TOWN OF EXETER, NEW HAMPSHIRE

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 •FAX 772-4709
www.exeternh.gov

LEGAL NOTICE
EXETER PLANNING BOARD
AGENDA

The Exeter Planning Board will meet on Thursday, December 8, 2022 at 7:00 P.M. in the Nowak Room of the Exeter Town Office building located at 10 Front Street, Exeter, New Hampshire to consider the following:

APPROVAL OF MINUTES: October 27 and November 10, 2022

NEW BUSINESS:

Board discussion of proposed zoning amendments for consideration on the 2023 Town Warrant.

PUBLIC HEARINGS:

Continued public hearing on the application of Jerry & Christine Sterritt for the subdivision of an existing 24.62-acre parcel located at 100 Beech Hill Road into seven (7) residential building lots. The subject property is located in the RU-Rural zoning district. Tax Map Parcel #13-1. PB Case #22-14.

The application of Todd & Corinne Cambio for a lot line adjustment to the common boundary line between the properties at 6 Hillside Avenue and 8 Hillside Avenue. The subject properties are located in the R-1, Low Density Residential zoning district. Tax Map Parcels #97-5-8 and #97-5-7. PB Case #22-18.

OTHER BUSINESS

- Master Plan Discussion
- Field Modifications
- Bond and/or Letter of Credit Reductions and Releases

EXETER PLANNING BOARD
Langdon J. Plumer, Chairman

Posted 11/22/22: Exeter Town Office and Town of Exeter website

TOWN OF EXETER
PLANNING BOARD
NOWAK ROOM – TOWN OFFICE BUILDING
10 FRONT STREET
OCTOBER 27, 2022
7:00 PM
DRAFT MINUTES

I. PRELIMINARIES:

BOARD MEMBERS PRESENT BY ROLL CALL: Chair Langdon Plumer, Vice-Chair Aaron Brown, Pete Cameron, Clerk, Gwen English, and Nancy Belanger Select Board Representative.

STAFF PRESENT: Town Planner Dave Sharples

II. CALL TO ORDER: Chair Plumer called the meeting to order at 7:00 PM and introduced the members.

III. OLD BUSINESS

APPROVAL OF MINUTES

October 13, 2022

Mr. Cameron and Ms. Belanger recommended edits.

Mr. Cameron motioned to approve the October 13, 2022 meeting minutes as amended. Ms. Belanger seconded the motion. A vote was taken, all were in favor, the motion passed 5-0-0.

IV. NEW BUSINESS

PUBLIC HEARINGS

1. The application of Alex Ross/Ross Engineering, LLC (on behalf of Janine L. Richards) for a lot line adjustment of the common boundary between 14 Hobart Street and 16-18 Hobart Street.
   R-2 Single Family Residential zoning district
   Tax Map Parcel #74-88 and #74-89
   Planning Board Case #22-16

   Chair Plumer read out loud the Public Hearing Notice and asked Mr. Sharples if the case was ready to be heard.

Mr. Sharples noted the applicant is seeking adjustment for .27 acres of lot area to be transferred and combined with the existing .80-acre parcel at 14 Hobart Street. The applicant has submitted a lot line adjustment plan and supporting documents dated October 7, 2022, enclosed. There was no TRC review however materials were reviewed by Code Enforcement Officer Doug Eastman and found to be in compliance with zoning regulations. Monumentation is needed at the common corner between houses on Hobart Street which will be one of two conditions of approval. There are no waivers being requested.

Mr. Cameron motioned to open Planning Board Case #22-16. Ms. Belanger seconded the motion. A vote was taken, all were in favor, the motion passed 5-0-0.

Alex Ross presented the application for a lot line adjustment. He presented the plans and described an odd jog configuration with the existing lots. The line has been shifted north so the barn is contained within the setbacks, almost total conformance.

Chair Plumer opened the hearing to the public for questions and comments are 7:13 PM and being none closed the hearing to the public for deliberations.

Mr. Sharples read out loud the proposed conditions of approval:

1. A dwg file of the plan shall be provided to the Town Planner showing all property lines and monumentation prior to signing the final plans. This plan must be in NAD 1983 State Plane New Hampshire FIPS 2800 Feet coordinates; and

2. All monumentation shall be set in accordance with Section 9.25 of the Site Plan Review and Subdivision Regulations prior to the signing of the final plan.

Mrs. Belanger motioned to approve the request of Alex Ross, Planning Board Case #22-16 for a lot line adjustment with the two conditions read by the Town Planner Dave Sharples. Ms. English seconded the motion. A vote was taken, all were in favor, the motion passed 5-0-0.

V. OTHER BUSINESS

- Fire Substation/Riverwoods

Mr. Cameron recused himself as he is a resident of Riverwoods.

Mr. Sharples indicated he has been working with the Police Chief, Fire Chief, Town Manager, Town Facilities Committee and the Select Board concerning the safety complex deficiencies and the proposal to pursue a substation at Continental Drive. The Select Board met Monday night and while they did not vote are hoping to put it on the Warrant Article in March for the voters. The Town Manager brought to his attention that there was funding in 2008 from Riverwoods for a substation and land placed as a condition of approval. The Town has $150,000 and 20,000 SF of land were to be conveyed to the Town by Riverwoods.

Mr. Sharples reached out to Riverwoods to see if they would agree to allow the Town o utilize the $150,000 for the proposed substation with no transfer of land and he spoke

with the Chief Financial Officer who notified him Riverwoods was agreeable for the Town to use the funds to offset the fire station needs, even if the Warrant Article does not pass.

Vice-Chair Brown indicated that the proposal was a win-win for both parties. Chair Plumer agreed the intent would be best served. Ms. English asked when the proposal was and Mr. Sharples noted it was part of the 2008 approval for the Boulders.

Ms. Belanger motioned to accept the request outlined by the Town Planner to modify the agreement with no further need for Riverwoods to provide land for the substation and $150,000 to offset the cost. Ms. English seconded the motion. A vote was taken, all were in favor, the motion passed 5-0-0.

Mr. Cameron retuned to the meeting at 7:29 PM and questioned the wording of the motion.

Ms. Belanger withdrew her motion and amend it.

Ms. Belanger motioned to modify the Planning Board Condition and agreement so there is no further need for the commitment of Riverwoods to provide land and the $150,000 plus accrued interest tendered to the Town may be utilized by the Town to offset fire station needs. Ms. English seconded the motion. A vote was taken, all were in favor, the motion passed 5-0-0.

- Master Plan Discussion

Mr. Sharples reported the Master Plan Oversight Committee is working on part two of the flood plain ordinance as recommended by Rockingham Planning Commission, in response to SLR, to add one (1') of freeboard required in any new or existing structure with 50% or more improvement plans. Neighboring towns, Portsmouth and Hampton have already amended their ordinance.

Mr. Sharples noted in Exeter while here are some areas that would be affected, most are undeveloped/undevelopable or Conservation lands. There will be a public meeting in November and the first public hearing in January.

- Field Modifications

Mr. Sharples noted no field modifications are requested but wanted to review some issues with a project which are minor such as grading chances to accommodate the height of a retaining wall, number of trees planted (24 planned – 34 planted) and sidewalk width which includes the 6" curbing in contradiction to another plan detail. The easement for the drainage structure had a corner modified.

Mr. Sharples noted this happens on every project, the abutter is okay with them, and he has no issue but wanted to get the Board's thoughts.

Vice-Chair Brown noted that he did not remember discussing sidewalk width but agreed it didn't make sense to spend time on that. He noted abutters are welcome to attend the meeting with any concerns. Mr. Cameron agreed.

Mr. Sharples noted the sidewalk was reduced because of buffer impacts.

- Bond and/or Letter of Credit Reductions and Release

VIII. TOWN PLANNER'S ITEMS

Mr. Sharples announced that a copy of the October 19, 2022 letter to Jay Meyers from Joel Shader was provided concerning the Heritage Commission. Julie Gilman is the representative on that commission.

IX. CHAIRPERSON'S ITEMS

X. PB REPRESENTATIVE'S REPORT ON "OTHER COMMITTEE ACTIVITY"

XI. ADJOURN.

Vice-Chair Brown motioned to adjourn the meeting at 7:50 PM. Ms. Belanger seconded the motion. A vote was taken all were in favor, the motion passed 7-0-0.

Respectfully submitted,

Daniel Hoijer,
Recording Secretary
Via Exeter TV

TOWN OF EXETER
PLANNING BOARD
NOWAK ROOM – TOWN OFFICE BUILDING
10 FRONT STREET
NOVEMBER 10, 2022
7:00 PM
DRAFT MINUTES

I. PRELIMINARIES:

BOARD MEMBERS PRESENT BY ROLL CALL: Chair Langdon Plumer, Vice-Chair Aaron Brown, Pete Cameron, Clerk, Gwen English, John Grueter, Nancy Belanger Select Board Representative and Alternate Dave Chartrand.

STAFF PRESENT:

II. CALL TO ORDER: Chair Plumer called the meeting to order at 7:00 PM, and introduced the members noting Alternate Dave Chartrand would be acting tonight.

III. OLD BUSINESS

APPROVAL OF MINUTES

October 27, 2022

Mr. Cameron motioned to table approval of the October 27, 2022 meeting minutes to the Planning Board's December 8, 2022 meeting at 7 PM. Ms. Belanger seconded the motion. A vote was taken, all were in favor, the motion passed 7-0-0.

IV. NEW BUSINESS

1. A request by W. Scott Carlisle III for a compliance hearing on the conditional approval granted by the Planning Board on August 24, 2017 for the proposed subdivision of an existing 10+/- acre parcel located off of Epping Road into three parcels.
I-Industrial zoning district
Tax Map Parcel #40-12
Planning Board Case #17-26

Chair Plumer read out loud the Public Hearing Notice and the Town Planner's Memo. The applicant applied for subdivision of an 18.41-acre parcel off the easterly side of Epping Road, adjacent to Route 101 (behind the existing Mobil station property and the parcel being developed by Wiley Creek for an active adult community). The Board granted conditional approval at its August 25, 2017 meeting. There have been several extensions approved, as recent as August of this year. Copies were provided to the

Board. The applicant submitted a cover letter and supporting documents dated September 27, 2022 (provided) and appeared before the Board at its October 13, 2022 meeting. At that meeting the Board took public comment and closed the hearing to further public comment tabling the item until its November 10, 2022 meeting.

Chair Plumer noted, In his memo, Mr. Sharples commented that he received materials from Attorney Hilson, representing CKT & Assoc. on October 28, 2022 by email. Mr. Hilson was present at the Planning Board's October 13, 2022 meeting when the Board closed public comment and Vice-Chair Brown explained what that meant and requested those present to say anything else they needed to say before the hearing was closed. No one else from the public spoke after Mr. Brown's remarks. Subsequent to Mr. Hilson's submittal Mr. Hilliard, representing the applicant, provided a letter dated November 1, 2022. Both Attorneys were informed that Mr. Sharples would not be provided these materials to the Board as the public hearing was closed. The Board may choose to reopen the public hearing and accept the new materials, but they will not be provided until he is instructed to do so.

Chair Plumer noted, in Mr. Sharples' memo, that Mr. Hilson claimed his client paid for the Cammett plans. Mr. Sharples clarified what he said was the applicant paid for them initially but was reimbursed by the Town. Mr. Hilson disputed this fact. Mr. Sharples provided a copy of the TIF road agreement that specifically included the design portion of the road in question, and that it was a reimbursable expense.

At 7:04 PM Chair Plumer indicated the Board would be in recess for a meeting with legal counsel and the Board departed the meeting room.

At 7:33 PM the Board returned in its entirety and Chair Plumer resumed the meeting.

Vice-Chair Brown clarified the reason the Board was in deliberations was Condition #2 and that public comment was closed at the October 13, 2022 meeting. The Board agreed it had enough information to move forward. Vice-Chair Brown noted the approval was not final until the applicant presented the Board with the design and the Board, and its engineers accept the design for the unbuilt portion of the Tif Road, roadway and cul-de-sac.

Vice-Chair Brown noted Mr. Chartrand and Ms. Belanger were on the Select Board when the Select Board talked about the Tif Road and executed the agreement with Mr. Shafmaster. Mr. Chartrand indicated that Mr. Shafmater signed the agreement including the requirement to design the unbuilt portion of the Tif Road and the same design should be sufficient to satisfy the parties and if Mr. Shafmaster thought it couldn't be he didn't say anything and should have. It was clear he wanted the portion built that would benefit him and knowing the Town would not build the other half if the second half would not be built.

Vice-Chair Brown noted this was intended to be a public improvement and subject to a different set of regulations and the Town does not have to come to the Planning Board for changes. The intent of condition #2 was the design.

Ms. Belanger read out loud the objections which included that the stormwater locations were not noted so the plan is incomplete; wetland impacts were not depicted, Wetland and Shoreland CUPS were noted obtained or an AoT permit and dredge and fill with the State. Case law was noted George Stergiou v Dover concerning voiding the conditional approval, that notice wasn't received, that the approval be void because a portion of the property was on Mr. Shafmaster's property, who was not the applicant.

Ms. Belanger responded to all objections that they were without merit because the condition was for a design only and those items come afterward. Mr. Chartrand noted that Mr. Shafmaster was integrally involved both serving on the Tif Committee as a beneficiary and member at the time. Chair Plumer noted that not only was CKT informed, they signed the agreement. Mr. Cameron noted that as far as public comment another 50 pages of reiteration of what has been heard before should not cause further discussion. Mr. Chartrand agreed that so much of what the Board has been given previously is not about what the Board is here to address. Vice-Chair Brown noted there is no merit to the objections and asked if Condition #2 was met – was the design sufficient to satisfy Condition #2. Ms. Belanger reread Condition #2. Mr. Chartrand noted in his mind the criteria has been met.

Vice-Chair Brown motioned that Condition #2 is satisfied regarding W. Scott Carlisle's approval. Mr. Grueter seconded the motion. A roll call vote was taken Belanger – aye, Grueter – aye, Brown – aye, Plumer – aye, Chartrand – aye, English – aye and Cameron – aye. The motion passed 7-0-0.

2. The application of Jerry Sterritt and Christine Sterritt for the subdivision of an existing 24.62-acre parcel located at 100 Beech Hill Road into seven (7) residential building lots
RU-Rural zoning district
Tax Map Parcel #13-1
Planning Board Case #22-14

Chair Plumer read out loud the Public Hearing Notice, noting that Mr. Sharples informed him the case was ready for review purposes.

Mr. Cameron motioned to open Planning Board Case #22-14. Ms. Belanger seconded the motion. A vote was taken, all were in favor, the motion passed unanimously.

Chair Plumer read out loud the Town Planner's Memo. Mr. Sharples reported the applicant is seeking approval for subdivision on existing 24.62-acre parcel into seven residential lots. The applicant submitted application, plans and supporting documents dated August 30, 2022 for review and were provided to the Board. A Technical Review Committee (TRC) meeting was conducted on September 22, 2022 and a copy of their letter of the same date was provided to the Board. TRC requested a response letter and revised plans noting a second TRC meeting would be scheduled to review the submission. Revised plans and supporting documents were received on October 18, 2022 in response and were provided to the Board. The second TRC meeting was conducted on October 27, 2022. UEI comments dated November 1, 2022 were received subsequent to the second TRC meeting and were provided to the Board. Staff is still in the process of reviewing the submission at this time. The TRC noted outcome of one of the waiver requests will dictate the path forward particularly concerning the requirement for

Open Space Development on a parcel 20 acres or larger. The applicant is requesting three waivers. A copy of the November 2, 2022 waiver request letter was provided to the Board.

Eric Saari from Altus Engineering presented the application and waiver requests on behalf of the applicant. He noted that the applicant's mother had gone into continuing care, and this was the only asset to pay for that. He noted rumors that a zoning change would require five acres for open space subdivisions. Lot 7 would have 10 of 12 acres in Conservation. He noted no new road or infrastructure requirements.

Chair Plumer opened the hearing to the public at 8:09 PM.

Nick Norton of 90 Beech Hill Road indicated he was an abutter and had concerns with setbacks, screening, old growth trees, the beautiful existing stone wall in front, traffic and lighting. Otherwise he was optimistic about the development on a nice piece of land.

Vice-Chair Brown noted the Planning Board has to administer the regulations and there are different requirements depending on the zone. The Planning Board can't go beyond those regulations, but the owner could make deed restrictions. Once the lots are sold, they lack control.

Mr. Saari presented the first waiver request for showing 20" diameter trees which is an expense and some of the parcel is open pasture. He imagined builders would concern themselves with trees as these lots were being subdivided for sale as parcels.

Mr. Grueter asked about a site walk and Ms. English noted she would be in favor of a site walk as she could not waive the condition without seeing what's there. She noted the regulation raises awareness and there are protections which can be put into place during excavation so as not to damage the tree.

Mr. Saari presented the second waiver request for open space subdivisions of parcels greater than 20 acres. He indicated the conventional was the most logical subdivision suited to this property as it needed no road or other infrastructure. An open space subdivision would cut the parcel in half. There are wetlands and finger wetlands and a significant slope of 20%. There would need to be a lot of fill brought in. The Conservation restriction meets the intent, and this fits the character of the parcel. Open Space would only yield one more lot. It is unusual to have this many frontage lots. The change in zoning ordinance proposed for parcels not located in existing asset areas would cause each lot to be five acres and they would lose their yield so that is why they are subdividing all now rather than one lot at a time as they'd like.

Chair Plumer indicated there are no guarantees here, but he sensed the Board would be in favor of the second waiver.

Mr. Saari presented the third waiver request concerning 100' setbacks. He referenced the surrounding properties that would benefit from such a setback as the existing owners, Conservation parcels and wetlands.

Chair Plumer indicated he didn't foresee a problem with the third request but the first request would be held up to do a site walk.

The Board scheduled the site walk for 8 AM on December 6, 2022 and will meet at 100 Beech Hill Road. Vice-Chair Brown asked that markers be concentrated on the Conservation lot and noted it is open o the public.

Mr. Chartrand asked how long ago the property was farmed and Mrs. Sterritt indicated her father passed away in 1990 but the meadows are still hayed.

Ms. Belanger motioned to continue Planning Board Case #22-14 to December 8, 2022 at 7:00 PM. Mr. Cameron seconded the motion. A vote was taken, all were in favor, the motion passed unanimously.

PUBLIC HEARINGS

V. OTHER BUSINESS

- Master Plan Discussion

  The next meeting of the Master Plan Oversight Committee is on December 16th at 9.

- Field Modifications

- Bond and/or Letter of Credit Reductions and Release

VIII. TOWN PLANNER'S ITEMS

IX. CHAIRPERSON'S ITEMS

X. PB REPRESENTATIVE'S REPORT ON "OTHER COMMITTEE ACTIVITY"

XI. ADJOURN.

Vice-Chair Brown motioned to adjourn the meeting at 8:47 PM. Ms. Belanger seconded the motion. A vote was taken all were in favor, the motion passed 7-0-0.

Respectfully submitted,

Daniel Hoijer,
Recording Secretary
Via Exeter TV

TOWN OF EXETER

Planning and Building Department

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 •FAX 772-4709

www.exeternh.gov

Date: **December 1, 2022**

To: **Planning Board**

From: **Dave Sharples, Town Planner**

Re: **Jerry & Christine Sterritt** **PB Case #22-14**

The Applicant is seeking approval for the subdivision of an existing 24.62-acre parcel into seven residential lots. The subject parcel is located at 100 Beech Hill Road, in the RU-Rural zoning district and identified as Tax Map Parcel #13-1.

The Applicant has submitted an application, plans and supporting documents, dated August 30, 2022 and revisions dated October 18, 2022 (copies previously provided) for review. A Technical Review Committee (TRC) meeting was conducted on September 22nd, 2022 and a second TRC on October 27th, 2022. UEI comments, dated November 1, 2022, had been received subsequent to the second TRC meeting and are enclosed for your review.

The Applicant appeared before the Board at the November 10th, 2022 meeting and presented their plans; the public hearing was opened and the Board discussed the Applicant's waiver requests. The application was tabled to the December 8th, 2022 meeting and a site walk was scheduled for Tuesday, December 6th, 2022 at 8:00 AM.

The Applicant has subsequently provided revised plans and supporting documents, dated November 22, 2022 and copies are enclosed for your review. The plan and documents were reviewed by UEI and their second comment letter, dated November 29, 2022, indicating that they have no further comments at this time is also enclosed.

The Applicant is requesting three (3) waiver from the Board's Site Plan and Subdivision Regulations. A copy of the waiver request letter, dated November 2, 2022, is enclosed for your review.

Waiver Motions:

Significant Trees (20-inches diameter or greater) waiver motion: After reviewing the criteria for granting waivers, I move that the request of Jerry & Christine Sterritt (PB Case #22-14) for a waiver from Section 7.4.7. of the Site Plan Review and Subdivision Regulations regarding identifying significant trees 20" in diameter or greater be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Subdivision for lots of record greater than 20 acres in area required to comply with provisions of Open Space Development motion: After reviewing the criteria for granting waivers, I move that the request of Jerry & Christine Sterritt (PB Case #22-14) for a waiver from complying with Article 7 of the Zoning Ordinance governing Open Space Development be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED

Perimeter Buffer Strip waiver motion: After reviewing the criteria for granting waivers, I move that the request of Jerry & Christine Sterritt (PB Case #22-14) for a waiver from Section 9.6.1.2 of the Site Plan Review and Subdivision Regulations regarding ownership of the perimeter (vegetative) buffer be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Planning Board Motion:

Subdivision Motion: I move that the request of Jerry & Christine Sterritt (PB Case #22-14) for subdivision approval be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Thank You.

Enclosures

civil &
environmental
engineering

UNDERWOOD
engineers

2853.00

November 29, 2022

David Sharples, Town Planner
Town Planning Office, Town of Exeter
10 Front Street
Exeter, NH 03833

Re: ***Beech Hill Subdivision***
Design Review Engineering Services
Exeter, New Hampshire

Site Information:

Review No. 2

Tax Map/Lot#:	13 / 1
Address:	Beech Hill Road
Lot Area:	24.62 ac (+/- 14.75 ac developed for this project)
Proposed Use:	Residential
Water:	Well
Sewer:	Septic Systems
Zoning District:	RU
Applicant:	Jerry and Christine Sterritt
Design Engineer:	Altus Engineering

Application Materials Received:

- Site plan set entitled "Beech Hill Subdivision" revised November 23, 2022, prepared by Altus Engineering.
- Response letter, dated November 23, 2022, prepared by Altus Engineering.
- Drainage analysis revised November 16, 2022, prepared by Altus Engineering.

Dear Mr. Sharples:

Based on our review of the above information, we have no further comments at this time.

Very truly yours,

UNDERWOOD ENGINEERS, INC.

Allison M. Rees

Allison M. Rees, P.E.
Project Manager

Robert J. Saunders, P.E.
Senior Project Engineer

ph 603.230.9898
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99 North State Street
Concord, NH 03301
underwoodengineers.com

civil &
environmental
engineering

UNDERWOOD
engineers

2853.00

November 1, 2022

David Sharples, Town Planner
Town Planning Office, Town of Exeter
10 Front Street
Exeter, NH 03833

Re: ***Beech Hill Subdivision***
Design Review Engineering Services
Exeter, New Hampshire

Site Information:

Review No. 1

Tax Map/Lot#:	13 / 1
Address:	Beech Hill Road
Lot Area:	24.62 ac (+/- 14.75 ac developed for this project)
Proposed Use:	Residential
Water:	Well
Sewer:	Septic Systems
Zoning District:	RU
Applicant:	Jerry and Christine Sterritt
Design Engineer:	Altus Engineering

Application Materials Received:

- Site plan set entitled "Beech Hill Subdivision" dated October 11, 2022, prepared by Altus Engineering.
- Site plan application materials prepared by Altus Engineering.
- Vernal pool assessment prepared by Gove Environmental Services.
- Drainage analysis dated October 11, 2022, prepared by Altus Engineering.

Dear Mr. Sharples:

Based on our review of the above information, in addition to comments provided by the Town, we offer the following comments in accordance with the Town of Exeter Regulations and standard engineering practice.

General

1. We note the proposed houses and driveways shown on sheet C-3 are conceptual in nature and will likely not be constructed as shown by individual landowners:

ph 603.230.9898
fx 603.230.9899
99 North State Street
Concord, NH 03301
underwoodengineers.com

- The driveways are shown as being graded between 12.5% and 20%.
- The grading upon Lots 5 and 6 relative to that necessary to construct the drive to Lot 7 may be in conflict, both as presented, as the owners of Lots 5 and 6 would need to grade their lots in the future. If this project were to move forward, there may need to be a sequence of sales that must be followed, in other words Lot 7 might need to be sold prior to Lots 5 and 6 to ensure that the driveway is constructed before the development of Lots 5 and 6 progresses forward.
- The minimal grading portrayed may not be sufficient to determine if these three lots can be developed as proposed with the property sharing that is being preserved by the notes on the plans.

Subdivision Plan

2. Total frontage for each lot should be clearly listed on the plan. The area of the upland for the lots should also be a call-out on the plan, particularly where Lots 1 and 4 are impacted by wetlands.
3. It appears that reducing the frontage for lots 4 through 6 to 200 LF each could allow the easement shown to be an extension of Lot 7 such that it has its own frontage.

Stormwater Analysis

4. The parcel number on the cover page should be changed to 1.
5. Since each lot will be developed by individual landowners, how will they be directed to ensure a drip edge and plunge pool is constructed for each lot?
6. Runoff amounts should be increased by 15%.
7. **PTAP Database: This project requires registration with the PTAP Database,** the Applicant is requested to enter project related stormwater tracking information contained in the site plan application documents using the Great Bay Pollution Tracking and Accounting Program (PTAP) database (www.unh.edu/unhsc/ptapp) and submit the information with the resubmitted response to comments.

A written response is required to facilitate future reviews. Please contact us if you have any questions.

Very truly yours,
UNDERWOOD ENGINEERS, INC.

Allison M. Rees, P.E.
Project Manager

Robert J. Saunders, P.E.
Senior Project Engineer

ALTUS ENGINEERING, INC.

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

November 23, 2022

Dave Sharples, Town Planner
Town of Exeter
10 Front Street
Exeter, NH 03833

Re: UEI Comments
Exeter PB Case #22-14
100 Beech Hill Road
Exeter, NH
Altus Project No. 5307

Transmitted via email to: dsharples@exeternh.gov

Dear Mr. Sharples,

Altus Engineering, Inc. (Altus) is in receipt of the UEI's review comments dated November 1, 2022. We offer the following in response to your comments:

Town Planner Comments

1a. No comment required.

1b. No comment required.

1c. Although we agree that constructing Lot 7's driveway first would be ideal, the Applicant is unable to commit to a specific sequence of sales and construction. We have added Note #14 1to Sheet C-3 indicating that grading in this area shall not impede drainage on an adjacent lot.

1d. We have added grading to the remainder of Lots 4-7 as shown on Sheet C-3.

2. Total lot frontages have been added to Sheet C-1.

3. We have extended Lot 7 to Beech Hill Road via a 16'-wdie strip of land as shown on the plans.

4. We have changed the word "parcel" to "map" on the Cover Sheet.

5. We have added Note #18 to Sheet C-1 specifying that each house is to be constructed with drip strips. As this sheet is to be recorded, this note will get captured on the mylar. In addition, this stipulation will be repeated in each deed.

6. Although the 15% increase in rainfall amounts is not required by Exeter regulations, we have dome so as shown in the attached drainage analysis.

7. The project has been registered with PTAPP. A copy of the submission is attached.

Altus hopes that the above information satisfies your concerns. Please call me if you have any questions or need any additional information. Thank you for your time and consideration.

Sincerely,

ALTUS ENGINEERING, INC.
3

Erik Saari
Vice President

ebs/5307.01-LTR-Town-112322

Enclosures

ALTUS ENGINEERING

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

November 2, 2022

Dave Sharples, Town Planner
Town of Exeter
10 Front Street
Exeter, NH 03833

Re: Waiver Requests
Exeter PB Case #22-14
100 Beech Hill Road
Exeter, NH
Altus Project No. 5307

Transmitted via email to: dsharples@exeternh.gov

Dear Mr. Sharples,

On behalf of the Applicant, Jerry and Christine Sterritt, and pursuant to comments received at TRC on October 27, 2022, Altus Engineering has prepared the following formal waiver requests from the Exeter Site and Subdivision Regulations:

1. We respectfully request a waiver of Subdivision Regulation Section 7.4.7 which requires trees over 20" in diameter be shown on the plan.

   The granting of the waiver will not be detrimental to the public safety, health or welfare or injurious to other property.

   The lack of said trees on a plan will not have a detrimental impact to the public. As this is not a site plan, the final location of houses and driveways will ultimately be chosen by the individual homeowners. Whether or not they choose to cut down or preserve their own trees will have no effect on the public.

   The conditions upon which the request for a waiver is based are unique to the property for which the waiver is sought and are not applicable generally to other property.

   The property is over twenty-four acres in size and the current proposal intends to preserve over 40% of it, including over half the site's wooded area. A portion of the residual woodland is contained within wetland and limited use buffer areas where clearing is not permitted without a Conditional Use Permit. The remaining area will be cleared only to accommodate four single-family building envelopes and driveways, not roadways or other major infrastructure that would require a more substantial impact. These unique considerations make the depiction of large trees unnecessary.

Because of the physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations are carried out.

The expense required to locate said trees, if any exist, would be of questionable utility and is overly burdensome to the applicant. These are not deep-pocketed developers. The applicant is a local family forced to subdivide the property to pay for spiraling medical costs. Any additional cost only exacerbates an already expensive process where every penny spent increases their hardship.

The granting of the waiver will not be contrary to the spirit and intent of the ordinance.

The waiver will not be contrary to the spirit and intent of the ordinance as the proposal meets the zoning regardless of whether or not the trees are shown.

The waiver will not, in any manner, vary the provisions of the Zoning Ordinance or Master Plan.

The granting of this waiver would not in any way vary the provisions of the Ordinance or Master Plan. Lot sizing, density and other applicable zoning elements remain unchanged with or without the trees being shown on the plan.

2. Our original October 11, 2022 request for a waiver from Subdivision Regulation Section 9.23 which requires underground utilities is hereby withdrawn.

3. As referenced in Zoning Section 4.3, Schedule II, Footnote #19, the Planning Board may waive the requirement that any subdivision on a lot of record over twenty acres in size comply with the provisions of Article 7 governing Open Space Development. We therefore respectfully request said waiver in order to allow a conventional subdivision with no new roadway.

The granting of the waiver will not be detrimental to the public safety, health or welfare or injurious to other property.

The waiver will not be detrimental to the public as it does not alter the number of units in the subdivision. In addition, the lack of public infrastructure such as roads and stormwater facilities minimizes the long-term maintenance burden on the town and its taxpayers.

The conditions upon which the request for a waiver is based are unique to the property for which the waiver is sought and are not applicable generally to other property.

Although the lot is over twenty-four acres, there are a number of unique qualities that inhibit an Open Space design and instead lend themselves to the conventional frontage lot configuration shown on the plans. The first is the location of abutting Lot 13/1-1 at 98 Beech Hill Road which interrupts the site's continuity. Second is the wetland area along the site's southern western boundary. This wetland features numerous fingers extending east into the site. Where these intersect with the abutting lot, the parcel is effectively cut in half, the two resulting segments each having their own restrictive features. On the northeast corner, there is the existing residence at 100 Beech Hill Road. Given that this structure is in fine shape, the Applicant understandably has no intention of tearing it down. This limits the available remaining land to the point where the two frontage lots shown on

the plan is the only real option for development. On the southeast, the upland area is confined to two narrow strips and one larger area along Beech Hill Road. While it might be possible to cluster a few units there, the slope from Beech Hill makes construction of a code-compliant cul-de-sac impractical without a significant amount of fill and related expense. Furthermore, the resulting grades would require even more fill for lot development as the new road would be many feet above the surrounding ground. The open field behind Lot 13/1-1 would also most likely be developed in this scenario rather than be preserved as intended. For these reasons, it is clear that an open space design is not appropriate for this site.

Because of the physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations are carried out.

Given the above referenced characteristics unique to the property, a conventional subdivision with no road is preferable to an open space layout that would essentially force the Applicant to build a road for the sake of building a road. As the Applicant is not a developer, the requirement to construct infrastructure of this scale would be well beyond their means and would subject them to significant hardship.

The granting of the waiver will not be contrary to the spirit and intent of the ordinance.

Despite the waiver request, the project does meet the purpose of the Open Space Ordinance, specifically where conservation of open space, the efficient use of land and the preservation of natural features are concerned. Although not required by the standard subdivision regulations, 42% of the lot is intended to be preserved as open space where only 30% is required in an Open Space layout. Over 40% of this area is upland, including a section of pasture that allows for a diversity of habitat and viewscape. This combines the best of both worlds where conservation and resource protection goals are met, infrastructure and its long-term maintenance responsibilities are minimized and the Applicant is able to make viable economic use of their land.

The waiver will not, in any manner, vary the provisions of the Zoning Ordinance or Master Plan.

The unit count would remain the same in either a conventional or open space subdivision layout, leaving the provisions of the Ordinance unvaried.

4. We respectfully request a waiver of Subdivision Regulation Section 9.6.1.2 which requires a 100' buffer strip between any proposed lots and the perimeter lot line.

The granting of the waiver will not be detrimental to the public safety, health or welfare or injurious to other property.

This waiver will in no way be detrimental to public health, safety or welfare. The project as designed conforms with the surrounding neighborhood and will comply with all applicable NHDES regulations regarding private septic systems and wells.

The conditions upon which the request for a waiver is based are unique to the property for which the waiver is sought and are not applicable generally to other property.

The need for a 100' buffer is not present given the characteristics of the site. Lots 1 and 2 are located across the street from existing conservation land and their building envelopes are pushed back from Old Town Farm Road due to wetland setbacks. Lot 3 is around an existing house that is intended to remain. Lots 1, 2, 3, 4 and 7 abut the Applicants property at Lot 13/1-11 where extensive buffering is not a concern. The three lots along Beech Hill Road, Lots 4, 5 and 6, will be similar to the surrounding neighborhood which is characterized by similar single-family homes. Finally, the building area on Lot 7 will abut conservation land to the southeast. Taken together, these unique factors make the buffer strip unnecessary for this project.

Because of the physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations are carried out.

Strict enforcement of the buffer rule in this instance would result in the building envelope on Lot 4 to be pushed into the existing field at the center of the property. The result would be a significant reduction in the area of preserved open space currently shown on the plan. This would be a hardship to the applicant in that their intent is to strike a balance between developing their land and preserving as much of it as possible.

The granting of the waiver will not be contrary to the spirit and intent of the ordinance.

The placement of single-family homes in an area surrounded by similar development will not be contrary to the ordinance. This project fits with the neighborhood and will allow for the preservation of open space that will link with other conservations areas.

The waiver will not, in any manner, vary the provisions of the Zoning Ordinance or Master Plan.

The waiver will not vary the provisions of the Ordinance or Master plan in that the required minimum lot sizes and building setbacks remain unchanged and the density is not altered.

Altus hopes that the above information satisfies your concerns. Please call me if you have any questions or need any additional information. Thank you for your time and consideration.

Sincerely,

ALTUS ENGINEERING, INC.

Erik Saari
Vice President

ebs/5307-LTR-Town-110222

CASE #22-14

TOWN OF EXETER, PLANNING BOARD

CHAIRPERSON _____ DATE _____

THIS DRAWING SET HAS NOT BEEN RELEASED FOR CONSTRUCTION

BEECH HILL SUBDIVISION

Beech Hill Road
Exeter, New Hampshire

Assessor's Map 13, Lot 1

ISSUED FOR PLANNING BOARD

Plan Issue Date:

November 23, 2022

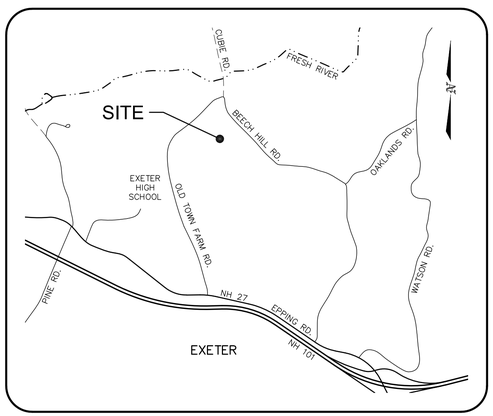
Owner:
Judith A. Nichols and
Frederick J. Nichols
100 Beech Hill Road
Exeter, NH 03833

Applicant:
Jerry and
Christine Sterritt
98 Beech Hill Road
Exeter, NH 03833
(603) 498-5975

Civil Engineer:
ALTUS ENGINEERING, INC.
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

Surveyor:
T. F. BERNIER, INC.
Land Surveyors - Designers - Consultants
50 PLEASANT STREET – P.O. BOX 3464
CONCORD, NEW HAMPSHIRE 03302-3464
Tel:(603)224-4148 – Fax:(603)224-0507

Wetland Scientist:
GOVE ENVIRONMENTAL SERVICES, INC.
Wetlands and Soil Mapping
8 Continental Dr Bldg 2 Unit H, Exeter, NH 03833-7526
Ph (603) 778 0644 / Fax (603) 778 0654

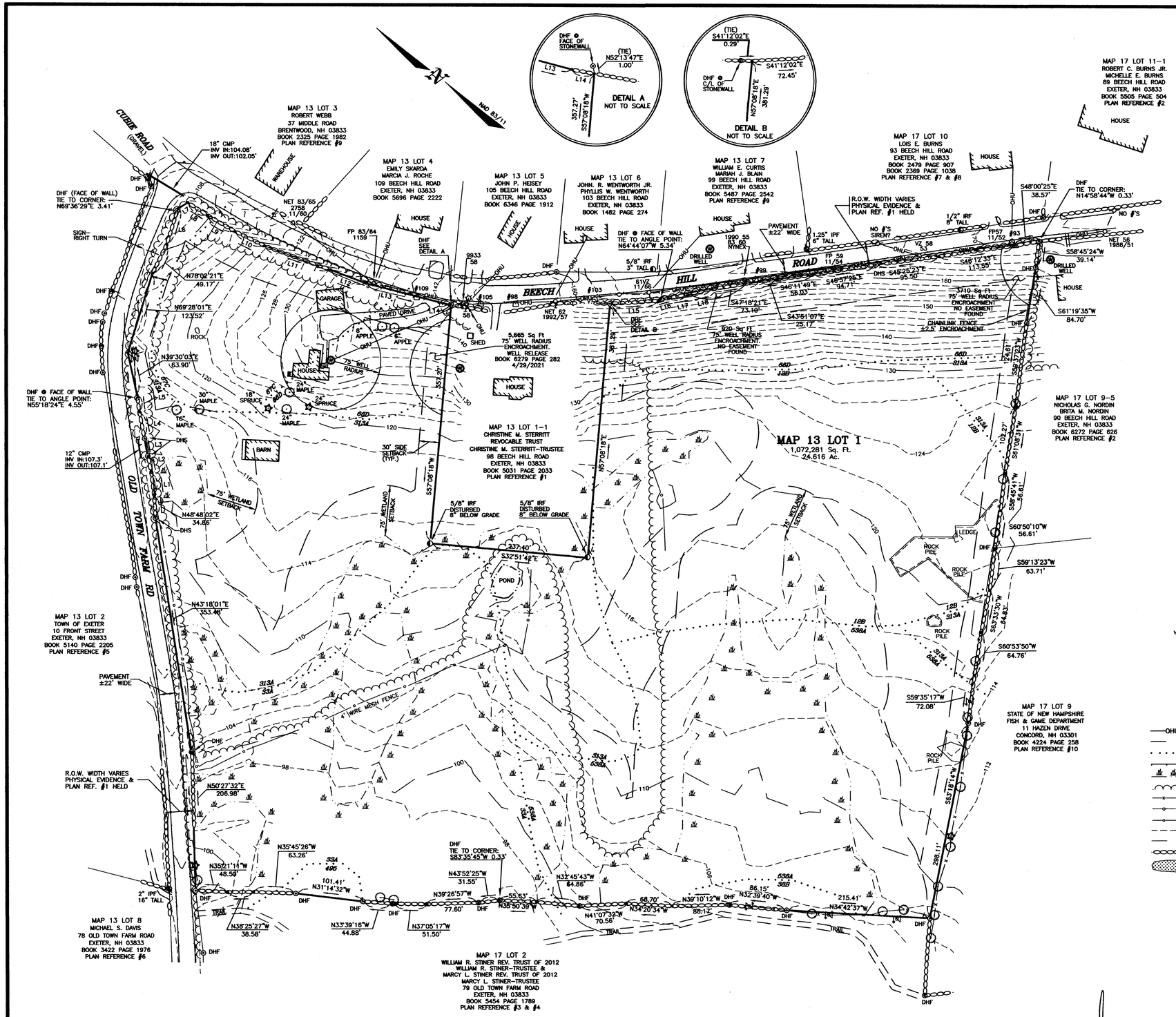


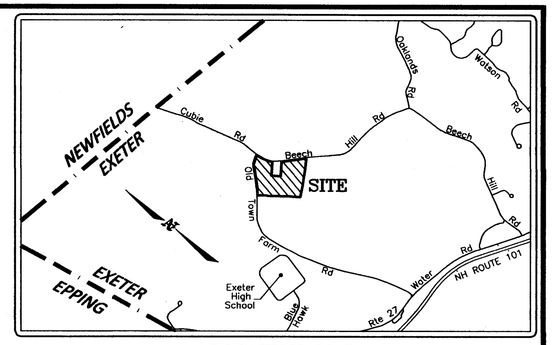
LOCUS NOT TO SCALE

Sheet Index Title	*Sheet No.:*	*Rev.*	*Date*
Existing Conditions Plan	None	0	May 2022
Subdivision Plan	C-1	2	11/23/22
Topography and Soils Plan	C-2	3	11/23/22
Stormwater Management and Development Plan	C-3	1	11/23/22
Details	C-4	0	10/11/22
Details	C-5	1	11/23/22

Permit Summary:	*Submitted*	*Received*
Exeter Subdivision Review	08/30/22	–
NH State Subdivision	08/30/22	–

P5307





LOCATION MAP
SCALE:1"=2,000'

LINE TABLE

LINE	BEARING	LENGTH
L1	N44°45'39"E	33.64'
L2	N39°55'53"E	25.15'
L3	N41°20'42"E	26.57'
L4	N40°51'10"E	40.45'
L5	N44°39'08"E	25.80'
L6	N69°36'29"E	55.94'
L7	S68°48'39"E	17.34'
L8	S5°16'07"E	35.18'
L9	S7°52'10"E	47.75'
L10	S12°00'11"E	48.93'
L11	S18°17'54"E	104.91'
L12	S17°14'44"E	57.82'
L13	S23°35'49"E	127.99'
L14	S29°05'47"E	3.36'
L15	S41°12'02"E	72.45'
L16	S53°39'55"E	15.45'
L17	S48°22'49"E	30.10'
L18	S50°22'53"E	36.82'

LEGEND
- ANGLE POINT
- DRILL HOLD FOUND/SET
- IRON PIPE FOUND
- IRON ROD FOUND
- #105 MAILBOX & STREET #
- UTILITY POLE W/ANCHOR
- LIGHT
- DECIDUOUS TREE WITH BARBED WIRE
- CONIFEROUS TREE WITH BARBED WIRE
- W WELL
- ELECTRIC METER
- FENCE POST WITH WIRE
- SIGN
- OHU OVERHEAD UTILITIES
- SETBACK LINE
- SOILS LINE
- EDGE OF PAVEMENT
- EDGE OF WETLANDS
- TREELINE
- BARBED WIRE FENCE
- WIRE/CHAINLINK FENCE
- WOODEN FENCE
- 2' TOPOGRAPHIC LINE
- 10' TOPOGRAPHIC LINE
- STONEWALL
- RIPRAP STONE
- DHF DRILL HOLE FOUND
- DHS DRILL HOLE SET
- IRF IRON ROD FOUND
- IRS IRON ROD SET
- IPF IRON PIPE FOUND

NOTES:
1. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON LOT 1 OF THE TOWN OF EXETER ASSESSORS MAP 13.
2. THE PARCELS SHOWN HEREON ARE LOCATED IN THE "RU"– RURAL ZONING DISTRICT AND ARE SUBJECT TO FOLLOWING DIMENSIONAL REGULATIONS;

(NO MUNICIPAL WATER OR SEWER)	
MINIMUM FRONTAGE:	200 FEET
MINIMUM LOT SIZE:	2 ACRES
MINIMUM LOT WIDTH:	200 FEET
MINIMUM LOT DEPTH:	200 FEET
MAXIMUM BUILDING HEIGHT:	35 FEET
MAXIMUM BUILDING COVERAGE:	10%
MINIMUM OPEN SPACE %:	85/75
BUILDING SETBACKS:	FRONT: 50 FEET (ALSO SEE ZONING 5.5.1)
	SIDE: (ONE)30 FEET (BOTH)60 FEET
	REAR: 50 FEET
WETLAND BUFFER:	75 FEET(PARKING AND STRUCTURES)
	75 FEET(WASTEWATER SYSTEMS)

3. THE INFORMATION SHOWN HEREON IS FROM A FIELD SURVEY PERFORMED BY THIS OFFICE IN APRIL 2022 USING A TOTAL STATION INSTRUMENT. THE BEARINGS ARE REFERENCED TO NH STATE PLANE NAD 83/11 AND THE VERTICAL DATUM IS NAVD88 BASED ON GPS OBSERVATIONS MADE BY THIS OFFICE IN APRIL 2022.
4. THE WETLANDS SHOWN HEREON WERE DELINEATED IN THE FIELD BY GOVE ENVIRONMENTAL SERVICES, INC. OF EXETER NEW HAMPSHIRE IN APRIL 2022 AND FIELD LOCATED BY THIS OFFICE.
5. NO PORTION OF THE PARCEL AS SHOWN HEREON FALLS IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR ROCKINGHAM COUNTY NEW HAMPSHIRE MAP NUMBER 33015C0238F WITH EFFECTIVE DATE JANUARY 29, 2021.

PLAN REFERENCES
1. SUBDIVISION PLAN OF LAND IN EXETER, N.H. TAX MAP 02-03-005 AS DRAWN FOR JUDITH A. NICHOL 100 BEECH HILL ROAD EXETER, NH 03833. DATE: FEB 1, 1995 SCALE:1"=100'. PREPARED BY PAUL F. NICHOLS C.E. KINGSTON, NH 03848 AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #D-24554
2. SUBDIVISION PLAN FOR PARK AVENUE DEVELOPMENT CORP. 87 BEECH HILL ROAD, COUNTY OF ROCKINGHAM EXETER, N.H. DATE: AUGUST 2, 2000. SCALE: 1"=100'. SHEET 2 OF 5. PREPARED BY MILLETTE, SPRAUGE & COLWELL, INC OF PORTSMOUTH, NH AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #D-28635.
3. SUBDIVISION PLAN TAX MAP 17 LOT 2 PROPERTY OF BARBARA NADREAU. 73 & 79 OLD TOWN FARM ROAD. COUNTY OF ROCKINGHAM EXETER NEW HAMPSHIRE. DATE: FEBRUARY 21, 2006. SCALE: 1"=60'. SHEET 1 & 2. PREPARED BY AMES MSC ARCHITECTS & ENGINEERS OF PORTSMOUTH, NH AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #D-33757.
4. SUBDIVISION OF LAND OF GLEN BOSWORTH IN EXETER, N.H. SCALE: 1"=100' DATE: APRIL 1978. PREPARED BY PARKER SURVEY ASSOC, INC OF SEABROOK, NH AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #D-6245.
5. TITLE INSURANCE PLOT PLAN MAP 13 LOT 2 PREPARED FOR THE NATURE CONSERVANCY OF N.H. SCALE: 1"=100' DATE: NOVEMBER 6, 2000. SHEET 2 OF 2. PREPARED BY JOHN J. O'NEIL, INC. OF NASHUA, NH AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #D-28606.
6. SUBDIVISION PLAN OF LAND IN EXETER, N.H. TAX MAP 17 LOT 1 AS DRAWN FOR DORIS W. CARLISLE 76 OLD TOWN FARM ROAD, EXETER, NH 03833. DATE: JAN 26, 1999 SCALE: 1"=100' SHEET 1 OF 2. PREPARED BY PAUL F. NICHOLS C.E. KINGSTON, NH 03848 AND RECORDED AT THE ROCKINGHAM COUNTRY REGISTRY OF DEEDS AS PLAN #D-27619.
7. BOUNDARY LINE CHANGE OF LAND FOR ROBERT WEBB IN EXETER, N.H. SCALE: 1"=50' DATE: NOV 5, 1982. SHOWN AS PARCEL "C". PREPARED BY BRUCE L. POHOPEK OF DOVER, N.H. AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #C-11219
8. PROPERTY BELONGING TO FRANK BURNS & LOIS PETERSON. BEECH HILL ROAD EXETER NEW HAMPSHIRE. DATE: JUNE 1979 SCALE: 1"=50' PREPARED BY WARD B. WILLIAMS ASSOC. 590 SOUTH ROAD IN RYE, NH AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #C-8752.
9. SUBDIVISION OF LAND FOR JOHN R. SR & EARLENE M. WENTWORTH IN EXETER, N.H. SCALE: 1"=100'. DATE: SEPTEMBER 1976. PREPARED BY PARKER SURVEY ASSOC, INC OF EXETER AND SEABROOK, NH AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #D-6500.
10. PLAN OF LAND FOR ROBERT WEBB REALTY, INC. 87 BEECH HILL ROAD EXETER & NEWFIELDS, NEW HAMPSHIRE. SCALE: 1"=200'. DATE: NOVEMBER 2000. PREPARED BY KEM LAND SURVEY, INC. OF DOVER, NH AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN #D-28636.

EXISTING CONDITIONS PLAN
PREPARED FOR
ALTUS ENGINEERING, INC
ASSESSORS MAP 13 LOT 1
100 BEECH HILL ROAD
EXETER, NEW HAMPSHIRE
SCALE: 1"=80' * DATE: MAY 2022

SOILS DATA
FROM NRCS WEB SOIL SURVEY
12B – HINCKLEY LOAMY SAND, 3 TO 8 PERCENT SLOPES
33A – SCITICO SILT LOAM, 0 TO 5 PERCENT SLOPES
38B – ELDRIDGE FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
66D – PAXTON FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES
67C – PAXTON FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES, VERY STONY
313A – DEERFIELD LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES
495 – NATCHAUG MUCKY PEAT, 0 TO 2 PERCENT SLOPES
538A – SQUAMSCOTT FINE SANDY LOAM, 0 TO 5 PERCENT SLOPES

OWNER OF RECORD
MAP 13 LOT 1
JUDITH A. NICHOLS
FREDERICK J. NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833
BOOK 2558 PAGE 1377

STATE OF NEW HAMPSHIRE No. 823 TIMOTHY F. BERNIER LAND SURVEYOR

NO.	REVISION	DATE

T. F. BERNIER, INC.
Land Surveyors - Designers - Consultants
50 PLEASANT STREET – P.O. BOX 3464
CONCORD, NEW HAMPSHIRE 03302-3464
Tel:(603)224-4148 – Fax:(603)224-0507

DESIGNED BY	DRAWN BY	CHECKED BY	F.B.	PG.	JOB #
———	BRK	BRK, JRC	232	48	155-08

DRAWING NAME: Existing Conditions 2022.dwg

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)

DETAIL A
NOT TO SCALE

DETAIL B
NOT TO SCALE

DETAIL C
NOT TO SCALE

NAD 83/11

MAP 13 LOT 3
ROBERT WEBB
37 MIDDLE ROAD
BRENTWOOD, NH 03833
BOOK 2325 PAGE 1982

MAP 13 LOT 4
EMILY SKARDA
MARCIA J. ROCHE
109 BEECH HILL ROAD
EXETER, NH 03833
BOOK 5696 PAGE 2222

MAP 13 LOT 5
JOHN P. HEISEY
105 BEECH HILL ROAD
EXETER, NH 03833
BOOK 6346 PAGE 1912

MAP 13 LOT 6
JOHN. R. WENTWORTH JR.
PHYLLIS W. WENTWORTH
103 BEECH HILL ROAD
EXETER, NH 03833
BOOK 1482 PAGE 274

MAP 13 LOT 7
WILLIAM E. CURTIS
MARIAH J. BLAIN
99 BEECH HILL ROAD
EXETER, NH 03833
BOOK 5487 PAGE 2542

MAP 17 LOT 10
LOIS E. BURNS
93 BEECH HILL ROAD
EXETER, NH 03833
BOOK 2479 PAGE 907
BOOK 2369 PAGE 1038

MAP 17 LOT 11-1
ROBERT C. BURNS JR.
MICHELLE E. BURNS
89 BEECH HILL ROAD
EXETER, NH 03833
BOOK 5505 PAGE 504

CUBIE ROAD

BEECH HILL ROAD

OLD TOWN FARM ROAD

DHF (FACE OF WALL) TIE TO CORNER: N69°36'29"E 3.41'

DHF ⊕ FACE OF WALL TIE TO ANGLE POINT: N55°18'24"E 4.55'

DHF SEE DETAIL A

DHF ⊕ FACE OF WALL SEE DETAIL C

DHF SEE DETAIL B

920 Sq Ft 75' WELL RADIUS ENCROACHMENT NO EASEMENT FOUND-WELL RELEASE TO BE RECORDED

5/8" IRF 3" TALL

1.25" IPF 6" TALL

1/2" IRF 8" TALL

DRILLED WELL

DHF TIE TO CORNER: N14°58'44"W 0.33'

3710 Sq Ft 75' WELL RADIUS ENCROACHMENT NO EASEMENT FOUND-WELL RELEASE TO BE RECORDED

5,665 Sq Ft 75' WELL RADIUS ENCROACHMENT. WELL RELEASE BOOK 6279 PAGE 282 4/29/2021

PAVED DRIVE

HOUSE

BARN

75' WELL RADIUS

LOT 1
91,859 S.F.
(±2.10 AC.)
65,509 S.F. UPLAND
250.20' FRONTAGE

LOT 2
88,308 S.F.
(±2.02 AC.)
83,331 S.F. UPLAND
275.37' FRONTAGE

LOT 3
93,707 S.F.
(±2.15 AC.)
93,707 S.F. UPLAND
646.93' FRONTAGE

LOT 4
87,309 S.F.
(±2.00 AC.)
80,532 S.F. UPLAND
227.92' FRONTAGE

LOT 5
87,753 S.F.
(±2.01 AC.)
86,753 S.F. UPLAND
206.23' FRONTAGE

LOT 6
87,441 S.F.
(±2.01 AC.)
87,441 S.F. UPLAND
200.64' FRONTAGE

LOT 7
535,904 S.F.
(±12.30 AC.)
274,552 S.F. UPLAND
328.90' FRONTAGE

CONSERVATION OPEN SPACE ON LOT 7
447,050 S.F.
(±10.26 ACRES)

75' WETLAND SETBACK

40' LIMITED USE BUFFER

75' VERNAL POOL BUFFER

100' VERNAL POOL SETBACK

VERNAL POOL

ACCESS, GRADING AND UTILITY EASEMENTS FOR THE BENEFIT OF LOT 7

5/8" IRF DISTURBED 8" BELOW GRADE

5/8" IRON REBAR WITH CAP TO BE SET, TYPICAL

DHF TIE TO CORNER: S83°35'45"W 0.33'

2" IPF 16" TALL

MAP 17 LOT 9-5
NICHOLAS G. NORDIN
BRITA M. NORDIN
90 BEECH HILL ROAD
EXETER, NH 03833
BOOK 6272 PAGE 626

MAP 17 LOT 9
STATE OF NEW HAMPSHIRE
FISH & GAME DEPARTMENT
11 HAZEN DRIVE
CONCORD, NH 03301
BOOK 4224 PAGE 258

MAP 13 LOT 1-1
CHRISTINE M. STERRITT
REVOCABLE TRUST
CHRISTINE M. STERRITT-TRUSTEE
98 BEECH HILL ROAD
EXETER, NH 03833
BOOK 5031 PAGE 2033
PLAN REFERENCE #1

MAP 13 LOT 2
TOWN OF EXETER
10 FRONT STREET
EXETER, NH 03833
BOOK 5140 PAGE 2205

MAP 13 LOT 8
MICHAEL S. DAVIS
78 OLD TOWN FARM ROAD
EXETER, NH 03833
BOOK 3422 PAGE 1976

MAP 17 LOT 2
WILLIAM R. STINER REV. TRUST OF 2012
WILLIAM R. STINER-TRUSTEE &
MARCY L. STINER REV. TRUST OF 2012
MARCY L. STINER-TRUSTEE
79 OLD TOWN FARM ROAD
EXETER, NH 03833
BOOK 5454 PAGE 1789

TRAIL

TOWN OF EXETER, PLANNING BOARD

CHAIRPERSON DATE

LOCATION MAP
SCALE:1"=2,000'

SUBDIVISION NOTES

1. DESIGN INTENT – THIS PLAN SET IS INTENDED TO DEPICT A PROPOSED SEVEN-LOT RESIDENTIAL SUBDIVISION.
2. THE BASE PLAN USED HERE WAS DEVELOPED FROM "EXISTING CONDITIONS PLAN, ASSESSOR'S MAP 13 LOT 1, 100 BEECH HILL ROAD, EXETER, NEW HAMPSHIRE", DATED MAY 2022, PREPARED BY T.F. BERNIER, INC.
3. APPROXIMATE LOT AREA: 1,072,281 (±24.62 AC.)
4. DEED REFERENCE: RCRD BOOK 2558, PAGE 1377
5. ZONE: RURAL (RU)
6. DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA:	2 ACRES (w/75% UPLAND)
MIN. LOT FRONTAGE:	200'
MIN. FRONT SETBACK:	50'
MIN. SIDE SETBACK:	30'
MIN. REAR SETBACK:	50'
MIN. LOT WIDTH:	200'
MIN. LOT DEPTH:	200'
MAX. BUILDING HEIGHT:	35'
WETLAND SETBACK:	75'
LIMITED USE WETLAND BUFFER:	40'
MAX. BUILDING COVERAGE:	10%
MIN. OPEN SPACE:	85%

7. WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC., SPRING 2022.
8. SINGLE FAMILY HOUSE LOTS WILL BE SERVED BY PRIVATE ON-SITE WATER & SEWER.
9. NO IMPACTS TO WETLANDS OR WETLAND BUFFERS ARE PROPOSED, WETLAND CONDITIONAL USE PERMIT NOT REQUIRED. DEVELOPMENT OF ALL PROPOSED LOTS BY THEIR RESPECTIVE OWNERS SHALL BE SUBJECT TO ALL APPLICABLE ZONING REGULATIONS, INCLUDING THOSE REGARDING WETLANDS AND ANY ASSOCIATED BUFFERS.
10. OVERALL AREA OF DISTURBANCE UNDER 100,000 S.F., NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED.
11. AREA OF DISTURBANCE UNDER 43,560 SF, COVERAGE UNDER EPA NPDES PHASE II CONSTRUCTION GENERAL PERMIT NOT REQUIRED.
12. WAIVER OF ZONING ARTICLE 7 AND SUBDIVISION REGULATION SECTION 11 AS PERMITTED UNDER ZONING SECTION 4.3, SCHEDULE II, FOOTNOTE #19 REQUIRED TO ALLOW A CONVENTIONAL SUBDIVISION IN LIEU OF AN OPEN SPACE DEVELOPMENT ON A LOT OVER TWENTY ACRES IN SIZE.
13. WAIVER OF SUBDIVISION REGULATION SECTION 7.4.7 REQUIRED TO NOT SHOW TREES OVER 20" IN DIAMETER ON THE EXISTING CONDITIONS PLAN.
14. WAIVER OF SUBDIVISION REGULATION SECTION 9.6.1.2 REQUIRED TO ALLOW THE ELIMINATION OF THE PERIMETER BUFFER STRIP.
15. THE BOUNDARY OF THE ORIGINAL MAP 13 LOT 1 SHOWN HEREON IS FROM A FIELD SURVEY MADE ON THE GROUND BY T.F. BERNIER, INC. IN APRIL 2022 USING AN ELECTRONIC TOTAL STATION SURVEYING INSTRUMENT. THE TRAVERSE HAS AN ERROR OF CLOSURE OF BETTER THAN ONE PART IN 15,000. THE SURVEY WAS COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF A STANDARD PROPERTY SURVEY AS DEFINED IN THE NH CODE OF ADMINISTRATIVE RULES Lan 500. THE BEARINGS ARE REFERENCED TO NH STATE PLANE NAD 83/11 GRID BASED ON GPS OBSERVATIONS PERFORMED BY T.F. BERNIER, INC. IN APRIL 2022.
16. EXISTING STONE WALLS ARE TO BE REMOVED ONLY TO THE MINIMUM AMOUNT PRACTICABLE TO INSTALL NEW DRIVEWAYS. NO OTHER WALL DISTURBANCE SHALL BE PERMITTED.
17. 40' WETLAND BUFFER OUTSIDE OF CONSERVATION AREA TO BE MARKED WITH PERMANENT DISKS AVAILABLE FROM THE TOWN OF EXETER. DISKS SHALL BE SPACED NO MORE THAN 50' APART.
18. ALL HOUSES SHALL BE EQUIPPED WITH STONE DRIP STRIPS WHERE APPROPRIATE TO ENSURE THE INFILTRATION OF ROOF RUNOFF. WHERE GUTTERS ARE REQUIRED AT SELECT LOCATIONS (I.E. OVER DOORWAYS, ETC.), DOWNSPOUTS SHALL BE DIRECTED TO THE DRIP STRIPS. GUTTER DOWNSPOUTS DIRECTED TO LAWN, WOODS OR LANDSCAPE AREAS SHALL NOT BE PERMITTED.
19. CONSERVATION OPEN SPACE ANALYSIS –
    WETLAND: ±5.97 ACRES (58%)
    UPLAND: ±4.29 ACRES (42%)
    TOTAL: ±10.26 ACRES (42% OF TOTAL LOT)

PERIMETER LINE TABLE

LINE	BEARING	LENGTH
L1	N44°45'39"E	33.64'
L2	N39°55'53"E	25.15'
L3	N41°20'42"E	26.57'
L4	N40°51'10"E	40.45'
L5	N44°39'06"E	25.80'
L6	N69°36'29"E	55.94'
L7	S68°48'39"E	17.34'
L8	S5°16'07"E	35.18'
L9	S7°52'10"E	47.75'
L10	S12°00'11"E	48.93'
L11	S18°17'54"E	104.91'
L12	S17°14'44"E	57.82'
L13	S23°35'49"E	127.99'
L14	S29°05'47"E	3.36'
L15	S41°12'02"E	72.45'
L16	S53°39'55"E	15.45'
L17	S48°22'49"E	30.10'
L18	S50°22'53"E	36.82'
L19	NOT USED	
L20	N39°30'03"E	63.90'
L21	N69°28'01"E	123.52'
L22	N78°02'21"E	49.17'
L23	S47°18'21"E	73.10'
L24	S43°51'07"E	25.17'
L25	S46°11'49"E	56.03'
L26	S46°57'25"E	94.71'
L27	S45°25'23"E	95.50'
L28	S46°12'33"E	113.55'
L29	N32°39'40"W	86.15'
L30	N39°10'12"W	86.17'
L31	N34°20'34"W	68.70'
L32	N41°07'32"W	70.56'
L33	N32°45'43"W	64.86'
L34	N35°50'39"W	55.63'
L35	N43°52'25"W	31.55'
L36	N39°26'57"W	77.60'
L37	N37°05'17"W	51.50'
L38	N33°39'16"W	44.88'
L39	N31°14'32"W	101.41'
L40	N35°45'26"W	63.26'
L41	N38°25'27"W	38.58'
L42	N35°21'11"W	48.50'
L43	N48°48'02"E	34.86'

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR NO. 823 TIMOTHY V. BERNIER

CASE #22-14
TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

T. F. BERNIER, INC.
Land Surveyors - Designers - Consultants
50 PLEASANT STREET – P.O. BOX 3464
CONCORD, NEW HAMPSHIRE 03302-3464
Tel:(603)224-4148 – Fax:(603)224-0507

NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: NOVEMBER 23, 2022

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	08/30/22
1	PLANNING BOARD	EBS	10/11/22
2	REV. PER COMMENTS	EBS	11/23/22

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5307-SUB.dwg

SCALE: (22"x34") 1"= 80'
(11"x17") 1"=160'

OWNER:
JUDITH A. NICHOLS
FREDERICK J. NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833

APPLICANT:
JERRY AND CHRISTINE STERRITT
98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:
BEECH HILL SUBDIVISION
TAX MAP 13, LOT 1
BEECH HILL ROAD
EXETER, NH 03833

TITLE:
SUBDIVISION PLAN

SHEET NUMBER:
C - 1

P5307

TEST PIT LOGS

Test Pit No.1–1
ESHWT: 24"
Termination @ 54"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–10"	10YR3/2	FSL	GR	FR	N
10–16"	10YR4/4	FSL	GR	FR	N
16–24"	2.5Y5/4	FSL	GR	FR	N
24–54"	10YR4/4	S	GR	FR	P

Percolation Rate: 8 min/in

Test Pit No.1–2
ESHWT: 26"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–10"	10YR3/3	FSL	GR	FR	N
10–18"	10YR4/4	FSL	GR	FR	N
18–26"	2.5Y5/4	FSL	GR	FR	N
26–60"	2.5Y4/4	S	GR	FR	P

Test Pit No.1–3
ESHWT: 32"
Termination @ 50"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–10"	10YR3/3	FSL	GR	FR	N
10–24"	10YR4/4	FSL	GR	FR	N
24–50"	2.5Y5/4	S	SG	L	P

Test Pit No.2–1
ESHWT: 30"
Termination @ 52"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–14"	10YR4/4	FSL	GR	FR	N
14–30"	2.5Y5/6	S	GR	L	N
30–52"	10YR5/8	S	GR	FR	P

Percolation Rate: 8 min/in

Test Pit No.2–2
ESHWT: 17"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–17"	10YR4/4	FSL	GR	FR	N
17–60"	2.5Y5/6	S	GR	FR	P

Test Pit No.3–1
ESHWT: 20"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–7"	10YR3/3	FSL	GR	FR	N
7–20"	10YR5/4	FSL	GR	FR	N
20–60"	2.5Y4/3	FSL	BLK	FI	P

Test Pit No.3–2
ESHWT: 20"
Termination @ 48"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–20"	10YR5/4	FSL	GR	FR	N
20–48"	2.5Y4/3	FSL	BLK	FI	P

Test Pit No.3–3
ESHWT: 20"
Termination @ 48"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/2	FSL	GR	FR	N
8–20"	10YR4/4	FSL	GR	FR	N
20–48"	2.5Y5/4	FSL	GR	FR	P

Test Pit No.3–4
ESHWT: 28"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–28"	10YR4/4	FSL	GR	FR	N
28–60"	2.5Y5/3	FSL	BLK	FI	P

Test Pit No.3–5
ESHWT: 30"
Termination @ 50"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–20"	10YR4/4	FSL	GR	FR	N
20–30"	2.5Y5/3	FSL	GR	FR	N
30–50"	2.5Y5/4	FSL	BLK	FI	P

Percolation Rate: 8 min/in

Test Pit No.4–1
ESHWT: 24"
Termination @ 64"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–16"	10YR5/4	FSL	GR	FR	N
16–24"	10YR4/4	FSL	GR	FR	N
24–64"	2.5Y4/3	FSL	BLK	FI	P

Percolation Rate: 8 min/in

Test Pit No.4–2
ESHWT: 20"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–10"	10YR3/3	FSL	GR	FR	N
10–20"	10YR4/4	FSL	GR	FR	N
20–60"	2.5Y5/3	FSL	BLK	FI	P

Test Pit No.4–3
ESHWT: 30"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–6"	10YR3/2	FSL	GR	FR	N
6–18"	10YR4/4	FSL	GR	FR	N
18–30"	2.5Y4/4	FSL	GR	FR	N
30–60"	2.5Y5/3	FSL	BLK	FI	P

Test Pit No.5–1
ESHWT: 30"
Termination @ 56"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–12"	10YR3/3	FSL	GR	FR	N
12–20"	10YR4/4	FSL	GR	FR	N
20–30"	2.5Y5/6	FSL	GR	FR	N
30–56"	2.5Y5/4	FSL	BLK	FI	P

Test Pit No.5–2
ESHWT: 38"
Termination @ 64"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–16"	10YR4/4	FSL	GR	FR	N
16–38"	10YR4/6	FSL	GR	FR	N
38–64"	2.5Y5/4	Gr	OM	FI	P

Percolation Rate: 8 min/in

Test Pit No.6–1
ESHWT: 30"
Termination @ 66"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/3	FSL	GR	FR	N
8–18"	10YR4/4	FSL	GR	FR	N
18–30"	2.5Y4/6	FSL	GR	FR	N
30–66"	2.5Y5/3	FSL	BLK	FI	P

Test Pit No.6–2
ESHWT: 38"
Termination @ 0"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–6"	10YR3/3	FSL	GR	FR	N
6–18"	10YR4/4	FSL	GR	FR	N
18–38"	10YR4/6	FSL	GR	FR	N
38–60"	2.5Y5/3	FSL	BLK	FI	P

Percolation Rate: 8 min/in

Test Pit No.7–1
ESHWT: 24"
Termination @ 36"
Refusal: 36"
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–6"	10YR3/2	FSL	GR	FR	N
6–18"	10YR4/4	FSL	GR	FR	N
18–24"	2.5Y4/6	S	GR	L	N
24–36"	2.5Y5/4	S	BLK	FI	P

Test Pit No.7–2
ESHWT: 24"
Termination @ 42"
Refusal: 42"
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–6"	10YR3/2	FSL	GR	FR	N
6–12"	10YR4/4	FSL	GR	FR	N
12–24"	10YR4/6	S	GR	FR	N
24–42"	2.5Y5/3S	FSL	BLK	FI	P

Test Pit No.7–3
ESHWT: 20"
Termination @ 54"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–10"	10YR3/3	FSL	GR	FR	N
10–20"	10YR4/4	FSL	GR	FR	N
20–54"	2.5Y5/4	S	GR	FR	P

Test Pit No.7–4
ESHWT: 18"
Termination @ 52"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–8"	10YR3/2	FSL	GR	FR	N
8–14"	10YR4/4	FSL	GR	FR	N
14–18"	10YR4/6	FSL	GR	FR	N
18–24"	2.5Y5/6	FS	GR	FR	P
24–36"	2.5Y5/4	FS	GR	FR	P
36–52"	2.5Y5/3	SIL	BLK	FI	P

Test Pit No.7–5
ESHWT: 24"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0–6"	10YR3/2	FSL	GR	FR	N
6–12"	10YR4/4	FSL	GR	FR	N
12–24"	2.5Y4/6	Sil	GR	FR	N
24–60"	2.5Y5/4	SL	GR	FR	P

Percolation Rate: 8 min/in

KEY:

GR (TEXTURE)= GRAVELLY	GR= GRANULAR	FR = FRIABLE
LS = LOAMY SAND	OM = MASSIVE	FI = FIRM
S = SAND	PL = PLATY	C = COMMON
FSL = FINE SANDY LOAM	BLK = BLOCKY	P = PROMINENT
SL = SANDY LOAM	L=LOOSE	D = DISTINCT
SIL = SILT LOAM		N = NONE
SICL = SILTY CLAY		
F (TEXTURE) = FINE	CB (TEXTURE) = COBBLY	
CN (TEXTURE) = CHANNERY	F (TEXTURE) = VERY FINE	
V (ROCK FRAGMENT)(TEXTURE) = VERY		

LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- 60 EXISTING CONTOUR
- 75' WETLAND SETBACK
- HISS SOIL BOUNDARY
- 543BH HISS SOIL DESIGNATION
- EXISTING TREE/DRIP LINE
- PROPOSED EASEMENT

HIGH INTENSITY MAP SYMBOL: 523BH

DRAINAGE CLASS
1. EXCESSIVELY DRAINED
2. WELL DRAINED
3. MODERATELY WELL DRAINED
4. SOMEWHAT POORLY DRAINED
5. POORLY DRAINED
6. VERY POORLY DRAINED
7. NOT DETERMINABLE

PARENT MATERIAL
1. GLACIOFLUVIAL
2. GLACIAL TILL
3. MARINE OR GLACIOLACUSTRINE VERY FINE SAND AND SILT
4. MARINE OR GLACIOLACUSTRINE LOAMY/SANDY OVER SILT/CLAY
5. MARINE OR GLACIOLACUSTRINE SILT AND CLAY
6. EXCAVATED, REGRADED, OR FILLED
7. ALLUVIAL DEPOSITS
8. ORGANIC MATERIALS FRESH WATER
9. ORGANIC MATERIALS TIDAL MARSH

IDENTIFIER
H. INDICATES HIGH INTENSITY SOIL MAP
P. INDICATES PRELIMINARY MAP

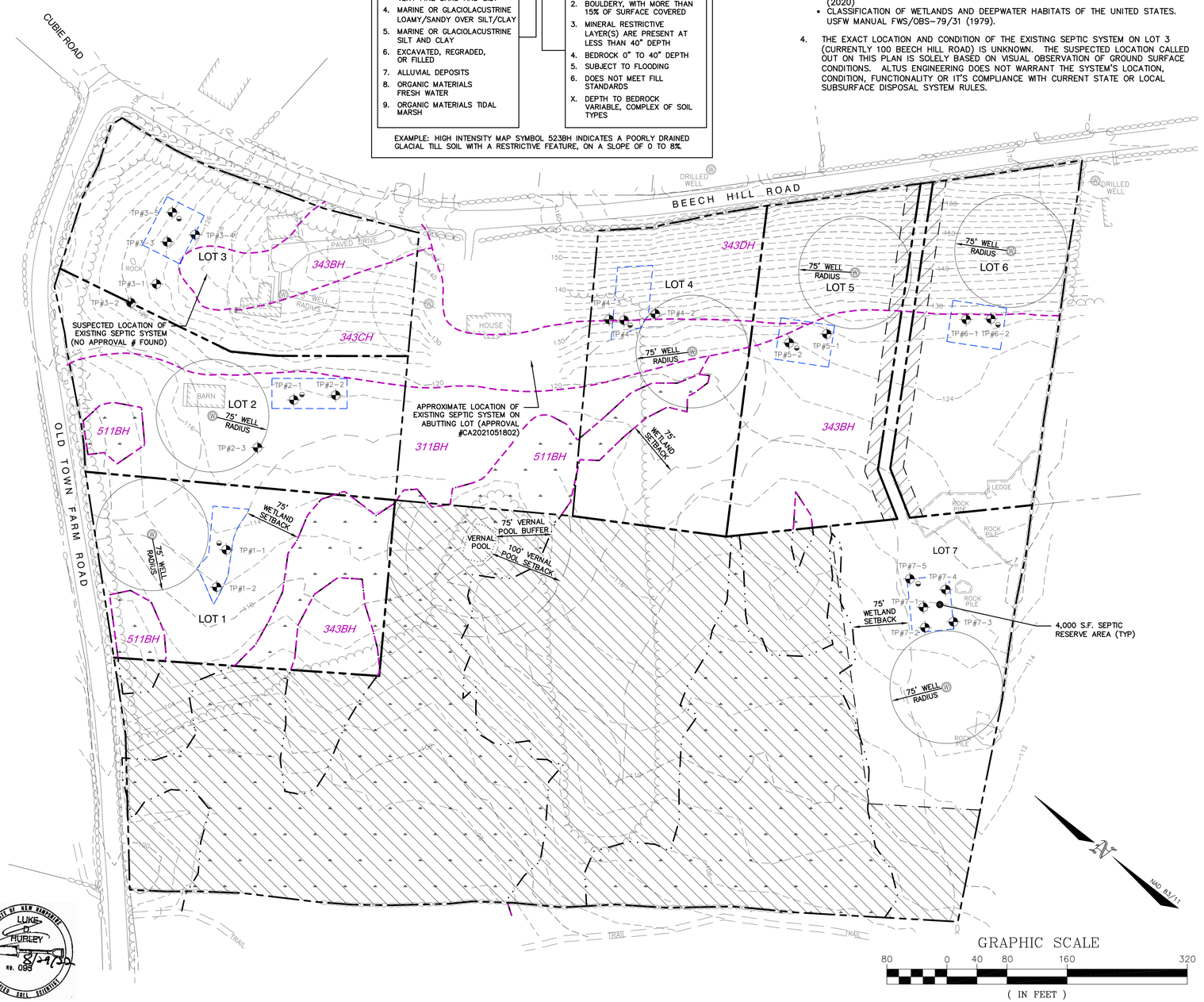
SLOPE CLASS
B. 0 TO 8%
C. 8 TO 15%
D. 15 TO 25%
E. 15 TO 25%

RESTRICTIVE FEATURE
1. NONE
2. BOULDERY, WITH MORE THAN 15% OF SURFACE COVERED
3. MINERAL RESTRICTIVE LAYER(S) ARE PRESENT AT LESS THAN 40" DEPTH
4. BEDROCK 0" TO 40" DEPTH
5. SUBJECT TO FLOODING
6. DOES NOT MEET FILL STANDARDS
X. DEPTH TO BEDROCK VARIABLE, COMPLEX OF SOIL TYPES

EXAMPLE: HIGH INTENSITY MAP SYMBOL 523BH INDICATES A POORLY DRAINED GLACIAL TILL SOIL WITH A RESTRICTIVE FEATURE, ON A SLOPE OF 0 TO 8%

NOTES

1. TEST PITS WERE PERFORMED BY GOVE ENVIRONMENTAL SERVICES, INC., ON AUGUST 10, 2022 AND WITNESSED BY THE ROCKINGHAM COUNTY CONSERVATION DISTRICT.
2. HISS MAPPING PREPARED BY GOVE ENVIRONMENTAL SERVICES, INC.
3. WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES INC. IN MARCH OF 2022 UTILIZING THE FOLLOWING STANDARDS:
   - REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
   - FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.2. UNITED STATES DEPARTMENT OF AGRICULTURE (2018).
   - NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE. 2019 VERSION 4, FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL, MA.
   - U.S. ARMY CORPS OF ENGINEERS NATIONAL WETLAND PLANT LIST, VERSION 3.5. (2020)
   - CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS–79/31 (1979).
4. THE EXACT LOCATION AND CONDITION OF THE EXISTING SEPTIC SYSTEM ON LOT 3 (CURRENTLY 100 BEECH HILL ROAD) IS UNKNOWN. THE SUSPECTED LOCATION CALLED OUT ON THIS PLAN IS SOLELY BASED ON VISUAL OBSERVATION OF GROUND SURFACE CONDITIONS. ALTUS ENGINEERING DOES NOT WARRANT THE SYSTEM'S LOCATION, CONDITION, FUNCTIONALITY OR IT'S COMPLIANCE WITH CURRENT STATE OR LOCAL SUBSURFACE DISPOSAL SYSTEM RULES.



STATE OF NEW HAMPSHIRE LUKE D. HUBLEY NO. 098 CERTIFIED SOIL SCIENTIST 8/29/20

CASE #22-14

TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

NEW HAMPSHIRE Designer of Subsurface Disposal Systems ERIC D. WEINRIEB No. 809 Water Supply & Pollution Control 10/11/22

NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: NOVEMBER 23, 2022

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	08/30/22
1	ADDED TEST PIT LOGS	EBS	09/09/22
2	REV. PER NHDES	EBS	10/11/22
3	REV. PER COMMENTS	EBS	11/23/22

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5307–SUB.dwg

SCALE:
(22"x34") 1"= 80'
(11"x17") 1"=160'

OWNER:
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FREDERICK J. NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833

APPLICANT:
JERRY AND CHRISTINE STERRITT
98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:
BEECH HILL SUBDIVISION
TAX MAP 13, LOT 1
BEECH HILL ROAD
EXETER, NH 03833

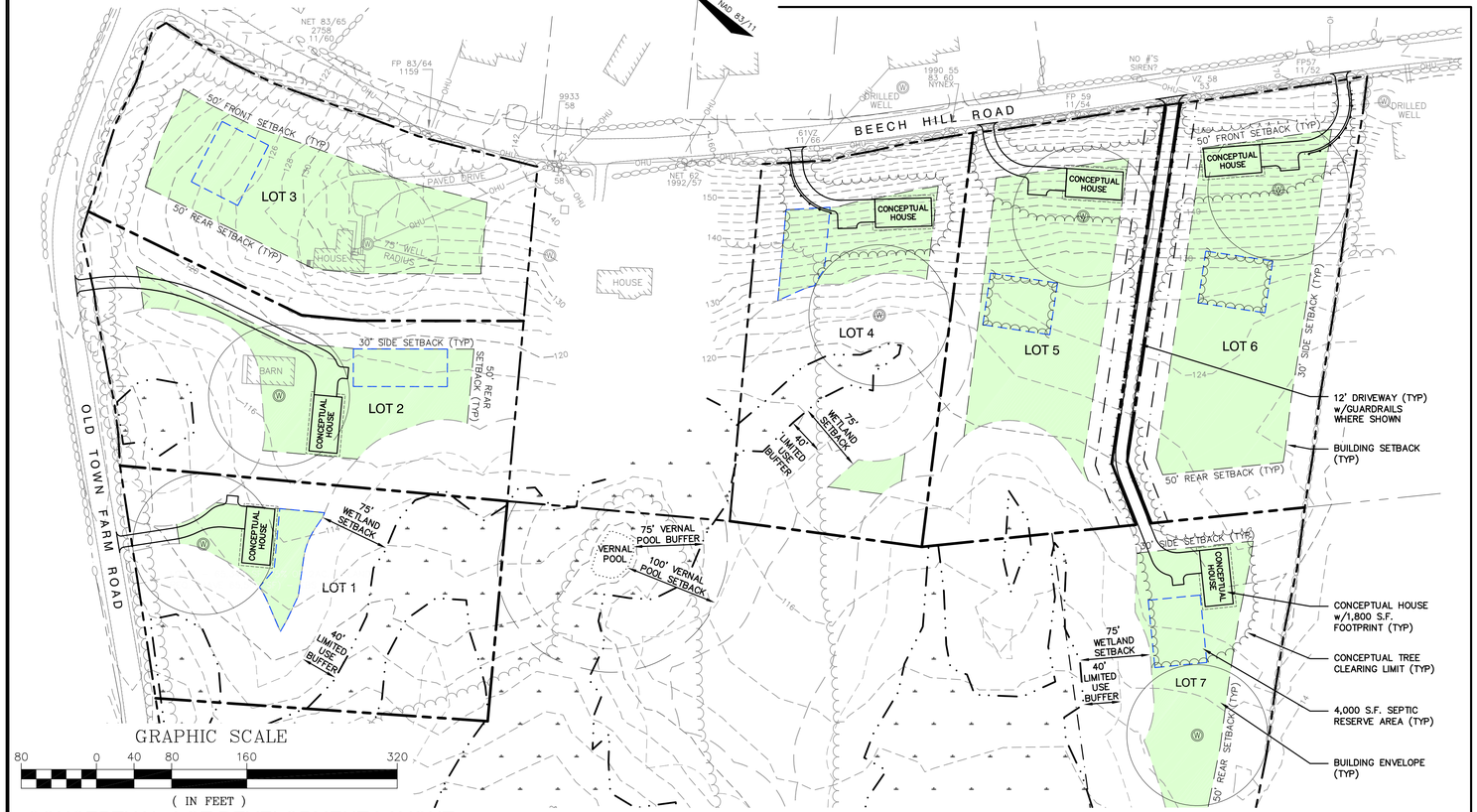
TITLE:
TOPOGRAPHY AND SOILS PLAN

SHEET NUMBER:
C - 2

P5307

NOTES

1. HOUSE AND DRIVEWAY LOCATIONS AND ANY GRADING SHOWN ARE SCHEMATIC AND INTENDED FOR PLANNING PURPOSES ONLY. ACTUAL HOUSE, DRIVEWAY, SEPTIC SYSTEM AND GRADING CONFIGURATIONS AND LOCATIONS MAY VARY DEPENDING ON THE SPECIFIC DESIGNS FOR EACH INDIVIDUAL LOT AS PREPARED BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNER TO COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO, BUILDING SETBACKS, WETLAND BUFFERS AND SUBSURFACE SANITARY DISPOSAL RULES.
2. ALL WATER, SEWER, ROAD (INCLUDING PARKING LOT), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.3 STORMWATER STANDARDS, STORMWATER MANAGEMENT PLAN, STORMWATER POLLUTION PREVENTION PLAN, AND EROSION AND SEDIMENT CONTROL STANDARDS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC UTILITIES IN EXETER, NEW HAMPSHIRE.
3. LOTS TO BE SERVICED BY UNDERGROUND ELECTRIC AND COMMUNICATIONS UTILITIES FROM BEECH HILL OR OLD TOWN FARM ROAD AND PRIVATE WELLS AND SUBSURFACE SANITARY DISPOSAL SYSTEMS. LOT OWNERS SHALL BE RESPONSIBLE FOR COORDINATION WITH APPROPRIATE UTILITY COMPANIES AND OBTAINING ALL NECESSARY PERMITS.
4. ALL DRIVEWAYS SHALL BE CONSTRUCTED SO AS TO SLOPE AWAY FROM THE PUBLIC WAY AT 2% FOR A MINIMUM OF 10' OR TO THE LIMITS OF THE RIGHT OF WAY, WHICHEVER IS GREATER.
5. WHERE A DRIVEWAY CROSSES A ROADSIDE SWALE, A 12" CPP CULVERT SHALL BE INSTALLED SO AS TO NOT IMPEDE DRAINAGE FLOW.
6. ANY DRIVEWAY SIDE SLOPE IN EXCESS OF 3:1 AND ALL RETAINING WALLS IN THE VICINITY OF VEHICULAR TRAFFIC OR PARKING AREAS SHALL BE EQUIPPED WITH GUARDRAILS PLACED NO LESS THAN 2' FROM THE EDGE OF PAVEMENT.
7. ANY RETAINING WALL IN EXCESS OF FOUR FEET IN HEIGHT SHALL BE BUILT IN ACCORDANCE WITH A DESIGN STAMPED BY A NH LICENSED ENGINEER FAMILIAR WITH WALL DESIGN.
8. ALL HOUSES SHALL BE EQUIPPED WITH STONE DRIP STRIPS WHERE APPROPRIATE TO ENSURE THE INFILTRATION OF ROOF RUNOFF. WHERE GUTTERS ARE REQUIRED AT SELECT LOCATIONS (I.E. OVER DOORWAYS, ETC.), DOWNSPOUTS SHALL BE DIRECTED TO THE DRIP STRIPS. GUTTER DOWNSPOUTS DIRECTED TO LAWN, WOODS OR LANDSCAPE AREAS SHALL NOT BE PERMITTED.
9. ALL SLOPES IN EXCESS OF 3:1 AND ALL SWALES SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75BN BIODEGRADABLE EROSION CONTROL BLANKET (OR APPROVED EQUAL) SECURED WITH BIODEGRADABLE FASTENERS.
10. A MINIMUM OF 6" OF SCREENED LOAM AND SEED SHALL BE APPLIED TO ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE OUTSIDE BUILDING, PAVEMENT AND DRIP EDGE LIMITS.
11. ALL SEDIMENT AND EROSION CONTROL MEASURES SHOWN ARE CONCEPTUAL IN NATURE AND SHOULD BE TAILORED TO THE FINAL HOUSE AND DRIVEWAY DESIGNS SPECIFIED BY THE LOT OWNERS. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE NH STORMWATER MANUAL, LATEST EDITION.
12. ADDITIONAL DRAINAGE INFRASTRUCTURE MAY BE REQUIRED BASED ON FINAL GRADING AS SPECIFIED BY INDIVIDUAL LOT OWNERS. LOT OWNERS SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF SAID INFRASTRUCTURE.
13. NEW OVERHEAD SERVICES WILL BE REQUIRED ON OLD TOWN FARM ROAD FOR LOTS 1 AND 2. COORDINATION WITH SERVICE PROVIDERS AND INSTALLATION SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNERS.
14. REGARDLESS OF THE SEQUENCE IN WHICH LOTS ARE DEVELOPED, GRADING WITHIN OR ADJACENT TO THE ACCESS, GRADING AND UTILITY EASEMENTS FOR THE BENEFIT OF LOT 7 ON LOTS 5 AND 6 SHALL NOT IMPEDE DRAINAGE FLOW OR CAUSE PONDING ON ANY ADJACENT LOT.
15. WETLAND SETBACKS SHALL BE FLAGGED PRIOR TO ANY LOT DEVELOPMENT.



CONCEPTUAL LOT DEVELOPMENT LAYOUT 1" = 80'

CONCEPTUAL LOT GRADING PLAN (LOTS 4 - 7) 1" = 40'

CASE #22-14

TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.

133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE – ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER – 11/21/22

NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: NOVEMBER 23, 2022

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	10/11/22
1	REV. PER COMMENTS	EBS	11/23/22

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5307-SUB.dwg

SCALE: AS NOTED

OWNER:
JUDITH A. NICHOLS
FREDERICK J. NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833

APPLICANT:
JERRY AND CHRISTINE STERRITT
98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:
BEECH HILL SUBDIVISION
TAX MAP 13, LOT 1
BEECH HILL ROAD
EXETER, NH 03833

TITLE:
STORMWATER MANAGEMENT AND DEVELOPMENT PLAN

SHEET NUMBER:
C - 3

P5307

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

100 BEECH HILL ROAD
EXETER, NEW HAMPSHIRE
TAX MAP 13 LOT 1

LATITUDE: 43°00'54" N
LONGITUDE: 71°01'45" W

OWNER/APPLICANT:
JUDITH AND FREDERICK NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833

DESCRIPTION

The project consists of a seven–lot single family residential subdivision with no new roadway or associated infrastructure.

DISTURBED AREA

Given that each house lot will be developed independently to the specific plans prepared by each owner, the total area to be disturbed for the development is unknown.

PROJECT PHASING

The project will be completed on a per lot basis by individual contractors retained by the lot owners.

NAME OF RECEIVING WATER

The site drains to an unnamed wetland tributary to the Fresh River.

SEQUENCE OF MAJOR ACTIVITIES (TO BE REPEATED FOR EACH LOT)

1. Install temporary erosion control measures including perimeter controls, stabilized construction entrance and inlet sediment filters as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
2. Delineate limits of disturbance.
3. Remove trees, stumps and brush strip loam and stockpile.
4. Construct building foundations.
5. Rough grade site including placement of borrow materials.
6. Construct new buildings and associated improvements.
7. Construct drainage structures, culverts, utilities & pavement base course materials.
8. Install base course paving.
9. Install top course paving.
10. Loam (6" min) and seed on all disturbed areas not paved or otherwise stabilized.
11. Install landscaping.
12. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 – 3", issued December 2008, as amended. As indicated in the sequence of Major Activities, perimeter controls shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area and permanent measures are established, perimeter controls shall be removed.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through appropriate perimeter controls. All storm drain inlets shall be provided with inlet protection measures.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the plan:

1. The smallest practical portion of the site shall be denuded at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.25 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built–up sediment shall be removed from perimeter barriers when it has reached one–third the height of the barrier or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. An area shall be considered stable if one of the following has occurred:
   a. Base coarse gravels have been installed in areas to be paved;
   b. A minimum of 85% vegetated growth as been established;
   c. A minimum of 3 inches of non–erosive material such as stone of riprap has been installed; – or –
   d. Erosion control blankets have been properly installed.
9. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

1. Timing – In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
   a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
   b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.
2. Guidelines for Winter Mulch Application –

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrubs.
Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1–1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	

* The organic matter content is between 80 and 100%, dry weight basis.
* Particle size by weight is 100% passing a 6"screen and a minimum of 70 %, maximum of 85%, passing a 0.75" screen.
*The organic portion needs to be fibrous and elongated.
*Large portions of silts, clays or fine sands are not acceptable in the mix.
* Soluble salts content is less than 4.0 mmhos/cm.
*The pH should fall between 5.0 and 8.0.

3. Maintenance – All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

C. PERMANENT SEEDING –

1. Bedding – stones larger than 1½", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.
2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and organic fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

   Agricultural Limestone @ 100 lbs. per 1,000 s.f.
   10–20–20 organic fertilizer @ 12 lbs. per 1,000 s.f.

3. Seed Mixture (for lawns**):

Type	Lbs. / Acre	Lbs. / 1,000 sf
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Seed Mixture (For slope embankments**):
Grass Seed: Provide fresh, clean, new–crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified:

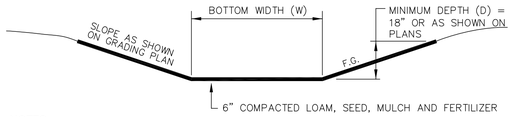
Type	Min. Purity (%)	Min. Germination (%)	Kg./Hectare (Lbs/Acre)
Creeping Red Fescue (c)	96	85	45 (40)
Perennial Rye Grass (a)	98	90	35 (30)
Redtop	95	80	5 (5)
Alsike Clover	97	90(e)	5 (5)
		Total	90 (80)

   a. Ryegrass shall be a certified fine–textured variety such as Pennfine, Fiesta, Yorktown, Diplomat, or equal.
   b. Fescue varieties shall include – Creeping Red and/or Hard Reliant, Scaldis, Koket, or Jamestown.
   ** In the event that the seed mixes shown here conflict with the project landscape plans, the landscape plans shall govern.

4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

WINTER CONSTRUCTION NOTES

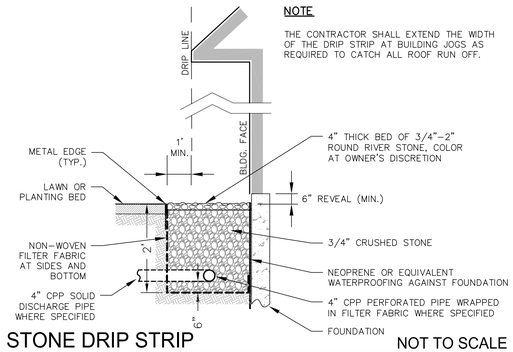
1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.



NOTES

1. THE FOUNDATION AREA OF THE SWALE SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA AND BE FREE OF IRREGULARITIES.
3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED SWALE.
4. VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO DIRECTING STORMWATER TO IT.
5. MAINTENANCE OF THE VEGETATION IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE SWALE. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE SWALE.
6. THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF RAINFALL IN 24 HOURS TO DETERMINE ITS CONDITION. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

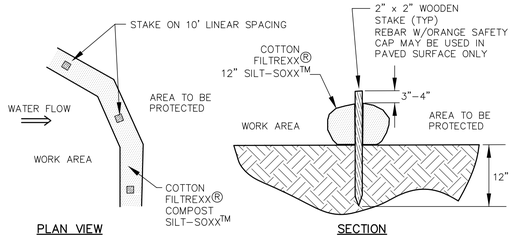
VEGETATED SWALE — NOT TO SCALE



NOTE

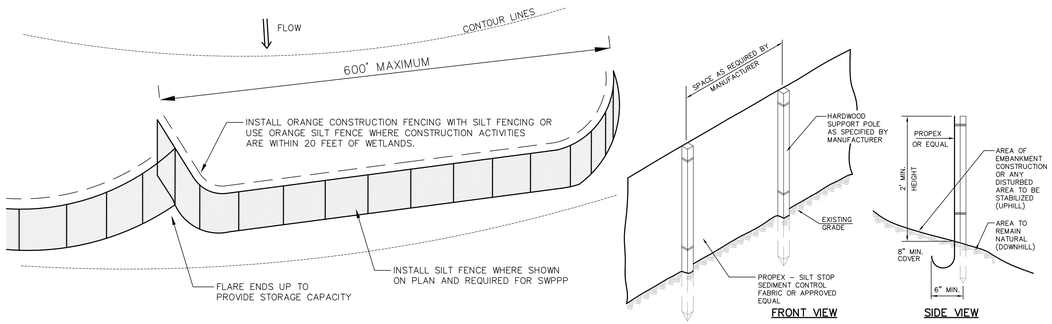
THE CONTRACTOR SHALL EXTEND THE WIDTH OF THE DRIP STRIP AT BUILDING JOGS AS REQUIRED TO CATCH ALL ROOF RUN OFF.

STONE DRIP STRIP — NOT TO SCALE

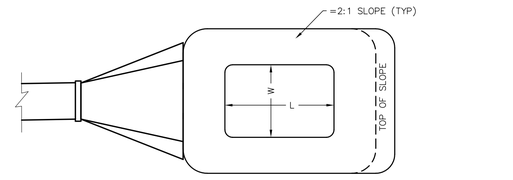


NOTES:
1. SILTSOXX MAY BY USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
3. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
4. ALL SEDIMENT TRAPPED BY SILTSOXX SHALL BE DISPOSED OF PROPERLY.

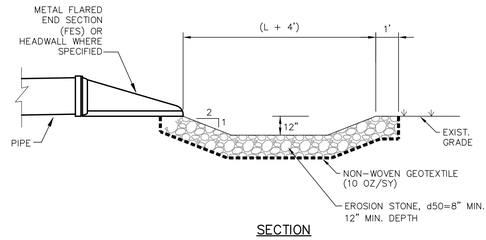
TUBULAR SEDIMENT BARRIER — NOT TO SCALE



SILT AND ORANGE CONSTRUCTION FENCE LAYOUT DETAIL — NOT TO SCALE



PLAN VIEW

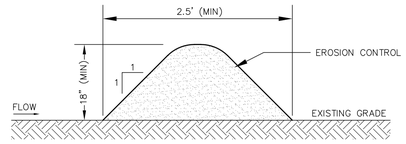


SECTION

NOTES

1. CONSTRUCT PLUNGE POOL TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
2. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
3. EROSION STONE USED FOR THE PLUNGE POOL SHALL MEET THE FOLLOWING GRADATION.
4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18 INCHES.
5. THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

PLUNGE POOL — NOT TO SCALE



NOTES

1. ORGANIC FILTER BERMS MAY BE UTILIZED IN LIEU OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
2. THE EROSION CONTROL MIXTURE USED IN FILTER BERMS SHALL BE A WELL–GRADED MIX OF PARTICLE SIZES THAT MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, AND/OR ACCEPTABLE MANUFACTURED PRODUCTS AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH. EROSION CONTROL MIXTURE SHALL MEET THE FOLLOWING STANDARDS:
   a) THE ORGANIC CONTENT SHALL BE 80–100% OF DRY WEIGHT.
   b) PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70–85% PASSING A 0.75" SCREEN.
   c) THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
   d) LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE.
   e) SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
   f) THE pH SHALL BE BETWEEN 5.0 AND 8.0.
3. ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
4. ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES NO STEEPER THAN 3:1 AND UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE) AND A MINIMUM OF 36" WIDE. ON LONGER AND/OR STEEPER SLOPES, THE BERM SHALL BE TALLER AND WIDER TO ACCOMMODATE THE POTENTIAL FOR ADDITIONAL RUNOFF (MAXIMUM HEIGHT SHALL NOT EXCEED 2').
5. FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FILTER BERMS WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE BERM.
7. ORGANIC FILTER BERMS MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED PROVIDED ANY SEDIMENT DEPOSITS TRAPPED BY THEM ARE REMOVED AND DISPOSED OF PROPERLY.
8. FILTER BERMS ARE PROHIBITED AT THE BASE OF SLOPES STEEPER THAN 8% OR WHERE THERE IS FLOWING WATER WITHOUT THE SUPPORT OF ADDITIONAL MEASURES SUCH AS SILTFENCE.

ORGANIC FILTER BERM — NOT TO SCALE

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ISSUE DATE:
OCTOBER 11, 2022

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DETAILS

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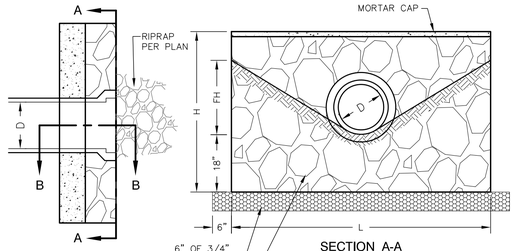


TOP SECTION

SECTION A-A

SECTION B-B

DIA.	HEADWALL LENGTH	HEADWALL HEIGHT	FILL HEIGHT	PIPE COVER	HEADWALL BOTTOM WIDTH
D	L	H	FH	h	W
12"	4'-3"	3'-9"	1'-1"	1'-3"	2'-0"
15"	6'-0"	4'-3"	1'-7"	1'-6"	2'-1"
18"	7'-0"	4'-6"	1'-10"	1'-6"	2'-2"
24"	9'-0"	5'-0"	2'-4"	1'-6"	2'-3"
30"	11'-0"	5'-6"	2'-10"	1'-6"	2'-5"
36"	13'-0"	6'-0"	3'-4"	1'-6"	2'-6"
42"	15'-9"	6'-9"	4'-1"	1'-9"	2'-9"
48"	17'-9"	7'-3"	4'-7"	1'-9"	2'-10"

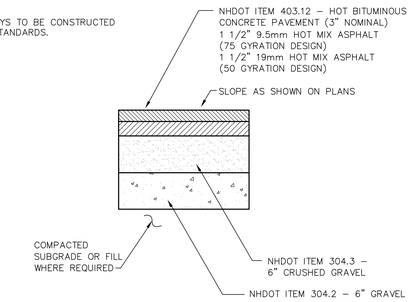
NOTES:

1. PROVIDE BELL END AT INLET HEADWALL, SPIGOT END AT OUTLET HEADWALL.
2. WINGWALLS MAY BE ADDED, COORDINATE w/PLANS.

MORTAR RUBBLE MASONRY HEADWALL N.T.S.

NOTES:

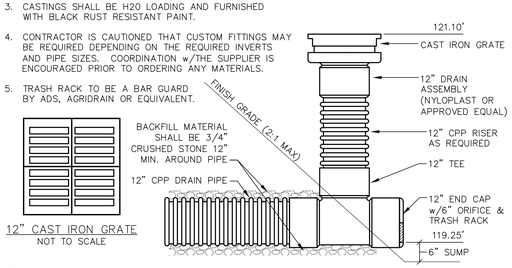
1. ALL DRIVEWAYS TO BE CONSTRUCTED PER TOWN STANDARDS.



DRIVEWAY CROSS SECTION NOT TO SCALE

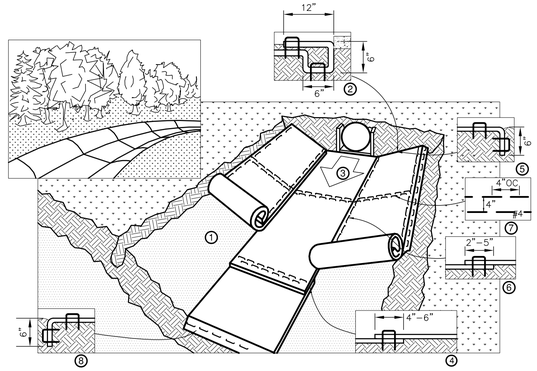
NOTES:

1. MATERIALS TO BE NYLOPLAST USA, INC., AND SUPPLIED BY ADS, INC., OR APPROVED EQUAL.
2. QUALITY: MATERIAL SHALL CONFORM TO ASTM A48–CLASS 30B.
3. CASTINGS SHALL BE H20 LOADING AND FURNISHED WITH BLACK RUST RESISTANT PAINT.
4. CONTRACTOR IS CAUTIONED THAT CUSTOM FITTINGS MAY BE REQUIRED DEPENDING ON THE REQUIRED INVERTS AND PIPE SIZES. COORDINATION w/THE SUPPLIER IS ENCOURAGED PRIOR TO ORDERING ANY MATERIALS.
5. TRASH RACK TO BE A BAR GUARD BY ADS, AGRIDRAIN OR EQUIVALENT.



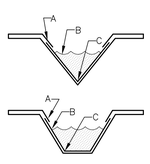
12" CAST IRON GRATE
NOT TO SCALE

OUTLET STRUCTURE NOT TO SCALE



NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"–6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"–5" (DEPENDING ON BLANKET TYPE) AND STAPLED. TO INSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS:

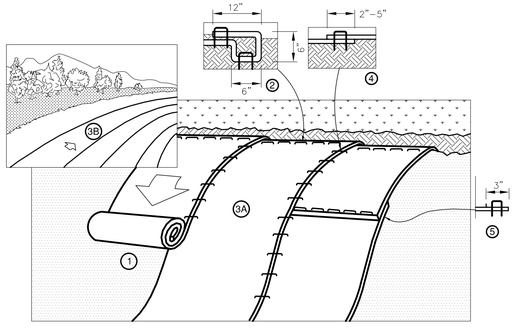
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTES:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

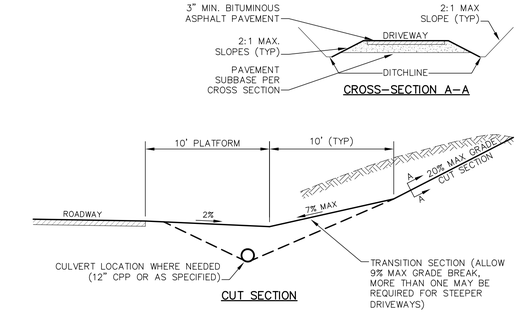
EROSION CONTROL BLANKET - SWALE NOT TO SCALE



NOTES

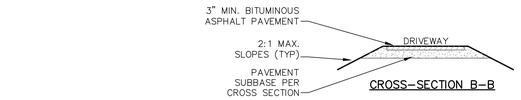
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"–5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET - SLOPE NOT TO SCALE

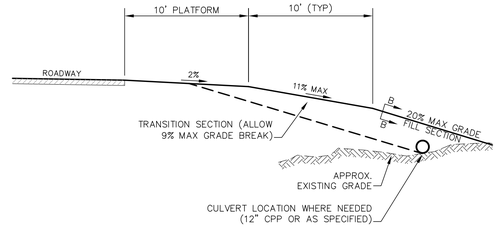


CROSS–SECTION A–A

CUT SECTION

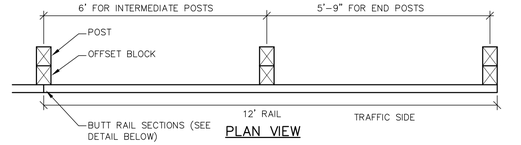


CROSS–SECTION B–B

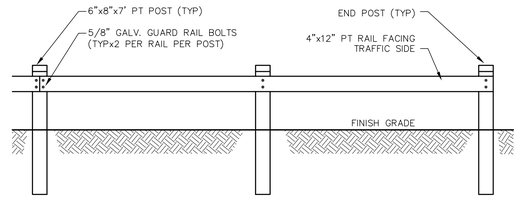


FILL SECTION

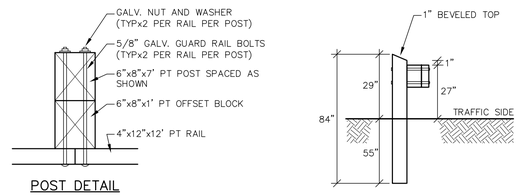
TYPICAL DRIVEWAY SECTIONS NOT TO SCALE



PLAN VIEW



FRONT VIEW



POST DETAIL

SIDE VIEW

NOTES

1. ALL POST AND RAIL MATERIAL SHALL BE PRESSURE TREATED (PT). PT POSTS SHALL BE RATED FOR GROUND CONTACT.
2. BOLT LENGTH IS DETERMINED BY 8" POST AND RAIL THICKNESS PLUS 1 INCH FOR NUT AND WASHER.
3. ALL MATERIAL TO MEET OR EXCEED NHDOT SECTION 606 – GUARDRAIL.

WOOD BEAM GUARDRAIL NOT TO SCALE

CASE #22-14

TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.

133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE – ERIC D. WEINRIEB No. 7934 LICENSED PROFESSIONAL ENGINEER – 11/21/22

NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: NOVEMBER 23, 2022

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	10/11/22
1	REVISED PER COMMENTS	EBS	11/23/22

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5307–SUB.dwg

SCALE: AS NOTED

OWNER:

JUDITH A. NICHOLS
FREDERICK J. NICHOLS

100 BEECH HILL ROAD
EXETER, NH 03833

APPLICANT:

JERRY AND CHRISTINE STERRITT

98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:

BEECH HILL SUBDIVISION

TAX MAP 13, LOT 1

BEECH HILL ROAD
EXETER, NH 03833

TITLE:

DETAILS

SHEET NUMBER:

C - 5

P5307

DRAINAGE ANALYSIS

FOR

Beech Hill Subdivision

Beech Hill and Old Town Farm Roads
Exeter, New Hampshire

Tax Map 13, Lot 3

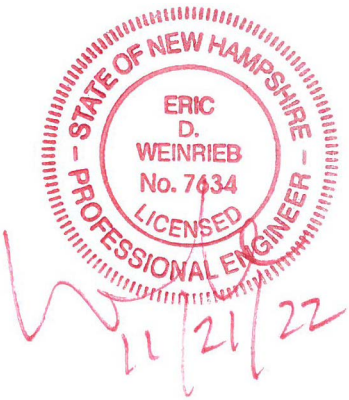
October 11, 2022
Revised November 16, 2022

Prepared For:

Jerry and Christine Sterritt
98 Beech Hill Road
Exeter, New Hampshire 03833

Prepared By:

ALTUS ENGINEERING
133 Court Street
Portsmouth, NH 03801
Phone: (603) 433-2335



ALTUS ENGINEERING

Altus Project 5307

Table of Contents

ALTUS ENGINEERING

Section 1

Narrative

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PROJECT DESCRIPTION

Jerry and Christine Sterritt are proposing to develop a residential lot located at the corner of Beech Hill and Old Town Farm Roads in Exeter, New Hampshire. The 24.62-acre property is identified as Assessor's Map 13, Lot 1 and is located in the Rural (RU) district. The site is a mixture of open pasture and woodland. Several wetland areas are located on the site, including a large contiguous complex adjacent to the southwest lot line. No wetland impacts are proposed as part of this project.

The proposed project will consist of seven single-family frontage lots serviced by private individual wells and septic systems to include an existing house at 100 Beech Hill Road. Private driveways will access the lots from Beech Hill and Old Town Farm Roads. No new roadway is proposed for this project.

The stormwater management system proposed for the site will reduce peak flows and treat runoff from 100% of the site's impervious areas prior to leaving the site. Treatment will be achieved with stone drip strips and vegetated buffers in addition to various temporary sediment and erosion controls measures that are to be utilized during construction.

Site Soils

A High Intensity Soils Survey (HISS) was conducted on the site which indicated that site's soils fall into Hydrologic Soils Groups (HSG) B and C.

Pre-Development (Existing Conditions)

The Pre-Development Watershed Plan (Sheet WS-1) reflects the current conditions of the site which include the existing house, field and wooded areas. The current site can be divided into one subcatchment which discharges to the southwest a wetland at Point of Analysis (POA) #1 (HydroCAD Link 100L).

Post-Development (Proposed Conditions)

The proposed project will construct six new houses and driveways and associated site improvements. Each house is intended to be equipped with a stone drip strip in order to infiltrate all new roof-generated runoff. A cross culvert fitted with a control structure and riprap plunge pool is also proposed. Treatment will be provided to paved driveways by vegetated buffers protected by the Town's wetland setbacks.

As shown on the attached Post-Development Watershed Plan (Sheet WS-2), the site was divided into eight subcatchment areas in the post-development conditions. The same point of analysis that was used in the Pre-Development model (POA # 1) was used for comparison of the Pre- and Post-development conditions.

CALCULATION METHODS

The drainage study was completed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. Reservoir routing was performed with the Dynamic Storage Indication method with automated calculation of tailwater conditions. A Type III 24-hour rainfall distribution was utilized in analyzing the data for the 2, 10 25 and 50 year - 24-hour storm events using rainfall data provided by the Northeast Regional Climate Center (NRCC). Rainfall amounts were intensified by 15% to accommodate potential future increases due to climate change. A time span of 0 to 36 hours was analyzed at 0.01-hour increments. The design infiltration rate used in the drip strips was calculated from the SSSNNE publication *Ksat for New Hampshire Soils* using the lowest rate in the most restrictive horizon of the in-situ material divided by two.

Disclaimer

Altus Engineering, Inc. notes that stormwater modeling is limited in its capacity to precisely predict peak rates of runoff and flood elevations. Results should not be considered to represent actual storm events due to the number of variables and assumptions involved in the modeling effort. Surface roughness coefficients (n), entrance loss coefficients (ke), velocity factors (kv) and times of concentration (Tc) are based on subjective field observations and engineering judgment using available data. For design purposes, curve numbers (Cn) describe the average conditions. However, curve numbers will vary from storm to storm depending on the antecedent runoff conditions (ARC) including saturation and frozen ground. Also, higher water elevations than predicted by modeling could occur if drainage channels, closed drain systems or culverts are not maintained and/or become blocked by debris before and/or during a storm event as this will impact flow capacity of the structures. Structures should be re-evaluated if future changes occur within relevant drainage areas in order to assess any required design modifications.

Drainage Analysis

A complete summary of the drainage model is included in the appendix of this report. The following table compares pre- and post-development peak rates at the Point of Analysis identified on the plans for the 2, 10 25 and 50-year storm events:

Stormwater Modeling Summary
Peak Q (cfs) for Type III 24-Hour Storm Events

	2-Yr Storm (3.70 inch)	10-Yr Storm (5.65 inch)	25-Yr Storm (7.19 inch)	50-Yr Storm (8.63 inch)
POA #1 (SW Wetland)				
Pre	21.28	50.35	75.96	100.95
Post	20.53	49.57	75.52	98.44
Change	**-0.75**	**-0.78**	**-0.44**	**-2.51**

As the above table demonstrates, the proposed peak rates of runoff will be decreased from the existing conditions for all analyzed storm events.

CONCLUSION

This proposed frontage subdivision off Beech Hill and Old Town Farm Roads in Exeter, New Hampshire will have minimal adverse effect on abutting properties and infrastructure as a result of stormwater runoff or siltation. Post-construction peak rates of runoff from the site will be lower than the existing conditions for all analyzed storm events. Appropriate steps will be taken to properly mitigate erosion and sedimentation through the use of temporary and permanent Best Management Practices for sediment and erosion control, including stone drip strips, vegetated buffers and a riprap plunge pool.

Section 2

Aerial Photo and USGS Map

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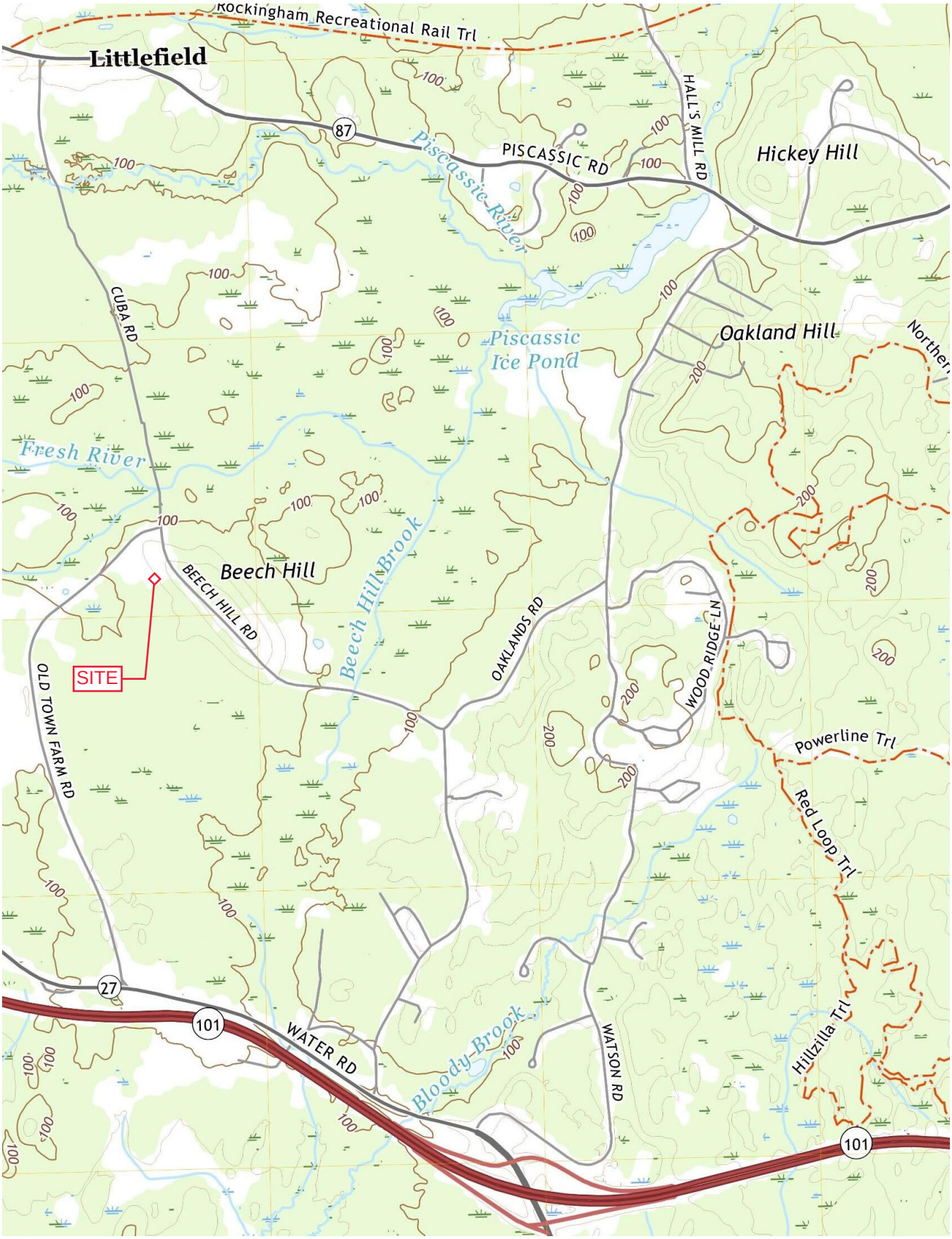
Rockingham Recreational Rail Trl
Littlefield
87
PISCASSIC RD
HALL'S MILL RD
Hickey Hill
Piscassic River
Piscassic Ice Pond
Oakland Hill
CUBA RD
Fresh River
Beech Hill Brook
Beech Hill
BEECH HILL RD
OAKLANDS RD
WOOD RIDGE LN
SITE
OLD TOWN FARM RD
Powerline Trl
Red Loop Trl
27
101
WATER RD
Bloody Brook
WATSON RD
Hillzilla Trl
100
200


Cubie Rd
Cubie Rd
Fresh River
Old Town Farm Rd
Beech Hill Rd
Curtis Tree Care
Old Town Farm Rd
Beech Hill Rd
SITE
Beech Hill Rd
Blue Hawk Dr
DQ'ed Motorsports
Temporarily closed
Gautreau's Auto
Restoration

Section 4

Drainage Calculations

Post-Development
2-Year, 24-Hour Summary
10-Year, 24-Hour Complete
25-Year, 24-Hour Summary
50-Year, 24-Hour Complete

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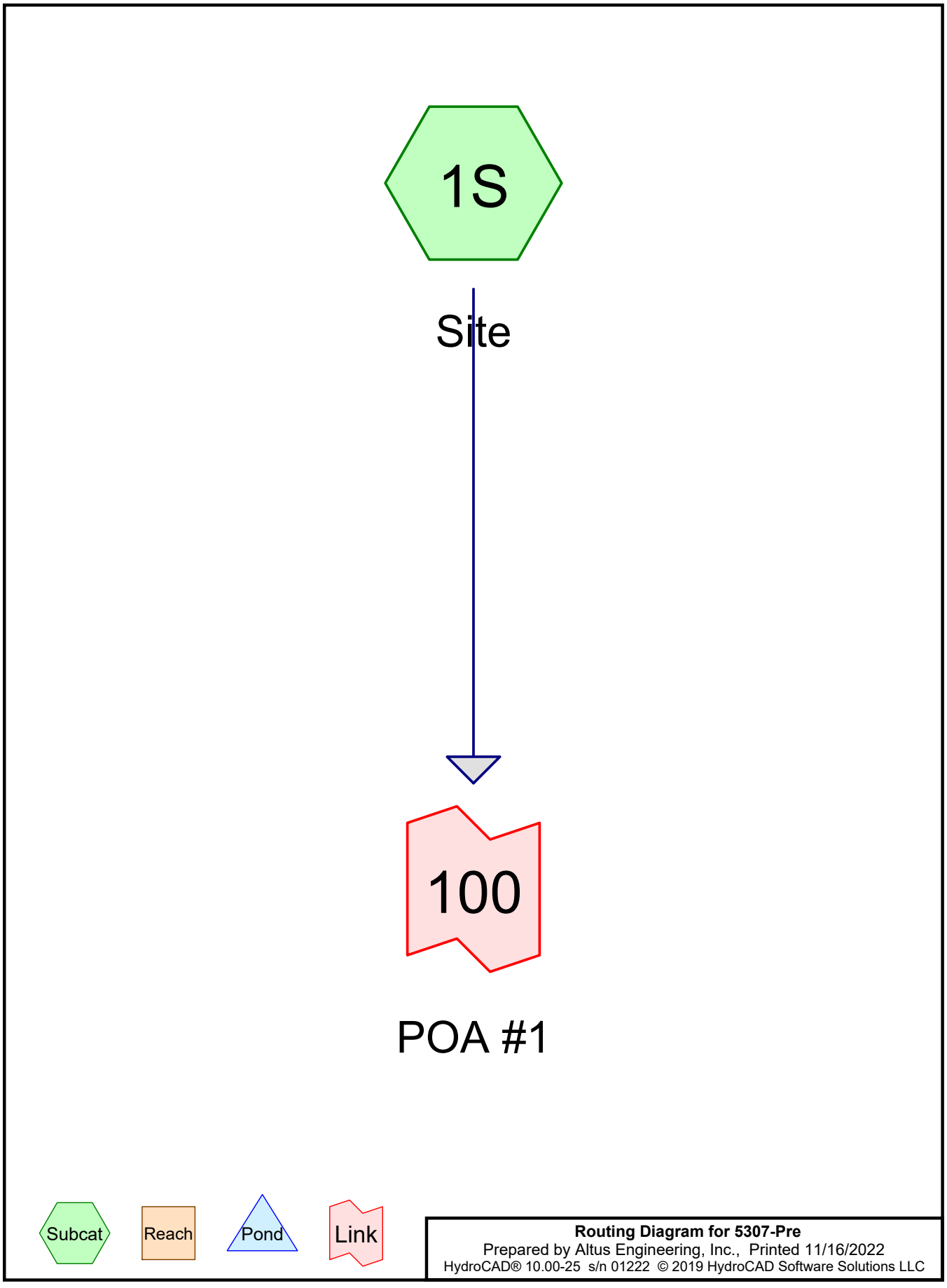


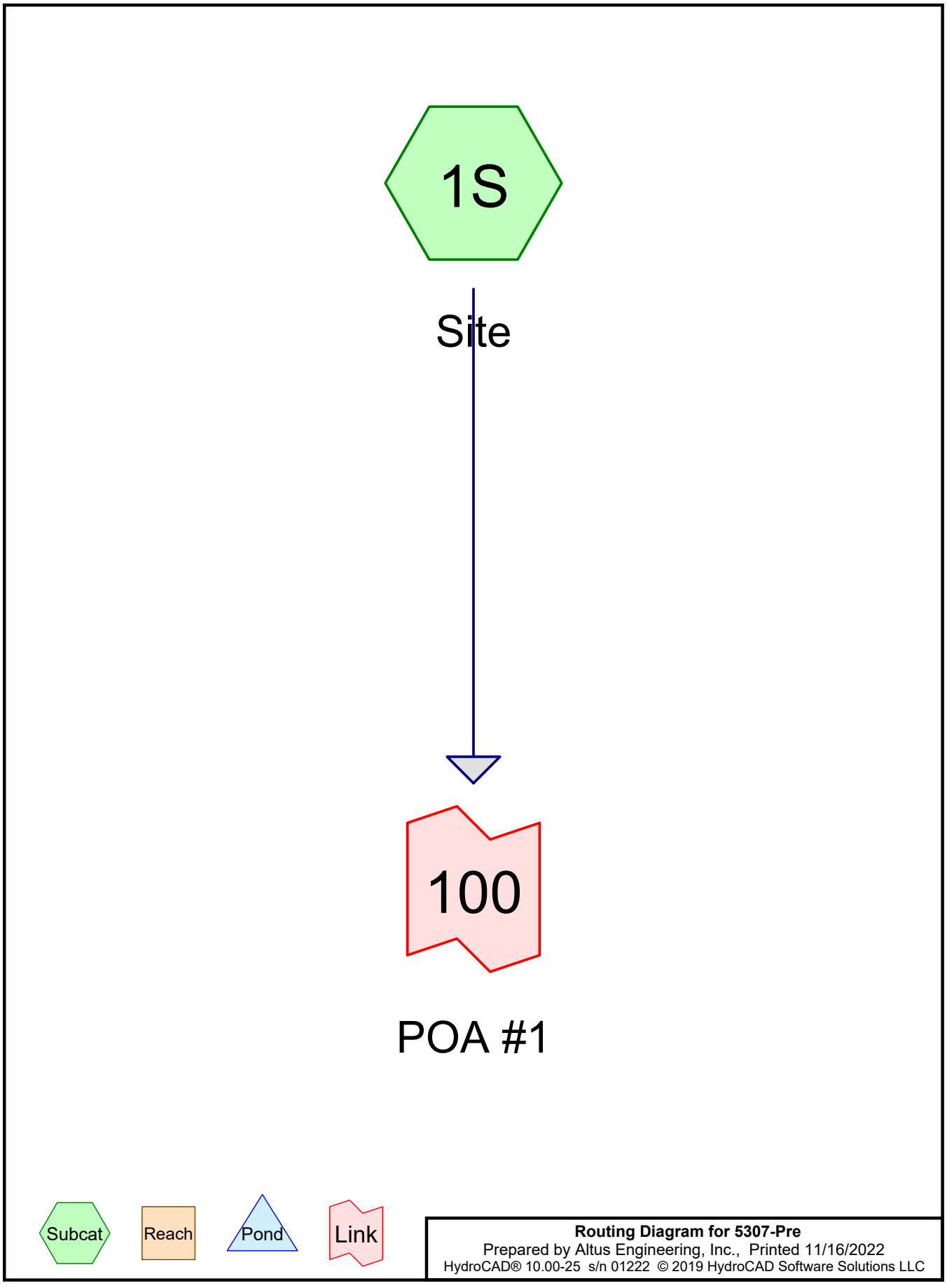
Routing Diagram for 5307-Pre
Prepared by Altus Engineering, Inc., Printed 11/16/2022

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,151,880 sf 1.69% Impervious Runoff Depth=1.13"
Flow Length=1,308' Tc=21.8 min CN=70 Runoff=21.28 cfs 2.498 af

Link 100: POA #1 Inflow=21.28 cfs 2.498 af
Primary=21.28 cfs 2.498 af

Total Runoff Area = 26.444 ac Runoff Volume = 2.498 af Average Runoff Depth = 1.13"
98.31% Pervious = 25.996 ac 1.69% Impervious = 0.448 ac



Routing Diagram for 5307-Pre
Prepared by Altus Engineering, Inc., Printed 11/16/2022

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.684	61	>75% Grass cover, Good, HSG B (1S)
6.055	74	>75% Grass cover, Good, HSG C (1S)
0.006	98	Gravel, HSG C (1S)
0.333	98	Unconnected pavement, HSG C (1S)
0.109	98	Unconnected roofs, HSG C (1S)
0.295	55	Woods, Good, HSG B (1S)
15.851	70	Woods, Good, HSG C (1S)
0.111	77	Woods, Good, HSG D (1S)
26.444	**70**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
3.979	HSG B	1S
22.354	HSG C	1S
0.111	HSG D	1S
0.000	Other	
26.444		**TOTAL AREA**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,151,880 sf 1.69% Impervious Runoff Depth=2.53"
Flow Length=1,308' Tc=21.8 min CN=70 Runoff=50.35 cfs 5.576 af

Link 100: POA #1 Inflow=50.35 cfs 5.576 af
Primary=50.35 cfs 5.576 af

Total Runoff Area = 26.444 ac Runoff Volume = 5.576 af Average Runoff Depth = 2.53"
98.31% Pervious = 25.996 ac 1.69% Impervious = 0.448 ac

Summary for Subcatchment 1S: Site

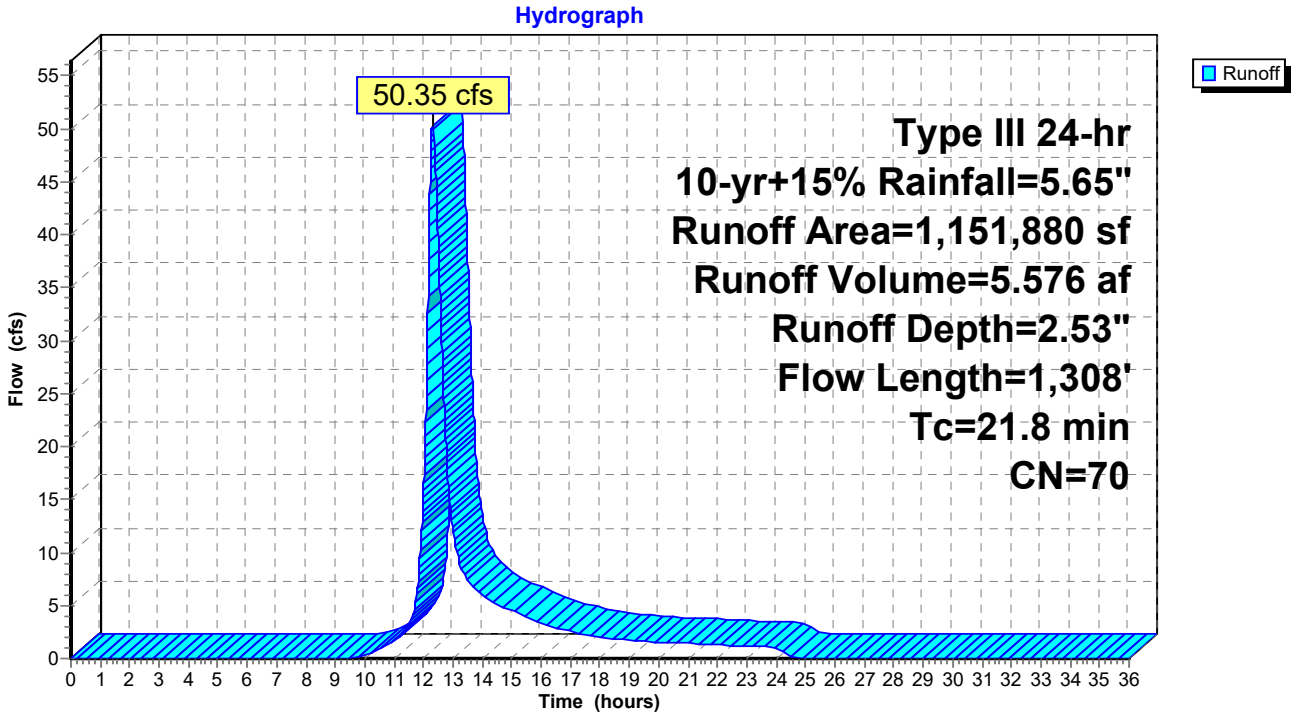
Runoff = 50.35 cfs @ 12.31 hrs, Volume= 5.576 af, Depth= 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

	Area (sf)	CN	Description
	14,493	98	Unconnected pavement, HSG C
	4,764	98	Unconnected roofs, HSG C
*	254	98	Gravel, HSG C
	4,830	77	Woods, Good, HSG D
	263,769	74	>75% Grass cover, Good, HSG C
	690,466	70	Woods, Good, HSG C
	160,466	61	>75% Grass cover, Good, HSG B
	12,838	55	Woods, Good, HSG B
	1,151,880	70	Weighted Average
	1,132,369		98.31% Pervious Area
	19,511		1.69% Impervious Area
	19,257		98.70% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0200	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.10"
1.0	149	0.2449	2.47		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.6	309	0.0493	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	224	0.0241	1.09		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
8.0	438	0.0329	0.91		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.6	174	0.0160	0.63		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
21.8	1,308	Total			

Subcatchment 1S: Site

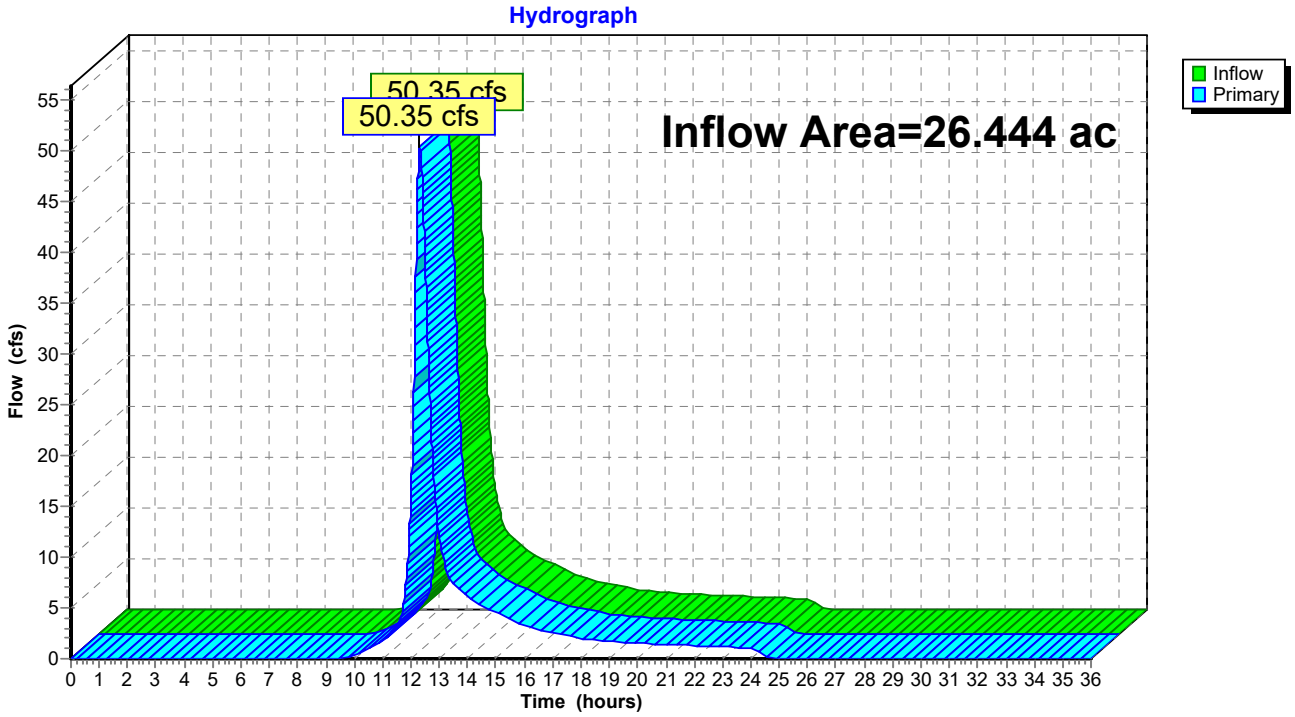


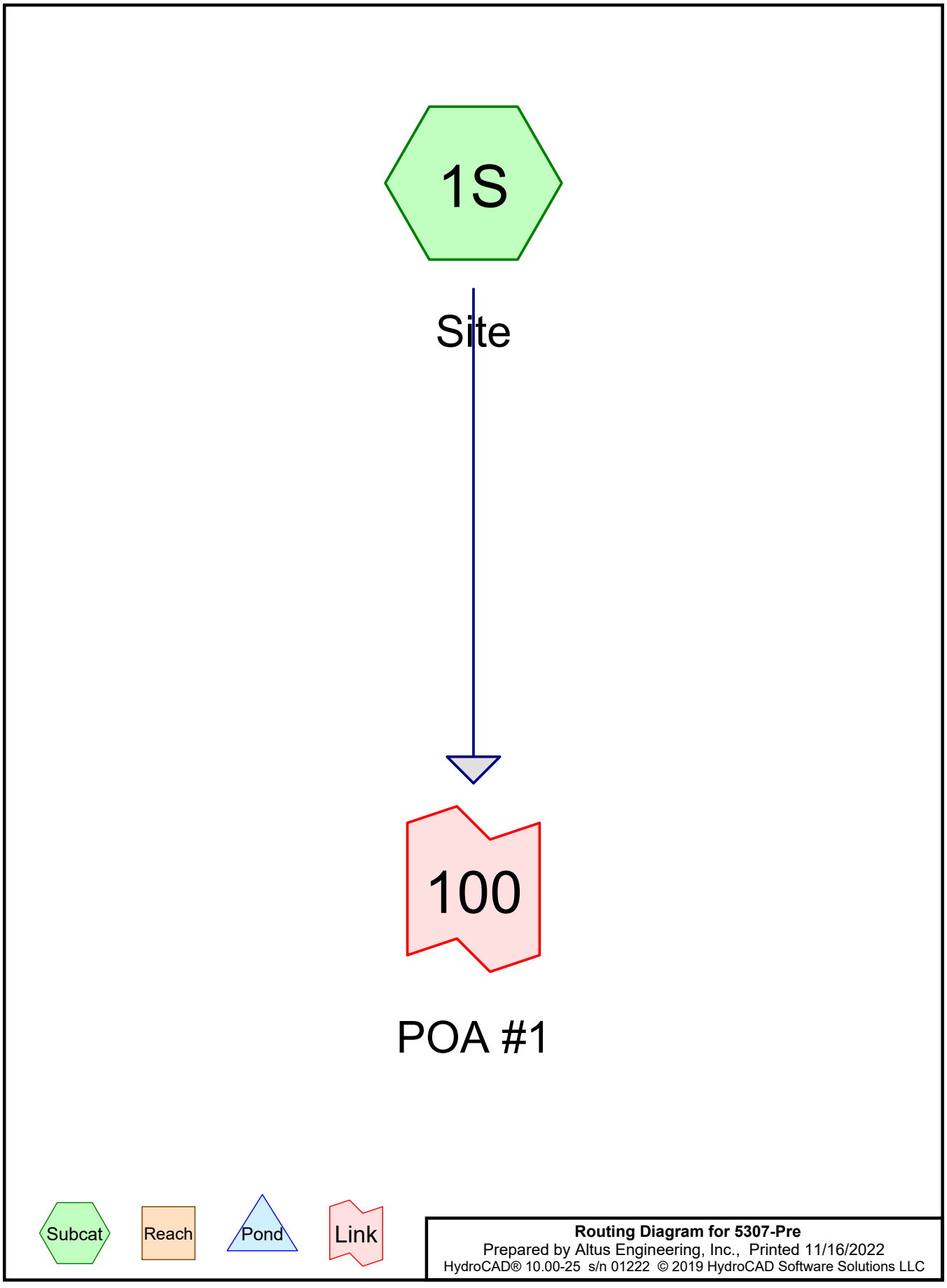
Summary for Link 100: POA #1

Inflow Area = 26.444 ac, 1.69% Impervious, Inflow Depth = 2.53" for 10-yr+15% event
Inflow = 50.35 cfs @ 12.31 hrs, Volume= 5.576 af
Primary = 50.35 cfs @ 12.31 hrs, Volume= 5.576 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 100: POA #1





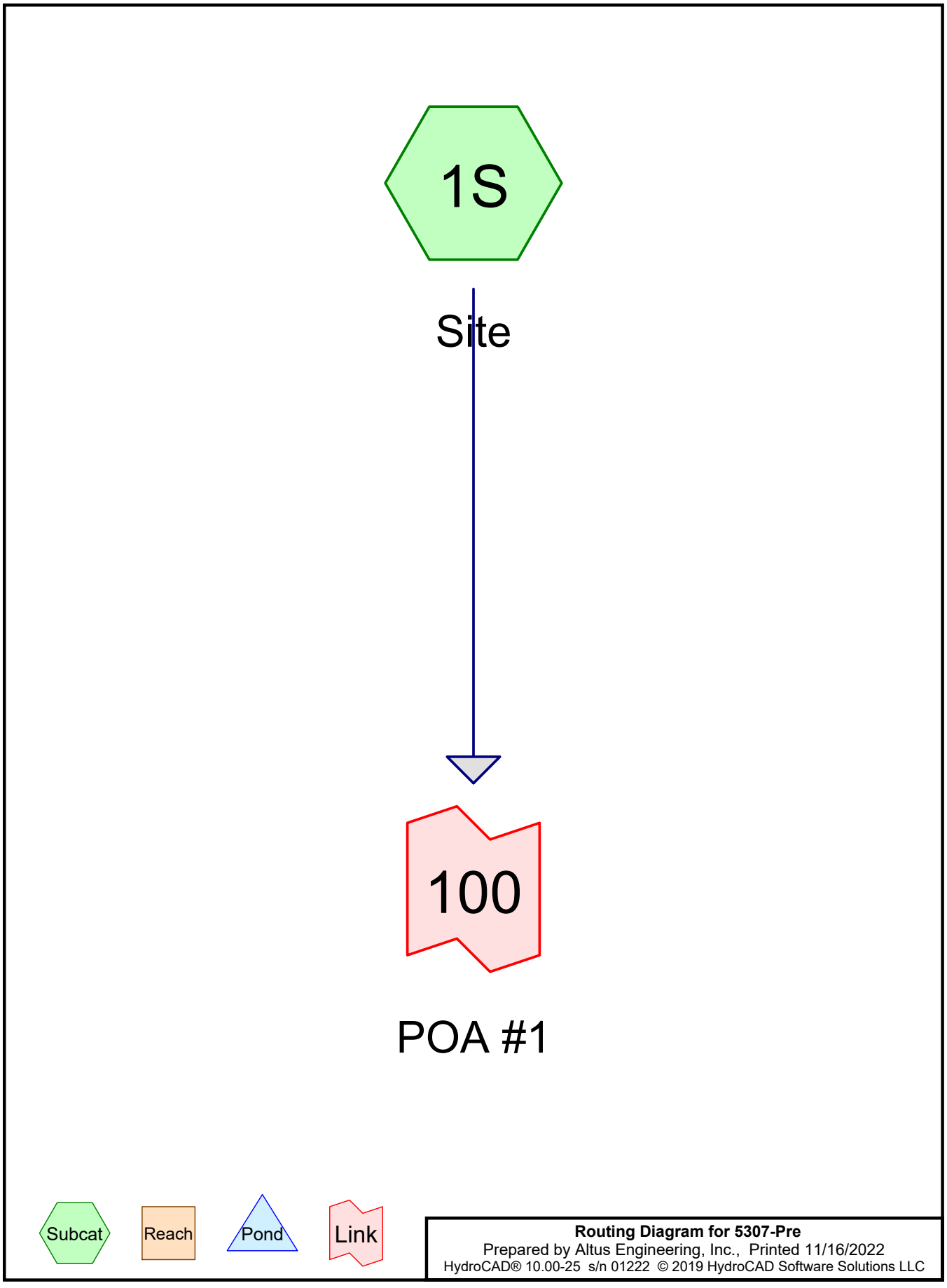
Routing Diagram for 5307-Pre
Prepared by Altus Engineering, Inc., Printed 11/16/2022

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,151,880 sf 1.69% Impervious Runoff Depth=3.78"
Flow Length=1,308' Tc=21.8 min CN=70 Runoff=75.96 cfs 8.323 af

Link 100: POA #1 Inflow=75.96 cfs 8.323 af
Primary=75.96 cfs 8.323 af

Total Runoff Area = 26.444 ac Runoff Volume = 8.323 af Average Runoff Depth = 3.78"
98.31% Pervious = 25.996 ac 1.69% Impervious = 0.448 ac



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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,151,880 sf 1.69% Impervious Runoff Depth=5.01"
Flow Length=1,308' Tc=21.8 min CN=70 Runoff=100.95 cfs 11.041 af

Link 100: POA #1 Inflow=100.95 cfs 11.041 af
Primary=100.95 cfs 11.041 af

Total Runoff Area = 26.444 ac Runoff Volume = 11.041 af Average Runoff Depth = 5.01"
98.31% Pervious = 25.996 ac 1.69% Impervious = 0.448 ac

Section 3

Drainage Calculations

Pre-Development
2-Year, 24-Hour Summary
10-Year, 24-Hour Complete
25-Year, 24-Hour Summary
50-Year, 24-Hour Complete

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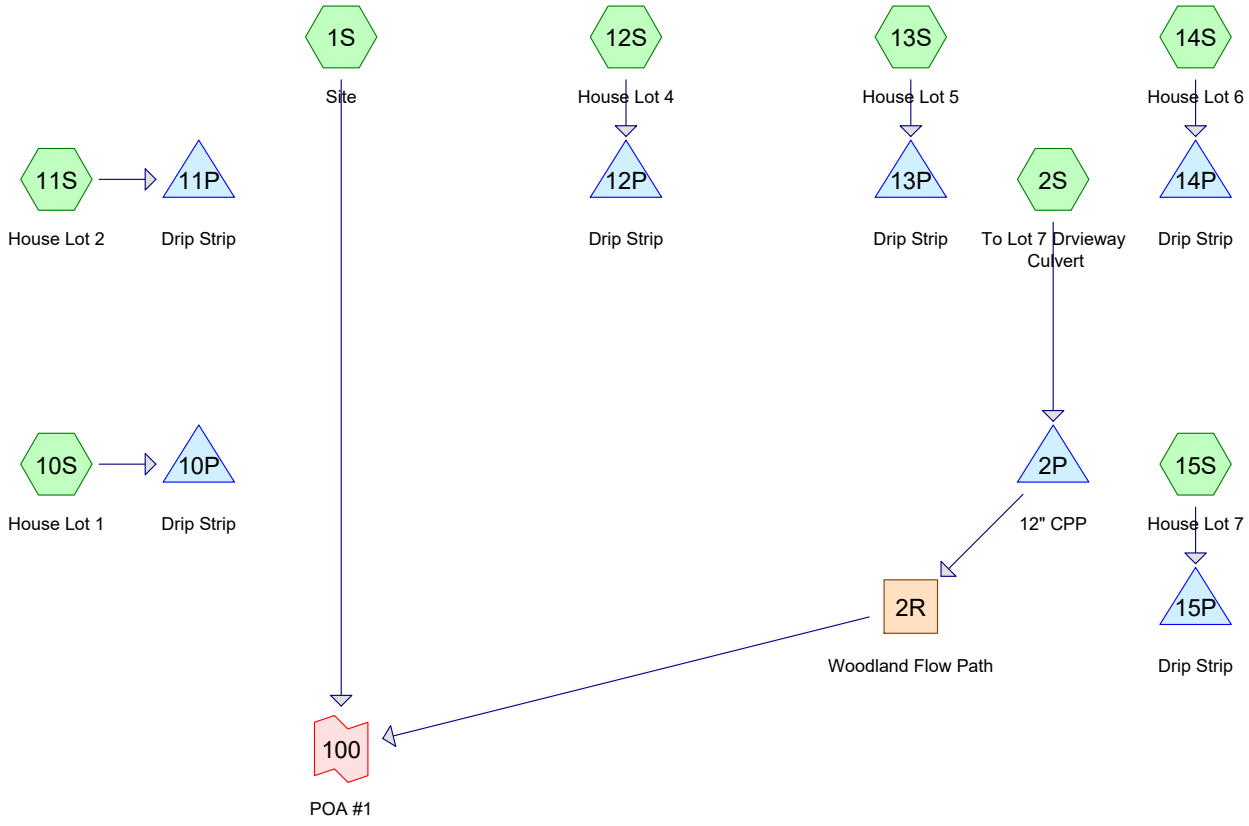


Subcat Reach Pond Link

Routing Diagram for 5307-Post
Prepared by Altus Engineering, Inc., Printed 11/16/2022

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,038,165 sf 2.75% Impervious Runoff Depth=1.13"
Flow Length=1,231' Tc=20.6 min CN=70 Runoff=19.59 cfs 2.252 af

Subcatchment 2S: To Lot 7 Drvieway Runoff Area=102,930 sf 4.36% Impervious Runoff Depth=1.32"
Flow Length=455' Tc=5.0 min UI Adjusted CN=73 Runoff=3.64 cfs 0.259 af

Subcatchment 10S: House Lot 1 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 11S: House Lot 2 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 12S: House Lot 4 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 13S: House Lot 5 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 14S: House Lot 6 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 15S: House Lot 7 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Reach 2R: Woodland Flow Path Avg. Flow Depth=0.16' Max Vel=0.61 fps Inflow=1.14 cfs 0.259 af
n=0.100 L=561.0' S=0.0241 '/' Capacity=35.11 cfs Outflow=1.10 cfs 0.259 af

Pond 2P: 12" CPP Peak Elev=120.94' Storage=2,321 cf Inflow=3.64 cfs 0.259 af
Outflow=1.14 cfs 0.259 af

Pond 10P: Drip Strip Peak Elev=0.20' Storage=102 cf Inflow=0.15 cfs 0.012 af
Outflow=0.03 cfs 0.012 af

Pond 11P: Drip Strip Peak Elev=0.20' Storage=102 cf Inflow=0.15 cfs 0.012 af
Outflow=0.03 cfs 0.012 af

Pond 12P: Drip Strip Peak Elev=0.31' Storage=158 cf Inflow=0.15 cfs 0.012 af
Outflow=0.02 cfs 0.012 af

Pond 13P: Drip Strip Peak Elev=0.31' Storage=158 cf Inflow=0.15 cfs 0.012 af
Outflow=0.02 cfs 0.012 af

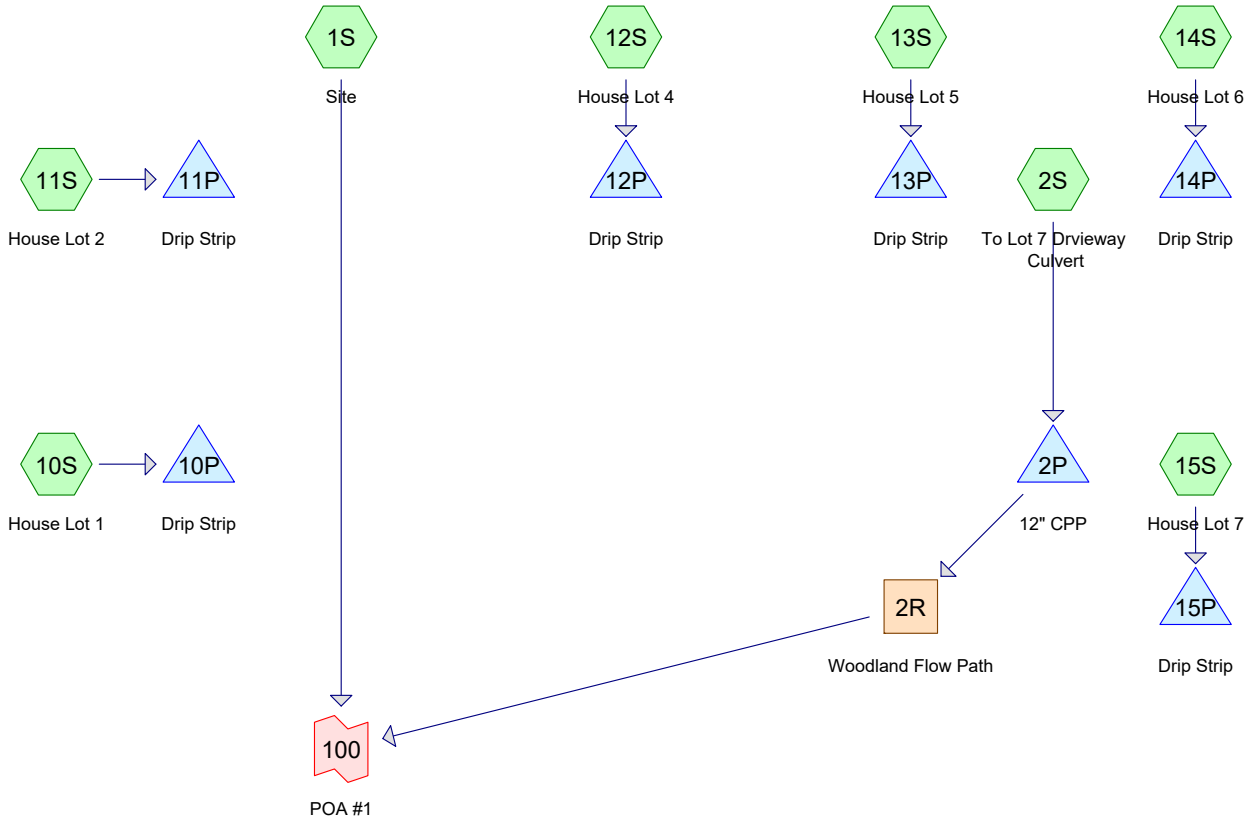
Pond 14P: Drip Strip Peak Elev=0.31' Storage=158 cf Inflow=0.15 cfs 0.012 af
Outflow=0.02 cfs 0.012 af

Pond 15P: Drip Strip Peak Elev=0.31' Storage=158 cf Inflow=0.15 cfs 0.012 af
Outflow=0.02 cfs 0.012 af

Link 100: POA #1

Inflow=20.53 cfs 2.511 af
Primary=20.53 cfs 2.511 af

Total Runoff Area = 26.444 ac Runoff Volume = 2.582 af Average Runoff Depth = 1.17"
96.20% Pervious = 25.438 ac 3.80% Impervious = 1.006 ac



Subcat Reach Pond Link

Routing Diagram for 5307-Post
Prepared by Altus Engineering, Inc., Printed 11/16/2022

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.525	61	>75% Grass cover, Good, HSG B (1S)
8.252	74	>75% Grass cover, Good, HSG C (1S, 2S)
0.006	98	Gravel, HSG C (1S)
0.081	98	Unconnected pavement, HSG B (1S)
0.562	98	Unconnected pavement, HSG C (1S, 2S)
0.083	98	Unconnected roofs, HSG B (10S, 11S)
0.275	98	Unconnected roofs, HSG C (1S, 12S, 13S, 14S, 15S)
0.290	55	Woods, Good, HSG B (1S)
13.260	70	Woods, Good, HSG C (1S, 2S)
0.111	77	Woods, Good, HSG D (1S)
26.444	**71**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
3.979	HSG B	1S, 10S, 11S
22.354	HSG C	1S, 2S, 12S, 13S, 14S, 15S
0.111	HSG D	1S
0.000	Other	
26.444		**TOTAL AREA**

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,038,165 sf 2.75% Impervious Runoff Depth=2.53"
Flow Length=1,231' Tc=20.6 min CN=70 Runoff=46.59 cfs 5.025 af

Subcatchment 2S: To Lot 7 Drvieway Runoff Area=102,930 sf 4.36% Impervious Runoff Depth=2.80"
Flow Length=455' Tc=5.0 min UI Adjusted CN=73 Runoff=8.03 cfs 0.551 af

Subcatchment 10S: House Lot 1 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=5.41"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 11S: House Lot 2 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=5.41"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 12S: House Lot 4 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=5.41"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 13S: House Lot 5 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=5.41"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 14S: House Lot 6 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=5.41"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 15S: House Lot 7 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=5.41"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Reach 2R: Woodland Flow Path Avg. Flow Depth=0.29' Max Vel=0.89 fps Inflow=3.71 cfs 0.551 af
n=0.100 L=561.0' S=0.0241 '/' Capacity=35.11 cfs Outflow=3.35 cfs 0.551 af

Pond 2P: 12" CPP Peak Elev=121.50' Storage=4,936 cf Inflow=8.03 cfs 0.551 af
Outflow=3.71 cfs 0.551 af

Pond 10P: Drip Strip Peak Elev=0.43' Storage=214 cf Inflow=0.23 cfs 0.019 af
Outflow=0.03 cfs 0.019 af

Pond 11P: Drip Strip Peak Elev=0.43' Storage=214 cf Inflow=0.23 cfs 0.019 af
Outflow=0.03 cfs 0.019 af

Pond 12P: Drip Strip Peak Elev=0.59' Storage=295 cf Inflow=0.23 cfs 0.019 af
Outflow=0.02 cfs 0.019 af

Pond 13P: Drip Strip Peak Elev=0.59' Storage=295 cf Inflow=0.23 cfs 0.019 af
Outflow=0.02 cfs 0.019 af

Pond 14P: Drip Strip Peak Elev=0.59' Storage=295 cf Inflow=0.23 cfs 0.019 af
Outflow=0.02 cfs 0.019 af

Pond 15P: Drip Strip Peak Elev=0.59' Storage=295 cf Inflow=0.23 cfs 0.019 af
Outflow=0.02 cfs 0.019 af

Link 100: POA #1

Inflow=49.57 cfs 5.577 af
Primary=49.57 cfs 5.577 af

Total Runoff Area = 26.444 ac Runoff Volume = 5.689 af Average Runoff Depth = 2.58"
96.20% Pervious = 25.438 ac 3.80% Impervious = 1.006 ac

Summary for Subcatchment 1S: Site

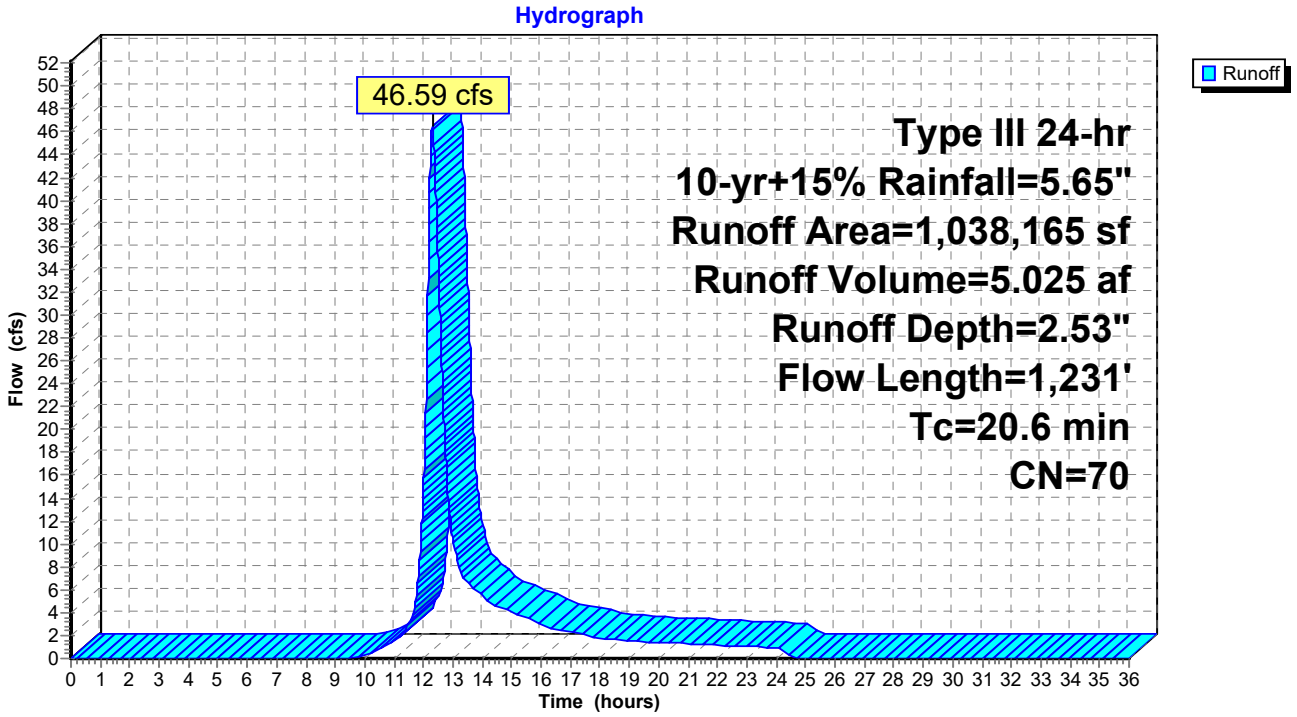
Runoff = 46.59 cfs @ 12.29 hrs, Volume= 5.025 af, Depth= 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

	Area (sf)	CN	Description
	12,400	98	Unconnected pavement, HSG C
	4,764	98	Unconnected roofs, HSG C
	7,599	98	Unconnected pavement, HSG C
	3,521	98	Unconnected pavement, HSG B
*	254	98	Gravel, HSG C
	4,830	77	Woods, Good, HSG D
	293,688	74	>75% Grass cover, Good, HSG C
	544,926	70	Woods, Good, HSG C
	153,560	61	>75% Grass cover, Good, HSG B
	12,623	55	Woods, Good, HSG B
	1,038,165	70	Weighted Average
	1,009,627		97.25% Pervious Area
	28,538		2.75% Impervious Area
	28,284		99.11% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	12	0.0200	1.02		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.10"
1.2	171	0.2326	2.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.2	212	0.0493	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	224	0.0241	1.09		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
8.0	438	0.0329	0.91		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.6	174	0.0160	0.63		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
20.6	1,231	Total			

Subcatchment 1S: Site



Summary for Subcatchment 2S: To Lot 7 Drvieway Culvert

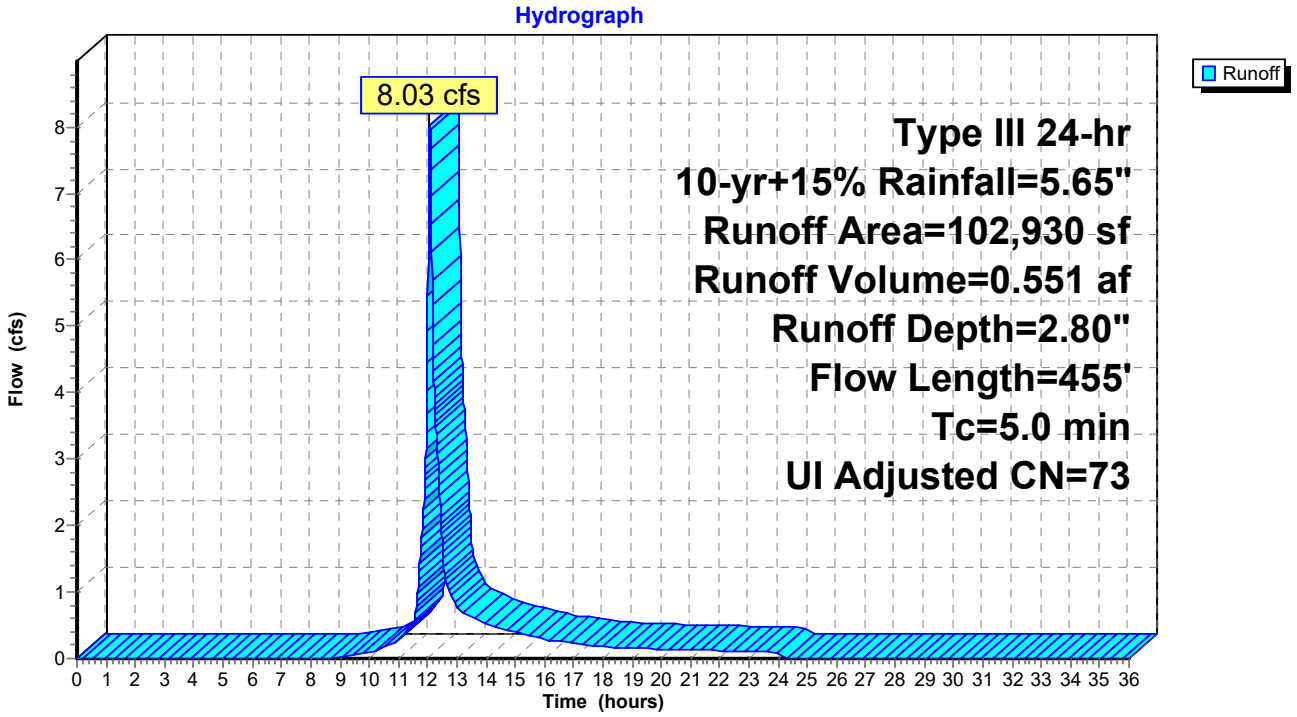
Runoff = 8.03 cfs @ 12.08 hrs, Volume= 0.551 af, Depth= 2.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

Area (sf)	CN	Adj	Description
2,093	98		Unconnected pavement, HSG C
2,395	98		Unconnected pavement, HSG C
65,780	74		>75% Grass cover, Good, HSG C
32,662	70		Woods, Good, HSG C
102,930	74	73	Weighted Average, UI Adjusted
98,442			95.64% Pervious Area
4,488			4.36% Impervious Area
4,488			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	14	0.0200	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.10"
0.6	117	0.2222	3.30		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.5	71	0.1972	2.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.3	183	0.0345	0.93		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	70	0.0100	3.02	15.11	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.035 Earth, dense weeds
5.0	455	Total			

Subcatchment 2S: To Lot 7 Drvieway Culvert



Summary for Subcatchment 10S: House Lot 1

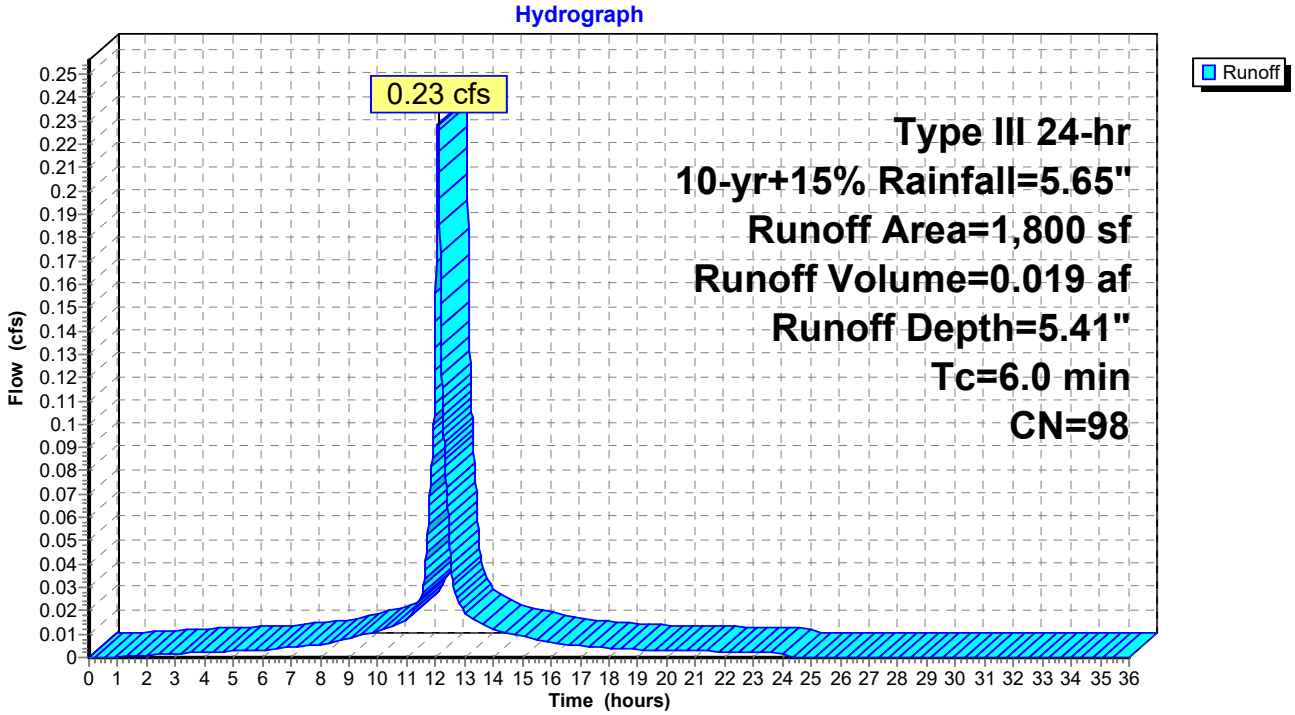
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

Area (sf)	CN	Description
1,800	98	Unconnected roofs, HSG B
1,800		100.00% Impervious Area
1,800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 10S: House Lot 1



Summary for Subcatchment 11S: House Lot 2

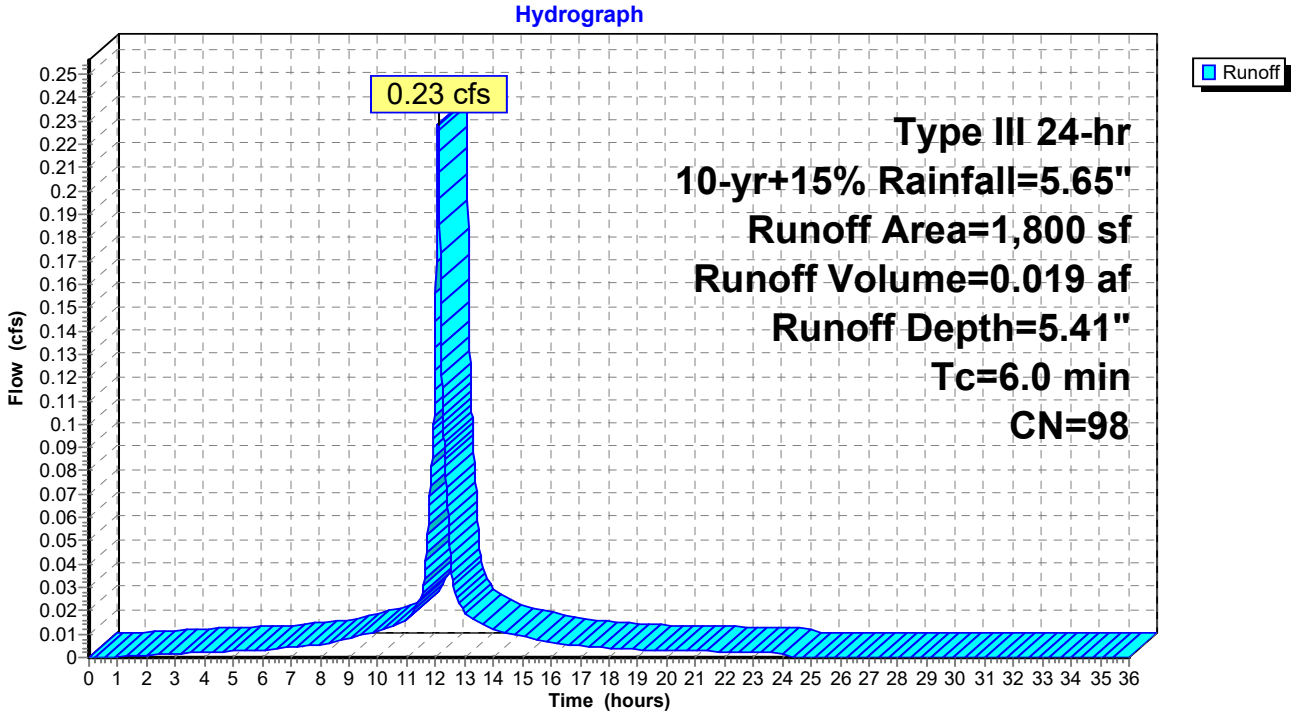
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

Area (sf)	CN	Description
1,800	98	Unconnected roofs, HSG B
1,800		100.00% Impervious Area
1,800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: House Lot 2



Summary for Subcatchment 12S: House Lot 4

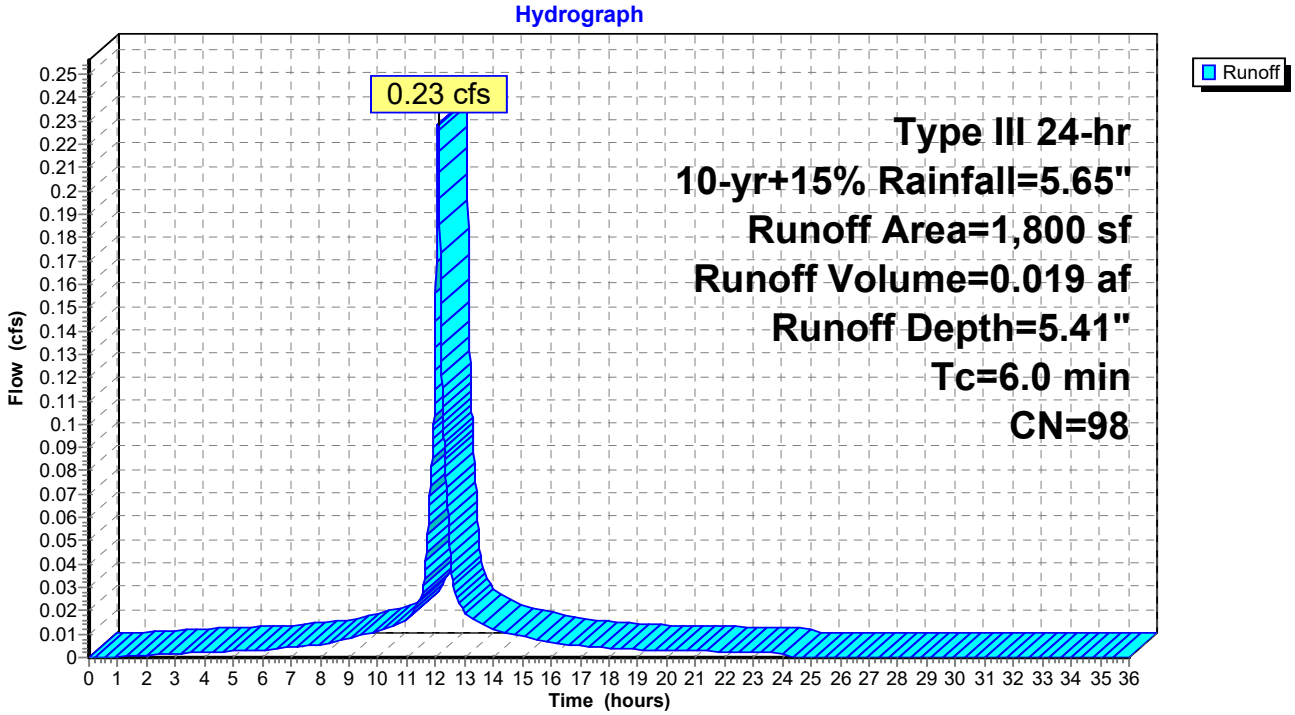
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

Area (sf)	CN	Description
1,800	98	Unconnected roofs, HSG C
1,800		100.00% Impervious Area
1,800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 12S: House Lot 4



Summary for Subcatchment 13S: House Lot 5

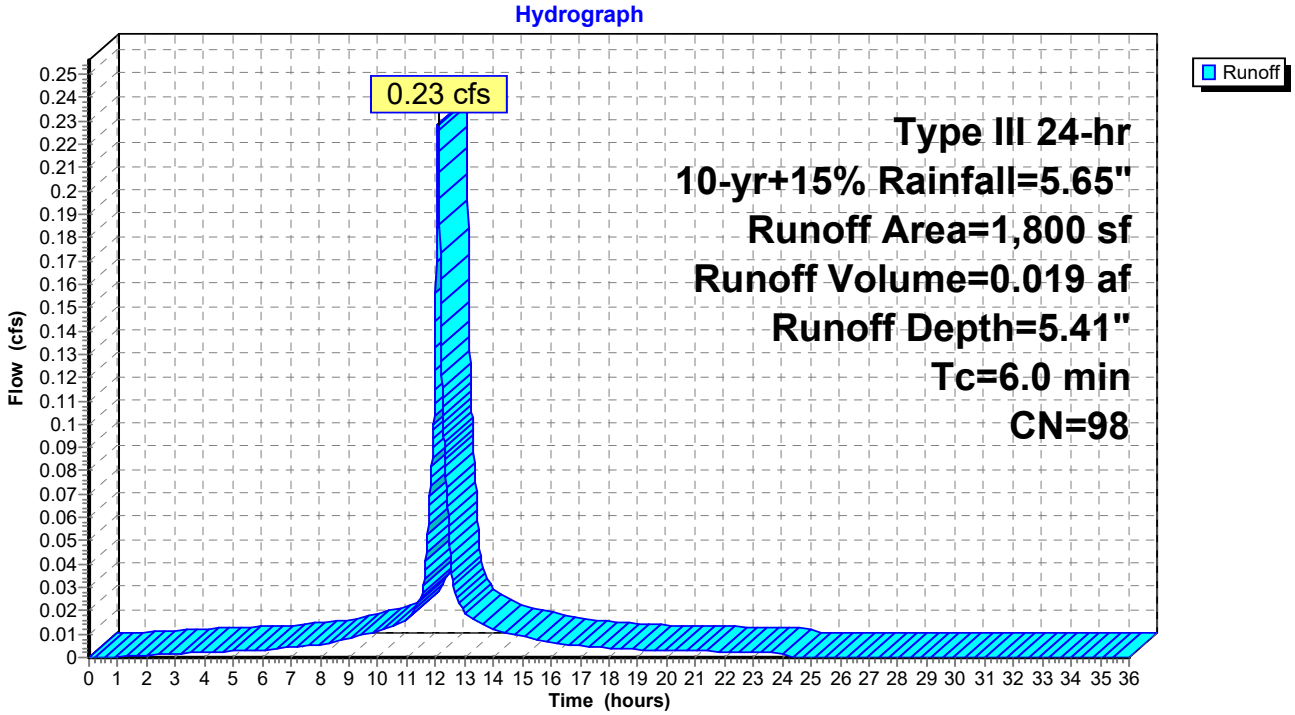
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

Area (sf)	CN	Description
1,800	98	Unconnected roofs, HSG C
1,800		100.00% Impervious Area
1,800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 13S: House Lot 5



Summary for Subcatchment 14S: House Lot 6

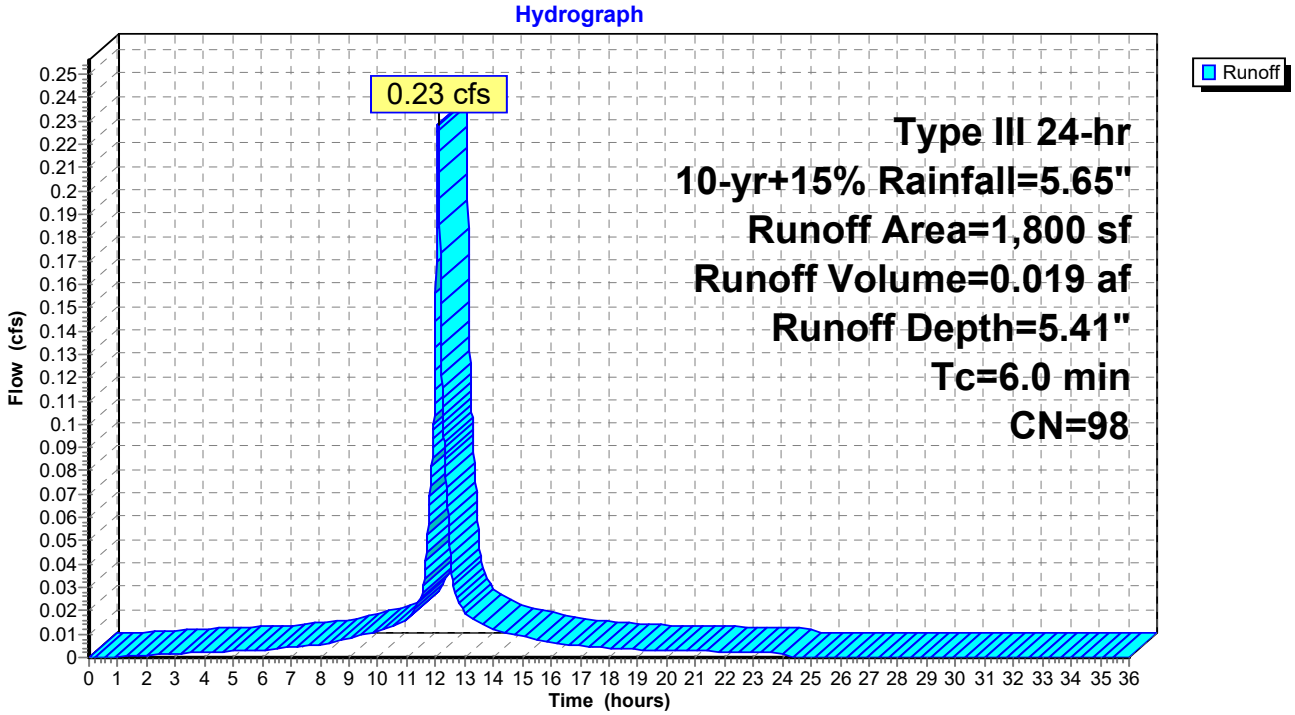
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

Area (sf)	CN	Description
1,800	98	Unconnected roofs, HSG C
1,800		100.00% Impervious Area
1,800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 14S: House Lot 6



Summary for Subcatchment 15S: House Lot 7

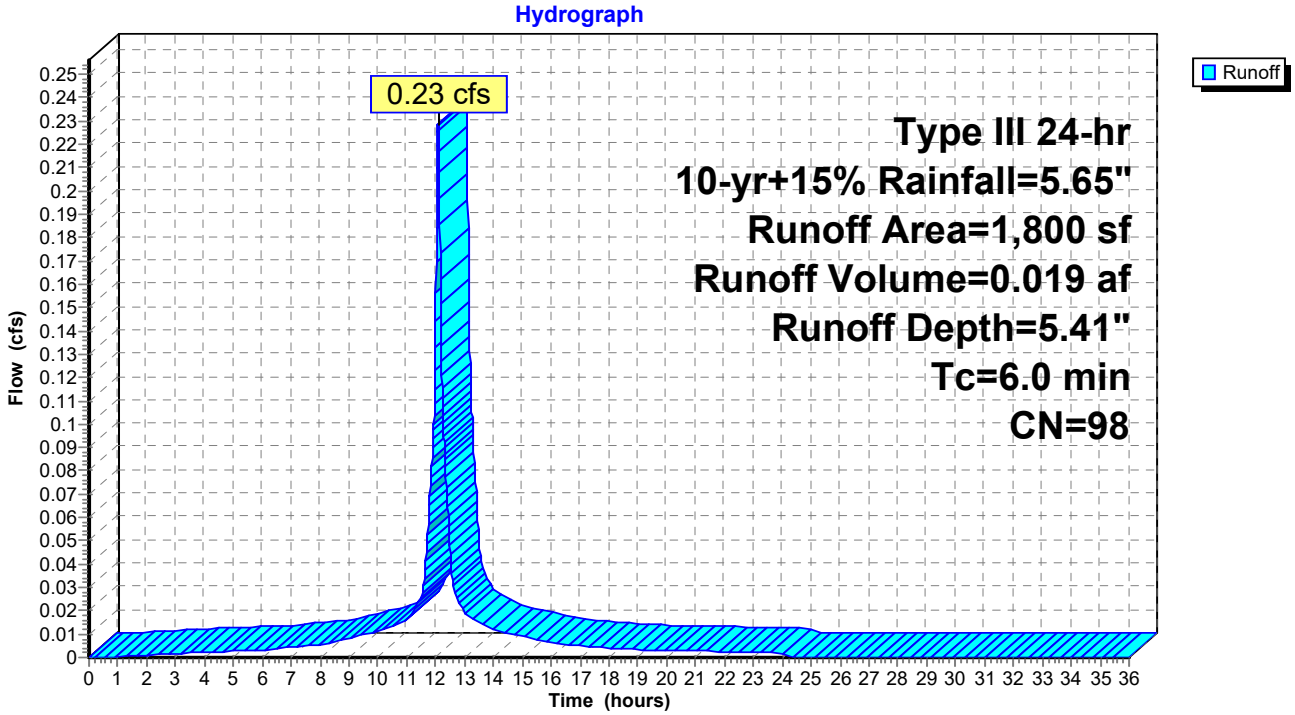
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr+15% Rainfall=5.65"

Area (sf)	CN	Description
1,800	98	Unconnected roofs, HSG C
1,800		100.00% Impervious Area
1,800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 15S: House Lot 7



Summary for Reach 2R: Woodland Flow Path

Inflow Area = 2.363 ac, 4.36% Impervious, Inflow Depth = 2.80" for 10-yr+15% event
Inflow = 3.71 cfs @ 12.25 hrs, Volume= 0.551 af
Outflow = 3.35 cfs @ 12.42 hrs, Volume= 0.551 af, Atten= 10%, Lag= 9.9 min

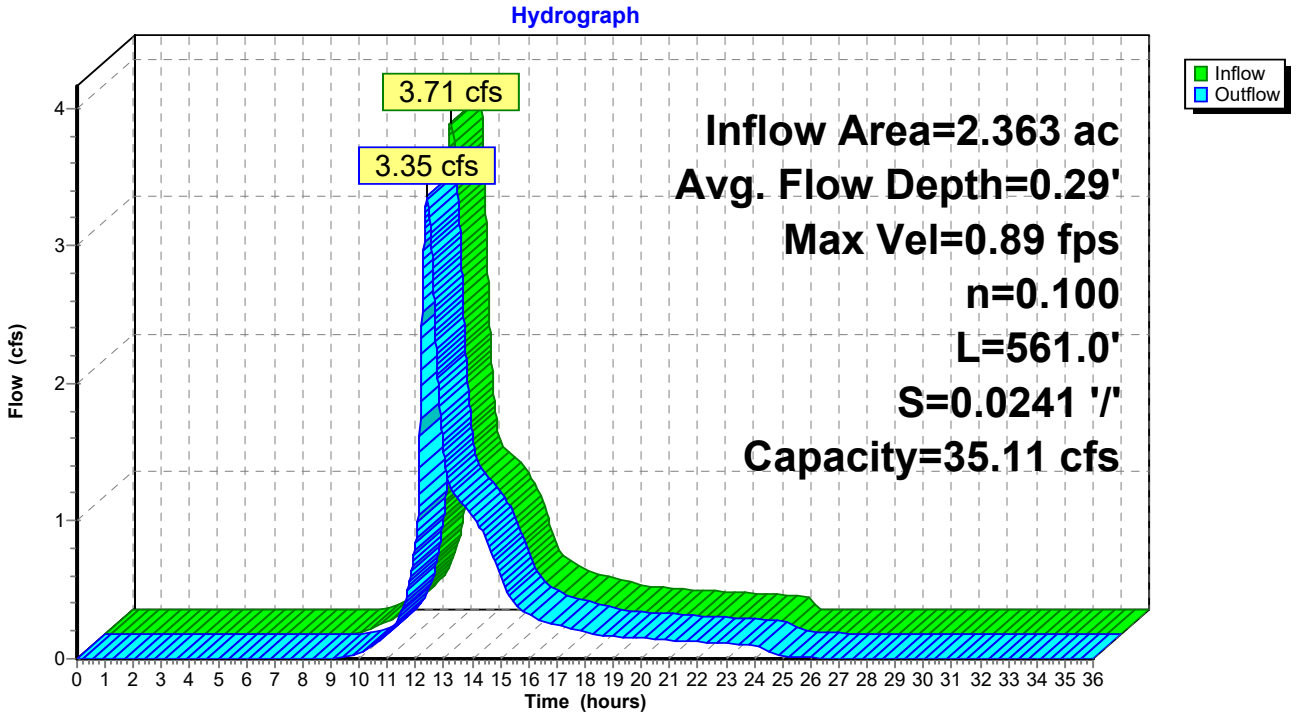
Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.89 fps, Min. Travel Time= 10.6 min
Avg. Velocity = 0.26 fps, Avg. Travel Time= 36.3 min

Peak Storage= 2,124 cf @ 12.42 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 1.00' Flow Area= 20.0 sf, Capacity= 35.11 cfs

10.00' x 1.00' deep channel, n= 0.100 Very weedy reaches w/pools
Side Slope Z-value= 10.0 '/' Top Width= 30.00'
Length= 561.0' Slope= 0.0241 '/'
Inlet Invert= 119.00', Outlet Invert= 105.50'

‡

Reach 2R: Woodland Flow Path



Summary for Pond 2P: 12" CPP

Inflow Area = 2.363 ac, 4.36% Impervious, Inflow Depth = 2.80" for 10-yr+15% event
Inflow = 8.03 cfs @ 12.08 hrs, Volume= 0.551 af
Outflow = 3.71 cfs @ 12.25 hrs, Volume= 0.551 af, Atten= 54%, Lag= 10.6 min
Primary = 3.71 cfs @ 12.25 hrs, Volume= 0.551 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 121.50' @ 12.25 hrs Surf.Area= 6,004 sf Storage= 4,936 cf
Flood Elev= 122.34' Surf.Area= 11,042 sf Storage= 11,849 cf

Plug-Flow detention time= 19.0 min calculated for 0.551 af (100% of inflow)
Center-of-Mass det. time= 19.0 min (852.0 - 833.1)

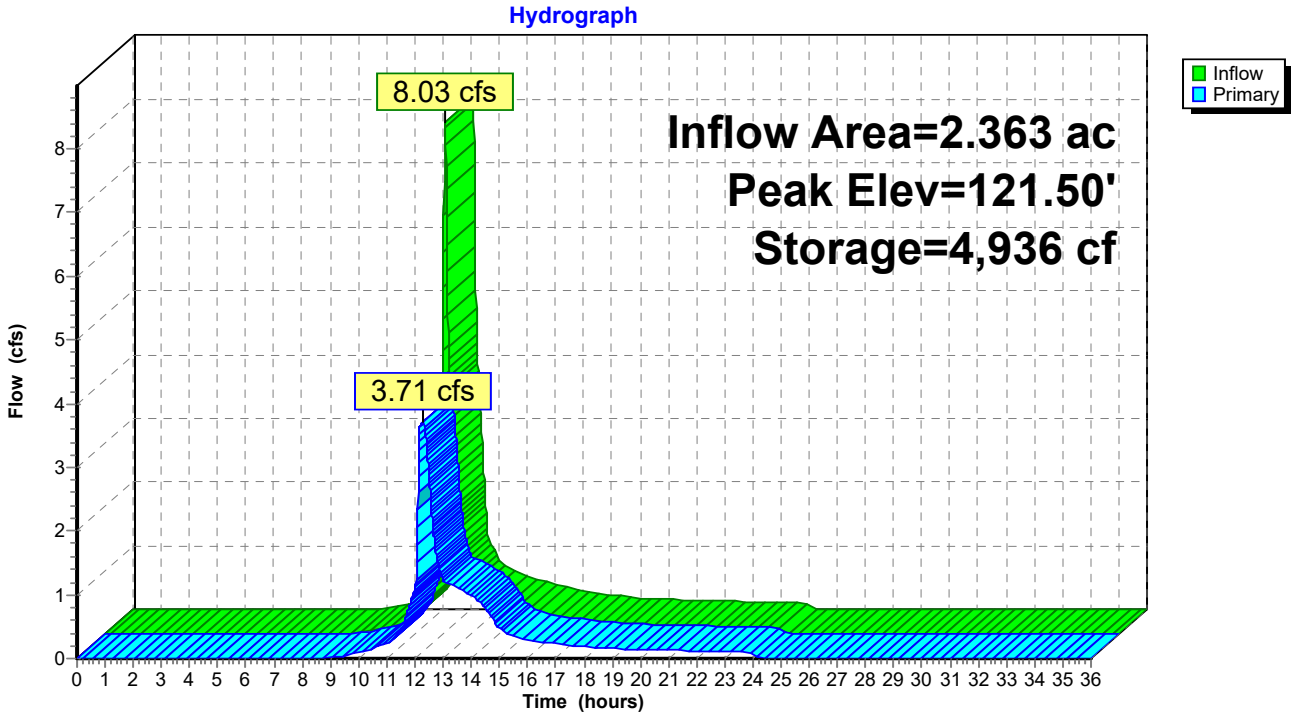
Volume	Invert	Avail.Storage	Storage Description
#1	119.25'	20,868 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
119.25	100	0	0
120.00	726	310	310
121.00	3,712	2,219	2,529
122.00	8,339	6,026	8,554
123.00	16,289	12,314	20,868

Device	Routing	Invert	Outlet Devices
#1	Primary	119.25'	**12.0" Round Culvert** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 119.25' / 119.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	119.25'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	121.10'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	122.34'	**Asymmetrical Weir, C= 3.27** Offset (feet) -37.70 0.00 37.70 Height (feet) 0.34 0.00 0.34

Primary OutFlow Max=3.71 cfs @ 12.25 hrs HW=121.50' TW=119.26' (Dynamic Tailwater)
- **1=Culvert** (Passes 3.71 cfs of 5.00 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.34 cfs @ 6.80 fps)
  - **3=Orifice/Grate** (Orifice Controls 2.38 cfs @ 3.03 fps)
- **4=Asymmetrical Weir** (Controls 0.00 cfs)

Pond 2P: 12" CPP



Summary for Pond 10P: Drip Strip

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth = 5.41" for 10-yr+15% event
Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af
Outflow = 0.03 cfs @ 11.80 hrs, Volume= 0.019 af, Atten= 85%, Lag= 0.0 min
Discarded = 0.03 cfs @ 11.80 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 0.43' @ 12.56 hrs Surf.Area= 504 sf Storage= 214 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 32.9 min (779.0 - 746.1)

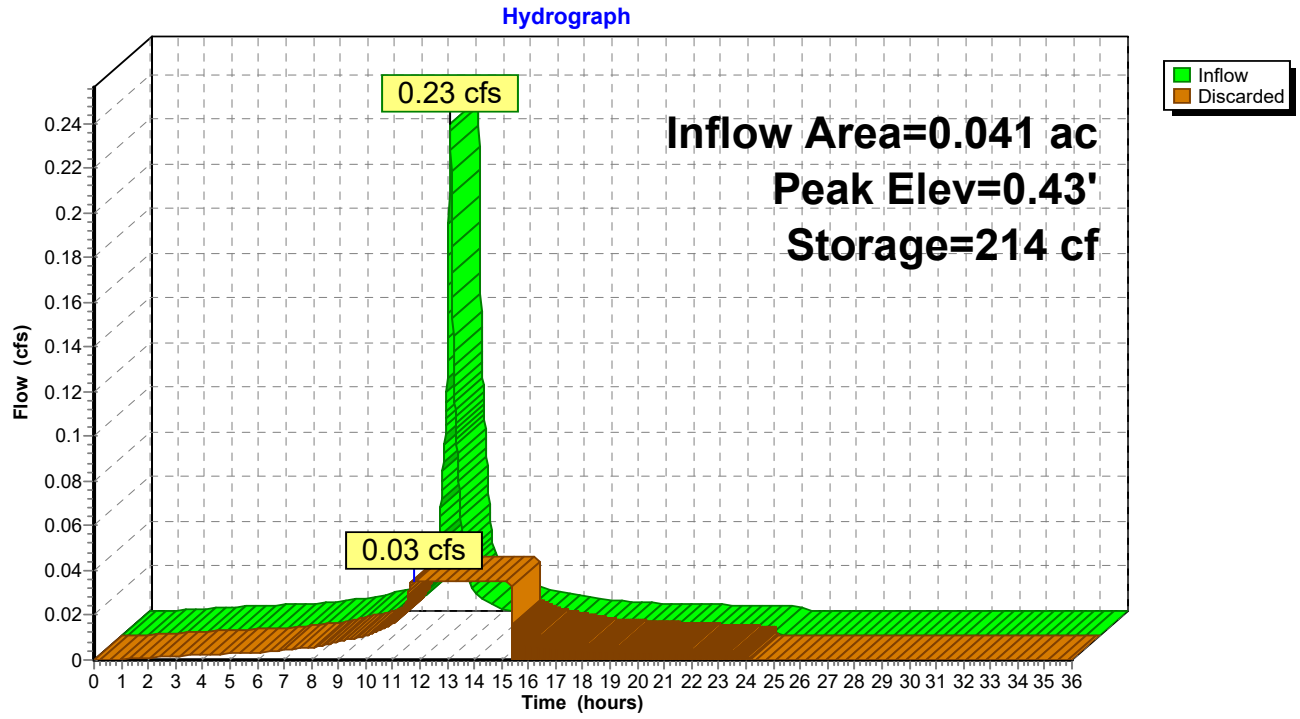
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,008 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	504	0	0
2.00	504	1,008	1,008

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**3.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 11.80 hrs HW=0.02' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.03 cfs)

Pond 10P: Drip Strip



Summary for Pond 11P: Drip Strip

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth = 5.41" for 10-yr+15% event
Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af
Outflow = 0.03 cfs @ 11.80 hrs, Volume= 0.019 af, Atten= 85%, Lag= 0.0 min
Discarded = 0.03 cfs @ 11.80 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 0.43' @ 12.56 hrs Surf.Area= 504 sf Storage= 214 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 32.9 min (779.0 - 746.1)

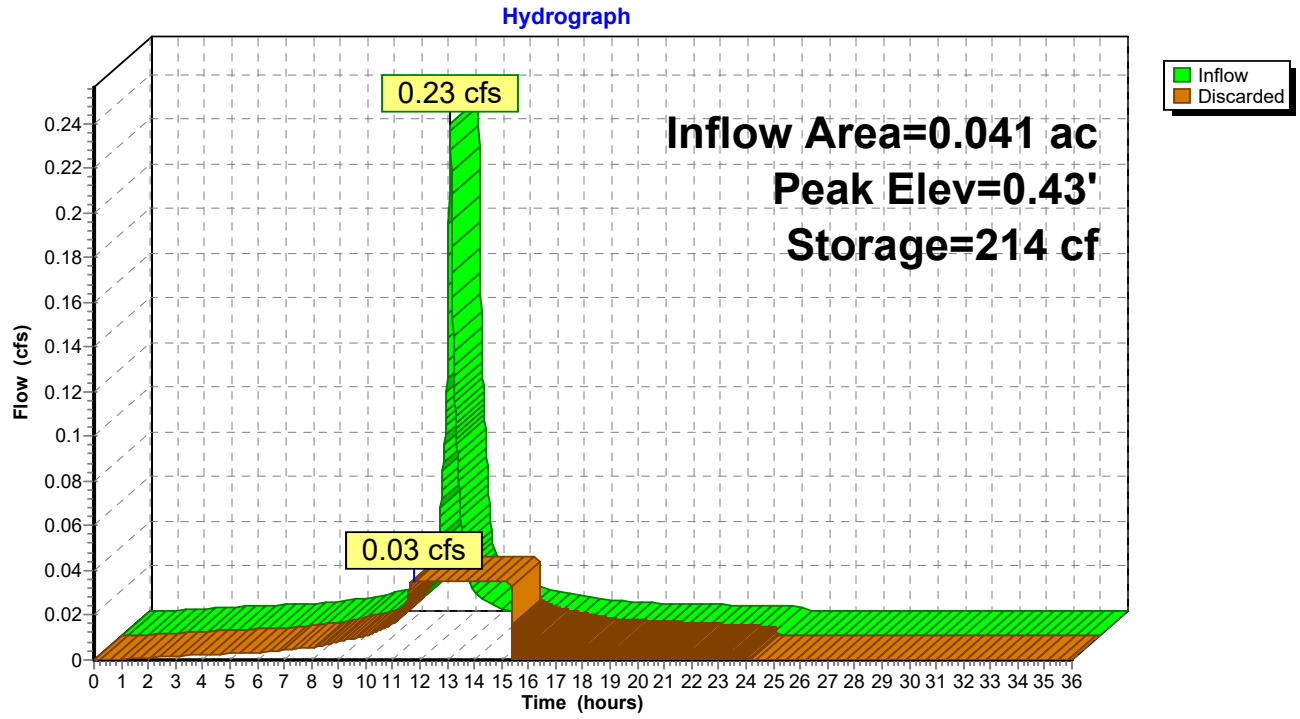
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,008 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	504	0	0
2.00	504	1,008	1,008

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**3.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 11.80 hrs HW=0.02' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.03 cfs)

Pond 11P: Drip Strip



Summary for Pond 12P: Drip Strip

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth = 5.41" for 10-yr+15% event
Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af
Outflow = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af, Atten= 92%, Lag= 0.0 min
Discarded = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 0.59' @ 13.09 hrs Surf.Area= 504 sf Storage= 295 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 119.9 min (865.9 - 746.1)

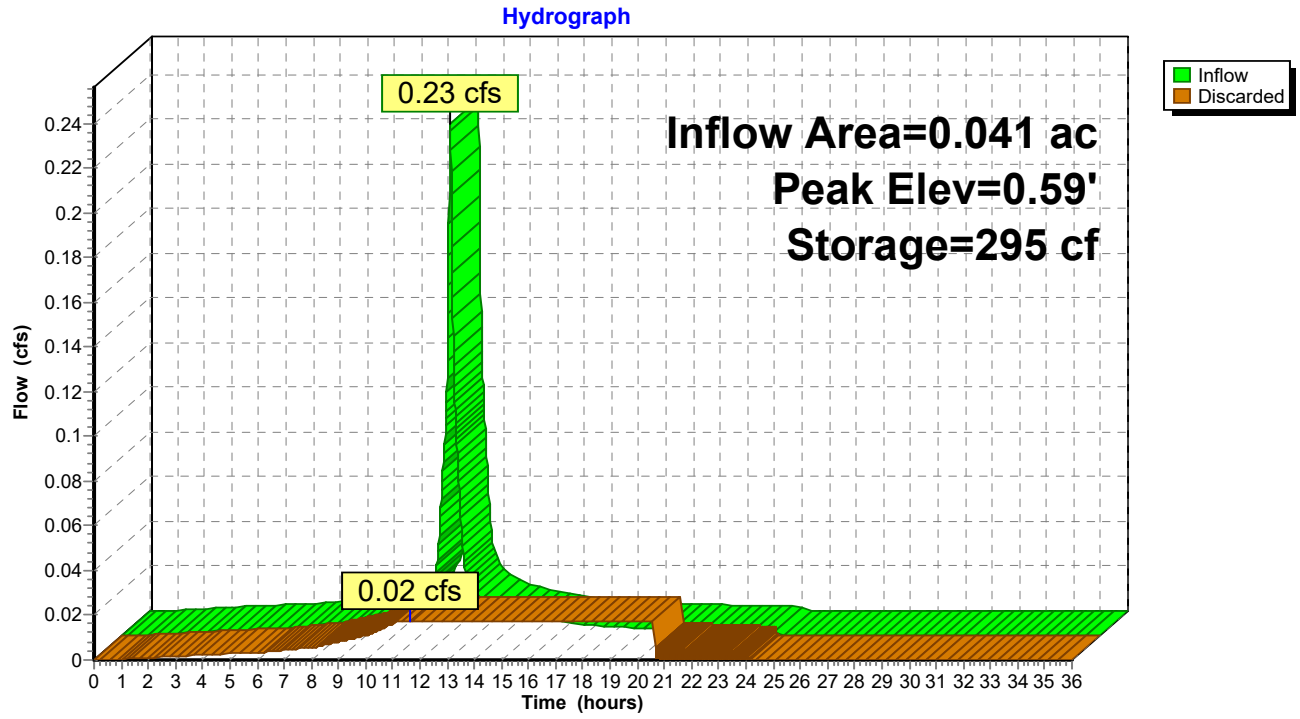
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,008 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	504	0	0
2.00	504	1,008	1,008

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**1.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.62 hrs HW=0.02' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.02 cfs)

Pond 12P: Drip Strip



Summary for Pond 13P: Drip Strip

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth = 5.41" for 10-yr+15% event
Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af
Outflow = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af, Atten= 92%, Lag= 0.0 min
Discarded = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 0.59' @ 13.09 hrs Surf.Area= 504 sf Storage= 295 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 119.9 min (865.9 - 746.1)

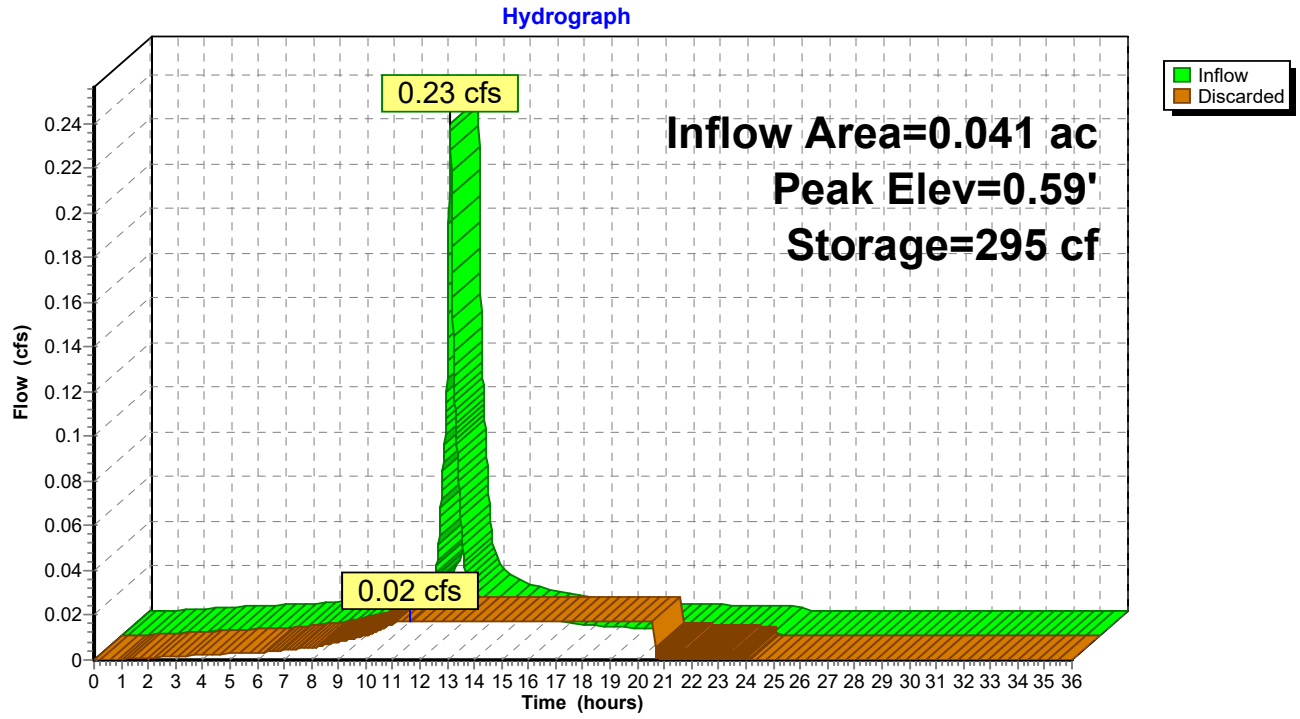
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,008 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	504	0	0
2.00	504	1,008	1,008

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**1.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.62 hrs HW=0.02' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Pond 13P: Drip Strip



Summary for Pond 14P: Drip Strip

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth = 5.41" for 10-yr+15% event
Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af
Outflow = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af, Atten= 92%, Lag= 0.0 min
Discarded = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 0.59' @ 13.09 hrs Surf.Area= 504 sf Storage= 295 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 119.9 min (865.9 - 746.1)

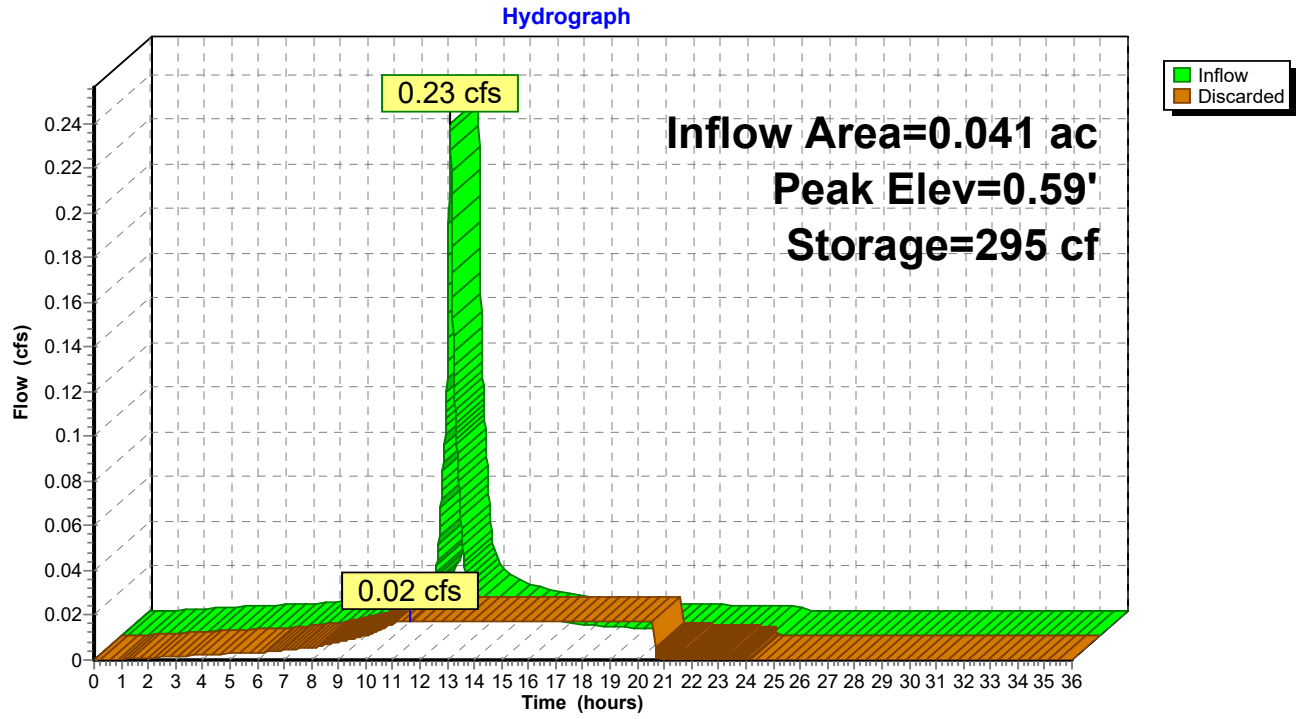
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,008 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	504	0	0
2.00	504	1,008	1,008

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**1.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.62 hrs HW=0.02' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.02 cfs)

Pond 14P: Drip Strip



Summary for Pond 15P: Drip Strip

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth = 5.41" for 10-yr+15% event
Inflow = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af
Outflow = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af, Atten= 92%, Lag= 0.0 min
Discarded = 0.02 cfs @ 11.62 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 0.59' @ 13.09 hrs Surf.Area= 504 sf Storage= 295 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 119.9 min (865.9 - 746.1)

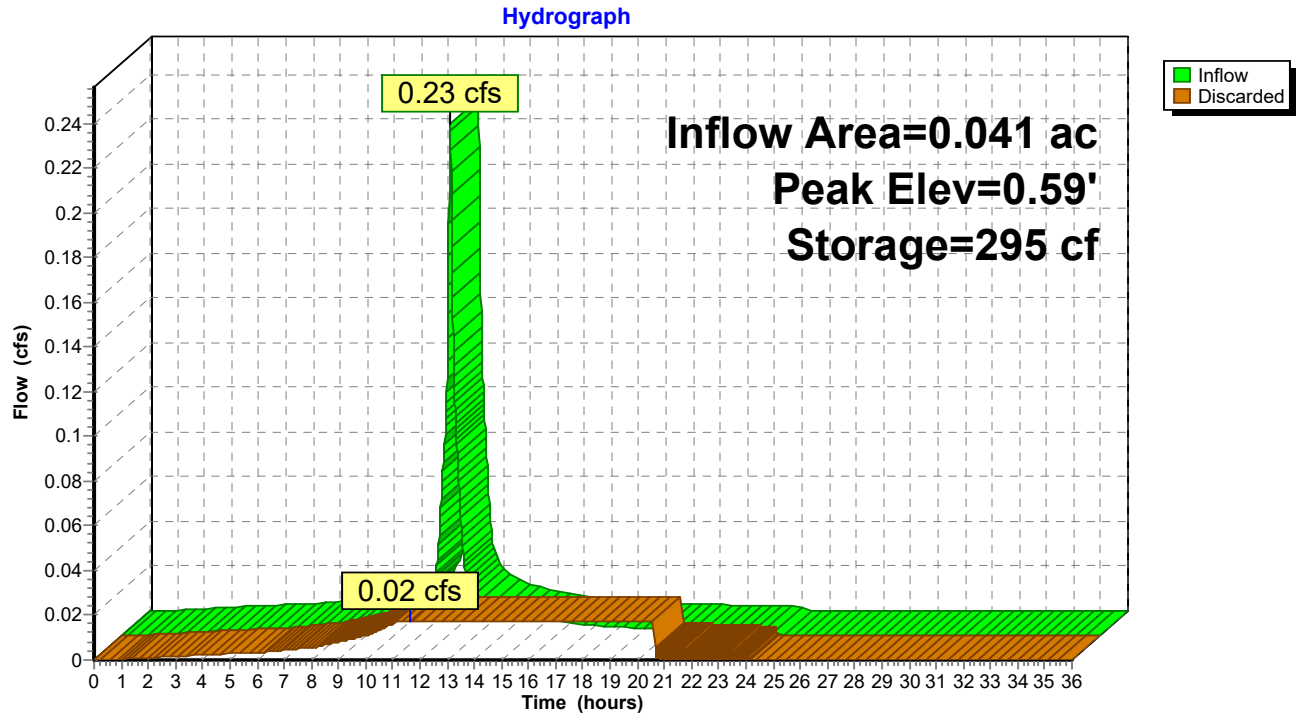
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	1,008 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	504	0	0
2.00	504	1,008	1,008

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**1.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 11.62 hrs HW=0.02' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.02 cfs)

Pond 15P: Drip Strip

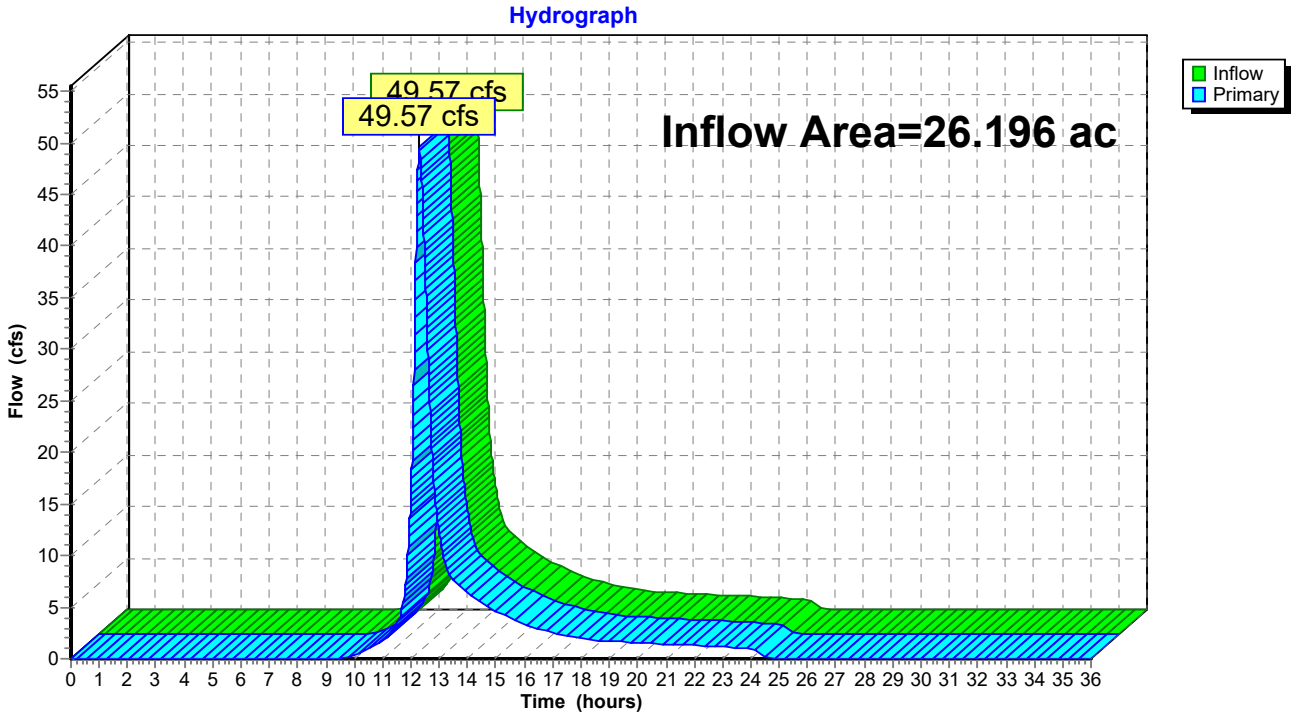


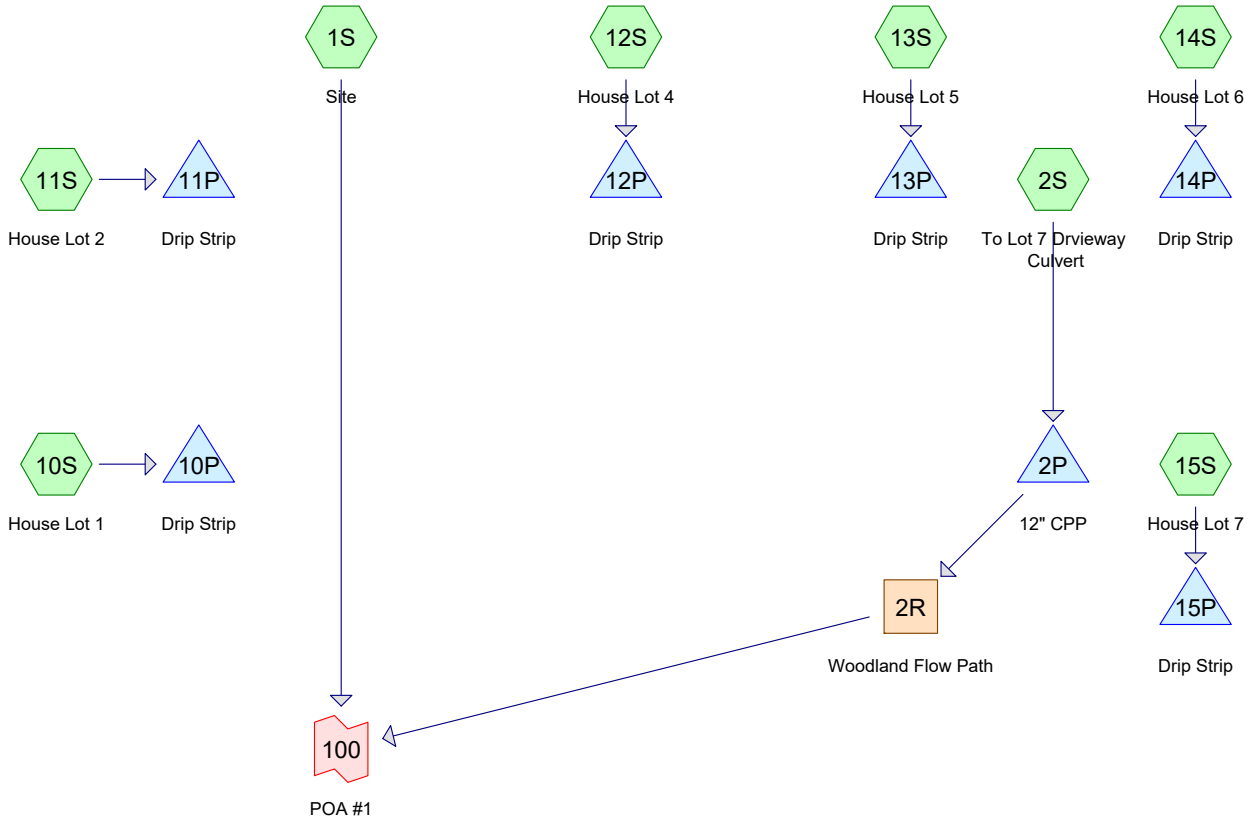
Summary for Link 100: POA #1

Inflow Area = 26.196 ac, 2.89% Impervious, Inflow Depth = 2.55" for 10-yr+15% event
Inflow = 49.57 cfs @ 12.29 hrs, Volume= 5.577 af
Primary = 49.57 cfs @ 12.29 hrs, Volume= 5.577 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 100: POA #1





Subcat Reach Pond Link

Routing Diagram for 5307-Post
Prepared by Altus Engineering, Inc., Printed 11/16/2022

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,038,165 sf 2.75% Impervious Runoff Depth=3.78"
Flow Length=1,231' Tc=20.6 min CN=70 Runoff=70.29 cfs 7.501 af

Subcatchment 2S: To Lot 7 Drvieway Runoff Area=102,930 sf 4.36% Impervious Runoff Depth=4.10"
Flow Length=455' Tc=5.0 min UI Adjusted CN=73 Runoff=11.78 cfs 0.807 af

Subcatchment 10S: House Lot 1 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 11S: House Lot 2 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 12S: House Lot 4 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 13S: House Lot 5 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 14S: House Lot 6 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 15S: House Lot 7 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Reach 2R: Woodland Flow Path Avg. Flow Depth=0.35' Max Vel=0.98 fps Inflow=4.83 cfs 0.807 af
n=0.100 L=561.0' S=0.0241 '/' Capacity=35.11 cfs Outflow=4.64 cfs 0.807 af

Pond 2P: 12" CPP Peak Elev=121.89' Storage=7,684 cf Inflow=11.78 cfs 0.807 af
Outflow=4.83 cfs 0.807 af

Pond 10P: Drip Strip Peak Elev=0.61' Storage=308 cf Inflow=0.29 cfs 0.024 af
Outflow=0.03 cfs 0.024 af

Pond 11P: Drip Strip Peak Elev=0.61' Storage=308 cf Inflow=0.29 cfs 0.024 af
Outflow=0.03 cfs 0.024 af

Pond 12P: Drip Strip Peak Elev=0.83' Storage=420 cf Inflow=0.29 cfs 0.024 af
Outflow=0.02 cfs 0.024 af

Pond 13P: Drip Strip Peak Elev=0.83' Storage=420 cf Inflow=0.29 cfs 0.024 af
Outflow=0.02 cfs 0.024 af

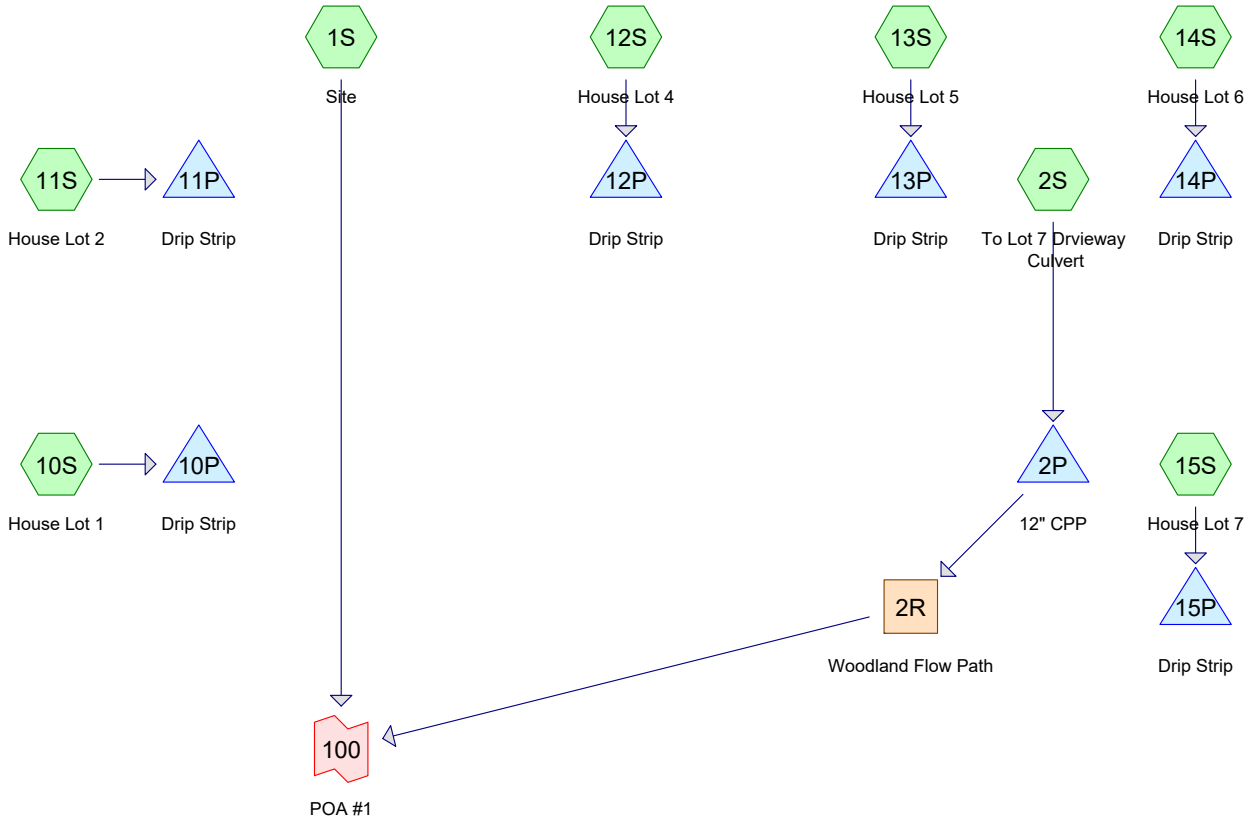
Pond 14P: Drip Strip Peak Elev=0.83' Storage=420 cf Inflow=0.29 cfs 0.024 af
Outflow=0.02 cfs 0.024 af

Pond 15P: Drip Strip Peak Elev=0.83' Storage=420 cf Inflow=0.29 cfs 0.024 af
Outflow=0.02 cfs 0.024 af

Link 100: POA #1

Inflow=74.52 cfs 8.308 af
Primary=74.52 cfs 8.308 af

Total Runoff Area = 26.444 ac Runoff Volume = 8.452 af Average Runoff Depth = 3.84"
96.20% Pervious = 25.438 ac 3.80% Impervious = 1.006 ac



Subcat Reach Pond Link

Routing Diagram for 5307-Post
Prepared by Altus Engineering, Inc., Printed 11/16/2022

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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: Site Runoff Area=1,038,165 sf 2.75% Impervious Runoff Depth=5.01"
Flow Length=1,231' Tc=20.6 min CN=70 Runoff=93.37 cfs 9.951 af

Subcatchment 2S: To Lot 7 Drvieway Runoff Area=102,930 sf 4.36% Impervious Runoff Depth=5.37"
Flow Length=455' Tc=5.0 min UI Adjusted CN=73 Runoff=15.38 cfs 1.058 af

Subcatchment 10S: House Lot 1 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=8.39"
Tc=6.0 min CN=98 Runoff=0.35 cfs 0.029 af

Subcatchment 11S: House Lot 2 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=8.39"
Tc=6.0 min CN=98 Runoff=0.35 cfs 0.029 af

Subcatchment 12S: House Lot 4 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=8.39"
Tc=6.0 min CN=98 Runoff=0.35 cfs 0.029 af

Subcatchment 13S: House Lot 5 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=8.39"
Tc=6.0 min CN=98 Runoff=0.35 cfs 0.029 af

Subcatchment 14S: House Lot 6 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=8.39"
Tc=6.0 min CN=98 Runoff=0.35 cfs 0.029 af

Subcatchment 15S: House Lot 7 Runoff Area=1,800 sf 100.00% Impervious Runoff Depth=8.39"
Tc=6.0 min CN=98 Runoff=0.35 cfs 0.029 af

Reach 2R: Woodland Flow Path Avg. Flow Depth=0.38' Max Vel=1.03 fps Inflow=5.60 cfs 1.058 af
n=0.100 L=561.0' S=0.0241 '/' Capacity=35.11 cfs Outflow=5.48 cfs 1.058 af

Pond 2P: 12" CPP Peak Elev=122.24' Storage=10,772 cf Inflow=15.38 cfs 1.058 af
Outflow=5.60 cfs 1.058 af

Pond 10P: Drip Strip Peak Elev=0.80' Storage=402 cf Inflow=0.35 cfs 0.029 af
Outflow=0.03 cfs 0.029 af

Pond 11P: Drip Strip Peak Elev=0.80' Storage=402 cf Inflow=0.35 cfs 0.029 af
Outflow=0.03 cfs 0.029 af

Pond 12P: Drip Strip Peak Elev=1.09' Storage=551 cf Inflow=0.35 cfs 0.029 af
Outflow=0.02 cfs 0.029 af

Pond 13P: Drip Strip Peak Elev=1.09' Storage=551 cf Inflow=0.35 cfs 0.029 af
Outflow=0.02 cfs 0.029 af

Pond 14P: Drip Strip Peak Elev=1.09' Storage=551 cf Inflow=0.35 cfs 0.029 af
Outflow=0.02 cfs 0.029 af

Pond 15P: Drip Strip Peak Elev=1.09' Storage=551 cf Inflow=0.35 cfs 0.029 af
Outflow=0.02 cfs 0.029 af

Link 100: POA #1

Inflow=98.44 cfs 11.009 af
Primary=98.44 cfs 11.009 af

Total Runoff Area = 26.444 ac Runoff Volume = 11.182 af Average Runoff Depth = 5.07"
96.20% Pervious = 25.438 ac 3.80% Impervious = 1.006 ac

Section 5

Precipitation Table

ALTUS ENGINEERING

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	70.948 degrees West
Latitude	42.981 degrees North
Elevation	0 feet
Date/Time	Tue, 26 Apr 2022 17:11:17 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.66	0.82	1.04	**1yr**	0.71	0.99	1.22	1.57	2.05	2.68	2.90	**1yr**	2.37	2.79	3.21	3.91	4.54	**1yr**
2yr	0.32	0.50	0.62	0.82	1.03	1.30	**2yr**	0.89	1.18	1.52	1.94	2.49	3.22	3.57	**2yr**	2.85	3.43	3.94	4.68	5.33	**2yr**
5yr	0.38	0.58	0.73	0.98	1.26	1.62	**5yr**	1.08	1.47	1.90	2.45	3.16	4.09	4.59	**5yr**	3.62	4.41	5.05	5.97	6.75	**5yr**
10yr	0.42	0.66	0.83	1.13	1.46	1.91	**10yr**	1.26	1.73	2.25	2.92	3.78	4.91	5.56	**10yr**	4.34	5.34	6.09	7.19	8.07	**10yr**
25yr	0.49	0.77	0.98	1.35	1.80	2.37	**25yr**	1.55	2.16	2.81	3.68	4.80	6.25	7.15	**25yr**	5.53	6.88	7.80	9.19	10.22	**25yr**
50yr	0.55	0.87	1.12	1.56	2.11	2.80	**50yr**	1.82	2.55	3.34	4.39	5.75	7.50	8.67	**50yr**	6.64	8.33	9.42	11.08	12.24	**50yr**
100yr	0.61	0.99	1.27	1.81	2.47	3.32	**100yr**	2.13	3.01	3.98	5.25	6.89	9.00	10.50	**100yr**	7.97	10.10	11.37	13.36	14.66	**100yr**
200yr	0.69	1.13	1.46	2.09	2.89	3.92	**200yr**	2.49	3.56	4.72	6.26	8.25	10.82	12.72	**200yr**	9.57	12.23	13.72	16.11	17.57	**200yr**
500yr	0.82	1.35	1.76	2.55	3.57	4.89	**500yr**	3.08	4.44	5.91	7.90	10.4	13.79	16.41	**500yr**	12.21	15.78	17.61	20.66	22.33	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.61	0.75	0.89	**1yr**	0.64	0.87	0.95	1.25	1.54	2.29	2.54	**1yr**	2.03	2.44	2.89	3.43	4.02	**1yr**
2yr	0.32	0.49	0.60	0.82	1.01	1.19	**2yr**	0.87	1.17	1.37	1.82	2.33	3.11	3.49	**2yr**	2.75	3.36	3.85	4.56	5.14	**2yr**
5yr	0.36	0.55	0.68	0.94	1.19	1.42	**5yr**	1.03	1.39	1.62	2.12	2.73	3.81	4.26	**5yr**	3.38	4.10	4.70	5.62	6.31	**5yr**
10yr	0.40	0.61	0.75	1.05	1.36	1.63	**10yr**	1.17	1.59	1.82	2.40	3.07	4.39	4.95	**10yr**	3.89	4.76	5.46	6.53	7.26	**10yr**
25yr	0.46	0.69	0.86	1.23	1.62	1.95	**25yr**	1.40	1.91	2.12	2.78	3.58	4.94	6.02	**25yr**	4.37	5.78	6.64	7.96	8.89	**25yr**
50yr	0.51	0.77	0.96	1.38	1.85	2.25	**50yr**	1.60	2.20	2.37	3.12	4.01	5.59	6.96	**50yr**	4.95	6.69	7.69	9.26	10.28	**50yr**
100yr	0.57	0.86	1.08	1.55	2.13	2.58	**100yr**	1.84	2.52	2.65	3.48	4.48	6.30	8.04	**100yr**	5.58	7.73	8.90	10.75	11.84	**100yr**
200yr	0.64	0.96	1.21	1.76	2.45	2.96	**200yr**	2.11	2.89	2.95	3.88	5.00	7.08	9.69	**200yr**	6.27	9.32	10.31	12.47	13.68	**200yr**
500yr	0.75	1.11	1.43	2.08	2.96	3.58	**500yr**	2.55	3.50	3.42	4.48	5.81	8.22	11.85	**500yr**	7.27	11.39	12.52	15.14	16.51	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.54	0.72	0.89	1.08	**1yr**	0.76	1.06	1.26	1.71	2.17	2.96	3.12	**1yr**	2.62	3.00	3.56	4.28	4.98	**1yr**
2yr	0.33	0.51	0.63	0.86	1.06	1.26	**2yr**	0.91	1.23	1.48	1.94	2.48	3.39	3.67	**2yr**	3.00	3.53	4.06	4.85	5.62	**2yr**
5yr	0.40	0.62	0.77	1.06	1.34	1.62	**5yr**	1.16	1.58	1.87	2.48	3.17	4.38	4.93	**5yr**	3.88	4.74	5.42	6.35	7.20	**5yr**
10yr	0.48	0.73	0.91	1.27	1.64	1.97	**10yr**	1.41	1.93	2.26	3.02	3.81	5.45	6.19	**10yr**	4.83	5.95	6.79	7.88	8.89	**10yr**
25yr	0.59	0.90	1.11	1.59	2.09	2.56	**25yr**	1.81	2.50	2.93	3.92	4.88	7.62	8.38	**25yr**	6.75	8.06	9.12	10.50	11.53	**25yr**
50yr	0.69	1.05	1.31	1.88	2.53	3.11	**50yr**	2.18	3.04	3.56	4.78	5.91	9.56	10.56	**50yr**	8.46	10.15	11.45	13.06	14.18	**50yr**
100yr	0.81	1.23	1.54	2.22	3.05	3.78	**100yr**	2.63	3.70	4.34	5.84	7.17	11.99	13.30	**100yr**	10.61	12.79	14.34	16.29	17.46	**100yr**
200yr	0.95	1.44	1.82	2.64	3.68	4.62	**200yr**	3.17	4.51	5.29	7.13	8.68	15.09	16.13	**200yr**	13.35	15.51	18.00	20.31	21.51	**200yr**
500yr	1.19	1.77	2.27	3.30	4.70	5.98	**500yr**	4.05	5.84	6.87	9.32	11.20	20.47	21.74	**500yr**	18.12	20.90	24.26	27.21	28.40	**500yr**

Powered by ACIS Northeast Regional Climate Center

Section 6

GRV / WQV Calculations

ALTUS
ENGINEERING

Groundwater Recharge Volume (GRV) / Water Quality Volume (WQV) Infiltration Calculations

Project: Beech Hill Subdivision
Town: Exeter, NH
Proj. No.: 5307
Date: 11-Oct-22

Area (AI) = existing vegetated area covered by new impervious surfaces

HSG	Area (ac)	Ratio	WQV		
A	0	0.4	0.000	in	Area*Ratio
B	0.16	0.25	0.040	in	Area*Ratio
C	0.39	0.1	0.039	in	Area*Ratio
D	0	0	0.000	in	Area*Ratio
Area (AI):	0.55		0.079	in	Weighted GRV Depth = Sum of WQV's
			0.043	ac-in	GRV = AI*Rd
			157.72	cf	GRV Conversion (ac-in * 43560sf/ac * 1'/12")

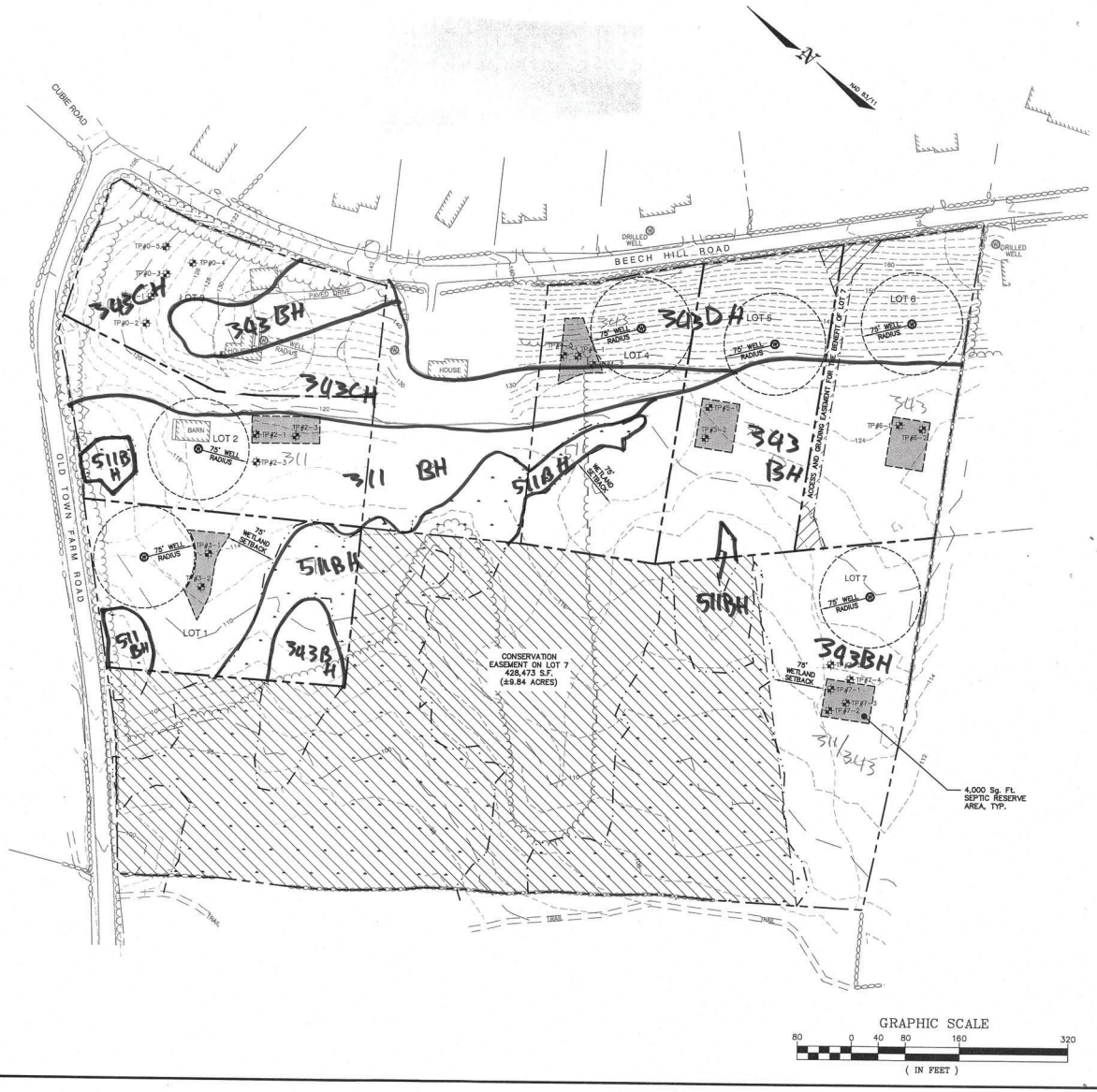
Volume Infiltrated:	4182	cf
	4024.28	cf Surplus/Deficit

ALTUS ENGINEERING

Section 7

HISS Map
Test Pit Logs
NRCS Soil Survey

ALTUS
ENGINEERING



NOTES

1. WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC., SPRING 2022.
2. TEST PITS WERE PERFORMED BY GOVE ENVIRONMENTAL SERVICES, INC., ON AUGUST 10, 2022 AND WITNESSED BY THE ROCKINGHAM COUNTY CONSERVATION DISTRICT.
3. HISS MAPPING PREPARED BY GOVE ENVIRONMENTAL SERVICES, INC.

CASE #22-XX
TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: AUGUST 30, 2022

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	08/30/22

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5307-SUB.dwg

SCALE: (22"x34") 1"= 80'
(11"x17") 1"=160'

OWNER:
JUDITH A. NICHOLS
FREDERICK J. NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833

APPLICANT:
JERRY AND CHRISTINE STERRITT
98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:
BEECH HILL SUBDIVISION
TAX MAP 13, LOT 1
BEECH HILL ROAD
EXETER, NH 03833

TITLE:
SOILS PLAN

SHEET NUMBER:
C - 2

P5307

GOVE ENVIRONMENTAL SERVICES, INC.

TEST PIT DATA

Project	Beech Hill Road
Client	Altus Engineering, Inc.
LDH 8/10/22	Luke Hurley, Certified Soil Scientist # 095
Test Pit No.	**0-1**
ESHWT:	20"
Termination @	60"
Refusal:	No
Obs. Water:	No

Depth	Color	Texture	Structure	Consistence	REDOX
0-7"	10YR3/3	FSL	GR	FR	N
7-20"	10YR5/4	FSL	GR	FR	N
20-60"	2.5Y4/3	FSL	BLK	Fi	P

Test Pit No.	**0-2**
ESHWT:	20"
Termination @	48"
Refusal:	No
Obs. Water:	No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-20"	10YR5/4	FSL	GR	FR	N
20-48"	2.5Y4/3	FSL	BLK	Fi	P

Test Pit No.	**0-3**
ESHWT:	20"
Termination @	48"
Refusal:	No
Obs. Water:	No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/2	FSL	GR	FR	N
8-20"	10YR4/4	FSL	GR	FR	N
20-48"	2.5Y5/4	FSL	GR	FR	P

Test Pit No.	**0-4**
ESHWT:	28"
Termination @	60"
Refusal:	No

8 Continental Dr Bldg 2 Unit H, Exeter, NH 03833-7526
Ph (603) 778 0644 / *Fax* (603) 778 0654
info@gesinc.biz
www.gesinc.biz

Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-28"	10YR4/4	FSL	GR	FR	N
28-60"	2.5Y5/3	FSL	BLK	Fi	P

Test Pit No. **0-5**
ESHWT: 30"
Termination @ 50"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-20"	10YR4/4	FSL	GR	FR	N
20-30"	2.5Y5/3	FSL	GR	FR	N
30-50"	2.5Y5/4	FSL	BLK	Fi	P

Test Pit No. **1-1**
ESHWT: 24"
Termination @ 54"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-10"	10YR3/2	FSL	GR	FR	N
10-16"	10YR4/4	FSL	GR	FR	N
16-24"	2.5Y5/4	FSL	GR	FR	N
24-54"	10YR4/4	S	GR	FR	P

Test Pit No. **1-2**
ESHWT: 26"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-10"	10YR3/3	FSL	GR	FR	N
10-18"	10YR4/4	FSL	GR	FR	N
18-26"	2.5Y5/4	FSL	GR	FR	N
26-60"	2.5Y4/4	S	GR	FR	P

Test Pit No. **1-3**
ESHWT: 32"
Termination @ 50"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-10"	10YR3/3	FSL	GR	FR	N
10-24"	10YR4/4	FSL	GR	FR	N
24-50"	2.5Y5/4	S	SG	L	P

Test Pit No. **2-1**
ESHWT: 30"
Termination @ 52"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-14"	10YR4/4	FSL	GR	FR	N
14-30"	2.5Y5/6	S	GR	L	N
30-52"	10YR5/8	S	GR	FR	P

Test Pit No. **2-2**
ESHWT: 17"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-17"	10YR4/4	FSL	GR	FR	N
17-60"	2.5Y5/6	S	GR	FR	P

Test Pit No. **4-1**
ESHWT: 24"
Termination @ 64"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-16"	10YR5/4	FSL	GR	FR	N
16-24"	10YR4/4	FSL	GR	FR	N
24-64"	2.5Y4/3	FSL	BLK	Fi	P

Test Pit No. **4-2**
ESHWT: 20"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-10"	10YR3/3	FSL	GR	FR	N
10-20"	10YR4/4	FSL	GR	FR	N
20-60"	2.5Y5/3	FSL	BLK	Fi	P

Test Pit No. **4-3**
ESHWT: 30"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-6"	10YR3/2	FSL	GR	FR	N
6-18"	10YR4/4	FSL	GR	FR	N
18-30"	2.5Y4/4	FSL	GR	FR	N
30-60"	2.5Y5/3	FSL	BLK	Fi	P

Test Pit No. **5-1**
ESHWT: 30"
Termination @ 56"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-12"	10YR3/3	FSL	GR	FR	N
12-20"	10YR4/4	FSL	GR	FR	N
20-30"	2.5Y5/6	FSL	GR	FR	N
30-56"	2.5Y5/4	FSL	BLK	Fi	P

Test Pit No. **5-2**
ESHWT: 38"
Termination @ 64"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-16"	10YR4/4	FSL	GR	FR	N
16-38"	10YR4/6	FSL	GR	FR	N
38-64"	2.5Y5/4	Gr	OM	Fi	P

Test Pit No. **6-1**
ESHWT: 30"
Termination @ 66"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/3	FSL	GR	FR	N
8-18"	10YR4/4	FSL	GR	FR	N
18-30"	2.5Y4/6	FSL	GR	FR	N
30-66"	2.5Y5/3	FSL	BLK	Fi	P

Test Pit No. **6-2**
ESHWT: 38"
Termination @ 60"
Refusal: No
Obs. Water: No

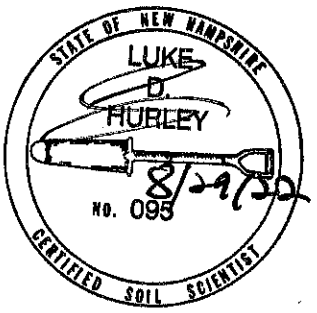
Depth	Color	Texture	Structure	Consistence	REDOX
0-6"	10YR3/3	FSL	GR	FR	N
6-18"	10YR4/4	FSL	GR	FR	N
18-38"	10YR4/6	FSL	GR	FR	N
38-60"	2.5Y5/3	FSL	BLK	Fi	P

Test Pit No. **7-1**
ESHWT: 24"
Termination @ 36"
Refusal: 36"
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-6"	10YR3/2	FSL	GR	FR	N
6-18"	10YR4/4	FSL	GR	FR	N
18-24"	2.5Y4/6	S	GR	L	N
24-36"	2.5Y5/4	S	BLK	Fi	P

Test Pit No. **7-2**
ESHWT: 24"
Termination @ 42"
Refusal: 42
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-6"	10YR3/2	FSL	GR	FR	N
6-12"	10YR4/4	FSL	GR	FR	N
12-24"	10YR4/6	S	GR	FR	N
24-42"	2.5Y5/3	FSL	BLK	Fi	P



Test Pit No. **7-3**
ESHWT: 20"
Termination @ 54"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-10"	10YR3/3	FSL	GR	FR	N
10-20"	10YR4/4	FSL	GR	FR	N
20-54"	2.5Y5/4	S	GR	FR	P

Test Pit No. **7-4**
ESHWT: 18"
Termination @ 52"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-8"	10YR3/2	FSL	GR	FR	N
8-14"	10YR4/4	FSL	GR	FR	N
14-18"	10YR4/6	FSL	GR	FR	N
18-24"	2.5Y5/6	FS	GR	FR	P
24-36"	2.5Y5/4	FS	GR	FR	P
36-52"	2.5Y5/3	SiL	BLK	Fi	P

Test Pit No. **7-5**
ESHWT: 24"
Termination @ 60"
Refusal: No
Obs. Water: No

Depth	Color	Texture	Structure	Consistence	REDOX
0-6"	10YR3/2	FSL	GR	FR	N
6-12"	10YR4/4	FSL	GR	FR	N
12-24"	2.5Y4/6	S	GR	FR	N
24-60"	2.5Y5/4	Sd	GR	FR	P

GR (TEXTURE) = GRAVELLY
LS = LOAMY SAND
S = SAND
FSL = FINE SANDY LOAM
SL = SANDY LOAM
SIL = SILT LOAM
SICL = SILTY CLAY
CB (TEXTURE) = COBBLY
CN (TEXTURE) = CHANNERY

GR = GRANULAR
OM = MASSIVE
PL = PLATY
BLK = BLOCKY

FR = FRIABLE
FI = FIRM
C = COMMON
P = PROMINENT
D = DISTINCT
N = NONE

VF (TEXTURE) = VERY FINE
F (TEXTURE) = FINE
V (ROCK FRAGMENT)(TEXTURE) = VERY

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Rockingham County, New Hampshire

October 10, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:5,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

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

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

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 1:24,000.

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: Rockingham County, New Hampshire
Survey Area Data: Version 25, Sep 12, 2022

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

Date(s) aerial images were photographed: Jun 19, 2020—Jun 5, 2022

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
12B	Hinckley loamy sand, 3 to 8 percent slopes	6.9	15.4%
32B	Boxford silt loam, 3 to 8 percent slopes	0.6	1.4%
33A	Scitico silt loam, 0 to 5 percent slopes	6.5	14.5%
38B	Eldridge fine sandy loam, 3 to 8 percent slopes	1.5	3.4%
66D	Paxton fine sandy loam, 15 to 25 percent slopes	4.9	11.0%
67C	Paxton fine sandy loam, 8 to 15 percent slopes, very stony	2.3	5.1%
313A	Deerfield loamy fine sand, 0 to 3 percent slopes	12.4	27.9%
495	Natchaug mucky peat, 0 to 2 percent slopes	2.8	6.4%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	6.6	14.8%
Totals for Area of Interest		**44.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They

generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Rockingham County, New Hampshire

12B—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, moraines, kames, outwash plains, kame terraces, eskers
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor
Percent of map unit: 8 percent
Landform: Outwash deltas, outwash terraces, moraines, kames, outwash plains, kame terraces, eskers
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury
Percent of map unit: 5 percent
Landform: Outwash deltas, outwash terraces, moraines, outwash plains, kame terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Head slope, side slope, base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Agawam
Percent of map unit: 2 percent
Landform: Outwash deltas, outwash terraces, moraines, kames, outwash plains, kame terraces, eskers
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

32B—Boxford silt loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9cn4
Elevation: 0 to 1,000 feet
Mean annual precipitation: 30 to 55 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 120 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Boxford and similar soils: 80 percent
Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boxford

Setting

Parent material: Glaciomarine

Typical profile

H1 - 0 to 2 inches: silt loam
H2 - 2 to 13 inches: silt loam
H3 - 13 to 23 inches: silty clay loam
H4 - 23 to 60 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Eldridge

Percent of map unit: 10 percent
Hydric soil rating: No

Scitico

Percent of map unit: 10 percent
Landform: Marine terraces
Hydric soil rating: Yes

33A—Scitico silt loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 9cn6
Elevation: 0 to 180 feet
Mean annual precipitation: 47 to 49 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 155 to 165 days
Farmland classification: Farmland of local importance

Map Unit Composition

Scitico and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scitico

Setting

Landform: Marine terraces

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 12 inches: silty clay loam
H3 - 12 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F144AY019NH - Wet Lake Plain
Hydric soil rating: Yes

Minor Components

Squamscott

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Boxford

Percent of map unit: 5 percent
Hydric soil rating: No

Maybid

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

38B—Eldridge fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9cnb
Elevation: 90 to 1,000 feet
Mean annual precipitation: 30 to 55 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 120 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Eldridge and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eldridge

Setting

Parent material: Outwash over glaciolacustrine

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 23 inches: loamy fine sand
H3 - 23 to 62 inches: loamy very fine sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Well drained inclusion

Percent of map unit: 5 percent
Hydric soil rating: No

Boxford
Percent of map unit: 5 percent
Hydric soil rating: No

Scitico
Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Squamscott
Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

66D—Paxton fine sandy loam, 15 to 25 percent slopes

Map Unit Setting
National map unit symbol: 2w67j
Elevation: 0 to 1,450 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Paxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting
Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile
Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities
Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 8 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 6 percent
Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 1 percent
Landform: Drainageways, depressions, hills, ground moraines, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

67C—Paxton fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w677
Elevation: 0 to 1,330 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 8 percent
Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 2 percent
Landform: Hills, ground moraines, drumlins, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

313A—Deerfield loamy fine sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2xfg8
Elevation: 0 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Deerfield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 7 percent
Landform: Outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Wareham

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sudbury

Percent of map unit: 2 percent
Landform: Outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Ninigret

Percent of map unit: 1 percent
Landform: Outwash terraces, outwash plains, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear, convex
Across-slope shape: Concave, convex
Hydric soil rating: No

495—Natchaug mucky peat, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w691
Elevation: 0 to 910 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Natchaug and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Natchaug

Setting

Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till

Typical profile

Oe1 - 0 to 12 inches: mucky peat
Oe2 - 12 to 31 inches: mucky peat
2Cg1 - 31 to 39 inches: silt loam
2Cg2 - 39 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.01 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 14.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Scarboro

Percent of map unit: 4 percent
Landform: Outwash deltas, outwash terraces, drainageways, depressions
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Walpole

Percent of map unit: 4 percent
Landform: Outwash terraces, outwash plains, depressions, depressions, deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Maybid

Percent of map unit: 2 percent
Landform: Depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

538A—Squamscott fine sandy loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 9cp9
Elevation: 0 to 1,000 feet
Mean annual precipitation: 30 to 55 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 120 to 180 days
Farmland classification: Farmland of local importance

Map Unit Composition

Squamscott and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Squamscott

Setting

Landform: Marine terraces

Typical profile

H1 - 0 to 4 inches: fine sandy loam
H2 - 4 to 12 inches: loamy sand
H3 - 12 to 19 inches: fine sand
H4 - 19 to 65 inches: silt loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F144AY019NH - Wet Lake Plain
Hydric soil rating: Yes

Minor Components

Scitico

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Maybid

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Eldridge

Percent of map unit: 5 percent
Hydric soil rating: No

Section 8

Stormwater Operations & Maintenance Plan

ALTUS
ENGINEERING

STORMWATER INSPECTION AND MAINTENANCE MANUAL

Branch View Estates
Alfred Assessor's Map 2, Lot 30

OWNER AT TIME OF APPROVAL:
Judith and Frederick Nichols
100 Beech Hill Road
Exeter, NH 03833

Proper inspection, maintenance, and repair are key elements in maintaining a successful stormwater management program on a developed property. Routine inspections ensure permit compliance and reduce the potential for deterioration of infrastructure or reduced water quality. Inspections should also be carried out after any rainfall of 1" or more. Qualified inspectors shall be Professional Engineers licensed in the State of Maine or Certified Professionals in Erosion and Sediment Control. The following responsible parties shall be in charge of managing the stormwater facilities:

RESPONSIBLE PARTIES:

Owner: *Judith and Frederick Nichols or Assigns*
Name *Company* *Phone*

Inspection: *Judith and Frederick Nichols or Assigns*
Name *Company* *Phone*

Maintenance: *Judith and Frederick Nichols or Assigns*
Name *Company* *Phone*

NOTES:

Inspection and maintenance responsibilities shall transfer to any future property owner(s).

This manual shall be updated as needed to reflect any changes related to any transfer of ownership and/or any delegation of inspection and maintenance responsibilities to any entity other than those listed above.

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CULVERTS AND DRAINAGE PIPES

Function – Culverts and drainage pipes convey stormwater away from buildings, walkways, and parking areas and to surface waters or closed drainage systems.

Maintenance

- Culverts and drainage pipes shall be inspected semi-annually, or more often as needed, for accumulation of debris and structural integrity. Leaves and other debris shall be removed from the inlet and outlet to insure the functionality of drainage structures. Debris shall be disposed of on site where it will not concentrate back at the drainage structures or at a solid waste disposal facility.
- Riprap Areas - Culvert outlets and inlets shall be inspected during annual maintenance and operations for erosion and scour. If scour or erosion is identified, the owner shall take appropriate means to prevent further erosion.

LANDSCAPED AREAS - FERTILIZER MANAGEMENT

Function – Fertilizer management involves controlling the rate, timing and method of fertilizer application so that the nutrients are taken up by the plants thereby reducing the chance of polluting the surface and ground waters. Fertilizer management can be effective in reducing the amounts of phosphorus and nitrogen in runoff from landscaped areas, particularly lawns.

Maintenance

- Have the soil tested by your landscaper or local Soil Conservation Service for nutrient requirements and follow the recommendations.
- Do not apply fertilizer to frozen ground.
- Clean up any fertilizer spills.
- Do not allow fertilizer to be broadcast into water bodies.
- When fertilizing a lawn, water thoroughly, but do not create a situation where water runs off the surface of the lawn.

LANDSCAPED AREAS - LITTER CONTROL

Function – Landscaped areas tend to filter debris and contaminates that may block drainage systems and pollute the surface and ground waters.

Maintenance

- Litter Control and lawn maintenance involves removing litter such as trash, leaves, lawn clippings, pet wastes, oil and chemicals from streets, parking lots, and lawns before materials are transported into surface waters.
- Litter control shall be implemented as part of the grounds maintenance program.

VEGETATIVE SWALES

Function – Vegetative swales filter sediment from stormwater, promote infiltration, and the uptake of contaminates. They are designed to treat runoff and dispose of it safely into the natural drainage system.

Maintenance

- Timely maintenance is important to keep a swale in good working condition. Mowing of grassed swales shall be monthly to keep the vegetation in vigorous condition. The cut vegetation shall be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale.
- Fertilizing shall be bi-annual or as recommended from soil testing.
- Inspect swales following significant rainfall events.
- Woody vegetation shall not be allowed to become established in the swales or rock riprap outlet protection and if present shall be removed.
- Accumulated debris disrupts flow and leads to clogging and erosion. Remove debris and litter as necessary.
- Inspect for eroded areas. Determine cause of erosion and correct deficiency as required. Monitor repaired areas.

RIP RAP OUTLETS, SWALES, LEVEL SPREADERS AND BUFFERS

Function – Rip rap outlets slow the velocity of runoff, minimizing erosion and maximizing the treatment capabilities of associated buffers. Level spreaders distribute concentrated stormwater flow over a continuous level lip constructed above a buffer. Vegetated buffers, either forested or meadow, slow runoff which promotes and reduces peak rates of runoff. The reduced velocities and the presence of vegetation encourage the filtration of sediment and the limited bio-uptake of nutrients.

Maintenance

- Inspect riprap, level spreaders and buffers at least annually for signs of erosion, sediment buildup, or vegetation loss.
- Inspect level for signs of condensed flows. Level spreader and rip rap shall be maintained to disperse flows evenly over level spreader.
- If a meadow buffer, provide periodic mowing as needed to maintain a healthy stand of herbaceous vegetation.
- If a forested buffer, then the buffer should be maintained in an undisturbed condition, unless erosion occurs.
- If erosion of the buffer (forested or meadow) occurs, eroded areas should be repaired and replanted with vegetation similar to the remaining buffer. Corrective action should include eliminating the source of the erosion problem and may require retrofit or reconstruction of the level spreader.
- Remove debris and accumulated sediment and dispose of properly.

DRIP STRIPS

Function – Drip strips are to provide erosion control of surface where impervious surfaces meet non-impervious surfaces, such as building or roadway edges. The also can provide for the infiltration and treatment of runoff and are particularly effective for roof-generated stormwater.

Maintenance
Drip strips should be inspected annually for erosion, rutting, and migration of stone. Any areas experiencing erosion shall be properly maintained by replacing or adding additional stone to the area of concern.

GENERAL CLEAN UP

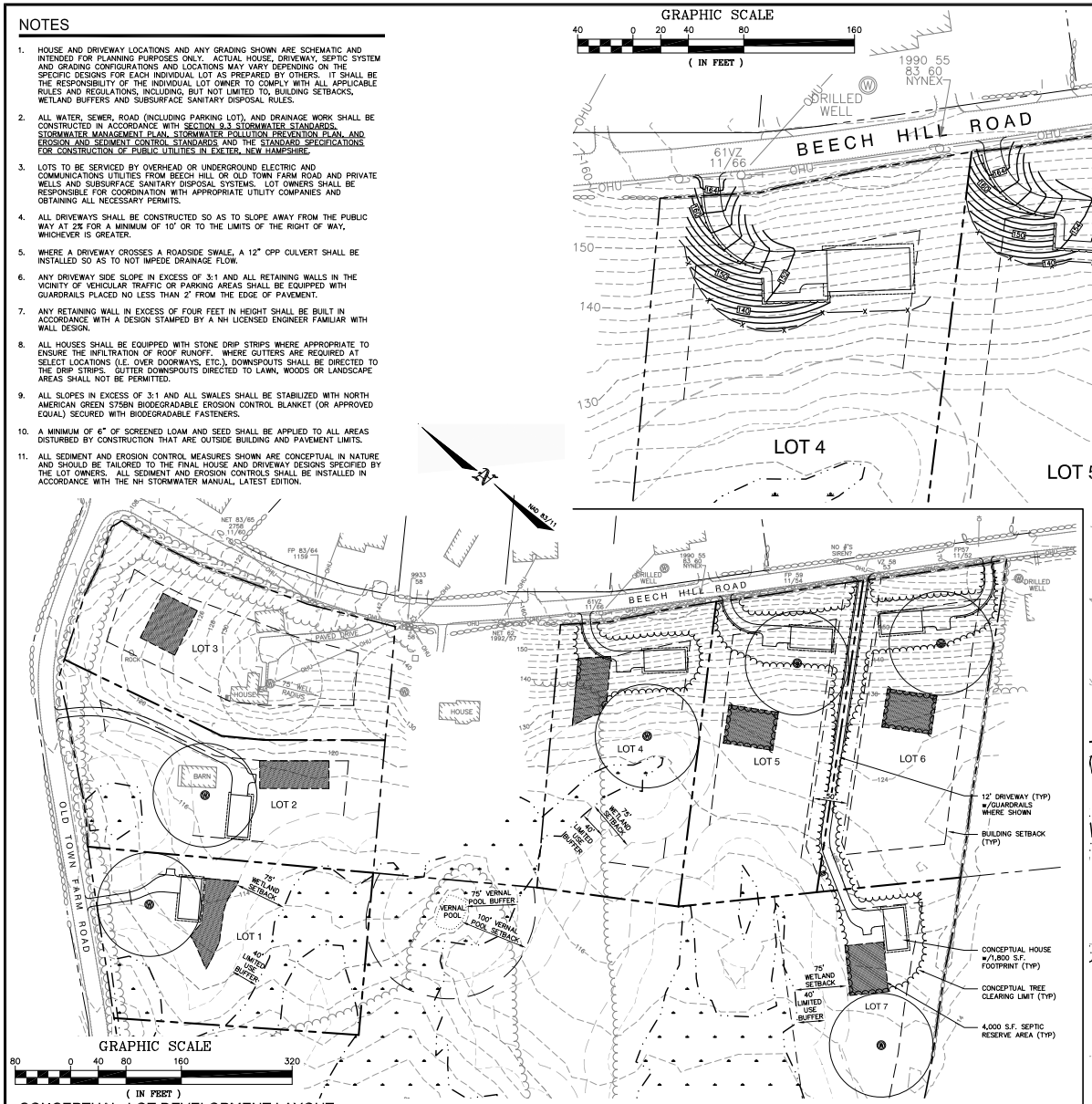
- Upon completion of the project, the contractor shall remove all temporary stormwater structures (i.e., temporary stone check dams, silt fence, temporary diversion swales, catch basin inlet filter, etc.). Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared, and seeded. Remove any sediment in catch basins and clean drain pipes that may have accumulated during construction.
- Once in operation, all paved areas of the site should be swept at least once annually at the end of winter/early spring prior to significant spring rains.

APPPENDIX

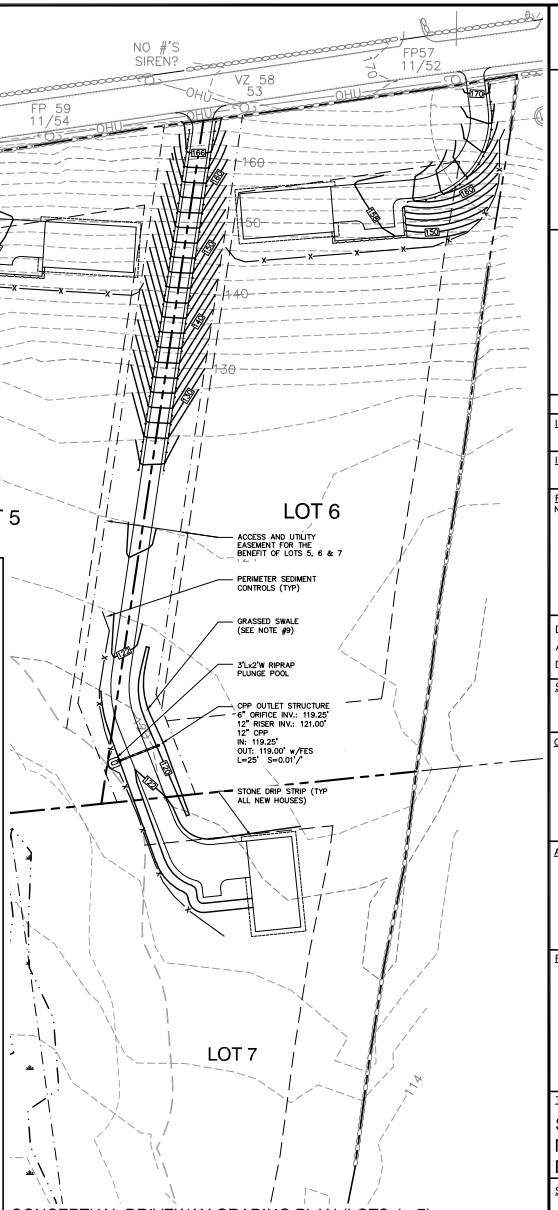
A. Stormwater System Operations and Maintenance Report
B. Site Grading and Drainage Plan

NOTES

1. HOUSE AND DRIVEWAY LOCATIONS AND ANY GRADING SHOWN ARE SCHEMATIC AND INTENDED FOR PLANNING PURPOSES ONLY. ACTUAL HOUSE, DRIVEWAY, SEPTIC SYSTEM AND GRADING CONFIGURATIONS AND LOCATIONS MAY VARY DEPENDING ON THE SPECIFIC DESIGNS FOR EACH INDIVIDUAL LOT AS PREPARED BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNER TO COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO, BUILDING SETBACKS, WETLAND BUFFERS AND SUBSURFACE SANITARY DISPOSAL RULES.
2. ALL WATER, SEWER, ROAD (INCLUDING PARKING LOT), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.3 STORMWATER STANDARDS, STORMWATER MANAGEMENT PLAN, STORMWATER POLLUTION PREVENTION PLAN, AND EROSION AND SEDIMENT CONTROL STANDARDS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC UTILITIES IN EXETER, NEW HAMPSHIRE.
3. LOTS TO BE SERVICED BY OVERHEAD OR UNDERGROUND ELECTRIC AND COMMUNICATIONS UTILITIES FROM BEECH HILL OR OLD TOWN FARM ROAD AND PRIVATE WELLS AND SUBSURFACE SANITARY DISPOSAL SYSTEMS. LOT OWNERS SHALL BE RESPONSIBLE FOR COORDINATION WITH APPROPRIATE UTILITY COMPANIES AND OBTAINING ALL NECESSARY PERMITS.
4. ALL DRIVEWAYS SHALL BE CONSTRUCTED SO AS TO SLOPE AWAY FROM THE PUBLIC WAY AT 2% FOR A MINIMUM OF 10' OR TO THE LIMITS OF THE RIGHT OF WAY, WHICHEVER IS GREATER.
5. WHERE A DRIVEWAY CROSSES A ROADSIDE SWALE, A 12" CPP CULVERT SHALL BE INSTALLED SO AS TO NOT IMPEDE DRAINAGE FLOW.
6. ANY DRIVEWAY SIDE SLOPE IN EXCESS OF 3:1 AND ALL RETAINING WALLS IN THE VICINITY OF VEHICULAR TRAFFIC OR PARKING AREAS SHALL BE EQUIPPED WITH GUARDRAILS PLACED NO LESS THAN 2' FROM THE EDGE OF PAVEMENT.
7. ANY RETAINING WALL IN EXCESS OF FOUR FEET IN HEIGHT SHALL BE BUILT IN ACCORDANCE WITH A DESIGN STAMPED BY A NH LICENSED ENGINEER FAMILIAR WITH WALL DESIGN.
8. ALL HOUSES SHALL BE EQUIPPED WITH STONE DRIP STRIPS WHERE APPROPRIATE TO ENSURE THE INFILTRATION OF ROOF RUNOFF. WHERE GUTTERS ARE REQUIRED AT SELECT LOCATIONS (I.E. OVER DOORWAYS, ETC.), DOWNSPOUTS SHALL BE DIRECTED TO THE DRIP STRIPS. GUTTER DOWNSPOUTS DIRECTED TO LAWN, WOODS OR LANDSCAPE AREAS SHALL NOT BE PERMITTED.
9. ALL SLOPES IN EXCESS OF 3:1 AND ALL SWALES SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75BN BIODEGRADABLE EROSION CONTROL BLANKET (OR APPROVED EQUAL) SECURED WITH BIODEGRADABLE FASTENERS.
10. A MINIMUM OF 6" OF SCREENED LOAM AND SEED SHALL BE APPLIED TO ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE OUTSIDE BUILDING AND PAVEMENT LIMITS.
11. ALL SEDIMENT AND EROSION CONTROL MEASURES SHOWN ARE CONCEPTUAL IN NATURE AND SHOULD BE TAILORED TO THE FINAL HOUSE AND DRIVEWAY DESIGNS SPECIFIED BY THE LOT OWNERS. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE NH STORMWATER MANUAL, LATEST EDITION.



CONCEPTUAL LOT DEVELOPMENT LAYOUT 1" = 80'



CONCEPTUAL DRIVEWAY GRADING PLAN (LOTS 4 - 7) 1" = 40'

CASE #22-14
TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: OCTOBER 11, 2022

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	10/11/22

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5307-SUB.dwg

SCALE: AS NOTED

OWNER:
JUDITH A. NICHOLS
FREDERICK J. NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833

APPLICANT:
JERRY AND CHRISTINE STERRITT
98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:
BEECH HILL SUBDIVISION
TAX MAP 13, LOT 1
BEECH HILL ROAD
EXETER, NH 03833

TITLE:
STORMWATER MANAGEMENT AND DEVELOPMENT PLAN

SHEET NUMBER:
C - 3

P5307

Section 9

Watershed Plans

Pre-Development Drainage Area Plan
Post-Development Drainage Area Plan

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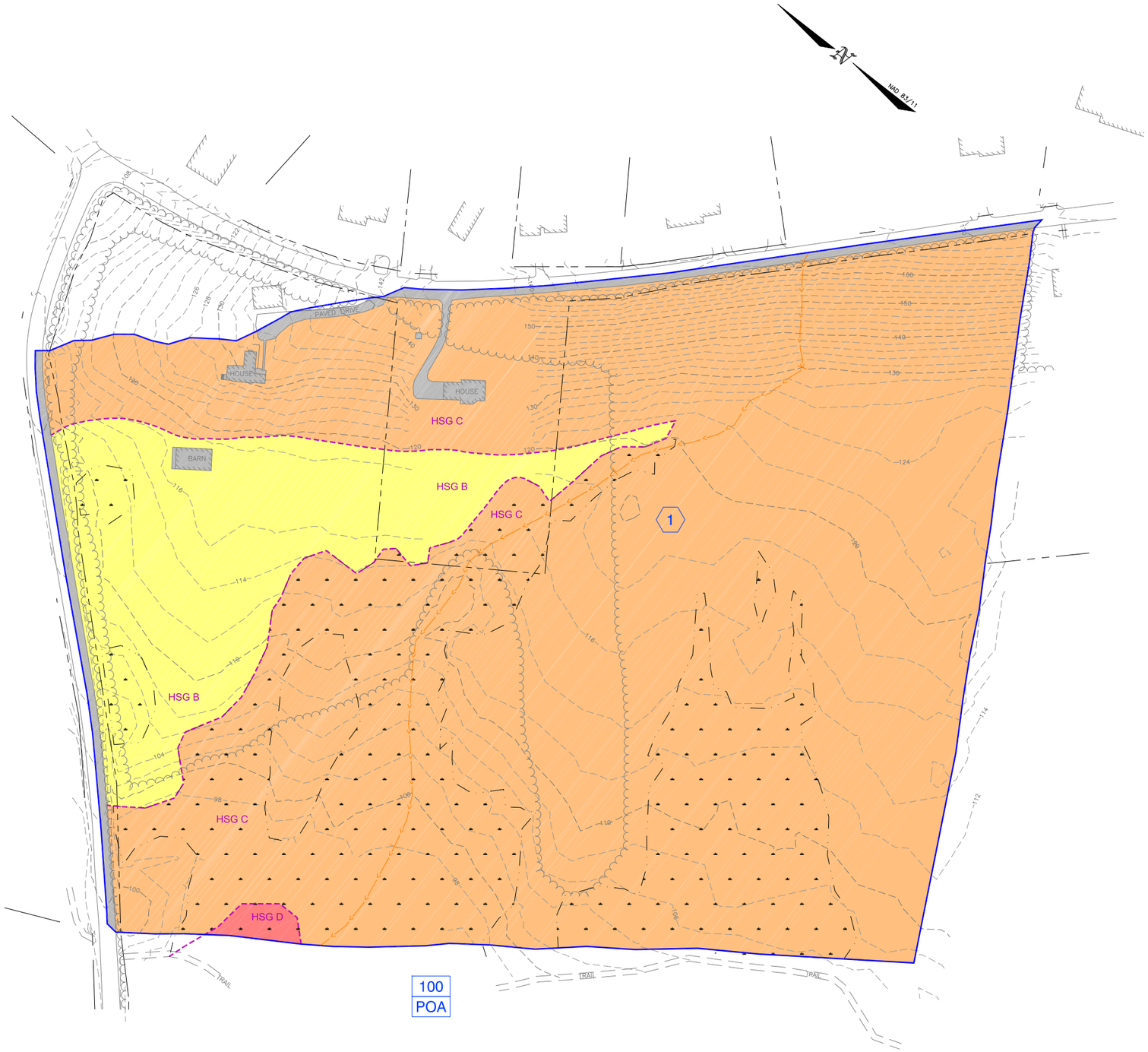


GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)

LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- 60 EXISTING CONTOUR
- WATERSHED BOUNDARY
- Tc PATH / REACH PATH
- PROPOSED GROUND SLOPE DIRECTION
- HISS SOIL BOUNDARY
- 311BH HISS SOIL DESIGNATION
- SOILS – HSG A
- SOILS – HSG B
- SOILS – HSG C
- SOILS – HSG D
- SOILS – IMPERVIOUS
- SOILS – WATER
- 1 1 1 SUBCATCHMENT/POND/REACH
- POA POINT OF ANALYSIS

CASE #22-14

TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.

133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 7634
LICENSED PROFESSIONAL ENGINEER
10/18/22

NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: OCTOBER 11, 2022

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	10/11/22

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5307-SUB.dwg

SCALE:
(22"x34") 1"= 80'
(11"x17") 1"=160'

OWNER:
JUDITH A. NICHOLS
FREDERICK J. NICHOLS
100 BEECH HILL ROAD
EXETER, NH 03833

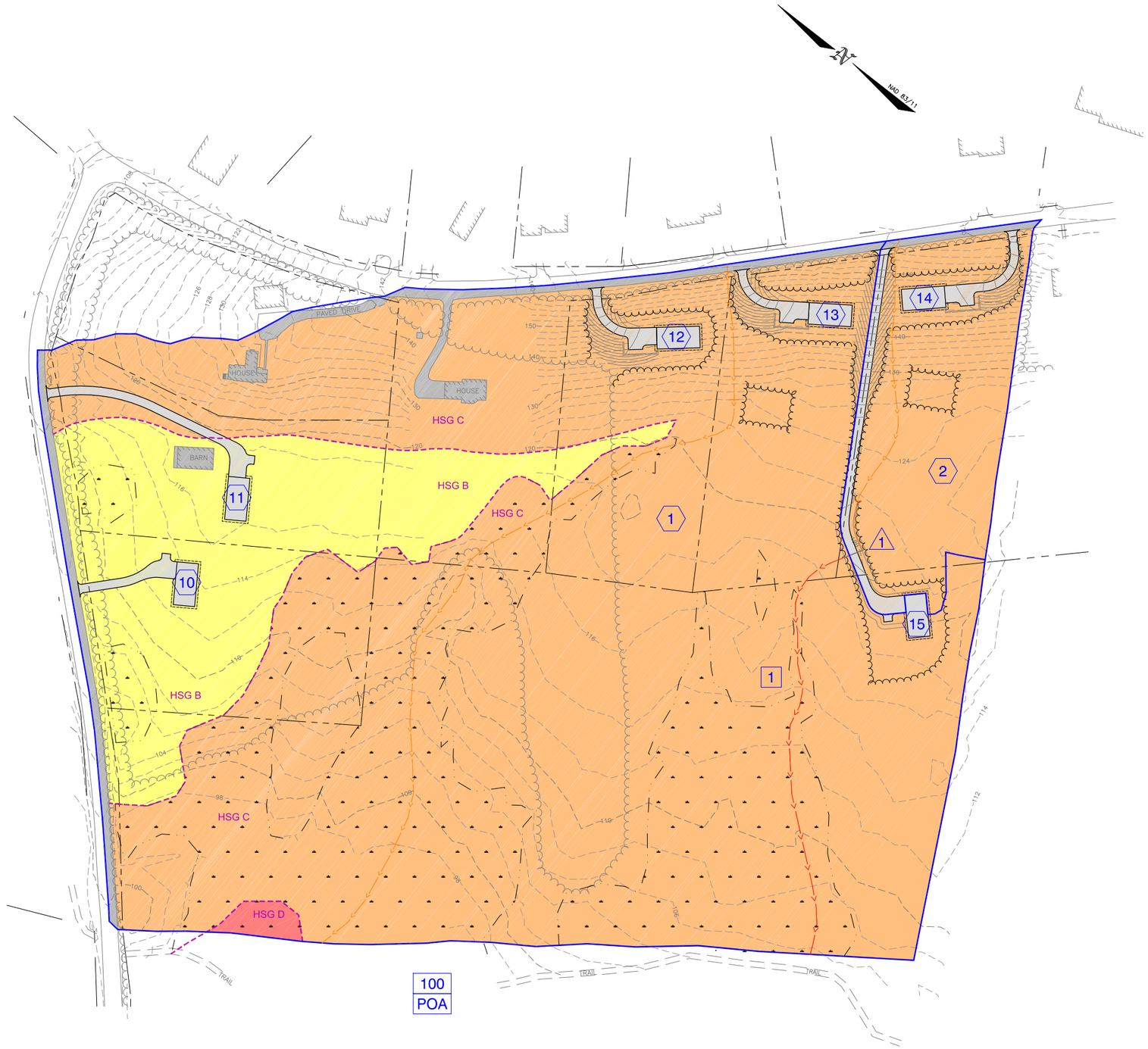
APPLICANT:
JERRY AND CHRISTINE STERRITT
98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:
BEECH HILL SUBDIVISION
TAX MAP 13, LOT 1
BEECH HILL ROAD
EXETER, NH 03833

TITLE:
PRE-DEVELOPMENT WATERSHED PLAN

SHEET NUMBER:
WS - 1

P5307



GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)

LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- 60 EXISTING CONTOUR
- WATERSHED BOUNDARY
- Tc PATH / REACH PATH
- PROPOSED GROUND SLOPE DIRECTION
- HISS SOIL BOUNDARY
- 311BH HISS SOIL DESIGNATION
- SOILS – HSG A
- SOILS – HSG B
- SOILS – HSG C
- SOILS – HSG D
- SOILS – IMPERVIOUS
- SOILS – WATER
- 1 1 1 SUBCATCHMENT/POND/REACH
- POA POINT OF ANALYSIS

CASE #22-14

TOWN OF EXETER PROJECT REFERENCE

ALTUS ENGINEERING, INC.

133 Court Street
(603) 433-2335
Portsmouth, NH 03801
www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 7634
LICENSED PROFESSIONAL ENGINEER
10/18/22

NOT FOR CONSTRUCTION

ISSUED FOR:
PLANNING BOARD

ISSUE DATE:
OCTOBER 11, 2022

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JERRY AND CHRISTINE STERRITT
98 BEECH HILL ROAD
EXETER, NH 03833

PROJECT:
BEECH HILL SUBDIVISION
TAX MAP 13, LOT 1
BEECH HILL ROAD
EXETER, NH 03833

TITLE:
POST-DEVELOPMENT WATERSHED PLAN

SHEET NUMBER:
WS - 2

P5307

TOWN OF EXETER

Planning and Building Department

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 •FAX 772-4709

www.exeternh.gov

Date: **December 1, 2022**

To: **Planning Board**

From: **Dave Sharples, Town Planner**

Re: **Todd & Corinne Cambio** **PB Case #22-18**

The Applicant is seeking a lot line adjustment of the common boundary line between their property located at 8 Hillside Avenue and the abutting property located at 6 Hillside Avenue owned by Patrick and Elissa Simpson. The proposed lot line adjustment will allow for the conveyance of 2,128 square feet of lot area from the abutting property at 6 Hillside Avenue (TM #97-5-8) to their property at 8 Hillside Avenue (TM #97-5-7). The subject properties are located in the R-1, Low Density Residential zoning district.

The Applicant has submitted a lot line adjustment plan and supporting documents, dated November 14th, 2022 and November 23rd, 2022 respectively, and are enclosed for your review. There was no TRC review, however, the materials have been reviewed by Code Enforcement Officer Doug Eastman and found to be in compliance with the zoning regulations.

There are no waivers being requested in conjunction with the application.

I will be prepared with suggested conditions of approval at the meeting in the event the board decides to act on the request.

Planning Board Motions

Lot Line Adjustment Motion: I move that the request of Todd & Corinne Cambio (PB Case #22-18) for Lot Line Adjustment approval be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Thank You.

Enclosures

RECEIVED

NOV 14 2022

EXETER PLANNING OFFICE

TOWN OF EXETER
MINOR SUBDIVISION, MINOR SITE PLAN, AND/OR LOT LINE ADJUSTMENT APPLICATION

THIS IS AN APPLICATION FOR:

( ) **MINOR SITE PLAN**
( ) **MINOR (3lots or less) SUBDIVISION** ( ) **LOTS**

(X) **LOT LINE ADJUSTMENT**

OFFICE USE ONLY

PB#22-18	**APPLICATION**
11/14/22	**DATE RECEIVED**
60.00	**APPLICATION FEE**
	PLAN REVIEW FEE
80.00	**ABUTTER FEE**
50.00	**LEGAL NOTICE FEE**
	INSPECTION FEE
$190.00	**TOTAL FEES**
	AMOUNT REFUNDED

1. **NAME OF LEGAL OWNER OF RECORD:** PATRICK + ELISSA SIMPSON

ADDRESS: 6 HILLSIDE AVE, EXETER, NH

TELEPHONE: ( )

2. **NAME OF APPLICANT:** TODD + CORINNE CAMBIO

ADDRESS: 8 HILLSIDE AVE, EXETER, NH

tcambio@hotmail.com **TELEPHONE:** (860) 287-3768

3. **RELATIONSHIP OF APPLICANT TO PROPERTY IF OTHER THAN OWNER:** NEIGHBOR

(Written permission from Owner is required, please attach.)

4. **DESCRIPTION OF PROPERTY:**

ADDRESS: 6 HILLSIDE AVE, EXETER

TAX MAP: 97 **PARCEL #:** 5-08 **ZONING DISTRICT:** R-1

AREA OF ENTIRE TRACT: _____ **PORTION BEING DEVELOPED:** _____

5. **EXPLANATION OF PROPOSAL:** PROPOSED LOT LINE ADJUSTMENT OF PARCEL A 2,128 S.F. TO BE COMBINED WITH 97-507 FROM LOT 97 5-08

6. **ARE MUNICIPAL SERVICES AVAILABLE?** (YES/NO) NO
IF YES, WATER AND SEWER SUPERINTENDENT MUST GRANT WRITTEN APPROVAL FOR CONNECTION. IF NO, SEPTIC SYSTEM MUST COMPLY WITH W.S.P.C.C. REQUIREMENTS.

7. **LIST ALL MAPS, PLANS AND OTHER ACCOMPANYING MATERIAL SUBMITTED WITH THIS APPLICATION:**

ITEM:	NUMBER OF COPIES
A. PLAT OF LAND DRAFT	
B.	
C.	
D.	
E.	
F.	

8. **ANY DEED RESTRICTIONS AND COVENANTS THAT APPLY OR ARE CONTEMPLATED** (YES/NO) NO IF YES, ATTACH COPY.

9. **NAME AND PROFESSION OF PERSON DESIGNING PLAN:**

NAME: HENRY BOYD MILLENNIUM ENGINEERING
ADDRESS: 13 HAMPTON ROAD, EXETER, NH
PROFESSION: SURVEYER **TELEPHONE:** (603) 778-0528

10. **LIST ALL IMPROVEMENTS AND UTILITIES TO BE INSTALLED:** WE JUST WANT A LOT LINE THAT INCLUDES OUR DRIVEWAY AND RETAINING WALL WHICH WE THOUGHT WAS OURS WHEN WE MOVED IN.

11. **HAVE ANY SPECIAL EXCEPTIONS OR VARIANCES BEEN GRANTED BY THE ZONING BOARDOF ADJUSTMENT TO THIS PROPERTY PREVIOUSLY?**

(Please check with the Planning Department Office to verify) (YES/NO) No IF YES, LIST BELOW AND NOTE ON PLAN.

_____

_____

NOTICE:

I CERTIFY THAT THIS APPLICATION AND THE ACCOMPANYING PLANS AND SUPPORTING INFORMATION HAVE BEEN PREPARED IN CONFORMANCE WITH ALL APPLICABLE TOWN REGULATIONS, INCLUDING BUT NOT LIMITED TO THE "SITE PLAN REVIEW AND SUBDIVISION REGULATION" AND THE ZONING ORDINANCE. FURTHERMORE, IN ACCORDANCE WITH THE REQUIREMENTS OF THE "SITE PLAN REVIEW AND SUBDIVISION REGULATIONS", I AGREE TO PAY ALL COSTS ASSOCIATED WITH THE REVIEW OF THIS APPLICATION.

DATE 10/24/22 APPLICANT'S SIGNATURE _____

ACCORDING TO RSA 676.4.I (c), THE PLANNING BOARD MUST DETERMINE WHETHER THE APPLICATION IS COMPLETE WITHIN 30 DAYS OF SUBMISSION. THE PLANNING BOARD MUST ACT TO EITHER APPROVE, CONDITIONALLY APPROVE, OR DENY AN APPLICATION WITHIN SIXTY FIVE (65) DAYS OF ITS ACCEPTANCE BY THE BOARD AS A COMPLETE APPLICATION. A SEPARATE FORM ALLOWING AN EXTENSION OR WAIVER TO THIS REQUIREMENT MAY BE SUBMITTED BY THE APPLICANT.

Todd M. Cambio
8 Hillside Ave
Exeter, NH 03833

11/1/22

TO WHOM IT MAY CONCERN:

This letter is in reference to my application for a lot line adjustment of Parcel A (2,128 sq ft) to be conveyed and combined with my tax map 97 5-07.

My neighbors, Patrick and Elissa Simpson of lot 97 5-08 and myself have both agreed to this lot line adjustment. It follows the topography of my driveway straight back to the retaining wall continuing until it reaches the tree line.

SINCERELY,

APPLICANT: TODD M. CAMBIO

APPLICANT SIGNATURE: _____ DATE: 11/5/22

NEIGHBOR: PATRICK SIMPSON

SIGNATURE: _____ DATE: 11/8/22

ABUTTERS: PLEASE LIST ALL PERSONS WHOSE PROPERTY IS LOCATED IN NEW HAMPSHIRE AND ADJOINS OR IS DIRECTLY ACROSS THE STREET OR STREAM FROM THE LAND UNDER CONSIDERATION BY THE BOARD. THIS LIST SHALL BE COMPILED FROM THE EXETER TAX ASSESSOR'S RECORDS.

TAX MAP 97 5-08
NAME PATRICK + ELISSA SIMPSON
ADDRESS 6 HILLSIDE AVE
EXETER NH 03833

TAX MAP 97 3-1
NAME MARCO + JAIME IACOBUCCI
ADDRESS 5 KINGSTON RD
EXETER NH 03833

TAX MAP 97 5-06
NAME NATHALIE GODBOUT +
ADDRESS DEAN ROEPKE
10 HILLSIDE AVE, EXETER 03833

TAX MAP 97 5-09
NAME Molly HARRINGTON
ADDRESS 4 HILLSIDE AVE
EXETER, NH 03833

TAX MAP 97 5-04
NAME DAN + ANNE MARITCHE
ADDRESS 7 HILLSIDE AVE
EXETER NH 03833

TAX MAP
NAME
ADDRESS

TAX MAP
NAME
ADDRESS

TAX MAP
NAME
ADDRESS

TAX MAP 97 5-07
NAME TODD + CORINNE CAMBIO
ADDRESS 8 HILLSIDE AVE
EXETER NH 03833

TAX MAP 97 5-03
NAME JAMES D. RAYMOND
ADDRESS 5 HILLSIDE AVE
EXETER NH 03833

TAX MAP 97 5-02
NAME WOLFGANG + ALICE HARDER
ADDRESS 3 HILLSIDE AVE
EXETER NH 03833

TAX MAP 97 3
NAME TAYLOR SANBORN
ADDRESS 54 KINGSTON RD
EXETER NH 03833

TAX MAP 97 1
NAME WOOL MARTIN REV. TRUST
ADDRESS MARTIN WOOL TRUSTEE
756 CORDOVA CIRCLE
THE VILLAGES, FL 32162
TAX MAP KB 5674 PG 2634
NAME
ADDRESS

TAX MAP
NAME
ADDRESS

TAX MAP
NAME
ADDRESS

Please attach additional sheets if needed

CHECK LIST FOR MINOR SITE PLAN REVIEW, MINOR SUBDIVISON AND LOT LINE ADJUSTMENT

APPLICANT	TRC	REQUIRED EXHIBITS, SEE REGULATION 6.6.2.4
☑	☐	a) The name and address of the property owner, authorized agent, the person or firm preparing the plan, and the person or firm preparing any other data to be included in the plan.
☑	☐	b) Title of the site plan, subdivision or lot line adjustment, including Planning Board Case Number.
☒	☐	c) Scale, north arrow, and date prepared.
☒	☐	d) Location of the land/site under consideration together with the names and address of all owners of record of abutting properties and their existing use.
☑	☐	e) Tax map reference for the land/site under consideration, together with those of abutting properties.
☒	☐	f) Zoning (including overlay) district references.
☒	☐	g) A vicinity sketch showing the location of the land/site in relation to the surrounding public street system and other pertinent location features within a distance of 1,000-feet.
☒	☐	h) For minor site plan review only, a description of the existing site and proposed changes thereto, including, but not limited to, buildings and accessory structures, parking and loading areas, signage, lighting, landscaping, and the amount of land to be disturbed.
☒	☐	i) If deemed necessary by the Town Planner, natural features including watercourses and water bodies, tree lines, and other significant vegetative cover, topographic features and any other environmental features which are significant to the site plan review or subdivision design process.
☐	☐	j) If deemed necessary by the Town Planner, existing contours at intervals not to exceed 2-feet with spot elevations provided when the grade is less than 5%. All datum provided shall reference the latest applicable US Coast and Geodetic Survey datum and should be noted on the plan.
☐	☐	k) If deemed necessary by the Town Planner for proposed lots not served by municipal water and sewer utilities, a High Intensity Soil Survey (HISS) of the entire site, or portion thereof. Such soil surveys shall be prepared and stamped by a certified soil scientist in accordance with the standards established by the Rockingham County Conservation District. Any cover letters or explanatory data provided by the certified soil scientist shall also be submitted.
☐	☐	l) State and federal jurisdictional wetlands, including delineation of required setbacks.
☑	☐	m) A note as follows: "The landowner is responsible for complying with all applicable local, State, and Federal wetlands regulations, including any permitting and setback requirements required under these regulations."
☒	☐	n) Surveyed exterior property lines including angles and bearings, distances, monument locations, and size of the entire parcel. A professional land surveyor licensed in New Hampshire must attest to said plan.

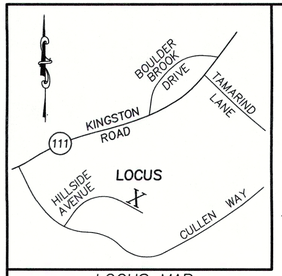
☒	☐	o) For minor site plans only, plans are not required to be prepared by a professional engineer or licensed surveyor unless deemed essential by the Town Planner or the TRC.
☒	☐	p) For minor subdivisions and lot line adjustments only, the locations, dimensions, and areas of all existing and proposed lots.
☒	☐	q) The lines of existing abutting streets and driveways locations within 100-feet of the site.
☐	☐	r) The location, elevation, and layout of existing catch basins and other surface drainage features.
☒	☐	s) The footprint location of all existing structures on the site and approximate location of structures within 100-feet of the site.
☒	☐	t) The size and location of all existing public and private utilities.
☐	☐	u) The location of all existing and proposed easements and other encumbrances.
☐	☐	v) All floodplain information, including contours of the 100-year flood elevation, based upon the Flood Insurance Rate Map for Exeter, as prepared by the Federal Emergency Management Agency, dated May 17, 1982.
☐	☐	w) The location of all test pits and the 4,000-square-foot septic reserve areas for each newly created lot, if applicable.
☐	☐	x) The location and dimensions of all property proposed to be set aside for green space, parks, playgrounds, or other public or private reservations. The plan shall describe the purpose of the dedications or reservations, and the accompanying conditions thereof (if any).
☐	☐	y) A notation shall be included which explains the intended purpose of the subdivision. Include the identification and location of all parcels of land proposed to be dedicated to public use and the conditions of such dedications, and a copy of such private deed restriction as are intended to cover part of all of the tract.
☐	☐	z) Newly created lots shall be consecutively numbered or lettered in alphabetical order. Street address numbers shall be assigned in accordance with Section 9.17 Streets of these regulations.
☐	☐	aa) The following notations shall also be shown: • Explanation of proposed drainage easements, if any • Explanation of proposed utility easement, if any • Explanation of proposed site easement, if any • Explanation of proposed reservations, if any • Signature block for Board approval as follows: Town of Exeter Planning Board _____ _____ Chairman Date
☐	☐	

TOWN OF EXETER, NH
APPLICATION FOR MINOR SITE PLAN REVIEW, MINOR SUBDIVISION and/or LOT LINE ADJUSTMENT

A completed application shall contain the following items, although please note that some items may not apply such as waivers or conditional use permit:

1. Application for Hearing (X)
2. Abutter's List Keyed to the Tax Map (including name and business address of all professionals responsible for the submission (engineer, landscape architect, wetland scientist, etc.) (X)
3. Checklist for plan requirements (X)
4. Letter of Explanation (X)
5. Written request and justification for waiver(s) from Site Plan/Sub Regulations
6. Application to Connect and/or Discharge to Town of Exeter Sewer, Water, or Storm Water Drainage System(s) - if applicable (X) N/A
7. Application Fees ( )
8. Seven (7) copies of 24'x36' plan set (X)
9. Fifteen (15) 11"x 17" copies of the plan set (X)
10. Three (3) pre-printed 1"x 2 5/8" labels for each abutter, the applicant and all consultants. (X)

NOTES: All required submittals must be presented to the Planning Department Office for distribution to other Town departments. Any material submitted directly to other departments will not be considered.



LOCUS MAP
NOT TO SCALE

NOTES:

1) THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
2) **THIS PARCEL DOES NOT LIE WITHIN A FLOOD ZONE. SEE F.I.R.M. COMMUNITY PANEL 330130 0404 E EFFECTIVE DATE MAY 17, 2005.**
3) NO WETLAND DELINEATION WAS PREFORMED FOR THE PURPOSE OF THIS SURVEY.
4) THE LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLANDS REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.

ZONING DISTRICT
R-1 RESIDENTIAL

MINIMUM REQUIREMENTS

AREA (NO SEWER)	2 ACRES
AREA (SEWER)	40,000 S.F.
LOT WIDTH	150'
LOT DEPTH	150'
FRONTAGE	150'

BUILDING SETBACKS

FRONT	25'
SIDE	15'
BOTH	30'
REAR	25'
HYDRIC B SOILS	40'

BUILDING COVERAGE

MAXIMUM	15%

OPEN SPACE

MINIMUM	70%

LEGEND

I.P.	IRON PIPE	———	EXISTING FENCE
I ROD	IRON ROD		UTILITY POLE
FND.	FOUND	--OHW--	OVERHEAD WIRE
0/00	ASSESSORS MAP AND PARCEL		WATER VALVE
			HYDRANT
		Ⓢ	SEWER MANHOLE

97/3 N/F TAYLOR W. SANBORN 54 KINGSTON RD EXETER, NH 03833 BK. 6259 PG. 2434

97/3-1 N/F MARCO & JAIME IACOBUCCI 50 KINGSTON RD. EXETER, NH 03833 BK. 5751 PG. 2802

97/1 N/F WOOL MARTIN REV. TRUST MARTIN WOOL TRUSTEE 756 CORDOVA CIRCLE THE VILLAGES, FL 32162 BK. 5674 PG. 2634

97/5-09 N/F MARC CHABOT & MOLLY HARRINGTON 4 HILLSIDE AVE. EXETER, NH 03833 BK. 4467 PG. 1409

97/5-06 N/F NATHALIE F. GODBOUT & DEAN M. ROEPKE 10 HILLSIDE AVE. EXETER, NH 03833 BK. 4287 PG. 1484

97/5-02 N/F WOLFGANG A. & ALICE M. HARDER 3 HILLSIDE AVE. EXETER, NH 03833 BK. 6008 PG. 0673

97/5-03 N/F JAMES D. RAYMOND 5 HILLSIDE AVE. EXETER, NH 03833 BK. 4675 PG. 0954

97/5-04 N/F DANIEL C. & ANNE M. MACRITCHIE 7 HILLSIDE AVE. EXETER, NH 03833 BK. 3621 PG. 0026

97/5-08 REMAINING AREA 82,950 S.F. 1.90 ACRES

97/5-07 NEW AREA 112,306 S.F. 2.58 ACRES

PARCEL A 2,128 S.F. TO BE CONVEYED AND COMBINED WITH 97/5-7

* PROPOSED * LOT LINE

N 82°44'50" E 95.56'
S 52°19'30" E 46.85'
N 84°36'30" E 34.21'
N 84°36'30" E 104.41'
N 85°41'00" E 137.92'
N 28°22'22" E 532.28'
409.89'
583.53'
702.86'
S 33°11'23" W
S 61°18'09" E 24.49'
TREE LINE
S 28°41'51" W
I ROD (TO BE SET)
I ROD (TO BE SET)
N 20°40'46" E 173.84'
8.1'
27.6'
WALL
EXISTING SHED
EXISTING DWELLING
EXISTING GARAGE
EXISTING DWELLING
EXISTING DRIVEWAY
L=78.90'
R=275.00
N 67°42'05" W 71.56'
I ROD FND. (BENT)
149.86'
N 67°42'05" W
I ROD FND. (BASE HELD)
147.99'
N 67°42'05" W
I ROD FND. (BADLY BENT)
S 71°06'37" W 668.31'
D.H.S.B. FND. (HELD FOR ALIGNMENT)
EDGE OF CURB (TYPICAL)
HILLSIDE AVENUE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 INCH = 40'

LOT HISTORY TABLE

97/5-08	85,078 S.F. 1.95 ACRES		97/5-07	110,178 S.F. 2.53 ACRES	
− PARCEL A	2,128 S.F. 1.95 ACRES		+ PARCEL A	2,128 S.F. 1.95 ACRES	
REMAINING AREA 97/5-08	82,950 S.F. 1.90 ACRES		NEW AREA 97/5-07	112,306 S.F. 2.58 ACRES	

TOWN OF EXETER
PLANNING BOARD APPROVAL

CHAIRMAN DATE

RECORD OWNERS

97/5-08 PATRICK S. & LYNNE ELISSA SIMPSON 6 HILLSIDE AVENUE EXETER, NH 03833 BK. 5683 PG. 1238 85,078 S.F. 1.95 ACRES

97/5-07 TODD M. & CORINNE E. CAMBIO 8 HILLSIDE AVENUE EXETER, NH 03833 BK. 5567 PG. 0362 110,178 S.F. 2.53 ACRES

PLAN NOTE

THE PURPOSE OF THIS PLAN IS TO SHOW A LOT LINE ADJUSTMENT BETWEEN TAX MAP 97 LOT 5-07 AND TAX MAP 97 LOT 5-08.

PLAN REFERENCE

"HILLSIDE SUBDIVISION EXETER, NH FOR BELL & FLYNN, INC. SCALE: 1"=60' DATE: 7-26-96 REVISED: 10-11-96 BY: MAGUIRE GROUP, INC. D-25668

D-25668

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEEDS REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN/CITY ASSESSORS' RECORDS.

I CERTIFY:

THAT THIS ACTUAL SURVEY WAS MADE ON THE GROUND BETWEEN MARCH AND JUNE OF 2022.

THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF REGISTER OF DEEDS.

THAT THIS SURVEY CONFORMS TO THE REQUIREMENTS FOR ACCURACY FOR N.H. URBAN SURVEY.

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 904 HENRY H. BOYD, JR. SIGNATURE

LICENSED LAND SURVEYOR 10-12-2022 DATE

PLANNING BOARD CASE NUMBER 22-XX

PLAT OF LAND
IN
EXETER, NH

SHOWING
A LOT LINE ADJUSTMENT AT 6 & 8 HILLSIDE AVENUE
(ASSESSORS MAP 97 LOTS 5-08 & 5-07)

RECORD OWNERS
PATRICK S. & LYNEE ELISSA SIMPSON
6 HILLSIDE AVENUE EXETER, NH 03833
TODD M. & CORINNE E. CAMBIO
8 HILLSIDE AVENUE EXETER, NH 03833

MILLENNIUM ENGINEERING INC.
ENGINEERS AND LAND SURVEYORS
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833
PHONE: (603) 778-0528 FAX: (603) 772-0689

NO.	DATE	DESCRIPTION	BY

SCALE: 1"=40' | DRWN. BY: H.H.B.
DATE: OCT. 12, 2022 | CHKD. BY: R.S.G.
PROJECT: E222861

TOWN OF EXETER

Planning and Building Department

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 •FAX 772-4709

www.exeternh.gov

Date: **December 1, 2022**

To: **Planning Board**

From: **Dave Sharples, Town Planner**

Re: **Zoning Amendments**

As you all are aware, the town has contracted with the Horsley Witten Group (HWG) to work with town staff to conduct a complete audit on our zoning ordinance. HWG presented our initial findings to the Board on October 13th. This presentation was a broader overview of the project and we are now ready to go into more specifics. Nate Kelly from HWG will be attending the meeting. We are currently working on materials that I will send along electronically before the meeting.

Based upon the work to date, it would likely be proposed to delete the existing Zoning Ordinance in its entirety and replace with a new ordinance. However, this isn't as big a change as it sounds. The proposal is to consolidate zoning districts which triggers amendments throughout the Zoning Ordinance so replacing the existing ordinance with a revised one is less confusing than trying to list all the proposed amendments. The majority of the ordinance will remain the same. To alleviate this confusion, we are creating a short document that explains what we are doing, why we are doing it, and what is and is not going to change. I will send that to everyone electronically before the meeting.

Thank You.