appropriate measures shall be taken to control any sedimentation and erosion which may result during construction.
8. There shall be no dumping of construction debris and/or excess excavated material into or in proximity to any inland or tidal wetland areas. All excavated material shall be stockpiled and contained on–site within silt fencing. The contractor shall be responsible for the removal of all excess material excavated during construction. All excess material shall be removed in a careful and environmetally sound manner and shall be disposed of legally off–site.
9. All specimen trees shall be protected during the construction period, except those specifically designated to be removed, in accordance with generally accepted standards.
10. The proposed structures shall be designed by others in order to conform with current applicable zoning setback criteria and regulations, and a building permit shall be obtained prior to commencing construction.
11. Existing utilities in conflict shall be relocated as directed by the appropriate utility company. Any change in location (from that shown on the approved plans) must be previously approved by the Town of Lewisboro building inspector, town engineer, and town wetland inspector, as applicable. The contractor shall excavate test pits to verify the location and depth of utilities where conflicts may exist.
12. Pavement replacement shall be bituminous concrete, placed in accordance with the Town of Wilton standards and/or Connecticut State Highway specifications.
13. Shoulders and disturbed areas shall receive four inches of topsoil; fine graded and seeded as soon as practical to prevent erosion.
14. Regrading, filling, and other such alterations to the site shall be restricted to the minimum level necessary to complete the project as shown on the plan.
15. Existing inverts on storm drains, sanitary sewers, and utility conduits shall be field verified where appropriate, before commencing construction. The contractor shall excavate test pits where indicated hereon or wherever design conflicts may occur. The contractor shall notify the project engineer of the test pit schedule. Design conflicts if any, shall be brought to the immediate attention of the project engineer. Plate or backfill and patch test pits as directed by the project engineer.
16. The project engineer with the approval of the Town of Lewisboro, NY, may direct a change in the location of the storm drainage structures to meet field conditions.
17. All gravity PVC storm drain and sanitary sewer pipes shall conform to ASTM D 3034 "Standard Specification for type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings" or approved equal (SDR35).
18. Where unsuitable foundation is encountered during construction of storm drains or sanitary sewers, the contractor shall remove the unsuitable material and replace it with other material approved by the project engineer.
19. Bedding and backfill material shall conform to ASTM D2321 specification "standard recommended practice for underground installations of flexible thermoplastic sewer pipe (PVC)."
20. All site drainage and sewer connections shall be sloped at 2% (minimum) or as otherwise noted.
21. The contractor shall provide all equipment, tools, labor, and materials necessary to satisfactorily clean and remove all visible obstructions, dirt, sand, sludge, roots, gravel, stones, etc., from the storm drains, sanitary sewers, and manholes.
22. Processed aggregate shall be in accordance with the Town of Lewisboro, NY standards and/or New York State Highway specifications.
23. All existing manhole frames, catch basin grates, and utility structures shall be adjusted to new finish grade as required.
24. The construction access way and constructin staging areas are temporary in nature and shall be removed prior to the issuance of a certificate of occupancy. Crushed stone shall be removed to a depth of roughly 6 inches within the entire access way and construction staging areas. These areas shall then be leveled with 6 inches of topsoil and seeded.



TYPICAL CROSS SECTION DETAIL 4'x4'x4' PRECAST CONCRETE GALLERY DRYWELL

N.T.S.

NOTES:
1. MINIMUM CONCRETE COMPRESSIVE STRENGTH: 4,00 PSI @ 28 DAYS.
2. DESIGN LOADING: AASHTO HS10–44, AASHTO HS20–44 OPTIONAL.
3. APPROXIMATE WEIGHTS PER UNIT: CENTER – 4,000 LBS, END – 4,800 LBS.
4. DURING CONSTRUCTION MUDDY AND TURBID WATER SHALL BE PREVENTED FROM ENTERING THE DRYWELLS.
5. THE SOILS BENEATH THE INFILTRATION SYSTEM SHALL BE SCARIFIED OR TILLED TO IMPROVE INFILTRATION.



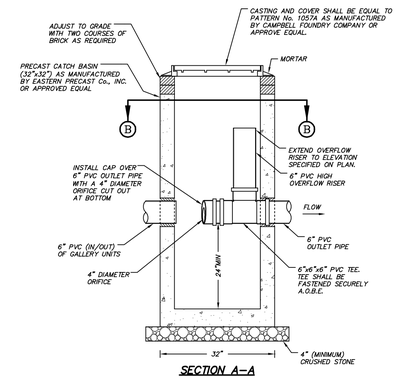
JUNCTION BOX DETAIL

N.T.S.

NOTES:
JUNCTION BOX SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.

CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.

REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATION OF ALL PIPES.



SECTION A–A

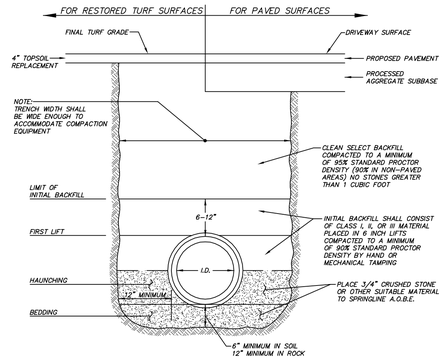
SECTION B–B

OUTLET CONTROL JUNCTION BOX

SCALE: 1"=1'

SUMP NOTE:
JUNCTION BOX SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.

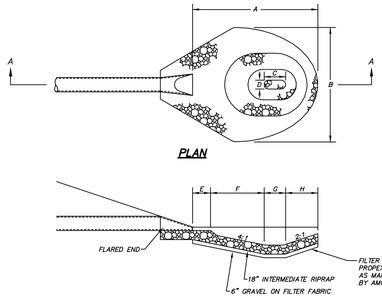
CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.



DETAIL FOR PVC SANITARY SEWER AND PVC/CPP STORM DRAIN INSTALLATION

N.T.S.

NOTES:
1. REFER TO ASTM D2321 (STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY–FLOW APPLICATIONS) FOR TRENCHING SPECIFICATIONS.

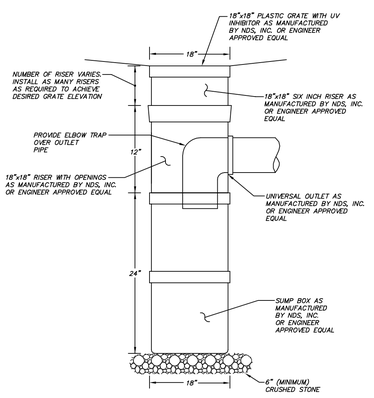


SECTION A–A

PIPE SIZE	A	B	C	D	E	F	G	H	WT. RIP RAP (TONS)
6" & 8"	8'	7'	1.5'	1'	1'	3.5'	1.5'	2'	6
12" & 15"	10'	7'	1.5'	1'	1'	4.5'	1.5'	3'	6
18"	12'	8'	2'	1'	1'	5'	2'	4'	8
21"	15'	9'	2.5'	1.5'	1'	7'	2.5'	4.5'	12
24"	17'	10'	2.5'	1.5'	1'	8'	2.5'	5.5'	15
30"	20'	13'	3'	2'	2'	9'	3'	6'	22
36"	24'	16'	3.5'	2'	2'	9.5'	3.5'	7'	33

ENERGY DISSIPATOR

N.T.S.

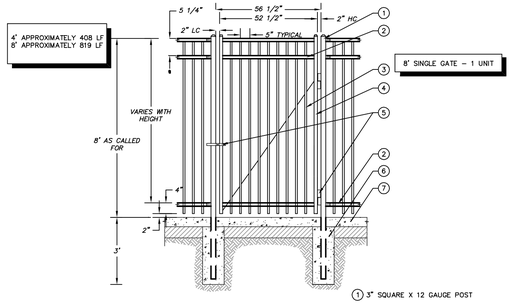


18"x18" PLASTIC YARD DRAIN DETAIL

N.T.S.

NOTES:
YARD DRAIN SHALL HAVE A MINIMUM SUMP OF 1 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.

REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATION OF ALL PIPES.

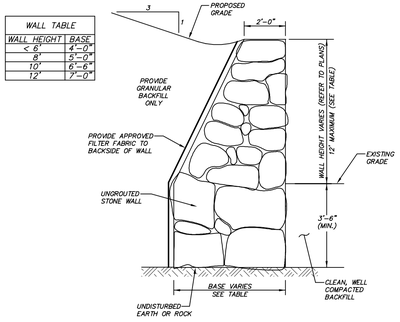


NOTES:
1. SUBMIT SHOP DRAWINGS AND MATERIALS TO ARCHITECT/ENGINEER. COLOR TO BLACK.
2. A 4" SPHERE SHALL NOT PASS BETWEEN PICKETS.
3. PROVIDE LATCH AT 54" ABOVE DECK AS REQUIRED BY FLORIDA CODE.
4. FENCING SHALL BE MONTAGE PLUS (3/8" PICKET) COMMERCIAL FLAT TOP, 3 RAIL 4' OR 8' HT, AS PROVIDED BY AMERISTAR (TULSA, OK) OR APPROVED EQUAL.

8' TUBULAR FENCE SINGLE GATE DETAIL

N.T.S.

WALL TABLE	
WALL HEIGHT	BASE
< 6'	4'–0"
8'	5'–0"
10'	6'–6"
12'	7'–0"



STONE RETAINING WALL

N.T.S.

STONE RETAINING WALL NOTES

ALL WORK SHALL COMPLY WITH THE STATE AND LOCAL BUILDING CODES AND SPECIFICATIONS.

WALL IS DESIGNED AS UNGROUTED.

VERIFY ALL DIMENSIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO D'ANDREA SURVEYING & ENGINEERING, P.C.

THE CONTRACTOR SHALL VERIFY ALL DRAWINGS FOR COORDINATION BETWEEN TRADES.

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND ACCEPT FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS.

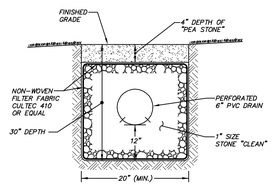
STONE WALLS SHALL BEAR ON UNDISTURBED SOIL OR ROCK HAVING A MINIMUM SAFE BEARING CAPACITY OF 2 TONS PER SQUARE FOOT. THIS VALUE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER FOR THE SPECIFIC APPLICATION AND LOCATION.

TRUCKS, BULLDOZERS OR OTHER HEAVY EQUIPMENT SHALL BE OPERATED WITH CAUTION AND IN SUCH A MANNER AS TO CAUSE NO DAMAGE TO RETAINING WALL SYSTEMS.

BACKFILL WITH APPROVED GRANULAR MATERIAL; BACKFILLING FRONT OF WALL SHALL BE DONE IN LAYERS, NOT TO EXCEED 10 INCHES. COMPACTION SHALL BE 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. EXCAVATION MUST BE FREE OF WATER WHILE STONE WORK IS IN PROGRESS.

ALL STONE SHALL HAVE A COMPRESSIVE STRENGTH OF AT LEAST 2,000 PSI.

STONE SIZES SHALL BE GRADED FROM 25% TO 100% OF THE WALL WIDTH. SMALLER STONES MAY BE USED TO LOCK THE WALL AS REQUIRED, BUT THE AMOUNT SHALL NOT EXCEED 20% OF THE TOTAL VOLUME OF THE WALL AND THESE STONES SHALL BE EVENLY DISTRIBUTED.



GRAVEL TRENCH DRAIN DETAIL

N.T.S.

D'ANDREA SURVEYING & ENGINEERING, PC
• LAND PLANNERS
• ENGINEERS
• SURVEYORS
P.O. BOX 549 RIVERSIDE, CT 06878
6 NEIL LANE TEL. 637–1779

REV.	DATE	DESCRIPTION
2	9–17–18	ENGINEERING COMMENTS DATED 9–6–18
1	7–23–18	WETLAND / UTILITIES / FENCING
0	6–22–18	SUBMIT FOR BUILDING PERMIT

RICHARD A. REGAN, NY PE No. 61598

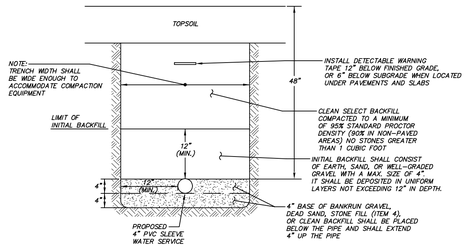
9–17–18
ENGINEER DATE

ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

PROJECT	PROPOSED POOL
PREPARED FOR	HIDDEN POINT FARMS, LLC
LOCATION	153 SILVER SPRING ROAD WILTON, CONNECTICUT AND LEWISBORO, NEW YORK
4 OF 5	CONSTRUCTION NOTES & DETAILS

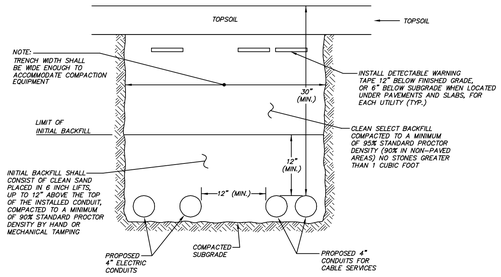
SEDIMENTATION AND EROSION CONTROL NOTES

1. Temporary soil and erosion control measures, inclusive of filter barriers, water breaks, check dams, and anti-tracking areas, shall remain in place for as long as necessary to permanently stabilize developed areas.
2. Erosion and sediment control devices shall be installed in their proper sequence. No clearing or grading may be done in any area until the erosion control devices for that area, as shown on the plan, are in place and functional.
3. Natural vegetation shall be maintained and protected where practical.
4. All sediment and erosion control devices and provisions shall be maintained in operational condition by the contractor until final acceptance of the project.
5. No changes of this soil erosion and sediment control plan may be made without prior approval of the supervising engineer.
6. Land disturbance is to be kept to a minimum. Reestablishment and/or stabilization of disturbed areas shall be scheduled as soon as practical.
7. Erosion controls shall be monitored periodically to verify that they are maintained in effective working order. If, during construction, additional control measures are necessary, they shall be installed by that contractor.
8. Sediment or debris shall be removed from the drainage pipes and structures as it accumulates during construction. It shall be disposed of in a manner which is consistent with the intent of this plan.
9. The contractor may provide alternate means of sediment control, but they may not eliminate placement of protection in the areas indicated hereon.
10. Sediment fencing shall be installed where required prior to commencing construction, and shall remain in place for the duration of the project. Fencing shall be Propex Silt Stop (TM) as manufactured by Amoco, or engineer approved equivalent.
11. The contractor shall re-grade, topsoil, and seed all disturbed areas immediately after construction has been completed.
12. Refer to New York State Standards and Specifications for Erosion and Sediment Control (2016 Blue Book) for additional details and specifications.
13. Additional protection measures shall be implemented should site conditions warrant them.
14. All designated trees shall be protected during the construction period, except those designated to be removed. Tree protection shall be in accordance with generally accepted standards.
15. Proposed roof leader down spouts and drains shall be connected to an approved storm drainage system.
16. Crushed stone shall be placed under any exterior decks and/or open stairways.
17. Copies of the Stormwater Pollution Prevention Plan are to be maintained at the site, and provided to the project foreman and subcontractors prior to the start of work at or before the on-site meeting with staff.



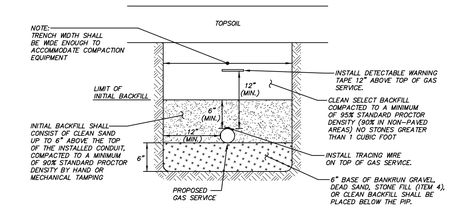
DETAIL FOR WATER SERVICE INSTALLATION
N.T.S.

NOTES:
1. THE CONTRACTOR SHALL HAVE ALL MATERIAL SELECTION AND INSTALLATION SPECIFICATIONS APPROVED BY A LICENSED PLUMBER PRIOR TO INSTALLATION.
2. WHERE THE WATER LINE CROSSES THE SANITARY SEWER FORCE MAIN A MINIMUM SEPARATION OF 6" SHALL BE PROVIDED AND PLACEMENT OF PIPE JOINTS AT THE CROSSING SHALL BE AVOIDED.



DETAIL FOR UNDERGROUND UTILITY TRENCH
N.T.S.

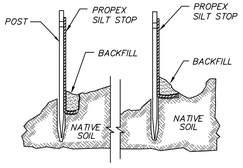
NOTES:
1. COORDINATE INSTALLATION WITH EACH RESPECTIVE UTILITY COMPANY PRIOR TO INSTALLATION.
2. ACTUAL NUMBER AND SIZE OF CONDUITS TO BE INSTALLED MAY VARY. CONTRACTOR SHALL COORDINATE ACTUAL NUMBER AND SIZE OF CONDUITS TO BE INSTALLED WITH BOTH THE OWNER AND EACH RESPECTIVE UTILITY COMPANY



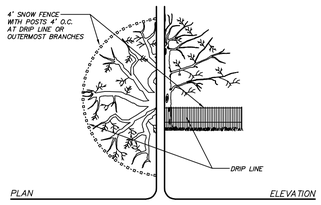
DETAIL FOR GAS SERVICE INSTALLATION
N.T.S.

NOTES:
1. THE CONTRACTOR SHALL HAVE ALL MATERIAL SELECTION AND INSTALLATION SPECIFICATIONS APPROVED BY A CERTIFIED PLUMBER PRIOR TO INSTALLATION.

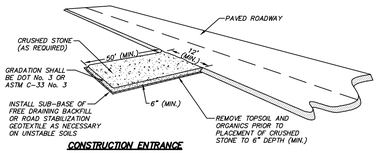
NOTE:
POSTS SHOULD NOT BE SPACED MORE THAN 10' APART



INSTALLATION DETAIL SEDIMENT CONTROL FABRIC
N.T.S.

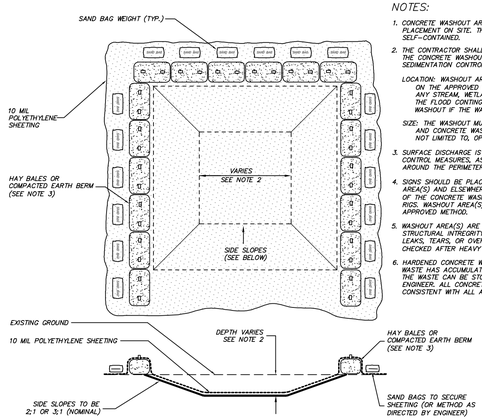


TREE PROTECTION
N.T.S.



CONSTRUCTION ENTRANCE

ANTI-TRACKING PAD DETAIL
N.T.S.

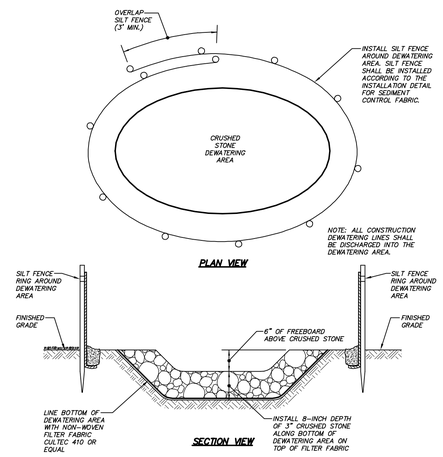


NOTES:
1. CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.
2. THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING OF THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER.

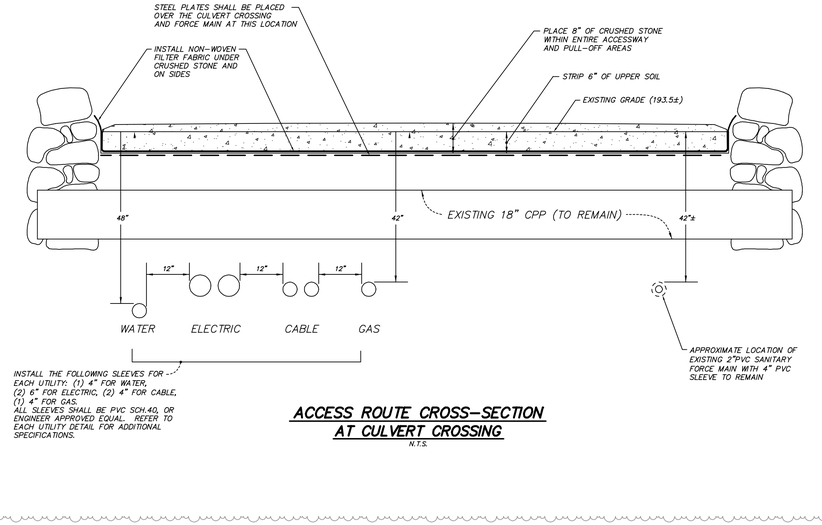
   LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED WHERE SPECIFIED ON THE APPROVED DEVELOPMENT PLANS AND AT LEAST 50 FEET FROM ANY STREAM, WETLAND, STORM DRAINS, OR OTHER SENSITIVE RESOURCE. THE FLOOD CONTINGENCY PLAN, IF REQUIRED, MUST ADDRESS THE CONCRETE WASHOUT IF THE WASHOUT IS TO BE LOCATED WITHIN A FLOODPLAIN.

   SIZE: THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS INCLUDING, BUT NOT LIMITED TO, OPERATIONS ASSOCIATED WITH GROUT AND MORTAR.
3. SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.
4. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHOD.
5. WASHOUT AREA(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTREGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEAKS, TEARS, OR OVERFLOWS. WASHOUT AREA(S) SHOULD BE CHECKED AFTER HEAVY RAINS.
6. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S HEIGHT. THE WASTE CAN BE STORED AT AN UPLAND LOCATION, AS APPROVED BY THE ENGINEER. ALL CONCRETE WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.

CONCRETE WASHOUT AREA
N.T.S.



CRUSHED STONE DEWATERING AREA WITH SILT FENCE
N.T.S.



ACCESS ROUTE CROSS-SECTION AT CULVERT CROSSING
N.T.S.

REV.	DATE	DESCRIPTION
1	9-17-18	ENGINEERING COMMENTS DATED 9-6-18
0	6-22-18	SUBMIT FOR BUILDING PERMIT

RICHARD A. REGAN, NY PE No. 61598

ENGINEER — 9-17-18 DATE

ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

D'ANDREA SURVEYING & ENGINEERING, PC
• LAND PLANNERS
• ENGINEERS
• SURVEYORS
P.O. BOX 549, RIVERSIDE, CT 06878 — 6 NEIL LANE, TEL. 637-1779

PROJECT	PROPOSED POOL
PREPARED FOR	HIDDEN POINT FARMS, LLC
LOCATION	153 SILVER SPRING ROAD WILTON, CONNECTICUT AND LEWISBORO, NEW YORK
5 OF 5	NOTES & DETAILS

D'ANDREA SURVEYING & ENGINEERING, PC.

STORMWATER POLLUTION PREVENTION PLAN

FOR
"PROPOSED POOL"

LOCATED AT
153 SILVER SPRING ROAD
WILTON, CONNECTICUT
&
LEWISBORO, NEW YORK

PREPARED FOR
HIDDEN POINT FARMS, LLC

September 17, 2018

Richard A. Regan, PE
NY License No. 61598-1

18DA SWPPP

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D'Andrea Surveying & Engineering, PC

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Attachments

A: Inspection Reports and Certification Statement

B: Notice of Intent

C: MS4 SWPPP Acceptance Form

D: Drainage Summary Report

1) General Description and Included Documents

This plan is to be used as the protocol for the Stormwater Pollution Prevention Plan for planned activities related to the construction of a proposed pool at 153 Silver Spring Road in Lewisboro, New York. An integral part of this plan (but not limited to) and included with this plan are the following supporting documents.

1) Drainage Summary Report dated June 22, 2018 as prepared by our firm.
2) Construction Plan Review Set, Sheets 1 - 5, dated September 17, 2018, as prepared by our firm.
3) Any future revisions to this plan and subsequent revised reports and drawings are also included.
4) Reports from future site inspections and recommended corrective actions are also to be included.
5) New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0201.

2) Site Description and Construction Activities

The purpose of this report is to outline the Stormwater Pollution Prevention Plan for the proposed pool, patios, utilities, and related site grading on the 8.815 acre parcel of property located in Lewisboro, New York. The property is unique in that it contains land within both Connecticut and New York. The Main dwelling structure and driveway entrance are located on a 2.185 acre parcel located in Connecticut, while the rear portion of property consists of 8.815 acres of mostly undeveloped land, which is located within New York. The proposed improvements lie completely within the New York parcel and will include a pool approximately 19,372 square feet in size, which will contain mechanical components to the south and a roofed structure for mechanical access. A patio and pool deck are proposed adjacent to the pool with walkways on either side of the pool. For a depiction of the proposed improvements, refer to a plan set prepared by D'Andrea Surveying & Engineering, P.C., entitled "Construction Plan

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Review Set, Proposed Pool, location 153 Silver Spring Road, Wilton, Connecticut and Lewisboro, New York, Prepared for Hidden Point Farms, LLC.

The proposed development will increase the amount of impervious coverage on site by approximately 12,470 square feet (excluding the pool), thus increasing the volume of stormwater runoff leaving the site. In order to account for this increase in runoff, a stormwater management plan has been developed. Refer to the Drainage Summary Report cited above. The proposed stormwater management plan, if constructed as proposed, will result in either maintaining or decreasing peak rates of runoff that flow toward the down gradient wetland system.

Soil types within the vicinity of the proposed pool primarily consist of Charlton fine sandy loam with slopes ranging from 3 to 15 percent. These soils are well drained and contain a hydraulic soil group rating of "B", which was confirmed with an on-site percolation test at a rate of 5 minutes per inch.

The general staging of this project will be as follows: All sedimentation and erosion controls will be installed prior to the start of construction including silt fence and orange construction to demark the limits of construction. Approximately 6-inches of topsoil will be stripped from the access way, stockpiled, and replaced with 8-inches of crushed stone. Steel plates will be added below the crushed stone for additional protection over the sanitary force main and culvert located within the access way. Tree removal and tree protection will then be completed as specified on the approved plans. Once the pool site is clear soil will be stockpiled and the construction vehicle parking area will be rough graded to allow for gravel to be placed.

Excavation for the pool foundation will then begin as will the preparation for any required ledge rock blasting. Stone from blasting will be crushed on-site and used throughout construction. Once ready the pool foundation will be constructed, backfilled, rough graded, and all slopes will be stabilized. The drainage system will then be installed along with any patios and patio drainage. Once the majority of construction is completed the proposed utility trench and utilities will be installed within the construction access way extending from the pool site back to the Connecticut border. As construction nears completion all slopes will be fine graded and

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stabilized. The construction access way will be re-stabilized, excess gravel will be removed, and 6-inches of topsoil will be replaced and seeded. Once landscaping has been completed and grass has taken root to establish stable ground cover all sedimentation and erosion controls will be removed.

Construction Debris, Litter and Construction Chemicals

Construction debris, litter and construction chemicals will be contained and controlled in the construction vehicle parking area noted on the plan and shall be coordinated with the operator/owner. The contractor shall provide dumpsters as required to control litter and construction debris.

If certain construction and waste materials have the potential to pollute stormwater, the contractor shall minimize exposure of these materials to storm water. Spill prevention protocols shall be followed and spill response protocols shall be kept on site.

3) Temporary and Permanent Structural and Vegetative Measures to be used for soil stabilization and long-term water quality:

Refer to the cited construction plans which detail the erosion control measures to ensure that no sediment is discharged into downstream waterways. Total disturbance on this project will be less than 5 acres, therefore, erosion can be controlled with standard measures primarily silt fence and hay bales. A concrete washout area will be provided as shown on sheet 2 of 5 and maintained to contain any residual concrete contaminants. A dewatering ring location and detail are provided, if required. During construction, a determination will be made if erosion control blankets will be required on earth slopes.

In order to treat, retain, and detain stormwater runoff a permanent sub-surface drywell system consisting of (22) 4'x4'x4' concrete galleries in a 2 x 11 array with crushed stone on all sides will be installed at the north end of the proposed pool. The drywells have been sized to retain both the water quality volume of the contributing watershed and the 6" drawdown volume

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of a standard 600 square foot pool. These design standards were set by the reviewing engineer based on the size of the pool and the unique filtration system. All installed catch basins, junction boxes, and patio drains will contain sumps and traps to aid in the removal of sediment and suspended solids. 90% of all annual storm events will be retained within this system, however, during larger and less frequent storm events runoff will overflow to a down-gradient rip-rap energy dissipater.

The proposed site improvements will maintain similar drainage patterns as compared to existing conditions, however, a subsurface detention system is proposed that will retain runoff and attenuate peak flow rates up to the 25-year storm event. Therefore, the proposed development will not have any negative effects or adverse impacts on the adjoining properties or down-gradient wetland systems. Refer to the aforementioned Drainage Summary Report for the full watershed analysis results and hydraulic calculations.

4) Site Assessment and Inspections: Requirements for Operator, Owner and Contractor

The (operator/owner) shall (work/coordinate) with a qualified professional (project engineer) and the contractor to ensure that requirements of the SWPPP and SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-02-01 is met. The (operator/owner) shall make sure that a NOI is filed 5 days prior to the start of construction.

Site Assessment and Inspections

The operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP and required by Part III.D of this permit have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction. Following the commencement of construction, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. During each inspection, the qualified professional shall record the following information:

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 the sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

5) Inspection of 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) All deficiencies that are identified with the implementation of the SWPPP.

The operator working with the contractor shall maintain a record of all inspection reports in a site log book. The site log book shall be maintained on site and be made available to the permitting authority upon request. Prior to the commencement of construction, the operator shall certify in the site log book that the SWPPP, prepared in accordance with the requirement of the general permit meets all Federal, State and local erosion and sediment control requirements. Refer to the attachment.

The operator working with the contractor shall post at the site, in a publicly-accessible location, a summary of the site inspection activities on a monthly basis. Refer to the attachment.

Prior to filing the Notice of Termination or the end of permit term, the operator shall have the qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone finale stabilization 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.

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Stabilization

The contractor shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity if that portion of the site has temporarily or permanently ceased. This requirement does not apply in the following instances:

a) Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as practicable.

b) Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within 21 days, temporary stabilization measures need not be initiated on that portion of the site.

Maintenance

Sediment shall be removed from sediment traps or sediment ponds whenever their capacity has been reduced by fifty (50) percent from the design capacity.

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Contractors

The contractors and any sub-contractors identified in the SWPPP must sign a copy of the certification statement attached in accordance with the requirements of the permit. All certifications must be included in the SWPPP. Additionally, new contractors and sub-contractors need to similarly certify.

Monitoring, Reporting and Retention of Records

A. The Department of Environmental Conservation may, at its sole discretion, require monitoring of discharge(s) from the permitted construction activity after notifying the permittee in writing of the basis for such monitoring, the parameters and frequency at which monitoring shall occur and the associated reporting requirements, if any.

B. The operator along with the contractor shall retain copies of SWPPPs and any reports submitted in conjunction with this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by the Department, in its solid discreation, at any time upon written notification.

C. The operator, along with the Contractor, shall retain a copy of the SWPP required by this permit at the construction site from the date of initiation of construction activities to the date of final stabilization.

D. The operator, along with the contractor, shall also prepare a written summary of its status with respect to compliance with this general permit at a minimum frequency of every three months during which coverage under this permit exists. Refer to attached. The summary should address the status of achieving each component of the SWPPP. This summary shall be handled in the same manner as prescribed for SWPPPS under the General Permit.

E. Addresses: Except for the submittal of NOIs and NOTs, all written correspondence under this permit directed to the Department, including the submittal of individual permit applications, shall be sent to the address of the appropriate Department Office as follows:

Division of Water (DOW)
Water (SPDES) Program
200 White Plains Road
Fifth Floor
Tarrytown NY 10591-5805
Telephone: 845-332-1835

5) Standard Permit Conditions

Duty to comply – The operator and contractor must comply with all conditions of the General Permit. All contractors and sub-contractors associated with the project must comply with the terms of the SWPPP. Any permit non-compliance constitutes a violation of the Clean

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Water Act (CWA) and the ECL and is grounds for an enforcement action against either the operator or the contractor / subcontractor, permit revocation or modification; or denial of a permit renewal application. Upon a finding of significant no-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all construction activity at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the operator or the operator's on-site representative.

ATTACHMENT "A"

Inspection Reports & Certification Statement

Contactor and Sub-Contractor Certification Statement

Proposed Pool, Hidden Point Farms, LLC, Lewisboro, NY

Certification Statement - All contractors and sub-contractors identified in a SWPPP in accordance with Part III.E.1 (see above) of this permit shall sign a copy of the following certification statement before undertaking any construction activity at the site identified in the SWPPP:

> "I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards".

_____ _____

Name Title

_____

Firm Name

_____

Address

_____ _____

Phone Emergency phone and contact

_____ _____

Email

Note: The signatory requirements outlined in the General Permit must be followed

ATTACHMENT "B"

Notice of Intent

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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-0-15-002

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)
HIDDEN POINT FARM LLC

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

Owner/Operator Contact Person First Name
JOSEPH

Owner/Operator Mailing Address
3990 NORTH POWERLINE ROAD

City
FORT LAUDERDALE

State
FL

Zip
33309-____

Phone (Owner/Operator)
954-566-3885

Fax (Owner/Operator)
954-566-3335

Email (Owner/Operator)
JOE@RECREATIONALDESIGN.COM

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

Project Site Information

Project/Site Name
HIDDEN PONT FARM

Street Address (NOT P.O. BOX)
153 SILVER SPRING ROAD

Side of Street
○ North ○ South ○ East ● West

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

State NY | Zip 10590- | County WESTCHESTER | DEC Region

Name of Nearest Cross Street
SUGARBUSH COURT

Distance to Nearest Cross Street (Feet)
1500

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

Tax Map Numbers
Section-Block-Parcel
48-10057-46

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you must go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting) | **Y Coordinates (Northing)**

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

- ● FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ● OTHER: PROPOSED POOL

***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
8.8	2.9	0.0	0.3

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
%	100 %	%	%

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

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

Start Date	End Date
10/31/2018	03/15/2018

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

Name

WEST BRANC SILVER MINE RIVER

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-0-15-002? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? ○ **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
D 'ANDREA SURVEYING & ENGINEERING P.C.

Contact Name (Last, Space, First)
REGAN, RICHARD

Mailing Address
6 NEIL LANE

City
RIVERSIDE

State Zip
CT 06878-

Phone
203-637-1779

Fax
203-637-1770

Email
RICH@RVDI.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-0-15-002. 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
RICHARD

MI
A

Last Name
REGAN

Signature

Date
09/25/2018

for DSEPC

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

0.020 **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)			0.286
○ 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)			
○ 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

0.029 **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

● **Yes** ○ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

. **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). [ ][ ][ ].[ ][ ][ ]

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ○ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **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

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **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

HIDDEN POINT FARM, 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. [ ][ ][ ][ ][ ][ ].[ ]

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: JOSEPH

MI: C

Print Last Name: CERRONE

Owner/Operator Signature



Date: 09/21/2018

ATTACHMENT "C"

MS4 SWPPP Acceptance Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-15-002)

Project Site Information

Project/Site Name

Hidden Point Farms

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Hidden Point Farms LLC.

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. 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.

Joseph III C Corrow

First name MI Last Name

Signature

9/24/18

Date

Revised: April 2015

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:	Hidden Point Farm, LLC
2. Contact Person:	Joseph Cerrone
3. Street Address:	3990 North Powerline Road
4. City/State/Zip:	Fort Lauderdale, FL 33309
II. Project Site Information	
5. Project/Site Name:	Hidden Point Farm
6. Street Address:	153 Silver Spring Road
7. City/State/Zip:	Lewisboro, NY 10590 / Wilton, CT 06897
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)

ATTACHMENT "D"

Drainage Summary Report

DRAINAGE SUMMARY REPOERT

For

153 Silver Spring Road
Wilton, Connecticut
&
Lewisboro, New York

Prepared For

Hidden Point Farms, LLC

June 22, 2018

Revised

September 17, 2018

Richard A. Regan, PE for DSEPC
NY License No. 61598

18DA_DSR_1

LAND PLANNERS • ENGINEERS • SURVEYORS
D'Andrea Surveying & Engineering, PC

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Introduction

The owners of 153 Silver Spring Road are proposing to construct a therapy pool within the rear portion of their property. The property is unique in that it contains land within both Connecticut and New York. The main dwelling structure and driveway entrance are located on a 2.185 acre parcel located in Connecticut, while the rear portion of the property consists of 8.815 acres of mostly undeveloped land, which is located within New York. The proposed pool is approximately 19,372 square feet and consists of a proprietary method of generating bubbles and moving water. A structure housing the mechanical components sits at the south end of the pool along with an adjacent patio. An additional smaller patio lies at the north end of the pool. For a depiction of the proposed improvements, refer to a plan set prepared by D'Andrea Surveying & Engineering, PC., entitled "Construction Plan Review Set, Proposed Pool, location 153 Silver Spring Road, Wilton, Connecticut and Lewisboro, New York, Prepared for Hidden Point Farms, LLC.", and dated June 22, 2018.

The proposed development will increase the amount of impervious coverage on site by approximately 12,470 square feet (excluding the pool), thus increasing the volume of stormwater runoff leaving the site. In order to account for this increase in runoff, a stormwater detention system has been proposed. The proposed stormwater management plan has been designed to pre-treat runoff and produce a decrease in the peak flow rates exiting the site. Therefore, the proposed project will have no discernible adverse impacts on the adjacent properties or the down-gradient wetland system. The purpose of this report is to outline the stormwater management plan for this project.

The stormwater management plan is based on a hydrologic analysis of pre-development and post-development conditions. HydraCAD Version 10 was used to generate peak stormwater runoff rates for the 2, 5, 10 & 25-year storm frequency events. This report provides an overview of existing and proposed conditions, which focuses on the 25-year event.

Existing Conditions

For the purposes of this report only the areas relative to the proposed improvements have been included within the analysis. Under existing conditions, the project site, with a total area of approximately 138,923 sq ft, primarily contains wooded and undeveloped land with stone walls throughout. The property primarily slopes from south to north with a moderate sloping topography and a large number of surface boulders. Refer to Exhibit "A", Existing Conditions Watershed Map, for a depiction of the existing drainage area and flow path.

The entire project site was modeled as one drainage area. Runoff starts from a high point to the south and travels north as sheet flow before finding shallow concentrated flow paths and eventually reaching the northerly property line, Point of Concern (P.O.C.) "A". The peak flow rate from Drainage Areas 1 is approximately 3.28 Cubic Feet per Second (cfs) during a 25-year storm event. Refer to Table 1 for a summary of peak runoff flow rates for the 2, 5, 10, and 25-year storm events.

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Area ID / POC	To POC				
		2-yr	5-yr	10-yr	25-yr
1	A	0.36	1.26	2.20	3.28

Table 1: Summary of Peak Runoff Rates - Existing Conditions

Proposed Conditions

Under proposed conditions the project site area was divided into two (2) watersheds. Refer to Exhibit "B", Proposed Conditions Watershed Map, for a depiction of the proposed drainage areas and flow paths. Drainage Area 1, approximately 108,565 sq ft, will consist of the areas surrounding the pool, which will consist of wooded and meadow coverage. Grades surrounding the pool will be consistently pitched and blended into the existing topography. At the north end of the pool a retaining wall is proposed to reduce the extent of grading. Runoff from the project area will primarily follow the same flow path and any runoff from the surrounding pool area will join the shallow concentrated flow paths before reaching the northerly property line, P.O.C. "A".

Drainage area 2, approximately 10,987 sq ft., will consist of the concrete pool structure, the mechanical housing structure, and both patios. Runoff from these areas will be collected by patio drains and a perimeter trench drain, which will route stormwater to a proposed subsurface drywell system located north of the pool. The drywell system will consist of (22) 4'x4'x4' concrete galleries in a 2 x 11 array with crushed stone on all sides. The drywells have been sized to retain both the water quality volume (870 cubic ft.) of the contributing watershed and the 6" drawdown volume of a standard 600 sq ft. pool. (300 cubic ft.). Refer to Appendix "A" for drywell sizing calculations. As the pool will be heated year round and because of the size of the pool and unique filtering system, an exception has been approved for the above method of sizing by the reviewing engineer, Jan Johannessen, AICP, per email dated June 11, 2018.

Runoff entering the proposed detention system will exfiltrate into the ground and during larger storm events will throttle flow rates via an outlet control structure routed to a rip-rap energy dissipater. Runoff will then reach the northerly property line, P.O.C. "A". The combined peak flow rate at POC "A" from both drainage areas will be approximately 2.97 cfs, which reveals a decrease of approximately 0.31 cfs during a 25-year storm event. Refer to Tables 2 for a summary of proposed stormwater runoff flow rates.

Area ID / POC	To POC	Desc				
			2-yr	5-yr	10-yr	25-yr
1	A	Project Site	0.35	1.13	1.91	2.80
2	DW-1	Patios/Bldgs	0.96	1.26	1.47	1.68
Reten. 1 (DW-1)	A	Inflow	0.96	1.26	1.47	1.68
		Outflow	0.14	0.14	0.21	0.37
		Peak WSE (ft)	177.93	178.99	179.68	179.97
A	-	-	0.35	1.13	1.91	2.97

Table 2: Summary of Peak Runoff Rates - Proposed Conditions

Conclusion

The proposed site improvements will maintain similar drainage patterns as compared to existing conditions and will increase the amount of impervious coverage within the site. However, a drywell system is proposed that will retain runoff and attenuate peak flow rates during the 2, 5, 10 and 25-year storm frequency events. Therefore, the proposed development will not have any negative effects or adverse impacts on the adjoining properties or down-gradient wetland systems. Refer to Table 3 for a comparison of existing and proposed condition stormwater flow rates at POC "A".

Storm Event	POC	Flow/Volume	Existing	Proposed	Δ	Δ (%)
2 Year Storm	A	q (ft^3/s)	0.36	0.35	-0.01	-2.8
5 Year Storm	A	q (ft^3/s)	1.26	1.13	-0.13	-10.3
10 Year Storm	A	q (ft^3/s)	2.20	1.91	-0.29	-13.2
25 Year Storm	A	q (ft^3/s)	3.28	2.97	-0.31	-9.5

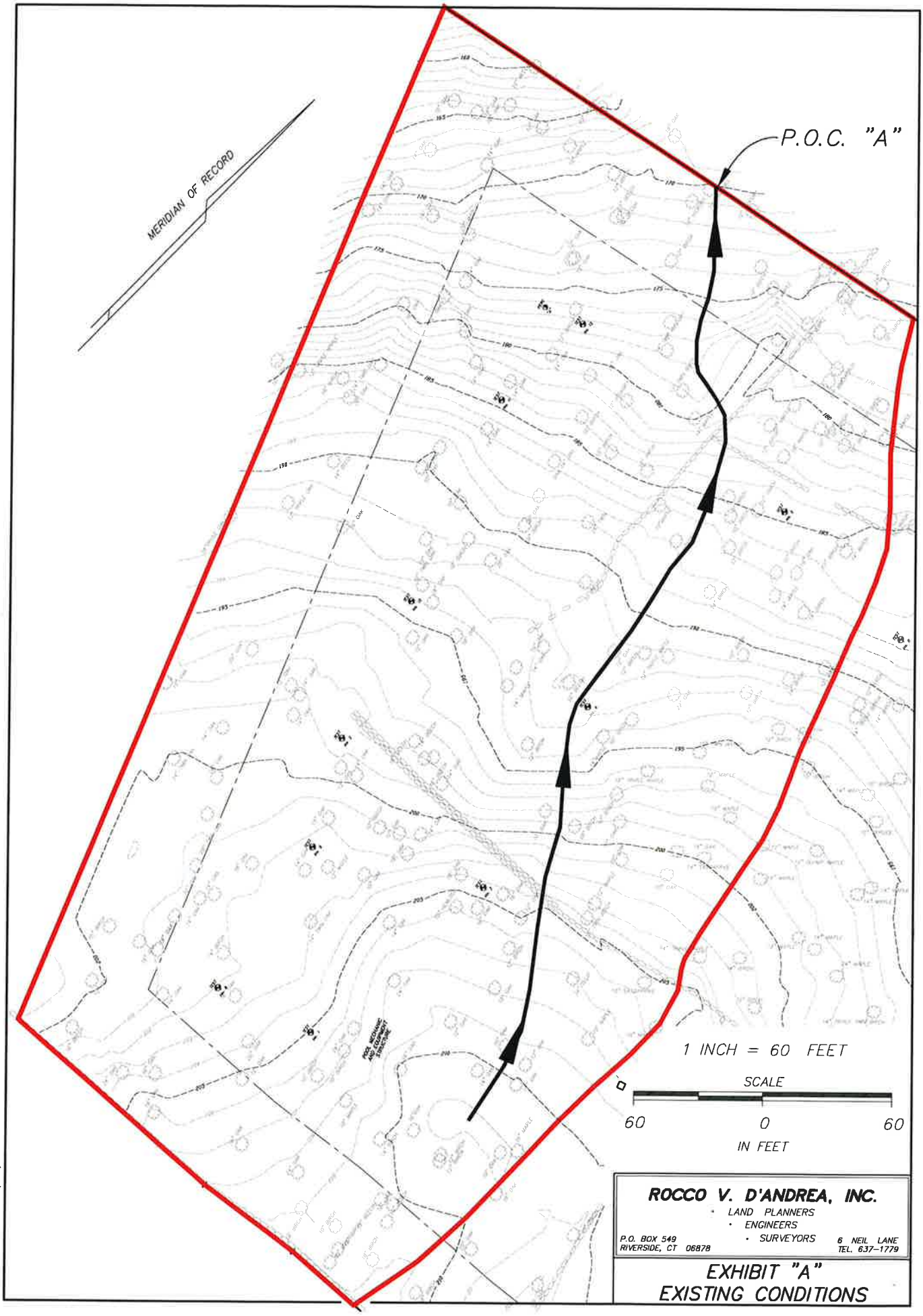
Table 3: Comparison of Exising and Proposed Peak Flow Rates for all Points of Concern.

During the construction phase, pretreatment of the stormwater will be provided by the use of temporary soil and erosion controls as outlined on the "Development Plan" prepared by D'Andrea Surveying and Engineering, PC. This includes the stockpiling of excess control materials and periodic on-site inspections to ensure that the development of the site remains "tight" throughout the construction phase.

Exhibits "A" and "B"

Drainage Areas & Flow Paths
For
Existing & Proposed Conditions

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D'Andrea Surveying & Engineering, PC



ROCCO V. D'ANDREA, INC.

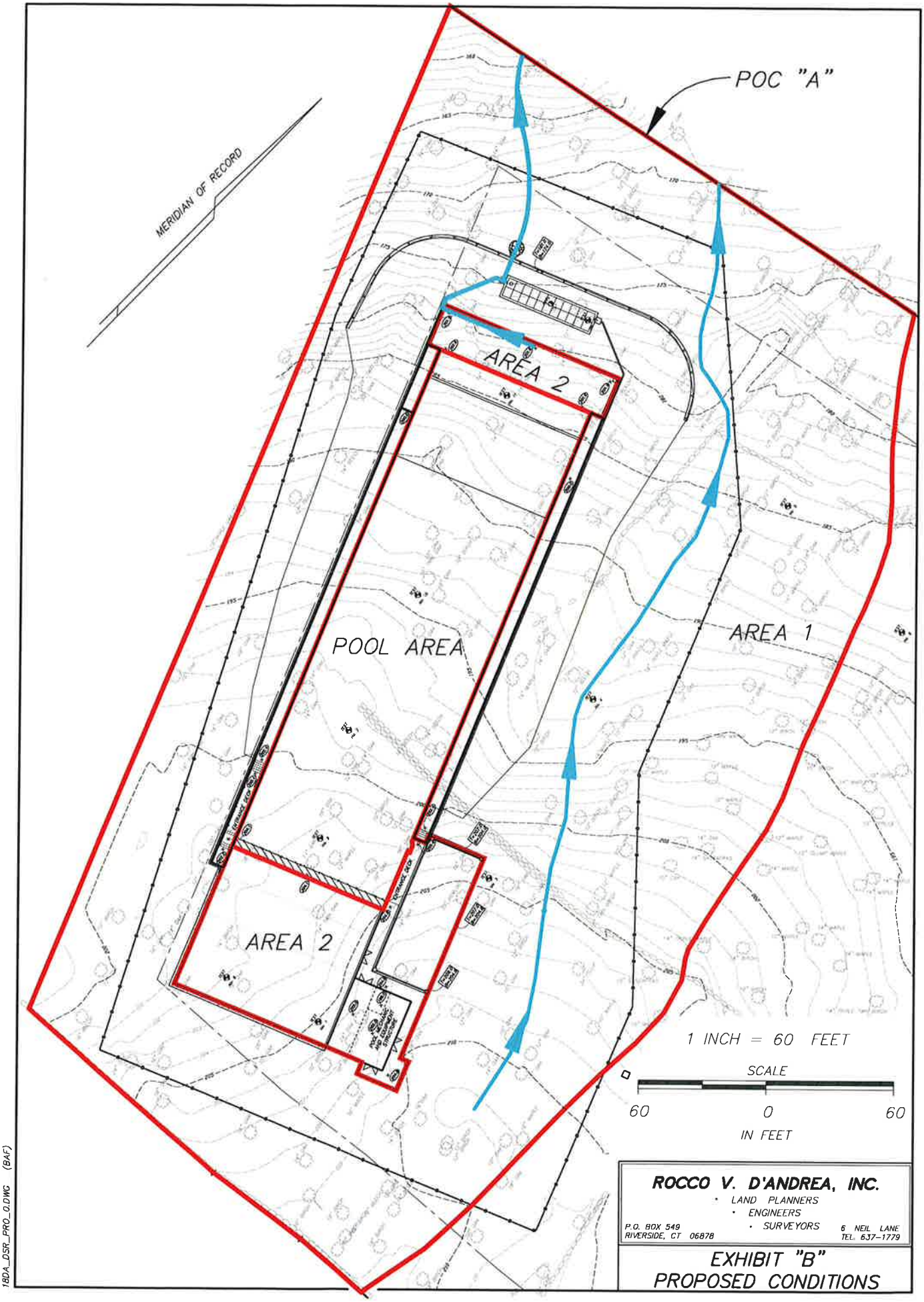
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- ENGINEERS
- SURVEYORS

P.O. BOX 549
RIVERSIDE, CT 06878

6 NEIL LANE
TEL. 637-1779

EXHIBIT "A"
EXISTING CONDITIONS

180A_DSR_EX_0.DWG (BAF)



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• SURVEYORS
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EXHIBIT "B"
PROPOSED CONDITIONS

18DA_DSR_PRO_O.DWG (BAF)

Appendix "A"

Drywell Sizing Calculations

Water Quality & Drywell Sizing Calculations

Name: Hidden Point Farms, LLC
Address: 153 Silver Spring Road, Wilton, Connecticut & Lewisboro, NY
Project: Proposed Pool
Date: September 17, 2018

❑ Compute the Water Quality Volume (WQV)

Watershed Area (Areas 2) = 10,987 ft^2
Impervious Coverage = 10,987 ft^2

$$WQV = \frac{1in}{12\frac{in}{ft}} RA$$

$$I = \%\ \text{Impervious Coverage} = \frac{A_{impervious}}{A_{Total}}(100) = \frac{10{,}987\ ft^2}{10{,}987\ ft^2}(100) = 100.0\%$$

R = Volumetric Runoff Coefficient $= 0.05 + 0.009I = 0.05 + 0.009(100\%) = 0.95$
A = Watershed Area = 10,987 ft^2

$$WQV = \frac{1in}{12\frac{in}{ft}} RA = \frac{1in}{12\frac{in}{ft}}(0.95)(10{,}987\ ft^2) = 869.8\ ft^3$$

Water Quality Volume (WQV) = 869.8 ft^3

❑ Pool Area Drawdown Volume

600 sq ft x (6 in/ 12 in/ft) = 300.0 ft^3

Total required retention storage = 869.8 + 300 = 1,170 ft^3

Total Storage provided below the outlet = 1,253 ft^3

*Refer to the HydroCad Drywell Storage Table on the following page

Stage-Area-Storage for Pond 3P: DW-1

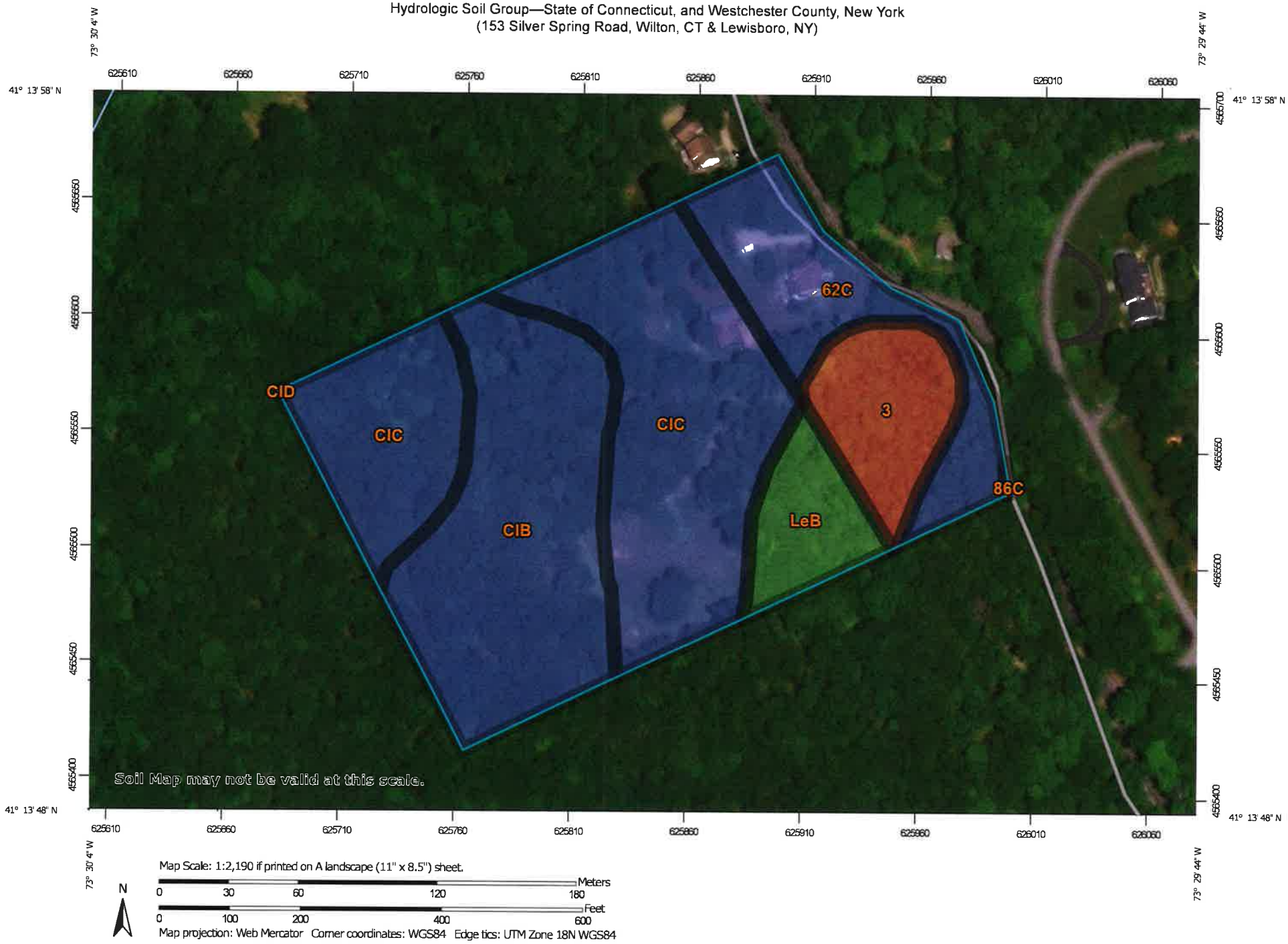
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
175.00	**497**	0
175.10	497	20
175.20	497	40
175.30	497	60
175.40	497	79
175.50	497	99
175.60	497	119
175.70	497	139
175.80	497	159
175.90	497	179
176.00	497	199
176.10	497	219
176.20	497	238
176.30	497	258
176.40	497	278
176.50	497	298
176.60	497	318
176.70	497	338
176.80	497	358
176.90	497	378
177.00	497	397
177.10	497	431
177.20	497	464
177.30	497	498
177.40	497	533
177.50	497	567
177.60	497	602
177.70	497	636
177.80	497	671
177.90	497	705
178.00	497	740
178.10	497	774
178.20	497	808
178.30	497	843
178.40	497	877
178.50	497	911
178.60	497	946
178.70	497	980
178.80	497	1,014
178.90	497	1,048
179.00	497	1,082
179.10	497	1,117
179.20	497	1,151
179.30	497	1,185
179.40	497	1,219
179.50	497	1,253
179.60	497	1,287
179.70	497	1,321
179.80	497	1,355
179.90	497	1,389
180.00	497	1,423
180.10	497	1,457
180.20	497	1,491
180.30	497	1,524
180.40	497	1,558
180.50	497	1,592
180.60	497	1,621
180.70	497	1,628
180.80	497	1,635
180.90	497	1,642
181.00	497	1,650
181.10	497	1,670
181.20	497	1,690
181.30	497	1,709
181.40	497	1,729
181.50	497	**1,749**

OUTLET INVERT

Appendix "B"

SOIL MAP

Hydrologic Soil Group—State of Connecticut, and Westchester County, New York
(153 Silver Spring Road, Wilton, CT & Lewisboro, NY)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 16, Sep 15, 2017

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 13, Oct 8, 2017

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 5, 2016

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	1.0	9.3%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B	1.6	14.1%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	C	0.0	0.0%
Subtotals for Soil Survey Area			**2.6**	**23.4%**
Totals for Area of Interest			**11.3**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CIB	Charlton fine sandy loam, 3 to 8 percent slopes, very stony	B	3.3	28.9%
CIC	Charlton fine sandy loam, 8 to 15 percent slopes, very stony	B	4.6	40.8%
CID	Charlton loam, 15 to 25 percent slopes, very stony	B	0.0	0.0%
LeB	Leicester loam, 2 to 8 percent slopes, very stony	A/D	0.8	6.8%
Subtotals for Soil Survey Area			**8.6**	**76.6%**
Totals for Area of Interest			**11.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix "C"

HYDROCAD RESULTS
(EXISTING CONDITIONS)



Area-1

Subcat Reach Pond Link

Routing Diagram for 18DA_EX_0
Prepared by Rocco V. D'andrea, Printed 6/22/2018
HydroCAD® 10.00-17 s/n 07357 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
138,923	55.0	Woods, Good, HSG B (1S)
138,923	**55.0**	**TOTAL AREA**

Summary for Subcatchment 1S: Area-1

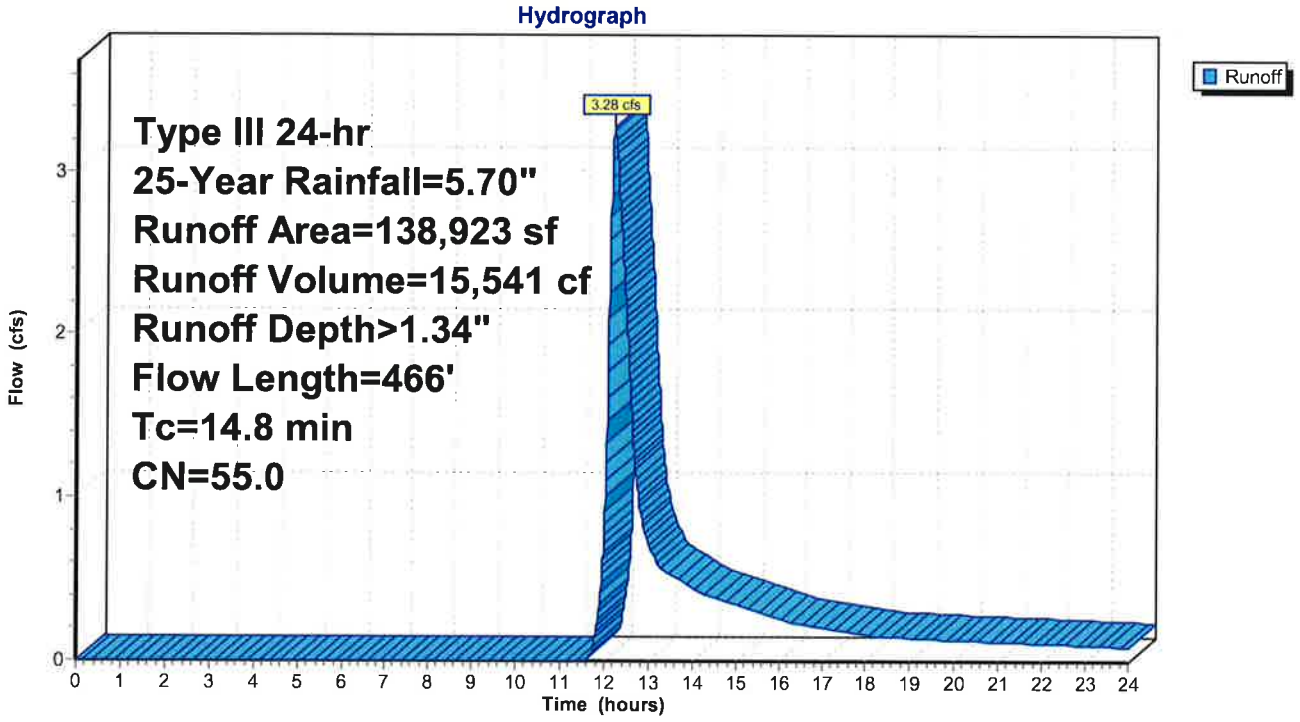
Runoff = 3.28 cfs @ 12.23 hrs, Volume= 15,541 cf, Depth> 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
138,923	55.0	Woods, Good, HSG B
138,923		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	366	0.0970	5.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.8	466	Total			

Subcatchment 1S: Area-1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area-1 Runoff Area=138,923 sf 0.00% Impervious Runoff Depth>0.12"
Flow Length=466' Tc=14.8 min CN=55.0 Runoff=0.08 cfs 1,404 cf

Total Runoff Area = 138,923 sf Runoff Volume = 1,404 cf Average Runoff Depth = 0.12"
100.00% Pervious = 138,923 sf 0.00% Impervious = 0 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area-1 Runoff Area=138,923 sf 0.00% Impervious Runoff Depth>0.28"
Flow Length=466' Tc=14.8 min CN=55.0 Runoff=0.36 cfs 3,232 cf

Total Runoff Area = 138,923 sf Runoff Volume = 3,232 cf Average Runoff Depth = 0.28"
100.00% Pervious = 138,923 sf 0.00% Impervious = 0 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area-1 Runoff Area=138,923 sf 0.00% Impervious Runoff Depth>0.65"
Flow Length=466' Tc=14.8 min CN=55.0 Runoff=1.26 cfs 7,532 cf

Total Runoff Area = 138,923 sf Runoff Volume = 7,532 cf Average Runoff Depth = 0.65"
100.00% Pervious = 138,923 sf 0.00% Impervious = 0 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area-1 Runoff Area=138,923 sf 0.00% Impervious Runoff Depth>0.98"
Flow Length=466' Tc=14.8 min CN=55.0 Runoff=2.20 cfs 11,289 cf

Total Runoff Area = 138,923 sf Runoff Volume = 11,289 cf Average Runoff Depth = 0.98"
100.00% Pervious = 138,923 sf 0.00% Impervious = 0 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area-1 Runoff Area=138,923 sf 0.00% Impervious Runoff Depth>1.34"
Flow Length=466' Tc=14.8 min CN=55.0 Runoff=3.28 cfs 15,541 cf

Total Runoff Area = 138,923 sf Runoff Volume = 15,541 cf Average Runoff Depth = 1.34"
100.00% Pervious = 138,923 sf 0.00% Impervious = 0 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area-1 Runoff Area=138,923 sf 0.00% Impervious Runoff Depth>1.75"
Flow Length=466' Tc=14.8 min CN=55.0 Runoff=4.49 cfs 20,207 cf

Total Runoff Area = 138,923 sf Runoff Volume = 20,207 cf Average Runoff Depth = 1.75"
100.00% Pervious = 138,923 sf 0.00% Impervious = 0 sf

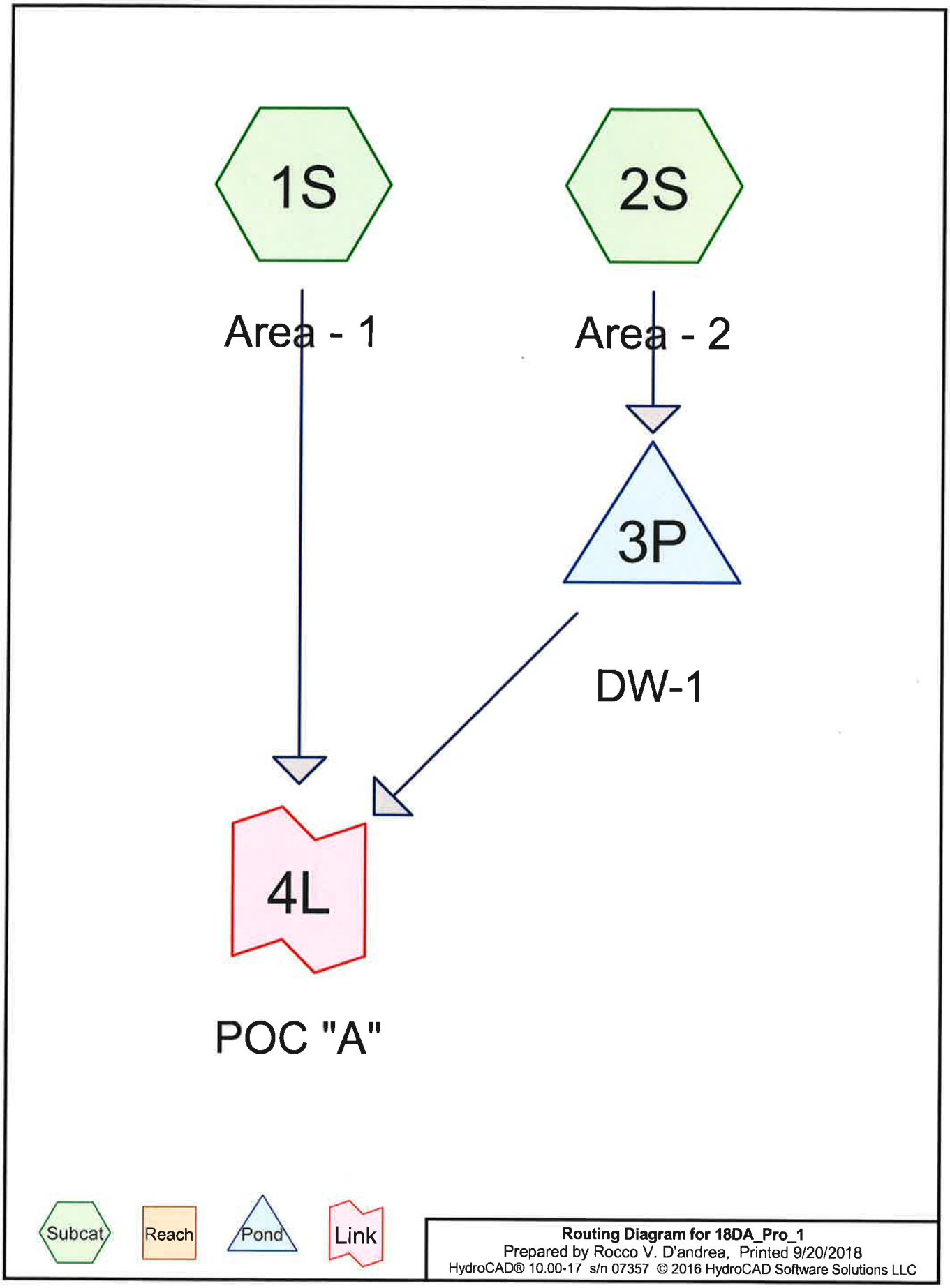
Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area-1 Runoff Area=138,923 sf 0.00% Impervious Runoff Depth>2.24"
Flow Length=466' Tc=14.8 min CN=55.0 Runoff=5.97 cfs 25,966 cf

Total Runoff Area = 138,923 sf Runoff Volume = 25,966 cf Average Runoff Depth = 2.24"
100.00% Pervious = 138,923 sf 0.00% Impervious = 0 sf

Appendix "D"

HYDROCAD RESULTS
(PROPOSED CONDITIONS)



Routing Diagram for 18DA_Pro_1
Prepared by Rocco V. D'andrea, Printed 9/20/2018
HydroCAD® 10.00-17 s/n 07357 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,381	96.0	Gravel surface, HSG B (1S)
15,408	58.0	Meadow, non-grazed, HSG B (1S)
10,987	98.0	Roofs, HSG B (2S)
1,484	98.0	Unconnected roofs, HSG B (1S)
90,291	55.0	Woods, Good, HSG B (1S)
119,551	**60.3**	**TOTAL AREA**

Summary for Subcatchment 1S: Area - 1

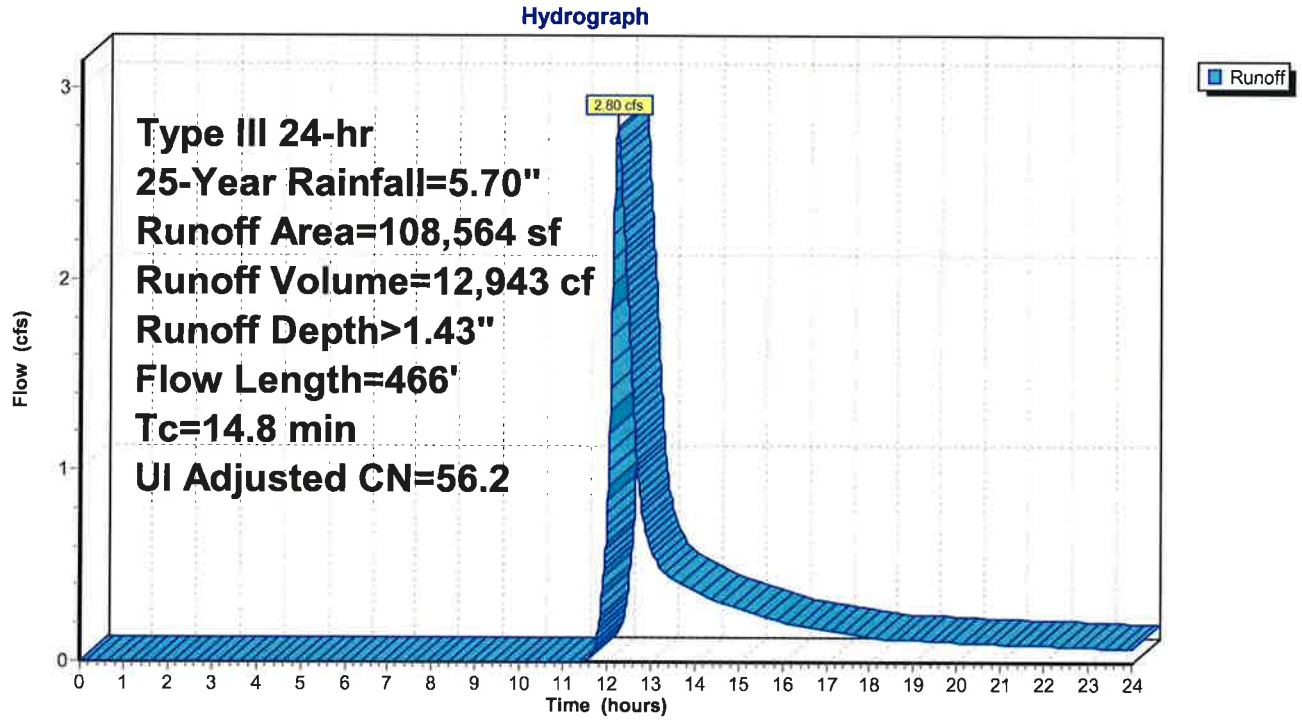
Runoff = 2.80 cfs @ 12.22 hrs, Volume= 12,943 cf, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Adj	Description
1,484	98.0		Unconnected roofs, HSG B
1,381	96.0		Gravel surface, HSG B
15,408	58.0		Meadow, non-grazed, HSG B
90,291	55.0		Woods, Good, HSG B
108,564	56.5	56.2	Weighted Average, UI Adjusted
107,080			98.63% Pervious Area
1,484			1.37% Impervious Area
1,484			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	366	0.0970	5.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.8	466	Total			

Subcatchment 1S: Area - 1



Summary for Subcatchment 2S: Area - 2

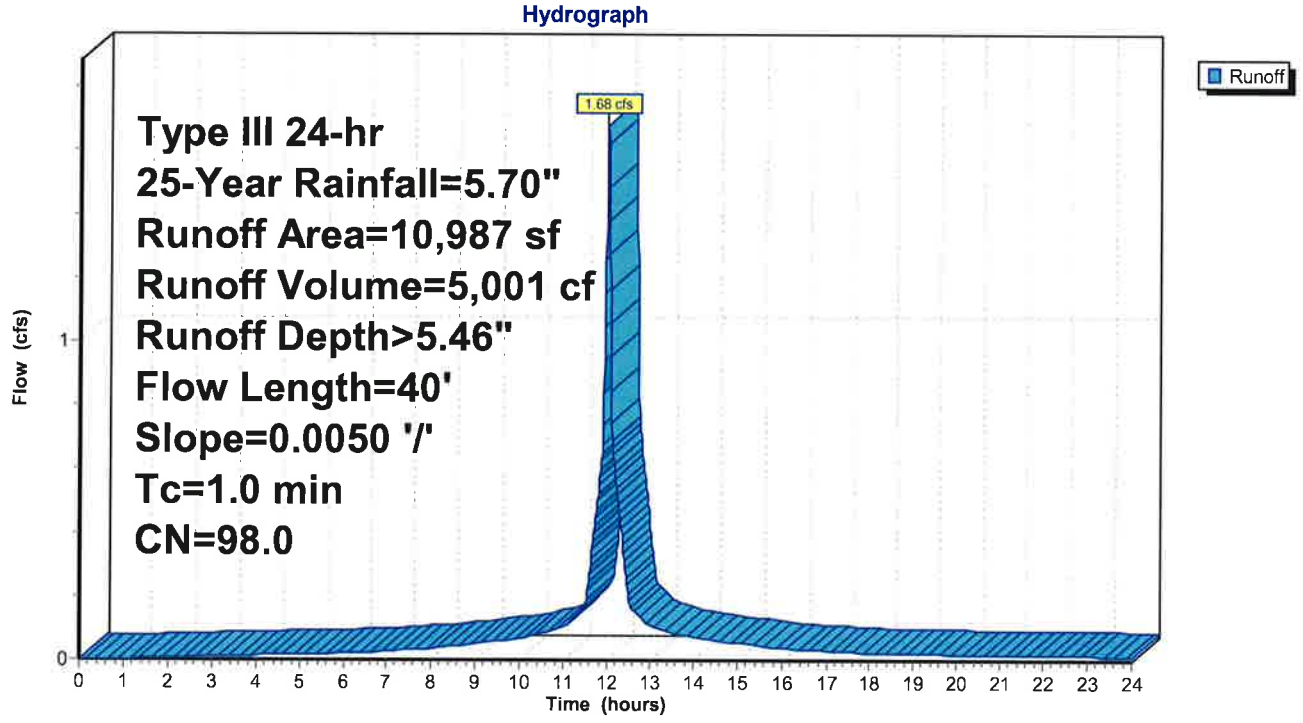
Runoff = 1.68 cfs @ 12.01 hrs, Volume= 5,001 cf, Depth> 5.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
10,987	98.0	Roofs, HSG B
10,987		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	40	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.30"

Subcatchment 2S: Area - 2



Summary for Pond 3P: DW-1

Inflow Area = 10,987 sf,100.00% Impervious, Inflow Depth > 5.46" for 25-Year event
Inflow = 1.68 cfs @ 12.01 hrs, Volume= 5,001 cf
Outflow = 0.37 cfs @ 12.36 hrs, Volume= 5,002 cf, Atten= 78%, Lag= 20.7 min
Discarded = 0.14 cfs @ 11.51 hrs, Volume= 4,652 cf
Primary = 0.23 cfs @ 12.36 hrs, Volume= 350 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 179.97' @ 12.36 hrs Surf.Area= 497 sf Storage= 1,414 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 54.6 min (795.8 - 741.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	175.00'	774 cf	**10.80'W x 46.00'L x 6.50'H Field A** 3,229 cf Overall - 1,295 cf Embedded = 1,934 cf x 40.0% Voids
#2A	177.00'	976 cf	**Galley 4x4x4** x 22 Inside #1 Inside= 42.0"W x 43.0"H => 12.67 sf x 3.50'L = 44.3 cf Outside= 52.8"W x 48.0"H => 14.72 sf x 4.00'L = 58.9 cf 2 Rows of 11 Chambers
		1,749 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	179.50'	**6.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 179.50' / 173.50' S= 0.5000 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	179.50'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	180.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Discarded	175.00'	**12.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.14 cfs @ 11.51 hrs HW=175.07' (Free Discharge)
↑└**4=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=0.23 cfs @ 12.36 hrs HW=179.97' TW=0.00' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 0.23 cfs of 0.45 cfs potential flow)
↑├**2=Orifice/Grate** (Orifice Controls 0.23 cfs @ 2.66 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: DW-1 - Chamber Wizard Field A

Chamber Model = Galley 4x4x4 (Concrete Galley, UCPI 4x4x4 Galley or equivalent)
Inside= 42.0"W x 43.0"H => 12.67 sf x 3.50'L = 44.3 cf
Outside= 52.8"W x 48.0"H => 14.72 sf x 4.00'L = 58.9 cf

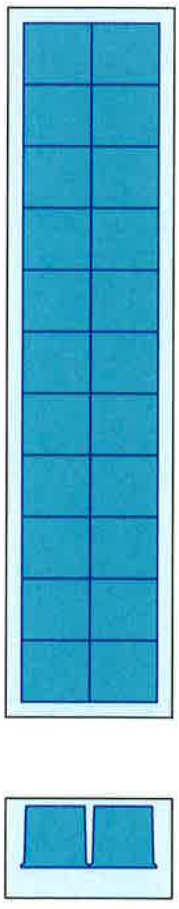
11 Chambers/Row x 4.00' Long = 44.00' Row Length +12.0" End Stone x 2 = 46.00' Base Length
2 Rows x 52.8" Wide + 12.0" Side Stone x 2 = 10.80' Base Width
24.0" Base + 48.0" Chamber Height + 6.0" Cover = 6.50' Field Height

22 Chambers x 44.3 cf = 975.6 cf Chamber Storage
22 Chambers x 58.9 cf = 1,295.3 cf Displacement

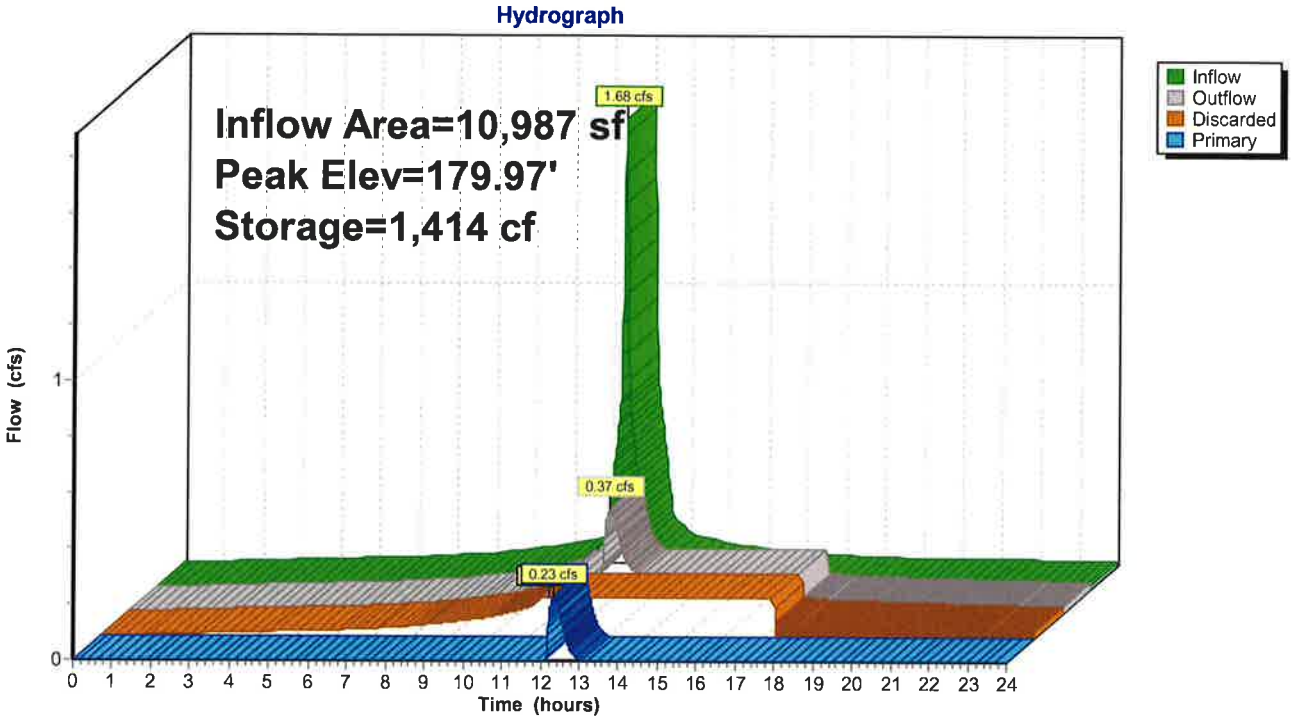
3,229.2 cf Field - 1,295.3 cf Chambers = 1,933.9 cf Stone x 40.0% Voids = 773.6 cf Stone Storage

Chamber Storage + Stone Storage = 1,749.2 cf = 0.040 af
Overall Storage Efficiency = 54.2%
Overall System Size = 46.00' x 10.80' x 6.50'

22 Chambers
119.6 cy Field
71.6 cy Stone



Pond 3P: DW-1

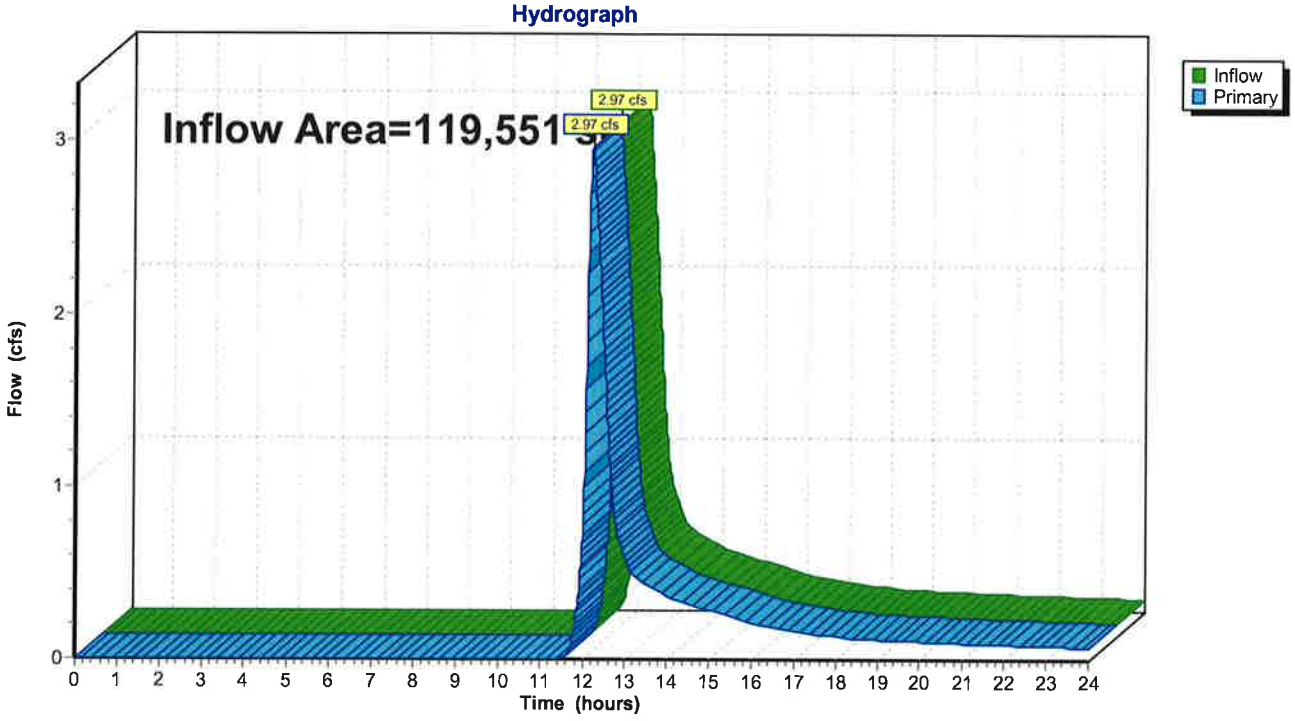

Hydrograph
Inflow Area=10,987 sf
Peak Elev=179.97'
Storage=1,414 cf
1.68 cfs
0.37 cfs
0.23 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
0
1
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time (hours)

Summary for Link 4L: POC "A"

Inflow Area = 119,551 sf, 10.43% Impervious, Inflow Depth > 1.33" for 25-Year event
Inflow = 2.97 cfs @ 12.24 hrs, Volume= 13,293 cf
Primary = 2.97 cfs @ 12.24 hrs, Volume= 13,293 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 4L: POC "A"



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area - 1 Runoff Area=108,564 sf 1.37% Impervious Runoff Depth>0.14"
Flow Length=466' Tc=14.8 min UI Adjusted CN=56.2 Runoff=0.09 cfs 1,308 cf

Subcatchment 2S: Area - 2 Runoff Area=10,987 sf 100.00% Impervious Runoff Depth>2.47"
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98.0 Runoff=0.78 cfs 2,261 cf

Pond 3P: DW-1 Peak Elev=177.31' Storage=502 cf Inflow=0.78 cfs 2,261 cf
Discarded=0.14 cfs 2,261 cf Primary=0.00 cfs 0 cf Outflow=0.14 cfs 2,261 cf

Link 4L: POC "A" Inflow=0.09 cfs 1,308 cf
Primary=0.09 cfs 1,308 cf

Total Runoff Area = 119,551 sf Runoff Volume = 3,569 cf Average Runoff Depth = 0.36"
89.57% Pervious = 107,080 sf 10.43% Impervious = 12,471 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area - 1 Runoff Area=108,564 sf 1.37% Impervious Runoff Depth>0.32"
Flow Length=466' Tc=14.8 min UI Adjusted CN=56.2 Runoff=0.35 cfs 2,858 cf

Subcatchment 2S: Area - 2 Runoff Area=10,987 sf 100.00% Impervious Runoff Depth>3.07"
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98.0 Runoff=0.96 cfs 2,808 cf

Pond 3P: DW-1 Peak Elev=177.93' Storage=714 cf Inflow=0.96 cfs 2,808 cf
Discarded=0.14 cfs 2,810 cf Primary=0.00 cfs 0 cf Outflow=0.14 cfs 2,810 cf

Link 4L: POC "A" Inflow=0.35 cfs 2,858 cf
Primary=0.35 cfs 2,858 cf

Total Runoff Area = 119,551 sf Runoff Volume = 5,666 cf Average Runoff Depth = 0.57"
89.57% Pervious = 107,080 sf 10.43% Impervious = 12,471 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area - 1 Runoff Area=108,564 sf 1.37% Impervious Runoff Depth>0.71"
Flow Length=466' Tc=14.8 min UI Adjusted CN=56.2 Runoff=1.13 cfs 6,419 cf

Subcatchment 2S: Area - 2 Runoff Area=10,987 sf 100.00% Impervious Runoff Depth>4.06"
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98.0 Runoff=1.26 cfs 3,721 cf

Pond 3P: DW-1 Peak Elev=178.99' Storage=1,080 cf Inflow=1.26 cfs 3,721 cf
Discarded=0.14 cfs 3,721 cf Primary=0.00 cfs 0 cf Outflow=0.14 cfs 3,721 cf

Link 4L: POC "A" Inflow=1.13 cfs 6,419 cf
Primary=1.13 cfs 6,419 cf

Total Runoff Area = 119,551 sf Runoff Volume = 10,140 cf Average Runoff Depth = 1.02"
89.57% Pervious = 107,080 sf 10.43% Impervious = 12,471 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area - 1 Runoff Area=108,564 sf 1.37% Impervious Runoff Depth>1.05"
Flow Length=466' Tc=14.8 min UI Adjusted CN=56.2 Runoff=1.91 cfs 9,491 cf

Subcatchment 2S: Area - 2 Runoff Area=10,987 sf 100.00% Impervious Runoff Depth>4.76"
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98.0 Runoff=1.47 cfs 4,361 cf

Pond 3P: DW-1 Peak Elev=179.68' Storage=1,314 cf Inflow=1.47 cfs 4,361 cf
Discarded=0.14 cfs 4,295 cf Primary=0.07 cfs 66 cf Outflow=0.21 cfs 4,361 cf

Link 4L: POC "A" Inflow=1.91 cfs 9,557 cf
Primary=1.91 cfs 9,557 cf

Total Runoff Area = 119,551 sf Runoff Volume = 13,851 cf Average Runoff Depth = 1.39"
89.57% Pervious = 107,080 sf 10.43% Impervious = 12,471 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area - 1 Runoff Area=108,564 sf 1.37% Impervious Runoff Depth>1.43"
Flow Length=466' Tc=14.8 min UI Adjusted CN=56.2 Runoff=2.80 cfs 12,943 cf

Subcatchment 2S: Area - 2 Runoff Area=10,987 sf 100.00% Impervious Runoff Depth>5.46"
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98.0 Runoff=1.68 cfs 5,001 cf

Pond 3P: DW-1 Peak Elev=179.97' Storage=1,414 cf Inflow=1.68 cfs 5,001 cf
Discarded=0.14 cfs 4,652 cf Primary=0.23 cfs 350 cf Outflow=0.37 cfs 5,002 cf

Link 4L: POC "A" Inflow=2.97 cfs 13,293 cf
Primary=2.97 cfs 13,293 cf

Total Runoff Area = 119,551 sf Runoff Volume = 17,944 cf Average Runoff Depth = 1.80"
89.57% Pervious = 107,080 sf 10.43% Impervious = 12,471 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area - 1 Runoff Area=108,564 sf 1.37% Impervious Runoff Depth>1.85"
Flow Length=466' Tc=14.8 min UI Adjusted CN=56.2 Runoff=3.77 cfs 16,713 cf

Subcatchment 2S: Area - 2 Runoff Area=10,987 sf 100.00% Impervious Runoff Depth>6.16"
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98.0 Runoff=1.89 cfs 5,641 cf

Pond 3P: DW-1 Peak Elev=180.30' Storage=1,523 cf Inflow=1.89 cfs 5,641 cf
Discarded=0.14 cfs 4,990 cf Primary=0.33 cfs 651 cf Outflow=0.47 cfs 5,642 cf

Link 4L: POC "A" Inflow=4.08 cfs 17,364 cf
Primary=4.08 cfs 17,364 cf

Total Runoff Area = 119,551 sf Runoff Volume = 22,354 cf Average Runoff Depth = 2.24"
89.57% Pervious = 107,080 sf 10.43% Impervious = 12,471 sf

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Area - 1 Runoff Area=108,564 sf 1.37% Impervious Runoff Depth>2.36"
Flow Length=466' Tc=14.8 min UI Adjusted CN=56.2 Runoff=4.97 cfs 21,347 cf

Subcatchment 2S: Area - 2 Runoff Area=10,987 sf 100.00% Impervious Runoff Depth>6.96"
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98.0 Runoff=2.12 cfs 6,373 cf

Pond 3P: DW-1 Peak Elev=180.62' Storage=1,622 cf Inflow=2.12 cfs 6,373 cf
Discarded=0.14 cfs 5,360 cf Primary=0.61 cfs 1,013 cf Outflow=0.75 cfs 6,373 cf

Link 4L: POC "A" Inflow=5.54 cfs 22,360 cf
Primary=5.54 cfs 22,360 cf

Total Runoff Area = 119,551 sf Runoff Volume = 27,719 cf Average Runoff Depth = 2.78"
89.57% Pervious = 107,080 sf 10.43% Impervious = 12,471 sf

Appendix "E"

Communications

Patrell
Engineering Group, Inc.

751 Sunny Grove Lane • Glendora, CA 91741 • Phone: (626) 335-4362 • Fax: (626) 963-4812

Mr. Jan Johannessen
Environmental Engineer
Town of Lewisboro

06/06/18

RE: Therapy Pool
Hidden Point Farms
153 Silver Spring Road

Dear Mr. Johannessen,

By means of this letter, I am responding to comments from the design team regarding the City's requirement for all pools to have an underground infiltrator system matrix sufficient to handle the storage of a potential 6"draw down of the pool water. So it's obvious that the size of the infiltrator system is governed by the overall pool surface area. This pool has a surface area 19,432 sq. ft., with a total of 875,514 gallons; therefore, a 6 inch drawdown would require a combined infiltrator storage + percolation of 72,000 gallons. This is far above any need this pool will ever actually require.

Considering the way this pool is designed, and will operate, it's my opinion that the infiltrator system should designed to meet the requirements for backwash water only. In my opinion, the size of the system would therefore be similar to that required for a normal 500 square ft. backyard pool. The reasons are as follows:

1. This is a Therapy Pool and thus will not be drained down during the winter or at any time during the course of its use. The water will be heated enough to maintain required area to be above freezing, so the normal draw down typically required for winterizing a pool will not be an issue.

2. The pool has been designed to be almost chlorine free so any water that drains to the environment will not have any halogen sufficient to cause any damage to plant or the local water supply.

3. Finally this pool is a personal use facility so backwashing is anticipated possibly every 3 weeks. This is a cutting edge filter with less than 1/3 the normal backwash water so any basic infiltrator matrix for a standard backyard pool will be more than adequate for the backwash of this filter system.

If there are any questions, feel free to contact me.

Respectfully Submitted,
PATRELL ENGINEERING GROUP, INC.



Douglas R. Ferrell P.E.



Bryan French

From: Jan Johannessen <jjohannessen@kelses.com>
Sent: Monday, June 11, 2018 2:37 PM
To: Joe Cerrone
Cc: Leonard D'Andrea; Bryan French; 'Aimee Hodges (AHodges@lewisborogov.com)'; Danielle Cinguina
Subject: RE: Hidden Point farms

Joe,

Since the pool will be heated year round and because of the size of the pool and unique filtering system, we will make an exception. Please design the infiltration system to accept the net increase in impervious cover associated with any proposed patio's, walkways, building, etc. (designed to mitigate the 25-year storm event) and 6" draw-down of a typical pool (600 s.f. minimum). As indicated, we will need to witness soil testing. All plans, environmental questionnaires, application forms, and reports must be submitted to the Building Department.

Regards,

JAN K. JOHANNESSEN, AICP
Principal

KELLARD SESSIONS

KELLARD SESSIONS CONSULTING
500 Main Street | Armonk, New York 10504
T: 914.273.2323| F: 914.273.2329
jjohannessen@kelses.com | www.kelses.com

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE
SITE & ENVIRONMENTAL PLANNING

From: Joe Cerrone [mailto:Joe@rdcdesignbuild.com]
Sent: Thursday, June 7, 2018 2:46 PM
To: Jan Johannessen <jjohannessen@kelses.com>
Cc: Leonard D'Andrea (lcd@rvdi.com) <lcd@rvdi.com>; Bryan French (bryan@rvdi.com) <bryan@rvdi.com>
Subject: Hidden Point farms

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Respectfully,

Patrell
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751 Sunny Grove Lane • Glendora, CA 91741 • Phone: (626) 335-4362 • Fax: (626) 963-4812

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Douglas R. Ferrell P.E.



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Regards,

JAN K. JOHANNESSEN, AICP
Principal

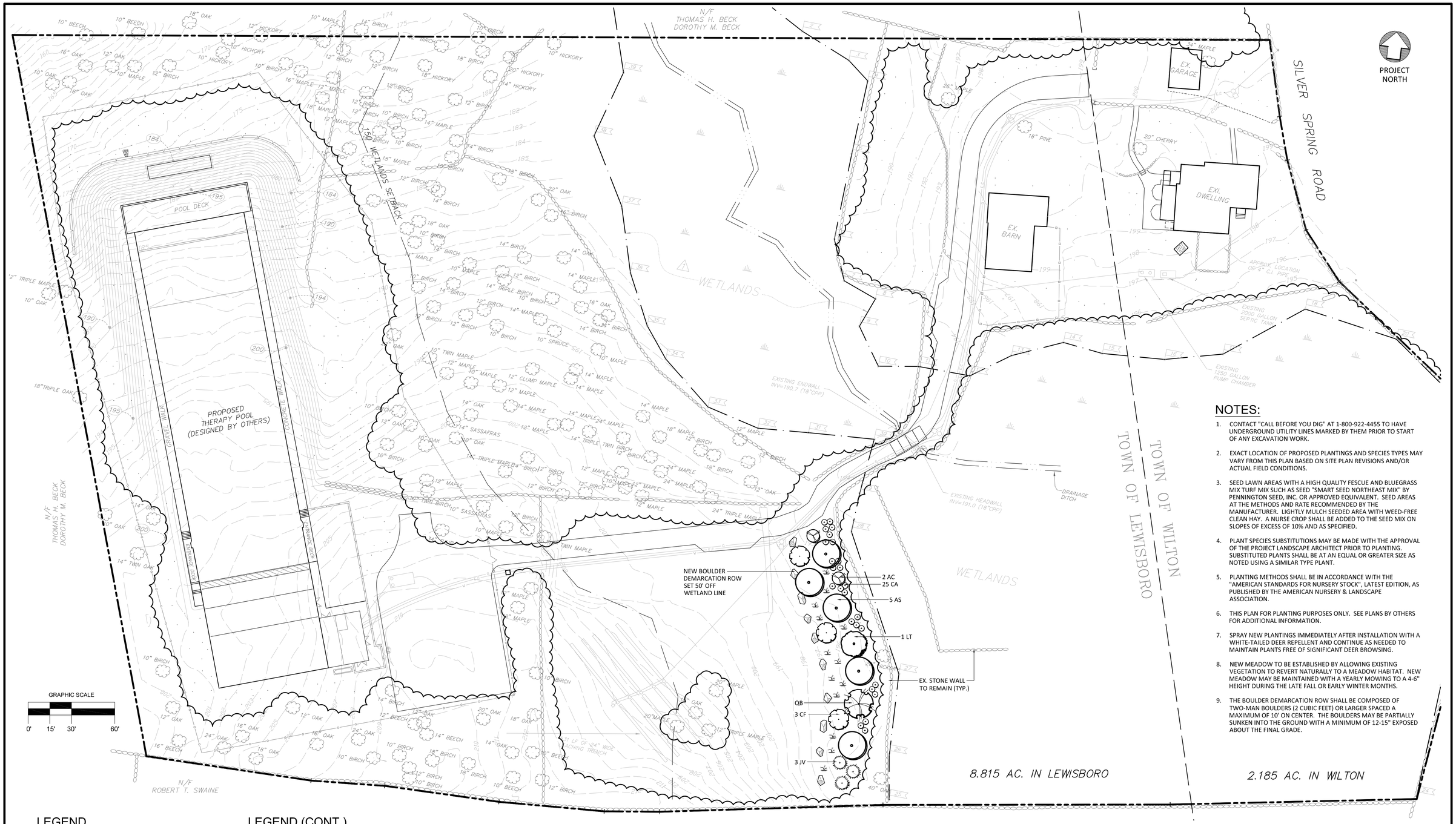
KELLARD SESSIONS CONSULTING
500 Main Street | Armonk, New York 10504
T: 914.273.2323 | F: 914.273.2329
jjohannessen@kelses.com | www.kelses.com

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE
SITE & ENVIRONMENTAL PLANNING

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Subject: Hidden Point farms

Hi Jan,
Please find the letter in reference to the Hidden Point Farms therapy pool located in Lewisboro, NY. As we discussed the letter from the aquatic engineer explains our request for the reduction or elimination of the required 6" drawdown.

Respectfully,



NOTES:

1. CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 TO HAVE UNDERGROUND UTILITY LINES MARKED BY THEM PRIOR TO START OF ANY EXCAVATION WORK.
2. EXACT LOCATION OF PROPOSED PLANTINGS AND SPECIES TYPES MAY VARY FROM THIS PLAN BASED ON SITE PLAN REVISIONS AND/OR ACTUAL FIELD CONDITIONS.
3. SEED LAWN AREAS WITH A HIGH QUALITY FESCUE AND BLUEGRASS MIX TURF MIX SUCH AS SEED "SMART SEED NORTHEAST MIX" BY PENNINGTON SEED, INC. OR APPROVED EQUIVALENT. SEED AREAS AT THE METHODS AND RATE RECOMMENDED BY THE MANUFACTURER. LIGHTLY MULCH SEEDED AREA WITH WEED-FREE CLEAN HAY. A NURSE CROP SHALL BE ADDED TO THE SEED MIX ON SLOPES OF EXCESS OF 10% AND AS SPECIFIED.
4. PLANT SPECIES SUBSTITUTIONS MAY BE MADE WITH THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT PRIOR TO PLANTING. SUBSTITUTED PLANTS SHALL BE AT AN EQUAL OR GREATER SIZE AS NOTED USING A SIMILAR TYPE PLANT.
5. PLANTING METHODS SHALL BE IN ACCORDANCE WITH THE "AMERICAN STANDARDS FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
6. THIS PLAN FOR PLANTING PURPOSES ONLY. SEE PLANS BY OTHERS FOR ADDITIONAL INFORMATION.
7. SPRAY NEW PLANTINGS IMMEDIATELY AFTER INSTALLATION WITH A WHITE-TAILED DEER REPELLENT AND CONTINUE AS NEEDED TO MAINTAIN PLANTS FREE OF SIGNIFICANT DEER BROWSING.
8. NEW MEADOW TO BE ESTABLISHED BY ALLOWING EXISTING VEGETATION TO REVERT NATURALLY TO A MEADOW HABITAT. NEW MEADOW MAY BE MAINTAINED WITH A YEARLY MOWING TO A 4-6" HEIGHT DURING THE LATE FALL OR EARLY WINTER MONTHS.
9. THE BOULDER DEMARCATION ROW SHALL BE COMPOSED OF TWO-MAN BOULDERS (2 CUBIC FEET) OR LARGER SPACED A MAXIMUM OF 10' ON CENTER. THE BOULDERS MAY BE PARTIALLY SUNKEN INTO THE GROUND WITH A MINIMUM OF 12-15" EXPOSED ABOUT THE FINAL GRADE.

LEGEND

- PROPERTY LINE
- WETLAND LINE
- UPLAND REVIEW LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TREE LINE TO REMAIN (APPROX.)
- NEW / EX. LAWN AREA
- EX. DECIDUOUS / EVERGREEN TREE TO REMAIN
- NEW UPLAND MEADOW

LEGEND (CONT.)

- NEW DECIDUOUS SHADE TREE
- NEW DECIDUOUS SMALL TREE
- NEW EVERGREEN TREE
- NEW SHRUB
- NEW BOULDER DEMARCATION ROW

PLANT LIST

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
5	AS	ACER SACCHARUM	SUGAR MAPLE	1 1/2-2" CAL.	B&B	FULL
2	AC	AMELANCHIER CANADENSIS	SHAD	4-5' HT.	B&B	MULTI-STEM
3	CF	CORNUS FLORIDA	FLOWERING DOGWOOD	6-7' HT.	B&B	WHITE
1	LT	LIRIODENDRON TULIPIFERA	TULIPTREE	8-9' HT.	B&B	
1	QB	QUERCUS BICOLOR	SWAMP WHITE OAK	1 1/2-2" CAL.	B&B	FULL
3	JV	JUNIPERUS VIRGINIANA	RED CEDAR	6-7' HT.	B&B	FULL
25	CA	CLETHRA ALNIFOLIA	SUMMERSWEET	2-3' HT.	CONT.	

REVISIONS:

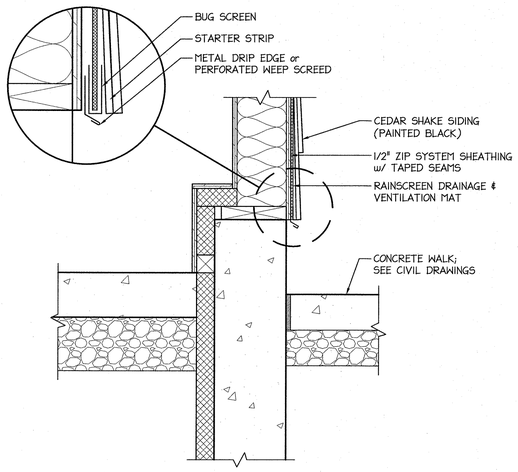
DRAWING TITLE: WETLAND MITIGATION PLAN

PROJECT: 152 SILVER SPRING ROAD
WILTON, CONNECTICUT

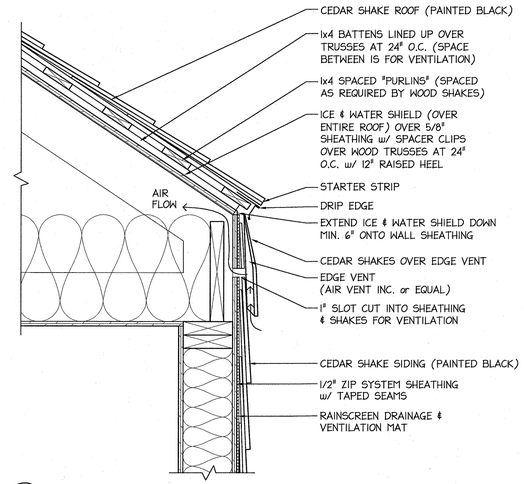
ENVIRONMENTAL LAND SOLUTIONS, LLC
Landscape Architecture and Environmental Planning
8 KNIGHT STREET, SUITE 203
NORWALK, CONNECTICUT 06851
Tel: (203) 855-7879 Fax: (203) 855-7836
info@elsllc.net www.elsllc.net

SEAL: LICENSED LANDSCAPE ARCHITECT MATTHEW JAMES PORTER STATE OF NEW YORK

DATE: 9.25.18
SCALE: 1"=30'
DRAWING NO.: LP.1



3 WALL BASE DETAIL
1-1/2" = 1'-0"



4 WALL TO ROOF TRANSITION DETAIL
1-1/2" = 1'-0"

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP.
	SPEED (mph)	TOPOGRAPHIC EFFECTS	SPECIAL WIND REGION	WIND-BORNE DEBRIS ZONE		WEATHERING	FROST LINE DEPTH	TERMITE					
50	115	NO	YES	NO	C	SEVERE	42"	MODERATE/ HEAVY	7°	YES	361227 9/07	618 100 YR	52.2

2015 IBC CODE SUMMARY

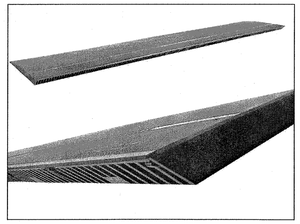
USE AND OCCUPANCY CLASSIFICATION: F-1
TYPE OF CONSTRUCTION: VB
ALLOWABLE NUMBER OF STORIES: 1 STORY
ALLOWABLE AREA (NON SPRINKLERED): 8,500 SF (998 SF ACTUAL)

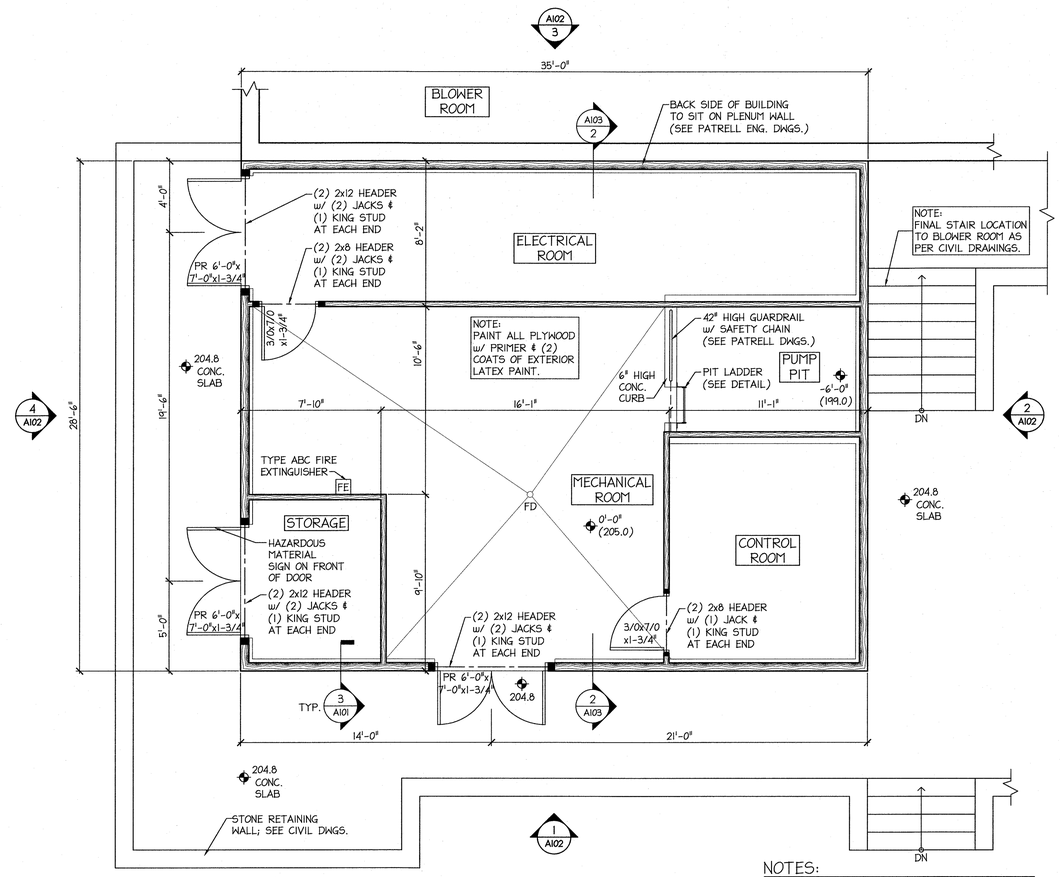
ENERGY CODE COMPLIANCE

THIS PROJECT AS SHOWN CONFORMS WITH CHAPTER 4 TABLE C402.1.3 OF THE IECC (2015) FOR CLIMATE ZONE 4.

UNHEATED SLABS	R-10 FOR 24" BELOW
WALLS	R-20 MIN. (R-21 ACTUAL)
ATTIC/CEILING	R-38
INSULATED METAL DOORS	U.6
INSULATED GLASS	U.35 or BETTER

EDGE VENT IMAGE



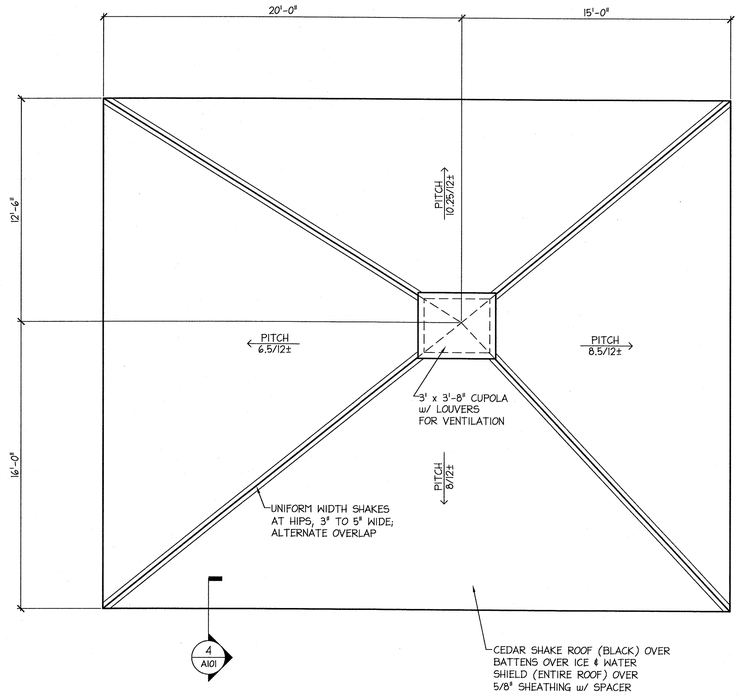


PROJECT NORTH

1 FLOOR PLAN
1/4" = 1'-0"

NOTES:

1. ALL INTERIOR WALLS ARE 2"x4" CONSTRUCTION (UNLESS NOTED OTHERWISE)
2. ALL EXTERIOR WALLS ARE 2"x6" CONSTRUCTION (UNLESS NOTED OTHERWISE)
3. ALL DOORS & FRAMES ARE HOLLOW METAL w/ HARDWARE AND LOCKS AS PER OWNER.
4. ALL EXTERIOR DOORS TO BE INSULATED & GALVANIZED (PAINTED) w/ WEATHERSTRIPPING AND THRESHOLD.



2 ROOF PLAN
1/4" = 1'-0"

SRG
STRACHER ROTH GILMORE ARCHITECTS
ARCHITECTURE
PLANNING
INTERIOR DESIGN
REHABILITATION
143 JAY STREET
SCHENECTADY, NY 12305
(518) 374-9412
FAX (518) 374-4049
info@srgarch.com

SEAL

PROJECT TITLE
POOL BUILDING AT:
HIDDEN POINT FARM
153 SILVER SPRINGS ROAD
LEWISBORO, NY / WILTON, CT

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 8/8/2018
SCALE: AS NOTED
DRAWN BY: TP
CHECKED BY: MJR

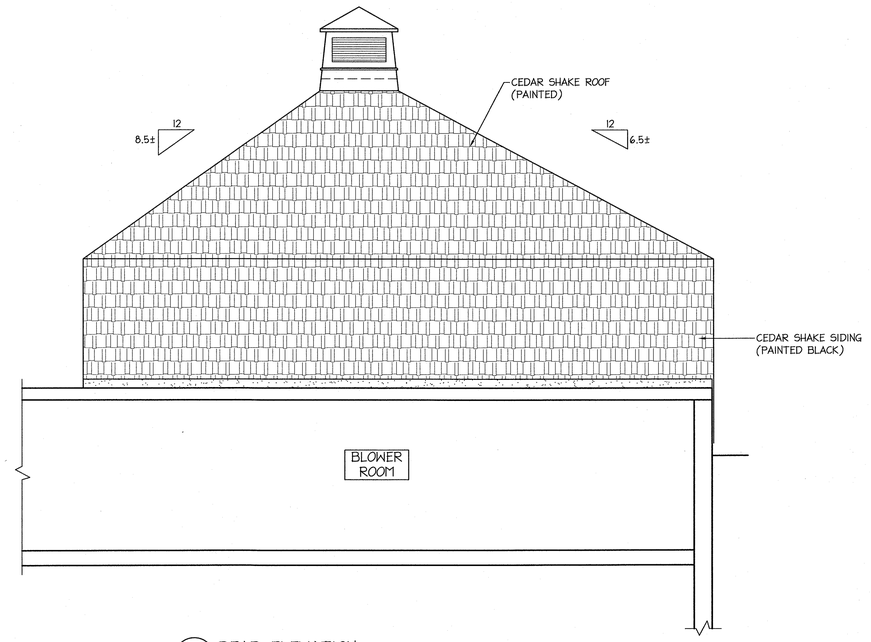
SHEET TITLE
FLOOR & ROOF PLAN

SHEET
A101

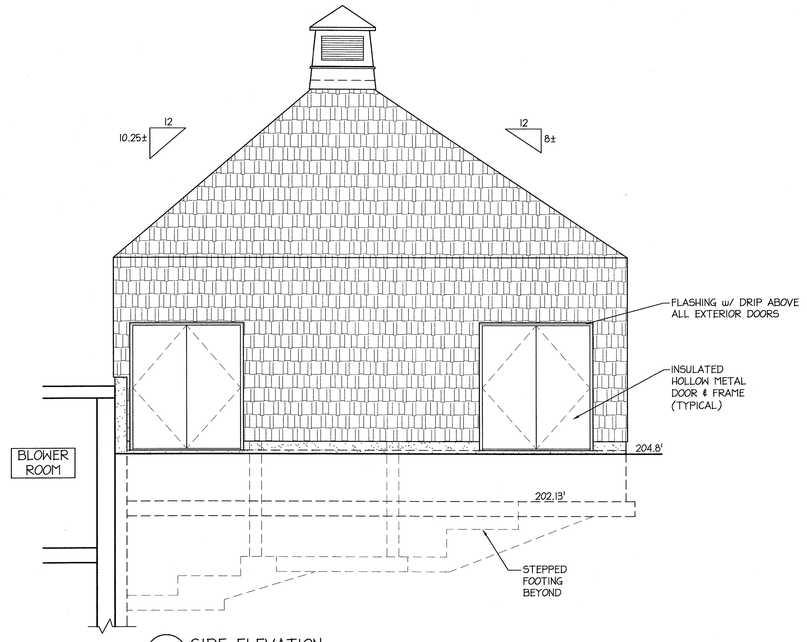
COMM NO. 1833.01

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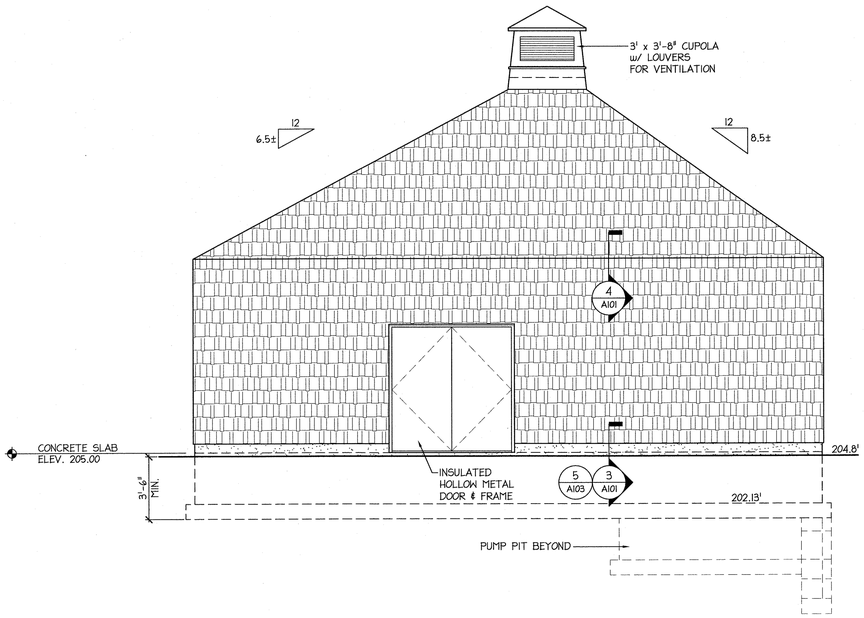
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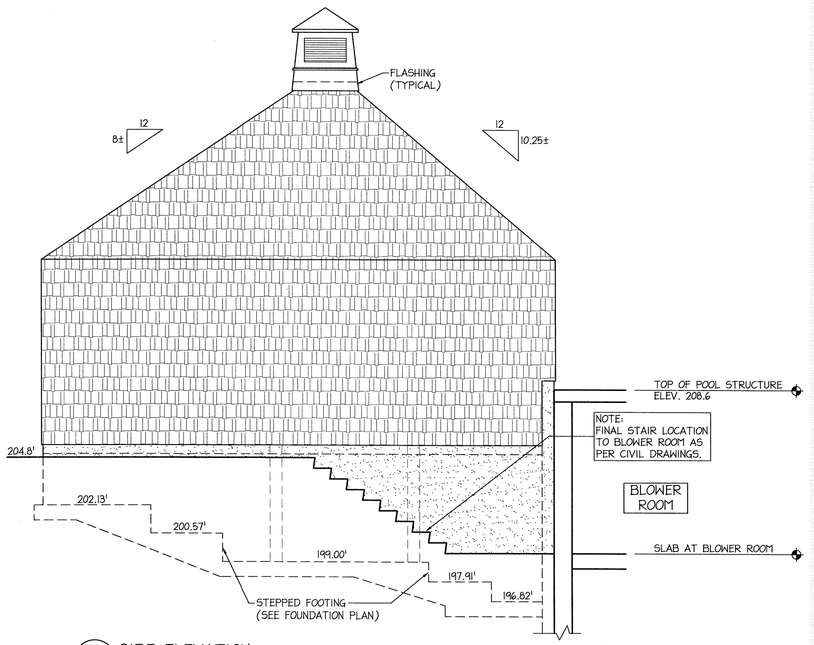
3 REAR ELEVATION
1/4" = 1'-0"



4 SIDE ELEVATION
1/4" = 1'-0"



1 FRONT ELEVATION
1/4" = 1'-0"



2 SIDE ELEVATION
1/4" = 1'-0"

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ARCHITECTS
ARCHITECTURE
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SCHENECTADY, NY 12305
(518) 374-9412
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SEAL

PROJECT TITLE
POOL BUILDING AT:
HIDDEN POINT FARM
153 SILVER SPRINGS ROAD
LEWISBORO, NY / WILTON, CT

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 8/8/2018
SCALE: AS NOTED
DRAWN BY: TP
CHECKED BY: MJR

SHEET TITLE
EXTERIOR
ELEVATIONS

SHEET
A102

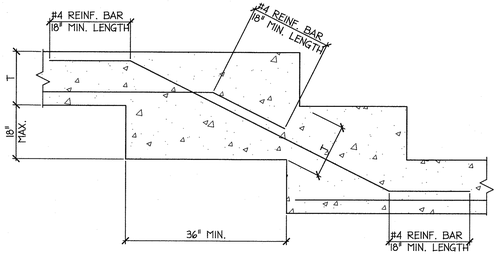
COMM NO. 1833.01

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Saved: 8/7/2018 4:54:03 PM Plotted: 8/8/2018 10:33:29 AM User: Tim Parillo

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CONCRETE, BACKFILL & FOUNDATION NOTES

1. ALL CONCRETE TO BE 3500 psi - 28 DAY UNLESS OTHERWISE NOTED.
2. ASSUMED SOIL BEARING VALUE OF 2000 psf. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.
3. WOOD SILL PLATE SHALL BE ANCHORED TO FOUNDATION WITH ANCHOR BOLTS AT A MAXIMUM SPACING OF 4'-0" O.C. AND LOCATED WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION.
4. ANCHOR BOLTS SHALL BE AT LEAST 1/2" IN DIAMETER AND SHALL EXTEND A MINIMUM OF 7" INTO CONCRETE.
5. FOOTING DOWELS SHALL BE PROVIDED TO CONNECT FOOTINGS TO WALLS AND SHALL CONSIST OF #4 BARS AT 4'-0" O.C. BARS SHALL EXTEND A MINIMUM OF 12" OUT OF TOP OF FOOTING AND SHALL BE EMBEDDED A MINIMUM OF 6" INTO FOOTING.
6. VERTICAL REINFORCING SHALL CONSIST OF #4 BARS AT 4'-0" O.C. AND SHALL BE LAPPED TO #4 FOOTING DOWELS EXTENDING VERTICALLY 12" OUT OF FOOTING PLACED AT 4'-0" O.C.
7. HORIZONTAL REINFORCING SHALL CONSIST OF (1) #4 BARS, AT 12" DOWN FROM TOP OF WALL AND AT MIDDLE OF WALL.
8. ALL WORK SHALL COMPLY WITH ACI, ASTM AND ANY OTHER APPLICABLE REFERENCED STANDARDS RELATING TO CONCRETE MIX AND PLACEMENT.
9. PROPERLY CURE ALL SLABS AND FINISH WORK.
10. CUT CONTROL JOINTS WITHIN 24 HOURS OF POUR. VERIFY LOCATIONS w/ ARCHITECT.
11. DO NOT PLACE CONCRETE ON ANY SUB-BASE THAT MAY DETRIMENTALLY AFFECT WORK.
12. PROVIDE SLEEVES FOR ANY UTILITY CONNECTIONS.



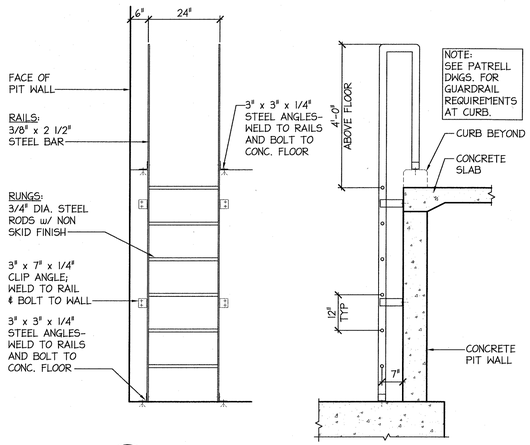
NOTES: T = FOOTING THICKNESS

1-THE MINIMUM FOOTING THICKNESS, T, IN STEPPED AREAS SHALL EQUAL THE FOOTING THICKNESS IN THOSE UNSTEPPED AREAS.

2-THE REINFORCING BAR SIZE IN STEPPED AREAS SHALL EQUAL THE BAR SIZE IN THOSE UNSTEPPED AREAS.

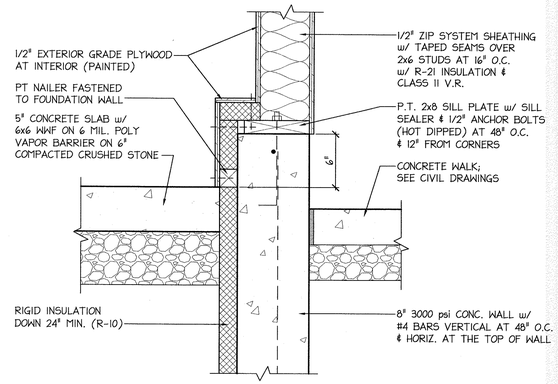
3-A MINIMUM OF 3 INCHES OF CONCRETE IS REQUIRED AROUND ALL REINFORCING BARS.

3 STEP FOOTING DETAIL
3/4" = 1'-0"

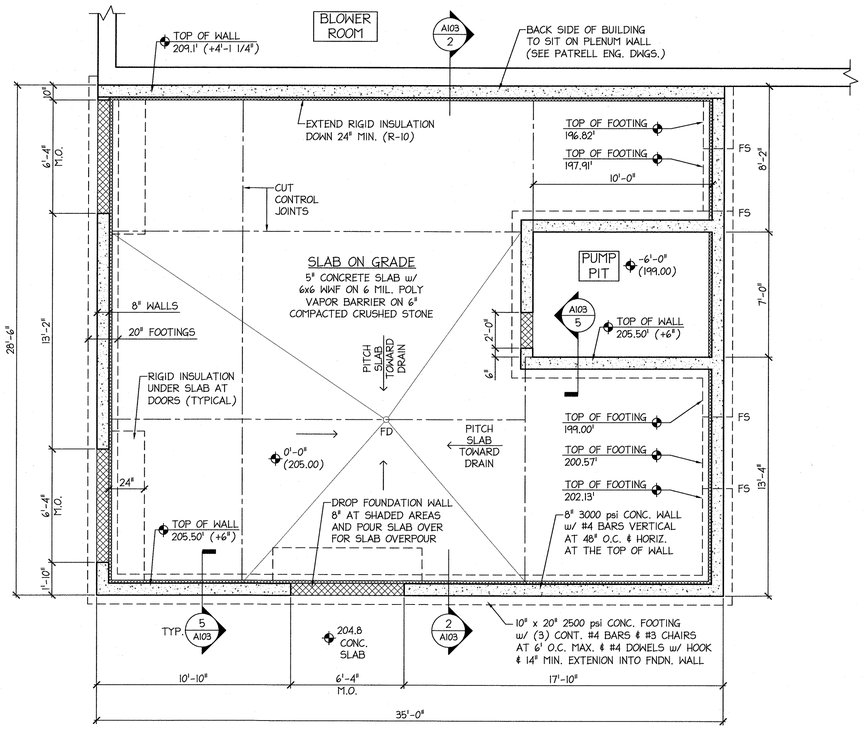


4 PIT LADDER DETAIL
1/2" = 1'-0"

NOTE: PLUG WELD RUNGS TO RAIL, WELD AND GRIND SMOOTH ALL CORNERS & SHARP EDGES.



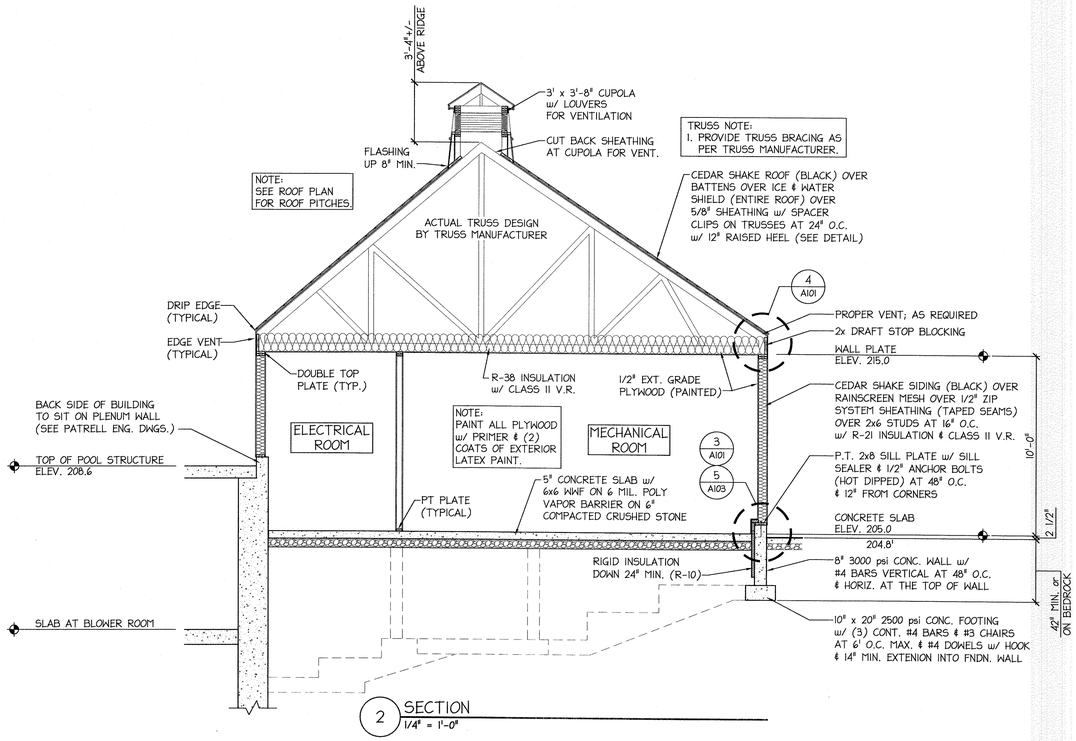
5 TYPICAL FOUNDATION DETAIL
1-1/2" = 1'-0"



1 FOUNDATION PLAN
1/4" = 1'-0"

NOTES:

1. CONCRETE SLAB TO HAVE BROOM FINISH.
2. APPLY SEALER/HARDENER TO CONCRETE SLAB.
3. PITCH SLAB TOWARDS FLOOR DRAIN (FD) AS INDICATED ON THE PLANS.
4. FS = FOOTING STEP (SEE DETAIL)
5. FD = FLOOR DRAIN
6. SEE PATRELL ENGINEERING DRAWINGS FOR HOUSEKEEPING PADS REQUIRED.



2 SECTION
1/4" = 1'-0"

SRG
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ARCHITECTURE
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SCHENECTADY, NY 12305
(518) 374-9412
FAX (518) 374-4049
info@srgarch.com

SEAL

REGISTERED ARCHITECT — JAMES R. TRACY — #23069 — STATE OF NEW YORK

PROJECT TITLE
POOL BUILDING AT:
HIDDEN POINT FARM
153 SILVER SPRINGS ROAD
LEWISBORO, NY / WILTON, CT

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 8/8/2018
SCALE: AS NOTED
DRAWN BY: TP
CHECKED BY: MJR

SHEET TITLE
FOUNDATION PLAN & SECTION

SHEET
A103

COMM NO. 1833.01

File: Z:\1833-01 HIDDENPOINT-POOLBLDG\DWGS\CONSTRUCTION DOCUMENTS\1833_HIDDEN POINT POOLBLDG.DWG
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KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
Town Consulting Professionals

DATE: October 11, 2018

RE: Wolf Conservation Center
Mead Street and Buck Run
Sheet 21, Block 10803, Lots 3, 65, 67, 81, 82, 83 and 88

PROJECT DESCRIPTION

The subject property consists of ±32.5 acres and is located off Buck Run, a private road, within the R-2A and R-4A Zoning Districts. The applicant has submitted an application for a subdivision in connection with a proposed lot line change and Special Use Permit application to make improvements and operate as a Private Nature Preserve in accordance with Section 220-43.2 of the Zoning Code. The applicant has an agreement with the owner of 1 Buck Run and, following acquisition of this property, will own all property along Buck Run with the exception of a single lot located on the northwest corner of the intersection of Buck Run and NYS Route 35.

SEQRA

The proposed action has been preliminarily identified as an Unlisted Action under the State Environmental Quality Review Act (SEQRA) and, therefore, a coordinated review is not required. The Planning Board must issue a Determination of Significance prior to taking action on this pending application.

REQUIRED APPROVALS AND REFERRALS

1. Subdivision, a Special Use Permit, a Wetland Activity Permit and a Town Stormwater Permit is required from the Planning Board; a public hearing is required to be held.

2. An area variance pertaining to an existing fence is required from the Zoning Board of Appeals (ZBA); other area variance may be required in connection with driveway/road and parking dimensions and grades.

3. The application must be referred to the Architecture and Community Appearance Review Council (ACARC) for review and recommendations.

4. Land disturbance will exceed one (1) acre located within the New York City Department of Environmental Protection (NYCDEP) East of Hudson Watershed; coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharge from Construction Activity (GP-0-15-002) is required.

5. The proposed action may require a Stormwater Pollution Prevision Plan (SWPPP), as required by the NYCDEP.

6. An Article 24 Freshwater Wetland Permit may be required from the NYSDEC.

7. Improvements and modifications within the State right-of-way will required approval from the New York State Department of Transportation (NYSDOT).

8. The proposed action must be referred to the Westchester County Planning Board in accordance with Section 239-m of the General Municipal Law.

COMMENTS

1. As noted, the applicant intends on purchasing 1 Buck Run and incorporating this parcel into the Private Nature Preserve. As a result, modifications to the previously submitted site plans and subdivision plat are being made and the applicant has submitted a revised conceptual layout illustrating the planned improvements; building plans for the proposed education center have been advanced considerably since the applicants last appearance before the Board. The submitted site plans are conceptual in nature and many of the comments contained in our prior memorandum, dated April 12, 2018, are still applicable and should be addressed in future submissions; annotated responses to each comment shall be provided by the applicant. Further, future submissions should include the proposed subdivision plat, as revised.

In addition to the comments outlined in our April 12, 2018 memorandum, we offer the following comments pertaining to the submitted conceptual plans:

2. The drive aisle associated with the proposed parking lot located below the education center must be a minimum of 25 feet wide.

3. The proposed handicap accessible spaces located proximate to the education center are not Code-Compliant; an eight (8) foot wide loading space is required. Further, these spaces should be adjusted to be perpendicular (90 degrees) with adequate space provided for a vehicle to safely back out.

4. The site plans shall identify/note the future use of all existing buildings to remain.

5. All proposed curbs shall be concrete or belgium block; it is recommended that the sidewalk proposed along a portion of Buck Run be concrete, not asphalt.

6. We question the note which states that existing portions of Buck Run will receive asphalt millings and asphalt overlay. Given the existing poor condition of the road surface and the fact that the road is being widened, we recommend full replacement of the road for its entire length.

7. Depending on the slope of the proposed gravel driveway, which has not been determined as this time, a paved surface may be required.

8. The plans shall be revised to illustrate the zoning district boundary line that runs through the subject property.

9. Additional information is required pertaining to the proposed ten (10) foot wide gravel path. The entire limits of the path shall be shown as should its existing/proposed limits and proposed grading; a detail shall be provided.

10. The education center is proposed to contain composting toilets. The applicant shall provide confirmation from the Westchester County Department of Health (WCDH) that composting toilets will be acceptable as a principal means of sewage disposal.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

PLANS REVIEWED, PREPARED BY BIBBO ASSOCIATES, LLP, DATED SEPTEMBER 26, 2018:

- Preliminary Plot Plan (PP-1)
- Existing Conditions Plan (EX-1)
- Layout Plan (LP-1, LP-2)

PLANS REVIEWED, PREPARED BY BAXTER PROJECTS, DATED MAY 25, 2018:

- Title Sheet (T100)
- Architectural Site Plan (A100)
- Floor Plan (A101)
- Basement Plan (A102)
- First Floor Occupancy and Egress Notes (OCC1)
- Floor Areas (A106)
- Roof Plan (A201)
- Building Elevations (A301)
- Building Sections (A401, A402, A403, A404, A405)

DOCUMENTS REVIEWED:

- Letter, prepared by Janet J. Giris, dated September 27, 2018

JKJ/JMC/dc

T:\Lewisboro\Correspondence\2018-10-11_LWPB_WolfConservationCtr_Review Memo.docx

DELBELLO DONNELLAN WEINGARTEN WISE & WIEDERKEHR, LLP

COUNSELLORS AT LAW

THE GATEWAY BUILDING
ONE NORTH LEXINGTON AVENUE
WHITE PLAINS, NEW YORK 10601
(914) 681-0200
FACSIMILE (914) 684-0288

Janet J. Giris
Partner
jjg@ddw-law.com

Connecticut Office
1111 SUMMER STREET
STAMFORD, CT 06905
(203) 298-0000

September 27, 2018

By Hand Delivery

Honorable Jerome Kerner, AIA, Chairman
and Members of the Planning Board
Town of Lewisboro
79 Bouton Road
South Salem, New York 10590

Re: Application of The Wolf Conservation Center, Inc., The County of Westchester and the Town of Lewisboro for Subdivision Approval of Property Located on Mead Street and Buck Run, Waccabuc in the Town of Lewisboro / Application of The Wolf Conservation Center, Inc., Site Plan and Special Permit Approval to Allow a Private Nature Preserve on Property Located on Buck Run, South Salem.

Dear Chairman Kerner and Members of the Board:

As you know, this firm represents the Wolf Conservation Center (the "Applicant" or the "Wolf Center"), in connection with the above-referenced applications. On behalf of the Applicant and in support of our applications, we are writing to submit revised materials for the Board's review and consideration.

As you may remember, when we last appeared before the Board in June, 2018, we advised that the Applicant was currently in negotiations for the purchase of the property located at 1 Buck Run. We are pleased to advise that the Applicant and the owner of the property at 1 Buck Run have now reached an agreement for the sale of that property to the Applicant. 1 Buck Run is located at the northeast corner of the intersection of Buck Run and Route 35. Upon the acquisition of 1 Buck Run, the Wolf Center will be the owner of all of the property along Buck Run with the exception of a single lot located on the northwest corner of the intersection of Buck Run and Route 35.

As a result of the anticipated acquisition of 1 Buck Run, the plans for the site are being revised to incorporate 1 Buck Run as part of the private nature preserve, and in addition, the Applicant will amend the pending subdivision application to merge the properties located at 3 Buck Run (Section 21, Block 10803, Lot 81) and 1 Buck Run (Section 21, Block 10803, Lot 67)with Lots 82, 83, 88, and the 11-acre portion of Lot 3. Accordingly, we respectfully submit the enclosed set of preliminary site plans for the Board's review and discussion, and for review by the Town's consulting professionals, Kellard Sessions.[1] We acknowledge the comments received from Kellard Sessions in its memorandum dated April 18, 2018, and since receipt of that memorandum we have met with the Town's consultants on at least two (2) occasions. Many of those comments are now being addressed in the detailed drawings being prepared by the Applicant's engineers, Bibbo Associates, and we will continue to work with the Town's consultants to address their detailed comments in due course.[2] Each set of revised site plans consists of the following sheets:

Drawing No.	Title	Prepared By	Dated or Last Revised
PP-1	Preliminary Plot Plan	Bibbo Associates, LLP ("Bibbo")	09-26-18
EX-1	Existing Conditions Plan	Bibbo	09-26-18
LP-1	Layout Plan	Bibbo	09-26-18
LP-2	Layout Plan	Bibbo	09-26-18

As shown on the enclosed plans, the addition of 1 Buck Run has allowed for the creation of a more traditional on-site parking area than previously proposed, and now includes an area for buses to pull in and safely maneuver around the parking area. Buck Run is now proposed to be widened; proposed width varies from 24 feet at the intersection of Buck Run with Route 35 to 14 feet at the driveway to 7 Buck Run. In addition, as a result of some reconfiguration of the roadway improvements, the number and height of the previously proposed retaining walls on the site have been reduced.

In addition, since we last met with the Board, the Applicant has been working with its architect, Kevin Baxter of Baxter Projects Architecture, on plans for a new Education Pavilion proposed to be constructed on that portion of the property currently known as 3 Buck Run. The Applicant is excited to share the details of the new Education Pavilion with the Board. The proposed building which incorporates many green features is shown in greater detail in the enclosed architectural plans. Each set of architectural drawings consists of the following sheets:

---

[1] The amended subdivision plat will be filed under separate cover upon completion; additional field work is currently being conducted and a topographic survey is being prepared. Upon completion of that work, the subdivision plat will be amended.

[2] A number of those comments have been addressed in the enclosed set of plans; however, as a result of the addition of 1 Buck Run to the site, a number of the comments are no longer applicable, and we anticipate that there will be new and additional comments. We acknowledge that many of the comments related to stormwater remain, and those comments will be addressed as the plans are further refined and details added.

Drawing No.	Title	Prepared By	Dated or Last Revised
T100	Title Sheet	Baxter Projects ("Baxter")	09-24-18
A100	Architectural Site Plan	Baxter	09-24-18
A101	Floor Plan	Baxter	09-24-18
A102	Basement Plan	Baxter	09-24-18
OCC1	First Floor Occupancy and Egress Notes	Baxter	09-24-18
A106	Floor Areas	Baxter	09-24-18
A201	Roof Plan	Baxter	09-24-18
A301	Building Elevations	Baxter	09-25-18
A401	Building Sections	Baxter	09-25-18
A402	Building Sections	Baxter	09-25-18
A403	Building Sections	Baxter	09-24-18
A404	Building Sections	Baxter	09-24-18
A405	Building Sections	Baxter	09-24-18

We respectfully request that this matter be placed on the Board's October 16, 2018 agenda for review and continued discussion. In the interim, please feel free to contact me if you have any questions or if you would like any additional information.

Thank you for your consideration. We are excited to share the new details of this project with the Board in greater depth on October 16.

Very truly yours,

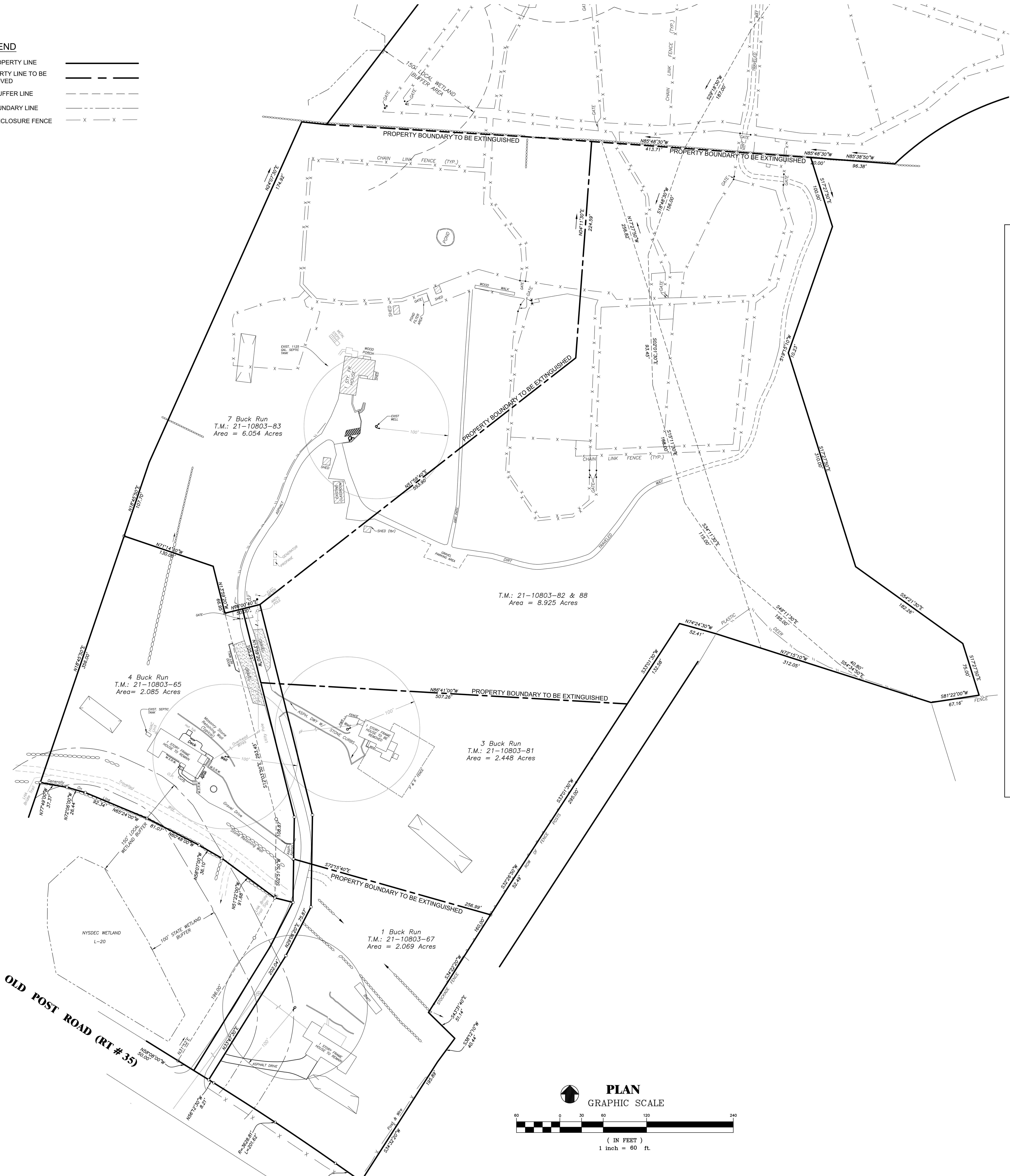
JANET J. GIRIS

Enclosures

cc: Judson Siebert, Esq.
Jan Johannessen, AICP, Kellard Sessions
Ed Delaney, P.E. Bibbo Associates
Kevin Baxter, AIA
Spencer Wilhelm, The Wolf Conservation Center

LEGEND

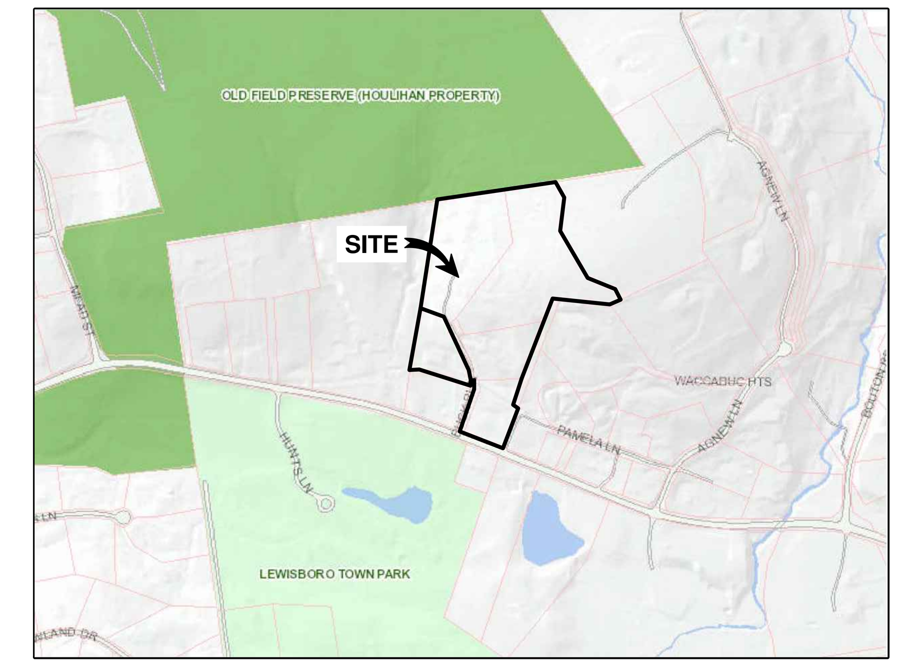
EXISTING PROPERTY LINE	
EXISTING PROPERTY LINE TO BE REMOVED	
WETLAND BUFFER LINE	
WETLAND BOUNDARY LINE	
EXISTING WOLF ENCLOSURE FENCE	



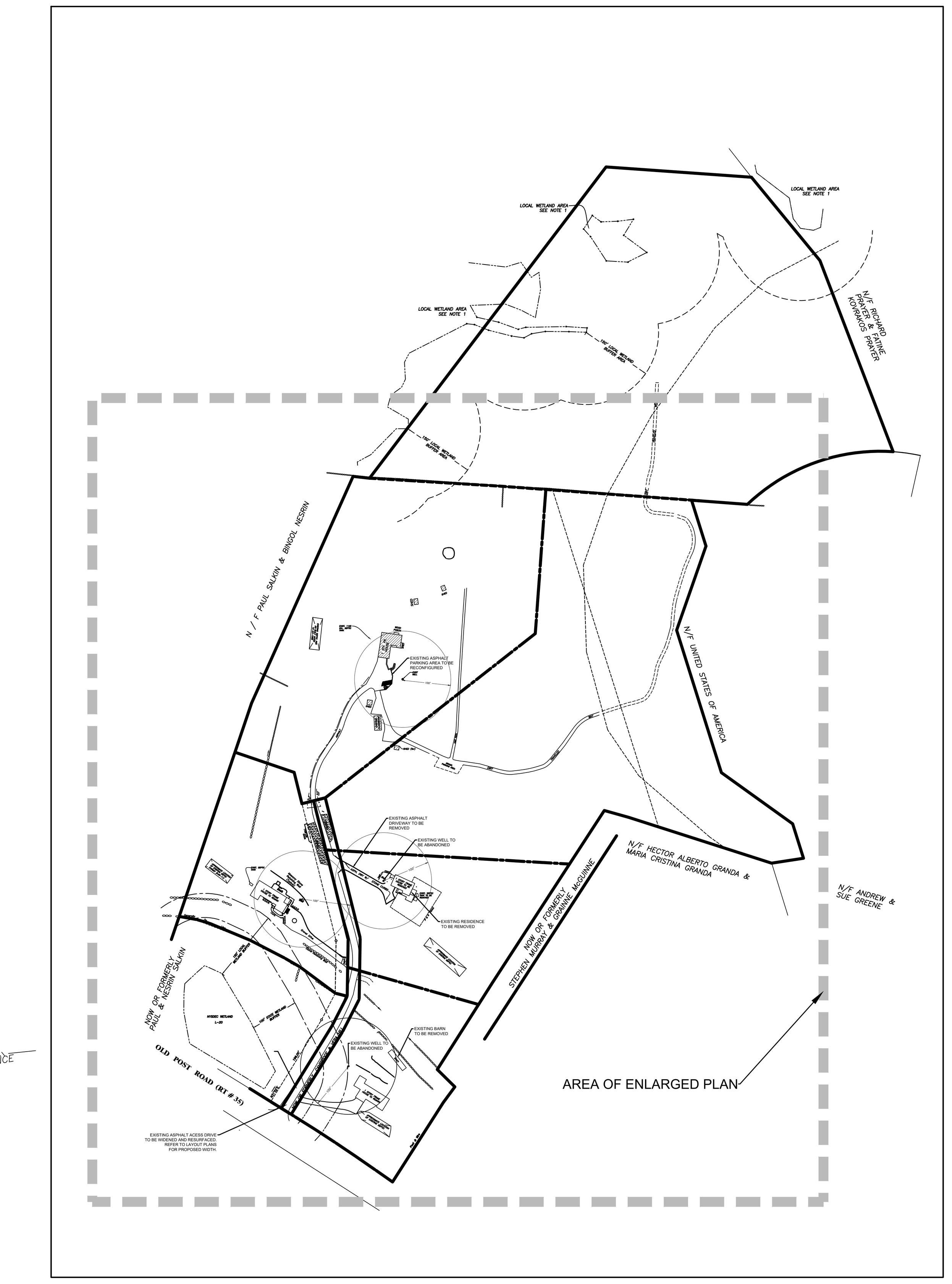
PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.



LOCATION MAP
1" = 2000'



OVERALL PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

THE UNDERSIGNED IS THE OWNER(S) OF THE PROPERTY SHOWN HEREON, IS FAMILIAR WITH THIS DRAWING AND ITS CONTENTS, AND HEREBY APPROVES SAME FOR FILING.

________________ DATE:__________

MAGGIE HOWELL
WOLF CONSERVATION CENTER
7 BUCK RUN
SOUTH SALEM, NY 10590

APPROVED BY RESOLUTION OF THE LEWISBORO PLANNING BOARD

________________ DATE:__________
CHAIRMAN

________________ DATE:__________
SECRETARY

REVIEWED FOR COMPLIANCE WITH THE PLANNING BOARD RESOLUTION, DATED__________

________________ DATE:__________

JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEERS

SITE DATA

1. TOTAL AREA OF PARCELS: 32.58 AC±
2. OWNER AND APPLICANT:
   WOLF CONSERVATION CENTER
   7 BUCK RUN
   SOUTH SALEM, NY 10590
3. ZONING DISTRICT(S): R-4A and R-2A
4. SURVEY BY:
   INSITE SURVEYING
   3 GARRETT PLACE
   CARMEL, NY 10512
5. TAX ID #: SHEET 21
   BLOCK 10803
   LOT 3, 65, 67, 81, 82, 83 & 88

SHEET: 21 **BLOCK: 10803** **LOTS: 3, 65, 67, 81, 82, 83, & 88**

DATE:	DESCRIPTION	BY/CK	DATE:	DESCRIPTION	BY/CK
9/1/17	TREE SURVEY	NEH	3/29/18	REVISION	NH/SB
10/25/17	REVISION	NEH	9/26/18	EDUCATION CENTER CONCEPT PLANS	MG/SB
1/18/18	REVISION	NH/SB			

REVISIONS

PRELIMINARY PLOT PLAN

WOLF CONSERVATION CENTER
7 BUCK RUN, SOUTH SALEM, NY 10590
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
SOMERS, NEW YORK 10589
TEL. 914 277 5805

SABRI BARISSER P.E.

DATE:	9-8-2016
SCALE:	1" = 60'
FILE:	L5
DSGN / CHK:	SB
DRN. BY:	NH
SHT NO.	1 OF 4
DWG NO.	PP-1

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LEGEND

- EXISTING PROPERTY LINE
- PROPERTY SETBACK LINE
- EXISTING PROPERTY LINE TO BE REMOVED
- WETLAND BUFFER LINE
- WETLAND BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING WOLF ENCLOSURE FENCE
- EXISTING EASEMENT LINE

EXISTING ASPHALT PARKING AREA TO BE RECONFIGURED

EXISTING ASPHALT DRIVEWAY TO BE REMOVED

EXISTING WELL TO BE ABANDONED

EXISTING RESIDENCE TO BE REMOVED

EXISTING BARN TO BE REMOVED

EXISTING WELL TO BE ABANDONED

EXISTING ASPHALT ACESS DRIVE TO BE WIDENED AND RESURFACED. REFER TO LAYOUT PLANS FOR PROPOSED WIDTH.

OLD POST ROAD (RT # 35)

NYSDEC WETLAND L-20

100' STATE WETLAND BUFFER

PLAN
GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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DUPLICATION IS A VIOLATION OF
APPLICABLE LAWS

AREA OF ENLARGED PLAN

OVERALL PLAN
GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

GENERAL NOTES:

1. EXISTING PROPERTY BOUNDARIES AND SITE FEATURES SHOWN HEREON FOR 203 HOMMOCKS LANE ARE BASED ON THE FOLLOWING:

   "SURVEY OF PROPERTY", DATED JUNE 12, 2017, PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

   "SUBDIVISION MAP", DATED JULY 21, 2015, PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

   "SURVEY OF PROPERTY" PREPARED FOR 1 BUCK RUN, DATED SEPTEMBER 25, 2018, PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

2. EXISTING SUBSURFACE SEWAGE TREATMENT SYSTEM LOCATIONS SHOWN HEREON OBTAINED FROM SSTS AS-BUILT PLANS ON FILE WITH THE WESTCHESTER COUNTY HEALTH DEPARTMENT.

3. EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON WESTCHESTER COUNTY AERIAL TOPOGRAPHY DATED APRIL 2004. ELEVATIONS CONFORM TO NORTH AMERICAN VERTICAL DATUM 1988 (N.A.V.D. 1988).

4. PRIOR TO EXCAVATION THE CONTRACTOR SHALL BE RESPONSIBLE TO TO OBTAIN A MARKOUT OF ALL SUBSURFACE UTILITIES WITHIN THE WORK ZONE. THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER UPON VERIFICATION OF EXISTING UTILITY LOCATIONS TO DETERMINE IF FIELD CHANGES ARE REQUIRED.

THE UNDERSIGNED IS THE OWNER(S) OF THE PROPERTY SHOWN HEREON, IS FAMILIAR WITH THIS DRAWING AND ITS CONTENTS, AND HEREBY APPROVES SAME FOR FILING.

_____ DATE:_____
MAGGIE HOWELL
WOLF CONSERVATION CENTER
7 BUCK RUN
SOUTH SALEM, NY 10590

APPROVED BY RESOLUTION OF THE LEWISBORO PLANNING BOARD

_____ DATE:_____
CHAIRMAN

_____ DATE:_____
SECRETARY

REVIEWED FOR COMPLIANCE WITH THE PLANNING BOARD RESOLUTION, DATED_____

_____ DATE:_____
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEERS

SITE DATA

1. TOTAL AREA OF PARCELS: 30.512 AC±
2. OWNER AND APPLICANT:
   WOLF CONSERVATION CENTER
   7 BUCK RUN
   SOUTH SALEM, NY 10590
3. ZONING DISTRICT(S): R-4A and R-2A
4. SURVEY BY:
   INSITE SURVEYING
   3 GARRETT PLACE
   CARMEL, NY 10512
5. TAX ID #: SHEET 21
   BLOCK 10803
   LOT 3, 65, 81, 82, 83 & 88

SHEET: 21 **BLOCK: 10803** **LOTS: 3, 65, 81, 82, 83, & 88**

REVISIONS						
9/1/17	TREE SURVEY	NEH	3/29/18	REVISION		NH/SB
10/25/17	REVISION	NEH	9/26/18	EDUCATION CENTER CONCEPT PLANS		MG/SB
1/18/18	REVISION	NH/SB				
DATE:	DESCRIPTION	BY/CK	DATE:	DESCRIPTION		BY/CK

STATE OF NEW YORK · SABRI BARISSER · LICENSED PROFESSIONAL ENGINEER · 075481

SABRI BARISSER P.E.

EXISTING CONDITIONS PLAN

WOLF CONSERVATION CENTER
7 BUCK RUN, SOUTH SALEM, NY 10590
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
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DATE:	9-8-2016
SCALE:	1" = 60'
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DRN. BY:	NH
SHT NO.	2 OF 4
DWG NO.	EX-1



OVERALL PLAN
GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

PLAN
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

ZONING CONFORMANCE CHART R-2A DISTRICT		
	REQUIRED	PROVIDED LOT 65
MIN. LOT SIZE	2.0 AC.	2.085 AC
DIAM. / CIRCLE	200'	200'
MIN. YARD FRONT	75'	103.1'
MIN. YARD SIDE	40'	80.8'
MIN. YARD REAR	50'	125.5'
MAX. BUILDING HEIGHT, STORIES / FEET	35' / 2 ½	<35' / 2 ½
BUILDING COVERAGE	9%	2.4%

ZONING CONFORMANCE CHART AS PER TOWN OF LEWISBORO R-4A		
	REQUIRED	PROPOSED COMBINED LOTS 67,81,82,88, 83 & P/O 3
MIN. LOT SIZE	9.0 AC. (10 AC.*)	30.496 AC
DIAM. / CIRCLE	250'	250'
MIN. YARD FRONT	75'	102.1'
MIN. YARD SIDE	50'	62.8'
MIN. YARD REAR	50'	1061'
MAX. BUILDING HEIGHT, STORIES / FEET	35' / 2 ½	<35' / 2 ½
BUILDING COVERAGE	6%	0.78%
BASE LOT DEPTH	700'	1576'

* MIN. LOT SIZE PER TOWN CODE FOR A PRIVATE NATURE PRESERVE.

LEGEND

- EXISTING PROPERTY LINE
- PROPERTY SETBACK LINE
- EXISTING PROPERTY LINE TO BE REMOVED
- WETLAND BUFFER LINE
- WETLAND BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING WOLF ENCLOSURE FENCE
- EXISTING EASEMENT LINE

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_____ DATE:_____
MAGGIE HOWELL
WOLF CONSERVATION CENTER
7 BUCK RUN
SOUTH SALEM, NY 10590

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_____ DATE:_____
CHAIRMAN

_____ DATE:_____
SECRETARY

REVIEWED FOR COMPLIANCE WITH THE PLANNING BOARD RESOLUTION, DATED_____

_____ DATE:_____
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KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEERS

SHEET: 21 **BLOCK: 10803** **LOTS: 3, 65, 81, 82, 83, & 88**

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1/18/18	REVISION	NH/SB				
DATE:	DESCRIPTION	BY/CK	DATE:	DESCRIPTION		BY/CK

STATE OF NEW YORK · SABRI BARISSER · LICENSED PROFESSIONAL ENGINEER · 075940
SABRI BARISSER P.E.

LAYOUT PLAN

WOLF CONSERVATION CENTER
7 BUCK RUN, SOUTH SALEM, NY 10590
TOWN OF LEWISBORO , WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
SOMERS, NEW YORK 10589
TEL. 914 277 5805

DATE:	9-8-2016
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DRN. BY:	NH
SHT NO.	3 OF 4
DWG NO.	**LP-1**

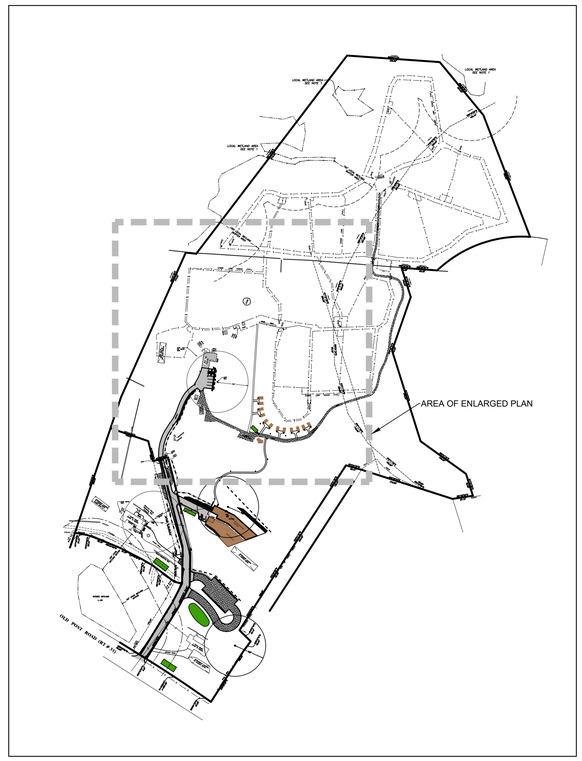
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- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING WOLF ENCLOSURE FENCE
- EXISTING EASEMENT LINE

150' LOCAL WETLAND BUFFER AREA
GATE
CHAIN LINK FENCE (TYP.)
N24°07'30"E 174.92'
317.9'
POND
S29°18'30"W 187.00'
S18°48'30"W 156.00'
N17°27'50"W 256.82'
S02°01'30"E 93.45'
S15°11'30"E 168.00'
S34°11'30"E 115.00'
324.7'
WOOD WALK
SHED
POND FILTER AREA
METAL STEPS
WOOD PORCH
EXIST. 1125 GAL. SEPTIC TANK
EXISTING SEPTIC PER 1981 FIELD CARD
EXISTING RESIDENCE TO REMAIN AS EMPLOYEE OFFICE
1 STY. FR. HOUSE
PROPOSED PARKING LAMP POST (TYP.)
PROPOSED HANDICAPPED PARKING (TYP.)
PROPOSED GRASS SWALE
PROPOSED CATCH BASIN (TYP.)
EXIST WELL
100'
PROPOSED WOOD GUIDERAIL
PROPOSED SEGMENTAL BLOCK RETAINING WALL
SHED
EXISTING CLASSROOM
12 PROPOSED CAMPING PODS
PROPOSED SUBSURFACE INFILTRATION SYSTEM
PROPOSED SEGMENTAL BLOCK RETAINING WALL
50.0'
ASPHALT
EXISTING CLASSROOM SPACE TO BE CONVERTED TO REFRIGERATED STORAGE AND KITCHEN
PROPOSED RIP RAP SWALE (TYP.)
GENERATOR
PROPANE
N71°14'10"W 130.08'
14' ACCESS DRIVE
N13°59'20"W 66.95'
N76°00'40"E 50.00'
ELEC. METER
ANCH. POLE
GATE
PROPOSED MOUNTABLE ASPHALT CURB (TYP.)
GRAVEL
TWP. LS OD
GRAVEL PARKING AREA
DIRT
TRAVELED WAY
PROPOSED MULCH PATH (TYP.)
PORCH LIGHT (TYP.)
PROPOSED 10' WIDE GRAVEL PATH
PROPOSED CLIVUS MULTRIM COMPOSTING TOILET FACILITIES
PROPOSED GROUND LAMP (TYP.)
PROPOSED 4' WIDE MULCH PATH
N74°24'30"W 52.41'
PLASTIC

PLAN
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.



OVERALL PLAN
GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

ZONING CONFORMANCE CHART AS PER TOWN OF LEWISBORO R-4A		
	REQUIRED	PROPOSED COMBINED LOTS 82, 83, 88 & 3
MIN. LOT SIZE	9.0 AC. (10 AC.*)	25.979 AC
DIAM. / CIRCLE	250'	250'
MIN. YARD FRONT	75'	173.6'
MIN. YARD SIDE	50'	170.3'
MIN. YARD REAR	50'	1061'
MAX. BUILDING HEIGHT, STORIES / FEET	35' / 2 ½	<35' / 2 ½
BUILDING COVERAGE	6%	0.39%
BASE LOT DEPTH	700'	1576'

* MIN. LOT SIZE PER TOWN CODE FOR A PRIVATE NATURE PRESERVE.

THE UNDERSIGNED IS THE OWNER(S) OF THE PROPERTY SHOWN HEREON, IS FAMILIAR WITH THIS DRAWING AND ITS CONTENTS, AND HEREBY APPROVES SAME FOR FILING.

_____ DATE:_____
MAGGIE HOWELL
WOLF CONSERVATION CENTER
7 BUCK RUN
SOUTH SALEM, NY 10590

APPROVED BY RESOLUTION OF THE LEWISBORO PLANNING BOARD

_____ DATE:_____
CHAIRMAN

_____ DATE:_____
SECRETARY

REVIEWED FOR COMPLIANCE WITH THE PLANNING BOARD RESOLUTION, DATED_____

_____ DATE:_____
JOSEPH M. CERMELE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
CONSULTING TOWN ENGINEERS

SHEET: 21 **BLOCK: 10803** **LOTS: 3, 65, 81, 82, 83, & 88**

REVISIONS						
9/1/17	TREE SURVEY	NEH	3/29/18	REVISION		NH/SB
10/25/17	REVISION	NEH	9/26/18	EDUCATION CENTER CONCEPT PLANS		MG/SB
1/18/18	REVISION	NH/SB				
DATE:	DESCRIPTION	BY/CK	DATE:	DESCRIPTION		BY/CK

UNAUTHORIZED ALTERATIONS AND ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.
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STATE OF NEW YORK — SABRI BARISSER — LICENSED PROFESSIONAL ENGINEER
SABRI BARISSER P.E.

LAYOUT PLAN

WOLF CONSERVATION CENTER
7 BUCK RUN, SOUTH SALEM, NY 10590
TOWN OF LEWISBORO , WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
SOMERS, NEW YORK 10589
TEL. 914 277 5805

DATE:	9-8-2016
SCALE:	1" = 60'
FILE:	L5
DSGN / CHK:	SB
DRN. BY:	NH
SHT NO.	4 OF 4
DWG NO.	**LP-2**



EDUCATION PAVILION

AT THE WOLF CONSERVATION CENTER

SOUTH SALEM, NEW YORK

NOT FOR CONSTRUCTION

USE AND ACTIVITY NOTES:

RECREATION ROOM USES AND ACTIVITIES:
- ART CLASS (TABLES AND CHAIRS)
- STORY TELLING (FLOOR SEATING)
- MEETINGS / CONFERENCES (PORTABLE TABLES AND CHAIRS)

LEARNING HALL USES AND ACTIVITIES:
- CLASS LECTURE WITH SINGLE EDUCATOR

COMBINED ACTIVITIES ROOM (MOVABLE DIVIDER BETWEEN REC ROOM AND LEARNING HALL):
- CATERED EVENTS
- MEETINGS / CONFERENCES

NOTE: REC ROOM AND LEARNING HALL WILL BE USED PRIMARILY AS EDUCATIONAL SPACES, THEREFORE WE ARE PROVIDING OCCUPANCY CALCULATIONS FOR A-3 (UNCONCENTRATED TABLES AND CHAIRS).

THE STRUCTURE IS ONE STORY WITH A BASEMENT.

LIST OF SPACES:

FIRST FLOOR:

GIFT SHOP		**400** NSF
RESTROOMS	3 (2 ADA)	
KITCHEN		**120** NSF
WELCOME LOUNGE		**125** NSF
REC ROOM		**660** NSF
LEARNING HALL		**810** NSF
(COMBINED ACTIVIES ROOM (NIC BLEACHERS))		**745** NSF
CONFERENCE ROOM		**420** NSF
STORAGE ROOM		**170** NSF
FIRST FLOOR AREA:	**3680** NSF (OCCUPIED AREAS ONLY)	
	4230 NSF (INSIDE OF EXTERIOR WALLS)	

BASEMENT:

MECHANICAL ROOM:	**1410** NSF

OCCUPANCY CALCULATIONS:

TOTAL OCCUPANCY COUNT: 115
ALL SPACES COMBINED

ACTIVITES ROOM 745 NSF / 7 = 107
(ASSEMBLY W/OUT FIXED SEATING, CONCENTRATED: **A-3** (TABLE1004.5))

EXIT REQUIREMENTS (USING A-3):
- EXIT DOORS: 32" CLEAR WIDTH MIN.
- EXIT PATH: 36" WIDE MIN.
- NUMBER OF EXITS REQUIRED: 2

TOILET REQUIREMENTS (USING A-3):
- NUMBER OF OCCUPANTS A-3 AREAS: 107
- NUMBER OF OCCUPANTS OTHER AREAS (B): 10

A-3 1 PER 65 (TABLE 2902.2): 2 TOILETS
B 1 PER 25 (TABLE 2902.2): 1 TOILET
- NUMBER OF TOILETS PROVIDED: 3 (2 ADA ACCESSIBLE)
- ONE JANITOR SINK PROVIDED

CONSTRUCTION TYPE NOTES:

CONSTRUCTION CLASSIFICATION: TYPE 1

EXTERIOR WALLS: LOAD BEARING REINFORCED CONCRETE, MINIMUM 8" THICK.

ROOF: REINFORCED CONCRETE SLABS, 12" THICK, CLASS A.

FLOORS: REINFORCED CONCRETE SLABS:
- 1510 SF ABOVE BASEMENT: 12" THICK
- 1540 SF SLAB ON GRADE: 6" THICK

REINFORCED CONCRETE FOUNDATION WALLS

CONTINUOUS CONCRETE SPREAD FOOTINGS

EXTERIOR GLAZING: DOUBLE PANE INSULATED GLAZING WITH LOW-E COATING IN THERMALLY BROKEN ALUMINUM FRAMES.

EXTERIOR DOORS: ALUMINUM THERMALLY BROKEN W/ INSULATED GLASS

CEILINGS: EXPOSED CONCRETE CEILINGS W/ SUSPENDED ACOUSTIC AND RADIANT CEILING PANELS OF FLAME RESISTANT MATERIALS, CLASS A.

EXTERIOR SURFACE AREAS: SEE BELOW

ROOFING NOTES:

TOTAL FOOTPRINT (OUTSIDE EDGE OF PARAPETS):	6008 SF
TOTAL GREEN ROOFING (INTENSIVE):	4008 SF (66%)
TOTAL ROOF AREA INSULATED (12" XPS):	4235 SF (70%)
CONDITIONED FLOOR AREA DIRECTLY BELOW ROOF:	4230 NSF

EXTERIOR WALL AREA NOTES:

EXTERIOR WALL AREA ABOVE GRADE:	800 SF
EXTERIOR WALL AREA BELOW GRADE:	5500 SF
EXTERIOR GLAZING AREA (IGU):	1360 SF

GLAZING AREA IS 0.22% OF EXTERIOR WALL AREA (1360 / 6300)

PROJECT NOTES:

LOCATION: 3 BUCK RUN, SOUTH SALEM, NY.

NARRATIVE DESCRIPTION:

NEW BUILDING TO SERVE EDUCATION AND VISITORS SERVICES FOR THE WOLF CONSERVATION CENTER.

NEW BUILDING TO BE LOCATED AT THE LOCATION OF THE EXISTING DETACHED DWELLING AT 3 BUCK RUN. EXISTING DWELLING TO BE DEMOLISHED.

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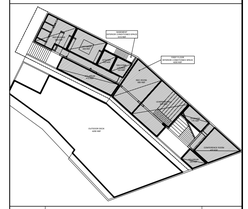
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CLIMATE ENGINEER
TRANSSOLAR
CLIMATE ENGINEERING
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NEW YORK, NEW YORK 10010
212 219 2255



REV	ISSUE	DATE
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--	COST ESTIMATING - ALTERNATE	04.30.18
--	COST ESTIMATING	01.25.18

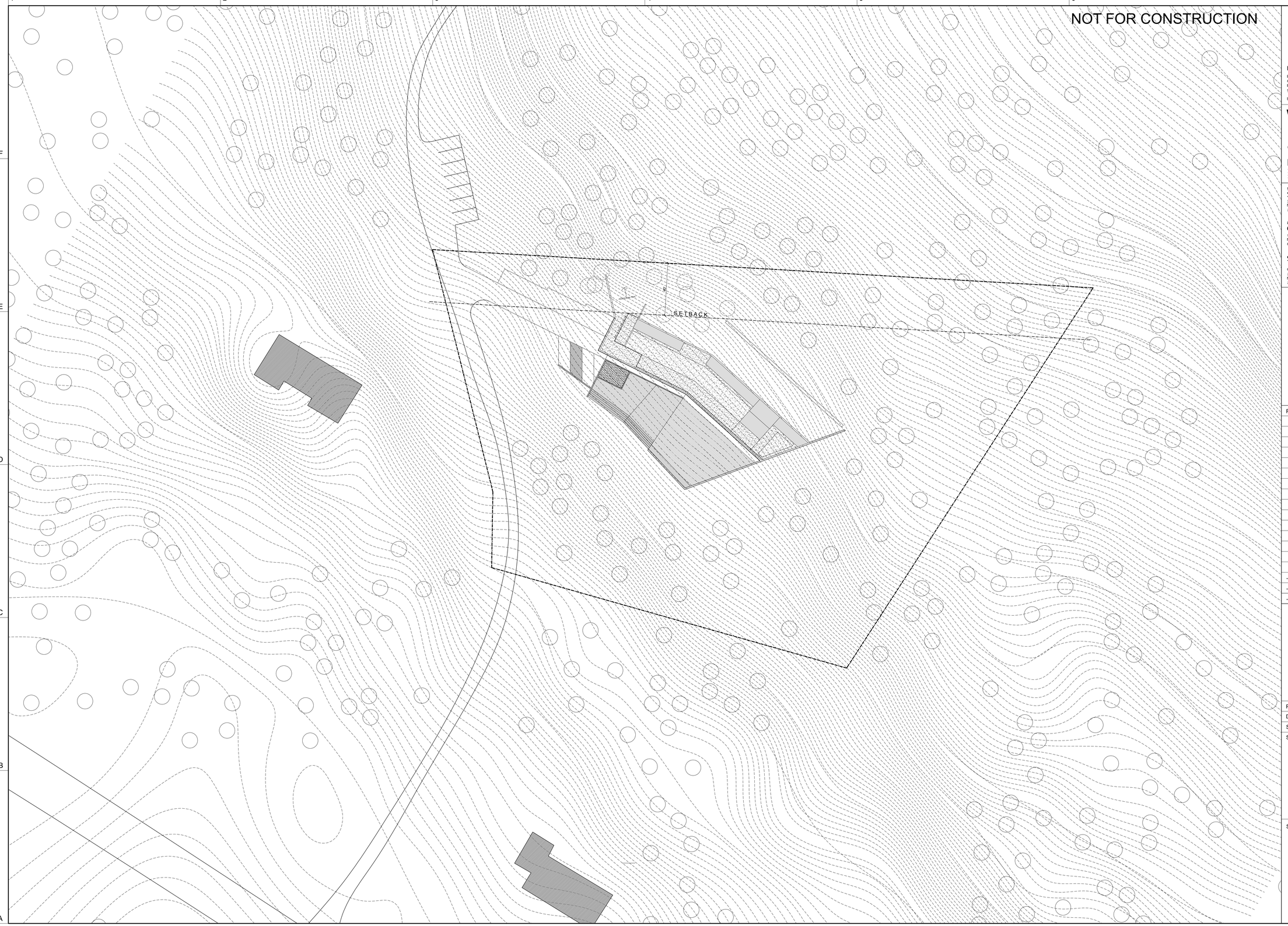
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PROJECT NO. 1610
DATE: SEPT 24, 2018
SCALE: N/A
SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T100
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--	COST ESTIMATING - ALTERNATE	04.30.18
--	COST ESTIMATING	01.25.18

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PROJECT NO. 1610
DATE: SEPT 24, 2018
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ARCHITECTURAL SITE PLAN

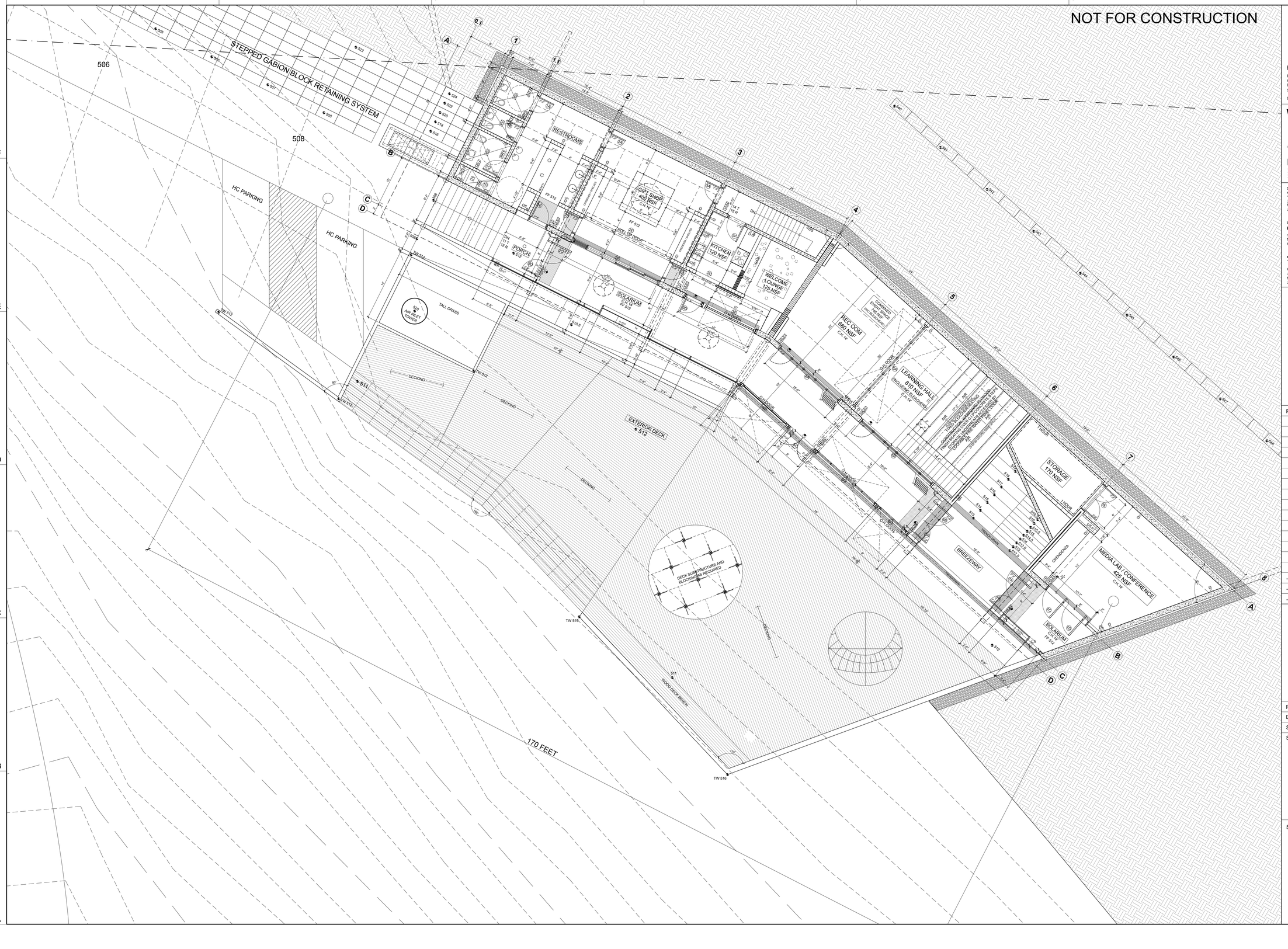
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--	COST ESTIMATING - ALTERNATE	04.30.18
--	COST ESTIMATING	01.25.18

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DATE: SEPT 24, 2018
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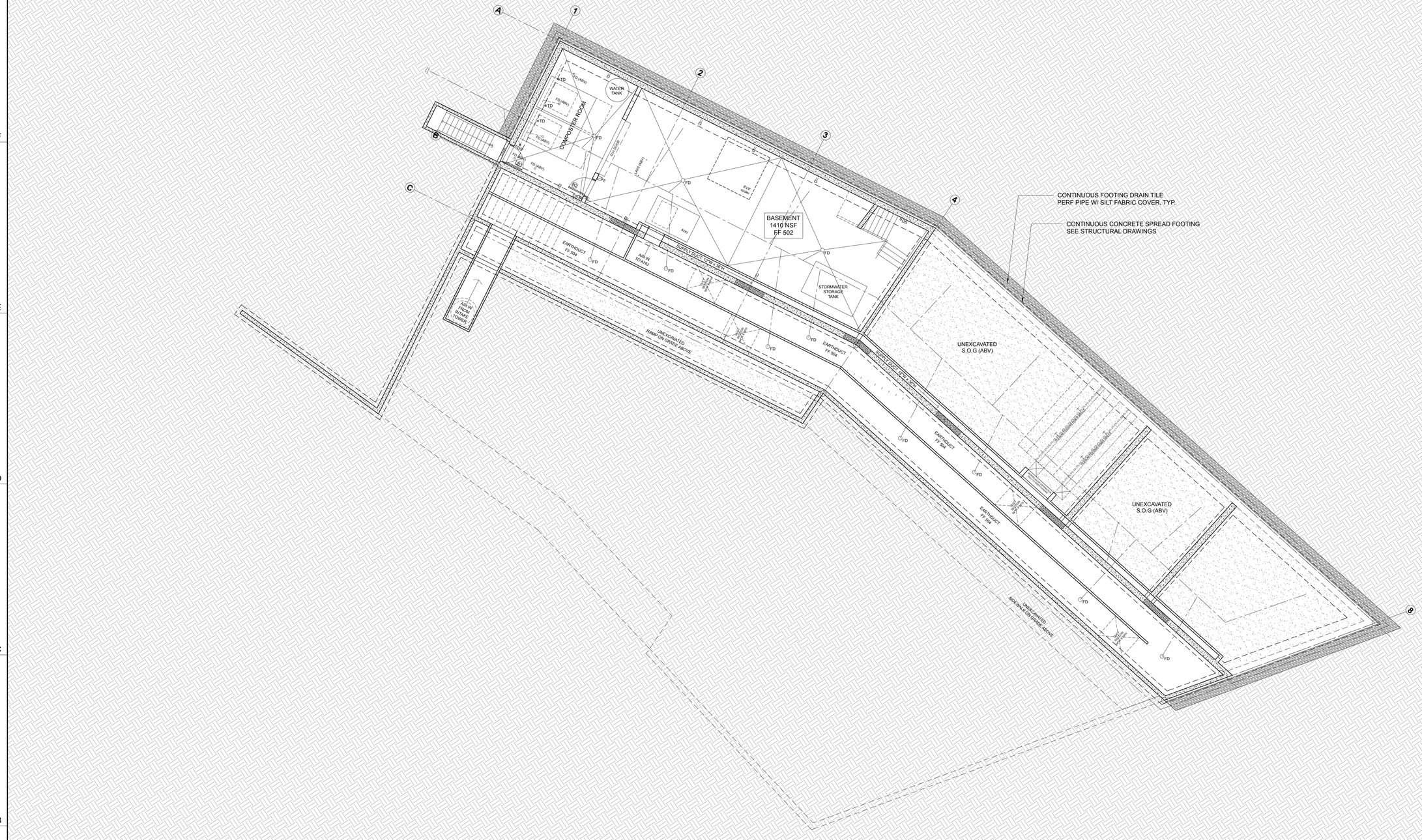
FLOOR PLAN

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A101

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--	COST ESTIMATING - ALTERNATE	05.25.18
--	COST ESTIMATING - ALTERNATE	04.30.18
--	COST ESTIMATING	01.25.18

SIGNATURE & SEAL

PROJECT NO. 1610
DATE: SEPT 24, 2018
SCALE: 1/8" = 1'-0"
SHEET TITLE:

BASEMENT PLAN

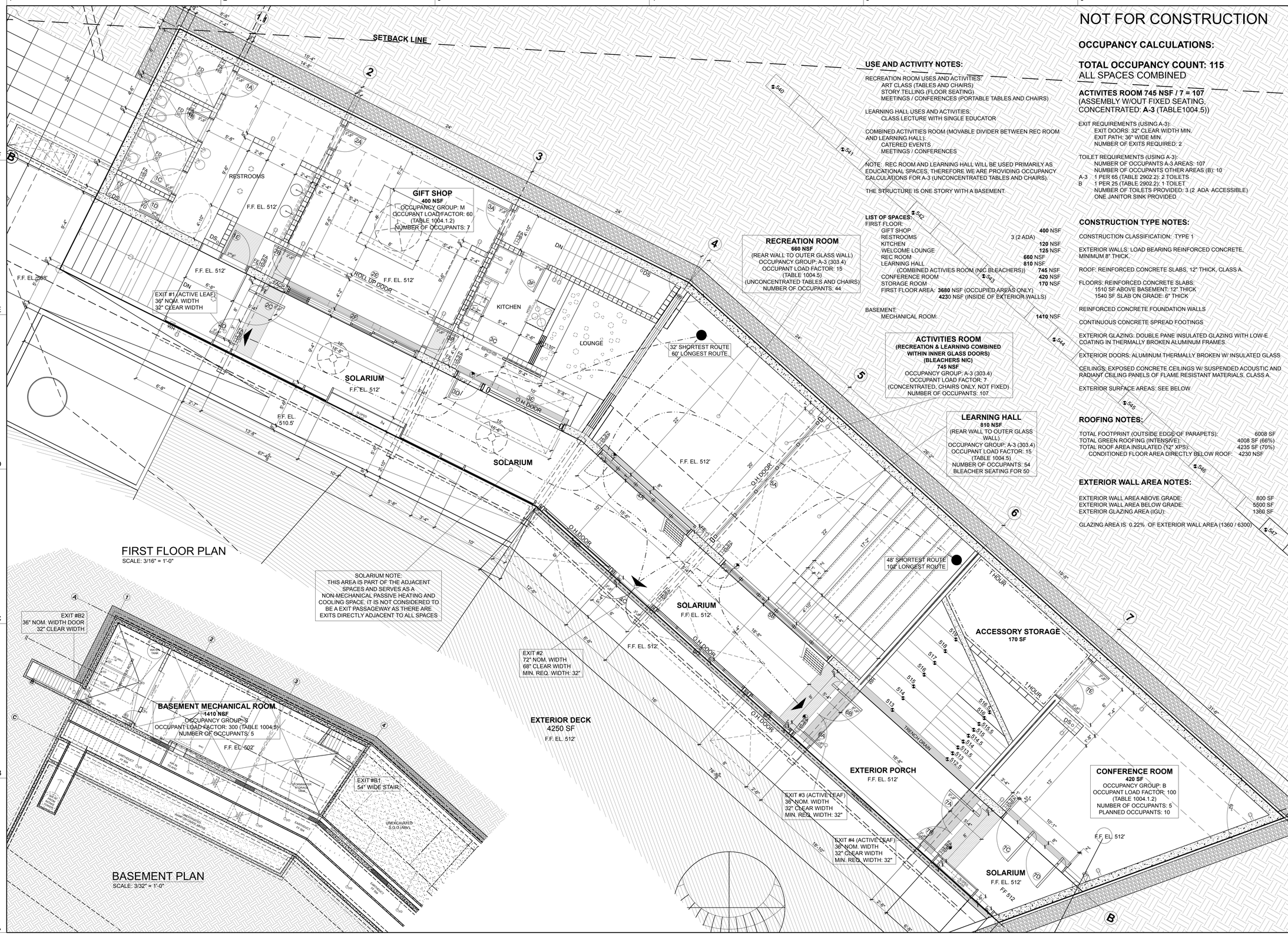
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FIRST FLOOR PLAN
SCALE: 3/16" = 1'-0"

BASEMENT PLAN
SCALE: 3/32" = 1'-0"

USE AND ACTIVITY NOTES:

RECREATION ROOM USES AND ACTIVITIES:
- ART CLASS (TABLES AND CHAIRS)
- STORY TELLING (FLOOR SEATING)
- MEETINGS / CONFERENCES (PORTABLE TABLES AND CHAIRS)

LEARNING HALL USES AND ACTIVITIES:
- CLASS LECTURE WITH SINGLE EDUCATOR

COMBINED ACTIVITIES ROOM (MOVABLE DIVIDER BETWEEN REC ROOM AND LEARNING HALL):
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THE STRUCTURE IS ONE STORY WITH A BASEMENT.

LIST OF SPACES:

FIRST FLOOR:		
GIFT SHOP		400 NSF
RESTROOMS	3 (2 ADA)	
KITCHEN		120 NSF
WELCOME LOUNGE		125 NSF
REC ROOM		660 NSF
LEARNING HALL		810 NSF
(COMBINED ACTIVIES ROOM (NIC BLEACHERS))		745 NSF
CONFERENCE ROOM		420 NSF
STORAGE ROOM		170 NSF
FIRST FLOOR AREA:	3680 NSF (OCCUPIED AREAS ONLY)	
	4230 NSF (INSIDE OF EXTERIOR WALLS)	
BASEMENT:		
MECHANICAL ROOM:		1410 NSF

OCCUPANCY CALCULATIONS:

TOTAL OCCUPANCY COUNT: 115
ALL SPACES COMBINED

ACTIVITES ROOM 745 NSF / 7 = 107
(ASSEMBLY W/OUT FIXED SEATING, CONCENTRATED: **A-3** (TABLE1004.5))

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- NUMBER OF OCCUPANTS OTHER AREAS (B): 10

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B 1 PER 25 (TABLE 2902.2): 1 TOILET
- NUMBER OF TOILETS PROVIDED: 3 (2 ADA ACCESSIBLE)
- ONE JANITOR SINK PROVIDED

CONSTRUCTION TYPE NOTES:

CONSTRUCTION CLASSIFICATION: TYPE 1

EXTERIOR WALLS: LOAD BEARING REINFORCED CONCRETE, MINIMUM 8" THICK.

ROOF: REINFORCED CONCRETE SLABS, 12" THICK, CLASS A.

FLOORS: REINFORCED CONCRETE SLABS:
- 1510 SF ABOVE BASEMENT: 12" THICK
- 1540 SF SLAB ON GRADE: 6" THICK

REINFORCED CONCRETE FOUNDATION WALLS

CONTINUOUS CONCRETE SPREAD FOOTINGS

EXTERIOR GLAZING: DOUBLE PANE INSULATED GLAZING WITH LOW-E COATING IN THERMALLY BROKEN ALUMINUM FRAMES.

EXTERIOR DOORS: ALUMINUM THERMALLY BROKEN W/ INSULATED GLASS

CEILINGS: EXPOSED CONCRETE CEILINGS W/ SUSPENDED ACOUSTIC AND RADIANT CEILING PANELS OF FLAME RESISTANT MATERIALS, CLASS A.

EXTERIOR SURFACE AREAS: SEE BELOW

ROOFING NOTES:

TOTAL FOOTPRINT (OUTSIDE EDGE OF PARAPETS):	6008 SF
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EXTERIOR WALL AREA NOTES:

EXTERIOR WALL AREA ABOVE GRADE:	800 SF
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GLAZING AREA IS 0.22% OF EXTERIOR WALL AREA (1360 / 6300)

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--	COST ESTIMATING - ALTERNATE	05.25.18
--	COST ESTIMATING - ALTERNATE	04.30.18
--	COST ESTIMATING	01.25.18

SIGNATURE & SEAL

PROJECT NO. 1610
DATE: SEPT 24, 2018
SCALE: 3/16" = 1'-0"
SHEET TITLE:

FIRST FLOOR OCCUPANCY AND EGRESS NOTES

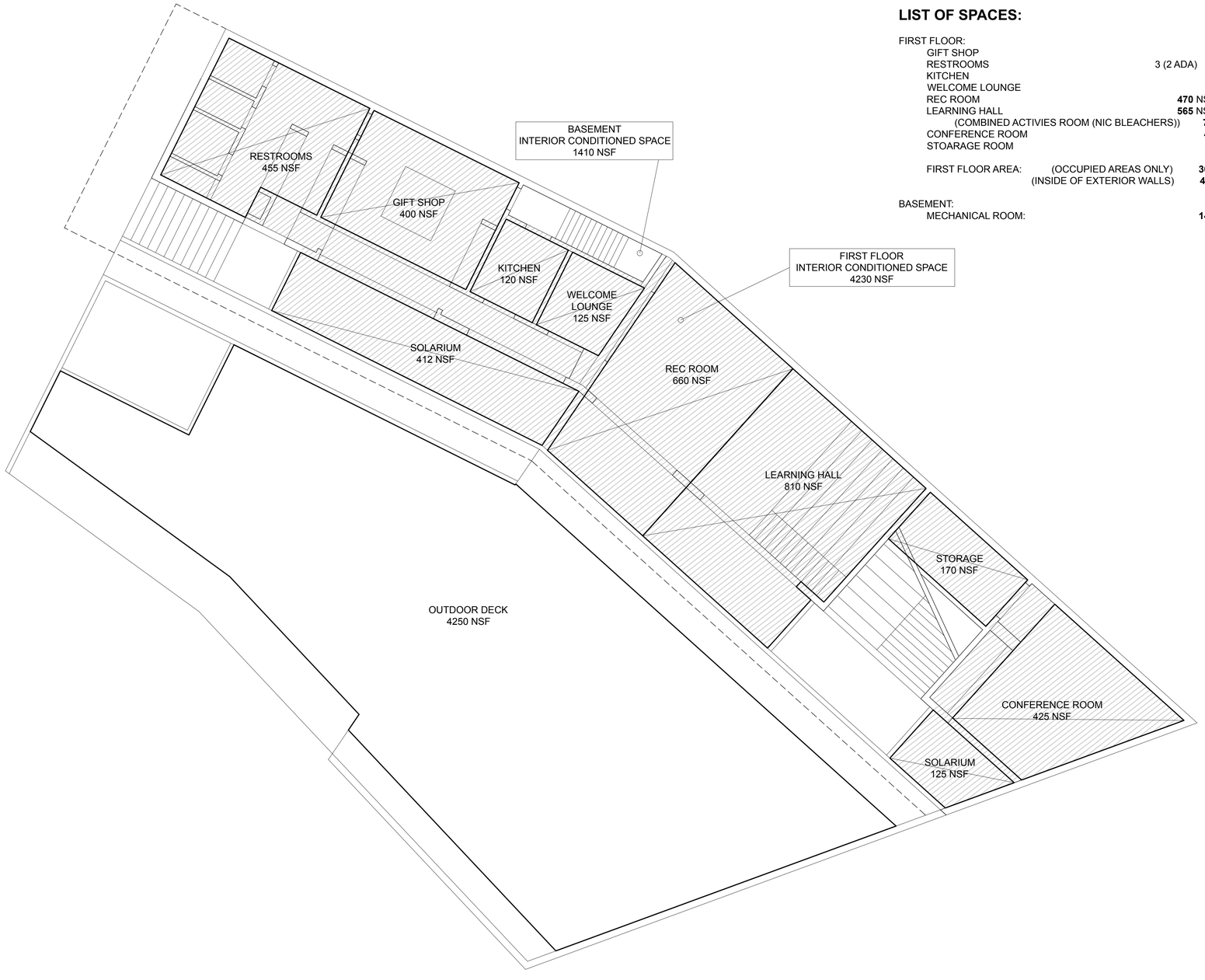
SHEET NUMBER:

OCC1

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LIST OF SPACES:

FIRST FLOOR:

GIFT SHOP		**400** NSF
RESTROOMS	3 (2 ADA)	
KITCHEN		**120** NSF
WELCOME LOUNGE		**125** NSF
REC ROOM		**470** NSF
LEARNING HALL		**565** NSF
(COMBINED ACTIVIES ROOM (NIC BLEACHERS))		**720** NSF
CONFERENCE ROOM		**425** NSF
STOARAGE ROOM		**170** NSF
FIRST FLOOR AREA:	(OCCUPIED AREAS ONLY)	**3680** NSF
	(INSIDE OF EXTERIOR WALLS)	**4230** NSF

BASEMENT:

MECHANICAL ROOM:	**1410** NSF

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SIGNATURE & SEAL

PROJECT NO. 1610
DATE: SEPT 24, 2018
SCALE: 1/8" = 1'-0"
SHEET TITLE:

FLOOR AREAS

SHEET NUMBER:

A106

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40'

S E T B A C K

RETAINING WALL

LINE OF BUILDING EXTERIOR WALL BELOW

SLOPE UP TO MEET TWS

TW 531.5

EL 529

TW 531.5

TP 531.5
BP 529

14'-6"
ROOF VIEW

10'-4"

54'

23'-4"
PLAN CUT 18' A.F.F.

OPEN TO BELOW

RD

FIXED SKYLIGHTS

OPERABLE SKYLIGHTS

GALV. STEEL SNOW BAFFLE

INSULATED PANELL EVERY OTHER BAY. INSULATED CMU OR INSULATED METAL PANEL, TBD.

PASSIVE SNOW/RAIN LOUVER, INSECT SCREEN, ACTIVE THERMALLY BROKEN DAMPER, TIE INTO BMS

INSULATED GLAZING IN THERMALLY BROKEN ALUMINUM FRAME

STANDING SEAM METAL ROOFING: L.C.C. OR TERNE

SKYLIGHT FRAME ON CONCRETE KNEEWALL

ROOF MOUNTED SOLAR ARRAY:
PHOTOVOLTAICS AND SOLAR WATER HEATERS AS ALLOWABLE

SLOPE DOWN

EL 529

EL 528.5

EL 529

TW 531.5

RETAINING WALL

INTENSIVE GREEN ROOF:
NATIVE VEGETATION

INTENSIVE GREEN ROOF:
PEA GRAVEL WALKING SURFACE

GRAVEL CURTAIN DRAIN AT BUILDING RETAINING WALLS

AREA CALCS:

ROOF FOORPRINT: 6008 GSF
GREEN ROOF (INTENSIVE): 4008 SF

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

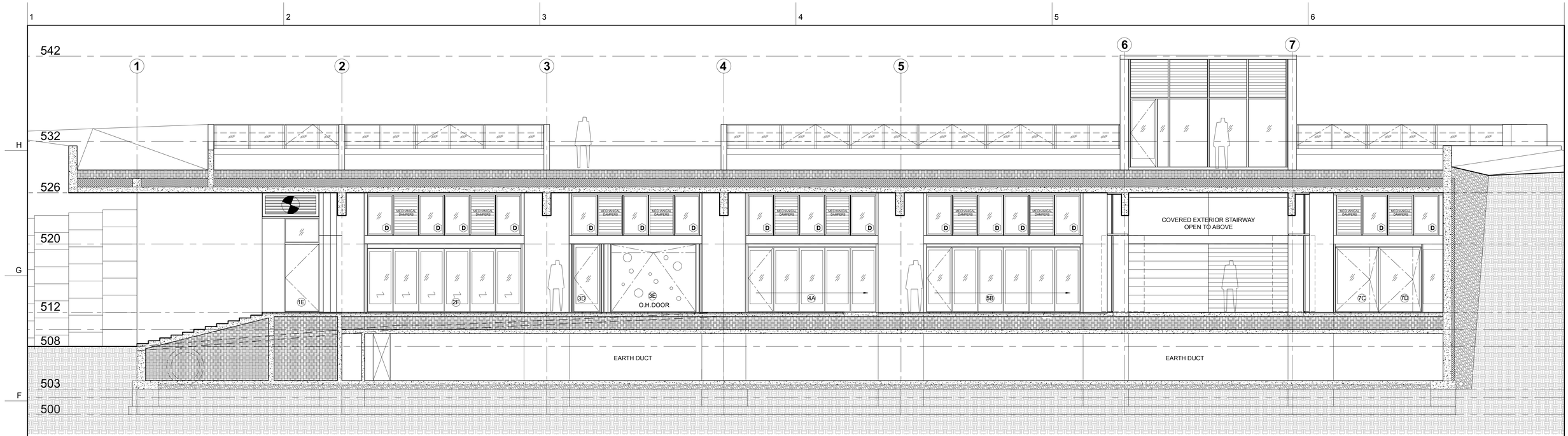
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ROOF PLAN

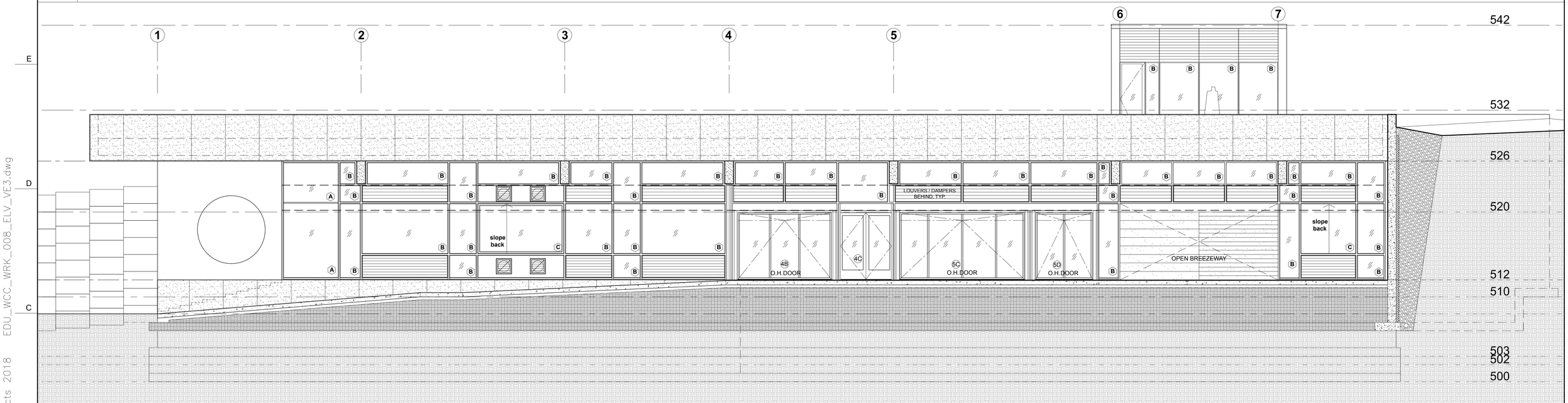
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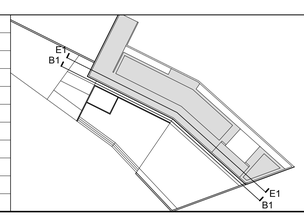
E1 BUILDING ELEVATION - INTERIOR WALL / LOGINTUDINAL SECTION THRU SOLARIUM



B1 BUILDING ELEVATION - EXTERIOR WALL

NOT FOR CONSTRUCTION

EXTERIOR WINDOW SCHEDULE - ALL THERMALLY BROKEN FRAMES	
A	TEMPERED - MULLED FIXED - HORIZONTAL BUTT JOINT
B	IGU - MULLED FIXED - SEE SECTIONS FOR MULLION DEPTHS
C	IGU - MULLED FIXED - SLOPED BACKWARD
INTERIOR WINDOW SCHEDULE - NON-THERMALLY BROKEN FRAMED WITH 1/2" TEMPERED GLAZING	
D	MULLED FIXED



WOLF
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EDUCATION PAVILION
3 BUCK RUN
SOUTH SALEM, NY 11590

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NEW YORK, NEW YORK 10010
212 219 2255

MEP ENGINEER
OLA CONSULTING ENGINEERS
12 EAST 49TH STREET, 11TH FLOOR
NEW YORK, NEW YORK 10017
646 849 4110

STRUCTURAL ENGINEER
STEMA
32 OLD SLIP ROAD, 10TH FLOOR
NEW YORK, NEW YORK, 10005
212 620 7970

REV	ISSUE	DATE
--	COST ESTIMATING - ALTERNATE	05.25.18
--	COST ESTIMATING	01.25.18

SHEET TITLE: **BUILDING ELEVATIONS**

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PROJECT NO. 1610
DATE: SEPT 25, 2018
SCALE: 3/16" = 1'-0"
SHEET NUMBER:

A301 SHT _ OF _

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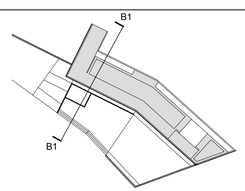
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526
512
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2'-6"
1'
1'
1'
5'-6"
19'-6"
14"
1' 2"
8'-10"
4'-6" 6" 2'
7'
34'
31'

PORCH
RESTROOMS
MECHANICAL ROOM
EARTH DUCT
AIR TRAVELING EAST

B1 BUILDING SECTION

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212 620 7970

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--	COST ESTIMATING - ALTERNATE	05.25.18
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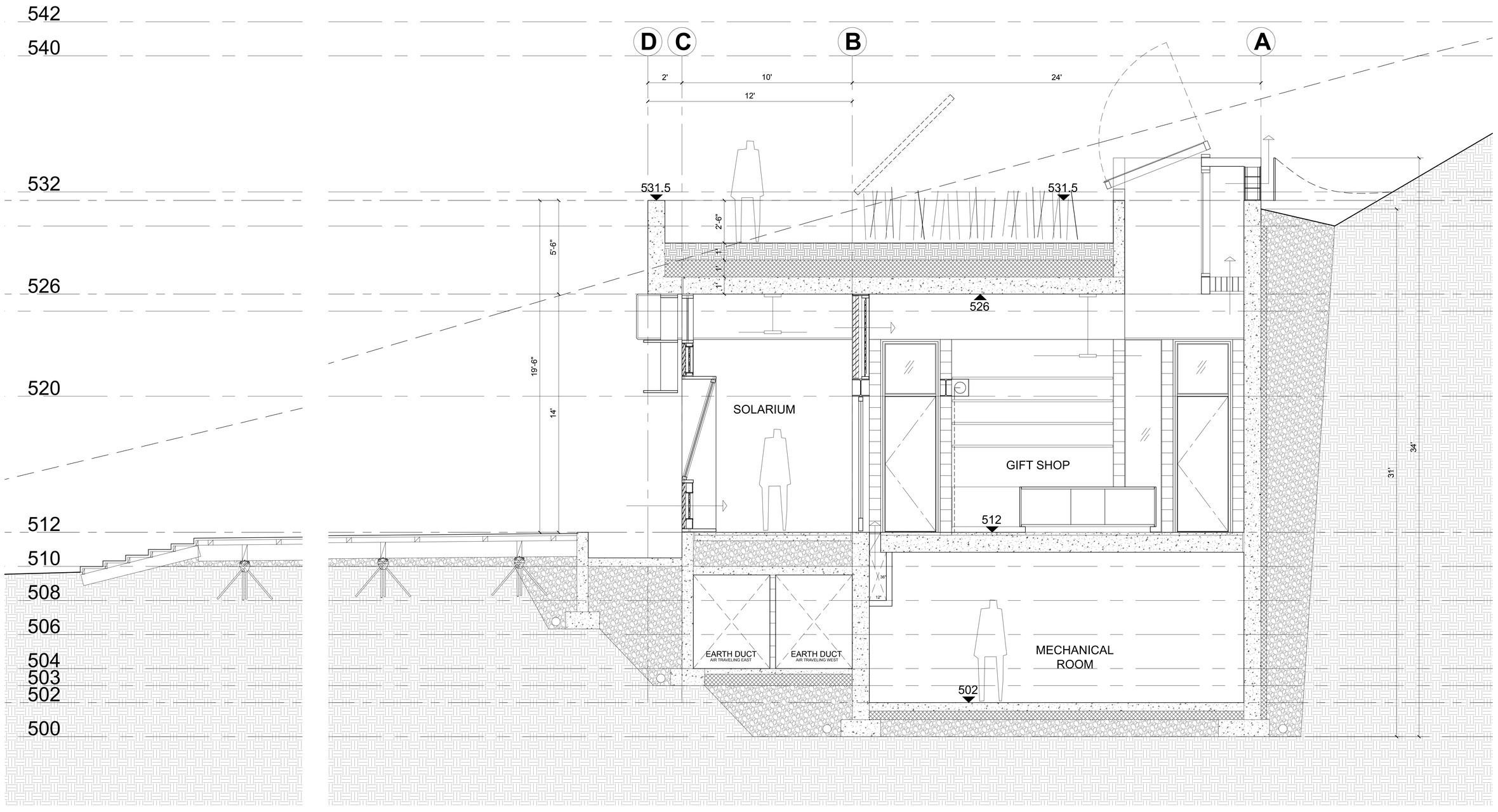
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SIGNATURE & SEAL

PROJECT NO. 1610
DATE: SEPT 25, 2018
SCALE: 3/8" = 1'-0"
SHEET NUMBER:

A401

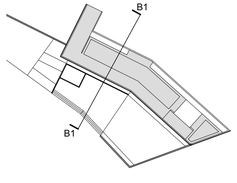
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12 EAST 49TH STREET, 11TH FLOOR
NEW YORK, NEW YORK 10017
646 849 4170

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SILMAN
32 OLD SLIP ROAD, 10TH FLOOR
NEW YORK, NEW YORK, 10005
212 620 7970

REV	ISSUE	DATE
--	COST ESTIMATING - ALTERNATE	05.25.18
--	COST ESTIMATING	01.25.18

SHEET TITLE: **BUILDING SECTIONS**

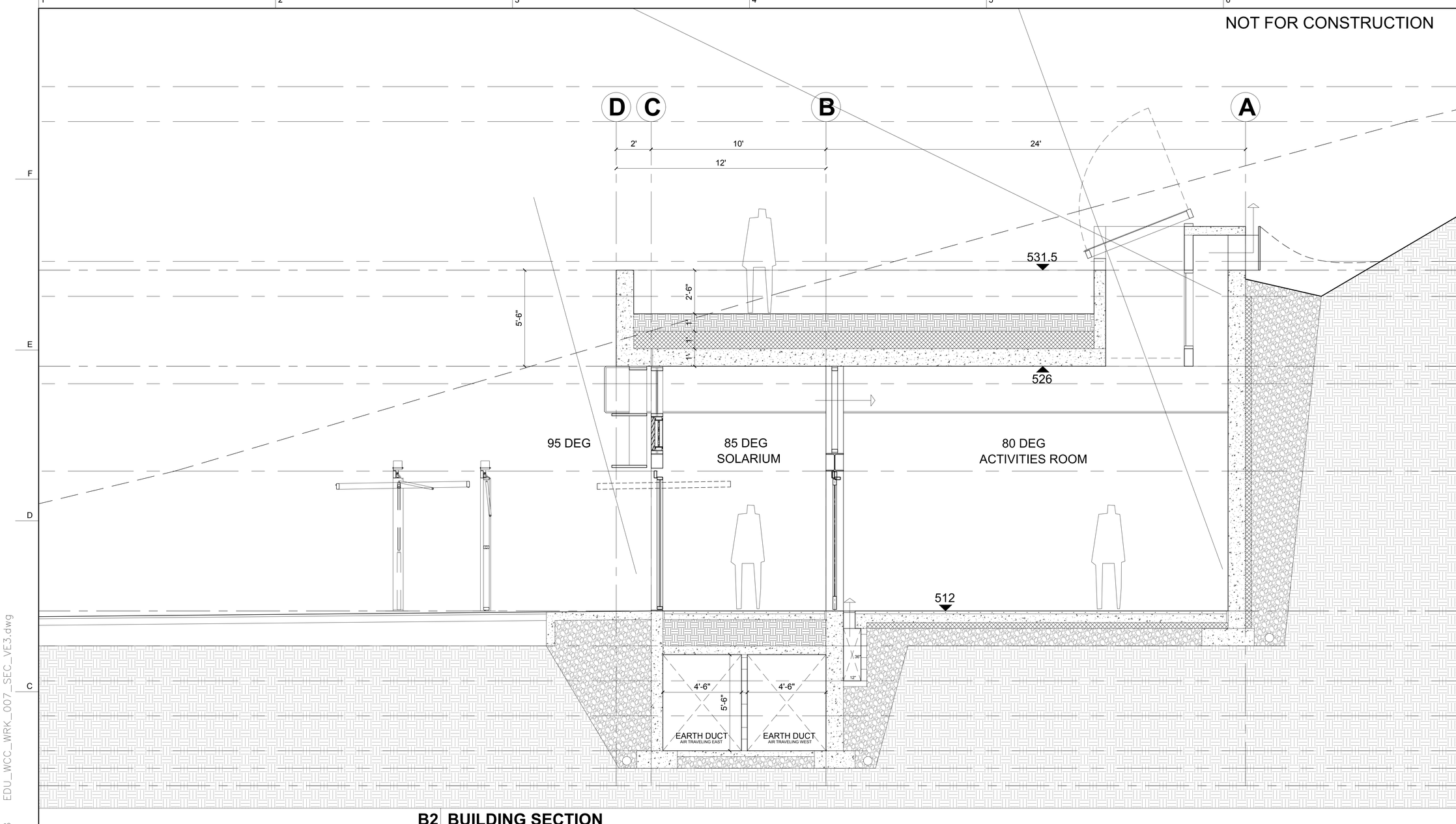
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PROJECT NO. 1610
DATE: SEPT 25, 2018
SCALE: 3/8" = 1'-0"
SHEET NUMBER:

A402

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B2 BUILDING SECTION

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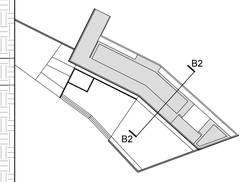
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REV	ISSUE	DATE
--	COST ESTIMATING - ALTERNATE	05.25.18
--	COST ESTIMATING - ALTERNATE	04.30.18
--	COST ESTIMATING	01.25.18

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PROJECT NO. 1610
DATE: SEPT 24, 2018
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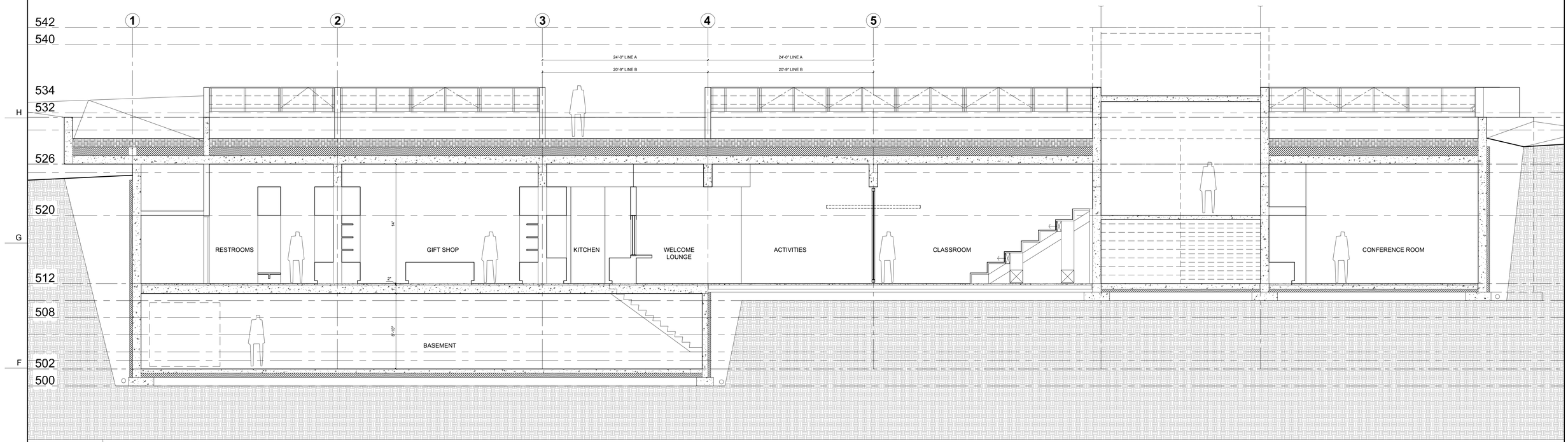
BUILDING SECTIONS

SHEET NUMBER:

A403

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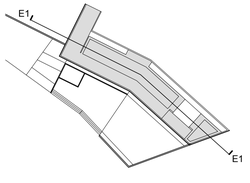
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E1 BUILDING SECTION - LONGITUDINAL THRU MAIN SPACES

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212 620 7970

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--	COST ESTIMATING - ALTERNATE	05.25.18
--	COST ESTIMATING	01.25.18

SHEET TITLE: **BUILDING SECTIONS**

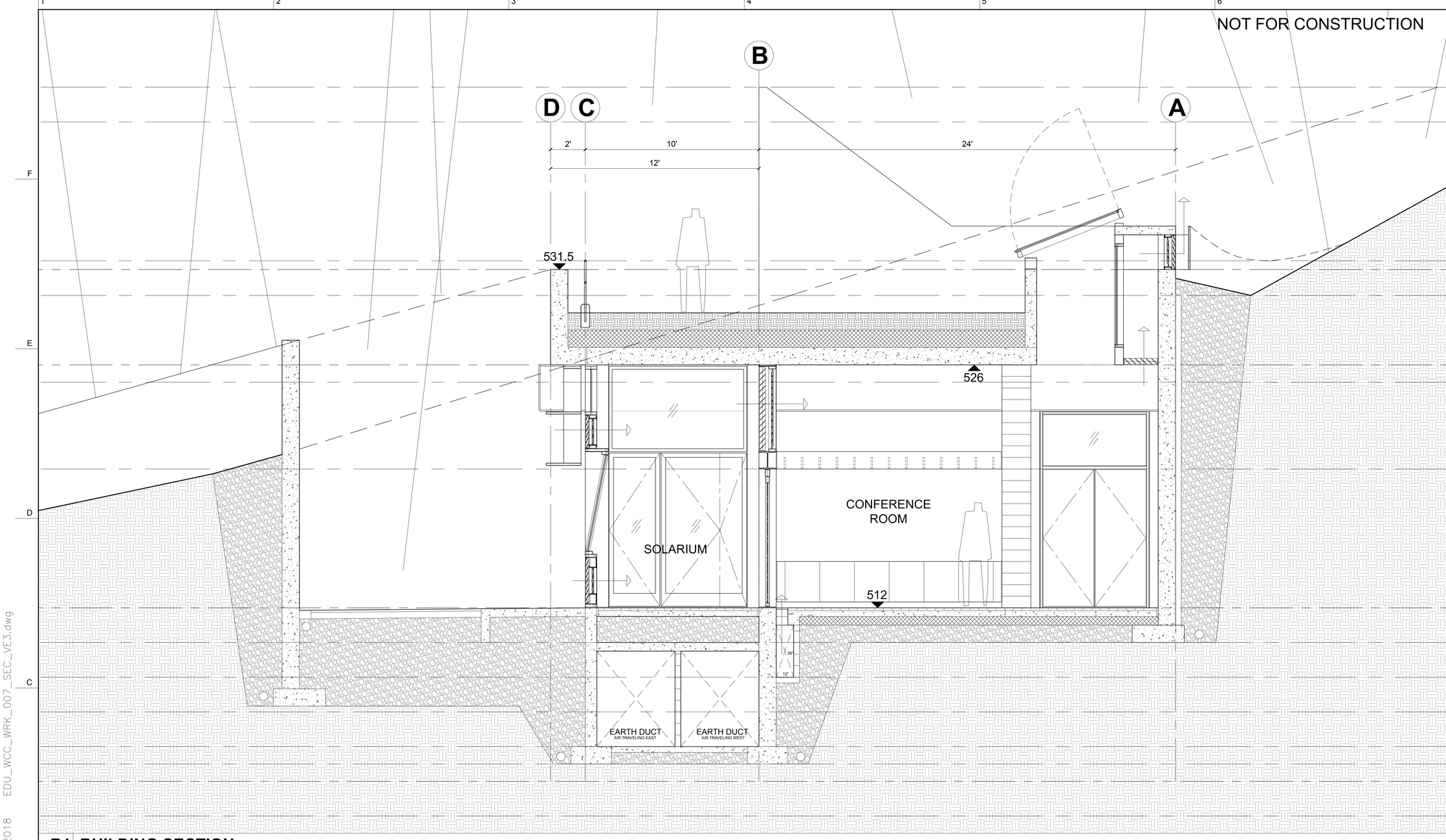
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PROJECT NO. 1610
DATE: SEPT 25, 2018
SCALE: 3/16" = 1'-0"
SHEET NUMBER:

A404

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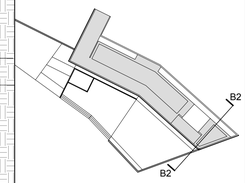
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--	COST ESTIMATING - ALTERNATE	04.30.18
--	COST ESTIMATING	01.25.18

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PROJECT NO. 1610
DATE: SEPT 24, 2018
SCALE: 3/8" = 1'-0"
SHEET TITLE:

BUILDING SECTIONS

SHEET NUMBER:

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KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
Town Consulting Professionals

DATE: October 11, 2018

RE: Mercedes-Benz of Goldens Bridge
321 Main Street
Sheet 4E, Block 11135, Lot 1,2,3,4,5,6,7 and 8
Sheet 4E, Block 11137, Lot 42

PROJECT DESCRIPTION

The subject property is comprised of several tax parcels that have a combined acreage of ±4.9 acres and located in the GB, RB and R-1/2A Zoning Districts. The majority of the property is developed with an auto dealership known as Mercedes-Benz of Goldens Bridge. The applicant is in contract to purchase a commercial parcel to the south (5 Anderson Lane - Lot 5) and a residential parcel to the east (46 Green Hill Road - Lot 42). The applicant is proposing to redevelop the property by expanding the showroom and service buildings, constructing a parking garage to be attached to the showroom building, constructing a parking lot for vehicle storage on an adjacent residential parcel (Lot 42), reconfiguring the existing curb cuts and parking lots and installing new drainage, lighting, landscaping, and other ancillary improvements.

SEQRA

The proposed action has been preliminarily identified as a Type 1 Action under the State Environmental Quality Review Act (SEQRA) and a coordinated review is underway. Prior to taking action on this pending application, a determination of significance must be adopted by the Planning Board as lead agency.

REQUIRED APPROVALS/REFERRALS

1. Site Development Plan Approval is required from the Planning Board; it is recommended that a public hearing be conducted.

2. Several area variances will be required from the Zoning Board of Appeals (ZBA).

3. Town Board Approval is required to amend the underlying Zoning District of Lots 5 and 42 from RB and R-1/2A, respectively, to GB. If this is to be considered by the Town Board, it is recommended that the adjacent Lot 9 (not part of the application) also be rezoned from RB to GB.

4. The application will require referral to the Architecture and Community Appearance Review Council (ACARC) for review and approval of the proposed building expansions and signage.

6. Approval is required from the Westchester County Department of Health (WCDH) for the proposed septic system and potable wells.

7. Approval is required from the New York City Department of Environmental Protection (NYCDEP) for review of a Stormwater Pollution Prevention Plan (SWPPP).

8. Approval from the New York State Department of Transportation (NYSDOT) is required for access onto NYS Route 22 and work within the right-of-way.

9. The owner/applicant will require coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002).

10. If the sewage design flow from the site is greater than 1,000 gpd, coverage is required under GP-0-05-001.

11. Referral to the Westchester County Planning Board is required under Section 239-m of General Municipal Law. The Planning Board secretary will coordinate this referral.

Parts 2 and 3 EAF Review – As previously requested, the applicant shall prepare and submit Parts 2 and 3 of the EAF for review and comment.

PLAN REVIEW COMMENTS:

1. This office has been working with the Building Inspector on developing a complete list of variances. At this point in the review process, we defer to the Building Inspector regarding zoning compliance and the final list of required variances.

2. The Planning Board is in receipt of correspondence from the Westchester County Planning Board (dated January 26, 2018), the NYSDEC Natural Heritage Program (dated February 20, 2018) and the NYCDEP (dated February 21, 2018). The applicant should provide annotated responses to each of the comments contained in the letters referenced above. To the extent that the applicant has received any additional correspondence from these or other review agencies, copies of those letters shall be provided to the Planning Board with annotated responses provided by the applicant.

3. As previously requested, a traffic impact study shall be prepared by the applicant and submitted for review.

4. As previously requested, the applicant shall prepare a lighting plan, demonstrating compliance with Section 220-14 of the Zoning Code for review. The goal should be to provide the minimal amount of lighting necessary to provide for a safe and secure site while protecting neighboring properties and public streets/places from light trespass and glare. The plan shall identify illuminance levels as expressed in footcandle measurements on a grid of the site, and 100 feet beyond, showing footcandle readings every 10 feet. The photometric plan shall specify maintained illuminance levels as maximum, minimum, average, maximum to minimum ratio, and average to minimum ratio. The plan shall specify the specific light fixtures proposed (by manufacturer and model number) and cut sheets shall be provided. The hours of operation of interior and exterior lighting shall be identified on the plan. Construction details (pole, foundation and fixture) shall be provided.

5. As previously requested, a landscaping plan, prepared by a NYS Registered Landscape Architect, shall be submitted for review.

6. It is understood that vehicle washing will be limited to indoors with biodegradable detergents and discharge to a reclamation system. As previously requested, the system components and configuration of the system shall be detailed on the plans.

7. We note that the applicant is proposing the installation of two (2) separate above-ground heating oil tanks, one (1) to serve each building. Particularly in connection with the tank serving the sales building, which is located in the zoning setback and may be visible from the street, the applicant should consider relocating the tank either indoors or in a less visible location. What fuel source is

currently used for each building? Has the applicant considered utilizing propane which tanks could be buried?

8. The plan indicates an existing underground fuel oil storage tank at the existing service building to be removed as part of the project. There also appears to be an underground tank on Lot 42 assumed to require removal. Any additional tanks on the existing service lot, as well as any that may be located on Lot 5 that require removal shall be shown on the plan. Given the current and historic use of the property and past spill history, any Phase 1 or 2 Environmental Assessment Reports prepared for or known to the applicant shall be submitted.

9. The Demolition Plan indicates several existing utility poles and overhead service wires to be removed. We note that two poles proposed to be removed at the Route 22 curb cuts are equipped with street lights. The removal and replacement shall be accounted for in the previously requested lighting plan.

10. The Demolition Plan shall clearly indicate the existing septic systems on Lots 5 and 42 to be removed. The location of the septic system serving Lot 42 shall be shown.

11. The Demolition Plan shall indicate the limits of Anderson Lane and Green Hill Road to be reconstructed.

12. The applicant shall identify if and where generators for each building will be located. The applicant had indicated verbally that generators would be located on the roof of the buildings, but a location does not appear to be indicated. Any provisions for visual screening shall be shown on the plans.

13. As previously requested, the proposed stacked-storage vehicle lift detail shall specify the color of the lifts.

14. As previously requested, the applicant must demonstrate that noise associated with the vehicle lifts and any proposed generator(s) will comply with Section 220-60B of the Zoning Code.

15. The applicant shall provide a guiderail along the west side of the upper lot access driveway and the south side of the interior connecting driveway. The plans shall indicate the limits and type of guiderail and include details.

16. As previously noted, one of the variances sought for this project is for the grade of the driveway entrances. Town Code requires a maximum grade of 3% for the first 30 feet of the entry drive. The applicant has provided additional information regarding the driveway grades and is now proposing grades as steep as 16.7% for the southern entrance and 12.5% for the northern entrance, respectively. The required variances shall be updated to reflect this.

17. As noted above, neither entry drive provides the required platform area and exceeds maximum permitted grades. As previously requested, the applicant shall investigate means to improve the driveway access by either adjusting grades, building elevations or a combination thereof. This office questions the safety of the drives as currently graded. Further, the practicality for auto-delivery vehicles to access these drives appears limited and may lead to unintended loading and off-loading of vehicles in Route 22. As previously requested, driveway profiles for all drives, including the upper storage lot drive and interior drives, shall be included on the plans. We note that the profiles provided for the south entrance does not correspond the proposed grade called out on the site plan. This shall be corrected and the variance request being sought shall be similarly adjusted.

18. The accessible parking spaces located in the employee parking lot appear to have finished grades that exceed the allowable 2% maximum. Please verify and adjust accordingly. The need for the "Reserved Parking" sign at the customer service pick-up exit should be verified.

19. The plan proposes "No-Parking Fire Lane" signs along the property frontage on Route 22. The ability to enforce this shall be confirmed with the Planning Board Attorney. Similar signs should be installed along the fire access road to the upper storage lot.

20. One set of dumpsters is proposed for the entire facility and is proposed to be located adjacent and to the south of the sales building. Given the distance between the proposed dumpster and the service building, it is recommended that a separate dumpster/enclosure be provided in proximity to the service building.

21. As previously requested, a detailed sequence of construction schedule shall be provided on the plans and within the SWPPP. At a minimum, the sequence and erosion control plan shall indicate the overall disturbance area, project phasing (and sub-areas) and provide a detailed sequence for all construction phases, locations of contractor staging areas, access (including for improvements to Anderson Lane/Green Hill Road and the upper storage lot), etc. The plan and SWPPP shall also clarify inspection requirements for the Trained Contractor and Certified Professional for erosion and sediment control and post-construction stormwater management. We note that the SWPPP currently requires only one qualified inspection per week. Because the project is located within the watershed, disturbing more than one (1) acre, qualified inspections shall be performed twice in a seven (7) day period.

22. The applicant has prepared a SWPPP and Erosion and Sediment Control Plan to comply with Chapter 189, Stormwater Management and Erosion and Sediment Control of the Town Code. The project will require review and approval of the SWPPP by the NYCDEP for compliance with the "Rules & Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources". Finally, the project will require coverage under NYSDEC General Permit, GP-0-15-002 for Stormwater Discharges from Construction Activity. We

will reserve comment until the necessary reports and analysis are provided and initially reviewed by the NYCDEP. Preliminarily, we offer the following:

a. The plans and SWPPP shall include a detailed sequence of construction and clarify various inspection requirements, as described above.

b. The SWPPP notes that prior approval by the Town and NYCDEP was received in 2012 and recently renewed in 2017. The plan, however, has changed and will require re-approval. Of particular note, the current plan has been revised to include three (3) rain gardens; one located in the right-of-way of Route 22 and two (2) within Anderson Lane, where landscaping was previously proposed. Stormwater improvements shall not be located within the Town right-of-way. The rain garden located in Route 22 will require a license agreement from the NYSDOT. The Planning Board should consider the location of this rain garden and the limited remaining area for planting. Landscape plans should be provided for the board's consideration.

c. Given the level of disturbance and terrain of the site, the applicant should provide temporary sediment basins at strategic locations to prevent the off-site transport of sediment laden stormwater runoff. Sizing calculations in accordance with the New York State Stormwater Management Design Manual shall be included.

d. The post-construction stormwater management controls will require long-term operation and maintenance by the owner as indicated in the SWPPP. The applicant shall provide a draft maintenance agreement for review by the Town.

23. The plan proposes drainage swales along the eastern property line to divert stormwater runoff from the upper parking lot to the north and south into the mitigation systems. The SWPPP and plans shall clarify how stormwater runoff from these areas will be handled. It appears that the swale to the north is proposed to discharge to the north-east corner of the parking lot and sheet flow across the lot to the proposed catch basin. The applicant should collect this runoff in a structure and convey it with a piped connection across the parking lot to avoid icing conditions and the potential for stormwater discharge to the property to the north. The prior applicant, as part of the previous approval, was required to construct interim stormwater controls and a diversion berm along the north property line, with the intention that a more permanent solution be provided once the site was constructed. Any removal or modifications to the berm and associated underdrain system shall be detailed on the plans. The swale discharge to the south will require additional collection and conveyance systems to the property route stormwater runoff to the mitigation system without flowing overland through the interior connection drive and parking lot.

24. As previously requested, the plans shall include drainage profiles for all conveyance systems.

25. The applicant shall provide confirmation from the WCDH that the two (2) exiting wells (to remain) will provide sufficient capacity for proposed action.

26. The applicant shall provide confirmation from the WCHD that minimum acceptable separation distances between existing Well #2 and the infiltration system and Well #3 and the fire storage are acceptable as shown.

27. The plans and details shall clarify where each of the drain inlet types (CI and DI with or without fingerdrains) are to be used. Please clarify the difference between the Type CI and the Type DI (without fingerdrains) units.

28. The Water Quality Structure Details shall include the configuration description and site specific data requirements.

29. The locations for the proposed finger underdrains included in Detail No. 20 shall be clarified on the plan.

30. The light pole location shown on the 90-degree Parking Detail (No. 39) is illustrated to be no less than four (4) inches from the curb. This should be clarified. If space is limited, we would suggest that the pole bases be extended two (2) feet above grade to provide protection from parked vehicles, snow removal, etc. The pole heights would need to be adjusted, as necessary, to maintain the desired fixture height.

31. The plans should clarify whether the existing storm line between existing Catch Basins No. 4 and 5 is to remain (shown to be removed on the Demolition Plan and to remain on the Utilities Plan).

32. As previously noted, it is recommended that any proposed chain link fence or gate be constructed using black vinyl coated fence material for durability and aesthetics; all applicable details shall be revised accordingly. Please also provide a detail for the Heavy Duty Chain Link Fence proposed along the west side of the stacked storage lot.

33. As previously noted, a white PVC privacy fence detail is provided; however, the location of this fence type is unknown; the applicant shall clarify. If any PVC type fencing is proposed, it is recommended that an earth tone color be selected to reduce visibility.

34. As previously requested, the plan proposes a retaining wall and safety fence at several locations that shall be detailed on the plans. All retaining walls in excess of four (4) feet shall be designed by a New York State Licensed Professional Engineer and certified to their proper construction by the Design Engineer. As previously requested, notes to this effect shall be added to the plan.

35. The construction details provided on the plans shall supplemented or modified based on the comments provided herein.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

PLANS REVIEWED, PREPARED BY JMC, DATED SEPTEMBER 6, 2018:

- Cover Sheet (C-000)
- Existing Conditions Plan (C-010)
- Demolition Plan (C-020)
- Tree Removal Plan (C-030)
- Layout Plan (C-100)
- Parking Plan (C-101)
- Grading & Drainage Plan (C-200)
- Site Sections Plan (C-201)
- Utilities Plan (C-300)
- Sanitary Force Main Profile (C-313)
- Road Profiles (C-314)
- Sediment and Erosion Control Plan (C-400)
- Vehicle Delivery Truck Plan (C-700)
- Fire Truck Plan (C-701, C-702)
- Construction Details (C-900, C-901, C-902, C-903, C-904, C-905, C-906, C-907)

PLANS REVIEWED, PREPARED BY SULLIVAN ARCHITECTURE, P.C., DATED SEPTEMBER 6, 2018:

- Service Building Proposed Lower Level (A1.01)
- Showroom Building Proposed Garage Level (Lower Level Parking) (A2.02)
- Showroom Building Proposed Lower Level (A2.03)
- Showroom Building Proposed Lower Level (Middle Level Parking) (A2.04)
- Showroom Building Proposed Upper Level (A2.05)
- Showroom Building Proposed Upper Level (Top Level Parking) (A2.06)
- Showroom Building Roof Plan (A2.07)
- Showroom Building Proposed Exterior Elevations (A3.0)
- Service Building Proposed Exterior Elevations (A3.01)

DOCUMENTS REVIEWED:

- Response Letter, prepared by JMC, dated September 10, 2018
- Building Height Calculations, prepared by JMC, dated September 6, 2018
- Stormwater Pollution Prevention Plan Report, dated September 6, 2018

JKJ/JMC/dc
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Site Planning
Civil Engineering
Landscape Architecture
Land Surveying
Transportation Engineering
Environmental Studies
Entitlements
Construction Services
3D Visualization
Laser Scanning

September 10, 2018

Chairman Jerome Kerner and Members of the Board
Town of Lewisboro Planning Board
79 Bouton Road
South Salem, NY 10590

RE: JMC Project 16124
Mercedes-Benz of Goldens Bridge
321 Main Street (NYS Rte. 22)
Town of Lewisboro, New York

Dear Chairman Kerner and Members of the Board:

On behalf of Celebrity Motor Car, LLC we are pleased to resubmit this application for Review of the Site Plan Approval Drawings for the proposed modifications to the existing auto dealership located at the above address. This submission is to provide additional documents to address some of the comments received by the Town Planning and Engineering Consultant and comments received from the Building Inspector. Nine sets (6 full size and 3 half scale) of the following information are provided for your review:

1. JMC Planning Engineering Landscape Architecture & Land Surveying ,PLLC Drawings:

Dwg. No.	Title	Rev. #/Date
C-000	"Cover Sheet"	2 09/06/2018
C-010	"Existing Conditions"	2 09/06/2018
C-020	"Demolition Plan"	2 09/06/2018
C-030	"Tree Removal Plan"	1 09/06/2018
C-100	"Layout Plan"	4 09/06/2018
C-101	"Parking Plan"	09/06/2018
C-200	"Grading & Drainage Plan"	4 09/06/2018
C-201	"Site Sections Plan"	1 09/06/2018
C-300	"Utilities Plan"	3 09/06/2018
C-313	"Sanitary Force Main Profile"	2 09/06/2018
C-314	"Road Profiles"	09/06/2018
C-400	"Sediment and Erosion Control Plan"	09/06/2018
C-700	"Vehicle Delivery Truck Plan"	1 09/06/2018
C-701	"Fire Truck Plan"	3 09/06/2018
C-702	"Fire Truck Plan"	3 09/06/2018
C-900	"Construction Details"	2 09/06/2018
C-901	"Construction Details"	2 09/06/2018
C-902	"Construction Details"	2 09/06/2018
C-903	"Construction Details"	2 09/06/2018
C-904	"Construction Details"	1 09/06/2018
C-905	"Construction Details"	1 09/06/2018

C-906	"Construction Details"	2	09/06/2018
C-907	"Construction Details"	1	09/06/2018

2. Sullivan Architecture, P.C. Drawings:

Dwg. No.	Title	Rev. #/Date	
A1.01	"Service Building Proposed Lower Level"	4	09/06/2018
A1.02	"Service Building Proposed Upper Level Plan"	4	09/06/2018
A2.02	"Showroom Building Proposed Garage Level (Lower Level Parking)"	4	09/06/2018
A2.03	"Showroom Building Proposed Lower Level"	4	09/06/2018
A2.04	"Showroom Building Proposed Lower Level (Middle Level Parking)"	4	09/06/2018
A2.05	"Showroom Building Proposed Upper Level"	4	09/06/2018
A2.06	"Showroom Building Proposed Upper Level (Top Level Parking)"	4	09/06/2018
A2.07	"Showroom Building Roof Plan"	1	09/06/2018
A3.0	"Showroom Building Proposed Exterior Elevations"	5	09/06/2018
A3.01	"Service Building Proposed Exterior Elevations"	5	09/06/2018

3. Stormwater Pollution Prevention Plan (SWPPP) prepared by JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC, revised September 6, 2018. (3 copies)

4. JMC Memorandum for Building Height Calculations, dated September 6, 2018. (9 copies)

Since the last appearance before the Planning Board on June 19, 2018, we have appeared before the Architectural & Community Review Council (ACARC) and received favorable comments. We have made submissions to the Westchester County Health department and New York City Department of Environmental Protection for the sanitary sewer approval. We have also been working with the Building Inspector to address comments/questions.

The following are responses to comments within a memorandum provided by Kellard Sessions Consulting, PC, dated June 14, 2018:

Comment 1

The most recent submission mainly deals with access, circulation and changes made to the layout in response to comments made by the Goldens Bridge Fire Department; a complete site plan submission was not provided. Upon review by the Planning Board, it is recommended that the most recent changes be incorporated into the overall plan set and that a complete site plan package be submitted for review which address our previous comments and those listed below. We note that several comments and concerns outlined in our December 13, 2017 memorandum have not been satisfactorily addressed. Prior to any future submission, it is recommended that the applicant meet with our office and the Building Inspector to review the plan and the applicant's response to comments.

Response 1

All comments from the December 13, 2017 memorandum have been addressed with the exception of the following:

Comment #14-Traffic Study is being prepared and vehicle intersection counts are being done now that school is back in session.

Comment #15-Lighting Plan will be prepared, similar to the previously approved version.

Comment #16-Landscape Plan will be prepared, similar to the previously approved version.

Comment #25-Noise data for the vehicle lifts will be submitted shortly once received from the manufacturer.

Comment #30-We are still developing a detailed sequence of construction with input from several sources that will be submitted shortly.

Comment #34-Pipe capacity calculations and profiles shall be submitted shortly and will be similar to the previously approved design.

Comment 2

As discussed during the site walk, we recommend that a vehicle connection be provided between the parking lot located immediately north of the showroom building and the driveway serving the upper parking lot located on Lot 42. Without this connection, vehicles will be jockeyed back and forth using Green Hill Road which is a dead-end road serving approximately four (4) homes.

Response 2

A vehicle connection has been provided as shown on the Site Plans.

Comment 3

The applicant reports that the submitted plans are satisfactory to the Goldens Bridge Fire Department. A written report from the Fire Department must be submitted to the Planning Board confirming same.

Response 3

Attached is the letter from the Goldens Bridge Fire District, dated June 14, 2018.

Comment 4

The fire truck exiting plan shall be updated to demonstrate that the fire truck can exit the parking lot located to the north of the sale building (only entry maneuvers are shown for this parking lot).

Response 4

JMC Drawing C-702 "Fire Truck Plan" has been updated to show a fire truck exiting the north side of the Showroom Building.

Comment 5

Vehicle overhangs shall be shown for all truck maneuvers (currently not shown in their entirety).

Response 5

Both vehicle overhangings and tire lines are shown on the truck turning plans. As noted on the plans, the truck turning radii were increased to provide additional space for maneuvering.

Comment 6

All proposed gates shall be dimensioned to the satisfaction of the Fire Department.

Response 6

As previously indicated, the Goldens Bridge Fire District has approved Site Plans and all driveways and gates are dimensioned.

Comment 7

The location and connections to all proposed oil and water separators shall be illustrated on the plan.

Response 7

The proposed oil/water separators will be located within the buildings. The plumbing drawings for the buildings are not completed, however Note #29 on JMC Drawing C-300 "Utilities Plan" indicates that oil/water separators will be installed within the buildings. The oil/water separator detail is provided on JMC Drawing C-906 "Construction Details."

Comment 8

We note that the access driveway extending off Green Hill Road to the upper lot is proposed to be widened to 16-feet; it is not clear how stormwater runoff from this driveway will be managed.

Response 8

Drain inlets are proposed at the bottom of the driveway at the property line to collect and convey runoff from the driveway to the proposed on-site infiltration system for treatment and retention.

Comment 9

Dimensions provided for Green Hill Road should be verified and/or revised accordingly.

Response 9

Dimensions for Green Hill Road are indicated on JMC Drawing C-100 "Layout Plan."

A meeting was held on August 16, 2018 with the Building Inspector and Kellard Sessions Consulting, PC to review the Building Inspector's comments. A draft memorandum was issued by the Building Inspector during the meeting. The following are responses to comments within the memorandum provided by the Building Inspector:

Comment No. 1

Section 220-9D(1) and (2) - nonconformities other than use.

Response No. 1

So noted.

Comment No. 2

Section 220-24E(A) Rear yard setback (minimum 30' required/2' proposed).

Response No. 2

Continuation of existing non-conforming Showroom Building and expansion of Showroom Building.

Comment No. 3

Section 220-24E Gross Floor Area of a single structure (maximum of 10,000 s.f. permitted/50,900 s.f. proposed).

Response No. 3

Continuation of existing non-conforming Service Building and expansion of Service Building and Showroom Building.

Comment No. 4

Section 220-24E Maximum building coverage (20% permitted/24.7% proposed).

Response No. 4

Expansions to Showroom and Service Buildings.

Comment No. 5

Section 220-24E Maximum site coverage (maximum 60% permitted/64.4% proposed).

Response No. 5

Expansion of buildings, driveways and parking areas.

Comment No. 6

Section 220-24E Maximum building height (maximum 30' permitted/34' proposed). Provide calculations for median grade level and indicate highest point of roof.

Response No. 6

The enclosed JMC Building Height Calculations Memorandum dated September 6, 2018 is provided. The Showroom Building height requires a variance as calculated. The highest point of the Showroom Building roof is elevation 234.83, which is the top of the jewel box at the northwest corner of the building. The highest point of the Service Building roof is elevation 238.90 which is the expanded portion of the building at the south side.

Comment No. 7

Section 220-55C(3) Minimum aisle width (minimum 25' required/20' proposed).

Response No. 7

Within gated upper parking lot for employee parking and vehicle storage.

Comment No. 8

Section 220-55D(2) Maximum entrance/exit grade within 30' of street line (maximum permitted 3%/+ or- 8.8% proposed).

Response No. 8

12% proposed slopes are needed at both driveway entrances from NYS Route 22 to meet the existing and proposed Showroom Building entrance elevations. Design is consistent with the existing non-conforming slopes.

Comment No. 9

Section 220-55D(2) Maximum driveway grade (maximum 12%).

Response No. 9

Existing non-conforming driveway to the Service Building is to remain and be slightly modified. Design is consistent with existing non-conforming slopes.

Comment No. 10

Section 220-12E(l)- Walls within required setbacks cannot exceed 6'; proposed retaining walls exceed this requirement. What is the highest point of the wall?

Response No. 10

The proposed retaining wall behind the Service Building will replace soil, boulders and vegetation against the rear of the Service Building. It is partly within the rear yard setback and ranges from approximately 15 feet high to 1 foot high within the setback.

Comment No. 11

Section 185-5F(3)(a) prohibits wall signs in excess of 20' in length.

Response No. 11

The main "Mercedes-Benz of Goldens Bridge" sign on the west side of the Showroom Building in between the service entrance/exit doors.

Comment No. 12

Section 185-5F(3)(a) allows for no more than 2 wall signs so long as the second wall sign meets the standards provided in Section 185-5F(4)16 wall signs are proposed.

Response No. 12

Along west side of Showroom Building for the main sign, service entrance/exit signs plus Mercedes Benz logos shown on top of the north, south and west sides of Showroom Building.

Comment No. 13

Section 185-5F(4) provides standards for secondary wall signs. The additional proposed wall signs do not meet these standards.

Response No. 13

The "Service Entrance" and "Service Exit" signs on the west side of the Showroom Building.

Comment No. 14

Section 185-6C(4) prohibits wall signs from extending beyond the second story. How much above?

Response No. 14

Mercedes Benz logos shown on top of the north, south and west sides of Showroom Building extend approximately 33 feet, 1 ½ inches above the second story as shown on Sullivan Architecture Drawing A3.0.

Comment No. 15

Section 185-6C(6) prohibits letters on wall signs in excess of 12".

Response No. 15

The main "Mercedes-Benz of Goldens Bridge" sign on west side of Showroom Building in between service entrance/exit doors.

Comment No. 16

Section 220-57B prohibits off-street loading areas to block parking stalls.

Response No. 16

On west side/front of Showroom Building and on north side/upper portion of Showroom Building.

Comment No. 17

Section 220-SSE(S) One shade tree shall be provided within or adjacent to the parking area for every 10 required parking spaces. Said shade tree(s) shall have a minimum trunk diameter measured at a height of 6 inches above finished ground level of 3 inches with a minimum of a 7' single straight stem to the first branches above ground level.

Response No. 17

The landscape architecture design will provide sufficient trees adjacent to the parking area. The Landscape Plan will be submitted under separate cover. Therefore, a variance is not needed.

Comment No. 18

Section 220-24E Auto lifts are within the required setbacks. Provide dimensions.

Response No. 18

The proposed vehicle lifts are approximately 17 feet from the rear property line, 43 feet from the side property line and 20 feet from the front property line as shown on JMC Drawing C-100 "Layout Plan."

Comment No. 19

Section 220-SSD(l) Access into the parking structure must be a minimum of 20' wide.

Response No. 19

According to Sullivan Architecture, P.C., Drawings A2.02 "Showroom Building Proposed Garage Level (Lower Level Parking)," and A2.03 "Showroom Building Proposed Lower Level," the access to the parking structure is 20 feet wide. Therefore, a variance is not needed.

Comment No. 20

Section 220-SSD(l) Access to upper parking must be a minimum of 20' wide.

Response No. 20

The existing driveway to the vehicle storage parking area east of the Service Building is proposed to be increased from approximately 11 feet wide to 16 feet wide as requested and approved by the Goldens Bridge Fire District.

Comment No. 21

Section 220-55D(2) Access to upper parking shall not exceed a grade of 3% within 30' of the street line or 12% at any other point.

Response No. 21

Exiting non-conforming driveway to be improved and remain non-conforming.

Comment No. 22

Section 220-55E(3) In all off-street parking areas containing 25 or more parking spaces, at least 10% of the surface within the parking perimeter shall consist of planting islands.

Response No. 22

The upper employee and storage parking area north of the Service Building and storage parking area east of the Service Building.

Comment No. 23

Section 220-57C(l) requires 1 loading space for the first 4,000 s.f. of gross floor area or major portion thereof and 1 additional space for 10,000 s.f. of gross floor area or major portion thereof in excess of 4,000 s.f. shall be provided. 2 spaces are indicated, a total of 6 are required.

Response No. 23

Loading spaces are proposed in the only locations that the dealership has indicated. The two areas are all that is required by the dealership.

Required waivers:

Comment

Section 220-15B-To permit a deviation from the standards requiring landscape buffers where existing non-conformities exist and shall remain.

Response

Along front and rear of Showroom Building, driveway up to Service Building and rear of upper parking area north of Service Building.

Required:

Comment

A. Indicate accessible parking for upper building.
B. Indicate accessible route to buildings from accessible parking.
C. Identify and provide quantities for all different types of parking (separate inventory, showcase, employee, customer and accessible).
D. Indicate striping of spaces within parking structure that comply with Section 220-55C.

Responses

A. Accessible parking is provided within the upper parking area for employees north of the Service Building as shown on JMC Drawing C-100 "Layout Plan."

B. Accessible routes to the building from the accessible parking area shown and accessible doorways are indicated on JMC Drawing C-100 "Layout Plan."

C. JMC Drawing C-101 "Parking Plan" and the Sullivan Architecture, PC Building Drawings identified and quantify all different types of parking.

D. Striping and dimensioning of the parking structure spaces is shown on the Sullivan Architecture, PC Building Drawings.

We trust that the enclosed information is sufficient for your review and we look forward to discussing this matter at the next available meeting. In the interim, if you have questions or require additional information, please do not hesitate to contact our office at (914) 273-5225.

Sincerely,

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

Stephen Spina, PE
Senior Project Manager

cc: Mr. Tom Maoli
Ms. Bernadette Kopec
Mr. Chris Pelella, AIA
Mr. John Sullivan, FAIA
Michael Sirignano, Esq.
Goldens Bridge Fire Department
Lewisboro Library
Katonah Village Library
Pound Ridge Library

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GOLDENS BRIDGE FIRE DISTRICT
P.O.BOX 409
GOLDENS BRIDGE, N. Y. 10526

TO: Honorable Chairman Jerome Kerner
And Members of the Planning Board
Town of Lewisboro

FROM: Board of Fire Commissioners
Goldens Bridge Fire Department

DATE: June 14, 2018

RE: Mercedes-Bens of Goldens Bridge
(NY Rte. 22)
Town of Lewisboro, New York

Dear Chairman, Kerner and Members of the Planning Board

This letter is written to confirm that the Goldens Bridge Fire District has met with representatives of the Mercedes-Benz of Goldens Bridge on April 26th and May 24th, 2018 to review the project and further discuss improvements in the site design. The Fire District is in agreement with the changes that have been made to the Site Plan Drawings to improve fire access and meet the 2015 International Fire Code.

The plans demonstrate additional truck maneuvering routes, increased turning radii and widened driveways as much as possible to help the trucks maneuver easier. The existing driveway to the overflow storage lot behind the Service Building has been widened from 11 feet to 16 feet to accommodate access for the fire trucks, even though there are no residential building occupants involved. It should be noted that the dry hydrant connection is located along the right of way in NY Route 22. The dry hydrant is the connection to the underground water storage tank which provides water to the fire trucks.

The Fire District acknowledges the above changes and the proposed improvements to the property. We understand that some of the site improvements will increase the impervious coverage but will help the Fire Department to safely maneuver throughout the site. The Fire District supports the additional lot coverage for truck maneuverability.

We trust that this letter is sufficient for your record and distribution as needed. If you have questions or require additional information, please contact the Fire District.

Sincerely,

Commissioner Robert Melillo
Goldens Bridge Fire District

cc: Ms. Bernadette Kopec, Mercedes-Benz of Goldens Bridge
Mr. Chris Pallela, Sullivan Architecture
Michael Sirignano, Esq.
Mr. Stephen Spina, JMC

MEMORANDUM

DATE: September 6, 2018

TO: Mr. Joseph Angielo, Town Building Inspector

FROM: Mr. Stephen Spina, JMC

RE: JMC Project 16124
Mercedes-Benz of Goldens Bridge
NYS Route 22
Town of Lewisboro, New York

SUBJECT: ***Building Height Calculations***

Showroom Building

Average grade around building = 183.38 (Refer to attached spreadsheet)
Elevation of building roof (main portion) = 216.83 (34' above Front FFE of 182')
Elevation of covered display = 219.67
Elevation of top of jewel box = 234.83
Elevation of top of blade wall = 226.83
Elevation of top of mechanical screening = 224.88

However, just using the elevation of the majority of the roof of 216.83 minus the average grade around the building of 183.38, the building height is 33.45'.

Need Variance because it is greater than 30 feet.

Service Building (FFE is 215.90)

Average grade around building = 215.46 (Refer to attached spreadsheet)
Elevation of building roof (existing portion) = 234.90 (19' high)
Elevation of building expansion roof (new portion) = 238.90 (23' high)
Building height is 23', No variance is required.
238.90 – 215.46 = 23.3

p:\2016\16124\admin\me building height calculations 09-06-2018.docx

Showroom Building Average Grade			
POINT A	POINT B	DISTANCE	AVERAGE
184.5	184.5	1.96	361.62
184.5	184.5	0.29	53.51
184.5	184.5	21.25	3,920.63
184.5	184	0.29	53.43
184	184.5	2	368.50
184.5	184	17.68	3,257.54
184	184	0.29	53.36
184	183	10.75	1,972.63
183	183	0.29	53.07
183	182.6	5.62	1,027.34
182.6	182	0.25	45.58
182	182.25	6.23	1,134.64
182.25	183.42	0.89	162.72
183.42	183.42	0.06	11.01
183.42	183.46	3.5	642.04
183.46	183.15	2.43	445.43
183.15	183.16	1	183.16
183.16	182	2.5	456.45
182	182	13	2,366.00
182	183.3	2.5	456.63
183.3	183.31	1	183.31
183.31	183.62	2.41	442.15
183.62	182.5	4.16	761.53
182.5	182.5	10.28	1,876.10
182.5	182.5	16	2,920.00
182.5	182.5	0.07	12.78
182.5	182.5	0.37	67.53
182.5	182.5	2.97	542.03
182.5	182.5	3.79	691.68
182.5	182	3	546.75
182	182	1.23	223.86
182	182	0.5	91.00
182	182	1.08	196.56
182	182	0.65	118.30
182	182	15.33	2,790.06
182	182	0.61	111.02
182	182	3.26	593.32
182	182	5.25	955.50
182	182	5.25	955.50
182	182	10.74	1,954.68
182	182	2.92	531.44

182	182	5.25	955.50
182	182	0.25	45.50
182	182	10.5	1,911.00
182	182	5.25	955.50
182	182	2.92	531.44
182	182	5.25	955.50
182	182	0.25	45.50
182	182	5.25	955.50
182	182	0.86	156.52
182	182	2.97	540.54
182	182	4.12	749.84
182	182	0.06	10.92
182	182	5.5	1,001.00
182	182	0.06	10.92
182	182	3.17	576.94
182	182	0.61	111.02
182	182	15.5	2,821.00
182	182	0.61	111.02
182	182	6.21	1,130.22
182	182	9	1,638.00
182	182	1.5	273.00
182	182	9	1,638.00
182	182	0.95	172.90
182	182	0.61	111.02
182	182	15.5	2,821.00
182	182	0.61	111.02
182	181.5	8.43	1,532.15
181.5	181.5	0.06	10.89
181.5	181	21.25	3,851.56
181	181	0.06	10.86
181	181	2.92	528.52
181	181	0.06	10.86
181	179	5.5	990.00
179	179	0.06	10.74
179	177	3.67	653.26
177	177	3.66	647.82
177	177	0.06	10.62
177	177	16	2,832.00
177	177	0.06	10.62
177	177	2.93	518.61
177	177	0.06	10.62
177	177.5	5.5	974.88
177.5	177.5	0.06	10.65
177.5	178	6.45	1,146.49
178	175	24	4,236.00

175	172	47	8,154.50
172	172	1.88	323.36
172	170	15.29	2,614.59
170	170	18.56	3,155.20
170	169.5	2.73	463.42
169.5	169.5	1.87	316.97
169.5	169	1.5	253.88
169	169	20.43	3,452.67
169	169	24.48	4,137.12
169	170	39.08	6,624.06
170	170	48	8,160.00
170	170.5	24	4,086.00
170.5	172	13.13	2,248.51
172	175	8.21	1,424.44
175	176	4.63	812.57
176	177	8.56	1,510.84
177	178	12.57	2,231.18
178	191	72.41	13,359.65
191	200.5	47.74	9,345.11
200.5	202	36.59	7,363.74
202	202	0.42	84.84
202	204	50.5	10,251.50
204	204	0.47	95.88
204	204	1.47	299.88
204	200	1.51	305.02
200	200	16.06	3,212.00
200	200	0.41	82.00
200	200	2	400.00
200	200	0.37	74.00
200	200	17.2	3,440.00
200	200	0.33	66.00
200	200	2.04	408.00
200	200	0.3	60.00
200	200	17.38	3,476.00
200	200	0.3	60.00
200	200	2	400.00
200	200	0.26	52.00
200	200	17.58	3,516.00
200	200	0.26	52.00
200	200	2	400.00
200	200	0.23	46.00
200	200.5	17.29	3,462.32
200.5	200.5	0.19	38.10
200.5	200.5	2.5	501.25
200.5	200.5	0.15	30.08

200.5	200.75	13.28	2,664.30
200.75	200.75	0.02	4.02
200.75	186	0.98	189.51
186	185	0.02	3.71
185	184.5	4.91	907.12
184.5	184.5	0.37	68.27

AVERAGE GRADE =	**183.38**

FORMULA = SUM OF AVERAGE / SUM OF DISTANCE

Service Building Average Grade			
POINT A	POINT B	DISTANCE	AVERAGE
215	215.9	29.21	6,293.29
215.9	215.9	1	215.90
215.9	215.9	12	2,590.80
215.9	215.9	1	215.90
215.9	215.9	28.82	6,222.24
215.9	215.9	44.4	9,585.96
215.9	215.9	4.84	1,044.96
215.9	215.9	2.76	595.88
215.9	215.9	3.84	829.06
215.9	215.9	4.31	930.53
215.9	215.9	4.31	930.53
215.9	215.9	6.33	1,366.65
215.9	215.9	1.27	274.19
215.9	215.9	3.77	813.94
215.9	215.9	4.14	893.83
215.9	215.9	2.47	533.27
215.9	215.9	2.47	533.27
215.9	215.9	6.33	1,366.65
215.9	215.9	1.89	408.05
215.9	215.9	1.89	408.05
215.9	215.9	5.01	1,081.66
215.9	215.9	5.67	1,224.15
215.9	215.9	3.17	684.40
215.9	215.9	3.12	673.61
215.9	215.9	1.67	360.55
215.9	215.9	1.78	384.30
215.9	215.9	4	863.60
215.9	215.9	2.38	513.84
215.9	215.9	4.83	1,042.80
215.9	215.9	4.82	1,040.64
215.9	215.9	10.23	2,208.66

215.9	215.9	9.89	2,135.25
215.9	215.9	2.81	606.68
215.9	215.9	2.54	548.39
215.9	215.8	2.71	584.95
215.8	215.7	2.33	502.70
215.7	215.6	1.93	416.20
215.6	215.5	2.22	478.52
215.5	215.5	3.91	842.61
215.5	215.5	1	215.50
215.5	215.25	12	2,584.50
215.25	215.25	1	215.25
215.25	215	6.5	1,398.31
215	215	1	215.00
215	214.85	12	2,579.10
214.85	214.85	1	214.85
214.85	214.75	6.5	1,396.20
214.75	214.75	1	214.75
214.75	214.5	12	2,575.50
214.5	214.5	1	214.50
214.5	214.25	6.5	1,393.44
214.25	214.25	0.98	209.97
214.25	214.1	12	2,570.10
214.1	214.1	0.98	209.82
214.1	214	4.25	909.71
214	215	19.31	4,142.00
215	215.9	19.31	4,160.34
215.9	215.9	1	215.90
215.9	215.9	12	2,590.80
215.9	215.9	1	215.90
215.9	215	29.21	6,293.29
215	215.75	100.67	21,681.80
215.75	215	94.2	20,288.33

AVERAGE GRADE = 215.46

FORMULA = SUM OF AVERAGE / SUM OF DISTANCE

SITE PLAN APPROVAL DRAWINGS

MERCEDES BENZ OF GOLDENS BRIDGE

WESTCHESTER COUNTY
NYS ROUTE 22
TOWN OF LEWISBORO, NY

Applicant:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981
(973) 727-7016

Site Planner, Civil & Traffic Engineer, Surveyor and Landscape Architect:
120 BEDFORD ROAD
ARMONK, NY 10504
(914) 273-5225

Architect:
SULLIVAN ARCHITECTURE, P.C.
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601
(914) 761-4919

Attorney:
MICHAEL SIRIGNANO, ESQ.
OLD POST PROFESSIONAL/ ROUTE 35
P.O. BOX 784
CROSS RIVER, NY 10518
(914) 763-5500

Surveyor:
INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 GARRETT PLACE, CARMEL, NY 10512
(845) 225-9690

JMC Drawing List:

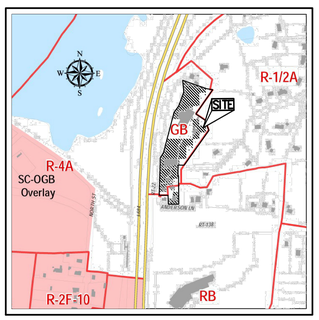
C-000 COVER SHEET
C-010 EXISTING CONDITIONS
C-020 DEMOLITION PLAN
C-030 TREE REMOVAL PLAN
C-100 LAYOUT PLAN
C-101 PARKING PLAN
C-200 GRADING & DRAINAGE PLAN
C-201 SITE SECTIONS PLAN
C-300 UTILITIES PLAN
C-313 SANITARY FORCE MAIN PROFILE
C-314 ROAD PROFILES
C-400 SEDIMENT AND EROSION CONTROL PLAN
C-700 VEHICLE DELIVERY TRUCK PLAN
C-701 FIRE TRUCK PLAN
C-702 FIRE TRUCK PLAN
C-900 CONSTRUCTION DETAILS
C-901 CONSTRUCTION DETAILS
C-902 CONSTRUCTION DETAILS
C-903 CONSTRUCTION DETAILS
C-904 CONSTRUCTION DETAILS
C-905 CONSTRUCTION DETAILS
C-906 CONSTRUCTION DETAILS
C-907 CONSTRUCTION DETAILS

Sullivan Architecture Drawing List:

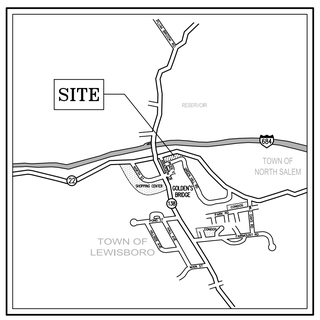
A1.01 SERVICE BUILDING PROPOSED LOWER LEVEL
A2.02 SHOWROOM BUILDING PROPOSED GARAGE LEVEL (LOWER LEVEL PARKING)
A2.03 SHOWROOM BUILDING PROPOSED LOWER LEVEL
A2.04 SHOWROOM BUILDING PROPOSED LOWER LEVEL (MIDDLE LEVEL PARKING)
A2.05 SHOWROOM BUILDING PROPOSED UPPER LEVEL
A2.06 SHOWROOM BUILDING PROPOSED UPPER LEVEL (TOP LEVEL PARKING)
A2.07 SHOWROOM BUILDING ROOF PLAN
A3.0 SHOWROOM BUILDING PROPOSED EXTERIOR ELEVATIONS
A3.01 SERVICE BUILDING PROPOSED EXTERIOR ELEVATIONS



AREA MAP
SCALE: 1" = 200'
SOURCE: NEAR MAP / 2017



ZONING MAP
SCALE: 1" = 2,000'
SOURCE: TOWN OF LEWISBORO ZONING MAP
DATED: MARCH 1, 2012



VICINITY MAP
SCALE: 1" = 2,000'

Mercedes Benz of Goldens Bridge
General Business (GB) Zoning Districts
Zoning Conformance Table

Zoning Bulk Regulation	Required	Existing	Proposed	Total
MINIMUM LOT AREA (ACRES)(SF)	0.5/21,780	4.966/216,319	No Change	4.966/216,319
MINIMUM STREET FRONTAGE (LF)	100	±350	No Change	350
MINIMUM YARDS (LF)				
FRONT FROM STREET TO CENTER LINE				
(SHOWROOM BLDG)	45	70	No Change	70
(SERVICE BLDG)	45	130	No Change	130
FRONT FROM LOT LINE				
(SHOWROOM BLDG)	20	±25	No Change	25
(SERVICE BLDG)	20	±39	No Change	39
SIDE				
(SHOWROOM BLDG)	15	±245	19	19
(SERVICE BLDG)	15	±299	No Change	209
REAR				
(SHOWROOM BLDG)	30	±3 (1)	2 (2)	2 (2)
(SERVICE BLDG)	30	±23 (1)	No Change	23 (1) (2)
MINIMUM LANDSCAPE BUFFERS (LF)				
FRONT				
(SHOWROOM BLDG)	15	0 (1)	0 (2)(4)	0 (2) (4)
(SERVICE BLDG)	15	0 (3)	15	15
SIDE				
(SHOWROOM BLDG)	15	0 (3)	19	19
(SERVICE BLDG)	15	±35	37	37
REAR				
(SHOWROOM BLDG)	30	0 (1)	2 (1) (2)	2 (1) (2)
(SERVICE BLDG)	30	±20(1)	20 (1) (2)	20 (1) (2)
GROSS FLOOR AREA (SF)				
SHOWROOM BUILDING		12,400	38,500	50,900
SERVICE BUILDING		18,200 (5)	2,700	20,900 (5)
2 STORY BUILDING & 1 STORY GARAGE ON PARCEL IV		3,091	-3,091 (6)	0
2 STORY BUILDING ON PARCEL VI		1,806	-1,806 (6)	0
SITE TOTAL		35,497	36,303	71,800
MAXIMUM SINGLE STRUCTURE (SF)	10,000	18,200 (1)	36,707 (2)(7)	36,707 (2)(7)
MAXIMUM BUILDING COVERAGE (% OF LOT)	20	10.9	15.2	24.7 (2) (6)
MAXIMUM BUILDING HEIGHT				
SHOWROOM				
FEET	30	25.5	34 (2)(8)	34 (2)(8)
STORIES	2 ½	2	2	2
SERVICE BUILDING				
FEET	30	20	23 (8)	23 (8)
STORIES	2 ½	1 1/2	1 1/2	1 1/2
MAXIMUM FLOOR AREA RATIO (TOTAL GROSS FLOOR AREA/TOTAL LOT AREA)	0.40	0.16	0.17	0.33
PARKING SPACES				
1 SP./EMPLOYEE +1SP./500 S.F. OF GROSS FLOOR AREA (65 EMPLOYEES + 71,800 S.F./500 S.F.)	209	130	195 (2) (9)	195 (2) (9)
LOADING SPACES (1/4,000 SF GFA + 1/10,000 SF GFA FOR ADDITIONAL SF.)	8	0	2	2
MAXIMUM SITE COVERAGE (% OF LOT AREA)	60	52 (10)	64.4 (2)	64.4 (2)

(1) Existing non-conformance to remain, based on approved site plan revised July 1982 and Amended Approved Site Plan revised 09/24/2012.
(2) Variance required.
(3) Existing non-conformance to be removed.
(4) Modified entrances onto NYS Route 22 with a landscape island.
(5) Includes existing Mezzanine.
(6) Existing buildings to be demolished.
(7) Includes Showroom Building Covered Display.
(8) Per Section 220-2B of the Zoning Code, Building Height equals the mean vertical distance measured from the mean average level of the finished grade adjacent to exterior walls of the building to the level of the highest point of the roof if the roof is flat, or to the mean level between the eaves and the highest point of the roof if the roof is of any other type. Mean building height includes the Showroom Covered Display and is 33.45 feet according to definition.
(9) Includes new and pre-owned storage and display, service department, service customer, showroom customer and employee parking both inside and outside. Does not include additional 225 storage spaces. See Parking Data Table on JMC Drawing C-101 "Parking Plan".
(10) Existing site coverage does not include gravel driveways and gravel parking areas.

I:\2016\16124\acad\mercedes benz zoning conformance table.docx

REQUIRED VARIANCES

ZONING CODE SECTION	DESCRIPTION	REQUIRED	PROVIDED	DIFFERENCE
§ 220-9D(1)&(2)	INCREASE IN NON-CONFORMITY OTHER THAN USE	–	–	–
§ 220-24E(A)	REAR YARD SETBACK	MINIMUM 30'	2' PROPOSED	28'
§ 220-24E	GROSS FLOOR AREA OF A SINGLE STRUCTURE	MAXIMUM 10,000 S.F.	50,900 S.F. PROPOSED	40,900 S.F.
§ 220-24E	MAXIMUM BUILDING COVERAGE	MAXIMUM 20%	24.7% PROPOSED	4.7%
§ 220-24E	MAXIMUM SITE COVERAGE	MAXIMUM 60%	64.4% PROPOSED	4.4%
§ 220-24E	MAXIMUM BUILDING HEIGHT	MAXIMUM 30'	34' PROPOSED	4'
§ 220-55C(3)	MINIMUM AISLE WIDTH	MINIMUM 25'	20' PROPOSED	5'
§ 220-55D(2)	MAXIMUM ENTRANCE/EXIT GRADE WITHIN 30' OF STREET LINE	MAXIMUM 3%	12.5% PROPOSED	9.5%
§ 220-55D(2)	MAXIMUM DRIVEWAY GRADE	MAXIMUM 12%	14.5% PROPOSED	2.5%
§ 220-12E(1)	HEIGHT OF WALLS WITHIN REQUIRED YARD SETBACKS	MAXIMUM 6'	11' PROPOSED	5'
§ 185-5F(3)(A)	LENGTH OF WALL SIGNS	MAXIMUM 20'	46'-0"	26'-0"
§ 185-5F(3)(A)	HEIGHT OF WALL SIGNS	MAXIMUM 2'	3'-3⅜"	1'-3⅜"
§ 185-5F(3)(A)	ALLOWS FOR NO MORE THAN TWO (2) WALL SIGNS SO LONG AS THE SECOND WALL SIGN MEETS THE STANDARDS PROVIDED IN § 185-5F(4)	2	8	6
§ 185-5F(4)	PROVIDES STANDARDS FOR SECONDARY WALL SIGNS	6 S.F. IN AREA	(5) SIGNS: 16.5 S.F. (2) SIGNS: 7.8 S.F.	(5) SIGNS: 10.5 S.F. (2) SIGNS: 1.8 S.F.
§ 185-6C(4)	PROHIBITS WALL SIGNS FROM EXTENDING BEYOND THE SECOND STORY	0	3'-1⅜"	3'-1⅜"
§ 185-6C(6)	PROHIBITS LETTERS ON WALL SIGNS IN EXCESS OF 12"	MAX. LETTER HEIGHT 12"	24 ⅜"	12 ⅜"
§ 220-57B	TO ALLOW PROPOSED OFF-STREET LOADING AREAS TO TEMPORARILY BLOCK PARKING STALLS	–	–	–
§ 220-24E	AUTO LIFTS ARE WITHIN THE REQUIRED SETBACKS.	30'	17'	13'
§ 220-55D(1)	ACCESS TO UPPER PARKING MUST BE A MINIMUM OF 20' WIDE	20'	16'	4'
§ 220-55D(2)	ACCESS TO UPPER PARKING SHALL NOT EXCEED A GRADE OF 3% WITHIN 30' OF THE STREET LINE OR 12% AT ANY OTHER POINT.	12%	22%	10%
§ 220-55E(3)	IN ALL OFF-STREET PARKING AREAS CONTAINING 25 OR MORE PARKING SPACES, AT LEAST 10% OF THE SURFACE WITHIN THE PARKING PERIMETER SHALL CONSIST OF PLANTING ISLANDS.	10%	< 10%	–
§ 220-57C(1)	REQUIRES 1 LOADING SPACE FOR THE FIRST 4,000 S.F. OF GROSS FLOOR AREA OR MAJOR PORTION THEREOF AND 1 ADDITIONAL SPACE FOR 10,000 S.F. OF GROSS FLOOR AREA OR MAJOR PORTIONTHEREOF IN EXCESS OF 4,000 S.F. SHALL BE PROVIDED. 2 SPACES ARE INDICATED, A TOTAL OF 6 AREA REQUIRED	6	2	4
§ 220-56	REQUIRES 1 SPACE PER EMPLOYEE PLUS 1 SPACE PER 500 S.F. OF GROSS FLOOR AREA FOR MOTOR VEHICLE SALES.	209	195	14

REQUIRED WAIVERS

1. SEC. 220-15B – TO PERMIT A DEVIATION FROM THE STANDARDS REQUIRING LANDSCAPE BUFFERS WHERE EXISTING NON-CONFORMITIES EXIST AND SHALL REMAIN.

GENERAL CONSTRUCTION NOTES APPLY TO ALL WORK HEREIN:

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CALL 811 "DIG SAFELY" (1-800-962-7962) TO HAVE UNDERGROUND UTILITIES LOCATED. EXPLORATORY EXCAVATIONS SHALL COMPLY WITH CODE 753 REQUIREMENTS. NO WORK SHALL COMMENCE UNTIL ALL THE OPERATORS HAVE NOTIFIED THE CONTRACTOR THAT THEIR UTILITIES HAVE BEEN LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION, INSOFAR AS THEY MAY BE ENDANGERED BY THE CONTRACTOR'S OPERATIONS. THIS SHALL HOLD TRUE WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS. IF THEY ARE SHOWN ON THE DRAWINGS, THEIR LOCATIONS ARE NOT GUARANTEED EVEN THOUGH THE INFORMATION WAS OBTAINED FROM THE BEST AVAILABLE SOURCES, AND IN ANY EVENT, OTHER UTILITIES ON THESE PLANS MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, IMMEDIATELY REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES THAT HE DAMAGES, AND SHALL CONSTANTLY PROCEED WITH CAUTION TO PREVENT UNDUE INTERRUPTION OF UTILITY SERVICE.

2. CONTRACTOR SHALL HAND DIG TEST PITS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTING UTILITIES DEPTHS AND ADVISE OF ANY CONFLICTS WITH PROPOSED UTILITIES. IF CONFLICTS ARE PRESENT. THE OWNER'S FIELD REPRESENTATIVE, JMC, PLLC AND THE APPLICABLE MUNICIPALITY OR AGENCY SHALL BE NOTIFIED IN WRITING. THE EXISTING/PROPOSED UTILITIES RELOCATION SHALL BE DESIGNED BY JMC, PLLC.

3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL LOCAL PERMITS REQUIRED.

4. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL SAFETY CODES. APPLICABLE SAFETY CODES MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS, AND ADDITIONS THERETO, TO THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA); AND APPLICABLE SAFETY, HEALTH REGULATIONS AND BUILDING CODES FOR CONSTRUCTION IN THE STATE OF NEW YORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GUARDING AND PROTECTING ALL OPEN EXCAVATIONS IN ACCORDANCE WITH THE PROVISION OF SECTION 107-05 (SAFETY AND HEALTH REQUIREMENTS) OF THE NYSDOT STANDARD SPECIFICATIONS. IF THE CONTRACTOR PERFORMS ANY HAZARDOUS CONSTRUCTION PRACTICES, ALL OPERATIONS IN THE AFFECTED AREA SHALL BE DISCONTINUED AND IMMEDIATE ACTION SHALL BE TAKEN TO CORRECT THE SITUATION TO THE SATISFACTION OF THE APPROVAL AUTHORITY HAVING JURISDICTION.

5. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE SCOPE OF WORK SHOWN HEREON AT ALL TIMES TO THE SATISFACTION OF THE OWNERS REPRESENTATIVE. RAMPING CONSTRUCTION TO PROVIDE ACCESS MAY BE CONSTRUCTED WITH SUBBASE MATERIAL EXCEPT THAT TEMPORARY ASPHALT CONCRETE SHALL BE PLACED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE PEDESTRIAN ACCESS AT ALL TIMES.

6. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING PAVEMENT TO REMAIN.

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SUBSURFACE UTILITY LOCATIONS ARE BASED ON A COMPILATION OF FIELD EVIDENCE, AVAILABLE RECORD PLANS AND/OR UTILITY MARK-OUTS. THE LOCATION OR COMPLETENESS OF UNDERGROUND INFORMATION CANNOT BE GUARANTEED. VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION.

811 Know what's below. Call before you dig.

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/26/2018	SMN
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN
	Previous Editions Obsolete		

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
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John Meyer Consulting, Inc.
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Drawn:	SS	Approved:	AN
Scale:	VARIES		
Date:	11/30/2017		
Project No:	16124		
16124-SITE	COVER	COVER.scr	

Drawing No: C-000

NOTE:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY OF PROPERTY," PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED 8/17/2017.
2. THE LOCATION OF THE EXISTING SUBSURFACE SEPTIC AND UTILITY INFORMATION WAS TAKEN FROM AN AS-BUILT AS SHOWN ON DRAWING SI-5 "SEWAGE PROPOSAL AND WATER SUPPLY", LAST REVISED 08/31/1983, AS ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH ON 09/27/1983.

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION (WF-63, WF-64, WF-65)
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING TREE LINE
- EXISTING DIRECTIONAL ARROWS
- EXISTING PAINT
- EXISTING PARKING WITH NUMBER OF SPACES
- EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
- EXISTING PEDESTRIAN CROSSING
- EXISTING STORM DRAIN LINE AND SIZE
- EXISTING SANITARY LINE AND SIZE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/22/2018	SMR
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMR

Previous Editions Obsolete

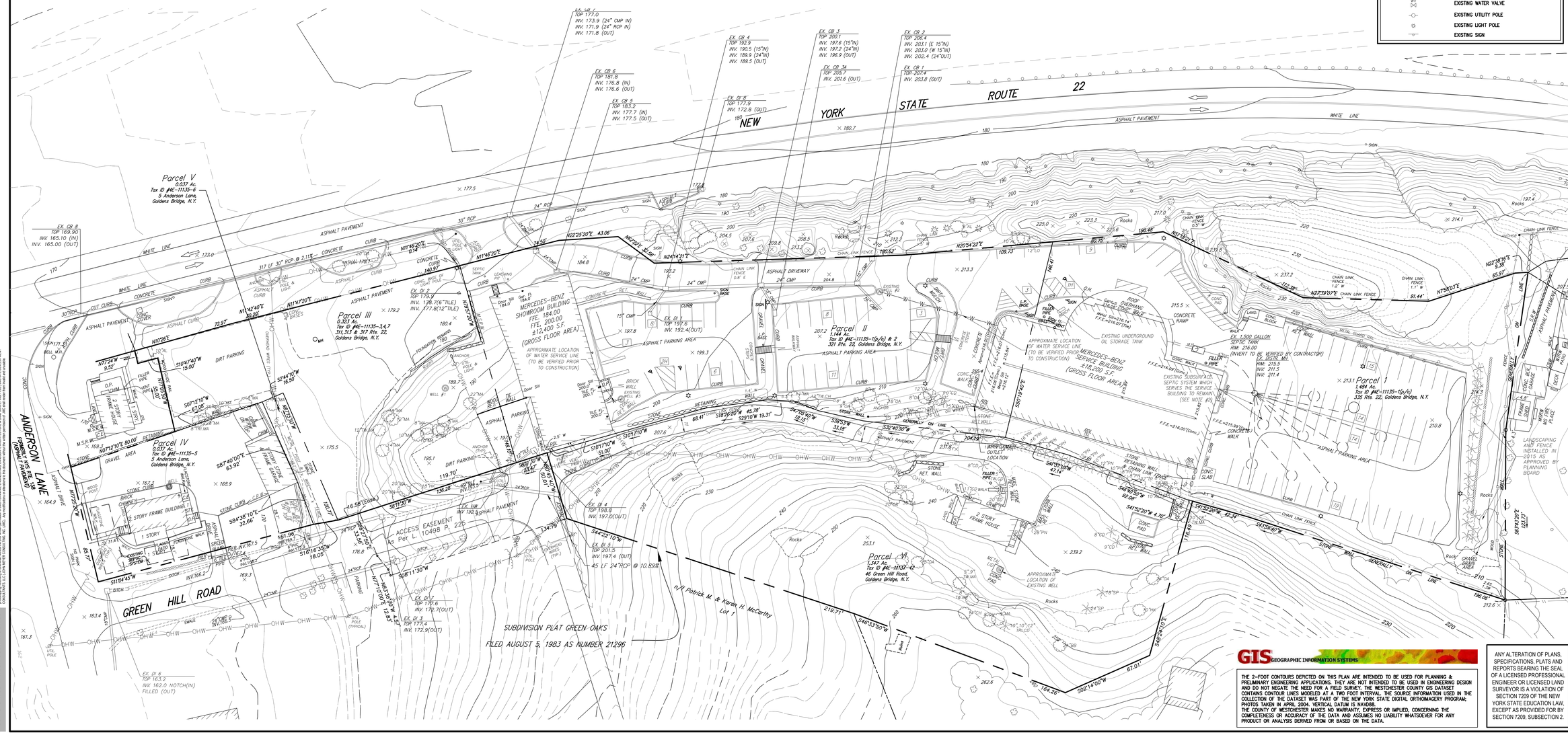
APPLICANT/OWNER:
CELEBRITY MOTOR CAR, LLC
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WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601

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EXISTING CONDITIONS

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY



GIS GEOGRAPHIC INFORMATION SYSTEMS

THE 2-FOOT CONTOURS DEPICTED ON THIS PLAN ARE INTENDED TO BE USED FOR PLANNING & PRELIMINARY ENGINEERING APPLICATIONS. THEY ARE NOT INTENDED TO BE USED IN ENGINEERING DESIGN AND DO NOT NEGATE THE NEED FOR A FIELD SURVEY. THE WESTCHESTER COUNTY GIS DATASET CONTAINS CONTOUR LINES MODELED AT A TWO FOOT INTERVAL. THE SOURCE INFORMATION USED IN THE COLLECTION OF THE DATASET WAS PART OF THE NEW YORK STATE DIGITAL ORTHOIMAGERY PROGRAM; PHOTOS TAKEN IN APRIL 2004. VERTICAL DATUM IS NAVD88. THE COUNTY OF WESTCHESTER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE COMPLETENESS OR ACCURACY OF THE DATA AND ASSUMES NO LIABILITY WHATSOEVER FOR ANY PRODUCT OR ANALYSIS DERIVED FROM OR BASED ON THE DATA.

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Drawn:	DK	Approved:	AN
Scale:	1" = 30'		
Date:	11/30/2017		
Project No:	16124		
16124-SITE	EXIST	EXIST.scr	

Drawing No:
C-010

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NOT FOR CONSTRUCTION

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY OF PROPERTY," PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED 8/17/2017.
2. THE LOCATION OF THE EXISTING SUBSURFACE SEPTIC AND UTILITY INFORMATION WAS TAKEN FROM AN AS-BUILT AS SHOWN ON DRAWING SI-5 "SEWAGE PROPOSAL AND WATER SUPPLY", LAST REVISED 08/31/1983, AS ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH ON 09/27/1983.
3. PRIOR TO THE START OF ANY DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE TOWN OF LEWISBORO AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
4. ALL CONSTRUCTION/DEMOLITION DEBRIS NOT PROPOSED TO BE RECYCLED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH THE REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AGENCIES HAVING JURISDICTION.
5. ALL MATERIAL TO BE USED AS FILL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
6. PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE NEW YORK STATE STANDARD AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AS REQUIRED AND/OR DIRECTED BY THE TOWN OF LEWISBORO OR JMC, PLLC.
7. ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING CONSTRUCTION SHALL BE DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED. ALL REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER.
8. EXISTING DRAINAGE PATTERNS ON SITE SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE.
9. THIS PLAN IS TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND SITE CONTRACTOR FOR THEIR USE, INFORMATION AND COORDINATION. ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
10. CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC, PLLC PRIOR TO THE START OF CONSTRUCTION.
11. ALL SANITARY SEWER AND WATER UTILITIES THAT MUST BE REMOVED AND/OR ABANDONED MUST BE DONE IN ACCORDANCE WITH WESTCHESTER COUNTY HEALTH DEPARTMENT RULES AND REGULATIONS.
12. THE EXISTING OWTS SERVICING THE CURRENT SERVICE BUILDING IS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION TO SERVE THE PROPOSED SHOWROOM AND SERVICE BUILDING EXPANSION.
13. LOCATIONS OF EXISTING SEPTIC SYSTEMS ON PARCELS IV & VI SHALL BE DETERMINED PRIOR TO CONSTRUCTION AND THE SYSTEMS SHALL BE REMOVED AND/OR ABANDONED IN ACCORDANCE WITH WESTCHESTER COUNTY HEALTH DEPARTMENT RULES AND REGULATIONS.

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING TREE TO BE REMOVED
- EXISTING TREE LINE
- EXISTING DIRECTIONAL ARROWS
- EXISTING PAINT
- EXISTING PARKING WITH NUMBER OF SPACES
- EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
- EXISTING PEDESTRIAN CROSSING
- EXISTING STORM DRAIN LINE AND SIZE (36" RCP)
- EXISTING SANITARY LINE AND SIZE (8" SAN)
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/26/2018	SMR
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMR

Previous Editions Obsolete

APPLICANT/OWNER:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601

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John Meyer Consulting, Inc.
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DEMOLITION PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

Drawn:	SS
Approved:	AN
Scale:	1" = 30'
Date:	11/30/2017
Project No:	16124
16124-SITE	DEMO
DEMO.scr	
Drawing No:	C-020

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TREE LEGEND

DECIDUOUS TREE

EVERGREEN TREE

TREE CODE	SPECIES	QUANTITY TO BE REMOVED
AL	AILANTHUS	4
BB	BLACK BIRCH	–
BR	BIRCH	–
CD	CEDAR	8
CH	CHERRY	1
HK	HICKORY	2
JM	JAPANESE MAPLE	1
LO	LOCUST	–
MA	MAPLE	24
OA	OAK	7
PN	PINE	1
PO	POPLAR	–
TR	TREE UNKNOWN	1
SP	SPRUCE	–
SY	SYCAMORE	–
	TOTAL	46

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY OF PROPERTY," PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED 8/17/2017.
2. PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE NEW YORK STATE STANDARD AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AS REQUIRED AND/OR DIRECTED BY THE TOWN OF LEWISBORO OR JMC, PLLC.
3. THIS PLAN IS TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND SITE CONTRACTOR FOR THEIR USE, INFORMATION AND COORDINATION. ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
4. CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC, PLLC PRIOR TO THE START OF CONSTRUCTION.
5. TREE SYMBOLS ARE SHOWN TO REPRESENT THE RELATIVE SIZE OF TREE STEMS AND ARE NOT INTENDED TO REPRESENT THE ACTUAL SIZE OF THE TREE CANOPY.
6. UPON TREE REMOVAL AND ROUGH GRADING, THE BARE SOIL SHALL BE PLANTED WITH A NATIVE SEED MEADOW MIX OF GRASSES AND WILD FLOWERS TO BE SPECIFIED BY THE PROJECT LANDSCAPE ARCHITECT.
7. TREE LOCATIONS, TYPES AND SIZES SHOWN ON THIS PLAN WERE TAKEN FROM THE SURVEY TITLED "TREE SURVEY OF PROPERTY", PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED 01/29/2018.

2.

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION
- EXISTING TREE TO BE REMOVED
- EXISTING TREE LINE
- EXISTING DIRECTIONAL ARROWS
- EXISTING PAINT
- EXISTING PARKING WITH NUMBER OF SPACES
- EXISTING ACCESSIBLE PARKING WITH NUMBER OF SPACES
- EXISTING PEDESTRIAN CROSSING
- EXISTING STORM DRAIN LINE AND SIZE
- EXISTING SANITARY LINE AND SIZE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN

No.	Revision	Date	By
1.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMH

Previous Editions Obsolete

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JMC

TREE REMOVAL PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Project No:	16124
16124-SITE	TREE REMOVAL | TREE DEMO.bor
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DESIGNATION NUMBER	SIGN	SIZE	DESCRIPTION	MOUNTING TYPE	MOUNTING HEIGHT	REGULATORY	REFLECTORIZED
1	STOP	30"X30"	WHITE ON RED	STEEL CHANNEL	7'-0"	R1-1	X
2	RESERVED PARKING VAN ACCESSIBLE	12"X18" 12"X6"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8 R7-8A	X
3	RESERVED PARKING	12"X18"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8	X
4	NO PARKING FIRE LANE	12"X18"	RED ON WHITE	STEEL CHANNEL	7'-0"	P1-1C	X
5	ONE WAY	12"X18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP1-2	X
6	ELECTRIC VEHICLE CHARGING STATION	12"X18"	GREEN ON WHITE	STEEL CHANNEL	7'-0"	NYP1-2	X

NOTES:

1. EXISTING INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" FOR CELEBRITY OF WESTCHESTER, LLC AS PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED AUGUST 17, 2017.
2. PROPOSED BUILDING INFORMATION PROVIDED BY SULLIVAN ARCHITECTURE.
3. LOADING OPERATIONS SHALL BE PERFORMED DURING OFF PEAK HOURS.
4. ALL LOADING AND PARKING SHALL BE CONDUCTED ON THE PREMISES. THERE SHALL BE NO LOADING OR PARKING ON OR WITHIN AREA ROADWAYS AND STREETS.
5. ANY SIGN LOCATED WITHIN THE NYSDOT R.O.W. SHALL HAVE A BREAK AWAY OR SLIP IMPACT MOUNTING POST, IN ACCORDANCE WITH NYSDOT STANDARD DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
6. DURING THE WINTER SEASON, THERE SHALL NOT BE ANY PLOWING OF SNOW ONTO OR ACROSS NYS RTE. 22, IN ACCORDANCE WITH THE NYS VEHICLE AND TRAFFIC LAW. SNOW PILES SHALL BE CONTAINED WITHIN THE SUBJECT PROPERTY IN THE AREAS SHOWN ON THIS PLAN WHICH ARE LOCATED SO AS NOT TO CREATE A DRAINAGE PROBLEM DURING SNOW MELT.
7. THE PROPOSED ACCESSIBLE PARKING SPACES ARE BASED ON THE TOTAL NUMBER OF CUSTOMER AND SERVICE DEPARTMENT PARKING SPACES AND DO NOT INCLUDE THE VEHICLE DISPLAY AND STORAGE PARKING AREAS.
8. NO OUTDOOR VEHICLE WASHING IS PERMITTED.
9. TO REDUCE NOISE RELATED IMPACTS, NO MORE THAN ONE EXTERIOR VEHICLE LIFT SHALL BE IN OPERATION AT ANY GIVEN TIME.
10. VEHICLE DELIVERY TRUCKS SHALL UNLOAD IN FRONT OF THE SHOWROOM BUILDING; VEHICLE DELIVERY TRUCKS SHALL NOT ENTER THE UPPER PARKING AREAS.
    VEHICLE DELIVERIES SHALL TAKE PLACE AFTER HOURS BETWEEN 7:00 P.M. AND 8:00 P.M.
    THE HOURS OF OPERATION HAVE BEEN IDENTIFIED BY THE APPLICANT TO BE: SERVICE DEPARTMENT – MONDAY THROUGH FRIDAY 7:30 A.M. TO 6:00 P.M. SALES DEPARTMENT – MONDAY THROUGH THURSDAY 9:00 A.M. TO 7:00 P.M., FRIDAY 9:00 A.M. TO 6:00 P.M. AND SATURDAY 9:00 A.M. TO 5:00 P.M.
11. THE EXISTING INTERIOR LOT LINES AND THE EXISTING PROPERTY LINES OF THE ADJOINING PROPERTIES IN CONTRACT SHALL BE MERGED TO FORM ONE OVERALL PROPERTY TO SERVICE THE AUTO DEALERSHIP.

LAYOUT LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- BUILDING SETBACK LINE
- LANDSCAPE BUFFER SETBACK LINE
- EXISTING PAVEMENT EDGE OR CURB LINE
- EXISTING FENCE
- EXISTING FENCE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING LIGHT STANDARD
- EXISTING UTILITY POLE
- EXISTING ROCK LEDGE
- PROPOSED BUILDING LINE
- PROPOSED BUILDING OVERHANG
- PROPOSED CONCRETE CURB
- PROPOSED N.Y.S.D.O.T. CONCRETE CURB
- PROPOSED MONOLITHIC CURB & SIDEWALK
- TRAFFIC SIGN LOCATION & DESIGNATION
- PROPOSED RETAINING WALL & CHAIN LINK SAFETY FENCE
- 18" WIDE WHITE STOP LINE WITH DOUBLE YELLOW LINE
- ARROW MARKING ON PAVEMENT
- PROPOSED SAW CUT LINE
- PROPOSED SOLID WOOD FENCE
- PROPOSED POROUS PAVEMENT
- LIGHT DUTY PAVEMENT
- HEAVY DUTY PAVEMENT
- TOWN STANDARD PAVEMENT
- NYSDOT STANDARD PAVEMENT

No.	Revision	Date	By
1.	TOWN CONSULTANT & PLANNING BOARD COMMENTS	12/28/2017	SS
2.	REVISED PER FIRE DEPARTMENT COMMENTS	05/23/2018	SMN
3.	WCDH SUBMISSION	06/26/2018	SMN
4.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

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WHIPPANY, NJ 07981

ARCHITECT:
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LAYOUT PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Project No:	16124		
16124-SITE	LAY	LAY.scr	

Drawing No:
C–100

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PARKING DATA

SITE/EXTERIOR PARKING SPACES:

1.	CUSTOMER PARKING COUNTED AS REQUIRED STRIPED SPACES	39
2.	EMPLOYEE PARKING COUNTED AS REQUIRED STRIPED SPACES	30
3.	DEALERSHIP STORAGE COUNTED AS REQUIRED STRIPED SPACES	31
4.	DEALERSHIP STORAGE SPACES	150
	SITE/EXTERIOR TOTAL:	250

PARKING SPACES REFERENCED FROM BUILDING DRAWINGS:

1.	SERVICE BUILDING: CUSTOMER PARKING COUNTED AS REQUIRED STRIPED SPACES	25
2.	SHOWROOM BUILDING: CUSTOMER PARKING COUNTED AS REQUIRED STRIPED SPACES	24
3.	EMPLOYEE PARKING COUNTED AS REQUIRED STRIPED SPACES	46
4.	DEALERSHIP STORAGE SPACES	75
	BUILDING TOTAL:	170

SUMMARY:

TOTAL PARKING COUNTED AS REQUIRED STRIPED SPACES	195
TOTAL DEALERSHIP STORAGE SPACES	225
OVERALL TOTAL:	**420**

DESIGNATION NUMBER	SIGN	SIZE	DESCRIPTION	MOUNTING TYPE	MOUNTING HEIGHT	REGULATORY	REFLECTORIZED
1	STOP	30"X30"	WHITE ON RED	STEEL CHANNEL	7'-0"	R1-1	X
2	RESERVED PARKING VAN ACCESS	12"X18" 12"X6"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8 R7-8A	X
3	RESERVED PARKING	12"X18"	GREEN & BLUE ON WHITE	STEEL CHANNEL	7'-0"	R7-8	X
4	NO PARKING FIRE LANE	12"X18"	RED ON WHITE	STEEL CHANNEL	7'-0"	P1-1C	X
5	NO PARKING ANY TIME	12"X18"	RED ON WHITE	STEEL CHANNEL	7'-0"	NYP1-2	X
6	ELECTRIC VEHICLE CHARGING STATION PARKING ONLY	12"X18"	GREEN ON WHITE	STEEL CHANNEL	7'-0"	NYP1-2	X

EXTERIOR PARKING TABULATION

DESCRIPTION		COUNT
	COUNTED AS REQUIRED STRIPED SPACES	100 SPACES
	EXTERIOR DEALERSHIP STORAGE	150 SPACES

NOTE:

1. ACCORDING TO THE ARCHITECTURAL BUILDING DRAWINGS BY SULLIVAN ARCHITECTURE THERE ARE AN ADDITIONAL 95 SPACES COUNTED AS REQUIRED AND 75 DEALERSHIP STORAGE SPACES WITHIN THE BUILDINGS. THEREFORE, THE TOTAL NUMBER OF PARKING COUNTED AS REQUIRED STRIPED SPACES IS 195 AND THE TOTAL NUMBER OF DEALERSHIP STORAGE SPACES IS 225.
2. THE TOTAL NUMBER OF SPACES IS 420.

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE OR CURB LINE
- EXISTING FENCE
- EXISTING FENCE
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING LIGHT STANDARD
- EXISTING UTILITY POLE
- EXISTING ROCK LEDGE
- PROPOSED BUILDING LINE
- PROPOSED BUILDING OVERHANG
- PROPOSED CONCRETE CURB
- PROPOSED N.Y.S.D.O.T. CONCRETE CURB
- PROPOSED MONOLITHIC CURB & SIDEWALK
- TRAFFIC SIGN LOCATION & DESIGNATION
- PROPOSED RETAINING WALL & CHAIN LINK SAFETY FENCE
- 18" WIDE WHITE STOP LINE WITH DOUBLE YELLOW LINE
- ARROW MARKING ON PAVEMENT
- ACCESSIBLE ROUTE
- ACCESSIBLE EXTERIOR DOORWAY
- NON ACCESSIBLE EXTERIOR DOORWAY

No.	Revision	Date	By
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APPLICANT/OWNER:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981

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JMC

PROPOSED COVERED DISPLAY AREA

PROPOSED 2,700 S.Q. FT. SERVICE BUILDING EXPANSION

PROPOSED SECURITY FENCE

PROPOSED 38,500 S.Q. FT. SHOWROOM BUILDING EXPANSION

RENOVATE EXISTING SHOWROOM BUILDING

PROPOSED VEHICLE STORAGE AREA

PROPOSED SECURED NEW VEHICLE STORAGE AREA AND EMPLOYEE PARKING AREA

NEW YORK STATE ROUTE 22

ANDERSON LANE (FORMERLY NYS RTE. 10 ASPHALT PAVEMENT)

GREEN HILL ROAD

PROPOSED ADDITION 38,500 SQ. FT.

PROPOSED (3) LEVEL OPEN PARKING STRUCTURE 38,500 SQ. FT. (135 CARS)

24 CUSTOMER, 46 EMPLOYEE & 75 STORAGE SPACES WITHIN SHOWROOM BUILDING

CUSTOMER PARKING 11 CARS

CUSTOMER PARKING 9 CARS

CUSTOMER PARKING 19 CARS

DEALERSHIP STORAGE 3 CARS

DEALERSHIP STORAGE 50 CARS

EMPLOYEE PARKING 30 CARS

52 CUSTOMER SPACES WITHIN SERVICE BUILDING

ONE LINE OF STACKED STORAGE (40 CARS)

TWO LINES OF STACKED STORAGE (88 CARS)

15' X 40' LOADING SPACE

LANDSCAPING AND FENCE INSTALLED IN 2015 AS APPROVED BY PLANNING BOARD

PARKING PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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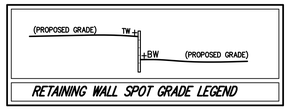
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1624-SITE	PARKING PLAN	LAY.scr	
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BORING TABLE

BORING #	SURFACE ELEVATION	DEPTH TO BEDROCK (FEET)	DEPTH TO GROUNDWATER (FEET)
1	211.8	NOT ENCOUNTERED	15
2	211.6	5	NOT ENCOUNTERED
3	210.2	19	10
4	202.1	6	NOT ENCOUNTERED
5	197.6	20.5	8.50
6	199.2	2	NOT ENCOUNTERED
7	189.0	4	NOT ENCOUNTERED
7b	189.1	3	NOT ENCOUNTERED
8	179.8	9.5	8.50
9	180.3	3	NOT ENCOUNTERED
10	195.0	13	NOT ENCOUNTERED
11	175.5	11	NOT ENCOUNTERED
12	175.4	22	10.50
13	176.0	16.5	15
14	173.0	NOT ENCOUNTERED	10



RETAINING WALL SPOT GRADE LEGEND

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY OF PROPERTY," PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED 8/17/2017.
2. THE LOCATION OF THE EXISTING SUBSURFACE SEPTIC UTILITY INFORMATION WAS TAKEN FROM AS BUILTS ON DRAWING SI-5 "SEWAGE PROPOSAL AND WATER SUPPLY", LAST REVISED 08/31/1983 AS ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH ON 09/27/1983.
3. ALL EXISTING STRUCTURES TO REMAIN SHALL HAVE THEIR TOPS AND GRATES ADJUSTED TO PROPOSED FINISHED GRADE.
4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL ROOF DRAIN LEADERS AND FOUNDATION DRAINS FOR CONNECTION INTO THE NEW STORMWATER MANAGEMENT SYSTEM.
5. AS REQUIRED BY THE TOWN ENGINEER, THE DESIGN ENGINEER SHALL CERTIFY PROPER INSTALLATION AND OPERATION OF THE STORMWATER SYSTEMS. THE TOWN OF LEWISBORO ENGINEER SHALL INSPECT ALL WORK ASSOCIATED WITH THE PROPOSED DRAINAGE SYSTEM AND DETERMINE THE SYSTEM SUBSTANTIALLY COMPLETE PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX, REPAIR OR REPLACE ANY AND ALL ITEMS NECESSARY IN THE EVENT IT IS DETERMINED BY THE TOWN ENGINEER THAT THE DRAINAGE SYSTEM IS NOT COMPLETED PER TOWN STANDARDS.
6. THE BORING LOCATIONS, DESIGNATIONS AND INFORMATION SHOWN ON THIS PLAN WERE TAKEN FROM THE "GEOTECHNICAL REPORT" DATED JULY 2011, PREPARED BY MCLAREN ENGINEERING GROUP.
7. UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS IN ACCORDANCE WITH ASTM F-2648. JOINTS SHALL BE WATERTIGHT IN ACCORDANCE WITH ASTM D-3212.
8. THIS PROJECT DRAINS TO THE MUSCOOT RESERVOIR, WHICH IS PART OF THE NYCDEP WATERSHED, THEREFORE ALL RULES AND REGULATIONS OF NYCDEP MUST BE MET.

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING FENCE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED FINISHED GRADE
- PROPOSED SPOT GRADE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED TYPE CI DRAIN INLET
- PROPOSED TYPE DI DRAIN INLET
- PROPOSED TRENCH DRAIN
- PROPOSED HEADWALL
- PROPOSED WATER QUALITY STRUCTURE
- PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- BORING LOCATION AND DESIGNATION
- PROPOSED GRASS SWALE
- PROPOSED RIP-RAP
- EXISTING FEATURE TO BE REMOVED

No.	Revision	Date	By
1.	TOWN CONSULTANT & PLANNING BOARD COMMENTS	12/28/2017	SS
2.	REVISED PER FIRE DEPARTMENT COMMENTS	05/23/2018	SMN
3.	WCDH SUBMISSION	06/26/2018	SMN
4.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

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John Meyer Consulting, Inc.
120 BEDFORD ROAD - ARMONK, NY 10504
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GRADING & DRAINAGE PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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GIS GEOGRAPHIC INFORMATION SYSTEMS

THE 2-FOOT CONTOURS DEPICTED ON THIS PLAN ARE INTENDED TO BE USED FOR PLANNING & PRELIMINARY ENGINEERING APPLICATIONS. THEY ARE NOT INTENDED TO BE USED IN ENGINEERING DESIGN AND DO NOT NEGATE THE NEED FOR A FIELD SURVEY. THE WESTCHESTER COUNTY GIS DATASET CONTAINS CONTOUR LINES MODELED AT A TWO FOOT INTERVAL. THE SOURCE INFORMATION USED IN THE COLLECTION OF THE DATASET WAS PART OF THE NEW YORK STATE DIGITAL ORTHOIMAGERY PROGRAM; PHOTOS TAKEN IN APRIL, 2004. VERTICAL DATUM IS NAVD88.
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Date:	11/30/2017		
Project No:	16124		
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Drawing No:	C-200		

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NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED "TOPOGRAPHIC SURVEY OF PROPERTY" PREPARED BY KINSTE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C. DATED 8/17/2017.
2. THIS PLAN IS PROVIDED FOR CROSS SECTION REFERENCE. REFER TO SITE SECTIONS DRAWINGS PREPARED BY SULLIVAN ARCHITECTURE.

SITE SECTIONS PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601

No.	Revision	Date	By
1.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN
	Previous Editions Obsolete		

Drawn: SS | Approved: AN
Scale: 1" = 50'
Date: 02/06/2018
Project No: 16124
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Drawing No:

C-201

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY OF PROPERTY," PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED 8/17/2017.
2. THE LOCATION OF THE EXISTING SUBSURFACE SEPTIC UTILITY INFORMATION WAS TAKEN FROM AS BUILTS ON DRAWING S-5 "SEWAGE PROPOSAL AND WATER SUPPLY", LAST REVISED 08/31/1983 AS ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH ON 09/27/1983.
3. ALL EXISTING STRUCTURES TO REMAIN SHALL HAVE THEIR TOPS AND GRATES ADJUSTED TO PROPOSED FINISHED GRADE.
4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL ROOF DRAIN LEADERS AND FOUNDATION DRAINS FOR CONNECTION INTO THE NEW STORMWATER MANAGEMENT SYSTEM.
5. AS REQUIRED BY THE TOWN ENGINEER, THE DESIGN ENGINEER SHALL CERTIFY PROPER INSTALLATION AND OPERATION OF THE STORMWATER SYSTEMS. THE TOWN OF LEWISBORO ENGINEER SHALL INSPECT ALL WORK ASSOCIATED WITH THE PROPOSED DRAINAGE SYSTEM AND DETERMINE THE SYSTEM SUBSTANTIALLY COMPLETE PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX, REPAIR OR REPLACE ANY AND ALL ITEMS NECESSARY IN THE EVENT IT IS DETERMINED BY THE TOWN ENGINEER THAT THE DRAINAGE SYSTEM IS NOT COMPLETED PER TOWN STANDARDS.
6. ALL SANITARY SEWER AND WATER UTILITIES MUST BE REMOVED AND/OR ABANDONED IN ACCORDANCE WITH WESTCHESTER COUNTY HEALTH DEPARTMENT RULES AND REGULATIONS.
7. THE MAINTENANCE OF THE UNDERGROUND WATER STORAGE TANK SHALL BE THE RESPONSIBILITY OF THE APPLICANT. YEARLY INSPECTIONS/TESTING OF THE TANK SHALL BE CONDUCTED BY THE APPLICANT; PROOF OF INSPECTION/TESTING SHALL BE SUBMITTED TO THE PLANNING BOARD SECRETARY.
8. ALL PROPOSED STORMWATER INFRASTRUCTURE SHALL BE MAINTAINED BY THE APPLICANT IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SPECIFIED ON THE SITE DEVELOPMENT PLANS AND WITHIN THE SWPPP.
9. UNLESS OTHERWISE SPECIFIED, PIPE FOR STORM DRAINS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS IN ACCORDANCE WITH ASTM F-2648. JOINTS SHALL BE WATERTIGHT IN ACCORDANCE WITH ASTM D-3212.
10. UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER GRAVITY LINES SHALL BE POLYVINYL CHLORIDE PIPE (PVCP), SDR-35, WITH PUSH-ON JOINTS IN ACCORDANCE WITH ASTM D-3034 AND D-3212.
11. UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER FORCE MAINS SHALL BE POLYVINYL CHLORIDE PRESSURE PIPE (PVCPP), SDR-26, 160 PSI, WITH PUSH-ON JOINTS IN ACCORDANCE WITH ASTM D-2241.
12. UNLESS OTHERWISE SPECIFICED, PIPE FOR WATER LINES SHALL BE HIGH DENSITY POLYEHTYLENE PIPE (HDPE), SDR-9 WITH BARD JOINTS IN ACCORDANCE WITH AWWA C-901.
13. ELECTRIC AND TELEPHONE LINES, FIRE ALARM AND CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND IN CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.
14. THERE SHALL BE NO TREES WITHIN 10 FEET OF THE OWTS.
15. THERE ARE NO WELLS WITHIN 200' OF OWTS UNLESS OTHERWISE SHOWN ON PLAN.
16. THERE ARE NO OWTS WITHIN 200' OF WELL UNLESS OTHERWISE SHOWN ON PLAN.
17. THE EXISTING OWTS AREA SHALL BE ISOLATED AND PROTECTED AGAINST DAMAGE BY EROSION, STORAGE OF EARTH OR MATERIALS, DISPLACEMENT, COMPACTION OR OTHER ADVERSE PHYSICAL CHANGE IN THE CHARACTERISTICS OF THE SOIL OR IN THE DRAINAGE OF THE AREA.
18. IF FOR ANY REASON THE APPROVED CONSTRUCTION PLAN CANNOT BE FOLLOWED, A REVISED PLAN MUST BE PREPARED, SUBMITTED AND APPROVED BY WCDH.
19. THE DESIGN PROFESSIONAL SHALL SUPERVISE THE CONSTRUCTION OF THE OWTS AND MAKE AN OPEN WORKS INSPECTION.
20. WITHIN 24-HOURS OF THE COMPLETION OF THE OWTS, THE DESIGN PROFESSIONAL MUST NOTIFY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH (WCDH) THAT THE OWTS IS READY FOR INSPECTION BY SUBMITTING A COMPLETED REQUEST FOR AN OPEN WORKS INSPECTION ON THE APPROPRIATE FOR TO WCDH.
21. THE INSTALLATION OF THE OWTS SHALL BE IN ACCORDANCE WITH THE RULES AN REGULATIONS FOR THE DESIGN AND CONSTRUCTION OF RESIDENTIAL SUBSURFACE SEWAGE TREATMENT SYSTEMS AND DRILLED WELLS IN WESTCHESTER COUNTY, NY.
22. ALL PIPES CONNECTING TO TANK AND BOXES SHALL BE CUT FLUSH WITH THE INSIDE WALL OF THE BOX.
23. THE PROPOSED OWTS SHALL BE INSTALLED BY A WESTCHESTER COUNTY LICENSED SEPTIC CONTRACTOR.
24. PRIOR TO ANY EXCAVATION ALL UNDERGROUND UTILITIES MUST BE LOCATED. CALL 1-800-962-7962.
25. THE WESTCHESTER COUNTY HEALTH DEPARTMENT APPROVAL EXPIRES ONE YEAR FROM THE DATE ON THE APPROVAL STAMP AND IS REQUIRED TO BE RENEWED ON OR BEFORE THE EXPIRATION DATE. THE APPROVAL IS REVOCABLE FOR CAUSE OR MAY BE AMENDED OR MODIFIED WHEN CONSIDERED NECESSARY BY THE DEPARTMENT.
26. THERE ARE NO RESERVOIRS, RESERVOIR STEMS OR CONTROLLED LAKE WITHIN 500 FEET OF THE PROPOSED OWTS UNLESS OTHERWISE SHOWN ON PLAN.
27. THERE ARE NO NYSDEC WETLANDS OR WATERCOURSES WITHIN 200 FEET OF THE PROPOSED OWTS UNLESS OTHERWISE SHOWN ON PLAN.
28. NYCDEP MUST BE CONTACTED AT LEAST TWO DAYS PRIOR TO START OF CONSTRUCTION OF THE OWTS SO THAT THE NYCDEP MAY INSPECT AND MONITOR THE INSTALLATION.
29. INTERNAL OIL-WATER SEPARATORS WILL BE INSTALLED IN EACH BUILDING AND WILL FLOW INTO THE SANITARY SEWER. OIL-WATER SEPARATORS WILL BE SHOWN ON THE ARCHITECTURAL BUILDING DRAWINGS.

LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING FENCE
- EXISTING STORM DRAIN LINE AND SIZE
- EXISTING SANITARY LINE AND SIZE
- EXISTING WATER LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED TYPE CI DRAIN INLET
- PROPOSED TYPE DI DRAIN INLET
- PROPOSED TRENCH DRAIN
- PROPOSED HEADWALL
- PROPOSED WATER QUALITY STRUCTURE
- PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED STORM DRAIN LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED RIP-RAP APRON
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- EXISTING FEATURE TO BE REMOVED

No.	Revision	Date	By
1.	TOWN CONSULTANT & PLANNING BOARD COMMENTS	12/28/2017	SS
2.	REVISED PER FIRE DEPARTMENT COMMENTS	05/23/2018	SMR
3.	WCDH SUBMISSION	06/26/2018	SMR

Previous Editions Obsolete

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UTILITIES PLAN

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22
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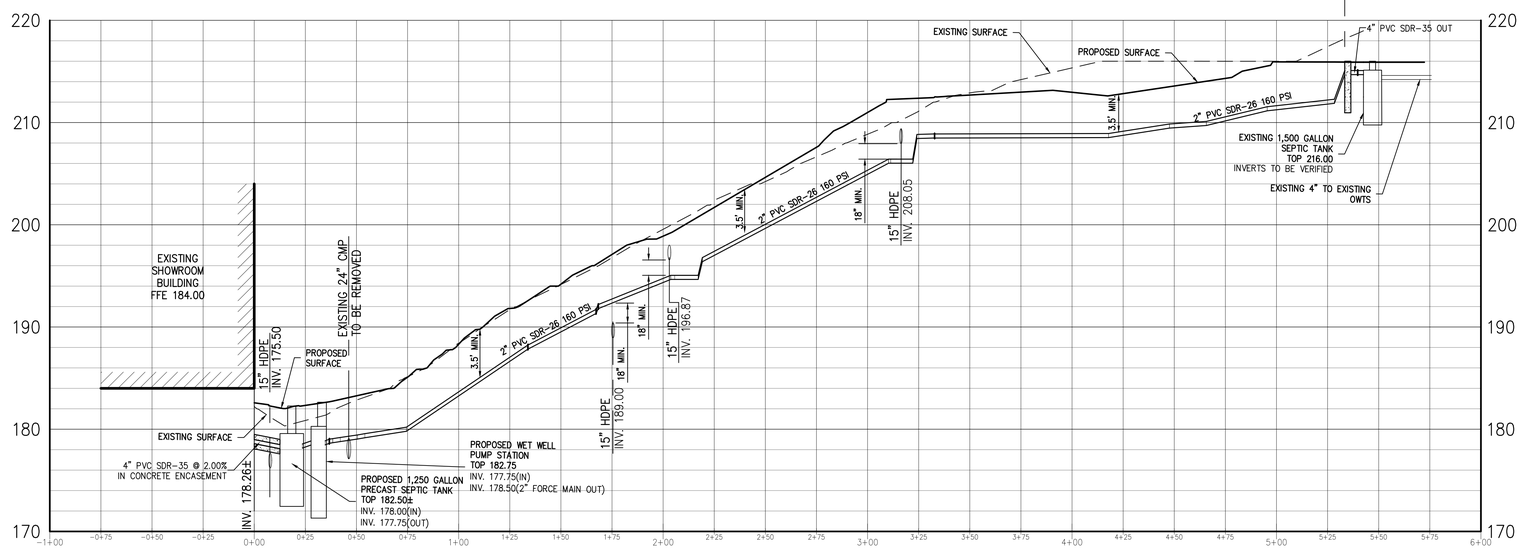
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Approved:	AN
Scale:	1" = 30'
Date:	11/30/2017
Project No:	16124
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Drawing No:	C-300

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NOTES:

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2. UNLESS OTHERWISE SPECIFIED, PIPE FOR SANITARY SEWER FORCE MAINS SHALL BE POLYVINYL CHLORIDE PRESSURE PIPE (PVCPP), SDR-26, 160 PSI, WITH PUSH-ON JOINTS IN ACCORDANCE WITH ASTM D-2241.



SANITARY FORCE MAIN

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/26/2018	SMR
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMR

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SANITARY FORCE MAIN PROFILE

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
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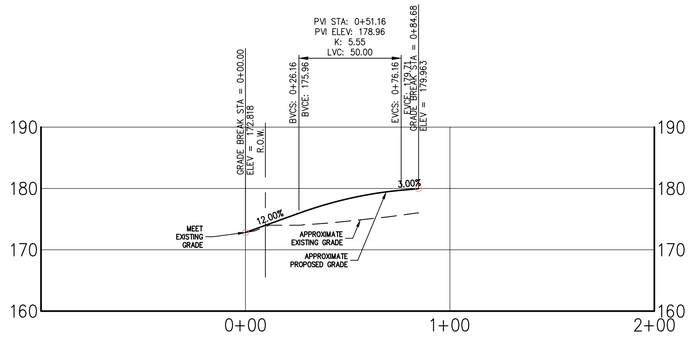
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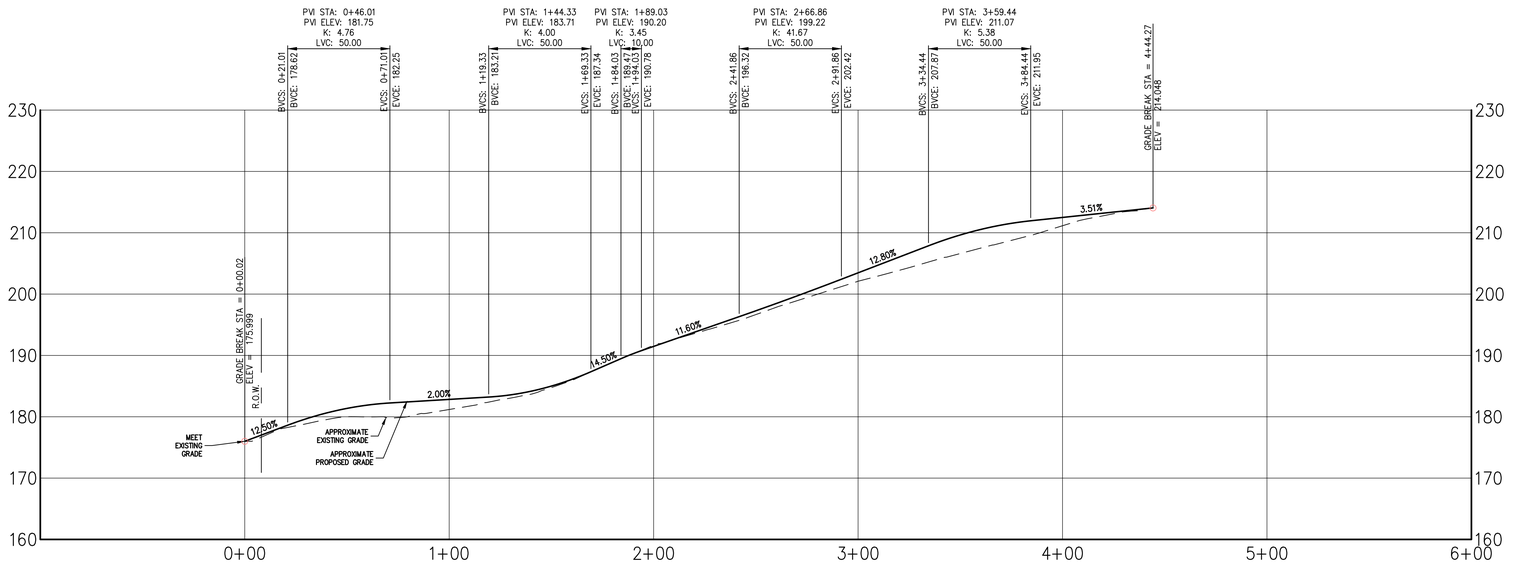
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SOUTH ENTRANCE

SCALE: HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'



NORTH ENTRANCE

SCALE: HORIZONTAL: 1" = 30'
VERTICAL: 1" = 10'

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ROAD PROFILES

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Project No:	16124		
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LEGEND

- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION FENCE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED STOCKPILE AREA SURROUNDED BY SILT FENCE
- PROPOSED TEMPORARY SWALE
- EXISTING FEATURE TO BE REMOVED

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHIC SURVEY OF PROPERTY," PREPARED BY INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED 8/17/2017.
2. THIS PLAN IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL INFORMATION ONLY.
3. PRIOR TO BEGINNING ANY CLEARING, GRUBBING OR EXCAVATION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE PLANS AND SPECIFICATIONS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE PLAN.
4. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ON-SITE EROSION AND SEDIMENT CONTROL MEASURES ON A DAILY BASIS. ALL COLLECTED SEDIMENT WITHIN SEDIMENT BARRIERS SHALL BE REMOVED PERIODICALLY AS REQUIRED TO MAINTAIN THE FUNCTION OF THE SEDIMENT BARRIERS. ALL SEDIMENT COLLECTED SHALL BE RESPREAD ON-SITE WITHIN STABILIZED AREAS AS DIRECTED BY THE OWNERS REPRESENTATIVE.
5. THE CONTRACTOR SHALL INSPECT DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A WEEKLY BASIS, AFTER EACH RAINSTORM, AND AS MAY BE REQUIRED OR DIRECTED BY ALL APPLICABLE APPROVALS AND PERMITS. THE CONTRACTOR SHALL IMMEDIATELY PROVIDE A WRITTEN REPORT ON FINDINGS OF SEDIMENT IN DOWNSTREAM AREAS TO ALL AUTHORITIES HAVING JURISDICTION AND MAKE REPAIRS AS REQUIRED OR DIRECTED.
6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED/WARRANTED BY FIELD CONDITIONS AND AS DIRECTED BY THE OWNERS REPRESENTATIVE, JMC, AND/OR ANY AUTHORITY HAVING JURISDICTION.
7. STOCKPILING OF CONSTRUCTION MATERIAL SHALL BE PLACED ON-SITE IN THE AREA DESIGNATED ON THIS PLAN OR AS APPROVED BY THE OWNERS REPRESENTATIVE. STOCKPILED EXCAVATED MATERIAL SHALL HAVE TWO ROWS OF SILT FENCE LOCATED AROUND ITS PERIMETER. ALL STOCKPILED MATERIAL SHALL BE MAINTAINED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE ON PEDESTRIAN AND/OR VEHICULAR TRAFFIC CIRCULATION ROUTES.
7. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNERS REPRESENTATIVE.
8. ALL EXPOSED SLOPES AND GRADED/DISTURBED AREAS, THAT WILL NOT BE FURTHER DISTURBED WITHIN 14 CALENDAR DAYS (7 DAYS FOR CONSTRUCTION SITES THAT EITHER DIRECTLY DISCHARGE TO ONE OF THE 303(d) SEGMENTS LISTED IN APPENDIX E OF THE GENERAL PERMIT OR ARE LOCATED WITHIN ONE OF THE WATERSHEDS LISTED IN APPENDIX C OF THE GENERAL PERMIT), SHALL BE TEMPORARILY SEEDED WITHIN 24 HOURS OF DISTURBANCE, IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) "EROSION AND SEDIMENT CONTROL GUIDELINES" AND THE ANSI A300 "BEST MANAGEMENT PRACTICES FOR TREE AND SHRUB PLANTING, TRANSPLANTING, MAINTENANCE AND CARE," PREPARED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), LATEST EDITIONS, AS FOLLOWS:
   A. SEED MIXTURE AND RATE OF APPLICATION:
      A.1. IN SPRING, SUMMER OR EARLY FALL, SEED THE AREA WITH RYEGRASS (ANNUAL OR PERENNIAL) AT 30 POUNDS PER ACRES (APPROXIMATELY 0.7 POUNDS/1000 SQUARE FEET OR USE 1 POUND/1000 SQUARE FEET).
      A.2. IN LATE FALL OR EARLY WINTER, SEED THE AREA WITH CERTIFIED 'AROOSTOOK' WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE (2.5 POUNDS/1000 SQUARE FEET).
   B. APPLICATION SHALL BE UNIFORM BY MECHANICAL OR HYDROSEED METHODS.
   C. MULCH ALL SEEDED AREAS WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 POUNDS PER 1,000 SQUARE FEET) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.

No.	Revision	Date	By
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SEDIMENT AND EROSION CONTROL PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
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Scale:	1" = 30'		
Date:	09/06/2018		
Project No:	16124		
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Drawing No:
C-400

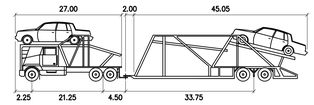
DELIVERY TRUCK PLAN LEGEND

CAR CARRIER

VEHICLE CENTER LINE

VEHICLE BODY LINE

VEHICLE FRONT TIRE LINE



CAR CARRIER — feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.00
Trailer Width	: 8.00	Steering Angle	: 40.00
Tractor Track	: 8.00	Articulating Angle	: 70.00
Trailer Track	: 8.00		

NOTES:

1. ALL LOADING AND UNLOADING OF CARS SHALL BE PERFORMED ON-SITE.
2. A FLAGMAN SHALL BE PROVIDED WHEN TRUCKS ARRIVE AND DEPART ON THE BYPASS ROAD.
3. NO UNLOADING OF CARS AND CAR CARRIERS SHALL BE PERMITTED ON THE BYPASS ROAD.
4. VEHICLE DELIVERY TRUCKS SHALL UNLOAD IN FRONT OF THE SHOWROOM BUILDING; VEHICLE DELIVERY TRUCKS SHALL NOT ENTER THE UPPER PARKING AREAS. VEHICLE DELIVERIES SHALL TAKE PLACE DURING THE HOURS OF OPERATION, WHICH HAVE BEEN IDENTIFIED BY THE APPLICANT TO BE: SERVICE DEPARTMENT – MONDAY THROUGH FRIDAY 7:30 A.M. TO 6:00 P.M. SALES DEPARTMENT – MONDAY THROUGH THURSDAY 9:00 A.M. TO 7:00 P.M. FRIDAY 9:00 A.M. TO 6:00 A.M. AND SATURDAY 9:00 A.M. TO 5:00 P.M.

NEW YORK STATE ROUTE 22

TURNING PATH OF DELIVERY TRUCK EXITING RIGHT FROM PROPOSED DRIVEWAY

TURNING PATH OF DELIVERY TRUCK ENTERING INTO PROPOSED DRIVEWAY

15' X 40' LOADING SPACE

15' X 40' LOADING SPACE

PROPOSED ADDITION 38,500 SQ. FT.

PROPOSED (3) LEVEL OPEN PARKING STRUCTURE 30,500 SQ. FT. (135 CARS)

MERCEDES-BENZ MAINTENANCE BUILDING (GROSS FLOOR AREA) 23,400 SQ.FT.

PROPOSED ADDITION

NO PARKING

STAIR CONNECTION

ANDERSON LANE (FORMERLY NYS RTE. 22 SERVICE ROAD)

GREEN HILL ROAD

Rocks

No.	Revision	Date	By
1.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMH

Previous Editions Obsolete

APPLICANT/OWNER:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601

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John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

VEHICLE DELIVERY TRUCK PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

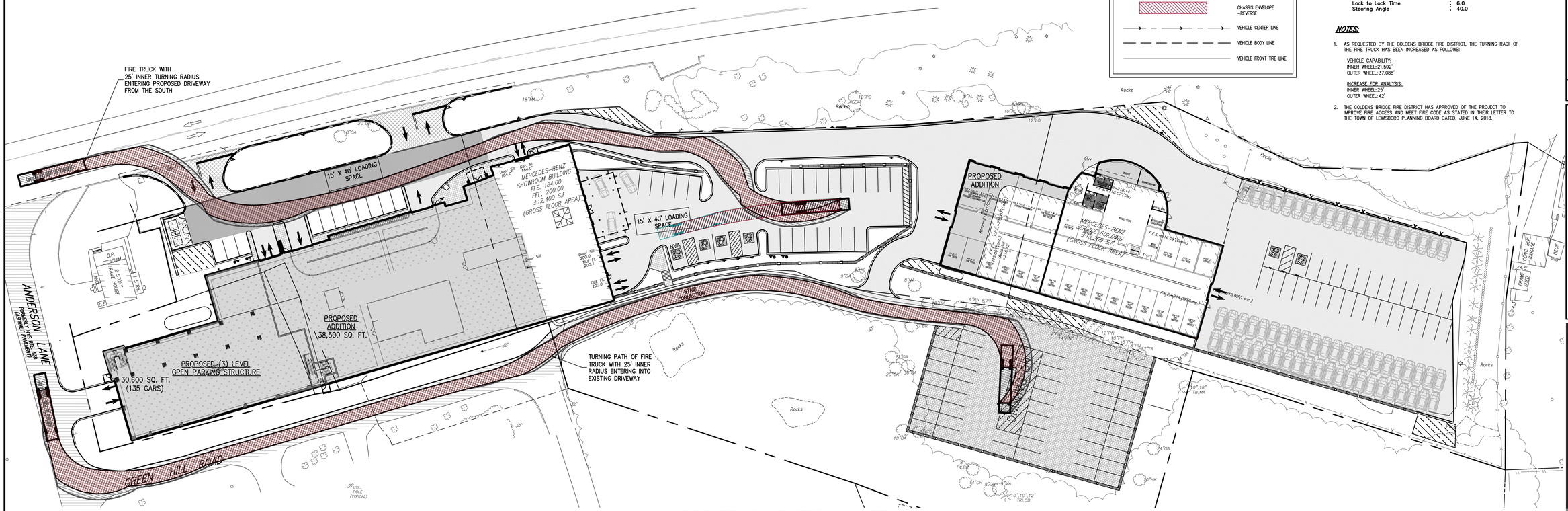
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Drawn:	SS	Approved:	AN
Scale:	1" = 30'		
Date:	11/30/2017		
Project No:	16124		
16124-SITE	DELIVERY TRUCK	DELIVERY.scr	
Drawing No:	C-700		

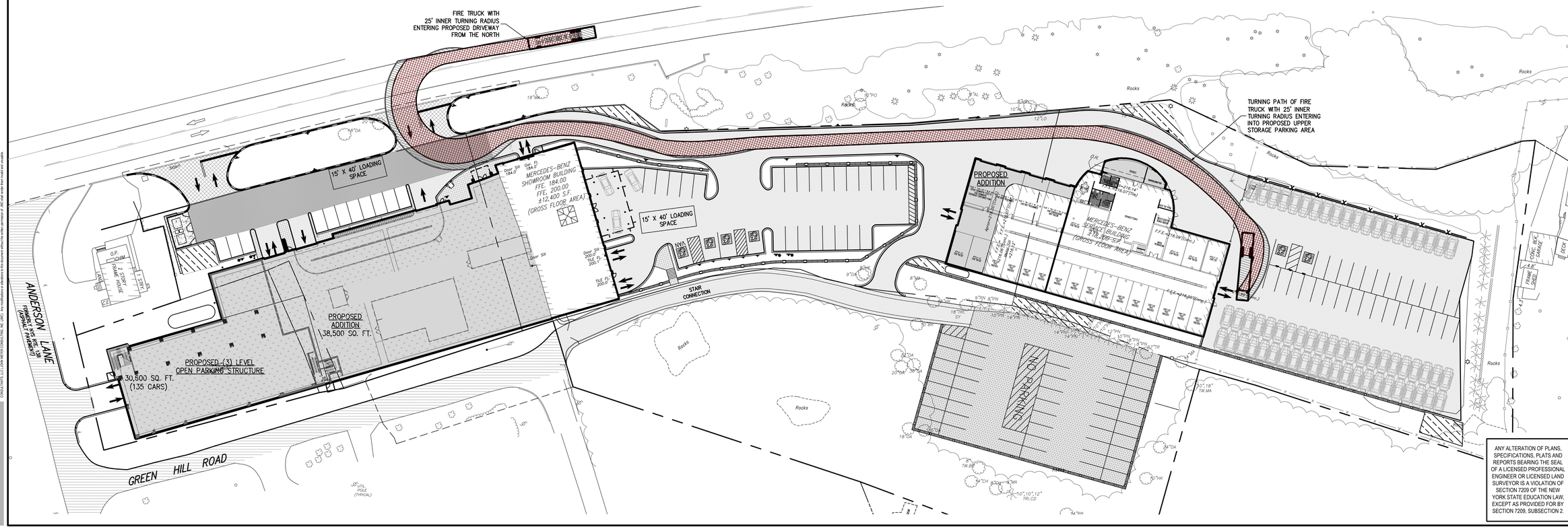
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FIRE TRUCK ENTERING SITE
SCENARIO 1

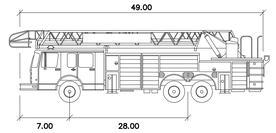


FIRE TRUCK ENTERING SITE
SCENARIO 2



FIRE TRUCK PLAN LEGEND

- FIRE TRUCK
- BODY OVERHANG ENVELOPE
- CHASSIS ENVELOPE
- BODY OVERHANG ENVELOPE-REVERSE
- CHASSIS ENVELOPE -REVERSE
- VEHICLE CENTER LINE
- VEHICLE BODY LINE
- VEHICLE FRONT TIRE LINE



FIRE TRUCK

	feet
Width	8.50
Track	8.50
Lock to Lock Time	6.0
Steering Angle	40.0

NOTES:

1. AS REQUESTED BY THE GOLDENS BRIDGE FIRE DISTRICT, THE TURNING RADII OF THE FIRE TRUCK HAS BEEN INCREASED AS FOLLOWS:

   VEHICLE CAPABILITY:
   INNER WHEEL: 21.592'
   OUTER WHEEL: 37.088'

   INCREASE FOR ANALYSIS:
   INNER WHEEL: 25'
   OUTER WHEEL: 42'

2. THE GOLDENS BRIDGE FIRE DISTRICT HAS APPROVED OF THE PROJECT TO IMPROVE FIRE ACCESS AND MEET FIRE CODE AS STATED IN THEIR LETTER TO THE TOWN OF LEWISBORO PLANNING BOARD DATED, JUNE 14, 2018.

No.	Revision	Date	By
1.	TOWN CONSULTANT & PLANNING BOARD COMMENTS	12/28/2017	SS
2.	REVISED PER FIRE DEPARTMENT COMMENTS	05/23/2018	SMR
3.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMR

Previous Editions Obsolete

APPLICANT/OWNER:
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WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
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FIRE TRUCK PLAN

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Drawn:	SS
Approved:	AN
Scale:	1" = 30'
Date:	11/30/2017
Project No:	16124
16124-SITE	FIRETRUCK	FIRETRUCK.sct
Drawing No:	C-701

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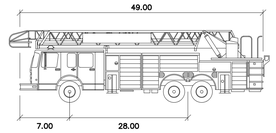
   VEHICLE CAPABILITY:
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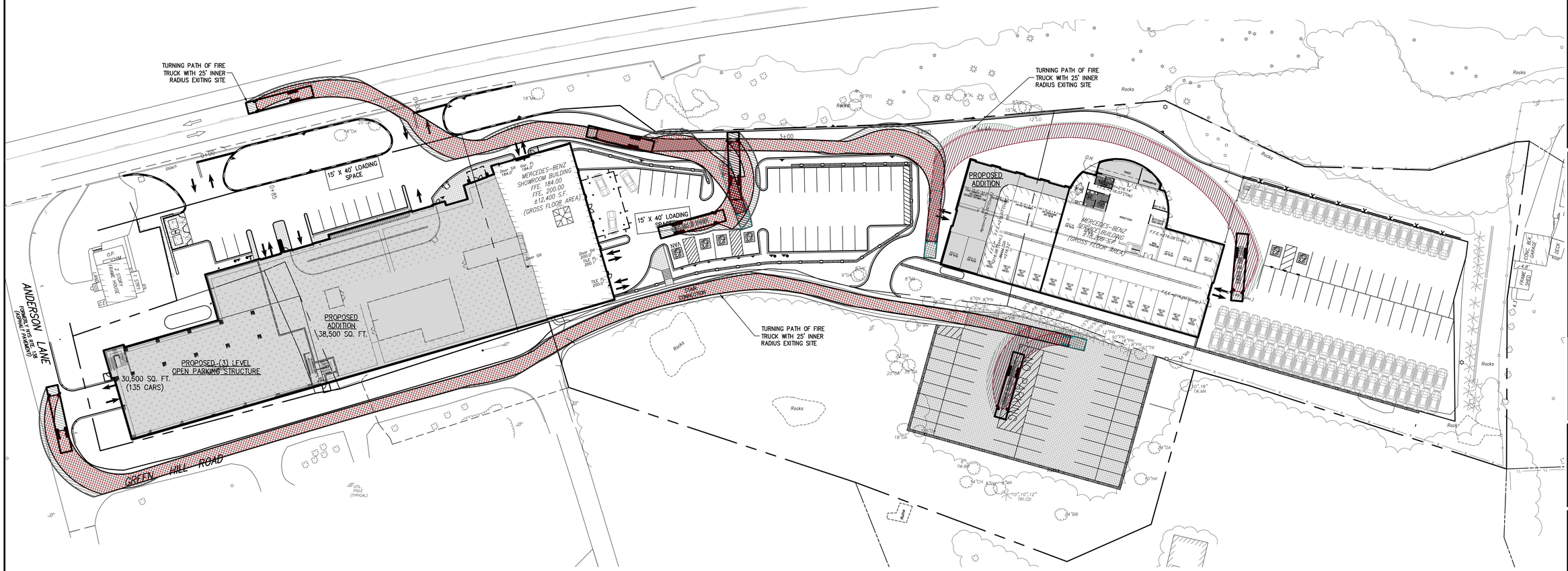
FIRE TRUCK PLAN LEGEND

- FIRE TRUCK
- BODY OVERHANG ENVELOPE
- CHASSIS ENVELOPE
- BODY OVERHANG ENVELOPE-REVERSE
- CHASSIS ENVELOPE -REVERSE
- VEHICLE CENTER LINE
- VEHICLE BODY LINE
- VEHICLE FRONT TIRE LINE



FIRE TRUCK	feet
Width	8.50
Track	8.50
Lock to Lock Time	6.0
Steering Angle	40.0

FIRE TRUCK EXITING SITE



No.	Revision	Date	By
1.	TOWN CONSULTANT & PLANNING BOARD COMMENTS	12/28/2017	SS
2.	REVISED PER FIRE DEPARTMENT COMMENTS	05/23/2018	SMN
3.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

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FIRE TRUCK PLAN

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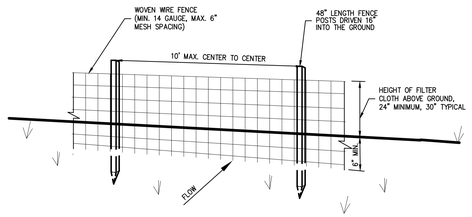
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Drawn:	SS	Approved:	AN
Scale:	1" = 30'		
Date:	11/30/2017		
Project No:	16124		
16124-SITE	FIRETRUCK (2)	FIRETRUCK.scr	

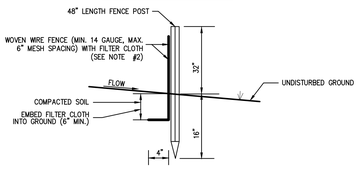
Drawing No:
C–702

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PERSPECTIVE VIEW

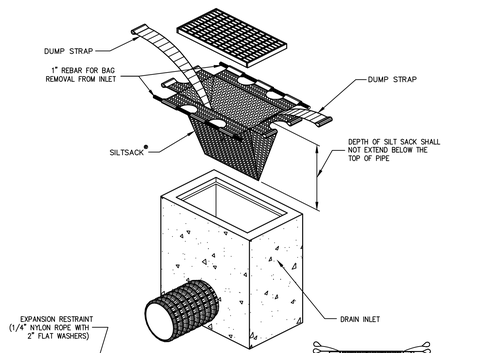


SECTION

NOTES:

1. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL, EITHER T OR U TYPE OR HARDWOOD.
2. FILTER CLOTH SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABLINKA T140N, OR APPROVED EQUAL.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE 1

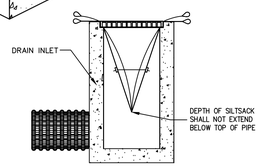


BAG DETAIL

HI-FLOW SILT SACK AS MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EQUAL®

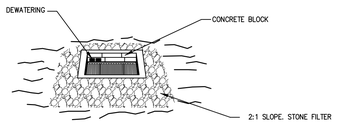
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

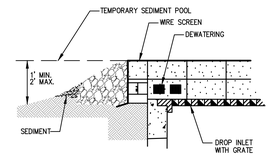
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC $^{-1}$



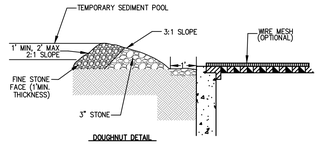
INSTALLATION DETAIL

SILT SACK 2





STONE & BLOCK DETAIL

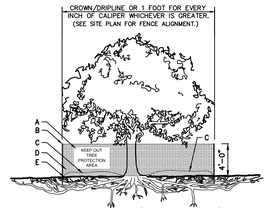


DOUGHNUT DETAIL

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 1/2" TO 3/4" IN DIAMETER PLACED 2" BELOW THE 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" STONE AS SHOWN ON THE DRAWINGS.

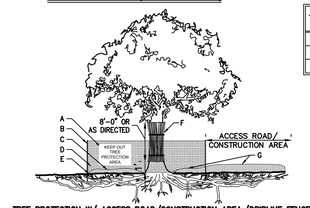
STONE & BLOCK DROP INLET PROTECTION 3



TREE PROTECTION (DRIPLINE FENCE)

A	8.5"x11" SIGN LAMINATED IN PLASTIC SPACED EVERY 50' ALONG FENCE.
B	2"X6" STEEL POSTS OR APPROVED EQUAL.
C	5" THICK LAYER OF MULCH.
D	TREE PROTECTION FENCE: HIGH DENSITY POLYETHYLENE FENCING WITH 3.5" X 1.5" OPENINGS; COLOR: ORANGE. STEEL POSTS INSTALLED AT 8' O.C.
E	MAINTAIN EXISTING GRADE WITHIN THE TREE PROTECTION FENCE UNLESS OTHERWISE INDICATED ON THE PLANS.
F	INSTALL ROUGH SAWN WOOD WHERE AND AS DIRECTED BY PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SEE CHART FOR WOOD SIZE BOUND WITH 9 GAUGE WIRE.
G	8"-12" THICK LAYER OF MULCH ON MAINTENANCE ROAD. 5" THICK LAYER INSIDE TREE PROTECTION AREA.

TREE DIAMETER	ROUGH SAWN WOOD SIZE
<12"	2"X2"
13"-24"	2"X4"
>25"	2"X6"



TREE PROTECTION W/ ACCESS ROAD/CONSTRUCTION AREA (DRIPLINE FENCE)

NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
3. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
4. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
5. SEE SITE PLANS FOR IDENTIFICATIONS/LOCATIONS OF INDIVIDUAL TREES TO BE PROTECTED.
6. ALL EXCAVATION WITHIN THE CROWN/DRIPLINE OF ANY TREE SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SPECIAL MEASURES, SUCH AS THE USE OF AN AIR SPADE MAY BE REQUIRED.
7. THE CONTRACTOR MAY PROPOSE THE USE OF ENGINEERED MATTING OR OTHER ENGINEERED PRODUCTS IN LIEU OF MULCH, WHICH SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION.

TREE PROTECTION 4

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/26/2018	SMN
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

Previous Editions Obsolete

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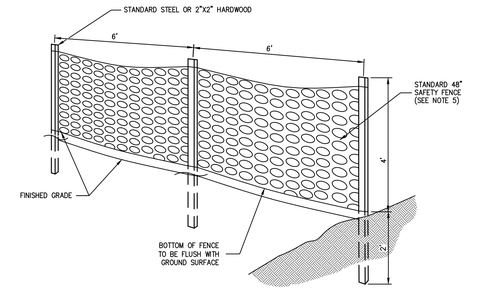
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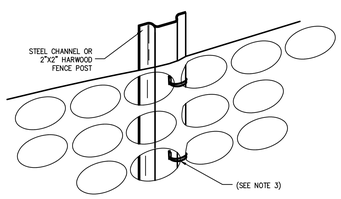
JMC

CONSTRUCTION DETAILS

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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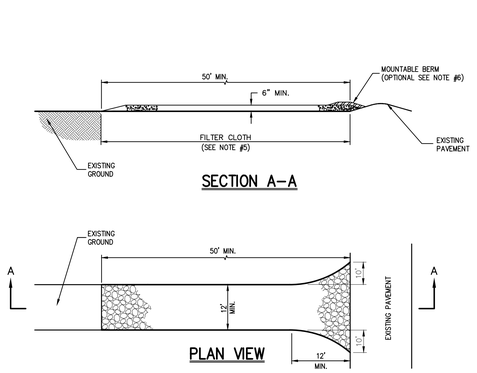




NOTES:

1. SPACE SUPPORT FENCE POSTS AT 6 FOOT INTERVALS.
2. DRIVE SUPPORT POSTS 2 FEET INTO GROUND.
3. FIRMLY FASTEN FENCE MATERIAL IN PLACE BY WIRING TO FENCE POST WHILE MAINTAINING TENSION ACROSS FULL HEIGHT OF FENCE. WIRING SHALL BE DONE IN A MANNER THAT WILL PREVENT SAGGING OF FENCE MATERIAL.
4. PROVIDE PERIODIC INSPECTION AND MAINTENANCE OF FENCE INCLUDING REPAIRS AS NECESSARY AND REQUIRED.
5. PLASTIC FENCE SHALL BE INTERNATIONAL ORANGE COLOR, AS MANUFACTURED BY ADFI ENTERPRISES, INC. OR APPROVED EQUAL.
6. REMOVE CONSTRUCTION FENCE AS DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE.

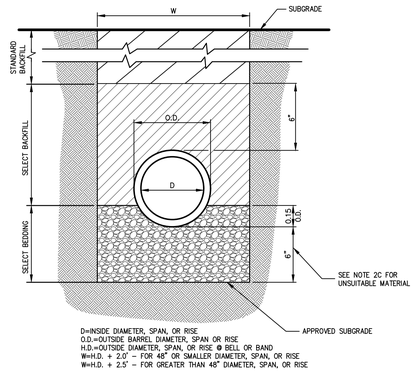
CONSTRUCTION FENCE 5



NOTES

1. STONE SIZE – USE 1" TO 4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET.
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. FILTER CLOTH TO BE PLACED OVER THE ENTIRE WIDTH AND LENGTH OF 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 TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-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 6

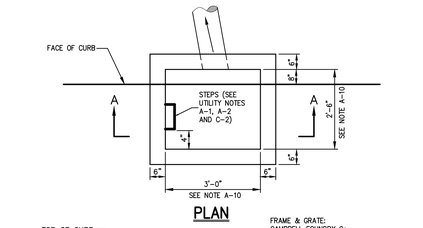


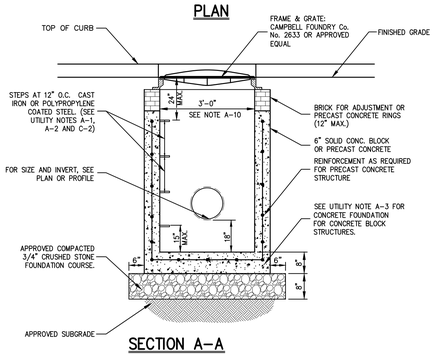
D=INSIDE DIAMETER, SPAN, OR RISE
O.D.=OUTSIDE BARREL DIAMETER, SPAN OR RISE
H.D.=OUTSIDE DIAMETER, SPAN, OR RISE @ BELL OR BAND
W=H.D. + 2.0" – FOR 48" OR SMALLER DIAMETER, SPAN, OR RISE
W=H.D. + 2.5" – FOR GREATER THAN 48" DIAMETER, SPAN, OR RISE

NOTES:

1. FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE:
   A. EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH.
   B. 3/4"CRUSHED STONE IF WATER IS ENCOUNTERED IN TRENCH.
2. TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES:
   A. FOR ALL CORRUGATED POLYETHYLENE DRAIN PIPE (CPDP) AND PVC PIPE AND CONDUIT INSTALLATION.
   B. WHEN ROCK OR HARDPAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
   C. WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN BOTTOM OF TRENCH. IN SUCH CASE DEPTH OF UNDERCUTTING SHALL BE AS DIRECTED BY THE ENGINEER WITH 6" MINIMUM.
3. FOR ALL TRENCH EXCAVATION IN FILL AREAS, ALL EMBANKMENTS SHALL BE CONSTRUCTED TO A MINIMUM OF 2 FEET ABOVE THE OUTSIDE TOP (AT THE BELL) OF THE PIPE PRIOR TO BEGINNING ANY TRENCH EXCAVATION.
4. BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES. UNLESS OTHERWISE SPECIFIED BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 92% MAXIMUM MODIFIED DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.

TYPE II TRENCH 7





NOTE:

1. SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON DRAWING C-901

DRAIN INLET (TYPE CI) 8

(with sump-w/o finger underdrains)

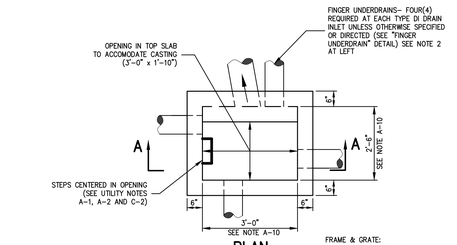
Drawn:	SS	Approved:	AN
Scale:	NOT TO SCALE		
Date:	11/30/2017		
Project No:	16124		
16124-DETAILS	C-900		-
Drawing No:	C-900		

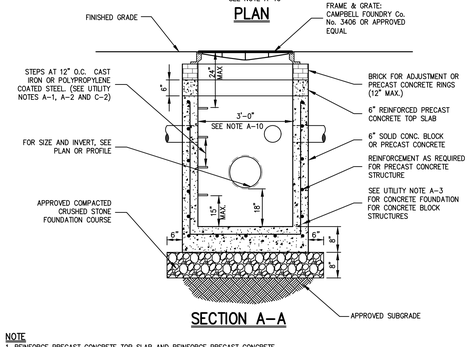
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NOT FOR CONSTRUCTION

DRAIN INLET (TYPE DI)
(with sump-with finger underdrains)

9

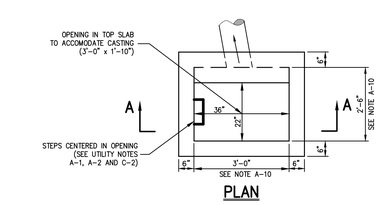


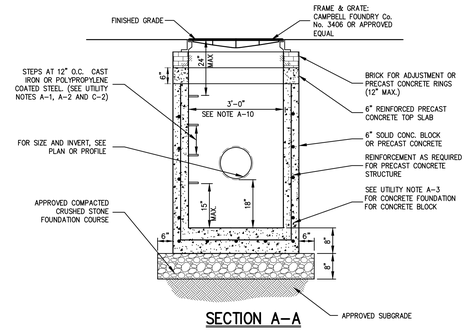


NOTE
1. REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
2. LOCATIONS OF FINGER UNDERDRAINS MAY VARY FROM THAT AS SHOWN DEPENDING UPON NUMBER AND SIZE OF STORM DRAIN LINES ENTERING AND EXITING THE STRUCTURE.
3. SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON DRAWING C-901

DRAIN INLET (TYPE DI)
(with sump-w/o finger underdrains)

10

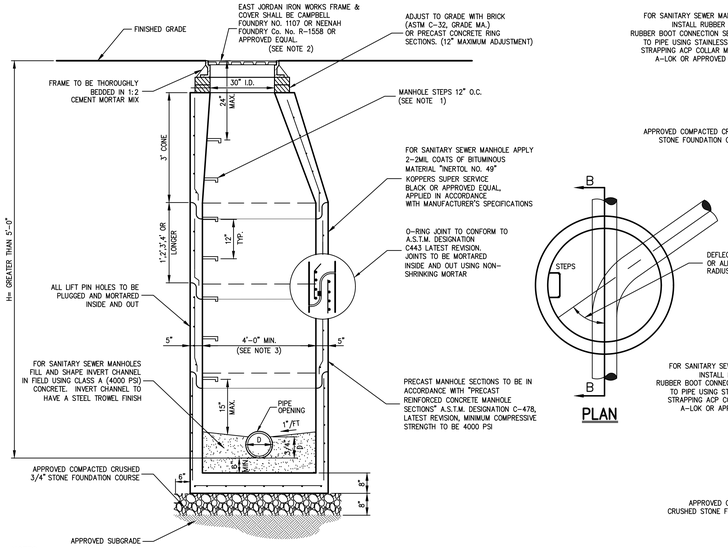


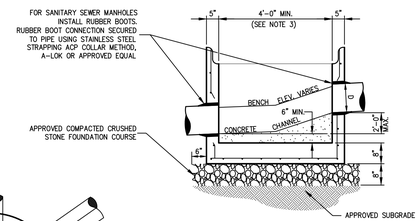


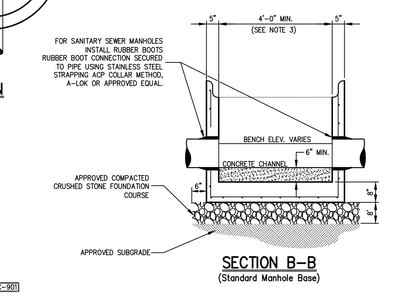
NOTE
1. REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.
2. SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON DRAWING C-901

MANHOLE (TYPE B)
(H > 5'-0")<10'-0")

11



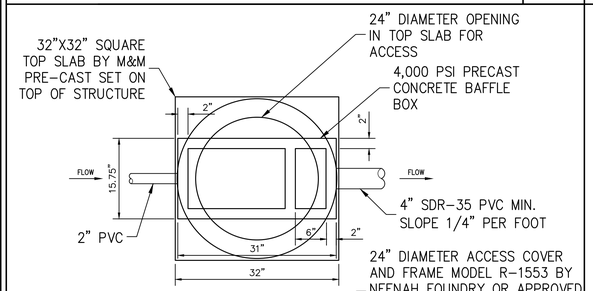


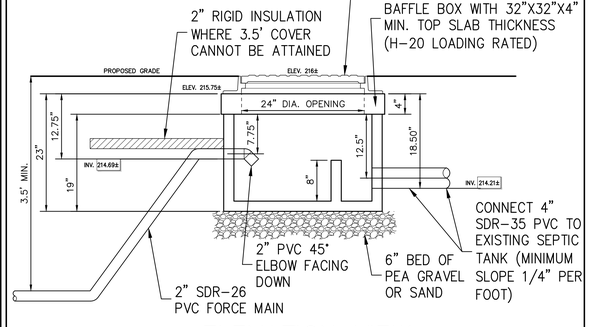


NOTES:
1. MANHOLE STEPS SHALL BE CAST IRON NEENAH No. R-1981-0 OR CAMPBELL FOUNDRY No. 2588-1 OR POLYPROPYLENE COATED STEEL (SEE SPECIFICATIONS) OR APPROVED EQUAL.
2. UNLESS OTHERWISE SPECIFIED, SANITARY SEWER MANHOLES SHALL HAVE LETTERS "SEWER" AND STORM DRAIN MANHOLES SHALL HAVE LETTERS "DRAIN" CAST ON COVER. THE COVERS SHALL HAVE VENT HOLES.
3. MANHOLES WITH DEPTH (h) 10' OR GREATER SHALL BE FIVE (5) FEET IN DIAMETER.
4. MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
5. SEE "NOTES PERTAINING TO MANHOLES" UNDER "UTILITY NOTES" ON DRAWING C-901

PRECAST BAFFLE BOX

12

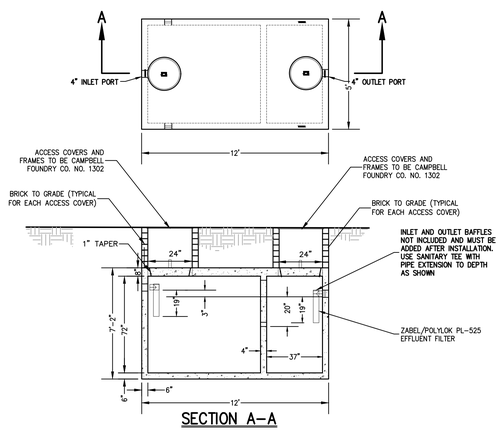




NOTES:
1. BOX TO BE PRECAST CONCRETE AS MANUFACTURED BY M&M PRECAST CORPORATION OR APPROVED EQUAL
2. STEEL REINFORCEMENT SHALL COMPLY WITH ASTM-A-615-68
3. BOX, TOP SLAB & ACCESS FRAME & GRATE SHALL BE H-20 LOAD RATING FOR TRAFFIC LOADS

CT 1,250 LOW BOY GALLON SEPTIC TANK

13



NOTES:
1. SEPTIC TANK SHALL BE MID HUDSON CONCRETE PRODUCTS, INC. 1,250 GALLON TANK, OR APPROVED EQUAL.
2. CONCRETE MINIMUM STRENGTH: 4,000 PSI @ 28 DAYS.
3. TANK SHALL BE PLACED ON 3" BED OF SAND OR PEA GRAVEL.
4. STEEL REINFORCEMENT: 6" X 6" X 10-10 GAUGE STEEL WIRE MESH.
5. CONSTRUCTION JOINT: SEALED WITH ASPHALT CEMENT OR EQUIVALENT.
6. REINFORCE PRECAST CONCRETE TOP SLAB AND REINFORCE PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.

UTILITY NOTES

14

NOTES PERTAINING TO DRAIN INLETS

A-1 STEPS WILL NOT BE REQUIRED IN INLETS LESS THAN FOUR (4) FEET IN DEPTH. STEPS WILL BE REQUIRED IN INLETS FOUR (4) FEET OR GREATER IN DEPTH. DEPTHS FOR DRAIN INLETS SHALL BE MEASURED FROM FINISHED GRADE TO INSIDE BOTTOM OF STRUCTURE (INCLUDING SUMP AS APPLICABLE).

A-2 WHEN STEPS ARE REQUIRED, STEPS SHALL COMPLY WITH THE SAME REQUIREMENTS OF ASTM STANDARD C-478, ARTICLE 13 ENTITLED "MANHOLE STEPS & LADDERS".

A-3 FOR MASONRY STRUCTURES, THE FIRST COURSE OF MASONRY SHALL BE SET IN THE CONCRETE FOUNDATION BEFORE THE CONCRETE HAS SET. CONCRETE FOUNDATION SHALL BE CLASS "A"(4000 psi) CONCRETE, TWELVE (12) INCHES THICK AND SHALL EXTEND SIX (6) INCHES BEYOND THE OUTSIDE FACE THE STRUCTURE.

A-4 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH AND CONSTRUCT THE PROPER SIZE STRUCTURE INCLUDING THE NECESSARY OPENINGS TO ACCOMMODATE THE WORK AS SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.

A-5 ALL NECESSARY PATCHING FOR DRAIN STRUCTURES SHALL BE ACCOMPLISHED WITH NON-SHRINKING CEMENT MORTAR GROUT, APPROVED EQUAL TO SIKA-SET AS MANUFACTURED BY THE SIKA CHEMICAL CORP.

A-6 FOUNDATIONS FOR PRECAST CONCRETE STRUCTURES SHALL BE SET ON A COMPACTED LAYER OF APPROVED CRUSHED STONE HAVING A MINIMUM COMPACTED THICKNESS OF EIGHT (8) INCHES.

A-7 ALL PIPES SHALL BE CUT FLUSH WITH THE INSIDE WALL OF THE STRUCTURE.

A-8 PROVIDE REINFORCED CONCRETE TOP SLAB FOR OVERSIZED DRAIN INLETS WITH PROPER SIZE OPENING TO ACCOMMODATE INSTALLATION OF FRAME & GRATE.

A-9 FOR MASONRY STRUCTURES GREATER THAN TEN (10) FEET IN DEPTH, THICKNESS OF MASONRY WALLS SHALL BE INCREASED TO TWELVE (12) INCHES.

A-10 FOR ALL STRUCTURES GREATER THAN 10 FEET IN DEPTH, STRUCTURES SHALL PROVIDE MINIMUM INSIDE DIMENSIONS OF 4 FEET X 4 FEET.

NOTES PERTAINING TO MANHOLES

B-1 PRECAST CONCRETE MANHOLES SHALL COMPLY WITH ASTM STANDARD C-478. MANHOLE JOINTS SHALL COMPLY WITH ASTM STANDARD C-443.

B-2 FOR PRECAST CONCRETE MANHOLES FIVE (5) FEET OR LESS IN HEIGHT, TOP CONE SECTION SHALL BE REPLACED WITH PRECAST REINFORCED CONCRETE SLAB (6" MIN. THICKNESS) WITH OPENING OF SUFFICIENT SIZE TO ACCOMMODATE MANHOLE CASTING.

B-3 FOR MANHOLES 10 FEET OR MORE IN DEPTH, MANHOLE DIAMETER SHALL BE FIVE (5) FEET.

B-4 TERMINAL MANHOLE FLOORS SHALL BE SLOPED TOWARD OUTFALL PIPE.

B-5 INVERT CHANNELS FOR PRECAST CONCRETE MANHOLES SHALL BE CONSTRUCTED OF CONCRETE.

B-6 NOTES A-1, A-2, A-4, A-5, A-6 & A-7 UNDER "NOTES PERTAINING TO DRAIN INLETS" ABOVE SHALL APPLY TO MANHOLES.

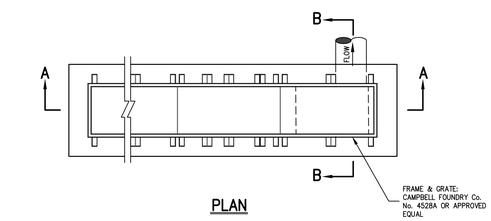
NOTES PERTAINING TO PRECAST CONCRETE STRUCTURES FOR STORM DRAINS, SANITARY SEWERS AND WATER LINES

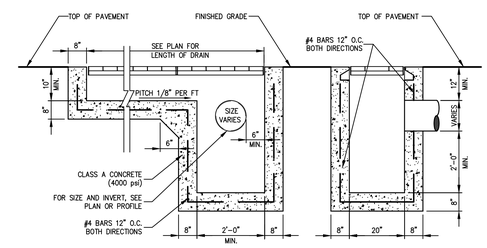
C-1 ALL PRECAST CONCRETE STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE AN H-20 DESIGN LOAD.

C-2 STEPS SHALL BE LOCATED WITHIN STRUCTURE TO AVOID PLACEMENT OVER PIPES WHEN PRACTICABLE.

TROUGH DRAIN
(END OUTLET)

15





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NOT FOR CONSTRUCTION

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/26/2018	SMR
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMR

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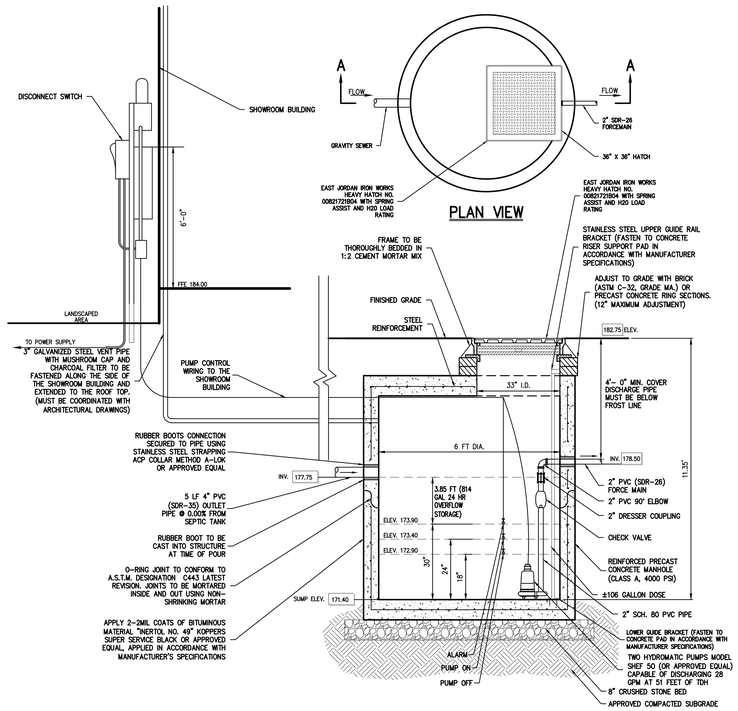
JMC

CONSTRUCTION DETAILS

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

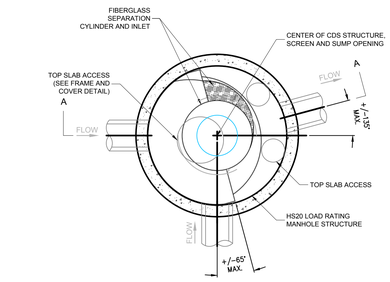
ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

Drawn:	SS
Approved:	AN
Scale:	NOT TO SCALE
Date:	11/30/2017
Project No:	16124
16124-DETAILS	C-901
Drawing No:	C-901

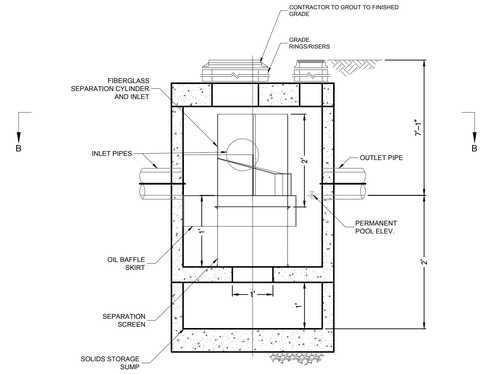


NOTES:

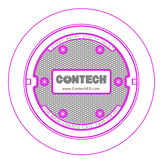
1. GUIDE RAILS SHALL BE CONERY MFG INC., BERS 125--CV OR APPROVED EQUAL.
2. UNLESS OTHERWISE SPECIFIED, SANITARY SEWER MANHOLES SHALL HAVE LETTERS "SEWER".
3. MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
4. SEE "NOTES PERTAINING TO MANHOLES" UNDER "UTILITY NOTES" ON DRAWING C--901.
5. AUDIO/VISUAL EMERGENCY ALARM SYSTEM TO BE INSTALLED WITHIN THE SHOWROOM BUILDING.
6. ALL ELECTRICAL WORK MUST CONFORM TO ALL APPLICABLE LOCAL, STATE, AND NATIONAL ELECTRICAL AND BUILDING CODES.
7. CONCRETE MINIMUM STRENGTH: 4,000 PSI @ 28 DAYS.
8. STEEL REINFORCEMENT: 6" x 6" x 10--10 GAUGE STEEL WIRE MESH.
9. CONSTRUCTION JOINT: SEALED WITH ASPHALT CEMENT OR EQUIVALENT.
10. GRAVITY LINES SHALL BE PVC SDR--35.
11. FORCE MAIN SHALL BE PVC SDR--26 160 PSI.
12. ALL CHECK VALVES AND GATE VALVES SHALL BE BRONZE.
13. PRECAST CONCRETE STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE AN H--20 DESIGN LOAD. CONCRETE SHALL BE 4,000 PSI MINIMUM 28 DAYS, REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A--82, A--185, A--496 OR A--615 GRADE 60 STEEL.
14. VISUAL/AUDIO ALARM SHALL BE MOUNTED AT ELECTRICAL CONTROL PANEL (NEMA 4X). THE ALARM SHALL BE LOCKABLE AND VANDAL PROOF.
15. PUMP STATION MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE FOR CLASS AND GROUP "D" DIVISON, PUMPS AND FLOATS SHALL BE WIRED DIRECTLY INTO THE CONTROL PANEL. NO SPLICES OR JUNCTION BOXES SHALL BE PERMITTED. USE TWO (2) HYDROMATIC SUBMERSIBLE PUMPS, MODEL SHEF50 OR APPROVED EQUAL. THE PUMP SHALL BE RATED 28 GPM, AT 51 FEET TOTAL DYNAMIC HEAD. PUMP MOTORS SHALL RATED ½ HP, 3450 RPM, SINGLE PHASE, 230 VOLTS, 60 CYCLE.
16. DISCONNECT SWITCH SHALL BE INSTALLED IN NEMA 4X, LOCKABLE ENCLOSURE.
17. CONTROL EQUIPMENT SHALL BE SECURELY MOUNTED ON BUILDING WALL AS DIRECTED BY OWNER'S FIELD REPRESENTATIVE AND SHALL BE WITHIN VIEW OF THE PUMP STATION.
18. TELEMETRY SYSTEM SHALL BE PROVIDED WITHIN THE ELECTRICAL CONTROL PANEL FOR TRANSMISSION OF EMERGENCY SIGNAL TO THE SHOWROOM BUILDING. EMERGENCY SIGNAL SHALL BE PROVIDED FOR: HIGH WATER ALARM, POWER FAILURE AND PUMP FAILURE, AT A MINIMUM.
19. MANHOLE IS TO BE BITUMINOUS COATED INSIDE AND OUT.
20. PROVIDE RUBBER BOOTS FOR ALL PIPES ENTERING AND EXISTING THE MANHOLE.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY LOCATING OPENINGS IN STRUCTURES TO ACCOMMODATE GRADE AND INSTALLATION OF ALL PIPES AS SHOWN.
22. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS.
23. CONTRACTOR SHALL VERIFY SANITARY SEWER SERVICE INVERT FROM THE SHOWROOM BUILDING.



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

########## DESIGN NOTES
########## RATED TREATMENT CAPACITY IS 2.5 CFS (70.8 L/s), OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 20.0 CFS (566 L/s). IF THE SITE CONDITIONS EXCEED 20.0 CFS (566 L/s), AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.
THE STANDARD ########## CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.
CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WQSA-1
WATER QUALITY FLOW RATE (CFS)	1.95
PEAK FLOW RATE (CFS)	8.68
RETURN PERIOD OF PEAK FLOW (YRS)	100
SCREEN APERTURE (2400 OR 4700)	2400

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	173.00	HDPE	15"
INLET PIPE 2	175.00	HDPE	15"
OUTLET PIPE	175.00	HDPE	15"
RIM ELEVATION			180.10

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE or www.ContechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

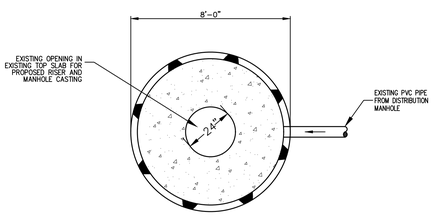
No.	Revision	Date	By
1.	WQH SUBMISSION	06/26/2018	SMN
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

Previous Editions Obsolete

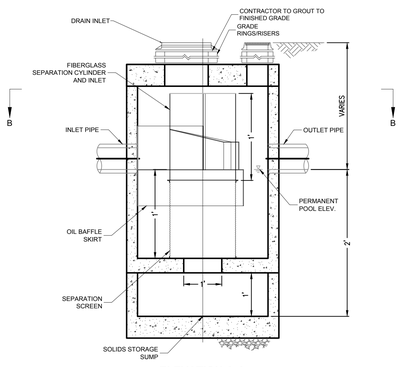
APPLICANT/OWNER:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
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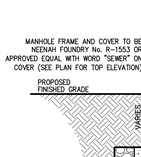


PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

########## DESIGN NOTES
########## RATED TREATMENT CAPACITY IS 3.8 CFS (107.6 L/s) OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 20.0 CFS (566 L/s). IF THE SITE CONDITIONS EXCEED 20.0 CFS (566 L/s), AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.
THE STANDARD ########## CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.
CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WQSC-2
WATER QUALITY FLOW RATE (CFS)	3.74
PEAK FLOW RATE (CFS)	19.46
RETURN PERIOD OF PEAK FLOW (YRS)	100
SCREEN APERTURE (2400 OR 4700)	2400

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	196.50	HDPE	15"
OUTLET PIPE	196.50	HDPE	15"

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE or www.ContechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

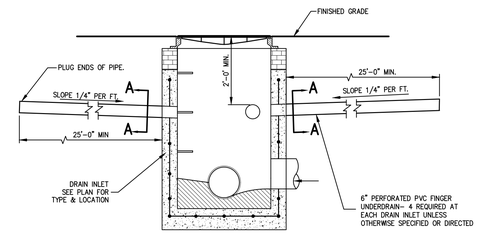
INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

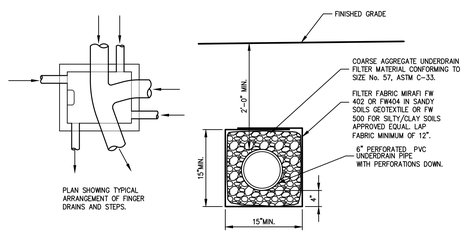
PLAN VIEW

ELEVATION **SECTION**

NOTES:

1. PROPOSED CONCRETE RISER SHALL BE H--20 LOAD RATED.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE PRECAST RISER AND CASTING FOR THE ENGINEER'S REVIEW.
3. DIAMETER OF OPENING OF EXISTING TOP SLAB SHALL BE VERIFIED BY CONTRACTOR.





SECTION A--A

NOTE:
1. LOCATIONS OF FINGER DRAINS MAY VARY FROM THAT AS SHOWN DEPENDING UPON NUMBER AND SIZE OF STORM DRAIN LINES ENTERING AND EXITING THE STRUCTURE.

CONSTRUCTION DETAILS

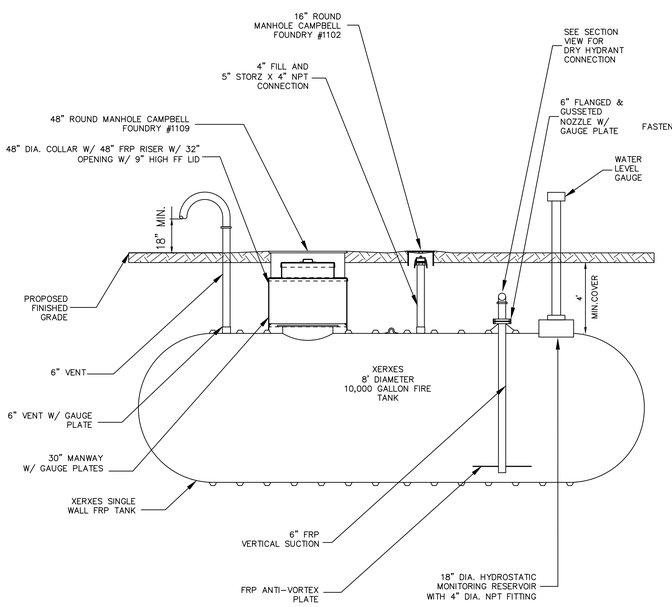
MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Drawn:	SS
Approved:	AN
Scale:	NOT TO SCALE
Date:	11/30/2017
Project No:	16124
WQH-DETAILS	MODEL
Drawing No:	C-902

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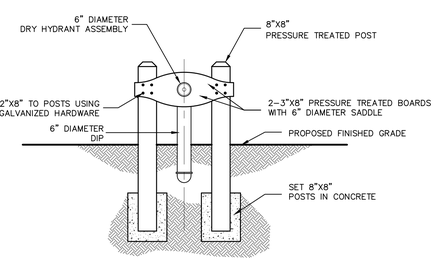
PROFILE VIEW

NOTES:

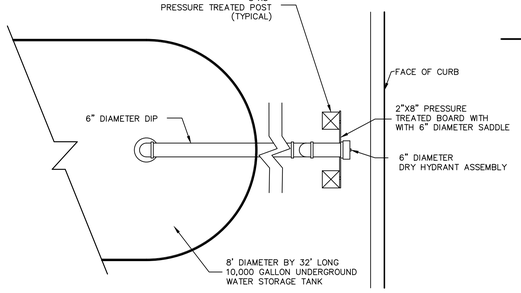
1. FOR LOCATION OF DRY HYDRANT ASSEMBLY, SEE SITE PLANS.
2. THE FIRE TANK SHALL BE FITTED WITH ALL APPURTENANCES AS REQUIRED BY NFPA 22.
3. THE INITIAL VOLUME OF WATER WILL BE SUPPLIED BY THE OWNER AND ANY ADDITIONAL FILLING WILL BE SUPPLIED BY THE GOLDEN'S BRIDGE FIRE DEPARTMENT AS NEEDED.



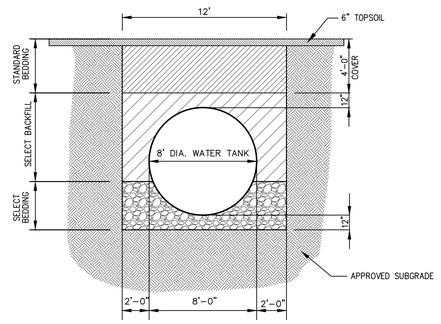
DRY HYDRANT PROFILE VIEW



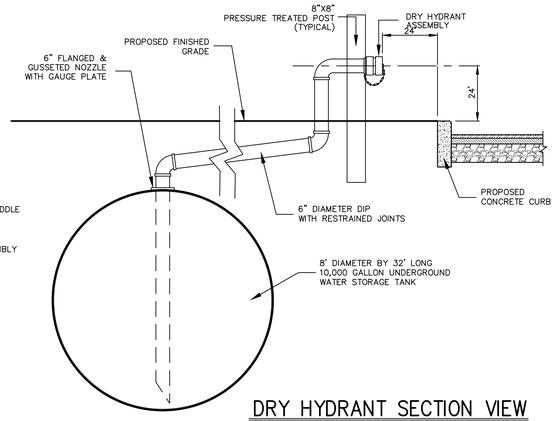
FRONT VIEW



PLAN VIEW

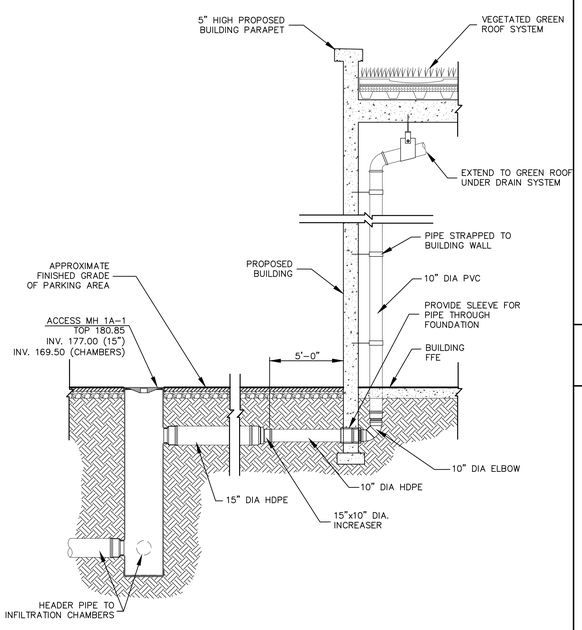


SECTION VIEW

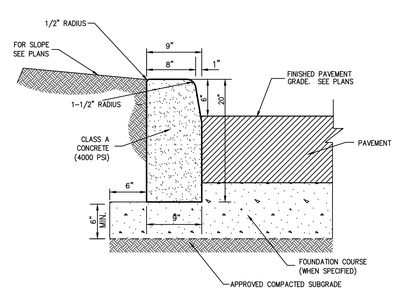


DRY HYDRANT SECTION VIEW

10,000 GALLON FIRE TANK WITH SUCTION HYDRANT — 21

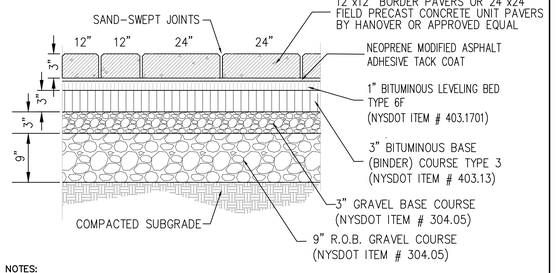


ROOF DRAIN LEADER CONNECTION TO INFILTRATION SYSTEM — 24



NYSDOT TYPE "BB" CONCRETE CURB — 25

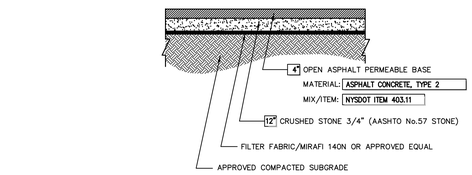
(NYSDOT (ITEM 609.04) – ROUTE 22)



NOTES:

1. CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.

PRECAST CONCRETE UNIT PAVEMENT ON BITUMINOUS BASE (VEHICULAR GRADE/BELOW COVERED DISPLAY) — 26

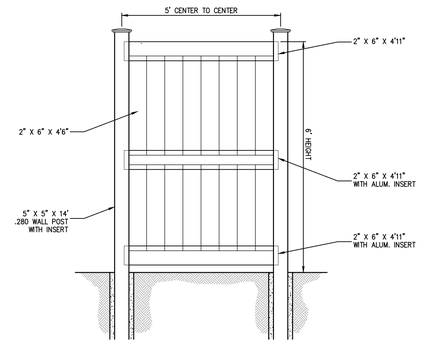


NOTES:

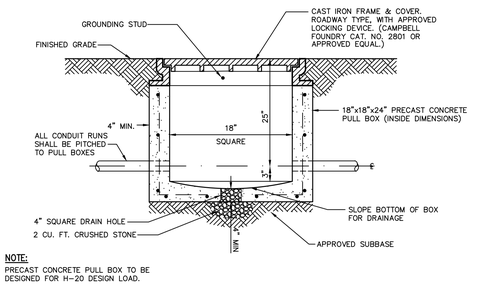
1. THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
2. MATERIAL AND MIX/ITEM NUMBERS REFER TO:

NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

POROUS PAVEMENT — 27



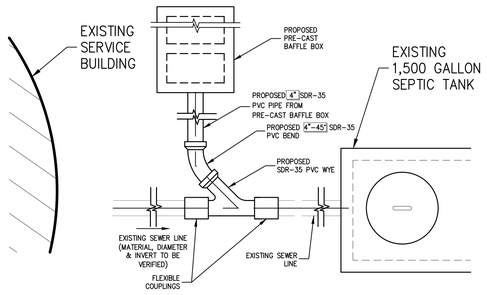
WHITE PRIVACY PVC FENCE — 28



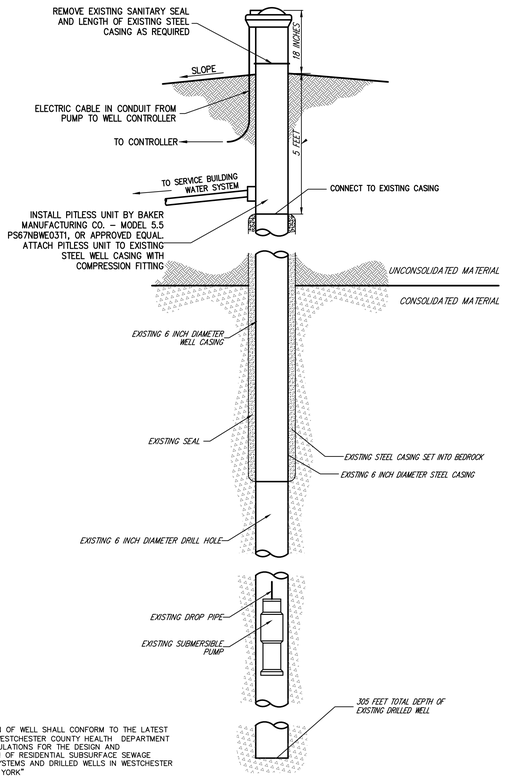
NOTE:

PRECAST CONCRETE PULL BOX TO BE DESIGNED FOR H-20 DESIGN LOAD.

ELECTRICAL PULL BOX — 22



WYE CONNECTION — 23



NOTE:

1. CONSTRUCTION OF WELL SHALL CONFORM TO THE LATEST EDITION OF "WESTCHESTER COUNTY HEALTH DEPARTMENT RULES & REGULATIONS FOR THE DESIGN AND CONSTRUCTION OF RESIDENTIAL SUBSURFACE SEWAGE TREATMENT SYSTEMS AND DRILLED WELLS IN WESTCHESTER COUNTY, NEW YORK"

EXISTING WELL No.2 UPGRADE — 29

(WCHD STANDARD)

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/26/2018	SMN
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

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CONSTRUCTION DETAILS

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

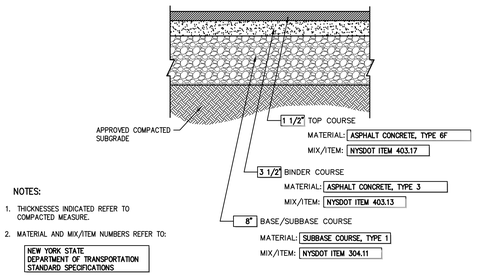
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Drawn:	SS
Approved:	AN
Scale:	NOT TO SCALE
Date:	11/30/2017
Project No:	16124
WCH-DETAILS	C-903
Drawing No:	C-903

NOT FOR CONSTRUCTION

SITE PAVEMENT
(Heavy Duty)

30



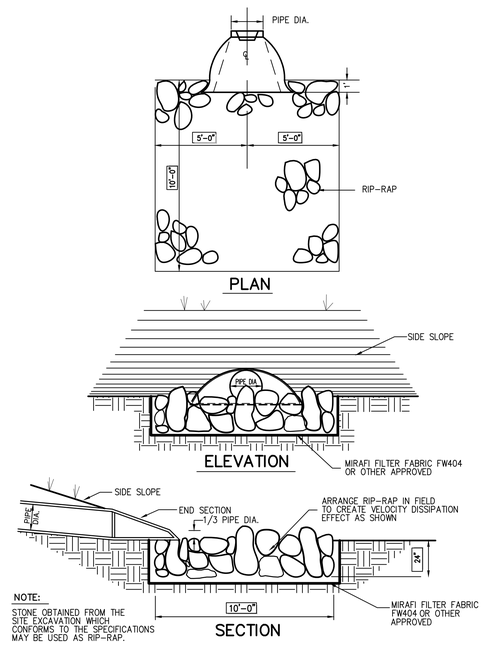
NOTES:

1. THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
2. MATERIAL AND MIX/ITEM NUMBERS REFER TO:

NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

RIP-RAP APRON/ENERGY DISSIPATOR
(Metal End Section)

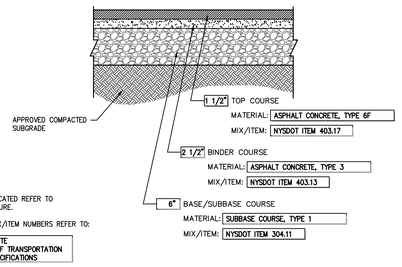
31



NOTE:
STONE OBTAINED FROM THE SITE EXCAVATION WHICH CONFORMS TO THE SPECIFICATIONS MAY BE USED AS RIP-RAP.

SITE PAVEMENT
(Light Duty)

32



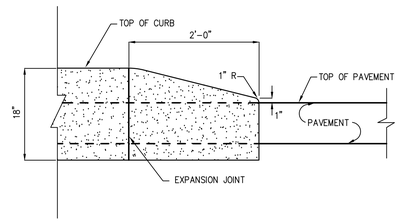
NOTES:

1. THICKNESSES INDICATED REFER TO COMPACTED MEASURE.
2. MATERIAL AND MIX/ITEM NUMBERS REFER TO:

NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

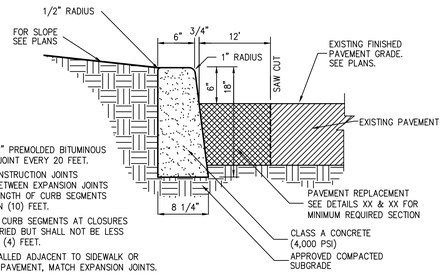
CONCRETE CURB ENDING

34



CAST-IN-PLACE CONCRETE CURB
(IN EXISTING PAVEMENT)

33

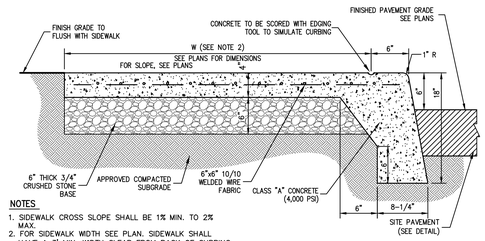


NOTES:

1. INSTALL 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT EVERY 20 FEET.
2. INSTALL CONSTRUCTION JOINTS MID-WAY BETWEEN EXPANSION JOINTS SO THAT LENGTH OF CURB SEGMENTS WILL BE TEN (10) FEET.
3. LENGTH OF CURB SEGMENTS AT CLOSURES MAY BE VARIED BUT SHALL NOT BE LESS THAN FOUR (4) FEET.
4. WHEN INSTALLED ADJACENT TO SIDEWALK OR CONCRETE PAVEMENT, MATCH EXPANSION JOINTS.

MONOLITHIC CONCRETE CURB AND SIDEWALK

35

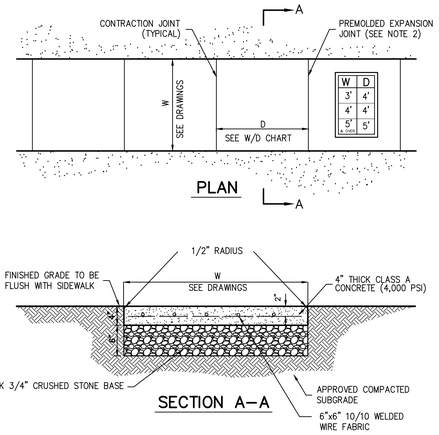


NOTES

1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
2. FOR SIDEWALK WIDTH SEE PLAN. SIDEWALK SHALL HAVE A 3' MIN. WIDTH CLEAR FROM BACK OF CURBING.
3. PROVIDE JOINT SEALER & PREMOULDED EXPANSION JOINT AT ALL BLDG. WALLS, CONSTRUCTION JOINTS AND OTHER FIXED OBJECTS (HYDRANTS, LIGHT POLES, ETC.)
4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH.
5. PROVIDE 1/2" PREMOULDED EXPANSION JOINTS AT 20 FOOT INTERVALS UNLESS OTHERWISE DIRECTED.
6. REINFORCEMENT SHALL NOT EXTEND THROUGH EXPANSION JOINTS.

CONCRETE SIDEWALK

36

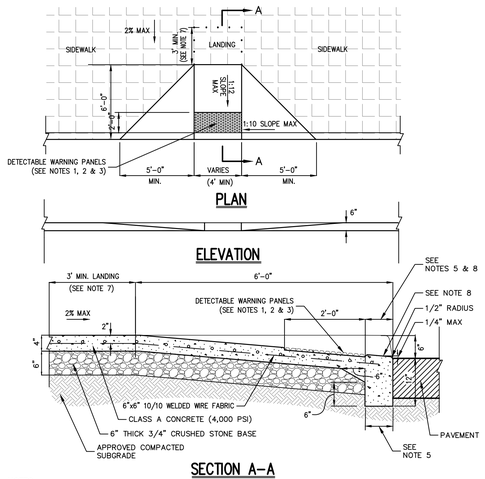


NOTES:

1. SIDEWALK CROSS SLOPE SHALL BE 1% MIN. TO 2% MAX.
2. PROVIDE 1/2" PREMOLDED EXPANSION JOINTS AT 20' INTERVALS UNLESS OTHERWISE DIRECTED.
3. REINFORCING SHALL NOT EXTEND THROUGH EXPANSION JOINTS.
4. SIDEWALK SHALL HAVE LIGHT BROOM FINISH

DROP CURB & RAMP (TYPE A)
WITH DETECTABLE WARNING

37

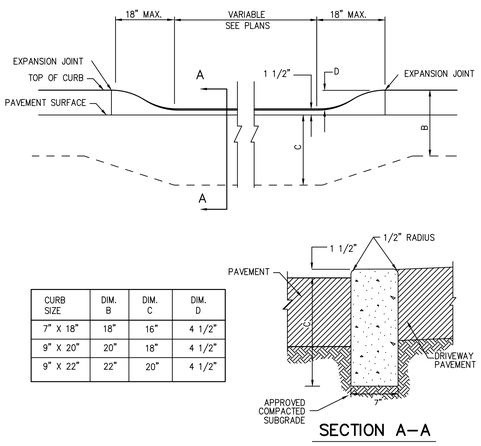


NOTES:

1. RAMPS SHALL HAVE CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILES AS MANUFACTURED BY ARMOR-TILE (OR APPROVED EQUAL) AND SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES.
2. DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT IN ACCORDANCE WITH SECTION 4.29.2, FEDERAL REGISTER, VOLUME 56, NO. 144, RULES AND REGULATIONS, APPENDIX A TO PART 36 – STANDARDS FOR ACCESSIBLE DESIGN (AMERICANS WITH DISABILITIES ACT), LATEST EDITION.
3. 24" WIDTH OF PANELS TO BE INSTALLED DIRECTLY BEHIND CURB AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE AND SEE CURB DETAIL FOR DIMENSIONS.
6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. WHEN LANDING OF RAMP ADJOINS A DOORWAY THEN THE MINIMUM DOORWAY MANEUVERING AREA SHALL BE AT LEAST THE WIDTH OF THE DOORWAY AND SHALL HAVE A MINIMUM DEPTH OF:
   MANUAL SWING DOORS = 60" MIN.
   FULL POWERED AUTOMATIC SLIDING DOORS = 48" MIN.
8. CONTRACTOR TO ENSURE TOP OF CURB MATCHES SLOPE OF RAMP.

DEPRESSED CONCRETE CURB

38

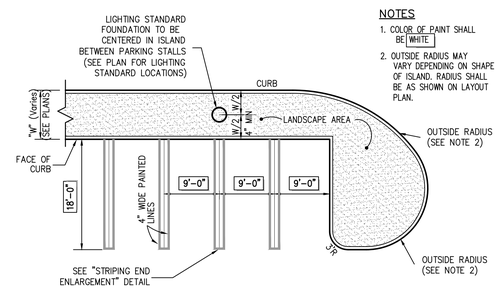


CURB SIZE	DIM. B	DIM. C	DIM. D
7" X 18"	18"	16"	4 1/2"
9" X 20"	20"	18"	4 1/2"
9" X 22"	22"	20"	4 1/2"

METHOD OF DEPRESSING CURB AT DRIVEWAYS

90° PARKING
(DOUBLE STRIPING – CURBED ISLAND AND CURBED END)

39

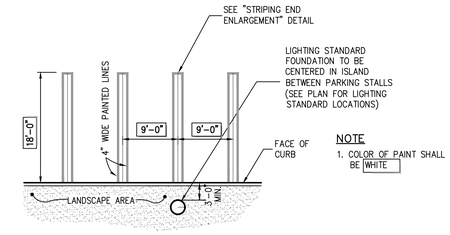


NOTES

1. COLOR OF PAINT SHALL BE WHITE
2. OUTSIDE RADIUS MAY VARY DEPENDING ON SHAPE OF ISLAND. RADIUS SHALL BE AS SHOWN ON LAYOUT PLAN.

90° PARKING
(DOUBLE STRIPING – CURBED PERIMETER)

40



NOTE

1. COLOR OF PAINT SHALL BE WHITE

No.	Revision	Date	By
1.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

Previous Editions Obsolete

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120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
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JMC

CONSTRUCTION DETAILS

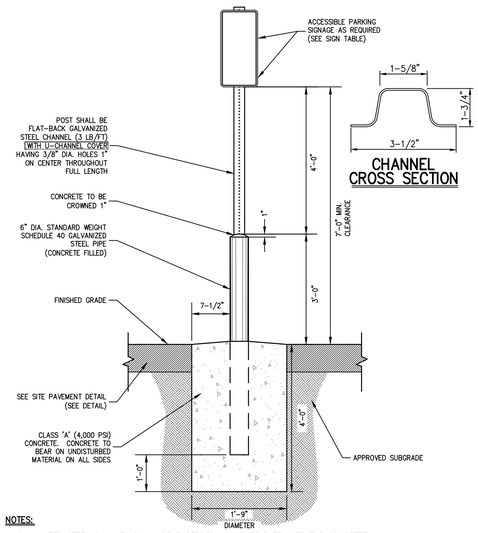
MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

Drawn:	SS
Approved:	AN
Scale:	NOT TO SCALE
Date:	11/30/2017
Project No:	16124
16124-DETAILS	C-904
Drawing No:	C-904

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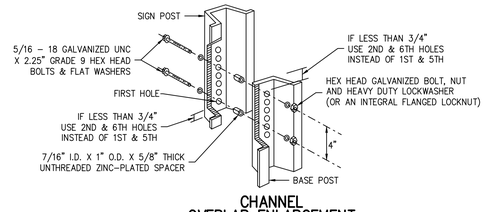


NOTES:

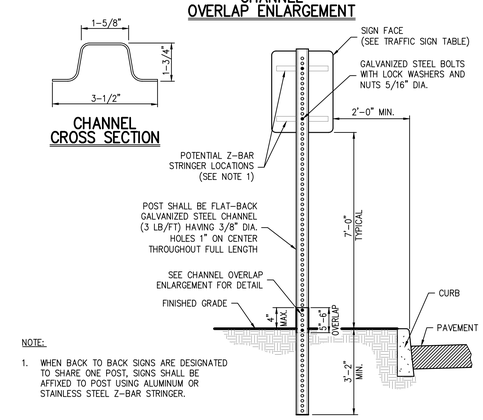
1. GALVANIZED STEEL CHANNEL SHALL BE EMBEDDED A MIN. OF 3 FT. INTO THE CONCRETE.
2. POSTS FOR HANDICAP PARKING STALLS AND ACCESS AISLES SHALL BE PAINTED BLUE AS FOLLOWS:
   A. SOLVENT CLEAN TO REMOVE OIL, GREASE AND OTHER CONTAMINANTS.
   B. APPLY METAL PRIMER FOR GALVANIZED SURFACES.
   C. APPLY TWO (2) FINISH COATS OF APPROVED EXTERIOR PAINT FOR METAL SURFACES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE PARKING SIGNS, BOLLARDS AND FOUNDATIONS WITH THE DESIGN AND INSTALLATION OF THE SITE SIDEWALKS, CURBING, PAVEMENT AND ANY OTHER SITE FEATURES SHOWN ON THE PLANS.
4. FASTEN SIGN TO POSTS WITH GALVANIZED STEEL BOLTS, LOCK WASHERS, AND NUTS (5/16" DIA.)
5. U-CHANNEL COVERS FOR POSTS SHALL BE BLUE WITH WHITE STRIPE FOR HANDICAP PARKING STALLS AND HANDICAP ACCESS AISLES.

ACCESSIBLE PARKING SIGN DETAIL

41

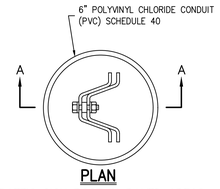


CHANNEL OVERLAP ENLARGEMENT



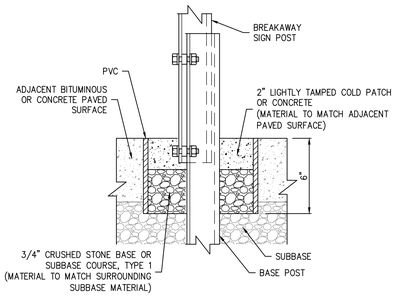
NOTE:

1. WHEN BACK TO BACK SIGNS ARE DESIGNATED TO SHARE ONE POST, SIGNS SHALL BE AFFIXED TO POST USING ALUMINUM OR STAINLESS STEEL Z-BAR STRINGER.



PLAN

TRAFFIC SIGN POST IN PAVED AREAS



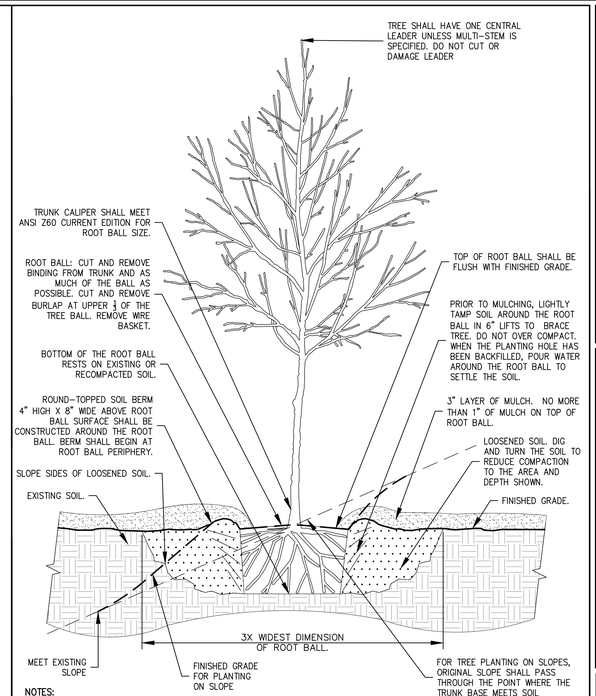
SECTION A–A

TRAFFIC SIGN POST IN PAVED AREAS

TRAFFIC SIGN POST

(BREAKAWAY STEEL CHANNEL)

42



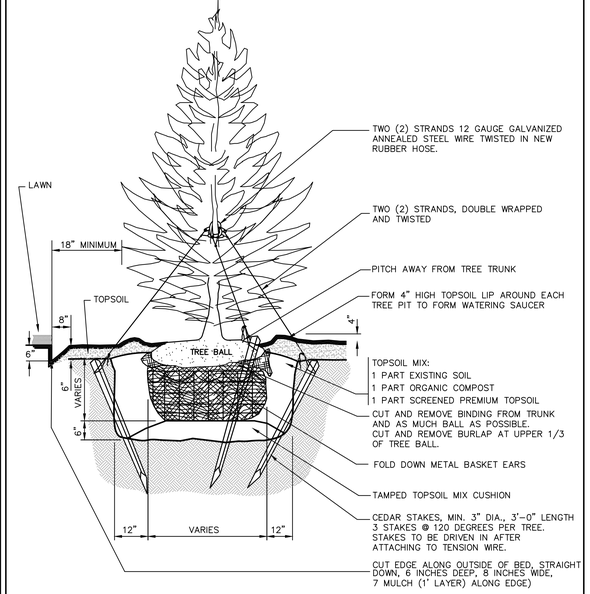
NOTES:

1. ALL PLANTING BEDS SHALL BE FREE OF WEEDS AND GRASS PRIOR TO AND FOLLOWING INSTALLATION OF PLANTS.
2. PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
3. PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.
4. SEE TREE STAKING DETAIL IF STAKING IS REQUIRED.

TREE PLANTING

(DECIDUOUS AND EVERGREEN)

43

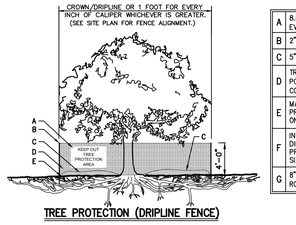


NOTES:

1. PLANTS IN CONTAINERS MUST HAVE THE FIBROUS POTBOUND ROOTS PULLED APART TO ALLOW THE ROOTS TO SPREAD.
2. AFTER THE TREE HAS BEEN PLACED IN THE HOLE, THE TOPSOIL MIX SHOULD BE PLACED AROUND THE PLANT ONE-THIRD OF THE WAY UP, A SLOW RELEASE SUPER PHOSPHATE FERTILIZER WILL BE ADDED TO THE SOIL AROUND THE TREE, AND THEN FILL THE REMAINDER OF HOLE WITH TOPSOIL MIX. THE TOPSOIL MIX SHOULD THEN BE GENTLY COMPACTED.
3. PROVIDE 3" LAYER OF MULCH AS SPECIFIED OVER ENTIRE WATERING SAUCER AT ALL TREE PITS OR OVER ENTIRE TREE BED.
4. REMOVE EXISTING WEEDS, LAWN OR PLANT MATERIAL FROM PROPOSED BED AREA.

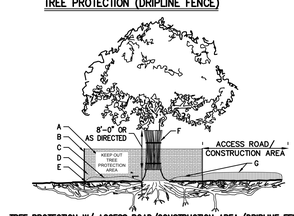
EVERGREEN TREE PLANTING

44



A	8.5"x11" SIGN LAMINATED IN PLASTIC SPACED EVERY 50' ALONG FENCE
B	2"x6" STEEL POSTS OR APPROVED EQUAL.
C	5" THICK LAYER OF MULCH.
D	TREE PROTECTION FENCE: HIGH DENSITY POLYETHYLENE FENCING WITH 3.5" X 1.5" OPENINGS; COLOR ORANGE. STEEL POSTS INSTALLED AT 8' O.C.
E	MAINTAIN EXISTING GRADE WITHIN THE TREE PROTECTION FENCE UNLESS OTHERWISE INDICATED ON THE PLANS.
F	INSTALL ROUGH SAWN WOOD WHERE AND AS DIRECTED BY PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SEE CHART FOR WOOD SIZE BOUND WITH 9 GAUGE WIRE.
G	8"-12" THICK LAYER OF MULCH ON MAINTENANCE ROAD. 5" THICK LAYER INSIDE TREE PROTECTION AREA.

TREE PROTECTION (DRIPLINE FENCE)



TREE DIAMETER	ROUGH SAWN WOOD SIZE
<12"	2"X2"
13"–24"	2"X4"
>25"	2"X6"

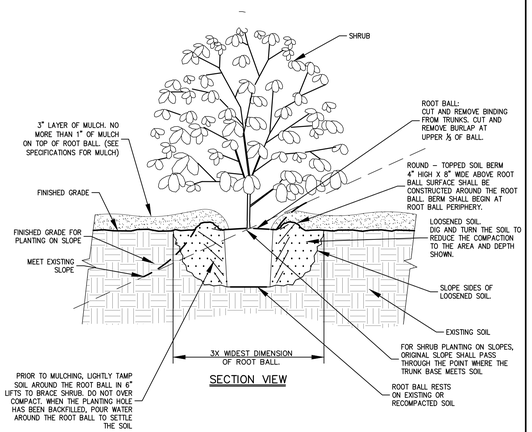
TREE PROTECTION W/ ACCESS ROAD/CONSTRUCTION AREA (DRIPLINE FENCE)

NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
3. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
4. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
5. SEE SITE PLANS FOR IDENTIFICATIONS/LOCATIONS OF INDIVIDUAL TREES TO BE PROTECTED.
6. ALL EXCAVATION WITHIN THE CROWN/DRIPLINE OF ANY TREE SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SPECIAL MEASURES, SUCH AS THE USE OF AN AIR SPADE MAY BE REQUIRED.
7. THE CONTRACTOR MAY PROPOSE THE USE OF ENGINEERED MATTING OR OTHER ENGINEERED PRODUCTS IN LIEU OF MULCH, WHICH SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION.

TREE PROTECTION

45



SECTION VIEW

NOTES:

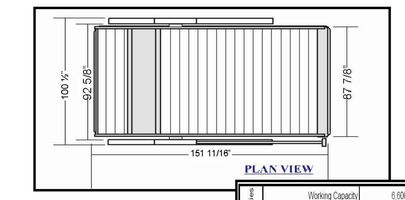
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SHRUB PLANTING

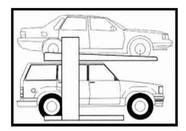
46

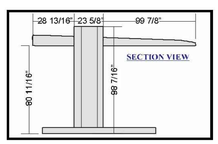
HARDING STEEL

Harding Steel SUV-XL Lift Specifications



PLAN VIEW





SECTION VIEW

Capacities	Working Capacity	6,600 lbs.
	Static Capacity	13,200 lbs.
	Dynamic Capacity	9,900 lbs.
Dimensions	Overall Width	100 1/2"
	Platform Width	87 7/8"
	Drive-thru Width	92 5/8"
	Overall Platform Length	151 11/16"
	Maximum vehicle wheelbase	146"
	Maximum clearance (lower car)	79"
	Overall height	98 7/16"
Power Speed	Lifting Speed (seconds)	17 seconds
	Lowering Speed (seconds)	15 seconds
	Power Requirements	220V 3 Phase 40 amp 220V Single Phase 40 amp
Features	Application	Outdoor/Indoor
	Surface	Asphalt/Concrete
	Material	100% Galvanized Steel
	Safety	Steel-on-Steel Locks

Harding Steel, Inc. • 730 17th Street #650 • Denver, CO 80202 • (800) PARK-DBL • www.hardingsteel.com

HARDING STEEL SUV–XL LIFT

47

No.	Revision	Date	By
1.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

Preparer Editors Obsolete

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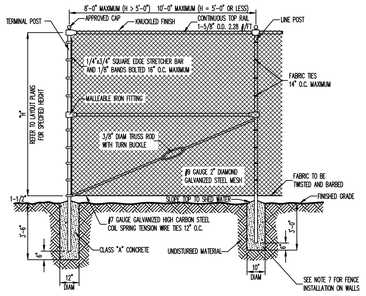
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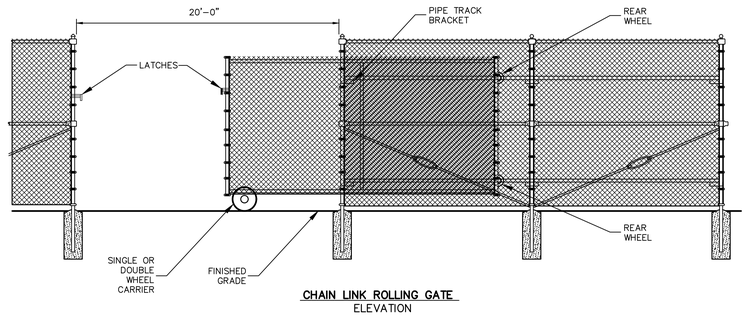
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16124-DETAILS	C-905	–	
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NOT FOR CONSTRUCTION

"H" (FT)	LINE POST	TERMINAL POST
5' OR LESS	2" O.D./2.72 #/FT	2.5" O.D./3.65 #/FT
> 5'-0"	2.5" O.D./3.65 #/FT	3" O.D./5.79 #/FT





CHAIN LINK ROLLING GATE
ELEVATION

NOTES:

1. ALL POSTS, RAILS, FABRIC AND ACCESSORIES SHALL BE GALVANIZED.
2. POST AND RAILS SHALL BE STANDARD FULL WEIGHT GALVANIZED SCHEDULE 40 PIPE MANUFACTURED AND GALVANIZED IN ACCORDANCE WITH ASTM A120. ALL MATERIALS SHALL BE NEW AND FIRST CLASS AND SHALL NOT INCLUDE RECONDITIONED OR REROLLED PIPE.
3. FITTINGS SHALL BE MALLEABLE IRON FITTINGS CONFORMING TO THE REQUIREMENTS OF ASTM A47 GALVANIZED IN ACCORDANCE WITH ASTM A153.
4. FABRIC SHALL BE 9 GAUGE GALVANIZED 2" MESH. TOP SELVAGE SHALL HAVE KNUCKLED FINISH.
5. TENSION WIRE SHALL BE 7 GAUGE MEETING THE REQUIREMENTS OF ASTM A641 AS MODIFIED HEREIN. THE TENSILE STRENGTH SHALL BE AT LEAST 80,000 PSI WITH A GALVANIZED COATING OF NOT LESS THAN 0.7 OZ. PER SQUARE FOOT.
6. FABRIC TIES SHALL BE MINIMUM 9 GAUGE GALVANIZED STEEL OR ALUMINUM. MINIMUM SPACING SHALL BE AS FOLLOWS:
   A. 14" O.C. AT LINE POSTS
   B. 24" O.C. AT TOP RAIL
   C. 12" O.C. AT TENSION WIRE
7. WHERE CHAIN LINK FENCE IS TO BE INSTALLED ON WALLS, THE FENCE POSTS SHALL BE IMBEDDED A MINIMUM OF TWELVE (12) INCHES IN THE WALL. NEWLY CONSTRUCTED WALLS SHALL BE PROVIDED WITH PROPER SIZE SLEEVES TO ACCOMMODATE FENCE POSTS. FENCE POSTS SHALL BE SECURELY GROUTED IN PLACE USING AN APPROVED HIGH STRENGTH, NON-SHRINKING, NON-STAINING GROUT.
8. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT SHOP AND ERECTION DRAWINGS INDICATING MATERIALS, SIZES AND DIMENSIONS OF FENCING TO THE OWNER'S FIELD REPRESENTATIVE PRIOR TO ORDERING MATERIALS FOR HIS REVIEW AND APPROVAL.
9. PRIOR TO INSTALLATION OF THE FENCE, THE CONTRACTOR SHALL CHECK THE FENCE LAYOUT WITH THE OWNER'S FIELD REPRESENTATIVE WHO MUST APPROVE THE LAYOUT BEFORE ANY OF THE WORK IS TO BE DONE.

CHAIN LINK FENCE WITH ROLLING GATE
(GALVANIZED)

45

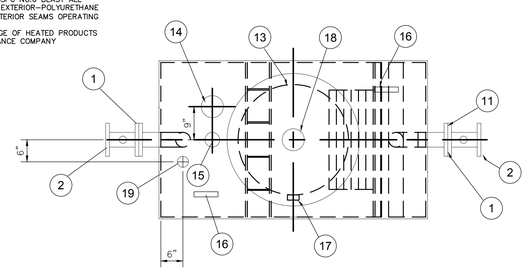
GENERAL SPECIFICATIONS

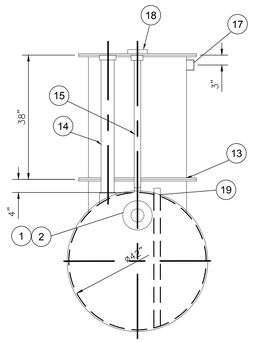
NO. REQ'D: (1) 350 GALLON CAPACITY: HTC, ACT-100-U, DOUBLE WALL TYPE: MILD CARBON STEEL MATERIAL: 35 GPM FLOW RATE: GAUGE: INNER OUTER 7 GA. 10 GA. SHELL- 7 GA. 10 GA. HEADS-SURFACE PREP: SSPC NO.6 BLAST ALL EXTERIOR SURFACES COATING: MATERIAL: THICKNESS EXTERIOR-POLYURETHANE (70 MILS) INTERIOR-NONE CONSTRUCTION : LAP FIT & WELD ALL EXTERIOR SEAMS OPERATING PRESSURE : ATMOSPHERIC NOTES:

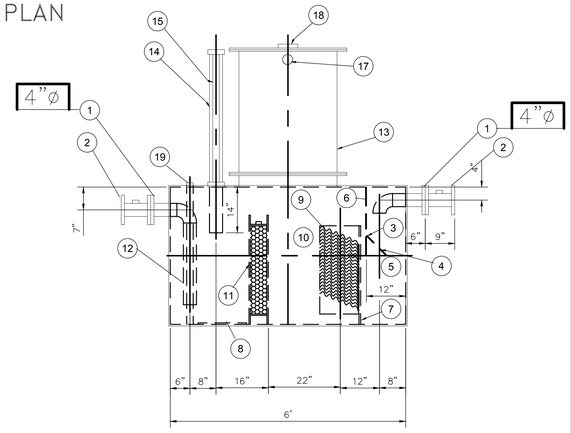
1. POLYURETHANE ACT-100-U TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS
2. TANK HAS 30 YEAR LIMITED WARRANTY THROUGH STEEL TANK INSURANCE COMPANY
3. 15000 VOLT SPARK TEST PROVIDED AT FACTORY
4. ALL VENT PIPING BY INSTALLER

PROVIDED EQUIPMENT

1. 150# R.F.S.O. FLANGE
2. ISOLATION SPOOL PIECE WITH 2" NPT FOR VENT
3. VELOCITY HEAD DIFFUSION BAFFLE
4. WEAR PLATE
5. SEDIMENT CHAMBER
6. UNDERFLOW BAFFLE
7. SLUDGE BAFFLE
8. STRIKER PLATES
9. PARALLEL CORRUGATED PLATE COALESCER
10. OIL/WATER SEPARATOR CHAMBER
11. 6" THICK COALESCER MATERIAL INSTALLED W/ PULL ROD SHIPPED LOOSE
12. OUTLET DOWNCOMER
13. 30"ø MANWAY WITH BOLT-ON EXTENSION SHIPPED LOOSE
14. 5"øFTG. W/ 5"øX4"ø NYLON BUSHING FTG. FOR OIL PUMPOUT W/ INTERNAL PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
15. 3"øFTG. W/ 3"øX2"ø NYLON BUSHING FTG. FOR LEVEL SENSOR WITH RISER PIPE SHIPPED LOOSE
16. LIFTING LUG
17. 3"øFTG. W/ 3"øX2"ø NYLON BUSHING FTG. FOR VENT
18. 5"øFTG. W/ 5"øX4"ø NYLON BUSHING FTG. FOR GAUGE WITH PLUG
19. 3"øFTG. W/ 3"øX2"ø NYLON BUSHING FTG. FOR LEAK DETECTION







NOTE :

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OIL-WATER SEPARATOR
(WITHIN BUILDINGS, REFER TO ARCHITECTURAL DRAWINGS)

46

No.	Revision	Date	By
1.	WCDH SUBMISSION	06/26/2018	SMN
2.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

Previous Editions Obsolete

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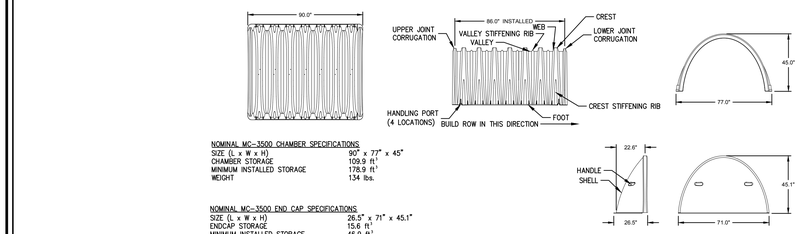
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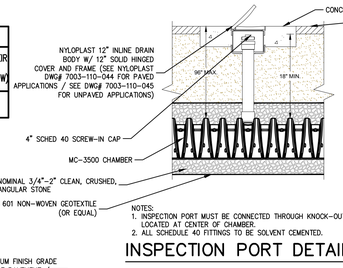
NOMINAL MC-3500 CHAMBER SPECIFICATIONS	
SIZE (L x W x H)	90" x 77" x 45"
CHAMBER STORAGE	109.9 ft³
MINIMUM INSTALLED STORAGE	178.9 ft³
WEIGHT	134 lbs.

NOMINAL MC-3500 END CAP SPECIFICATIONS	
SIZE (L x W x H)	26.5" x 71" x 45.1"
ENDCAP STORAGE	15.6 ft³
MINIMUM INSTALLED STORAGE	46.9 ft³
WEIGHT	43 lbs.



SCHEDULE OF INVERTS

DESIGNATION	(A) BOTTOM OF STONE	(B) CHAMBER BOTTOM	(C) MANIFOLD & STUB INVERT	(D) ISOLATOR ROW PIPE INVERT	(E) OVERFLOW WEIR INVERT (ISOLATOR ROW)
1-A	170.00	170.83	170.83	170.83	172.83



NOTES:
1. INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

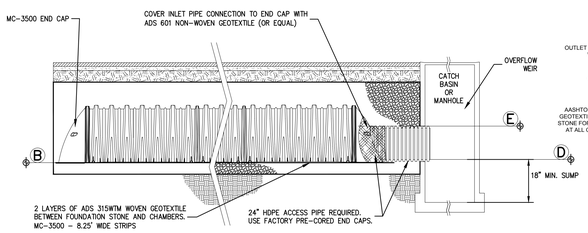
INSPECTION PORT DETAIL

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

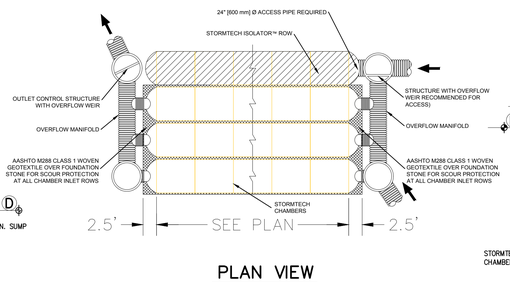
MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION¹	COMPACTION/DENSITY REQUIREMENT
(d)	FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
(c)	FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, < 35% FINES. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 24" OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" MAX LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY.
(b)	EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 – 2 INCH	3, 4	NO COMPACTION REQUIRED.
(a)	FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 – 2 INCH	3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY ².

PLEASE NOTE:

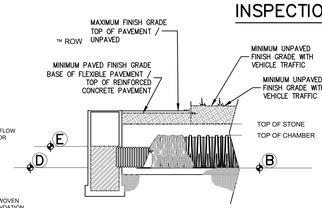
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: 'CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE'.
2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.



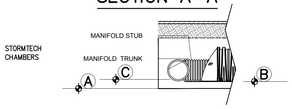
SECTION AT ISOLATOR ROW



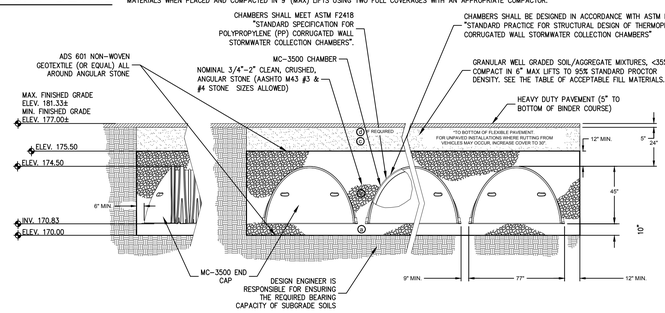
PLAN VIEW



SECTION A-A



SECTION B-B

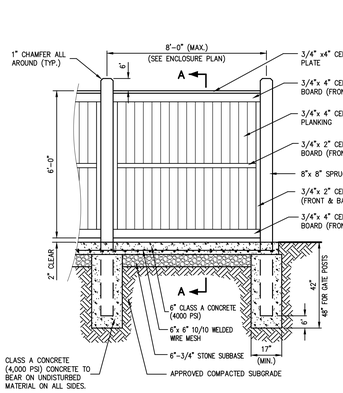


SECTION AT DETENTION AND WATER QUALITY CONTROL

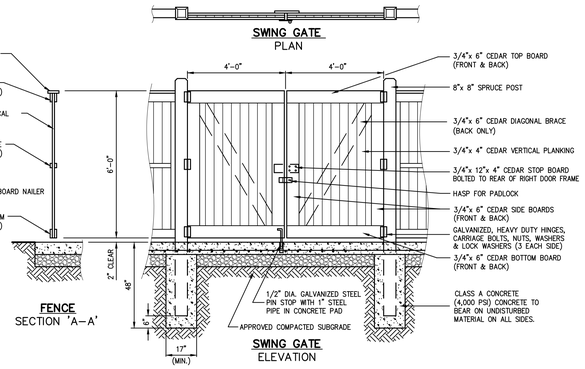
STORMTECH CHAMBERS MC-3500

47

NOT FOR CONSTRUCTION



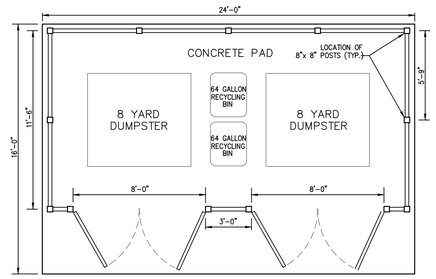
FENCE
ELEVATION



FENCE
SECTION 'A-A'

NOTES:

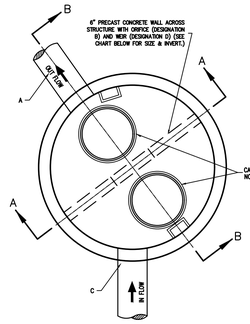
1. METAL FLANGES, CLEATS, BOLTS, SCREWS, ETC. SHALL BE STAINLESS STEEL OR GALVANIZED STEEL.
2. ALL LUMBER TO BE PRESSURE TREATED WITH WOOD PRESERVATIVE FOR IN GROUND USE. ALL LUMBER TO BE #1 GRADE.
3. SEE SITE LAYOUT PLANS FOR LOCATION.



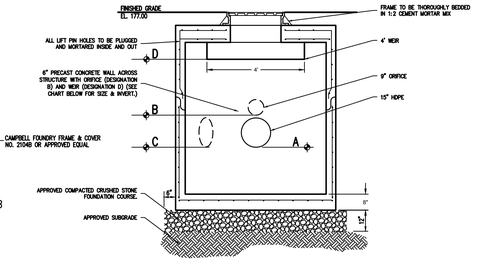
CONCRETE PAD & ENCLOSURE
PLAN

DOUBLE TRASH ENCLOSURE WITH CONCRETE PAD
(WOOD)

48



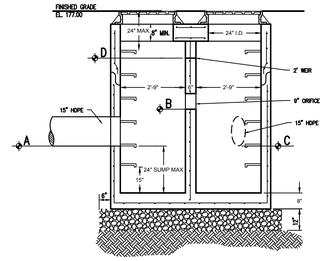
PLAN VIEW



SECTION A-A

SCHEDULE OF INVERTS

DESIGNATION	A		B		C		D	
	SIZE	INVERT	SIZE	INVERT	SIZE	INVERT	SIZE	INVERT
OCS 1A	15" HDPE	170.00	9"	171.50	15" HDPE	170.00	4' WEIR	175.00



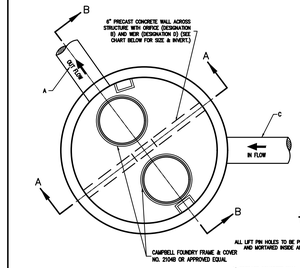
SECTION B-B

NOTES:

1. MANHOLE STEPS SHALL BE CAST IRON NEENAH No. R-1981-0 OR CAMPBELL FOUNDRY No. 2588-1 OR POLYPROPYLENE COATED STEEL (SEE SPECIFICATIONS) OR APPROVED EQUAL.
2. UNLESS OTHERWISE SPECIFIED, STORM DRAIN MANHOLES SHALL HAVE LETTERS "DRAIN" CAST ON COVER, THE COVERS SHALL HAVE VENT HOLES.
3. MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
4. STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE H-20 LOADING.
5. SEE "NOTES PERTAINING TO MANHOLES AND DRAINAGE STRUCTURES UNDER "UTILITY NOTES" ON DRAWING C-901.

OUTLET CONTROL STRUCTURE 1A

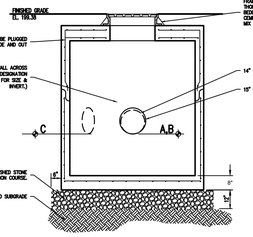
49



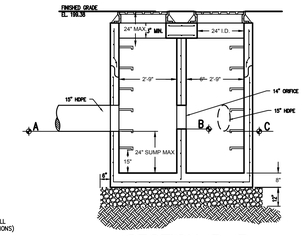
PLAN VIEW

SCHEDULE OF INVERTS

DESIGNATION	A		B		C	
	SIZE	INVERT	SIZE	INVERT	SIZE	INVERT
OCS 1C-3	15" HDPE	191.75	14"	191.75	15" HDPE	191.75



SECTION A-A



SECTION B-B

NOTES:

1. MANHOLE STEPS SHALL BE CAST IRON NEENAH No. R-1981-0 OR CAMPBELL FOUNDRY No. 2588-1 OR POLYPROPYLENE COATED STEEL (SEE SPECIFICATIONS) OR APPROVED EQUAL.
2. UNLESS OTHERWISE SPECIFIED, STORM DRAIN MANHOLES SHALL HAVE LETTERS "DRAIN" CAST ON COVER, THE COVERS SHALL HAVE VENT HOLES.
3. MANHOLES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
4. STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE H-20 LOADING.
5. SEE "NOTES PERTAINING TO MANHOLES AND DRAINAGE STRUCTURES UNDER "UTILITY NOTES" ON DRAWING C-901.

OUTLET CONTROL STRUCTURE 1C-3

50

No.	Revision	Date	By
1.	TOWN PLANNING BOARD SUBMISSION	09/06/2018	SMN

Project Editor: Chester

APPLICANT/OWNER:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601

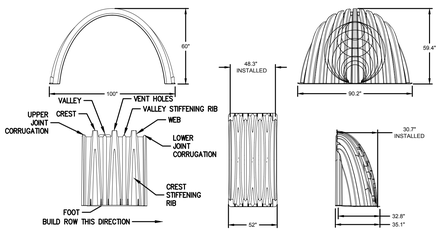
JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD - ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcplic.com

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CONSTRUCTION DETAILS

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

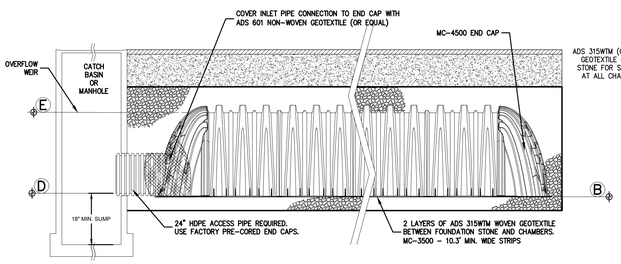


NOMINAL CHAMBER SPECIFICATIONS

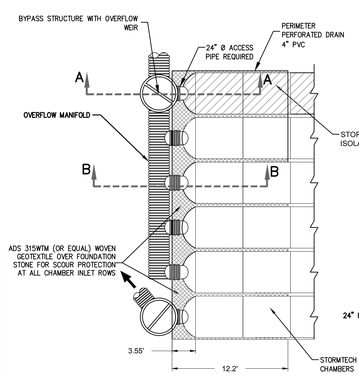
SIZE (W x H x INSTALLED LENGTH)	100.0" x 60.0" x 48.3"
CHAMBER STORAGE	106.5 ft³
MINIMUM INSTALLED STORAGE*	162.6 ft³
NOMINAL WEIGHT	120 lbs
NOMINAL END CAP SPECIFICATIONS	
SIZE (W x H x INSTALLED LENGTH)	90.2" x 59.4" x 30.7"
END CAP STORAGE	35.7 ft³
MINIMUM INSTALLED STORAGE*	108.7 ft³
NOMINAL WEIGHT	120 lbs

SCHEDULE OF INVERTS

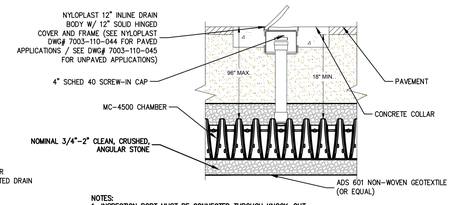
DESIGNATION	A	B	C	D	E
	BOTTOM OF STONE	CHAMBER BOTTOM	MANIFOLD & STUB INVERT	ISOLATOR ROW PIPE INVERT	OVERFLOW WEIR INVERT (ISOLATOR ROW)
DETENTION SYSTEM	191.75	192.50	192.50	192.50	194.50



SECTION AT ISOLATOR ROW

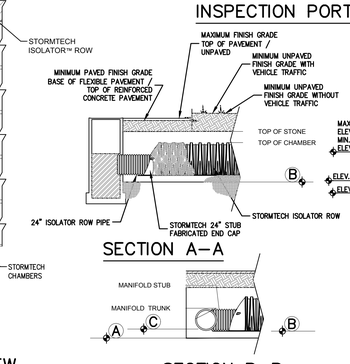


PLAN VIEW



NOTES:
1. INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

INSPECTION PORT DETAIL



SECTION A-A

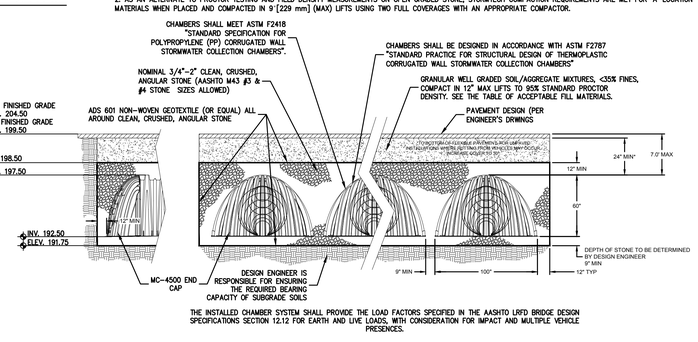
SECTION B-B

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION[1]	COMPACTION/DENSITY REQUIREMENT
D FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, < 35% FINES. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 24" OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" [305 mm] MAX LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY.
B EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" – 2 INCH	3, 4	NO COMPACTION REQUIRED.
A FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" – 2 INCH	3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY [2].

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: 'CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE'.

2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9' [229 mm] (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.



THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

SECTION AT DETENTION AND WATER QUALITY CONTROL

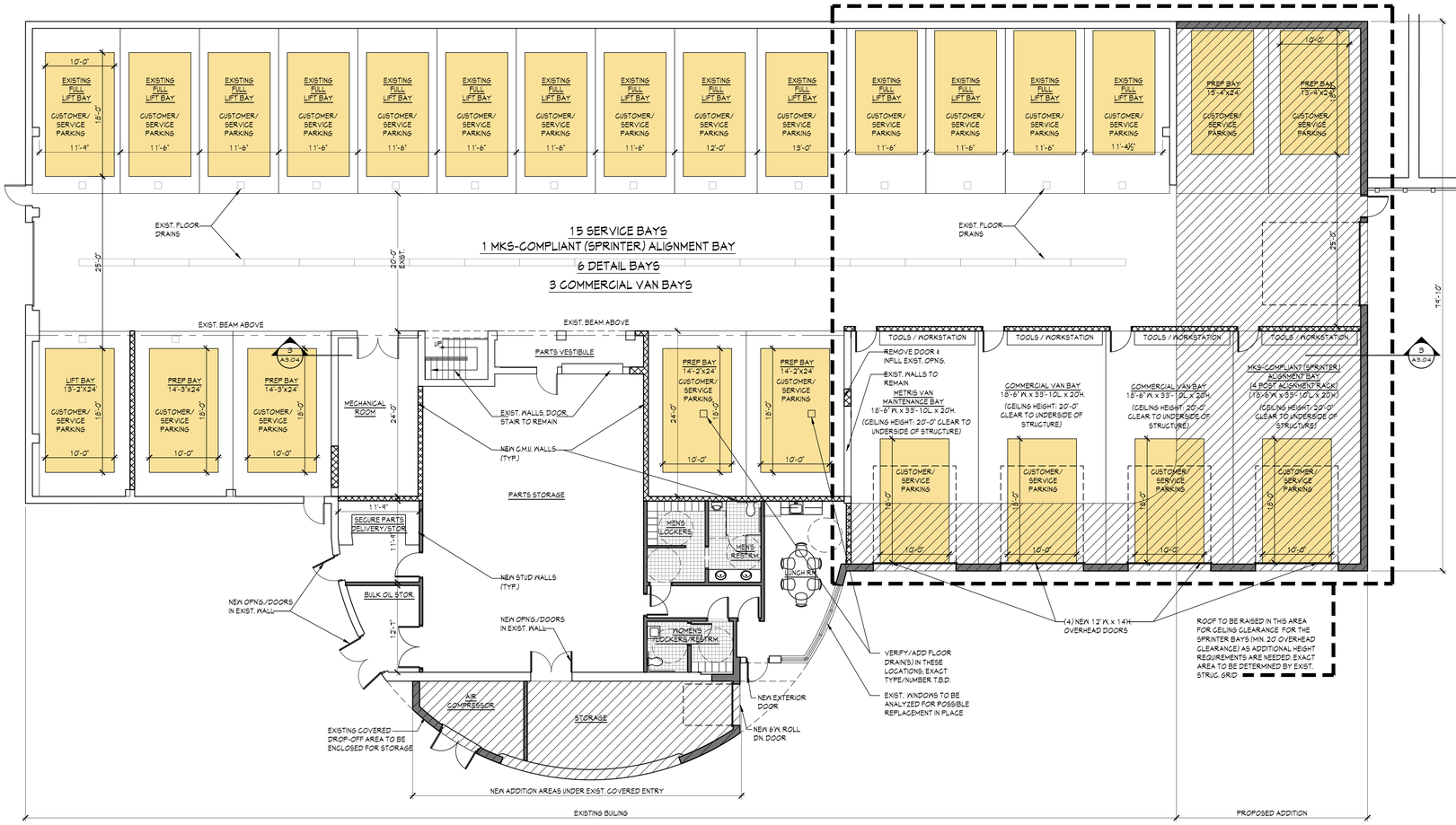
STORMTECH CHAMBERS MC-4500

51

Drawn:	SS
Approved:	AN
Scale:	NOT TO SCALE
Date:	11/30/2017
Project No:	16124
16124-DETAILS	C-907
Drawing No:	C-907

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1 LOWER LEVEL FLOOR PLAN
1/8"=1'-0"

INTERNAL BUILDING/GARAGE PARKING TABULATION		
TYPE		COUNT
	COUNTED AS REQUIRED STRIPED SPACES	25 SPACES

KEY

NEW ADDITIONS

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White Plains, New York 10601
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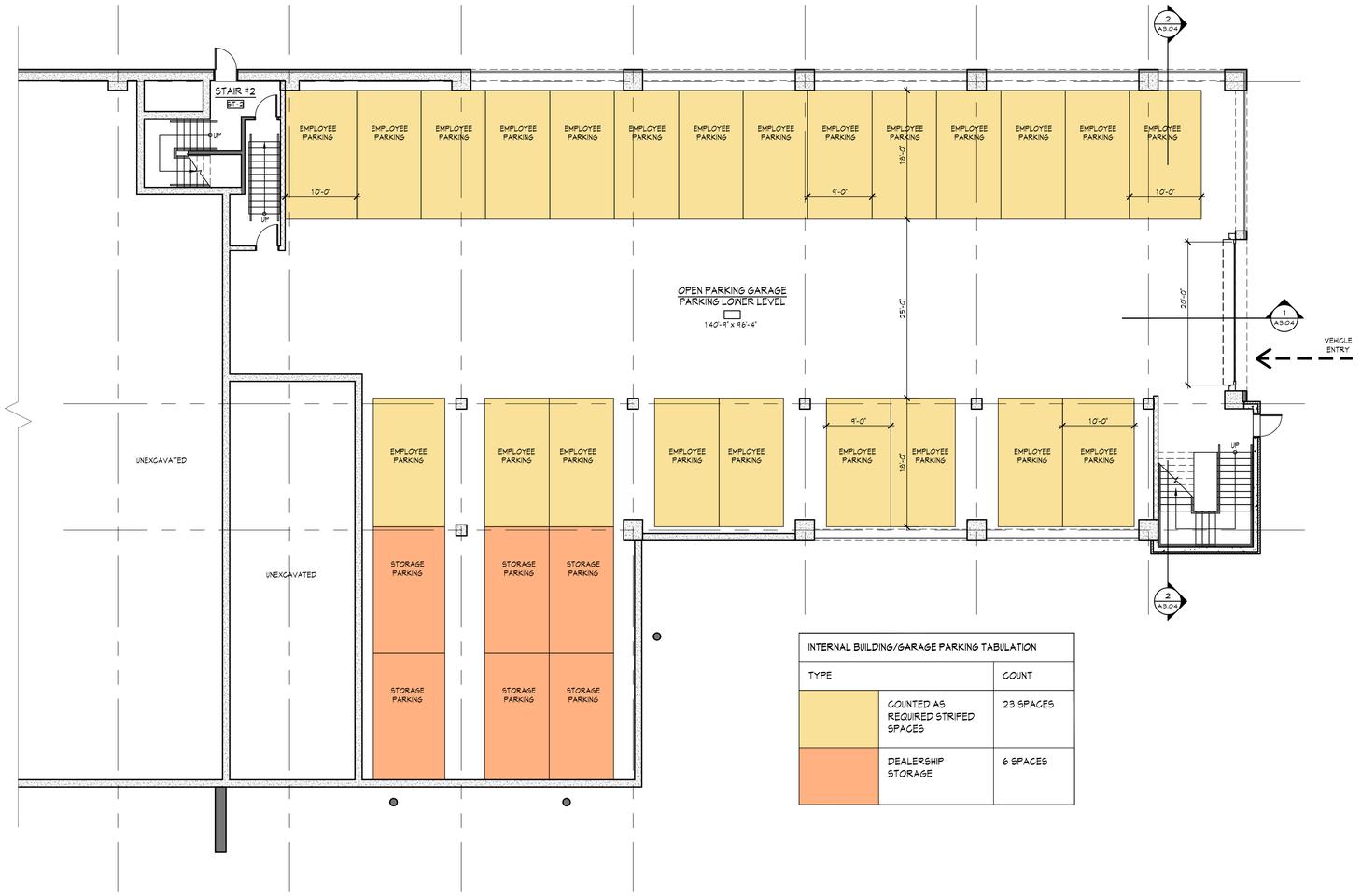
Project Title
Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue
11.30.17 PLANNING BD. SUB.
6.8.18 BLDG. DEPT. SUBMISSION
6.26.18 ACARC SUBMISSION
9.6.18 PLANNING BD. SUB.

Project No. 1707
Date 08.07.18
Drawing By EAV/CP
Scale 1/8"=1'-0"

Drawing Title
SERVICE BUILDING
PROPOSED LOWER LEVEL

Drawing No.
A1.01



INTERNAL BUILDING/GARAGE PARKING TABULATION		
TYPE		COUNT
	COUNTED AS REQUIRED STRIPED SPACES	23 SPACES
	DEALERSHIP STORAGE	6 SPACES

1 LOWER LEVEL PARKING FLOOR PLAN
1/8"=1'-0"

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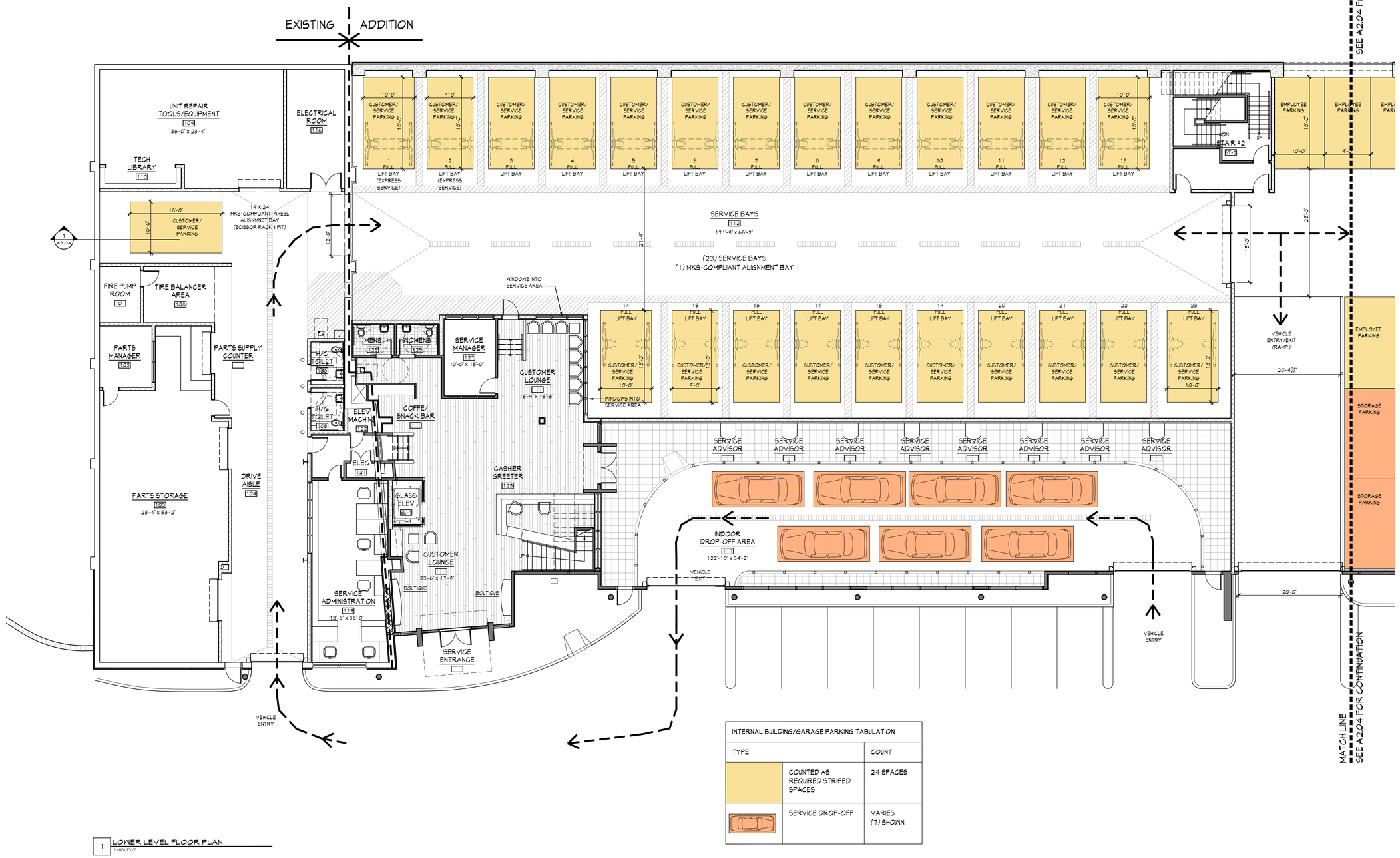
Project Title
Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue
11.30.17 PLANNING BD. SUB.
6.8.18 BLDG. DEPT. SUBMISSION
6.26.18 ACARC SUBMISSION
9.6.18 PLANNING BD. SUB.

Project No.	1701
Date	08.07.18
Drawing By	GJP
Scale	1/8"=1'-0"

Drawing Title
SHOWROOM BUILDING
PROPOSED GARAGE LEVEL
(LOWER LEVEL PARKING)

Drawing No.
A2.02



INTERNAL BUILDING/GARAGE PARKING TABULATION		
TYPE		COUNT
	COUNTED AS REQUIRED STRIPED SPACES	24 SPACES
	SERVICE DROP-OFF	VARIES (7) SHOWN

1 LOWER LEVEL FLOOR PLAN
1/8"=1'-0"

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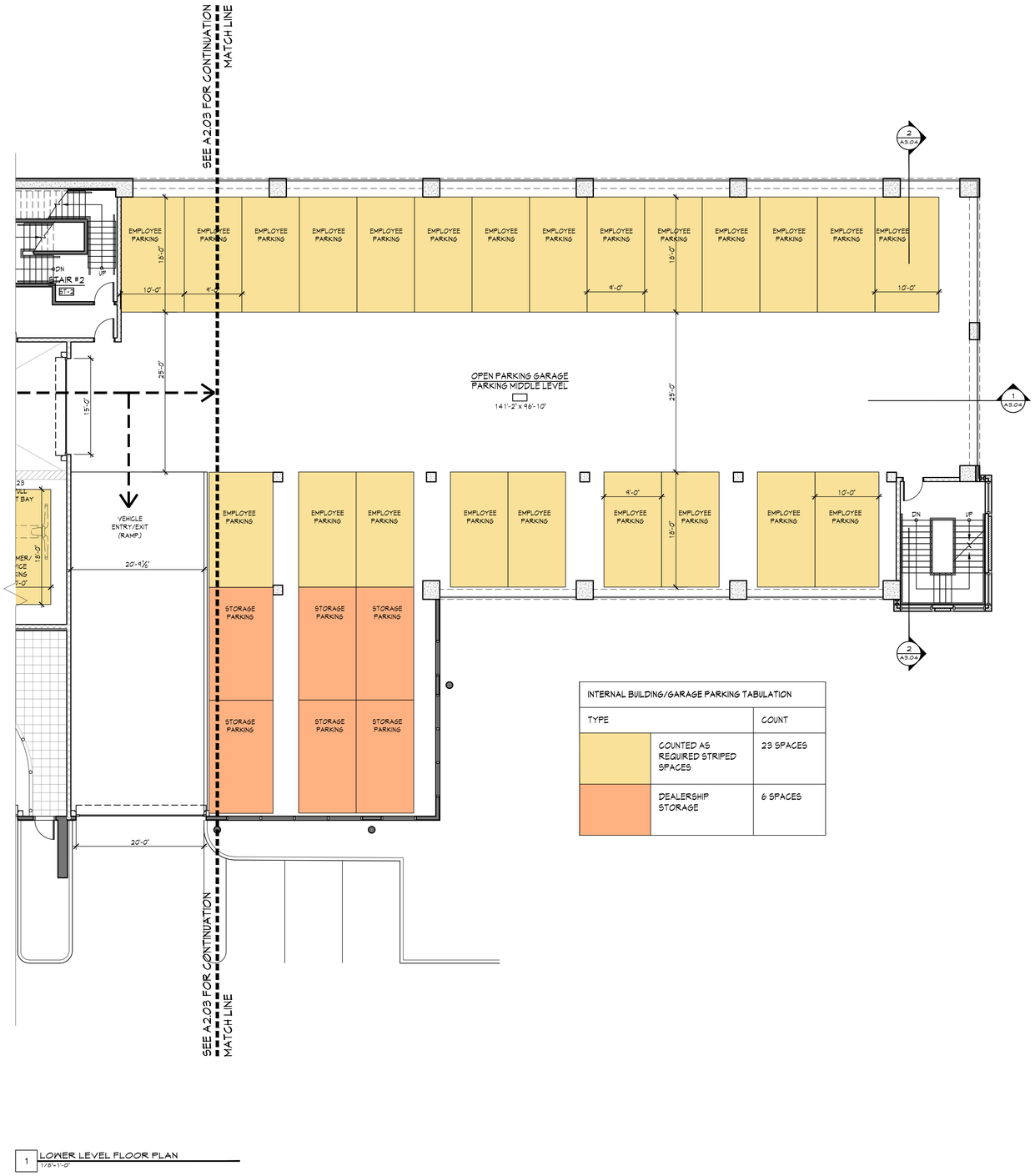
Project Title
Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue
11.30.17 PLANNING BD. SUB.
6.8.18 BLDG. DEPT. SUBMISSION
6.26.18 ACARC SUBMISSION
9.6.18 PLANNING BD. SUB.

Project No. 1707
Date 08.07.18
Drawing By GJP
Scale 1/8"=1'-0"

Drawing Title
SHOWROOM BUILDING
PROPOSED LOWER LEVEL

Drawing No.
A2.03



INTERNAL BUILDING/GARAGE PARKING TABULATION		
TYPE		COUNT
	COUNTED AS REQUIRED STRIPED SPACES	23 SPACES
	DEALERSHIP STORAGE	6 SPACES

1 LOWER LEVEL FLOOR PLAN
1/8"=1'-0"

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White Plains, New York 10601
914-761-6006 (F) 914-761-4919

Project Title
Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue
1.1.30.17 PLANNING BD. SUB.
6.8.18 BLDG. DEPT. SUBMISSION
6.26.18 ACARC SUBMISSION
9.6.18 PLANNING BD. SUB.

Project No. 1701
Date 06.01.18
Drawing By cjp
Scale 1/8"=1'-0"

Drawing Title
SHOWROOM BUILDING
PROPOSED LOWER LEVEL
(MIDDLE LEVEL PARKING)

Drawing No.
A2.04

EXISTING | ADDITION

MATCH LINE
SEE A2.06 FOR CONTINUATION

DELIVERY
201
47'-0" x 37'-9"

COMMERCIAL VAN SALES 229
NEW CAR SALES 227
NEW CAR SALES 228
NEW CAR SALES 228
NEW CAR SALES 228
NEW CAR SALES 221
NEW CAR SALES 222
NEW CAR SALES 223

NEW SHOWROOM / SALES
202
51'-8" x 44'-0"
(EXPOSED CEILING STRUCTURE ABOVE)

NEW SHOWROOM / SALES
202
48'-0" x 44'-10"
(EXPOSED CEILING STRUCTURE ABOVE)

MECH SHAFT 212

MECHANICAL ROOM
211
21'-5" x 24'-5"

JAN
MENS 213
WOMENS 214

COMPUTER ROOM
215
15'-6" x 8'-6"

F & I MANAGER 234
10'-0" x 15'-0"
F & I MANAGER 234
10'-0" x 15'-0"
F & I MANAGER 234
10'-0" x 15'-0"

HALL #1
235

BUSINESS MANAGER
249
15'-0" x 12'-0"

FILE STORAGE
244
15'-0" x 15'-6"

GENERAL OFFICE ADMINISTRATION
248
26'-3" x 21'-2"

OFFICE EQUIP

MENS ROOM 240
MENS LOCKERS 236
WOMENS LOCKERS 237
WOMENS ROOM 238

HALL #2
246

LUNCH/BREAK ROOM
251
31'-3" x 15'-4"

E-TRAINING
243
15'-5" x 9'-5"

CONFERENCE/ TRAINING ROOM
232
24'-8" x 19'-4"

DN
STAIR #2
217
LITERATURE STORAGE
218
21'-0" x 11'-7"

SALES MANAGER 220
ASST. SALES MANAGER 226
NEW CAR SALES 224
NEW CAR SALES 224
NEW CAR SALES 209
PRE-OWNED SALES 209
PRE-OWNED SALES 208
PRE-OWNED MANAGER 204

ASSISTANT ADMIN.
11'-2" x 10'-6"

BUSINESS DEV. CENTER
18'-0" x 15'-6"

PRINCIPAL GENERAL MANAGER
253
23'-3" x 14'-3"

STOR.

14'-0"

OVERHEAD DOOR TO TOP LEVEL OF PARKING STRUCTURE

PRE-OWNED SHOWROOM / SALES
213
181'-4" x 54'-6"
(EXPOSED CEILING STRUCTURE ABOVE)

PRE-O SAL 20

VEHICLE DISPLAY

SHOWROOM ENTRY

RECEPTION 208

CUSTOMER LOUNGE 209

GLASS ELEV.

NEW SHOWROOM / SALES
207
56'-0" x 78'-4"

CUSTOMER LOUNGE

OPEN TO BELOW

DN

EXIST. SKY ABOVE

1 A3.04

INTERNAL BUILDING/GARAGE PARKING TABULATION		
TYPE		COUNT
	DISPLAY CARS/ CUSTOMER DELIVERY	VARIES (27) SHOWN

1 UPPER LEVEL FLOOR PLAN
1/8"=1'-0"

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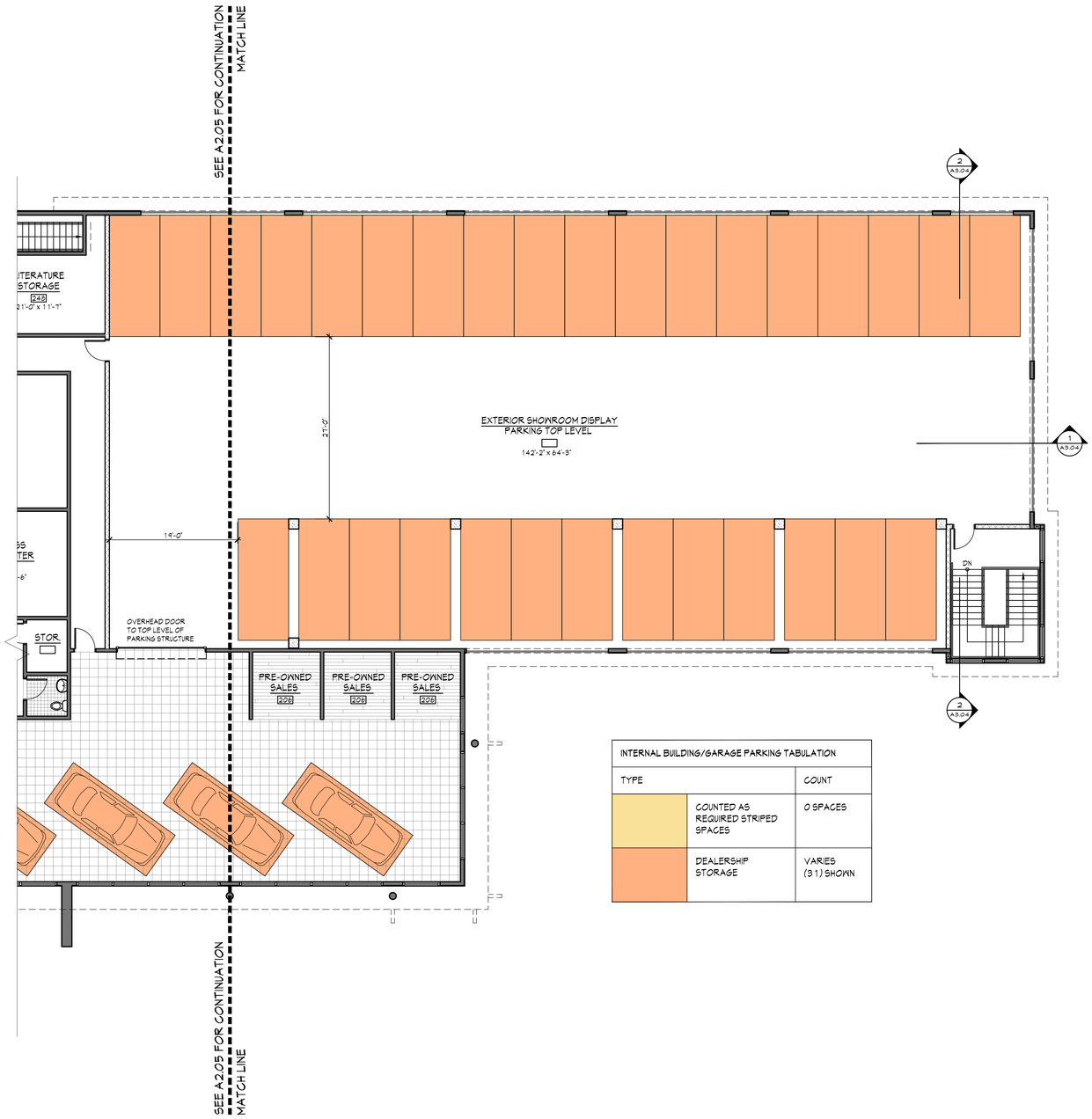
Project Title
Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue
11.30.17 PLANNING BD. SUB.
6.8.18 BLDG. DEPT. SUBMISSION
6.26.18 ACARC SUBMISSION
9.6.18 PLANNING BD. SUB.

Project No. 1707
Date 08.07.18
Drawing By GJP
Scale 1/8"=1'-0"

Drawing Title
SHOWROOM BUILDING
PROPOSED UPPER LEVEL

Drawing No.
A2.05



INTERNAL BUILDING/GARAGE PARKING TABULATION		
TYPE		COUNT
	COUNTED AS REQUIRED STRIPED SPACES	0 SPACES
	DEALERSHIP STORAGE	VARIES (31) SHOWN

1 UPPER LEVEL FLOOR PLAN
1/8"=1'-0"

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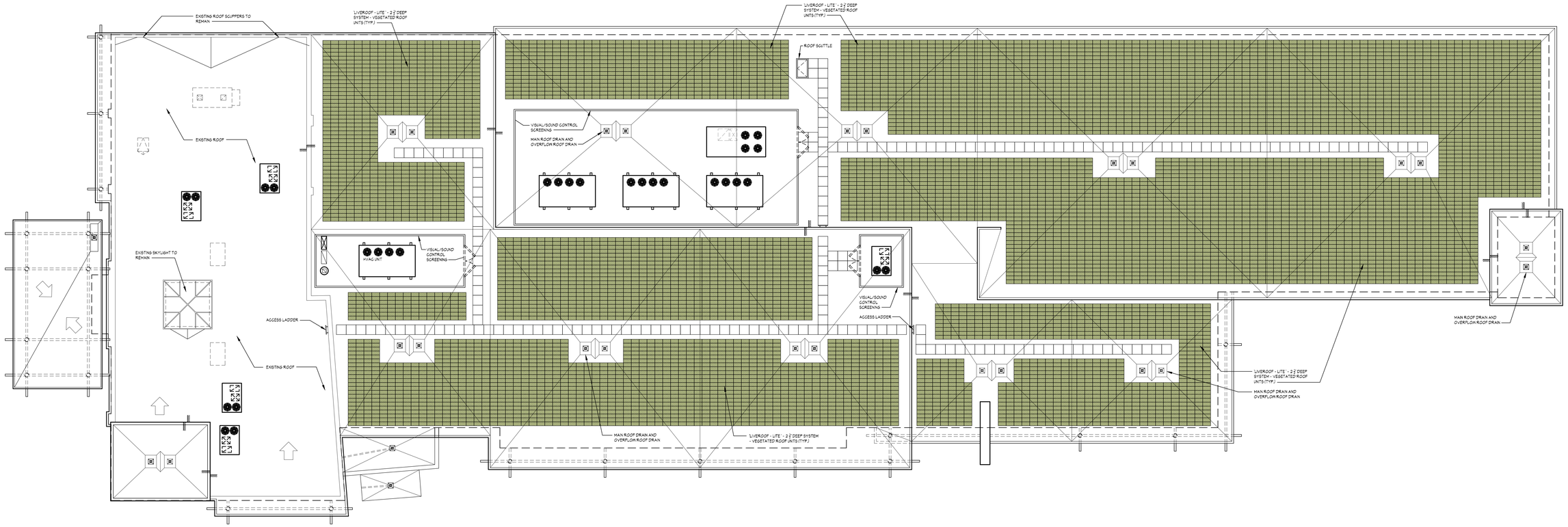
Project Title
Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue
11.30.17 PLANNING BD. SUB.
6.8.18 BLDG. DEPT. SUBMISSION
6.26.18 ACARC SUBMISSION
9.6.18 PLANNING BD. SUB.

Project No. 1707
Date 08.07.18
Drawing By GJP
Scale 1/8"=1'-0"

Drawing Title
SHOWROOM BUILDING
PROPOSED UPPER LEVEL
(TOP LEVEL PARKING)

Drawing No.
A2.06



1 ROOF PLAN
3/32"=1'-0"

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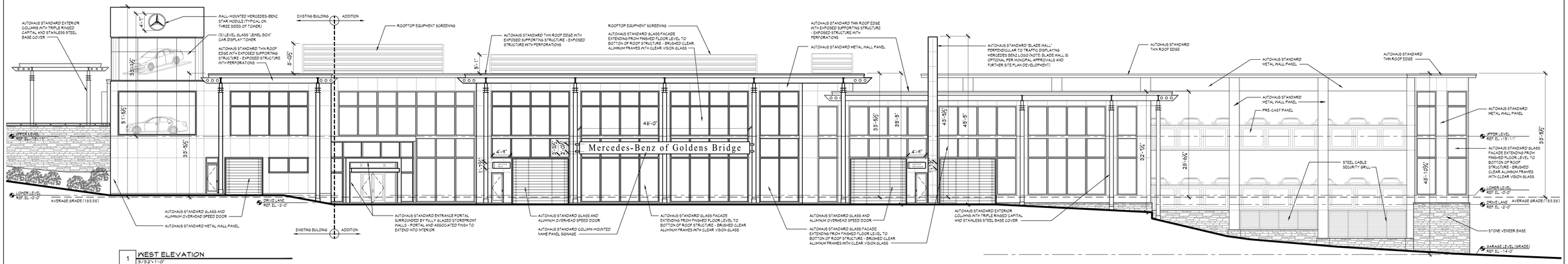
Project Title
Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue
9.6.18 PLANNING BD. SUB.

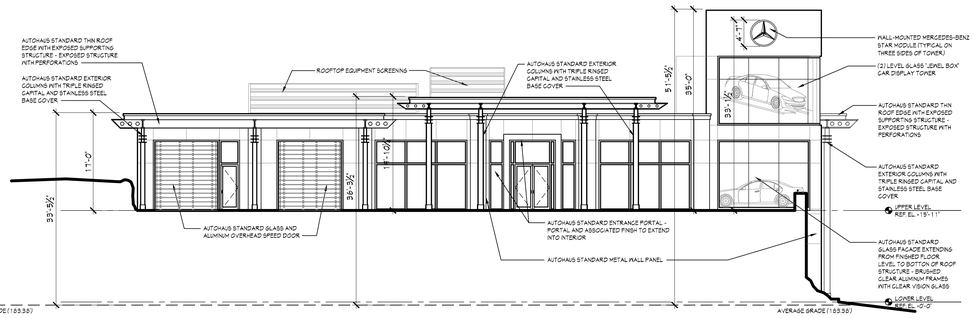
Project No. 1701
Date 08.07.18
Drawing By cjp
Scale 3/32"=1'-0"

Drawing Title
SHOWROOM BUILDING
ROOF PLAN

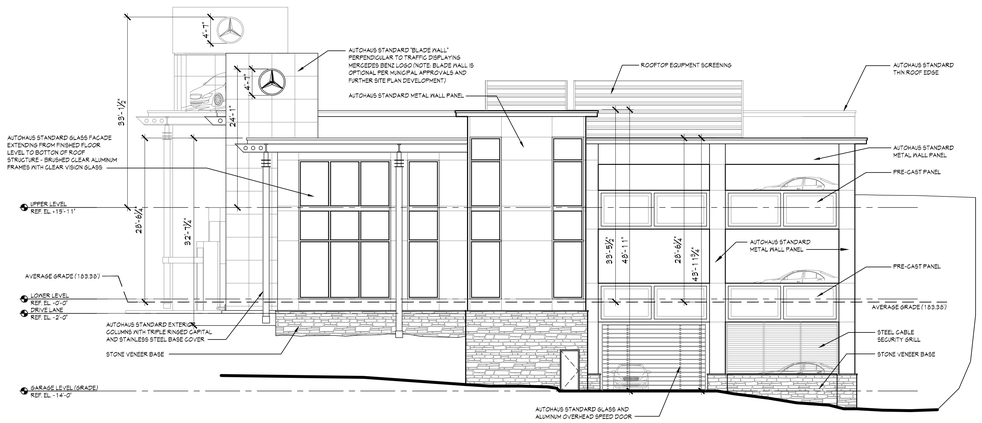
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A2.07



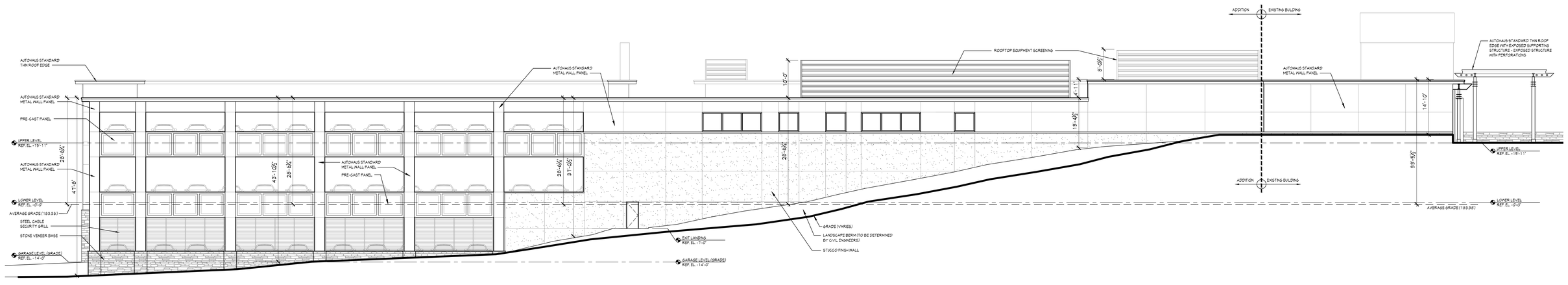
1 WEST ELEVATION
3/32"=1'-0"



2 NORTH ELEVATION
3/32"=1'-0"



3 SOUTH ELEVATION
3/32"=1'-0"



4 EAST ELEVATION
3/32"=1'-0"

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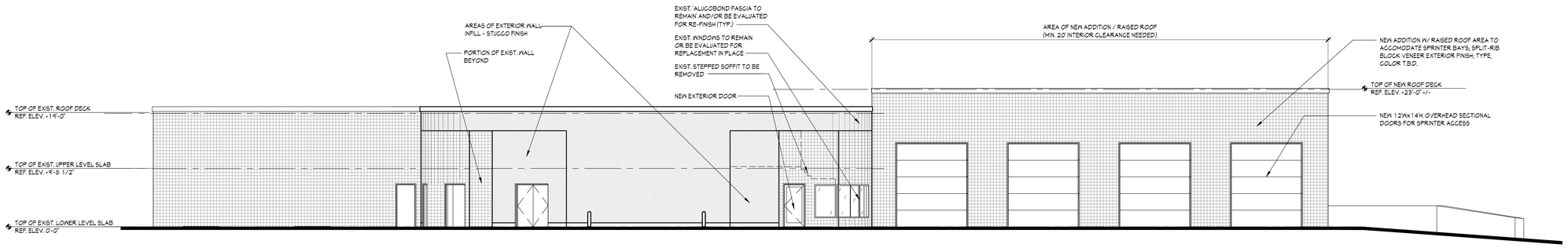
Project Title: Mercedes-Benz of Goldens Bridge
Prepared for Celebrity Motors
Goldens Bridge, New York

Date Issue	
09.19.17 PLANNING BD. SUBMISSION	9.6.18 PLANNING BD. SUB.
11.30.17 PLANNING BD. SUBMISSION	
6.8.18 BLDG. DEPT. SUBMISSION	
6.26.18 ACARC SUBMISSION	

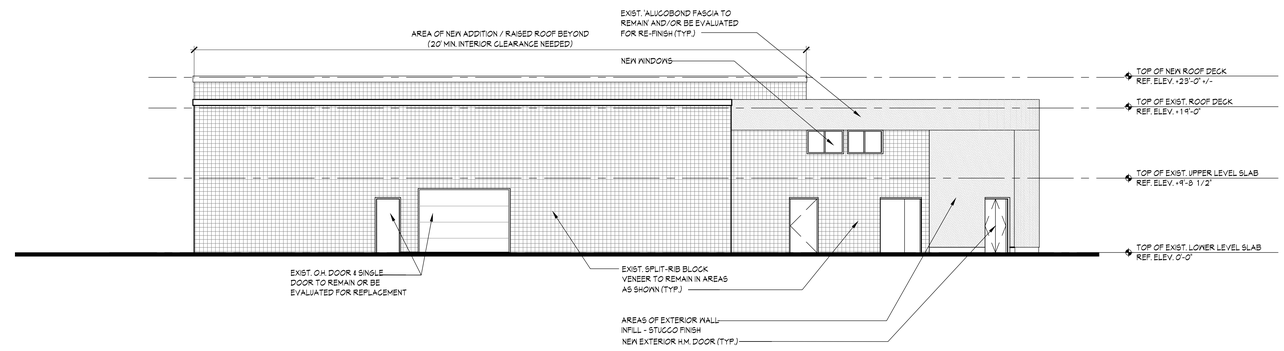
Project No. 1701
Date 08.01.18
Drawing By cjp
Scale AS NOTED

Drawing Title: SHOWROOM BUILDING
PROPOSED EXTERIOR ELEVATIONS

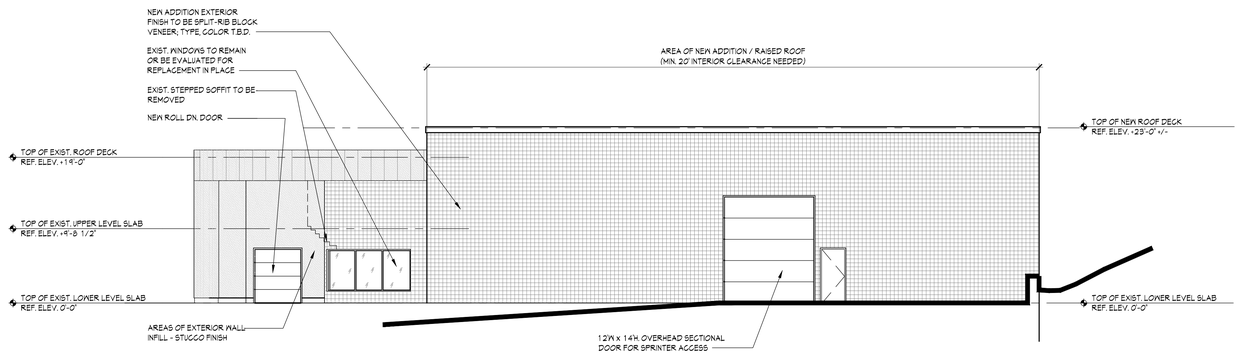
Drawing No. A3.0



1 FRONT/WEST ELEVATION
1/8"= 1'-0"



2 SIDE/NORTH ELEVATION
1/8"= 1'-0"



3 SIDE/SOUTH ELEVATION
1/8"= 1'-0"

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6.8.18 BLDG. DEPT. SUBMISSION
6.26.18 ACARC SUBMISSION
9.6.18 PLANNING BD. SUB.

Project No. 1707
Date 08.07.18
Drawing By EAV
Scale AS NOTED

Drawing Title
SERVICE BUILDING
PROPOSED EXTERIOR ELEVATIONS

Drawing No.
A3.01

STORMWATER POLLUTION PREVENTION PLAN

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22
TOWN OF LEWISBORO, NEW YORK

Applicant/Operator/ **Celebrity Motor Car, LLC**
130 Route 10
Whippany, NJ 07981

Owner: **c/o Mr. Tom Maoli**
973-727-7016

Prepared by:

JMC Project 16124

Dated: 09/06/2018

TABLE OF CONTENTS

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APPENDIX	**DESCRIPTION**
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B.	Proposed Hydrologic Calculations
C.	NYSDEC Stormwater Sizing Calculations
D.	Temporary Erosion and Sediment Control Inspection and Maintenance Checklist Permanent Stormwater Practice Operation, Maintenance and Management Inspection Checklist
E.	Drawings DA-1 "Existing Drainage Area Map" DA-2 "Proposed Drainage Area Map"

REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS

1. JMC SITE PLANS

Dwg. No.	Title
C-000	"Cover Sheet"
C-010	"Existing Conditions Plan"
C-020	"Demolition Plan"
C-030	"Tree Removal Plan"
C-100	"Layout Plan"
C-200	"Grading & Drainage Plan"
C-201	"Site Sections Plan"
C-300	"Utilities Plan"
C-700	"Vehicle Delivery Truck Plan"
C-701	"Fire Truck Plan"
C-702	"Fire Truck Plan"
C-900	"Construction Details"
C-901	"Construction Details"
C-902	"Construction Details"
C-903	"Construction Details"
C-904	"Construction Details"
C-905	"Construction Details"
C-906	"Construction Details"
C-907	"Construction Details"

2. Sullivan Architecture, P.C. Building Drawings:

A1.01	"Service Building Proposed Lower Level"
A2.02	"Showroom Building Proposed Garage Level (Lower Level Parking)"
A2.03	"Showroom Building Proposed Lower Level"
A2.04	"Showroom Building Proposed Lower Level (Middle Level Parking)"
A2.05	"Showroom Building Proposed Upper Level"
A2.06	"Showroom Building Proposed Upper Level (Top Level Parking)"
A2.07	"Showroom Building Roof Plan"
A-3.0	"Showroom Building Proposed Exterior Elevations"

I. INTRODUCTION

This Stormwater Pollution Prevention Plan has been prepared for the 4.966 acre Mercedes Benz of Goldens Bridge site, located in the Town of Lewisboro, Westchester County, New York (hereinafter referred to as the "Site"). The site is bordered by residences to the north and east, Anderson Road to the south, and Route 22 to the west. The proposed development includes an expansion and updating to the existing automobile dealership on the site. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002, effective January 29, 2015, last modified November 23, 2016.
- New York City Environmental Protection (NYCEP, formerly NYCDEP) Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, amended April 4, 2010.
- Chapter 188 "Storm Sewer System" of the Town of Lewisboro Zoning Code
- Chapter 189 "Stormwater Management and Erosion and Sediment Control" of the Town of Lewisboro Zoning Code

The project includes a Showroom Building expansion of 38,500 s.f., to the existing 12,400 s.f. Showroom Building, bringing the new Showroom Building total to 50,900 s.f. A 2,700 s.f. expansion is also proposed to the existing 18,200 s.f. Service Building, bringing the new Service Building total to 20,900 s.f. The Service Building was planned to be demolished under the previous approval. A 3 level parking garage is also proposed attached to the Showroom Building expansion. The total net increase in building area is approximately 41,200 s.f. An inventory storage parking lot is also proposed on the adjacent residential lot in contract.

The proposed project will also include various site upgrades including new parking and vehicle storage areas, site drainage, site lighting and extensive landscaping improvements. The modified design of the project will likely require all of the same or similar variances and will require approvals from the same outside agencies. The SWPPP was approved by the Town of Lewisboro

on May 15, 2012 and NYCDEP on September 26, 2012. The SWPPP approval was recently renewed by NYCDEP on September 27, 2017.

II. STORMWATER MANAGEMENT PLANNING

In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-15-002 for Stormwater Discharges from Construction Activities, the Stormwater Pollution Prevention Plan (SWPPP) includes stormwater management practices (SMP's) from the publication "New York State Stormwater Management Design Manual," last revised January 2015.

A Stormwater Pollution Prevention Plan has been prepared for this project because it is a construction activity that involves soil disturbances of one (1) or more acres of land.

The proposed stormwater facilities have been designed such that the quantity and quality of stormwater runoff during and after construction are not adversely altered or are enhanced when compared to pre-development conditions.

Based on the GIS information provided by the website of the New York State Office of Parks, Recreation and Historic Places, the site does not contain, nor is it immediately adjacent to any properties listed on the State or National Register of Historic Places.

The Six Step Process for Stormwater Site Planning and Practice Selection

Stormwater management using green infrastructure is summarized in the six step process described below. The six step process was adhered to when developing this SWPPP. Information is provided in this SWPPP which documents compliance with the required process as follows:

Step 1: Site Planning

Implement planning practices that protect natural resources and utilize the hydrology of the site. Strong consideration must be given to reducing impervious cover to aid in the preservation of

natural resources including protecting natural areas, avoiding sensitive areas and minimizing grading and soil disturbance.

Step 2: Determine Water Quality Treatment Volume (WQv)

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **Enhanced Phosphorus Removal Standard -** Since the project is located within the New York City watershed, enhanced phosphorus removal must be achieved by the stormwater improvements. For enhanced phosphorus removal, the water quality volume is sized for the 1 year, 24 hour storm event. Standard stormwater measures must be sized to treat the 1 year, 24 hour storm for 25% of existing impervious areas plus 100% of new impervious areas.

The NYSDEC Redevelopment Standards include specific criteria for the implementation of surface water quality improvements. A combination of standard and non-standard practices are proposed and all facilities will treat the required water quality volume from the entire contributing area. Therefore, Water Quality Treatment Options II & III will be utilized. According to Option III of the Redevelopment Standards, alternative or non-standard practices such as manufactured treatment devices are acceptable if they treat 75% of the water quality volume from the disturbed areas as well as any additional runoff directed to the practice. According to Option II, standard practices such as subsurface infiltration systems can be sized to treat the water quality volume generated from 25% of the existing impervious area plus 100% of the new impervious area. Green practices such as green roofs and porous pavement can be used towards credit in meeting the water quality volume requirements.

Proposed standard SMP's will effectively treat 100% of the 1 year storm for all existing and new impervious areas and the proposed alternative SMP's will also treat 100% of the 1 year storm for all existing impervious areas which is above and beyond the water quality requirements for

Redevelopment Projects.

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

RRv is required for this project since it is a combination of both new development and redevelopment.

Green infrastructure techniques or standard SMP's with RRv capacity can potentially reduce the required WQv by incorporating combinations of green infrastructure techniques and standard SMP's within each drainage area on the site.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.
- Practices resulting in a reduction of contributing volume such as green roofs, stormwater planters, and rain gardens.

Apply a combination of green infrastructure techniques and standard SMPs with RRv capacity to provide 100% of the WQv calculated in Step 2. If the RRv calculated in this step is greater than or equal to the WQv in Step 2, the RRv requirement has been met and Step 4 can be skipped. If the RRv provided cannot meet or exceed 100% of the WQv, the project must, at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S).

The following green infrastructure techniques and practices are provided in the Design Manual:

- **Conservation of Natural Areas**
  - The entire site is developed and has been for decades. There are no undisturbed areas that could be planned to be included within a conservation easement. Therefore, there is no area to be subtracted from the contributing area for the WQv calculation.
- **Sheet flow to Riparian Buffers or Filter Strips**
  - There are no well vegetated areas on-site with acceptable slopes that lend an opportunity as a buffer and still meet the minimum contributing length of flow. This practice is not practical for this project since these items are typically used in a residential application.
- **Vegetated Swales**
  - The use of sheet flow into vegetated swales cannot be implemented along the existing driveways and roadways because of the steep slopes or throughout the parking areas due to the limited flow lengths, rock outcroppings, etc.
- **Tree Planting / Tree Pits**
  - The project includes extensive tree planting around its perimeter as part of the proposed landscaping plan. However, the new trees are not credited towards area reduction for the water quality volume.
- **Disconnection of Rooftop Runoff**
  - This practice is not practical for this project since these items are typically used in a residential application for small rooftop areas.
- **Stream Daylighting**
  - This practice is not possible for this project since there are no existing streams.
- **Rain Gardens**
  - This practice is will be used for the site entrance driveways due to a lack of other options. Rain gardens are a variation of bioretention and are ideal for small contributing drainage areas, such as building roof tops or small paved areas.
- **Green Roofs**
  - This practice is proposed for the Showroom Building expansion. An extensive green roof will provide RRv for the Showroom Building Expansion. This proposed green infrastructure technique is well suited and effective to treat the rooftop runoff for this type of project.

- **Stormwater Planters**
  - Stormwater planters are not used on this project due to the roofs already being treated using green roofs. Steep slopes along the Showroom Building and limited space also make it difficult to proposed planters.
- **Rain Barrels and Cisterns**
  - Underground storage tanks installed to collect stormwater runoff to be used for irrigation purposes are impractical since the project will not have an irrigation system for the landscaped areas.
- **Porous Paving**
  - This practice is being utilized at the upper vehicle storage area east of the Service Building. Porous pavement can be used to provide RRv because the soil on-site is classified as hydrologic soil group B. The other paved areas of the site are not acceptable for porous pavement because they will be high traffic areas, have steep slopes, or are over a septic field.
- **Standard Practices with RRv Capacity**
  - **Biofilters and Bioretention Basins –** These practices are not proposed because other practices more suitable to treat RRv are provided.
  - **Infiltration Practices –** A subsurface infiltration system is proposed to treat and retain runoff from the majority of the site.

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.

<u>Step 4: Determine the minimum RRv Required</u>

The minimum RRv is calculated similar to the WQV. However, it is determined using only the new impervious cover and accounts for the hydrologic soil group present. In no case shall the runoff reduction achieved from the newly constructed impervious area be less than the minimum runoff reduction volume (RRv_{min}).

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Apply the standard SMP's to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques. The standard SMP's with RRv capacity must be implemented to verify that the RRv requirement has been met.

- **Green Roofs –** A green roof consists of a layer of vegetation and soil installed on a conventional roof. The rooftop vegetation captures rainwater allowing evaporation and evapotranspiration processes to reduce the amount of runoff entering downstream systems, effectively reducing stormwater runoff volumes and attenuating peak flows. This project makes use of existing roofs and turns them into extensive green roofs that have a thin soil layer and require low maintenance.

- **Subsurface Infiltration System –** This practice captures and temporary stores the WQv before allowing it to infiltrate into the soil. Smaller storms are completely infiltrated while the overflow from the larger storms is released into the storm sewer system using an overflow weir.

- **Porous Pavement** – Permeable paving provides an alternative to conventional asphalt and concrete surfaces and are designed to convey rainfall through the surface into an underlying reservoir where it can infiltrate, thereby reducing stormwater runoff from a site. This project is proposing pervious pavement on the dealership storage parking area.

- **Rain Gardens** – This practice is typically only used in rooftop applications. However, on this site rain gardens are proposed by site entrances because there are no other feasible alternatives. Since rain gardens are designed for small contributing drainage areas, they make the most ideal choice for treating the small new impervious areas that make up the driveways entrances to the site.

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

The Channel Protection Volume (CPv), Overbank Flood Control (Qp) and Extreme Flood Control (Qf) must be met for the plan to be completed. This is accomplished by using practices such as subsurface infiltration systems detention systems, etc. to meet water quantity requirements. The following standards must be met:

1. **Stream Channel Protection (CPv)**

   Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event, remained from runoff reduction. Reduction of runoff for meeting stream channel protection objectives, where site conditions allow, is encouraged and the volume reduction achieved through green infrastructure can be deducted from CPv. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion. Detention time may be calculated using either a center of mass method or plug flow calculation method.

   - CPv for a redevelopment project is not required if there is no increase in impervious area or changes to hydrology that increase the discharge rate. This criterion, as defined in Chapter 4 of New York State Stormwater Design Manual, is not based on a pre versus post-development comparison. However, for a redevelopment project this requirement is relaxed. If the hydrology and hydraulic study shows that the post-construction 1-year 24 hour discharge rate and velocity are less than or equal to the pre-construction discharge rate, providing 24 hour detention of the 1-year storm to meet the channel protection criteria is not required.
   - According to Section 10.4.3 of the Design Manual, infiltration practices sized for enhanced phosphorus removal automatically meet channel protection requirements.

2. **Overbank Flood (Qp) which is the 10 year storm.**

   Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates.

   The overbank flood control requirement (Qp) does not apply in certain conditions, including:

   - The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.
   - A downstream analysis reveals that overbank control is not needed.
   - If redevelopment results in an increase in impervious area or changes to hydrology that increase the discharge rate from the site, the ten year criteria does not apply.

3. **Extreme Storm (Qf) which is the 100 year storm.**

   100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates.

   The 100-year storm control requirement can be waived if:

   - The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.
   - Development is prohibited within the ultimate 100-year floodplain
   - A downstream analysis reveals that 100-year control is not needed.

- If redevelopment results in no increase in impervious area or changes to hydrology that increase the discharge rate from the site the hundred-year criteria does not apply.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-15-002.

III. STUDY METHODOLOGY

Runoff rates were calculated based upon the standards set forth by the United States Department of Agriculture Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986. The methodology set forth in TR-55 considers a multitude of characteristics for watershed areas including soil types, soil permeability, vegetative cover, time of concentration, topography, rainfall intensity, ponding areas, etc.

The 1, 10 & 100 year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendices A & B Existing/Proposed Hydrologic Calculations).

Anticipated drainage conditions were analyzed taking into account the rate of runoff which will result from the construction of buildings, parking areas and other impervious surfaces associated with the site development.

Base Data and Design Criteria

For the stormwater management analysis, the following base information and methodology were used:

1. The site drainage patterns and outfall facilities were reviewed by JMC personnel for the purpose of gathering background data and confirming existing mapping of the watershed areas.

2. An Existing Drainage Area Map was developed from the topographical survey. The drainage area map reflects the existing conditions within and around the project area.

3. A Proposed Drainage Area Map was developed from the proposed grading design superimposed over the topographical survey. The drainage area map reflects the proposed conditions within the project area and the existing conditions to remain in the surrounding area.

4. The United States Department of Agriculture (USDA) Web Soil Survey of the site available on its website at http://websoilsurvey.nrcd.usda.gov.

5. The United States Department of Agriculture Natural Resources Conservation Service National Engineering Handbook, Section 4 - Hydrology", dated March 1985.

6. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.

7. United States Department of Commerce Weather Bureau Technical Release No. 40 Rainfall Frequency Atlas of the United States.

The time of concentration was calculated using the methods described in Chapter 3 of TR-55, Second Edition, June 1986. Manning's kinematics wave equation was used to determine the travel time of sheet flow. The 2-year 24 hour precipitation amount of 3.44 inches was used in the equation for all storm events. The travel time for shallow concentrated flow was computed using Figure 3-1 and Table 3-1 of TR-55. Manning's Equation was used to determine the travel time for channel reaches.

8. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.

9. All hydraulic calculations were performed with the Civil 3D Storm Sewer Analysis software package version 2018.

10. The New York State Stormwater Management Design Manual, revised January 2015.

11. New York Standards and Specifications for Erosion and Sediment Control, November 2016.

12. The NYCEP Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, as amended April 4, 2010.

13. New York City Department of Environmental Protection, 2009 Watershed Water Quality Annual Report, Updated May 2011.

14. The storm flows for the 1, 10 & 100 year recurrence interval storms were analyzed for the total watershed areas. The Type III distribution design storm for a 24 hour duration was used and the mass rainfall for each design storm was taken from the Extreme Precipitation in New York & New England developed by the Natural Resource Conservation Service (NRCS) and the Northeast Regional Climate Center (NRCC) as follows:

24 Hour Rainfall Amounts

Design Storm Recurrence Interval	Inches of Rainfall
1 Year	3.00
10 Year	5.50
100 Year	9.00

IV. EXISTING CONDITIONS

The site is currently developed as a Mercedes-Benz dealership of which a majority of the property is impervious. The site also consists of an existing residence to the east and a commercial business to the south. The site is located within the drainage basin of the Muscoot

Reservoir and the New York City Watershed. Stormwater runoff is collected on-site and conveyed via corrugated metal pipes to the New York State Department of Transportation storm drainage system off-site within NYS Route 22 which eventually discharges to the Muscoot Reservoir.

The following natural features, conservation areas, resource areas and drainage patterns of the project site have been identified and utilized to develop Drawing DA-1 "Existing Drainage Area Map" which is included in Appendix E:

- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)
- Bedrock, significant geology features

Based on the USDA Web soil survey, most of the on-site soils are moderately drained and belong to hydrological group B, with a small area belonging to the hydrological group D. The soil types, boundaries and drainage areas/designations are depicted on Drawing DA-1 within Appendix E.

Three separate Design Points (DP-1 through DP-3) were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, four separate drainage areas were identified in existing conditions based on the existing drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the existing conditions analysis:

Existing Drainage Area 1A (EDA-1A) is 0.89 acres in size and is located on the southwestern portion of the site along NYS Route 22. This area consists of existing pavement and a small amount of landscaping. This drainage area drains towards the storm sewer system on NYS Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 87 and 5

minutes, respectively. Refer to Drawing DA-1 in Appendix E.

Existing Drainage Area 1B (EDA-1B) is 1.22 acres in size and is located on the western portion of the site along the western property line near NYS Route 22. This area consists of existing pavement and a portion of the existing Service Building. This drainage area drains towards the storm sewer system on NYS Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 86 and 5 minutes, respectively. Refer to Drawing DA-1 in Appendix E.

Existing Drainage Area 2 (EDA-2) is 3.28 acres in size and is located on the southern and eastern portions of the site and off-site along Anderson Lane and Green Hill Road. This area consists of the existing commercial property south of the dealership and about half of the large uphill residential area off-site to the east of the dealership. This drainage area drains towards the vegetated area south of the property along Anderson Lane. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 68 and 16 minutes, respectively. Refer to Drawing DA-1 in Appendix E.

Existing Drainage Area 3 (EDA-3) is 2.77 acres in size and is located on the northern and eastern portions of the site and off-site including a portion of the uphill residential area. This area consists of the existing northern dealership parking lot and about half of the large uphill residential area to the east of the dealership. This drainage area drains towards the adjacent residential lots south of the property. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 72 and 15 minutes, respectively. Refer to Drawing DA-1 in Appendix E.

The peak rates of runoff to the design points from the drainage areas for each storm are shown in the table below:

Table 1
Summary of Peak Rates of Runoff in Existing Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2	DP-3
1 year	3.72	1.43	1.73
10 year	8.42	6.04	6.05
100 year	14.98	13.94	13.01

V. PROPOSED CONDITIONS

The project includes a Showroom Building expansion and Service Building expansion as well as the redevelopment of adjacent residential and commercial lots in contract. The proposed project will also include various site upgrades including new parking and vehicle storage areas, site drainage, site lighting and landscaping improvements.

The proposed drainage improvements include a variety of stormwater practices, such as green roofs, porous pavement, rain gardens and an underground infiltration system. The vegetated practices and overland discharges provide multiple opportunities for water quality enhancement and infiltration in addition to the proposed stormwater management basins.

This section describes the design and analysis of the proposed conditions used to demonstrate that the SWPPP meets the requirements of the General Permit.

The Six Step Process For Stormwater Site Planning and Practice Selection

Step 1: Site Planning

The following practices and site features were incorporated in the site design:

- Preserving hydrology - Maintaining drainage divides
- Forest, vegetative cover – The maximum amount of forest and vegetative cover has been maintained and/or provided.

- Critical areas have been preserved.
- Topography (contour lines, existing flow paths, steep slopes, etc.) has been maintained or disturbed to the minimum extent practicable.
- Soil (hydrologic soil groups, highly erodible soils, etc.)
- Bedrock, significant geology features have been accounted for.

Step 2: Determine Water Quality Treatment Volume (WQv)

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

- Green Roofs
- Subsurface Infiltration System
- Permeable Paving
- Rain Gardens

Step 4: Determine the minimum RRv Required

RRv_{min} calculations can be found in Appendix 'C'. RRv_{min} was met through

- Green Roofs
- Subsurface Infiltration System
- Permeable Paving
- Rain Gardens

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

- **INFILTRATION SYSTEMS**

  Subsurface Infiltration System (I-2)

  Description

An infiltration practice that stores the water quality volume in an underground system, before it is infiltrated it into the ground.

Non Standard/Alternative SMP's to Address Remaining Water Quality Volume (for Redevelopment Projects)

- **Hydrodynamic Separators**

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

- **INFILTRATION SYSTEMS**

Subsurface Infiltration System (I-2)

Description

An infiltration practice that stores the water quality volume in an underground system, before it is infiltrated it into the ground.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Ponds are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM) Table 7.2 "Physical Feasibility Matrix".

2. Conveyance – The design conveys runoff to the designed pond in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.

3. Pretreatment – All pond provide pretreatment in accordance with NYSSMDM design guidelines.

4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines noted Table 6.1 "Water Quality Volume Distributing in Pond Design".

5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed practice to enhance pollutant removal and provide aesthetic enhancement to the property.

6. Maintenance – Maintenance for the environment practices has been provided and is detain the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing DA-2 "Proposed Drainage Area Map" located in Appendix "E".

Three separate Design Points (DP-1 through DP-3) were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, seven separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the proposed conditions analysis:

Proposed Drainage Area 1A (PDA-1A) is 1.43 acres in size and is located on the western portion of the site on the north and west sides of the proposed Showroom Building, as well as the stormwater which drains onto the existing driveway along the east side of the site. This area consists of the parking areas associated with the Showroom Building, as well as some landscaping and existing brush area to remain and the driveway to the uphill storage area. This drainage area drains towards a proposed subsurface infiltration system consisting of 92 StormTech MC-3500 Chambers where it receives treatment. Prior to entering the system, the runoff is pre-treated by a water quality structure, then an isolator row of chambers wrapped in filter fabric. Excess

stormwater is directed to the exiting storm sewer system located on New York State Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 82 and 11 minutes, respectively. Refer to Drawing DA-2 in Appendix E.

Proposed Drainage Area 1B (PDA-1B) is 3.63 acres in size and is located on the northeastern portion of the site. This area consists of the Service Building and vehicle storage areas to the north and east. This drainage area also includes the existing uphill forested area to remain. This drainage area drains towards a proposed subsurface detention system consisting of 132 StormTech MC-4500 chambers with a liner where it is held and released slowly over time. Prior to entering the system, stormwater runoff is treated by a water quality structure. The stormwater is then directed to the portion of the on-site stormwater system that discharges to the existing storm sewer system located on New York State Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 78 and 14 minutes, respectively. Refer to Drawing DA-2 in Appendix E.

Proposed Drainage Area 1C (PDA-1C) is 0.50 acres in size and is located on the western frontage of the site along New York State Route 22. This area consists of a portion of NYS Route 22, the entrance driveways and a landscape area which separates the site from the road. This drainage area drains through curb cuts into proposed rain gardens which provide water quality treatment. Any excess stormwater overflows from the rain gardens and flows into the existing storm sewer system located on New York State Route 22 similar to existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 83 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix E.

Proposed Drainage Area 1D (PDA-1D) is 0.45 acres in size and is located on the south-center portion of the site. This area consists of the proposed Showroom Building expansion not including the attached parking garage. The Showroom Building will include an extensive green roof which will provide initial stormwater treatment. After passing through the green roof, the stormwater will be directed to the proposed subsurface infiltration system This drainage area drains towards the existing storm sewer system located on New York State Route 22 similar to existing conditions. Excess stormwater is directed to the exiting storm sewer system located on

New York State Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 98 and 12 minutes, respectively. Refer to Drawing DA-2 in Appendix E.

Proposed Drainage Area 2A (PDA-2A) is 0.22 acres in size and is located on the south-center portion of the site. This area consists of the proposed Showroom Building parking garage. The parking garage will include an extensive green roof which will provide initial stormwater treatment. After passing through the green roof, the stormwater will be directed to the proposed stormwater conveyance system along Green Hill Road and Anderson Lane. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 98 and 12 minutes, respectively. Refer to Drawing DA-2 in Appendix E. The proposed pipes and structures replace the existing inadequate conveyance system along Green Hill Road.

Proposed Drainage Area 2B (PDA-2B) is 1.75 acres in size and is located on the southeastern portion of the site. This area consists of Green Hill Road and the forested uphill area which drains onto Green Hill Road. This area also consists of Anderson Lane and the landscaped areas which drain onto Anderson Lane. The only new impervious in this drainage area is the entrance drive into the parking garage, which will be treated by rain gardens. The remaining stormwater will be directed to the existing drainage ditch located on the south side of Anderson Lane, similar to existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 63 and 14 minutes, respectively. Refer to Drawing DA-2 in Appendix E.

Proposed Drainage Area 3 (PDA-3) is 0.10 acres in size and is located on the north end of the site. This area consists of the landscaped areas which separate the Site from the residential property to the north. The area has been greatly reduced from existing conditions. The stormwater will sheet flow off the site to the north, similar to existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 60 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix E.

The peak rates of runoff to the design point of each of the analyzed drainage areas for each storm are shown on the table below:

Table 2
Summary of Proposed Peak Rates of Runoff in Proposed Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2	DP-3
1 year	2.27	0.57	0.02
10 year	7.00	3.40	0.15
100 year	13.72	8.20	0.41

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

Table 3
Percent Reductions in Peak Rates of Runoff (Existing vs. Proposed Conditions)
(Cubic Feet per Second)

Design Point	Storm Recurrence Frequency (Years)	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)	Percent Reduction (%)
1	1 year	3.72	2.27	39.0
	10 year	8.42	7.00	16.9
	100 year	14.98	13.72	8.4
2	1 year	1.43	0.57	60.1
	10 year	6.04	3.40	43.7
	100 year	13.94	8.20	41.2
3	1 year	1.73	0.02	98.8
	10 year	6.05	0.15	97.5
	100 year	13.01	0.41	96.8

As demonstrated in Table 3, the proposed stormwater improvements will result in significant reductions of peak rates of runoff for all storms and design points analyzed.

VI. SOIL EROSION & SEDIMENT CONTROL

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction

and continuing throughout its course, as outlined in the "New York State Standards and Specifications for Erosion and Sediment Control," November 2016. A continuing maintenance program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.

The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days.

Prior to the commencement of construction activity, the owner or operator must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.
The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the certification statement to be provided in before they commence any construction activity.

Soil Description

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

Soils are placed into four hydrologic groups: A, B, C, and D. In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by the surface conditions. Transmission rate is the rate at which water moves in the soil and is controlled by soil properties. Definitions of the classes are as follows:

A. (Low runoff potential). The soils have a high infiltration rate even when thoroughly wetted. They chiefly consist of deep, well drained to excessively drained sands or gravels. They have a high rate of water transmission.

B. The soils have a moderate infiltration rate when thoroughly wetted. They chiefly are moderately deep to deep, moderately well drained to well drained soils that have moderately fine to moderately coarse textures. They have a moderate rate of water transmission.

C. The soils have a slow infiltration rate when thoroughly wetted. They chiefly have a layer that impedes downward movement of water or have moderately fine to fine texture. They have a slow rate of water transmission.

D. (High runoff potential). The soils have a very slow infiltration rate when thoroughly wetted. They chiefly consist of clay soils that have a high swelling potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. They have a very slow rate of water transmission.

A soil's tendency to erode is also described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight," "moderate," or "SEVERE." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "SEVERE" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed.

Per the Soil Survey, the following soils listed below are present at the site. Following this list is a detailed description of each soil type found on the property:

SYM.	HYDRO. SOIL GROUP	DESCRIPTION
CrC	**B**	**Charlton-Chatfield Complex Rolling, 0 to 15%**
CsD	**B**	**Chatfield-Charlton Complex Hilly, 15 to 35%**
CtC	**B**	**Chatfield-Hollis-Rock Outcrop Complex, 0 to 15%**
CuD	**D**	**Chatfield-Hollis-Rock Outcrop Complex, 15 to 35%**

CrC, Charlton-Chatfield complex, rolling, very rocky, 0 to 15 percent slopes

This unit consists of the very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and the well drained Charlton soil. It is on hilltops and hillsides that are underlain by highly folded bedrock. Slopes range from 0 to 15 percent. Individual areas are highly irregular in shape and range from 3 to 100 acres in size. They are about 50 percent Charlton soil, 30 percent Chatfield soil, and 20 percent other soils and rock outcrop. The rock outcrop covers 2 to 10 percent of the surface. Depth to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low to moderate.

Hydrologic group: **B**

Erosion Hazard Rating: **Moderate**

CsD, Chatfield-Charlton complex, hilly, very rocky, 15 to 35 percent slopes

This unit consists of the very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and the well drained Charlton soil. It is on the tops and sides of hills that are underlain by highly folded bedrock. Slopes range from 15 to 35 percent. Individual areas are highly irregular in shape and range from 3 to 75 acres in size. They are about 45 percent Chatfield soil, 35 percent Chatfield soil, and 20 percent other soils and rock outcrop. The rock outcrop covers 2 to 10 percent of the surface. Depth to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low to moderate.

Hydrologic group: **B**

Erosion Hazard Rating: **Severe**

CtC, Chatfield-Hollis-Rock outcrop complex, rolling, 0 to 15 percent slopes

This unit consists of the rolling, moderately deep, well drained and somewhat excessively drained Chatfield soil, the shallow, well drained and somewhat excessively drained Hollis soil, and areas of Rock outcrop, dominate granite, gneiss, and schist. This unit is on hilltops and narrow ridges in bedrock-controlled landscapes. Slopes dominantly range from 3 to 15 percent. Individual areas of this unit are mostly irregular in shape and range from 2 to 100 acres in size. They are typically about 30 percent Chatfield soil, 20 percent Hollis soil, 20 percent rock outcrop, and 20 percent other soils. Depth to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low.

Hydrologic group: **B**
Erosion Hazard Rating: **Moderate**

CuD, Chatfield-Hollis-Rock outcrop complex, hilly, 15 to 35 percent slopes

This unit consists of the moderately deep, well drained and somewhat excessively drained Chatfield soil, the shallow, well drained and somewhat excessively drained Hollis soil, and areas of Rock outcrop, dominantly granite, schist, and gneiss. The unit is on hillsides in bedrock-controlled landscapes. Slopes are dominantly 15 to 35 percent. Very steep or nearly vertical bedrock escarpments are common landscape features. Individual areas of this unit are mostly long and narrow and range from 2 to 200 acres in size. They are typically about 30 percent Chatfield soil, 30 percent Hollis soil, 25 percent Rock outcrop, and 15 percent other soils. Depth to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low.

Hydrologic group: **D**
Erosion Hazard Rating: **Severe**

On-Site Pollution Prevention

There are temporary pollution prevention measures used to control litter and construction debris on site, such as:

- Silt Fence
- Silt Sack
- Excavated Drop Inlet Protection
- Haybales

There will be inlet protection provided for all storm drains and inlets with the use of curb gutter inlet protection structures, stone & block drop inlet protection and silt sacks, which keep silt, sediment and construction litter and debris out of the on-site and stormwater drainage system.

Temporary Control Measures

Temporary control measures and facilities will include silt fences, interceptor swales, stabilized construction entrances, temporary seeding, mulching, haybales, etc.

Throughout the construction of the proposed redevelopment, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Interceptor swales, if required, will be used to direct stormwater runoff to temporary sediment traps for settlement. Descriptions of the temporary sediment & erosion controls that will be used during the development of the site are as follows:

1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.

2. Stabilized Construction Entrance consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 20 feet in width by 8 inches in depth.

3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 70% of the disturbed area has a perennial vegetative cover. This amount is required to

adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.

4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.

5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using "Silt Sacks" inside the structures.

6. Dust Control will be used and consists of spraying the ground surface with water to prevent dust emissions from vehicular and construction traffic.

7. Temporary Swales may be created to prevent stormwater runoff from flowing into construction areas where disturbed soil is present. The swales can intercept and divert runoff to stabilized, undisturbed areas of the site or into a sediment pit.

8. Sediment Sump Pits are temporary excavations constructed to capture and filter runoff and accumulated water for pumping to stabilized areas or catch basins.

9. Haybales may be used along existing paved areas to intercept sediment from stormwater runoff generated by upstream soil disturbance. Haybales may also be placed around temporary soil stockpile areas on pavement.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:

1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).

2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.

3. Sediment deposits shall be removed when they reach approximately ⅓ the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner's Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.

4. Rake all exposed areas parallel to the slope during earthwork operations.

5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for fourteen or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

<u>Concrete Material and Equipment Management</u>

Concrete washouts shall be used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solid for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drain pipes and cause flooding.

Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

Prefabricated concrete washout containers can be delivered to the site to provide maintenance and disposal of materials. Regular pick-ups of solid and liquid waste materials will be necessary. To prevent leaks on the job site, ensure that prefabricated washout containers are watertight. A self installed concrete washout facility can be utilized although they are much less reliable than prefabricated containers and are prone to leaks. There are many design options for the washout, but they are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Above-grade structures can also be used if they are sized and constructed correctly and are diligently maintained. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of constant use, therefore the contractor shall be sure to use quality materials and inspect the facilities on a daily basis.

Washouts must be sized to handle solids, wash water, and rainfall to prevent overflow. Concrete Washout Systems, Inc. estimates that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be at least 10 feet wide and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 12-inches of freeboard must be provided. The pit must be lined with plastic sheeting of at least 10-mil thickness without holes or tears to prevent leaching of liquids into the ground. Concrete wash water should never be placed in a pit that is connected to the storm drain system or that drains to nearby waterways.

An above-grade washout can be constructed at least 10 feet wide by 10 feet long and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 4-inches of freeboard must be provided. The washout structures can be constructed with staked straw bales or sandbags double-or triple lined with plastic sheeting of at least 10-mil thickness without holes or tears.

Concrete washout facilities shall not be located within 50 feet of storm drains, open ditches, or water bodies and should be placed in locations that allow for convenient access for concrete trucks. The contractor shall check all concrete washout facilities daily to determine if they have been filled to 75 percent capacity, which is when materials need to be removed. Both above-and below-ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Prefabricated washout containers should be inspected daily as well as to ensure the container is not leaking or nearing 75 percent capacity. Inspectors should also note whether the facilities are being used regularly. Additional signage for washouts may be needed in more convenient locations if concrete truck operators are not utilizing them.

The washout structures must be drained or covered prior to predicted rainstorms to prevent overflows. Hardened solids either whole or broken must be removed and then they may be reused onsite or hauled away for recycling.

Once materials are removed from the concrete washout, a new structure must be built or excavated, or if the previous structure is still intact, inspect it for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic be used after every cleaning because pumps and concrete removal equipment can damage the existing liner.

Construction Site Chemical Control

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides; fertilizers used for vegetative stabilization; petrochemicals; construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste.

Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in applicable Federal, State and local regulations that govern their usage, handling, storage, and disposal.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.
Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage areas, and notifying neighboring property owners prior to spraying.

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity of 110 percent greater than that of the largest container;
- Clearly label all products;
- Keep tanks off the ground; and
- Keep lids securely fastened.

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.

Thinners or solvents should not be discharged into sanitary or storm systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used,

and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned with degreasing solvents, which can then be reused or recycled.

Solid Waste Management and Portable Sanitary Management

The purpose of this management measure is to prevent the potential for solid waste such as construction debris, trash, etc. from construction sites due to improper handling and storage. Debris and litter should be removed periodically from the BMP's and surrounding areas to prevent clogging of pipes and structures. All construction material shall be stored in designated staging areas. Roll-off containers shall be placed on site and all empty containers, construction debris and litter shall be placed in the containers.

Portable sanitary units may be utilized on-site or bathrooms will be provided within construction trailers. A sanitation removal company will be hired to pump/remove any sanitary waste. In the event that portable sanitary units are used and then cleaned after being emptied, the rinse water may not be disposed of to the storm drain system. It shall be contained for later disposal if it can't be disposed of on-site. Remove paper and trash before cleaning the portable sanitary units. The portable sanitary units shall be located away from the storm drain system if possible. Provide over head cover for wash areas if possible. Maintain spill response material and equipment on site to eliminate the potential for contaminants and wash water from entering the storm drain system.

Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project:

1. The CDS Water Quality Structures must provide water quality for 75% of existing impervious areas for the 1 year, 24 hour storm in accordance with the requirements of the New York State Department of Conservation (NYSDEC). The CDS Water Quality

Structures have been designed to treat up to the required water quality volume and appropriately handle all storm frequencies without the resuspension of solids. The systems will provide 80% TSS removal rate for particles having a mean particle size of 125 microns for stormwater runoff. The treated stormwater will then be discharged into the subsurface detention system and then piped to the existing storm drainage system along NYS Route 22.

2. Detention System (StormTech Chambers) which is a standard SMP that will be used to treat the runoff volume generated from a portion of the developed area. The StormTech MC-4500 Recharge Chambers are domed shaped fully opened bottom corrugated chambers with perforated side walls. Chambers allow stormwater to be stored within the dome void and released slowly. They are able to be used for residential, commercial or industrial applications and provide an easy way to treat and dispose of stormwater runoff underground. Water is detained underground through the chambers and surrounding crushed stone and will release through an orifice to control peak flows leaving the site.

3. Rain Gardens which are shallow depressions that treat stormwater as it flows through a soil matrix, and is either returned to the storm drain system or discharged overland. These practices will consist of a ponding depth of 6 inches, grass/landscaping with a layer of mulch, 12 to 18 inches of soil media, 6 to 12 inches of washed stone, which will enable removal of pollutants and sediment generated by the rooftop and other small impervious areas. Refer to Appendix 'C' for the Typical Rain Garden Runoff Reduction Volume Calculation.

4. Infiltration System (StormTech Recharge Chambers)
   The StormTech MC-3500 Recharge Chambers are domed shaped fully opened bottom corrugated chambers with perforated side walls. Chambers allow stormwater to be stored within the dome void until it can infiltrate into the ground. They are able to be used for residential, commercial or industrial applications and provide an easy way to treat and dispose of stormwater runoff underground. Water is infiltrated into the ground through the chambers and surrounding crushed stone and will replenish the groundwater as a natural condition.

The Isolator Row is a row of StormTech chambers that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as stormwater rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage access of the adjacent stone and chambers from sediment accumulation.

The Isolator Row is designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but includes a high flow weir such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other standard chambers. By treating stormwater prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured.

5. Vegetated Swales will function to provide additional treatment of stormwater runoff by removal of pollutants and will promote a reduction of peak flows and provide runoff infiltration.

6. Catch Basins and trench drains will be used to remove some of the coarse sand and grit sediment before entering the drainage system. Each catch basin will be constructed with an 18 inch deep sump and the trench drain will be constructed with a 24 inch deep sump.

7. Seeding of at least 70% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket.

8. Green Roof - The proposed building will be constructed with an extensive green roof which will provide hydrologic source control and water quality volume for the rooftop runoff. The green roof must provide volume reduction equal to or greater than the required minimum RRv. This reduction is achieved when runoff is captured, routed through green infrastructure, infiltrated to the ground, reused, reduced by evapotranspiration and eventually removed from the stormwater discharge from the site. After determining the minimum RRv required, which depends on factors such as the Hydrologic Soil Group (HSG) and the amount of impervious area within the targeted drainage area, the remaining water quality volume is directed to a standard practice.

9. Porous Pavement is proposed in the upper parking lot to capture and treat/infiltrate stormwater runoff. Porous pavement can be used to provide RRv because the soil on-site is classified as hydrologic soil group B. The project is proposing the use of Stormcrete Modular Precast Porous Concrete which is typically 5 foot by 5 foot panels of precast porous concrete laid on top of a thick crushed stone bed that acts as a reservoir. These panels will account for the new impervious area and will receive the stormwater runoff from within the parking lot.

Specifications for Soil Restoration

Prior to the final stabilization of the disturbed areas, soil restoration will be required for all vegetated areas to recover the original properties and porosity of the soil. Soil Restoration Requirements are provided on Table 4 below:

Table 4

Soil Restoration Requirements

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	HSG C&D	Protect area from any ongoing construction activities
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	Clearing and grubbing
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration**	
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 (decompaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct 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.		

* 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.

** Per "Deep Ripping and De-compaction, DEC 2008."

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following full soil restoration steps applied:

1. Apply 3 inches of compost over subsoil.

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.

3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

Specifications for Final Stabilization of Graded Areas

Final stabilization of graded areas consists of the placement of topsoil and installation of landscaping (unless the area is to be paved, or a building is to be constructed in the location). Topsoil is to be spread as soon as grading operations are completed. Topsoil is to be placed to a minimum depth of six inches on all embankments, planting areas and seeding/sod areas. The subgrade is to be scarified to a depth of two inches to provide a bond of the topsoil with the subsoil. Topsoil is to be raked to an even surface and cleared of all debris, roots, stones and other unsatisfactory material.

Planting operations shall be conducted under favorable weather conditions as follows:

- Permanent Lawns - April 15 (provided soil is frost-free and not excessively moist) to May 15; August 15 to October 15.
- Temporary Lawn Seeding - if outside of the time periods noted above, the areas shall be seeded immediately on completion of topsoil operations with annual ryegrass (Italian rye) at a rate of six pounds per 1,000 square feet. Temporary lawn installation is permitted provided the soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

On slopes with a grade of 3 horizontal to 1 vertical or greater, and in swales, a geotextile netting or mat shall be installed for stabilization purposes as shown on the Plans. Seeded areas are to be

mulched with straw or hay at an application rate of 70-90 pounds per 1,000 s.f. Straw or hay mulch must be spread uniformly and anchored immediately after spreading to prevent wind blowing. Mulches must be inspected periodically and in particular after rainstorms to check for erosion. If erosion is observed, additional mulch must be applied. Netting shall be inspected after rainstorms for dislocation or failure; any damage shall be repaired immediately.

All denuded surfaces which will be exposed for a period of over two months or more shall be temporarily hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet); (b) Certified "Aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to be used in the months of October and November.

Permanent turfgrass cover is to consist of a seed mixture as follows:

(a) Sunny sites

Kentucky Bluegrass	2.0-2.6 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	0.4-0.6 pounds/1000 square feet

(b) Shady sites

Kentucky Bluegrass	0.8-1.0 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	2.6-3.3 pounds/1000 square feet

All plant materials shall comply with the standards of the American Association Of Nurserymen with respect to height and caliper as described in its publication American Standard for Nursery Stock, latest edition.

VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE

During the construction phase and following construction of the project, a number of maintenance measures will be taken with respect to the site maintenance. Measures to be taken included the following:

1. During Construction

A comprehensive sediment and erosion control plan will be in place during the construction period. Maintenance measures for sediment and erosion controls will include:

A qualified professional acceptable to the municipality will be hired by the owner or operator to monitor the installation and maintenance of the sediment and erosion control plans. The qualified professional shall report directly to the Engineering Consultant and shall be responsible for ensuring compliance with the design of the sediment and erosion control plans.

The qualified professional so hired will inspect all sediment and erosion control measures at least every seven calendar days. In the event that there has been a variance with the design of the sediment and erosion control measures so that the ability of the measures to adequately perform the intended function is lessened or compromised and/or the facilities are not adequately maintained, the qualified professional shall be required to report such variance to the Engineering Consultant within 48 hours and shall be empowered to order immediate repairs to the sediment and erosion control measures.

The qualified professional will also be responsible for observing the adequacy of the vegetation growth (trees, shrubs, groundcovers and turfgrasses) in newly graded areas and for ordering additional plantings in the event that the established plant materials do not adequately protect the ground surface from erosion.

2. Following Construction

Site maintenance activities on the property will include:

- Grounds maintenance, including mowing of lawns;
- Planting of trees, shrubs and groundcovers; pruning of trees and shrubs;
- Application of fertilizer and herbicides;
- Maintenance of stormwater management practices;

Grounds maintenance on the site will be performed by a landscaping contractor and a qualified stormwater management practice maintenance contractor will be hired to clean, monitor and maintain all post-construction practices.

Fertilizer is typically applied twice in the year - once in the spring and once in the fall. The application of fertilizer is usually necessary to maintain healthy lawn growth due to competition for nutrients with trees and shrubs and since the clippings are often removed. It is not recommended that fertilizer be applied during the summer. It is at this time that lawns are typically dormant.

Fertilizers come in three basic types: (1) Organic; (2) Soluble synthetic and (3) Slow release.

Organic fertilizers are derived from plant or animal waste. Since they are heavier and bulkier than other fertilizers, it is necessary to apply a much greater amount at one time. Soluble synthetic fertilizers are predictable with determining the exact impact on a lawn. However more applications are necessary since their effect is often short term. Slow release fertilizers have a high percentage of nitrogen so quantities that need be handled at one time are smaller. Slow release fertilizers will be utilized by the project.

A complete fertilizer contains all three of the primary nutrients - nitrogen (N), phosphorus (P) and potassium in the form of potash (K). Typically, a 3-1-2 ratio of nutrients (N-P-K) is used for lawn applications.

Fertilizer shall be applied by the landscape contractor in accordance with the manufacturer's instructions. The application of fertilizer does require some skill on the part of the operator. Should there be a spill of fertilizer, the landscape contractor shall be required to scrape or vacuum it up. The area will then be watered in accordance with the manufacturer's instructions to ensure that the fertilizer becomes soluble and available to plants and does not run off.

Mercedes Benz of Goldens Bridge will be responsible for the long-term operation and maintenance of the permanent stormwater management practices. The permanent stormwater management practices shall be maintained in accordance with the Maintenance Inspection Checklists provided in Appendix D.

VIII. CONCLUSION

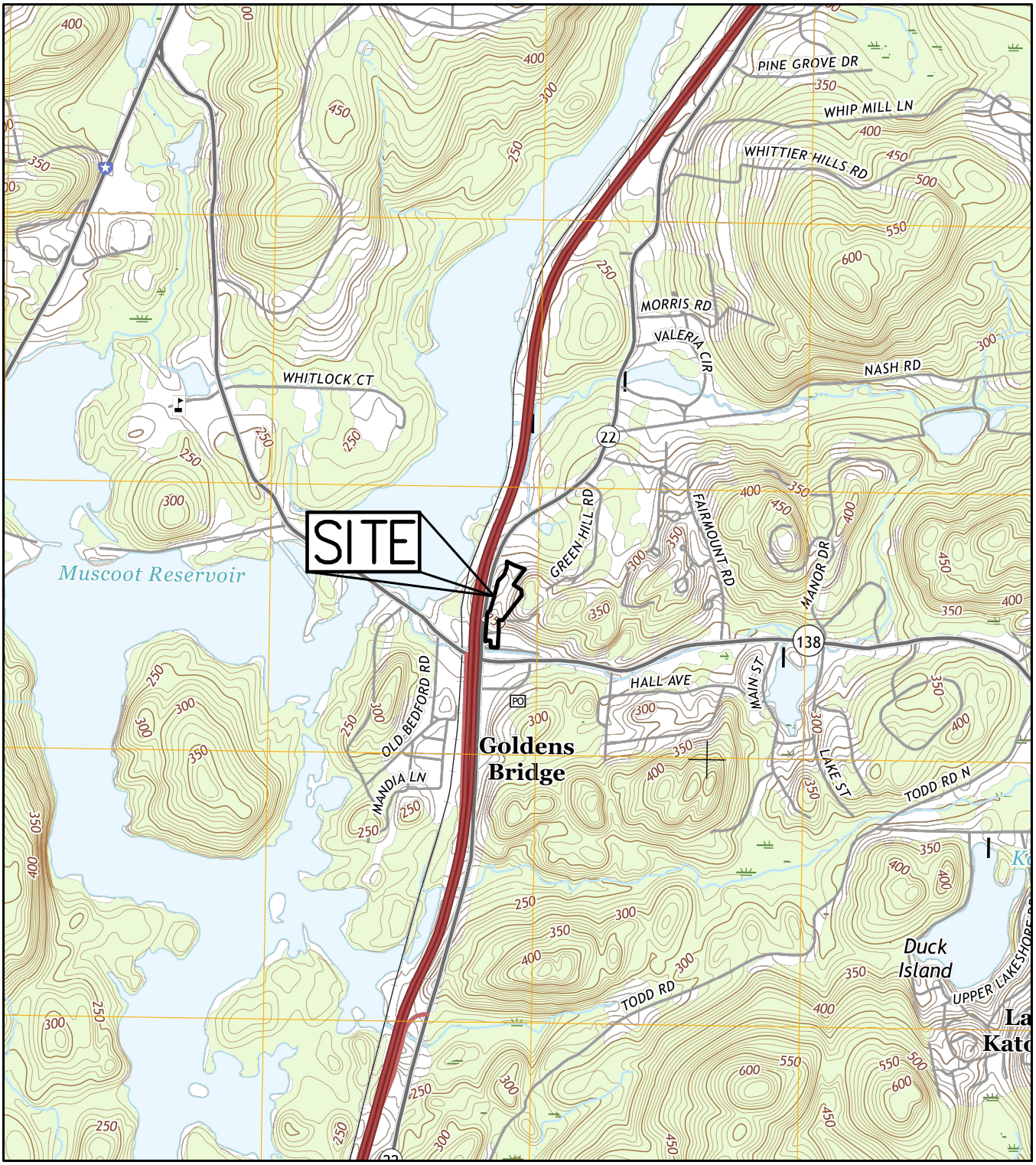
This Stormwater Pollution Prevention Plan has been prepared to describe the project's pre and post-development stormwater management improvements and its sediment and erosion control improvements to be utilized during construction. The proposed permanent improvements and the interim improvements to be utilized during construction have been designed in accordance with the requirements of the:

- New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002, effective January 29, 2015, last modified November 23, 2016.
- New York City Environmental Protection (NYCEP, formerly NYCDEP) Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, amended April 4, 2010.
- Chapter 188 "Storm Sewer System" of the Town of Lewisboro Zoning Code
- Chapter 189 "Stormwater Management and Erosion and Sediment Control" of the Town of Lewisboro Zoning Code

The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed building expansion and improvements. These measures

include green roofs, subsurface detention and infiltration systems, and rain gardens. These improvements will also mitigate runoff volumes from the proposed improvements as runoff volumes will be slightly reduced or maintained in all the analyzed storms.

Based on the foregoing, it is our professional opinion that the proposed improvements will provide water quantity and quality enhancements which exceed the above mentioned requirements and are not anticipated to have any adverse impacts to the site or any surrounding areas.



MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SITE LOCATION MAP

DATE: 09/04/2018 — JMC PROJECT: 16124

FIGURE: 01 — SCALE: 1" = 2,000'

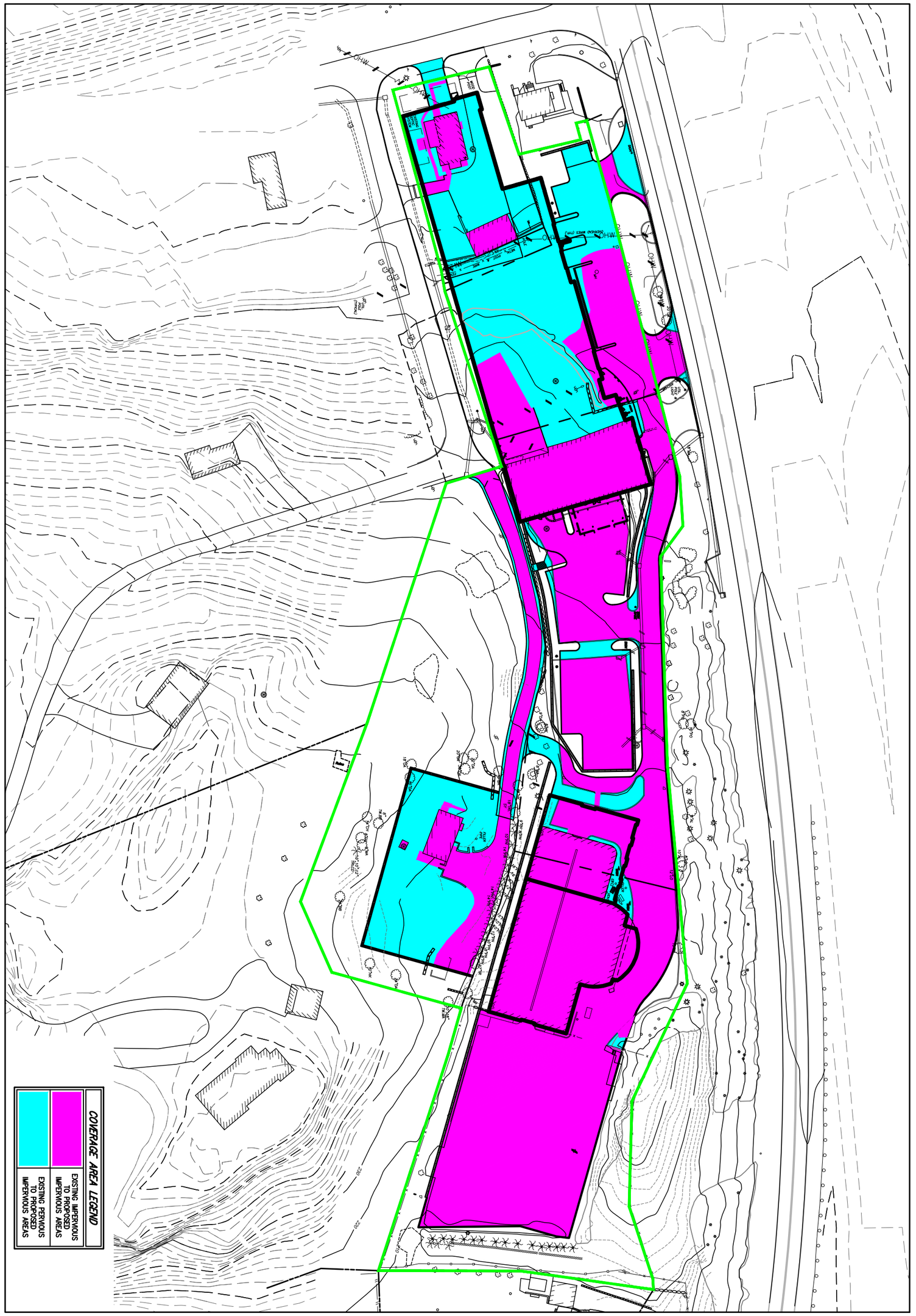
120 BEDFORD RD
ARMONK
NY 10504

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fax 273-2102

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16124–SLM.dwg; SLM.tab



MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

IMPERVIOUS COVERAGE AREAS

DATE: 09/06/2018 — JMC PROJECT: 16124

FIGURE: 2 — SCALE: 1"=80'

120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

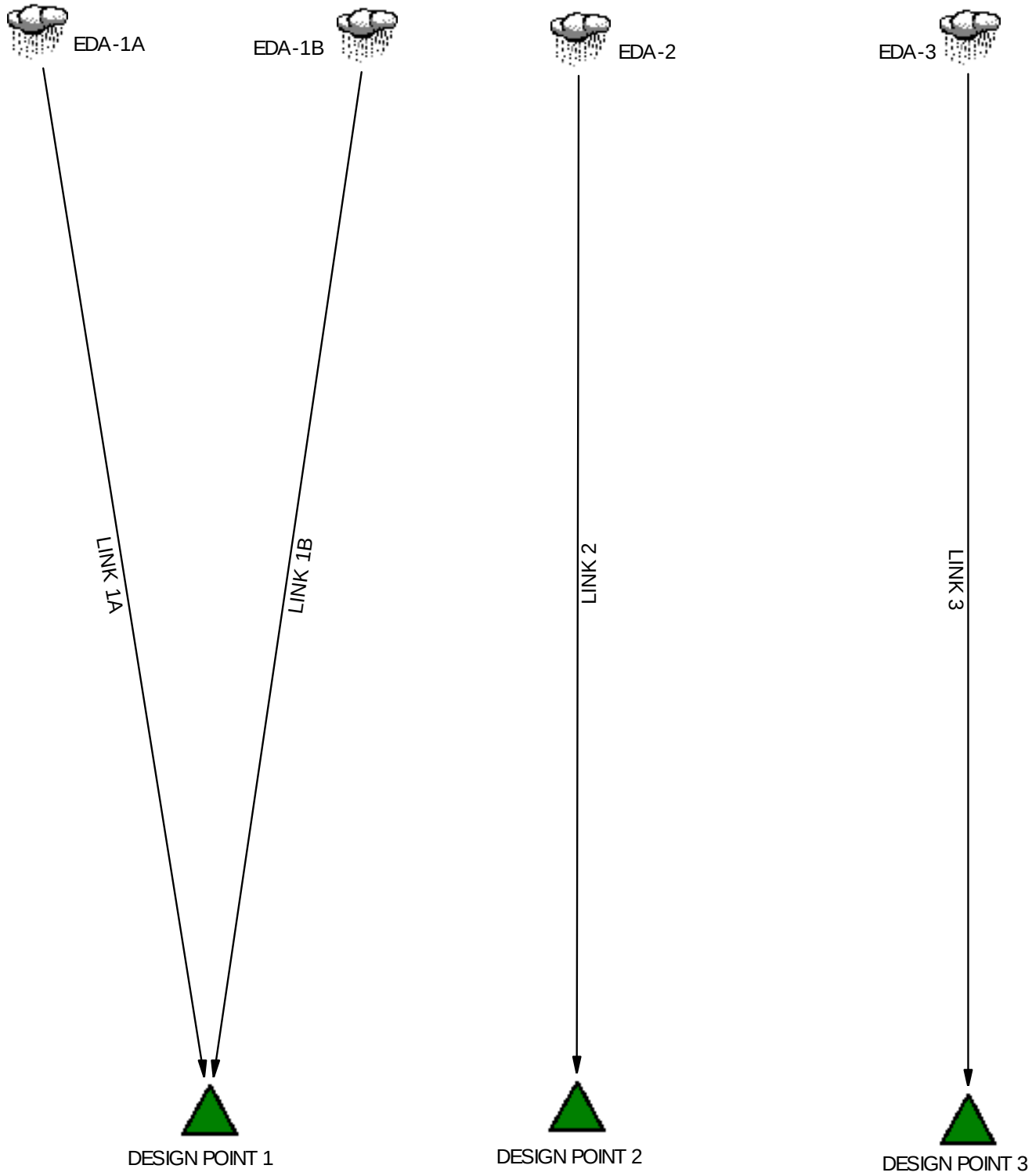
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16124–Drainage.dwg; IMPERVIOUS COVERAGE AREAS.tab BUILDING–COVERAGE.LS

APPENDIX A

EXISTING HYDROLOGIC CALCULATIONS


EDA-1A
EDA-1B
EDA-2
EDA-3
LINK 1A
LINK 1B
LINK 2
LINK 3
DESIGN POINT 1
DESIGN POINT 2
DESIGN POINT 3

==========
JOB TITLE
==========

Project Date: 9/6/2018
Project Engineer: Michael Thompson, PE
Project Title: Mercedes Benz of Goldens Bridge
Project Comments:

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Executive Summary (Nodes) 2.03
Executive Summary (Links) 2.04

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Executive Summary (Nodes) 2.05
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Node: Addition Summary 8.24

DESIGN POINT 3.. 100Y
Node: Addition Summary 8.27

MASTER DESIGN STORM SUMMARY

Network Storm Collection: WESTCHESTER-NEW

Return Event	Total Depth in	Rainfall Type	RNF ID
1Y	3.0000	Synthetic Curve	TypeIII 24hr
10Y	5.5000	Synthetic Curve	TypeIII 24hr
100Y	9.0000	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*DESIGN POINT 1	JCT	1	13029		12.1000	3.72		
*DESIGN POINT 1	JCT	10	30599		12.1000	8.42		
*DESIGN POINT 1	JCT	100	56548		12.1000	14.98		
*DESIGN POINT 2	JCT	1	7458		12.2500	1.43		
*DESIGN POINT 2	JCT	10	26701		12.2000	6.04		
*DESIGN POINT 2	JCT	100	60559		12.2000	13.94		
*DESIGN POINT 3	JCT	1	8128		12.2000	1.73		
*DESIGN POINT 3	JCT	10	26047		12.2000	6.05		
*DESIGN POINT 3	JCT	100	56147		12.2000	13.01		
EDA-1A	AREA	1	5643		12.1000	1.61		
EDA-1A	AREA	10	13111		12.1000	3.60		
EDA-1A	AREA	100	24098		12.1000	6.36		
EDA-1B	AREA	1	7386		12.1000	2.11		
EDA-1B	AREA	10	17488		12.1000	4.83		
EDA-1B	AREA	100	32450		12.1000	8.62		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
EDA-2	AREA	1	7458		12.2500	1.43		
EDA-2	AREA	10	26701		12.2000	6.04		
EDA-2	AREA	100	60559		12.2000	13.94		
EDA-3	AREA	1	8128		12.2000	1.73		
EDA-3	AREA	10	26047		12.2000	6.05		
EDA-3	AREA	100	56147		12.2000	13.01		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	13029		12.1000	3.72	
Outfall DESIGN POINT 2	JCT	7458		12.2500	1.43	
Outfall DESIGN POINT 3	JCT	8128		12.2000	1.73	
EDA-1A	AREA	5643		12.1000	1.61	
EDA-1B	AREA	7386		12.1000	2.11	
EDA-2	AREA	7458		12.2500	1.43	
EDA-3	AREA	8128		12.2000	1.73	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
LINK 1A	ADD	UN	5643		12.1000	1.61	EDA-1A
		DL	5643		12.1000	1.61	
		DN	13029		12.1000	3.72	DESIGN POINT 1
LINK 1B	ADD	UN	7386		12.1000	2.11	EDA-1B
		DL	7386		12.1000	2.11	
		DN	13029		12.1000	3.72	DESIGN POINT 1
LINK 2	ADD	UN	7458		12.2500	1.43	EDA-2
		DL	7458		12.2500	1.43	
		DN	7458		12.2500	1.43	DESIGN POINT 2
LINK 3	ADD	UN	8128		12.2000	1.73	EDA-3
		DL	8128		12.2000	1.73	
		DN	8128		12.2000	1.73	DESIGN POINT 3

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	30599		12.1000	8.42	
Outfall DESIGN POINT 2	JCT	26701		12.2000	6.04	
Outfall DESIGN POINT 3	JCT	26047		12.2000	6.05	
EDA-1A	AREA	13111		12.1000	3.60	
EDA-1B	AREA	17488		12.1000	4.83	
EDA-2	AREA	26701		12.2000	6.04	
EDA-3	AREA	26047		12.2000	6.05	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
LINK 1A	ADD	UN	13111		12.1000	3.60	EDA-1A
		DL	13111		12.1000	3.60	
		DN	30599		12.1000	8.42	DESIGN POINT 1
LINK 1B	ADD	UN	17488		12.1000	4.83	EDA-1B
		DL	17488		12.1000	4.83	
		DN	30599		12.1000	8.42	DESIGN POINT 1
LINK 2	ADD	UN	26701		12.2000	6.04	EDA-2
		DL	26701		12.2000	6.04	
		DN	26701		12.2000	6.04	DESIGN POINT 2
LINK 3	ADD	UN	26047		12.2000	6.05	EDA-3
		DL	26047		12.2000	6.05	
		DN	26047		12.2000	6.05	DESIGN POINT 3

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	56548		12.1000	14.98	
Outfall DESIGN POINT 2	JCT	60559		12.2000	13.94	
Outfall DESIGN POINT 3	JCT	56147		12.2000	13.01	
EDA-1A	AREA	24098		12.1000	6.36	
EDA-1B	AREA	32450		12.1000	8.62	
EDA-2	AREA	60559		12.2000	13.94	
EDA-3	AREA	56147		12.2000	13.01	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
LINK 1A	ADD	UN	24098		12.1000	6.36	EDA-1A
		DL	24098		12.1000	6.36	
		DN	56548		12.1000	14.98	DESIGN POINT 1
LINK 1B	ADD	UN	32450		12.1000	8.62	EDA-1B
		DL	32450		12.1000	8.62	
		DN	56548		12.1000	14.98	DESIGN POINT 1
LINK 2	ADD	UN	60559		12.2000	13.94	EDA-2
		DL	60559		12.2000	13.94	
		DN	60559		12.2000	13.94	DESIGN POINT 2
LINK 3	ADD	UN	56147		12.2000	13.01	EDA-3
		DL	56147		12.2000	13.01	
		DN	56147		12.2000	13.01	DESIGN POINT 3

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	EDA-1A	Subarea	EDA-1A	Add Hyd	EDA-1A
SCS UH	EDA-3	Subarea	EDA-3	Add Hyd	EDA-3
SCS UH	EDA-1B	Subarea	EDA-1B	Add Hyd	EDA-1B
SCS UH	EDA-2	Subarea	EDA-2	Add Hyd	EDA-2

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node	
Add Hyd LINK 2	Subarea EDA-2	Jct	DESIGN POINT 2
Add Hyd LINK 3	Subarea EDA-3	Jct	DESIGN POINT 3
Add Hyd LINK 1A	Subarea EDA-1A	Jct	DESIGN POINT 1
Add Hyd LINK 1B	Subarea EDA-1B	Jct	DESIGN POINT 1

Title... Project Date: 9/6/2018
Project Engineer: Michael Thompson, PE
Project Title: Mercedes Benz of Goldens Bridge
Project Comments:

DESIGN STORMS SUMMARY

Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

DESIGN STORMS SUMMARY

Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.000	.001	.002	.003	.004
.5000	.005	.006	.007	.008	.009
1.0000	.010	.011	.012	.013	.014
1.5000	.015	.016	.017	.018	.019
2.0000	.020	.021	.022	.023	.024
2.5000	.025	.026	.027	.028	.030
3.0000	.031	.032	.033	.034	.035
3.5000	.037	.038	.039	.040	.042
4.0000	.043	.044	.046	.047	.048
4.5000	.050	.051	.052	.054	.055
5.0000	.057	.058	.060	.061	.063
5.5000	.064	.066	.067	.069	.070
6.0000	.072	.074	.075	.077	.079
6.5000	.081	.083	.084	.086	.088
7.0000	.091	.093	.095	.097	.099
7.5000	.102	.104	.106	.109	.111
8.0000	.114	.117	.119	.122	.125
8.5000	.128	.132	.135	.138	.142
9.0000	.146	.150	.153	.158	.162
9.5000	.166	.170	.175	.179	.184
10.0000	.189	.194	.199	.205	.211
10.5000	.217	.223	.229	.236	.243
11.0000	.250	.258	.266	.276	.287
11.5000	.298	.314	.339	.373	.416
12.0000	.500	.584	.627	.661	.686
12.5000	.702	.713	.724	.734	.742
13.0000	.750	.757	.764	.771	.777
13.5000	.784	.789	.795	.801	.806
14.0000	.811	.816	.821	.825	.830
14.5000	.834	.838	.842	.847	.850
15.0000	.854	.858	.862	.865	.868
15.5000	.872	.875	.878	.881	.883
16.0000	.886	.889	.891	.894	.896
16.5000	.898	.901	.903	.905	.907
17.0000	.910	.912	.914	.916	.918
17.5000	.919	.921	.923	.925	.926
18.0000	.928	.930	.931	.933	.934
18.5000	.936	.937	.939	.940	.942
19.0000	.943	.945	.946	.948	.949
19.5000	.950	.952	.953	.954	.956
20.0000	.957	.958	.960	.961	.962
20.5000	.963	.965	.966	.967	.968
21.0000	.969	.971	.972	.973	.974
21.5000	.975	.976	.977	.979	.980

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
22.0000	.981	.982	.983	.984	.985
22.5000	.986	.987	.988	.989	.990
23.0000	.991	.992	.993	.994	.995
23.5000	.996	.997	.997	.998	.999
24.0000	1.000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0030	.0060	.0090	.0120
.5000	.0150	.0180	.0210	.0240	.0270
1.0000	.0300	.0330	.0360	.0390	.0420
1.5000	.0450	.0480	.0510	.0540	.0570
2.0000	.0600	.0630	.0661	.0692	.0724
2.5000	.0756	.0788	.0821	.0854	.0888
3.0000	.0923	.0957	.0992	.1028	.1064
3.5000	.1101	.1138	.1175	.1213	.1251
4.0000	.1290	.1329	.1369	.1409	.1450
4.5000	.1491	.1532	.1574	.1616	.1659
5.0000	.1703	.1746	.1790	.1835	.1880
5.5000	.1926	.1972	.2018	.2065	.2112
6.0000	.2160	.2209	.2259	.2311	.2364
6.5000	.2419	.2475	.2533	.2592	.2653
7.0000	.2715	.2779	.2844	.2911	.2979
7.5000	.3049	.3120	.3193	.3267	.3343
8.0000	.3420	.3500	.3583	.3670	.3760
8.5000	.3853	.3950	.4051	.4154	.4262
9.0000	.4373	.4487	.4604	.4726	.4850
9.5000	.4978	.5110	.5245	.5383	.5525
10.0000	.5670	.5821	.5978	.6143	.6316
10.5000	.6495	.6682	.6875	.7076	.7285
11.0000	.7500	.7733	.7993	.8281	.8597
11.5000	.8940	.9429	1.0182	1.1199	1.2480
12.0000	1.5000	1.7520	1.8801	1.9818	2.0571
12.5000	2.1060	2.1403	2.1719	2.2007	2.2267
13.0000	2.2500	2.2715	2.2924	2.3125	2.3318
13.5000	2.3505	2.3684	2.3857	2.4022	2.4179
14.0000	2.4330	2.4475	2.4617	2.4755	2.4890
14.5000	2.5022	2.5150	2.5274	2.5396	2.5513
15.0000	2.5628	2.5738	2.5846	2.5949	2.6050
15.5000	2.6147	2.6240	2.6330	2.6417	2.6500
16.0000	2.6580	2.6657	2.6733	2.6807	2.6880
16.5000	2.6951	2.7021	2.7089	2.7156	2.7221
17.0000	2.7285	2.7347	2.7408	2.7467	2.7525
17.5000	2.7581	2.7636	2.7689	2.7741	2.7791
18.0000	2.7840	2.7888	2.7935	2.7982	2.8028
18.5000	2.8074	2.8120	2.8165	2.8210	2.8254
19.0000	2.8298	2.8341	2.8384	2.8426	2.8468
19.5000	2.8509	2.8550	2.8591	2.8631	2.8671
20.0000	2.8710	2.8749	2.8787	2.8826	2.8863
20.5000	2.8901	2.8938	2.8975	2.9011	2.9047
21.0000	2.9083	2.9119	2.9154	2.9189	2.9223
21.5000	2.9257	2.9291	2.9324	2.9357	2.9390

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	2.9423	2.9455	2.9486	2.9518	2.9549
22.5000	2.9579	2.9610	2.9640	2.9670	2.9699
23.0000	2.9728	2.9757	2.9785	2.9813	2.9841
23.5000	2.9868	2.9895	2.9922	2.9948	2.9974
24.0000	3.0000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0055	.0110	.0165	.0220
.5000	.0275	.0330	.0385	.0440	.0495
1.0000	.0550	.0605	.0660	.0715	.0770
1.5000	.0825	.0880	.0935	.0990	.1045
2.0000	.1100	.1156	.1212	.1269	.1327
2.5000	.1385	.1445	.1505	.1566	.1629
3.0000	.1691	.1755	.1819	.1885	.1951
3.5000	.2018	.2086	.2154	.2224	.2294
4.0000	.2365	.2437	.2510	.2583	.2658
4.5000	.2733	.2809	.2886	.2963	.3042
5.0000	.3121	.3202	.3282	.3364	.3447
5.5000	.3530	.3615	.3700	.3786	.3873
6.0000	.3960	.4050	.4142	.4237	.4334
6.5000	.4435	.4538	.4644	.4752	.4864
7.0000	.4978	.5095	.5214	.5337	.5462
7.5000	.5590	.5720	.5854	.5990	.6129
8.0000	.6270	.6416	.6569	.6728	.6893
8.5000	.7064	.7242	.7426	.7616	.7813
9.0000	.8016	.8226	.8441	.8664	.8892
9.5000	.9127	.9368	.9615	.9869	1.0129
10.0000	1.0395	1.0671	1.0960	1.1263	1.1579
10.5000	1.1908	1.2250	1.2605	1.2973	1.3355
11.0000	1.3750	1.4177	1.4654	1.5182	1.5761
11.5000	1.6390	1.7287	1.8667	2.0532	2.2880
12.0000	2.7500	3.2120	3.4469	3.6333	3.7714
12.5000	3.8610	3.9239	3.9818	4.0346	4.0823
13.0000	4.1250	4.1645	4.2027	4.2395	4.2750
13.5000	4.3093	4.3421	4.3737	4.4040	4.4329
14.0000	4.4605	4.4871	4.5131	4.5385	4.5632
14.5000	4.5873	4.6108	4.6336	4.6559	4.6774
15.0000	4.6984	4.7187	4.7384	4.7574	4.7758
15.5000	4.7936	4.8107	4.8272	4.8431	4.8584
16.0000	4.8730	4.8872	4.9011	4.9147	4.9280
16.5000	4.9411	4.9539	4.9664	4.9786	4.9906
17.0000	5.0023	5.0137	5.0248	5.0357	5.0463
17.5000	5.0566	5.0666	5.0764	5.0859	5.0951
18.0000	5.1040	5.1127	5.1214	5.1300	5.1385
18.5000	5.1470	5.1553	5.1636	5.1718	5.1798
19.0000	5.1879	5.1958	5.2037	5.2114	5.2191
19.5000	5.2267	5.2342	5.2417	5.2490	5.2563
20.0000	5.2635	5.2706	5.2777	5.2847	5.2916
20.5000	5.2985	5.3053	5.3120	5.3187	5.3253
21.0000	5.3319	5.3384	5.3448	5.3512	5.3576
21.5000	5.3638	5.3700	5.3761	5.3822	5.3882

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
22.0000	5.3941	5.4000	5.4058	5.4116	5.4173
22.5000	5.4229	5.4285	5.4340	5.4394	5.4448
23.0000	5.4502	5.4554	5.4606	5.4657	5.4709
23.5000	5.4759	5.4808	5.4857	5.4905	5.4953
24.0000	5.5000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0090	.0180	.0270	.0360
.5000	.0450	.0540	.0630	.0720	.0810
1.0000	.0900	.0990	.1080	.1170	.1260
1.5000	.1350	.1440	.1530	.1620	.1710
2.0000	.1800	.1891	.1983	.2076	.2171
2.5000	.2267	.2364	.2463	.2563	.2665
3.0000	.2768	.2872	.2977	.3084	.3192
3.5000	.3302	.3413	.3525	.3639	.3754
4.0000	.3870	.3988	.4107	.4227	.4349
4.5000	.4472	.4596	.4722	.4849	.4978
5.0000	.5108	.5239	.5371	.5505	.5640
5.5000	.5777	.5915	.6054	.6195	.6337
6.0000	.6480	.6627	.6777	.6933	.7092
6.5000	.7257	.7425	.7599	.7776	.7959
7.0000	.8145	.8337	.8532	.8733	.8937
7.5000	.9147	.9360	.9579	.9801	1.0029
8.0000	1.0260	1.0499	1.0749	1.1009	1.1279
8.5000	1.1560	1.1850	1.2152	1.2463	1.2785
9.0000	1.3118	1.3460	1.3813	1.4177	1.4550
9.5000	1.4935	1.5329	1.5734	1.6149	1.6574
10.0000	1.7010	1.7462	1.7935	1.8430	1.8947
10.5000	1.9485	2.0045	2.0626	2.1229	2.1854
11.0000	2.2500	2.3198	2.3980	2.4844	2.5790
11.5000	2.6820	2.8287	3.0546	3.3597	3.7440
12.0000	4.5000	5.2560	5.6403	5.9454	6.1713
12.5000	6.3180	6.4210	6.5156	6.6020	6.6802
13.0000	6.7500	6.8146	6.8771	6.9374	6.9955
13.5000	7.0515	7.1053	7.1570	7.2065	7.2538
14.0000	7.2990	7.3426	7.3851	7.4266	7.4671
14.5000	7.5065	7.5450	7.5823	7.6187	7.6540
15.0000	7.6883	7.7215	7.7537	7.7848	7.8150
15.5000	7.8440	7.8721	7.8991	7.9251	7.9501
16.0000	7.9740	7.9972	8.0199	8.0422	8.0640
16.5000	8.0854	8.1063	8.1268	8.1468	8.1664
17.0000	8.1855	8.2042	8.2224	8.2402	8.2575
17.5000	8.2744	8.2908	8.3068	8.3223	8.3374
18.0000	8.3520	8.3663	8.3805	8.3946	8.4085
18.5000	8.4223	8.4360	8.4495	8.4629	8.4761
19.0000	8.4893	8.5022	8.5151	8.5278	8.5404
19.5000	8.5528	8.5651	8.5773	8.5893	8.6012
20.0000	8.6130	8.6246	8.6362	8.6477	8.6590
20.5000	8.6702	8.6814	8.6924	8.7034	8.7142
21.0000	8.7250	8.7356	8.7461	8.7566	8.7669
21.5000	8.7771	8.7872	8.7972	8.8072	8.8170

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	8.8268	8.8364	8.8459	8.8553	8.8646
22.5000	8.8738	8.8830	8.8920	8.9009	8.9097
23.0000	8.9185	8.9270	8.9356	8.9439	8.9523
23.5000	8.9605	8.9686	8.9766	8.9845	8.9923
24.0000	9.0000				

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400
Hydraulic Length	55.00 ft
2yr, 24hr P	3.5000 in
Slope	.182000 ft/ft
Avg.Velocity	.26 ft/sec

Segment #1 Time: .0583 hrs

Segment #2: Tc: TR-55 Sheet

Mannings n	.0110
Hydraulic Length	95.00 ft
2yr, 24hr P	3.5000 in
Slope	.084200 ft/ft
Avg.Velocity	2.53 ft/sec

Segment #2 Time: .0104 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length	45.00 ft
Slope	.089000 ft/ft
Paved	
Avg.Velocity	6.06 ft/sec

Segment #3 Time: .0021 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	4.9100	sq.ft
Wetted Perimeter	7.85	ft
Hydraulic Radius	.63	ft
Slope	.021100	ft/ft
Mannings n	.0110	
Hydraulic Length	238.00	ft

Avg.Velocity 14.39 ft/sec

Segment #4 Time: .0046 hrs

Total Tc: .0754 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.0110
Hydraulic Length	71.00 ft
2yr, 24hr P	3.5000 in
Slope	.113000 ft/ft
Avg.Velocity	2.69 ft/sec

Segment #1 Time: .0073 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	86.00 ft
Slope	.186000 ft/ft
Unpaved	
Avg.Velocity	6.96 ft/sec

Segment #2 Time: .0034 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length	125.00 ft
Slope	.032000 ft/ft
Paved	
Avg.Velocity	3.64 ft/sec

Segment #3 Time: .0095 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	1.2300 sq.ft
Wetted Perimeter	3.93 ft
Hydraulic Radius	.31 ft
Slope	.173900 ft/ft
Mannings n	.0120
Hydraulic Length	23.00 ft
Avg.Velocity	23.87 ft/sec

Segment #4 Time: .0003 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	3.1400 sq.ft
Wetted Perimeter	6.28 ft
Hydraulic Radius	.50 ft
Slope	.113200 ft/ft
Mannings n	.0150
Hydraulic Length	204.00 ft
Avg.Velocity	21.05 ft/sec

Segment #5 Time: .0027 hrs

Segment #6: Tc: TR-55 Channel

Flow Area	4.9060 sq.ft
Wetted Perimeter	7.85 ft
Hydraulic Radius	.62 ft
Slope	.021100 ft/ft
Mannings n	.0110
Hydraulic Length	320.00 ft
Avg.Velocity	14.38 ft/sec

Segment #6 Time: .0062 hrs

==========

Total Tc: .0295 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs

==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 150.00 ft
2yr, 24hr P 3.5000 in
Slope .140000 ft/ft

Avg.Velocity .19 ft/sec

Segment #1 Time: .2173 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 189.00 ft
Slope .238000 ft/ft
Unpaved

Avg.Velocity 7.87 ft/sec

Segment #2 Time: .0067 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length 80.00 ft
Slope .100000 ft/ft
Paved

Avg.Velocity 6.43 ft/sec

Segment #3 Time: .0035 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.102300	ft/ft
Mannings n	.0110	
Hydraulic Length	46.00	ft

Avg.Velocity 27.29 ft/sec

Segment #4 Time: .0005 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	2.0000	sq.ft
Wetted Perimeter	4.00	ft
Hydraulic Radius	.50	ft
Slope	.192000	ft/ft
Mannings n	.1500	
Hydraulic Length	83.25	ft

Avg.Velocity 2.74 ft/sec

Segment #5 Time: .0084 hrs

Segment #6: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.106000	ft/ft
Mannings n	.0110	
Hydraulic Length	56.50	ft

Avg.Velocity 27.78 ft/sec

Segment #6 Time: .0006 hrs

Segment #7: Tc: TR-55 Channel

Flow Area	2.0000 sq.ft
Wetted Perimeter	4.00 ft
Hydraulic Radius	.50 ft
Slope	.070000 ft/ft
Mannings n	.1500
Hydraulic Length	56.47 ft
Avg.Velocity	1.66 ft/sec

Segment #7 Time: .0095 hrs

Segment #8: Tc: TR-55 Channel

Flow Area	.1963 sq.ft
Wetted Perimeter	1.57 ft
Hydraulic Radius	.13 ft
Slope	.133330 ft/ft
Mannings n	.0110
Hydraulic Length	15.00 ft
Avg.Velocity	12.37 ft/sec

Segment #8 Time: .0003 hrs

Segment #9: Tc: TR-55 Channel

Flow Area	2.0000 sq.ft
Wetted Perimeter	4.00 ft
Hydraulic Radius	.50 ft
Slope	.050000 ft/ft
Mannings n	.1500
Hydraulic Length	79.46 ft
Avg.Velocity	1.40 ft/sec

Segment #9 Time: .0158 hrs

==========
Total Tc: .2625 hrs
==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.4000
Hydraulic Length	150.00 ft
2yr, 24hr P	3.5000 in
Slope	.140000 ft/ft

Avg.Velocity .19 ft/sec

Segment #1 Time: .2173 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	180.00 ft
Slope	.105550 ft/ft

Unpaved

Avg.Velocity 5.24 ft/sec

Segment #2 Time: .0095 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length	213.00 ft
Slope	.028000 ft/ft

Paved

Avg.Velocity 3.40 ft/sec

Segment #3 Time: .0174 hrs

Segment #4: Tc: TR-55 Shallow

Hydraulic Length 48.45 ft
Slope .041300 ft/ft
Unpaved

Avg.Velocity 3.28 ft/sec

Segment #4 Time: .0041 hrs

Total Tc: .2484 hrs

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
Impervious Areas - Dirt (w/ right-o	82	.027			82.00
Impervious Areas - Paved parking lo	98	.616			98.00
Open space (Lawns,parks etc.) - Goo	61	.251			61.00
COMPOSITE AREA & WEIGHTED CN --->		.894			87.13 (87)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.868			98.00
Open space (Lawns,parks etc.) - Goo	61	.271			61.00
Brush - brush, weed, grass mix - go	48	.085			48.00
COMPOSITE AREA & WEIGHTED CN --->		1.224			86.34 (86)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.613			98.00
ROCK	98	.006			98.00
Open space (Lawns,parks etc.) - Goo	61	.465			61.00
Impervious Areas - Gravel (w/ right	85	.416			85.00
Woods - good	55	1.779			55.00
COMPOSITE AREA & WEIGHTED CN --->		3.279			67.77 (68)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.958			98.00
Woods - Soil B	55	1.549			55.00
Woods - Soil D	77	.264			77.00
COMPOSITE AREA & WEIGHTED CN --->		2.771			71.96 (72)

SCS UNIT HYDROGRAPH METHOD
(Computational Notes)

DEFINITION OF TERMS: ----------

At = Total area (acres): At = Ai+Ap
Ai = Impervious area (acres)
Ap = Pervious area (acres)
CNi = Runoff curve number for impervious area
CNp = Runoff curve number for pervious area
fLoss = f loss constant infiltration (depth/time)
gKs = Saturated Hydraulic Conductivity (depth/time)
Md = Volumetric Moisture Deficit
Psi = Capillary Suction (length)
hK = Horton Infiltration Decay Rate (time^-1)
fo = Initial Infiltration Rate (depth/time)
fc = Ultimate(capacity)Infiltration Rate (depth/time)
Ia = Initial Abstraction (length)
dt = Computational increment (duration of unit excess rainfall)
Default dt is smallest value of 0.1333Tc, rtm, and th
(Smallest dt is then adjusted to match up with Tp)
UDdt = User specified override computational main time increment
(only used if UDdt is => .1333Tc)
D(t) = Point on distribution curve (fraction of P) for time step t

K = 2 / (1 + (Tr/Tp)): default K = 0.75: (for Tr/Tp = 1.67)
Ks = Hydrograph shape factor
= Unit Conversions * K:
= ((1hr/3600sec) * (1ft/12in) * ((5280ft)**2/sq.mi)) * K
Default Ks = 645.333 * 0.75 = 484

Lag = Lag time from center of excess runoff (dt) to Tp: Lag = 0.6Tc
P = Total precipitation depth, inches
Pa(t) = Accumulated rainfall at time step t
Pi(t) = Incremental rainfall at time step t
qp = Peak discharge (cfs) for 1in. runoff, for 1hr, for 1 sq.mi.
= (Ks * A * Q) / Tp (where Q = 1in. runoff, A=sq.mi.)
Qu(t) = Unit hydrograph ordinate (cfs) at time step t
Q(t) = Final hydrograph ordinate (cfs) at time step t
Rai(t)= Accumulated runoff (inches) at time step t for impervious area
Rap(t)= Accumulated runoff (inches) at time step t for pervious area
Rii(t)= Incremental runoff (inches) at time step t for impervious area
Rip(t)= Incremental runoff (inches) at time step t for pervious area
R(t) = Incremental weighted total runoff (inches)
Rtm = Time increment for rainfall table
Si = S for impervious area: Si = (1000/CNi) - 10
Sp = S for pervious area: Sp = (1000/CNp) - 10
t = Time step (row) number
Tc = Time of concentration
Tb = Time (hrs) of entire unit hydrograph: Tb = Tp + Tr
Tp = Time (hrs) to peak of a unit hydrograph: Tp = (dt/2) + Lag
Tr = Time (hrs) of receding limb of unit hydrograph: Tr = ratio of Tp

SCS UNIT HYDROGRAPH METHOD
(Computational Notes)

PRECIPITATION: ----------
Column (1): Time for time step t
Column (2): D(t) = Point on distribution curve for time step t
Column (3): Pi(t) = Pa(t) - Pa(t-1): Col.(4) - Preceding Col.(4)
Column (4): Pa(t) = D(t) x P: Col.(2) x P

PERVIOUS AREA RUNOFF (using SCS Runoff CN Method) ----------
Column (5): Rap(t) = Accumulated pervious runoff for time step t
If (Pa(t) is <= 0.2Sp) then use: Rap(t) = 0.0
If (Pa(t) is > 0.2Sp) then use:

Rap(t) = (Col.(4)-0.2Sp)**2 / (Col.(4)+0.8Sp)

Column (6): Rip(t) = Incremental pervious runoff for time step t
Rip(t) = Rap(t) - Rap(t-1)
Rip(t) = Col.(5) for current row - Col.(5) for preceding row.

IMPERVIOUS AREA RUNOFF ----------
Column (7 & 8)... Did not specify to use impervious areas.

INCREMENTAL WEIGHTED RUNOFF: ----------
Column (9): R(t) = (Ap/At) x Rip(t) + (Ai/At) x Rii(t)
R(t) = (Ap/At) x Col.(6) + (Ai/At) x Col.(8)

SCS UNIT HYDROGRAPH METHOD: ----------
Column (10): Q(t) is computed with the SCS unit hydrograph method
using R() and Qu().

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-1A 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .894 acres Runoff CN= 87

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = 1.61 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 1.61 cfs
==========

DRAINAGE AREA

ID:EDA-1A
CN = 87
Area = .894 acres
S = 1.4943 in
0.2S = .2989 in

Cumulative Runoff

1.7391 in
5644 cu.ft

HYG Volume... 5643 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1A)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.16 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-1A 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .894 acres Runoff CN= 87

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 3.60 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 3.60 cfs
==========

DRAINAGE AREA

ID:EDA-1A
CN = 87
Area = .894 acres
S = 1.4943 in
0.2S = .2989 in

Cumulative Runoff

4.0404 in
13112 cu.ft

HYG Volume... 13111 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1A)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.16 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-1A 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .894 acres Runoff CN= 87

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 6.36 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 6.36 cfs
==========

DRAINAGE AREA

ID:EDA-1A
CN = 87
Area = .894 acres
S = 1.4943 in
0.2S = .2989 in

Cumulative Runoff

7.4259 in
24099 cu.ft

HYG Volume... 24098 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1A)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.16 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-1B 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = 1.224 acres Runoff CN= 86

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = 2.12 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 2.11 cfs
==========

DRAINAGE AREA

ID:EDA-1B
CN = 86
Area = 1.224 acres
S = 1.6279 in
0.2S = .3256 in

Cumulative Runoff

1.6625 in
7387 cu.ft

HYG Volume... 7386 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1B)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 16.64 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-1B 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = 1.224 acres Runoff CN= 86

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 4.83 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 4.83 cfs
==========

DRAINAGE AREA

ID:EDA-1B
CN = 86
Area = 1.224 acres
S = 1.6279 in
0.2S = .3256 in

Cumulative Runoff

3.9361 in
17489 cu.ft

HYG Volume... 17488 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1B)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 16.64 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-1B 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = 1.224 acres Runoff CN= 86

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 8.62 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 8.62 cfs
==========

DRAINAGE AREA

ID:EDA-1B
CN = 86
Area = 1.224 acres
S = 1.6279 in
0.2S = .3256 in

Cumulative Runoff

7.3037 in
32451 cu.ft

HYG Volume... 32450 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1B)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 16.64 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-2 1Y
Tc = .2625 hrs
Drainage Area = 3.279 acres Runoff CN= 68

==========
Computational Time Increment = .03500 hrs
Computed Peak Time = 12.2507 hrs
Computed Peak Flow = 1.43 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2500 hrs
Peak Flow, Interpolated Output = 1.43 cfs
==========

DRAINAGE AREA

ID:EDA-2
CN = 68
Area = 3.279 acres
S = 4.7059 in
0.2S = .9412 in

Cumulative Runoff

.6266 in
7458 cu.ft

HYG Volume... 7458 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .26252 hrs (ID: EDA-2)
Computational Incr, Tm = .03500 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.15 cfs
Unit peak time Tp = .17501 hrs
Unit receding limb, Tr = .70004 hrs
Total unit time, Tb = .87505 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-2 10Y
Tc = .2625 hrs
Drainage Area = 3.279 acres Runoff CN= 68

==========
Computational Time Increment = .03500 hrs
Computed Peak Time = 12.2157 hrs
Computed Peak Flow = 6.05 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 6.04 cfs
==========

DRAINAGE AREA

ID:EDA-2
CN = 68
Area = 3.279 acres
S = 4.7059 in
0.2S = .9412 in

Cumulative Runoff

2.2432 in
26701 cu.ft

HYG Volume... 26701 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .26252 hrs (ID: EDA-2)
Computational Incr, Tm = .03500 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.15 cfs
Unit peak time Tp = .17501 hrs
Unit receding limb, Tr = .70004 hrs
Total unit time, Tb = .87505 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-2 100Y
Tc = .2625 hrs
Drainage Area = 3.279 acres Runoff CN= 68

==========
Computational Time Increment = .03500 hrs
Computed Peak Time = 12.1807 hrs
Computed Peak Flow = 14.01 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 13.94 cfs
==========

DRAINAGE AREA

ID:EDA-2
CN = 68
Area = 3.279 acres
S = 4.7059 in
0.2S = .9412 in

Cumulative Runoff

5.0878 in
60559 cu.ft

HYG Volume... 60559 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .26252 hrs (ID: EDA-2)
Computational Incr, Tm = .03500 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.15 cfs
Unit peak time Tp = .17501 hrs
Unit receding limb, Tr = .70004 hrs
Total unit time, Tb = .87505 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-3 1Y
Tc = .2484 hrs
Drainage Area = 2.771 acres Runoff CN= 72

==========
Computational Time Increment = .03312 hrs
Computed Peak Time = 12.2200 hrs
Computed Peak Flow = 1.73 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 1.73 cfs
==========

DRAINAGE AREA

ID:EDA-3
CN = 72
Area = 2.771 acres
S = 3.8889 in
0.2S = .7778 in

Cumulative Runoff

.8081 in
8128 cu.ft

HYG Volume... 8128 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .24837 hrs (ID: EDA-3)
Computational Incr, Tm = .03312 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.64 cfs
Unit peak time Tp = .16558 hrs
Unit receding limb, Tr = .66233 hrs
Total unit time, Tb = .82791 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-3 10Y
Tc = .2484 hrs
Drainage Area = 2.771 acres Runoff CN= 72

==========
Computational Time Increment = .03312 hrs
Computed Peak Time = 12.1869 hrs
Computed Peak Flow = 6.10 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 6.05 cfs
==========

DRAINAGE AREA

ID:EDA-3
CN = 72
Area = 2.771 acres
S = 3.8889 in
0.2S = .7778 in

Cumulative Runoff

2.5896 in
26048 cu.ft

HYG Volume... 26047 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .24837 hrs (ID: EDA-3)
Computational Incr, Tm = .03312 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.64 cfs
Unit peak time Tp = .16558 hrs
Unit receding limb, Tr = .66233 hrs
Total unit time, Tb = .82791 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - EDA-3 100Y
Tc = .2484 hrs
Drainage Area = 2.771 acres Runoff CN= 72

==========
Computational Time Increment = .03312 hrs
Computed Peak Time = 12.1869 hrs
Computed Peak Flow = 13.17 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 13.01 cfs
==========

DRAINAGE AREA

ID:EDA-3
CN = 72
Area = 2.771 acres
S = 3.8889 in
0.2S = .7778 in

Cumulative Runoff

5.5821 in
56148 cu.ft

HYG Volume... 56147 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .24837 hrs (ID: EDA-3)
Computational Incr, Tm = .03312 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.64 cfs
Unit peak time Tp = .16558 hrs
Unit receding limb, Tr = .66233 hrs
Total unit time, Tb = .82791 hrs

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 1A	EDA-1A		EDA-1A	1Y
LINK 1B	EDA-1B		EDA-1B	1Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-1A	1Y	5643	12.1000	1.61
	EDA-1B	1Y	7386	12.1000	2.11

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	1Y	13029	12.1000	3.72

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 1Y

Peak Discharge = 3.72 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 13029 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.6000	.00	.00	.00	.00	.00
7.8500	.00	.00	.00	.00	.01
8.1000	.01	.01	.01	.01	.01
8.3500	.01	.01	.01	.02	.02
8.6000	.02	.02	.02	.02	.02
8.8500	.03	.03	.03	.03	.03
9.1000	.04	.04	.04	.04	.04
9.3500	.05	.05	.05	.05	.05
9.6000	.06	.06	.06	.06	.07
9.8500	.07	.07	.07	.08	.08
10.1000	.08	.09	.09	.10	.10
10.3500	.10	.11	.11	.12	.12
10.6000	.13	.13	.14	.14	.15
10.8500	.16	.16	.17	.17	.18
11.1000	.19	.21	.22	.24	.26
11.3500	.27	.29	.31	.33	.39
11.6000	.47	.61	.77	.94	1.12
11.8500	1.32	1.54	2.25	3.17	3.52
12.1000	3.72	3.13	2.29	1.94	1.71
12.3500	1.51	1.30	1.09	.88	.74
12.6000	.61	.57	.54	.52	.49
12.8500	.47	.45	.43	.40	.39
13.1000	.37	.37	.36	.35	.35
13.3500	.34	.34	.33	.32	.32
13.6000	.31	.31	.30	.29	.29
13.8500	.28	.28	.27	.26	.26
14.1000	.26	.25	.25	.25	.24
14.3500	.24	.24	.24	.23	.23
14.6000	.23	.22	.22	.22	.22
14.8500	.21	.21	.21	.20	.20
15.1000	.20	.19	.19	.19	.19

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.3500	.18	.18	.18	.17	.17
15.6000	.17	.16	.16	.16	.16
15.8500	.15	.15	.15	.14	.14
16.1000	.14	.14	.14	.13	.13
16.3500	.13	.13	.13	.13	.13
16.6000	.13	.12	.12	.12	.12
16.8500	.12	.12	.12	.12	.11
17.1000	.11	.11	.11	.11	.11
17.3500	.11	.10	.10	.10	.10
17.6000	.10	.10	.10	.10	.09
17.8500	.09	.09	.09	.09	.09
18.1000	.09	.09	.09	.09	.09
18.3500	.08	.08	.08	.08	.08
18.6000	.08	.08	.08	.08	.08
18.8500	.08	.08	.08	.08	.08
19.1000	.08	.08	.08	.08	.08
19.3500	.08	.08	.08	.08	.08
19.6000	.08	.07	.07	.07	.07
19.8500	.07	.07	.07	.07	.07
20.1000	.07	.07	.07	.07	.07
20.3500	.07	.07	.07	.07	.07
20.6000	.07	.07	.07	.07	.07
20.8500	.07	.07	.07	.07	.07
21.1000	.07	.06	.06	.06	.06
21.3500	.06	.06	.06	.06	.06
21.6000	.06	.06	.06	.06	.06
21.8500	.06	.06	.06	.06	.06
22.1000	.06	.06	.06	.06	.06
22.3500	.06	.06	.06	.06	.06
22.6000	.06	.06	.06	.06	.05
22.8500	.05	.05	.05	.05	.05
23.1000	.05	.05	.05	.05	.05
23.3500	.05	.05	.05	.05	.05
23.6000	.05	.05	.05	.05	.05
23.8500	.05	.05	.05	.05	.03
24.1000	.01	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 1A	EDA-1A		EDA-1A	10Y
LINK 1B	EDA-1B		EDA-1B	10Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-1A	10Y	13111	12.1000	3.60
	EDA-1B	10Y	17488	12.1000	4.83

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	10Y	30599	12.1000	8.42

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 10Y

Peak Discharge = 8.42 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 30599 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
5.0000	.00	.00	.00	.00	.00
5.2500	.00	.00	.00	.01	.01
5.5000	.01	.01	.01	.01	.01
5.7500	.01	.01	.01	.01	.02
6.0000	.02	.02	.02	.02	.02
6.2500	.02	.02	.03	.03	.03
6.5000	.03	.03	.03	.03	.04
6.7500	.04	.04	.04	.04	.04
7.0000	.05	.05	.05	.05	.05
7.2500	.06	.06	.06	.06	.06
7.5000	.07	.07	.07	.07	.08
7.7500	.08	.08	.08	.09	.09
8.0000	.09	.09	.10	.10	.10
8.2500	.11	.11	.12	.12	.12
8.5000	.13	.13	.14	.14	.15
8.7500	.15	.16	.16	.17	.17
9.0000	.18	.18	.19	.19	.20
9.2500	.20	.21	.22	.22	.23
9.5000	.23	.24	.25	.25	.26
9.7500	.26	.27	.28	.28	.29
10.0000	.30	.31	.31	.32	.34
10.2500	.35	.36	.37	.38	.39
10.5000	.41	.42	.43	.44	.46
10.7500	.47	.48	.49	.51	.52
11.0000	.53	.56	.58	.62	.66
11.2500	.70	.75	.79	.83	.88
11.5000	.93	1.10	1.30	1.65	2.04
11.7500	2.46	2.89	3.34	3.81	5.47
12.0000	7.50	8.15	8.42	6.99	5.05
12.2500	4.24	3.72	3.25	2.80	2.34
12.5000	1.88	1.57	1.30	1.20	1.14

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.7500	1.09	1.04	.99	.95	.90
13.0000	.85	.81	.78	.76	.75
13.2500	.74	.73	.71	.70	.69
13.5000	.68	.66	.65	.64	.63
13.7500	.61	.60	.59	.57	.56
14.0000	.55	.54	.53	.52	.52
14.2500	.51	.50	.50	.49	.49
14.5000	.48	.47	.47	.46	.45
14.7500	.45	.44	.44	.43	.42
15.0000	.42	.41	.41	.40	.39
15.2500	.39	.38	.37	.37	.36
15.5000	.36	.35	.34	.34	.33
15.7500	.32	.32	.31	.31	.30
16.0000	.29	.29	.28	.28	.28
16.2500	.28	.27	.27	.27	.26
16.5000	.26	.26	.26	.25	.25
16.7500	.25	.25	.24	.24	.24
17.0000	.23	.23	.23	.23	.22
17.2500	.22	.22	.22	.21	.21
17.5000	.21	.20	.20	.20	.20
17.7500	.19	.19	.19	.19	.18
18.0000	.18	.18	.18	.18	.17
18.2500	.17	.17	.17	.17	.17
18.5000	.17	.17	.17	.17	.17
18.7500	.17	.16	.16	.16	.16
19.0000	.16	.16	.16	.16	.16
19.2500	.16	.16	.16	.15	.15
19.5000	.15	.15	.15	.15	.15
19.7500	.15	.15	.15	.15	.15
20.0000	.15	.14	.14	.14	.14
20.2500	.14	.14	.14	.14	.14
20.5000	.14	.14	.14	.14	.14
20.7500	.14	.14	.13	.13	.13
21.0000	.13	.13	.13	.13	.13
21.2500	.13	.13	.13	.13	.13
21.5000	.13	.13	.13	.12	.12
21.7500	.12	.12	.12	.12	.12
22.0000	.12	.12	.12	.12	.12
22.2500	.12	.12	.12	.12	.11
22.5000	.11	.11	.11	.11	.11
22.7500	.11	.11	.11	.11	.11
23.0000	.11	.11	.11	.11	.11
23.2500	.10	.10	.10	.10	.10
23.5000	.10	.10	.10	.10	.10
23.7500	.10	.10	.10	.10	.10

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
24.0000	.10	.06	.01	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 1A	EDA-1A		EDA-1A	100Y
LINK 1B	EDA-1B		EDA-1B	100Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-1A	100Y	24098	12.1000	6.36
	EDA-1B	100Y	32450	12.1000	8.62

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	100Y	56548	12.1000	14.98

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 100Y

Peak Discharge = 14.98 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 56548 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
3.3000	.00	.00	.00	.00	.00
3.5500	.00	.01	.01	.01	.01
3.8000	.01	.01	.02	.02	.02
4.0500	.02	.02	.02	.03	.03
4.3000	.03	.03	.03	.04	.04
4.5500	.04	.04	.04	.04	.05
4.8000	.05	.05	.05	.05	.06
5.0500	.06	.06	.06	.06	.07
5.3000	.07	.07	.07	.07	.08
5.5500	.08	.08	.08	.08	.09
5.8000	.09	.09	.09	.09	.10
6.0500	.10	.10	.10	.11	.11
6.3000	.11	.12	.12	.12	.13
6.5500	.13	.13	.14	.14	.15
6.8000	.15	.15	.16	.16	.17
7.0500	.17	.17	.18	.18	.19
7.3000	.19	.20	.20	.20	.21
7.5500	.21	.22	.22	.23	.23
7.8000	.24	.24	.25	.25	.26
8.0500	.26	.27	.28	.29	.29
8.3000	.30	.31	.32	.33	.34
8.5500	.35	.36	.37	.38	.39
8.8000	.40	.41	.42	.43	.44
9.0500	.45	.46	.47	.48	.49
9.3000	.50	.51	.52	.53	.55
9.5500	.56	.57	.58	.59	.60
9.8000	.61	.63	.64	.65	.66
10.0500	.68	.69	.71	.73	.75
10.3000	.77	.80	.82	.84	.86
10.5500	.88	.91	.93	.95	.97
10.8000	1.00	1.02	1.04	1.07	1.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.0500	1.13	1.18	1.25	1.33	1.41
11.3000	1.49	1.57	1.65	1.73	1.81
11.5500	2.14	2.53	3.18	3.91	4.68
11.8000	5.46	6.26	7.08	10.03	13.61
12.0500	14.64	14.98	12.34	8.87	7.43
12.3000	6.48	5.65	4.85	4.06	3.25
12.5500	2.72	2.25	2.07	1.97	1.88
12.8000	1.80	1.71	1.63	1.54	1.46
13.0500	1.40	1.34	1.31	1.29	1.27
13.3000	1.25	1.23	1.20	1.18	1.16
13.5500	1.14	1.12	1.09	1.07	1.05
13.8000	1.03	1.01	.98	.96	.94
14.0500	.92	.90	.89	.88	.87
14.3000	.86	.85	.84	.83	.82
14.5500	.81	.80	.79	.78	.77
14.8000	.76	.74	.73	.72	.71
15.0500	.70	.69	.68	.67	.66
15.3000	.65	.64	.63	.62	.61
15.5500	.60	.59	.57	.56	.55
15.8000	.54	.53	.52	.51	.50
16.0500	.49	.48	.48	.47	.47
16.3000	.46	.46	.45	.45	.45
16.5500	.44	.44	.43	.43	.42
16.8000	.42	.41	.41	.40	.40
17.0500	.39	.39	.38	.38	.38
17.3000	.37	.37	.36	.36	.35
17.5500	.35	.34	.34	.33	.33
17.8000	.32	.32	.32	.31	.30
18.0500	.30	.30	.30	.30	.29
18.3000	.29	.29	.29	.29	.29
18.5500	.29	.28	.28	.28	.28
18.8000	.28	.28	.28	.27	.27
19.0500	.27	.27	.27	.27	.27
19.3000	.26	.26	.26	.26	.26
19.5500	.26	.26	.26	.25	.25
19.8000	.25	.25	.25	.25	.25
20.0500	.24	.24	.24	.24	.24
20.3000	.24	.24	.24	.24	.23
20.5500	.23	.23	.23	.23	.23
20.8000	.23	.23	.23	.23	.22
21.0500	.22	.22	.22	.22	.22
21.3000	.22	.22	.22	.21	.21
21.5500	.21	.21	.21	.21	.21
21.8000	.21	.21	.20	.20	.20
22.0500	.20	.20	.20	.20	.20

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.3000	.20	.20	.20	.19	.19
22.5500	.19	.19	.19	.19	.19
22.8000	.19	.19	.18	.18	.18
23.0500	.18	.18	.18	.18	.18
23.3000	.18	.17	.17	.17	.17
23.5500	.17	.17	.17	.17	.17
23.8000	.17	.16	.16	.16	.16
24.0500	.10	.02	.01	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 2	EDA-2		EDA-2	1Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-2	1Y	7458	12.2500	1.43

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	1Y	7458	12.2500	1.43

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 1Y

Peak Discharge = 1.43 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 7458 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.00	.02	.04	.08
11.9000	.14	.24	.40	.65	.95
12.1500	1.23	1.40	1.43	1.37	1.27
12.4000	1.17	1.07	.96	.84	.73
12.6500	.63	.55	.49	.45	.42
12.9000	.39	.37	.35	.33	.32
13.1500	.31	.29	.29	.28	.27
13.4000	.27	.27	.26	.26	.25
13.6500	.25	.25	.24	.24	.24
13.9000	.23	.23	.22	.22	.22
14.1500	.21	.21	.21	.20	.20
14.4000	.20	.20	.20	.19	.19
14.6500	.19	.19	.19	.18	.18
14.9000	.18	.18	.18	.17	.17
15.1500	.17	.17	.16	.16	.16
15.4000	.16	.16	.15	.15	.15
15.6500	.15	.14	.14	.14	.14
15.9000	.13	.13	.13	.13	.13
16.1500	.12	.12	.12	.12	.12
16.4000	.12	.11	.11	.11	.11
16.6500	.11	.11	.11	.11	.11
16.9000	.11	.10	.10	.10	.10
17.1500	.10	.10	.10	.10	.10
17.4000	.09	.09	.09	.09	.09
17.6500	.09	.09	.09	.09	.08
17.9000	.08	.08	.08	.08	.08
18.1500	.08	.08	.08	.08	.08
18.4000	.08	.08	.08	.07	.07
18.6500	.07	.07	.07	.07	.07
18.9000	.07	.07	.07	.07	.07
19.1500	.07	.07	.07	.07	.07

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.4000	.07	.07	.07	.07	.07
19.6500	.07	.07	.07	.07	.07
19.9000	.07	.07	.07	.07	.06
20.1500	.06	.06	.06	.06	.06
20.4000	.06	.06	.06	.06	.06
20.6500	.06	.06	.06	.06	.06
20.9000	.06	.06	.06	.06	.06
21.1500	.06	.06	.06	.06	.06
21.4000	.06	.06	.06	.06	.06
21.6500	.06	.06	.06	.06	.06
21.9000	.06	.06	.06	.05	.05
22.1500	.05	.05	.05	.05	.05
22.4000	.05	.05	.05	.05	.05
22.6500	.05	.05	.05	.05	.05
22.9000	.05	.05	.05	.05	.05
23.1500	.05	.05	.05	.05	.05
23.4000	.05	.05	.05	.05	.05
23.6500	.05	.05	.05	.05	.05
23.9000	.05	.04	.04	.04	.04
24.1500	.03	.02	.01	.01	.00
24.4000	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 2	EDA-2		EDA-2	10Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-2	10Y	26701	12.2000	6.04

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	10Y	26701	12.2000	6.04

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 10Y

Peak Discharge = 6.04 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 26701 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.7000	.00	.00	.00	.01	.01
9.9500	.01	.02	.02	.03	.03
10.2000	.04	.04	.05	.05	.06
10.4500	.07	.08	.08	.09	.10
10.7000	.11	.12	.13	.14	.15
10.9500	.16	.17	.18	.19	.21
11.2000	.22	.24	.27	.29	.32
11.4500	.35	.38	.42	.48	.56
11.7000	.69	.87	1.10	1.37	1.69
11.9500	2.15	2.85	3.84	4.89	5.74
12.2000	6.04	5.84	5.34	4.77	4.25
12.4500	3.77	3.31	2.86	2.44	2.08
12.7000	1.79	1.58	1.43	1.31	1.22
12.9500	1.15	1.09	1.03	.98	.93
13.2000	.90	.87	.85	.83	.82
13.4500	.80	.79	.77	.76	.75
13.7000	.73	.72	.71	.70	.68
13.9500	.67	.66	.64	.63	.62
14.2000	.61	.60	.59	.58	.58
14.4500	.57	.56	.56	.55	.54
14.7000	.54	.53	.52	.52	.51
14.9500	.51	.50	.49	.49	.48
15.2000	.47	.47	.46	.45	.45
15.4500	.44	.43	.42	.42	.41
15.7000	.40	.40	.39	.38	.38
15.9500	.37	.36	.36	.35	.34
16.2000	.34	.33	.33	.33	.32
16.4500	.32	.32	.31	.31	.31
16.7000	.30	.30	.30	.29	.29
16.9500	.29	.28	.28	.28	.28
17.2000	.27	.27	.27	.26	.26

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.4500	.26	.25	.25	.25	.24
17.7000	.24	.24	.23	.23	.23
17.9500	.23	.22	.22	.22	.21
18.2000	.21	.21	.21	.21	.21
18.4500	.20	.20	.20	.20	.20
18.7000	.20	.20	.20	.20	.20
18.9500	.20	.19	.19	.19	.19
19.2000	.19	.19	.19	.19	.19
19.4500	.19	.19	.18	.18	.18
19.7000	.18	.18	.18	.18	.18
19.9500	.18	.18	.18	.17	.17
20.2000	.17	.17	.17	.17	.17
20.4500	.17	.17	.17	.17	.17
20.7000	.17	.16	.16	.16	.16
20.9500	.16	.16	.16	.16	.16
21.2000	.16	.16	.16	.16	.16
21.4500	.15	.15	.15	.15	.15
21.7000	.15	.15	.15	.15	.15
21.9500	.15	.15	.15	.15	.14
22.2000	.14	.14	.14	.14	.14
22.4500	.14	.14	.14	.14	.14
22.7000	.14	.14	.14	.13	.13
22.9500	.13	.13	.13	.13	.13
23.2000	.13	.13	.13	.13	.13
23.4500	.13	.13	.12	.12	.12
23.7000	.12	.12	.12	.12	.12
23.9500	.12	.12	.11	.10	.08
24.2000	.05	.03	.02	.01	.01
24.4500	.01	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 2	EDA-2		EDA-2	100Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-2	100Y	60559	12.2000	13.94

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	100Y	60559	12.2000	13.94

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 100Y

Peak Discharge = 13.94 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 60559 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.7500	.00	.00	.00	.01	.01
8.0000	.01	.02	.02	.02	.03
8.2500	.03	.04	.04	.05	.05
8.5000	.06	.06	.07	.07	.08
8.7500	.09	.09	.10	.11	.12
9.0000	.12	.13	.14	.15	.16
9.2500	.17	.17	.18	.19	.20
9.5000	.21	.22	.23	.24	.25
9.7500	.27	.28	.29	.30	.31
10.0000	.32	.34	.35	.36	.38
10.2500	.40	.41	.43	.45	.47
10.5000	.49	.51	.54	.56	.58
10.7500	.60	.63	.65	.68	.70
11.0000	.73	.76	.79	.83	.87
11.2500	.93	.99	1.06	1.13	1.21
11.5000	1.29	1.40	1.55	1.79	2.15
11.7500	2.63	3.22	3.92	4.69	5.76
12.0000	7.38	9.59	11.85	13.53	13.94
12.2500	13.25	11.92	10.50	9.26	8.13
12.5000	7.07	6.06	5.14	4.36	3.74
12.7500	3.29	2.96	2.71	2.52	2.36
13.0000	2.22	2.10	1.99	1.90	1.83
13.2500	1.77	1.72	1.68	1.65	1.62
13.5000	1.59	1.56	1.53	1.50	1.48
13.7500	1.45	1.42	1.39	1.37	1.34
14.0000	1.31	1.28	1.26	1.23	1.21
14.2500	1.19	1.18	1.16	1.15	1.13
14.5000	1.12	1.11	1.09	1.08	1.07
14.7500	1.05	1.04	1.02	1.01	1.00
15.0000	.98	.97	.96	.94	.93
15.2500	.92	.90	.89	.87	.86

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.5000	.85	.83	.82	.81	.79
15.7500	.78	.76	.75	.74	.72
16.0000	.71	.69	.68	.67	.66
16.2500	.65	.64	.63	.63	.62
16.5000	.61	.61	.60	.60	.59
16.7500	.58	.58	.57	.57	.56
17.0000	.55	.55	.54	.54	.53
17.2500	.52	.52	.51	.50	.50
17.5000	.49	.49	.48	.47	.47
17.7500	.46	.46	.45	.44	.44
18.0000	.43	.42	.42	.41	.41
18.2500	.41	.40	.40	.40	.40
18.5000	.39	.39	.39	.39	.39
18.7500	.38	.38	.38	.38	.38
19.0000	.38	.37	.37	.37	.37
19.2500	.37	.36	.36	.36	.36
19.5000	.36	.36	.35	.35	.35
19.7500	.35	.35	.34	.34	.34
20.0000	.34	.34	.33	.33	.33
20.2500	.33	.33	.33	.33	.32
20.5000	.32	.32	.32	.32	.32
20.7500	.32	.31	.31	.31	.31
21.0000	.31	.31	.31	.31	.30
21.2500	.30	.30	.30	.30	.30
21.5000	.30	.29	.29	.29	.29
21.7500	.29	.29	.29	.28	.28
22.0000	.28	.28	.28	.28	.28
22.2500	.27	.27	.27	.27	.27
22.5000	.27	.27	.26	.26	.26
22.7500	.26	.26	.26	.26	.25
23.0000	.25	.25	.25	.25	.25
23.2500	.25	.24	.24	.24	.24
23.5000	.24	.24	.24	.23	.23
23.7500	.23	.23	.23	.23	.23
24.0000	.22	.21	.19	.15	.10
24.2500	.06	.04	.02	.02	.01
24.5000	.01	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 3

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 3	EDA-3		EDA-3	1Y

INFLOWS TO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-3	1Y	8128	12.2000	1.73

TOTAL FLOW INTO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 3	1Y	8128	12.2000	1.73

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 3
HYG Tag = 1Y

Peak Discharge = 1.73 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 8128 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.2000	.00	.00	.00	.01	.01
11.4500	.02	.02	.03	.04	.06
11.7000	.09	.13	.18	.25	.33
11.9500	.46	.68	.98	1.32	1.61
12.2000	1.73	1.69	1.56	1.42	1.28
12.4500	1.15	1.02	.88	.76	.65
12.7000	.56	.50	.46	.43	.40
12.9500	.38	.36	.34	.33	.31
13.2000	.30	.29	.29	.28	.28
13.4500	.27	.27	.26	.26	.26
13.7000	.25	.25	.24	.24	.23
13.9500	.23	.23	.22	.22	.21
14.2000	.21	.21	.21	.20	.20
14.4500	.20	.20	.19	.19	.19
14.7000	.19	.19	.18	.18	.18
14.9500	.18	.18	.17	.17	.17
15.2000	.17	.16	.16	.16	.16
15.4500	.16	.15	.15	.15	.15
15.7000	.14	.14	.14	.14	.13
15.9500	.13	.13	.13	.12	.12
16.2000	.12	.12	.12	.12	.11
16.4500	.11	.11	.11	.11	.11
16.7000	.11	.11	.11	.11	.10
16.9500	.10	.10	.10	.10	.10
17.2000	.10	.10	.10	.09	.09
17.4500	.09	.09	.09	.09	.09
17.7000	.09	.09	.08	.08	.08
17.9500	.08	.08	.08	.08	.08
18.2000	.08	.08	.08	.07	.07
18.4500	.07	.07	.07	.07	.07
18.7000	.07	.07	.07	.07	.07

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.9500	.07	.07	.07	.07	.07
19.2000	.07	.07	.07	.07	.07
19.4500	.07	.07	.07	.07	.07
19.7000	.07	.07	.07	.07	.06
19.9500	.06	.06	.06	.06	.06
20.2000	.06	.06	.06	.06	.06
20.4500	.06	.06	.06	.06	.06
20.7000	.06	.06	.06	.06	.06
20.9500	.06	.06	.06	.06	.06
21.2000	.06	.06	.06	.06	.06
21.4500	.06	.06	.06	.06	.06
21.7000	.06	.06	.05	.05	.05
21.9500	.05	.05	.05	.05	.05
22.2000	.05	.05	.05	.05	.05
22.4500	.05	.05	.05	.05	.05
22.7000	.05	.05	.05	.05	.05
22.9500	.05	.05	.05	.05	.05
23.2000	.05	.05	.05	.05	.05
23.4500	.05	.05	.05	.05	.05
23.7000	.05	.04	.04	.04	.04
23.9500	.04	.04	.04	.04	.03
24.2000	.02	.01	.01	.00	.00
24.4500	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 3

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 3	EDA-3		EDA-3	10Y

INFLOWS TO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-3	10Y	26047	12.2000	6.05

TOTAL FLOW INTO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 3	10Y	26047	12.2000	6.05

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 3
HYG Tag = 10Y

Peak Discharge = 6.05 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 26047 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.0000	.00	.00	.00	.01	.01
9.2500	.01	.01	.02	.02	.02
9.5000	.03	.03	.04	.04	.04
9.7500	.05	.05	.06	.06	.07
10.0000	.07	.08	.08	.09	.09
10.2500	.10	.11	.11	.12	.13
10.5000	.14	.15	.15	.16	.17
10.7500	.18	.19	.20	.21	.22
11.0000	.23	.25	.26	.27	.29
11.2500	.32	.34	.37	.40	.43
11.5000	.46	.50	.57	.67	.82
11.7500	1.02	1.27	1.56	1.90	2.37
12.0000	3.12	4.13	5.15	5.90	6.05
12.2500	5.71	5.12	4.51	3.99	3.51
12.5000	3.06	2.61	2.22	1.88	1.63
12.7500	1.43	1.30	1.20	1.12	1.06
13.0000	1.00	.95	.90	.86	.83
13.2500	.81	.79	.77	.76	.74
13.5000	.73	.72	.70	.69	.68
13.7500	.67	.65	.64	.63	.62
14.0000	.60	.59	.58	.57	.56
14.2500	.55	.54	.54	.53	.53
14.5000	.52	.51	.51	.50	.49
14.7500	.49	.48	.48	.47	.46
15.0000	.46	.45	.45	.44	.43
15.2500	.43	.42	.41	.41	.40
15.5000	.40	.39	.38	.38	.37
15.7500	.36	.36	.35	.34	.34
16.0000	.33	.32	.32	.31	.31
16.2500	.30	.30	.30	.29	.29
16.5000	.29	.29	.28	.28	.28

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.7500	.27	.27	.27	.27	.26
17.0000	.26	.26	.25	.25	.25
17.2500	.25	.24	.24	.24	.23
17.5000	.23	.23	.23	.22	.22
17.7500	.22	.21	.21	.21	.21
18.0000	.20	.20	.20	.19	.19
18.2500	.19	.19	.19	.19	.19
18.5000	.19	.18	.18	.18	.18
18.7500	.18	.18	.18	.18	.18
19.0000	.18	.18	.18	.17	.17
19.2500	.17	.17	.17	.17	.17
19.5000	.17	.17	.17	.17	.17
19.7500	.16	.16	.16	.16	.16
20.0000	.16	.16	.16	.16	.16
20.2500	.16	.16	.15	.15	.15
20.5000	.15	.15	.15	.15	.15
20.7500	.15	.15	.15	.15	.15
21.0000	.15	.15	.15	.14	.14
21.2500	.14	.14	.14	.14	.14
21.5000	.14	.14	.14	.14	.14
21.7500	.14	.14	.14	.13	.13
22.0000	.13	.13	.13	.13	.13
22.2500	.13	.13	.13	.13	.13
22.5000	.13	.13	.13	.12	.12
22.7500	.12	.12	.12	.12	.12
23.0000	.12	.12	.12	.12	.12
23.2500	.12	.12	.12	.11	.11
23.5000	.11	.11	.11	.11	.11
23.7500	.11	.11	.11	.11	.11
24.0000	.11	.10	.09	.07	.04
24.2500	.03	.02	.01	.01	.00
24.5000	.00	.00	.00		

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 3

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 3	EDA-3		EDA-3	100Y

INFLOWS TO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-3	100Y	56147	12.2000	13.01

TOTAL FLOW INTO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 3	100Y	56147	12.2000	13.01

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 3
HYG Tag = 100Y

Peak Discharge = 13.01 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 56147 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.9500	.00	.00	.00	.01	.01
7.2000	.01	.01	.02	.02	.02
7.4500	.02	.03	.03	.03	.04
7.7000	.04	.04	.05	.05	.05
7.9500	.06	.06	.06	.07	.07
8.2000	.08	.08	.09	.09	.10
8.4500	.10	.11	.12	.12	.13
8.7000	.14	.14	.15	.16	.17
8.9500	.17	.18	.19	.20	.21
9.2000	.21	.22	.23	.24	.25
9.4500	.26	.27	.28	.29	.30
9.7000	.31	.32	.33	.35	.36
9.9500	.37	.38	.39	.40	.42
10.2000	.43	.45	.47	.49	.51
10.4500	.52	.54	.57	.59	.61
10.7000	.63	.65	.68	.70	.72
10.9500	.75	.77	.80	.83	.87
11.2000	.91	.97	1.03	1.10	1.17
11.4500	1.24	1.32	1.42	1.58	1.83
11.7000	2.20	2.68	3.27	3.95	4.70
11.9500	5.72	7.34	9.45	11.50	12.91
12.2000	13.01	12.10	10.72	9.35	8.19
12.4500	7.15	6.17	5.25	4.44	3.74
12.7000	3.22	2.83	2.56	2.36	2.20
12.9500	2.07	1.95	1.85	1.76	1.68
13.2000	1.61	1.56	1.52	1.49	1.46
13.4500	1.43	1.41	1.38	1.36	1.33
13.7000	1.31	1.28	1.26	1.23	1.21
13.9500	1.18	1.16	1.13	1.11	1.09
14.2000	1.07	1.05	1.04	1.03	1.01
14.4500	1.00	.99	.98	.97	.95

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.7000	.94	.93	.92	.90	.89
14.9500	.88	.87	.86	.84	.83
15.2000	.82	.81	.80	.78	.77
15.4500	.76	.75	.73	.72	.71
15.7000	.70	.68	.67	.66	.65
15.9500	.63	.62	.61	.60	.59
16.2000	.58	.57	.56	.56	.55
16.4500	.55	.54	.54	.53	.52
16.7000	.52	.51	.51	.50	.50
16.9500	.49	.49	.48	.48	.47
17.2000	.47	.46	.45	.45	.44
17.4500	.44	.43	.43	.42	.42
17.7000	.41	.41	.40	.39	.39
17.9500	.38	.38	.37	.37	.36
18.2000	.36	.36	.35	.35	.35
18.4500	.35	.35	.34	.34	.34
18.7000	.34	.34	.34	.33	.33
18.9500	.33	.33	.33	.33	.33
19.2000	.32	.32	.32	.32	.32
19.4500	.32	.31	.31	.31	.31
19.7000	.31	.31	.30	.30	.30
19.9500	.30	.30	.30	.29	.29
20.2000	.29	.29	.29	.29	.29
20.4500	.28	.28	.28	.28	.28
20.7000	.28	.28	.28	.27	.27
20.9500	.27	.27	.27	.27	.27
21.2000	.27	.27	.26	.26	.26
21.4500	.26	.26	.26	.26	.25
21.7000	.25	.25	.25	.25	.25
21.9500	.25	.25	.25	.24	.24
22.2000	.24	.24	.24	.24	.24
22.4500	.24	.23	.23	.23	.23
22.7000	.23	.23	.23	.23	.22
22.9500	.22	.22	.22	.22	.22
23.2000	.22	.22	.21	.21	.21
23.4500	.21	.21	.21	.21	.21
23.7000	.20	.20	.20	.20	.20
23.9500	.20	.20	.19	.16	.12
24.2000	.08	.05	.03	.02	.01
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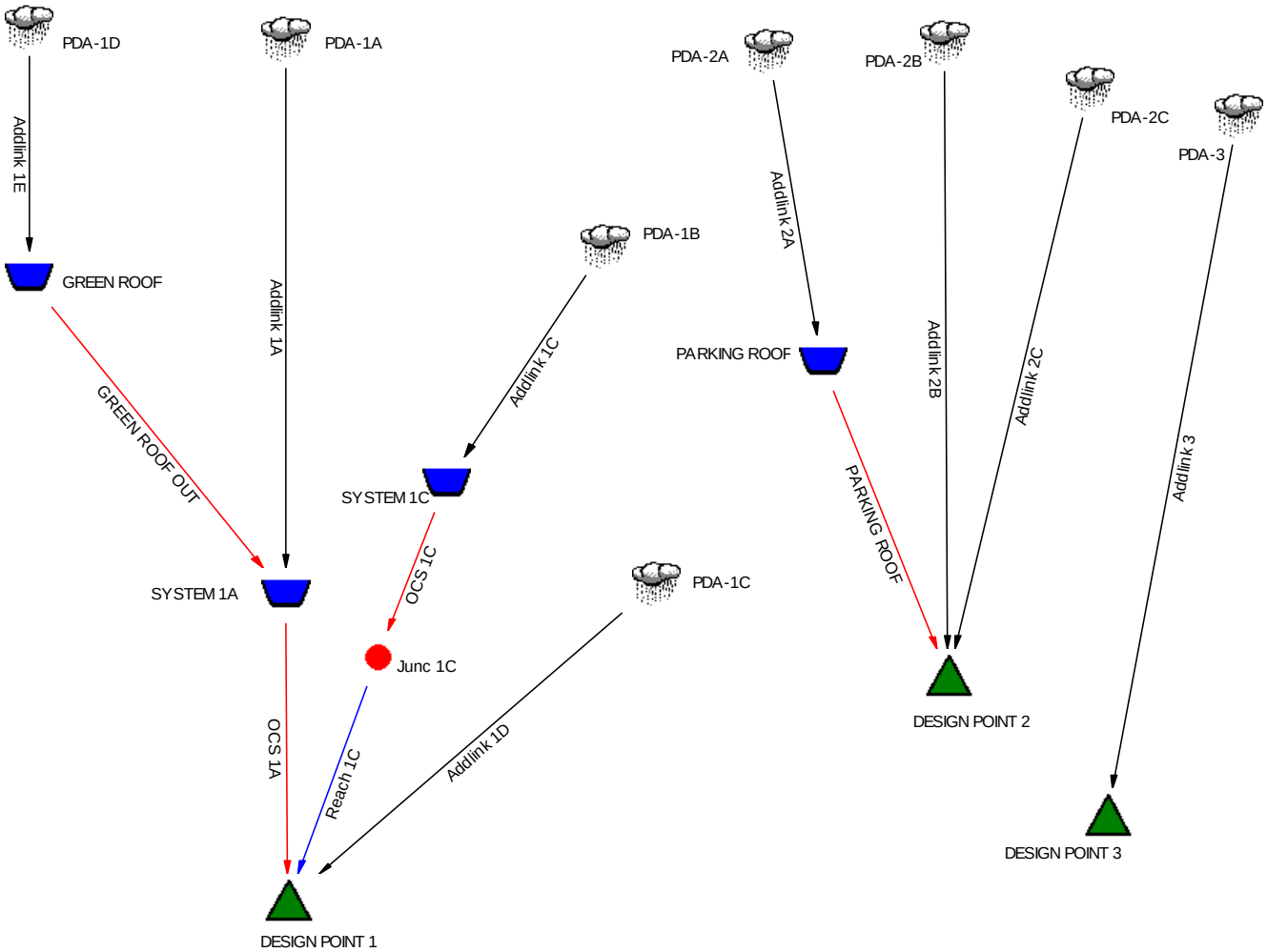
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==========
JOB TITLE
==========

Project Date: 9/6/2018
Project Engineer: Michael Thompson, PE
Project Title: Mercedes Benz of Goldens Bridge
Project Comments:

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MASTER DESIGN STORM SUMMARY

Network Storm Collection: WESTCHESTER-NEW

Return Event	Total Depth in	Rainfall Type	RNF ID
1Y	3.0000	Synthetic Curve	TypeIII 24hr
10Y	5.5000	Synthetic Curve	TypeIII 24hr
100Y	9.0000	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*DESIGN POINT 1	JCT	1	17448		12.4000	2.27		
*DESIGN POINT 1	JCT	10	55680		12.4500	7.00		
*DESIGN POINT 1	JCT	100	121055		12.4500	13.72		
*DESIGN POINT 2	JCT	1	4010		12.3500	.57		
*DESIGN POINT 2	JCT	10	15419		12.2000	3.40		
*DESIGN POINT 2	JCT	100	35831		12.2000	8.20		
*DESIGN POINT 3	JCT	1	113		12.1000	.02		
*DESIGN POINT 3	JCT	10	558		12.1000	.15		
*DESIGN POINT 3	JCT	100	1428		12.1000	.41		
GREEN ROOF	IN	POND 1	4470		12.1500	1.00		
GREEN ROOF	IN	POND 10	8499		12.1500	1.85		
GREEN ROOF	IN	POND 100	14148		12.1500	3.04		
GREEN ROOF	OUT	POND 1	2370		12.5000	.33	210.16	2583
GREEN ROOF	OUT	POND 10	6399		12.3000	1.25	210.23	3540
GREEN ROOF	OUT	POND 100	12047		12.2500	2.23	210.27	4263

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
JUNC 1C	JCT	1	14834		12.4500	2.03		
JUNC 1C	JCT	10	41320		12.4500	5.07		
JUNC 1C	JCT	100	83191		12.4500	9.16		
PARKING ROOF IN	POND	1	2209		12.1500	.49		
PARKING ROOF IN	POND	10	4201		12.1500	.92		
PARKING ROOF IN	POND	100	6994		12.1500	1.50		
PARKING ROOF OUT	POND	1	1040		12.5000	.17	210.15	1306
PARKING ROOF OUT	POND	10	3032		12.2500	.65	210.19	1700
PARKING ROOF OUT	POND	100	5825		12.2500	1.24	210.22	1969
PDA-1A	AREA	1	7164		12.1500	1.81		
PDA-1A	AREA	10	18338		12.1500	4.62		
PDA-1A	AREA	100	35399		12.1500	8.68		
PDA-1B	AREA	1	14858		12.2000	3.46		
PDA-1B	AREA	10	41344		12.2000	9.78		
PDA-1B	AREA	100	83215		12.1500	19.46		
PDA-1C	AREA	1	2614		12.1000	.75		
PDA-1C	AREA	10	6561		12.1000	1.84		
PDA-1C	AREA	100	12539		12.1000	3.39		
PDA-1D	AREA	1	4470		12.1500	1.00		
PDA-1D	AREA	10	8499		12.1500	1.85		
PDA-1D	AREA	100	14148		12.1500	3.04		
PDA-2A	AREA	1	2209		12.1500	.49		
PDA-2A	AREA	10	4201		12.1500	.92		
PDA-2A	AREA	100	6994		12.1500	1.50		
PDA-2B	AREA	1	2755		12.2500	.45		
PDA-2B	AREA	10	11680		12.2000	2.66		
PDA-2B	AREA	100	28462		12.2000	6.71		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
PDA-2C	AREA	1	215		12.1000	.06		
PDA-2C	AREA	10	707		12.1000	.20		
PDA-2C	AREA	100	1544		12.1000	.44		
PDA-3	AREA	1	113		12.1000	.02		
PDA-3	AREA	10	558		12.1000	.15		
PDA-3	AREA	100	1428		12.1000	.41		
SYSTEM 1A IN	POND	1	9534		12.1500	1.81		
SYSTEM 1A IN	POND	10	24737		12.1500	5.57		
SYSTEM 1A IN	POND	100	47446		12.1500	10.58		
SYSTEM 1A OUT	POND	1	0		9.2500	.00	171.10	2958
SYSTEM 1A OUT	POND	10	7800		12.6000	1.57	172.42	8353
SYSTEM 1A OUT	POND	100	25326		12.5500	3.83	175.01	15896
SYSTEM 1C IN	POND	1	14858		12.2000	3.46		
SYSTEM 1C IN	POND	10	41344		12.2000	9.78		
SYSTEM 1C IN	POND	100	83215		12.1500	19.46		
SYSTEM 1C OUT	POND	1	14834		12.4500	2.03	192.85	3163
SYSTEM 1C OUT	POND	10	41320		12.4500	5.07	194.28	9497
SYSTEM 1C OUT	POND	100	83191		12.4500	9.16	197.47	20610

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	17448		12.4000	2.27	
Outfall DESIGN POINT 2	JCT	4010		12.3500	.57	
Outfall DESIGN POINT 3	JCT	113		12.1000	.02	
GREEN ROOF IN	POND	4470		12.1500	1.00	
GREEN ROOF OUT	POND	2370		12.5000	.33	210.16
JUNC 1C	JCT	14834		12.4500	2.03	
PARKING ROOF IN	POND	2209		12.1500	.49	
PARKING ROOF OUT	POND	1040		12.5000	.17	210.15
PDA-1A	AREA	7164		12.1500	1.81	
PDA-1B	AREA	14858		12.2000	3.46	
PDA-1C	AREA	2614		12.1000	.75	
PDA-1D	AREA	4470		12.1500	1.00	
PDA-2A	AREA	2209		12.1500	.49	
PDA-2B	AREA	2755		12.2500	.45	
PDA-2C	AREA	215		12.1000	.06	
PDA-3	AREA	113		12.1000	.02	
SYSTEM 1A IN	POND	9534		12.1500	1.81	
SYSTEM 1A OUT	POND	0		9.2500	.00	171.10
SYSTEM 1C IN	POND	14858		12.2000	3.46	
SYSTEM 1C OUT	POND	14834		12.4500	2.03	192.85

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 1A	ADD	UN	7164		12.1500	1.81	PDA-1A
		DL	7164		12.1500	1.81	
		DN	9534		12.1500	1.81	SYSTEM 1A IN
ADDLINK 1C	ADD	UN	14858		12.2000	3.46	PDA-1B
		DL	14858		12.2000	3.46	
		DN	14858		12.2000	3.46	SYSTEM 1C IN
ADDLINK 1D	ADD	UN	2614		12.1000	.75	PDA-1C
		DL	2614		12.1000	.75	
		DN	17448		12.4000	2.27	DESIGN POINT 1
ADDLINK 1E	ADD	UN	4470		12.1500	1.00	PDA-1D
		DL	4470		12.1500	1.00	
		DN	4470		12.1500	1.00	GREEN ROOF IN
ADDLINK 2A	ADD	UN	2209		12.1500	.49	PDA-2A
		DL	2209		12.1500	.49	
		DN	2209		12.1500	.49	PARKING ROOF IN
ADDLINK 2B	ADD	UN	2755		12.2500	.45	PDA-2B
		DL	2755		12.2500	.45	
		DN	4010		12.3500	.57	DESIGN POINT 2
ADDLINK 2C	ADD	UN	215		12.1000	.06	PDA-2C
		DL	215		12.1000	.06	
		DN	4010		12.3500	.57	DESIGN POINT 2

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
ADDLINK 3	ADD	UN	113		12.1000	.02	PDA-3	
		DL	113		12.1000	.02		
		DN	113		12.1000	.02	DESIGN POINT 3	
GREEN ROOF OUT	PONDrt	UN	4470		12.1500	1.00	GREEN ROOF	IN
GREEN ROOF OUT			2370		12.5000	.33	GREEN ROOF	OUT
		DL	2370		12.5000	.33		
		DN	9534		12.1500	1.81	SYSTEM 1A	IN
OCS 1A	PONDrt	UN	9534		12.1500	1.81	SYSTEM 1A	IN
OCS 1A			0		9.2500	.00	SYSTEM 1A	OUT
		DL	0		9.2500	.00		
		DN	17448		12.4000	2.27	DESIGN POINT 1	
OCS 1C	PONDrt	UN	14858		12.2000	3.46	SYSTEM 1C	IN
OCS 1C			14834		12.4500	2.03	SYSTEM 1C	OUT
		DL	14834		12.4500	2.03		
		DN	14834		12.4500	2.03	JUNC 1C	
PARKING ROOF	PONDrt	UN	2209		12.1500	.49	PARKING ROOF	IN
PARKING ROOF			1040		12.5000	.17	PARKING ROOF	OUT
		DL	1040		12.5000	.17		
		DN	4010		12.3500	.57	DESIGN POINT 2	
REACH 1C	REACH	UN	14834		12.4500	2.03	JUNC 1C	
		DL	14834		12.4500	2.03		
		DN	17448		12.4000	2.27	DESIGN POINT 1	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	55680		12.4500	7.00	
Outfall DESIGN POINT 2	JCT	15419		12.2000	3.40	
Outfall DESIGN POINT 3	JCT	558		12.1000	.15	
GREEN ROOF IN	POND	8499		12.1500	1.85	
GREEN ROOF OUT	POND	6399		12.3000	1.25	210.23
JUNC 1C	JCT	41320		12.4500	5.07	
PARKING ROOF IN	POND	4201		12.1500	.92	
PARKING ROOF OUT	POND	3032		12.2500	.65	210.19
PDA-1A	AREA	18338		12.1500	4.62	
PDA-1B	AREA	41344		12.2000	9.78	
PDA-1C	AREA	6561		12.1000	1.84	
PDA-1D	AREA	8499		12.1500	1.85	
PDA-2A	AREA	4201		12.1500	.92	
PDA-2B	AREA	11680		12.2000	2.66	
PDA-2C	AREA	707		12.1000	.20	
PDA-3	AREA	558		12.1000	.15	
SYSTEM 1A IN	POND	24737		12.1500	5.57	
SYSTEM 1A OUT	POND	7800		12.6000	1.57	172.42
SYSTEM 1C IN	POND	41344		12.2000	9.78	
SYSTEM 1C OUT	POND	41320		12.4500	5.07	194.28

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
ADDLINK 1A	ADD	UN	18338		12.1500	4.62	PDA-1A	
		DL	18338		12.1500	4.62		
		DN	24737		12.1500	5.57	SYSTEM 1A	IN
ADDLINK 1C	ADD	UN	41344		12.2000	9.78	PDA-1B	
		DL	41344		12.2000	9.78		
		DN	41344		12.2000	9.78	SYSTEM 1C	IN
ADDLINK 1D	ADD	UN	6561		12.1000	1.84	PDA-1C	
		DL	6561		12.1000	1.84		
		DN	55680		12.4500	7.00	DESIGN POINT 1	
ADDLINK 1E	ADD	UN	8499		12.1500	1.85	PDA-1D	
		DL	8499		12.1500	1.85		
		DN	8499		12.1500	1.85	GREEN ROOF	IN
ADDLINK 2A	ADD	UN	4201		12.1500	.92	PDA-2A	
		DL	4201		12.1500	.92		
		DN	4201		12.1500	.92	PARKING ROOF	IN
ADDLINK 2B	ADD	UN	11680		12.2000	2.66	PDA-2B	
		DL	11680		12.2000	2.66		
		DN	15419		12.2000	3.40	DESIGN POINT 2	
ADDLINK 2C	ADD	UN	707		12.1000	.20	PDA-2C	
		DL	707		12.1000	.20		
		DN	15419		12.2000	3.40	DESIGN POINT 2	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
ADDLINK 3	ADD	UN	558		12.1000	.15	PDA-3	
		DL	558		12.1000	.15		
		DN	558		12.1000	.15	DESIGN POINT 3	
GREEN ROOF OUT	PONDrt	UN	8499		12.1500	1.85	GREEN ROOF	IN
GREEN ROOF OUT			6399		12.3000	1.25	GREEN ROOF	OUT
		DL	6399		12.3000	1.25		
		DN	24737		12.1500	5.57	SYSTEM 1A	IN
OCS 1A	PONDrt	UN	24737		12.1500	5.57	SYSTEM 1A	IN
OCS 1A			7800		12.6000	1.57	SYSTEM 1A	OUT
		DL	7800		12.6000	1.57		
		DN	55680		12.4500	7.00	DESIGN POINT 1	
OCS 1C	PONDrt	UN	41344		12.2000	9.78	SYSTEM 1C	IN
OCS 1C			41320		12.4500	5.07	SYSTEM 1C	OUT
		DL	41320		12.4500	5.07		
		DN	41320		12.4500	5.07	JUNC 1C	
PARKING ROOF	PONDrt	UN	4201		12.1500	.92	PARKING ROOF	IN
PARKING ROOF			3032		12.2500	.65	PARKING ROOF	OUT
		DL	3032		12.2500	.65		
		DN	15419		12.2000	3.40	DESIGN POINT 2	
REACH 1C	REACH	UN	41320		12.4500	5.07	JUNC 1C	
		DL	41319		12.5000	5.06		
		DN	55680		12.4500	7.00	DESIGN POINT 1	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	121055		12.4500	13.72	
Outfall DESIGN POINT 2	JCT	35831		12.2000	8.20	
Outfall DESIGN POINT 3	JCT	1428		12.1000	.41	
GREEN ROOF IN	POND	14148		12.1500	3.04	
GREEN ROOF OUT	POND	12047		12.2500	2.23	210.27
JUNC 1C	JCT	83191		12.4500	9.16	
PARKING ROOF IN	POND	6994		12.1500	1.50	
PARKING ROOF OUT	POND	5825		12.2500	1.24	210.22
PDA-1A	AREA	35399		12.1500	8.68	
PDA-1B	AREA	83215		12.1500	19.46	
PDA-1C	AREA	12539		12.1000	3.39	
PDA-1D	AREA	14148		12.1500	3.04	
PDA-2A	AREA	6994		12.1500	1.50	
PDA-2B	AREA	28462		12.2000	6.71	
PDA-2C	AREA	1544		12.1000	.44	
PDA-3	AREA	1428		12.1000	.41	
SYSTEM 1A IN	POND	47446		12.1500	10.58	
SYSTEM 1A OUT	POND	25326		12.5500	3.83	175.01
SYSTEM 1C IN	POND	83215		12.1500	19.46	
SYSTEM 1C OUT	POND	83191		12.4500	9.16	197.47

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
ADDLINK 1A	ADD	UN	35399		12.1500	8.68	PDA-1A	
		DL	35399		12.1500	8.68		
		DN	47446		12.1500	10.58	SYSTEM 1A	IN
ADDLINK 1C	ADD	UN	83215		12.1500	19.46	PDA-1B	
		DL	83215		12.1500	19.46		
		DN	83215		12.1500	19.46	SYSTEM 1C	IN
ADDLINK 1D	ADD	UN	12539		12.1000	3.39	PDA-1C	
		DL	12539		12.1000	3.39		
		DN	121055		12.4500	13.72	DESIGN POINT 1	
ADDLINK 1E	ADD	UN	14148		12.1500	3.04	PDA-1D	
		DL	14148		12.1500	3.04		
		DN	14148		12.1500	3.04	GREEN ROOF	IN
ADDLINK 2A	ADD	UN	6994		12.1500	1.50	PDA-2A	
		DL	6994		12.1500	1.50		
		DN	6994		12.1500	1.50	PARKING ROOF	IN
ADDLINK 2B	ADD	UN	28462		12.2000	6.71	PDA-2B	
		DL	28462		12.2000	6.71		
		DN	35831		12.2000	8.20	DESIGN POINT 2	
ADDLINK 2C	ADD	UN	1544		12.1000	.44	PDA-2C	
		DL	1544		12.1000	.44		
		DN	35831		12.2000	8.20	DESIGN POINT 2	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 3	ADD	UN	1428		12.1000	.41	PDA-3
		DL	1428		12.1000	.41	
		DN	1428		12.1000	.41	DESIGN POINT 3
GREEN ROOF OUT	PONDrt	UN	14148		12.1500	3.04	GREEN ROOF IN
GREEN ROOF OUT			12047		12.2500	2.23	GREEN ROOF OUT
		DL	12047		12.2500	2.23	
		DN	47446		12.1500	10.58	SYSTEM 1A IN
OCS 1A	PONDrt	UN	47446		12.1500	10.58	SYSTEM 1A IN
OCS 1A			25326		12.5500	3.83	SYSTEM 1A OUT
		DL	25326		12.5500	3.83	
		DN	121055		12.4500	13.72	DESIGN POINT 1
OCS 1C	PONDrt	UN	83215		12.1500	19.46	SYSTEM 1C IN
OCS 1C			83191		12.4500	9.16	SYSTEM 1C OUT
		DL	83191		12.4500	9.16	
		DN	83191		12.4500	9.16	JUNC 1C
PARKING ROOF	PONDrt	UN	6994		12.1500	1.50	PARKING ROOF IN
PARKING ROOF			5825		12.2500	1.24	PARKING ROOF OUT
		DL	5825		12.2500	1.24	
		DN	35831		12.2000	8.20	DESIGN POINT 2
REACH 1C	REACH	UN	83191		12.4500	9.16	JUNC 1C
		DL	83190		12.5000	9.16	
		DN	121055		12.4500	13.72	DESIGN POINT 1

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	PDA-2B	Subarea	PDA-2B	Add Hyd	PDA-2B
SCS UH	PDA-3	Subarea	PDA-3	Add Hyd	PDA-3
SCS UH	PDA-1C	Subarea	PDA-1C	Add Hyd	PDA-1C
SCS UH	PDA-1D	Subarea	PDA-1D	Add Hyd	PDA-1D
SCS UH	PDA-1A	Subarea	PDA-1A	Add Hyd	PDA-1A
SCS UH	PDA-1B	Subarea	PDA-1B	Add Hyd	PDA-1B
SCS UH	PDA-2A	Subarea	PDA-2A	Add Hyd	PDA-2A
SCS UH	PDA-2C	Subarea	PDA-2C	Add Hyd	PDA-2C

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 1E	Subarea PDA-1D	Pond GREEN ROOF IN
POND ROUTE TOTAL OUTFLOW...		
Total Pond Outflow	Pond GREEN ROOF IN	Outflow GREEN ROOF OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet GREEN ROOF OUT	Outflow GREEN ROOF OUT	Pond SYSTEM 1A IN
Add Hyd ADDLINK 1C	Subarea PDA-1B	Pond SYSTEM 1C IN
POND ROUTE TOTAL OUTFLOW...		
Total Pond Outflow	Pond SYSTEM 1C IN	Outflow SYSTEM 1C OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet OCS 1C	Outflow SYSTEM 1C OUT	Jct JUNC 1C
Add Hyd ADDLINK 1A	Subarea PDA-1A	Pond SYSTEM 1A IN
POND ROUTE INFILTRATION AND TOTAL OUTFLOW...		
Infiltration	Pond SYSTEM 1A IN	Infilt. SYSTEM 1A INF
Total Pond Outflow	Pond SYSTEM 1A IN	Outflow SYSTEM 1A OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet OCS 1A	Outflow SYSTEM 1A OUT	Jct DESIGN POINT 1
Add Hyd ADDLINK 2A	Subarea PDA-2A	Pond PARKING ROOF IN
POND ROUTE TOTAL OUTFLOW...		
Total Pond Outflow	Pond PARKING ROOF IN	Outflow PARKING ROOF OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet PARKING ROOF	Outflow PARKING ROOF OUT	Jct DESIGN POINT 2
Reach REACH 1C	Jct JUNC 1C	Jct DESIGN POINT 1
Add Hyd ADDLINK 1D	Subarea PDA-1C	Jct DESIGN POINT 1
Add Hyd ADDLINK 3	Subarea PDA-3	Jct DESIGN POINT 3
Add Hyd ADDLINK 2C	Subarea PDA-2C	Jct DESIGN POINT 2
Add Hyd ADDLINK 2B	Subarea PDA-2B	Jct DESIGN POINT 2

Title... Project Date: 9/6/2018
Project Engineer: Michael Thompson, PE
Project Title: Mercedes Benz of Goldens Bridge
Project Comments:

DESIGN STORMS SUMMARY

Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

DESIGN STORMS SUMMARY

Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.000	.001	.002	.003	.004
.5000	.005	.006	.007	.008	.009
1.0000	.010	.011	.012	.013	.014
1.5000	.015	.016	.017	.018	.019
2.0000	.020	.021	.022	.023	.024
2.5000	.025	.026	.027	.028	.030
3.0000	.031	.032	.033	.034	.035
3.5000	.037	.038	.039	.040	.042
4.0000	.043	.044	.046	.047	.048
4.5000	.050	.051	.052	.054	.055
5.0000	.057	.058	.060	.061	.063
5.5000	.064	.066	.067	.069	.070
6.0000	.072	.074	.075	.077	.079
6.5000	.081	.083	.084	.086	.088
7.0000	.091	.093	.095	.097	.099
7.5000	.102	.104	.106	.109	.111
8.0000	.114	.117	.119	.122	.125
8.5000	.128	.132	.135	.138	.142
9.0000	.146	.150	.153	.158	.162
9.5000	.166	.170	.175	.179	.184
10.0000	.189	.194	.199	.205	.211
10.5000	.217	.223	.229	.236	.243
11.0000	.250	.258	.266	.276	.287
11.5000	.298	.314	.339	.373	.416
12.0000	.500	.584	.627	.661	.686
12.5000	.702	.713	.724	.734	.742
13.0000	.750	.757	.764	.771	.777
13.5000	.784	.789	.795	.801	.806
14.0000	.811	.816	.821	.825	.830
14.5000	.834	.838	.842	.847	.850
15.0000	.854	.858	.862	.865	.868
15.5000	.872	.875	.878	.881	.883
16.0000	.886	.889	.891	.894	.896
16.5000	.898	.901	.903	.905	.907
17.0000	.910	.912	.914	.916	.918
17.5000	.919	.921	.923	.925	.926
18.0000	.928	.930	.931	.933	.934
18.5000	.936	.937	.939	.940	.942
19.0000	.943	.945	.946	.948	.949
19.5000	.950	.952	.953	.954	.956
20.0000	.957	.958	.960	.961	.962
20.5000	.963	.965	.966	.967	.968
21.0000	.969	.971	.972	.973	.974
21.5000	.975	.976	.977	.979	.980

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	.981	.982	.983	.984	.985
22.5000	.986	.987	.988	.989	.990
23.0000	.991	.992	.993	.994	.995
23.5000	.996	.997	.997	.998	.999
24.0000	1.000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0030	.0060	.0090	.0120
.5000	.0150	.0180	.0210	.0240	.0270
1.0000	.0300	.0330	.0360	.0390	.0420
1.5000	.0450	.0480	.0510	.0540	.0570
2.0000	.0600	.0630	.0661	.0692	.0724
2.5000	.0756	.0788	.0821	.0854	.0888
3.0000	.0923	.0957	.0992	.1028	.1064
3.5000	.1101	.1138	.1175	.1213	.1251
4.0000	.1290	.1329	.1369	.1409	.1450
4.5000	.1491	.1532	.1574	.1616	.1659
5.0000	.1703	.1746	.1790	.1835	.1880
5.5000	.1926	.1972	.2018	.2065	.2112
6.0000	.2160	.2209	.2259	.2311	.2364
6.5000	.2419	.2475	.2533	.2592	.2653
7.0000	.2715	.2779	.2844	.2911	.2979
7.5000	.3049	.3120	.3193	.3267	.3343
8.0000	.3420	.3500	.3583	.3670	.3760
8.5000	.3853	.3950	.4051	.4154	.4262
9.0000	.4373	.4487	.4604	.4726	.4850
9.5000	.4978	.5110	.5245	.5383	.5525
10.0000	.5670	.5821	.5978	.6143	.6316
10.5000	.6495	.6682	.6875	.7076	.7285
11.0000	.7500	.7733	.7993	.8281	.8597
11.5000	.8940	.9429	1.0182	1.1199	1.2480
12.0000	1.5000	1.7520	1.8801	1.9818	2.0571
12.5000	2.1060	2.1403	2.1719	2.2007	2.2267
13.0000	2.2500	2.2715	2.2924	2.3125	2.3318
13.5000	2.3505	2.3684	2.3857	2.4022	2.4179
14.0000	2.4330	2.4475	2.4617	2.4755	2.4890
14.5000	2.5022	2.5150	2.5274	2.5396	2.5513
15.0000	2.5628	2.5738	2.5846	2.5949	2.6050
15.5000	2.6147	2.6240	2.6330	2.6417	2.6500
16.0000	2.6580	2.6657	2.6733	2.6807	2.6880
16.5000	2.6951	2.7021	2.7089	2.7156	2.7221
17.0000	2.7285	2.7347	2.7408	2.7467	2.7525
17.5000	2.7581	2.7636	2.7689	2.7741	2.7791
18.0000	2.7840	2.7888	2.7935	2.7982	2.8028
18.5000	2.8074	2.8120	2.8165	2.8210	2.8254
19.0000	2.8298	2.8341	2.8384	2.8426	2.8468
19.5000	2.8509	2.8550	2.8591	2.8631	2.8671
20.0000	2.8710	2.8749	2.8787	2.8826	2.8863
20.5000	2.8901	2.8938	2.8975	2.9011	2.9047
21.0000	2.9083	2.9119	2.9154	2.9189	2.9223
21.5000	2.9257	2.9291	2.9324	2.9357	2.9390

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	2.9423	2.9455	2.9486	2.9518	2.9549
22.5000	2.9579	2.9610	2.9640	2.9670	2.9699
23.0000	2.9728	2.9757	2.9785	2.9813	2.9841
23.5000	2.9868	2.9895	2.9922	2.9948	2.9974
24.0000	3.0000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0055	.0110	.0165	.0220
.5000	.0275	.0330	.0385	.0440	.0495
1.0000	.0550	.0605	.0660	.0715	.0770
1.5000	.0825	.0880	.0935	.0990	.1045
2.0000	.1100	.1156	.1212	.1269	.1327
2.5000	.1385	.1445	.1505	.1566	.1629
3.0000	.1691	.1755	.1819	.1885	.1951
3.5000	.2018	.2086	.2154	.2224	.2294
4.0000	.2365	.2437	.2510	.2583	.2658
4.5000	.2733	.2809	.2886	.2963	.3042
5.0000	.3121	.3202	.3282	.3364	.3447
5.5000	.3530	.3615	.3700	.3786	.3873
6.0000	.3960	.4050	.4142	.4237	.4334
6.5000	.4435	.4538	.4644	.4752	.4864
7.0000	.4978	.5095	.5214	.5337	.5462
7.5000	.5590	.5720	.5854	.5990	.6129
8.0000	.6270	.6416	.6569	.6728	.6893
8.5000	.7064	.7242	.7426	.7616	.7813
9.0000	.8016	.8226	.8441	.8664	.8892
9.5000	.9127	.9368	.9615	.9869	1.0129
10.0000	1.0395	1.0671	1.0960	1.1263	1.1579
10.5000	1.1908	1.2250	1.2605	1.2973	1.3355
11.0000	1.3750	1.4177	1.4654	1.5182	1.5761
11.5000	1.6390	1.7287	1.8667	2.0532	2.2880
12.0000	2.7500	3.2120	3.4469	3.6333	3.7714
12.5000	3.8610	3.9239	3.9818	4.0346	4.0823
13.0000	4.1250	4.1645	4.2027	4.2395	4.2750
13.5000	4.3093	4.3421	4.3737	4.4040	4.4329
14.0000	4.4605	4.4871	4.5131	4.5385	4.5632
14.5000	4.5873	4.6108	4.6336	4.6559	4.6774
15.0000	4.6984	4.7187	4.7384	4.7574	4.7758
15.5000	4.7936	4.8107	4.8272	4.8431	4.8584
16.0000	4.8730	4.8872	4.9011	4.9147	4.9280
16.5000	4.9411	4.9539	4.9664	4.9786	4.9906
17.0000	5.0023	5.0137	5.0248	5.0357	5.0463
17.5000	5.0566	5.0666	5.0764	5.0859	5.0951
18.0000	5.1040	5.1127	5.1214	5.1300	5.1385
18.5000	5.1470	5.1553	5.1636	5.1718	5.1798
19.0000	5.1879	5.1958	5.2037	5.2114	5.2191
19.5000	5.2267	5.2342	5.2417	5.2490	5.2563
20.0000	5.2635	5.2706	5.2777	5.2847	5.2916
20.5000	5.2985	5.3053	5.3120	5.3187	5.3253
21.0000	5.3319	5.3384	5.3448	5.3512	5.3576
21.5000	5.3638	5.3700	5.3761	5.3822	5.3882

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	5.3941	5.4000	5.4058	5.4116	5.4173
22.5000	5.4229	5.4285	5.4340	5.4394	5.4448
23.0000	5.4502	5.4554	5.4606	5.4657	5.4709
23.5000	5.4759	5.4808	5.4857	5.4905	5.4953
24.0000	5.5000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0090	.0180	.0270	.0360
.5000	.0450	.0540	.0630	.0720	.0810
1.0000	.0900	.0990	.1080	.1170	.1260
1.5000	.1350	.1440	.1530	.1620	.1710
2.0000	.1800	.1891	.1983	.2076	.2171
2.5000	.2267	.2364	.2463	.2563	.2665
3.0000	.2768	.2872	.2977	.3084	.3192
3.5000	.3302	.3413	.3525	.3639	.3754
4.0000	.3870	.3988	.4107	.4227	.4349
4.5000	.4472	.4596	.4722	.4849	.4978
5.0000	.5108	.5239	.5371	.5505	.5640
5.5000	.5777	.5915	.6054	.6195	.6337
6.0000	.6480	.6627	.6777	.6933	.7092
6.5000	.7257	.7425	.7599	.7776	.7959
7.0000	.8145	.8337	.8532	.8733	.8937
7.5000	.9147	.9360	.9579	.9801	1.0029
8.0000	1.0260	1.0499	1.0749	1.1009	1.1279
8.5000	1.1560	1.1850	1.2152	1.2463	1.2785
9.0000	1.3118	1.3460	1.3813	1.4177	1.4550
9.5000	1.4935	1.5329	1.5734	1.6149	1.6574
10.0000	1.7010	1.7462	1.7935	1.8430	1.8947
10.5000	1.9485	2.0045	2.0626	2.1229	2.1854
11.0000	2.2500	2.3198	2.3980	2.4844	2.5790
11.5000	2.6820	2.8287	3.0546	3.3597	3.7440
12.0000	4.5000	5.2560	5.6403	5.9454	6.1713
12.5000	6.3180	6.4210	6.5156	6.6020	6.6802
13.0000	6.7500	6.8146	6.8771	6.9374	6.9955
13.5000	7.0515	7.1053	7.1570	7.2065	7.2538
14.0000	7.2990	7.3426	7.3851	7.4266	7.4671
14.5000	7.5065	7.5450	7.5823	7.6187	7.6540
15.0000	7.6883	7.7215	7.7537	7.7848	7.8150
15.5000	7.8440	7.8721	7.8991	7.9251	7.9501
16.0000	7.9740	7.9972	8.0199	8.0422	8.0640
16.5000	8.0854	8.1063	8.1268	8.1468	8.1664
17.0000	8.1855	8.2042	8.2224	8.2402	8.2575
17.5000	8.2744	8.2908	8.3068	8.3223	8.3374
18.0000	8.3520	8.3663	8.3805	8.3946	8.4085
18.5000	8.4223	8.4360	8.4495	8.4629	8.4761
19.0000	8.4893	8.5022	8.5151	8.5278	8.5404
19.5000	8.5528	8.5651	8.5773	8.5893	8.6012
20.0000	8.6130	8.6246	8.6362	8.6477	8.6590
20.5000	8.6702	8.6814	8.6924	8.7034	8.7142
21.0000	8.7250	8.7356	8.7461	8.7566	8.7669
21.5000	8.7771	8.7872	8.7972	8.8072	8.8170

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	8.8268	8.8364	8.8459	8.8553	8.8646
22.5000	8.8738	8.8830	8.8920	8.9009	8.9097
23.0000	8.9185	8.9270	8.9356	8.9439	8.9523
23.5000	8.9605	8.9686	8.9766	8.9845	8.9923
24.0000	9.0000				

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.4000
Hydraulic Length	100.00 ft
2yr, 24hr P	3.5000 in
Slope	.120000 ft/ft
Avg.Velocity	.17 ft/sec

Segment #1 Time: .1671 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	70.00 ft
Slope	.514000 ft/ft
Unpaved	
Avg.Velocity	11.57 ft/sec

Segment #2 Time: .0017 hrs

Segment #3: Tc: TR-55 Channel

Flow Area	1.0000 sq.ft
Wetted Perimeter	4.00 ft
Hydraulic Radius	.25 ft
Slope	.044400 ft/ft
Mannings n	.0110
Hydraulic Length	180.00 ft
Avg.Velocity	11.33 ft/sec

Segment #3 Time: .0044 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	1.2300	sq.ft
Wetted Perimeter	3.93	ft
Hydraulic Radius	.31	ft
Slope	.005000	ft/ft
Mannings n	.0110	
Hydraulic Length	255.00	ft
Avg.Velocity	4.42	ft/sec

Segment #4 Time: .0160 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.085000	ft/ft
Mannings n	.0110	
Hydraulic Length	200.00	ft
Avg.Velocity	24.88	ft/sec

Segment #5 Time: .0022 hrs

==========
Total Tc: .1915 hrs
==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .130000 ft/ft

Avg.Velocity .17 ft/sec

Segment #1 Time: .1619 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 438.00 ft
Slope .121000 ft/ft
Unpaved

Avg.Velocity 5.61 ft/sec

Segment #2 Time: .0217 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length 132.50 ft
Slope .007500 ft/ft
Paved

Avg.Velocity 1.76 ft/sec

Segment #3 Time: .0209 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	1.2300	sq.ft
Wetted Perimeter	3.93	ft
Hydraulic Radius	.31	ft
Slope	.010000	ft/ft
Mannings n	.0120	
Hydraulic Length	585.00	ft

Avg.Velocity 5.73 ft/sec

Segment #4 Time: .0284 hrs

Total Tc: .2328 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400	
Hydraulic Length	31.30	ft
2yr, 24hr P	3.5000	in
Slope	.128000	ft/ft
Avg.Velocity	.20	ft/sec

Segment #1 Time: .0427 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	174.00	ft
Slope	.034500	ft/ft
Paved		
Avg.Velocity	3.78	ft/sec

Segment #2 Time: .0128 hrs

Segment #3: Tc: TR-55 Channel

Flow Area	4.9100	sq.ft
Wetted Perimeter	7.85	ft
Hydraulic Radius	.63	ft
Slope	.021100	ft/ft
Mannings n	.0120	
Hydraulic Length	48.00	ft
Avg.Velocity	13.19	ft/sec

Segment #3 Time: .0010 hrs

==========
Total Tc: .0565 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400
Hydraulic Length	60.00 ft
2yr, 24hr P	3.5000 in
Slope	.010417 ft/ft
Avg.Velocity	.08 ft/sec

Segment #1 Time: .1962 hrs

==========
Total Tc: .1962 hrs
==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400
Hydraulic Length	60.00 ft
2yr, 24hr P	3.5000 in
Slope	.010417 ft/ft
Avg.Velocity	.08 ft/sec

Segment #1 Time: .1962 hrs

==========
Total Tc: .1962 hrs
==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 150.00 ft
2yr, 24hr P 3.5000 in
Slope .140000 ft/ft

Avg.Velocity .19 ft/sec

Segment #1 Time: .2173 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 189.00 ft
Slope .238000 ft/ft
Unpaved

Avg.Velocity 7.87 ft/sec

Segment #2 Time: .0067 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length 80.00 ft
Slope .100000 ft/ft
Paved

Avg.Velocity 6.43 ft/sec

Segment #3 Time: .0035 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.108900	ft/ft
Mannings n	.0240	
Hydraulic Length	26.80	ft
Avg.Velocity	12.91	ft/sec

Segment #4 Time: .0006 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.154300	ft/ft
Mannings n	.0120	
Hydraulic Length	97.00	ft
Avg.Velocity	30.73	ft/sec

Segment #5 Time: .0009 hrs

Segment #6: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.047000	ft/ft
Mannings n	.0120	
Hydraulic Length	210.00	ft
Avg.Velocity	16.96	ft/sec

Segment #6 Time: .0034 hrs

Segment #7: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.005000	ft/ft
Mannings n	.0120	
Hydraulic Length	48.00	ft

Avg.Velocity 5.53 ft/sec

Segment #7 Time: .0024 hrs

Total Tc: .2348 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: User Defined

Segment #1 Time: .0833 hrs

Total Tc: .0833 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.4000
Hydraulic Length	27.00 ft
2yr, 24hr P	3.5000 in
Slope	.129630 ft/ft
Avg.Velocity	.13 ft/sec

Segment #1 Time: .0568 hrs

==========
Total Tc: .0568 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
==========

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.885			98.00
Open space (Lawns,parks etc.) - Goo	61	.157			61.00
Brush - brush, weed, grass mix - go	48	.019			48.00
Woods - good	55	.370			55.00
COMPOSITE AREA & WEIGHTED CN --->		1.431			82.16 (82)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Woods - good	55	1.118			55.00
Porous Pavement	92	.350			92.00
Impervious Areas - Paved parking lo	98	1.428			98.00
Open space (Lawns,parks etc.) - Goo	61	.398			61.00
BRUSH GOOD COND. HSG B	48	.068			48.00
Woods - good	77	.264			77.00
COMPOSITE AREA & WEIGHTED CN --->		3.626			77.63 (78)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.300			98.00
Open space (Lawns,parks etc.) - Goo	61	.198			61.00
COMPOSITE AREA & WEIGHTED CN --->		.498			83.29 (83)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.078			98.00
Open space (Lawns,parks etc.) - Goo	61	.005			61.00
Green Roof	98	.362			98.00
COMPOSITE AREA & WEIGHTED CN --->		.445			97.58 (98)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.019			98.00
Green Roof	98	.201			98.00
COMPOSITE AREA & WEIGHTED CN --->		.220			98.00 (98)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.240			98.00
Open space (Lawns,parks etc.) - Goo	61	.328			61.00
Woods - good	55	1.156			55.00
Impervious Areas - Gravel (w/ right	85	.030			85.00
COMPOSITE AREA & WEIGHTED CN --->		1.754			62.52 (63)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.022			98.00
Open space (Lawns,parks etc.) - Goo	61	.056			61.00
COMPOSITE AREA & WEIGHTED CN --->		.078			71.44 (71)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
LAWN GOOD COND. HSG B	69	.010			69.00
Woods - good	55	.078			55.00
Impervious Areas - Paved parking lo	98	.008			98.00
COMPOSITE AREA & WEIGHTED CN --->		.096			60.04 (60)

SCS UNIT HYDROGRAPH METHOD
(Computational Notes)

DEFINITION OF TERMS: ----------

At = Total area (acres): At = Ai+Ap
Ai = Impervious area (acres)
Ap = Pervious area (acres)
CNi = Runoff curve number for impervious area
CNp = Runoff curve number for pervious area
fLoss = f loss constant infiltration (depth/time)
gKs = Saturated Hydraulic Conductivity (depth/time)
Md = Volumetric Moisture Deficit
Psi = Capillary Suction (length)
hK = Horton Infiltration Decay Rate (time^-1)
fo = Initial Infiltration Rate (depth/time)
fc = Ultimate(capacity)Infiltration Rate (depth/time)
Ia = Initial Abstraction (length)
dt = Computational increment (duration of unit excess rainfall)
Default dt is smallest value of 0.1333Tc, rtm, and th
(Smallest dt is then adjusted to match up with Tp)
UDdt = User specified override computational main time increment
(only used if UDdt is => .1333Tc)
D(t) = Point on distribution curve (fraction of P) for time step t

K = 2 / (1 + (Tr/Tp)): default K = 0.75: (for Tr/Tp = 1.67)
Ks = Hydrograph shape factor
= Unit Conversions * K:
= ((1hr/3600sec) * (1ft/12in) * ((5280ft)**2/sq.mi)) * K
Default Ks = 645.333 * 0.75 = 484

Lag = Lag time from center of excess runoff (dt) to Tp: Lag = 0.6Tc
P = Total precipitation depth, inches
Pa(t) = Accumulated rainfall at time step t
Pi(t) = Incremental rainfall at time step t
qp = Peak discharge (cfs) for 1in. runoff, for 1hr, for 1 sq.mi.
= (Ks * A * Q) / Tp (where Q = 1in. runoff, A=sq.mi.)
Qu(t) = Unit hydrograph ordinate (cfs) at time step t
Q(t) = Final hydrograph ordinate (cfs) at time step t
Rai(t)= Accumulated runoff (inches) at time step t for impervious area
Rap(t)= Accumulated runoff (inches) at time step t for pervious area
Rii(t)= Incremental runoff (inches) at time step t for impervious area
Rip(t)= Incremental runoff (inches) at time step t for pervious area
R(t) = Incremental weighted total runoff (inches)
Rtm = Time increment for rainfall table
Si = S for impervious area: Si = (1000/CNi) - 10
Sp = S for pervious area: Sp = (1000/CNp) - 10
t = Time step (row) number
Tc = Time of concentration
Tb = Time (hrs) of entire unit hydrograph: Tb = Tp + Tr
Tp = Time (hrs) to peak of a unit hydrograph: Tp = (dt/2) + Lag
Tr = Time (hrs) of receding limb of unit hydrograph: Tr = ratio of Tp

SCS UNIT HYDROGRAPH METHOD
(Computational Notes)

PRECIPITATION: ----------
Column (1): Time for time step t
Column (2): D(t) = Point on distribution curve for time step t
Column (3): Pi(t) = Pa(t) - Pa(t-1): Col.(4) - Preceding Col.(4)
Column (4): Pa(t) = D(t) x P: Col.(2) x P

PERVIOUS AREA RUNOFF (using SCS Runoff CN Method) ----------
Column (5): Rap(t) = Accumulated pervious runoff for time step t
If (Pa(t) is <= 0.2Sp) then use: Rap(t) = 0.0
If (Pa(t) is > 0.2Sp) then use:

Rap(t) = (Col.(4)-0.2Sp)**2 / (Col.(4)+0.8Sp)

Column (6): Rip(t) = Incremental pervious runoff for time step t
Rip(t) = Rap(t) - Rap(t-1)
Rip(t) = Col.(5) for current row - Col.(5) for preceding row.

IMPERVIOUS AREA RUNOFF ----------
Column (7 & 8)... Did not specify to use impervious areas.

INCREMENTAL WEIGHTED RUNOFF: ----------
Column (9): R(t) = (Ap/At) x Rip(t) + (Ai/At) x Rii(t)
R(t) = (Ap/At) x Col.(6) + (Ai/At) x Col.(8)

SCS UNIT HYDROGRAPH METHOD: ----------
Column (10): Q(t) is computed with the SCS unit hydrograph method
using R() and Qu().

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1A 1Y
Tc = .1915 hrs
Drainage Area = 1.431 acres Runoff CN= 82

==========
Computational Time Increment = .02553 hrs
Computed Peak Time = 12.1527 hrs
Computed Peak Flow = 1.81 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 1.81 cfs
==========

DRAINAGE AREA

ID:PDA-1A
CN = 82
Area = 1.431 acres
S = 2.1951 in
0.2S = .4390 in

Cumulative Runoff

1.3790 in
7163 cu.ft

HYG Volume... 7164 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19148 hrs (ID: PDA-1A)
Computational Incr, Tm = .02553 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .12765 hrs
Unit receding limb, Tr = .51062 hrs
Total unit time, Tb = .63827 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1A 10Y
Tc = .1915 hrs
Drainage Area = 1.431 acres Runoff CN= 82

==========
Computational Time Increment = .02553 hrs
Computed Peak Time = 12.1527 hrs
Computed Peak Flow = 4.62 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 4.62 cfs
==========

DRAINAGE AREA

ID:PDA-1A
CN = 82
Area = 1.431 acres
S = 2.1951 in
0.2S = .4390 in

Cumulative Runoff

3.5299 in
18336 cu.ft

HYG Volume... 18338 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19148 hrs (ID: PDA-1A)
Computational Incr, Tm = .02553 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .12765 hrs
Unit receding limb, Tr = .51062 hrs
Total unit time, Tb = .63827 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1A 100Y
Tc = .1915 hrs
Drainage Area = 1.431 acres Runoff CN= 82

==========
Computational Time Increment = .02553 hrs
Computed Peak Time = 12.1527 hrs
Computed Peak Flow = 8.68 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 8.68 cfs
==========

DRAINAGE AREA

ID:PDA-1A
CN = 82
Area = 1.431 acres
S = 2.1951 in
0.2S = .4390 in

Cumulative Runoff

6.8138 in
35395 cu.ft

HYG Volume... 35399 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19148 hrs (ID: PDA-1A)
Computational Incr, Tm = .02553 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .12765 hrs
Unit receding limb, Tr = .51062 hrs
Total unit time, Tb = .63827 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1B 1Y
Tc = .2328 hrs
Drainage Area = 3.626 acres Runoff CN= 78

==========
Computational Time Increment = .03104 hrs
Computed Peak Time = 12.1992 hrs
Computed Peak Flow = 3.46 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 3.46 cfs
==========

DRAINAGE AREA

ID:PDA-1B
CN = 78
Area = 3.626 acres
S = 2.8205 in
0.2S = .5641 in

Cumulative Runoff

1.1288 in
14858 cu.ft

HYG Volume... 14858 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23281 hrs (ID: PDA-1B)
Computational Incr, Tm = .03104 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.65 cfs
Unit peak time Tp = .15521 hrs
Unit receding limb, Tr = .62083 hrs
Total unit time, Tb = .77603 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1B 10Y
Tc = .2328 hrs
Drainage Area = 3.626 acres Runoff CN= 78

==========
Computational Time Increment = .03104 hrs
Computed Peak Time = 12.1682 hrs
Computed Peak Flow = 9.93 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 9.78 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:PDA-1B
CN = 78
Area = 3.626 acres
S = 2.8205 in
0.2S = .5641 in

Cumulative Runoff

3.1410 in
41343 cu.ft

HYG Volume... 41344 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23281 hrs (ID: PDA-1B)
Computational Incr, Tm = .03104 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.65 cfs
Unit peak time Tp = .15521 hrs
Unit receding limb, Tr = .62083 hrs
Total unit time, Tb = .77603 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1B 100Y
Tc = .2328 hrs
Drainage Area = 3.626 acres Runoff CN= 78

==========
Computational Time Increment = .03104 hrs
Computed Peak Time = 12.1682 hrs
Computed Peak Flow = 19.70 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 19.46 cfs
==========

DRAINAGE AREA

ID:PDA-1B
CN = 78
Area = 3.626 acres
S = 2.8205 in
0.2S = .5641 in

Cumulative Runoff

6.3221 in
83214 cu.ft

HYG Volume... 83215 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23281 hrs (ID: PDA-1B)
Computational Incr, Tm = .03104 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.65 cfs
Unit peak time Tp = .15521 hrs
Unit receding limb, Tr = .62083 hrs
Total unit time, Tb = .77603 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1C 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .498 acres Runoff CN= 83

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .75 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .75 cfs
==========

DRAINAGE AREA

ID:PDA-1C
CN = 83
Area = .498 acres
S = 2.0482 in
0.2S = .4096 in

Cumulative Runoff

1.4466 in
2615 cu.ft

HYG Volume... 2614 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-1C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.77 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1C 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .498 acres Runoff CN= 83

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 1.84 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 1.84 cfs
==========

DRAINAGE AREA

ID:PDA-1C
CN = 83
Area = .498 acres
S = 2.0482 in
0.2S = .4096 in

Cumulative Runoff

3.6298 in
6562 cu.ft

HYG Volume... 6561 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-1C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.77 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1C 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .498 acres Runoff CN= 83

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 3.39 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 3.39 cfs
==========

DRAINAGE AREA

ID:PDA-1C
CN = 83
Area = .498 acres
S = 2.0482 in
0.2S = .4096 in

Cumulative Runoff

6.9365 in
12539 cu.ft

HYG Volume... 12539 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-1C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.77 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1D 1Y
Tc = .1962 hrs
Drainage Area = .445 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1372 hrs
Computed Peak Flow = 1.01 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 1.00 cfs
==========

DRAINAGE AREA

ID:PDA-1D
CN = 98
Area = .445 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

2.7683 in
4472 cu.ft

HYG Volume... 4470 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-1D)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 2.57 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52316 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1D 10Y
Tc = .1962 hrs
Drainage Area = .445 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1372 hrs
Computed Peak Flow = 1.86 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 1.85 cfs
==========

DRAINAGE AREA

ID:PDA-1D
CN = 98
Area = .445 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

5.2625 in
8501 cu.ft

HYG Volume... 8499 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-1D)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 2.57 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52316 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-1D 100Y
Tc = .1962 hrs
Drainage Area = .445 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1372 hrs
Computed Peak Flow = 3.06 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 3.04 cfs
==========

DRAINAGE AREA

ID:PDA-1D
CN = 98
Area = .445 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

8.7596 in
14150 cu.ft

HYG Volume... 14148 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-1D)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 2.57 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52316 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2A 1Y
Tc = .1962 hrs
Drainage Area = .220 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1371 hrs
Computed Peak Flow = .50 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = .49 cfs
==========

DRAINAGE AREA

ID:PDA-2A
CN = 98
Area = .220 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

2.7683 in
2211 cu.ft

HYG Volume... 2209 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-2A)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.27 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52315 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2A 10Y
Tc = .1962 hrs
Drainage Area = .220 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1371 hrs
Computed Peak Flow = .92 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = .92 cfs
==========

DRAINAGE AREA

ID:PDA-2A
CN = 98
Area = .220 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

5.2625 in
4203 cu.ft

HYG Volume... 4201 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-2A)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.27 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52315 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2A 100Y
Tc = .1962 hrs
Drainage Area = .220 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1371 hrs
Computed Peak Flow = 1.51 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 1.50 cfs
==========

DRAINAGE AREA

ID:PDA-2A
CN = 98
Area = .220 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

8.7596 in
6995 cu.ft

HYG Volume... 6994 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-2A)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.27 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52315 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2B 1Y
Tc = .2348 hrs
Drainage Area = 1.754 acres Runoff CN= 63

==========
Computational Time Increment = .03130 hrs
Computed Peak Time = 12.2393 hrs
Computed Peak Flow = .45 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2500 hrs
Peak Flow, Interpolated Output = .45 cfs
==========

DRAINAGE AREA

ID:PDA-2B
CN = 63
Area = 1.754 acres
S = 5.8730 in
0.2S = 1.1746 in

Cumulative Runoff

.4328 in
2756 cu.ft

HYG Volume... 2755 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23477 hrs (ID: PDA-2B)
Computational Incr, Tm = .03130 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .15651 hrs
Unit receding limb, Tr = .62605 hrs
Total unit time, Tb = .78256 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2B 10Y
Tc = .2348 hrs
Drainage Area = 1.754 acres Runoff CN= 63

==========
Computational Time Increment = .03130 hrs
Computed Peak Time = 12.1766 hrs
Computed Peak Flow = 2.66 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 2.66 cfs
==========

DRAINAGE AREA

ID:PDA-2B
CN = 63
Area = 1.754 acres
S = 5.8730 in
0.2S = 1.1746 in

Cumulative Runoff

1.8345 in
11680 cu.ft

HYG Volume... 11680 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23477 hrs (ID: PDA-2B)
Computational Incr, Tm = .03130 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .15651 hrs
Unit receding limb, Tr = .62605 hrs
Total unit time, Tb = .78256 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2B 100Y
Tc = .2348 hrs
Drainage Area = 1.754 acres Runoff CN= 63

==========
Computational Time Increment = .03130 hrs
Computed Peak Time = 12.1766 hrs
Computed Peak Flow = 6.80 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 6.71 cfs
==========

DRAINAGE AREA

ID:PDA-2B
CN = 63
Area = 1.754 acres
S = 5.8730 in
0.2S = 1.1746 in

Cumulative Runoff

4.4704 in
28463 cu.ft

HYG Volume... 28462 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23477 hrs (ID: PDA-2B)
Computational Incr, Tm = .03130 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .15651 hrs
Unit receding limb, Tr = .62605 hrs
Total unit time, Tb = .78256 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2C 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .078 acres Runoff CN= 71

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1217 hrs
Computed Peak Flow = .06 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .06 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:PDA-2C
CN = 71
Area = .078 acres
S = 4.0845 in
0.2S = .8169 in

Cumulative Runoff

.7604 in
215 cu.ft

HYG Volume... 215 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-2C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.06 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2C 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .078 acres Runoff CN= 71

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .20 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .20 cfs
==========

DRAINAGE AREA

ID:PDA-2C
CN = 71
Area = .078 acres
S = 4.0845 in
0.2S = .8169 in

Cumulative Runoff

2.5014 in
708 cu.ft

HYG Volume... 707 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-2C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.06 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-2C 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .078 acres Runoff CN= 71

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .44 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .44 cfs
==========

DRAINAGE AREA

ID:PDA-2C
CN = 71
Area = .078 acres
S = 4.0845 in
0.2S = .8169 in

Cumulative Runoff

5.4585 in
1546 cu.ft

HYG Volume... 1544 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-2C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.06 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-3 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .096 acres Runoff CN= 60

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1329 hrs
Computed Peak Flow = .02 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = .02 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:PDA-3
CN = 60
Area = .096 acres
S = 6.6667 in
0.2S = 1.3333 in

Cumulative Runoff

.3333 in
116 cu.ft

HYG Volume... 113 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-3)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.31 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-3 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .096 acres Runoff CN= 60

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .16 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .15 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:PDA-3
CN = 60
Area = .096 acres
S = 6.6667 in
0.2S = 1.3333 in

Cumulative Runoff

1.6026 in
558 cu.ft

HYG Volume... 558 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-3)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.31 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
HYG File - ID = - PDA-3 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .096 acres Runoff CN= 60

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .41 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .41 cfs
==========

DRAINAGE AREA

ID:PDA-3
CN = 60
Area = .096 acres
S = 6.6667 in
0.2S = 1.3333 in

Cumulative Runoff

4.1008 in
1429 cu.ft

HYG Volume... 1428 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-3)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.31 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

Solution to Mannings Open Channel Flow Equation
(Computed values are based on normal depth.)

CIRCULAR CROSS SECTION

Slope = .051624 ft/ft
Mannings n = 0.01300
Invert Elev. = 204.00 ft
Top of Channel = 205.82 ft
Diameter = 1.8200 ft

Elev. (ft)	Depth (ft)	Flow (cfs)	Vel. (ft/sec)	Area (sq.ft)	Top W. (ft)	Wet.P. (ft)	Hd (ft)	Froude No.
204.000	.00	.00	.00	.0000	.00	.00	.00	0.00
204.040	.04	.03	2.30	.0143	.53	.54	.03	2.48
204.080	.08	.15	3.63	.0402	.75	.77	.05	2.76
204.120	.12	.35	4.72	.0733	.90	.95	.08	2.92
204.160	.16	.64	5.68	.1120	1.03	1.10	.11	3.04
204.200	.20	1.02	6.54	.1555	1.14	1.23	.14	3.12
204.240	.24	1.49	7.33	.2029	1.23	1.35	.16	3.18
204.280	.28	2.05	8.06	.2538	1.31	1.47	.19	3.23
204.320	.32	2.69	8.75	.3079	1.39	1.58	.22	3.27
204.360	.36	3.42	9.39	.3646	1.45	1.68	.25	3.30
204.400	.40	4.23	9.99	.4238	1.51	1.78	.28	3.32
204.440	.44	5.12	10.56	.4851	1.56	1.87	.31	3.34
204.480	.48	6.09	11.10	.5484	1.60	1.96	.34	3.35
204.520	.52	7.12	11.61	.6134	1.64	2.05	.37	3.35
204.560	.56	8.22	12.09	.6798	1.68	2.14	.40	3.35
204.600	.60	9.38	12.55	.7477	1.71	2.23	.44	3.35
204.640	.64	10.60	12.98	.8167	1.74	2.31	.47	3.34
204.680	.68	11.88	13.39	.8867	1.76	2.39	.50	3.33
204.720	.72	13.20	13.78	.9575	1.78	2.48	.54	3.31
204.760	.76	14.56	14.15	1.0290	1.80	2.56	.57	3.30
204.800	.80	15.97	14.50	1.1011	1.81	2.64	.61	3.28
204.840	.84	17.41	14.83	1.1735	1.81	2.72	.65	3.25
204.880	.88	18.87	15.14	1.2462	1.82	2.80	.69	3.23
204.920	.92	20.36	15.43	1.3190	1.82	2.88	.72	3.20
204.960	.96	21.86	15.71	1.3917	1.82	2.96	.77	3.16
205.000	1.00	23.37	15.96	1.4643	1.81	3.04	.81	3.13
205.040	1.04	24.89	16.20	1.5366	1.80	3.12	.85	3.09
205.080	1.08	26.40	16.41	1.6084	1.79	3.20	.90	3.05
205.120	1.12	27.90	16.61	1.6795	1.77	3.28	.95	3.01
205.160	1.16	29.39	16.79	1.7500	1.75	3.37	1.00	2.96
205.200	1.20	30.85	16.96	1.8195	1.73	3.45	1.05	2.91
205.240	1.24	32.28	17.10	1.8879	1.70	3.53	1.11	2.86
205.280	1.28	33.67	17.22	1.9551	1.66	3.62	1.18	2.80
205.320	1.32	35.01	17.32	2.0209	1.62	3.71	1.24	2.74
205.360	1.36	36.29	17.41	2.0851	1.58	3.80	1.32	2.67
205.400	1.40	37.50	17.47	2.1474	1.53	3.89	1.40	2.60
205.440	1.44	38.64	17.50	2.2077	1.48	3.99	1.49	2.53

Solution to Mannings Open Channel Flow Equation
(Computed values are based on normal depth.)

CIRCULAR CROSS SECTION

Slope = .051624 ft/ft
Mannings n = 0.01300
Invert Elev. = 204.00 ft
Top of Channel = 205.82 ft
Diameter = 1.8200 ft

Elev. (ft)	Depth (ft)	Flow (cfs)	Vel. (ft/sec)	Area (sq.ft)	Top W. (ft)	Wet.P. (ft)	Hd (ft)	Froude No.
205.480	1.48	39.68	17.51	2.2656	1.42	4.09	1.60	2.44
205.520	1.52	40.62	17.50	2.3211	1.35	4.20	1.72	2.35
205.560	1.56	41.44	17.46	2.3736	1.27	4.31	1.86	2.25
205.600	1.60	42.11	17.38	2.4228	1.19	4.43	2.04	2.14
205.640	1.64	42.62	17.27	2.4683	1.09	4.55	2.27	2.02
205.680	1.68	42.93	17.11	2.5095	.97	4.69	2.59	1.87
205.708	1.71	42.99	16.96	2.5350	.88	4.80	2.89	1.76
205.720	1.72	42.98	16.88	2.5456	.83	4.86	3.07	1.70
205.760	1.76	42.68	16.57	2.5754	.65	5.05	3.96	1.47
205.800	1.80	41.72	16.07	2.5965	.38	5.34	6.84	1.08
205.820	1.82	39.97	15.36	2.6016	.00	5.72	****	****

SOLUTION TO MANNINGS OPEN CHANNEL FLOW EQUATION
(Computed values are based on normal depth.)

Q = (k/n) * A * (R**2/3) * (S**1/2)

where:	English Units	SI units
Q = Channel flow	cfs	cms
k = Mannings constant	1.485919	1.0
n = Mannings n	no units	no units
R = Hydraulic radius, A/WP	ft	m
A = X-section flow area	sq.ft.	sq.m.
WP = Wetted perimeter	ft	m
S = Slope	ft/ft	m/m

ADDITIONAL OUTPUT VARIABLES:
Vel= Q/A
Hd = A/TpW
F = Vel / (g * Hd)**1/2

where:	English Units	SI units
Vel= Velocity	ft/sec	m/sec
Q = Channel flow	cfs	cms
A = X-section flow area	sq.ft.	sq.m.
Hd = Hydraulic depth	ft	m
TpW= Top width for flow area	ft	m
g = Acceleration of gravity	ft/sec**2	m/sec**2
F = Froude No.	no units	no units

(Subcritical: F < 1; Critical: F = 1; Supercritical: F > 1)

MODIFIED PULS REACH DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - JUNC 1C 1Y
Outflow HYG file = NONE STORED - REACH 1C 1Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0329 hrs (based on Wtd.Q = .86 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 204.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
204.00	.00	0	0	.00	.00	.00
204.04	.03	11	394	.00	.03	.15
204.08	.15	30	551	.00	.15	.48
204.12	.35	54	668	.00	.35	.95
204.16	.64	83	762	.00	.64	1.56
204.20	1.02	115	841	.00	1.02	2.29
204.24	1.49	150	910	.00	1.49	3.15
204.28	2.05	188	971	.00	2.05	4.13
204.32	2.69	228	1024	.00	2.69	5.22
204.36	3.42	269	1072	.00	3.42	6.42
204.40	4.23	313	1114	.00	4.23	7.71
204.44	5.12	358	1152	.00	5.12	9.11
204.48	6.09	405	1185	.00	6.09	10.59
204.52	7.12	453	1215	.00	7.12	12.16
204.56	8.22	502	1242	.00	8.22	13.80
204.60	9.38	553	1265	.00	9.38	15.52
204.64	10.60	604	1284	.00	10.60	17.31
204.68	11.88	655	1301	.00	11.88	19.16
204.72	13.20	708	1315	.00	13.20	21.06
204.76	14.56	760	1327	.00	14.56	23.01

MODIFIED PULS REACH DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - JUNC 1C 1Y
Outflow HYG file = NONE STORED - REACH 1C 1Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0329 hrs (based on Wtd.Q = .86 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 204.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
204.80	15.97	814	1335	.00	15.97	25.01
204.84	17.41	867	1341	.00	17.41	27.04
204.88	18.87	921	1344	.00	18.87	29.10
204.92	20.36	975	1345	.00	20.36	31.19
204.96	21.86	1028	1345	.00	21.86	33.29
205.00	23.37	1082	1345	.00	23.37	35.40
205.04	24.89	1136	1345	.00	24.89	37.50
205.08	26.40	1189	1345	.00	26.40	39.61
205.12	27.90	1241	1345	.00	27.90	41.69
205.16	29.39	1293	1345	.00	29.39	43.76
205.20	30.85	1345	1345	.00	30.85	45.79
205.24	32.28	1395	1345	.00	32.28	47.78
205.28	33.67	1445	1345	.00	33.67	49.72
205.32	35.01	1493	1345	.00	35.01	51.60
205.36	36.29	1541	1345	.00	36.29	53.41
205.40	37.50	1587	1345	.00	37.50	55.14
205.44	38.64	1631	1345	.00	38.64	56.77
205.48	39.68	1674	1345	.00	39.68	58.29
205.52	40.62	1715	1345	.00	40.62	59.68
205.56	41.44	1754	1345	.00	41.44	60.93

MODIFIED PULS REACH DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - JUNC 1C 1Y
Outflow HYG file = NONE STORED - REACH 1C 1Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0329 hrs (based on Wtd.Q = .86 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 204.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
205.60	42.11	1790	1345	.00	42.11	62.01
205.64	42.62	1824	1345	.00	42.62	62.89
205.68	42.93	1855	1345	.00	42.93	63.53
205.71	42.99	1873	1345	.00	42.99	63.81

MODIFIED PULS REACH ROUTING SUMMARY

```
HYG Dir          = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow  HYG file = NONE STORED - JUNC 1C          1Y
Outflow HYG file = NONE STORED - REACH 1C         1Y

Reach Link Data  = REACH 1C
Reach Length     = 739.00 ft
Approx. Total Tt = .0329 hrs  (based on Wtd.Q = .86 cfs)
Reach Channel    = Chn-Cir - 1C  (Chn-Circular)
Overflow Elev.   = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS
---------------------------------
Starting WS Elev   =   204.00 ft
Starting Volume    =        0 cu.ft
Starting Outflow   =      .00 cfs
Starting Infiltr.  =      .00 cfs
Starting Total Qout=      .00 cfs
Time Increment     =    .0500 hrs


INFLOW/OUTFLOW HYDROGRAPH SUMMARY
=====================================================
Peak Inflow       =      2.03 cfs    at   12.4500 hrs
Peak Outflow      =      2.03 cfs    at   12.4500 hrs
=====================================================


MASS BALANCE (cu.ft)
--------------------------
+ Initial Vol  =           0
+ HYG Vol IN   =       14834
- Infiltration =           0
- HYG Vol OUT  =       14834
- Retained Vol =           1
                ----------
Unrouted Vol =           0 cu.ft  (.000% of Inflow Volume)


WARNING: For weighted average inflow, the approximate total
travel time through entire reach is shorter than
the inflow hydrograph time step. Consider reducing
calculation time step.
Wtd.Avg.Q = .86 cfs   Approx.Total Tt = .0329 hrs
```

MODIFIED PULS REACH ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - JUNC 1C 10Y
Outflow HYG file = NONE STORED - REACH 1C 10Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0245 hrs (based on Wtd.Q = 2.33 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	204.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	5.07 cfs	at	12.4500 hrs
Peak Outflow	=	5.06 cfs	at	12.5000 hrs

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	41320
- Infiltration	=	0
- HYG Vol OUT	=	41319
- Retained Vol	=	1
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

WARNING: For weighted average inflow, the approximate total travel time through entire reach is shorter than the inflow hydrograph time step. Consider reducing calculation time step.
Wtd.Avg.Q = 2.33 cfs Approx.Total Tt = .0245 hrs

MODIFIED PULS REACH ROUTING SUMMARY

```
HYG Dir          = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow  HYG file = NONE STORED - JUNC 1C          100Y
Outflow HYG file = NONE STORED - REACH 1C         100Y

Reach Link Data  = REACH 1C
Reach Length     = 739.00 ft
Approx. Total Tt = .0206 hrs  (based on Wtd.Q = 4.19 cfs)
Reach Channel    = Chn-Cir - 1C  (Chn-Circular)
Overflow Elev.   = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS
---------------------------------
Starting WS Elev   =   204.00 ft
Starting Volume    =        0 cu.ft
Starting Outflow   =      .00 cfs
Starting Infiltr.  =      .00 cfs
Starting Total Qout=      .00 cfs
Time Increment     =    .0500 hrs


INFLOW/OUTFLOW HYDROGRAPH SUMMARY
=====================================================
Peak Inflow       =      9.16 cfs    at   12.4500 hrs
Peak Outflow      =      9.16 cfs    at   12.5000 hrs
=====================================================


MASS BALANCE (cu.ft)
--------------------------
+ Initial Vol  =           0
+ HYG Vol IN   =       83191
- Infiltration =           0
- HYG Vol OUT  =       83190
- Retained Vol =           1
                ----------
Unrouted Vol = -            cu.ft  (.000% of Inflow Volume)


WARNING: For weighted average inflow, the approximate total
travel time through entire reach is shorter than
the inflow hydrograph time step. Consider reducing
calculation time step.
Wtd.Avg.Q = 4.19 cfs   Approx.Total Tt = .0206 hrs
```

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
REACH 1C	JUNC 1C		REACH 1C	1Y
ADDLINK 1D	PDA-1C		PDA-1C	1Y
OCS 1A	SYSTEM 1A	IN	OCS 1A	1Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	REACH 1C	1Y	14834	12.4500	2.03
	PDA-1C	1Y	2614	12.1000	.75
	OCS 1A	1Y	0	9.2500	.00

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	1Y	17448	12.4000	2.27

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 1Y

Peak Discharge = 2.27 cfs
Time to Peak = 12.4000 hrs
HYG Volume = 17448 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.9500	.00	.00	.00	.00	.00
9.2000	.00	.00	.00	.00	.00
9.4500	.00	.00	.01	.01	.01
9.7000	.01	.01	.01	.01	.01
9.9500	.01	.01	.01	.01	.01
10.2000	.01	.01	.01	.01	.02
10.4500	.02	.02	.02	.02	.02
10.7000	.02	.03	.03	.03	.03
10.9500	.03	.04	.04	.04	.05
11.2000	.05	.06	.06	.07	.07
11.4500	.08	.09	.11	.14	.17
11.7000	.21	.27	.33	.41	.51
11.9500	.73	1.03	1.31	1.62	1.77
12.2000	1.84	1.99	2.14	2.23	2.27
12.4500	2.26	2.20	2.13	2.04	1.95
12.7000	1.84	1.74	1.64	1.55	1.47
12.9500	1.39	1.32	1.26	1.19	1.12
13.2000	1.06	1.00	.94	.88	.82
13.4500	.77	.72	.69	.66	.64
13.7000	.62	.59	.58	.56	.54
13.9500	.53	.51	.50	.49	.48
14.2000	.47	.46	.45	.44	.44
14.4500	.43	.42	.41	.41	.40
14.7000	.39	.39	.38	.38	.37
14.9500	.37	.36	.36	.35	.35
15.2000	.35	.34	.34	.33	.33
15.4500	.32	.32	.32	.31	.31
15.7000	.30	.30	.29	.29	.28
15.9500	.28	.28	.27	.27	.26
16.2000	.26	.25	.25	.25	.24
16.4500	.24	.24	.23	.23	.23

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.7000	.22	.22	.22	.22	.21
16.9500	.21	.21	.21	.21	.20
17.2000	.20	.20	.20	.20	.19
17.4500	.19	.19	.19	.19	.18
17.7000	.18	.18	.18	.18	.17
17.9500	.17	.17	.17	.17	.16
18.2000	.16	.16	.16	.16	.16
18.4500	.15	.15	.15	.15	.15
18.7000	.15	.15	.14	.14	.14
18.9500	.14	.14	.14	.14	.14
19.2000	.14	.14	.14	.13	.13
19.4500	.13	.13	.13	.13	.13
19.7000	.13	.13	.13	.13	.13
19.9500	.13	.12	.12	.12	.12
20.2000	.12	.12	.12	.12	.12
20.4500	.12	.12	.12	.12	.12
20.7000	.12	.12	.12	.11	.11
20.9500	.11	.11	.11	.11	.11
21.2000	.11	.11	.11	.11	.11
21.4500	.11	.11	.11	.11	.11
21.7000	.11	.11	.11	.11	.10
21.9500	.10	.10	.10	.10	.10
22.2000	.10	.10	.10	.10	.10
22.4500	.10	.10	.10	.10	.10
22.7000	.10	.10	.10	.10	.10
22.9500	.10	.10	.09	.09	.09
23.2000	.09	.09	.09	.09	.09
23.4500	.09	.09	.09	.09	.09
23.7000	.09	.09	.09	.09	.09
23.9500	.09	.09	.08	.08	.07
24.2000	.07	.07	.07	.06	.06
24.4500	.06	.05	.05	.05	.05
24.7000	.04	.04	.04	.04	.03
24.9500	.03	.03	.03	.03	.03
25.2000	.03	.03	.02	.02	.02
25.4500	.02	.02	.02	.02	.02
25.7000	.02	.02	.02	.02	.02
25.9500	.02	.02	.02	.02	.02
26.2000	.02	.02	.02	.02	.01
26.4500	.01	.01	.01	.01	.01
26.7000	.01	.01	.01	.01	.01
26.9500	.01	.01	.01	.01	.01
27.2000	.01	.01	.01	.01	.01
27.4500	.01	.01	.01	.01	.01
27.7000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
27.9500	.01	.01	.01	.01	.01
28.2000	.01	.01	.01	.01	.01
28.4500	.01	.01	.01	.01	.01
28.7000	.01	.01	.01	.00	.00
28.9500	.00	.00	.00	.00	.00
29.2000	.00	.00	.00	.00	.00
29.4500	.00	.00	.00	.00	.00
29.7000	.00	.00	.00	.00	.00
29.9500	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
REACH 1C	JUNC 1C		REACH 1C	10Y
ADDLINK 1D	PDA-1C		PDA-1C	10Y
OCS 1A	SYSTEM 1A	IN	OCS 1A	10Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	REACH 1C	10Y	41319	12.5000	5.06
	PDA-1C	10Y	6561	12.1000	1.84
	OCS 1A	10Y	7800	12.6000	1.57

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	10Y	55680	12.4500	7.00

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 10Y

Peak Discharge = 7.00 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 55680 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.4000	.00	.00	.00	.00	.00
6.6500	.00	.00	.00	.00	.00
6.9000	.00	.00	.00	.00	.00
7.1500	.01	.01	.01	.01	.01
7.4000	.01	.01	.01	.01	.01
7.6500	.01	.01	.01	.01	.01
7.9000	.01	.01	.01	.01	.01
8.1500	.02	.02	.02	.02	.02
8.4000	.02	.02	.02	.03	.03
8.6500	.03	.03	.03	.04	.04
8.9000	.04	.04	.05	.05	.05
9.1500	.05	.06	.06	.06	.07
9.4000	.08	.09	.09	.10	.11
9.6500	.11	.12	.13	.14	.14
9.9000	.15	.16	.17	.18	.20
10.1500	.21	.22	.23	.24	.25
10.4000	.27	.28	.30	.31	.33
10.6500	.35	.36	.38	.40	.41
10.9000	.43	.45	.48	.50	.52
11.1500	.55	.58	.61	.64	.68
11.4000	.73	.77	.82	.91	1.00
11.6500	1.14	1.31	1.49	1.70	1.94
11.9000	2.22	2.83	3.64	4.20	4.71
12.1500	4.89	5.04	5.58	6.14	6.58
12.4000	6.88	7.00	6.99	6.92	6.80
12.6500	6.65	6.47	6.27	6.05	5.81
12.9000	5.58	5.33	5.07	4.82	4.58
13.1500	4.34	4.12	3.91	3.71	3.53
13.4000	3.34	3.13	2.91	2.74	2.59
13.6500	2.46	2.34	2.24	2.14	2.06
13.9000	1.97	1.90	1.83	1.77	1.71

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.1500	1.66	1.60	1.55	1.50	1.45
14.4000	1.40	1.36	1.32	1.28	1.24
14.6500	1.21	1.18	1.14	1.11	1.08
14.9000	1.05	1.03	1.00	.98	.96
15.1500	.93	.91	.89	.87	.85
15.4000	.84	.82	.81	.79	.78
15.6500	.76	.75	.73	.72	.70
15.9000	.69	.67	.65	.64	.62
16.1500	.61	.60	.58	.57	.56
16.4000	.55	.55	.54	.53	.52
16.6500	.51	.51	.50	.49	.48
16.9000	.48	.47	.46	.46	.45
17.1500	.45	.44	.44	.43	.43
17.4000	.42	.42	.41	.41	.40
17.6500	.40	.39	.39	.38	.38
17.9000	.38	.37	.37	.36	.36
18.1500	.35	.35	.35	.34	.34
18.4000	.34	.33	.33	.33	.32
18.6500	.32	.32	.32	.32	.31
18.9000	.31	.31	.31	.31	.30
19.1500	.30	.30	.30	.30	.30
19.4000	.29	.29	.29	.29	.29
19.6500	.29	.28	.28	.28	.28
19.9000	.28	.28	.28	.27	.27
20.1500	.27	.27	.27	.27	.27
20.4000	.26	.26	.26	.26	.26
20.6500	.26	.26	.26	.25	.25
20.9000	.25	.25	.25	.25	.25
21.1500	.25	.24	.24	.24	.24
21.4000	.24	.24	.24	.24	.24
21.6500	.23	.23	.23	.23	.23
21.9000	.23	.23	.23	.23	.22
22.1500	.22	.22	.22	.22	.22
22.4000	.22	.22	.22	.22	.21
22.6500	.21	.21	.21	.21	.21
22.9000	.21	.21	.21	.21	.20
23.1500	.20	.20	.20	.20	.20
23.4000	.20	.20	.20	.20	.19
23.6500	.19	.19	.19	.19	.19
23.9000	.19	.19	.19	.18	.16
24.1500	.16	.15	.15	.14	.13
24.4000	.12	.11	.10	.10	.09
24.6500	.08	.08	.08	.07	.07
24.9000	.06	.06	.06	.05	.05
25.1500	.05	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
25.4000	.04	.03	.03	.03	.03
25.6500	.03	.03	.03	.03	.02
25.9000	.02	.02	.02	.02	.02
26.1500	.02	.02	.02	.02	.02
26.4000	.02	.02	.02	.02	.02
26.6500	.02	.02	.02	.02	.02
26.9000	.02	.01	.01	.01	.01
27.1500	.01	.01	.01	.01	.01
27.4000	.01	.01	.01	.01	.01
27.6500	.01	.01	.01	.01	.01
27.9000	.01	.01	.01	.01	.01
28.1500	.01	.01	.01	.01	.01
28.4000	.01	.01	.01	.01	.01
28.6500	.01	.01	.01	.01	.01
28.9000	.01	.01	.01	.01	.01
29.1500	.01	.01	.01	.01	.01
29.4000	.00	.00	.00	.00	.00
29.6500	.00	.00	.00	.00	.00
29.9000	.00	.00	.00	.00	.00
30.1500	.00	.00	.00	.00	.00
30.4000	.00	.00	.00		

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
REACH 1C	JUNC 1C		REACH 1C	100Y
ADDLINK 1D	PDA-1C		PDA-1C	100Y
OCS 1A	SYSTEM 1A	IN	OCS 1A	100Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	REACH 1C	100Y	83190	12.5000	9.16
	PDA-1C	100Y	12539	12.1000	3.39
	OCS 1A	100Y	25326	12.5500	3.83

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	100Y	121055	12.4500	13.72

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 100Y

Peak Discharge = 13.72 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 121055 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.3500	.00	.00	.00	.00	.00
4.6000	.00	.00	.00	.00	.00
4.8500	.00	.00	.01	.01	.01
5.1000	.01	.01	.01	.01	.01
5.3500	.01	.01	.01	.01	.01
5.6000	.01	.01	.01	.01	.01
5.8500	.01	.01	.01	.01	.02
6.1000	.02	.02	.02	.02	.02
6.3500	.02	.02	.03	.03	.03
6.6000	.03	.03	.03	.04	.04
6.8500	.04	.04	.04	.05	.05
7.1000	.05	.05	.06	.06	.07
7.3500	.07	.08	.09	.09	.10
7.6000	.10	.11	.11	.12	.13
7.8500	.13	.14	.15	.16	.16
8.1000	.17	.18	.19	.20	.21
8.3500	.22	.23	.24	.25	.26
8.6000	.27	.28	.30	.31	.32
8.8500	.34	.35	.37	.38	.39
9.1000	.41	.43	.44	.46	.48
9.3500	.50	.51	.53	.55	.57
9.6000	.58	.60	.62	.64	.66
9.8500	.68	.70	.72	.74	.76
10.1000	.79	.81	.83	.86	.89
10.3500	.92	.95	.98	1.01	1.04
10.6000	1.07	1.10	1.12	1.15	1.18
10.8500	1.21	1.25	1.28	1.32	1.35
11.1000	1.39	1.43	1.48	1.53	1.59
11.3500	1.65	1.73	1.81	1.90	2.05
11.6000	2.23	2.50	2.84	3.24	3.65
11.8500	4.11	4.70	5.99	7.73	9.23

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.1000	10.50	11.12	11.50	12.19	12.81
12.3500	13.29	13.59	13.72	13.65	13.55
12.6000	13.21	12.90	12.56	12.19	11.81
12.8500	11.42	11.04	10.67	10.30	9.95
13.1000	9.60	9.27	8.94	8.62	8.31
13.3500	8.01	7.71	7.42	7.15	6.88
13.6000	6.62	6.36	6.12	5.88	5.66
13.8500	5.44	5.22	5.01	4.81	4.62
14.1000	4.43	4.26	4.05	3.86	3.66
14.3500	3.47	3.28	3.11	2.98	2.85
14.6000	2.74	2.64	2.55	2.47	2.39
14.8500	2.33	2.27	2.21	2.15	2.10
15.1000	2.05	2.00	1.96	1.92	1.87
15.3500	1.84	1.80	1.77	1.73	1.70
15.6000	1.66	1.63	1.59	1.56	1.53
15.8500	1.49	1.45	1.42	1.38	1.35
16.1000	1.32	1.30	1.27	1.24	1.21
16.3500	1.19	1.16	1.14	1.11	1.09
16.6000	1.06	1.04	1.02	1.00	.98
16.8500	.96	.95	.93	.92	.90
17.1000	.89	.88	.86	.85	.84
17.3500	.82	.81	.80	.79	.78
17.6000	.77	.75	.74	.73	.72
17.8500	.70	.69	.68	.67	.66
18.1000	.65	.64	.63	.62	.61
18.3500	.61	.60	.59	.58	.58
18.6000	.57	.57	.56	.56	.55
18.8500	.55	.54	.54	.53	.53
19.1000	.53	.53	.52	.52	.52
19.3500	.52	.51	.51	.51	.51
19.6000	.50	.50	.50	.50	.49
19.8500	.49	.49	.48	.48	.48
20.1000	.48	.47	.47	.47	.47
20.3500	.47	.46	.46	.46	.46
20.6000	.45	.45	.45	.45	.45
20.8500	.44	.44	.44	.44	.44
21.1000	.43	.43	.43	.43	.43
21.3500	.42	.42	.42	.42	.42
21.6000	.41	.41	.41	.41	.41
21.8500	.40	.40	.40	.40	.40
22.1000	.39	.39	.39	.39	.39
22.3500	.38	.38	.38	.38	.38
22.6000	.37	.37	.37	.37	.37
22.8500	.36	.36	.36	.36	.36
23.1000	.36	.35	.35	.35	.35

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
23.3500	.35	.35	.34	.34	.34
23.6000	.34	.34	.33	.33	.33
23.8500	.33	.33	.32	.32	.31
24.1000	.29	.27	.26	.25	.23
24.3500	.21	.19	.18	.16	.15
24.6000	.14	.13	.12	.11	.10
24.8500	.09	.09	.08	.08	.07
25.1000	.07	.07	.06	.06	.05
25.3500	.05	.05	.05	.04	.04
25.6000	.04	.04	.03	.03	.03
25.8500	.03	.03	.03	.03	.03
26.1000	.02	.02	.02	.02	.02
26.3500	.02	.02	.02	.02	.02
26.6000	.02	.02	.02	.02	.02
26.8500	.02	.02	.02	.02	.02
27.1000	.02	.02	.02	.01	.01
27.3500	.01	.01	.01	.01	.01
27.6000	.01	.01	.01	.01	.01
27.8500	.01	.01	.01	.01	.01
28.1000	.01	.01	.01	.01	.01
28.3500	.01	.01	.01	.01	.01
28.6000	.01	.01	.01	.01	.01
28.8500	.01	.01	.01	.01	.01
29.1000	.01	.01	.01	.01	.01
29.3500	.01	.01	.01	.01	.01
29.6000	.01	.00	.00	.00	.00
29.8500	.00	.00	.00	.00	.00
30.1000	.00	.00	.00	.00	.00
30.3500	.00	.00	.00	.00	.00
30.6000	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2C	PDA-2C		PDA-2C	1Y
PARKING ROOF	PARKING ROOF IN		PARKING ROOF	1Y
ADDLINK 2B	PDA-2B		PDA-2B	1Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2C	1Y	215	12.1000	.06
	PARKING ROOF	1Y	1040	12.5000	.17
	PDA-2B	1Y	2755	12.2500	.45

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	1Y	4010	12.3500	.57

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 1Y

Peak Discharge = .57 cfs
Time to Peak = 12.3500 hrs
HYG Volume = 4010 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.5000	.00	.00	.00	.00	.00
11.7500	.01	.01	.01	.02	.04
12.0000	.09	.18	.30	.40	.47
12.2500	.50	.55	.57	.57	.55
12.5000	.52	.47	.43	.38	.34
12.7500	.31	.29	.27	.25	.24
13.0000	.23	.21	.20	.19	.19
13.2500	.18	.18	.17	.17	.16
13.5000	.16	.16	.16	.15	.15
13.7500	.15	.14	.14	.14	.14
14.0000	.13	.13	.13	.13	.13
14.2500	.12	.12	.12	.12	.12
14.5000	.12	.12	.11	.11	.11
14.7500	.11	.11	.11	.11	.11
15.0000	.10	.10	.10	.10	.10
15.2500	.10	.10	.10	.09	.09
15.5000	.09	.09	.09	.09	.09
15.7500	.08	.08	.08	.08	.08
16.0000	.08	.08	.07	.07	.07
16.2500	.07	.07	.07	.07	.07
16.5000	.07	.07	.07	.07	.07
16.7500	.06	.06	.06	.06	.06
17.0000	.06	.06	.06	.06	.06
17.2500	.06	.06	.06	.06	.06
17.5000	.05	.05	.05	.05	.05
17.7500	.05	.05	.05	.05	.05
18.0000	.05	.05	.05	.05	.05
18.2500	.05	.05	.05	.04	.04
18.5000	.04	.04	.04	.04	.04
18.7500	.04	.04	.04	.04	.04
19.0000	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.2500	.04	.04	.04	.04	.04
19.5000	.04	.04	.04	.04	.04
19.7500	.04	.04	.04	.04	.04
20.0000	.04	.04	.04	.04	.04
20.2500	.04	.04	.04	.04	.04
20.5000	.04	.04	.04	.04	.04
20.7500	.04	.04	.04	.04	.04
21.0000	.04	.04	.04	.04	.03
21.2500	.03	.03	.03	.03	.03
21.5000	.03	.03	.03	.03	.03
21.7500	.03	.03	.03	.03	.03
22.0000	.03	.03	.03	.03	.03
22.2500	.03	.03	.03	.03	.03
22.5000	.03	.03	.03	.03	.03
22.7500	.03	.03	.03	.03	.03
23.0000	.03	.03	.03	.03	.03
23.2500	.03	.03	.03	.03	.03
23.5000	.03	.03	.03	.03	.03
23.7500	.03	.03	.03	.03	.03
24.0000	.03	.02	.02	.02	.01
24.2500	.01	.01	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2C	PDA-2C		PDA-2C	10Y
PARKING ROOF	PARKING ROOF IN		PARKING ROOF	10Y
ADDLINK 2B	PDA-2B		PDA-2B	10Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2C	10Y	707	12.1000	.20
	PARKING ROOF	10Y	3032	12.2500	.65
	PDA-2B	10Y	11680	12.2000	2.66

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	10Y	15419	12.2000	3.40

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 10Y

Peak Discharge = 3.40 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 15419 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.6000	.00	.00	.00	.00	.00
9.8500	.00	.00	.00	.00	.00
10.1000	.00	.00	.00	.00	.00
10.3500	.00	.00	.00	.00	.00
10.6000	.01	.01	.01	.01	.02
10.8500	.02	.03	.03	.04	.04
11.1000	.05	.05	.06	.07	.08
11.3500	.09	.10	.11	.13	.14
11.6000	.17	.21	.28	.41	.56
11.8500	.73	.93	1.23	1.69	2.27
12.1000	2.87	3.29	3.40	3.27	3.01
12.3500	2.74	2.48	2.23	1.97	1.72
12.6000	1.48	1.28	1.13	1.01	.92
12.8500	.84	.79	.73	.69	.65
13.1000	.61	.58	.56	.54	.52
13.3500	.51	.50	.49	.48	.47
13.6000	.46	.45	.44	.43	.42
13.8500	.42	.41	.40	.39	.38
14.1000	.38	.37	.36	.36	.35
14.3500	.35	.34	.34	.34	.33
14.6000	.33	.32	.32	.32	.31
14.8500	.31	.30	.30	.30	.29
15.1000	.29	.29	.28	.28	.27
15.3500	.27	.27	.26	.26	.25
15.6000	.25	.24	.24	.24	.23
15.8500	.23	.22	.22	.22	.21
16.1000	.21	.20	.20	.20	.20
16.3500	.19	.19	.19	.19	.19
16.6000	.18	.18	.18	.18	.18
16.8500	.18	.17	.17	.17	.17
17.1000	.17	.16	.16	.16	.16

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.3500	.16	.15	.15	.15	.15
17.6000	.15	.15	.14	.14	.14
17.8500	.14	.14	.13	.13	.13
18.1000	.13	.13	.13	.13	.12
18.3500	.12	.12	.12	.12	.12
18.6000	.12	.12	.12	.12	.12
18.8500	.12	.12	.12	.12	.12
19.1000	.12	.11	.11	.11	.11
19.3500	.11	.11	.11	.11	.11
19.6000	.11	.11	.11	.11	.11
19.8500	.11	.11	.11	.11	.10
20.1000	.10	.10	.10	.10	.10
20.3500	.10	.10	.10	.10	.10
20.6000	.10	.10	.10	.10	.10
20.8500	.10	.10	.10	.10	.10
21.1000	.10	.09	.09	.09	.09
21.3500	.09	.09	.09	.09	.09
21.6000	.09	.09	.09	.09	.09
21.8500	.09	.09	.09	.09	.09
22.1000	.09	.09	.09	.09	.09
22.3500	.08	.08	.08	.08	.08
22.6000	.08	.08	.08	.08	.08
22.8500	.08	.08	.08	.08	.08
23.1000	.08	.08	.08	.08	.08
23.3500	.08	.08	.08	.07	.07
23.6000	.07	.07	.07	.07	.07
23.8500	.07	.07	.07	.07	.07
24.1000	.06	.04	.03	.02	.01
24.3500	.01	.01	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2C	PDA-2C		PDA-2C	100Y
PARKING ROOF	PARKING ROOF IN		PARKING ROOF	100Y
ADDLINK 2B	PDA-2B		PDA-2B	100Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2C	100Y	1544	12.1000	.44
	PARKING ROOF	100Y	5825	12.2500	1.24
	PDA-2B	100Y	28462	12.2000	6.71

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	100Y	35831	12.2000	8.20

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 100Y

Peak Discharge = 8.20 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 35831 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00
8.4000	.00	.00	.00	.00	.00
8.6500	.00	.00	.01	.01	.01
8.9000	.01	.02	.02	.02	.03
9.1500	.03	.03	.04	.04	.05
9.4000	.05	.06	.06	.06	.07
9.6500	.07	.08	.08	.09	.10
9.9000	.10	.11	.11	.12	.13
10.1500	.14	.17	.19	.21	.23
10.4000	.25	.26	.28	.30	.31
10.6500	.33	.34	.36	.37	.39
10.9000	.40	.42	.43	.45	.47
11.1500	.49	.52	.55	.59	.63
11.4000	.67	.71	.76	.83	.92
11.6500	1.08	1.29	1.58	1.93	2.34
11.9000	2.80	3.48	4.57	5.88	7.24
12.1500	8.13	8.20	7.67	6.86	6.06
12.4000	5.35	4.69	4.06	3.49	3.00
12.6500	2.58	2.25	2.01	1.83	1.69
12.9000	1.58	1.48	1.39	1.31	1.24
13.1500	1.18	1.13	1.09	1.06	1.04
13.4000	1.01	.99	.97	.95	.93
13.6500	.91	.90	.88	.86	.84
13.9000	.83	.81	.79	.78	.76
14.1500	.75	.73	.72	.71	.70
14.4000	.69	.69	.68	.67	.66
14.6500	.65	.64	.64	.63	.62
14.9000	.61	.60	.59	.59	.58
15.1500	.57	.56	.55	.55	.54

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.4000	.53	.52	.51	.50	.50
15.6500	.49	.48	.47	.46	.45
15.9000	.45	.44	.43	.42	.41
16.1500	.41	.40	.39	.39	.38
16.4000	.38	.38	.37	.37	.36
16.6500	.36	.36	.35	.35	.35
16.9000	.34	.34	.34	.33	.33
17.1500	.32	.32	.32	.31	.31
17.4000	.31	.30	.30	.29	.29
17.6500	.29	.28	.28	.28	.27
17.9000	.27	.26	.26	.26	.25
18.1500	.25	.25	.25	.24	.24
18.4000	.24	.24	.24	.24	.24
18.6500	.24	.23	.23	.23	.23
18.9000	.23	.23	.23	.23	.23
19.1500	.22	.22	.22	.22	.22
19.4000	.22	.22	.22	.22	.21
19.6500	.21	.21	.21	.21	.21
19.9000	.21	.21	.21	.20	.20
20.1500	.20	.20	.20	.20	.20
20.4000	.20	.20	.20	.20	.19
20.6500	.19	.19	.19	.19	.19
20.9000	.19	.19	.19	.19	.19
21.1500	.19	.18	.18	.18	.18
21.4000	.18	.18	.18	.18	.18
21.6500	.18	.18	.17	.17	.17
21.9000	.17	.17	.17	.17	.17
22.1500	.17	.17	.17	.17	.16
22.4000	.16	.16	.16	.16	.16
22.6500	.16	.16	.16	.16	.16
22.9000	.16	.15	.15	.15	.15
23.1500	.15	.15	.15	.15	.15
23.4000	.15	.15	.15	.14	.14
23.6500	.14	.14	.14	.14	.14
23.9000	.14	.14	.14	.13	.11
24.1500	.08	.05	.04	.02	.02
24.4000	.01	.01	.01	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 3

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 3	PDA-3		PDA-3	1Y

INFLOWS TO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-3	1Y	113	12.1000	.02

TOTAL FLOW INTO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 3	1Y	113	12.1000	.02

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 3
HYG Tag = 1Y

Peak Discharge = .02 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 113 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.9500	.00	.00	.01	.02	.02
12.2000	.02	.02	.02	.01	.01
12.4500	.01	.01	.01	.01	.01
12.7000	.01	.01	.01	.01	.01
12.9500	.01	.01	.00	.00	.00
13.2000	.00	.00	.00	.00	.00
13.4500	.00	.00	.00	.00	.00
13.7000	.00	.00	.00	.00	.00
13.9500	.00	.00	.00	.00	.00
14.2000	.00	.00	.00	.00	.00
14.4500	.00	.00	.00	.00	.00
14.7000	.00	.00	.00	.00	.00
14.9500	.00	.00	.00	.00	.00
15.2000	.00	.00	.00	.00	.00
15.4500	.00	.00	.00	.00	.00
15.7000	.00	.00	.00	.00	.00
15.9500	.00	.00	.00	.00	.00
16.2000	.00	.00	.00	.00	.00
16.4500	.00	.00	.00	.00	.00
16.7000	.00	.00	.00	.00	.00
16.9500	.00	.00	.00	.00	.00
17.2000	.00	.00	.00	.00	.00
17.4500	.00	.00	.00	.00	.00
17.7000	.00	.00	.00	.00	.00
17.9500	.00	.00	.00	.00	.00
18.2000	.00	.00	.00	.00	.00
18.4500	.00	.00	.00	.00	.00
18.7000	.00	.00	.00	.00	.00
18.9500	.00	.00	.00	.00	.00
19.2000	.00	.00	.00	.00	.00
19.4500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.7000	.00	.00	.00	.00	.00
19.9500	.00	.00	.00	.00	.00
20.2000	.00	.00	.00	.00	.00
20.4500	.00	.00	.00	.00	.00
20.7000	.00	.00	.00	.00	.00
20.9500	.00	.00	.00	.00	.00
21.2000	.00	.00	.00	.00	.00
21.4500	.00	.00	.00	.00	.00
21.7000	.00	.00	.00	.00	.00
21.9500	.00	.00	.00	.00	.00
22.2000	.00	.00	.00	.00	.00
22.4500	.00	.00	.00	.00	.00
22.7000	.00	.00	.00	.00	.00
22.9500	.00	.00	.00		

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 3

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 3	PDA-3		PDA-3	10Y

INFLOWS TO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-3	10Y	558	12.1000	.15

TOTAL FLOW INTO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 3	10Y	558	12.1000	.15

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 3
HYG Tag = 10Y

Peak Discharge = .15 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 558 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.1500	.00	.00	.00	.00	.00
11.4000	.00	.00	.00	.01	.01
11.6500	.01	.02	.02	.03	.04
11.9000	.04	.07	.11	.14	.15
12.1500	.14	.10	.09	.08	.07
12.4000	.06	.05	.04	.04	.03
12.6500	.03	.03	.03	.03	.02
12.9000	.02	.02	.02	.02	.02
13.1500	.02	.02	.02	.02	.02
13.4000	.02	.02	.02	.02	.02
13.6500	.02	.02	.02	.02	.02
13.9000	.02	.01	.01	.01	.01
14.1500	.01	.01	.01	.01	.01
14.4000	.01	.01	.01	.01	.01
14.6500	.01	.01	.01	.01	.01
14.9000	.01	.01	.01	.01	.01
15.1500	.01	.01	.01	.01	.01
15.4000	.01	.01	.01	.01	.01
15.6500	.01	.01	.01	.01	.01
15.9000	.01	.01	.01	.01	.01
16.1500	.01	.01	.01	.01	.01
16.4000	.01	.01	.01	.01	.01
16.6500	.01	.01	.01	.01	.01
16.9000	.01	.01	.01	.01	.01
17.1500	.01	.01	.01	.01	.01
17.4000	.01	.01	.01	.01	.01
17.6500	.01	.01	.01	.01	.01
17.9000	.01	.01	.01	.01	.01
18.1500	.01	.00	.00	.00	.00
18.4000	.00	.00	.00	.00	.00
18.6500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.9000	.00	.00	.00	.00	.00
19.1500	.00	.00	.00	.00	.00
19.4000	.00	.00	.00	.00	.00
19.6500	.00	.00	.00	.00	.00
19.9000	.00	.00	.00	.00	.00
20.1500	.00	.00	.00	.00	.00
20.4000	.00	.00	.00	.00	.00
20.6500	.00	.00	.00	.00	.00
20.9000	.00	.00	.00	.00	.00
21.1500	.00	.00	.00	.00	.00
21.4000	.00	.00	.00	.00	.00
21.6500	.00	.00	.00	.00	.00
21.9000	.00	.00	.00	.00	.00
22.1500	.00	.00	.00	.00	.00
22.4000	.00	.00	.00	.00	.00
22.6500	.00	.00	.00	.00	.00
22.9000	.00	.00	.00	.00	.00
23.1500	.00	.00	.00	.00	.00
23.4000	.00	.00	.00	.00	.00
23.6500	.00	.00	.00	.00	.00
23.9000	.00	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 3

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 3	PDA-3		PDA-3	100Y

INFLOWS TO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-3	100Y	1428	12.1000	.41

TOTAL FLOW INTO: DESIGN POINT 3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 3	100Y	1428	12.1000	.41

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 3
HYG Tag = 100Y

Peak Discharge = .41 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 1428 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.3500	.00	.00	.00	.00	.00
9.6000	.00	.00	.00	.00	.00
9.8500	.00	.00	.00	.00	.00
10.1000	.00	.00	.01	.01	.01
10.3500	.01	.01	.01	.01	.01
10.6000	.01	.01	.01	.01	.01
10.8500	.01	.01	.01	.01	.01
11.1000	.02	.02	.02	.02	.02
11.3500	.02	.03	.03	.03	.04
11.6000	.04	.06	.07	.09	.11
11.8500	.13	.15	.23	.33	.38
12.1000	.41	.35	.26	.22	.20
12.3500	.17	.15	.13	.10	.09
12.6000	.07	.07	.06	.06	.06
12.8500	.06	.05	.05	.05	.05
13.1000	.04	.04	.04	.04	.04
13.3500	.04	.04	.04	.04	.04
13.6000	.04	.04	.04	.04	.03
13.8500	.03	.03	.03	.03	.03
14.1000	.03	.03	.03	.03	.03
14.3500	.03	.03	.03	.03	.03
14.6000	.03	.03	.03	.03	.03
14.8500	.03	.03	.02	.02	.02
15.1000	.02	.02	.02	.02	.02
15.3500	.02	.02	.02	.02	.02
15.6000	.02	.02	.02	.02	.02
15.8500	.02	.02	.02	.02	.02
16.1000	.02	.02	.02	.02	.02
16.3500	.02	.02	.02	.02	.02
16.6000	.02	.02	.02	.01	.01
16.8500	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.1000	.01	.01	.01	.01	.01
17.3500	.01	.01	.01	.01	.01
17.6000	.01	.01	.01	.01	.01
17.8500	.01	.01	.01	.01	.01
18.1000	.01	.01	.01	.01	.01
18.3500	.01	.01	.01	.01	.01
18.6000	.01	.01	.01	.01	.01
18.8500	.01	.01	.01	.01	.01
19.1000	.01	.01	.01	.01	.01
19.3500	.01	.01	.01	.01	.01
19.6000	.01	.01	.01	.01	.01
19.8500	.01	.01	.01	.01	.01
20.1000	.01	.01	.01	.01	.01
20.3500	.01	.01	.01	.01	.01
20.6000	.01	.01	.01	.01	.01
20.8500	.01	.01	.01	.01	.01
21.1000	.01	.01	.01	.01	.01
21.3500	.01	.01	.01	.01	.01
21.6000	.01	.01	.01	.01	.01
21.8500	.01	.01	.01	.01	.01
22.1000	.01	.01	.01	.01	.01
22.3500	.01	.01	.01	.01	.01
22.6000	.01	.01	.01	.01	.01
22.8500	.01	.01	.01	.01	.01
23.1000	.01	.01	.01	.01	.01
23.3500	.01	.01	.01	.01	.01
23.6000	.01	.01	.01	.01	.01
23.8500	.01	.01	.01	.01	.00
24.1000	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: JUNC 1C

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
OCS 1C	SYSTEM 1C	IN	OCS 1C	1Y

INFLOWS TO: JUNC 1C

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	OCS 1C	1Y	14834	12.4500	2.03

TOTAL FLOW INTO: JUNC 1C

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	JUNC 1C	1Y	14834	12.4500	2.03

TOTAL NODE INFLOW...
HYG file =
HYG ID = JUNC 1C
HYG Tag = 1Y

Peak Discharge = 2.03 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 14834 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.4000	.00	.00	.00	.00	.00
10.6500	.00	.00	.01	.01	.01
10.9000	.01	.01	.01	.01	.01
11.1500	.02	.02	.02	.02	.02
11.4000	.03	.04	.04	.05	.06
11.6500	.07	.09	.12	.15	.19
11.9000	.26	.36	.50	.73	1.00
12.1500	1.23	1.46	1.67	1.85	1.96
12.4000	2.02	2.03	2.01	1.96	1.88
12.6500	1.79	1.69	1.60	1.51	1.42
12.9000	1.34	1.27	1.21	1.15	1.08
13.1500	1.02	.95	.90	.84	.77
13.4000	.72	.67	.64	.61	.58
13.6500	.56	.54	.52	.50	.49
13.9000	.47	.46	.45	.44	.43
14.1500	.42	.41	.40	.39	.39
14.4000	.38	.37	.37	.36	.36
14.6500	.35	.34	.34	.33	.33
14.9000	.33	.32	.32	.31	.31
15.1500	.31	.30	.30	.30	.29
15.4000	.29	.28	.28	.28	.27
15.6500	.27	.27	.26	.26	.25
15.9000	.25	.25	.24	.24	.23
16.1500	.23	.23	.22	.22	.22
16.4000	.21	.21	.21	.20	.20
16.6500	.20	.20	.19	.19	.19
16.9000	.19	.19	.18	.18	.18
17.1500	.18	.18	.18	.17	.17
17.4000	.17	.17	.17	.16	.16
17.6500	.16	.16	.16	.16	.15
17.9000	.15	.15	.15	.15	.15

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.1500	.14	.14	.14	.14	.14
18.4000	.14	.13	.13	.13	.13
18.6500	.13	.13	.13	.13	.12
18.9000	.12	.12	.12	.12	.12
19.1500	.12	.12	.12	.12	.12
19.4000	.12	.12	.11	.11	.11
19.6500	.11	.11	.11	.11	.11
19.9000	.11	.11	.11	.11	.11
20.1500	.11	.11	.11	.11	.10
20.4000	.10	.10	.10	.10	.10
20.6500	.10	.10	.10	.10	.10
20.9000	.10	.10	.10	.10	.10
21.1500	.10	.10	.10	.10	.10
21.4000	.09	.09	.09	.09	.09
21.6500	.09	.09	.09	.09	.09
21.9000	.09	.09	.09	.09	.09
22.1500	.09	.09	.09	.09	.09
22.4000	.09	.09	.09	.09	.09
22.6500	.09	.09	.09	.08	.08
22.9000	.08	.08	.08	.08	.08
23.1500	.08	.08	.08	.08	.08
23.4000	.08	.08	.08	.08	.08
23.6500	.08	.08	.08	.08	.08
23.9000	.08	.08	.08	.07	.07
24.1500	.07	.07	.07	.06	.06
24.4000	.06	.05	.05	.05	.05
24.6500	.04	.04	.04	.04	.03
24.9000	.03	.03	.03	.03	.03
25.1500	.03	.02	.02	.02	.02
25.4000	.02	.02	.02	.02	.02
25.6500	.02	.02	.02	.02	.02
25.9000	.02	.02	.02	.02	.02
26.1500	.02	.02	.02	.02	.01
26.4000	.01	.01	.01	.01	.01
26.6500	.01	.01	.01	.01	.01
26.9000	.01	.01	.01	.01	.01
27.1500	.01	.01	.01	.01	.01
27.4000	.01	.01	.01	.01	.01
27.6500	.01	.01	.01	.01	.01
27.9000	.01	.01	.01	.01	.01
28.1500	.01	.01	.01	.01	.01
28.4000	.01	.01	.01	.01	.01
28.6500	.01	.01	.00	.00	.00
28.9000	.00	.00	.00	.00	.00
29.1500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
29.4000	.00	.00	.00	.00	.00
29.6500	.00	.00	.00	.00	.00
29.9000	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: JUNC 1C

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
OCS 1C	SYSTEM 1C	IN	OCS 1C	10Y

INFLOWS TO: JUNC 1C

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	OCS 1C	10Y	41320	12.4500	5.07

TOTAL FLOW INTO: JUNC 1C

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	JUNC 1C	10Y	41320	12.4500	5.07

TOTAL NODE INFLOW...
HYG file =
HYG ID = JUNC 1C
HYG Tag = 10Y

Peak Discharge = 5.07 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 41320 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.0000	.00	.00	.00	.00	.00
8.2500	.00	.00	.00	.00	.01
8.5000	.01	.01	.01	.01	.01
8.7500	.01	.01	.01	.02	.02
9.0000	.02	.02	.02	.02	.03
9.2500	.03	.04	.04	.05	.05
9.5000	.06	.06	.07	.08	.08
9.7500	.09	.09	.10	.11	.12
10.0000	.13	.14	.15	.15	.16
10.2500	.17	.18	.19	.20	.22
10.5000	.23	.24	.26	.27	.28
10.7500	.30	.31	.33	.35	.36
11.0000	.38	.40	.42	.44	.46
11.2500	.48	.51	.54	.58	.62
11.5000	.66	.71	.77	.84	.93
11.7500	1.03	1.16	1.30	1.50	1.78
12.0000	2.19	2.64	3.10	3.61	4.09
12.2500	4.48	4.76	4.93	5.03	5.07
12.5000	5.05	4.99	4.88	4.75	4.59
12.7500	4.42	4.24	4.05	3.87	3.69
13.0000	3.52	3.35	3.18	3.02	2.87
13.2500	2.72	2.59	2.46	2.30	2.14
13.5000	1.99	1.87	1.77	1.67	1.60
13.7500	1.53	1.46	1.41	1.35	1.31
14.0000	1.27	1.23	1.20	1.16	1.13
14.2500	1.09	1.06	1.02	.99	.97
14.5000	.94	.92	.90	.88	.85
14.7500	.83	.81	.79	.77	.75
15.0000	.74	.73	.71	.70	.69
15.2500	.68	.67	.66	.65	.64
15.5000	.63	.62	.61	.60	.59

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.7500	.58	.57	.56	.55	.54
16.0000	.54	.53	.52	.51	.50
16.2500	.49	.48	.47	.47	.46
16.5000	.46	.45	.45	.44	.44
16.7500	.43	.43	.42	.42	.41
17.0000	.41	.40	.40	.39	.39
17.2500	.39	.38	.38	.37	.37
17.5000	.36	.36	.36	.35	.35
17.7500	.34	.34	.33	.33	.33
18.0000	.32	.32	.31	.31	.31
18.2500	.30	.30	.30	.29	.29
18.5000	.29	.29	.28	.28	.28
18.7500	.28	.28	.27	.27	.27
19.0000	.27	.27	.27	.26	.26
19.2500	.26	.26	.26	.26	.26
19.5000	.25	.25	.25	.25	.25
19.7500	.25	.25	.25	.24	.24
20.0000	.24	.24	.24	.24	.24
20.2500	.23	.23	.23	.23	.23
20.5000	.23	.23	.23	.23	.22
20.7500	.22	.22	.22	.22	.22
21.0000	.22	.22	.22	.22	.21
21.2500	.21	.21	.21	.21	.21
21.5000	.21	.21	.21	.21	.20
21.7500	.20	.20	.20	.20	.20
22.0000	.20	.20	.20	.20	.20
22.2500	.19	.19	.19	.19	.19
22.5000	.19	.19	.19	.19	.19
22.7500	.19	.19	.18	.18	.18
23.0000	.18	.18	.18	.18	.18
23.2500	.18	.18	.18	.17	.17
23.5000	.17	.17	.17	.17	.17
23.7500	.17	.17	.17	.17	.16
24.0000	.16	.16	.16	.16	.15
24.2500	.14	.13	.12	.11	.10
24.5000	.10	.09	.08	.08	.08
24.7500	.07	.07	.06	.06	.06
25.0000	.05	.05	.05	.04	.04
25.2500	.04	.04	.04	.03	.03
25.5000	.03	.03	.03	.03	.03
25.7500	.02	.02	.02	.02	.02
26.0000	.02	.02	.02	.02	.02
26.2500	.02	.02	.02	.02	.02
26.5000	.02	.02	.02	.02	.02
26.7500	.02	.02	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
27.0000	.01	.01	.01	.01	.01
27.2500	.01	.01	.01	.01	.01
27.5000	.01	.01	.01	.01	.01
27.7500	.01	.01	.01	.01	.01
28.0000	.01	.01	.01	.01	.01
28.2500	.01	.01	.01	.01	.01
28.5000	.01	.01	.01	.01	.01
28.7500	.01	.01	.01	.01	.01
29.0000	.01	.01	.01	.01	.01
29.2500	.01	.00	.00	.00	.00
29.5000	.00	.00	.00	.00	.00
29.7500	.00	.00	.00	.00	.00
30.0000	.00	.00	.00	.00	.00
30.2500	.00	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: JUNC 1C

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
OCS 1C	SYSTEM 1C	IN	OCS 1C	100Y

INFLOWS TO: JUNC 1C

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	OCS 1C	100Y	83191	12.4500	9.16

TOTAL FLOW INTO: JUNC 1C

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	JUNC 1C	100Y	83191	12.4500	9.16

TOTAL NODE INFLOW...
HYG file =
HYG ID = JUNC 1C
HYG Tag = 100Y

Peak Discharge = 9.16 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 83191 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
5.8500	.00	.00	.00	.00	.00
6.1000	.00	.00	.00	.00	.01
6.3500	.01	.01	.01	.01	.01
6.6000	.01	.01	.01	.01	.02
6.8500	.02	.02	.02	.02	.02
7.1000	.02	.03	.03	.04	.04
7.3500	.04	.05	.05	.06	.06
7.6000	.07	.07	.08	.08	.09
7.8500	.09	.10	.11	.12	.12
8.1000	.13	.14	.14	.15	.16
8.3500	.17	.17	.18	.19	.20
8.6000	.21	.22	.23	.24	.26
8.8500	.27	.28	.29	.30	.31
9.1000	.33	.34	.36	.37	.39
9.3500	.40	.42	.43	.45	.46
9.6000	.48	.50	.51	.53	.55
9.8500	.57	.58	.60	.62	.64
10.1000	.65	.67	.69	.72	.74
10.3500	.76	.79	.81	.84	.87
10.6000	.89	.91	.93	.96	.98
10.8500	1.01	1.04	1.07	1.10	1.12
11.1000	1.15	1.18	1.21	1.25	1.29
11.3500	1.34	1.39	1.46	1.54	1.62
11.6000	1.72	1.86	2.05	2.32	2.58
11.8500	2.86	3.21	3.63	4.15	4.81
12.1000	5.59	6.42	7.20	7.86	8.38
12.3500	8.77	9.03	9.16	9.16	9.04
12.6000	8.84	8.60	8.34	8.07	7.80
12.8500	7.54	7.28	7.02	6.76	6.51
13.1000	6.26	6.01	5.77	5.54	5.32
13.3500	5.09	4.89	4.68	4.49	4.30

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
13.6000	4.12	3.95	3.79	3.63	3.48
13.8500	3.34	3.20	3.07	2.94	2.83
14.1000	2.72	2.61	2.51	2.42	2.29
14.3500	2.18	2.07	1.98	1.90	1.83
14.6000	1.77	1.71	1.66	1.62	1.58
14.8500	1.54	1.51	1.48	1.45	1.42
15.1000	1.39	1.37	1.34	1.32	1.30
15.3500	1.28	1.26	1.24	1.22	1.20
15.6000	1.18	1.16	1.14	1.12	1.10
15.8500	1.08	1.06	1.04	1.01	.99
16.1000	.97	.95	.94	.92	.90
16.3500	.89	.87	.85	.83	.82
16.6000	.80	.79	.78	.76	.75
16.8500	.74	.73	.72	.72	.71
17.1000	.70	.69	.68	.67	.67
17.3500	.66	.65	.64	.64	.63
17.6000	.62	.62	.61	.60	.59
17.8500	.59	.58	.57	.56	.56
18.1000	.55	.54	.53	.53	.52
18.3500	.52	.51	.51	.50	.50
18.6000	.49	.49	.49	.48	.48
18.8500	.48	.47	.47	.47	.47
19.1000	.47	.46	.46	.46	.46
19.3500	.45	.45	.45	.45	.44
19.6000	.44	.44	.44	.44	.43
19.8500	.43	.43	.43	.42	.42
20.1000	.42	.42	.42	.41	.41
20.3500	.41	.41	.40	.40	.40
20.6000	.40	.40	.40	.39	.39
20.8500	.39	.39	.39	.38	.38
21.1000	.38	.38	.38	.38	.37
21.3500	.37	.37	.37	.37	.37
21.6000	.36	.36	.36	.36	.36
21.8500	.35	.35	.35	.35	.35
22.1000	.35	.34	.34	.34	.34
22.3500	.34	.34	.33	.33	.33
22.6000	.33	.33	.33	.32	.32
22.8500	.32	.32	.32	.32	.31
23.1000	.31	.31	.31	.31	.31
23.3500	.31	.30	.30	.30	.30
23.6000	.30	.30	.29	.29	.29
23.8500	.29	.29	.29	.28	.28
24.1000	.28	.27	.25	.23	.21
24.3500	.20	.18	.17	.15	.14
24.6000	.13	.12	.11	.10	.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
24.8500	.09	.08	.08	.07	.07
25.1000	.07	.06	.06	.06	.05
25.3500	.05	.05	.04	.04	.04
25.6000	.04	.03	.03	.03	.03
25.8500	.03	.03	.03	.02	.02
26.1000	.02	.02	.02	.02	.02
26.3500	.02	.02	.02	.02	.02
26.6000	.02	.02	.02	.02	.02
26.8500	.02	.02	.02	.02	.02
27.1000	.02	.01	.01	.01	.01
27.3500	.01	.01	.01	.01	.01
27.6000	.01	.01	.01	.01	.01
27.8500	.01	.01	.01	.01	.01
28.1000	.01	.01	.01	.01	.01
28.3500	.01	.01	.01	.01	.01
28.6000	.01	.01	.01	.01	.01
28.8500	.01	.01	.01	.01	.01
29.1000	.01	.01	.01	.01	.01
29.3500	.01	.01	.01	.01	.01
29.6000	.00	.00	.00	.00	.00
29.8500	.00	.00	.00	.00	.00
30.1000	.00	.00	.00	.00	.00
30.3500	.00	.00	.00	.00	.00
30.6000	.00	.00	.00		

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
1.7500	210.00	210.00	210.00	210.00	210.00
2.0000	210.00	210.00	210.00	210.00	210.00
2.2500	210.00	210.00	210.00	210.00	210.00
2.5000	210.00	210.00	210.00	210.00	210.00
2.7500	210.00	210.00	210.00	210.00	210.00
3.0000	210.00	210.00	210.00	210.00	210.00
3.2500	210.00	210.00	210.00	210.00	210.00
3.5000	210.00	210.00	210.00	210.00	210.00
3.7500	210.00	210.00	210.00	210.00	210.00
4.0000	210.00	210.00	210.00	210.00	210.00
4.2500	210.00	210.00	210.00	210.00	210.00
4.5000	210.00	210.00	210.00	210.00	210.00
4.7500	210.00	210.00	210.00	210.00	210.00
5.0000	210.00	210.00	210.01	210.01	210.01
5.2500	210.01	210.01	210.01	210.01	210.01
5.5000	210.01	210.01	210.01	210.01	210.01
5.7500	210.01	210.01	210.01	210.01	210.01
6.0000	210.01	210.01	210.01	210.01	210.01
6.2500	210.01	210.01	210.01	210.01	210.01
6.5000	210.01	210.01	210.01	210.01	210.01
6.7500	210.01	210.01	210.01	210.01	210.01
7.0000	210.01	210.01	210.01	210.01	210.01
7.2500	210.01	210.01	210.01	210.01	210.01
7.5000	210.01	210.01	210.02	210.02	210.02
7.7500	210.02	210.02	210.02	210.02	210.02
8.0000	210.02	210.02	210.02	210.02	210.02
8.2500	210.02	210.02	210.02	210.02	210.02
8.5000	210.02	210.02	210.02	210.02	210.02
8.7500	210.02	210.02	210.02	210.02	210.02
9.0000	210.03	210.03	210.03	210.03	210.03
9.2500	210.03	210.03	210.03	210.03	210.03
9.5000	210.03	210.03	210.03	210.03	210.03
9.7500	210.03	210.03	210.03	210.04	210.04
10.0000	210.04	210.04	210.04	210.04	210.04
10.2500	210.04	210.04	210.04	210.04	210.04
10.5000	210.04	210.05	210.05	210.05	210.05
10.7500	210.05	210.05	210.05	210.05	210.05
11.0000	210.05	210.05	210.06	210.06	210.06
11.2500	210.06	210.06	210.06	210.06	210.06
11.5000	210.07	210.07	210.07	210.07	210.07
11.7500	210.08	210.08	210.08	210.09	210.09
12.0000	210.10	210.11	210.12	210.13	210.14
12.2500	210.15	210.16	210.16	210.16	210.16

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
12.5000	210.16	210.16	210.16	210.16	210.16
12.7500	210.16	210.16	210.16	210.16	210.15
13.0000	210.15	210.15	210.15	210.15	210.15
13.2500	210.15	210.15	210.15	210.15	210.15
13.5000	210.15	210.14	210.14	210.14	210.14
13.7500	210.14	210.14	210.14	210.14	210.14
14.0000	210.14	210.14	210.14	210.14	210.14
14.2500	210.14	210.14	210.14	210.14	210.14
14.5000	210.14	210.14	210.14	210.14	210.14
14.7500	210.14	210.14	210.14	210.14	210.14
15.0000	210.14	210.14	210.14	210.14	210.14
15.2500	210.14	210.14	210.14	210.14	210.14
15.5000	210.14	210.14	210.14	210.14	210.14
15.7500	210.14	210.14	210.14	210.14	210.14
16.0000	210.14	210.14	210.14	210.14	210.14
16.2500	210.14	210.14	210.14	210.14	210.14
16.5000	210.14	210.14	210.14	210.14	210.14
16.7500	210.14	210.14	210.14	210.14	210.14
17.0000	210.14	210.14	210.14	210.14	210.14
17.2500	210.14	210.14	210.14	210.14	210.14
17.5000	210.14	210.14	210.14	210.14	210.14
17.7500	210.14	210.14	210.14	210.14	210.14
18.0000	210.14	210.14	210.14	210.14	210.14
18.2500	210.14	210.14	210.14	210.14	210.14
18.5000	210.14	210.14	210.14	210.14	210.14
18.7500	210.14	210.14	210.14	210.14	210.14
19.0000	210.14	210.14	210.14	210.14	210.14
19.2500	210.14	210.14	210.14	210.14	210.14
19.5000	210.14	210.14	210.14	210.14	210.14
19.7500	210.14	210.14	210.14	210.14	210.14
20.0000	210.14	210.14	210.14	210.14	210.14
20.2500	210.14	210.14	210.14	210.14	210.14
20.5000	210.14	210.14	210.13	210.13	210.13
20.7500	210.13	210.13	210.13	210.13	210.13
21.0000	210.13	210.13	210.13	210.13	210.13
21.2500	210.13	210.13	210.13	210.13	210.13
21.5000	210.13	210.13	210.13	210.13	210.13
21.7500	210.13	210.13	210.13	210.13	210.13
22.0000	210.13	210.13	210.13	210.13	210.13
22.2500	210.13	210.13	210.13	210.13	210.13
22.5000	210.13	210.13	210.13	210.13	210.13
22.7500	210.13	210.13	210.13	210.13	210.13
23.0000	210.13	210.13	210.13	210.13	210.13
23.2500	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs	Time on left represents time for first value in each row.				
23.5000	210.13	210.13	210.13	210.13	210.13
23.7500	210.13	210.13	210.13	210.13	210.13
24.0000	210.13	210.13	210.13	210.13	210.13
24.2500	210.13	210.13	210.13	210.13	210.13
24.5000	210.13	210.13	210.13	210.13	210.13
24.7500	210.13				

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.9500	210.00	210.00	210.00	210.00	210.00
1.2000	210.00	210.00	210.00	210.00	210.00
1.4500	210.00	210.00	210.00	210.00	210.00
1.7000	210.00	210.00	210.00	210.00	210.00
1.9500	210.00	210.00	210.00	210.00	210.00
2.2000	210.00	210.00	210.00	210.00	210.00
2.4500	210.00	210.00	210.00	210.00	210.00
2.7000	210.00	210.00	210.00	210.00	210.00
2.9500	210.00	210.00	210.00	210.00	210.01
3.2000	210.01	210.01	210.01	210.01	210.01
3.4500	210.01	210.01	210.01	210.01	210.01
3.7000	210.01	210.01	210.01	210.01	210.01
3.9500	210.01	210.01	210.01	210.01	210.01
4.2000	210.01	210.01	210.01	210.01	210.01
4.4500	210.01	210.01	210.01	210.01	210.01
4.7000	210.01	210.01	210.01	210.01	210.01
4.9500	210.01	210.01	210.02	210.02	210.02
5.2000	210.02	210.02	210.02	210.02	210.02
5.4500	210.02	210.02	210.02	210.02	210.02
5.7000	210.02	210.02	210.02	210.02	210.02
5.9500	210.02	210.02	210.02	210.02	210.02
6.2000	210.02	210.02	210.02	210.02	210.03
6.4500	210.03	210.03	210.03	210.03	210.03
6.7000	210.03	210.03	210.03	210.03	210.03
6.9500	210.03	210.03	210.03	210.03	210.03
7.2000	210.03	210.03	210.03	210.03	210.04
7.4500	210.04	210.04	210.04	210.04	210.04
7.7000	210.04	210.04	210.04	210.04	210.04
7.9500	210.04	210.04	210.04	210.04	210.04
8.2000	210.05	210.05	210.05	210.05	210.05
8.4500	210.05	210.05	210.05	210.05	210.05
8.7000	210.05	210.05	210.05	210.06	210.06
8.9500	210.06	210.06	210.06	210.06	210.06
9.2000	210.06	210.06	210.06	210.07	210.07
9.4500	210.07	210.07	210.07	210.07	210.07
9.7000	210.07	210.07	210.08	210.08	210.08
9.9500	210.08	210.08	210.08	210.08	210.09
10.2000	210.09	210.09	210.09	210.09	210.09
10.4500	210.09	210.10	210.10	210.10	210.10
10.7000	210.10	210.10	210.11	210.11	210.11
10.9500	210.11	210.11	210.11	210.12	210.12
11.2000	210.12	210.12	210.13	210.13	210.13
11.4500	210.13	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
11.7000	210.15	210.15	210.15	210.16	210.16
11.9500	210.17	210.18	210.19	210.20	210.21
12.2000	210.22	210.22	210.23	210.22	210.22
12.4500	210.22	210.21	210.21	210.21	210.20
12.7000	210.20	210.19	210.19	210.19	210.18
12.9500	210.18	210.18	210.17	210.17	210.17
13.2000	210.17	210.16	210.16	210.16	210.16
13.4500	210.16	210.16	210.16	210.16	210.15
13.7000	210.15	210.15	210.15	210.15	210.15
13.9500	210.15	210.15	210.15	210.15	210.15
14.2000	210.15	210.15	210.15	210.15	210.15
14.4500	210.15	210.15	210.15	210.15	210.15
14.7000	210.14	210.14	210.14	210.14	210.14
14.9500	210.14	210.14	210.14	210.14	210.14
15.2000	210.14	210.14	210.14	210.14	210.14
15.4500	210.14	210.14	210.14	210.14	210.14
15.7000	210.14	210.14	210.14	210.14	210.14
15.9500	210.14	210.14	210.14	210.14	210.14
16.2000	210.14	210.14	210.14	210.14	210.14
16.4500	210.14	210.14	210.14	210.14	210.14
16.7000	210.14	210.14	210.14	210.14	210.14
16.9500	210.14	210.14	210.14	210.14	210.14
17.2000	210.14	210.14	210.14	210.14	210.14
17.4500	210.14	210.14	210.14	210.14	210.14
17.7000	210.14	210.14	210.14	210.14	210.14
17.9500	210.14	210.14	210.14	210.14	210.14
18.2000	210.14	210.14	210.14	210.14	210.14
18.4500	210.14	210.14	210.14	210.14	210.14
18.7000	210.14	210.14	210.14	210.14	210.14
18.9500	210.14	210.14	210.14	210.14	210.14
19.2000	210.14	210.14	210.14	210.14	210.14
19.4500	210.14	210.14	210.14	210.14	210.14
19.7000	210.14	210.14	210.14	210.14	210.14
19.9500	210.14	210.14	210.14	210.14	210.14
20.2000	210.14	210.14	210.14	210.14	210.14
20.4500	210.14	210.14	210.14	210.14	210.14
20.7000	210.14	210.14	210.14	210.14	210.14
20.9500	210.14	210.14	210.14	210.14	210.14
21.2000	210.14	210.14	210.14	210.14	210.14
21.4500	210.14	210.14	210.14	210.14	210.14
21.7000	210.14	210.14	210.14	210.14	210.14
21.9500	210.14	210.14	210.14	210.14	210.14
22.2000	210.14	210.14	210.14	210.14	210.14
22.4500	210.14	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.7000	210.14	210.14	210.14	210.14	210.14
22.9500	210.14	210.14	210.14	210.14	210.14
23.2000	210.14	210.14	210.14	210.14	210.14
23.4500	210.14	210.14	210.14	210.14	210.14
23.7000	210.14	210.14	210.14	210.14	210.14
23.9500	210.14	210.14	210.14	210.14	210.14
24.2000	210.14	210.13	210.13	210.13	210.13
24.4500	210.13	210.13	210.13	210.13	210.13
24.7000	210.13	210.13	210.13	210.13	210.13
24.9500	210.13	210.13			

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.6000	210.00	210.00	210.00	210.00	210.00
.8500	210.00	210.00	210.00	210.00	210.00
1.1000	210.00	210.00	210.00	210.00	210.00
1.3500	210.00	210.00	210.00	210.00	210.00
1.6000	210.00	210.00	210.00	210.00	210.00
1.8500	210.00	210.00	210.00	210.00	210.01
2.1000	210.01	210.01	210.01	210.01	210.01
2.3500	210.01	210.01	210.01	210.01	210.01
2.6000	210.01	210.01	210.01	210.01	210.01
2.8500	210.01	210.01	210.01	210.01	210.01
3.1000	210.01	210.01	210.01	210.01	210.01
3.3500	210.01	210.02	210.02	210.02	210.02
3.6000	210.02	210.02	210.02	210.02	210.02
3.8500	210.02	210.02	210.02	210.02	210.02
4.1000	210.02	210.02	210.02	210.02	210.02
4.3500	210.02	210.02	210.03	210.03	210.03
4.6000	210.03	210.03	210.03	210.03	210.03
4.8500	210.03	210.03	210.03	210.03	210.03
5.1000	210.03	210.03	210.03	210.03	210.04
5.3500	210.04	210.04	210.04	210.04	210.04
5.6000	210.04	210.04	210.04	210.04	210.04
5.8500	210.04	210.04	210.04	210.04	210.05
6.1000	210.05	210.05	210.05	210.05	210.05
6.3500	210.05	210.05	210.05	210.05	210.05
6.6000	210.05	210.05	210.05	210.06	210.06
6.8500	210.06	210.06	210.06	210.06	210.06
7.1000	210.06	210.06	210.06	210.06	210.07
7.3500	210.07	210.07	210.07	210.07	210.07
7.6000	210.07	210.07	210.07	210.07	210.08
7.8500	210.08	210.08	210.08	210.08	210.08
8.1000	210.08	210.08	210.08	210.09	210.09
8.3500	210.09	210.09	210.09	210.09	210.09
8.6000	210.10	210.10	210.10	210.10	210.10
8.8500	210.10	210.10	210.11	210.11	210.11
9.1000	210.11	210.11	210.11	210.12	210.12
9.3500	210.12	210.12	210.12	210.12	210.13
9.6000	210.13	210.13	210.13	210.13	210.14
9.8500	210.14	210.14	210.14	210.14	210.14
10.1000	210.14	210.14	210.15	210.15	210.15
10.3500	210.15	210.15	210.15	210.15	210.15
10.6000	210.15	210.15	210.15	210.15	210.15
10.8500	210.15	210.15	210.15	210.16	210.16
11.1000	210.16	210.16	210.16	210.16	210.16

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.3500	210.16	210.16	210.16	210.16	210.16
11.6000	210.17	210.17	210.17	210.17	210.18
11.8500	210.19	210.19	210.20	210.21	210.23
12.1000	210.24	210.26	210.27	210.27	210.27
12.3500	210.27	210.26	210.25	210.25	210.24
12.6000	210.23	210.22	210.22	210.21	210.21
12.8500	210.20	210.20	210.20	210.19	210.19
13.1000	210.19	210.18	210.18	210.18	210.18
13.3500	210.17	210.17	210.17	210.17	210.17
13.6000	210.17	210.17	210.16	210.16	210.16
13.8500	210.16	210.16	210.16	210.16	210.16
14.1000	210.16	210.16	210.16	210.16	210.16
14.3500	210.15	210.15	210.15	210.15	210.15
14.6000	210.15	210.15	210.15	210.15	210.15
14.8500	210.15	210.15	210.15	210.15	210.15
15.1000	210.15	210.15	210.15	210.15	210.15
15.3500	210.15	210.15	210.15	210.15	210.15
15.6000	210.15	210.15	210.15	210.15	210.15
15.8500	210.15	210.15	210.15	210.15	210.15
16.1000	210.15	210.14	210.14	210.14	210.14
16.3500	210.14	210.14	210.14	210.14	210.14
16.6000	210.14	210.14	210.14	210.14	210.14
16.8500	210.14	210.14	210.14	210.14	210.14
17.1000	210.14	210.14	210.14	210.14	210.14
17.3500	210.14	210.14	210.14	210.14	210.14
17.6000	210.14	210.14	210.14	210.14	210.14
17.8500	210.14	210.14	210.14	210.14	210.14
18.1000	210.14	210.14	210.14	210.14	210.14
18.3500	210.14	210.14	210.14	210.14	210.14
18.6000	210.14	210.14	210.14	210.14	210.14
18.8500	210.14	210.14	210.14	210.14	210.14
19.1000	210.14	210.14	210.14	210.14	210.14
19.3500	210.14	210.14	210.14	210.14	210.14
19.6000	210.14	210.14	210.14	210.14	210.14
19.8500	210.14	210.14	210.14	210.14	210.14
20.1000	210.14	210.14	210.14	210.14	210.14
20.3500	210.14	210.14	210.14	210.14	210.14
20.6000	210.14	210.14	210.14	210.14	210.14
20.8500	210.14	210.14	210.14	210.14	210.14
21.1000	210.14	210.14	210.14	210.14	210.14
21.3500	210.14	210.14	210.14	210.14	210.14
21.6000	210.14	210.14	210.14	210.14	210.14
21.8500	210.14	210.14	210.14	210.14	210.14
22.1000	210.14	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.3500	210.14	210.14	210.14	210.14	210.14
22.6000	210.14	210.14	210.14	210.14	210.14
22.8500	210.14	210.14	210.14	210.14	210.14
23.1000	210.14	210.14	210.14	210.14	210.14
23.3500	210.14	210.14	210.14	210.14	210.14
23.6000	210.14	210.14	210.14	210.14	210.14
23.8500	210.14	210.14	210.14	210.14	210.14
24.1000	210.14	210.14	210.14	210.14	210.14
24.3500	210.14	210.14	210.14	210.13	210.13
24.6000	210.13	210.13	210.13	210.13	210.13
24.8500	210.13	210.13	210.13	210.13	210.13
25.1000	210.13	210.13	210.13		

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
2.0500	210.00	210.00	210.00	210.00	210.00
2.3000	210.00	210.00	210.00	210.00	210.00
2.5500	210.00	210.00	210.00	210.00	210.00
2.8000	210.00	210.00	210.00	210.00	210.00
3.0500	210.00	210.00	210.00	210.00	210.00
3.3000	210.00	210.00	210.00	210.00	210.00
3.5500	210.00	210.00	210.00	210.00	210.00
3.8000	210.00	210.00	210.00	210.00	210.00
4.0500	210.00	210.00	210.00	210.00	210.00
4.3000	210.00	210.00	210.00	210.00	210.00
4.5500	210.00	210.00	210.00	210.00	210.00
4.8000	210.00	210.00	210.00	210.00	210.00
5.0500	210.00	210.00	210.00	210.00	210.00
5.3000	210.00	210.01	210.01	210.01	210.01
5.5500	210.01	210.01	210.01	210.01	210.01
5.8000	210.01	210.01	210.01	210.01	210.01
6.0500	210.01	210.01	210.01	210.01	210.01
6.3000	210.01	210.01	210.01	210.01	210.01
6.5500	210.01	210.01	210.01	210.01	210.01
6.8000	210.01	210.01	210.01	210.01	210.01
7.0500	210.01	210.01	210.01	210.01	210.01
7.3000	210.01	210.01	210.01	210.01	210.01
7.5500	210.01	210.01	210.01	210.01	210.01
7.8000	210.01	210.01	210.01	210.02	210.02
8.0500	210.02	210.02	210.02	210.02	210.02
8.3000	210.02	210.02	210.02	210.02	210.02
8.5500	210.02	210.02	210.02	210.02	210.02
8.8000	210.02	210.02	210.02	210.02	210.02
9.0500	210.02	210.02	210.02	210.02	210.02
9.3000	210.03	210.03	210.03	210.03	210.03
9.5500	210.03	210.03	210.03	210.03	210.03
9.8000	210.03	210.03	210.03	210.03	210.03
10.0500	210.03	210.03	210.03	210.04	210.04
10.3000	210.04	210.04	210.04	210.04	210.04
10.5500	210.04	210.04	210.04	210.04	210.04
10.8000	210.04	210.04	210.05	210.05	210.05
11.0500	210.05	210.05	210.05	210.05	210.05
11.3000	210.05	210.05	210.06	210.06	210.06
11.5500	210.06	210.06	210.06	210.07	210.07
11.8000	210.07	210.07	210.08	210.08	210.09
12.0500	210.10	210.11	210.12	210.13	210.13
12.3000	210.14	210.15	210.15	210.15	210.15
12.5500	210.15	210.15	210.15	210.15	210.15

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
12.8000	210.14	210.14	210.14	210.14	210.14
13.0500	210.14	210.14	210.14	210.14	210.14
13.3000	210.14	210.14	210.14	210.14	210.14
13.5500	210.14	210.14	210.14	210.14	210.14
13.8000	210.14	210.14	210.14	210.14	210.14
14.0500	210.14	210.14	210.14	210.14	210.14
14.3000	210.14	210.14	210.14	210.14	210.14
14.5500	210.14	210.14	210.14	210.14	210.14
14.8000	210.14	210.14	210.14	210.14	210.14
15.0500	210.14	210.14	210.14	210.14	210.14
15.3000	210.14	210.14	210.14	210.14	210.14
15.5500	210.14	210.14	210.14	210.14	210.14
15.8000	210.14	210.14	210.14	210.14	210.14
16.0500	210.14	210.14	210.14	210.14	210.14
16.3000	210.14	210.14	210.14	210.13	210.13
16.5500	210.13	210.13	210.13	210.13	210.13
16.8000	210.13	210.13	210.13	210.13	210.13
17.0500	210.13	210.13	210.13	210.13	210.13
17.3000	210.13	210.13	210.13	210.13	210.13
17.5500	210.13	210.13	210.13	210.13	210.13
17.8000	210.13	210.13	210.13	210.13	210.13
18.0500	210.13	210.13	210.13	210.13	210.13
18.3000	210.13	210.13	210.13	210.13	210.13
18.5500	210.13	210.13	210.13	210.13	210.13
18.8000	210.13	210.13	210.13	210.13	210.13
19.0500	210.13	210.13	210.13	210.13	210.13
19.3000	210.13	210.13	210.13	210.13	210.13
19.5500	210.13	210.13	210.13	210.13	210.13
19.8000	210.13	210.13	210.13	210.13	210.13
20.0500	210.13	210.13	210.13	210.13	210.13
20.3000	210.13	210.13	210.13	210.13	210.13
20.5500	210.13	210.13	210.13	210.13	210.13
20.8000	210.13	210.13	210.13	210.13	210.13
21.0500	210.13	210.13	210.13	210.13	210.13
21.3000	210.13	210.13	210.13	210.13	210.13
21.5500	210.13	210.13	210.13	210.13	210.13
21.8000	210.13	210.13	210.13	210.13	210.13
22.0500	210.13	210.13	210.13	210.13	210.13
22.3000	210.13	210.13	210.13	210.13	210.13
22.5500	210.13	210.13	210.13	210.13	210.13
22.8000	210.13	210.13	210.13	210.13	210.13
23.0500	210.13	210.13	210.13	210.13	210.13
23.3000	210.13	210.13	210.13	210.13	210.13
23.5500	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.8000	210.13	210.13	210.13	210.13	210.13
24.0500	210.13	210.13	210.13	210.13	210.13
24.3000	210.13	210.13			

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
1.0500	210.00	210.00	210.00	210.00	210.00
1.3000	210.00	210.00	210.00	210.00	210.00
1.5500	210.00	210.00	210.00	210.00	210.00
1.8000	210.00	210.00	210.00	210.00	210.00
2.0500	210.00	210.00	210.00	210.00	210.00
2.3000	210.00	210.00	210.00	210.00	210.00
2.5500	210.00	210.00	210.00	210.00	210.00
2.8000	210.00	210.00	210.00	210.00	210.00
3.0500	210.00	210.00	210.00	210.00	210.00
3.3000	210.01	210.01	210.01	210.01	210.01
3.5500	210.01	210.01	210.01	210.01	210.01
3.8000	210.01	210.01	210.01	210.01	210.01
4.0500	210.01	210.01	210.01	210.01	210.01
4.3000	210.01	210.01	210.01	210.01	210.01
4.5500	210.01	210.01	210.01	210.01	210.01
4.8000	210.01	210.01	210.01	210.01	210.01
5.0500	210.01	210.01	210.01	210.01	210.01
5.3000	210.02	210.02	210.02	210.02	210.02
5.5500	210.02	210.02	210.02	210.02	210.02
5.8000	210.02	210.02	210.02	210.02	210.02
6.0500	210.02	210.02	210.02	210.02	210.02
6.3000	210.02	210.02	210.02	210.02	210.02
6.5500	210.02	210.02	210.02	210.02	210.03
6.8000	210.03	210.03	210.03	210.03	210.03
7.0500	210.03	210.03	210.03	210.03	210.03
7.3000	210.03	210.03	210.03	210.03	210.03
7.5500	210.03	210.03	210.03	210.03	210.03
7.8000	210.04	210.04	210.04	210.04	210.04
8.0500	210.04	210.04	210.04	210.04	210.04
8.3000	210.04	210.04	210.04	210.04	210.04
8.5500	210.04	210.05	210.05	210.05	210.05
8.8000	210.05	210.05	210.05	210.05	210.05
9.0500	210.05	210.05	210.05	210.06	210.06
9.3000	210.06	210.06	210.06	210.06	210.06
9.5500	210.06	210.06	210.06	210.07	210.07
9.8000	210.07	210.07	210.07	210.07	210.07
10.0500	210.07	210.07	210.08	210.08	210.08
10.3000	210.08	210.08	210.08	210.08	210.08
10.5500	210.09	210.09	210.09	210.09	210.09
10.8000	210.09	210.10	210.10	210.10	210.10
11.0500	210.10	210.10	210.11	210.11	210.11
11.3000	210.11	210.11	210.12	210.12	210.12
11.5500	210.12	210.13	210.13	210.13	210.14

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.8000	210.14	210.15	210.15	210.16	210.16
12.0500	210.17	210.18	210.19	210.19	210.19
12.3000	210.19	210.19	210.19	210.19	210.18
12.5500	210.18	210.17	210.17	210.17	210.16
12.8000	210.16	210.16	210.15	210.15	210.15
13.0500	210.15	210.15	210.15	210.15	210.14
13.3000	210.14	210.14	210.14	210.14	210.14
13.5500	210.14	210.14	210.14	210.14	210.14
13.8000	210.14	210.14	210.14	210.14	210.14
14.0500	210.14	210.14	210.14	210.14	210.14
14.3000	210.14	210.14	210.14	210.14	210.14
14.5500	210.14	210.14	210.14	210.14	210.14
14.8000	210.14	210.14	210.14	210.14	210.14
15.0500	210.14	210.14	210.14	210.14	210.14
15.3000	210.14	210.14	210.14	210.14	210.14
15.5500	210.14	210.14	210.14	210.14	210.14
15.8000	210.14	210.14	210.14	210.14	210.14
16.0500	210.14	210.14	210.14	210.14	210.14
16.3000	210.14	210.14	210.14	210.14	210.14
16.5500	210.14	210.14	210.14	210.14	210.14
16.8000	210.14	210.14	210.14	210.14	210.14
17.0500	210.14	210.14	210.14	210.14	210.14
17.3000	210.14	210.14	210.14	210.14	210.14
17.5500	210.14	210.14	210.14	210.14	210.14
17.8000	210.14	210.14	210.14	210.14	210.14
18.0500	210.14	210.14	210.14	210.14	210.14
18.3000	210.14	210.14	210.14	210.14	210.14
18.5500	210.14	210.14	210.14	210.14	210.14
18.8000	210.14	210.14	210.14	210.14	210.14
19.0500	210.14	210.14	210.14	210.14	210.14
19.3000	210.14	210.14	210.14	210.14	210.13
19.5500	210.13	210.13	210.13	210.13	210.13
19.8000	210.13	210.13	210.13	210.13	210.13
20.0500	210.13	210.13	210.13	210.13	210.13
20.3000	210.13	210.13	210.13	210.13	210.13
20.5500	210.13	210.13	210.13	210.13	210.13
20.8000	210.13	210.13	210.13	210.13	210.13
21.0500	210.13	210.13	210.13	210.13	210.13
21.3000	210.13	210.13	210.13	210.13	210.13
21.5500	210.13	210.13	210.13	210.13	210.13
21.8000	210.13	210.13	210.13	210.13	210.13
22.0500	210.13	210.13	210.13	210.13	210.13
22.3000	210.13	210.13	210.13	210.13	210.13
22.5500	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.8000	210.13	210.13	210.13	210.13	210.13
23.0500	210.13	210.13	210.13	210.13	210.13
23.3000	210.13	210.13	210.13	210.13	210.13
23.5500	210.13	210.13	210.13	210.13	210.13
23.8000	210.13	210.13	210.13	210.13	210.13
24.0500	210.13	210.13	210.13	210.13	210.13
24.3000	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.6500	210.00	210.00	210.00	210.00	210.00
.9000	210.00	210.00	210.00	210.00	210.00
1.1500	210.00	210.00	210.00	210.00	210.00
1.4000	210.00	210.00	210.00	210.00	210.00
1.6500	210.00	210.00	210.00	210.00	210.00
1.9000	210.00	210.00	210.00	210.00	210.00
2.1500	210.01	210.01	210.01	210.01	210.01
2.4000	210.01	210.01	210.01	210.01	210.01
2.6500	210.01	210.01	210.01	210.01	210.01
2.9000	210.01	210.01	210.01	210.01	210.01
3.1500	210.01	210.01	210.01	210.01	210.01
3.4000	210.01	210.01	210.01	210.01	210.02
3.6500	210.02	210.02	210.02	210.02	210.02
3.9000	210.02	210.02	210.02	210.02	210.02
4.1500	210.02	210.02	210.02	210.02	210.02
4.4000	210.02	210.02	210.02	210.02	210.02
4.6500	210.02	210.03	210.03	210.03	210.03
4.9000	210.03	210.03	210.03	210.03	210.03
5.1500	210.03	210.03	210.03	210.03	210.03
5.4000	210.03	210.03	210.03	210.03	210.03
5.6500	210.04	210.04	210.04	210.04	210.04
5.9000	210.04	210.04	210.04	210.04	210.04
6.1500	210.04	210.04	210.04	210.04	210.04
6.4000	210.04	210.05	210.05	210.05	210.05
6.6500	210.05	210.05	210.05	210.05	210.05
6.9000	210.05	210.05	210.05	210.05	210.05
7.1500	210.06	210.06	210.06	210.06	210.06
7.4000	210.06	210.06	210.06	210.06	210.06
7.6500	210.06	210.07	210.07	210.07	210.07
7.9000	210.07	210.07	210.07	210.07	210.07
8.1500	210.07	210.08	210.08	210.08	210.08
8.4000	210.08	210.08	210.08	210.08	210.08
8.6500	210.09	210.09	210.09	210.09	210.09
8.9000	210.09	210.09	210.10	210.10	210.10
9.1500	210.10	210.10	210.10	210.10	210.11
9.4000	210.11	210.11	210.11	210.11	210.11
9.6500	210.12	210.12	210.12	210.12	210.12
9.9000	210.13	210.13	210.13	210.13	210.13
10.1500	210.13	210.14	210.14	210.14	210.14
10.4000	210.14	210.14	210.14	210.14	210.14
10.6500	210.14	210.14	210.14	210.14	210.14
10.9000	210.14	210.14	210.14	210.15	210.15
11.1500	210.15	210.15	210.15	210.15	210.15

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs	Time on left represents time for first value in each row.				
11.4000	210.15	210.15	210.15	210.15	210.15
11.6500	210.15	210.15	210.16	210.16	210.17
11.9000	210.17	210.18	210.18	210.20	210.21
12.1500	210.22	210.22	210.22	210.22	210.22
12.4000	210.21	210.21	210.20	210.20	210.19
12.6500	210.19	210.18	210.18	210.17	210.17
12.9000	210.16	210.16	210.16	210.16	210.16
13.1500	210.15	210.15	210.15	210.15	210.15
13.4000	210.15	210.15	210.15	210.15	210.15
13.6500	210.15	210.15	210.15	210.15	210.15
13.9000	210.14	210.14	210.14	210.14	210.14
14.1500	210.14	210.14	210.14	210.14	210.14
14.4000	210.14	210.14	210.14	210.14	210.14
14.6500	210.14	210.14	210.14	210.14	210.14
14.9000	210.14	210.14	210.14	210.14	210.14
15.1500	210.14	210.14	210.14	210.14	210.14
15.4000	210.14	210.14	210.14	210.14	210.14
15.6500	210.14	210.14	210.14	210.14	210.14
15.9000	210.14	210.14	210.14	210.14	210.14
16.1500	210.14	210.14	210.14	210.14	210.14
16.4000	210.14	210.14	210.14	210.14	210.14
16.6500	210.14	210.14	210.14	210.14	210.14
16.9000	210.14	210.14	210.14	210.14	210.14
17.1500	210.14	210.14	210.14	210.14	210.14
17.4000	210.14	210.14	210.14	210.14	210.14
17.6500	210.14	210.14	210.14	210.14	210.14
17.9000	210.14	210.14	210.14	210.14	210.14
18.1500	210.14	210.14	210.14	210.14	210.14
18.4000	210.14	210.14	210.14	210.14	210.14
18.6500	210.14	210.14	210.14	210.14	210.14
18.9000	210.14	210.14	210.14	210.14	210.14
19.1500	210.14	210.14	210.14	210.14	210.14
19.4000	210.14	210.14	210.14	210.14	210.14
19.6500	210.14	210.14	210.14	210.14	210.14
19.9000	210.14	210.14	210.14	210.14	210.14
20.1500	210.14	210.14	210.14	210.14	210.14
20.4000	210.14	210.14	210.14	210.14	210.14
20.6500	210.14	210.14	210.14	210.14	210.14
20.9000	210.14	210.14	210.14	210.14	210.14
21.1500	210.14	210.14	210.14	210.14	210.14
21.4000	210.14	210.14	210.14	210.14	210.14
21.6500	210.14	210.14	210.14	210.14	210.14
21.9000	210.14	210.14	210.14	210.14	210.14
22.1500	210.14	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.4000	210.14	210.14	210.14	210.14	210.14
22.6500	210.14	210.14	210.14	210.14	210.14
22.9000	210.14	210.14	210.14	210.14	210.14
23.1500	210.14	210.14	210.14	210.14	210.14
23.4000	210.14	210.14	210.14	210.14	210.14
23.6500	210.14	210.14	210.14	210.14	210.14
23.9000	210.14	210.14	210.14	210.14	210.13
24.1500	210.13	210.13	210.13	210.13	210.13
24.4000	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
9.2000	170.00	170.00	170.00	170.00	170.00
9.4500	170.00	170.00	170.00	170.00	170.00
9.7000	170.00	170.00	170.00	170.00	170.00
9.9500	170.00	170.00	170.00	170.00	170.01
10.2000	170.01	170.01	170.01	170.01	170.01
10.4500	170.01	170.01	170.01	170.01	170.01
10.7000	170.01	170.01	170.01	170.01	170.01
10.9500	170.01	170.02	170.02	170.02	170.02
11.2000	170.02	170.02	170.02	170.02	170.03
11.4500	170.03	170.03	170.03	170.03	170.04
11.7000	170.05	170.06	170.07	170.08	170.10
11.9500	170.13	170.18	170.26	170.36	170.49
12.2000	170.62	170.73	170.80	170.85	170.89
12.4500	170.93	170.96	170.98	171.01	171.02
12.7000	171.04	171.05	171.06	171.07	171.08
12.9500	171.08	171.09	171.09	171.10	171.10
13.2000	171.10	171.10	171.10	171.10	171.10
13.4500	171.10	171.10	171.10	171.09	171.09
13.7000	171.09	171.09	171.08	171.08	171.07
13.9500	171.07	171.07	171.06	171.06	171.05
14.2000	171.04	171.04	171.03	171.03	171.02
14.4500	171.01	171.01	171.00	171.00	170.99
14.7000	170.98	170.97	170.97	170.96	170.95
14.9500	170.95	170.94	170.93	170.92	170.91
15.2000	170.91	170.90	170.89	170.88	170.87
15.4500	170.87	170.86	170.85	170.84	170.83
15.7000	170.82	170.81	170.80	170.79	170.78
15.9500	170.76	170.75	170.74	170.72	170.71
16.2000	170.69	170.67	170.65	170.62	170.60
16.4500	170.58	170.56	170.53	170.51	170.49
16.7000	170.46	170.44	170.41	170.39	170.37
16.9500	170.34	170.32	170.29	170.27	170.24
17.2000	170.22	170.19	170.17	170.14	170.12
17.4500	170.10	170.07	170.06	170.05	170.04
17.7000	170.04	170.03	170.03	170.03	170.03
17.9500	170.03	170.02	170.02	170.02	170.02
18.2000	170.02	170.02	170.02	170.02	170.02
18.4500	170.02	170.02	170.02	170.02	170.02
18.7000	170.02	170.02	170.02	170.02	170.02
18.9500	170.02	170.02	170.02	170.02	170.02
19.2000	170.02	170.02	170.02	170.02	170.02
19.4500	170.02	170.02	170.02	170.02	170.02
19.7000	170.02	170.02	170.02	170.02	170.02

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.9500	170.02	170.02	170.02	170.02	170.02
20.2000	170.02	170.02	170.02	170.02	170.02
20.4500	170.02	170.02	170.02	170.02	170.02
20.7000	170.02	170.02	170.02	170.02	170.02
20.9500	170.02	170.02	170.02	170.02	170.02
21.2000	170.02	170.02	170.02	170.02	170.02
21.4500	170.02	170.02	170.02	170.02	170.01
21.7000	170.01	170.01	170.01	170.01	170.01
21.9500	170.01	170.01	170.01	170.01	170.01
22.2000	170.01	170.01	170.01	170.01	170.01
22.4500	170.01	170.01	170.01	170.01	170.01
22.7000	170.01	170.01	170.01	170.01	170.01
22.9500	170.01	170.01	170.01	170.01	170.01
23.2000	170.01	170.01	170.01	170.01	170.01
23.4500	170.01	170.01	170.01	170.01	170.01
23.7000	170.01	170.01	170.01	170.01	170.01
23.9500	170.01	170.01	170.01	170.01	170.01
24.2000	170.01	170.01	170.01	170.01	170.00
24.4500	170.00	170.00	170.00	170.00	170.00
24.7000	170.00	170.00	170.00	170.00	

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
6.6500	170.00	170.00	170.00	170.00	170.00
6.9000	170.00	170.00	170.00	170.00	170.00
7.1500	170.00	170.00	170.00	170.00	170.00
7.4000	170.00	170.00	170.00	170.00	170.00
7.6500	170.00	170.00	170.00	170.01	170.01
7.9000	170.01	170.01	170.01	170.01	170.01
8.1500	170.01	170.01	170.01	170.01	170.01
8.4000	170.01	170.01	170.01	170.01	170.01
8.6500	170.01	170.01	170.01	170.01	170.01
8.9000	170.02	170.02	170.02	170.02	170.02
9.1500	170.02	170.02	170.02	170.02	170.02
9.4000	170.02	170.02	170.02	170.03	170.03
9.6500	170.03	170.03	170.03	170.03	170.03
9.9000	170.03	170.03	170.03	170.04	170.04
10.1500	170.04	170.04	170.04	170.04	170.04
10.4000	170.04	170.05	170.05	170.05	170.05
10.6500	170.05	170.06	170.06	170.06	170.06
10.9000	170.06	170.07	170.07	170.07	170.07
11.1500	170.07	170.08	170.08	170.09	170.09
11.4000	170.10	170.10	170.11	170.13	170.15
11.6500	170.18	170.23	170.30	170.39	170.51
11.9000	170.65	170.78	170.90	171.04	171.23
12.1500	171.44	171.66	171.86	172.03	172.16
12.4000	172.26	172.33	172.38	172.41	172.42
12.6500	172.42	172.40	172.39	172.36	172.34
12.9000	172.31	172.28	172.26	172.23	172.21
13.1500	172.18	172.16	172.13	172.11	172.09
13.4000	172.07	172.05	172.04	172.02	172.00
13.6500	171.99	171.97	171.96	171.95	171.94
13.9000	171.92	171.91	171.90	171.89	171.88
14.1500	171.87	171.86	171.85	171.84	171.83
14.4000	171.82	171.81	171.81	171.80	171.79
14.6500	171.78	171.78	171.77	171.76	171.76
14.9000	171.75	171.74	171.74	171.73	171.73
15.1500	171.72	171.71	171.71	171.70	171.70
15.4000	171.69	171.69	171.68	171.67	171.67
15.6500	171.66	171.66	171.65	171.65	171.64
15.9000	171.63	171.63	171.62	171.62	171.61
16.1500	171.60	171.60	171.59	171.59	171.58
16.4000	171.57	171.57	171.56	171.55	171.55
16.6500	171.54	171.53	171.53	171.52	171.52
16.9000	171.51	171.50	171.50	171.49	171.48
17.1500	171.48	171.47	171.46	171.45	171.45

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.4000	171.44	171.43	171.42	171.42	171.41
17.6500	171.40	171.39	171.39	171.38	171.37
17.9000	171.36	171.35	171.34	171.33	171.33
18.1500	171.32	171.31	171.30	171.29	171.28
18.4000	171.27	171.26	171.25	171.24	171.24
18.6500	171.23	171.22	171.21	171.20	171.19
18.9000	171.18	171.17	171.16	171.15	171.14
19.1500	171.13	171.12	171.11	171.10	171.09
19.4000	171.08	171.07	171.06	171.05	171.04
19.6500	171.03	171.02	171.01	171.00	170.99
19.9000	170.98	170.97	170.96	170.95	170.94
20.1500	170.93	170.92	170.91	170.90	170.89
20.4000	170.88	170.87	170.86	170.85	170.84
20.6500	170.83	170.82	170.81	170.80	170.79
20.9000	170.77	170.76	170.74	170.73	170.72
21.1500	170.70	170.68	170.65	170.63	170.61
21.4000	170.58	170.56	170.54	170.51	170.49
21.6500	170.47	170.44	170.42	170.39	170.37
21.9000	170.35	170.32	170.30	170.27	170.25
22.1500	170.23	170.20	170.18	170.15	170.13
22.4000	170.10	170.08	170.07	170.06	170.05
22.6500	170.04	170.04	170.03	170.03	170.03
22.9000	170.03	170.03	170.03	170.03	170.03
23.1500	170.03	170.03	170.03	170.03	170.03
23.4000	170.03	170.03	170.03	170.03	170.02
23.6500	170.02	170.02	170.02	170.02	170.02
23.9000	170.02	170.02	170.02	170.02	170.02
24.1500	170.02	170.02	170.01	170.01	170.01
24.4000	170.01	170.01	170.01	170.00	170.00
24.6500	170.00	170.00	170.00	170.00	170.00
24.9000	170.00	170.00	170.00	170.00	170.00

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
4.6000	170.00	170.00	170.00	170.00	170.00
4.8500	170.00	170.00	170.00	170.00	170.00
5.1000	170.00	170.00	170.00	170.00	170.00
5.3500	170.00	170.00	170.00	170.00	170.00
5.6000	170.01	170.01	170.01	170.01	170.01
5.8500	170.01	170.01	170.01	170.01	170.01
6.1000	170.01	170.01	170.01	170.01	170.01
6.3500	170.01	170.01	170.01	170.01	170.01
6.6000	170.01	170.01	170.01	170.01	170.01
6.8500	170.01	170.02	170.02	170.02	170.02
7.1000	170.02	170.02	170.02	170.02	170.02
7.3500	170.02	170.02	170.02	170.02	170.02
7.6000	170.02	170.02	170.03	170.03	170.03
7.8500	170.03	170.03	170.03	170.03	170.03
8.1000	170.03	170.03	170.03	170.03	170.04
8.3500	170.04	170.04	170.04	170.04	170.04
8.6000	170.04	170.04	170.05	170.05	170.05
8.8500	170.05	170.05	170.05	170.05	170.06
9.1000	170.06	170.06	170.06	170.06	170.06
9.3500	170.07	170.07	170.07	170.07	170.07
9.6000	170.08	170.08	170.08	170.08	170.09
9.8500	170.09	170.10	170.10	170.11	170.12
10.1000	170.13	170.14	170.15	170.17	170.18
10.3500	170.20	170.23	170.25	170.27	170.30
10.6000	170.33	170.36	170.39	170.43	170.46
10.8500	170.50	170.54	170.58	170.63	170.67
11.1000	170.71	170.75	170.78	170.81	170.84
11.3500	170.87	170.91	170.94	170.98	171.02
11.6000	171.07	171.13	171.20	171.28	171.39
11.8500	171.52	171.67	171.85	172.07	172.34
12.1000	172.68	173.06	173.45	173.81	174.15
12.3500	174.46	174.72	174.89	174.99	175.01
12.6000	174.98	174.91	174.80	174.66	174.52
12.8500	174.37	174.22	174.09	173.97	173.86
13.1000	173.75	173.65	173.55	173.46	173.37
13.3500	173.28	173.20	173.12	173.04	172.97
13.6000	172.90	172.83	172.77	172.70	172.64
13.8500	172.59	172.53	172.48	172.43	172.39
14.1000	172.34	172.30	172.26	172.23	172.19
14.3500	172.17	172.14	172.12	172.10	172.08
14.6000	172.06	172.04	172.03	172.01	172.00
14.8500	171.99	171.97	171.96	171.95	171.94
15.1000	171.93	171.92	171.91	171.91	171.90

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.3500	171.89	171.88	171.88	171.87	171.86
15.6000	171.85	171.85	171.84	171.83	171.83
15.8500	171.82	171.81	171.81	171.80	171.80
16.1000	171.79	171.78	171.78	171.77	171.77
16.3500	171.76	171.75	171.75	171.74	171.74
16.6000	171.73	171.73	171.72	171.72	171.71
16.8500	171.71	171.70	171.70	171.69	171.69
17.1000	171.68	171.68	171.67	171.67	171.66
17.3500	171.66	171.66	171.65	171.65	171.64
17.6000	171.64	171.63	171.63	171.62	171.62
17.8500	171.61	171.61	171.60	171.60	171.59
18.1000	171.59	171.58	171.58	171.57	171.57
18.3500	171.56	171.56	171.55	171.55	171.54
18.6000	171.54	171.53	171.52	171.52	171.51
18.8500	171.51	171.50	171.50	171.49	171.49
19.1000	171.48	171.48	171.47	171.47	171.46
19.3500	171.46	171.45	171.44	171.44	171.43
19.6000	171.43	171.42	171.41	171.41	171.40
19.8500	171.40	171.39	171.38	171.38	171.37
20.1000	171.37	171.36	171.35	171.35	171.34
20.3500	171.33	171.33	171.32	171.31	171.31
20.6000	171.30	171.29	171.29	171.28	171.27
20.8500	171.26	171.26	171.25	171.24	171.24
21.1000	171.23	171.22	171.21	171.21	171.20
21.3500	171.19	171.19	171.18	171.17	171.16
21.6000	171.16	171.15	171.14	171.13	171.12
21.8500	171.12	171.11	171.10	171.09	171.09
22.1000	171.08	171.07	171.06	171.05	171.05
22.3500	171.04	171.03	171.02	171.01	171.00
22.6000	171.00	170.99	170.98	170.97	170.96
22.8500	170.95	170.95	170.94	170.93	170.92
23.1000	170.91	170.90	170.89	170.89	170.88
23.3500	170.87	170.86	170.85	170.84	170.83
23.6000	170.82	170.81	170.81	170.79	170.78
23.8500	170.77	170.76	170.74	170.73	170.72
24.1000	170.70	170.68	170.65	170.62	170.59
24.3500	170.56	170.53	170.50	170.47	170.43
24.6000	170.40	170.37	170.34	170.30	170.27
24.8500	170.24	170.20	170.17	170.14	170.10
25.1000	170.07	170.05	170.04	170.03	170.02
25.3500	170.01	170.01	170.01	170.00	170.00
25.6000	170.00	170.00	170.00	170.00	170.00

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
10.1000	191.75	191.75	191.75	191.75	191.75
10.3500	191.75	191.75	191.75	191.76	191.76
10.6000	191.76	191.76	191.77	191.77	191.77
10.8500	191.78	191.78	191.79	191.79	191.80
11.1000	191.80	191.81	191.82	191.82	191.83
11.3500	191.84	191.85	191.86	191.88	191.89
11.6000	191.90	191.92	191.94	191.97	192.01
11.8500	192.05	192.11	192.17	192.26	192.38
12.1000	192.50	192.60	192.68	192.75	192.80
12.3500	192.83	192.85	192.85	192.84	192.83
12.6000	192.81	192.78	192.75	192.72	192.69
12.8500	192.66	192.64	192.61	192.59	192.56
13.1000	192.54	192.51	192.48	192.46	192.43
13.3500	192.40	192.38	192.36	192.34	192.32
13.6000	192.31	192.30	192.29	192.28	192.27
13.8500	192.26	192.25	192.24	192.24	192.23
14.1000	192.22	192.22	192.21	192.20	192.20
14.3500	192.19	192.19	192.19	192.18	192.18
14.6000	192.17	192.17	192.17	192.16	192.16
14.8500	192.16	192.16	192.15	192.15	192.15
15.1000	192.14	192.14	192.14	192.14	192.13
15.3500	192.13	192.13	192.12	192.12	192.12
15.6000	192.11	192.11	192.11	192.11	192.10
15.8500	192.10	192.10	192.09	192.09	192.09
16.1000	192.08	192.08	192.08	192.08	192.07
16.3500	192.07	192.07	192.07	192.06	192.06
16.6000	192.06	192.06	192.05	192.05	192.05
16.8500	192.05	192.05	192.05	192.04	192.04
17.1000	192.04	192.04	192.04	192.03	192.03
17.3500	192.03	192.03	192.03	192.02	192.02
17.6000	192.02	192.02	192.02	192.02	192.01
17.8500	192.01	192.01	192.01	192.01	192.00
18.1000	192.00	192.00	192.00	192.00	192.00
18.3500	191.99	191.99	191.99	191.99	191.99
18.6000	191.99	191.99	191.99	191.98	191.98
18.8500	191.98	191.98	191.98	191.98	191.98
19.1000	191.98	191.98	191.98	191.98	191.97
19.3500	191.97	191.97	191.97	191.97	191.97
19.6000	191.97	191.97	191.97	191.97	191.97
19.8500	191.97	191.97	191.97	191.97	191.96
20.1000	191.96	191.96	191.96	191.96	191.96
20.3500	191.96	191.96	191.96	191.96	191.96
20.6000	191.96	191.96	191.96	191.96	191.96

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
20.8500	191.96	191.96	191.96	191.95	191.95
21.1000	191.95	191.95	191.95	191.95	191.95
21.3500	191.95	191.95	191.95	191.95	191.95
21.6000	191.95	191.95	191.95	191.95	191.95
21.8500	191.95	191.95	191.95	191.95	191.94
22.1000	191.94	191.94	191.94	191.94	191.94
22.3500	191.94	191.94	191.94	191.94	191.94
22.6000	191.94	191.94	191.94	191.94	191.94
22.8500	191.94	191.94	191.93	191.93	191.93
23.1000	191.93	191.93	191.93	191.93	191.93
23.3500	191.93	191.93	191.93	191.93	191.93
23.6000	191.93	191.93	191.93	191.93	191.92
23.8500	191.92	191.92	191.92	191.92	191.92
24.1000	191.92	191.92	191.91	191.91	191.91
24.3500	191.90	191.90	191.89	191.89	191.88
24.6000	191.88	191.87	191.87	191.87	191.86
24.8500	191.86	191.86	191.86	191.85	191.85
25.1000	191.85	191.85	191.84	191.84	191.84
25.3500	191.84	191.84	191.83	191.83	191.83
25.6000	191.83	191.83	191.83	191.82	191.82
25.8500	191.82	191.82	191.82	191.82	191.81
26.1000	191.81	191.81	191.81	191.81	191.81
26.3500	191.81	191.81	191.80	191.80	191.80
26.6000	191.80	191.80	191.80	191.80	191.80
26.8500	191.79	191.79	191.79	191.79	191.79
27.1000	191.79	191.79	191.79	191.79	191.79
27.3500	191.79	191.79	191.78	191.78	191.78
27.6000	191.78	191.78	191.78	191.78	191.78
27.8500	191.78	191.78	191.78	191.78	191.78
28.1000	191.78	191.77	191.77	191.77	191.77
28.3500	191.77	191.77	191.77	191.77	191.77
28.6000	191.77	191.77	191.77	191.77	191.77
28.8500	191.77	191.77	191.77	191.77	191.77
29.1000	191.77	191.77	191.77	191.77	191.76
29.3500	191.76	191.76	191.76	191.76	191.76
29.6000	191.76	191.76	191.76	191.76	191.76
29.8500	191.76	191.76			

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
7.6500	191.75	191.75	191.75	191.75	191.75
7.9000	191.75	191.75	191.75	191.75	191.76
8.1500	191.76	191.76	191.76	191.76	191.77
8.4000	191.77	191.77	191.77	191.78	191.78
8.6500	191.79	191.79	191.79	191.80	191.80
8.9000	191.81	191.82	191.82	191.83	191.84
9.1500	191.84	191.85	191.86	191.87	191.87
9.4000	191.88	191.89	191.90	191.91	191.91
9.6500	191.92	191.93	191.94	191.95	191.96
9.9000	191.97	191.98	191.99	191.99	192.00
10.1500	192.01	192.02	192.03	192.04	192.05
10.4000	192.06	192.07	192.08	192.09	192.10
10.6500	192.11	192.12	192.13	192.15	192.16
10.9000	192.17	192.18	192.19	192.20	192.21
11.1500	192.23	192.24	192.25	192.27	192.29
11.4000	192.31	192.33	192.35	192.37	192.40
11.6500	192.43	192.47	192.51	192.57	192.62
11.9000	192.69	192.78	192.89	193.05	193.26
12.1500	193.50	193.74	193.95	194.10	194.20
12.4000	194.26	194.28	194.27	194.24	194.17
12.6500	194.10	194.01	193.91	193.81	193.72
12.9000	193.63	193.54	193.45	193.37	193.29
13.1500	193.22	193.15	193.09	193.03	192.97
13.4000	192.92	192.88	192.84	192.81	192.77
13.6500	192.75	192.72	192.70	192.68	192.66
13.9000	192.64	192.63	192.61	192.59	192.58
14.1500	192.57	192.55	192.54	192.52	192.51
14.4000	192.50	192.49	192.48	192.47	192.46
14.6500	192.45	192.44	192.43	192.42	192.41
14.9000	192.40	192.39	192.39	192.38	192.38
15.1500	192.37	192.36	192.36	192.35	192.35
15.4000	192.34	192.34	192.33	192.33	192.32
15.6500	192.32	192.31	192.31	192.30	192.30
15.9000	192.29	192.29	192.28	192.28	192.27
16.1500	192.27	192.26	192.26	192.25	192.25
16.4000	192.25	192.24	192.24	192.24	192.23
16.6500	192.23	192.23	192.22	192.22	192.22
16.9000	192.21	192.21	192.21	192.20	192.20
17.1500	192.20	192.20	192.19	192.19	192.19
17.4000	192.19	192.18	192.18	192.18	192.17
17.6500	192.17	192.17	192.17	192.16	192.16
17.9000	192.16	192.16	192.15	192.15	192.15
18.1500	192.14	192.14	192.14	192.14	192.13

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
18.4000	192.13	192.13	192.13	192.13	192.12
18.6500	192.12	192.12	192.12	192.12	192.12
18.9000	192.11	192.11	192.11	192.11	192.11
19.1500	192.11	192.11	192.11	192.10	192.10
19.4000	192.10	192.10	192.10	192.10	192.10
19.6500	192.10	192.10	192.10	192.09	192.09
19.9000	192.09	192.09	192.09	192.09	192.09
20.1500	192.09	192.09	192.08	192.08	192.08
20.4000	192.08	192.08	192.08	192.08	192.08
20.6500	192.08	192.08	192.08	192.08	192.07
20.9000	192.07	192.07	192.07	192.07	192.07
21.1500	192.07	192.07	192.07	192.07	192.07
21.4000	192.07	192.06	192.06	192.06	192.06
21.6500	192.06	192.06	192.06	192.06	192.06
21.9000	192.06	192.06	192.06	192.06	192.06
22.1500	192.05	192.05	192.05	192.05	192.05
22.4000	192.05	192.05	192.05	192.05	192.05
22.6500	192.05	192.05	192.04	192.04	192.04
22.9000	192.04	192.04	192.04	192.04	192.04
23.1500	192.04	192.04	192.04	192.03	192.03
23.4000	192.03	192.03	192.03	192.03	192.03
23.6500	192.03	192.03	192.03	192.03	192.02
23.9000	192.02	192.02	192.02	192.02	192.02
24.1500	192.01	192.01	192.00	191.99	191.98
24.4000	191.97	191.96	191.95	191.94	191.94
24.6500	191.93	191.92	191.92	191.91	191.90
24.9000	191.90	191.89	191.89	191.89	191.88
25.1500	191.88	191.87	191.87	191.87	191.86
25.4000	191.86	191.86	191.86	191.85	191.85
25.6500	191.85	191.85	191.84	191.84	191.84
25.9000	191.84	191.84	191.83	191.83	191.83
26.1500	191.83	191.83	191.82	191.82	191.82
26.4000	191.82	191.82	191.82	191.82	191.81
26.6500	191.81	191.81	191.81	191.81	191.81
26.9000	191.81	191.80	191.80	191.80	191.80
27.1500	191.80	191.80	191.80	191.80	191.80
27.4000	191.79	191.79	191.79	191.79	191.79
27.6500	191.79	191.79	191.79	191.79	191.79
27.9000	191.79	191.78	191.78	191.78	191.78
28.1500	191.78	191.78	191.78	191.78	191.78
28.4000	191.78	191.78	191.78	191.78	191.78
28.6500	191.78	191.77	191.77	191.77	191.77
28.9000	191.77	191.77	191.77	191.77	191.77
29.1500	191.77	191.77	191.77	191.77	191.77

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs	Time on left represents time for first value in each row.				
29.4000	191.77	191.77	191.77	191.77	191.77
29.6500	191.77	191.77	191.77	191.77	191.76
29.9000	191.76	191.76	191.76	191.76	191.76
30.1500	191.76	191.76	191.76	191.76	191.76
30.4000	191.76	191.76			

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
5.5000	191.75	191.75	191.75	191.75	191.75
5.7500	191.75	191.75	191.75	191.75	191.76
6.0000	191.76	191.76	191.76	191.76	191.77
6.2500	191.77	191.77	191.77	191.78	191.78
6.5000	191.78	191.79	191.79	191.79	191.80
6.7500	191.80	191.81	191.81	191.82	191.83
7.0000	191.83	191.84	191.84	191.85	191.86
7.2500	191.86	191.87	191.88	191.88	191.89
7.5000	191.90	191.91	191.91	191.92	191.93
7.7500	191.93	191.94	191.95	191.96	191.96
8.0000	191.97	191.98	191.99	191.99	192.00
8.2500	192.01	192.02	192.02	192.03	192.04
8.5000	192.05	192.06	192.07	192.07	192.08
8.7500	192.09	192.10	192.11	192.12	192.13
9.0000	192.14	192.15	192.16	192.17	192.18
9.2500	192.19	192.20	192.20	192.21	192.22
9.5000	192.23	192.24	192.25	192.26	192.27
9.7500	192.28	192.29	192.30	192.31	192.32
10.0000	192.33	192.34	192.35	192.36	192.37
10.2500	192.38	192.39	192.40	192.41	192.42
10.5000	192.43	192.45	192.46	192.46	192.47
10.7500	192.48	192.50	192.51	192.52	192.53
11.0000	192.54	192.55	192.56	192.57	192.59
11.2500	192.60	192.62	192.64	192.66	192.68
11.5000	192.70	192.73	192.76	192.80	192.86
11.7500	192.93	193.03	193.15	193.31	193.51
12.0000	193.77	194.13	194.60	195.16	195.74
12.2500	196.28	196.73	197.09	197.35	197.47
12.5000	197.46	197.35	197.16	196.93	196.70
12.7500	196.46	196.23	196.01	195.80	195.60
13.0000	195.41	195.22	195.05	194.88	194.72
13.2500	194.57	194.43	194.30	194.18	194.06
13.5000	193.95	193.85	193.75	193.67	193.58
13.7500	193.51	193.43	193.36	193.30	193.24
14.0000	193.19	193.13	193.09	193.04	193.00
14.2500	192.96	192.92	192.89	192.86	192.84
14.5000	192.81	192.79	192.78	192.76	192.74
14.7500	192.73	192.72	192.71	192.69	192.68
15.0000	192.67	192.66	192.65	192.65	192.64
15.2500	192.63	192.62	192.61	192.60	192.60
15.5000	192.59	192.58	192.57	192.57	192.56
15.7500	192.55	192.54	192.53	192.53	192.52
16.0000	192.51	192.50	192.49	192.48	192.47

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
16.2500	192.47	192.46	192.45	192.45	192.44
16.5000	192.43	192.42	192.42	192.41	192.40
16.7500	192.40	192.39	192.39	192.38	192.38
17.0000	192.38	192.37	192.37	192.36	192.36
17.2500	192.36	192.35	192.35	192.35	192.34
17.5000	192.34	192.33	192.33	192.33	192.32
17.7500	192.32	192.32	192.31	192.31	192.30
18.0000	192.30	192.30	192.29	192.29	192.28
18.2500	192.28	192.28	192.27	192.27	192.27
18.5000	192.27	192.26	192.26	192.26	192.26
18.7500	192.26	192.25	192.25	192.25	192.25
19.0000	192.25	192.25	192.24	192.24	192.24
19.2500	192.24	192.24	192.24	192.24	192.23
19.5000	192.23	192.23	192.23	192.23	192.23
19.7500	192.23	192.22	192.22	192.22	192.22
20.0000	192.22	192.22	192.22	192.21	192.21
20.2500	192.21	192.21	192.21	192.21	192.21
20.5000	192.20	192.20	192.20	192.20	192.20
20.7500	192.20	192.20	192.20	192.20	192.19
21.0000	192.19	192.19	192.19	192.19	192.19
21.2500	192.19	192.19	192.19	192.18	192.18
21.5000	192.18	192.18	192.18	192.18	192.18
21.7500	192.18	192.18	192.17	192.17	192.17
22.0000	192.17	192.17	192.17	192.17	192.17
22.2500	192.17	192.16	192.16	192.16	192.16
22.5000	192.16	192.16	192.16	192.16	192.16
22.7500	192.15	192.15	192.15	192.15	192.15
23.0000	192.15	192.15	192.15	192.15	192.14
23.2500	192.14	192.14	192.14	192.14	192.14
23.5000	192.14	192.14	192.13	192.13	192.13
23.7500	192.13	192.13	192.13	192.13	192.13
24.0000	192.12	192.12	192.12	192.11	192.10
24.2500	192.08	192.07	192.05	192.04	192.02
24.5000	192.01	192.00	191.99	191.98	191.97
24.7500	191.96	191.95	191.94	191.93	191.93
25.0000	191.92	191.91	191.91	191.90	191.90
25.2500	191.89	191.89	191.88	191.88	191.88
25.5000	191.87	191.87	191.87	191.86	191.86
25.7500	191.86	191.85	191.85	191.85	191.85
26.0000	191.85	191.84	191.84	191.84	191.84
26.2500	191.83	191.83	191.83	191.83	191.83
26.5000	191.83	191.82	191.82	191.82	191.82
26.7500	191.82	191.82	191.81	191.81	191.81
27.0000	191.81	191.81	191.81	191.81	191.81

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
27.2500	191.80	191.80	191.80	191.80	191.80
27.5000	191.80	191.80	191.80	191.80	191.79
27.7500	191.79	191.79	191.79	191.79	191.79
28.0000	191.79	191.79	191.79	191.79	191.79
28.2500	191.78	191.78	191.78	191.78	191.78
28.5000	191.78	191.78	191.78	191.78	191.78
28.7500	191.78	191.78	191.78	191.78	191.78
29.0000	191.77	191.77	191.77	191.77	191.77
29.2500	191.77	191.77	191.77	191.77	191.77
29.5000	191.77	191.77	191.77	191.77	191.77
29.7500	191.77	191.77	191.77	191.77	191.77
30.0000	191.77	191.77	191.76	191.76	191.76
30.2500	191.76	191.76	191.76	191.76	191.76
30.5000	191.76	191.76	191.76	191.76	191.76

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
1.7500	0	0	0	0	0
2.0000	0	0	2	2	3
2.2500	3	4	4	5	5
2.5000	6	6	7	8	8
2.7500	9	10	11	12	13
3.0000	13	14	15	16	17
3.2500	18	19	20	22	23
3.5000	24	25	26	28	29
3.7500	31	32	33	35	36
4.0000	38	39	41	43	44
4.2500	46	47	49	51	53
4.5000	55	56	58	60	62
4.7500	64	66	68	70	72
5.0000	74	76	78	81	83
5.2500	85	87	90	92	94
5.5000	97	99	102	104	107
5.7500	109	112	114	117	120
6.0000	122	125	128	130	133
6.2500	136	139	142	145	148
6.5000	151	154	158	161	164
6.7500	168	171	175	178	182
7.0000	186	190	193	197	201
7.2500	205	210	214	218	222
7.5000	227	231	236	240	245
7.7500	250	254	259	264	269
8.0000	274	279	284	290	295
8.2500	301	306	312	318	324
8.5000	330	336	342	349	356
8.7500	363	370	377	384	391
9.0000	399	407	414	422	430
9.2500	439	447	456	464	473
9.5000	482	491	500	510	519
9.7500	529	539	549	559	569
10.0000	580	590	601	612	623
10.2500	634	646	658	670	683
10.5000	696	709	722	736	750
10.7500	764	778	793	809	824
11.0000	840	856	872	889	907
11.2500	925	945	965	987	1010
11.5000	1034	1059	1086	1118	1155
11.7500	1200	1254	1318	1392	1478
12.0000	1586	1722	1885	2062	2227
12.2500	2357	2449	2511	2551	2574

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
12.5000	2583	2581	2570	2552	2531
12.7500	2509	2487	2466	2446	2427
13.0000	2408	2391	2376	2361	2347
13.2500	2334	2322	2312	2302	2293
13.5000	2285	2278	2271	2265	2259
13.7500	2253	2248	2243	2239	2235
14.0000	2231	2227	2223	2220	2217
14.2500	2214	2211	2208	2206	2204
14.5000	2201	2199	2197	2195	2194
14.7500	2192	2190	2189	2187	2186
15.0000	2184	2183	2181	2180	2179
15.2500	2178	2176	2175	2174	2173
15.5000	2171	2170	2169	2168	2167
15.7500	2166	2165	2163	2162	2161
16.0000	2160	2159	2158	2156	2155
16.2500	2154	2154	2153	2152	2151
16.5000	2150	2149	2148	2148	2147
16.7500	2147	2146	2145	2145	2144
17.0000	2143	2143	2142	2142	2141
17.2500	2141	2140	2140	2139	2139
17.5000	2138	2137	2137	2137	2136
17.7500	2136	2135	2135	2134	2134
18.0000	2133	2133	2132	2132	2131
18.2500	2131	2130	2130	2130	2129
18.5000	2129	2129	2128	2128	2128
18.7500	2128	2127	2127	2127	2127
19.0000	2127	2126	2126	2126	2126
19.2500	2126	2126	2126	2125	2125
19.5000	2125	2125	2125	2125	2124
19.7500	2124	2124	2124	2124	2124
20.0000	2123	2123	2123	2123	2123
20.2500	2123	2122	2122	2122	2122
20.5000	2122	2122	2122	2122	2121
20.7500	2121	2121	2121	2121	2121
21.0000	2121	2121	2120	2120	2120
21.2500	2120	2120	2120	2120	2120
21.5000	2120	2120	2120	2119	2119
21.7500	2119	2119	2119	2119	2119
22.0000	2119	2118	2118	2118	2118
22.2500	2118	2118	2118	2118	2118
22.5000	2117	2117	2117	2117	2117
22.7500	2117	2117	2117	2117	2116
23.0000	2116	2116	2116	2116	2116
23.2500	2116	2116	2115	2115	2115

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
23.5000	2115	2115	2115	2115	2115
23.7500	2115	2114	2114	2114	2114
24.0000	2114	2114	2114	2113	2111
24.2500	2110	2109	2107	2106	2105
24.5000	2104	2103	2102	2102	2101
24.7500	2100				

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.9500	0	0	0	0	0
1.2000	2	3	3	4	5
1.4500	6	7	9	10	11
1.7000	13	14	16	17	19
1.9500	21	22	24	26	28
2.2000	30	32	34	36	39
2.4500	41	43	46	48	51
2.7000	53	56	59	62	64
2.9500	67	70	73	77	80
3.2000	83	86	89	93	96
3.4500	100	103	107	111	114
3.7000	118	122	126	130	134
3.9500	138	142	146	150	154
4.2000	159	163	167	172	177
4.4500	181	186	190	195	200
4.7000	204	209	214	219	224
4.9500	229	234	240	245	250
5.2000	255	260	266	271	277
5.4500	282	288	293	299	305
5.7000	310	316	322	328	334
5.9500	340	346	352	358	364
6.2000	371	377	383	390	397
6.4500	403	410	417	424	431
6.7000	439	446	454	461	469
6.9500	477	485	493	502	510
7.2000	519	527	536	545	554
7.4500	563	572	581	591	600
7.7000	610	620	630	639	650
7.9500	660	670	681	691	702
8.2000	713	724	736	747	759
8.4500	771	784	797	809	822
8.7000	836	850	863	878	892
8.9500	907	922	937	953	968
9.2000	984	1001	1017	1034	1051
9.4500	1068	1086	1104	1122	1140
9.7000	1159	1178	1197	1216	1236
9.9500	1256	1276	1296	1317	1338
10.2000	1360	1381	1404	1427	1450
10.4500	1474	1499	1524	1549	1575
10.7000	1602	1629	1657	1685	1714
10.9500	1744	1773	1804	1835	1868
11.2000	1901	1936	1973	2012	2053
11.4500	2096	2138	2178	2217	2259

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.7000	2306	2361	2426	2500	2583
11.9500	2679	2799	2957	3142	3320
12.2000	3452	3523	3540	3520	3478
12.4500	3423	3360	3293	3224	3157
12.7000	3092	3028	2968	2911	2858
12.9500	2809	2764	2722	2683	2647
13.2000	2614	2584	2557	2532	2510
13.4500	2490	2471	2454	2439	2425
13.7000	2412	2400	2389	2379	2369
13.9500	2360	2352	2344	2336	2329
14.2000	2323	2317	2311	2306	2301
14.4500	2296	2292	2288	2284	2280
14.7000	2277	2274	2271	2267	2265
14.9500	2262	2259	2256	2254	2251
15.2000	2249	2246	2244	2242	2239
15.4500	2237	2235	2233	2231	2228
15.7000	2226	2224	2222	2220	2217
15.9500	2215	2213	2211	2209	2207
16.2000	2205	2203	2201	2200	2198
16.4500	2197	2195	2194	2192	2191
16.7000	2190	2189	2187	2186	2185
16.9500	2184	2183	2182	2181	2180
17.2000	2179	2178	2177	2176	2175
17.4500	2174	2173	2172	2171	2170
17.7000	2170	2169	2168	2167	2166
17.9500	2165	2164	2163	2162	2161
18.2000	2160	2160	2159	2158	2158
18.4500	2157	2156	2156	2155	2155
18.7000	2154	2154	2154	2153	2153
18.9500	2152	2152	2152	2151	2151
19.2000	2151	2150	2150	2150	2149
19.4500	2149	2149	2149	2148	2148
19.7000	2148	2148	2147	2147	2147
19.9500	2146	2146	2146	2146	2145
20.2000	2145	2145	2144	2144	2144
20.4500	2144	2143	2143	2143	2143
20.7000	2142	2142	2142	2142	2142
20.9500	2142	2141	2141	2141	2141
21.2000	2141	2140	2140	2140	2140
21.4500	2139	2139	2139	2139	2139
21.7000	2138	2138	2138	2138	2138
21.9500	2137	2137	2137	2137	2137
22.2000	2136	2136	2136	2136	2136
22.4500	2135	2135	2135	2135	2135

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.7000	2134	2134	2134	2134	2134
22.9500	2133	2133	2133	2133	2132
23.2000	2132	2132	2132	2132	2131
23.4500	2131	2131	2131	2131	2131
23.7000	2130	2130	2130	2130	2130
23.9500	2129	2129	2129	2128	2126
24.2000	2124	2122	2119	2117	2114
24.4500	2112	2110	2109	2107	2106
24.7000	2105	2104	2103	2102	2102
24.9500	2101	2100			

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.6000	0	0	0	0	2
.8500	4	5	7	9	11
1.1000	13	15	18	21	24
1.3500	27	30	33	37	40
1.6000	44	48	52	56	60
1.8500	64	68	73	77	82
2.1000	86	91	96	101	105
2.3500	110	116	121	126	132
2.6000	137	143	148	154	160
2.8500	166	172	178	185	191
3.1000	197	204	211	217	224
3.3500	231	238	245	252	259
3.6000	266	274	281	289	296
3.8500	304	312	319	327	335
4.1000	343	352	360	368	376
4.3500	385	393	402	410	419
4.6000	428	437	446	454	464
4.8500	473	482	491	501	510
5.1000	519	529	539	548	558
5.3500	568	578	588	598	608
5.6000	618	628	638	649	659
5.8500	669	680	691	701	712
6.1000	723	734	745	756	767
6.3500	779	790	803	815	827
6.6000	839	852	865	878	891
6.8500	904	918	931	945	959
7.1000	974	988	1003	1018	1033
7.3500	1048	1063	1079	1095	1111
7.6000	1127	1143	1160	1177	1193
7.8500	1211	1228	1245	1263	1281
8.1000	1299	1317	1336	1355	1374
8.3500	1394	1414	1435	1455	1477
8.6000	1499	1521	1544	1567	1590
8.8500	1614	1638	1663	1688	1714
9.1000	1740	1767	1794	1821	1849
9.3500	1877	1905	1934	1964	1994
9.6000	2024	2055	2086	2116	2144
9.8500	2169	2191	2211	2230	2246
10.1000	2261	2275	2288	2300	2312
10.3500	2323	2333	2343	2353	2362
10.6000	2371	2380	2389	2397	2406
10.8500	2414	2422	2430	2438	2446
11.1000	2454	2462	2472	2483	2496

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.3500	2509	2525	2542	2560	2580
11.6000	2604	2637	2684	2747	2828
11.8500	2928	3045	3183	3353	3564
12.1000	3801	4024	4187	4263	4257
12.3500	4197	4108	4002	3886	3765
12.6000	3644	3528	3421	3327	3246
12.8500	3178	3119	3065	3014	2966
13.1000	2920	2877	2838	2801	2767
13.3500	2737	2709	2683	2660	2638
13.6000	2618	2599	2582	2566	2552
13.8500	2538	2524	2512	2500	2489
14.1000	2478	2468	2458	2449	2441
14.3500	2433	2426	2419	2412	2406
14.6000	2400	2395	2389	2384	2380
14.8500	2375	2370	2366	2362	2357
15.1000	2353	2350	2345	2342	2338
15.3500	2334	2330	2327	2323	2319
15.6000	2316	2312	2309	2305	2302
15.8500	2298	2295	2291	2288	2284
16.1000	2281	2278	2274	2271	2268
16.3500	2265	2263	2260	2258	2256
16.6000	2254	2251	2249	2248	2246
16.8500	2244	2242	2240	2238	2237
17.1000	2235	2233	2232	2230	2228
17.3500	2227	2225	2224	2222	2221
17.6000	2219	2218	2216	2215	2213
17.8500	2212	2210	2209	2207	2206
18.1000	2204	2203	2201	2200	2199
18.3500	2198	2197	2196	2195	2194
18.6000	2193	2192	2192	2191	2190
18.8500	2189	2189	2188	2188	2187
19.1000	2187	2186	2185	2185	2184
19.3500	2184	2183	2183	2182	2182
19.6000	2181	2181	2181	2180	2180
19.8500	2179	2179	2178	2178	2177
20.1000	2177	2176	2176	2176	2175
20.3500	2175	2174	2174	2174	2173
20.6000	2173	2172	2172	2172	2171
20.8500	2171	2171	2170	2170	2170
21.1000	2169	2169	2169	2168	2168
21.3500	2168	2167	2167	2167	2166
21.6000	2166	2165	2165	2165	2165
21.8500	2164	2164	2164	2163	2163
22.1000	2163	2162	2162	2162	2161

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.3500	2161	2161	2160	2160	2159
22.6000	2159	2159	2159	2158	2158
22.8500	2158	2157	2157	2157	2156
23.1000	2156	2156	2155	2155	2155
23.3500	2154	2154	2154	2153	2153
23.6000	2153	2152	2152	2152	2151
23.8500	2151	2151	2150	2150	2149
24.1000	2148	2146	2142	2138	2133
24.3500	2130	2126	2122	2119	2117
24.6000	2114	2112	2110	2109	2107
24.8500	2106	2105	2104	2103	2102
25.1000	2102	2101	2100		

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
2.0500	0	0	0	0	0
2.3000	1	1	1	2	2
2.5500	2	3	3	3	4
2.8000	4	5	5	5	6
3.0500	6	7	7	8	8
3.3000	9	9	10	11	11
3.5500	12	12	13	14	14
3.8000	15	16	16	17	18
4.0500	19	20	20	21	22
4.3000	23	24	24	25	26
4.5500	27	28	29	30	31
4.8000	32	33	34	35	36
5.0500	37	38	39	40	41
5.3000	42	44	45	46	47
5.5500	48	49	51	52	53
5.8000	54	56	57	58	59
6.0500	61	62	64	65	66
6.3000	68	69	71	72	74
6.5500	75	77	79	80	82
6.8000	84	86	87	89	91
7.0500	93	95	97	99	101
7.3000	103	105	107	109	111
7.5500	113	116	118	120	122
7.8000	125	127	130	132	135
8.0500	137	140	142	145	148
8.3000	150	153	156	159	162
8.5500	165	168	172	175	178
8.8000	182	185	189	192	196
9.0500	200	204	208	212	216
9.3000	220	224	228	233	237
9.5500	242	246	251	256	260
9.8000	265	270	275	280	286
10.0500	291	296	301	307	313
10.3000	318	324	330	336	343
10.5500	349	356	363	369	377
10.8000	384	391	399	406	414
11.0500	422	430	438	447	456
11.3000	466	476	487	498	510
11.5500	522	536	552	570	592
11.8000	619	651	687	730	783
12.0500	851	931	1019	1104	1179
12.3000	1235	1270	1291	1303	1306
12.5500	1304	1298	1290	1281	1272

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
12.8000	1263	1255	1249	1243	1237
13.0500	1233	1228	1224	1221	1218
13.3000	1216	1213	1212	1210	1208
13.5500	1207	1206	1205	1204	1203
13.8000	1202	1201	1201	1200	1199
14.0500	1198	1198	1197	1196	1196
14.3000	1195	1195	1194	1194	1194
14.5500	1193	1193	1192	1192	1192
14.8000	1191	1191	1191	1190	1190
15.0500	1190	1189	1189	1189	1188
15.3000	1188	1188	1187	1187	1187
15.5500	1187	1186	1186	1186	1185
15.8000	1185	1185	1184	1184	1184
16.0500	1183	1183	1183	1183	1182
16.3000	1182	1182	1182	1181	1181
16.5500	1181	1181	1181	1181	1181
16.8000	1180	1180	1180	1180	1180
17.0500	1180	1179	1179	1179	1179
17.3000	1179	1179	1179	1179	1178
17.5500	1178	1178	1178	1178	1178
17.8000	1178	1177	1177	1177	1177
18.0500	1177	1177	1177	1177	1177
18.3000	1176	1176	1176	1176	1176
18.5500	1176	1176	1176	1176	1176
18.8000	1176	1176	1176	1176	1176
19.0500	1176	1175	1175	1175	1175
19.3000	1175	1175	1175	1175	1175
19.5500	1175	1175	1175	1175	1175
19.8000	1175	1175	1175	1175	1175
20.0500	1175	1175	1175	1175	1175
20.3000	1175	1175	1175	1174	1174
20.5500	1174	1174	1174	1174	1174
20.8000	1174	1174	1174	1174	1174
21.0500	1174	1174	1174	1174	1174
21.3000	1174	1174	1174	1174	1174
21.5500	1174	1174	1174	1174	1174
21.8000	1174	1174	1174	1173	1173
22.0500	1173	1173	1173	1173	1173
22.3000	1173	1173	1173	1173	1173
22.5500	1173	1173	1173	1173	1173
22.8000	1173	1173	1173	1173	1173
23.0500	1173	1173	1173	1173	1173
23.3000	1173	1173	1173	1173	1173
23.5500	1173	1173	1173	1172	1172

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
23.8000	1172	1172	1172	1172	1172
24.0500	1172	1172	1172	1171	1171
24.3000	1170	1169			

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
1.0500	0	0	0	0	1
1.3000	1	2	2	3	3
1.5500	4	5	5	6	7
1.8000	7	8	9	10	11
2.0500	12	13	14	15	16
2.3000	17	18	19	20	21
2.5500	22	24	25	26	27
2.8000	29	30	32	33	34
3.0500	36	38	39	41	42
3.3000	44	46	47	49	51
3.5500	53	54	56	58	60
3.8000	62	64	66	68	70
4.0500	72	74	76	78	80
4.3000	82	85	87	89	91
4.5500	94	96	98	101	103
4.8000	105	108	110	113	115
5.0500	118	121	123	126	128
5.3000	131	134	136	139	142
5.5500	145	147	150	153	156
5.8000	159	162	165	168	170
6.0500	173	176	180	183	186
6.3000	189	192	195	199	202
6.5500	206	209	213	216	220
6.8000	224	228	231	235	239
7.0500	243	247	252	256	260
7.3000	264	269	273	278	282
7.5500	287	291	296	301	306
7.8000	311	316	321	326	331
8.0500	336	341	346	352	357
8.3000	363	369	375	381	387
8.5500	393	399	406	413	419
8.8000	426	433	440	448	455
9.0500	463	470	478	486	494
9.3000	502	511	519	527	536
9.5500	545	554	563	572	582
9.8000	591	601	610	620	630
10.0500	640	651	661	672	682
10.3000	694	705	717	728	741
10.5500	753	766	779	792	805
10.8000	819	833	847	862	877
11.0500	892	907	923	940	957
11.3000	975	994	1015	1036	1058
11.5500	1081	1107	1136	1171	1208

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.8000	1245	1282	1321	1362	1413
12.0500	1477	1550	1620	1672	1699
12.3000	1700	1684	1658	1627	1592
12.5500	1555	1517	1480	1445	1415
12.8000	1388	1365	1346	1329	1315
13.0500	1302	1291	1282	1274	1267
13.3000	1261	1256	1252	1248	1245
13.5500	1242	1240	1237	1235	1234
13.8000	1232	1230	1229	1227	1226
14.0500	1225	1223	1222	1221	1220
14.3000	1219	1218	1217	1216	1215
14.5500	1215	1214	1213	1213	1212
14.8000	1211	1211	1210	1210	1209
15.0500	1208	1208	1207	1207	1206
15.3000	1206	1205	1204	1204	1203
15.5500	1203	1202	1202	1201	1200
15.8000	1200	1199	1199	1198	1198
16.0500	1197	1196	1196	1195	1195
16.3000	1194	1194	1194	1193	1193
16.5500	1193	1192	1192	1192	1191
16.8000	1191	1191	1191	1190	1190
17.0500	1190	1190	1189	1189	1189
17.3000	1189	1188	1188	1188	1188
17.5500	1187	1187	1187	1187	1186
17.8000	1186	1186	1186	1185	1185
18.0500	1185	1185	1184	1184	1184
18.3000	1184	1184	1184	1183	1183
18.5500	1183	1183	1183	1183	1183
18.8000	1183	1183	1183	1183	1182
19.0500	1182	1182	1182	1182	1182
19.3000	1182	1182	1182	1182	1182
19.5500	1182	1181	1181	1181	1181
19.8000	1181	1181	1181	1181	1181
20.0500	1181	1181	1181	1181	1181
20.3000	1181	1180	1180	1180	1180
20.5500	1180	1180	1180	1180	1180
20.8000	1180	1180	1180	1180	1180
21.0500	1180	1180	1179	1179	1179
21.3000	1179	1179	1179	1179	1179
21.5500	1179	1179	1179	1179	1179
21.8000	1179	1179	1179	1179	1179
22.0500	1179	1178	1178	1178	1178
22.3000	1178	1178	1178	1178	1178
22.5500	1178	1178	1178	1178	1178

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.8000	1178	1178	1177	1177	1177
23.0500	1177	1177	1177	1177	1177
23.3000	1177	1177	1177	1177	1177
23.5500	1177	1177	1177	1177	1177
23.8000	1177	1177	1176	1176	1176
24.0500	1176	1176	1175	1174	1173
24.3000	1172	1171	1171	1170	1169

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.6500	0	0	0	1	2
.9000	2	3	4	5	6
1.1500	7	9	10	11	13
1.4000	15	16	18	20	22
1.6500	23	25	27	29	31
1.9000	34	36	38	40	42
2.1500	45	47	49	52	54
2.4000	57	59	62	65	68
2.6500	70	73	76	79	82
2.9000	85	88	91	94	97
3.1500	100	104	107	110	114
3.4000	117	121	124	128	131
3.6500	135	139	142	146	150
3.9000	154	158	161	165	169
4.1500	173	177	181	186	190
4.4000	194	198	202	207	211
4.6500	215	220	224	229	233
4.9000	238	242	247	252	256
5.1500	261	266	271	275	280
5.4000	285	290	295	300	305
5.6500	310	315	320	325	330
5.9000	336	341	346	352	357
6.1500	362	368	373	379	385
6.4000	390	396	402	408	414
6.6500	421	427	433	440	447
6.9000	453	460	467	474	481
7.1500	488	495	503	510	518
7.4000	525	533	541	549	557
7.6500	565	573	581	590	598
7.9000	607	615	624	633	642
8.1500	651	660	669	679	689
8.4000	699	709	719	730	741
8.6500	752	763	774	786	798
8.9000	810	822	835	847	860
9.1500	873	886	900	914	928
9.4000	942	956	971	985	1000
9.6500	1016	1031	1047	1062	1078
9.9000	1095	1111	1128	1145	1162
10.1500	1178	1192	1203	1213	1221
10.4000	1227	1233	1238	1243	1247
10.6500	1250	1253	1256	1259	1262
10.9000	1264	1267	1269	1271	1274
11.1500	1276	1279	1283	1287	1292

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.4000	1297	1303	1309	1315	1324
11.6500	1336	1354	1379	1411	1450
11.9000	1495	1548	1619	1715	1820
12.1500	1908	1960	1969	1945	1904
12.4000	1859	1814	1770	1725	1678
12.6500	1630	1584	1542	1504	1472
12.9000	1443	1419	1398	1380	1364
13.1500	1350	1338	1327	1318	1311
13.4000	1304	1298	1293	1289	1285
13.6500	1282	1278	1276	1273	1270
13.9000	1268	1265	1263	1261	1259
14.1500	1257	1255	1253	1251	1250
14.4000	1249	1247	1246	1245	1244
14.6500	1243	1242	1241	1239	1239
14.9000	1238	1237	1236	1235	1234
15.1500	1233	1232	1231	1230	1229
15.4000	1228	1227	1226	1225	1224
15.6500	1223	1222	1221	1220	1220
15.9000	1219	1218	1217	1216	1215
16.1500	1214	1213	1212	1212	1211
16.4000	1210	1210	1209	1209	1208
16.6500	1208	1207	1207	1206	1206
16.9000	1206	1205	1205	1204	1204
17.1500	1204	1203	1203	1202	1202
17.4000	1201	1201	1201	1200	1200
17.6500	1199	1199	1199	1198	1198
17.9000	1197	1197	1197	1196	1196
18.1500	1195	1195	1195	1194	1194
18.4000	1194	1194	1194	1193	1193
18.6500	1193	1193	1193	1192	1192
18.9000	1192	1192	1192	1192	1192
19.1500	1192	1191	1191	1191	1191
19.4000	1191	1191	1191	1191	1190
19.6500	1190	1190	1190	1190	1190
19.9000	1190	1190	1189	1189	1189
20.1500	1189	1189	1189	1189	1189
20.4000	1189	1188	1188	1188	1188
20.6500	1188	1188	1188	1188	1188
20.9000	1188	1187	1187	1187	1187
21.1500	1187	1187	1187	1187	1187
21.4000	1187	1187	1187	1186	1186
21.6500	1186	1186	1186	1186	1186
21.9000	1186	1186	1186	1185	1185
22.1500	1185	1185	1185	1185	1185

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.4000	1185	1185	1185	1185	1185
22.6500	1184	1184	1184	1184	1184
22.9000	1184	1184	1184	1184	1184
23.1500	1183	1183	1183	1183	1183
23.4000	1183	1183	1183	1183	1183
23.6500	1183	1183	1182	1182	1182
23.9000	1182	1182	1182	1182	1181
24.1500	1180	1179	1177	1175	1174
24.4000	1173	1172	1171	1170	1170

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
9.2000	0	0	0	1	1
9.4500	2	2	2	3	4
9.7000	4	5	5	6	6
9.9500	7	8	8	9	10
10.2000	11	12	12	13	14
10.4500	15	16	18	19	20
10.7000	21	22	24	25	26
10.9500	28	29	31	33	35
11.2000	37	39	42	45	49
11.4500	53	57	62	68	77
11.7000	90	108	132	162	199
11.9500	254	348	499	708	954
12.2000	1213	1422	1679	1876	2052
12.4500	2209	2345	2459	2553	2630
12.7000	2692	2744	2788	2826	2858
12.9500	2884	2906	2924	2937	2946
13.2000	2953	2956	2958	2957	2954
13.4500	2949	2943	2936	2926	2916
13.7000	2904	2891	2876	2860	2843
13.9500	2825	2806	2786	2764	2742
14.2000	2718	2695	2670	2644	2618
14.4500	2592	2565	2537	2509	2480
14.7000	2451	2421	2390	2360	2328
14.9500	2296	2264	2231	2198	2164
15.2000	2130	2095	2060	2024	1988
15.4500	1952	1915	1877	1839	1801
15.7000	1762	1722	1682	1630	1574
15.9500	1517	1460	1433	1406	1379
16.2000	1347	1303	1259	1215	1170
16.4500	1126	1081	1035	990	944
16.7000	898	852	806	759	712
16.9500	665	618	570	523	475
17.2000	427	378	330	281	232
17.4500	185	145	117	97	83
17.7000	72	65	59	55	52
17.9500	50	48	46	45	44
18.2000	43	42	42	41	41
18.4500	40	40	40	39	39
18.7000	39	39	39	38	38
18.9500	38	38	37	37	37
19.2000	37	37	36	36	36
19.4500	36	36	36	35	35
19.7000	35	35	35	34	34

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
19.9500	34	34	34	34	33
20.2000	33	33	33	33	33
20.4500	32	32	32	32	32
20.7000	32	31	31	31	31
20.9500	31	31	31	31	30
21.2000	30	30	30	30	30
21.4500	30	29	29	29	29
21.7000	29	29	29	28	28
21.9500	28	28	28	28	28
22.2000	28	27	27	27	27
22.4500	27	27	27	26	26
22.7000	26	26	26	26	26
22.9500	25	25	25	25	25
23.2000	25	25	24	24	24
23.4500	24	24	24	24	24
23.7000	23	23	23	23	23
23.9500	23	23	22	21	20
24.2000	17	14	12	10	8
24.4500	7	6	5	4	3
24.7000	3	3	2	1	

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
6.6500	0	0	0	1	1
6.9000	1	2	2	2	3
7.1500	3	4	4	5	5
7.4000	6	6	7	7	8
7.6500	8	9	9	10	11
7.9000	11	12	13	13	14
8.1500	15	15	16	17	18
8.4000	19	20	21	22	23
8.6500	24	25	26	28	29
8.9000	30	32	33	34	36
9.1500	37	39	40	42	43
9.4000	45	47	48	50	52
9.6500	54	55	57	59	61
9.9000	63	65	67	69	71
10.1500	73	75	78	81	84
10.4000	87	90	93	96	100
10.6500	103	107	111	115	119
10.9000	123	127	131	135	139
11.1500	145	151	158	167	177
11.4000	187	199	217	246	290
11.6500	355	449	581	758	985
11.9000	1268	1602	2089	2715	3495
12.1500	4388	5304	6127	6800	7323
12.4000	7719	8001	8194	8308	8353
12.6500	8342	8292	8220	8133	8036
12.9000	7933	7826	7720	7614	7510
13.1500	7410	7314	7223	7136	7054
13.4000	6976	6903	6833	6766	6703
13.6500	6643	6585	6530	6477	6426
13.9000	6377	6330	6285	6241	6198
14.1500	6156	6116	6077	6040	6004
14.4000	5969	5936	5904	5873	5844
14.6500	5814	5786	5758	5730	5703
14.9000	5677	5650	5624	5599	5574
15.1500	5549	5525	5501	5477	5454
15.4000	5431	5407	5384	5360	5336
15.6500	5312	5288	5264	5240	5215
15.9000	5191	5166	5141	5117	5092
16.1500	5067	5042	5017	4992	4966
16.4000	4941	4915	4889	4863	4836
16.6500	4810	4783	4756	4729	4702
16.9000	4675	4648	4621	4593	4565
17.1500	4536	4507	4478	4447	4417

TIME vs. VOLUME (cu.ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.4000	4386	4355	4323	4291	4259
17.6500	4226	4192	4158	4124	4089
17.9000	4054	4019	3983	3946	3909
18.1500	3872	3835	3797	3759	3721
18.4000	3683	3645	3606	3567	3528
18.6500	3489	3449	3409	3370	3330
18.9000	3290	3250	3210	3169	3129
19.1500	3088	3048	3007	2966	2925
19.4000	2883	2842	2801	2759	2717
19.6500	2675	2633	2591	2549	2506
19.9000	2464	2421	2378	2335	2292
20.1500	2249	2206	2162	2119	2075
20.4000	2032	1988	1944	1900	1856
20.6500	1812	1767	1723	1678	1619
20.9000	1557	1496	1447	1419	1391
21.1500	1363	1319	1273	1228	1182
21.4000	1137	1091	1045	999	953
21.6500	907	860	814	768	721
21.9000	674	628	581	534	487
22.1500	440	393	345	298	250
22.4000	203	161	130	108	92
22.6500	80	72	67	62	59
22.9000	57	55	54	53	52
23.1500	52	51	51	50	50
23.4000	49	49	49	49	48
23.6500	48	48	47	47	47
23.9000	46	46	46	45	43
24.1500	40	34	29	24	20
24.4000	16	13	11	9	8
24.6500	7	6	5	4	4
24.9000	3	3	2	2	1

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
4.6000	0	0	0	1	1
4.8500	2	2	2	3	4
5.1000	4	5	5	6	6
5.3500	7	7	8	9	9
5.6000	10	10	11	12	12
5.8500	13	13	14	15	15
6.1000	16	17	17	18	19
6.3500	19	20	21	22	23
6.6000	24	25	26	27	28
6.8500	29	30	31	32	33
7.1000	34	36	37	38	39
7.3500	41	42	43	44	46
7.6000	47	48	50	51	53
7.8500	54	55	57	58	60
8.1000	61	63	65	67	69
8.3500	71	73	76	78	81
8.6000	84	86	89	92	95
8.8500	98	101	104	107	110
9.1000	113	116	120	123	126
9.3500	130	133	137	140	144
9.6000	147	151	155	159	166
9.8500	175	185	196	209	225
10.1000	245	268	295	325	359
10.3500	397	438	484	532	585
10.6000	641	700	763	830	901
10.8500	975	1053	1135	1220	1309
11.1000	1387	1449	1584	1723	1847
11.3500	1981	2126	2281	2448	2629
11.6000	2833	3072	3364	3727	4172
11.8500	4710	5341	6071	6958	8051
12.1000	9337	10737	12084	13232	14133
12.3500	14816	15315	15652	15843	15896
12.6000	15836	15688	15473	15214	14929
12.8500	14626	14318	13998	13682	13365
13.1000	13055	12733	12420	12113	11812
13.3500	11519	11230	10950	10679	10415
13.6000	10158	9910	9672	9439	9215
13.8500	9000	8793	8595	8405	8223
14.1000	8049	7884	7733	7594	7468
14.3500	7354	7251	7158	7072	6994
14.6000	6921	6854	6792	6734	6680
14.8500	6630	6582	6537	6494	6454
15.1000	6415	6378	6342	6309	6276

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
15.3500	6245	6214	6183	6154	6125
15.6000	6096	6068	6041	6014	5987
15.8500	5961	5935	5909	5884	5859
16.1000	5834	5809	5784	5759	5735
16.3500	5711	5688	5665	5642	5620
16.6000	5598	5577	5556	5535	5515
16.8500	5495	5475	5456	5437	5418
17.1000	5399	5379	5360	5341	5321
17.3500	5302	5282	5262	5243	5223
17.6000	5203	5183	5163	5144	5124
17.8500	5104	5084	5064	5044	5023
18.1000	5002	4981	4960	4938	4916
18.3500	4894	4873	4851	4829	4807
18.6000	4785	4763	4742	4720	4698
18.8500	4676	4655	4633	4611	4589
19.1000	4567	4544	4522	4499	4475
19.3500	4452	4428	4404	4380	4356
19.6000	4331	4307	4282	4256	4231
19.8500	4205	4179	4153	4127	4100
20.1000	4073	4046	4019	3992	3964
20.3500	3937	3909	3881	3852	3824
20.6000	3795	3767	3738	3709	3680
20.8500	3650	3621	3591	3561	3531
21.1000	3501	3470	3439	3408	3377
21.3500	3346	3315	3283	3252	3220
21.6000	3188	3156	3123	3091	3058
21.8500	3025	2993	2960	2926	2893
22.1000	2859	2825	2792	2757	2723
22.3500	2689	2654	2619	2584	2549
22.6000	2514	2478	2443	2407	2371
22.8500	2335	2299	2262	2226	2189
23.1000	2152	2115	2078	2040	2003
23.3500	1965	1927	1889	1851	1812
23.6000	1774	1735	1696	1651	1597
23.8500	1543	1488	1447	1422	1397
24.1000	1370	1326	1272	1215	1155
24.3500	1094	1033	970	907	844
24.6000	780	716	652	588	523
24.8500	458	393	328	263	198
25.1000	141	101	72	51	36
25.3500	26	18	13	9	7
25.6000	5	3	2	2	1

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
10.1000	0	0	1	2	3
10.3500	5	7	10	13	18
10.6000	22	28	34	41	49
10.8500	57	66	76	87	99
11.1000	111	125	140	156	174
11.3500	194	216	240	265	292
11.6000	323	359	404	463	537
11.8500	630	745	886	1072	1320
12.1000	1576	1999	2370	2690	2922
12.3500	3068	3143	3163	3135	3069
12.6000	2971	2850	2718	2580	2444
12.8500	2313	2188	2069	1956	1849
13.1000	1731	1603	1528	1479	1421
13.3500	1362	1311	1267	1230	1197
13.6000	1167	1141	1118	1097	1077
13.8500	1059	1043	1028	1013	999
14.1000	985	973	960	949	938
14.3500	927	918	909	900	892
14.6000	885	877	871	864	857
14.8500	851	845	839	833	827
15.1000	821	816	810	804	798
15.3500	792	785	779	773	767
15.6000	761	755	748	742	736
15.8500	729	723	716	710	704
16.1000	697	691	685	679	673
16.3500	667	662	657	652	647
16.6000	643	639	634	630	627
16.8500	623	619	615	611	607
17.1000	604	600	596	592	588
17.3500	585	581	577	573	569
17.6000	566	562	558	554	550
17.8500	546	543	539	535	531
18.1000	527	523	520	516	513
18.3500	509	506	503	500	498
18.6000	495	493	490	488	486
18.8500	484	482	480	478	476
19.1000	474	473	471	470	468
19.3500	466	465	463	462	461
19.6000	459	458	456	455	454
19.8500	452	451	450	449	447
20.1000	446	445	444	442	441
20.3500	440	439	438	437	436
20.6000	435	433	432	431	430

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
20.8500	429	428	427	426	425
21.1000	425	424	423	422	421
21.3500	420	419	418	417	416
21.6000	415	414	413	412	411
21.8500	410	409	408	407	406
22.1000	405	404	403	402	401
22.3500	399	398	397	396	395
22.6000	394	392	391	390	389
22.8500	388	387	385	384	383
23.1000	382	380	379	378	377
23.3500	375	374	373	372	371
23.6000	369	368	367	365	364
23.8500	363	362	360	359	357
24.1000	355	350	343	334	324
24.3500	314	305	295	286	277
24.6000	268	260	253	246	239
24.8500	233	227	221	216	211
25.1000	206	202	197	193	188
25.3500	184	180	176	172	168
25.6000	164	161	157	154	150
25.8500	147	144	140	137	134
26.1000	131	128	125	123	120
26.3500	117	115	112	110	107
26.6000	105	102	100	98	96
26.8500	94	91	89	87	85
27.1000	84	82	80	78	76
27.3500	75	73	71	70	68
27.6000	67	65	64	62	61
27.8500	60	58	57	56	54
28.1000	53	52	51	50	49
28.3500	48	46	45	44	43
28.6000	42	41	41	40	39
28.8500	38	37	36	35	35
29.1000	34	33	32	32	31
29.3500	30	30	29	28	28
29.6000	27	26	26	25	25
29.8500	24	24			

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
7.6500	0	0	0	1	2
7.9000	3	5	7	9	12
8.1500	15	19	23	28	33
8.4000	38	44	51	58	66
8.6500	74	83	93	103	114
8.9000	125	137	150	163	177
9.1500	192	208	224	240	257
9.4000	273	290	307	325	342
9.6500	360	379	397	416	435
9.9000	454	472	491	510	528
10.1500	547	566	586	606	627
10.4000	648	669	690	712	734
10.6500	756	779	802	826	849
10.9000	873	897	921	945	969
11.1500	995	1022	1053	1086	1122
11.4000	1161	1204	1249	1298	1355
11.6500	1428	1503	1624	1863	2118
11.9000	2438	2837	3361	4075	5000
12.1500	6067	7132	8042	8714	9155
12.4000	9404	9497	9454	9294	9033
12.6500	8697	8309	7892	7468	7048
12.9000	6639	6244	5865	5503	5158
13.1500	4832	4525	4238	3971	3722
13.4000	3495	3293	3116	2958	2818
13.6500	2693	2579	2476	2380	2293
13.9000	2212	2135	2064	1995	1931
14.1500	1870	1812	1745	1677	1615
14.4000	1562	1538	1516	1496	1477
14.6500	1460	1435	1412	1392	1374
14.9000	1358	1343	1329	1316	1303
15.1500	1292	1280	1269	1259	1249
15.4000	1239	1228	1218	1208	1197
15.6500	1187	1176	1166	1155	1145
15.9000	1134	1123	1113	1102	1092
16.1500	1081	1071	1062	1053	1044
16.4000	1036	1028	1020	1013	1006
16.6500	999	992	986	979	973
16.9000	967	961	955	949	943
17.1500	937	931	925	919	914
17.4000	908	902	896	891	885
17.6500	879	874	868	862	857
17.9000	851	845	840	834	828
18.1500	823	817	812	807	802

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
18.4000	797	792	788	784	781
18.6500	777	773	770	767	764
18.9000	761	758	755	753	750
19.1500	747	745	742	740	738
19.4000	735	733	731	728	726
19.6500	724	722	719	717	715
19.9000	713	711	709	707	704
20.1500	702	700	698	696	694
20.4000	692	690	689	687	685
20.6500	683	681	680	678	676
20.9000	674	673	671	669	668
21.1500	666	665	663	661	660
21.4000	658	657	655	653	652
21.6500	650	649	647	645	644
21.9000	642	641	639	638	636
22.1500	634	633	631	630	628
22.4000	626	625	623	622	620
22.6500	618	616	615	613	611
22.9000	609	607	606	604	602
23.1500	600	598	596	594	592
23.4000	590	588	586	584	582
23.6500	580	578	576	574	572
23.9000	570	568	566	563	558
24.1500	549	534	516	496	476
24.4000	457	438	421	404	389
24.6500	374	360	347	334	323
24.9000	312	301	291	282	273
25.1500	265	257	250	243	236
25.4000	230	224	219	214	209
25.6500	204	200	195	191	187
25.9000	182	178	174	171	167
26.1500	163	159	156	152	149
26.4000	146	142	139	136	133
26.6500	130	127	124	122	119
26.9000	116	114	111	109	106
27.1500	104	101	99	97	95
27.4000	93	91	89	87	85
27.6500	83	81	79	77	76
27.9000	74	72	71	69	68
28.1500	66	65	63	62	60
28.4000	59	58	56	55	54
28.6500	53	52	50	49	48
28.9000	47	46	45	44	43
29.1500	42	41	40	39	38

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
29.4000	38	37	36	35	34
29.6500	34	33	32	31	31
29.9000	30	29	29	28	27
30.1500	27	26	26	25	24
30.4000	24	23			

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
5.5000	0	0	0	1	2
5.7500	3	5	7	9	12
6.0000	15	19	23	27	32
6.2500	37	42	48	55	62
6.5000	69	77	85	94	103
6.7500	113	123	134	145	157
7.0000	169	182	195	209	223
7.2500	237	252	266	281	295
7.5000	310	325	340	355	370
7.7500	385	401	416	432	448
8.0000	463	478	493	508	524
8.2500	539	555	571	588	605
8.5000	623	641	659	677	695
8.7500	714	733	751	770	790
9.0000	809	829	849	869	889
9.2500	909	928	948	968	988
9.5000	1008	1028	1048	1068	1088
9.7500	1108	1127	1147	1167	1186
10.0000	1206	1225	1245	1266	1286
10.2500	1307	1329	1352	1376	1400
10.5000	1426	1452	1472	1491	1511
10.7500	1532	1554	1591	1644	1698
11.0000	1754	1806	1852	1902	1958
11.2500	2023	2098	2182	2277	2381
11.5000	2493	2617	2762	2946	3191
11.7500	3519	3956	4520	5226	6106
12.0000	7269	8847	10850	13122	15379
12.2500	17317	18774	19758	20345	20610
12.5000	20600	20358	19926	19345	18663
12.7500	17920	17147	16372	15597	14838
13.0000	14096	13373	12672	11994	11342
13.2500	10719	10127	9566	9037	8537
13.5000	8066	7622	7206	6815	6449
13.7500	6105	5781	5478	5194	4928
14.0000	4678	4445	4225	4019	3828
14.2500	3648	3484	3339	3211	3097
14.5000	2995	2904	2821	2746	2678
14.7500	2615	2556	2502	2450	2401
15.0000	2355	2311	2270	2230	2191
15.2500	2153	2115	2079	2043	2008
15.5000	1973	1938	1904	1871	1837
15.7500	1805	1764	1721	1679	1638
16.0000	1598	1562	1544	1528	1511

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
16.2500	1496	1481	1468	1452	1433
16.5000	1417	1402	1388	1375	1364
16.7500	1353	1343	1333	1324	1315
17.0000	1306	1298	1290	1282	1274
17.2500	1266	1258	1251	1243	1235
17.5000	1228	1220	1212	1203	1195
17.7500	1187	1179	1170	1162	1154
18.0000	1145	1137	1128	1120	1112
18.2500	1105	1098	1091	1086	1080
18.5000	1075	1070	1066	1062	1058
18.7500	1054	1051	1048	1044	1041
19.0000	1038	1035	1032	1029	1026
19.2500	1023	1020	1017	1013	1010
19.5000	1007	1004	1001	998	995
19.7500	992	989	986	983	980
20.0000	977	974	971	968	965
20.2500	962	959	957	954	951
20.5000	949	946	943	941	938
20.7500	936	933	931	928	926
21.0000	924	921	919	917	915
21.2500	912	910	908	905	903
21.5000	901	898	896	894	891
21.7500	889	887	884	882	880
22.0000	878	876	873	871	869
22.2500	866	864	862	859	857
22.5000	855	852	850	848	846
22.7500	844	841	839	837	834
23.0000	832	830	827	825	822
23.2500	820	817	814	812	809
23.5000	807	804	801	799	796
23.7500	793	790	788	785	782
24.0000	779	775	767	751	727
24.2500	697	665	632	601	572
24.5000	544	518	494	472	451
24.7500	432	415	399	383	369
25.0000	355	342	330	318	308
25.2500	297	288	279	270	262
25.5000	254	247	241	234	228
25.7500	222	217	212	207	203
26.0000	198	194	189	185	181
26.2500	177	173	169	165	162
26.5000	158	155	151	148	144
26.7500	141	138	135	132	129
27.0000	126	123	121	118	115

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
27.2500	113	110	108	105	103
27.5000	101	98	96	94	92
27.7500	90	88	86	84	82
28.0000	80	78	77	75	73
28.2500	72	70	69	67	66
28.5000	64	63	61	60	59
28.7500	57	56	55	53	52
29.0000	51	50	49	48	47
29.2500	46	45	44	43	42
29.5000	41	40	39	38	37
29.7500	36	36	35	34	33
30.0000	33	32	31	30	30
30.2500	29	28	28	27	27
30.5000	26	25	25	24	24

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
210.00	-----	15769	0	0	0
210.13	-----	15679	47171	2044	2044
210.33	-----	15769	47171	3145	5189

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
210.00	-----	8756	0	0	0
210.13	-----	8756	26268	1138	1138
210.33	-----	8756	26268	1751	2889

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

USER DEFINED VOLUME RATING TABLE

Elevation (ft)	Volume (cu.ft)
170.00	0
170.75	1459
171.00	2530
171.25	3590
171.50	4639
171.75	5673
172.00	6691
172.25	7690
172.50	8666
172.75	9616
173.00	10536
173.25	11421
173.50	12263
173.75	13053
174.00	13776
174.25	14379
174.50	14896
175.50	16840

USER DEFINED VOLUME RATING TABLE

Elevation (ft)	Volume (cu.ft)
191.75	0
192.50	1564
192.75	2705
193.00	3840
193.25	4966
193.50	6082
193.75	7187
194.00	8280
194.25	9358
194.50	10420
194.75	11463
195.00	12487
195.25	13488
195.50	14465
195.75	15413
196.00	16329
196.25	17208
196.50	18044
196.75	18828
197.00	19541
197.25	20137
197.50	20684
198.50	22770

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 210.00 ft
Increment = .10 ft
Max. Elev.= 210.33 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	R3	--->	TW	210.133	210.330
Stand Pipe	R6	--->	TW	210.133	210.330
Stand Pipe	R2	--->	TW	210.133	210.330
Stand Pipe	R4	--->	TW	210.133	210.330
Stand Pipe	R1	--->	TW	210.133	210.330
Stand Pipe	R5	--->	TW	210.133	210.330

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = R3
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = R6
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

OUTLET STRUCTURE INPUT DATA

Structure ID = R2
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = R4
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

OUTLET STRUCTURE INPUT DATA

Structure ID = R1
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = R5
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R3 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
210.00	.00	Free Outfall HW & TW < Inv.El.=210.133		
210.10	.00	Free Outfall HW & TW < Inv.El.=210.133		
210.13	.00	Free Outfall Weir: H =.00ft		
210.20	.12	Free Outfall Weir: H =.07ft		
210.30	.47	Free Outfall Weir: H =.17ft		
210.33	.61	Free Outfall Weir: H =.20ft		

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R6 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
210.00	.00	Free Outfall HW & TW < Inv.El.=210.133		
210.10	.00	Free Outfall HW & TW < Inv.El.=210.133		
210.13	.00	Free Outfall Weir: H =.00ft		
210.20	.12	Free Outfall Weir: H =.07ft		
210.30	.47	Free Outfall Weir: H =.17ft		
210.33	.61	Free Outfall Weir: H =.20ft		

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R2 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
210.00	.00	Free Outfall HW & TW < Inv.El.=210.133		
210.10	.00	Free Outfall HW & TW < Inv.El.=210.133		
210.13	.00	Free Outfall Weir: H =.00ft		
210.20	.12	Free Outfall Weir: H =.07ft		
210.30	.47	Free Outfall Weir: H =.17ft		
210.33	.61	Free Outfall Weir: H =.20ft		

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R4 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev ft	Converge +/-ft	Computation Messages
210.00	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall		Weir: H =.00ft
210.20	.12	Free Outfall		Weir: H =.07ft
210.30	.47	Free Outfall		Weir: H =.17ft
210.33	.61	Free Outfall		Weir: H =.20ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev. ft	Device Q cfs	Tail Water TW Elev ft	Converge +/-ft	Notes Computation Messages
210.00	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall		Weir: H =.00ft
210.20	.12	Free Outfall		Weir: H =.07ft
210.30	.47	Free Outfall		Weir: H =.17ft
210.33	.61	Free Outfall		Weir: H =.20ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R5 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
210.00	.00	Free Outfall HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall Weir: H =.00ft
210.20	.12	Free Outfall Weir: H =.07ft
210.30	.47	Free Outfall Weir: H =.17ft
210.33	.61	Free Outfall Weir: H =.20ft

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
210.00	.00	Free Outfall		None contributing
210.10	.00	Free Outfall		None contributing
210.13	.00	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5
210.20	.72	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5
210.30	2.84	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5
210.33	3.63	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 170.00 ft
Increment = .10 ft
Max. Elev.= 175.50 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Orifice-Circular	O1	--->	CV	171.500	175.500
Weir-Rectangular	W2	--->	CV	175.000	175.500
Culvert-Circular	CV	--->	TW	170.000	175.500

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = O1
Structure Type = Orifice-Circular
---
of Openings = 1
Invert Elev. = 171.50 ft
Diameter = .7500 ft
Orifice Coeff. = .600

Structure ID = W2
Structure Type = Weir-Rectangular
---
of Openings = 1
Crest Elev. = 175.00 ft
Weir Length = 4.00 ft
Weir Coeff. = 3.300000

Weir TW effects (Use adjustment equation)

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels = 1
Barrel Diameter = 1.2500 ft
Upstream Invert = 170.00 ft
Dnstream Invert = 167.30 ft
Horiz. Length = 54.00 ft
Barrel Length = 54.07 ft
Barrel Slope = .05000 ft/ft

OUTLET CONTROL DATA...
Mannings n = .0120
Ke = .5000 (forward entrance loss)
Kb = .019790 (per ft of full flow)
Kr = .5000 (reverse entrance loss)
HW Convergence = .001 +/- ft

INLET CONTROL DATA...
Equation form = 2
Inlet Control K = .5340
Inlet Control M = .5550
Inlet Control c = .01960
Inlet Control Y = .9000
T1 ratio (HW/D) = 1.070
T2 ratio (HW/D) = 1.189
Slope Factor = -.500

Use unsubmerged inlet control Form 2 equ. below T1 elev.
Use submerged inlet control Form 2 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev = 171.34 ft ---> Flow = 4.80 cfs
At T2 Elev = 171.49 ft ---> Flow = 5.49 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
170.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.60	.03	171.60	Free	170.10	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL Vh= .025ft Dcr= .075ft CRIT.DEPTH Hev= .00ft							
171.70	.11	171.70	Free	170.20	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL Vh= .051ft Dcr= .148ft CRIT.DEPTH Hev= .00ft							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
171.80	.24	171.80	Free	170.29	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .079ft	Dcr= .220ft		CRIT.DEPTH	Hev= .00ft
171.90	.42	171.90	Free	170.38	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .109ft	Dcr= .291ft		CRIT.DEPTH	Hev= .00ft
172.00	.63	172.00	Free	170.47	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .140ft	Dcr= .361ft		CRIT.DEPTH	Hev= .00ft
172.10	.86	172.10	Free	170.56	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .174ft	Dcr= .425ft		CRIT.DEPTH	Hev= .00ft
172.20	1.12	172.20	Free	170.65	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .212ft	Dcr= .488ft		CRIT.DEPTH	Hev= .00ft
172.30	1.39	172.30	Free	170.72	.000	.000	Free Outfall	
		H =.43						
172.40	1.54	172.40	Free	170.77	.000	.000	Free Outfall	
		H =.52						
172.50	1.68	172.50	Free	170.80	.000	.000	Free Outfall	
		H =.63						
172.60	1.81	172.60	Free	170.84	.000	.000	Free Outfall	
		H =.73						
172.70	1.93	172.70	Free	170.87	.000	.000	Free Outfall	
		H =.82						
172.80	2.05	172.80	Free	170.90	.000	.000	Free Outfall	
		H =.93						
172.90	2.15	172.90	Free	170.93	.000	.000	Free Outfall	
		H =1.02						
173.00	2.26	173.00	Free	170.95	.000	.000	Free Outfall	
		H =1.13						
173.10	2.35	173.10	Free	170.97	.000	.000	Free Outfall	
		H =1.23						
173.20	2.45	173.20	Free	171.00	.000	.000	Free Outfall	
		H =1.32						
173.30	2.54	173.30	Free	171.02	.000	.000	Free Outfall	
		H =1.43						
173.40	2.63	173.40	Free	171.04	.000	.000	Free Outfall	
		H =1.52						
173.50	2.71	173.50	Free	171.06	.000	.000	Free Outfall	
		H =1.63						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
173.60	2.79	173.60	Free	171.07	.000	.000	Free Outfall	
		H =1.73						
173.70	2.87	173.70	Free	171.09	.000	.000	Free Outfall	
		H =1.82						
173.80	2.95	173.80	Free	171.11	.000	.000	Free Outfall	
		H =1.93						
173.90	3.03	173.90	Free	171.13	.000	.000	Free Outfall	
		H =2.02						
174.00	3.10	174.00	Free	171.14	.000	.000	Free Outfall	
		H =2.13						
174.10	3.17	174.10	Free	171.16	.000	.000	Free Outfall	
		H =2.23						
174.20	3.24	174.20	Free	171.18	.000	.000	Free Outfall	
		H =2.32						
174.30	3.31	174.30	Free	171.19	.000	.000	Free Outfall	
		H =2.43						
174.40	3.38	174.40	Free	171.20	.000	.000	Free Outfall	
		H =2.52						
174.50	3.45	174.50	Free	171.22	.000	.000	Free Outfall	
		H =2.63						
174.60	3.51	174.60	Free	171.23	.000	.000	Free Outfall	
		H =2.73						
174.70	3.57	174.70	Free	171.25	.000	.000	Free Outfall	
		H =2.82						
174.80	3.64	174.80	Free	171.26	.000	.000	Free Outfall	
		H =2.93						
174.90	3.70	174.90	Free	171.27	.000	.000	Free Outfall	
		H =3.02						
175.00	3.76	175.00	Free	171.29	.000	.000	Free Outfall	
		H =3.13						
175.10	3.82	175.10	Free	171.39	.000	.000	Free Outfall	
		H =3.23						
175.20	3.88	175.20	171.56	171.56	.000	.000	Free Outfall	
		H =3.32						
175.30	3.94	175.30	171.78	171.78	.000	.000	Free Outfall	
		H =3.43						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
175.40	3.90	175.40	172.03	172.03	.000	.000	Free Outfall	
		H =3.37						
175.50	3.79	175.50	172.32	172.32	.000	.000	Free Outfall	
		H =3.18						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
170.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
171.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
173.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
175.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
175.10	.42	175.10	Free	171.39	.000	.000	Free Outfall	
	H=.10; Htw=.00; Qfree=.42;							
175.20	1.17	175.20	Free	171.56	.000	.000	Free Outfall	
	H=.20; Htw=.00; Qfree=1.17;							
175.30	2.14	175.30	Free	171.78	.000	.000	Free Outfall	
	H=.30; Htw=.00; Qfree=2.14;							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
175.40	3.27	175.40	Free	172.03	.000	.000	Free Outfall	
		H=.40; Htw=.00; Qfree=3.27;						
175.50	4.55	175.50	Free	172.32	.000	.000	Free Outfall	
		H=.50; Htw=.00; Qfree=4.55;						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
170.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.60	.03	170.10	Free	Free	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL Vh= .022ft Dcr= .066ft CRIT.DEPTH Hev= .00ft							
171.70	.11	170.20	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL Vh= .044ft Dcr= .128ft CRIT.DEPTH Hev= .00ft							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
171.80	.24	170.29	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .066ft	Dcr= .190ft		CRIT.DEPTH	Hev= .00ft
171.90	.42	170.38	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .088ft	Dcr= .251ft		CRIT.DEPTH	Hev= .00ft
172.00	.63	170.47	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .110ft	Dcr= .311ft		CRIT.DEPTH	Hev= .00ft
172.10	.87	170.56	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .131ft	Dcr= .365ft		CRIT.DEPTH	Hev= .00ft
172.20	1.12	170.65	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .152ft	Dcr= .417ft		CRIT.DEPTH	Hev= .00ft
172.30	1.39	170.72	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .172ft	Dcr= .466ft		CRIT.DEPTH	Hev= .00ft
172.40	1.54	170.77	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .184ft	Dcr= .492ft		CRIT.DEPTH	Hev= .00ft
172.50	1.68	170.80	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .193ft	Dcr= .514ft		CRIT.DEPTH	Hev= .00ft
172.60	1.81	170.84	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .203ft	Dcr= .535ft		CRIT.DEPTH	Hev= .00ft
172.70	1.93	170.87	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .211ft	Dcr= .553ft		CRIT.DEPTH	Hev= .00ft
172.80	2.05	170.90	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .219ft	Dcr= .570ft		CRIT.DEPTH	Hev= .00ft
172.90	2.15	170.93	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .226ft	Dcr= .586ft		CRIT.DEPTH	Hev= .00ft
173.00	2.25	170.95	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .233ft	Dcr= .600ft		CRIT.DEPTH	Hev= .00ft
173.10	2.35	170.97	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .240ft	Dcr= .613ft		CRIT.DEPTH	Hev= .00ft
173.20	2.45	171.00	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .246ft	Dcr= .627ft		CRIT.DEPTH	Hev= .00ft
173.30	2.54	171.02	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .252ft	Dcr= .638ft		CRIT.DEPTH	Hev= .00ft
173.40	2.63	171.04	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .258ft	Dcr= .650ft		CRIT.DEPTH	Hev= .00ft
173.50	2.71	171.06	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .264ft	Dcr= .661ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
173.60	2.79	171.07	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .269ft	Dcr= .671ft		CRIT.DEPTH	Hev= .00ft
173.70	2.87	171.09	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .274ft	Dcr= .681ft		CRIT.DEPTH	Hev= .00ft
173.80	2.95	171.11	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .280ft	Dcr= .691ft		CRIT.DEPTH	Hev= .00ft
173.90	3.03	171.13	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .285ft	Dcr= .700ft		CRIT.DEPTH	Hev= .00ft
174.00	3.10	171.14	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .290ft	Dcr= .708ft		CRIT.DEPTH	Hev= .00ft
174.10	3.17	171.16	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .295ft	Dcr= .717ft		CRIT.DEPTH	Hev= .00ft
174.20	3.24	171.18	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .299ft	Dcr= .725ft		CRIT.DEPTH	Hev= .00ft
174.30	3.31	171.19	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .304ft	Dcr= .733ft		CRIT.DEPTH	Hev= .00ft
174.40	3.38	171.20	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .309ft	Dcr= .742ft		CRIT.DEPTH	Hev= .00ft
174.50	3.44	171.22	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .313ft	Dcr= .749ft		CRIT.DEPTH	Hev= .00ft
174.60	3.51	171.23	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .318ft	Dcr= .756ft		CRIT.DEPTH	Hev= .00ft
174.70	3.57	171.25	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .322ft	Dcr= .763ft		CRIT.DEPTH	Hev= .00ft
174.80	3.64	171.26	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .327ft	Dcr= .771ft		CRIT.DEPTH	Hev= .00ft
174.90	3.70	171.27	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .331ft	Dcr= .778ft		CRIT.DEPTH	Hev= .00ft
175.00	3.75	171.29	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .335ft	Dcr= .783ft		CRIT.DEPTH	Hev= .00ft
175.10	4.23	171.39	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .369ft	Dcr= .833ft		CRIT.DEPTH	Hev= .00ft
175.20	5.05	171.56	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .431ft	Dcr= .911ft		CRIT.DEPTH	Hev= .00ft
175.30	6.07	171.78	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .521ft	Dcr= .996ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
175.40	7.18	172.03	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .639ft	Dcr= 1.071ft		CRIT.DEPTH	Hev= .00ft
175.50	8.34	172.32	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .793ft	Dcr= 1.130ft		CRIT.DEPTH	Hev= .00ft

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
170.00	.00	Free Outfall		(no Q: O1,W2,CV)
170.10	.00	Free Outfall		(no Q: O1,W2,CV)
170.20	.00	Free Outfall		(no Q: O1,W2,CV)
170.30	.00	Free Outfall		(no Q: O1,W2,CV)
170.40	.00	Free Outfall		(no Q: O1,W2,CV)
170.50	.00	Free Outfall		(no Q: O1,W2,CV)
170.60	.00	Free Outfall		(no Q: O1,W2,CV)
170.70	.00	Free Outfall		(no Q: O1,W2,CV)
170.80	.00	Free Outfall		(no Q: O1,W2,CV)
170.90	.00	Free Outfall		(no Q: O1,W2,CV)
171.00	.00	Free Outfall		(no Q: O1,W2,CV)
171.10	.00	Free Outfall		(no Q: O1,W2,CV)
171.20	.00	Free Outfall		(no Q: O1,W2,CV)
171.30	.00	Free Outfall		(no Q: O1,W2,CV)
171.40	.00	Free Outfall		(no Q: O1,W2,CV)
171.50	.00	Free Outfall		(no Q: O1,W2,CV)
171.60	.03	Free Outfall		O1,CV (no Q: W2)
171.70	.11	Free Outfall		O1,CV (no Q: W2)
171.80	.24	Free Outfall		O1,CV (no Q: W2)
171.90	.42	Free Outfall		O1,CV (no Q: W2)
172.00	.63	Free Outfall		O1,CV (no Q: W2)
172.10	.87	Free Outfall		O1,CV (no Q: W2)
172.20	1.12	Free Outfall		O1,CV (no Q: W2)
172.30	1.39	Free Outfall		O1,CV (no Q: W2)
172.40	1.54	Free Outfall		O1,CV (no Q: W2)
172.50	1.68	Free Outfall		O1,CV (no Q: W2)
172.60	1.81	Free Outfall		O1,CV (no Q: W2)
172.70	1.93	Free Outfall		O1,CV (no Q: W2)
172.80	2.05	Free Outfall		O1,CV (no Q: W2)
172.90	2.15	Free Outfall		O1,CV (no Q: W2)
173.00	2.25	Free Outfall		O1,CV (no Q: W2)
173.10	2.35	Free Outfall		O1,CV (no Q: W2)
173.20	2.45	Free Outfall		O1,CV (no Q: W2)
173.30	2.54	Free Outfall		O1,CV (no Q: W2)
173.40	2.63	Free Outfall		O1,CV (no Q: W2)
173.50	2.71	Free Outfall		O1,CV (no Q: W2)
173.60	2.79	Free Outfall		O1,CV (no Q: W2)
173.70	2.87	Free Outfall		O1,CV (no Q: W2)

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
173.80	2.95	Free Outfall		O1,CV (no Q: W2)
173.90	3.03	Free Outfall		O1,CV (no Q: W2)
174.00	3.10	Free Outfall		O1,CV (no Q: W2)
174.10	3.17	Free Outfall		O1,CV (no Q: W2)
174.20	3.24	Free Outfall		O1,CV (no Q: W2)
174.30	3.31	Free Outfall		O1,CV (no Q: W2)
174.40	3.38	Free Outfall		O1,CV (no Q: W2)
174.50	3.44	Free Outfall		O1,CV (no Q: W2)
174.60	3.51	Free Outfall		O1,CV (no Q: W2)
174.70	3.57	Free Outfall		O1,CV (no Q: W2)
174.80	3.64	Free Outfall		O1,CV (no Q: W2)
174.90	3.70	Free Outfall		O1,CV (no Q: W2)
175.00	3.76	Free Outfall		O1,CV (no Q: W2)
175.10	4.23	Free Outfall		O1,W2,CV
175.20	5.05	Free Outfall		O1,W2,CV
175.30	6.07	Free Outfall		O1,W2,CV
175.40	7.18	Free Outfall		O1,W2,CV
175.50	8.34	Free Outfall		O1,W2,CV

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 191.75 ft
Increment = .10 ft
Max. Elev.= 198.50 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Orifice-Circular	O0	--->	C1	191.750	198.500
Culvert-Circular	C1	--->	TW	191.750	198.500

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = O0
Structure Type = Orifice-Circular
---
of Openings = 1
Invert Elev. = 191.75 ft
Diameter = 1.1670 ft
Orifice Coeff. = .600

OUTLET STRUCTURE INPUT DATA

Structure ID = C1
Structure Type = Culvert-Circular

No. Barrels = 1
Barrel Diameter = 1.2500 ft
Upstream Invert = 191.75 ft
Dnstream Invert = 189.75 ft
Horiz. Length = 68.00 ft
Barrel Length = 68.03 ft
Barrel Slope = .02941 ft/ft

OUTLET CONTROL DATA...
Mannings n = .0120
Ke = .5000 (forward entrance loss)
Kb = .019790 (per ft of full flow)
Kr = .5000 (reverse entrance loss)
HW Convergence = .001 +/- ft

INLET CONTROL DATA...
Equation form = 2
Inlet Control K = .5340
Inlet Control M = .5550
Inlet Control c = .01960
Inlet Control Y = .9000
T1 ratio (HW/D) = 1.070
T2 ratio (HW/D) = 1.199
Slope Factor = -.500

Use unsubmerged inlet control Form 2 equ. below T1 elev.
Use submerged inlet control Form 2 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev = 193.09 ft ---> Flow = 4.80 cfs
At T2 Elev = 193.25 ft ---> Flow = 5.49 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
191.75	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
191.85	.03	191.85	191.84	191.84	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .007ft hwDi= .092ft Lbw= .0ft Hev= .00ft							
191.95	.09	191.95	191.93	191.93	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .024ft hwDi= .176ft Lbw= .0ft Hev= .00ft							
192.05	.19	192.05	192.01	192.01	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .044ft hwDi= .256ft Lbw= .0ft Hev= .00ft							
192.15	.32	192.15	192.08	192.08	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .067ft hwDi= .333ft Lbw= .0ft Hev= .00ft							
192.25	.47	192.25	192.16	192.16	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .091ft hwDi= .409ft Lbw= .0ft Hev= .00ft							
192.35	.66	192.35	192.24	192.24	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .115ft hwDi= .485ft Lbw= .0ft Hev= .00ft							
192.45	.88	192.45	192.32	192.32	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .133ft hwDi= .566ft Lbw= .0ft Hev= .00ft							
192.55	1.12	192.55	192.39	192.39	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .157ft hwDi= .643ft Lbw= .0ft Hev= .00ft							
192.65	1.38	192.65	192.47	192.47	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .178ft hwDi= .722ft Lbw= .0ft Hev= .00ft							
192.75	1.68	192.75	192.55	192.55	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .197ft hwDi= .803ft Lbw= .0ft Hev= .00ft							
192.85	2.03	192.85	192.64	192.64	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .205ft hwDi= .894ft Lbw= .0ft Hev= .00ft							
192.95	2.40	192.95	192.73	192.73	.000	.000	Free Outfall	
	H =.22							
193.05	2.64	193.05	192.79	192.79	.000	.000	Free Outfall	
	H =.26							
193.15	2.87	193.15	192.84	192.84	.000	.000	Free Outfall	
	H =.31							
193.25	3.09	193.25	192.89	192.89	.000	.000	Free Outfall	
	H =.36							
193.35	3.30	193.35	192.94	192.94	.000	.000	Free Outfall	
	H =.41							
193.45	3.51	193.45	192.98	192.98	.000	.000	Free Outfall	
	H =.47							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
193.55	3.72	193.55	193.03	193.03	.000	.000	Free Outfall	
		H =.52						
193.65	3.92	193.65	193.07	193.07	.000	.000	Free Outfall	
		H =.58						
193.75	4.12	193.75	193.11	193.11	.000	.000	Free Outfall	
		H =.64						
193.85	4.30	193.85	193.15	193.15	.000	.000	Free Outfall	
		H =.70						
193.95	4.49	193.95	193.19	193.19	.000	.000	Free Outfall	
		H =.76						
194.05	4.67	194.05	193.23	193.23	.000	.000	Free Outfall	
		H =.82						
194.15	4.84	194.15	193.26	193.26	.000	.000	Free Outfall	
		H =.89						
194.25	5.02	194.25	193.30	193.30	.000	.000	Free Outfall	
		H =.95						
194.35	5.18	194.35	193.34	193.34	.000	.000	Free Outfall	
		H =1.01						
194.45	5.35	194.45	193.37	193.37	.000	.000	Free Outfall	
		H =1.08						
194.55	5.51	194.55	193.40	193.41	.002	.000	Free Outfall	
		H =1.15						
194.65	5.66	194.65	193.44	193.44	.000	.000	Free Outfall	
		H =1.21						
194.75	5.82	194.75	193.47	193.47	.000	.000	Free Outfall	
		H =1.28						
194.85	5.97	194.85	193.50	193.50	.000	.000	Free Outfall	
		H =1.35						
194.95	6.12	194.95	193.54	193.54	.000	.000	Free Outfall	
		H =1.41						
195.05	6.26	195.05	193.57	193.57	.000	.000	Free Outfall	
		H =1.48						
195.15	6.40	195.15	193.60	193.60	.000	.000	Free Outfall	
		H =1.55						
195.25	6.55	195.25	193.63	193.63	.000	.000	Free Outfall	
		H =1.62						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
195.35	6.68	195.35	193.67	193.67	.000	.000	Free Outfall	
		H =1.68						
195.45	6.82	195.45	193.70	193.70	.000	.000	Free Outfall	
		H =1.75						
195.55	6.95	195.55	193.73	193.73	.000	.000	Free Outfall	
		H =1.82						
195.65	7.08	195.65	193.76	193.76	.000	.000	Free Outfall	
		H =1.89						
195.75	7.21	195.75	193.79	193.79	.000	.000	Free Outfall	
		H =1.96						
195.85	7.34	195.85	193.82	193.82	.000	.000	Free Outfall	
		H =2.03						
195.95	7.46	195.95	193.85	193.85	.000	.000	Free Outfall	
		H =2.10						
196.05	7.59	196.05	193.88	193.88	.000	.000	Free Outfall	
		H =2.17						
196.15	7.71	196.15	193.91	193.91	.002	.000	Free Outfall	
		H =2.24						
196.25	7.83	196.25	193.94	193.94	.000	.000	Free Outfall	
		H =2.31						
196.35	7.94	196.35	193.97	193.97	.000	.000	Free Outfall	
		H =2.38						
196.45	8.06	196.45	194.00	194.00	.000	.000	Free Outfall	
		H =2.45						
196.55	8.18	196.55	194.03	194.03	.000	.000	Free Outfall	
		H =2.52						
196.65	8.29	196.65	194.06	194.06	.000	.000	Free Outfall	
		H =2.59						
196.75	8.40	196.75	194.08	194.08	.000	.000	Free Outfall	
		H =2.67						
196.85	8.51	196.85	194.12	194.12	.000	.000	Free Outfall	
		H =2.73						
196.95	8.62	196.95	194.14	194.14	.000	.000	Free Outfall	
		H =2.81						
197.05	8.73	197.05	194.17	194.17	.000	.000	Free Outfall	
		H =2.88						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
197.15	8.84	197.15	194.20	194.20	.000	.000	Free Outfall	
		H =2.95						
197.25	8.94	197.25	194.23	194.23	.000	.000	Free Outfall	
		H =3.02						
197.35	9.05	197.35	194.26	194.26	.000	.000	Free Outfall	
		H =3.09						
197.45	9.15	197.45	194.29	194.29	.000	.000	Free Outfall	
		H =3.16						
197.55	9.25	197.55	194.32	194.32	.000	.000	Free Outfall	
		H =3.23						
197.65	9.35	197.65	194.35	194.35	.000	.000	Free Outfall	
		H =3.30						
197.75	9.45	197.75	194.38	194.38	.000	.000	Free Outfall	
		H =3.37						
197.85	9.55	197.85	194.41	194.41	.000	.000	Free Outfall	
		H =3.44						
197.95	9.65	197.95	194.44	194.44	.005	.000	Free Outfall	
		H =3.51						
198.05	9.75	198.05	194.47	194.47	.000	.000	Free Outfall	
		H =3.58						
198.15	9.84	198.15	194.50	194.50	.000	.000	Free Outfall	
		H =3.65						
198.25	9.94	198.25	194.53	194.53	.000	.000	Free Outfall	
		H =3.72						
198.35	10.03	198.35	194.55	194.55	.000	.000	Free Outfall	
		H =3.80						
198.45	10.12	198.45	194.58	194.58	.000	.000	Free Outfall	
		H =3.87						
198.50	10.17	198.50	194.60	194.60	.000	.000	Free Outfall	
		H =3.90						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
191.75	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
191.85	.03	191.84	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .021ft	Dcr= .061ft	CRIT.DEPTH Hev= .00ft				
191.95	.09	191.93	Free	Free	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .040ft	Dcr= .117ft	CRIT.DEPTH Hev= .00ft				
192.05	.19	192.01	Free	Free	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .058ft	Dcr= .168ft	CRIT.DEPTH Hev= .00ft				
192.15	.32	192.08	Free	Free	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .076ft	Dcr= .218ft	CRIT.DEPTH Hev= .00ft				
192.25	.47	192.16	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .094ft	Dcr= .268ft	CRIT.DEPTH Hev= .00ft				
192.35	.65	192.24	Free	Free	.000	.004	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .112ft	Dcr= .316ft	CRIT.DEPTH Hev= .00ft				
192.45	.88	192.32	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .132ft	Dcr= .367ft	CRIT.DEPTH Hev= .00ft				
192.55	1.12	192.39	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .152ft	Dcr= .416ft	CRIT.DEPTH Hev= .00ft				
192.65	1.38	192.47	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .171ft	Dcr= .464ft	CRIT.DEPTH Hev= .00ft				
192.75	1.68	192.55	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .193ft	Dcr= .514ft	CRIT.DEPTH Hev= .00ft				
192.85	2.02	192.64	Free	Free	.000	.003	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .217ft	Dcr= .567ft	CRIT.DEPTH Hev= .00ft				
192.95	2.40	192.73	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .243ft	Dcr= .620ft	CRIT.DEPTH Hev= .00ft				
193.05	2.64	192.79	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .259ft	Dcr= .651ft	CRIT.DEPTH Hev= .00ft				
193.15	2.86	192.84	Free	Free	.000	.004	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .274ft	Dcr= .679ft	CRIT.DEPTH Hev= .00ft				
193.25	3.09	192.89	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .289ft	Dcr= .707ft	CRIT.DEPTH Hev= .00ft				
193.35	3.31	192.94	Free	Free	.000	.003	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .304ft	Dcr= .733ft	CRIT.DEPTH Hev= .00ft				
193.45	3.52	192.98	Free	Free	.000	.003	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .318ft	Dcr= .757ft	CRIT.DEPTH Hev= .00ft				

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
193.55	3.72	193.03	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .332ft	Dcr= .780ft		CRIT.DEPTH	Hev= .00ft
193.65	3.92	193.07	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .346ft	Dcr= .801ft		CRIT.DEPTH	Hev= .00ft
193.75	4.11	193.11	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .360ft	Dcr= .821ft		CRIT.DEPTH	Hev= .00ft
193.85	4.31	193.15	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .374ft	Dcr= .841ft		CRIT.DEPTH	Hev= .00ft
193.95	4.49	193.19	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .388ft	Dcr= .859ft		CRIT.DEPTH	Hev= .00ft
194.05	4.67	193.23	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .401ft	Dcr= .876ft		CRIT.DEPTH	Hev= .00ft
194.15	4.84	193.26	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .415ft	Dcr= .892ft		CRIT.DEPTH	Hev= .00ft
194.25	5.01	193.30	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .428ft	Dcr= .908ft		CRIT.DEPTH	Hev= .00ft
194.35	5.18	193.34	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .442ft	Dcr= .923ft		CRIT.DEPTH	Hev= .00ft
194.45	5.35	193.37	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .456ft	Dcr= .937ft		CRIT.DEPTH	Hev= .00ft
194.55	5.50	193.41	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .469ft	Dcr= .951ft		CRIT.DEPTH	Hev= .00ft
194.65	5.67	193.44	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .484ft	Dcr= .964ft		CRIT.DEPTH	Hev= .00ft
194.75	5.82	193.47	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .497ft	Dcr= .976ft		CRIT.DEPTH	Hev= .00ft
194.85	5.97	193.50	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .511ft	Dcr= .988ft		CRIT.DEPTH	Hev= .00ft
194.95	6.12	193.54	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .526ft	Dcr= 1.000ft		CRIT.DEPTH	Hev= .00ft
195.05	6.26	193.57	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .540ft	Dcr= 1.010ft		CRIT.DEPTH	Hev= .00ft
195.15	6.41	193.60	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .554ft	Dcr= 1.021ft		CRIT.DEPTH	Hev= .00ft
195.25	6.55	193.63	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .569ft	Dcr= 1.031ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
195.35	6.69	193.67	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .584ft	Dcr= 1.040ft		CRIT.DEPTH	Hev= .00ft
195.45	6.82	193.70	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .598ft	Dcr= 1.049ft		CRIT.DEPTH	Hev= .00ft
195.55	6.95	193.73	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .613ft	Dcr= 1.057ft		CRIT.DEPTH	Hev= .00ft
195.65	7.09	193.76	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .628ft	Dcr= 1.065ft		CRIT.DEPTH	Hev= .00ft
195.75	7.22	193.79	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .644ft	Dcr= 1.073ft		CRIT.DEPTH	Hev= .00ft
195.85	7.34	193.82	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .658ft	Dcr= 1.080ft		CRIT.DEPTH	Hev= .00ft
195.95	7.46	193.85	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .674ft	Dcr= 1.087ft		CRIT.DEPTH	Hev= .00ft
196.05	7.59	193.88	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .689ft	Dcr= 1.094ft		CRIT.DEPTH	Hev= .00ft
196.15	7.70	193.91	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .704ft	Dcr= 1.100ft		CRIT.DEPTH	Hev= .00ft
196.25	7.82	193.94	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .721ft	Dcr= 1.106ft		CRIT.DEPTH	Hev= .00ft
196.35	7.95	193.97	Free	Free	.000	.008	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .738ft	Dcr= 1.113ft		CRIT.DEPTH	Hev= .00ft
196.45	8.06	194.00	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .753ft	Dcr= 1.118ft		CRIT.DEPTH	Hev= .00ft
196.55	8.17	194.03	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .769ft	Dcr= 1.123ft		CRIT.DEPTH	Hev= .00ft
196.65	8.28	194.06	Free	Free	.000	.008	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .785ft	Dcr= 1.128ft		CRIT.DEPTH	Hev= .00ft
196.75	8.40	194.08	Free	Free	.000	.008	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .802ft	Dcr= 1.133ft		CRIT.DEPTH	Hev= .00ft
196.85	8.51	194.12	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .819ft	Dcr= 1.138ft		CRIT.DEPTH	Hev= .00ft
196.95	8.62	194.14	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .835ft	Dcr= 1.142ft		CRIT.DEPTH	Hev= .00ft
197.05	8.73	194.17	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .852ft	Dcr= 1.146ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
197.15	8.83	194.20	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .869ft	Dcr= 1.150ft		CRIT.DEPTH	Hev= .00ft
197.25	8.94	194.23	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .886ft	Dcr= 1.153ft		CRIT.DEPTH	Hev= .00ft
197.35	9.04	194.26	Free	Free	.000	.007	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .903ft	Dcr= 1.157ft		CRIT.DEPTH	Hev= .00ft
197.45	9.14	194.29	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .921ft	Dcr= 1.160ft		CRIT.DEPTH	Hev= .00ft
197.55	9.25	194.32	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .938ft	Dcr= 1.164ft		CRIT.DEPTH	Hev= .00ft
197.65	9.35	194.35	Free	Free	.000	.007	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .955ft	Dcr= 1.167ft		CRIT.DEPTH	Hev= .00ft
197.75	9.44	194.38	Free	Free	.000	.008	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .973ft	Dcr= 1.170ft		CRIT.DEPTH	Hev= .00ft
197.85	9.55	194.41	Free	Free	.000	.008	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .992ft	Dcr= 1.173ft		CRIT.DEPTH	Hev= .00ft
197.95	9.64	194.44	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.007ft	Dcr= 1.175ft		CRIT.DEPTH	Hev= .00ft
198.05	9.74	194.47	Free	Free	.000	.009	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.026ft	Dcr= 1.178ft		CRIT.DEPTH	Hev= .00ft
198.15	9.84	194.50	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.044ft	Dcr= 1.180ft		CRIT.DEPTH	Hev= .00ft
198.25	9.93	194.53	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.062ft	Dcr= 1.182ft		CRIT.DEPTH	Hev= .00ft
198.35	10.03	194.55	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.080ft	Dcr= 1.185ft		CRIT.DEPTH	Hev= .00ft
198.45	10.12	194.58	Free	Free	.000	.009	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.097ft	Dcr= 1.187ft		CRIT.DEPTH	Hev= .00ft
198.50	10.16	194.60	Free	Free	.000	.007	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.107ft	Dcr= 1.188ft		CRIT.DEPTH	Hev= .00ft

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
191.75	.00	Free Outfall		(no Q: O0,C1)
191.85	.03	Free Outfall		O0,C1
191.95	.09	Free Outfall		O0,C1
192.05	.19	Free Outfall		O0,C1
192.15	.32	Free Outfall		O0,C1
192.25	.47	Free Outfall		O0,C1
192.35	.66	Free Outfall		O0,C1
192.45	.88	Free Outfall		O0,C1
192.55	1.12	Free Outfall		O0,C1
192.65	1.38	Free Outfall		O0,C1
192.75	1.68	Free Outfall		O0,C1
192.85	2.03	Free Outfall		O0,C1
192.95	2.40	Free Outfall		O0,C1
193.05	2.64	Free Outfall		O0,C1
193.15	2.86	Free Outfall		O0,C1
193.25	3.09	Free Outfall		O0,C1
193.35	3.31	Free Outfall		O0,C1
193.45	3.52	Free Outfall		O0,C1
193.55	3.72	Free Outfall		O0,C1
193.65	3.92	Free Outfall		O0,C1
193.75	4.11	Free Outfall		O0,C1
193.85	4.31	Free Outfall		O0,C1
193.95	4.49	Free Outfall		O0,C1
194.05	4.67	Free Outfall		O0,C1
194.15	4.84	Free Outfall		O0,C1
194.25	5.01	Free Outfall		O0,C1
194.35	5.18	Free Outfall		O0,C1
194.45	5.35	Free Outfall		O0,C1
194.55	5.51	Free Outfall		O0,C1
194.65	5.67	Free Outfall		O0,C1
194.75	5.82	Free Outfall		O0,C1
194.85	5.97	Free Outfall		O0,C1
194.95	6.12	Free Outfall		O0,C1
195.05	6.26	Free Outfall		O0,C1
195.15	6.41	Free Outfall		O0,C1
195.25	6.55	Free Outfall		O0,C1
195.35	6.69	Free Outfall		O0,C1
195.45	6.82	Free Outfall		O0,C1

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
195.55	6.95	Free Outfall		O0,C1
195.65	7.09	Free Outfall		O0,C1
195.75	7.22	Free Outfall		O0,C1
195.85	7.34	Free Outfall		O0,C1
195.95	7.46	Free Outfall		O0,C1
196.05	7.59	Free Outfall		O0,C1
196.15	7.71	Free Outfall		O0,C1
196.25	7.82	Free Outfall		O0,C1
196.35	7.95	Free Outfall		O0,C1
196.45	8.06	Free Outfall		O0,C1
196.55	8.17	Free Outfall		O0,C1
196.65	8.28	Free Outfall		O0,C1
196.75	8.40	Free Outfall		O0,C1
196.85	8.51	Free Outfall		O0,C1
196.95	8.62	Free Outfall		O0,C1
197.05	8.73	Free Outfall		O0,C1
197.15	8.83	Free Outfall		O0,C1
197.25	8.94	Free Outfall		O0,C1
197.35	9.04	Free Outfall		O0,C1
197.45	9.14	Free Outfall		O0,C1
197.55	9.25	Free Outfall		O0,C1
197.65	9.35	Free Outfall		O0,C1
197.75	9.44	Free Outfall		O0,C1
197.85	9.55	Free Outfall		O0,C1
197.95	9.64	Free Outfall		O0,C1
198.05	9.74	Free Outfall		O0,C1
198.15	9.84	Free Outfall		O0,C1
198.25	9.93	Free Outfall		O0,C1
198.35	10.03	Free Outfall		O0,C1
198.45	10.12	Free Outfall		O0,C1
198.50	10.16	Free Outfall		O0,C1

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - GREEN ROOF IN 1Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 1Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 210.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
210.00	.00	0	15769	.00	.00	.00
210.10	.00	1574	15699	.00	.00	17.48
210.13	.00	2096	15680	.00	.00	23.29
210.20	.72	3143	15710	.00	.72	35.64
210.30	2.84	4716	15755	.00	2.84	55.24
210.33	3.63	5189	15769	.00	3.63	61.29

SUMMARY FOR HYDROGRAPH ADDITION
at Node: GREEN ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1E	PDA-1D		PDA-1D	1Y

INFLOWS TO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1D	1Y	4470	12.1500	1.00

TOTAL FLOW INTO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	GREEN ROOF IN	1Y	4470	12.1500	1.00

TOTAL NODE INFLOW...
HYG file =
HYG ID = GREEN ROOF IN
HYG Tag = 1Y

Peak Discharge = 1.00 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 4470 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
1.7500	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.2500	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
2.7500	.00	.00	.00	.00	.00
3.0000	.01	.01	.01	.01	.01
3.2500	.01	.01	.01	.01	.01
3.5000	.01	.01	.01	.01	.01
3.7500	.01	.01	.01	.01	.01
4.0000	.01	.01	.01	.01	.01
4.2500	.01	.01	.01	.01	.01
4.5000	.01	.01	.01	.01	.01
4.7500	.01	.01	.01	.01	.01
5.0000	.01	.01	.01	.01	.01
5.2500	.01	.01	.01	.01	.01
5.5000	.01	.01	.01	.01	.01
5.7500	.01	.01	.01	.01	.01
6.0000	.01	.01	.02	.02	.02
6.2500	.02	.02	.02	.02	.02
6.5000	.02	.02	.02	.02	.02
6.7500	.02	.02	.02	.02	.02
7.0000	.02	.02	.02	.02	.02
7.2500	.02	.02	.02	.02	.02
7.5000	.02	.02	.03	.03	.03
7.7500	.03	.03	.03	.03	.03
8.0000	.03	.03	.03	.03	.03
8.2500	.03	.03	.03	.03	.03
8.5000	.03	.04	.04	.04	.04
8.7500	.04	.04	.04	.04	.04
9.0000	.04	.04	.04	.04	.05
9.2500	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.5000	.05	.05	.05	.05	.05
9.7500	.05	.06	.06	.06	.06
10.0000	.06	.06	.06	.06	.06
10.2500	.06	.07	.07	.07	.07
10.5000	.07	.07	.08	.08	.08
10.7500	.08	.08	.08	.08	.09
11.0000	.09	.09	.09	.10	.10
11.2500	.11	.11	.12	.12	.13
11.5000	.14	.14	.16	.19	.23
11.7500	.27	.33	.38	.44	.52
12.0000	.67	.84	.97	1.00	.92
12.2500	.79	.66	.56	.48	.41
12.5000	.35	.29	.24	.20	.18
12.7500	.16	.15	.14	.13	.12
13.0000	.12	.11	.11	.10	.10
13.2500	.10	.09	.09	.09	.09
13.5000	.09	.08	.08	.08	.08
13.7500	.08	.08	.08	.07	.07
14.0000	.07	.07	.07	.07	.07
14.2500	.06	.06	.06	.06	.06
14.5000	.06	.06	.06	.06	.06
14.7500	.06	.06	.05	.05	.05
15.0000	.05	.05	.05	.05	.05
15.2500	.05	.05	.05	.05	.05
15.5000	.04	.04	.04	.04	.04
15.7500	.04	.04	.04	.04	.04
16.0000	.04	.04	.04	.04	.03
16.2500	.03	.03	.03	.03	.03
16.5000	.03	.03	.03	.03	.03
16.7500	.03	.03	.03	.03	.03
17.0000	.03	.03	.03	.03	.03
17.2500	.03	.03	.03	.03	.03
17.5000	.03	.03	.03	.02	.02
17.7500	.02	.02	.02	.02	.02
18.0000	.02	.02	.02	.02	.02
18.2500	.02	.02	.02	.02	.02
18.5000	.02	.02	.02	.02	.02
18.7500	.02	.02	.02	.02	.02
19.0000	.02	.02	.02	.02	.02
19.2500	.02	.02	.02	.02	.02
19.5000	.02	.02	.02	.02	.02
19.7500	.02	.02	.02	.02	.02
20.0000	.02	.02	.02	.02	.02
20.2500	.02	.02	.02	.02	.02
20.5000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
20.7500	.02	.02	.02	.02	.02
21.0000	.02	.02	.02	.02	.02
21.2500	.02	.02	.02	.02	.02
21.5000	.02	.02	.02	.02	.02
21.7500	.02	.01	.01	.01	.01
22.0000	.01	.01	.01	.01	.01
22.2500	.01	.01	.01	.01	.01
22.5000	.01	.01	.01	.01	.01
22.7500	.01	.01	.01	.01	.01
23.0000	.01	.01	.01	.01	.01
23.2500	.01	.01	.01	.01	.01
23.5000	.01	.01	.01	.01	.01
23.7500	.01	.01	.01	.01	.01
24.0000	.01	.01	.01	.01	.00
24.2500	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: GREEN ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1E	PDA-1D		PDA-1D	10Y

INFLOWS TO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1D	10Y	8499	12.1500	1.85

TOTAL FLOW INTO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	GREEN ROOF IN	10Y	8499	12.1500	1.85

TOTAL NODE INFLOW...
HYG file =
HYG ID = GREEN ROOF IN
HYG Tag = 10Y

Peak Discharge =	1.85 cfs
Time to Peak =	12.1500 hrs
HYG Volume =	8499 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.9500	.00	.00	.00	.00	.00
1.2000	.00	.00	.00	.01	.01
1.4500	.01	.01	.01	.01	.01
1.7000	.01	.01	.01	.01	.01
1.9500	.01	.01	.01	.01	.01
2.2000	.01	.01	.01	.01	.01
2.4500	.01	.01	.01	.01	.01
2.7000	.01	.02	.02	.02	.02
2.9500	.02	.02	.02	.02	.02
3.2000	.02	.02	.02	.02	.02
3.4500	.02	.02	.02	.02	.02
3.7000	.02	.02	.02	.02	.02
3.9500	.02	.02	.02	.02	.02
4.2000	.02	.02	.02	.02	.03
4.4500	.03	.03	.03	.03	.03
4.7000	.03	.03	.03	.03	.03
4.9500	.03	.03	.03	.03	.03
5.2000	.03	.03	.03	.03	.03
5.4500	.03	.03	.03	.03	.03
5.7000	.03	.03	.03	.03	.03
5.9500	.03	.03	.03	.03	.03
6.2000	.03	.04	.04	.04	.04
6.4500	.04	.04	.04	.04	.04
6.7000	.04	.04	.04	.04	.04
6.9500	.04	.04	.05	.05	.05
7.2000	.05	.05	.05	.05	.05
7.4500	.05	.05	.05	.05	.05
7.7000	.05	.05	.06	.06	.06
7.9500	.06	.06	.06	.06	.06
8.2000	.06	.06	.06	.07	.07
8.4500	.07	.07	.07	.07	.07

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.7000	.08	.08	.08	.08	.08
8.9500	.08	.08	.09	.09	.09
9.2000	.09	.09	.09	.09	.10
9.4500	.10	.10	.10	.10	.10
9.7000	.10	.11	.11	.11	.11
9.9500	.11	.11	.11	.12	.12
10.2000	.12	.12	.13	.13	.13
10.4500	.13	.14	.14	.14	.15
10.7000	.15	.15	.16	.16	.16
10.9500	.16	.17	.17	.18	.18
11.2000	.19	.20	.21	.22	.23
11.4500	.24	.26	.27	.30	.35
11.7000	.43	.51	.61	.71	.82
11.9500	.97	1.25	1.57	1.79	1.85
12.2000	1.71	1.45	1.21	1.04	.89
12.4500	.76	.64	.54	.44	.37
12.7000	.32	.29	.27	.25	.24
12.9500	.23	.22	.20	.19	.19
13.2000	.18	.18	.17	.17	.17
13.4500	.16	.16	.16	.15	.15
13.7000	.15	.14	.14	.14	.14
13.9500	.13	.13	.13	.12	.12
14.2000	.12	.12	.12	.12	.11
14.4500	.11	.11	.11	.11	.11
14.7000	.11	.10	.10	.10	.10
14.9500	.10	.10	.10	.09	.09
15.2000	.09	.09	.09	.09	.09
15.4500	.08	.08	.08	.08	.08
15.7000	.08	.08	.07	.07	.07
15.9500	.07	.07	.07	.07	.06
16.2000	.06	.06	.06	.06	.06
16.4500	.06	.06	.06	.06	.06
16.7000	.06	.06	.06	.06	.05
16.9500	.05	.05	.05	.05	.05
17.2000	.05	.05	.05	.05	.05
17.4500	.05	.05	.05	.05	.05
17.7000	.05	.04	.04	.04	.04
17.9500	.04	.04	.04	.04	.04
18.2000	.04	.04	.04	.04	.04
18.4500	.04	.04	.04	.04	.04
18.7000	.04	.04	.04	.04	.04
18.9500	.04	.04	.04	.04	.04
19.2000	.04	.04	.04	.04	.03
19.4500	.03	.03	.03	.03	.03
19.7000	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.9500	.03	.03	.03	.03	.03
20.2000	.03	.03	.03	.03	.03
20.4500	.03	.03	.03	.03	.03
20.7000	.03	.03	.03	.03	.03
20.9500	.03	.03	.03	.03	.03
21.2000	.03	.03	.03	.03	.03
21.4500	.03	.03	.03	.03	.03
21.7000	.03	.03	.03	.03	.03
21.9500	.03	.03	.03	.03	.03
22.2000	.03	.03	.03	.03	.03
22.4500	.03	.03	.03	.03	.03
22.7000	.03	.02	.02	.02	.02
22.9500	.02	.02	.02	.02	.02
23.2000	.02	.02	.02	.02	.02
23.4500	.02	.02	.02	.02	.02
23.7000	.02	.02	.02	.02	.02
23.9500	.02	.02	.02	.02	.01
24.2000	.01	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: GREEN ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1E	PDA-1D		PDA-1D	100Y

INFLOWS TO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1D	100Y	14148	12.1500	3.04

TOTAL FLOW INTO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	GREEN ROOF IN	100Y	14148	12.1500	3.04

TOTAL NODE INFLOW...
HYG file =
HYG ID = GREEN ROOF IN
HYG Tag = 100Y

Peak Discharge = 3.04 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 14148 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.6000	.00	.00	.00	.00	.01
.8500	.01	.01	.01	.01	.01
1.1000	.01	.01	.01	.02	.02
1.3500	.02	.02	.02	.02	.02
1.6000	.02	.02	.02	.02	.02
1.8500	.02	.02	.02	.02	.03
2.1000	.03	.03	.03	.03	.03
2.3500	.03	.03	.03	.03	.03
2.6000	.03	.03	.03	.03	.03
2.8500	.03	.03	.03	.03	.04
3.1000	.04	.04	.04	.04	.04
3.3500	.04	.04	.04	.04	.04
3.6000	.04	.04	.04	.04	.04
3.8500	.04	.04	.04	.04	.04
4.1000	.04	.05	.05	.05	.05
4.3500	.05	.05	.05	.05	.05
4.6000	.05	.05	.05	.05	.05
4.8500	.05	.05	.05	.05	.05
5.1000	.05	.05	.05	.05	.05
5.3500	.05	.06	.06	.06	.06
5.6000	.06	.06	.06	.06	.06
5.8500	.06	.06	.06	.06	.06
6.1000	.06	.06	.06	.06	.06
6.3500	.06	.07	.07	.07	.07
6.6000	.07	.07	.07	.07	.07
6.8500	.07	.08	.08	.08	.08
7.1000	.08	.08	.08	.08	.08
7.3500	.09	.09	.09	.09	.09
7.6000	.09	.09	.09	.09	.09
7.8500	.10	.10	.10	.10	.10
8.1000	.10	.10	.10	.11	.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.3500	.11	.11	.12	.12	.12
8.6000	.12	.12	.13	.13	.13
8.8500	.13	.14	.14	.14	.14
9.1000	.15	.15	.15	.15	.16
9.3500	.16	.16	.16	.16	.17
9.6000	.17	.17	.17	.18	.18
9.8500	.18	.18	.19	.19	.19
10.1000	.19	.20	.20	.21	.21
10.3500	.21	.22	.22	.23	.23
10.6000	.24	.24	.25	.25	.26
10.8500	.26	.27	.27	.28	.28
11.1000	.29	.30	.31	.33	.35
11.3500	.37	.38	.40	.42	.45
11.6000	.50	.58	.70	.85	1.01
11.8500	1.17	1.35	1.60	2.06	2.58
12.1000	2.95	3.04	2.80	2.38	1.99
12.3500	1.70	1.46	1.25	1.05	.88
12.6000	.73	.61	.53	.48	.44
12.8500	.42	.39	.37	.35	.34
13.1000	.32	.31	.30	.29	.28
13.3500	.28	.27	.27	.26	.26
13.6000	.25	.25	.24	.24	.23
13.8500	.23	.22	.22	.21	.21
14.1000	.20	.20	.20	.19	.19
14.3500	.19	.19	.18	.18	.18
14.6000	.18	.17	.17	.17	.17
14.8500	.17	.16	.16	.16	.16
15.1000	.15	.15	.15	.15	.14
15.3500	.14	.14	.14	.14	.13
15.6000	.13	.13	.13	.12	.12
15.8500	.12	.12	.11	.11	.11
16.1000	.11	.11	.10	.10	.10
16.3500	.10	.10	.10	.10	.10
16.6000	.10	.09	.09	.09	.09
16.8500	.09	.09	.09	.09	.09
17.1000	.09	.08	.08	.08	.08
17.3500	.08	.08	.08	.08	.08
17.6000	.08	.07	.07	.07	.07
17.8500	.07	.07	.07	.07	.07
18.1000	.07	.07	.06	.06	.06
18.3500	.06	.06	.06	.06	.06
18.6000	.06	.06	.06	.06	.06
18.8500	.06	.06	.06	.06	.06
19.1000	.06	.06	.06	.06	.06
19.3500	.06	.06	.06	.06	.06

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.6000	.06	.06	.06	.05	.05
19.8500	.05	.05	.05	.05	.05
20.1000	.05	.05	.05	.05	.05
20.3500	.05	.05	.05	.05	.05
20.6000	.05	.05	.05	.05	.05
20.8500	.05	.05	.05	.05	.05
21.1000	.05	.05	.05	.05	.05
21.3500	.05	.05	.05	.05	.05
21.6000	.05	.05	.05	.05	.05
21.8500	.04	.04	.04	.04	.04
22.1000	.04	.04	.04	.04	.04
22.3500	.04	.04	.04	.04	.04
22.6000	.04	.04	.04	.04	.04
22.8500	.04	.04	.04	.04	.04
23.1000	.04	.04	.04	.04	.04
23.3500	.04	.04	.04	.04	.04
23.6000	.04	.04	.04	.04	.04
23.8500	.04	.04	.04	.03	.03
24.1000	.03	.02	.01	.00	.00
24.3500	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - GREEN ROOF IN 1Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 1Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	1.00 cfs	at	12.1500 hrs
Peak Outflow	=	.33 cfs	at	12.5000 hrs
Peak Elevation	=	210.16 ft		
Peak Storage	=	2583 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	4470
- Infiltration	=	0
- HYG Vol OUT	=	2370
- Retained Vol	=	2100
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 1Y

Peak Discharge = .33 cfs
Time to Peak = 12.5000 hrs
HYG Volume = 2370 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
1.7500	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.2500	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
2.7500	.00	.00	.00	.00	.00
3.0000	.00	.00	.00	.00	.00
3.2500	.00	.00	.00	.00	.00
3.5000	.00	.00	.00	.00	.00
3.7500	.00	.00	.00	.00	.00
4.0000	.00	.00	.00	.00	.00
4.2500	.00	.00	.00	.00	.00
4.5000	.00	.00	.00	.00	.00
4.7500	.00	.00	.00	.00	.00
5.0000	.00	.00	.00	.00	.00
5.2500	.00	.00	.00	.00	.00
5.5000	.00	.00	.00	.00	.00
5.7500	.00	.00	.00	.00	.00
6.0000	.00	.00	.00	.00	.00
6.2500	.00	.00	.00	.00	.00
6.5000	.00	.00	.00	.00	.00
6.7500	.00	.00	.00	.00	.00
7.0000	.00	.00	.00	.00	.00
7.2500	.00	.00	.00	.00	.00
7.5000	.00	.00	.00	.00	.00
7.7500	.00	.00	.00	.00	.00
8.0000	.00	.00	.00	.00	.00
8.2500	.00	.00	.00	.00	.00
8.5000	.00	.00	.00	.00	.00
8.7500	.00	.00	.00	.00	.00
9.0000	.00	.00	.00	.00	.00
9.2500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.5000	.00	.00	.00	.00	.00
9.7500	.00	.00	.00	.00	.00
10.0000	.00	.00	.00	.00	.00
10.2500	.00	.00	.00	.00	.00
10.5000	.00	.00	.00	.00	.00
10.7500	.00	.00	.00	.00	.00
11.0000	.00	.00	.00	.00	.00
11.2500	.00	.00	.00	.00	.00
11.5000	.00	.00	.00	.00	.00
11.7500	.00	.00	.00	.00	.00
12.0000	.00	.00	.00	.00	.09
12.2500	.18	.24	.28	.31	.33
12.5000	.33	.33	.32	.31	.30
12.7500	.28	.27	.25	.24	.23
13.0000	.21	.20	.19	.18	.17
13.2500	.16	.16	.15	.14	.14
13.5000	.13	.12	.12	.12	.11
13.7500	.11	.10	.10	.10	.10
14.0000	.09	.09	.09	.08	.08
14.2500	.08	.08	.08	.08	.07
14.5000	.07	.07	.07	.07	.07
14.7500	.07	.06	.06	.06	.06
15.0000	.06	.06	.06	.06	.06
15.2500	.06	.05	.05	.05	.05
15.5000	.05	.05	.05	.05	.05
15.7500	.05	.05	.05	.05	.04
16.0000	.04	.04	.04	.04	.04
16.2500	.04	.04	.04	.04	.04
16.5000	.04	.04	.04	.04	.03
16.7500	.03	.03	.03	.03	.03
17.0000	.03	.03	.03	.03	.03
17.2500	.03	.03	.03	.03	.03
17.5000	.03	.03	.03	.03	.03
17.7500	.03	.03	.03	.03	.03
18.0000	.03	.02	.02	.02	.02
18.2500	.02	.02	.02	.02	.02
18.5000	.02	.02	.02	.02	.02
18.7500	.02	.02	.02	.02	.02
19.0000	.02	.02	.02	.02	.02
19.2500	.02	.02	.02	.02	.02
19.5000	.02	.02	.02	.02	.02
19.7500	.02	.02	.02	.02	.02
20.0000	.02	.02	.02	.02	.02
20.2500	.02	.02	.02	.02	.02
20.5000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
20.7500	.02	.02	.02	.02	.02
21.0000	.02	.02	.02	.02	.02
21.2500	.02	.02	.02	.02	.02
21.5000	.02	.02	.02	.02	.02
21.7500	.02	.02	.02	.02	.02
22.0000	.02	.02	.02	.02	.01
22.2500	.01	.01	.01	.01	.01
22.5000	.01	.01	.01	.01	.01
22.7500	.01	.01	.01	.01	.01
23.0000	.01	.01	.01	.01	.01
23.2500	.01	.01	.01	.01	.01
23.5000	.01	.01	.01	.01	.01
23.7500	.01	.01	.01	.01	.01
24.0000	.01	.01	.01	.01	.01
24.2500	.01	.01	.01	.01	.01
24.5000	.01	.00	.00	.00	.00
24.7500	.00				

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - GREEN ROOF IN 10Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 10Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	1.85 cfs	at	12.1500 hrs
Peak Outflow	=	1.25 cfs	at	12.3000 hrs
Peak Elevation	=	210.23 ft		
Peak Storage	=	3540 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	8499
- Infiltration	=	0
- HYG Vol OUT	=	6399
- Retained Vol	=	2100
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 10Y

Peak Discharge = 1.25 cfs
Time to Peak = 12.3000 hrs
HYG Volume = 6399 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.9500	.00	.00	.00	.00	.00
1.2000	.00	.00	.00	.00	.00
1.4500	.00	.00	.00	.00	.00
1.7000	.00	.00	.00	.00	.00
1.9500	.00	.00	.00	.00	.00
2.2000	.00	.00	.00	.00	.00
2.4500	.00	.00	.00	.00	.00
2.7000	.00	.00	.00	.00	.00
2.9500	.00	.00	.00	.00	.00
3.2000	.00	.00	.00	.00	.00
3.4500	.00	.00	.00	.00	.00
3.7000	.00	.00	.00	.00	.00
3.9500	.00	.00	.00	.00	.00
4.2000	.00	.00	.00	.00	.00
4.4500	.00	.00	.00	.00	.00
4.7000	.00	.00	.00	.00	.00
4.9500	.00	.00	.00	.00	.00
5.2000	.00	.00	.00	.00	.00
5.4500	.00	.00	.00	.00	.00
5.7000	.00	.00	.00	.00	.00
5.9500	.00	.00	.00	.00	.00
6.2000	.00	.00	.00	.00	.00
6.4500	.00	.00	.00	.00	.00
6.7000	.00	.00	.00	.00	.00
6.9500	.00	.00	.00	.00	.00
7.2000	.00	.00	.00	.00	.00
7.4500	.00	.00	.00	.00	.00
7.7000	.00	.00	.00	.00	.00
7.9500	.00	.00	.00	.00	.00
8.2000	.00	.00	.00	.00	.00
8.4500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.7000	.00	.00	.00	.00	.00
8.9500	.00	.00	.00	.00	.00
9.2000	.00	.00	.00	.00	.00
9.4500	.00	.00	.00	.00	.00
9.7000	.00	.00	.00	.00	.00
9.9500	.00	.00	.00	.00	.00
10.2000	.00	.00	.00	.00	.00
10.4500	.00	.00	.00	.00	.00
10.7000	.00	.00	.00	.00	.00
10.9500	.00	.00	.00	.00	.00
11.2000	.00	.00	.00	.00	.00
11.4500	.00	.03	.06	.08	.11
11.7000	.14	.18	.23	.28	.33
11.9500	.40	.48	.59	.72	.96
12.2000	1.13	1.23	1.25	1.23	1.17
12.4500	1.10	1.01	.92	.83	.74
12.7000	.68	.64	.60	.56	.52
12.9500	.49	.46	.43	.40	.38
13.2000	.36	.33	.32	.30	.28
13.4500	.27	.26	.25	.24	.23
13.7000	.22	.21	.20	.19	.19
13.9500	.18	.18	.17	.16	.16
14.2000	.16	.15	.15	.14	.14
14.4500	.14	.13	.13	.13	.13
14.7000	.12	.12	.12	.12	.12
14.9500	.11	.11	.11	.11	.11
15.2000	.10	.10	.10	.10	.10
15.4500	.10	.10	.09	.09	.09
15.7000	.09	.09	.09	.08	.08
15.9500	.08	.08	.08	.08	.08
16.2000	.07	.07	.07	.07	.07
16.4500	.07	.07	.07	.07	.07
16.7000	.06	.06	.06	.06	.06
16.9500	.06	.06	.06	.06	.06
17.2000	.06	.06	.06	.05	.05
17.4500	.05	.05	.05	.05	.05
17.7000	.05	.05	.05	.05	.05
17.9500	.05	.05	.05	.05	.04
18.2000	.04	.04	.04	.04	.04
18.4500	.04	.04	.04	.04	.04
18.7000	.04	.04	.04	.04	.04
18.9500	.04	.04	.04	.04	.04
19.2000	.04	.04	.04	.04	.04
19.4500	.04	.04	.04	.04	.04
19.7000	.04	.04	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.9500	.03	.03	.03	.03	.03
20.2000	.03	.03	.03	.03	.03
20.4500	.03	.03	.03	.03	.03
20.7000	.03	.03	.03	.03	.03
20.9500	.03	.03	.03	.03	.03
21.2000	.03	.03	.03	.03	.03
21.4500	.03	.03	.03	.03	.03
21.7000	.03	.03	.03	.03	.03
21.9500	.03	.03	.03	.03	.03
22.2000	.03	.03	.03	.03	.03
22.4500	.03	.03	.03	.03	.03
22.7000	.03	.03	.03	.03	.03
22.9500	.03	.03	.03	.03	.02
23.2000	.02	.02	.02	.02	.02
23.4500	.02	.02	.02	.02	.02
23.7000	.02	.02	.02	.02	.02
23.9500	.02	.02	.02	.02	.02
24.2000	.02	.02	.02	.01	.01
24.4500	.01	.01	.01	.01	.01
24.7000	.01	.01	.00	.00	.00
24.9500	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - GREEN ROOF IN 100Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 100Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	3.04 cfs	at	12.1500 hrs
Peak Outflow	=	2.23 cfs	at	12.2500 hrs
Peak Elevation	=	210.27 ft		
Peak Storage	=	4263 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	14148
- Infiltration	=	0
- HYG Vol OUT	=	12047
- Retained Vol	=	2100
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 100Y

Peak Discharge = 2.23 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 12047 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.6000	.00	.00	.00	.00	.00
.8500	.00	.00	.00	.00	.00
1.1000	.00	.00	.00	.00	.00
1.3500	.00	.00	.00	.00	.00
1.6000	.00	.00	.00	.00	.00
1.8500	.00	.00	.00	.00	.00
2.1000	.00	.00	.00	.00	.00
2.3500	.00	.00	.00	.00	.00
2.6000	.00	.00	.00	.00	.00
2.8500	.00	.00	.00	.00	.00
3.1000	.00	.00	.00	.00	.00
3.3500	.00	.00	.00	.00	.00
3.6000	.00	.00	.00	.00	.00
3.8500	.00	.00	.00	.00	.00
4.1000	.00	.00	.00	.00	.00
4.3500	.00	.00	.00	.00	.00
4.6000	.00	.00	.00	.00	.00
4.8500	.00	.00	.00	.00	.00
5.1000	.00	.00	.00	.00	.00
5.3500	.00	.00	.00	.00	.00
5.6000	.00	.00	.00	.00	.00
5.8500	.00	.00	.00	.00	.00
6.1000	.00	.00	.00	.00	.00
6.3500	.00	.00	.00	.00	.00
6.6000	.00	.00	.00	.00	.00
6.8500	.00	.00	.00	.00	.00
7.1000	.00	.00	.00	.00	.00
7.3500	.00	.00	.00	.00	.00
7.6000	.00	.00	.00	.00	.00
7.8500	.00	.00	.00	.00	.00
8.1000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.3500	.00	.00	.00	.00	.00
8.6000	.00	.00	.00	.00	.00
8.8500	.00	.00	.00	.00	.00
9.1000	.00	.00	.00	.00	.00
9.3500	.00	.00	.00	.00	.00
9.6000	.00	.00	.00	.01	.03
9.8500	.05	.07	.08	.09	.10
10.1000	.11	.12	.13	.14	.15
10.3500	.16	.16	.17	.18	.18
10.6000	.19	.19	.20	.21	.21
10.8500	.22	.22	.23	.23	.24
11.1000	.25	.25	.26	.27	.27
11.3500	.28	.29	.31	.32	.33
11.6000	.35	.37	.40	.45	.50
11.8500	.57	.65	.77	1.00	1.29
12.1000	1.60	1.90	2.12	2.23	2.22
12.3500	2.14	2.02	1.87	1.72	1.56
12.6000	1.39	1.24	1.09	.97	.86
12.8500	.77	.70	.66	.63	.60
13.1000	.56	.54	.51	.48	.46
13.3500	.44	.42	.40	.39	.37
13.6000	.36	.35	.33	.32	.31
13.8500	.30	.29	.29	.28	.27
14.1000	.26	.25	.25	.24	.24
14.3500	.23	.23	.22	.22	.21
14.6000	.21	.20	.20	.20	.19
14.8500	.19	.19	.19	.18	.18
15.1000	.18	.17	.17	.17	.17
15.3500	.16	.16	.16	.16	.15
15.6000	.15	.15	.15	.14	.14
15.8500	.14	.14	.13	.13	.13
16.1000	.13	.12	.12	.12	.12
16.3500	.12	.11	.11	.11	.11
16.6000	.11	.11	.11	.10	.10
16.8500	.10	.10	.10	.10	.10
17.1000	.10	.09	.09	.09	.09
17.3500	.09	.09	.09	.09	.09
17.6000	.08	.08	.08	.08	.08
17.8500	.08	.08	.08	.08	.07
18.1000	.07	.07	.07	.07	.07
18.3500	.07	.07	.07	.07	.07
18.6000	.07	.07	.07	.06	.06
18.8500	.06	.06	.06	.06	.06
19.1000	.06	.06	.06	.06	.06
19.3500	.06	.06	.06	.06	.06

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.6000	.06	.06	.06	.06	.06
19.8500	.06	.06	.06	.06	.06
20.1000	.06	.06	.05	.05	.05
20.3500	.05	.05	.05	.05	.05
20.6000	.05	.05	.05	.05	.05
20.8500	.05	.05	.05	.05	.05
21.1000	.05	.05	.05	.05	.05
21.3500	.05	.05	.05	.05	.05
21.6000	.05	.05	.05	.05	.05
21.8500	.05	.05	.05	.05	.05
22.1000	.05	.05	.05	.04	.04
22.3500	.04	.04	.04	.04	.04
22.6000	.04	.04	.04	.04	.04
22.8500	.04	.04	.04	.04	.04
23.1000	.04	.04	.04	.04	.04
23.3500	.04	.04	.04	.04	.04
23.6000	.04	.04	.04	.04	.04
23.8500	.04	.04	.04	.04	.04
24.1000	.04	.03	.03	.03	.03
24.3500	.02	.02	.02	.02	.01
24.6000	.01	.01	.01	.01	.01
24.8500	.01	.01	.01	.00	.00
25.1000	.00	.00	.00		

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 1Y

Peak Discharge = .33 cfs
Time to Peak = 12.5000 hrs
HYG Volume = 2370 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.1500	.00	.09	.18	.24	.28
12.4000	.31	.33	.33	.33	.32
12.6500	.31	.30	.28	.27	.25
12.9000	.24	.23	.21	.20	.19
13.1500	.18	.17	.16	.16	.15
13.4000	.14	.14	.13	.12	.12
13.6500	.12	.11	.11	.10	.10
13.9000	.10	.10	.09	.09	.09
14.1500	.08	.08	.08	.08	.08
14.4000	.08	.07	.07	.07	.07
14.6500	.07	.07	.07	.06	.06
14.9000	.06	.06	.06	.06	.06
15.1500	.06	.06	.06	.05	.05
15.4000	.05	.05	.05	.05	.05
15.6500	.05	.05	.05	.05	.05
15.9000	.05	.04	.04	.04	.04
16.1500	.04	.04	.04	.04	.04
16.4000	.04	.04	.04	.04	.04
16.6500	.04	.03	.03	.03	.03
16.9000	.03	.03	.03	.03	.03
17.1500	.03	.03	.03	.03	.03
17.4000	.03	.03	.03	.03	.03
17.6500	.03	.03	.03	.03	.03
17.9000	.03	.03	.03	.02	.02
18.1500	.02	.02	.02	.02	.02
18.4000	.02	.02	.02	.02	.02
18.6500	.02	.02	.02	.02	.02
18.9000	.02	.02	.02	.02	.02
19.1500	.02	.02	.02	.02	.02
19.4000	.02	.02	.02	.02	.02
19.6500	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.9000	.02	.02	.02	.02	.02
20.1500	.02	.02	.02	.02	.02
20.4000	.02	.02	.02	.02	.02
20.6500	.02	.02	.02	.02	.02
20.9000	.02	.02	.02	.02	.02
21.1500	.02	.02	.02	.02	.02
21.4000	.02	.02	.02	.02	.02
21.6500	.02	.02	.02	.02	.02
21.9000	.02	.02	.02	.02	.02
22.1500	.02	.01	.01	.01	.01
22.4000	.01	.01	.01	.01	.01
22.6500	.01	.01	.01	.01	.01
22.9000	.01	.01	.01	.01	.01
23.1500	.01	.01	.01	.01	.01
23.4000	.01	.01	.01	.01	.01
23.6500	.01	.01	.01	.01	.01
23.9000	.01	.01	.01	.01	.01
24.1500	.01	.01	.01	.01	.01
24.4000	.01	.01	.01	.00	.00
24.6500	.00	.00	.00		

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 10Y

Peak Discharge = 1.25 cfs
Time to Peak = 12.3000 hrs
HYG Volume = 6399 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.4500	.00	.03	.06	.08	.11
11.7000	.14	.18	.23	.28	.33
11.9500	.40	.48	.59	.72	.96
12.2000	1.13	1.23	1.25	1.23	1.17
12.4500	1.10	1.01	.92	.83	.74
12.7000	.68	.64	.60	.56	.52
12.9500	.49	.46	.43	.40	.38
13.2000	.36	.33	.32	.30	.28
13.4500	.27	.26	.25	.24	.23
13.7000	.22	.21	.20	.19	.19
13.9500	.18	.18	.17	.16	.16
14.2000	.16	.15	.15	.14	.14
14.4500	.14	.13	.13	.13	.13
14.7000	.12	.12	.12	.12	.12
14.9500	.11	.11	.11	.11	.11
15.2000	.10	.10	.10	.10	.10
15.4500	.10	.10	.09	.09	.09
15.7000	.09	.09	.09	.08	.08
15.9500	.08	.08	.08	.08	.08
16.2000	.07	.07	.07	.07	.07
16.4500	.07	.07	.07	.07	.07
16.7000	.06	.06	.06	.06	.06
16.9500	.06	.06	.06	.06	.06
17.2000	.06	.06	.06	.05	.05
17.4500	.05	.05	.05	.05	.05
17.7000	.05	.05	.05	.05	.05
17.9500	.05	.05	.05	.05	.04
18.2000	.04	.04	.04	.04	.04
18.4500	.04	.04	.04	.04	.04
18.7000	.04	.04	.04	.04	.04
18.9500	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.2000	.04	.04	.04	.04	.04
19.4500	.04	.04	.04	.04	.04
19.7000	.04	.04	.03	.03	.03
19.9500	.03	.03	.03	.03	.03
20.2000	.03	.03	.03	.03	.03
20.4500	.03	.03	.03	.03	.03
20.7000	.03	.03	.03	.03	.03
20.9500	.03	.03	.03	.03	.03
21.2000	.03	.03	.03	.03	.03
21.4500	.03	.03	.03	.03	.03
21.7000	.03	.03	.03	.03	.03
21.9500	.03	.03	.03	.03	.03
22.2000	.03	.03	.03	.03	.03
22.4500	.03	.03	.03	.03	.03
22.7000	.03	.03	.03	.03	.03
22.9500	.03	.03	.03	.03	.02
23.2000	.02	.02	.02	.02	.02
23.4500	.02	.02	.02	.02	.02
23.7000	.02	.02	.02	.02	.02
23.9500	.02	.02	.02	.02	.02
24.2000	.02	.02	.02	.01	.01
24.4500	.01	.01	.01	.01	.01
24.7000	.01	.01	.00	.00	.00
24.9500	.00	.00			

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 100Y

Peak Discharge = 2.23 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 12047 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.7000	.00	.01	.03	.05	.07
9.9500	.08	.09	.10	.11	.12
10.2000	.13	.14	.15	.16	.16
10.4500	.17	.18	.18	.19	.19
10.7000	.20	.21	.21	.22	.22
10.9500	.23	.23	.24	.25	.25
11.2000	.26	.27	.27	.28	.29
11.4500	.31	.32	.33	.35	.37
11.7000	.40	.45	.50	.57	.65
11.9500	.77	1.00	1.29	1.60	1.90
12.2000	2.12	2.23	2.22	2.14	2.02
12.4500	1.87	1.72	1.56	1.39	1.24
12.7000	1.09	.97	.86	.77	.70
12.9500	.66	.63	.60	.56	.54
13.2000	.51	.48	.46	.44	.42
13.4500	.40	.39	.37	.36	.35
13.7000	.33	.32	.31	.30	.29
13.9500	.29	.28	.27	.26	.25
14.2000	.25	.24	.24	.23	.23
14.4500	.22	.22	.21	.21	.20
14.7000	.20	.20	.19	.19	.19
14.9500	.19	.18	.18	.18	.17
15.2000	.17	.17	.17	.16	.16
15.4500	.16	.16	.15	.15	.15
15.7000	.15	.14	.14	.14	.14
15.9500	.13	.13	.13	.13	.12
16.2000	.12	.12	.12	.12	.11
16.4500	.11	.11	.11	.11	.11
16.7000	.11	.10	.10	.10	.10
16.9500	.10	.10	.10	.10	.09
17.2000	.09	.09	.09	.09	.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.4500	.09	.09	.09	.08	.08
17.7000	.08	.08	.08	.08	.08
17.9500	.08	.08	.07	.07	.07
18.2000	.07	.07	.07	.07	.07
18.4500	.07	.07	.07	.07	.07
18.7000	.07	.06	.06	.06	.06
18.9500	.06	.06	.06	.06	.06
19.2000	.06	.06	.06	.06	.06
19.4500	.06	.06	.06	.06	.06
19.7000	.06	.06	.06	.06	.06
19.9500	.06	.06	.06	.06	.06
20.2000	.05	.05	.05	.05	.05
20.4500	.05	.05	.05	.05	.05
20.7000	.05	.05	.05	.05	.05
20.9500	.05	.05	.05	.05	.05
21.2000	.05	.05	.05	.05	.05
21.4500	.05	.05	.05	.05	.05
21.7000	.05	.05	.05	.05	.05
21.9500	.05	.05	.05	.05	.05
22.2000	.05	.04	.04	.04	.04
22.4500	.04	.04	.04	.04	.04
22.7000	.04	.04	.04	.04	.04
22.9500	.04	.04	.04	.04	.04
23.2000	.04	.04	.04	.04	.04
23.4500	.04	.04	.04	.04	.04
23.7000	.04	.04	.04	.04	.04
23.9500	.04	.04	.04	.04	.03
24.2000	.03	.03	.03	.02	.02
24.4500	.02	.02	.01	.01	.01
24.7000	.01	.01	.01	.01	.01
24.9500	.01	.00	.00	.00	.00
25.2000	.00				

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1A
HYG Tag = 1Y

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs			
9.2000	.00	.00	.00

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1A
HYG Tag = 10Y

Peak Discharge = 1.57 cfs
Time to Peak = 12.6000 hrs
HYG Volume = 7800 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.1500	.00	.08	.35	.69	1.02
12.4000	1.27	1.43	1.51	1.55	1.57
12.6500	1.56	1.55	1.52	1.48	1.45
12.9000	1.41	1.35	1.28	1.20	1.14
13.1500	1.07	1.01	.95	.90	.84
13.4000	.80	.76	.71	.67	.64
13.6500	.61	.58	.55	.52	.49
13.9000	.47	.44	.42	.40	.38
14.1500	.36	.35	.33	.31	.30
14.4000	.28	.27	.26	.24	.23
14.6500	.22	.21	.20	.20	.19
14.9000	.18	.17	.16	.15	.15
15.1500	.14	.13	.12	.11	.11
15.4000	.10	.10	.09	.09	.09
15.6500	.08	.08	.07	.07	.06
15.9000	.06	.05	.05	.04	.04
16.1500	.03	.03	.03	.03	.02
16.4000	.02	.02	.02	.02	.01
16.6500	.01	.01	.01	.01	.00
16.9000	.00	.00			

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1A
HYG Tag = 100Y

Peak Discharge = 3.83 cfs
Time to Peak = 12.5500 hrs
HYG Volume = 25326 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.8000	.00	.01	.09	.33	.79
12.0500	1.45	1.90	2.31	2.67	2.96
12.3000	3.20	3.42	3.58	3.69	3.75
12.5500	3.83	3.75	3.71	3.64	3.55
12.8000	3.45	3.36	3.26	3.17	3.07
13.0500	2.99	2.91	2.83	2.75	2.67
13.3000	2.60	2.52	2.44	2.37	2.29
13.5500	2.22	2.15	2.08	2.01	1.93
13.8000	1.86	1.79	1.72	1.65	1.59
14.0500	1.52	1.45	1.39	1.28	1.19
14.3000	1.11	1.04	.97	.91	.85
14.5500	.81	.77	.73	.69	.66
14.8000	.63	.60	.57	.55	.53
15.0500	.51	.49	.47	.45	.43
15.3000	.42	.40	.39	.38	.36
15.5500	.35	.34	.33	.31	.30
15.8000	.29	.28	.27	.26	.25
16.0500	.24	.23	.22	.21	.21
16.3000	.20	.19	.18	.17	.17
16.5500	.16	.15	.15	.14	.13
16.8000	.13	.12	.11	.11	.11
17.0500	.10	.10	.09	.09	.09
17.3000	.08	.08	.07	.07	.07
17.5500	.06	.06	.06	.05	.05
17.8000	.04	.04	.04	.03	.03
18.0500	.03	.03	.02	.02	.02
18.3000	.02	.02	.02	.02	.01
18.5500	.01	.01	.01	.01	.01
18.8000	.00	.00	.00	.00	

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1C
HYG Tag = 1Y

Peak Discharge = 2.03 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 14834 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.4000	.00	.00	.00	.00	.00
10.6500	.00	.00	.01	.01	.01
10.9000	.01	.01	.01	.01	.01
11.1500	.02	.02	.02	.02	.02
11.4000	.03	.04	.04	.05	.06
11.6500	.07	.09	.12	.15	.19
11.9000	.26	.36	.50	.73	1.00
12.1500	1.23	1.46	1.67	1.85	1.96
12.4000	2.02	2.03	2.01	1.96	1.88
12.6500	1.79	1.69	1.60	1.51	1.42
12.9000	1.34	1.27	1.21	1.15	1.08
13.1500	1.02	.95	.90	.84	.77
13.4000	.72	.67	.64	.61	.58
13.6500	.56	.54	.52	.50	.49
13.9000	.47	.46	.45	.44	.43
14.1500	.42	.41	.40	.39	.39
14.4000	.38	.37	.37	.36	.36
14.6500	.35	.34	.34	.33	.33
14.9000	.33	.32	.32	.31	.31
15.1500	.31	.30	.30	.30	.29
15.4000	.29	.28	.28	.28	.27
15.6500	.27	.27	.26	.26	.25
15.9000	.25	.25	.24	.24	.23
16.1500	.23	.23	.22	.22	.22
16.4000	.21	.21	.21	.20	.20
16.6500	.20	.20	.19	.19	.19
16.9000	.19	.19	.18	.18	.18
17.1500	.18	.18	.18	.17	.17
17.4000	.17	.17	.17	.16	.16
17.6500	.16	.16	.16	.16	.15
17.9000	.15	.15	.15	.15	.15

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.1500	.14	.14	.14	.14	.14
18.4000	.14	.13	.13	.13	.13
18.6500	.13	.13	.13	.13	.12
18.9000	.12	.12	.12	.12	.12
19.1500	.12	.12	.12	.12	.12
19.4000	.12	.12	.11	.11	.11
19.6500	.11	.11	.11	.11	.11
19.9000	.11	.11	.11	.11	.11
20.1500	.11	.11	.11	.11	.10
20.4000	.10	.10	.10	.10	.10
20.6500	.10	.10	.10	.10	.10
20.9000	.10	.10	.10	.10	.10
21.1500	.10	.10	.10	.10	.10
21.4000	.09	.09	.09	.09	.09
21.6500	.09	.09	.09	.09	.09
21.9000	.09	.09	.09	.09	.09
22.1500	.09	.09	.09	.09	.09
22.4000	.09	.09	.09	.09	.09
22.6500	.09	.09	.09	.08	.08
22.9000	.08	.08	.08	.08	.08
23.1500	.08	.08	.08	.08	.08
23.4000	.08	.08	.08	.08	.08
23.6500	.08	.08	.08	.08	.08
23.9000	.08	.08	.08	.07	.07
24.1500	.07	.07	.07	.06	.06
24.4000	.06	.05	.05	.05	.05
24.6500	.04	.04	.04	.04	.03
24.9000	.03	.03	.03	.03	.03
25.1500	.03	.02	.02	.02	.02
25.4000	.02	.02	.02	.02	.02
25.6500	.02	.02	.02	.02	.02
25.9000	.02	.02	.02	.02	.02
26.1500	.02	.02	.02	.02	.01
26.4000	.01	.01	.01	.01	.01
26.6500	.01	.01	.01	.01	.01
26.9000	.01	.01	.01	.01	.01
27.1500	.01	.01	.01	.01	.01
27.4000	.01	.01	.01	.01	.01
27.6500	.01	.01	.01	.01	.01
27.9000	.01	.01	.01	.01	.01
28.1500	.01	.01	.01	.01	.01
28.4000	.01	.01	.01	.01	.01
28.6500	.01	.01	.00	.00	.00
28.9000	.00	.00	.00	.00	.00
29.1500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
29.4000	.00	.00	.00	.00	.00
29.6500	.00	.00	.00	.00	.00
29.9000	.00				

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1C
HYG Tag = 10Y

Peak Discharge = 5.07 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 41320 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.0000	.00	.00	.00	.00	.00
8.2500	.00	.00	.00	.00	.01
8.5000	.01	.01	.01	.01	.01
8.7500	.01	.01	.01	.02	.02
9.0000	.02	.02	.02	.02	.03
9.2500	.03	.04	.04	.05	.05
9.5000	.06	.06	.07	.08	.08
9.7500	.09	.09	.10	.11	.12
10.0000	.13	.14	.15	.15	.16
10.2500	.17	.18	.19	.20	.22
10.5000	.23	.24	.26	.27	.28
10.7500	.30	.31	.33	.35	.36
11.0000	.38	.40	.42	.44	.46
11.2500	.48	.51	.54	.58	.62
11.5000	.66	.71	.77	.84	.93
11.7500	1.03	1.16	1.30	1.50	1.78
12.0000	2.19	2.64	3.10	3.61	4.09
12.2500	4.48	4.76	4.93	5.03	5.07
12.5000	5.05	4.99	4.88	4.75	4.59
12.7500	4.42	4.24	4.05	3.87	3.69
13.0000	3.52	3.35	3.18	3.02	2.87
13.2500	2.72	2.59	2.46	2.30	2.14
13.5000	1.99	1.87	1.77	1.67	1.60
13.7500	1.53	1.46	1.41	1.35	1.31
14.0000	1.27	1.23	1.20	1.16	1.13
14.2500	1.09	1.06	1.02	.99	.97
14.5000	.94	.92	.90	.88	.85
14.7500	.83	.81	.79	.77	.75
15.0000	.74	.73	.71	.70	.69
15.2500	.68	.67	.66	.65	.64
15.5000	.63	.62	.61	.60	.59

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.7500	.58	.57	.56	.55	.54
16.0000	.54	.53	.52	.51	.50
16.2500	.49	.48	.47	.47	.46
16.5000	.46	.45	.45	.44	.44
16.7500	.43	.43	.42	.42	.41
17.0000	.41	.40	.40	.39	.39
17.2500	.39	.38	.38	.37	.37
17.5000	.36	.36	.36	.35	.35
17.7500	.34	.34	.33	.33	.33
18.0000	.32	.32	.31	.31	.31
18.2500	.30	.30	.30	.29	.29
18.5000	.29	.29	.28	.28	.28
18.7500	.28	.28	.27	.27	.27
19.0000	.27	.27	.27	.26	.26
19.2500	.26	.26	.26	.26	.26
19.5000	.25	.25	.25	.25	.25
19.7500	.25	.25	.25	.24	.24
20.0000	.24	.24	.24	.24	.24
20.2500	.23	.23	.23	.23	.23
20.5000	.23	.23	.23	.23	.22
20.7500	.22	.22	.22	.22	.22
21.0000	.22	.22	.22	.22	.21
21.2500	.21	.21	.21	.21	.21
21.5000	.21	.21	.21	.21	.20
21.7500	.20	.20	.20	.20	.20
22.0000	.20	.20	.20	.20	.20
22.2500	.19	.19	.19	.19	.19
22.5000	.19	.19	.19	.19	.19
22.7500	.19	.19	.18	.18	.18
23.0000	.18	.18	.18	.18	.18
23.2500	.18	.18	.18	.17	.17
23.5000	.17	.17	.17	.17	.17
23.7500	.17	.17	.17	.17	.16
24.0000	.16	.16	.16	.16	.15
24.2500	.14	.13	.12	.11	.10
24.5000	.10	.09	.08	.08	.08
24.7500	.07	.07	.06	.06	.06
25.0000	.05	.05	.05	.04	.04
25.2500	.04	.04	.04	.03	.03
25.5000	.03	.03	.03	.03	.03
25.7500	.02	.02	.02	.02	.02
26.0000	.02	.02	.02	.02	.02
26.2500	.02	.02	.02	.02	.02
26.5000	.02	.02	.02	.02	.02
26.7500	.02	.02	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
27.0000	.01	.01	.01	.01	.01
27.2500	.01	.01	.01	.01	.01
27.5000	.01	.01	.01	.01	.01
27.7500	.01	.01	.01	.01	.01
28.0000	.01	.01	.01	.01	.01
28.2500	.01	.01	.01	.01	.01
28.5000	.01	.01	.01	.01	.01
28.7500	.01	.01	.01	.01	.01
29.0000	.01	.01	.01	.01	.01
29.2500	.01	.00	.00	.00	.00
29.5000	.00	.00	.00	.00	.00
29.7500	.00	.00	.00	.00	.00
30.0000	.00	.00	.00	.00	.00
30.2500	.00	.00	.00	.00	.00

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1C
HYG Tag = 100Y

Peak Discharge = 9.16 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 83191 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
5.8500	.00	.00	.00	.00	.00
6.1000	.00	.00	.00	.00	.01
6.3500	.01	.01	.01	.01	.01
6.6000	.01	.01	.01	.01	.02
6.8500	.02	.02	.02	.02	.02
7.1000	.02	.03	.03	.04	.04
7.3500	.04	.05	.05	.06	.06
7.6000	.07	.07	.08	.08	.09
7.8500	.09	.10	.11	.12	.12
8.1000	.13	.14	.14	.15	.16
8.3500	.17	.17	.18	.19	.20
8.6000	.21	.22	.23	.24	.26
8.8500	.27	.28	.29	.30	.31
9.1000	.33	.34	.36	.37	.39
9.3500	.40	.42	.43	.45	.46
9.6000	.48	.50	.51	.53	.55
9.8500	.57	.58	.60	.62	.64
10.1000	.65	.67	.69	.72	.74
10.3500	.76	.79	.81	.84	.87
10.6000	.89	.91	.93	.96	.98
10.8500	1.01	1.04	1.07	1.10	1.12
11.1000	1.15	1.18	1.21	1.25	1.29
11.3500	1.34	1.39	1.46	1.54	1.62
11.6000	1.72	1.86	2.05	2.32	2.58
11.8500	2.86	3.21	3.63	4.15	4.81
12.1000	5.59	6.42	7.20	7.86	8.38
12.3500	8.77	9.03	9.16	9.16	9.04
12.6000	8.84	8.60	8.34	8.07	7.80
12.8500	7.54	7.28	7.02	6.76	6.51
13.1000	6.26	6.01	5.77	5.54	5.32
13.3500	5.09	4.89	4.68	4.49	4.30

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
13.6000	4.12	3.95	3.79	3.63	3.48
13.8500	3.34	3.20	3.07	2.94	2.83
14.1000	2.72	2.61	2.51	2.42	2.29
14.3500	2.18	2.07	1.98	1.90	1.83
14.6000	1.77	1.71	1.66	1.62	1.58
14.8500	1.54	1.51	1.48	1.45	1.42
15.1000	1.39	1.37	1.34	1.32	1.30
15.3500	1.28	1.26	1.24	1.22	1.20
15.6000	1.18	1.16	1.14	1.12	1.10
15.8500	1.08	1.06	1.04	1.01	.99
16.1000	.97	.95	.94	.92	.90
16.3500	.89	.87	.85	.83	.82
16.6000	.80	.79	.78	.76	.75
16.8500	.74	.73	.72	.72	.71
17.1000	.70	.69	.68	.67	.67
17.3500	.66	.65	.64	.64	.63
17.6000	.62	.62	.61	.60	.59
17.8500	.59	.58	.57	.56	.56
18.1000	.55	.54	.53	.53	.52
18.3500	.52	.51	.51	.50	.50
18.6000	.49	.49	.49	.48	.48
18.8500	.48	.47	.47	.47	.47
19.1000	.47	.46	.46	.46	.46
19.3500	.45	.45	.45	.45	.44
19.6000	.44	.44	.44	.44	.43
19.8500	.43	.43	.43	.42	.42
20.1000	.42	.42	.42	.41	.41
20.3500	.41	.41	.40	.40	.40
20.6000	.40	.40	.40	.39	.39
20.8500	.39	.39	.39	.38	.38
21.1000	.38	.38	.38	.38	.37
21.3500	.37	.37	.37	.37	.37
21.6000	.36	.36	.36	.36	.36
21.8500	.35	.35	.35	.35	.35
22.1000	.35	.34	.34	.34	.34
22.3500	.34	.34	.33	.33	.33
22.6000	.33	.33	.33	.32	.32
22.8500	.32	.32	.32	.32	.31
23.1000	.31	.31	.31	.31	.31
23.3500	.31	.30	.30	.30	.30
23.6000	.30	.30	.29	.29	.29
23.8500	.29	.29	.29	.28	.28
24.1000	.28	.27	.25	.23	.21
24.3500	.20	.18	.17	.15	.14
24.6000	.13	.12	.11	.10	.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
24.8500	.09	.08	.08	.07	.07
25.1000	.07	.06	.06	.06	.05
25.3500	.05	.05	.04	.04	.04
25.6000	.04	.03	.03	.03	.03
25.8500	.03	.03	.03	.02	.02
26.1000	.02	.02	.02	.02	.02
26.3500	.02	.02	.02	.02	.02
26.6000	.02	.02	.02	.02	.02
26.8500	.02	.02	.02	.02	.02
27.1000	.02	.01	.01	.01	.01
27.3500	.01	.01	.01	.01	.01
27.6000	.01	.01	.01	.01	.01
27.8500	.01	.01	.01	.01	.01
28.1000	.01	.01	.01	.01	.01
28.3500	.01	.01	.01	.01	.01
28.6000	.01	.01	.01	.01	.01
28.8500	.01	.01	.01	.01	.01
29.1000	.01	.01	.01	.01	.01
29.3500	.01	.01	.01	.01	.01
29.6000	.00	.00	.00	.00	.00
29.8500	.00	.00	.00	.00	.00
30.1000	.00	.00	.00	.00	.00
30.3500	.00	.00	.00	.00	.00
30.6000	.00	.00	.00		

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - PARKING ROOF IN 1Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 1Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
210.00	.00	0	8756	.00	.00	.00
210.10	.00	876	8756	.00	.00	9.73
210.13	.00	1167	8756	.00	.00	12.97
210.20	.72	1751	8756	.00	.72	20.17
210.30	2.84	2627	8756	.00	2.84	32.02
210.33	3.63	2889	8756	.00	3.63	35.74

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = PARKING ROOF
HYG Tag = 1Y

Peak Discharge = .17 cfs
Time to Peak = 12.5000 hrs
HYG Volume = 1040 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.2000	.00	.01	.08	.13	.15
12.4500	.17	.17	.17	.16	.15
12.7000	.14	.13	.12	.11	.10
12.9500	.09	.09	.08	.07	.07
13.2000	.07	.06	.06	.06	.05
13.4500	.05	.05	.05	.05	.05
13.7000	.04	.04	.04	.04	.04
13.9500	.04	.04	.04	.04	.04
14.2000	.04	.03	.03	.03	.03
14.4500	.03	.03	.03	.03	.03
14.7000	.03	.03	.03	.03	.03
14.9500	.03	.03	.03	.03	.03
15.2000	.03	.03	.03	.03	.02
15.4500	.02	.02	.02	.02	.02
15.7000	.02	.02	.02	.02	.02
15.9500	.02	.02	.02	.02	.02
16.2000	.02	.02	.02	.02	.02
16.4500	.02	.02	.02	.02	.02
16.7000	.02	.02	.02	.02	.02
16.9500	.02	.02	.02	.01	.01
17.2000	.01	.01	.01	.01	.01
17.4500	.01	.01	.01	.01	.01
17.7000	.01	.01	.01	.01	.01
17.9500	.01	.01	.01	.01	.01
18.2000	.01	.01	.01	.01	.01
18.4500	.01	.01	.01	.01	.01
18.7000	.01	.01	.01	.01	.01
18.9500	.01	.01	.01	.01	.01
19.2000	.01	.01	.01	.01	.01
19.4500	.01	.01	.01	.01	.01
19.7000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.9500	.01	.01	.01	.01	.01
20.2000	.01	.01	.01	.01	.01
20.4500	.01	.01	.01	.01	.01
20.7000	.01	.01	.01	.01	.01
20.9500	.01	.01	.01	.01	.01
21.2000	.01	.01	.01	.01	.01
21.4500	.01	.01	.01	.01	.01
21.7000	.01	.01	.01	.01	.01
21.9500	.01	.01	.01	.01	.01
22.2000	.01	.01	.01	.01	.01
22.4500	.01	.01	.01	.01	.01
22.7000	.01	.01	.01	.01	.01
22.9500	.01	.01	.01	.01	.01
23.2000	.01	.01	.01	.01	.01
23.4500	.01	.01	.01	.01	.01
23.7000	.01	.01	.01	.01	.01
23.9500	.01	.01	.01	.01	.01
24.2000	.00	.00	.00	.00	

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = PARKING ROOF
HYG Tag = 10Y

Peak Discharge = .65 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 3032 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.00	.05	.10	.14
11.9000	.19	.24	.30	.38	.47
12.1500	.56	.62	.65	.65	.63
12.4000	.60	.56	.52	.48	.43
12.6500	.38	.34	.30	.27	.24
12.9000	.22	.20	.18	.17	.15
13.1500	.14	.13	.12	.12	.11
13.4000	.10	.10	.10	.09	.09
13.6500	.09	.08	.08	.08	.08
13.9000	.08	.07	.07	.07	.07
14.1500	.07	.07	.06	.06	.06
14.4000	.06	.06	.06	.06	.06
14.6500	.06	.06	.05	.05	.05
14.9000	.05	.05	.05	.05	.05
15.1500	.05	.05	.05	.05	.05
15.4000	.05	.04	.04	.04	.04
15.6500	.04	.04	.04	.04	.04
15.9000	.04	.04	.04	.04	.04
16.1500	.03	.03	.03	.03	.03
16.4000	.03	.03	.03	.03	.03
16.6500	.03	.03	.03	.03	.03
16.9000	.03	.03	.03	.03	.03
17.1500	.03	.03	.03	.03	.03
17.4000	.03	.03	.02	.02	.02
17.6500	.02	.02	.02	.02	.02
17.9000	.02	.02	.02	.02	.02
18.1500	.02	.02	.02	.02	.02
18.4000	.02	.02	.02	.02	.02
18.6500	.02	.02	.02	.02	.02
18.9000	.02	.02	.02	.02	.02
19.1500	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.4000	.02	.02	.02	.02	.02
19.6500	.02	.02	.02	.02	.02
19.9000	.02	.02	.02	.02	.02
20.1500	.02	.02	.02	.02	.02
20.4000	.02	.02	.02	.02	.02
20.6500	.02	.02	.02	.02	.02
20.9000	.02	.02	.01	.01	.01
21.1500	.01	.01	.01	.01	.01
21.4000	.01	.01	.01	.01	.01
21.6500	.01	.01	.01	.01	.01
21.9000	.01	.01	.01	.01	.01
22.1500	.01	.01	.01	.01	.01
22.4000	.01	.01	.01	.01	.01
22.6500	.01	.01	.01	.01	.01
22.9000	.01	.01	.01	.01	.01
23.1500	.01	.01	.01	.01	.01
23.4000	.01	.01	.01	.01	.01
23.6500	.01	.01	.01	.01	.01
23.9000	.01	.01	.01	.01	.01
24.1500	.01	.01	.01	.01	.00
24.4000	.00	.00	.00		

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = PARKING ROOF
HYG Tag = 100Y

Peak Discharge = 1.24 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 5825 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.1000	.00	.01	.03	.04	.06
10.3500	.07	.07	.08	.09	.09
10.6000	.10	.10	.11	.11	.11
10.8500	.12	.12	.12	.12	.13
11.1000	.13	.13	.14	.14	.15
11.3500	.15	.16	.17	.17	.18
11.6000	.19	.21	.23	.26	.30
11.8500	.35	.40	.47	.55	.67
12.1000	.88	1.10	1.22	1.24	1.19
12.3500	1.09	.98	.87	.76	.69
12.6000	.63	.57	.51	.46	.41
12.8500	.37	.34	.31	.28	.26
13.1000	.24	.22	.21	.20	.19
13.3500	.18	.17	.16	.15	.15
13.6000	.14	.14	.14	.13	.13
13.8500	.13	.12	.12	.12	.11
14.1000	.11	.11	.11	.11	.10
14.3500	.10	.10	.10	.10	.10
14.6000	.09	.09	.09	.09	.09
14.8500	.09	.09	.08	.08	.08
15.1000	.08	.08	.08	.08	.08
15.3500	.08	.07	.07	.07	.07
15.6000	.07	.07	.07	.07	.07
15.8500	.06	.06	.06	.06	.06
16.1000	.06	.06	.06	.06	.05
16.3500	.05	.05	.05	.05	.05
16.6000	.05	.05	.05	.05	.05
16.8500	.05	.05	.05	.05	.05
17.1000	.04	.04	.04	.04	.04
17.3500	.04	.04	.04	.04	.04
17.6000	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.8500	.04	.04	.04	.04	.04
18.1000	.03	.03	.03	.03	.03
18.3500	.03	.03	.03	.03	.03
18.6000	.03	.03	.03	.03	.03
18.8500	.03	.03	.03	.03	.03
19.1000	.03	.03	.03	.03	.03
19.3500	.03	.03	.03	.03	.03
19.6000	.03	.03	.03	.03	.03
19.8500	.03	.03	.03	.03	.03
20.1000	.03	.03	.03	.03	.03
20.3500	.03	.03	.03	.03	.03
20.6000	.03	.03	.03	.03	.03
20.8500	.02	.02	.02	.02	.02
21.1000	.02	.02	.02	.02	.02
21.3500	.02	.02	.02	.02	.02
21.6000	.02	.02	.02	.02	.02
21.8500	.02	.02	.02	.02	.02
22.1000	.02	.02	.02	.02	.02
22.3500	.02	.02	.02	.02	.02
22.6000	.02	.02	.02	.02	.02
22.8500	.02	.02	.02	.02	.02
23.1000	.02	.02	.02	.02	.02
23.3500	.02	.02	.02	.02	.02
23.6000	.02	.02	.02	.02	.02
23.8500	.02	.02	.02	.02	.02
24.1000	.02	.02	.01	.01	.01
24.3500	.01	.01	.01	.00	.00
24.6000	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PARKING ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2A	PDA-2A		PDA-2A	1Y

INFLOWS TO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2A	1Y	2209	12.1500	.49

TOTAL FLOW INTO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PARKING ROOF IN	1Y	2209	12.1500	.49

TOTAL NODE INFLOW...
HYG file =
HYG ID = PARKING ROOF IN
HYG Tag = 1Y

Peak Discharge = .49 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 2209 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
2.0500	.00	.00	.00	.00	.00
2.3000	.00	.00	.00	.00	.00
2.5500	.00	.00	.00	.00	.00
2.8000	.00	.00	.00	.00	.00
3.0500	.00	.00	.00	.00	.00
3.3000	.00	.00	.00	.00	.00
3.5500	.00	.00	.00	.00	.00
3.8000	.00	.00	.00	.00	.00
4.0500	.00	.00	.00	.00	.00
4.3000	.00	.00	.00	.00	.00
4.5500	.01	.01	.01	.01	.01
4.8000	.01	.01	.01	.01	.01
5.0500	.01	.01	.01	.01	.01
5.3000	.01	.01	.01	.01	.01
5.5500	.01	.01	.01	.01	.01
5.8000	.01	.01	.01	.01	.01
6.0500	.01	.01	.01	.01	.01
6.3000	.01	.01	.01	.01	.01
6.5500	.01	.01	.01	.01	.01
6.8000	.01	.01	.01	.01	.01
7.0500	.01	.01	.01	.01	.01
7.3000	.01	.01	.01	.01	.01
7.5500	.01	.01	.01	.01	.01
7.8000	.01	.01	.01	.01	.01
8.0500	.01	.01	.01	.01	.02
8.3000	.02	.02	.02	.02	.02
8.5500	.02	.02	.02	.02	.02
8.8000	.02	.02	.02	.02	.02
9.0500	.02	.02	.02	.02	.02
9.3000	.02	.02	.02	.02	.02
9.5500	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.8000	.03	.03	.03	.03	.03
10.0500	.03	.03	.03	.03	.03
10.3000	.03	.03	.03	.03	.04
10.5500	.04	.04	.04	.04	.04
10.8000	.04	.04	.04	.04	.04
11.0500	.04	.05	.05	.05	.05
11.3000	.06	.06	.06	.06	.07
11.5500	.07	.08	.09	.11	.14
11.8000	.16	.19	.22	.26	.33
12.0500	.42	.48	.49	.46	.39
12.3000	.32	.28	.24	.20	.17
12.5500	.14	.12	.10	.09	.08
12.8000	.07	.07	.06	.06	.06
13.0500	.05	.05	.05	.05	.05
13.3000	.05	.05	.04	.04	.04
13.5500	.04	.04	.04	.04	.04
13.8000	.04	.04	.04	.04	.03
14.0500	.03	.03	.03	.03	.03
14.3000	.03	.03	.03	.03	.03
14.5500	.03	.03	.03	.03	.03
14.8000	.03	.03	.03	.03	.03
15.0500	.03	.03	.02	.02	.02
15.3000	.02	.02	.02	.02	.02
15.5500	.02	.02	.02	.02	.02
15.8000	.02	.02	.02	.02	.02
16.0500	.02	.02	.02	.02	.02
16.3000	.02	.02	.02	.02	.02
16.5500	.02	.02	.02	.02	.02
16.8000	.02	.01	.01	.01	.01
17.0500	.01	.01	.01	.01	.01
17.3000	.01	.01	.01	.01	.01
17.5500	.01	.01	.01	.01	.01
17.8000	.01	.01	.01	.01	.01
18.0500	.01	.01	.01	.01	.01
18.3000	.01	.01	.01	.01	.01
18.5500	.01	.01	.01	.01	.01
18.8000	.01	.01	.01	.01	.01
19.0500	.01	.01	.01	.01	.01
19.3000	.01	.01	.01	.01	.01
19.5500	.01	.01	.01	.01	.01
19.8000	.01	.01	.01	.01	.01
20.0500	.01	.01	.01	.01	.01
20.3000	.01	.01	.01	.01	.01
20.5500	.01	.01	.01	.01	.01
20.8000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
21.0500	.01	.01	.01	.01	.01
21.3000	.01	.01	.01	.01	.01
21.5500	.01	.01	.01	.01	.01
21.8000	.01	.01	.01	.01	.01
22.0500	.01	.01	.01	.01	.01
22.3000	.01	.01	.01	.01	.01
22.5500	.01	.01	.01	.01	.01
22.8000	.01	.01	.01	.01	.01
23.0500	.01	.01	.01	.01	.01
23.3000	.01	.01	.01	.01	.01
23.5500	.01	.01	.01	.01	.01
23.8000	.01	.01	.01	.01	.01
24.0500	.01	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PARKING ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2A	PDA-2A		PDA-2A	10Y

INFLOWS TO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2A	10Y	4201	12.1500	.92

TOTAL FLOW INTO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PARKING ROOF IN	10Y	4201	12.1500	.92

TOTAL NODE INFLOW...
HYG file =
HYG ID = PARKING ROOF IN
HYG Tag = 10Y

Peak Discharge = .92 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 4201 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
1.0500	.00	.00	.00	.00	.00
1.3000	.00	.00	.00	.00	.00
1.5500	.00	.00	.00	.00	.00
1.8000	.00	.00	.00	.00	.00
2.0500	.01	.01	.01	.01	.01
2.3000	.01	.01	.01	.01	.01
2.5500	.01	.01	.01	.01	.01
2.8000	.01	.01	.01	.01	.01
3.0500	.01	.01	.01	.01	.01
3.3000	.01	.01	.01	.01	.01
3.5500	.01	.01	.01	.01	.01
3.8000	.01	.01	.01	.01	.01
4.0500	.01	.01	.01	.01	.01
4.3000	.01	.01	.01	.01	.01
4.5500	.01	.01	.01	.01	.01
4.8000	.01	.01	.01	.01	.01
5.0500	.01	.01	.01	.01	.01
5.3000	.01	.01	.02	.02	.02
5.5500	.02	.02	.02	.02	.02
5.8000	.02	.02	.02	.02	.02
6.0500	.02	.02	.02	.02	.02
6.3000	.02	.02	.02	.02	.02
6.5500	.02	.02	.02	.02	.02
6.8000	.02	.02	.02	.02	.02
7.0500	.02	.02	.02	.02	.02
7.3000	.02	.02	.02	.03	.03
7.5500	.03	.03	.03	.03	.03
7.8000	.03	.03	.03	.03	.03
8.0500	.03	.03	.03	.03	.03
8.3000	.03	.03	.03	.03	.03
8.5500	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.8000	.04	.04	.04	.04	.04
9.0500	.04	.04	.04	.04	.05
9.3000	.05	.05	.05	.05	.05
9.5500	.05	.05	.05	.05	.05
9.8000	.05	.05	.05	.06	.06
10.0500	.06	.06	.06	.06	.06
10.3000	.06	.06	.07	.07	.07
10.5500	.07	.07	.07	.07	.08
10.8000	.08	.08	.08	.08	.08
11.0500	.08	.09	.09	.09	.10
11.3000	.10	.11	.11	.12	.13
11.5500	.13	.15	.18	.21	.25
11.8000	.30	.35	.41	.48	.62
12.0500	.78	.89	.92	.84	.72
12.3000	.60	.51	.44	.38	.32
12.5500	.26	.22	.18	.16	.14
12.8000	.13	.13	.12	.11	.11
13.0500	.10	.10	.09	.09	.09
13.3000	.09	.08	.08	.08	.08
13.5500	.08	.08	.07	.07	.07
13.8000	.07	.07	.07	.07	.06
14.0500	.06	.06	.06	.06	.06
14.3000	.06	.06	.06	.06	.05
14.5500	.05	.05	.05	.05	.05
14.8000	.05	.05	.05	.05	.05
15.0500	.05	.05	.05	.05	.04
15.3000	.04	.04	.04	.04	.04
15.5500	.04	.04	.04	.04	.04
15.8000	.04	.04	.04	.03	.03
16.0500	.03	.03	.03	.03	.03
16.3000	.03	.03	.03	.03	.03
16.5500	.03	.03	.03	.03	.03
16.8000	.03	.03	.03	.03	.03
17.0500	.03	.03	.03	.03	.02
17.3000	.02	.02	.02	.02	.02
17.5500	.02	.02	.02	.02	.02
17.8000	.02	.02	.02	.02	.02
18.0500	.02	.02	.02	.02	.02
18.3000	.02	.02	.02	.02	.02
18.5500	.02	.02	.02	.02	.02
18.8000	.02	.02	.02	.02	.02
19.0500	.02	.02	.02	.02	.02
19.3000	.02	.02	.02	.02	.02
19.5500	.02	.02	.02	.02	.02
19.8000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
20.0500	.02	.02	.02	.02	.02
20.3000	.02	.02	.02	.02	.02
20.5500	.02	.02	.02	.02	.01
20.8000	.01	.01	.01	.01	.01
21.0500	.01	.01	.01	.01	.01
21.3000	.01	.01	.01	.01	.01
21.5500	.01	.01	.01	.01	.01
21.8000	.01	.01	.01	.01	.01
22.0500	.01	.01	.01	.01	.01
22.3000	.01	.01	.01	.01	.01
22.5500	.01	.01	.01	.01	.01
22.8000	.01	.01	.01	.01	.01
23.0500	.01	.01	.01	.01	.01
23.3000	.01	.01	.01	.01	.01
23.5500	.01	.01	.01	.01	.01
23.8000	.01	.01	.01	.01	.01
24.0500	.01	.01	.00	.00	.00
24.3000	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PARKING ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2A	PDA-2A		PDA-2A	100Y

INFLOWS TO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2A	100Y	6994	12.1500	1.50

TOTAL FLOW INTO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PARKING ROOF IN	100Y	6994	12.1500	1.50

TOTAL NODE INFLOW...
HYG file =
HYG ID = PARKING ROOF IN
HYG Tag = 100Y

Peak Discharge = 1.50 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 6994 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.6500	.00	.00	.00	.00	.00
.9000	.00	.00	.01	.01	.01
1.1500	.01	.01	.01	.01	.01
1.4000	.01	.01	.01	.01	.01
1.6500	.01	.01	.01	.01	.01
1.9000	.01	.01	.01	.01	.01
2.1500	.01	.01	.01	.01	.01
2.4000	.01	.01	.01	.02	.02
2.6500	.02	.02	.02	.02	.02
2.9000	.02	.02	.02	.02	.02
3.1500	.02	.02	.02	.02	.02
3.4000	.02	.02	.02	.02	.02
3.6500	.02	.02	.02	.02	.02
3.9000	.02	.02	.02	.02	.02
4.1500	.02	.02	.02	.02	.02
4.4000	.02	.02	.02	.02	.02
4.6500	.02	.02	.02	.02	.03
4.9000	.03	.03	.03	.03	.03
5.1500	.03	.03	.03	.03	.03
5.4000	.03	.03	.03	.03	.03
5.6500	.03	.03	.03	.03	.03
5.9000	.03	.03	.03	.03	.03
6.1500	.03	.03	.03	.03	.03
6.4000	.03	.03	.03	.03	.03
6.6500	.03	.04	.04	.04	.04
6.9000	.04	.04	.04	.04	.04
7.1500	.04	.04	.04	.04	.04
7.4000	.04	.04	.04	.04	.04
7.6500	.05	.05	.05	.05	.05
7.9000	.05	.05	.05	.05	.05
8.1500	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.4000	.06	.06	.06	.06	.06
8.6500	.06	.06	.06	.07	.07
8.9000	.07	.07	.07	.07	.07
9.1500	.07	.07	.08	.08	.08
9.4000	.08	.08	.08	.08	.08
9.6500	.08	.09	.09	.09	.09
9.9000	.09	.09	.09	.09	.10
10.1500	.10	.10	.10	.10	.11
10.4000	.11	.11	.11	.12	.12
10.6500	.12	.12	.13	.13	.13
10.9000	.13	.13	.14	.14	.14
11.1500	.15	.16	.16	.17	.18
11.4000	.19	.20	.21	.22	.25
11.6500	.29	.35	.42	.50	.58
11.9000	.67	.79	1.02	1.27	1.46
12.1500	1.50	1.39	1.18	.99	.84
12.4000	.72	.62	.52	.43	.36
12.6500	.30	.26	.24	.22	.21
12.9000	.19	.18	.17	.17	.16
13.1500	.15	.15	.14	.14	.14
13.4000	.13	.13	.13	.13	.12
13.6500	.12	.12	.12	.11	.11
13.9000	.11	.11	.11	.10	.10
14.1500	.10	.10	.10	.09	.09
14.4000	.09	.09	.09	.09	.09
14.6500	.09	.09	.08	.08	.08
14.9000	.08	.08	.08	.08	.08
15.1500	.07	.07	.07	.07	.07
15.4000	.07	.07	.07	.07	.06
15.6500	.06	.06	.06	.06	.06
15.9000	.06	.06	.06	.05	.05
16.1500	.05	.05	.05	.05	.05
16.4000	.05	.05	.05	.05	.05
16.6500	.05	.05	.05	.05	.04
16.9000	.04	.04	.04	.04	.04
17.1500	.04	.04	.04	.04	.04
17.4000	.04	.04	.04	.04	.04
17.6500	.04	.04	.04	.04	.03
17.9000	.03	.03	.03	.03	.03
18.1500	.03	.03	.03	.03	.03
18.4000	.03	.03	.03	.03	.03
18.6500	.03	.03	.03	.03	.03
18.9000	.03	.03	.03	.03	.03
19.1500	.03	.03	.03	.03	.03
19.4000	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.6500	.03	.03	.03	.03	.03
19.9000	.03	.03	.03	.03	.03
20.1500	.03	.03	.03	.03	.03
20.4000	.03	.03	.03	.03	.02
20.6500	.02	.02	.02	.02	.02
20.9000	.02	.02	.02	.02	.02
21.1500	.02	.02	.02	.02	.02
21.4000	.02	.02	.02	.02	.02
21.6500	.02	.02	.02	.02	.02
21.9000	.02	.02	.02	.02	.02
22.1500	.02	.02	.02	.02	.02
22.4000	.02	.02	.02	.02	.02
22.6500	.02	.02	.02	.02	.02
22.9000	.02	.02	.02	.02	.02
23.1500	.02	.02	.02	.02	.02
23.4000	.02	.02	.02	.02	.02
23.6500	.02	.02	.02	.02	.02
23.9000	.02	.02	.02	.02	.01
24.1500	.01	.00	.00	.00	.00

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - PARKING ROOF IN 1Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 1Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	.49 cfs	at	12.1500 hrs
Peak Outflow	=	.17 cfs	at	12.5000 hrs
Peak Elevation	=	210.15 ft		
Peak Storage	=	1306 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	2209
- Infiltration	=	0
- HYG Vol OUT	=	1040
- Retained Vol	=	1169
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = PARKING ROOF OUT
HYG Tag = 1Y

Peak Discharge = .17 cfs
Time to Peak = 12.5000 hrs
HYG Volume = 1040 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
2.0500	.00	.00	.00	.00	.00
2.3000	.00	.00	.00	.00	.00
2.5500	.00	.00	.00	.00	.00
2.8000	.00	.00	.00	.00	.00
3.0500	.00	.00	.00	.00	.00
3.3000	.00	.00	.00	.00	.00
3.5500	.00	.00	.00	.00	.00
3.8000	.00	.00	.00	.00	.00
4.0500	.00	.00	.00	.00	.00
4.3000	.00	.00	.00	.00	.00
4.5500	.00	.00	.00	.00	.00
4.8000	.00	.00	.00	.00	.00
5.0500	.00	.00	.00	.00	.00
5.3000	.00	.00	.00	.00	.00
5.5500	.00	.00	.00	.00	.00
5.8000	.00	.00	.00	.00	.00
6.0500	.00	.00	.00	.00	.00
6.3000	.00	.00	.00	.00	.00
6.5500	.00	.00	.00	.00	.00
6.8000	.00	.00	.00	.00	.00
7.0500	.00	.00	.00	.00	.00
7.3000	.00	.00	.00	.00	.00
7.5500	.00	.00	.00	.00	.00
7.8000	.00	.00	.00	.00	.00
8.0500	.00	.00	.00	.00	.00
8.3000	.00	.00	.00	.00	.00
8.5500	.00	.00	.00	.00	.00
8.8000	.00	.00	.00	.00	.00
9.0500	.00	.00	.00	.00	.00
9.3000	.00	.00	.00	.00	.00
9.5500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.8000	.00	.00	.00	.00	.00
10.0500	.00	.00	.00	.00	.00
10.3000	.00	.00	.00	.00	.00
10.5500	.00	.00	.00	.00	.00
10.8000	.00	.00	.00	.00	.00
11.0500	.00	.00	.00	.00	.00
11.3000	.00	.00	.00	.00	.00
11.5500	.00	.00	.00	.00	.00
11.8000	.00	.00	.00	.00	.00
12.0500	.00	.00	.00	.00	.01
12.3000	.08	.13	.15	.17	.17
12.5500	.17	.16	.15	.14	.13
12.8000	.12	.11	.10	.09	.09
13.0500	.08	.07	.07	.07	.06
13.3000	.06	.06	.05	.05	.05
13.5500	.05	.05	.05	.04	.04
13.8000	.04	.04	.04	.04	.04
14.0500	.04	.04	.04	.04	.03
14.3000	.03	.03	.03	.03	.03
14.5500	.03	.03	.03	.03	.03
14.8000	.03	.03	.03	.03	.03
15.0500	.03	.03	.03	.03	.03
15.3000	.03	.03	.02	.02	.02
15.5500	.02	.02	.02	.02	.02
15.8000	.02	.02	.02	.02	.02
16.0500	.02	.02	.02	.02	.02
16.3000	.02	.02	.02	.02	.02
16.5500	.02	.02	.02	.02	.02
16.8000	.02	.02	.02	.02	.02
17.0500	.02	.01	.01	.01	.01
17.3000	.01	.01	.01	.01	.01
17.5500	.01	.01	.01	.01	.01
17.8000	.01	.01	.01	.01	.01
18.0500	.01	.01	.01	.01	.01
18.3000	.01	.01	.01	.01	.01
18.5500	.01	.01	.01	.01	.01
18.8000	.01	.01	.01	.01	.01
19.0500	.01	.01	.01	.01	.01
19.3000	.01	.01	.01	.01	.01
19.5500	.01	.01	.01	.01	.01
19.8000	.01	.01	.01	.01	.01
20.0500	.01	.01	.01	.01	.01
20.3000	.01	.01	.01	.01	.01
20.5500	.01	.01	.01	.01	.01
20.8000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
21.0500	.01	.01	.01	.01	.01
21.3000	.01	.01	.01	.01	.01
21.5500	.01	.01	.01	.01	.01
21.8000	.01	.01	.01	.01	.01
22.0500	.01	.01	.01	.01	.01
22.3000	.01	.01	.01	.01	.01
22.5500	.01	.01	.01	.01	.01
22.8000	.01	.01	.01	.01	.01
23.0500	.01	.01	.01	.01	.01
23.3000	.01	.01	.01	.01	.01
23.5500	.01	.01	.01	.01	.01
23.8000	.01	.01	.01	.01	.01
24.0500	.01	.01	.01	.00	.00
24.3000	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - PARKING ROOF IN 10Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 10Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	.92 cfs	at	12.1500 hrs
Peak Outflow	=	.65 cfs	at	12.2500 hrs
Peak Elevation	=	210.19 ft		
Peak Storage	=	1700 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	4201
- Infiltration	=	0
- HYG Vol OUT	=	3032
- Retained Vol	=	1169
Unrouted Vol	=	0 cu.ft (.001% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = PARKING ROOF OUT
HYG Tag = 10Y

Peak Discharge = .65 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 3032 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
1.0500	.00	.00	.00	.00	.00
1.3000	.00	.00	.00	.00	.00
1.5500	.00	.00	.00	.00	.00
1.8000	.00	.00	.00	.00	.00
2.0500	.00	.00	.00	.00	.00
2.3000	.00	.00	.00	.00	.00
2.5500	.00	.00	.00	.00	.00
2.8000	.00	.00	.00	.00	.00
3.0500	.00	.00	.00	.00	.00
3.3000	.00	.00	.00	.00	.00
3.5500	.00	.00	.00	.00	.00
3.8000	.00	.00	.00	.00	.00
4.0500	.00	.00	.00	.00	.00
4.3000	.00	.00	.00	.00	.00
4.5500	.00	.00	.00	.00	.00
4.8000	.00	.00	.00	.00	.00
5.0500	.00	.00	.00	.00	.00
5.3000	.00	.00	.00	.00	.00
5.5500	.00	.00	.00	.00	.00
5.8000	.00	.00	.00	.00	.00
6.0500	.00	.00	.00	.00	.00
6.3000	.00	.00	.00	.00	.00
6.5500	.00	.00	.00	.00	.00
6.8000	.00	.00	.00	.00	.00
7.0500	.00	.00	.00	.00	.00
7.3000	.00	.00	.00	.00	.00
7.5500	.00	.00	.00	.00	.00
7.8000	.00	.00	.00	.00	.00
8.0500	.00	.00	.00	.00	.00
8.3000	.00	.00	.00	.00	.00
8.5500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.8000	.00	.00	.00	.00	.00
9.0500	.00	.00	.00	.00	.00
9.3000	.00	.00	.00	.00	.00
9.5500	.00	.00	.00	.00	.00
9.8000	.00	.00	.00	.00	.00
10.0500	.00	.00	.00	.00	.00
10.3000	.00	.00	.00	.00	.00
10.5500	.00	.00	.00	.00	.00
10.8000	.00	.00	.00	.00	.00
11.0500	.00	.00	.00	.00	.00
11.3000	.00	.00	.00	.00	.00
11.5500	.00	.00	.00	.00	.05
11.8000	.10	.14	.19	.24	.30
12.0500	.38	.47	.56	.62	.65
12.3000	.65	.63	.60	.56	.52
12.5500	.48	.43	.38	.34	.30
12.8000	.27	.24	.22	.20	.18
13.0500	.17	.15	.14	.13	.12
13.3000	.12	.11	.10	.10	.10
13.5500	.09	.09	.09	.08	.08
13.8000	.08	.08	.08	.07	.07
14.0500	.07	.07	.07	.07	.06
14.3000	.06	.06	.06	.06	.06
14.5500	.06	.06	.06	.06	.05
14.8000	.05	.05	.05	.05	.05
15.0500	.05	.05	.05	.05	.05
15.3000	.05	.05	.05	.04	.04
15.5500	.04	.04	.04	.04	.04
15.8000	.04	.04	.04	.04	.04
16.0500	.04	.04	.03	.03	.03
16.3000	.03	.03	.03	.03	.03
16.5500	.03	.03	.03	.03	.03
16.8000	.03	.03	.03	.03	.03
17.0500	.03	.03	.03	.03	.03
17.3000	.03	.03	.03	.03	.02
17.5500	.02	.02	.02	.02	.02
17.8000	.02	.02	.02	.02	.02
18.0500	.02	.02	.02	.02	.02
18.3000	.02	.02	.02	.02	.02
18.5500	.02	.02	.02	.02	.02
18.8000	.02	.02	.02	.02	.02
19.0500	.02	.02	.02	.02	.02
19.3000	.02	.02	.02	.02	.02
19.5500	.02	.02	.02	.02	.02
19.8000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
20.0500	.02	.02	.02	.02	.02
20.3000	.02	.02	.02	.02	.02
20.5500	.02	.02	.02	.02	.02
20.8000	.02	.02	.02	.02	.01
21.0500	.01	.01	.01	.01	.01
21.3000	.01	.01	.01	.01	.01
21.5500	.01	.01	.01	.01	.01
21.8000	.01	.01	.01	.01	.01
22.0500	.01	.01	.01	.01	.01
22.3000	.01	.01	.01	.01	.01
22.5500	.01	.01	.01	.01	.01
22.8000	.01	.01	.01	.01	.01
23.0500	.01	.01	.01	.01	.01
23.3000	.01	.01	.01	.01	.01
23.5500	.01	.01	.01	.01	.01
23.8000	.01	.01	.01	.01	.01
24.0500	.01	.01	.01	.01	.01
24.3000	.01	.00	.00	.00	.00

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - PARKING ROOF IN 100Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 100Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	1.50 cfs	at	12.1500 hrs
Peak Outflow	=	1.24 cfs	at	12.2500 hrs
Peak Elevation	=	210.22 ft		
Peak Storage	=	1969 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	6994
- Infiltration	=	0
- HYG Vol OUT	=	5825
- Retained Vol	=	1170
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = PARKING ROOF OUT
HYG Tag = 100Y

Peak Discharge = 1.24 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 5825 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.6500	.00	.00	.00	.00	.00
.9000	.00	.00	.00	.00	.00
1.1500	.00	.00	.00	.00	.00
1.4000	.00	.00	.00	.00	.00
1.6500	.00	.00	.00	.00	.00
1.9000	.00	.00	.00	.00	.00
2.1500	.00	.00	.00	.00	.00
2.4000	.00	.00	.00	.00	.00
2.6500	.00	.00	.00	.00	.00
2.9000	.00	.00	.00	.00	.00
3.1500	.00	.00	.00	.00	.00
3.4000	.00	.00	.00	.00	.00
3.6500	.00	.00	.00	.00	.00
3.9000	.00	.00	.00	.00	.00
4.1500	.00	.00	.00	.00	.00
4.4000	.00	.00	.00	.00	.00
4.6500	.00	.00	.00	.00	.00
4.9000	.00	.00	.00	.00	.00
5.1500	.00	.00	.00	.00	.00
5.4000	.00	.00	.00	.00	.00
5.6500	.00	.00	.00	.00	.00
5.9000	.00	.00	.00	.00	.00
6.1500	.00	.00	.00	.00	.00
6.4000	.00	.00	.00	.00	.00
6.6500	.00	.00	.00	.00	.00
6.9000	.00	.00	.00	.00	.00
7.1500	.00	.00	.00	.00	.00
7.4000	.00	.00	.00	.00	.00
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.4000	.00	.00	.00	.00	.00
8.6500	.00	.00	.00	.00	.00
8.9000	.00	.00	.00	.00	.00
9.1500	.00	.00	.00	.00	.00
9.4000	.00	.00	.00	.00	.00
9.6500	.00	.00	.00	.00	.00
9.9000	.00	.00	.00	.00	.00
10.1500	.01	.03	.04	.06	.07
10.4000	.07	.08	.09	.09	.10
10.6500	.10	.11	.11	.11	.12
10.9000	.12	.12	.12	.13	.13
11.1500	.13	.14	.14	.15	.15
11.4000	.16	.17	.17	.18	.19
11.6500	.21	.23	.26	.30	.35
11.9000	.40	.47	.55	.67	.88
12.1500	1.10	1.22	1.24	1.19	1.09
12.4000	.98	.87	.76	.69	.63
12.6500	.57	.51	.46	.41	.37
12.9000	.34	.31	.28	.26	.24
13.1500	.22	.21	.20	.19	.18
13.4000	.17	.16	.15	.15	.14
13.6500	.14	.14	.13	.13	.13
13.9000	.12	.12	.12	.11	.11
14.1500	.11	.11	.11	.10	.10
14.4000	.10	.10	.10	.10	.09
14.6500	.09	.09	.09	.09	.09
14.9000	.09	.08	.08	.08	.08
15.1500	.08	.08	.08	.08	.08
15.4000	.07	.07	.07	.07	.07
15.6500	.07	.07	.07	.07	.06
15.9000	.06	.06	.06	.06	.06
16.1500	.06	.06	.06	.05	.05
16.4000	.05	.05	.05	.05	.05
16.6500	.05	.05	.05	.05	.05
16.9000	.05	.05	.05	.05	.04
17.1500	.04	.04	.04	.04	.04
17.4000	.04	.04	.04	.04	.04
17.6500	.04	.04	.04	.04	.04
17.9000	.04	.04	.04	.04	.03
18.1500	.03	.03	.03	.03	.03
18.4000	.03	.03	.03	.03	.03
18.6500	.03	.03	.03	.03	.03
18.9000	.03	.03	.03	.03	.03
19.1500	.03	.03	.03	.03	.03
19.4000	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.6500	.03	.03	.03	.03	.03
19.9000	.03	.03	.03	.03	.03
20.1500	.03	.03	.03	.03	.03
20.4000	.03	.03	.03	.03	.03
20.6500	.03	.03	.03	.03	.02
20.9000	.02	.02	.02	.02	.02
21.1500	.02	.02	.02	.02	.02
21.4000	.02	.02	.02	.02	.02
21.6500	.02	.02	.02	.02	.02
21.9000	.02	.02	.02	.02	.02
22.1500	.02	.02	.02	.02	.02
22.4000	.02	.02	.02	.02	.02
22.6500	.02	.02	.02	.02	.02
22.9000	.02	.02	.02	.02	.02
23.1500	.02	.02	.02	.02	.02
23.4000	.02	.02	.02	.02	.02
23.6500	.02	.02	.02	.02	.02
23.9000	.02	.02	.02	.02	.02
24.1500	.02	.01	.01	.01	.01
24.4000	.01	.01	.00	.00	.00

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 170.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
170.00	.00	0	.00	.00	.00
170.10	.00	195	.37	.37	2.53
170.20	.00	389	.37	.37	4.69
170.30	.00	583	.37	.37	6.85
170.40	.00	778	.37	.37	9.01
170.50	.00	972	.37	.37	11.17
170.60	.00	1167	.37	.37	13.33
170.70	.00	1361	.37	.37	15.49
170.80	.00	1673	.37	.37	18.96
170.90	.00	2102	.37	.37	23.72
171.00	.00	2530	.37	.37	28.48
171.10	.00	2954	.37	.37	33.19
171.20	.00	3378	.37	.37	37.90
171.30	.00	3800	.37	.37	42.59
171.40	.00	4219	.37	.37	47.25
171.50	.00	4639	.37	.37	51.91
171.60	.03	5053	.37	.40	56.54
171.70	.11	5466	.37	.48	61.21
171.80	.24	5877	.37	.61	65.91
171.90	.42	6284	.37	.79	70.61

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 170.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
172.00	.63	6691	.37	1.00	75.34
172.10	.87	7091	.37	1.23	80.02
172.20	1.12	7490	.37	1.49	84.71
172.30	1.39	7885	.37	1.75	89.37
172.40	1.54	8276	.37	1.91	93.86
172.50	1.68	8666	.37	2.05	98.34
172.60	1.81	9046	.37	2.18	102.69
172.70	1.93	9426	.37	2.30	107.03
172.80	2.05	9800	.37	2.41	111.30
172.90	2.15	10168	.37	2.52	115.50
173.00	2.25	10536	.37	2.62	119.69
173.10	2.35	10890	.37	2.72	123.72
173.20	2.45	11244	.37	2.81	127.75
173.30	2.54	11589	.37	2.90	131.68
173.40	2.63	11926	.37	2.99	135.51
173.50	2.71	12263	.37	3.08	139.34
173.60	2.79	12579	.37	3.16	142.93
173.70	2.87	12895	.37	3.24	146.52
173.80	2.95	13198	.37	3.32	149.96
173.90	3.03	13487	.37	3.39	153.25

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 170.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
174.00	3.10	13776	.37	3.46	156.53
174.10	3.17	14017	.37	3.54	159.29
174.20	3.24	14258	.37	3.61	162.03
174.30	3.31	14482	.37	3.68	164.59
174.40	3.38	14689	.37	3.75	166.96
174.50	3.44	14896	.37	3.81	169.32
174.60	3.51	15090	.37	3.88	171.55
174.70	3.57	15285	.37	3.94	173.77
174.80	3.64	15479	.37	4.01	176.00
174.90	3.70	15674	.37	4.07	178.22
175.00	3.76	15868	.37	4.12	180.43
175.10	4.23	16062	.37	4.60	183.07
175.20	5.05	16257	.37	5.41	186.04
175.30	6.07	16451	.37	6.44	189.23
175.40	7.18	16646	.37	7.54	192.49
175.50	8.34	16840	.37	8.71	195.82

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1A IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1A	PDA-1A		PDA-1A	1Y
GREEN ROOF OUT	GREEN ROOF	IN	GREEN ROOF OUT	1Y

INFLOWS TO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1A	1Y	7164	12.1500	1.81
	GREEN ROOF OUT	1Y	2370	12.5000	.33

TOTAL FLOW INTO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1A IN	1Y	9534	12.1500	1.81

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1A IN
HYG Tag = 1Y

Peak Discharge = 1.81 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 9534 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.2000	.00	.00	.00	.00	.00
9.4500	.01	.01	.01	.01	.01
9.7000	.01	.01	.01	.01	.02
9.9500	.02	.02	.02	.02	.02
10.2000	.02	.03	.03	.03	.03
10.4500	.03	.04	.04	.04	.04
10.7000	.05	.05	.05	.05	.06
10.9500	.06	.06	.07	.07	.08
11.2000	.08	.09	.10	.10	.11
11.4500	.12	.13	.14	.17	.20
11.7000	.26	.32	.40	.49	.59
11.9500	.75	1.04	1.38	1.67	1.81
12.2000	1.80	1.67	1.52	1.40	1.29
12.4500	1.18	1.06	.95	.84	.75
12.7000	.68	.63	.59	.56	.53
12.9500	.50	.48	.45	.43	.41
13.2000	.39	.38	.37	.36	.35
13.4500	.34	.33	.32	.31	.30
13.7000	.30	.29	.28	.28	.27
13.9500	.26	.26	.25	.25	.24
14.2000	.24	.23	.23	.22	.22
14.4500	.22	.21	.21	.21	.21
14.7000	.20	.20	.20	.19	.19
14.9500	.19	.19	.18	.18	.18
15.2000	.18	.17	.17	.17	.16
15.4500	.16	.16	.16	.15	.15
15.7000	.15	.15	.14	.14	.14
15.9500	.14	.13	.13	.13	.13
16.2000	.12	.12	.12	.12	.12
16.4500	.12	.12	.11	.11	.11
16.7000	.11	.11	.11	.11	.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.9500	.11	.10	.10	.10	.10
17.2000	.10	.10	.10	.10	.09
17.4500	.09	.09	.09	.09	.09
17.7000	.09	.09	.09	.08	.08
17.9500	.08	.08	.08	.08	.08
18.2000	.08	.08	.08	.08	.07
18.4500	.07	.07	.07	.07	.07
18.7000	.07	.07	.07	.07	.07
18.9500	.07	.07	.07	.07	.07
19.2000	.07	.07	.07	.07	.07
19.4500	.07	.07	.07	.07	.07
19.7000	.06	.06	.06	.06	.06
19.9500	.06	.06	.06	.06	.06
20.2000	.06	.06	.06	.06	.06
20.4500	.06	.06	.06	.06	.06
20.7000	.06	.06	.06	.06	.06
20.9500	.06	.06	.06	.06	.06
21.2000	.06	.06	.06	.06	.06
21.4500	.06	.05	.05	.05	.05
21.7000	.05	.05	.05	.05	.05
21.9500	.05	.05	.05	.05	.05
22.2000	.05	.05	.05	.05	.05
22.4500	.05	.05	.05	.05	.05
22.7000	.05	.05	.05	.05	.05
22.9500	.05	.05	.05	.05	.05
23.2000	.05	.05	.05	.05	.04
23.4500	.04	.04	.04	.04	.04
23.7000	.04	.04	.04	.04	.04
23.9500	.04	.04	.04	.03	.02
24.2000	.02	.01	.01	.01	.01
24.4500	.01	.01	.00	.00	.00
24.7000	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1A IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1A	PDA-1A		PDA-1A	10Y
GREEN ROOF OUT	GREEN ROOF	IN	GREEN ROOF OUT	10Y

INFLOWS TO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1A	10Y	18338	12.1500	4.62
	GREEN ROOF OUT	10Y	6399	12.3000	1.25

TOTAL FLOW INTO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1A IN	10Y	24737	12.1500	5.57

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1A IN
HYG Tag = 10Y

Peak Discharge = 5.57 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 24737 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.6500	.00	.00	.00	.00	.00
6.9000	.00	.01	.01	.01	.01
7.1500	.01	.01	.01	.01	.01
7.4000	.01	.01	.02	.02	.02
7.6500	.02	.02	.02	.02	.02
7.9000	.02	.03	.03	.03	.03
8.1500	.03	.03	.03	.04	.04
8.4000	.04	.04	.04	.05	.05
8.6500	.05	.05	.06	.06	.06
8.9000	.06	.07	.07	.07	.08
9.1500	.08	.08	.08	.09	.09
9.4000	.09	.10	.10	.10	.11
9.6500	.11	.11	.12	.12	.13
9.9000	.13	.13	.14	.14	.15
10.1500	.15	.16	.16	.17	.17
10.4000	.18	.19	.19	.20	.21
10.6500	.22	.22	.23	.24	.25
10.9000	.25	.26	.27	.28	.29
11.1500	.30	.32	.34	.37	.39
11.4000	.41	.44	.50	.56	.66
11.6500	.79	.98	1.21	1.48	1.78
11.9000	2.10	2.56	3.37	4.32	5.09
12.1500	5.57	5.42	4.90	4.35	3.91
12.4000	3.49	3.10	2.71	2.34	2.01
12.6500	1.74	1.56	1.43	1.34	1.25
12.9000	1.18	1.11	1.05	.99	.94
13.1500	.89	.86	.82	.79	.77
13.4000	.74	.72	.70	.68	.66
13.6500	.65	.63	.61	.60	.58
13.9000	.57	.55	.54	.53	.51
14.1500	.50	.49	.49	.48	.47

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.4000	.46	.45	.45	.44	.43
14.6500	.43	.42	.42	.41	.40
14.9000	.40	.39	.39	.38	.38
15.1500	.37	.36	.36	.35	.35
15.4000	.34	.34	.33	.33	.32
15.6500	.31	.31	.30	.30	.29
15.9000	.29	.28	.28	.27	.27
16.1500	.26	.26	.25	.25	.25
16.4000	.25	.24	.24	.24	.23
16.6500	.23	.23	.23	.22	.22
16.9000	.22	.22	.21	.21	.21
17.1500	.21	.20	.20	.20	.20
17.4000	.19	.19	.19	.19	.18
17.6500	.18	.18	.18	.18	.17
17.9000	.17	.17	.17	.16	.16
18.1500	.16	.16	.16	.16	.15
18.4000	.15	.15	.15	.15	.15
18.6500	.15	.15	.15	.15	.15
18.9000	.14	.14	.14	.14	.14
19.1500	.14	.14	.14	.14	.14
19.4000	.14	.14	.14	.14	.13
19.6500	.13	.13	.13	.13	.13
19.9000	.13	.13	.13	.13	.13
20.1500	.13	.13	.13	.13	.12
20.4000	.12	.12	.12	.12	.12
20.6500	.12	.12	.12	.12	.12
20.9000	.12	.12	.12	.12	.12
21.1500	.12	.12	.11	.11	.11
21.4000	.11	.11	.11	.11	.11
21.6500	.11	.11	.11	.11	.11
21.9000	.11	.11	.11	.11	.11
22.1500	.10	.10	.10	.10	.10
22.4000	.10	.10	.10	.10	.10
22.6500	.10	.10	.10	.10	.10
22.9000	.10	.10	.10	.10	.09
23.1500	.09	.09	.09	.09	.09
23.4000	.09	.09	.09	.09	.09
23.6500	.09	.09	.09	.09	.09
23.9000	.09	.09	.08	.08	.07
24.1500	.05	.03	.02	.02	.02
24.4000	.01	.01	.01	.01	.01
24.6500	.01	.01	.01	.00	.00
24.9000	.00	.00	.00		

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1A IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1A	PDA-1A		PDA-1A	100Y
GREEN ROOF OUT	GREEN ROOF	IN	GREEN ROOF OUT	100Y

INFLOWS TO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1A	100Y	35399	12.1500	8.68
	GREEN ROOF OUT	100Y	12047	12.2500	2.23

TOTAL FLOW INTO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1A IN	100Y	47446	12.1500	10.58

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1A IN
HYG Tag = 100Y

Peak Discharge = 10.58 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 47446 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.6000	.00	.00	.00	.00	.00
4.8500	.01	.01	.01	.01	.01
5.1000	.01	.01	.01	.01	.01
5.3500	.02	.02	.02	.02	.02
5.6000	.02	.02	.02	.03	.03
5.8500	.03	.03	.03	.03	.03
6.1000	.03	.03	.04	.04	.04
6.3500	.04	.04	.04	.05	.05
6.6000	.05	.05	.05	.06	.06
6.8500	.06	.06	.06	.07	.07
7.1000	.07	.07	.08	.08	.08
7.3500	.08	.09	.09	.09	.09
7.6000	.10	.10	.10	.10	.11
7.8500	.11	.11	.12	.12	.12
8.1000	.12	.13	.13	.14	.14
8.3500	.15	.15	.16	.16	.17
8.6000	.17	.18	.18	.19	.19
8.8500	.20	.21	.21	.22	.22
9.1000	.23	.24	.24	.25	.26
9.3500	.26	.27	.28	.28	.29
9.6000	.30	.31	.31	.33	.36
9.8500	.38	.41	.43	.45	.47
10.1000	.49	.51	.53	.55	.57
10.3500	.59	.61	.63	.65	.67
10.6000	.69	.71	.73	.75	.77
10.8500	.79	.81	.83	.85	.87
11.1000	.90	.94	.98	1.03	1.08
11.3500	1.14	1.20	1.26	1.33	1.42
11.6000	1.58	1.82	2.17	2.59	3.09
11.8500	3.62	4.21	5.06	6.65	8.47
12.1000	9.92	10.58	10.10	9.01	7.91

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.3500	7.04	6.24	5.51	4.79	4.12
12.6000	3.52	3.03	2.66	2.39	2.18
12.8500	2.01	1.87	1.78	1.68	1.60
13.1000	1.52	1.45	1.40	1.35	1.31
13.3500	1.27	1.24	1.20	1.17	1.14
13.6000	1.12	1.09	1.06	1.04	1.01
13.8500	.99	.97	.94	.92	.90
14.1000	.88	.86	.84	.83	.82
14.3500	.80	.79	.78	.77	.76
14.6000	.75	.74	.72	.71	.70
14.8500	.69	.68	.67	.66	.65
15.1000	.64	.63	.62	.62	.61
15.3500	.60	.59	.58	.57	.56
15.6000	.55	.54	.53	.52	.51
15.8500	.50	.49	.48	.47	.46
16.1000	.46	.45	.44	.44	.43
16.3500	.42	.42	.41	.41	.41
16.6000	.40	.40	.39	.39	.38
16.8500	.38	.37	.37	.37	.36
17.1000	.36	.35	.35	.35	.34
17.3500	.34	.33	.33	.32	.32
17.6000	.32	.31	.31	.30	.30
17.8500	.30	.29	.29	.28	.28
18.1000	.28	.27	.27	.27	.27
18.3500	.26	.26	.26	.26	.26
18.6000	.26	.25	.25	.25	.25
18.8500	.25	.25	.25	.25	.24
19.1000	.24	.24	.24	.24	.24
19.3500	.24	.23	.23	.23	.23
19.6000	.23	.23	.23	.23	.22
19.8500	.22	.22	.22	.22	.22
20.1000	.22	.22	.22	.21	.21
20.3500	.21	.21	.21	.21	.21
20.6000	.21	.21	.21	.20	.20
20.8500	.20	.20	.20	.20	.20
21.1000	.20	.20	.20	.20	.19
21.3500	.19	.19	.19	.19	.19
21.6000	.19	.19	.19	.19	.19
21.8500	.18	.18	.18	.18	.18
22.1000	.18	.18	.18	.18	.18
22.3500	.17	.17	.17	.17	.17
22.6000	.17	.17	.17	.17	.17
22.8500	.17	.17	.16	.16	.16
23.1000	.16	.16	.16	.16	.16
23.3500	.16	.16	.16	.15	.15

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.6000	.15	.15	.15	.15	.15
23.8500	.15	.15	.15	.14	.14
24.1000	.11	.08	.06	.04	.03
24.3500	.03	.02	.02	.02	.01
24.6000	.01	.01	.01	.01	.01
24.8500	.01	.01	.01	.00	.00
25.1000	.00	.00	.00		

HYG file =
HYG ID = SYSTEM 1A INF
HYG Tag = 1Y

Peak Discharge = .37 cfs
Time to Peak = 11.9000 hrs
HYG Volume = 9532 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.2000	.00	.00	.00	.00	.00
9.4500	.00	.00	.00	.01	.01
9.7000	.01	.01	.01	.01	.01
9.9500	.01	.01	.02	.02	.02
10.2000	.02	.02	.02	.03	.03
10.4500	.03	.03	.03	.04	.04
10.7000	.04	.04	.04	.05	.05
10.9500	.05	.06	.06	.06	.07
11.2000	.07	.07	.08	.09	.09
11.4500	.10	.11	.12	.13	.14
11.7000	.17	.20	.25	.31	.37
11.9500	.37	.37	.37	.37	.37
12.2000	.37	.37	.37	.37	.37
12.4500	.37	.37	.37	.37	.37
12.7000	.37	.37	.37	.37	.37
12.9500	.37	.37	.37	.37	.37
13.2000	.37	.37	.37	.37	.37
13.4500	.37	.37	.37	.37	.37
13.7000	.37	.37	.37	.37	.37
13.9500	.37	.37	.37	.37	.37
14.2000	.37	.37	.37	.37	.37
14.4500	.37	.37	.37	.37	.37
14.7000	.37	.37	.37	.37	.37
14.9500	.37	.37	.37	.37	.37
15.2000	.37	.37	.37	.37	.37
15.4500	.37	.37	.37	.37	.37
15.7000	.37	.37	.37	.37	.37
15.9500	.37	.37	.37	.37	.37
16.2000	.37	.37	.37	.37	.37
16.4500	.37	.37	.37	.37	.37
16.7000	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.9500	.37	.37	.37	.37	.37
17.2000	.37	.37	.37	.37	.37
17.4500	.35	.27	.22	.18	.16
17.7000	.14	.12	.11	.10	.10
17.9500	.09	.09	.09	.08	.08
18.2000	.08	.08	.08	.08	.08
18.4500	.08	.08	.08	.07	.07
18.7000	.07	.07	.07	.07	.07
18.9500	.07	.07	.07	.07	.07
19.2000	.07	.07	.07	.07	.07
19.4500	.07	.07	.07	.07	.07
19.7000	.07	.07	.07	.06	.06
19.9500	.06	.06	.06	.06	.06
20.2000	.06	.06	.06	.06	.06
20.4500	.06	.06	.06	.06	.06
20.7000	.06	.06	.06	.06	.06
20.9500	.06	.06	.06	.06	.06
21.2000	.06	.06	.06	.06	.06
21.4500	.06	.06	.06	.05	.05
21.7000	.05	.05	.05	.05	.05
21.9500	.05	.05	.05	.05	.05
22.2000	.05	.05	.05	.05	.05
22.4500	.05	.05	.05	.05	.05
22.7000	.05	.05	.05	.05	.05
22.9500	.05	.05	.05	.05	.05
23.2000	.05	.05	.05	.05	.05
23.4500	.05	.05	.04	.04	.04
23.7000	.04	.04	.04	.04	.04
23.9500	.04	.04	.04	.04	.04
24.2000	.03	.03	.02	.02	.02
24.4500	.01	.01	.01	.01	.01
24.7000	.01	.00	.00	.00	

HYG file =
HYG ID = SYSTEM 1A INF
HYG Tag = 10Y

Peak Discharge = .37 cfs
Time to Peak = 11.4500 hrs
HYG Volume = 16936 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.6500	.00	.00	.00	.00	.00
6.9000	.00	.00	.00	.00	.01
7.1500	.01	.01	.01	.01	.01
7.4000	.01	.01	.01	.01	.01
7.6500	.02	.02	.02	.02	.02
7.9000	.02	.02	.02	.02	.03
8.1500	.03	.03	.03	.03	.03
8.4000	.04	.04	.04	.04	.04
8.6500	.05	.05	.05	.05	.05
8.9000	.06	.06	.06	.06	.07
9.1500	.07	.07	.08	.08	.08
9.4000	.08	.09	.09	.09	.10
9.6500	.10	.10	.11	.11	.11
9.9000	.12	.12	.13	.13	.13
10.1500	.14	.14	.15	.15	.16
10.4000	.16	.17	.18	.18	.19
10.6500	.20	.20	.21	.22	.22
10.9000	.23	.24	.25	.25	.26
11.1500	.27	.28	.30	.31	.33
11.4000	.35	.37	.37	.37	.37
11.6500	.37	.37	.37	.37	.37
11.9000	.37	.37	.37	.37	.37
12.1500	.37	.37	.37	.37	.37
12.4000	.37	.37	.37	.37	.37
12.6500	.37	.37	.37	.37	.37
12.9000	.37	.37	.37	.37	.37
13.1500	.37	.37	.37	.37	.37
13.4000	.37	.37	.37	.37	.37
13.6500	.37	.37	.37	.37	.37
13.9000	.37	.37	.37	.37	.37
14.1500	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
14.4000	.37	.37	.37	.37	.37
14.6500	.37	.37	.37	.37	.37
14.9000	.37	.37	.37	.37	.37
15.1500	.37	.37	.37	.37	.37
15.4000	.37	.37	.37	.37	.37
15.6500	.37	.37	.37	.37	.37
15.9000	.37	.37	.37	.37	.37
16.1500	.37	.37	.37	.37	.37
16.4000	.37	.37	.37	.37	.37
16.6500	.37	.37	.37	.37	.37
16.9000	.37	.37	.37	.37	.37
17.1500	.37	.37	.37	.37	.37
17.4000	.37	.37	.37	.37	.37
17.6500	.37	.37	.37	.37	.37
17.9000	.37	.37	.37	.37	.37
18.1500	.37	.37	.37	.37	.37
18.4000	.37	.37	.37	.37	.37
18.6500	.37	.37	.37	.37	.37
18.9000	.37	.37	.37	.37	.37
19.1500	.37	.37	.37	.37	.37
19.4000	.37	.37	.37	.37	.37
19.6500	.37	.37	.37	.37	.37
19.9000	.37	.37	.37	.37	.37
20.1500	.37	.37	.37	.37	.37
20.4000	.37	.37	.37	.37	.37
20.6500	.37	.37	.37	.37	.37
20.9000	.37	.37	.37	.37	.37
21.1500	.37	.37	.37	.37	.37
21.4000	.37	.37	.37	.37	.37
21.6500	.37	.37	.37	.37	.37
21.9000	.37	.37	.37	.37	.37
22.1500	.37	.37	.37	.37	.37
22.4000	.37	.30	.24	.20	.17
22.6500	.15	.14	.13	.12	.11
22.9000	.11	.10	.10	.10	.10
23.1500	.10	.10	.10	.09	.09
23.4000	.09	.09	.09	.09	.09
23.6500	.09	.09	.09	.09	.09
23.9000	.09	.09	.09	.09	.08
24.1500	.07	.06	.05	.04	.04
24.4000	.03	.03	.02	.02	.01
24.6500	.01	.01	.01	.01	.01
24.9000	.01	.01	.00	.00	.00

HYG file =
HYG ID = SYSTEM 1A INF
HYG Tag = 100Y

Peak Discharge = .37 cfs
Time to Peak = 9.9500 hrs
HYG Volume = 22119 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.6000	.00	.00	.00	.00	.00
4.8500	.00	.00	.00	.01	.01
5.1000	.01	.01	.01	.01	.01
5.3500	.01	.01	.02	.02	.02
5.6000	.02	.02	.02	.02	.02
5.8500	.02	.03	.03	.03	.03
6.1000	.03	.03	.03	.03	.04
6.3500	.04	.04	.04	.04	.04
6.6000	.05	.05	.05	.05	.05
6.8500	.05	.06	.06	.06	.06
7.1000	.07	.07	.07	.07	.07
7.3500	.08	.08	.08	.08	.09
7.6000	.09	.09	.09	.10	.10
7.8500	.10	.10	.11	.11	.11
8.1000	.12	.12	.12	.13	.13
8.3500	.13	.14	.14	.15	.15
8.6000	.16	.16	.17	.17	.18
8.8500	.18	.19	.20	.20	.21
9.1000	.21	.22	.23	.23	.24
9.3500	.24	.25	.26	.26	.27
9.6000	.28	.28	.29	.30	.31
9.8500	.33	.35	.37	.37	.37
10.1000	.37	.37	.37	.37	.37
10.3500	.37	.37	.37	.37	.37
10.6000	.37	.37	.37	.37	.37
10.8500	.37	.37	.37	.37	.37
11.1000	.37	.37	.37	.37	.37
11.3500	.37	.37	.37	.37	.37
11.6000	.37	.37	.37	.37	.37
11.8500	.37	.37	.37	.37	.37
12.1000	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
12.3500	.37	.37	.37	.37	.37
12.6000	.37	.37	.37	.37	.37
12.8500	.37	.37	.37	.37	.37
13.1000	.37	.37	.37	.37	.37
13.3500	.37	.37	.37	.37	.37
13.6000	.37	.37	.37	.37	.37
13.8500	.37	.37	.37	.37	.37
14.1000	.37	.37	.37	.37	.37
14.3500	.37	.37	.37	.37	.37
14.6000	.37	.37	.37	.37	.37
14.8500	.37	.37	.37	.37	.37
15.1000	.37	.37	.37	.37	.37
15.3500	.37	.37	.37	.37	.37
15.6000	.37	.37	.37	.37	.37
15.8500	.37	.37	.37	.37	.37
16.1000	.37	.37	.37	.37	.37
16.3500	.37	.37	.37	.37	.37
16.6000	.37	.37	.37	.37	.37
16.8500	.37	.37	.37	.37	.37
17.1000	.37	.37	.37	.37	.37
17.3500	.37	.37	.37	.37	.37
17.6000	.37	.37	.37	.37	.37
17.8500	.37	.37	.37	.37	.37
18.1000	.37	.37	.37	.37	.37
18.3500	.37	.37	.37	.37	.37
18.6000	.37	.37	.37	.37	.37
18.8500	.37	.37	.37	.37	.37
19.1000	.37	.37	.37	.37	.37
19.3500	.37	.37	.37	.37	.37
19.6000	.37	.37	.37	.37	.37
19.8500	.37	.37	.37	.37	.37
20.1000	.37	.37	.37	.37	.37
20.3500	.37	.37	.37	.37	.37
20.6000	.37	.37	.37	.37	.37
20.8500	.37	.37	.37	.37	.37
21.1000	.37	.37	.37	.37	.37
21.3500	.37	.37	.37	.37	.37
21.6000	.37	.37	.37	.37	.37
21.8500	.37	.37	.37	.37	.37
22.1000	.37	.37	.37	.37	.37
22.3500	.37	.37	.37	.37	.37
22.6000	.37	.37	.37	.37	.37
22.8500	.37	.37	.37	.37	.37
23.1000	.37	.37	.37	.37	.37
23.3500	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.6000	.37	.37	.37	.37	.37
23.8500	.37	.37	.37	.37	.37
24.1000	.37	.37	.37	.37	.37
24.3500	.37	.37	.37	.37	.37
24.6000	.37	.37	.37	.37	.37
24.8500	.37	.37	.37	.37	.37
25.1000	.27	.19	.14	.10	.07
25.3500	.05	.03	.02	.02	.01
25.6000	.01	.01	.00	.00	.00

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev	=	170.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	1.81 cfs	at	12.1500 hrs
Peak Outflow	=	.00 cfs	at	9.2500 hrs
Peak Infiltration	=	.37 cfs	at	11.9000 hrs

Peak Elevation	=	171.10 ft
Peak Storage	=	2958 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	9534
- Infiltration	=	9532
- HYG Vol OUT	=	0
- Retained Vol	=	1
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = SYSTEM 1A OUT
HYG Tag = 1Y

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.2000	.00	.00	.00	.00	.00
9.4500	.00	.00	.00	.00	.00
9.7000	.00	.00	.00	.00	.00
9.9500	.00	.00	.00	.00	.00
10.2000	.00	.00	.00	.00	.00
10.4500	.00	.00	.00	.00	.00
10.7000	.00	.00	.00	.00	.00
10.9500	.00	.00	.00	.00	.00
11.2000	.00	.00	.00	.00	.00
11.4500	.00	.00	.00	.00	.00
11.7000	.00	.00	.00	.00	.00
11.9500	.00	.00	.00	.00	.00
12.2000	.00	.00	.00	.00	.00
12.4500	.00	.00	.00	.00	.00
12.7000	.00	.00	.00	.00	.00
12.9500	.00	.00	.00	.00	.00
13.2000	.00	.00	.00	.00	.00
13.4500	.00	.00	.00	.00	.00
13.7000	.00	.00	.00	.00	.00
13.9500	.00	.00	.00	.00	.00
14.2000	.00	.00	.00	.00	.00
14.4500	.00	.00	.00	.00	.00
14.7000	.00	.00	.00	.00	.00
14.9500	.00	.00	.00	.00	.00
15.2000	.00	.00	.00	.00	.00
15.4500	.00	.00	.00	.00	.00
15.7000	.00	.00	.00	.00	.00
15.9500	.00	.00	.00	.00	.00
16.2000	.00	.00	.00	.00	.00
16.4500	.00	.00	.00	.00	.00
16.7000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.9500	.00	.00	.00	.00	.00
17.2000	.00	.00	.00	.00	.00
17.4500	.00	.00	.00	.00	.00
17.7000	.00	.00	.00	.00	.00
17.9500	.00	.00	.00	.00	.00
18.2000	.00	.00	.00	.00	.00
18.4500	.00	.00	.00	.00	.00
18.7000	.00	.00	.00	.00	.00
18.9500	.00	.00	.00	.00	.00
19.2000	.00	.00	.00	.00	.00
19.4500	.00	.00	.00	.00	.00
19.7000	.00	.00	.00	.00	.00
19.9500	.00	.00	.00	.00	.00
20.2000	.00	.00	.00	.00	.00
20.4500	.00	.00	.00	.00	.00
20.7000	.00	.00	.00	.00	.00
20.9500	.00	.00	.00	.00	.00
21.2000	.00	.00	.00	.00	.00
21.4500	.00	.00	.00	.00	.00
21.7000	.00	.00	.00	.00	.00
21.9500	.00	.00	.00	.00	.00
22.2000	.00	.00	.00	.00	.00
22.4500	.00	.00	.00	.00	.00
22.7000	.00	.00	.00	.00	.00
22.9500	.00	.00	.00	.00	.00
23.2000	.00	.00	.00	.00	.00
23.4500	.00	.00	.00	.00	.00
23.7000	.00	.00	.00	.00	.00
23.9500	.00	.00	.00	.00	.00
24.2000	.00	.00	.00	.00	.00
24.4500	.00	.00	.00	.00	.00
24.7000	.00	.00	.00	.00	

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 10Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 10Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev	=	170.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	5.57 cfs	at	12.1500 hrs
Peak Outflow	=	1.57 cfs	at	12.6000 hrs
Peak Infiltration	=	.37 cfs	at	11.4500 hrs

Peak Elevation	=	172.42 ft
Peak Storage	=	8353 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	24737
- Infiltration	=	16936
- HYG Vol OUT	=	7800
- Retained Vol	=	1
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = SYSTEM 1A OUT
HYG Tag = 10Y

Peak Discharge = 1.57 cfs
Time to Peak = 12.6000 hrs
HYG Volume = 7800 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.6500	.00	.00	.00	.00	.00
6.9000	.00	.00	.00	.00	.00
7.1500	.00	.00	.00	.00	.00
7.4000	.00	.00	.00	.00	.00
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00
8.4000	.00	.00	.00	.00	.00
8.6500	.00	.00	.00	.00	.00
8.9000	.00	.00	.00	.00	.00
9.1500	.00	.00	.00	.00	.00
9.4000	.00	.00	.00	.00	.00
9.6500	.00	.00	.00	.00	.00
9.9000	.00	.00	.00	.00	.00
10.1500	.00	.00	.00	.00	.00
10.4000	.00	.00	.00	.00	.00
10.6500	.00	.00	.00	.00	.00
10.9000	.00	.00	.00	.00	.00
11.1500	.00	.00	.00	.00	.00
11.4000	.00	.00	.00	.00	.00
11.6500	.00	.00	.00	.00	.00
11.9000	.00	.00	.00	.00	.00
12.1500	.00	.08	.35	.69	1.02
12.4000	1.27	1.43	1.51	1.55	1.57
12.6500	1.56	1.55	1.52	1.48	1.45
12.9000	1.41	1.35	1.28	1.20	1.14
13.1500	1.07	1.01	.95	.90	.84
13.4000	.80	.76	.71	.67	.64
13.6500	.61	.58	.55	.52	.49
13.9000	.47	.44	.42	.40	.38
14.1500	.36	.35	.33	.31	.30

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
14.4000	.28	.27	.26	.24	.23
14.6500	.22	.21	.20	.20	.19
14.9000	.18	.17	.16	.15	.15
15.1500	.14	.13	.12	.11	.11
15.4000	.10	.10	.09	.09	.09
15.6500	.08	.08	.07	.07	.06
15.9000	.06	.05	.05	.04	.04
16.1500	.03	.03	.03	.03	.02
16.4000	.02	.02	.02	.02	.01
16.6500	.01	.01	.01	.01	.00
16.9000	.00	.00	.00	.00	.00
17.1500	.00	.00	.00	.00	.00
17.4000	.00	.00	.00	.00	.00
17.6500	.00	.00	.00	.00	.00
17.9000	.00	.00	.00	.00	.00
18.1500	.00	.00	.00	.00	.00
18.4000	.00	.00	.00	.00	.00
18.6500	.00	.00	.00	.00	.00
18.9000	.00	.00	.00	.00	.00
19.1500	.00	.00	.00	.00	.00
19.4000	.00	.00	.00	.00	.00
19.6500	.00	.00	.00	.00	.00
19.9000	.00	.00	.00	.00	.00
20.1500	.00	.00	.00	.00	.00
20.4000	.00	.00	.00	.00	.00
20.6500	.00	.00	.00	.00	.00
20.9000	.00	.00	.00	.00	.00
21.1500	.00	.00	.00	.00	.00
21.4000	.00	.00	.00	.00	.00
21.6500	.00	.00	.00	.00	.00
21.9000	.00	.00	.00	.00	.00
22.1500	.00	.00	.00	.00	.00
22.4000	.00	.00	.00	.00	.00
22.6500	.00	.00	.00	.00	.00
22.9000	.00	.00	.00	.00	.00
23.1500	.00	.00	.00	.00	.00
23.4000	.00	.00	.00	.00	.00
23.6500	.00	.00	.00	.00	.00
23.9000	.00	.00	.00	.00	.00
24.1500	.00	.00	.00	.00	.00
24.4000	.00	.00	.00	.00	.00
24.6500	.00	.00	.00	.00	.00
24.9000	.00	.00	.00	.00	.00

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 100Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 100Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev	=	170.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	10.58 cfs	at	12.1500 hrs
Peak Outflow	=	3.83 cfs	at	12.5500 hrs
Peak Infiltration	=	.37 cfs	at	9.9500 hrs

Peak Elevation	=	175.01 ft
Peak Storage	=	15896 cu.ft

MASS BALANCE (cu.ft)

+	Initial Vol	= 0
+	HYG Vol IN	= 47446
-	Infiltration	= 22119
-	HYG Vol OUT	= 25326
-	Retained Vol	= 1

Unrouted Vol = - cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = SYSTEM 1A OUT
HYG Tag = 100Y

Peak Discharge = 3.83 cfs
Time to Peak = 12.5500 hrs
HYG Volume = 25326 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.6000	.00	.00	.00	.00	.00
4.8500	.00	.00	.00	.00	.00
5.1000	.00	.00	.00	.00	.00
5.3500	.00	.00	.00	.00	.00
5.6000	.00	.00	.00	.00	.00
5.8500	.00	.00	.00	.00	.00
6.1000	.00	.00	.00	.00	.00
6.3500	.00	.00	.00	.00	.00
6.6000	.00	.00	.00	.00	.00
6.8500	.00	.00	.00	.00	.00
7.1000	.00	.00	.00	.00	.00
7.3500	.00	.00	.00	.00	.00
7.6000	.00	.00	.00	.00	.00
7.8500	.00	.00	.00	.00	.00
8.1000	.00	.00	.00	.00	.00
8.3500	.00	.00	.00	.00	.00
8.6000	.00	.00	.00	.00	.00
8.8500	.00	.00	.00	.00	.00
9.1000	.00	.00	.00	.00	.00
9.3500	.00	.00	.00	.00	.00
9.6000	.00	.00	.00	.00	.00
9.8500	.00	.00	.00	.00	.00
10.1000	.00	.00	.00	.00	.00
10.3500	.00	.00	.00	.00	.00
10.6000	.00	.00	.00	.00	.00
10.8500	.00	.00	.00	.00	.00
11.1000	.00	.00	.00	.00	.00
11.3500	.00	.00	.00	.00	.00
11.6000	.00	.00	.00	.00	.00
11.8500	.01	.09	.33	.79	1.45
12.1000	1.90	2.31	2.67	2.96	3.20

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
12.3500	3.42	3.58	3.69	3.75	3.83
12.6000	3.75	3.71	3.64	3.55	3.45
12.8500	3.36	3.26	3.17	3.07	2.99
13.1000	2.91	2.83	2.75	2.67	2.60
13.3500	2.52	2.44	2.37	2.29	2.22
13.6000	2.15	2.08	2.01	1.93	1.86
13.8500	1.79	1.72	1.65	1.59	1.52
14.1000	1.45	1.39	1.28	1.19	1.11
14.3500	1.04	.97	.91	.85	.81
14.6000	.77	.73	.69	.66	.63
14.8500	.60	.57	.55	.53	.51
15.1000	.49	.47	.45	.43	.42
15.3500	.40	.39	.38	.36	.35
15.6000	.34	.33	.31	.30	.29
15.8500	.28	.27	.26	.25	.24
16.1000	.23	.22	.21	.21	.20
16.3500	.19	.18	.17	.17	.16
16.6000	.15	.15	.14	.13	.13
16.8500	.12	.11	.11	.11	.10
17.1000	.10	.09	.09	.09	.08
17.3500	.08	.07	.07	.07	.06
17.6000	.06	.06	.05	.05	.04
17.8500	.04	.04	.03	.03	.03
18.1000	.03	.02	.02	.02	.02
18.3500	.02	.02	.02	.01	.01
18.6000	.01	.01	.01	.01	.00
18.8500	.00	.00	.00	.00	.00
19.1000	.00	.00	.00	.00	.00
19.3500	.00	.00	.00	.00	.00
19.6000	.00	.00	.00	.00	.00
19.8500	.00	.00	.00	.00	.00
20.1000	.00	.00	.00	.00	.00
20.3500	.00	.00	.00	.00	.00
20.6000	.00	.00	.00	.00	.00
20.8500	.00	.00	.00	.00	.00
21.1000	.00	.00	.00	.00	.00
21.3500	.00	.00	.00	.00	.00
21.6000	.00	.00	.00	.00	.00
21.8500	.00	.00	.00	.00	.00
22.1000	.00	.00	.00	.00	.00
22.3500	.00	.00	.00	.00	.00
22.6000	.00	.00	.00	.00	.00
22.8500	.00	.00	.00	.00	.00
23.1000	.00	.00	.00	.00	.00
23.3500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.6000	.00	.00	.00	.00	.00
23.8500	.00	.00	.00	.00	.00
24.1000	.00	.00	.00	.00	.00
24.3500	.00	.00	.00	.00	.00
24.6000	.00	.00	.00	.00	.00
24.8500	.00	.00	.00	.00	.00
25.1000	.00	.00	.00	.00	.00
25.3500	.00	.00	.00	.00	.00
25.6000	.00	.00	.00	.00	.00

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
191.75	.00	0	.00	.00	.00
191.85	.03	209	.00	.03	2.34
191.95	.09	417	.00	.09	4.73
192.05	.19	626	.00	.19	7.14
192.15	.32	834	.00	.32	9.59
192.25	.47	1043	.00	.47	12.06
192.35	.66	1251	.00	.66	14.56
192.45	.88	1460	.00	.88	17.10
192.55	1.12	1792	.00	1.12	21.03
192.65	1.38	2249	.00	1.38	26.36
192.75	1.68	2705	.00	1.68	31.73
192.85	2.03	3159	.00	2.03	37.13
192.95	2.40	3613	.00	2.40	42.54
193.05	2.64	4065	.00	2.64	47.81
193.15	2.86	4516	.00	2.86	53.03
193.25	3.09	4966	.00	3.09	58.26
193.35	3.31	5412	.00	3.31	63.44
193.45	3.52	5859	.00	3.52	68.61
193.55	3.72	6303	.00	3.72	73.76
193.65	3.92	6745	.00	3.92	78.86

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
193.75	4.11	7187	.00	4.11	83.97
193.85	4.31	7624	.00	4.31	89.02
193.95	4.49	8061	.00	4.49	94.06
194.05	4.67	8496	.00	4.67	99.06
194.15	4.84	8927	.00	4.84	104.03
194.25	5.01	9358	.00	5.01	108.99
194.35	5.18	9783	.00	5.18	113.88
194.45	5.35	10208	.00	5.35	118.77
194.55	5.51	10629	.00	5.51	123.60
194.65	5.67	11046	.00	5.67	128.40
194.75	5.82	11463	.00	5.82	133.18
194.85	5.97	11873	.00	5.97	137.89
194.95	6.12	12282	.00	6.12	142.59
195.05	6.26	12687	.00	6.26	147.23
195.15	6.41	13088	.00	6.41	151.83
195.25	6.55	13488	.00	6.55	156.41
195.35	6.69	13879	.00	6.69	160.90
195.45	6.82	14270	.00	6.82	165.37
195.55	6.95	14655	.00	6.95	169.78
195.65	7.09	15034	.00	7.09	174.13

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
195.75	7.22	15413	.00	7.22	178.47
195.85	7.34	15779	.00	7.34	182.66
195.95	7.46	16146	.00	7.46	186.86
196.05	7.59	16505	.00	7.59	190.97
196.15	7.71	16856	.00	7.71	195.00
196.25	7.82	17208	.00	7.82	199.02
196.35	7.95	17542	.00	7.95	202.87
196.45	8.06	17877	.00	8.06	206.69
196.55	8.17	18201	.00	8.17	210.40
196.65	8.28	18514	.00	8.28	214.00
196.75	8.40	18828	.00	8.40	217.60
196.85	8.51	19113	.00	8.51	220.88
196.95	8.62	19398	.00	8.62	224.15
197.05	8.73	19660	.00	8.73	227.17
197.15	8.83	19899	.00	8.83	229.93
197.25	8.94	20137	.00	8.94	232.68
197.35	9.04	20356	.00	9.04	235.22
197.45	9.14	20575	.00	9.14	237.75
197.55	9.25	20788	.00	9.25	240.23
197.65	9.35	20997	.00	9.35	242.64

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
197.75	9.44	21206	.00	9.44	245.06
197.85	9.55	21414	.00	9.55	247.49
197.95	9.64	21623	.00	9.64	249.90
198.05	9.74	21831	.00	9.74	252.31
198.15	9.84	22040	.00	9.84	254.72
198.25	9.93	22249	.00	9.93	257.14
198.35	10.03	22457	.00	10.03	259.55
198.45	10.12	22666	.00	10.12	261.96
198.50	10.16	22770	.00	10.16	263.16

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1C IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1C	PDA-1B		PDA-1B	1Y

INFLOWS TO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1B	1Y	14858	12.2000	3.46

TOTAL FLOW INTO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1C IN	1Y	14858	12.2000	3.46

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1C IN
HYG Tag = 1Y

Peak Discharge = 3.46 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 14858 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.1000	.00	.00	.00	.01	.01
10.3500	.01	.02	.02	.02	.03
10.6000	.03	.04	.04	.05	.05
10.8500	.06	.06	.07	.07	.08
11.1000	.09	.09	.10	.11	.13
11.3500	.14	.16	.17	.19	.21
11.6000	.25	.30	.37	.48	.61
11.8500	.77	.96	1.23	1.69	2.30
12.1000	2.92	3.36	3.46	3.22	2.88
12.3500	2.55	2.26	2.00	1.74	1.49
12.6000	1.26	1.07	.93	.83	.76
12.8500	.71	.67	.63	.60	.57
13.1000	.54	.52	.50	.49	.48
13.3500	.47	.46	.45	.44	.44
13.6000	.43	.42	.42	.41	.40
13.8500	.39	.39	.38	.37	.36
14.1000	.36	.35	.35	.34	.34
14.3500	.33	.33	.32	.32	.32
14.6000	.31	.31	.31	.30	.30
14.8500	.30	.29	.29	.28	.28
15.1000	.28	.27	.27	.27	.26
15.3500	.26	.25	.25	.25	.24
15.6000	.24	.23	.23	.23	.22
15.8500	.22	.21	.21	.21	.20
16.1000	.20	.20	.19	.19	.19
16.3500	.19	.18	.18	.18	.18
16.6000	.18	.18	.17	.17	.17
16.8500	.17	.17	.16	.16	.16
17.1000	.16	.16	.16	.15	.15
17.3500	.15	.15	.15	.15	.14
17.6000	.14	.14	.14	.14	.13

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.8500	.13	.13	.13	.13	.13
18.1000	.12	.12	.12	.12	.12
18.3500	.12	.12	.12	.12	.12
18.6000	.12	.12	.12	.11	.11
18.8500	.11	.11	.11	.11	.11
19.1000	.11	.11	.11	.11	.11
19.3500	.11	.11	.11	.11	.11
19.6000	.11	.11	.10	.10	.10
19.8500	.10	.10	.10	.10	.10
20.1000	.10	.10	.10	.10	.10
20.3500	.10	.10	.10	.10	.10
20.6000	.10	.10	.10	.09	.09
20.8500	.09	.09	.09	.09	.09
21.1000	.09	.09	.09	.09	.09
21.3500	.09	.09	.09	.09	.09
21.6000	.09	.09	.09	.09	.09
21.8500	.09	.09	.09	.08	.08
22.1000	.08	.08	.08	.08	.08
22.3500	.08	.08	.08	.08	.08
22.6000	.08	.08	.08	.08	.08
22.8500	.08	.08	.08	.08	.08
23.1000	.08	.08	.07	.07	.07
23.3500	.07	.07	.07	.07	.07
23.6000	.07	.07	.07	.07	.07
23.8500	.07	.07	.07	.07	.06
24.1000	.05	.04	.02	.01	.01
24.3500	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1C IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1C	PDA-1B		PDA-1B	10Y

INFLOWS TO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1B	10Y	41344	12.2000	9.78

TOTAL FLOW INTO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1C IN	10Y	41344	12.2000	9.78

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1C IN
HYG Tag = 10Y

Peak Discharge = 9.78 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 41344 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.6500	.00	.00	.00	.00	.01
7.9000	.01	.01	.01	.02	.02
8.1500	.02	.02	.03	.03	.03
8.4000	.04	.04	.04	.05	.05
8.6500	.06	.06	.07	.07	.08
8.9000	.08	.09	.09	.10	.10
9.1500	.11	.11	.12	.13	.13
9.4000	.14	.15	.15	.16	.17
9.6500	.18	.18	.19	.20	.21
9.9000	.22	.22	.23	.24	.25
10.1500	.26	.27	.28	.29	.31
10.4000	.32	.34	.35	.36	.38
10.6500	.40	.41	.43	.44	.46
10.9000	.48	.50	.51	.53	.56
11.1500	.58	.62	.66	.70	.75
11.4000	.80	.86	.92	.99	1.11
11.6500	1.30	1.58	1.95	2.39	2.89
11.9000	3.47	4.24	5.56	7.21	8.80
12.1500	9.77	9.78	8.91	7.80	6.79
12.4000	5.95	5.18	4.46	3.79	3.19
12.6500	2.70	2.32	2.06	1.88	1.74
12.9000	1.64	1.54	1.46	1.38	1.32
13.1500	1.26	1.22	1.18	1.15	1.13
13.4000	1.11	1.09	1.07	1.05	1.03
13.6500	1.01	.99	.98	.96	.94
13.9000	.92	.90	.88	.86	.85
14.1500	.83	.82	.80	.79	.78
14.4000	.77	.76	.76	.75	.74
14.6500	.73	.72	.71	.70	.69
14.9000	.68	.67	.66	.66	.65
15.1500	.64	.63	.62	.61	.60

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.4000	.59	.58	.57	.56	.55
15.6500	.54	.53	.52	.51	.51
15.9000	.50	.49	.48	.47	.46
16.1500	.45	.44	.44	.43	.43
16.4000	.42	.42	.42	.41	.41
16.6500	.40	.40	.39	.39	.39
16.9000	.38	.38	.37	.37	.37
17.1500	.36	.36	.35	.35	.34
17.4000	.34	.34	.33	.33	.32
17.6500	.32	.32	.31	.31	.30
17.9000	.30	.29	.29	.29	.28
18.1500	.28	.28	.27	.27	.27
18.4000	.27	.27	.27	.27	.26
18.6500	.26	.26	.26	.26	.26
18.9000	.26	.26	.25	.25	.25
19.1500	.25	.25	.25	.25	.25
19.4000	.24	.24	.24	.24	.24
19.6500	.24	.24	.24	.23	.23
19.9000	.23	.23	.23	.23	.23
20.1500	.23	.22	.22	.22	.22
20.4000	.22	.22	.22	.22	.22
20.6500	.22	.21	.21	.21	.21
20.9000	.21	.21	.21	.21	.21
21.1500	.21	.21	.20	.20	.20
21.4000	.20	.20	.20	.20	.20
21.6500	.20	.20	.19	.19	.19
21.9000	.19	.19	.19	.19	.19
22.1500	.19	.19	.19	.18	.18
22.4000	.18	.18	.18	.18	.18
22.6500	.18	.18	.18	.18	.17
22.9000	.17	.17	.17	.17	.17
23.1500	.17	.17	.17	.17	.16
23.4000	.16	.16	.16	.16	.16
23.6500	.16	.16	.16	.16	.15
23.9000	.15	.15	.15	.14	.12
24.1500	.09	.05	.03	.02	.01
24.4000	.01	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1C IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1C	PDA-1B		PDA-1B	100Y

INFLOWS TO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1B	100Y	83215	12.1500	19.46

TOTAL FLOW INTO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1C IN	100Y	83215	12.1500	19.46

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1C IN
HYG Tag = 100Y

Peak Discharge =	19.46 cfs
Time to Peak =	12.1500 hrs
HYG Volume =	83215 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
5.5000	.00	.00	.00	.00	.01
5.7500	.01	.01	.01	.02	.02
6.0000	.02	.02	.03	.03	.03
6.2500	.03	.04	.04	.04	.05
6.5000	.05	.05	.06	.06	.07
6.7500	.07	.07	.08	.08	.09
7.0000	.09	.10	.10	.10	.11
7.2500	.11	.12	.12	.13	.14
7.5000	.14	.15	.15	.16	.16
7.7500	.17	.18	.18	.19	.19
8.0000	.20	.21	.21	.22	.23
8.2500	.24	.25	.26	.27	.28
8.5000	.29	.30	.31	.32	.34
8.7500	.35	.36	.37	.39	.40
9.0000	.41	.43	.44	.45	.47
9.2500	.48	.50	.51	.53	.54
9.5000	.56	.57	.59	.61	.62
9.7500	.64	.66	.67	.69	.71
10.0000	.73	.75	.76	.79	.81
10.2500	.84	.86	.89	.92	.95
10.5000	.98	1.02	1.05	1.08	1.12
10.7500	1.15	1.18	1.22	1.25	1.29
11.0000	1.33	1.36	1.41	1.47	1.55
11.2500	1.63	1.73	1.84	1.95	2.06
11.5000	2.19	2.34	2.61	3.02	3.62
11.7500	4.41	5.34	6.38	7.54	9.07
12.0000	11.65	14.85	17.80	19.46	19.24
12.2500	17.36	15.07	13.01	11.32	9.80
12.5000	8.41	7.11	5.97	5.03	4.32
12.7500	3.82	3.48	3.22	3.02	2.84
13.0000	2.69	2.55	2.42	2.31	2.23

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
13.2500	2.16	2.11	2.07	2.03	1.99
13.5000	1.95	1.92	1.88	1.85	1.81
13.7500	1.78	1.74	1.71	1.67	1.64
14.0000	1.60	1.57	1.54	1.51	1.48
14.2500	1.46	1.44	1.42	1.40	1.38
14.5000	1.37	1.35	1.33	1.32	1.30
14.7500	1.28	1.27	1.25	1.23	1.21
15.0000	1.20	1.18	1.16	1.15	1.13
15.2500	1.11	1.10	1.08	1.06	1.04
15.5000	1.03	1.01	.99	.98	.96
15.7500	.94	.92	.91	.89	.87
16.0000	.85	.84	.82	.81	.80
16.2500	.79	.78	.77	.76	.75
16.5000	.74	.74	.73	.72	.71
16.7500	.71	.70	.69	.68	.68
17.0000	.67	.66	.65	.65	.64
17.2500	.63	.62	.62	.61	.60
17.5000	.59	.59	.58	.57	.56
17.7500	.56	.55	.54	.53	.52
18.0000	.52	.51	.50	.50	.49
18.2500	.49	.49	.48	.48	.48
18.5000	.48	.47	.47	.47	.47
18.7500	.46	.46	.46	.46	.45
19.0000	.45	.45	.45	.45	.44
19.2500	.44	.44	.44	.43	.43
19.5000	.43	.43	.43	.42	.42
19.7500	.42	.42	.41	.41	.41
20.0000	.41	.41	.40	.40	.40
20.2500	.40	.40	.39	.39	.39
20.5000	.39	.39	.39	.38	.38
20.7500	.38	.38	.38	.37	.37
21.0000	.37	.37	.37	.37	.36
21.2500	.36	.36	.36	.36	.36
21.5000	.35	.35	.35	.35	.35
21.7500	.35	.34	.34	.34	.34
22.0000	.34	.34	.33	.33	.33
22.2500	.33	.33	.32	.32	.32
22.5000	.32	.32	.32	.32	.31
22.7500	.31	.31	.31	.31	.30
23.0000	.30	.30	.30	.30	.30
23.2500	.29	.29	.29	.29	.29
23.5000	.29	.28	.28	.28	.28
23.7500	.28	.28	.27	.27	.27
24.0000	.27	.26	.21	.15	.10
24.2500	.06	.03	.02	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs				
24.5000	.00	.00	.00	.00

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	191.75 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	3.46 cfs	at	12.2000 hrs
Peak Outflow	=	2.03 cfs	at	12.4500 hrs
Peak Elevation	=	192.85 ft		
Peak Storage	=	3163 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	14858
- Infiltration	=	0
- HYG Vol OUT	=	14834
- Retained Vol	=	24
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = SYSTEM 1C OUT
HYG Tag = 1Y

Peak Discharge = 2.03 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 14834 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.1000	.00	.00	.00	.00	.00
10.3500	.00	.00	.00	.00	.00
10.6000	.00	.00	.00	.01	.01
10.8500	.01	.01	.01	.01	.01
11.1000	.01	.02	.02	.02	.02
11.3500	.02	.03	.04	.04	.05
11.6000	.06	.07	.09	.12	.15
11.8500	.19	.26	.36	.50	.73
12.1000	1.00	1.23	1.46	1.67	1.85
12.3500	1.96	2.02	2.03	2.01	1.96
12.6000	1.88	1.79	1.69	1.60	1.51
12.8500	1.42	1.34	1.27	1.21	1.15
13.1000	1.08	1.02	.95	.90	.84
13.3500	.77	.72	.67	.64	.61
13.6000	.58	.56	.54	.52	.50
13.8500	.49	.47	.46	.45	.44
14.1000	.43	.42	.41	.40	.39
14.3500	.39	.38	.37	.37	.36
14.6000	.36	.35	.34	.34	.33
14.8500	.33	.33	.32	.32	.31
15.1000	.31	.31	.30	.30	.30
15.3500	.29	.29	.28	.28	.28
15.6000	.27	.27	.27	.26	.26
15.8500	.25	.25	.25	.24	.24
16.1000	.23	.23	.23	.22	.22
16.3500	.22	.21	.21	.21	.20
16.6000	.20	.20	.20	.19	.19
16.8500	.19	.19	.19	.18	.18
17.1000	.18	.18	.18	.18	.17
17.3500	.17	.17	.17	.17	.16
17.6000	.16	.16	.16	.16	.16

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
17.8500	.15	.15	.15	.15	.15
18.1000	.15	.14	.14	.14	.14
18.3500	.14	.14	.13	.13	.13
18.6000	.13	.13	.13	.13	.13
18.8500	.12	.12	.12	.12	.12
19.1000	.12	.12	.12	.12	.12
19.3500	.12	.12	.12	.11	.11
19.6000	.11	.11	.11	.11	.11
19.8500	.11	.11	.11	.11	.11
20.1000	.11	.11	.11	.11	.11
20.3500	.10	.10	.10	.10	.10
20.6000	.10	.10	.10	.10	.10
20.8500	.10	.10	.10	.10	.10
21.1000	.10	.10	.10	.10	.10
21.3500	.10	.09	.09	.09	.09
21.6000	.09	.09	.09	.09	.09
21.8500	.09	.09	.09	.09	.09
22.1000	.09	.09	.09	.09	.09
22.3500	.09	.09	.09	.09	.09
22.6000	.09	.09	.09	.09	.08
22.8500	.08	.08	.08	.08	.08
23.1000	.08	.08	.08	.08	.08
23.3500	.08	.08	.08	.08	.08
23.6000	.08	.08	.08	.08	.08
23.8500	.08	.08	.08	.08	.07
24.1000	.07	.07	.07	.07	.06
24.3500	.06	.06	.05	.05	.05
24.6000	.05	.04	.04	.04	.04
24.8500	.03	.03	.03	.03	.03
25.1000	.03	.03	.02	.02	.02
25.3500	.02	.02	.02	.02	.02
25.6000	.02	.02	.02	.02	.02
25.8500	.02	.02	.02	.02	.02
26.1000	.02	.02	.02	.02	.02
26.3500	.01	.01	.01	.01	.01
26.6000	.01	.01	.01	.01	.01
26.8500	.01	.01	.01	.01	.01
27.1000	.01	.01	.01	.01	.01
27.3500	.01	.01	.01	.01	.01
27.6000	.01	.01	.01	.01	.01
27.8500	.01	.01	.01	.01	.01
28.1000	.01	.01	.01	.01	.01
28.3500	.01	.01	.01	.01	.01
28.6000	.01	.01	.01	.00	.00
28.8500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
29.1000	.00	.00	.00	.00	.00
29.3500	.00	.00	.00	.00	.00
29.6000	.00	.00	.00	.00	.00
29.8500	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 10Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 10Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	191.75 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	9.78 cfs	at	12.2000 hrs
Peak Outflow	=	5.07 cfs	at	12.4500 hrs
Peak Elevation	=	194.28 ft		
Peak Storage	=	9497 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	41344
- Infiltration	=	0
- HYG Vol OUT	=	41320
- Retained Vol	=	23
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = SYSTEM 1C OUT
HYG Tag = 10Y

Peak Discharge = 5.07 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 41320 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00
8.4000	.00	.01	.01	.01	.01
8.6500	.01	.01	.01	.01	.01
8.9000	.02	.02	.02	.02	.02
9.1500	.02	.03	.03	.04	.04
9.4000	.05	.05	.06	.06	.07
9.6500	.08	.08	.09	.09	.10
9.9000	.11	.12	.13	.14	.15
10.1500	.15	.16	.17	.18	.19
10.4000	.20	.22	.23	.24	.26
10.6500	.27	.28	.30	.31	.33
10.9000	.35	.36	.38	.40	.42
11.1500	.44	.46	.48	.51	.54
11.4000	.58	.62	.66	.71	.77
11.6500	.84	.93	1.03	1.16	1.30
11.9000	1.50	1.78	2.19	2.64	3.10
12.1500	3.61	4.09	4.48	4.76	4.93
12.4000	5.03	5.07	5.05	4.99	4.88
12.6500	4.75	4.59	4.42	4.24	4.05
12.9000	3.87	3.69	3.52	3.35	3.18
13.1500	3.02	2.87	2.72	2.59	2.46
13.4000	2.30	2.14	1.99	1.87	1.77
13.6500	1.67	1.60	1.53	1.46	1.41
13.9000	1.35	1.31	1.27	1.23	1.20
14.1500	1.16	1.13	1.09	1.06	1.02
14.4000	.99	.97	.94	.92	.90
14.6500	.88	.85	.83	.81	.79
14.9000	.77	.75	.74	.73	.71
15.1500	.70	.69	.68	.67	.66

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.4000	.65	.64	.63	.62	.61
15.6500	.60	.59	.58	.57	.56
15.9000	.55	.54	.54	.53	.52
16.1500	.51	.50	.49	.48	.47
16.4000	.47	.46	.46	.45	.45
16.6500	.44	.44	.43	.43	.42
16.9000	.42	.41	.41	.40	.40
17.1500	.39	.39	.39	.38	.38
17.4000	.37	.37	.36	.36	.36
17.6500	.35	.35	.34	.34	.33
17.9000	.33	.33	.32	.32	.31
18.1500	.31	.31	.30	.30	.30
18.4000	.29	.29	.29	.29	.28
18.6500	.28	.28	.28	.28	.27
18.9000	.27	.27	.27	.27	.27
19.1500	.26	.26	.26	.26	.26
19.4000	.26	.26	.25	.25	.25
19.6500	.25	.25	.25	.25	.25
19.9000	.24	.24	.24	.24	.24
20.1500	.24	.24	.23	.23	.23
20.4000	.23	.23	.23	.23	.23
20.6500	.23	.22	.22	.22	.22
20.9000	.22	.22	.22	.22	.22
21.1500	.22	.21	.21	.21	.21
21.4000	.21	.21	.21	.21	.21
21.6500	.21	.20	.20	.20	.20
21.9000	.20	.20	.20	.20	.20
22.1500	.20	.20	.19	.19	.19
22.4000	.19	.19	.19	.19	.19
22.6500	.19	.19	.19	.19	.18
22.9000	.18	.18	.18	.18	.18
23.1500	.18	.18	.18	.18	.18
23.4000	.17	.17	.17	.17	.17
23.6500	.17	.17	.17	.17	.17
23.9000	.17	.16	.16	.16	.16
24.1500	.16	.15	.14	.13	.12
24.4000	.11	.10	.10	.09	.08
24.6500	.08	.08	.07	.07	.06
24.9000	.06	.06	.05	.05	.05
25.1500	.04	.04	.04	.04	.04
25.4000	.03	.03	.03	.03	.03
25.6500	.03	.03	.02	.02	.02
25.9000	.02	.02	.02	.02	.02
26.1500	.02	.02	.02	.02	.02
26.4000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
26.6500	.02	.02	.02	.02	.01
26.9000	.01	.01	.01	.01	.01
27.1500	.01	.01	.01	.01	.01
27.4000	.01	.01	.01	.01	.01
27.6500	.01	.01	.01	.01	.01
27.9000	.01	.01	.01	.01	.01
28.1500	.01	.01	.01	.01	.01
28.4000	.01	.01	.01	.01	.01
28.6500	.01	.01	.01	.01	.01
28.9000	.01	.01	.01	.01	.01
29.1500	.01	.01	.01	.00	.00
29.4000	.00	.00	.00	.00	.00
29.6500	.00	.00	.00	.00	.00
29.9000	.00	.00	.00	.00	.00
30.1500	.00	.00	.00	.00	.00
30.4000	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-08-14\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 100Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 100Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	191.75 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	19.46 cfs	at	12.1500 hrs
Peak Outflow	=	9.16 cfs	at	12.4500 hrs
Peak Elevation	=	197.47 ft		
Peak Storage	=	20610 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	83215
- Infiltration	=	0
- HYG Vol OUT	=	83191
- Retained Vol	=	24
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = SYSTEM 1C OUT
HYG Tag = 100Y

Peak Discharge = 9.16 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 83191 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
5.5000	.00	.00	.00	.00	.00
5.7500	.00	.00	.00	.00	.00
6.0000	.00	.00	.00	.00	.00
6.2500	.00	.01	.01	.01	.01
6.5000	.01	.01	.01	.01	.01
6.7500	.01	.02	.02	.02	.02
7.0000	.02	.02	.02	.03	.03
7.2500	.04	.04	.04	.05	.05
7.5000	.06	.06	.07	.07	.08
7.7500	.08	.09	.09	.10	.11
8.0000	.12	.12	.13	.14	.14
8.2500	.15	.16	.17	.17	.18
8.5000	.19	.20	.21	.22	.23
8.7500	.24	.26	.27	.28	.29
9.0000	.30	.31	.33	.34	.36
9.2500	.37	.39	.40	.42	.43
9.5000	.45	.46	.48	.50	.51
9.7500	.53	.55	.57	.58	.60
10.0000	.62	.64	.65	.67	.69
10.2500	.72	.74	.76	.79	.81
10.5000	.84	.87	.89	.91	.93
10.7500	.96	.98	1.01	1.04	1.07
11.0000	1.10	1.12	1.15	1.18	1.21
11.2500	1.25	1.29	1.34	1.39	1.46
11.5000	1.54	1.62	1.72	1.86	2.05
11.7500	2.32	2.58	2.86	3.21	3.63
12.0000	4.15	4.81	5.59	6.42	7.20
12.2500	7.86	8.38	8.77	9.03	9.16
12.5000	9.16	9.04	8.84	8.60	8.34
12.7500	8.07	7.80	7.54	7.28	7.02
13.0000	6.76	6.51	6.26	6.01	5.77

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
13.2500	5.54	5.32	5.09	4.89	4.68
13.5000	4.49	4.30	4.12	3.95	3.79
13.7500	3.63	3.48	3.34	3.20	3.07
14.0000	2.94	2.83	2.72	2.61	2.51
14.2500	2.42	2.29	2.18	2.07	1.98
14.5000	1.90	1.83	1.77	1.71	1.66
14.7500	1.62	1.58	1.54	1.51	1.48
15.0000	1.45	1.42	1.39	1.37	1.34
15.2500	1.32	1.30	1.28	1.26	1.24
15.5000	1.22	1.20	1.18	1.16	1.14
15.7500	1.12	1.10	1.08	1.06	1.04
16.0000	1.01	.99	.97	.95	.94
16.2500	.92	.90	.89	.87	.85
16.5000	.83	.82	.80	.79	.78
16.7500	.76	.75	.74	.73	.72
17.0000	.72	.71	.70	.69	.68
17.2500	.67	.67	.66	.65	.64
17.5000	.64	.63	.62	.62	.61
17.7500	.60	.59	.59	.58	.57
18.0000	.56	.56	.55	.54	.53
18.2500	.53	.52	.52	.51	.51
18.5000	.50	.50	.49	.49	.49
18.7500	.48	.48	.48	.47	.47
19.0000	.47	.47	.47	.46	.46
19.2500	.46	.46	.45	.45	.45
19.5000	.45	.44	.44	.44	.44
19.7500	.44	.43	.43	.43	.43
20.0000	.42	.42	.42	.42	.42
20.2500	.41	.41	.41	.41	.40
20.5000	.40	.40	.40	.40	.40
20.7500	.39	.39	.39	.39	.39
21.0000	.38	.38	.38	.38	.38
21.2500	.38	.37	.37	.37	.37
21.5000	.37	.37	.36	.36	.36
21.7500	.36	.36	.35	.35	.35
22.0000	.35	.35	.35	.34	.34
22.2500	.34	.34	.34	.34	.33
22.5000	.33	.33	.33	.33	.33
22.7500	.32	.32	.32	.32	.32
23.0000	.32	.31	.31	.31	.31
23.2500	.31	.31	.31	.30	.30
23.5000	.30	.30	.30	.30	.29
23.7500	.29	.29	.29	.29	.29
24.0000	.28	.28	.28	.27	.25
24.2500	.23	.21	.20	.18	.17

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
24.5000	.15	.14	.13	.12	.11
24.7500	.10	.09	.09	.08	.08
25.0000	.07	.07	.07	.06	.06
25.2500	.06	.05	.05	.05	.04
25.5000	.04	.04	.04	.03	.03
25.7500	.03	.03	.03	.03	.03
26.0000	.02	.02	.02	.02	.02
26.2500	.02	.02	.02	.02	.02
26.5000	.02	.02	.02	.02	.02
26.7500	.02	.02	.02	.02	.02
27.0000	.02	.02	.02	.01	.01
27.2500	.01	.01	.01	.01	.01
27.5000	.01	.01	.01	.01	.01
27.7500	.01	.01	.01	.01	.01
28.0000	.01	.01	.01	.01	.01
28.2500	.01	.01	.01	.01	.01
28.5000	.01	.01	.01	.01	.01
28.7500	.01	.01	.01	.01	.01
29.0000	.01	.01	.01	.01	.01
29.2500	.01	.01	.01	.01	.01
29.5000	.01	.01	.00	.00	.00
29.7500	.00	.00	.00	.00	.00
30.0000	.00	.00	.00	.00	.00
30.2500	.00	.00	.00	.00	.00
30.5000	.00	.00	.00	.00	.00

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APPENDIX C

NYSDEC STORMWATER SIZING CALCULATIONS

RUNOFF REDUCTION VOLUME, WATER QUALITY VOLUME AND STREAM CHANNEL PROTECTION SIZING CALCULATIONS

Mercedes Benz of Goldens Bridge

NYS Route 22

Lewisboro, NY

JMC Project: **16124**

Drawing Reference: **DA-1, DA-2**

Computed by: **MT**

Checked by: **SS**

Date Printed: 9/7/2018

WATER QUALITY VOLUME WORKSHEET JMC Project: **16124**

FOR REDEVELOPMENT PROJECTS Design Point: **1**

Mercedes Benz of Goldens Bridge Drainage Area: **PDA 1A,B,C,D**

Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE							
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						**29,106**

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit		
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL		
UNITS	Ac	Ac

Net Water Quality Treatment Volume = Adjusted WQv - Provided RRv

Initial Water Quality Treatment Volume	29,106	CF
Adjusted Water Quality Treatment Volume	29,106	CF
Provided Runoff Reduction Volume	17,316	CF
Net Water Quality Treatment Volume	11,790	CF

Date Printed: 9/7/2018

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project:	**16124**
Design Point:	**1**

Mercedes Benz of Goldens Bridge	Drainage Area:	**PDA 1A,B,C,D**

Total Water Quality Treatment Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume Required	WQ_V	**29,106**	CF

Minimum Runoff Reduction Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Total Area of *new* Impervious Cover	Aic	0.88	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x Aic]	Ai	0.35	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x Ai) / 12]	RR_V	**3,631**	CF

Runoff Reduction Techniques (Volume)

GREEN INFRASTRUCTURE PRACTICE / SMP	*SYMBOL*	*VALUE*	*UNITS*
Green Roof #1	RR_V	1,971	CF
Subsurface Infiltration System	RR_V	9,534	CF
Porous Pavement	RR_V	3,635	CF
Rain Garden #1	RR_V	222	CF
Rain Garden #2	RR_V	1,111	CF
Rain Garden #3	RR_V	843	CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
TOTAL	RR_V	**17,316**	CF

Runoff Reduction

Is Total RR_V > Adjusted WQ_V ?	**NO**
Is Total RR_V > Minimum RR_V ?	**YES**

Date Printed: 9/7/2018

INFILTRATION WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1A,D**

Subsurface Infiltration System #1

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P		In
Impervious Area	I		Ac
Area	A		Ac
Percent Impervious	%I		%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V		CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V		CF
Design Storm [1-yr Storm Depth]	P	3.0	In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V	**11,634**	CF

Water Quality Volume Provided			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
1 Year Storm Entering System	Q_1 IN	9,534	CF
1 Year Storm Exiting System	Q_1OUT	0	CF
Runoff Volume Infiltrated		**9,534**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**9,534**	CF
Total Area of Infiltration Basin Provided	A_p		SF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**9,534**	CF

Date Printed: 9/7/2018

INFILTRATION WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1B**

Porous Pavement

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I	0.35	Ac
Area	A	0.35	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**3,635**	CF

Minimum Porous Pavement Area			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	3,635	CF
Porosity	*n*	0.40	Ft / Day
Trench Depth	d_t	1.00	Ft
Surface Area Required [$A_R = WQ_v / (n \times d_t)$]	A_R	**9,087**	SF

Proposed Porous Pavement			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Surface Area of Porous Pavement Provided [A_p]	A_p	**15,305**	SF
Actual Volume Provided	WQ_{VP}	6,122	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**3,635**	CF

GREEN ROOF WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1D**

Green Roof

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I_N	0.44	
Area	A	0.45	Ac
Percent Impervious	%I	98.88	%
Runoff Volume [0.05 + 0.009 x %I]	R_V	0.94	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**4,470**	CF

Proposed Green Roof			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Green Roof surface AREA	A_{RG}	15,769.00	SF
DEPTH of the Soil Media	D_{SM}	0.21	Ft
DEPTH of the Drainage Layer	D_{DL}	0.17	Ft
DEPTH of Ponding above surface	D_P	0.04	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	25%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	657.04	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	657.04	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		657.04	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**1,971**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Runoff Reduction volume provided	RR_V	**1,971**	CF

PROPRIETARY PRACTICE WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1A**

Continuous Deflective Separation Unit

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak [$R = I_a / P$] [$C_i = A \times R^2 + B \times R + C$]	C_0	-1.774	0.3301	2.4577
	C_1	1.8622	-0.7397	-0.4627
	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	0.80	Ac
Area	A	0.92	Ac
Percent Impervious	%I	86.32	%
Runoff Coefficient [$0.05 + 0.009 \times \%I$]	R_V	0.83	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**4,147**	CF
Design Storm [1-yr Storm Depth]	P	3.0	In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V	**7,164**	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	7,164	CF
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Time of Concentration	t_c	0.0833	Hr
Runoff Volume [$Q = WQ_V / (A \times 3630)$]	Q	2.14	In
Curve Number [$CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25\ QP)^{½}$]	CN	91.80	
Curve Number	CN	92	
Initial Abstraction [$I_a = 200 / CN - 2$]	I_a	0.18	In
Ratio [$R = I_a / P$]	R	0.06	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.47	
$C_1 = A \times R2 + B \times R + C$	C_1	-0.50	
$C_2 = A \times R2 + B \times R + C$	C_2	-0.18	
Unit Peak Discharge	q_u	632.89	$cfs/mi^2/in$
Peak Discharge [$Q_p = q_u \times A \times Q / 640$]	Q_p	**1.95**	cfs

Proposed Device			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Peak Flow Provided	Q_p	**2.5**	cfs
Water Quality Volume Provided [$WQ_V = 640 \times 3600 \times Q_P / q_u$]	WQ_V	**9,101**	CF
Model Designation		CDS3025-6-C	
Quantity		1	

Date Printed: 9/7/2018

PROPRIETARY PRACTICE WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1B**

Continuous Deflective Separation Unit

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak [$R = I_a / P$] [$C_i = A \times R^2 + B \times R + C$]	C_0	-1.774	0.3301	2.4577
	C_1	1.8622	-0.7397	-0.4627
	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	1.78	Ac
Area	A	3.63	Ac
Percent Impervious	%I	49.03	%
Runoff Coefficient [$0.05 + 0.009 \times \%I$]	R_V	0.49	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**9,700**	CF
Design Storm [1-yr Storm Depth]	P	3.0	In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V	**14,858**	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	14,858	CF
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Time of Concentration	t_c	0.2333	Hr
Runoff Volume [$Q = WQ_V / (A \times 3630)$]	Q	1.13	In
Curve Number [$CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25\ QP)^{½}$]	CN	78.00	
Curve Number	CN	78	
Initial Abstraction [$I_a = 200 / CN - 2$]	I_a	0.56	In
Ratio [$R = I_a / P$]	R	0.19	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.46	
$C_1 = A \times R2 + B \times R + C$	C_1	-0.54	
$C_2 = A \times R2 + B \times R + C$	C_2	-0.15	
Unit Peak Discharge	q_u	542.98	$cfs/mi^2/in$
Peak Discharge [$Q_p = q_u \times A \times Q / 640$]	Q_p	**3.47**	cfs

Proposed Device			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Peak Flow Provided	Q_p	**3.8**	cfs
Water Quality Volume Provided [$WQ_V = 640 \times 3600 \times Q_P / q_u$]	WQ_V	**16,124**	CF
Model Designation		CDS3035-6-C	
Quantity		1	

Date Printed: 9/7/2018

RAIN GARDEN WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1D**

Rain Garden #1

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I	0.02	Ac
Area	A	0.06	Ac
Percent Impervious	%I	35.42	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.37	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**222**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V		CF

Proposed Rain Garden			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Rain Garden surface AREA	A_{RG}	390.00	SF
DEPTH of the Soil Media	D_{SM}	1.00	Ft
DEPTH of the Drainage Layer	D_{DL}	0.50	Ft
DEPTH of Ponding above surface	D_P	0.50	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	40%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	78.00	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	78.00	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		195.00	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**351**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity in HSG A and B (no underdrains)	RR_V	**222**	CF
40% Runoff Reduction capacity in HSG C and D (with underdrains)	RR_V	**89**	CF

Date Printed: 9/7/2018

RAIN GARDEN WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1D**

Rain Garden #2

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I	0.10	Ac
Area	A	0.18	Ac
Percent Impervious	%I	55.77	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.55	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**1,111**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V		CF

Proposed Rain Garden			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Rain Garden surface AREA	A_{RG}	987.00	SF
DEPTH of the Soil Media	D_{SM}	1.50	Ft
DEPTH of the Drainage Layer	D_{DL}	1.00	Ft
DEPTH of Ponding above surface	D_P	0.50	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	40%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	296.10	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	394.80	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		493.50	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**1,184**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity in HSG A and B (no underdrains)	RR_V	**1,111**	CF
40% Runoff Reduction capacity in HSG C and D (with underdrains)	RR_V	**444**	CF

Date Printed: 9/7/2018

RAIN GARDEN WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1D**

Rain Garden #3

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I	0.08	Ac
Area	A	0.10	Ac
Percent Impervious	%I	76.71	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.74	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**843**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V		CF

Proposed Rain Garden			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Rain Garden surface AREA	A_{RG}	708.00	SF
DEPTH of the Soil Media	D_{SM}	1.50	Ft
DEPTH of the Drainage Layer	D_{DL}	1.00	Ft
DEPTH of Ponding above surface	D_P	0.50	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	40%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	212.40	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	283.20	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		354.00	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**850**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity in HSG A and B (no underdrains)	RR_V	**843**	CF
40% Runoff Reduction capacity in HSG C and D (with underdrains)	RR_V	**337**	CF

Date Printed: 9/7/2018

WATER QUALITY VOLUME WORKSHEET JMC Project: **16124**

FOR REDEVELOPMENT PROJECTS Design Point: **2**

Mercedes Benz of Goldens Bridge Drainage Area: **PDA 2A,C**

Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE							
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						**2,424**

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit		
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL		
UNITS	Ac	Ac

Net Water Quality Treatment Volume = Adjusted WQv - Provided RRv

Initial Water Quality Treatment Volume	2,424	CF
Adjusted Water Quality Treatment Volume	2,424	CF
Provided Runoff Reduction Volume	2,593	CF
Net Water Quality Treatment Volume	-169	CF

Date Printed: 9/7/2018

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project:	16124
Design Point:	2

Mercedes Benz of Goldens Bridge	Drainage Area:	PDA 2A, C

Total Water Quality Treatment Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Initial Water Quality Volume	WQ_V	**2,424**	CF

Minimum Runoff Reduction Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Total Area of *new* Impervious Cover	Aic	0.18	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x Aic]	Ai	0.07	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x Ai) / 12]	RR_V	**731**	CF

Runoff Reduction Techniques (Volume)

GREEN INFRASTRUCTURE PRACTICE / SMP	*SYMBOL*	*VALUE*	*UNITS*
Green Roof #2	RR_V	2,335	CF
Rain Garden #4	RR_V	116	CF
Rain Garden #5	RR_V	142	CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
TOTAL	RR_V	**2,593**	CF

Runoff Reduction

Is Total RR_V > Adjusted WQ_V ?	**YES**
Is Total RR_V > Minimum RR_V ?	**YES**

Date Printed: 9/7/2018

RAIN GARDEN WORKSHEET

JMC Project:	**16124**
Design Point:	**2**
Drainage Area:	**2B**

Rain Garden #4

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I	0.01	Ac
Area	A	0.04	Ac
Percent Impervious	%I	22.26	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.25	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**116**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V		CF

Proposed Rain Garden			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Rain Garden surface AREA	A_{RG}	394.00	SF
DEPTH of the Soil Media	D_{SM}	1.00	Ft
DEPTH of the Drainage Layer	D_{DL}	0.50	Ft
DEPTH of Ponding above surface	D_P	0.50	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	40%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	78.80	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	78.80	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		197.00	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**355**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity in HSG A and B (no underdrains)	RR_V	**116**	CF
40% Runoff Reduction capacity in HSG C and D (with underdrains)	RR_V	**46**	CF

Date Printed: 9/7/2018

RAIN GARDEN WORKSHEET

JMC Project:	**16124**
Design Point:	**2**
Drainage Area:	**2B**

Rain Garden #5

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I	0.01	Ac
Area	A	0.04	Ac
Percent Impervious	%I	35.64	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.37	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**142**	CF
Design Storm [1-yr Storm Depth]	P		In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V		CF

Proposed Rain Garden			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Rain Garden surface AREA	A_{RG}	170.00	SF
DEPTH of the Soil Media	D_{SM}	1.00	Ft
DEPTH of the Drainage Layer	D_{DL}	0.50	Ft
DEPTH of Ponding above surface	D_P	0.50	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	40%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	34.00	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	34.00	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		85.00	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**153**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity in HSG A and B (no underdrains)	RR_V	**142**	CF
40% Runoff Reduction capacity in HSG C and D (with underdrains)	RR_V	**57**	CF

Date Printed: 9/7/2018

GREEN ROOF WORKSHEET

JMC Project:	**16124**
Design Point:	**2**
Drainage Area:	**2A**

Green Roof

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I_N	0.20	
Area	A	0.22	Ac
Percent Impervious	%I	91.36	%
Runoff Volume [0.05 + 0.009 x %I]	R_V	0.87	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**2,090**	CF

Proposed Green Roof			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Green Roof surface AREA	A_{RG}	8,756.00	SF
DEPTH of the Soil Media	D_{SM}	0.50	Ft
DEPTH of the Drainage Layer	D_{DL}	0.50	Ft
DEPTH of Ponding above surface	D_P	0.04	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	25%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	875.60	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	1,094.50	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		364.83	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**2,335**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Runoff Reduction volume provided	RR_V	**2,335**	CF

APPENDIX D

TEMPORARY EROSION AND SEDIMENTCONTROL INSPECTION AND MAINTENANCE CHECKLIST PERMANENT STORMWATER PRACTICE OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST

JMC Project 16124
Mercedes Benz of Goldens Bridge
NYS Route 22
Town of Lewisboro, NY

Temporary Erosion and Sediment Control Inspection and Maintenance Checklist

Erosion and Sediment Control Measure	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Stabilized Construction Entrance	Daily	• Periodic top dressing with additional aggregate as required • Clean sediment in public right-of-ways immediately
Silt Fence	Weekly + After Each Rain	• Remove & redistribute sediment when bulges develop in the silt fence.
Inlet Protection	Weekly + After Each Rain	• Refer to Figures A5.11, A5.12, A5.13 & A5.14 within the NYSDEC New York State Standard and Specifications for Erosion and Sediment Control
Temporary Swale	Weekly + After Each Rain	• Immediately remove any sediment and reestablish vegetative cover as required. • Inspect entire swale and surrounding area for rilling and repair as required with the placement of additional topsoil, then seeding and mulching, as outlined in Figure No. 5A.2 of the NYSDEC New York State Standards and Specifications for Erosion and Sediment Control.

JMC Project 16124
Mercedes Benz of Goldens Bridge
NYS Route 22
Town of Lewisboro, NY

Permanent Stormwater Management Practice Inspection and Maintenance Checklist

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Vegetated Swale	Monthly	• Check that contributing area is clean of debris. • Confirm vegetation is adequately maintained (mowing, fertilizer, etc.) • Check for rilling/erosion and repair as needed. • Confirm dewatering occurs between storms.
Drain Inlets	Monthly	• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary. • Check for sediment and debris collected within sumps and clean out as necessary.
Vegetated Swale/Open Channel/Level Spreader	Annually + After Major Storms	• Clean sediment and re-vegetate as necessary. • Check condition of outlet and repair as necessary

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Subsurface Stormwater Management Detention Facility	Annually + After Major Storms	• Check level of sediment and debris accumulated within the system. • Check structural integrity of the system pipes, structures, etc. for cracking, bulging or deterioration. Repair/remove as necessary. • Confirm all inlets and outlet structures/pipes are operating properly.
StormTech Subsurface Retention Facility		• Check level of sediment accumulated within the isolator row through the access manhole. If 3 inches of sediment or greater, clean out utilizing a high pressure water nozzle to scour and suspend sediments. • Flush all sediment to access manhole and remove using a vacuum truck.
Rain Garden	Early Spring (before new growth is 3 inches high)	• Cut and remove dead stalks and seed heads remaining from previous season. • Remove sticks and debris. • Prune shrubs if necessary. • Divide and move perennials if they are too crowded. • Replenish mulch layer to maintain a 3 inch layer of shredded bark.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Rain Garden	Late Spring and Summer	• Remove weeds. • Water as needed during periods of drought.
	Fall	• Remove weeds and diseased plants • Remove excess leaves. • If Fall is dry, continue to water trees and shrubs until the ground begins to freeze (later October). These woody plants need moisture entering winter to ensure survival.
CDS Water Quality Structure		• Open access cover for visual inspection and measure the distance from the standing water surface to the sediment pile with a measuring stick or tape. If less than 4 feet, insert hose from vacuum truck into the sump and screen through both access covers to clean out the standing water, layer of oil, sediment, trash, etc. • The screen must be powerwashed to ensure it is free of trash and debris.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Porous Pavement and Permeable Pavers	Monthly and As Needed	• Ensure that paving area is clean of debris • Ensure that paving dewaters between storms • Ensure that the area is clean of sediments • Mow upland and adjacent areas, and seed bare areas
	Quarterly	• Vacuum sweep frequently to keep surface free of sediments
	Annually	• Inspect the surface for deterioration or spalling

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Green Roof	Spring	• Annual Soil Test by removing small soil quantities and sending to a testing laboratory for nutrient content, etc. • Begin biweekly weed inspection and removal. • Judiciously apply phosphorus free fertilizer if needed based on the annual soil test results. • Biweekly check for displaced soil, inspect roof drains, remove debris and check for pests.
	Summer	• Continue biweekly weed inspection and removal. • Continue biweekly inspection for soil displacement, roof drains, debris, pest control, etc. • Irrigation may be required every 2 or 3 weeks during prolonged hot, dry weather.
	Fall	• Continue biweekly weed inspection and removal. • Continue biweekly inspection for soil displacement, roof drains, debris, pest control, etc.
	Winter	• Remove snow as needed from access walkways.

The owner/operator responsible for inspection and maintenance as outlined above:

Celebrity Motor Car, LLC
Mr. Tom Maoli
130 Route 10
Whippany, NJ 07981
Phone: 973-727-7016
Fax: 973-319-1013
Email: tmaoli@lexusofroute10.com

p:\2016\16124\drainage\temporary & permanent s&e inspection and maintenance checklist.docx

APPENDIX E

DRAWINGS

SOIL TYPE TABLE

DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
CrC	B	CHARLTON–CHATFIELD COMPLEX ROLLING, 0 TO 15% SLOPES, VERY ROCKY.
CsD	B	CHATFIELD–CHARLTON COMPLEX HILLY, VERY ROCKY, 15 TO 35% SLOPES
CtC	B	CHATFIELD–HOLLIS–ROCK OUTCROP COMPLEX, 0 TO 15% SLOPES
CuD	D	CHATFIELD–HOLLIS–ROCK OUTCROP COMPLEX, 15 TO 35% SLOPES

NOTES:

1. EXISTING PROPERTY BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" AND "TOPOGRAPHIC SURVEY OF PROPERTY" OF CELEBRITY OF WESTCHESTER, LLC., AS PREPARED BY INSITE ENGINEERS, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED AUGUST 17, 2017.
2. THE SOIL TYPES, HYDROLOGIC SOIL GROUPS AND BOUNDARY INFORMATION SHOWN ON THIS PLAN WERE TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) WEB SOIL SURVEY.
3. THE TOPOGRAPHIC CONTOURS DEPICTED ON THIS PLAN HAVE BEEN SUPPLEMENTED BY THE WESTCHESTER COUNTY GIS BASE MAP. THE WESTCHESTER COUNTY GIS DATASET CONTAINS CONTOUR LINES MODELED AT A TWO FOOT INTERVAL. THE SOURCE INFORMATION USED IN THE COLLECTION OF THE DATASET WAS PART OF THE NEW YORK STATE DIGITAL ORTHOIMAGERY PROGRAM; PHOTOS TAKEN IN APRIL 2004. THE VERTICAL DATUM IS NAVD88. THE COUNTY OF WESTCHESTER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE COMPLETENESS OR ACCURACY OF THE DATA AND ASSUMES NO LIABILITY WHATSOEVER FOR ANY PRODUCT OR ANALYSIS DERIVED FROM OR BASED ON THE DATA.

EXISTING DRAINAGE LEGEND

- EXISTING BUILDING
- EXISTING CURB
- +201 EXISTING SPOT GRADE
- EXISTING MANHOLE
- EXISTING DRAIN INLET
- EXISTING STONE WALL
- OHW OHW OHW EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE
- PROPERTY LINE
- 197 EXISTING CONTOUR
- 200 EXISTING INDEX CONTOUR
- WELL EXISTING WELL
- 30" RCP EXISTING STORM LINE
- DRAINAGE AREA BOUNDARY LINE
- TC FLOW PATH LINE
- CuD SOIL TYPE AND DESIGNATION

No.	Revision	Date	By
	Preliminary Plan Submission	09/06/2018	

PREPARED FOR:
CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
31 MAMARONECK AVENUE
WHITE PLAINS, NY 10601

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcplic.com

EXISTING DRAINAGE AREA MAP

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Drawn:	SS	Approved:	AN
Scale:	1" = 30'		
Date:	09/06/2018		
Project No:	16124		
16124-Drainage	EDA	--	

DA–1

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SOIL TYPE TABLE

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CrC	B	CHARLTON-CHATFIELD COMPLEX ROLLING, 0 TO 15% SLOPES, VERY ROCKY.
CsD	B	CHATFIELD-CHARLTON COMPLEX HILLY, VERY ROCKY, 15 TO 35% SLOPES
CtC	B	CHATFIELD-HOLLIS-ROCK OUTCROP COMPLEX, 0 TO 15% SLOPES
CuD	D	CHATFIELD-HOLLIS-ROCK OUTCROP COMPLEX, 15 TO 35% SLOPES

NOTES:

1. EXISTING PROPERTY BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" AND "TOPOGRAPHIC SURVEY OF PROPERTY" OF CELEBRITY OF WESTCHESTER, L.L.C, AS PREPARED BY INSITE ENGINEERING SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED AUGUST 17, 2017.
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4. THE BORING LOCATIONS, DESIGNATIONS AND INFORMATION SHOWN ON THIS PLAN WERE TAKEN FROM THE "GEOTECHNICAL REPORT" DATED JULY 2011, PREPARED BY MCLAREN ENGINEERING GROUP.
5. THE DEEP HOLE & PERCOLATION TEST LOCATIONS & DESIGNATIONS SHOWN ON THIS PLAN WERE PERFORMED BY JMC ON AUGUST 4, 2011 AND WITNESSED BY THE TOWN OF LEWISBORO ENGINEERING CONSULTANT AND NYCDEP.

PROPOSED DRAINAGE LEGEND

- EXISTING BUILDING
- EXISTING CURB
- +201 EXISTING SPOT GRADE
- EXISTING MANHOLE
- EXISTING DRAIN INLET
- EXISTING STONE WALL
- EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE
- PROPERTY LINE
- 197 EXISTING CONTOUR
- 200 EXISTING INDEX CONTOUR
- WELL EXISTING WELL
- PROPOSED BUILDING
- 202 / 201 PROPOSED FINISHED GRADE
- +203.00 PROPOSED SPOT GRADE
- PROPOSED MANHOLE
- PROPOSED RETAINING WALL
- PROPOSED DRAIN INLET
- PROPOSED WATER QUALITY STRUCTURE
- 30" RCP EXISTING STORM LINE
- 24" HDPE PROPOSED STORM LINE
- DRAINAGE SUBAREA
- DRAINAGE AREA
- TC FLOW PATH LINE
- CuD SOIL TYPE AND DESIGNATION
- B-1 BORING LOCATION & DESIGNATION
- DH-1 DEEP HOLE & PERCOLATION TEST DESIGNATION & LOCATION

No.	Revision	Date	By
	Previous Editions Obsolete		

PRELIMINARY/FINAL

CELEBRITY MOTOR CAR, LLC
130 ROUTE 10
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JMC

PROPOSED DRAINAGE AREA MAP

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Drawn:	SS	Approved:	AN
Scale:	1" = 30'		
Date:	09/06/2018		
Project No:	16124		
16124-Drainage	PDA	---	
Drawing No:	DA-2		

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