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, February 13, 2025 at 7:00 P.M. in the Nowak Room of the Town Office building located at 10 Front Street, Exeter, New Hampshire, to consider the following:

APPROVAL OF MINUTES: January 9 and January 23, 2025

NEW BUSINESS: PUBLIC HEARINGS

Continued public hearing on the application of RiverWoods Company at Exeter for site plan review and Wetland CUP application for the demolition of the existing administrative building and the proposed construction of the new supportive living health center along with associated site improvement on the property located at 5 White Oak Drive. The subject property is located in the R-1, Low Density Residential zoning district and are identified as Tax Map Parcel #97-23. PB Case #24-16.

The application of StoneArch Development for site plan review of a proposal for the redevelopment of the property located at 112 Front Street. The proposal includes the demolition of the existing buildings and new construction of seventeen (17) townhouse style condominium units and associated site improvements. The subject property is located in the C-1, Central Area Commercial zoning district and identified as Tax Map Parcel #73-14. PB Case #24-17.

OTHER BUSINESS

- Master Plan Discussion
- Land Use Regulations Review
- Field Modifications
- Bond and/or Letter of Credit Reductions and Releases

EXETER PLANNING BOARD
Langdon J. Plumer, Chairman

Posted 01/31/25: Exeter Town Office and Town of Exeter website

TOWN OF EXETER
PLANNING BOARD
NOWAK ROOM
JANUARY 9, 2025
DRAFT MINUTES
7:00 PM

I. PRELIMINARIES:

BOARD MEMBERS PRESENT BY ROLL CALL: Chair Langdon Plumer, Vice-Chair Aaron Brown, Clerk, John Grueter, Gwen English, Jennifer Martel, 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

November 21, 2024

Ms. Belanger and Ms. English recommended edits.

Ms. Belanger motioned to approve the November 21, 2024 meeting minutes, as amended. Ms. English seconded the motion. A vote was taken, Mr. Grueter abstained. The motion passed 6-0-1.

December 19, 2024

Ms. Belanger and Ms. English recommended edits.

Ms. Martel asked that the amount of granular fill being brought in be double checked on Line 114.

Ms. Belanger motioned to approve the December 19, 2024 meeting minutes, as amended. Mr. Grueter seconded the motion. A vote was taken, all were in favor, the motion passed unanimously.

IV. NEW BUSINESS:

1. Public hearing on the proposed zoning amendments for 2025 Town Meeting warrant. Copies of the full text of the proposed amendments are available in the Planning Office and posted on the Town website. Amend Article 2, Section 2.2 Definitions by adding a new definition for “Short-term rental”. Amend Article 4, Section 4.2 Schedule I: Permitted Uses by adding “Short-term rental” as a permitted use in the C-1, Central Area Commercial and WC-Waterfront Commercial zoning districts.

Chair Plumer read out loud the Public Hearing Notice.

Mr. Sharples noted that the amendment was discussed at the Board's November 21st meeting. The Housing Advisory Committee (HAC) had proposed a zoning amendment to define "Short-term rentals" under Article 2, Section 2.2. Definitions as: "Any individually or collectively owned single-family house or dwelling unit or any unit or group of units in a condominium, cooperative, or timeshare, or owner-occupied residential home, that is offered for a fee and for less than thirty (30) consecutive days."

Mr. Sharples noted that Schedule 1 Permitted Uses under Article 4, Section 4.2. would add: "Short-term rental" as a permitted use in the C-1, Central Area Commercial and WC-Waterfront Commercial zoning districts. He provided the Board with a copy of the minutes from the Housing Advisory Committee's meeting of November 8th, 2024 when the proposed amendment was discussed.

Mr. Sharples noted that these zones are places where there is already density and any unit taken out of long-term rental has an effect on pricing and availability of long term rentals.

Ms. Martel asked if HAC discussed short term rentals in rural districts and Mr. Sharples indicated they reviewed a map and narrowed it down to these two areas. Ms. Belanger noted three areas had been originally considered. Mr. Sharples noted homeowners in other zones could apply for a variance. Vice-Chair Brown noted hotels are allowed in the zone and just about everything but industrial uses. Mr. Sharples indicated short-term rentals are not hotels and are not permitted now in any zone without a variance. Mr. Grueter noted that hotels have people on staff around the clock. Ms. Belanger noted there is also enough parking.

Vice-Chair Brown asked what it was they are allowing physically and why these, and boarding houses are not triggering the safety code. Mr. Sharples noted they are a unit that has its own sleeping, eating and sanitary whereas a boarding house might share those. Ms. Belanger noted that groups of people often rent a house and could have six cars parking there. Mr. Sharples noted that Bed and Breakfasts have their own definition, serve breakfast and the owner lives on the premises.

Chair Plumer opened the hearing to the public for comments and questions at 7:32 PM and being none closed the hearing to public comment.

Mr. Sharples informed the Board they could have a second public hearing at the library on January 23rd but they don't have to, and they have a full agenda but could consider meeting at 6:45 PM.

Vice-Chair Brown motioned to forward the proposed amendment to the March 2025 town warrant as proposed. Mr. Grueter seconded the motion.

Ms. Martel indicated she would not like to limit the allowance to such a small area. Vice-Chair Brown indicated right now it is not allowed anywhere without a variance. Ms. Belanger noted they could consider expanding the area next year but would like to see how it works out so there would not be too many more obstacles with the study on the winter parking ban. Mr. Sharples noted enforcement is

complaint driven. Ms. Martel opined that this could make their property more valuable than others because short-term rentals are allowed.

Vote: ***A vote was taken. Ms. Martel was opposed. The motion passed 6-1-0.***

V. OTHER BUSINESS

- Master Plan Discussion

Mr. Sharples noted that the Select Board set aside funds from ARPA (American Rescue Plan) which have to be encumbered by the end of 2024 and spent by 2025. The funds are encumbered by entering a contract before the end of 2024 and they went under contract with RPC.

- Field Modifications

- Bond and/or Letter of Credit Reductions and Release

Mr. Sharples reported there was a release for Meredith Village Savings Bank. They submitted their as-builts and finalized conditions of approval.

VII. TOWN PLANNER'S ITEMS

VIII. CHAIRPERSON'S ITEMS

Ms. Belanger asked if there is a follow-up with TRC when new plans are submitted. Mr. Sharples indicated there must be enough of a change to warrant it.

Ms. Belanger noted there was a site walk today and it was difficult to hear and recommended brining a bullhorn just in case.

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

X. ADJOURN

Mr. Grueter motioned to adjourn the meeting at 7:51 PM. Ms. Belanger seconded the motion. A vote was taken and passed unanimously.

Respectfully submitted.

Daniel Hoijer,
Recording Secretary (Via Exeter TV)

TOWN OF EXETER
PLANNING BOARD
MEZZANINE AT EXETER PUBLIC LIBRARY
FOUR CHESTNUT STREET
JANUARY 23, 2025
DRAFT MINUTES
7:00 PM

I. PRELIMINARIES:

BOARD MEMBERS PRESENT BY ROLL CALL: Chair Langdon Plumer, Vice-Chair Aaron Brown, Clerk, John Grueter, Gwen English, Jennifer Martel, Nancy Belanger Select Board Representative and Alternate Mary Kennedy

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 – *Tabled*

January 9, 2025

IV. NEW BUSINESS:

1. Continued public hearing on the application of Green & Company for site plan review and Wetlands Conditional Use Permit (CUP) for a proposed Mixed-Use Neighborhood Development (MUND) project consisting of a townhouse development (off Haven Lane) with thirty-two (32) three-bedroom units, a four-story mixed-use building on Portsmouth Avenue having 4,418 S.F. commercial use on the first floor and thirty-six (36) one-bedroom units above, and one separate duplex structure with three-bedroom units on Haven Lane, along with associated site improvements. The subject property is located at 76 Portsmouth Avenue
C-2, Highway Commercial zoning district
Tax Map Parcel #65-118
PB Case #24-8.

Chair Plumer indicated that the applicant has requested a continuance.

Mr. Grueter continued Planning Board Case #24-8 to the February 27, 2025 Planning Board meeting at 7:00 PM at the Nowak Room. Ms. Belanger seconded the motion. A vote was taken, all were in favor, the motion passed unanimously.

2. Continued public hearing on the application of RiverWoods Company at Exeter for site plan review and Wetland CUP application for the demolition of the existing administrative building and the proposed construction of the new supportive living health center along with associated site improvement on the property located at 5 White Oak Drive.
R-1, Low Density Residential zoning district
Tax Map Parcel #97-23
PB Case #24-16.

Chair Plumer read out loud the Public Hearing Notice.

Town Planner Dave Sharples noted that the applicant had appeared on November 21, 2024 and December 19, 2024 and there was a site walk on December 12, 2024. The applicant is seeking approval of a site plan and Wetlands Conditional Use Permit (CUP) application for the demolition of the existing administrative building and proposed new supportive living health center along with associated site improvement on the property. At the December 19th meeting the Board has for additional information: revised landscaping plan, density calculations (allowed number of units, number of units built & number of surplus remaining), a Master Plan narrative and plan of construction sequence, contractor parking and laydown areas for construction. The applicant submitted revised plans and supporting documents dated January 15, 2025 which will be reviewed by town staff and the town's third party engineer Underwood Engineering (UEI).

Attorney Sharon Somers noted that Justine Vogel the CEO of Riverwoods was present as well as Eric Saari, Robbie Woodburn, and Tom Severino of Severino Construction.

Eric Saari of Altus Engineering noted minor changes to the plans. He noted there was a lot of lighting that would be off at 10 PM and some dimming to 30% for safety in the parking lot. A motion sensor is being considered. Mr. Saari noted that DES made wetland comments and AoT had minor comments. They are working with DOT on their comments.

Robbie Woodburn discussed screening of the proposed building. She noted additional evergreen trees would be added and displayed slides of Kingston Road and Route 111, she showed existing 67 Kingston Road's house where parking will be. She showed the current White Oak Drive and noted the utility pole will be gone. She showed vegetation at street level and the intersection of Pickpocket Road which is most impacted by the new site. She noted the types of trees and shrubs proposed, many of which are native species, to screen the corner of the building, the top left, across from Mr. Murray's house, the parking and screening for the building. She noted the wet field proposed challenges and proposed red maples and disease resistant elms. She showed the view across Ms. Hooten's field and of Riverwoods Drive to White Oak in the winter. She showed the architectural rendering of the entry and portico, and two-story atrium, proposed.

Tom Severino of Severino Trucking Co. reviewed the four stages of construction to get the site ready for the building, parking and lay down areas on the east side of White Oak Drive and in front of the administration building. He noted that during phase 2 the parking lot would be used for construction parking and during construction of the underground parking and garage excavation, frost walls they

would use that as a lay down parking area. In phase 3 they would use the new parking lot and the laydown area would be on White Oak Drive. During phase 4 there would be temporary parking on gravel.

Vice-Chair Brown noted the evergreens along Route 111 shown as 20.'

Chair Plumer noted the kiosk area by the guard house, that the town asked the park to be available to residents.

Ms. English asked if anyone talked to Ruth Hotten about screening. Ms. Woodburn apologized for not remembering. Attorney Somers noted that the engineer had conversations with her early on and she preferred to have discussions at these meetings.

Ms. English questioned if the viburnums would tolerate snow plowing.

Bob Prior of Pickpocket Road read a letter and asked if conditions of approval could include no construction traffic or parking of Timber Lane. He noted the vehicles come in early. He asked for no parking on Pickpocket and other public roads. He noted that in 2011 the administration building was moved, and the park was put in for recreation, but a pickleball court is not a vegetated buffer and the idea is to screen the property. He would like to see the pickleball court moved. He questioned how long Riverwoods would have to be responsive to renew and maintain the screening and who would monitor it.

Mr. Prior stated that he felt these buildings in the R-1 low density zoning, should have ZBA review. He reviewed the history of special exceptions for every stage except this one and referenced the Zoning Board of Adjustment's conditions of approval including a maximum of 15 employees, a maximum footprint of 5,500 SF and maximum area of 6,800 SF with 21 parking spaces. Now there are 100 employees, a 50,000 SF footprint and 170,000 SF building with 131 parking spaces in the R-1 zone without ZBA approval. The applicant applied for a variance to eliminated beds and for the off-site skilled nursing care and both were denied in January of 2023. He stated that moving forward in a piece meal basis doesn't work. He asked what the plans were for the homes they purchased on Kingston Road and Pickpocket Road. He asked if the administration offices were going to be moved to one of those.

Mr. Prior reviewed the history of the lot line adjustment merging two parcels on Kingston Road. He indicated the Board could not approve a plan that did not conform to the zoning ordinance without ZBA approval and requested a continuance until the discrepancy was resolved.

Ms. English noted she was baffled as well and questioned if the ball got dropped. She noted it was not a permitted use, the parcels were all separate at one time but that doesn't mean they can continue to keep expanding if it is not permitted and hoped someone would look at it.

Attorney Somers indicated they received a court order only yesterday and they sought the relief they were told was needed which did not include a special exception. The merger of the Grinnell property appeal by Mr. Prior was dismissed. She noted they asked the administrative decision to be codified.

There was an appeal to Superior Court as of yesterday. The Town of Exeter and Riverwoods filed a request that it be dismissed yesterday and this is now a settled matter, litigated to a conclusion and cannot be reopened.

Attorney Somers noted that they were busy with the Durham project and there was not a lot of opportunity right now to develop additional property.

Mr. Sharples noted that the zoning ordinance is under the purview of the building inspector, and he has the final say and had a reason why the special exception was not required.

Vice-Chair Brown noted in the March 5, 2024 letter Mr. Eastman indicated no special exception was required and if the buildings went above 35' would need a variance for height and if not the building is permitted as a matter of right which seems consistent with what Mr. Sharples recalled and Attorney Somers testified.

Barbara Freeman of 6 Sandstone Way agreed with Mr. Prior that there must have been a slip up and the Board should have sent it back if a special exception is required to expand an enormous building in the R-1 zone, an urban building in the R-1 zone. She opined that Riverwoods needs to scale down this building and while she did not oppose the separate health care facility the building is out of scale. Ms. Freeman noted the importance of not isolating the residents and keeping them in the community.

Mr. Prior indicated the ZBA only denied the height and setback application and his appeal was dismissed because the time expired. He requested the ZBA weigh in.

Bob Cully noted he and his wife, Anne lived at Boulders and the building doesn't belong in the residential character of the neighborhood. He noted he was disappointed in the impact on the residents who believed they had lifetime contracts. He noted there was a significant increase in employees, traffic and the conversion of health units to individual living units should be part of the approval. A fresh review should be had. He noted that residents would be subjected to living in a construction zone for the next six years and many won't live to the end of the project and not focused on abutters with a significant investment in their homes.

Susan Desjardins of Holland Way noted she was the Chair of the Riverwoods CCRC. She noted that they had a duty of care. She noted they received several letters from concerned residents and discussed and responded. She noted the goals of the 2016 analysis which indicated a lack of memory care, she noted the difficulty finding staff post-COVID, the transportation plan and assisted living units near their spouse. She noted their goal was to do better.

John Maull of 21 Colonial Way, off Kingston Road, indicated the building was outside of the footprint and not appropriate on the rural, scenic road. He felt that there is an expansion in the guise of building a health care facility. He estimated 75 units at $700,000/unit and 115 new residences at $5,000 per month, a big financial component, at the cost of the neighborhood. He stated that the building was oversized. He noted the ZBA should have ruled on the appropriateness. One of their approval conditions was to have onsite care.

Susan ____ questioned how often people visit, if anyone has really studied that. She reviewed some of her visits to other residents and health care on a regular basis.

Steve of Kingston Road asked to see the view from Grant's driveway. He opined that the trees were 40-50 years old and going to die, that you could see right through them. He stated that it would take 13.5 years for western cedars to grown 35.' He noted that he was not in favor of the Pickleball Court and it could be located someplace else, screening should be 40' tall and would like to see Balsam Fir and Black Spruce on 111.

Ann ____, a resident of Riverwoods since 2021 served on the Strategic Planning Committee and is Vice-Chair of the Resident Council. She noted a healthcare center if vital to continuing care and hiring post-COVID. She stated there were changes in Medicare. She supported the center being built.

Mr. Grueter noted this was the first time Medicare was mentioned and asked if there were any effect. Ms. Vogel indicated there is no bearing on what Riverwoods is trying to do and the number of beds has shrunk and memory care is by private pay.

Lisa, who lives off Pickpocket Road, requested the Board preserve and defend the character of their neighborhood.

Eric Saari explained drainage in the areas of Ms. Hooten's property and Grant's yard. He noted the bioretention pond and treatment of runoff. He stated that the town engineer reviewed the plan and comments were addressed.

Ruth Hooten expressed concerns with the wetland and pond and hill above her. She said the steam fed to the Exeter River and she didn't see how they would put trees there. She was concerned about the new trees blocking her view when she enters route 111.

Glen (and Matthew) noted he lives in a family neighborhood and his property was his biggest investment. He expressed concerns with lighting, lengthy construction, and tractors who he provided a video of going down the road at 6 AM and are very loud. Chair Plumer noted they could not say if they were related to this project. He noted the building is too big and a significant change from what is there now. He expressed concerns with traffic from 75 more units, the enjoyment of his property and devaluation of a lot of abutting properties.

Ms. Woodburn noted trees will be planted 30' back from the end of the road and not be in site view. There is a swale there and trees are not being planted on her land and are appropriate for the location.

Chair Plumer stated that four letters were received, from: Nancy Fleming on 12/23, two from Barbara Freeman of 6 Sandstone Lane and from David and Ann Cully of 4 Timber Lane.

The hearing was closed to public comment at 9:13 PM.

Ms. Belanger noted questions were not answered about the length of construction and when planting is happening and construction vehicles. Ms. Woodburn noted that plantings are usually done last and while it is not her call, some could be planted sooner in some areas. Mr. Saari indicated White Oak Drive will remain open, and they are not forcing anyone to go any other way than they are going now. Hours of construction will be from 7 AM to 5 PM.

Ms. Belanger asked about police details on 111. Mr. Saari indicated they would only be used for off-site improvements.

Ms. English reviewed calculations on the maximum number of units, 141 surplus units, 75 units spread across campus and the new facility. Mr. Saari indicated no plans for a complete build out. Ms. English noted that when she questioned their master plan, she was asking for what the newly purchased properties on Pickpocket Road and 111 would be used for. Ms. Vogel noted there were no plans to use them for offices or other units. The plan is to rent space off site.

Vice-Chair Brown appreciated the landscape presentation and screening. He asked why the Pickleball Court was still there and if there were other places to put that or if it were required to be there. Ms. Woodburn indicated it was part of the initial planning process, and they looked for another good place and couldn't find one. It is an asset to the residents and Exeter residents. Mr. Grueter questioned whether residents would want that noise next to the new facility. He agreed it seemed strange to keep the Pickleball Court and it would look better and make a lot of people happy to keep the noise down. Mr. Kennedy agreed with the court being eliminated but many residents use it.

Ms. Martel agreed the landscaping presentation was excellent, and that planting doesn't need to be 35' tall to screen a building. She asked that the packet include a detailed plan set.

Ms. English expressed concerns with traffic and pedestrian use to the health care center. Attorney Somers referenced the robust shuttle service.

Mr. Sharples noted that the application was accepted November 21, 2024 and they had 65 days to act on it per state law. He noted the applicant can agree to an extension. Attorney Somers agreed to the extension with public comment closed. She noted the maintenance of plant materials, not to use or divert traffic or parking to Timber Lane or Pickpocket could be a condition they could accommodate with parking on site.

Vice-Chair Brown motioned to continue the application to the February 13, 2025 Planning Board meeting at 7:00 PM at the Nowak Room. Mr. Grueter seconded the motion. A vote was taken, all were in favor, the motion passed unanimously.

3. The application of StoneArch Development for site plan review of a proposal for the redevelopment of the property located at 112 Front Street. The proposal includes the demolition of the existing buildings and new construction of seventeen (17) townhouse style condominium units and associated site improvements.
C-1, Central Area Commercial zoning district

Tax Map Parcel #73-14
PB Case #24-17.
Chair Plumer read out loud the Public Hearing Notice and asked if the case was ready to be heard. Mr. Sharples indicated the case was ready for review purposes.

Ms. English motioned to open Planning Board Case #24-17. Ms. Belanger seconded the motion. A vote was taken, all were in favor, the motion passed unanimously.

Mr. Sharples indicated the application was for a multi-family site plan review application for the redevelopment of 112 Front Street. The existing structure would be demolished and there would be 17 townhouse condominium units and associated site improvements in the C-1 zone. Plans and supporting documents dated December 10th were submitted. There was a Technical Review Committee meeting on January 9th and UEI comments on January 10th. He noted that density calculations were submitted with plans yesterday that he hasn't had a chance to look at yet. Demolition permit was applied for in September and the Heritage Commission met on September 17th and recommended to not demolish but they are advisory only. There are two waivers being requested.

Christian Smith of Beals Associates noted John O'Neil and Sam Makarkur were present. He posted plans showing the previous home and barn and existing driveway. He noted there will be a waiver for grading within 5' of property line. He noted Gove did the test pits, drainage and soil tests. The parcel is on town water, sewer and gas. There will be pervious walkways and stormwater infiltration ponds going to groundwater. Four buildings are proposed, two with four units, one with three and one with five. He noted there will be screening. He displayed architectural renderings depicting Front Street and the proposed driveway.

Mr. O'Neil noted there will be two car garages in the back of the buildings, which are 24'x40' wood sided, just under 35.' There will be fences, screening and landscaping. Decks are enclosed 9'x12.' There will be screening with fence for the abutter near the driveway.

Mr. Smith noted lighting will be motion sensored. Foot candles are zero at the property line. There is private trash collection, no dumpsters.

Ms. English asked about snow storage and Mr. Smith referenced the parking plan.

Lisa expressed concerns about the impact of 17 families on the footprint, sewer, traffic, and other resources in town. She questioned the C-1 schedule of dimensional requirements.

Charlie French of 9 Gill Street asked about zoning in the C-1 for 17 units and screening. He asked about the retention ponds and mosquitoes, the impacts of runoff and salt. He was glad to hear about fencing and asked about traffic and commercial setbacks. He noted it was already difficult to turn left when the tech school gets out.

Mrs. French of 9 Gill Street expressed concerns with mature plantings in her yard.

Randy Daley the cemetery supervisor asked if construction noise could be stopped during funerals which take about half an hour. Mr. O'Neil said to contact him and he would make sure they were quiet during a funeral. He asked if the fence on the cemetery side could be constructed early.

Mr. Smith noted the project would take approximately one year and he will have the traffic engineers come to the next meeting. He noted the ponds are not detention ponds, they are infiltration ponds and water would not remain after 72 hours.

Mr. Smith noted there would be a waiver requested for reducing the 24' wide drive aisle. He noted DPW is part of TRC and felt the capacity of the sewer and water was enough to serve the property.

Bill Campbell of 7 Riverwoods Drive was concerned with the large development in the surrounding neighborhood with 35-50 new people. Merrill House was 25' high and this will be 35' and on 1.8 acres with no space for recreation.

Jim of 5 Gill Street noted the committee that recommended against tearing down the house and questioned the purpose of their public hearings.

Vice-Chair Brown recommended a site walk be scheduled. The Board agreed on February 6, 2025 at 8 AM and to meet at 112 Front Street.

Vice-Chair Brown motioned to continue the application to the February 13, 2025 Planning Borad meeting at 7 PM at the Nowak Room. Ms. Belanger seconded the motion. A vote was taken, all were in favor, the motion passed unanimously.

V. OTHER BUSINESS

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

VII. TOWN PLANNER'S ITEMS

VIII. CHAIRPERSON'S ITEMS

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

X. ADJOURN

Ms. Belanger motioned to adjourn the meeting at 10:30 PM. Ms. English seconded the motion. A vote was taken and passed unanimously.

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: **February 7, 2025**

To: **Planning Board**

From: **Dave Sharples, Town Planner**

Re: **RiverWoods Company at Exeter** **PB Case #24-16**

The Applicant is seeking approval of a site plan and Wetlands Conditional Use permit (CUP) application for the demolition of the existing administrative building and the proposed construction of a new supportive living health center along with associated site improvement on the property located at 5 White Oak Drive. The subject property is located in the R-1, Low Density Residential zoning district and is identified as Tax Map Parcel #97-23.

The Applicant has appeared before the Planning Board at the November 21st and December 19th, 2024 and the January 23, 2025 meetings. A site walk was conducted on December 12th, 2024. The Board closed the public hearing at the January 23rd, 2025 meeting and voted to continue further discussion of the application to the February 13th, 2025 meeting.

The town has received three separate correspondence from the public since the last meeting. If the Board wants to consider them, it has the option of reopening the hearing, but in order to do so, it needs to re-notice the public and the abutters, at the town's cost, and then hold the public hearing at a later date. The Board can limit the reopening to the issues raised in those letters, but everyone gets to comment on those issues.

The Applicant has submitted revised plans and supporting documents, dated 1/15/25, which have been provided to the Board in a previous mailing.

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

Planning Board Motions:

Conditional Use Permit (Wetlands) Motion: After reviewing the criteria for a Wetlands Conditional Use permit, I move that the request of RiverWoods Company at Exeter (PB Case #24-16) for a Conditional Use Permit be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Site Plan Motion: I move that the request of RiverWoods Company at Exeter (PB #24-16) for Site Plan approval be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Thank You.

Enclosures

DTC Lawyers
Dedicated to Clients

CELEBRATING OVER 35 YEARS OF SERVICE TO OUR CLIENTS

February 5, 2025

Langdon Plumer, Chair
Exeter Planning Board
10 Front Street
Exeter, NH 03833

Re: RiverWoods of Exeter Health Care Center
PB Case #24-16

Dear Chair Plumer and Members of the Planning Board:

At the January 23, 2025 Planning Board meeting, the Planning Board requested that we provide black and white versions of the landscape plan and a PDF copy of the slide presentation. We enclose same for use by the Planning Board. We understand that the public hearing is now closed but the development team will be present at the February 13, 2025 Planning Board hearing if the Board has any questions. Please let me know if there are any immediate questions on these submittals.

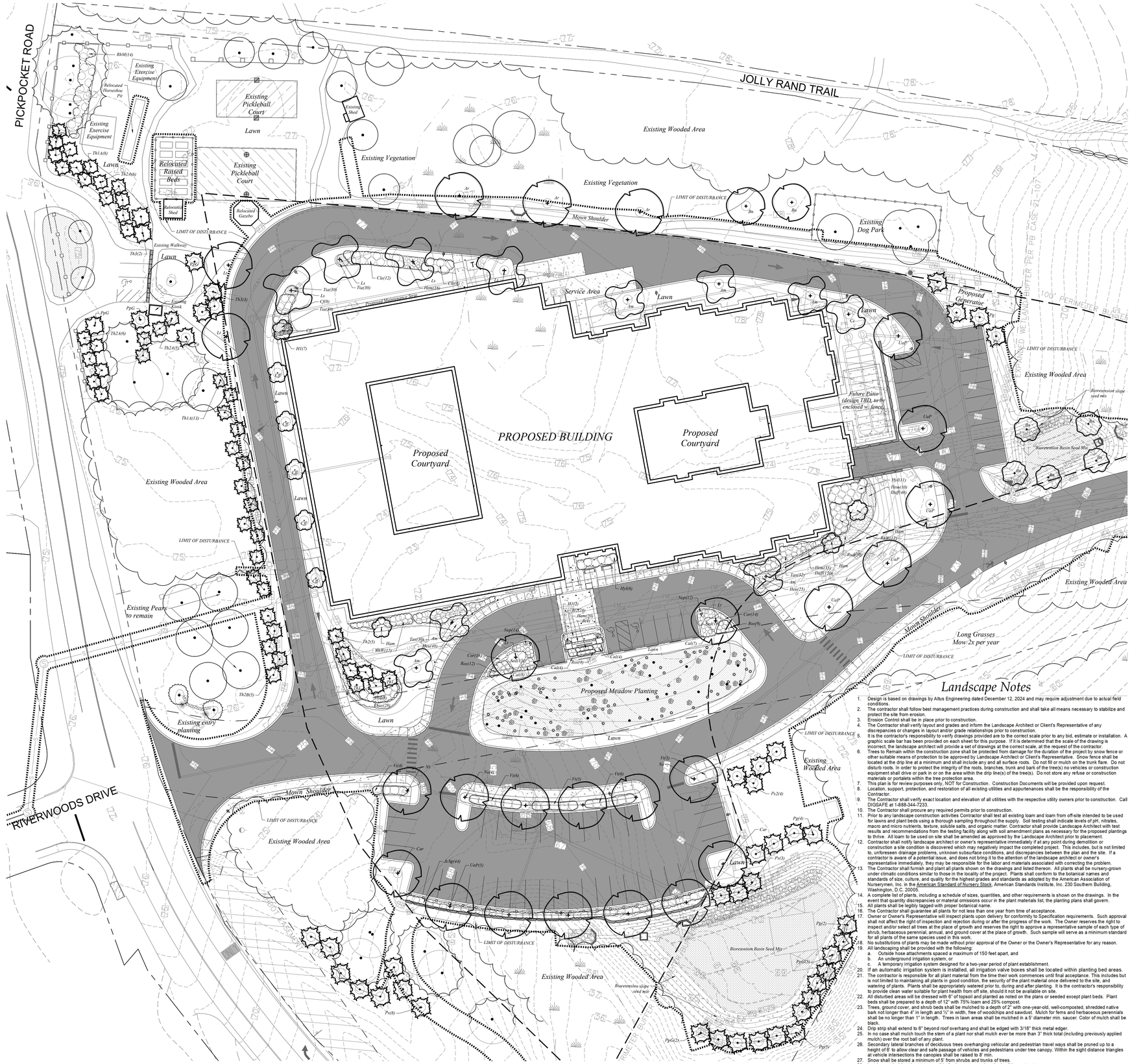
Very truly yours,
DONAHUE, TUCKER & CIANDELLA, PLLC

Sharon Cuddy Somers

Sharod Cuddy Somers
SCS/sac
Enclosures

cc: RiverWoods Exeter
Robbi Woodburn
Erik Saari

4902-3806-0311, v. 1



Landscape Notes

1. Design is based on drawings by Altus Engineering dated December 12, 2024 and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
5. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
6. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
7. This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with the following:
    a. Outside hose attachments spaced a maximum of 150 feet apart, and
    b. An underground irrigation system, or
    c. A temporary irrigation system designed for a two-year period of plant establishment.
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
22. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
23. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
24. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
27. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
28. Landscape Architect is not responsible for the means and methods of the contractor.

Do not heavily prune the tree at planting. Prune only cross-over limbs, co-dominant leaders, and broken or dead branches. Some interior twigs and lateral branches may be pruned; however, Do NOT remove the terminal buds of branches that extend to the edge of the crown.

Trees less than 3" in caliper shall be staked with three stakes per tree, spaced evenly around the trunk with 12 gauge wire. Plastic hose sections shall be used at attachment to trees. Each wire shall be flagged with a visual marker. 5' long min. wooden stakes shall be used to anchor the wires. Stakes shall be driven at least 12" outside the edge of the planting pit into stable soil. Remove all staking NO LATER than the end of the first growing season after planting.

Mark the north side of the tree in the nursery. Rotate the tree to face north at the site whenever possible.

4 in. high earth saucer beyond edge of root ball

2 IN. max. Mulch. Do NOT place mulch in contact with tree trunk. Maintain the mulch weed-free for a minimum of three years after planting.

Tamp soil around root ball base firmly with foot pressure so that root ball does not shift.

Place root ball on unexcavated or tamped soil.

2 times the diameter of the root ball - Permeable area in which tree is to be planted shall be no less than a 3' wide radius from the base of the tree

Trees greater than 3" in caliper shall be guyed with three guys per tree, spaced evenly around the trunk with 12 gauge wire. Plastic hose sections shall be used at attachment to trees. Each guy wire shall be flagged with a visual marker. 24" stakes or metal drive anchors shall be used to anchor the guy wires. Stakes/Anchors shall be driven 12" min. outside the edge of the planting pit into stable soil. Remove all guying NO LATER than the end of the first growing season after planting.

6" Corrugated PVC tree sock

Each tree must be planted such that the original trunk flare is visible at the top of the root ball. Trees where the original trunk flare is not visible may be rejected. Do NOT cover the top of the root ball with soil.
Before planting Contractor shall inspect the rootball for the location of the original root flare. If the original root flare is not visible at the top of the root ball then the Contractor shall then gently remove from the top of the root ball any excess soil from nursery operations that may be covering the original root flare. All secondary and girdling roots shall be removed prior to planting. Trees with 4" or more of extraneous soil and/or adventitious roots greater than 1/8" shall be rejected. The tree shall be planted with the original root flare at or slightly (2-3") above surrounding finished grade.

Backfill with existing soil, in sandy and heavy clay soils add 20% max. by volume composted organic material to the existing soil.

Remove all twine, rope, wire, and burlap

If plant is shipped with a wire basket around the root ball, prior to planting, the contractor shall cut away the bottom of the wire basket, leaving the sides in place. Once the tree is placed and faced, the contractor shall remove the remainder of the wire basket and backfill the planting pit as noted above.

Tree Planting Detail

Set shrub to display best face towards the primary view whenever possible.

50 MM (2 IN.) max. mulch over the ball of the shrub. Maintain the mulch weed-free for a minimum of three years after planting.

Set top of root ball 3-4" above surrounding grade and feather planting soil towards the crown of the plant.

Tamp soil around root ball base firmly with foot pressure so that root ball does not shift.

Place root ball on unexcavated or tamped soil.

2 times the diameter of the root ball

Each shrub must be planted such that the trunk flare is visible at the top of the root ball. Shrubs where the trunk flare is not visible shall be rejected.

100 mm (4 in.) high earth saucer beyond edge of root ball

100 mm (4 in.) max mulch outside the saucer between shrubs in a bed. Maintain the mulch weed-free for a minimum of three years after planting.

Backfill with existing soil, in sandy soils add 20% max. by volume composted organic material to the existing soil.

Remove all twine, rope, wire, and burlap from top half of root ball

Shrub Planting Detail

Plant List

TREES

Symbol	Botanical Name	Common Name	Native	Base Quantity	Screen Quantity	Size	Comments
Am	*Amelanchier granidflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	Y	6		8-10' ht	BB
Ar	*Acer rubrum 'Red Sunset'*	Red Sunset Red Maple	Y	3		3-3.5" cal	BB
Ar2	*Acer rubrum 'October Glory'*	October Glory Red Maple	Y	0	5	2.5-3" cal.	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7		12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1		3-3.5" cal	BB
Cc	*Cercis canadensis*	Eastern Redbud	Y	1		8-10' ht.	BB
Cff	*Carpinus betulus 'Frans Fontaine'*	Frans Fontiane European Hornbeam		6		3-3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	Y	3		7-8' ht	multi-stemmed BB
Ls	*Liquidambar styraciflua*	American Sweet Gum	Y	4		3-3.5" cal	BB
Lt	*Liriodendton tulipifera*	Tulip Tree	Y	4		3-3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6		3-3.5" cal	BB
Pa	*Picea abies*	Norway Spruce		1		10-12' ht.	BB
Pg	*Picea glauca*	White Spruce	Y	10	5	10-12' ht.	BB
PpG	*Picea pungens 'Glauca'*	Colorado Blue Spruce	to US	5	4	10-12' ht.	BB
Ps	*Pinus strobus*	Eastern White Pine	Y	0	11	8-10' ht.	BB
Ps2	*Pinus strobus*	Eastern White Pine	Y	4	0	12-14' ht.	BB
Th1	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	2	0	10'ht.	BB
Th1A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	21	8-10' ht.	BB
Th2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	5	0	12-14' ht.	BB
Th2A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	11	10-12' ht.	BB
Th2B	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	12-14' ht.	BB
Th3	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	14-16' ht	BB
UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10		3-3.5" cal	BB
UaP2	*Ulmus americana 'Princeton'*	Princeton American Elm	Y		3	2.5-3" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
Cf	*Calycanthus floridus 'Aphrodite'*	Aphrodite Sweetshrub	Y	8		7 gal	
Hyl	*Hydrangea arborescens 'Indrediball'*	Incrediball Hydrangea	Y	25		5 gal	
JcSg	*Juniperus chinensis 'Seagreen'*	Seagreen Juniper		0	44	2-2.5'ht	
Rhus	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	28		3 gal	
RhM	*Rhododendron 'Maximum'*	Rosebay Rhododendron	Y	0	14	4-5' hvy	BB
RhW	*Rhododendron 'Wilsoni'*	Wilson Rhododendron		29		2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25		3 gal	
Cle	*Clethra anifolia 'Hummingbird'*	Summingbird Summersweet	Y	18		5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62		18-24"	BB
Vt	*Viburnum plicatum tomentosum 'Mariesii'*	Marie's Doublefile Viburnum		25		3-4'ht.	BB

PERENNIALS AND GROUND COVERS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
B	*Baptisia*	False Indigo	Y	4		1gal	
Cal	*Calamagrostis 'Karl Foerster'*	Karl Foerster Feather Reed Grass		23		2 gal	
Cor	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis		32		1 gal	
Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50		topsize	
	Narcissus 'Johann Strauss'	Johann Stauss Daffodil		50		topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50		topsize	
H1	*Hosta 'Frances Williams'*	Frances Williams Hosta		9		1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28		1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24		1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24		1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24		1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65		2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		26		1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50		1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25		1 gal	
Tia	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90		1 gal	

LOAM 6" lawns and 12" for plant beds

SEED MIXES - Prep and Install per manufacturer's installation guides.

MEADOW SEEDING	50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf) 50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)
LAWN AREAS	Penningtons Smart Seed Sun/Shade mix or approved equal
BIORETENTION SLOPES	Prairie Nursery No Mow Fescue or approved equal
BIORETENTION BASIN	50% New England Wetland Plants Erosion Control/Restoration Mix for Detention Basins and Moist 50% New England Wetland Plants New England Showy Wildflower Mix

0 10 15 30 60

woodburn
& company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

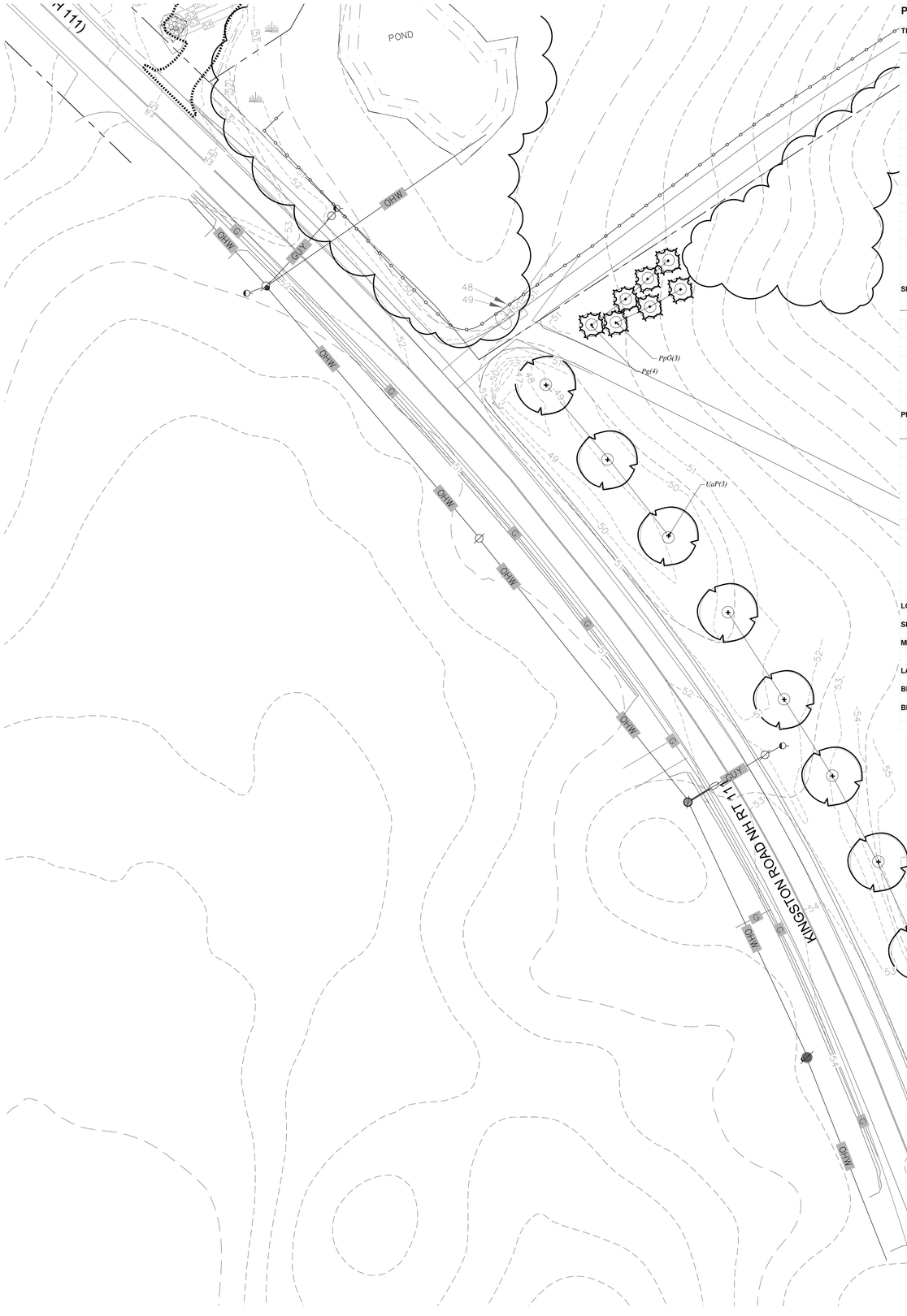
LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By: RW, VM
Checked By: RW
Scale: 1" = 30' = 0"
Date: June 6, 2024
Revisions:
September 10, 2024
October 23, 2024
November 11, 2024
December 12, 2024
January 16, 2025

L-1

Sheet 1 of 2



Plant List

TREES

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Ar2	*Acer rubrum 'October Glory'*	October Glory Red Maple	Y	0	5	2.5-3" cal.	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7		12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1		3-3.5" cal	BB
Cc	*Cercis canadensis*	Eastern Redbud	Y	1		8-10' ht.	BB
Cff	*Carpinus betulus 'Frans Fontaine'*	Frans Fontiane European Hornbeam		6		3-3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	Y	3		7-8' ht	multi-stemmed BB
Ls	*Liquidambar styraciflua*	American Sweet Gum	Y	4		3-3.5" cal	BB
Lt	*Liriodendton tulipifera*	Tulip Tree	Y	4		3-3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6		3-3.5" cal	BB
Pa	*Picea abies*	Norway Spruce		1		10-12' ht.	BB
Pg	*Picea glauca*	White Spruce	Y	10	5	10-12' ht.	BB
PpG	*Picea pungens 'Glauca'*	Colorado Blue Spruce	to US	5	4	10-12' ht.	BB
Ps	*Pinus strobus*	Eastern White Pine	Y	0	11	8-10' ht.	BB
Ps2	*Pinus strobus*	Eastern White Pine	Y	4	0	12-14' ht.	BB
Th1	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	2	0	10'ht.	BB
Th1A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	21	8-10' ht.	BB
Th2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	5	0	12-14' ht.	BB
Th2A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	11	10-12' ht.	BB
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UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10		3-3.5" cal	BB
UaP2	*Ulmus americana 'Princeton'*	Princeton American Elm	Y		3	2.5-3" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
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Hyl	*Hydrangea arborescens 'Indrediball'*	Incrediball Hydrangea	Y	25		5 gal	
JcSg	*Juniperus chinensis 'Seagreen'*	Seagreen Juniper		0	44	2-2.5'ht	
Rhus	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	28		3 gal	
RhM	*Rhododendron 'Maximum'*	Rosebay Rhododendron	Y	0	14	4-5' hvy	BB
RhW	*Rhododendron 'Wilsoni'*	Wilson Rhododendron		29		2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25		3 gal	
Cle	*Clethra anifolia 'Hummingbird'*	Summingbird Summersweet	Y	18		5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62		18-24"	BB
Vt	*Viburnum plicatum tomentosum 'Mariesii'*	Marie's Doublefile Viburnum		25		3-4'ht.	BB

PERENNIALS AND GROUND COVERS

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Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50		topsize	
	Narcissus 'Johann Strauss'	Johann Stauss Daffodil		50		topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50		topsize	
H1	*Hosta 'Frances Williams'*	Frances Williams Hosta		9		1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28		1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24		1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24		1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24		1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65		2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		26		1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50		1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25		1 gal	
Tia	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90		1 gal	

LOAM	6" lawns and 12" for plant beds
SEED MIXES - Prep and Install per manufacturer's installation guides.	
MEADOW SEEDING	50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf) 50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)
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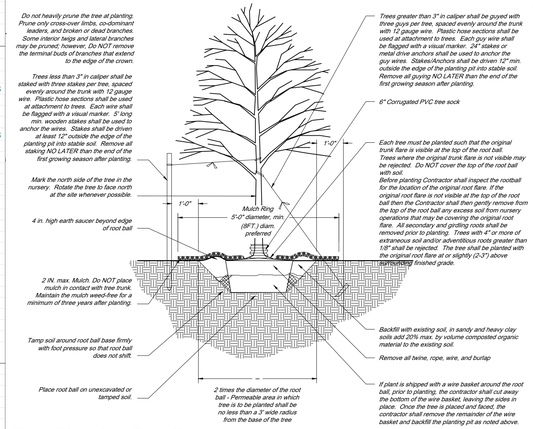
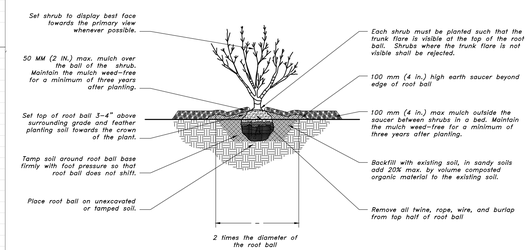


Tree Planting Detail



Shrub Planting Detail

Landscape Notes

1. Design is based on drawings by Altus Engineering dated December 12, 2024 and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
5. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
6. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
7. This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
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23. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
24. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
27. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
28. Landscape Architect is not responsible for the means and methods of the contractor.

0 10 15 30 60

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By:	RW, VM
Checked By:	RW
Scale:	1" = 30' = 0"
Date:	January 16, 2025
Revisions:	

L-2

Sheet 2 of 2

RiverWoods
Exeter

Supportive Health Care Site Plan

ALTUS
ENGINEERING

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

CASE #24-16

THIS DRAWING SET HAS NOT BEEN RELEASED FOR CONSTRUCTION

RiverWoods Exeter

SUPPORTIVE LIVING HEALTH CENTER

5 WHITE OAK DRIVE
EXETER, NEW HAMPSHIRE

Owner/Applicant:
RIVERWOODS COMPANY AT EXETER
7 RIVERWOODS DRIVE
EXETER, NH 03833

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

Surveyor:
JVA JAMES VERRA & ASSOCIATES INC
101 SHATTUCK WAY, SUITE 8, NEWINGTON, N.H., 03801–7876
603–436–3557

Architect:
AG ARCHITECTURE Bright Vision. Bold Communities.
1414 UNDERWOOD AVE. WAUWATOSA, WI 53213
TEL 414.431.3131 FAX 414.431.0531 WWW.AGARCH.COM

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

Landscape Architect:
woodburn & company LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

Lighting Consultant:
VISIBLELIGHT
24 STICKNEY TERRACE, SUITE 6
HAMPTON, NH 03842
(603) 926-6049

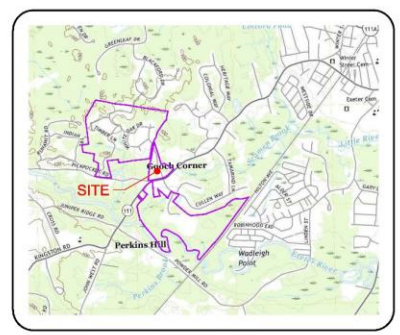
Traffic Engineer:
GPI
44 Stiles Road
Salem, NH 03079
Phone: (603) 893-0720

Assessor's Parcel 97, Lot 23

ISSUED FOR REVIEW

Plan Issue Date:

January 16, 2024



LOCUS SCALE: 1" = 2,000'

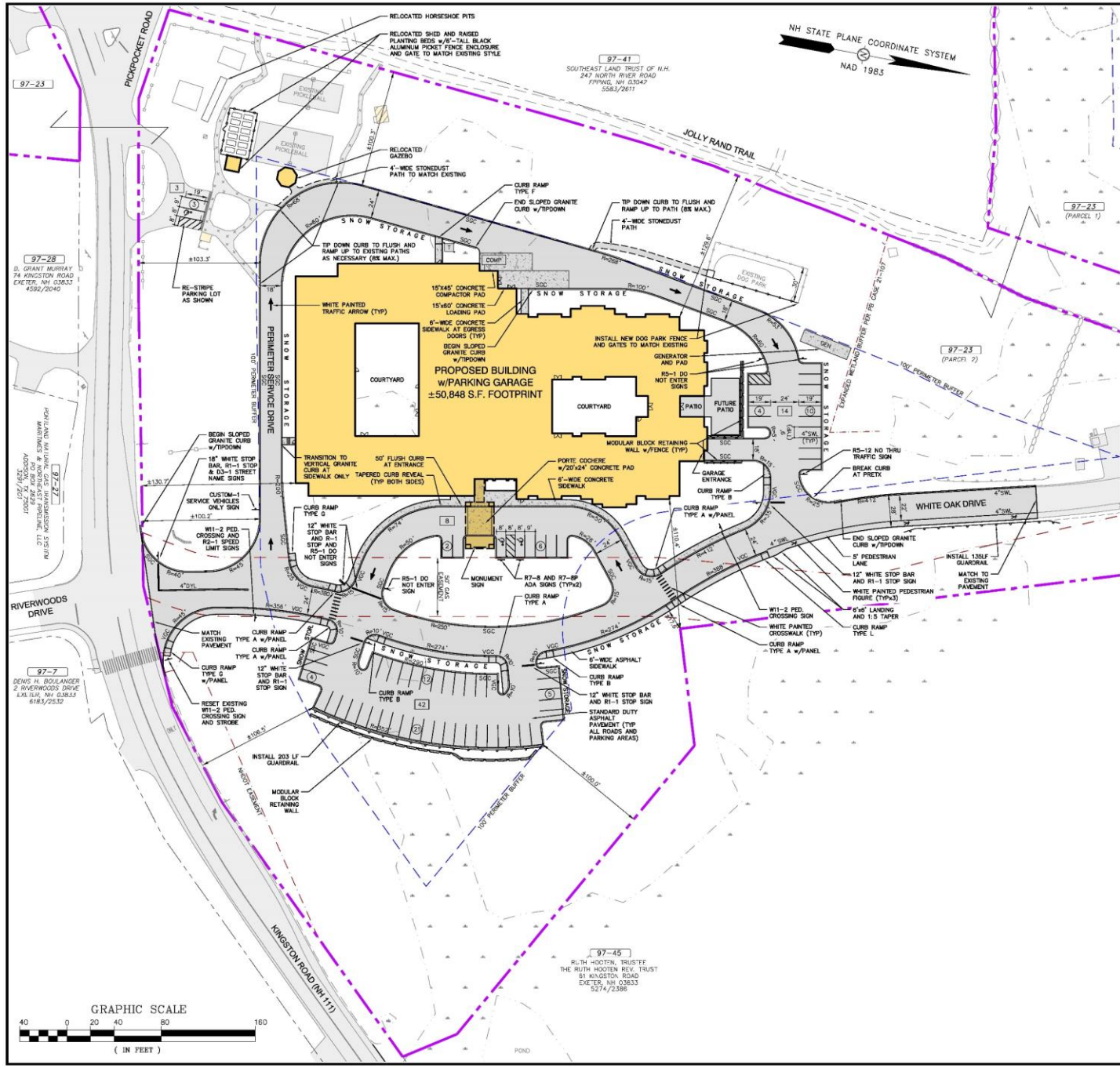
WILDLIFE PROTECTION NOTES

1. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER (NHB 24-0142), THE PROJECT NAME (BILL DUBE KIA), AND THE TERM "WILDLIFE SPECIES OBSERVATION".
2. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE.
3. IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.
4. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

Sheet Index

Permit Summary	Submitted	Received
Exeter Site Plan & CUP	09/10/24	–
NHDES Alteration of Terrain	11/26/24	–
NHDES Wetlands Dredge and Fill	10/31/24	–
NHDES Sewer Connection Permit	–	–
Army Corps of Engineers	10/31/24	–
NHDOT Driveway Entrance	09/25/24	–
EPA Notice of Intent	By Contractor 14 days prior to construction	

P5015



SITE NOTES

1. DESIGN INTENT – THIS PLAN SET IS INTENDED TO DEPICT THE REDEVELOPMENT OF THE SITE FOR A SUPPORTIVE LIVING HEALTH CARE CENTER.
2. APPROXIMATE LOT AREA: ±204.48 AC.
3. REFERENCE DEED: ROCKINGHAM COUNTY REGISTRY OF DEED BOOK 6534 PAGE 2917
4. ZONE: RESIDENTIAL LOW DENSITY (R-1)
5. DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA:	2 ACRES OR 40,000 S.F. w/WATER AND SEWER
DENSITY:	3 UNITS/ACRE (FOR ELDERLY CONGREGATE CARE)
MIN. STREET FRONTAGE:	150'
FRONT SETBACK:	25' (±130.7' PROVIDED)
SIDE SETBACK:	15' (±100.4' PROVIDED)
REAR SETBACK:	25' (N/A, NO REAR ON THIS SECTION OF THE PARCEL)
MAX. BUILDING HEIGHT:	35'/3 STORIES (35' PROPOSED)
MIN. OPEN SPACE:	70% (>70% PROVIDED)
PERIMETER BUFFER:	100' (FOR ELDERLY CONGREGATE CARE)
WETLAND SETBACKS:	40' (POORLY DRAINED)
	50' (VERY POORLY DRAINED)
	75' (PARKING & STRUCTURES)
	100' (VERNAL POOL)

4. PARKING REQUIREMENTS:
DUE TO THE PROPOSED USE NOT BEING ADEQUATELY REPRESENTED IN THE OFF-STREET PARKING SCHEDULE, AN ALTERNATE PARKING CALCULATION PER ZONING SECTION 5.6.3.B.1 IS UTILIZED HERE TO CALCULATE PARKING DEMAND. THIS CALCULATION IS BASED ON PROJECTED STAFFING LEVELS AND ANTICIPATED VISITOR DEMAND DERIVED FROM EXPERIENCE WITH THE THREE EXISTING RIVERWOODS EXETER CAMPUSES:

STAFF AT MAX. SHIFT:	83
RESIDENT VISITORS:	25
OTHER VISITORS:	15
GOOCH PARK:	2
TOTAL PARKING REQUIRED	= 125 SPACES
TOTAL PARKING PROVIDED	= 130 SPACES (63 GARAGE, 67 SURFACE)
SURPLUS/DEFICIT	= +5 SPACES

5. OVERALL AREA OF DISTURBANCE OVER 100,000 S.F., NHDES ALTERATION OF TERRAIN PERMIT REQUIRED.
6. AREA OF DISTURBANCE OVER 43,560 SF, COVERAGE UNDER EPA NPDES PHASE II CONSTRUCTION GENERAL PERMIT REQUIRED (NOIs TO BE PREPARED AND SUBMITTED BY CONTRACTOR, SWPPP AND INSPECTIONS TO BE PREPARED AND PERFORMED BY CONTRACTOR).
7. NHDOT DRIVEWAY PERMIT REQUIRED.
8. TOWN OF EXETER SIGN PERMIT REQUIRED.
9. CONDITIONAL USE PERMIT UNDER ZONING SECTION 9.1.6 REQUIRED FOR SITE DEVELOPMENT IN THE WETLANDS CONSERVATION DISTRICT.
10. SITE IS NOT IN A SPECIAL FLOOD HAZARD ZONE PER FIRM PANEL #33015C0401E PANEL 401 OF 681 AS REVISED PER LOMR DATED NOV. 5, 2018.
11. WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. IN JANUARY, 2023 IN ACCORDANCE WITH THE U.S. ARMY CORPS OF ENGINEERS (ACOE) WETLAND DELINEATION MANUAL (1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH-CENTRAL AND NORTHEAST REGION (VERSION 2). HYDRIC SOIL DETERMINATIONS WERE CONDUCTED IN ACCORDANCE WITH THE U.S. DEPT. OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE'S FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES (VERSION 7.0, 2010) ALONG WITH THE MANUAL FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND (VERSION 3, APRIL 2004). PLANT SPECIES INDICATOR STATUS WAS BASED ON THE ACOE'S THE NATIONAL WETLAND PLANT LIST (2013).
12. ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION.
13. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND WITH THE REGULATIONS AND STANDARD SPECIFICATIONS OF THE TOWN OF EXETER, LATEST EDITIONS. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
14. ALL WATER, SEWER, ROAD (INCLUDING PARKING LOT), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.3 STORMWATER STANDARDS, STORMWATER MANAGMENT PLAN, STORMWATER POLLUTION PREVENTION PLAN, AND EROSION AND SEDIMENT CONTROL STANDARDS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC UTILITIES IN EXETER, NEW HAMPSHIRE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION, INSTALLATION AND ORIENTATION OF ALL SIGNS.
16. THE APPLICANT RESERVES THE RIGHT TO INSTALL ADDITIONAL WAYFINDING SIGNS WITHIN THE PROPERTY AS DEEMED NECESSARY.
17. PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC DEVICES," "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" AND THE AMERICANS WITH DISABILITIES ACT (ADA), LATEST EDITIONS.
18. PAVEMENT MARKINGS SHALL BE CONSTRUCTED USING WHITE, YELLOW OR BLUE TRAFFIC PAINT (WHERE SPECIFIED) MEETING THE REQUIREMENTS OF AASHTO M248, TYPE F OR EQUAL. PAINTED ISLANDS AND LOADING ZONES SHALL BE 4"-WIDE DIAGONAL WHITE LINES 3'-0" O.C. BORDERED BY 4"-WIDE WHITE LINES. PARKING STALLS SHALL BE SEPARATED BY 4"-WIDE WHITE LINES. SEE DETAILS FOR HANDICAP SYMBOLS, SIGNS AND SIGN DETAILS.
19. PAVEMENT MARKING ABBREVIATIONS:
SWL: SINGLE WHITE LINE (4" SOLID LINE)
DYL: DOUBLE YELLOW LINE (2 x 4" SOLID LINES SEPARATED BY 4")
20. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINES WITH RS-1 IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
21. UNLESS OTHERWISE NOTED, ALL NEW CURBING SHALL BE SLOPED GRANITE ("SGC") OR VERTICAL GRANITE ("VGC") WITH A MINIMUM RADIUS OF 4'.
22. CURB RAMPS INDICATED AS "w/PANEL" SHALL BE EQUIPPED WITH AN ADA-COMPLIANT DETECTABLE WARNING PANEL.
23. SNOW SHALL BE STORED AT THE EDGE OF PAVEMENT AND IN AREAS SHOWN HEREON AS APPROPRIATE. NO SNOW SHALL BE STORED IN ANY STORMWATER POND.
24. BUILDING AREA AND DIMENSIONS SHOWN ARE BASED ON MEASUREMENTS TO THE EXTERIOR FACE. ACTUAL DIMENSIONS TO FOUNDATION AND INTERIOR SPACE WILL DIFFER. THE CONTRACTOR SHALL VERIFY ALL BUILDING DIMENSIONS WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR ALL NECESSARY COORDINATION BETWEEN CIVIL AND ARCHITECTURAL PLANS TO ENSURE THE DESIGN INTENT IS MET. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR RESOLUTION.
25. THIS SITE PLAN IS DESIGNED IN COMPLIANCE WITH ALL APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED BUILDING IS DESIGNED IN COMPLIANCE WITH ALL APPLICABLE ACCESSIBILITY REGULATIONS INCLUDING NH RSA 155-A:5-d&b, THE IBC AND ANSI 117.1.
26. AT THE CONCLUSION OF THE PROJECT, THE CONTRACTOR SHALL PREPARE AN AS-BUILT SITE AND UTILITY PLAN STAMPED BY A NH LICENSED LAND SURVEYOR (LLS) & PROVIDE DIGITAL COPIES IN PDF AND CAD FORMAT TO THE ENGINEER.
27. SEE DETAIL SHEETS FOR LEGEND.

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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
1/16/25

NOT FOR CONSTRUCTION

ISSUED FOR: REVIEW

ISSUE DATE: JANUARY 16, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EBS	09/10/24
1	REVISED PER COMMENTS	EBS	10/23/24
2	REVISED PER COMMENTS	EBS	11/13/24
3	REVISED BUILDING	EBS	12/12/24
4	ADDED NEW NOTE #16	EBS	01/16/25

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5015-SITE.dwg

SCALE:
24" x 36" - 1" = 40'
11" x 17" - 1" = NOT TO SCALE

OWNER:
RIVERWOODS COMPANY AT EXETER
7 RIVERWOODS DRIVE
EXETER, NH 03833

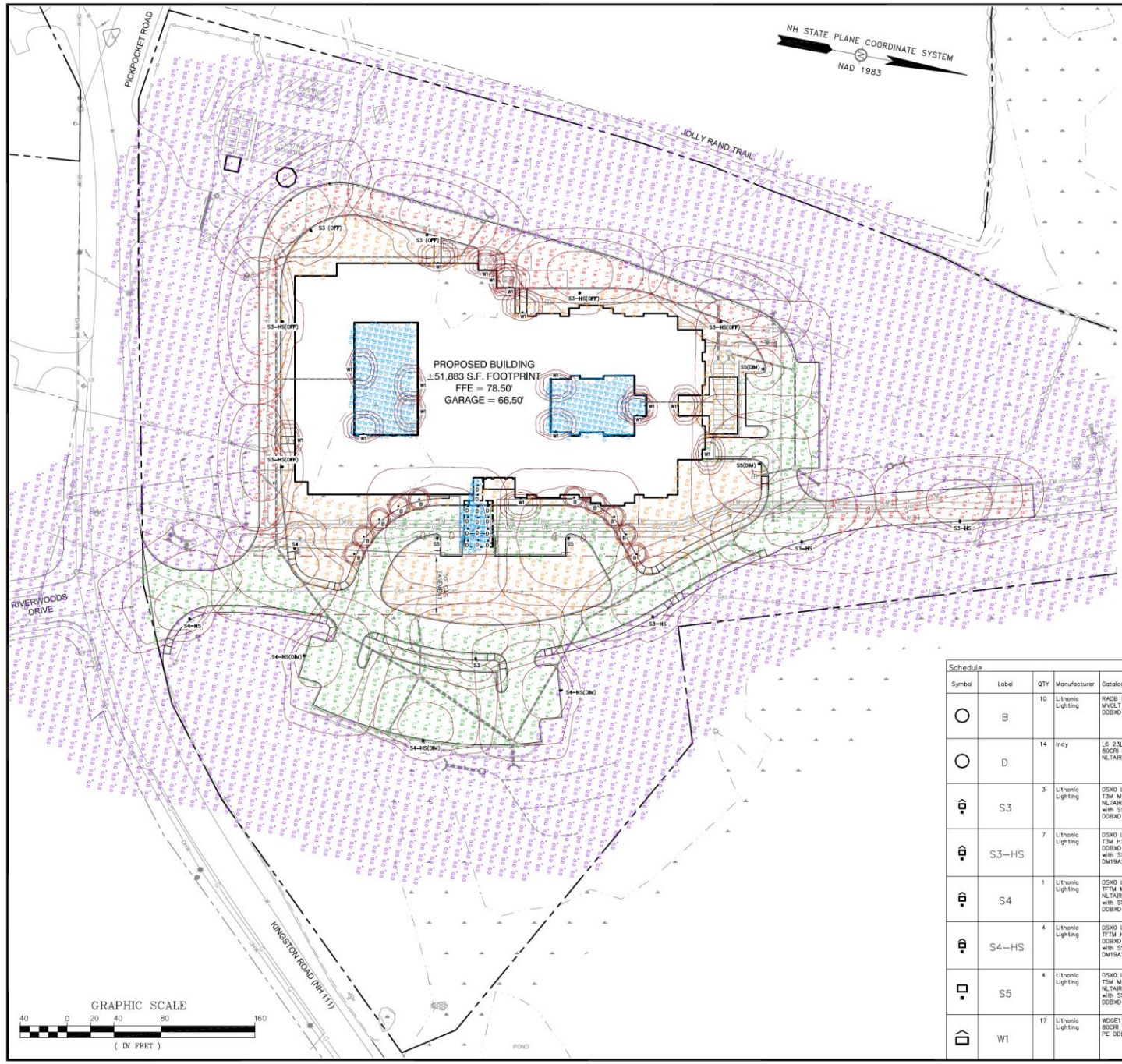
APPLICANT:
RIVERWOODS COMPANY AT EXETER
7 RIVERWOODS DRIVE
EXETER, NH 03833

PROJECT:
RIVERWOODS SUPPORTIVE LIVING HEALTH CENTER
TAX MAP 97 LOT 23
5 WHITE OAK DRIVE
EXETER, NH 03833

TITLE:
SITE PLAN

SHEET NUMBER:
C-2

P5015



LIGHTING NOTES

1. SITE CONTRACTOR SHALL COORDINATE LOCATIONS OF OF ALL UNDERGROUND UTILITIES, DRAINAGE AND OTHER INFRASTRUCTURE BEFORE INSTALLING POLE BASES.
2. ALL LIGHTING MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND LOCAL REGULATIONS.
3. ALL ELECTRICAL SERVICES TO LIGHT POLES SHALL BE UNDERGROUND.
4. LIGHTING CONDUIT SHALL BE PVC SCH 40, SIZING AND QUANTITIES PER ELECTRICAL CONTRACTOR. CONDUIT INSTALLATION, INCLUDING BUT NOT LIMITED TO ANY SAWCUTTING, TRENCHING, BACKFILLING AND PAVEMENT PATCHING, SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR. FINAL ROUTING SHALL BE PER THE ELECTRICAL CONTRACTOR.
5. DETECTABLE WARNING TAPE SHALL BE PLACED OVER THE ENTIRE LENGTH OF ALL BURIED UTILITIES TO INCLUDE LIGHTING CONDUIT, COLORS PER THE RESPECTIVE UTILITY PROVIDERS.
6. SITE CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND ELECTRICAL CONTRACTOR FOR ALL SITE ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO ALL SERVICE ENTRANCES/EXITS, RISERS, CIRCUITRY, METERS, SUB-METERS, ETC. ALL WIRING, CIRCUITRY AND CONTROLLERS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
7. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL BUILDING-MOUNTED AND LANDSCAPE FIXTURES, TYPES, LOCATIONS AND WIRING.
8. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP BALLAST AND LUMINAIRE MAY AFFECT FIELD RESULTS.
9. ALL EXTERIOR LIGHTING SHALL BE DOWN-LIT AND FULLY SHIELDED SO NO CONCENTRATED LIGHT IS DIRECTED TOWARDS ADJACENT PROPERTIES AND ROADWAYS.
10. WHERE NOTED, SELECT PARKING LOT LIGHTING SHALL BE EQUIPPED WITH A TIMER OR OTHER CONTROLLER TO REDUCE LIGHTING LEVELS TO 30% INTENSITY EVERY EVENING AT 10PM. THESE FIXTURES ARE NOTED AS "(DIM)". THE APPLICANT RESERVES THE RIGHT TO EQUIP THESE FIXTURES WITH MOTION SENSORS OR OTHER TECHNOLOGY THAT WILL INCREASE THE LIGHTING LEVELS TO 100% IF THE AREA IS OR BECOMES OCCUPIED.
11. WHERE NOTED, SELECT FIXTURES SHALL BE EQUIPPED WITH A TIMER OR OTHER CONTROLLER TO SHUT THEM OFF EVERY EVENING AT 10PM. THESE FIXTURE ARE NOTED AS "(OFF)".
12. ALL PARKING LOT AND DRIVEWAY LIGHTING FIXTURES SHALL BE FULL CUT-OFF AND 3000K COLOR TEMPERATURE SO AS TO BE DARK-SKY COMPLIANT AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
13. THIS LIGHTING DESIGN WAS PROVIDED IS BASED ON LIMITED INFORMATION PROVIDED BY VISIBLE LIGHT, INC., 24 STICKNEY TERRACE, SUITE 6, HAMPTON, NH 03842. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, CIRCUITRY, ETC.) SHALL BE COORDINATED BETWEEN THE CONTRACTOR, ARCHITECT AND SPECIFIER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE LIGHTING INSTALLATION MEETS THE ILLUMINATION LEVELS SHOWN HERE.
14. SEE DETAIL SHEETS FOR POLE BASE AND CONDUIT TRENCH DETAILS.

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Around Building (ne)	+	1.1 fc	12.7 fc	0.0 fc	N/A	N/A
Around Building (nw)	+	0.9 fc	3.8 fc	0.0 fc	N/A	N/A
Around Building (south)	+	1.0 fc	18.2 fc	0.1 fc	182.8:1	10.0:1
Courtyard	+	0.6 fc	4.4 fc	0.0 fc	N/A	N/A
Courtyard	+	0.8 fc	6.8 fc	0.0 fc	N/A	N/A
Front Parking Lot/Drive	+	1.0 fc	9.5 fc	0.4 fc	23.8:1	2.5:1
Landscape Area	+	0.9 fc	5.9 fc	0.4 fc	14.8:1	2.3:1
Outside of Parking Lot	+	0.1 fc	1.9 fc	0.0 fc	N/A	N/A
Perimeter Service Drive	+	1.2 fc	4.8 fc	0.4 fc	12.0:1	3.0:1
Side Parking Lot	+	1.2 fc	4.0 fc	0.6 fc	6.7:1	2.0:1
Under Canopy	+	14.5 fc	19.3 fc	3.8 fc	5.1:1	3.8:1
White Oak Drive	+	0.9 fc	1.7 fc	0.4 fc	4.3:1	2.3:1

Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens per Lamp	LLF	Wattage	Distribution
○	B	10	Lithonia Lighting	RADB LED P5 30K SYM MVOLT BTT BCC H36 PE DDBXD	Radean Bollard; mounted at 3ft	LED	RADB_LED_P5_30K_SYM_DDBXD.ies	2116	0.9	32.31	TYPE VS, BUG RATING: B1 – U1 – G0
○	D	14	Indy	L6 23LM 30K 120 G4 80CRI EZ1 WPR CD WET NLTAIR2	Indy 6in Downlight; mounted at 12ft	LED	L6_23LM_30K_120_G4_80CRI_EZ1_WPR_CD.ies	1736	0.9	23.52	DIRECT, SC-0=1.12, SC-90=1.12
	S3	3	Lithonia Lighting	DSXO LED P4 30K 80CRI T3M MVOLT SPA DDBXD NLTAIR2 PIRHN with SSS 20 4C DM19AS DDBXD	D-Series Size 0 Area Fixture Type 3 mounted at 22ft (20ft pole on 2ft base)	LED	DSXO_LED_P4_30K_80CRI_T3M.ies	9695	0.9	93.04	TYPE IV, MEDIUM, BUG RATING: B2 – U0 – G3
	S3-HS	7	Lithonia Lighting	DSXO LED P4 30K 80CRI T3M HS MVOLT SPA DDBXD NLTAIR2 PIRHN with SSS 20 4C DM19AS DDBXD	D-Series Size 0 Area Fixture Type 3 with house-side shield; mounted at 22ft (20ft pole on 2ft base)	LED	DSXO_LED_P4_30K_80CRI_T3M_HS.ies	8404	0.9	93.04	TYPE IV, MEDIUM, BUG RATING: B1 – U0 – G3
	S4	1	Lithonia Lighting	DSXO LED P4 30K 80CRI TFTM MVOLT SPA DDBXD NLTAIR2 PIRHN with SSS 20 4C DM19AS DDBXD	D-Series Size 0 Area Fixture Type 4 mounted at 22.5ft (20ft pole on 2.5ft base)	LED	DSXO_LED_P4_30K_80CRI_TFTM.ies	9908	0.9	93.04	TYPE IV, SHORT, BUG RATING: B2 – U0 – G3
	S4-HS	4	Lithonia Lighting	DSXO LED P4 30K 80CRI TFTM HS MVOLT SPA DDBXD NLTAIR2 PIRHN with SSS 20 4C DM19AS DDBXD	D-Series Size 0 Area Fixture Type 4 with house-side shield; mounted at 22ft (20ft pole on 2ft base)	LED	DSXO_LED_P4_30K_80CRI_TFTM_HS.ies	8309	0.9	93.04	TYPE IV, SHORT, BUG RATING: B1 – U0 – G2
	S5	4	Lithonia Lighting	DSXO LED P4 30K 80CRI T5M MVOLT SPA DDBXD NLTAIR2 PIRHN with SSS 20 4C DM19AS DDBXD	D-Series Size 0 Area Fixture Type 5 mounted at 22ft (20ft pole on 2ft base)	LED	DSXO_LED_P4_30K_80CRI_T5M.ies	10124	0.9	93.04	TYPE VS, BUG RATING: B4 – U0 – G2
	W1	17	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VF MVOLT SRM PE DDBXD	WDGE1 LED Wallpack; mounted at 10ft(above doors)	LED	WDGE1_LED_P1_30K_80CRI_VF.ies	1161	0.9	10.0002	TYPE II, VERY SHORT, BUG RATING: B0 – U0 – G0

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VISIBLELIGHT

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ISSUE DATE: JANUARY 16, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
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2	REVISED PER COMMENTS	EBS	11/13/24
3	REVISED BUILDING	EBS	12/12/24
4	REVISED NOTES	EBS	01/16/25

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5015-SITE.dwg

SCALE:
24" x 36" - 1" = 40'
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OWNER:
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7 RIVERWOODS DRIVE
EXETER, NH 03833

APPLICANT:
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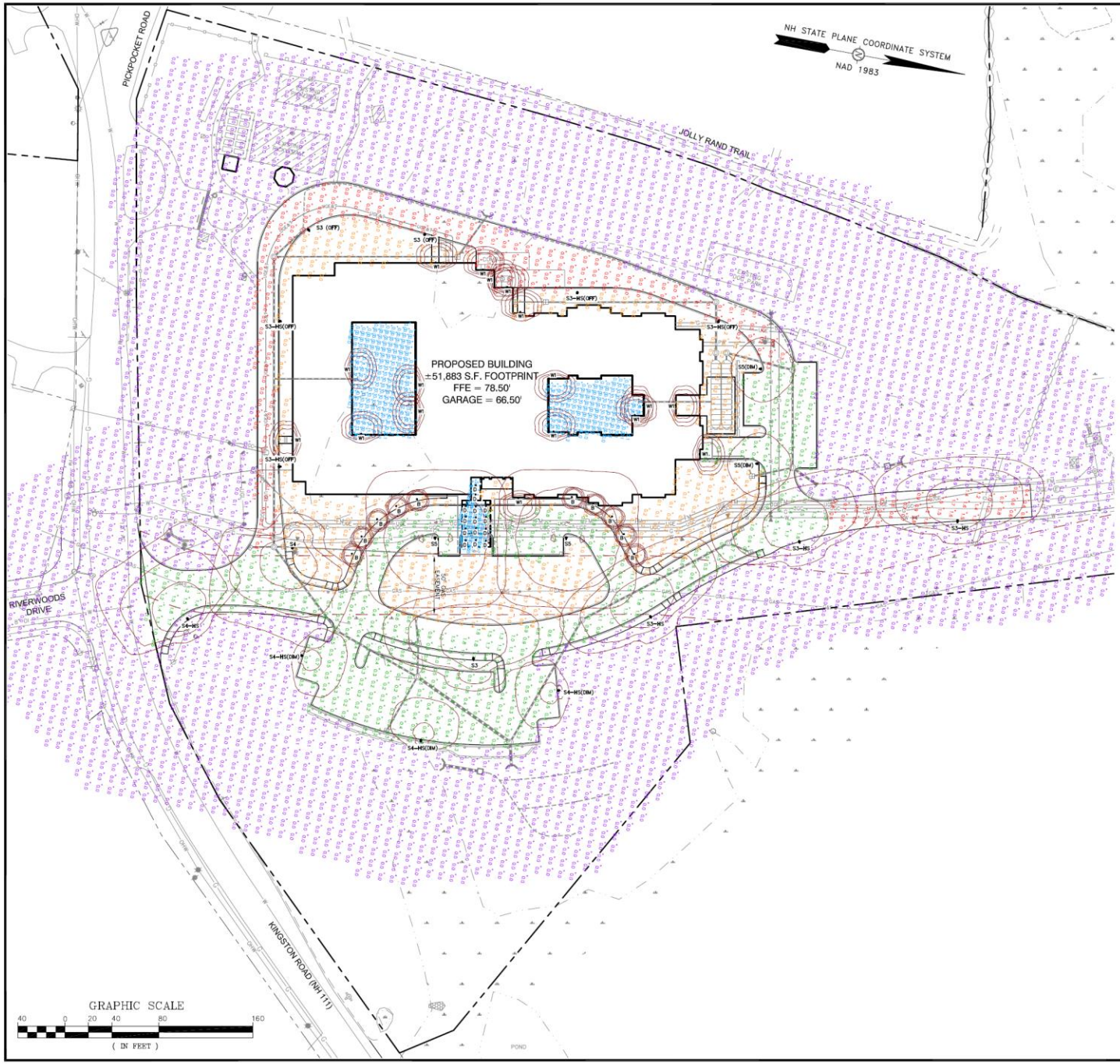
EXETER, NH 03833

PROJECT:
RIVERWOODS SUPPORTIVE LIVING HEALTH CENTER
TAX MAP 97 LOT 23
5 WHITE OAK DRIVE
EXETER, NH 03833

TITLE:
LIGHTING PLAN

SHEET NUMBER:
C-10

P5015



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Courtyard	+	0.6 fc	4.4 fc	0.0 fc	N/A	N/A
Courtyard	+	0.8 fc	6.6 fc	0.0 fc	N/A	N/A
Front Parking Lot/Drive	+	0.8 fc	9.5 fc	0.2 fc	47.5:1	4.0:1
Landscape Area	+	0.8 fc	5.9 fc	0.4 fc	14.8:1	2.0:1
Outside of Parking Lot	+	0.1 fc	1.9 fc	0.0 fc	N/A	N/A
Perimeter Service Drive	+	0.2 fc	4.5 fc	0.0 fc	N/A	N/A
Side Parking Lot	+	0.7 fc	3.6 fc	0.2 fc	18.0:1	3.5:1
Under Canopy	+	14.8 fc	19.3 fc	5.2 fc	3.7:1	2.8:1
White Oak Drive	+	0.9 fc	1.7 fc	0.3 fc	5.7:1	3.0:1

ALTUS ENGINEERING
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VISIBLELIGHT

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ISSUE DATE:
JANUARY 16, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EBS	09/16/24
1	REVISED PER COMMENTS	EBS	10/23/24
2	REVISED PER COMMENTS	EBS	11/13/24
3	REVISED BUILDING	EBS	12/12/24
4	REVISED NOTES	EBS	01/16/25

DRAWN BY: EBS
APPROVED BY: EBS
DRAWING FILE: 5015-SITE.dwg

SCALE:
24" x 36" - 1" = 40'
11" x 17" - 1" = NOT TO SCALE

OWNER:
RIVERWOODS COMPANY AT EXETER
7 RIVERWOODS DRIVE
EXETER, NH 03833

APPLICANT:
RIVERWOODS COMPANY AT EXETER
7 RIVERWOODS DRIVE
EXETER, NH 03833

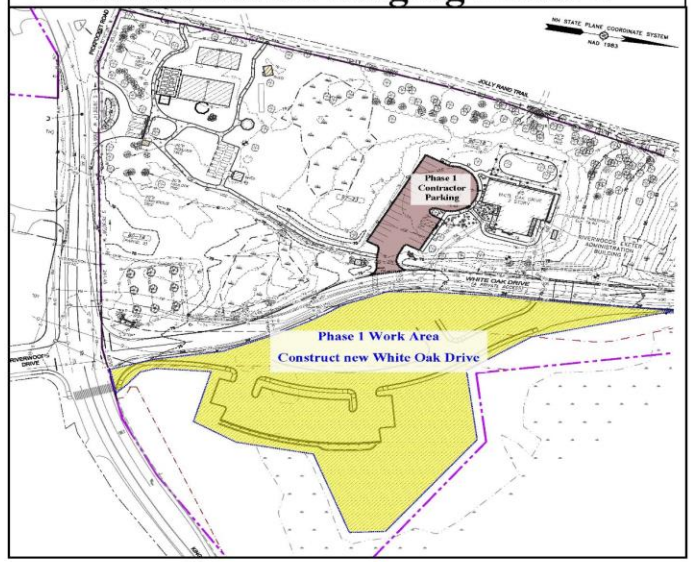
PROJECT:
RIVERWOODS SUPPORTIVE LIVING HEALTH CENTER
TAX MAP 97 LOT 23
5 WHITE OAK DRIVE
EXETER, NH 03833

TITLE:
NIGHT LIGHTING PLAN

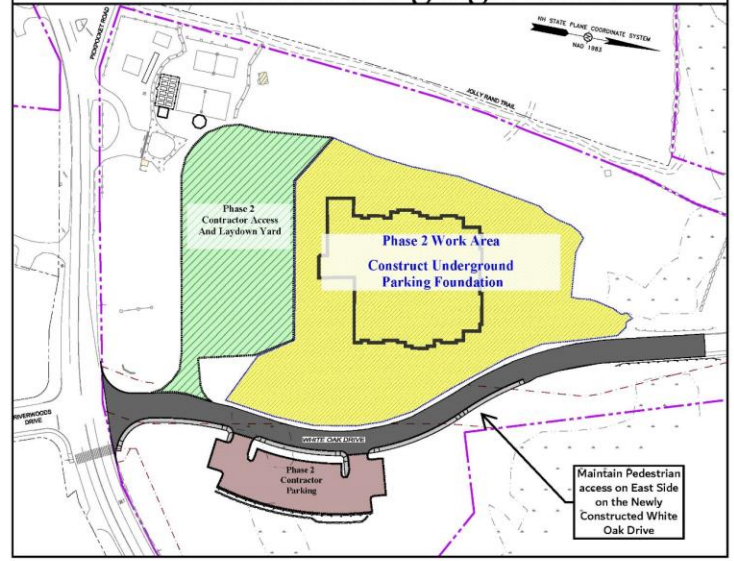
SHEET NUMBER:
C-10.1

P5015

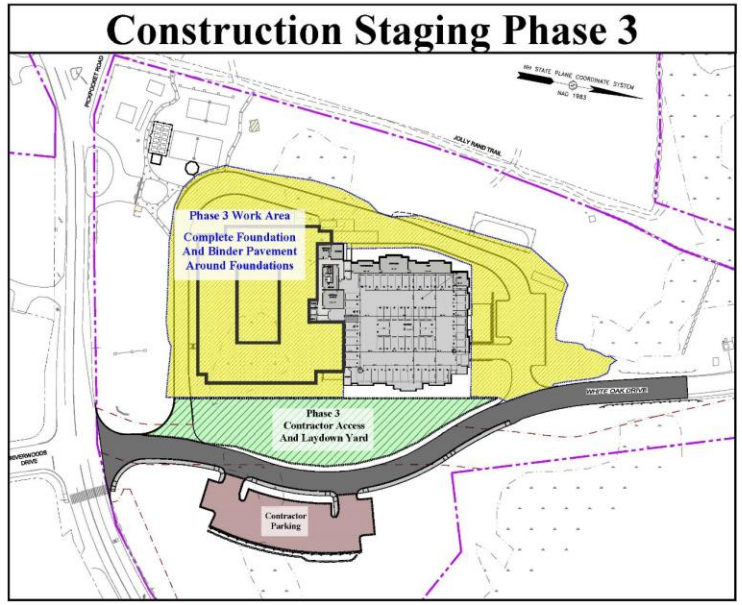
Construction Staging Phase 1



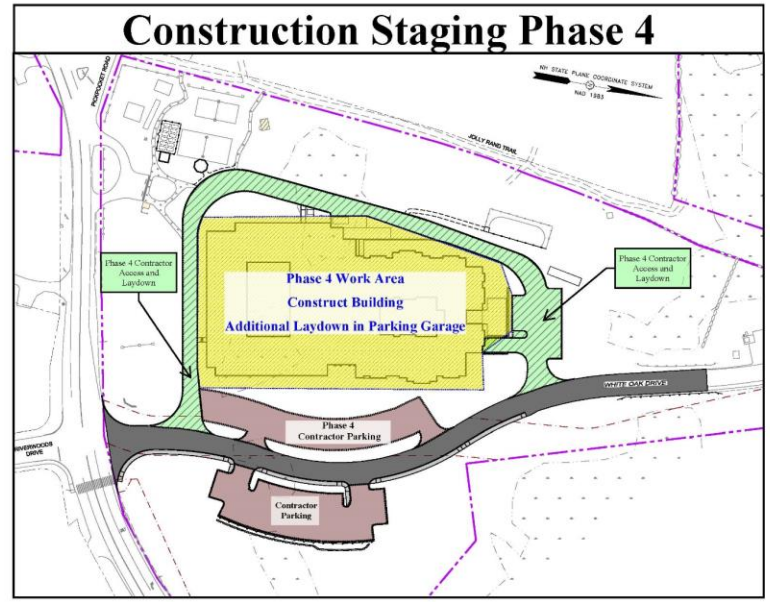
Construction Staging Phase 2

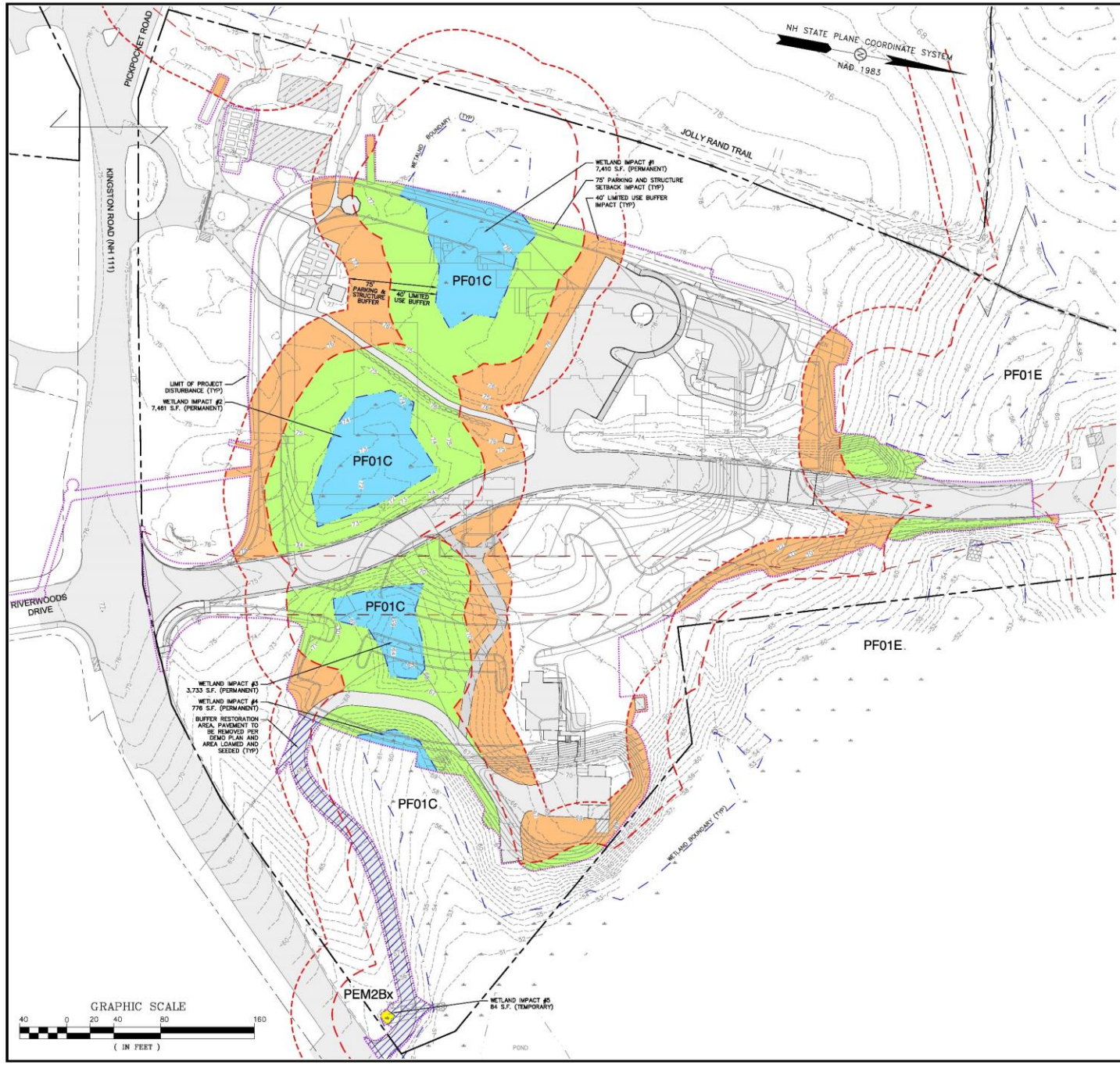


Construction Staging Phase 3



Construction Staging Phase 4





WETLAND NOTES

1. NHDES WETLAND IMPACT ANALYSIS:

	AREA
PERMANENT IMPACT:	19,380 S.F.
TEMPORARY IMPACT:	84 S.F.

2. TOWN OF EXETER WETLAND BUFFER IMPACT ANALYSIS:

	AREA
40' LIMITED USE BUFFER:	47,387 S.F.
75' PARKING AND STRUCTURE BUFFER:	38,404 S.F.
TOTAL BUFFER IMPACT:	85,791 S.F.

3. WETLAND BUFFER RESTORATION AREA:

	AREA
40' LIMITED USE BUFFER:	3,901 S.F.
75' PARKING AND STRUCTURE BUFFER:	1,736 S.F.
TOTAL BUFFER RESTORATION:	5,637 S.F.

4. WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES INC. ON 01/11/23. NO POTENTIAL VERNAL POOLS WERE IDENTIFIED. WETLANDS WERE DELINEATED 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).

LEGEND

- 40' LIMITED USE BUFFER
- 75' PARKING AND STRUCTURE BUFFER
- LIMIT OF PROJECT DISTURBANCE
- WETLAND BOUNDARY
- PROPOSED 40' WETLAND BUFFER IMPACT
- PROPOSED 75' WETLAND SETBACK IMPACT
- PROPOSED WETLAND IMPACT (PERMANENT)
- PROPOSED WETLAND IMPACT (TEMPORARY)
- PROPOSED BUFFER RESTORATION AREA
- PF01C WETLAND CLASSIFICATION

ALTUS ENGINEERING
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
1/16/25

NOT FOR CONSTRUCTION

ISSUED FOR: REVIEW

ISSUE DATE: JANUARY 16, 2025

REVISIONS

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4	ADDED WETLAND CLASSES	EBS	01/16/25

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EXETER, NH 03833

PROJECT:
RIVERWOODS SUPPORTIVE LIVING HEALTH CENTER
TAX MAP 97 LOT 23
5 WHITE OAK DRIVE
EXETER, NH 03833

TITLE:
WETLAND AND CONDITIONAL USE PERMIT PLAN

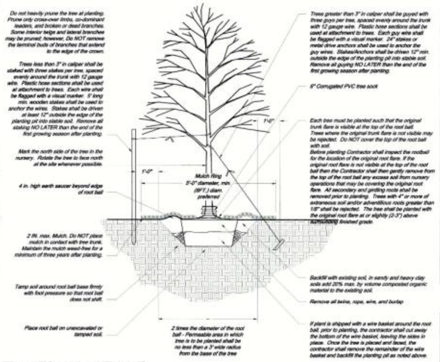
SHEET NUMBER:
C-11

P5015

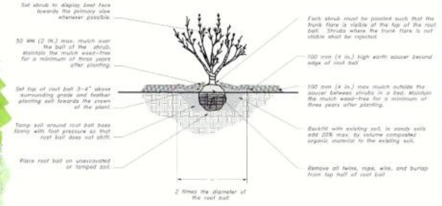
RiverWoods
Exeter

Supportive Health Care Landscape

woodburn & company
LANDSCAPE ARCHITECTURE
Since 1994 *reflecting your vision.*



Tree Planting Detail



Shrub Planting Detail

Landscape Notes

1. Design is based on drawings by Altus Engineering dated November 12, 2024 and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
5. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
6. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
7. This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with the following:
    a. Outside hose attachments spaced a maximum of 150 feet apart, and
    b. An underground irrigation system, or
    c. A temporary irrigation system designed for a two-year period of plant establishment.
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
22. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
23. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
24. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
27. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
28. Landscape Architect is not responsible for the means and methods of the contractor.

Plant List

TREES

Symbol	Botanical Name	Common Name	Native	Quantity	Size	Comments
Am	*Amelanchier grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	Y	6	8-10' ht	BB
Ar	*Acer rubrum 'Red Sunset'*	Red Sunset Red Maple	Y	4	3-3.5"	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7	12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1	3-3.5" cal	BB
Cc	*Cercis canadensis*	Eastern Redbud	Y	1	10-12' ht.	BB
Cff	*Carpinus betulus 'Frans Fontaine'*	Frans Fontiane European Hornbeam		6	3.3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	Y	3	7-8' ht	multi-stemmed BB
Ls	*Liquidambar styraciflua*	American Sweet Gum	Y	4	3.3.5" cal	BB
Lt	*Liriodendron tulipifera*	Tulip Tree	Y	4	3.3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6	3.3.5" cal	BB
Pg	*Picea glauca*	White Spruce	Y	10	10'12' ht.	BB
Th1	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	4	10' ht.	BB
Th2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	12	12-14' ht.	BB
UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10	3.3.5" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Size	Comments
Cf	*Calycanthus floridus 'Aphrodite'*	Aphrodite Sweetshrub	Y	8	7 gal	
Hyl	*Hydrangea arborescens 'Incrediball'*	Incrediball Hydrangea	Y	25	5 gal	
Rhus	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	28	3 gal	
RhW	*Rhododendron 'Wilsoni'*	Wilson Rhododendron		29	2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25	3 gal	
Cle	*Clethra anifolia 'Hummingbird'*	Summingbird Summersweet	Y	18	5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62	18-24"	BB
Vt	*Viburnum plicatum tomentosum 'Mariesii'*	Marie's Doublefile Viburnum		24	3-4'ht.	BB

PERENNIALS AND GROUND COVERS

Symbol	Botanical Name	Common Name	Native	Quantity	Size	Comments
B	*Baptisia*	False Indigo	Y	4	1gal	
Cal	*Calamagrostis 'Karl Foerster'*	Karl Foerster Feather Reed Grass		23	2 gal	
Cor	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis		32	1 gal	
Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50	topsize	
	Narcissus 'Johann Strauss'	Johann Stauss Daffodil		50	topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50	topsize	
H1	*Hosta 'Frances Williams'*	Frances Williams Hosta		9	1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28	1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24	1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24	1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24	1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65	2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		26	1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50	1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25	1 gal	
Tia	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90	1 gal	

SEED MIXES - Prep and install per manufacturer's installation guides.

MEADOW SEEDING	50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf) 50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)
LAWN AREAS	Penningtons Smart Seed Sun/Shade mix or approved equal
BIORETENTION SLOPES	Prairie Nursery No Mow Fescue or approved equal
BIORETENTION BASIN	50% New England Wetland Plants Erosion Control/Restoration Mix for Detention Basins and Moist 50% New England Wetland Plants New England Showy Wildflower Mix

0 10 15 30 60

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By: RW, VM
Checked By: RW
Scale: 1" = 30'-0"
Date: June 6, 2024
Revisions: September 10, 2024; October 23, 2024; November 12, 2024

L-1
Sheet 1 of 1

ORIGINAL PLAN – 12-05-2024

PROPOSED PLAN
1-16-2025

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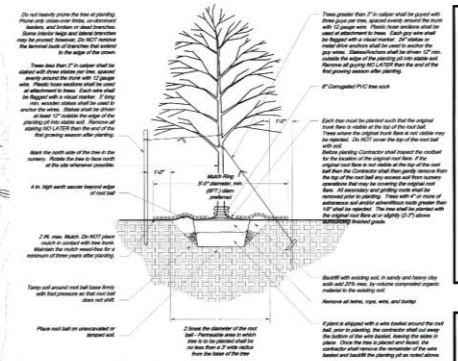
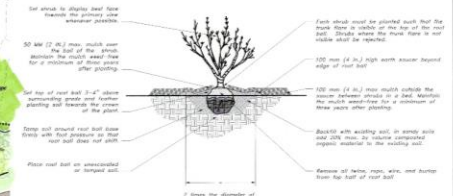


Tree Planting Detail



Shrub Planting Detail

Plant List

TREES

Symbol	Botanical Name	Common Name	Native	Base Quantity	Screen Quantity	Size	Comments
Aam	*Amelanchier grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	Y	6		8-10' ht.	BB
Ar	*Acer rubrum 'Red Sunset'*	Red Sunset Red Maple	Y	3		3-3.5" cal	BB
AcC	*Acer rubrum 'October Glory'*	October Glory Red Maple	Y	9	5	2.5-3" cal.	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7		12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1		3-3.5" cal	BB
Cc	*Cercis canadensis*	Eastern Redbud	Y	1		8-10' ht.	BB
CfF	*Carpinus betulus 'Frans Fontaine'*	Frans Fontaine European Hornbeam		6		3-3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel		3		7-8' ht.	multi-stemmed BB
Ls	*Liquidambar styraciflua*	American Sweet Gum	Y	4		3-3.5" cal	BB
Lt	*Liriodendron tulipifera*	Tulip Tree	Y	4		3-3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6		3-3.5" cal	BB
Pa	*Picea abies*	Norway Spruce		1		10-12' ht.	BB
Pg	*Picea glauca*	White Spruce	Y	10	5	10-12' ht.	BB
PpG	*Picea pungens 'Glauca'*	Colorado Blue Spruce	to US	5	4	10-12' ht.	BB
Ps	*Pinus strobus*	Eastern White Pine	Y	0	11	8-10' ht.	BB
Pst2	*Pinus strobus*	Eastern White Pine	Y	4	0	12-14' ht.	BB
ThI	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	2	0	10'ht.	BB
ThI-A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	21	8-10' ht.	BB
ThI2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	5	0	12-14' ht.	BB
ThI-A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	11	10-12' ht.	BB
ThI5	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	12-14' ht.	BB
ThI3	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	14-16' ht	BB
UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10		3-3.5" cal	BB
UaP2	*Ulmus americana 'Princeton'*	Princeton American Elm	Y		3	2.5-3" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
Cf	*Calycanthus floridus 'Aphrodite'*	Aphrodite Sweetshrub	Y	9	7	7 gal	
Hyl	*Hydrangea arborescens 'Incrediball'*	Incrediball Hydrangea	Y	25		5 gal	
JcSg	*Juniperus chinensis 'Seagreen'*	Seagreen Juniper		0	44	2-2.5'Ht	
RhuL	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	28		3 gal	
RhM	*Rhododendron 'Mavirum'*	Rosebay Rhododendron	Y	0	14	4-5' hvy	BB
RhW	*Rhododendron 'Wilson'*	Wilson Rhododendron		29		2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25		3 gal	
Cs	*Caelina anthopis 'Hummingbird'*	Summersweet Summersweet	Y	16		5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62		18-24"	BB
Vt	*Viburnum plicatum tomentosum 'Mariesii'*	Mariesii Doublefile Viburnum		25		3-4'Ht	BB

PERENNIALS AND GROUND COVERS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
B	*Baptisia*	False Indigo	Y	4		1 gal	
Cal	*Calamagrostis 'Karl Foerster'*	Karl Foerster Feather Reed Grass		23		2 gal	
Cor	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis		32		1 gal	
Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50		topsize	
	Narcissus 'Johann Strauss'	Johann Strauss Daffodil		50		topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50		topsize	
H1	*Hosta 'Francee'*	Francee Williams Hosta		9		1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28		1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24		1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24		1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24		1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65		2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		28		1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50		1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25		1 gal	
Tia	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90		1 gal	

LOAM 6" lawns and 12" for plant beds

SEED MIXES - Prep and install per manufacturer's installation guides.

MEADOW SEEDING 50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf)
50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)

LAWN AREAS Pennington's Smart Seed Sun/Shade mix or approved equal

BIORETENTION SLOPES Prairie Nursery No Mow Fescue or approved equal

BIORETENTION BASIN 50% New England Wetland Plants Erosion Control/Restoration Mix for Detention Basins and Moist
50% New England Wetland Plants New England Showy Wildflower Mix

0 10 15 30 60

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By: RW, VM
Checked By: RW
Scale: 1" = 30' = 0"
Date: June 6, 2024

Revisions:
September 10, 2024
October 23, 2024
November 11, 2024
December 12, 2024
January 16, 2025

L-1

Sheet 1 of 2

Plant List

TREES

Symbol	Botanical Name	Common Name	Native	Base Quantity	Screen Quantity	Size	Comments
Am	*Amelanchier grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	Y	6		8-10' ht	BB
Ar	*Acer rubrum 'Red Sunset'*	Red Sunset Red Maple	Y	3		3-3.5" cal	BB
Ar2	*Acer rubrum 'October Glory'*	October Glory Red Maple	Y	0	5	2.5-3" cal.	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7		12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1		3-3.5" cal	BB
Cc	*Cercis canadensis*	Eastern Redbud	Y	1		8-10' ht.	BB
Cff	*Carpinus betulus 'Frans Fontaine'*	Frans Fontiane European Hornbeam		6		3-3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	Y	3		7-8' ht	multi-stemmed BB
Ls	*Liquidambar styraciflua*	American Sweet Gum	Y	4		3-3.5" cal	BB
Lt	*Liriodendron tulipifera*	Tulip Tree	Y	4		3-3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6		3-3.5" cal	BB
Pa	*Picea abies*	Norway Spruce		1		10-12' ht.	BB
Pg	*Picea glauca*	White Spruce	Y	10	5	10-12' ht.	BB
PpG	*Picea pungens 'Glauca'*	Colorado Blue Spruce	to US	5	4	10-12' ht.	BB
Ps	*Pinus strobus*	Eastern White Pine	Y	0	11	8-10' ht	BB
Ps2	*Pinus strobus*	Eastern White Pine	Y	4	0	12-14' ht.	BB
Th1	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	2	0	10'ht.	BB
Th1A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	21	8-10' ht	BB
Th2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	5	0	12-14' ht.	BB
Th2A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	11	10-12' ht.	BB
Th2B	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	12-14' ht.	BB
Th3	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	14-16' ht	BB
UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10		3-3.5" cal	BB
UaP2	*Ulmus americana 'Princeton'*	Princeton American Elm	Y		3	2.5-3" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
Cf	*Calycanthus floridus 'Aphrodite'*	Aphrodite Sweetshrub	Y	8		7 gal	
Hyl	*Hydrangea arborescens 'Incrediball'*	Incrediball Hydrangea	Y	25		5 gal	
JcSg	*Juniperus chinensis 'Seagreen'*	Seagreen Juniper		0	44	2-2.5'ht	
Rhus	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	28		3 gal	
RhM	*Rhododendron 'Maximum'*	Rosebay Rhododendron	Y	0	14	4-5' hvy	BB
RhW	*Rhododendron 'Wilsoni'*	Wilson Rhododendron		29		2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25		3 gal	
Cle	*Clethra anifolia 'Hummingbird'*	Summingbird Summersweet	Y	18		5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62		18-24"	BB
Vt	*Viburnum plicatum tomentosum 'Mariesii'*	Marie's Doublefile Viburnum		25		3-4'ht.	BB

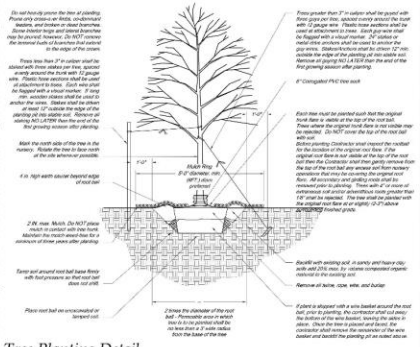
PERENNIALS AND GROUND COVERS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
B	*Baptisia*	False Indigo	Y	4		1gal	
Cal	*Calamagrostis 'Karl Foerster'*	Karl Foerster Feather Reed Grass		23		2 gal	
Cor	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis		32		1 gal	
Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50		topsize	
	Narcissus 'Johann Strauss'	Johann Stauss Daffodil		50		topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50		topsize	
H1	*Hosta 'Frances Williams'*	Frances Williams Hosta		9		1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28		1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24		1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24		1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24		1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65		2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		26		1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50		1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25		1 gal	
Tie	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90		1 gal	

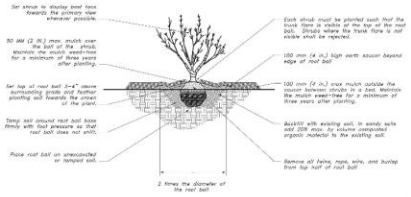
LOAM 6" lawns and 12" for plant beds

SEED MIXES - Prep and install per manufacturer's installation guides.

MEADOW SEEDING	50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf)
	50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)
LAWN AREAS	Penningtons Smart Seed Sun/Shade mix or approved equal
BIORETENTION SLOPES	Prairie Nursery No Mow Fescue or approved equal
BIORETENTION BASIN	50% New England Wetland Plants Erosion Control/Restoration Mix for Detention Basins and Moist
	50% New England Wetland Plants New England Showy Wildflower Mix



Tree Planting Detail



Shrub Planting Detail

Landscape Notes

1. Design is based on drawings by Altus Engineering dated December 12, 2024 and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
5. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
6. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
7. This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with the following:
    a. Outside hose attachments spaced a maximum of 150 feet apart, and
    b. An underground irrigation system, or
    c. A temporary irrigation system designed for a two-year period of plant establishment.
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
22. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
23. Trees, ground cover, and shrub beds shall be mulched to a depth of 3" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
24. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 8' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
27. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
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0 10 15 30 60

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By:	RW, VM
Checked By:	RW
Scale:	1" = 30' = 0"
Date:	January 16, 2025
Revisions:	

L-2

Sheet 2 of 2

PROPOSED PLAN
1-16-2025

PROPOSED PLAN
01-16-2025

KEY VIEWS

VIEW 1 - TRAVELING WEST ON RT 111

VIEW 2/3 - TRAVELING WEST ON RT 111

VIEW 4 – VIEW LOOKING WEST FROM HOOTEN DRIVEWAY

VIEW 5 – TRAVELING WEST ON RT. 111

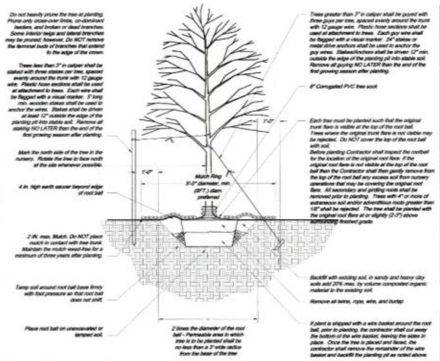
VIEW 6 –RIVERWOODS DRIVE LOOKING NORTH

VIEW 7 –WHITE OAK DRIVE LOOKING NORTH

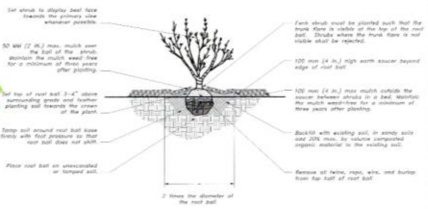
VIEW 8 – FROM MURRAY DRIVEWAY LOOKING NORTH

VIEW 9 – RT.111 LOOKING NORTHEAST

VIEW 10 – TRAVELING NORTHEAST ON RT. 111



Tree Planting Detail



Shrub Planting Detail

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18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with the following:
    a. Outside hose attachments spaced a maximum of 150 feet apart, and
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22. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
23. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
24. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
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Plant List

TREES

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Ar2	*Acer rubrum 'October Glory'*	October Glory Red Maple	Y	0	5	2.5-3" cal	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7		12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1		3-3.5" cal	BB
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Cff	*Carpinus betulus 'Frans Fontaine'*	Frans Fontiane European Hornbeam		6		3-3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	Y	3		7-8' ht	multi-stemmed BB
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Lt	*Liriodendron tulipifera*	Tulip Tree	Y	4		3-3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6		3-3.5" cal	BB
Pa	*Picea abies*	Norway Spruce		1		10-12' ht.	BB
Pg	*Picea glauca*	White Spruce	Y	10	5	10-12' ht.	BB
PpG	*Picea pungens 'Glauca'*	Colorado Blue Spruce	to US	5	4	10-12' ht.	BB
Ps	*Pinus strobus*	Eastern White Pine	Y	0	11	8-10' ht.	BB
Ps2	*Pinus strobus*	Eastern White Pine	Y	4	0	12-14' ht.	BB
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Th2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	5	0	12-14' ht.	BB
Th2A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	11	10-12' ht.	BB
Th2B	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	12-14' ht.	BB
Th3	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	14-16' ht	BB
UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10		3-3.5" cal	BB
UaP2	*Ulmus americana 'Princeton'*	Princeton American Elm	Y		3	2.5-3" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
Cf	*Calycanthus floridus 'Aphrodite'*	Aphrodite Sweetshrub	Y	8		7 gal	
Hyl	*Hydrangea arborescens 'Incrediball'*	Incrediball Hydrangea	Y	25		5 gal	
JcSg	*Juniperus chinensis 'Seagreen'*	Seagreen Juniper		0	44	2-2.5'ht	
Rhus	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	28		3 gal	
RhM	*Rhododendron 'Maximum'*	Rosebay Rhododendron	Y	0	14	4-5' hvy	BB
RhW	*Rhododendron 'Wilson'*	Wilson Rhododendron		29		2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25		3 gal	
Cle	*Clethra alnifolia 'Hummingbird'*	Summingbird Summersweet	Y	18		5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62		18-24"	BB
Vi	*Viburnum plicatum tomentosum 'Mariesii'*	Marie's Doublefile Viburnum		25		3-4'ht.	BB

PERENNIALS AND GROUND COVERS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
B	*Baptisia*	False Indigo	Y	4		1gal	
Cal	*Calamagrostis 'Karl Foerster'*	Karl Foerster Feather Reed Grass		23		2 gal	
Cor	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis		32		1 gal	
Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50		topsize	
	Narcissus 'Johann Strauss'	Johann Stauss Daffodil		50		topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50		topsize	
H1	*Hosta 'Frances Williams'*	Frances Williams Hosta		9		1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28		1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24		1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24		1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24		1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65		2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		28		1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50		1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25		1 gal	
Tia	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90		1 gal	

LOAM 6" lawns and 12" for plant beds

SEED MIXES - Prep and install per manufacturer's installation guides.

MEADOW SEEDING 50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf)
50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)

LAWN AREAS Penningtons Smart Seed Sun/Shade mix or approved equal

BIORETENTION SLOPES Prairie Nursery No Mow Fescue or approved equal

BIORETENTION BASIN 50% New England Wetland Plants Erosion Control/Restoration Mix for Detention Basins and Moist
50% New England Wetland Plants New England Showy Wildflower Mix

0 10 15 30 60

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By: RW, VM

Checked By: RW

Scale: 1" = 30' = 0"

Date: June 6, 2024

Revisions:
September 10, 2024
October 23, 2024
November 11, 2024
December 12, 2024
January 16, 2025

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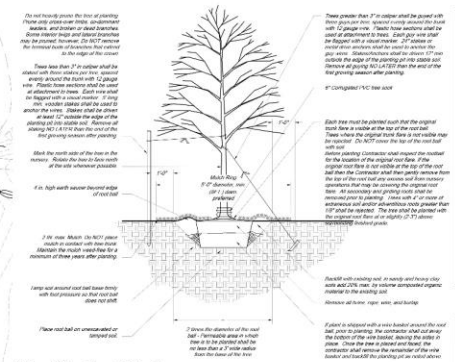
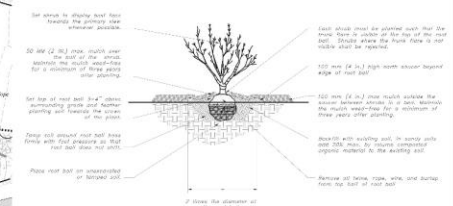
Sheet 1 of 2





ORIGINAL 12-05-2024

EVERGREEN SCREEN PLANTING

SIZE	
VARIES	DECIDUOUS TREES
8-10'HT.	EVERGREEN
10-12' HT.	EVERGREEN
12-14' HT.	EVERGREEN
14-16' HT.	EVERGREEN
2-2.5' HT.	EVERGREEN SHRUBS IN PARKING

0 10 15 30 60

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103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By:	RW, VM
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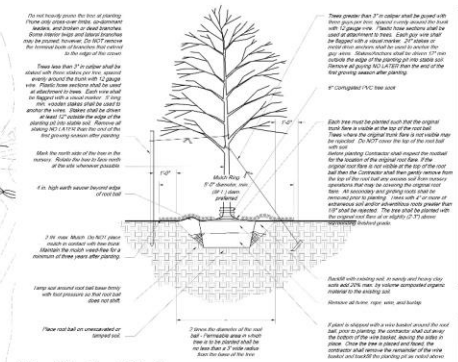
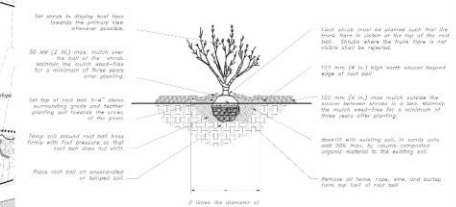


Tree Planting Detail



Shrub Planting Detail

ORIGINAL EVERGREEN AND DECIDUOUS SCREEN 12-05-2024

EVERGREEN SCREEN PLANTING

SIZE	
VARIES	DECIDUOUS TREES
8-10'HT.	EVERGREEN
10-12' HT.	EVERGREEN
12-14' HT.	EVERGREEN
14-16' HT.	EVERGREEN
2-2.5' HT.	EVERGREEN SHRUBS IN PARKING
4-5' ht.	RHODODENDRONS (EVERGREEN)
VARIES	EXISTING SCREEN VEGETATION

0 10 15 30 60

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LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

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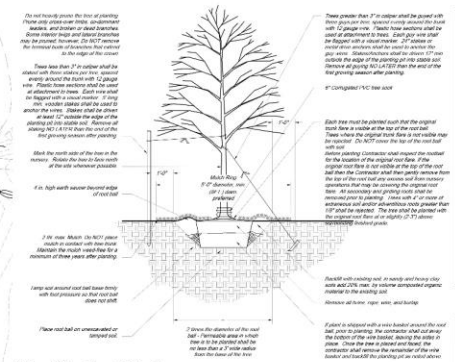
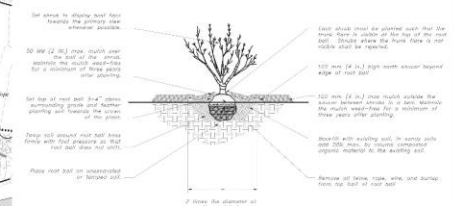


Tree Planting Detail



Shrub Planting Detail

NEW EVERGREEN SCREENING 1-16-2025

EVERGREEN SCREEN PLANTING

SIZE	
VARIES	DECIDUOUS TREES
8-10'HT.	EVERGREEN
10-12' HT.	EVERGREEN
12-14' HT.	EVERGREEN
14-16' HT.	EVERGREEN
2-2.5' HT.	EVERGREEN SHRUBS IN PARKING
4-5' ht.	RHODODENDRONS (EVERGREEN)
VARIES	EXISTING SCREEN VEGETATION

0 10 15 30 60

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

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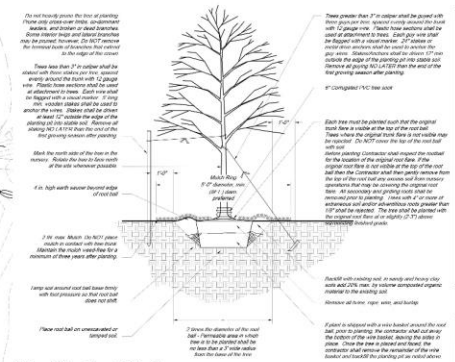
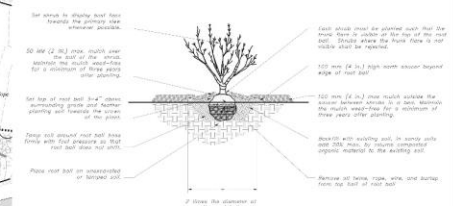


Tree Planting Detail



Shrub Planting Detail

NEW EVERGREEN, ORIGINAL SCREENING & EXISTING VEGETATION

EVERGREEN SCREEN PLANTING

SIZE	
VARIES	DECIDUOUS TREES
8-10'HT.	EVERGREEN
10-12' HT.	EVERGREEN
12-14' HT.	EVERGREEN
14-16' HT.	EVERGREEN
2-2.5' HT.	EVERGREEN SHRUBS IN PARKING
4-5' ht.	RHODODENDRONS (EVERGREEN)
VARIES	EXISTING SCREEN VEGETATION

0 10 15 30 60

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White Oak Drive Exeter, New Hampshire

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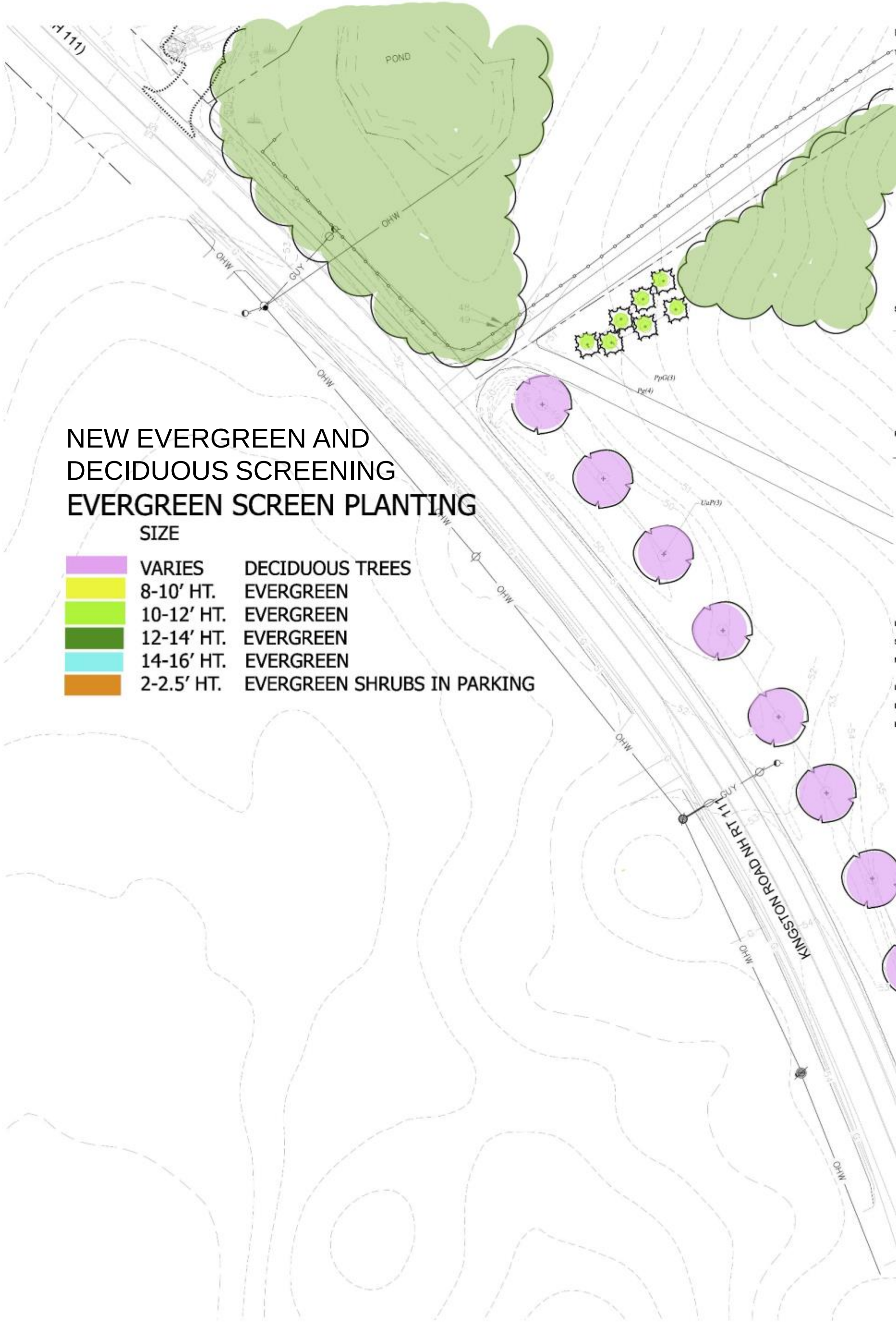


Plant List

TREES

Symbol	Botanical Name	Common Name	Native	Base Quantity	Screen Quantity	Size	Comments
Am	*Amelanchier grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	Y	6		8-10' ht	BB
Ar	*Acer rubrum 'Red Sunset'*	Red Sunset Red Maple	Y	3		3-3.5" cal	BB
Ar2	*Acer rubrum 'October Glory'*	October Glory Red Maple	Y	0	5	2.5-3" cal.	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7		12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1		3-3.5" cal	BB
Cc	*Cercis canadensis*	Eastern Redbud	Y	1		8-10' ht.	BB
Cff	*Carpinus betulus 'Frans Fontaine'*	Frans Fontiane European Hornbeam		6		3-3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	Y	3		7-8' ht	multi-stemmed BB
Ls	*Liquidambar styraciflua*	American Sweet Gum	Y	4		3-3.5" cal	BB
Lt	*Liriodendron tulipifera*	Tulip Tree	Y	4		3-3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6		3-3.5" cal	BB
Pa	*Picea abies*	Norway Spruce		1		10-12' ht.	BB
Pg	*Picea glauca*	White Spruce	Y	10	5	10-12' ht.	BB
PpG	*Picea pungens 'Glauca'*	Colorado Blue Spruce	to US	5	4	10-12' ht.	BB
Ps	*Pinus strobus*	Eastern White Pine	Y	0	11	8-10' ht.	BB
Ps2	*Pinus strobus*	Eastern White Pine	Y	4	0	12-14' ht.	BB
Th1	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	2	0	10'ht.	BB
Th1A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	21	8-10' ht.	BB
Th2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	5	0	12-14' ht.	BB
Th2A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	11	10-12' ht.	BB
Th2B	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	12-14' ht.	BB
Th3	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	14-16' ht	BB
UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10		3-3.5" cal	BB
UaP2	*Ulmus americana 'Princeton'*	Princeton American Elm	Y		3	2.5-3" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
Cf	*Calycanthus floridus 'Aphrodite'*	Aphrodite Sweetshrub	Y	8		7 gal	
Hyl	*Hydrangea arborescens 'Incrediball'*	Incrediball Hydrangea	Y	25		5 gal	
JcSg	*Juniperus chinensis 'Seagreen'*	Seagreen Juniper		0	44	2-2.5'ht	
Rhus	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	28		3 gal	
RhM	*Rhododendron 'Maximum'*	Rosebay Rhododendron	Y	0	14	4-5' hvy	BB
RhW	*Rhododendron 'Wilsoni'*	Wilson Rhododendron		29		2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25		3 gal	
Cle	*Clethra anifolia 'Hummingbird'*	Summingbird Summersweet	Y	18		5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62		18-24"	BB
Vt	*Viburnum plicatum tomentosum 'Mariesii'*	Marie's Doublefile Viburnum		25		3-4'ht.	BB

PERENNIALS AND GROUND COVERS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
B	*Baptisia*	False Indigo	Y	4		1gal	
Cal	*Calamagrostis 'Karl Foerster'*	Karl Foerster Feather Reed Grass		23		2 gal	
Cor	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis		32		1 gal	
Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50		topsize	
	Narcissus 'Johann Strauss'	Johann Stauss Daffodil		50		topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50		topsize	
H1	*Hosta 'Frances Williams'*	Frances Williams Hosta		9		1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28		1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24		1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24		1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24		1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65		2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		26		1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50		1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25		1 gal	
Tia	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90		1 gal	

LOAM 6" lawns and 12" for plant beds

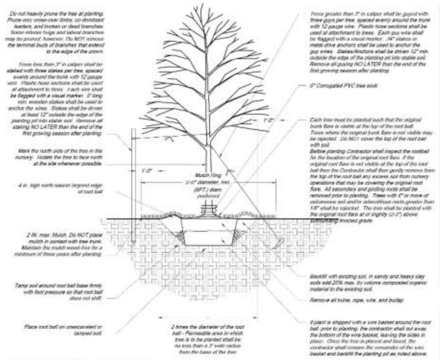
SEED MIXES - Prep and Install per manufacturer's installation guides.

MEADOW SEEDING 50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf)
50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)

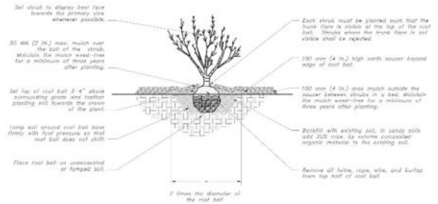
LAWN AREAS Penningtons Smart Seed Sun/Shade mix or approved equal

BIORETENTION SLOPES Prairie Nursery No Mow Fescue or approved equal

BIORETENTION BASIN 50% New England Wetland Plants Erosion Control/Restoration Mix for Detention Basins and Moist
50% New England Wetland Plants New England Showy Wildflower Mix



Tree Planting Detail



Shrub Planting Detail

Landscape Notes

1. Design is based on drawings by Altus Engineering dated December 12, 2024 and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
5. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
6. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
7. This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with the following:
    a. Outside hose attachments spaced a maximum of 150 feet apart, and
    b. An underground irrigation system, or
    c. A temporary irrigation system designed for a two-year period of plant establishment.
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
22. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
23. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
24. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
27. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
28. Landscape Architect is not responsible for the means and methods of the contractor.

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woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By: RW, VM
Checked By: RW
Scale: 1" = 30' = 0"
Date: January 16, 2025
Revisions:

L-2

Sheet 2 of 2

VIEW ONE - PROPOSED- TRAVELING SOUTH ON Rt 111

VIEW TWO /3– PROPOSED - TRAVELING WEST ON RT 111

VIEW FOUR – PROPOSED - VIEW FROM HOOTEN DRIVEWAY

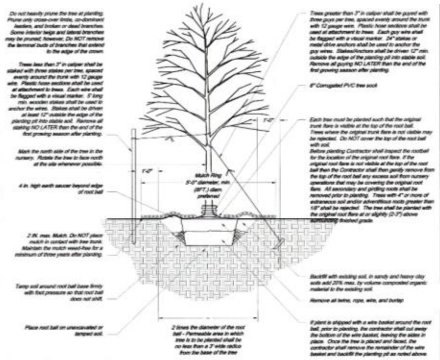
VIEW SIX – PROPOSED - FROM RIVERWOODS DRIVE LOOKING NORTH

VIEW 7 – PROPOSED WHITE OAK DRIVE LOOKING NORTH

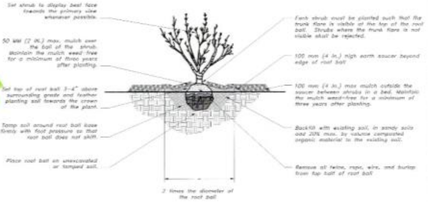
VIEW 8 – PROPOSED - FROM MURRAY DRIVEWAY LOOKING NORTH

VIEW NINE – PROPOSED - RT.111 LOOKING NORTHEAST

VIEW TEN – PROPOSED - TRAVELING NORTHEAST ON RT. 111



Tree Planting Detail



Shrub Planting Detail

Plant List

TREES

Symbol	Botanical Name	Common Name	Native	Base Quantity	Screen Quantity	Size	Comments
Am	*Amelanchier grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	Y	6		8-10' ht	BB
Ar	*Acer rubrum 'Red Sunset'*	Red Sunset Red Maple	Y	3		3-3.5" cal	BB
Ar2	*Acer rubrum 'October Glory'*	October Glory Red Maple	Y	0	5	2.5-3" cal	BB
Bn	*Betula nigra 'Dura Heat'*	Dura-Heat River Birch	Y	7		12-14' ht	multi-stemmed BB
Car	*Carpinus caroliniana*	American Hornbeam	Y	1		3-3.5" cal	BB
Cc	*Cercis canadensis*	Eastern Redbud	Y	1		8-10' ht.	BB
Cf	*Carpinus betulus 'Frans Fontaine'*	Frans Fontiane European Hornbeam		6		3-3.5" cal	BB
Ham	*Hamamelis intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	Y	3		7-8' ht	multi-stemmed BB
Ls	*Liquidambar styraciflua*	American Sweet Gum	Y	4		3-3.5" cal	BB
Lt	*Liriodendron tulipifera*	Tulip Tree	Y	4		3-3.5" cal	BB
Ns	*Nyssa sylvatica*	Tupelo	Y	6		3-3.5" cal	BB
Pa	*Picea abies*	Norway Spruce		1		10-12' ht	BB
Pg	*Picea glauca*	White Spruce	Y	10	5	10-12' ht.	BB
PpG	*Picea pungens 'Glauca'*	Colorado Blue Spruce	to US	5	4	10-12' ht.	BB
Ps	*Pinus strobus*	Eastern White Pine	Y	0	11	8-10' ht.	BB
Ps2	*Pinus strobus*	Eastern White Pine	Y	4	0	12-14' ht.	BB
Th1	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	2	0	10'ht.	BB
Th1A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	21	8-10' ht.	BB
Th2	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	5	0	12-14' ht.	BB
Th2A	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	11	10-12' ht.	BB
Th2B	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	12-14' ht.	BB
Th3	*Thuja plicata 'Green Giant'*	Green Giant Western Red Cedar	to US	0	5	14-16' ht	BB
UaP	*Ulmus americana 'Princeton'*	Princeton American Elm	Y	10		3-3.5" cal	BB
UaP2	*Ulmus americana 'Princeton'*	Princeton American Elm	Y		3	2.5-3" cal	BB

SHRUBS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
Cf	*Calycanthus floridus 'Aphrodite'*	Aphrodite Sweetshrub	Y	8		7 gal	
Hyl	*Hydrangea arborescens 'Incrediball'*	Incrediball Hydrangea	Y	25		5 gal	
JcSg	*Juniperus chinensis 'Seagreen'*	Seagreen Juniper		0	44	2-2.5'ht	
Rhus	*Rhus aromatica 'Grow Low'*	Grow Low Sumac	Y	26		3 gal	
RhM	*Rhododendron 'Maximum'*	Rosebay Rhododendron	Y	0	14	4-5' hvy	BB
RhW	*Rhododendron 'Wilson'*	Wilson Rhododendron		29		2-2.5' ht	BB
Ros	*Rosa 'Knockout - Blush Pink'*	Blush Pink Knockout Rose		25		3 gal	
Cle	*Clethra alnifolia 'Hummingbird'*	Summingbird Summersweet	Y	18		5 gal	
Tax	*Taxus media 'Everlow'*	Everlow Yew		62		18-24"	BB
Vt	*Viburnum plicatum tomentosum 'Mariesii'*	Marie's Doublefile Viburnum		25		3-4'ht.	BB

PERENNIALS AND GROUND COVERS

Symbol	Botanical Name	Common Name	Native	Quantity	Screen Quantity	Size	Comments
B	*Baptisia*	False Indigo	Y	4		1gal	
Cal	*Calamagrostis 'Karl Foerster'*	Karl Foerster Feather Reed Grass		23		2 gal	
Cor	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis		32		1 gal	
Daff	*Narcissus 'King Alfred'*	King Alfred Daffodil		50		topsize	
	Narcissus 'Johann Strauss'	Johann Stauss Daffodil		50		topsize	
	Narcissus 'Ice Follies'	Ice Follies Daffodil		50		topsize	
H1	*Hosta 'Frances Williams'*	Frances Williams Hosta		9		1 gal	
H2	*Hosta 'Curly Fries'*	Curly Fries Hosta		28		1 gal	
Hem	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily		24		1 gal	
	Hemerocallis 'Siloam Double Classic'	Siloam Double Classic Daylily		24		1 gal	
	Hemerocallis 'Joan Senior'	Joan Senior Daylily		24		1 gal	
Heu	*Heuchera americana 'Green Spice'*	Green Spice Coral Bells		65		2 qts	
Nep	*Nepeta 'Walker's Low'*	Walker's Low Catmint		28		1 gal	
Rud	*Rudbeckia 'American Gold Rush'*	Am. Gold Rush Black Eyed Susan		50		1 gal	
Sed	*Sedum 'Autumn Joy'*	Autumn Joy Sedum		25		1 gal	
Tia	*Tiarella 'Running Tapestry'*	Running Tapestry Foamflower		90		1 gal	

LOAM 6" lawns and 12" for plant beds

SEED MIXES - Prep and install per manufacturer's installation guides.

MEADOW SEEDING 50% American Meadows - Native Northeast Wildflower Mix (1lb per 2000sf)
50% New England Wetland Plants Showy Wildflower Mix (1lb per 2000sf)

LAWN AREAS Penningtons Smart Seed Sun/Shade mix or approved equal

BIORETENTION SLOPES Prairie Nursery No Mow Fescue or approved equal

BIORETENTION BASIN 50% New England Wetland Plants Erosion Control/Restoration Mix for Detention Basins and Moist
50% New England Wetland Plants New England Showy Wildflower Mix

Landscape Notes

1. Design is based on drawings by Altus Engineering dated December 12, 2024 and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
5. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
6. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
7. This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with the following:
    a. Outside hose attachments spaced a maximum of 150 feet apart, and
    b. An underground irrigation system, or
    c. A temporary irrigation system designed for a two-year period of plant establishment.
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
22. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
23. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
24. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
25. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
26. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
27. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
28. Landscape Architect is not responsible for the means and methods of the contractor.

0 10 15 30 60

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

RiverWoods Supportive Living Center

LANDSCAPE PLAN

White Oak Drive Exeter, New Hampshire

Drawn By: RW, VM
Checked By: RW
Scale: 1" = 30' = 0"
Date: June 6, 2024
Revisions:
September 10, 2024
October 23, 2024
November 11, 2024
December 12, 2024
January 16, 2025

L-1

Sheet 1 of 2

RiverWoods
Exeter

Supportive Health Care Animation


Riverwoods Health Center


RiverWoods
Campus Crossing

TOWN OF EXETER

Planning and Building Department

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

www.exeternh.gov

Date: **February 7, 2025**

To: **Planning Board**

From: **Dave Sharples, Town Planner**

Re: **StoneArch Development 112 Front Street PB Case #24-17**

The Applicant has submitted a multi-family site plan review application for the proposed redevelopment of the property located at 112 Front Street. The developer is proposing to demolish the existing buildings on the site and construct seventeen (17) townhouse-style residential condominiums and associated site improvements. The property is located in the C-1, Central Area Commercial zoning district and is identified as Tax Map Parcel #73-14.

The Applicant appeared before the Board at the January 23rd, 2025 meeting to present their plans for the redevelopment of the subject property. The public hearing was opened for public comment and a site walk was scheduled for Thursday, February 6th, 2025 at 8:00 AM. At the site walk, the applicant mentioned that they were developing a landscape plan that would be submitted prior to the Planning Board meeting but after the packet goes out. I will forward that on to the board when received. Further discussion on the application was continued to the February 13th, 2025 meeting.

The Applicant submitted revised plans and supporting documents, dated 01/22/25, which are enclosed for your review. Staff is still in the process of reviewing the materials and I will update the Board at the meeting.

The Applicant is requesting two waivers from the Board's Site Plan Review & Subdivision Regulations as outlined in the waiver request letter, dated 01/21/25, included with the enclosed materials.

Numerous letters (and emails) have been received from abutters and/or residents in the neighborhood and are included with the meeting materials for your review.

Waiver Motions:

Roadway and Fire Lanes Less than 24' Width waiver motion: After reviewing the criteria for granting waivers, I move that the request of StoneArch Development (PB Case #24-17) for a waiver from Section 9.14.9 of the Site Plan Review and Subdivision Regulations to permit proposed roadway and fire lanes to be less than 24' in width be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Grading within 5 feet of exterior property line waiver motion: After reviewing the criteria for granting waivers, I move that the request of StoneArch Development (PB Case #24-17) for a waiver from Section 9.3.6.4. of the Site Plan Review and Subdivision Regulations regarding grading within 5 feet of an exterior property line be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Planning Board Motions:

Multi-Family Site Plan Motion: I move that the request of StoneArch Development (PB Case #24-17) for Multi-Family Site Plan approval be APPROVED / APPROVED WITH THE FOLLOWING CONDITIONS / TABLED / DENIED.

Thank You.

Enclosures

BEALS · ASSOCIATES *PLLC*

70 Portsmouth Avenue
Stratham, New Hampshire
0388
603 – 583 - 4860
Fax: 583 - 4863

January 21, 2025

Chairman
Town of Exeter Planning Board
10 Front Street
Exeter, NH 03833

RE: Letter of Explanation
112 Front Street, LC.
Proposed 17-unit residential townhouse condominium
Tax Map 0073 Lot #: 0014

Dear Members of the Board:

The applicant is proposing to demolish the existing house and barn structures and remove the foundation/slabs. The redevelopment will consist of 17 residential townhouse condominium units (3-four-unit buildings, and 1-five-unit building) with a reconfigured private driveway, parking, utilities and drainage structures. Specifically, porous pavement and infiltration ponds are proposed for drainage along with underground water, sewer, gas, and electric/communications services.

Thank you for your consideration.

Very truly yours,
BEALS ASSOCIATES, PLLC

Christian O. Smith

Christian O. Smith P.E.
Principal

BA BEALS ASSOCIATES, PLLC

Land Planning · Civil Engineering
Landscape Architecture · Septic Design & Evaluation
Stratham, NH

January 21, 2025
Chairman
Town of Exeter Planning Board
10 Front Street
Exeter, NH 03833

RE: Proposed Residential Development at 112 Front Street – Waiver Requests
Tax Map 73 Lot #: 14

Dear Members of the Board:

This is written to formalize a request for two waivers specific to the design for the referenced subdivision application.

Your petitioner seeks the following relief:

1. We respectfully request a waiver to the Town of Exeter's Site Plan Review and Subdivision Regulations Section 9.14.9 which requires a 24-foot-wide access points and fire lanes to multi-family developments. This requirement can be waived based upon the review and recommendation of the Exeter Department of Public Works.

   We feel the waiver is justified as:

   13.7.1 The proposed design provide adequate access for the Town of Exeter's Aerial Ladder Truck (see Sheet 12) and the reduced width will decrease stormwater flow from the driveway due to the reduction of impervious area. Therefore, granting of the waiver will not be detrimental to public safety, health, or welfare, nor could it be deemed injurious to other property.

   13.7.2 The conditions upon which this request is made expressly due to the fact that the proposed development access to Front Street is in the same location as the existing access. The existing curb cut is being utilized and widened and is unique to the parcel/proposal and not generally applicable to other properties.

   13.7.3 Due to the location of the curb cut for the existing driveway, the proposed driveway was placed in the same location, but is wider than the existing driveway. This would result in a hardship if the strict letter of the regulations is carried out as it would add needless impervious area to the development where access for all potential emergency response vehicles is provided with the proposed reduced width drive without potential conflict.

   13.7.4 The waiver would not be contrary to the spirit and intent of the regulations as the proposed development will result in adequate width for cars to pass each other in

opposite directions as well as the Town of Exeter's largest fire truck (the aerial ladder truck) to maneuver into and out of the property.

13.7.5 The proposed waiver does not propose to vary the provisions of the Zoning Ordinance or Master Plan. This is demonstrated by the facts cited above, particularly the fact that sufficient fire access will be provided as part of this proposed development.

2. We respectfully request a waiver to the Town of Exeter's Site Plan Review and Subdivision Regulations Section 9.3.6.4 which restricts grading within 5 feet of any exterior property line.

   We feel the waiver is justified as:

   13.7.1 The proposed design provides adequate space to work between the proposed disturbance and the property line, therefore granting of the waiver will not be detrimental to public safety, health, or welfare, nor could it be deemed injurious to other property.

   13.7.2 The conditions upon which this request is made expressly due to the fact that the proposed development access to Front Street is in the same location as the existing access. The existing curb cut is being utilized and widened and is unique to the parcel/proposal and not generally applicable to other properties.

   13.7.3 Due to the location of the curb cut for the existing driveway, the proposed driveway was placed in the same location, but is obviously wider than the existing driveway. The western edge of the existing driveway was held and the expansion grew towards the east, causing grading within 5 feet of the property line. This would result in a hardship if the strict letter of the regulations is carried out as it would be illogical to move the drive westerly off the existing drive location. Care will be taken to ensure no disturbance to the abutting property, and adequate screening will be maintained to the extent possible.

   13.7.4 The waiver would not be contrary to the spirit and intent of the regulations as the proposed development will result in adequate width for construction to take place without causing harm to abutting property.

   13.7.5 The proposed waiver does not propose to vary the provisions of the Zoning Ordinance or Master Plan. This is demonstrated by the facts cited above, as well as the fact that no structures are to be located within 5-feet of the property line.

Thank you for your consideration.
Very truly yours,
BEALS ASSOCIATES, PLLC

Christian O Smith

Christian O. Smith, PE
Principal

BA BEALS ASSOCIATES, PLLC
Land Planning • Civil Engineering
Landscape Architecture • Septic Design & Evaluation
Stratham, NH

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

January 21, 2025

Re: 112 Front Street, LLC – 112 Front Street – Residential Development
Response to UEI Comments

Dear Mr. Chairman, Members of the Board, & Mr. Sharples:

We are in receipt of a review letter from Underwood Engineers, dated January 10, 2025 and we offer the following responses to the noted comments. Each comment is followed by our response in **bold**.

General

1. Architectural drawings were not included in the submittal package. Please submit.

   Response: Architectural drawings are included as part of this response submittal.

2. We note the lot abuts a cemetery. Per NH RSA 289.3:

   > III. New construction, excavation, or building in the area of a known burial site or within the boundaries of an established burial ground or cemetery shall comply with local zoning regulations concerning burial sites, burial grounds or cemeteries, whether or not such burial site or burial ground was properly recorded in the deed to the property. In the absence of such regulations, no new construction, excavation, or building shall be conducted within 25 feet of a known burial site or within 25 feet of the boundaries of an established burial ground or cemetery, whether or not such burial site or burial ground was properly recorded in the deed to the property, except when such construction, excavation, or building is necessary for the construction of an essential service, as approved by the governing body of a municipality in concurrence with the cemetery trustees, or in the case of a state highway, by the commissioner of the department of transportation in concurrence with the cemetery trustees.

   The project proposes sitework as close as 10' to the (rear) property line.

   Response: A 25-foot setback from the abutting cemetery has been incorporated into the design.

Existing Conditions Plan

3. It appears there is an encroachment in the northwestern corner of the parcel, from the abutting parcel TM/L 73 / 15. How will the encroachment be resolved?

Response: The walkway encroachment will be reviewed with the abutter and an easement will be considered.

4. Add the location of the existing sewer service.

Response: The surveyor was able to enter the house to determine the location of the sewer service line leaving the house and worked with Exeter DPW, but was unable to determine where the service line connects to the main.

Demolition Plan

5. Per the comment above, if the encroachment will be removed, please label on plan.

Response: A label has been added to the Demolition Plan to call out the encroachment.

6. Add protection notes as appropriate, e.g. any trees to remain; protection for the chainlink fence post in the northeast corner of the site, as it doubles as a property corner post.

Response: Additional protection notes above have been added to the Demolition Plan.

7. Please revise Note 2 to indicate existing water and sewer services must be abandoned at the main by a contractor properly licensed by Exeter Public Works. In addition, label the existing water and sewer connections in Front Street in the area where they are to be abandoned. Please add a note to direct the Contractor to coordinate traffic control with the Town prior to commencing the work.

Response: Note 2 has been revised and additional callouts have been added.

8. The Demo and Removal of the existing driveway appears to start/stop before the properly line. The project should replace the driveway and sidewalk as required all the way to the gutterline.

Response: The limits of driveway removal to the gutter line have been added to the plan.

Site Plan

9. It is unclear how residents will enter the units from the outside of the buildings, front or rear. Please submit architectural plans for clarification.

Response: Architectural drawings are included as part of this response submittal.

10. Project is proposing a 22' driveway/ drive aisle. It appears to UE that the 22'-wide entrance and roadway would fall under section 9.14.9 of the Site and Subdivision regulations.

Response: A waiver for a 22-foot wide entrance drive is included as part of this re-submission.

11. If applicable, show decks and/or patios extending from the units.

Response: Decks are recessed into the units and patios and walkways have bene added to the plans.

12. Alternatives to porous pavement for the initial drive entrance up to about SMH 3 should be explored. Additionally, the area in front of the dumpster pad should not be porous pavement – Concrete in front of the dumpster area: we recommend consideration of concrete or standard pavement.

Response: The entrance drive to about SMH3 has been revised to conventional pavement and the dumpster area has been removed from the plans in lieu of toter bins (see note 13 on the Parking & Pavement Plan.

13. Show the location of any concrete pads needed to serve the units, such as HVAC, if applicable.

Response: HVAC units will be within the building.

14. Units 1-4 and 14-17 have pavement in front of the units sufficient to park two vehicles per unit in front of each unit. Units 5-13 do not have this flexibility. Please elaborate on the intent.

Response: Parking outside of the garages not anticipated. Units 1-4 and 14-17 have additional area for maneuvering into the garage that is not needed for Units 5-13.

15. Per discussion at the TRC meeting confirm ADA parking space requirements. If two spaces are required, consider separating them, i.e., one at the northerly end of the northerly bump-out and one on the southerly end of the southerly bump-out will more appropriately meet the proximity intent of ADA regulation.

Response: We have removed one accessible parking space and meet ADA standards by provide one accessible parking space.

16. Is a mail kiosk with a pullover area proposed?

Response: A mail kiosk has been added to the plans.

17. Please show the location of the porous pavement sign (per the included detail).

Response: The location of the porous pavement sign has been added by the entrance drive where the pavement transitions from conventional to porous pavement.

Grading and Drainage Plan

18. Excavation and grading will occur very close to the property line, the most obvious example being the installation of the entrance drive. A waiver is required for grading within 5' of the property line.

Response: A waiver to grade within 5 feet of the property line is included as part of this re-submission.

19. Contours 52, 53, and 54 coming in the entrance drive are inverse crowned directing the run-off to the middle of the driveway. At the TRC meeting, we discussed the potential to regrade the entrance drive once changed to standard pavement.

- UE notes that it may not be possible to construct a driveway entrance that directs all of the drive run-off to the existing CB just northwest of the driveway. Confirm the area in the NE corner of the site that will shed water to the Front Street gutterline and then flow easterly to the next available CB.
- While the planset does not include a driveway profile, one is provided for the proposed sewer. The profile implies that proposed work begins at Sta 4+25, far back behind the back of siderwalk. Per comment 8 above, the proposed driveway work should extend to the Front Street gutterline at a minimum.

Response: The driveway has been regraded to slope towards the east where curbing directs the stormwater to a proposed catch basin that ties into an existing catch basin in Front Street. Conventional pavement and vertical granite curbing details have been added to the detail sheets.

20. Show locations of erosion and sediment control BMPs.

Response: Erosion control barriers and a stabilized construction entrance are shown on the Grading, Drainage, & Erosion Control Plan.

21. Spot grades around the ADA space(s) ae recommended to emphasize that final construction grading must be 2% or less in all directions.

Response: Spot grades reflecting the 1% grading have been added around the ADA space and access aisle.

22. Indicate the concrete washout pit location.

Response: The concrete washout pit has been added to the Site Plan.

Utility Plan

23. Label the size and material of water and sewer mains and services as well as the sprinkler services throughout the project. Please note the profile labels the water main as 4" but the note at the connection in the roadway calls it out as a 6" line.

Response: Size and materials for water and sewer mains and sprinkler services have been clarified.

24. Please indicate the location of curb stops and onsite gate valves.

Response: Curb stops for each unit and on-site gate valves have been added.

25. The project proposes a doghouse manhole for the sewer connection in Front Street. The manhole should be traditional manhole with PVC pipe stubs and solid sleeve connections to make connections to the existing AC pipe.

Response: The doghouse manhole has been removed in lieu of a traditional manhole.

26. The additional sewer lateral servicing Units 1 through 4 may not be necessary, consider making connections directly to the main between SMH's 2 and 3 (SMH 3 is unlabeled).

Response: The sewer services to Units 1-4 have been revised to connect directly to the sewer main and the sewer lateral has been removed.

Landscape and Lighting Plan

27. Project disturbances will eliminate all but one row of trees between the development and the abutting properties. When the trees are bare of leaves, there will be little to screen the abutters from the headlights of turning vehicles within the development. Additional screening may be warranted. At the TRC meeting, it was indicated that a revised landscaping plan is forthcoming with added screening.

Response: Additional screening will be reviewed with the Planning Board.

Detail Sheets

28. Add a detail for a concrete washout pit.

Response: A concrete washout pit detail has been added to Sheet 10.

Drainage Analysis

29. If there will be patios off the units, account for the additional impervious area in the calculations.

Response: Pervious walkways and patios have been added but do not account for additional impervious.

30. UE questions the delineations of the subcatchments of the existing conditions. It appears to UE that:

- Half of the existing house roof flows toward the encroachment in the NW corner.
- The other half of the house roof along with half of the existing driveway flows down the driveway and into the Front Street ROW (near the existing CB).
- Half of the garage flows toward the existing driveway as well, but it is unclear if the existing driveway flows predominantly to the Front Street ROW or if it breaks toward the property boundary to the east/northeast.

In any event, UE does not concur that two points of study in this project is adequate given the effects on immediately adjacent abutters to the sides as well as Front Street.

Response: The sub-catchments have been revised to reflect three additional sub-catchments. Since the site is so flat around the house, survey spot grades were used to determine which way stormwater flows. The area to the west of the house flows around the garage and does not continue towards the western property line.

31. The profile shown on the utility plan is in conflict with the boundary between subcatchments 1.2 & 2.3. Run-off from the roofs of (at least) units 1 and 2 as well as the pavement in front of the two units, is going to be turned by the entrance driveway's dominating profile slope and be routed toward Front Street.

Response: The sewer profile has been updated.

32. Comment 1 asks for Architectural drawings, the subcatchment boundary running along Units 14-17 implies a (4) hipped roof system to the back, but none of the other subcatchment boundaries support this roof arrangement. Confirm that the catchment boundaries are correct relative to the proposed roof pitches.

Response: All roof runoff is directed to underground piping and into the porous pavement's reservoir course. See note #8 on the Grading, Drainage, & Erosion Control Plan (Sheet 6).

33. **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).

Response: This will be completed after local approvals are received.

Thank you for your timely and professional review of the submitted plans. We hope the information provided address your concerns. Please feel free to contact our office if you have any additional question and/or comments.

Very Truly Yours,

BEALS ASSOCIATES, PLLC

Christian O. Smith

Christian O. Smith, PE
Principal

RESIDENTIAL SITE PLAN
112 FRONT STREET
(NH ROUTE 111)
TAX MAP 73, LOT 14

DECEMBER 9, 2024

NOT FOR CONSTRUCTION

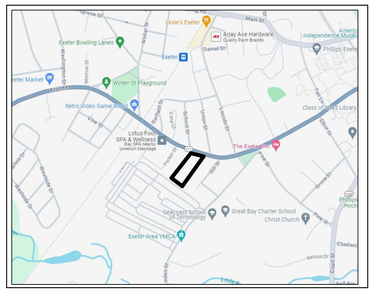
CIVIL ENGINEERS:

BA BEALS ASSOCIATES, PLLC

70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863

STATE OF NEW HAMPSHIRE – CHRISTIAN O. SMITH No. 9900 – PROFESSIONAL ENGINEER

LOCATION MAP



SCALE: 1"=500'

DRAWING INDEX

SHEET #	TITLE
	COVER SHEET
1-3	EXISTING CONDITION PLANS (BERRY SURVEY)
4	DEMOLITION PLAN
5	PARKING & PAVEMENT PLAN
6	GRADING, DRAINAGE, & EROSION CONTROL
7	UTILITY PLAN
8	LIGHTING & LANDSCAPE PLAN
9	EROSION & SEDIMENT CONTROL DETAILS
10-11	CONSTRUCTION DETAILS
12	EXETER LADDER TRUCK MANEUVERING PLAN

LAND SURVEYORS:

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
603-332-2863

WETLAND/SOIL CONSULTANT:

GOVE ENVIRONMENTAL SERVICES INC.
8 CONTINENTAL DRIVE,
BLDG 2 UNIT H
EXETER, NH 03833
603-778-0644

STATE OF NEW HAMPSHIRE – JAMES P. GOVE – No. 604 – 11-12-2024 – CERTIFIED SOIL SCIENTIST

STATE OF NEW HAMPSHIRE – JAMES P. GOVE – No. 0051 – 11-12-2024 – CERTIFIED WETLAND SCIENTIST

PLAN SET LEGEND

5/8" REBAR	●	VGC	VERTICAL GRANITE CURB
DRILL HOLE	◉	OVERHEAD ELEC. LINE	
CONC. BOUND	⊡	FENCING	x
UTILITY POLE		DRAINAGE LINE	D D
DRAIN MANHOLE	Ⓓ	SEWER LINE	S
SEWER MANHOLE	Ⓢ	GAS LINE	G
EXISTING LIGHT POLE	☼	WATER LINE	W W
EXISTING CATCH BASIN	□	STONE WALL	
PROPOSED CATCH BASIN	⊞	TREE LINE	
WATER GATE	WV	ABUT. PROPERTY LINES	
WATER SHUT OFF		EXIST. PROPERTY LINES	
HYDRANT		BUILDING SETBACK LINES	
PINES, ETC.		EXIST. CONTOUR	100
MAPLES, ETC.		PROP. CONTOUR	100
EXIST. SPOT GRADE	96x69	SOIL LINES	
PROP. SPOT GRADE	96x69		
DOUBLE POST SIGN			
SINGLE POST SIGN			

RECORD OWNER/APPLICANT

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NEW HAMPSHIRE

WAIVERS REQUESTED:

1. SECTION 9.14.9 TO PROVIDE A 24–FOOT WIDE DRIVEWAY
2. SECTION 9.3.6.4 TO RESTRICT GRADING WITHIN 5 FEET OF A PROPERTY LINE

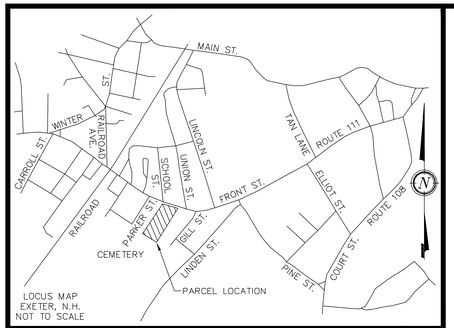
REQUIRED STATE & FEDERAL PERMITS

CONSTRUCTION GENERAL PERMIT
NHDES SEWER CONNECTION
NHDES WATER CONNECTION

	REVISIONS:	DATE:
1	REVISED PER REVIEW COMMENTS	01/17/25
2		
3		
4		
5		

PB CASE # TBD
CHAIRMAN SIGNATURE:

NH-1531 PROPOSED RESIDENTIAL PLAN



LOCUS MAP
EXETER, N.H.
NOT TO SCALE

NOTES:

1.) OWNER: 112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

2.) TAX MAP 73, LOT 14

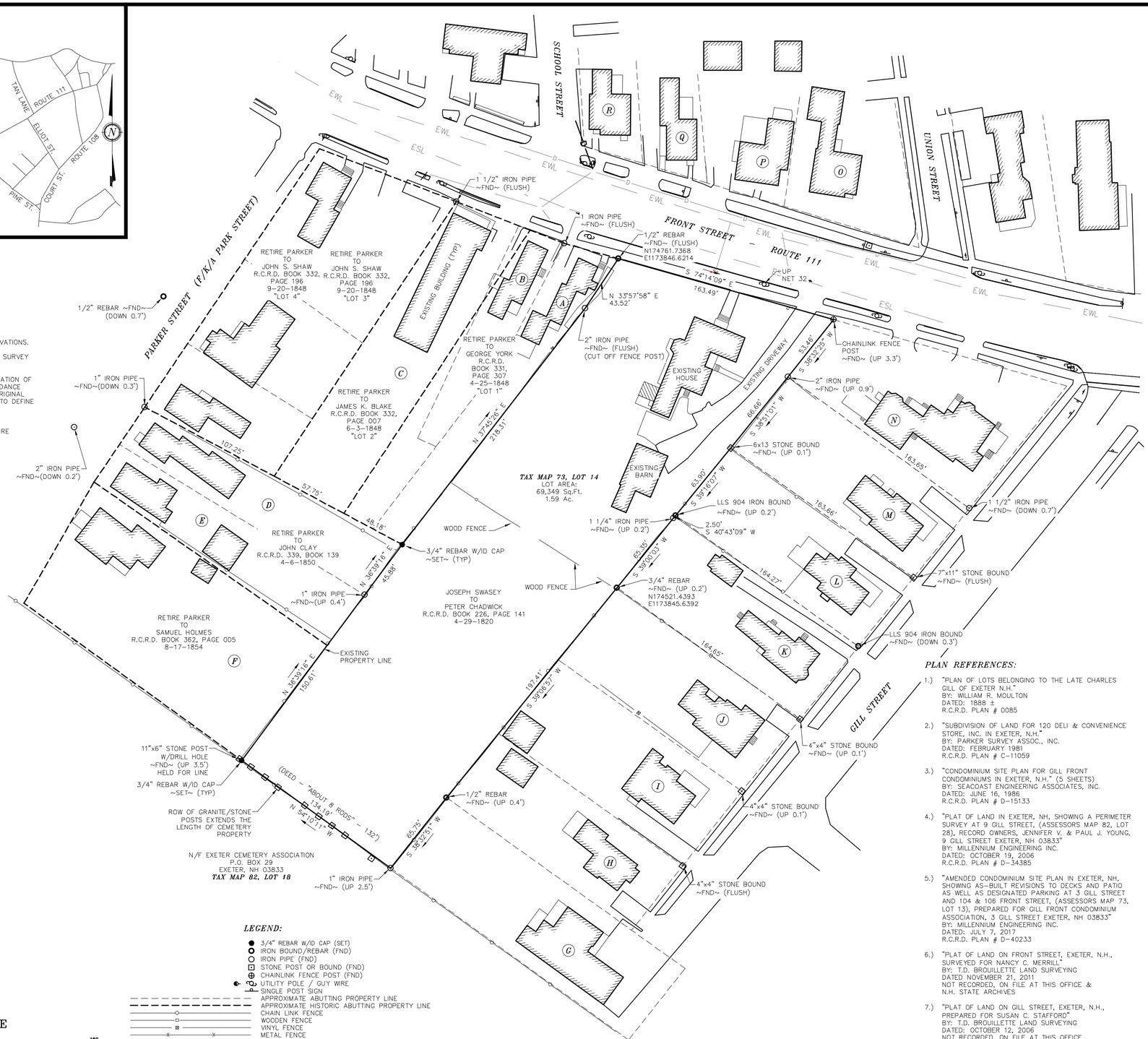
3.) R.C.R.D. BOOK 6571, PAGE 2507

4.) LOT AREA: 69,349 Sq.Ft., 1.59 Ac.

5.) VERTICAL DATUM BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83, COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES OF TAX MAP 73, LOT 14 IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT AND ORIGINAL LEGAL DESCRIPTIONS, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE.

7.) NH STANDARD PROPERTY SURVEY WITH A CLOSURE BETTER THAN 1:10,000.



ABUTTERS :

N/F MICHELLE E. HARRITON REVOCABLE TRUST
HARRITON, MICHELLE E., TRUSTEE
& HARRITON, BENJAMIN MICHAEL
114 FRONT STREET
(A) EXETER, NH 03833
TAX MAP 73, LOT 15
R.C.R.D. BOOK 6482, PAGE 2462

N/F JOHN & TERESA TOOMEY FAMILY REVOCABLE TRUST
TOOMEY, JOHN & TERESA, TRUSTEES
2 NEWFIELDS ROAD
(B) EXETER, NH 03833
TAX MAP 73, LOT 16
R.C.R.D. BOOK 6174, PAGE 602

N/F ART UP FRONT STREET LLC
120 FRONT STREET
(C) EXETER, NH 03833
TAX MAP 73, LOT 17
R.C.R.D. BOOK 5755, PAGE 1773

N/F JEANETTE MORRISETTE TRUST
MORRISETTE, JEANETTE, TRUSTEE
12 PARKER STREET
(D) EXETER, NH 03833
TAX MAP 73, LOT 21
R.C.R.D. BOOK 3468, PAGE 947

N/F ROY E. MORRISETTE REVOCABLE TRUST
MORRISETTE, ROY E., TRUSTEE
14 PARKER STREET
(E) EXETER, NH 03833
TAX MAP 73, LOT 22
R.C.R.D. BOOK 6496, PAGE 2880

N/F MDMJ MILLER REVOCABLE TRUST
MILLER, DEBORAH J. & MARK A., TRUSTEES
16 PARKER STREET
(F) EXETER, NH 03833
TAX MAP 73, LOT 23
R.C.R.D. BOOK 6530, PAGE 879

N/F MAHATA HALL FAMILY TRUST
MAHATA, MINI & HALL, BRETT, TRUSTEES
17 GILL STREET
(G) EXETER, NH 03833
TAX MAP 82, LOT 24
R.C.R.D. BOOK 6116, PAGE 1827

N/F UNGER–DESMOND 2018 REVOCABLE TRUST
UNGER, NICHOLAS F. & DESMOND, BARBARA S., TRUSTEES
20 MAIN STREET
(H) EXETER, NH 03833
TAX MAP 82, LOT 25
R.C.R.D. BOOK 5957, PAGE 081

N/F POWERS, VINCENT & ANNMARIE
13 GILL STREET
(I) EXETER, NH 03833
TAX MAP 82, LOT 26
R.C.R.D. BOOK 5580, PAGE 338

N/F MASKWA, ERIC & EVAGELIA
11 GILL STREET
(J) EXETER, NH 03833
TAX MAP 82, LOT 27
R.C.R.D. BOOK 6197, PAGE 2683

N/F FRENCH, CHARLES ANDREW & GASTICH, DANA ERIN
9 GILL STREET
(K) EXETER, NH 03833
TAX MAP 82, LOT 28
R.C.R.D. BOOK 6124, PAGE 164

N/F SUSAN C. STAFFORD REVOCABLE TRUST
STAFFORD, SUSAN C., TRUSTEE
1301 SEAFARER CIRCLE 104
(L) JUPITER, FL 33477
TAX MAP 73, LOT 11
R.C.R.D. BOOK 4879, PAGE 2548

N/F NEALON FAMILY REVOCABLE TRUST
NEALON, JAMES D. & KRISTIN F., TRUSTEES
5 GILL STREET
(M) EXETER, NH 03833
TAX MAP 73, LOT 12
R.C.R.D. BOOK 6449, PAGE 189

N/F DALE A. ATKINS REVOCABLE TRUST
ATKINS, DALE A., TRUSTEE
104 FRONT STREET
(N) EXETER, NH 03833
TAX MAP 73, LOT 13-1
R.C.R.D. BOOK 5983, PAGE 001

N/F ELLEN WOLFF LIVING TRUST
WOLFF, ELLEN, TRUSTEE
3 GILL STREET
(N) EXETER, NH 03833
TAX MAP 73, LOT 13-2
R.C.R.D. BOOK 6479, PAGE 440

N/F RUSSMAN, BRETT M. & ROBERTSON, ADELE G. (LIFE ESTATE)
106 FRONT STREET
(N) EXETER, NH 03833
TAX MAP 73, LOT 13-3
R.C.R.D. BOOK 5807, PAGE 1710

N/F LINDE, ARTHUR & JEAN
109 FRONT STREET
(O) EXETER, NH 03833
TAX MAP 73, LOT 239
R.C.R.D. BOOK 5400, PAGE 914

N/F GARSTKA, JEFFREY STACI
P.O. BOX 154
(P) PORTSMOUTH, NH 03802–0154
TAX MAP 73, LOT 238
R.C.R.D. BOOK 5013, PAGE 281

N/F DAVIS, JAMES M. & JODY W.
115 FRONT STREET
(Q) EXETER, NH 03833
TAX MAP 73, LOT 237
R.C.R.D. BOOK 3101, PAGE 870

N/F WEBSTER, PAUL M. & ELIZABETH
117 FRONT STREET
(R) EXETER, NH 03833
TAX MAP 73, LOT 236
R.C.R.D. BOOK 6489, PAGE 1994

PLAN REFERENCES:

1.) "PLAN OF LOTS BELONGING TO THE LATE CHARLES GILL OF EXETER N.H."
BY: WILLIAM R. MOULTON
DATED: 1888 ±
R.C.R.D. PLAN # 0085

2.) "SUBDIVISION OF LAND FOR 120 DELI & CONVENIENCE STORE, INC. IN EXETER, N.H."
BY: PARKER SURVEY ASSOC., INC.
DATED: FEBRUARY 1981
R.C.R.D. PLAN # C–11059

3.) "CONDOMINIUM SITE PLAN FOR GILL FRONT CONDOMINIUMS IN EXETER, N.H." (5 SHEETS)
BY: SEACOAST ENGINEERING ASSOCIATES, INC.
DATED: JUNE 16, 1986
R.C.R.D. PLAN # D–15133

4.) "PLAT OF LAND IN EXETER, NH, SHOWING A PERIMETER SURVEY AT 9 GILL STREET, (ASSESSORS MAP 82, LOT 28), RECORD OWNERS, JENNIFER V. & PAUL J. YOUNG, 9 GILL STREET EXETER, NH 03833"
BY: MILLENNIUM ENGINEERING INC.
DATED: OCTOBER 19, 2006
R.C.R.D. PLAN # D–34385

5.) "AMENDED CONDOMINIUM SITE PLAN IN EXETER, NH, SHOWING AS–BUILT REVISIONS TO DECKS AND PATIO AS WELL AS DESIGNATED PARKING AT 3 GILL STREET AND 104 & 106 FRONT STREET, (ASSESSORS MAP 73, LOT 13), PREPARED FOR GILL FRONT CONDOMINIUM ASSOCIATION, 3 GILL STREET EXETER, NH 03833"
BY: MILLENNIUM ENGINEERING INC.
DATED: JULY 7, 2017
R.C.R.D. PLAN # D–40233

6.) "PLAT OF LAND ON FRONT STREET, EXETER, N.H., SURVEYED FOR NANCY C. MERRILL"
BY: T.D. BROUILLETTE LAND SURVEYING
DATED NOVEMBER 21, 2011
NOT RECORDED, ON FILE AT THIS OFFICE &
N.H. STATE ARCHIVES

7.) "PLAT OF LAND ON GILL STREET, EXETER, N.H., PREPARED FOR SUSAN C. STAFFORD"
BY: T.D. BROUILLETTE LAND SURVEYING
DATED: OCTOBER 12, 2006
NOT RECORDED, ON FILE AT THIS OFFICE

8.) "PLAN OF LOT, NO.8 PARKER ST., EXETER, N.H."
BY: JOHN W. DURGIN
DATED: OCT. 1954
NOT RECORDED, ON FILE AT THIS OFFICE

LEGEND:

- ● 3/4" REBAR W/ID CAP (SET)
- O IRON BOUND/REBAR (FND)
- ○ IRON PIPE (FND)
- ⊡ STONE POST OR BOUND (FND)
- ⊕ CHAINLINK FENCE POST (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- APPROXIMATE ABUTTING PROPERTY LINE
- APPROXIMATE HISTORIC ABUTTING PROPERTY LINE
- CHAIN LINK FENCE
- WOODEN FENCE
- VINYL FENCE
- METAL FENCE

FND FOUND
TYP TYPICAL
TBS TO BE SET
R.C.R.D. ROCKINGHAM COUNTY REGISTRY OF DEEDS

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

16°± MAGNETIC NADB3 NH STATE PLANE N

REVISION	DATE	DESCRIPTION
#2	12–2–24	UPDATE EX. CONDITIONS PLANS
#1	11–11–24	ADD BOUNDS SET

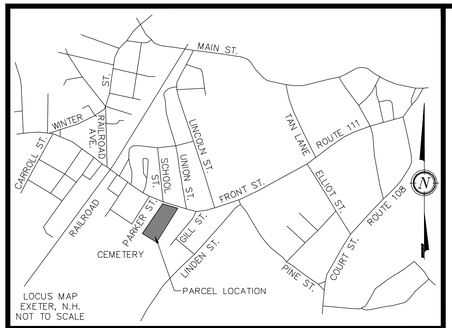
BOUNDARY PLAN
LAND OF
112 FRONT STREET, LLC
112 FRONT STREET
EXETER, N.H.
TAX MAP 73, LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : 1 IN. EQUALS 40 FT.
DATE : SEPTEMBER 20, 2024
FILE NO. : DB 2024 – 100

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.
12-2-24
KENNETH A. BERRY L.L.S. 805 DATE

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 805 KENNETH A. BERRY SIGNATURE



LOCUS MAP
EXETER, N.H.
NOT TO SCALE

NOTES:

1.) OWNER: 112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

2.) TAX MAP 73, LOT 14

3.) R.C.R.D. BOOK 6571, PAGE 2507

4.) LOT AREA: 69,349 Sq.Ft., 1.59 Ac.

5.) ZONING: C-1, CENTRAL AREA COMMERCIAL DISTRICT
MIN. LOT SIZE: 5,000
MIN. LOT WIDTH: 50'
MIN LOT DEPTH: 100'
MAX. BUILDING HEIGHT: 35'
FRONT BUILDING SETBACK: 10' OR THE AVERAGE OF THE BLOCK, WHICH EVER IS LESS
THE AVERAGE FRONT SETBACKOF THE BLOCK: 14.69'
SIDE BUILDING SETBACK: EQUAL TO THE SIDE YARD OF THE ABUTTING PROPERTY OR 10', WHICHEVER IS LESS.
RIGHT SIDE ABUTTING HOUSE: 1.43'
LEFT SIDE ABUTTING HOUSE: 63.59'
REAR BUILDING SETBACK: 20'
MAX. BUILDING COVERAGE: 75%
MIN. OPEN SPACE: 5%

6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN. FLOOD HAZARD REFERENCE: FEMA, COMMUNITY # – 330130, MAP # – 33015C0402E, DATED: MAY 17, 2005.

7.) VERTICAL DATUM BASED ON USGS NAVD88ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83, COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

8.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF EXETER TAX MAP 73, LOT 14 AS OF THE DATE OF THE SURVEY: SEPTEMBER 2024.

9.) THE LOT IS SERVICED BY MUNICIPAL WATER AND SEWER.

10.) EXISTING IMPERVIOUS AREA:
HOUSE, PORCH, STEPS, SCREEN PORCH AND PATIO: 2,456 Sq.Ft., 3.54%
BARN: 998 Sq.Ft., 1.44%
CONCRETE PADS AND FRONT WALK: 1,068 Sq.Ft., 1.54%
DRIVEWAY: 2,075 Sq.Ft., 2.99%
TOTAL: 6,597 Sq.Ft., 9.51%

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR NOR THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

PLAN REFERENCES:

1.) "PLAN OF LOTS BELONGING TO THE LATE CHARLES GILL OF EXETER N.H."
BY: WILLIAM R. MOULTON
DATED: UNKNOWN
R.C.R.D. PLAN # 0085

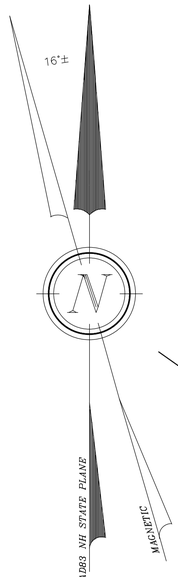
2.) "SUBDIVISION OF LAND FOR 120 DELI & CONVENIENCE STORE, INC. IN EXETER, N.H."
BY: PARKER SURVEY ASSOC., INC.
DATED: FEBRUARY 1981
R.C.R.D. PLAN # C-11059

3.) "CONDOMINIUM SITE PLAN FOR GILL FRONT CONDOMINIUMS IN EXETER, N.H." (5 SHEETS)
BY: SEACOAST ENGINEERING ASSOCIATES, INC.
DATED: JUNE 16, 1986
R.C.R.D. PLAN # D-15133

4.) "PLAT OF LAND IN EXETER, NH, SHOWING A PERIMETER SURVEY AT 9 GILL STREET, (ASSESSORS MAP 82, LOT 28), RECORD OWNERS, JENNIFER V. & PAUL J. YOUNG, 9 GILL STREET EXETER, NH 03833"
BY: MILLENNIUM ENGINEERING INC.
DATED: OCTOBER 19, 2006
R.C.R.D. PLAN # D-34385

5.) "AMENDED CONDOMINIUM SITE PLAN IN EXETER, NH, SHOWING AS-BUILT REVISIONS TO DESKS AND PATIO AS WELL AS DESIGNATED PARKING AT 3 GILL STREET AND 104 & 106 FRONT STREET, (ASSESSORS MAP 73, LOT 13), PREPARED FOR GILL FRONT CONDOMINIUM ASSOCIATION, 3 GILL STREET EXETER, NH 03833"
BY: MILLENNIUM ENGINEERING INC.
DATED: JULY 7, 2017
R.C.R.D. PLAN # D-40233

6.) "PLAT OF LAND ON FRONT STREET, EXETER, N.H., SURVEYED FOR NANCY C. MERRILL"
BY: T.D. BROUILLETTE
DATED NOVEMBER 21, 2011
NOT RECORDED, ON FILE AT THIS OFFICE



SOILS:

599 – URBAN LAND, HOOSIC COMPLEX, 3 TO 15 % SLOPES

SEE: USDA/NRCS WEBSOIL

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

1-15-25

KENNETH A. BERRY L.L.S. 805 DATE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

ABUTTERS :

N/F MICHELLE E. HARRITON REVOCABLE TRUST
HARRITON, MICHELLE E., TRUSTEE
& HARRITON, BENJAMIN MICHAEL
(A) 114 FRONT STREET
EXETER, NH 03833
TAX MAP 73, LOT 15
R.C.R.D. BOOK 6482, PAGE 2462

N/F JOHN & TERESA TOOMEY FAMILY REVOCABLE TRUST
TOOMEY, JOHN & TERESA, TRUSTEES
2 NEWFIELDS ROAD
(B) EXETER, NH 03833
TAX MAP 73, LOT 16
R.C.R.D. BOOK 6174, PAGE 602

N/F ART UP FRONT STREET LLC
120 FRONT STREET
(C) EXETER, NH 03833
TAX MAP 73, LOT 17
R.C.R.D. BOOK 5755, PAGE 1773

N/F JEANETTE MORRISETTE TRUST
MORRISETTE, JEANETTE, TRUSTEE
12 PARKER STREET
(D) EXETER, NH 03833
TAX MAP 73, LOT 21
R.C.R.D. BOOK 3468, PAGE 947

N/F ROY E. MORRISETTE REVOCABLE TRUST
MORRISETTE, ROY E., TRUSTEE
14 PARKER STREET
(E) EXETER, NH 03833
TAX MAP 73, LOT 22
R.C.R.D. BOOK 6496, PAGE 2880

N/F MDMJ MILLER REVOCABLE TRUST
MILLER, DEBORAH J. & MARK A., TRUSTEES
16 PARKER STREET
(F) EXETER, NH 03833
TAX MAP 73, LOT 23
R.C.R.D. BOOK 6530, PAGE 879

N/F MAHATA HALL FAMILY TRUST
MAHATA, MINI & HALL, BRETT, TRUSTEES
17 GILL STREET
(G) EXETER, NH 03833
TAX MAP 82, LOT 24
R.C.R.D. BOOK 6116, PAGE 1827

N/F UNGER-DESMOND 2018 REVOCABLE TRUST
UNGER, NICHOLAS F. & DESMOND, BARBARA S., TRUSTEES
20 MAIN STREET
(H) EXETER, NH 03833
TAX MAP 82, LOT 25
R.C.R.D. BOOK 5957, PAGE 081

N/F POWERS, VINCENT & ANNMARIE
13 GILL STREET
(I) EXETER, NH 03833
TAX MAP 82, LOT 26
R.C.R.D. BOOK 5580, PAGE 338

N/F MASKWA, ERIC & EVAGELIA
11 GILL STREET
(J) EXETER, NH 03833
TAX MAP 82, LOT 27
R.C.R.D. BOOK 6197, PAGE 2683

N/F FRENCH, CHARLES ANDREW & GASTICH, DANA ERIN
9 GILL STREET
(K) EXETER, NH 03833
TAX MAP 82, LOT 28
R.C.R.D. BOOK 6124, PAGE 164

N/F SUSAN C. STAFFORD REVOCABLE TRUST
STAFFORD, SUSAN C., TRUSTEE
1301 SEAFARER CIRCLE 104
(L) JUPITER, FL 33477
TAX MAP 73, LOT 11
R.C.R.D. BOOK 4879, PAGE 2548

N/F NEALON FAMILY REVOCABLE TRUST
NEALON, JAMES D. & KRISTIN F., TRUSTEES
5 GILL STREET
(M) EXETER, NH 03833
TAX MAP 73, LOT 12
R.C.R.D. BOOK 6449, PAGE 189

N/F DALE A. ATKINS REVOCABLE TRUST
ATKINS, DALE A., TRUSTEE
104 FRONT STREET
(N) EXETER, NH 03833
TAX MAP 73, LOT 13-1
R.C.R.D. BOOK 5983, PAGE 001

N/F ELLEN WOLFF LIVING TRUST
WOLFF, ELLEN, TRUSTEE
3 GILL STREET
(N) EXETER, NH 03833
TAX MAP 73, LOT 13-2
R.C.R.D. BOOK 6479, PAGE 440

N/F RUSSMAN, BRETT M. & ROBERTSON, ADELE G. (LIFE ESTATE)
106 FRONT STREET
(N) EXETER, NH 03833
TAX MAP 73, LOT 13-3
R.C.R.D. BOOK 5807, PAGE 1710

N/F LINDE, ARTHUR & JEAN
109 FRONT STREET
(O) EXETER, NH 03833
TAX MAP 73, LOT 239
R.C.R.D. BOOK 5400, PAGE 914

N/F GARSTKA, JEFFREY STACI
P.O. BOX 154
(P) PORTSMOUTH, NH 03802-0154
TAX MAP 73, LOT 238
R.C.R.D. BOOK 5013, PAGE 281

N/F DAVIS, JAMES M. & JODY W.
115 FRONT STREET
(Q) EXETER, NH 03833
TAX MAP 73, LOT 237
R.C.R.D. BOOK 3101, PAGE 870

N/F WEBSTER, PAUL M. & ELIZABETH
117 FRONT STREET
(R) EXETER, NH 03833
TAX MAP 73, LOT 236
R.C.R.D. BOOK 6489, PAGE 1994

LEGEND:

- IRON BOUND/REBAR (FND)
- IRON PIPE (FND)
- STONE BOUND (FND)
- CHAINLINK FENCE POST (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- TEMPORARY BENCHMARK
- TEST PIT
- DECIDUOUS TREE, 3" OR GRAETER
- CONIFEROUS TREE, 3" OR GREATER
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- GAS VALVE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE

- APPROXIMATE ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- OHU OVERHEAD UTILITIES
- 116 EXISTING CONTOUR MINOR
- 115 EXISTING CONTOUR MAJOR
- ZONING BOUNDARY

FND FOUND
TYP TYPICAL
R.C.R.D. ROCKINGHAM COUNTY REGISTRY OF DEEDS

EXETER PLANNING BOARD CASE NUMBER:

REVISION	DATE	DESCRIPTION
#3	1-15-25	ADD CB 501 DATA & SEWER SERVICE INVERT & LOCATION
#2	12-2-24	UPDATE EX. CONDITIONS PLANS
#1	11-11-24	ADD BOUNDS SET

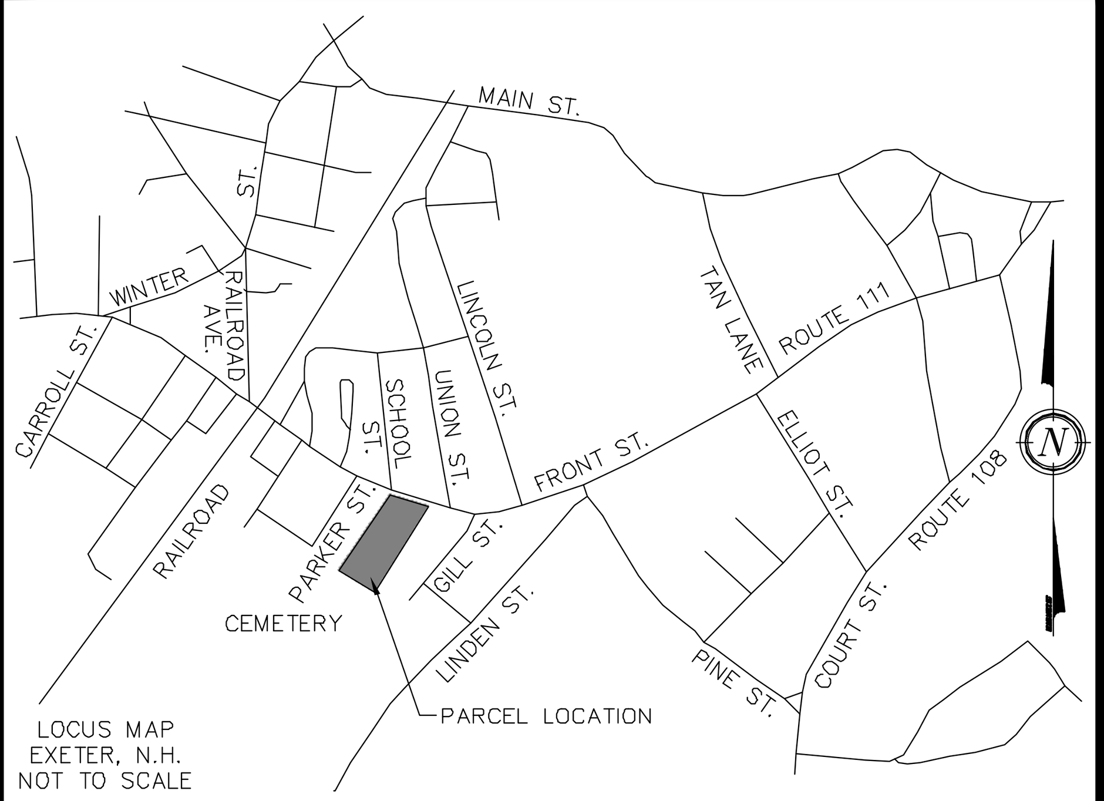
OVERVIEW EXISTING CONDITIONS PLAN
LAND OF
112 FRONT STREET, LLC
112 FRONT STREET
EXETER, N.H.
TAX MAP 73, LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : SEPTEMBER 20, 2024
FILE NO. : DB 2024 – 100

STATE OF NEW HAMPSHIRE No. 805 KENNETH A. BERRY LICENSED LAND SURVEYOR
SIGNATURE

SHEET 1



NOTES:

1.) OWNER: 112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

2.) TAX MAP 73, LOT 14

3.) R.C.R.D. BOOK 6571, PAGE 2507

4.) LOT AREA: 69,349 Sq.Ft., 1.59 Ac.

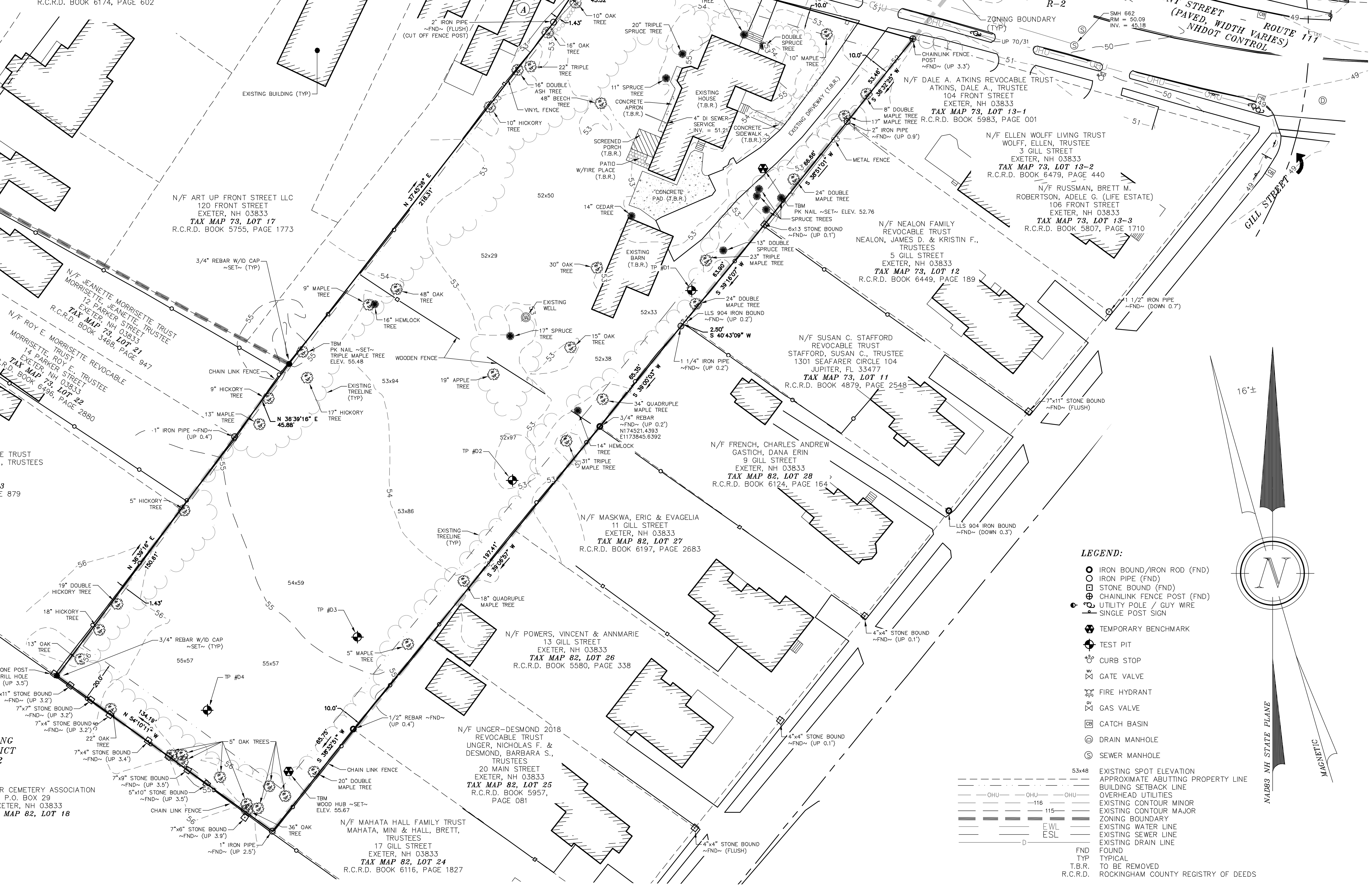
5.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF EXETER TAX MAP 73, LOT 14 AS OF THE DATE OF THE SURVEY: SEPTEMBER 2024.

6.) SEE OVERVIEW EXISTING CONDITIONS PAGE FOR COMPLETE NOTES.

ABUTTERS :

(A) N/F MICHELLE E. HARRITON REVOCABLE TRUST
HARRITON, MICHELLE E., TRUSTEE
& HARRITON, BENJAMIN MICHAEL
114 FRONT STREET
EXETER, NH 03833
TAX MAP 73, LOT 15
R.C.R.D. BOOK 6482, PAGE 2462

(B) N/F JOHN & TERESA TOOMEY FAMILY REVOCABLE TRUST
TOOMEY, JOHN & TERESA, TRUSTEES
2 NEWFIELDS ROAD
EXETER, NH 03833
TAX MAP 73, LOT 16
R.C.R.D. BOOK 6174, PAGE 602



I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

1-15-25

KENNETH A. BERRY L.L.S. 805 DATE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND:

Symbol	Description
	IRON BOUND/IRON ROD (FND)
	IRON PIPE (FND)
	STONE BOUND (FND)
	CHAINLINK FENCE POST (FND)
	UTILITY POLE / GUY WIRE
	SINGLE POST SIGN
	TEMPORARY BENCHMARK
	TEST PIT
	CURB STOP
	GATE VALVE
	FIRE HYDRANT
	GAS VALVE
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
53x48	EXISTING SPOT ELEVATION
	APPROXIMATE ABUTTING PROPERTY LINE
	BUILDING SETBACK LINE
OHU	OVERHEAD UTILITIES
116	EXISTING CONTOUR MINOR
115	EXISTING CONTOUR MAJOR
	ZONING BOUNDARY
EWL	EXISTING WATER LINE
ESL	EXISTING SEWER LINE
D	EXISTING DRAIN LINE
FND	FOUND
TYP	TYPICAL
T.B.R.	TO BE REMOVED
R.C.R.D.	ROCKINGHAM COUNTY REGISTRY OF DEEDS

EXETER PLANNING BOARD CASE NUMBER:

REVISION	DATE	DESCRIPTION
#3	1-15-25	ADD CB 501 DATA & SEWER SERVICE INVERT & LOCATION
#2	12-2-24	UPDATE EX. CONDITIONS PLANS
#1	11-11-24	ADD BOUNDS SET

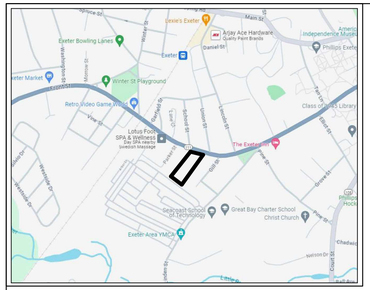
EXISTING CONDITIONS PLAN
LAND OF
112 FRONT STREET, LLC
112 FRONT STREET
EXETER, N.H.
TAX MAP 73, LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : SEPTEMBER 20, 2024
FILE NO. : DB 2024 - 100

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 805
LICENSED LAND SURVEYOR
SIGNATURE

SHEET 2



LOCATION MAP
1"=500'

SITE DATA:

LOCATION: 112 FRONT STREET, EXETER, NEW HAMPSHIRE
ZONING DISTRICTS: CENTRAL AREA COMMERCIAL (C-1)
EXISTING USE: RESIDENTIAL HOME
PROPOSED USE: 17 TOWN HOUSE UNITS

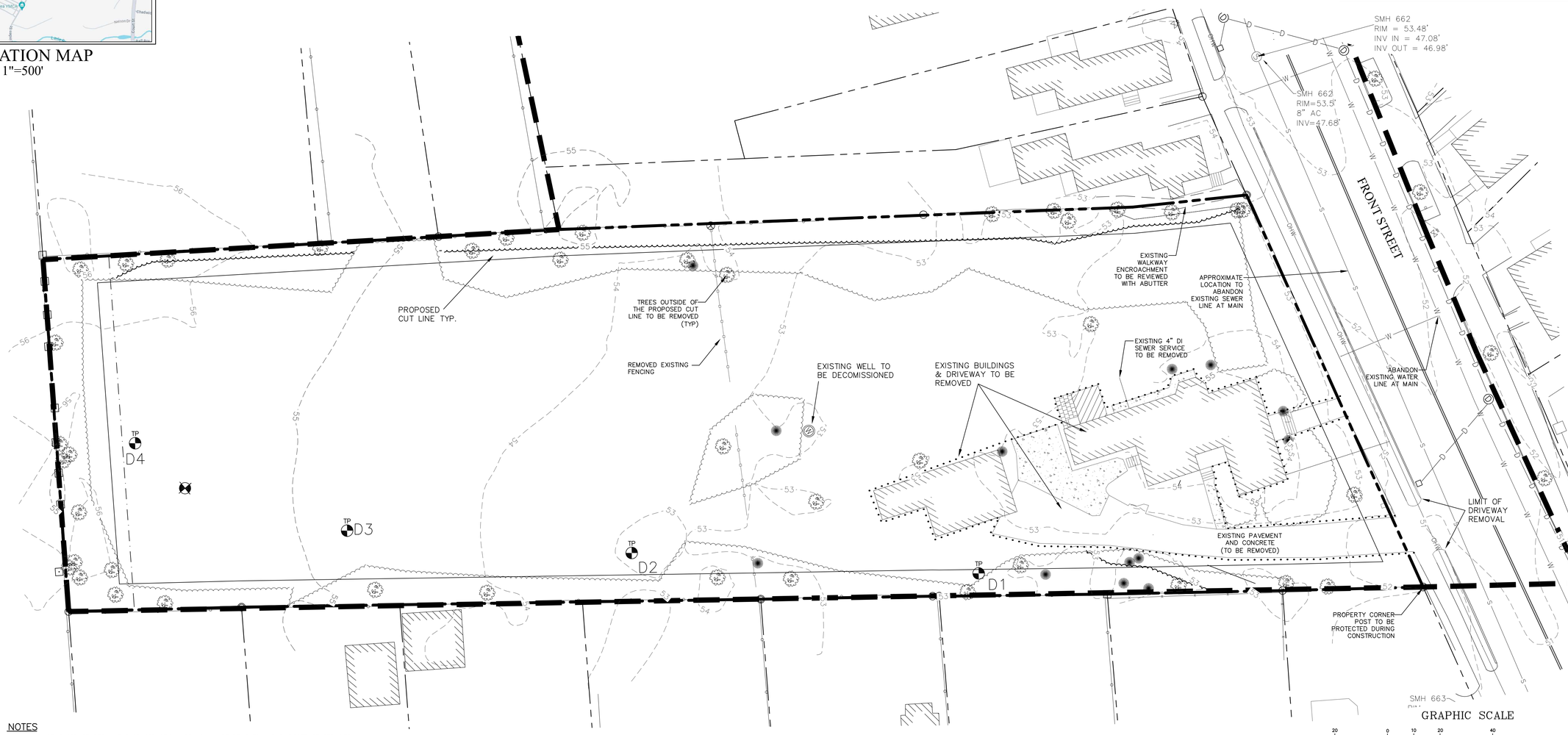
STATE OF NEW HAMPSHIRE JAMES P. GOVE 11-12-2024 No. 004 REGISTERED SOIL SCIENTIST

STATE OF NEW HAMPSHIRE JAMES P. GOVE 11-12-2024 No. 0051 CERTIFIED WETLAND SCIENTIST

PREPARED FOR:

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BA BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTES

1. ALL EXISTING STRUCTURES IN THE CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS, UNLESS NOTED TO REMAIN ON THE SITE PLANS. ANY BURNING ON-SITE SHALL BE SUBJECT TO LOCAL ORDINANCES.
2. ALL EXISTING UTILITIES SHALL BE TERMINATED IN CONFORMANCE WITH LOCAL, STATE, AND UTILITY COMPANY STANDARDS, SPECIFICATIONS, AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES PRIOR TO THE START OF WORK. WATER AND SEWER SERVICES SHALL BE ABANDONED AT THE MAIN BY A CONTRACTOR LICENSED BY EXETER PUBLIC WORKS. CONTRACTOR SHALL COORDINATE TRAFFIC CONTROL WITH THE TOWN PRIOR TO COMMENCING WORK.
3. EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED PRIOR TO ANY EARTH MOVING ACTIVITIES.
4. A TREE CLEARING PERMIT FROM LOCAL AND STATE AUTHORITIES MAY BE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL STUMPS AND DEBRIS ARE TO BE REMOVED FROM SITE.
5. THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCING ALONG PROPERTY LINES IN ALL AREAS WHERE SILT FENCING IS NOT REQUIRED WHERE CONSTRUCTION IS PROPOSED ADJACENT TO ABUTTING PROPERTIES.
6. EXISTING SEWER SERVICE AND APPURTENANCES TO BE REMOVED AND DISPOSED OF PER TOWN AND STATE REQUIREMENTS. NEW SERVICES FOR EACH UNIT TO BE INSTALLED & CONNECTED PER TOWN SPECIFICATIONS. SEQUENCING AND SCHEDULING: (SEE DETAIL SHEETS FOR COMPLETE CONSTRUCTION SEQUENCE AND EROSION CONTROL SPECIFICATION.)
7. DEMOLITION REQUIREMENTS: CONDUCT DEMOLITION TO MINIMIZE INTERFERENCE WITH THE ADJACENT AND OCCUPIED BUILDING AREAS, IN COMPLIANCE WITH THE GOVERNING LAWS. PRIME CONSIDERATION SHALL BE GIVEN TO THE SAFETY, PROTECTION AND CONVENIENCE OF THE PUBLIC AND OWNER'S PERSONNEL.
8. LEAVE SITE IN CLEAN CONDITION.
9. STUMP DISPOSAL TO BE OUTSIDE LIMITS OF PAVEMENT, DRAINAGE STRUCTURES, ETC.
10. TEMPORARY EARTH MATERIAL STOCKPILES TO BE IN UPLAND AREAS AND COMPLETELY IMPOUNDED BY SILT FENCE/HAYBALE EROSION CONTROLS.
11. THE LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.
12. WETLANDS WERE NOT FOUND ON SITE BY GOVE ENVIRONMENTAL SERVICES, INC. OF EXETER, NH STANDARDS UTILIZED:US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN 1987). AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012 AND FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4, NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE. WETLANDS DELINEATED BY CWS JAMES GOVE, #004, FIELD WORK 9-11-2024.
13. ALL WATER, SEWER, ROAD (INCLUDING DRIVEWAY), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.3 STORMWATER MANAGEMENT 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", SEE SECTION 9.14 ROADWAYS, ACCESS POINTS, AND FIRE LANES AND SECTION 9.13 PARKING AREAS FOR EXCEPTIONS.
14. THE CONTRACTOR MUST OBTAIN A VALID UTILITY PIPE INSTALLER'S LICENSE AND THE JOB SUPERVISOR OR FOREMAN MUST BE CERTIFIED BY THE TOWN PRIOR TO WORKING ON ANY WATER, SEWER, OR DRAINAGE PIPES THAT ARE IN A TOWN STREET OR RIGHT OF WAY, OR THAT WILL CONNECT OR MAY BE CONNECTED TO A TOWN WATER, SEWER, OR DRAINAGE SYSTEM. A LICENSED SUPERVISOR OR FOREMAN MUST BE PRESENT AT THE JOB SITE AT ALL TIMES DURING CONSTRUCTION OF THESE UTILITIES.

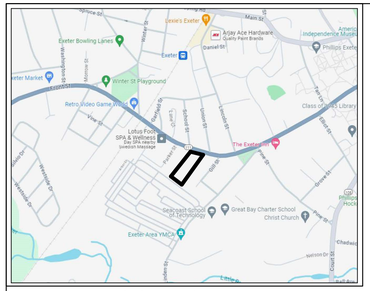
STATE OF NEW HAMPSHIRE CHRISTIAN O. SMITH No.9900 PROFESSIONAL ENGINEER

REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

DEMOLITION PLAN

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. NO:	NH-1531	SHEET NO.	4



LOCATION MAP
1"=500'

TOWN NOTES

1. 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.
2. THE APPLICANT HAS DESIGNED THIS SITE TO SAFELY ACCOMMODATE MAXIMUM SIZE VEHICLES AND TRUCKS, (DESIGN VEHICLE IS THE EXETER LADDER TRUCK OR 35' BOX TRUCK) EITHER DELIVERING TO, OR USING THE PROPERTY.
3. ALL SNOW SHALL BE STORED IN THE AREA(S) DEPICTED ON THIS PLAN AS SNOW STORAGE AREAS. IN THE EVENT THAT THE AREA(S) APPROVED FOR SNOW STORAGE BECOME FULL, THE OWNER SHALL REASONABLY REMOVE EXCESS SNOW FROM THE SITE, AND SHALL NOT ALLOW SNOW TO BE STORED WITHIN TRAVEL AISLES.
4. ALL WASTE MATERIALS AND RECYCLABLE SHALL BE CONTAINED WITHIN THE BUILDING(S) OR APPROVED STORAGE FACILITIES AND SHALL NOT BE OTHERWISE STORED ON THE PROPERTY. REFUSE COLLECTION WILL BE BY DUMPSTER AS NEEDED.
5. ALL WATER, SEWER, ROAD (INCLUDING PARKING LOT), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.5 GRADING, DRAINAGE, AND EROSION & SEDIMENT CONTROL AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC UTILITIES IN EXETER, NEW HAMPSHIRE.

ZONING REQUIREMENTS:
ZONING DISTRICT – CENTRAL AREA (C1)
MINIMUM LOT SIZE – 5,000 S.F.
MINIMUM LOT WIDTH – 50 FT.
MINIMUM LOT DEPTH – 100 FT.
MINIMUM DWELLING UNIT – 3,500 S.F.

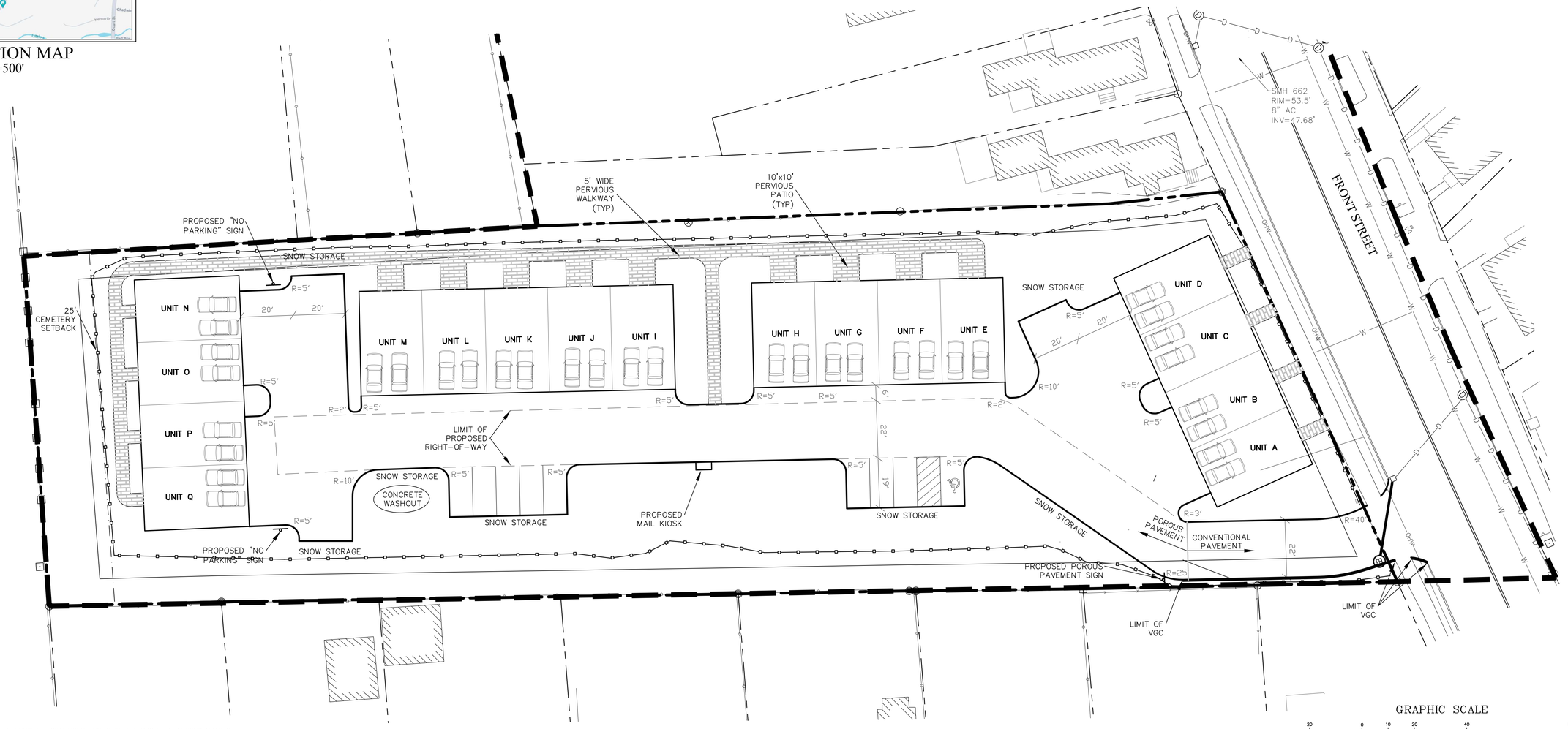
BUILDING SETBACKS
FRONT=10 FT.
SIDE=10 FT.
REAR=20 FT.
BUILDING HEIGHT=35 FT.
MAXIMUM BUILDING COVERAGE = 75%
MINIMUM OPEN SPACE = 5%

DENSITY CALCULATION:
PARCEL AREA – 69,349 SF
(–) DRIVEWAY AREA – 9,450 S.F.
= 59,899 S.F.
59,899/3500 (SF/UNIT) = 17.1 UNITS

PARKING CALCULATIONS:
TOTAL NUMBER OF UNITS=17
2 SPACES PER UNIT AND 1 SPACE PER 4 UNITS FOR VISITOR
TOTAL SPACES REQUIRED=41
17 UNITS HAVE 2 SPACES=34
PLUS 9=VISITOR STALLS
TOTAL SPACES PROVIDED=43

PREPARED FOR:
112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BA BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863



NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW 17 TOWN HOUSE UNITS WITH ASSOCIATED PARKING SPACES.
2. ALL CONSTRUCTION SHALL CONFORM TO TOWN OF EXETER STANDARDS AND REGULATIONS.
3. ALL WATER, SEWER, ROAD (INCLUDING PARKING LOT), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.3 STORMWATER MANAGEMENT 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". SEE SECTION 9.14 ROADWAYS, ACCESS POINTS, AND FIRE LANES AND SECTION 9.13 PARKING AREAS FOR EXCEPTIONS.
4. IN ACCORDANCE WITH SITE PLAN REVIEW & SUBDIVISION REGULATIONS SECTIONS 7.15.10 AND 9.3.4 THE APPLICANT SHALL PROVIDE THE TOWN WITH THREE COPIES OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND ALSO ENSURE THAT ONE COPY REMAINS ON SITE.
5. ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE TOWN ZONING REGULATIONS UNLESS A VARIANCE IS OTHERWISE REQUESTED.
6. TOTAL PROPOSED DISTURBANCE FOR CONSTRUCTION = 1.3± ACRES.
7. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO RELEASE OF BOND, THE APPLICANT SHALL SUBMIT A LETTER TO THE TOWN, SIGNED AND STAMPED BY THE DESIGN ENGINEER, WHO MUST BE A LICENSED PROFESSIONAL ENGINEER IN NH, STATING CONSTRUCTION HAS BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED PLANS.
8. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN LOCATED FROM FIELD OBSERVATIONS AND THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. BEALS ASSOCIATES OR ANY OF THEIR EMPLOYEES TAKE NO RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN, THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND UTILITIES OR STRUCTURES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1-888-DIG-SAFE.
9. THIS PLAN HAS BEEN PREPARED FOR MUNICIPAL APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
10. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
11. THIS SITE IS NOT LOCATED IN THE 100 YEAR FLOOD ZONE.
12. BEYOND THE ENTRANCE DRIVE, ALL PAVEMENT WILL BE POROUS PAVEMENT. SEE PLAN FOR LIMITS.
13. GARBAGE WILL BE STORED IN TOTER BINS WITHIN GARAGES FOR PRIVATE PICKUP.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No.9900
PROFESSIONAL ENGINEER

REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

PARKING & PAVEMENT PLAN

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

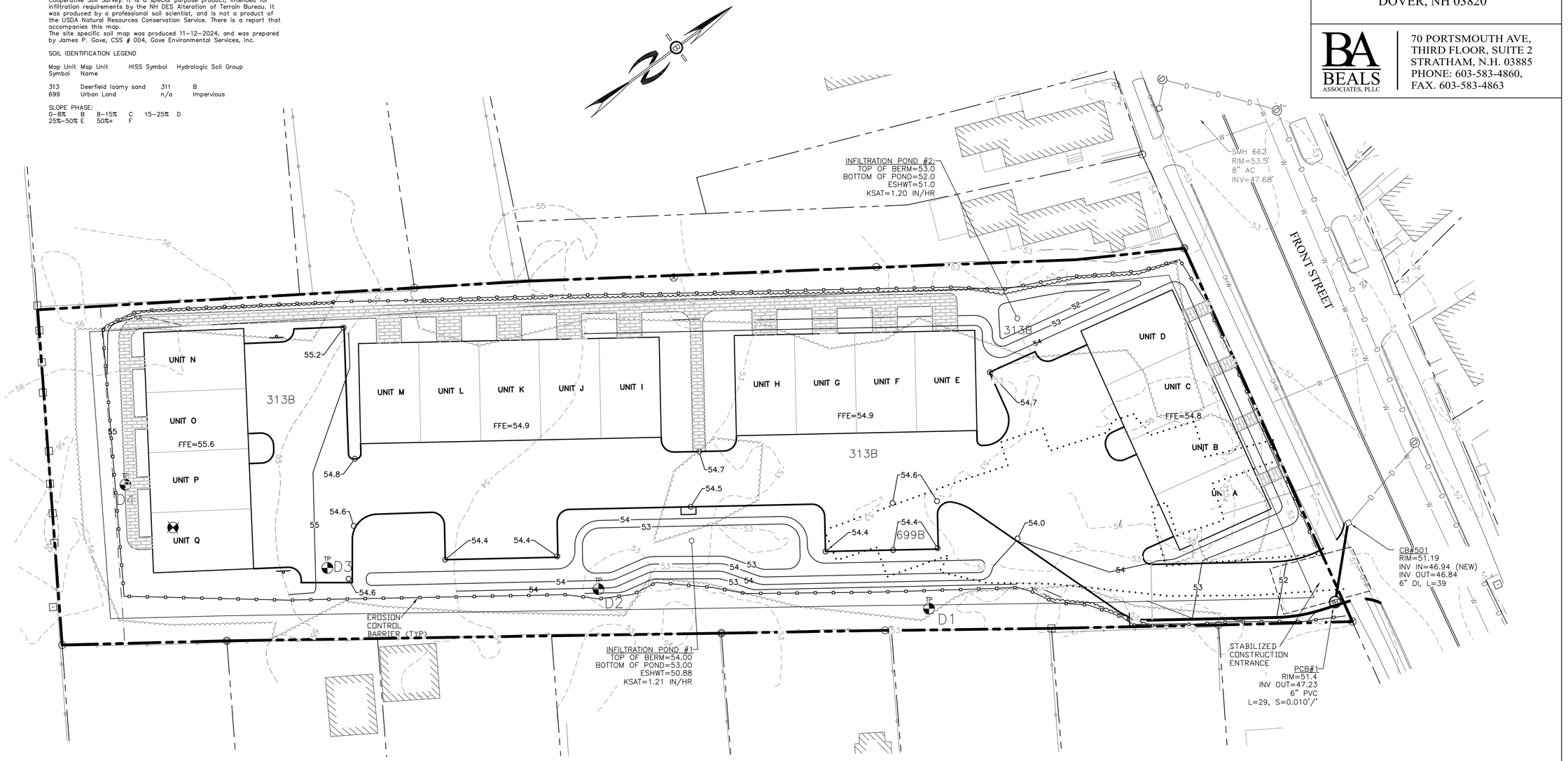
DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. N0:	NH-1531	SHEET NO.	5

This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, intended for infiltration requirements by the NH DES Alteration of Terrain Bureau. It was produced by a professional soil scientist, and is not a product of the USDA Natural Resources Conservation Service. There is a report that accompanies this map.
The site specific soil map was produced 11-12-2024, and was prepared by James P. Gove, CSS # 004, Gove Environmental Services, Inc.

SOIL IDENTIFICATION LEGEND

Map Unit Symbol	Map Unit Name	HISS Symbol	Hydrologic Soil Group
313	Deerfield loamy sand	311	B
699	Urban Land	n/a	Impervious

SLOPE PHASE:
0-8% B 8-15% C 15-25% D
25%-50% E 50%+ F



PREPARED FOR:

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
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PHONE: 603-583-4860,
FAX. 603-583-4863

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER BEALS ASSOCIATES, NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1-888-DIG-SAFE (1-888-344-7233) AND EXETER DPW (603) 773-6157.

NOTES:

1. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
2. STRAW BALES SHALL BE ANCHORED INTO THE SOIL USING 2" X 2" STAKES DRIVEN THROUGH THE BALES AND AT LEAST 18 INCHES IN TO THE SOIL.
3. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATED VEGETATIVE BMP.
4. THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL TAKE PRECAUTIONS AND INSTRUCTIONS FROM THE PLANNING DEPARTMENT IN ORDER TO PREVENT, ABATE AND CONTROL THE EMISSION OF FUGITIVE DUST INCLUDING BUT NOT LIMITED TO WETTING, COVERING, SHIELDING, OR VACUUMING.
5. THE NH COMMISSIONER OF AGRICULTURE PROHIBITS THE COLLECTION, POSSESSION, IMPORTATION, TRANSPORTATION, SALE, PROPAGATION, TRANSPLANTATION, OR CULTIVATION OF PLANTS BANNED BY NH LAW RSA 430:53 AND NH CODE ADMINISTRATIVE RULES AGR 3800. THE PROJECT SHALL MEET ALL REQUIREMENTS AND THE INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
6. THE CONSTRUCTION SITE OPERATOR AND OWNER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO USEPA, WASHINGTON, DC, STORMWATER NOTICE PROCESSING CENTER AT LEAST FORTEEN DAYS PRIOR TO COMMENCEMENT OF WORK ON SITE. EPA WILL POST THE NOI AT http://cfpub1.epa.gov/npdes/stormwater/noi/noisearch.cfm. AUTHORIZATION IS GRANTED UNDER THE PERMIT ONCE THE NOI IS SHOWN IN "ACTIVE STATUS".
7. ALL DRAINAGE STRUCTURES AND SWALES SHALL BE BUILT AND STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.
8. ALL ROOF RUNOFF SHALL BE DIRECTED UNDERGROUND TO THE RESERVOIR COURSE BELOW THE POROUS PAVEMENT.

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No.9900
PROFESSIONAL ENGINEER

REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

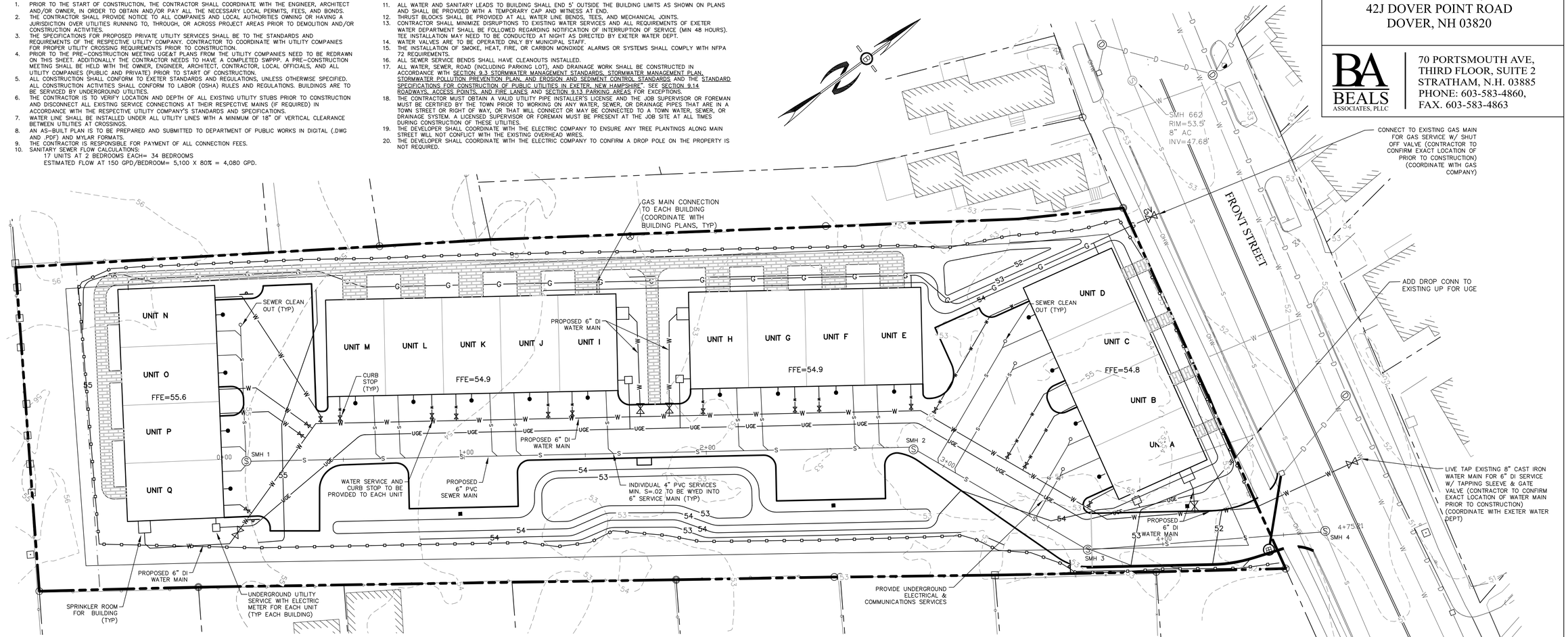
GRADING, DRAINAGE, & EROSION CONTROL PLAN

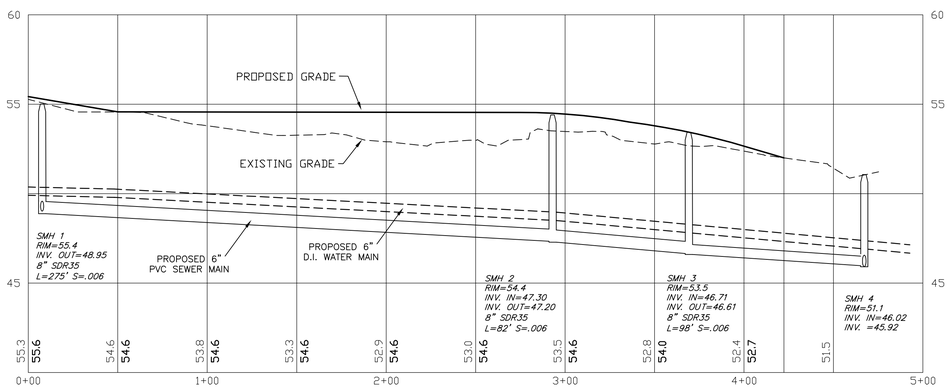
RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. NO:	NH-1531	SHEET NO.	6

UTILITY NOTES:

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES, AND BONDS.
2. THE CONTRACTOR SHALL PROVIDE NOTICE TO ALL COMPANIES AND LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH, OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
3. THE SPECIFICATIONS FOR PROPOSED PRIVATE UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES FOR PROPER UTILITY CROSSING REQUIREMENTS PRIOR TO CONSTRUCTION.
4. PRIOR TO THE PRE-CONSTRUCTION MEETING UGE&T PLANS FROM THE UTILITY COMPANIES NEED TO BE REDRAWN ON THIS SHEET. ADDITIONALLY THE CONTRACTOR NEEDS TO HAVE A COMPLETED SWPPP. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
5. ALL CONSTRUCTION SHALL CONFORM TO EXETER STANDARDS AND REGULATIONS, UNLESS OTHERWISE SPECIFIED. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR (OSHA) RULES AND REGULATIONS. BUILDINGS ARE TO BE SERVICED BY UNDERGROUND UTILITIES.
6. THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS (IF REQUIRED) IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS.
7. WATER LINE SHALL BE INSTALLED UNDER ALL UTILITY LINES WITH A MINIMUM OF 18" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT CROSSINGS.
8. AN AS-BUILT PLAN IS TO BE PREPARED AND SUBMITTED TO DEPARTMENT OF PUBLIC WORKS IN DIGITAL (.DWG AND .PDF) AND MYLAR FORMATS.
9. THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT OF ALL CONNECTION FEES.
10. SANITARY SEWER FLOW CALCULATIONS:
    17 UNITS AT 2 BEDROOMS EACH= 34 BEDROOMS
    ESTIMATED FLOW AT 150 GPD/BEDROOM= 5,100 X 80% = 4,080 GPD.
11. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLANS AND SHALL BE PROVIDED WITH A TEMPORARY CAP AND WITNESS AT END.
12. THRUST BLOCKS SHALL BE PROVIDED AT ALL WATER LINE BENDS, TEES, AND MECHANICAL JOINTS.
13. CONTRACTOR SHALL MINIMIZE DISRUPTIONS TO EXISTING WATER SERVICES AND ALL REQUIREMENTS OF EXETER WATER DEPARTMENT SHALL BE FOLLOWED REGARDING NOTIFICATION OF INTERRUPTION OF SERVICE (MIN 48 HOURS). TEE INSTALLATION MAY NEED TO BE CONDUCTED AT NIGHT AS DIRECTED BY EXETER WATER DEPT.
14. WATER VALVES ARE TO BE OPERATED ONLY BY MUNICIPAL STAFF.
15. THE INSTALLATION OF SMOKE, HEAT, FIRE, OR CARBON MONOXIDE ALARMS OR SYSTEMS SHALL COMPLY WITH NFPA 72 REQUIREMENTS.
16. ALL SEWER SERVICE BENDS SHALL HAVE CLEANOUTS INSTALLED.
17. ALL WATER, SEWER, ROAD (INCLUDING PARKING LOT), AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.3 STORMWATER MANAGEMENT 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", SEE SECTION 9.14 ROADWAYS, ACCESS POINTS, AND FIRE LANES AND SECTION 9.13 PARKING AREAS FOR EXCEPTIONS.
18. THE CONTRACTOR MUST OBTAIN A VALID UTILITY PIPE INSTALLER'S LICENSE AND THE JOB SUPERVISOR OR FOREMAN MUST BE CERTIFIED BY THE TOWN PRIOR TO WORKING ON ANY WATER, SEWER, OR DRAINAGE PIPES THAT ARE IN A TOWN STREET OR RIGHT OF WAY, OR THAT WILL CONNECT OR MAY BE CONNECTED TO A TOWN WATER, SEWER, OR DRAINAGE SYSTEM. A LICENSED SUPERVISOR OR FOREMAN MUST BE PRESENT AT THE JOB SITE AT ALL TIMES DURING CONSTRUCTION OF THESE UTILITIES.
19. THE DEVELOPER SHALL COORDINATE WITH THE ELECTRIC COMPANY TO ENSURE ANY TREE PLANTINGS ALONG MAIN STREET WILL NOT CONFLICT WITH THE EXISTING OVERHEAD WIRES.
20. THE DEVELOPER SHALL COORDINATE WITH THE ELECTRIC COMPANY TO CONFIRM A DROP POLE ON THE PROPERTY IS NOT REQUIRED.





UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER BEALS ASSOCIATES, NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1-888-DIG-SAFE (1-888-344-7233) AND EXETER DPW (603) 773-6157.

PREPARED FOR:

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH No.9900
PROFESSIONAL ENGINEER

REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

UTILITY PLAN

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. NO:	NH-1531	SHEET NO.	7

LIGHT POST

WALL MOUNT

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens
	1	P3	Single	PEMCO: PMJOET1C130W3KU3-CXX	MOUNTED ON 10' PEMCO POLE: PLB132410S125T300N-CXX	0.900	3427
	2	P4	Single	PEMCO: PMJOET1C130W3KU4-CXX	MOUNTED ON 10' PEMCO POLE: PLB132410S125T300N-CXX	0.900	3422
	17	W1	Single	TMS: 33W-O-15LED-30K-VXX-WM-CXX-DIML	WALL MTD 10' AFG	0.900	1109

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
ENTIRE AREA	Fc	0.18	9.6	0.0	N.A.	N.A.

LIGHTING NOTES:

1. ALL OUTDOOR LIGHTING SHALL BE SO DIRECTED & SHIELDED THAT NO GLARE WILL SPILL OUT ONTO RESIDENTIALLY ZONED ABUTTERS

2. AFTER 10:00 PM ONLY THAT AMOUNT OF LIGHT NECESSARY FOR THE SECURITY OF THE PREMISES SHALL BE PERMITTED.

PREPARED FOR:

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BA BEALS ASSOCIATES, PLLC

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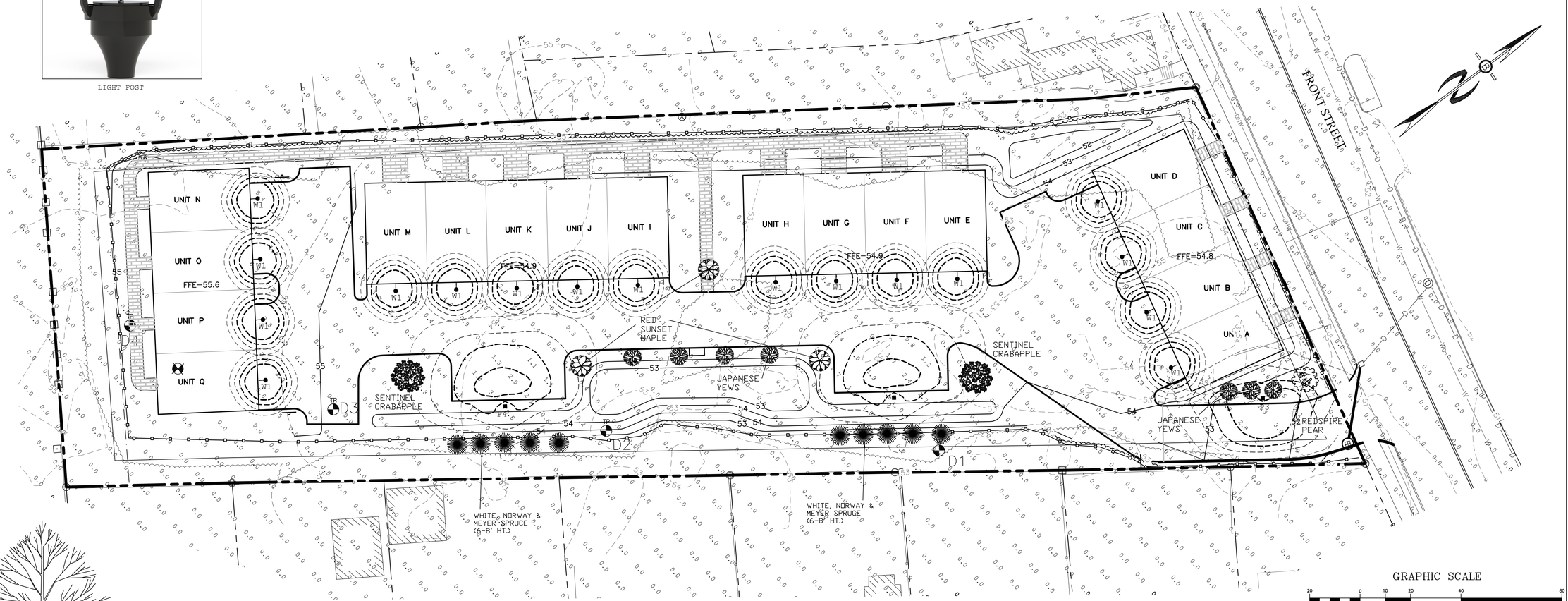
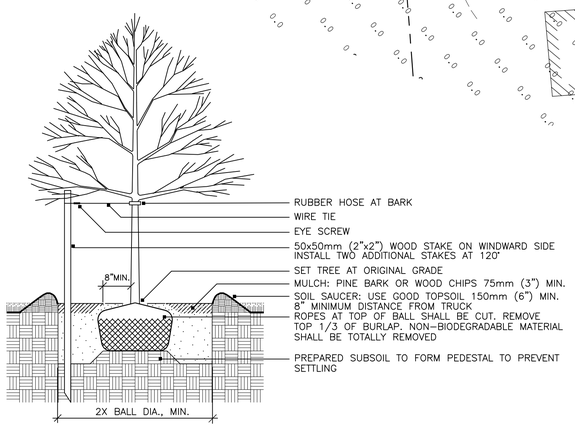


GRAPHIC SCALE

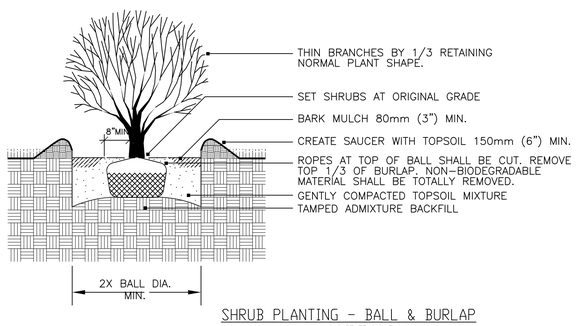
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



DECIDUOUS TREE PLANTING WITH STAKE AND WIRE TIE - HEAVY DUTY

NOTE: STAKING TO BE USED IN PARKING ISLANDS AND OTHER CONFINED AREAS AS NECESSARY TO AVOID CONFLICTS WITH PEDESTRIANS



SHRUB PLANTING - BALL & BURLAP

NOT TO SCALE

PLANT LIST

BOTANICAL NAME	COMMON NAME	SIZE AND SPECIFICATION
TREES		
ACER REBRUM RED SUNSET	RED SUNSET MAPLE	2.5"-3" CAL. B&B
MALUS SENTINEL	SENTINEL CRABAPPLE	2" CAL. B&B
PYRUS CALLERYANA REDSPIRE	REDSPIRE PEAR	2.5"-3" CAL. B&B
SHRUBS AND GROUNDCOVERS		
TAXUS MEDIA DENSIFORMIS	JAPANESE YEW	18" HGT.

PLANTING NOTES:

1. NO PLANT MATERIALS SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
2. A 4-INCH DEEP SHREDDED PINE BARK SHALL BE INSTALLED UNDER ALL SHRUBS, AND IN ALL PLANTING BEDS, AS DIRECTED BY OWNER.
3. ALL TREES SHALL BE BAILED AND BURLAPPED, UNLESS OTHERWISE NOTED, OR APPROVED BY THE OWNER.
4. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
5. LOAM AND SEED ALL AREAS NOT OTHERWISE NOTED.
6. DO NOT INSTALL LOAM IN AREAS OF EXISTING TREES TO REMAIN.
7. THE LANDSCAPING OF THE SITE DEPICTED ON THIS PLAN IS INTEGRAL TO THE APPROVAL BY THE BARRINGTON PLANNING BOARD AND SHALL BE REASONABLY MAINTAINED AND WHEN DEAD OR REMOVED, MUST BE REASONABLY REPLACED.

REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

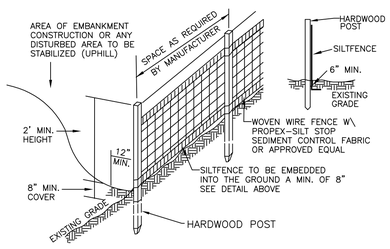
LIGHTING & LANDSCAPE PLAN

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. NO:	NH-1531	SHEET NO.	8

CONSTRUCTION SEQUENCE

1. CUT AND REMOVE TREES IN CONSTRUCTION AREAS AS REQUIRED OR DIRECTED.
2. CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS REQUIRED. EROSION, SEDIMENT AND DETENTION CONTROL FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO ANY EARTH MOVING OPERATION AND PRIOR TO DIRECTING RUNOFF TO THEM.
3. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. STUMPS AND DEBRIS ARE TO BE REMOVED FROM SITE AND DISPOSED OF PER STATE AND LOCAL REGULATIONS.
4. EXCAVATE AND STOCKPILE TOPSOIL /LOAM. ALL AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
5. CONSTRUCT TEMPORARY CULVERTS AS REQUIRED OR DIRECTED.
6. CONSTRUCT THE ROADWAY AND ITS ASSOCIATED DRAINAGE STRUCTURES.
7. INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING.
8. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED.
9. DAILY OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE CHECK DAMS, DITCHES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS OR PROPERTY.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING
12. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
13. ALL SWALES AND DRAINAGE STRUCTURES WILL BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.
14. FINISH PAVING ALL DRIVEWAYS



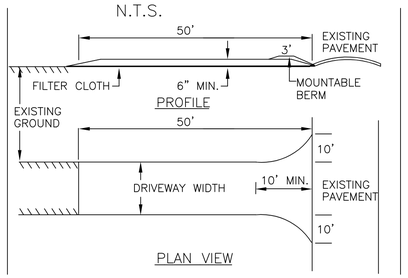
SILT FENCE CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A
2. MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER,
3. THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BYPASSING MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT
4. REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE
5. FOR SEDIMENT STORAGE SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND
6. THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED

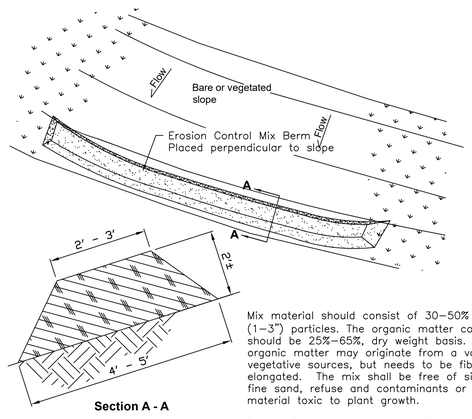
SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME
2. INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT.
3. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE
4. FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

STABILIZED CONSTRUCTION ENTRANCE



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET,
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE, IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.



Section A - A

Mix material should consist of 30-50% large (1-3") particles. The organic matter content should be 25%-65%, dry weight basis. The organic matter may originate from a variety of vegetative sources, but needs to be fibrous and elongated. The mix shall be free of silt, clay, fine sand, refuse and contaminants or any material toxic to plant growth.

Erosion Control Mix berms are effective filters for overland flow conditions and should not be used to filter concentrated flow such as that found in drainage ditchs, streams, etc.

SEEDING RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDS FOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

TEMPORARY EROSION CONTROL MEASURES

1. NO MORE THAN 1.58 ACRES OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED OR DIRECTED BY THE ENGINEER ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS.
3. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN 1.10 POUNDS OF SEED PER 1000 SQUARE FEET OF AREA. (48 POUNDS PER ACRE) SEE SEED SPECIFICATIONS THIS SHEET.
4. SILT FENCES AND OTHER EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY RAIN EVENT GREATER THAN 0.5" DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
5. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
6. AREAS MUST BE SEEDED AND MULCHED WITHIN 3 DAYS OF FINAL GRADING, PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL.

WINTER MAINTENANCE

1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH, SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER OCTOBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED ABOVE.

2. ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH TEMPORARY JUTE MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY GRADED AND SHAPED.

3. PRIOR TO OCT. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.

4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEEDED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL KINDS AND AMOUNTS OF LIME AND 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, 2 TONS PER ACRE OR 100 LBS PER 1,000 SQ. FT..
   NITROGEN(N), 50 LBS PER ACRE OR 1. 1 LBS PER 1,000 SQ.FT.
   PHOSPHATE(P205), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.
   POTASH(K20), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.
   (NOTE: THIS IS THE EQUIVALENT OF 500 LBS PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS PER ACRE OF 5-10-10.)

Erosion Control Mix Berm

   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDS FOOT TREFOIL, AND FLAT PEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 SQ. FT.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

SEEDING GUIDE

USE	SEEDING MIXTURE*	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	FAIR	GOOD	EXCELLENT
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	FAIR	GOOD	GOOD	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	F	FAIR	EXCELLENT	EXCELLENT	**
	G	FAIR	EXCELLENT	EXCELLENT	**

RECOMMENDED

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

* REFER TO SEEDING MIXTURES AND RATES IN TABLE 7-36.
** POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAY AREAS OR ATHLETIC FIELDS.

NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCT. 15, IF PERMANENT SEEDING NOT YET COMPLETE.

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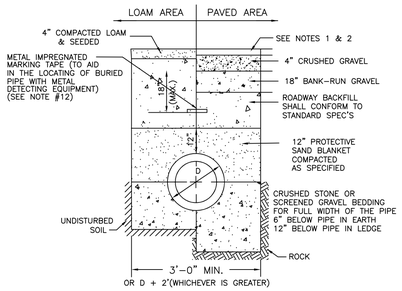
REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

EROSION & SEDIMENT CONTROL DETAILS

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

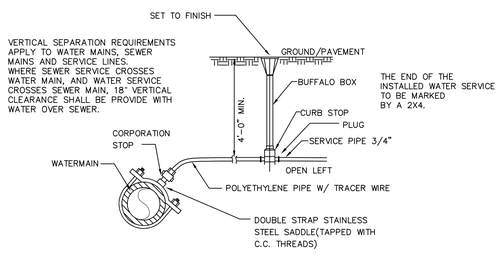
DATE:	DEC 9, 2024	SCALE:	NTS'
PROJ. NO:	NH-1531	SHEET NO.	9



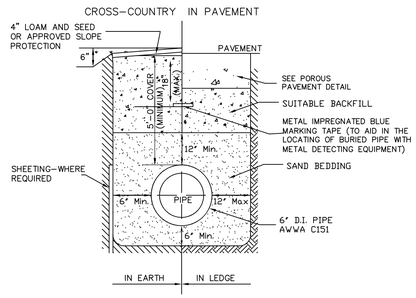
NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.

TYPICAL SEWER TRENCH DETAIL

NOT TO SCALE

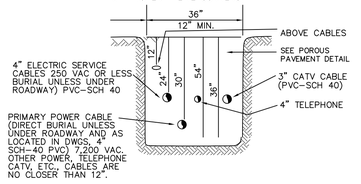


TYPICAL WATER SERVICE CONNECTION

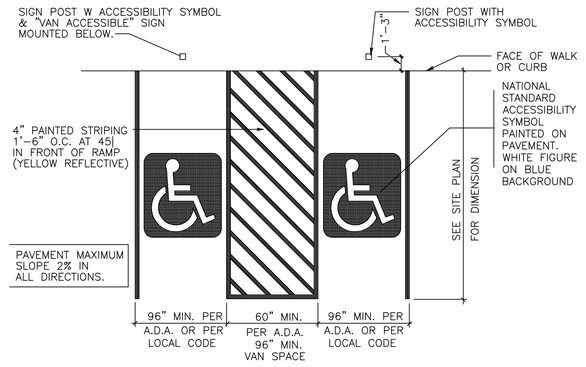


TYPICAL TRENCH DETAIL FOR WATER SYSTEM

NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY. SERVICE BOX CONNECTIONS SHALL BE "FLUSH MOUNT" TO GREATEST EXTENT POSSIBLE AND LOCATED AT PROPERTY LINE CORNERS.



UTILITY TRENCH DETAIL

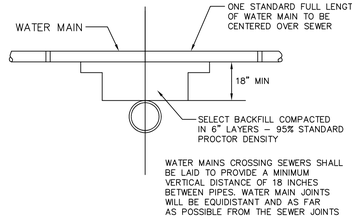


PARKING STALL FOR THE PHYSICALLY CHALLENGED

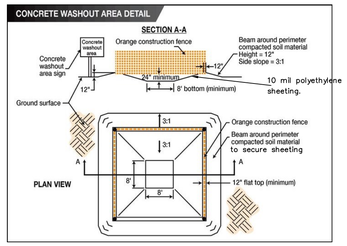
NOT TO SCALE DEC. 15, 1991

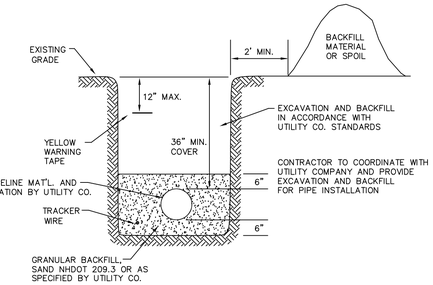
SEPARATION NOTES:

SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES (460 MM) BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE.

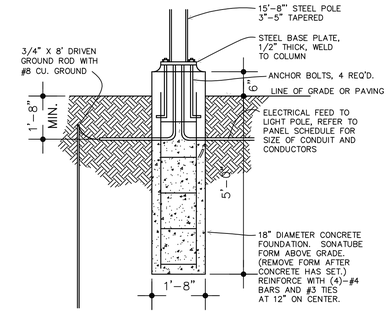


WATER/SEWER MAIN CROSSING





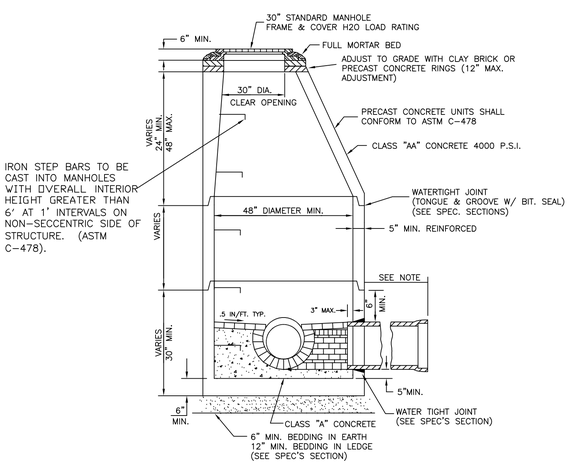
GAS TRENCH DETAIL



POLE FOUNDATION

LIGHT BASE DETAIL

SCALE: NONE



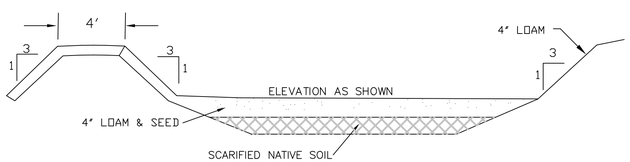
NOTE:

TYPE OF PIPE	SIZE	MAX. DISTANCE TO FIRST JOINT
R.C.P. C.I.	ALL	48"
V.C.	0-12"	18"
V.C.	> 12"	36"

SEWER MANHOLE

TYPICAL SECTION

NOT TO SCALE

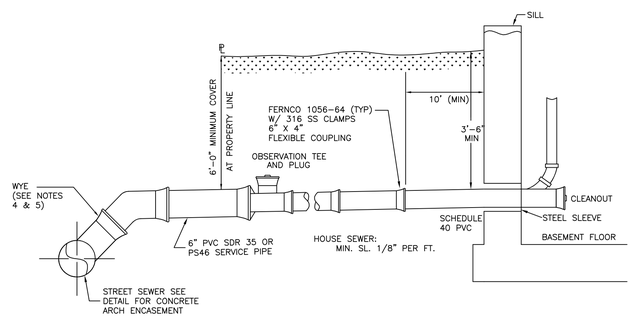


INFILTRATION POND NOTES:

1. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
2. AFTER THE INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
3. DO NOT PLACE INFILTRATION SYSTEM INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

INFILTRATION POND DETAIL

NOT TO SCALE



DETAIL OF HOUSE SEWER SERVICE

NOTES:
1) SEWER SERVICE FROM PROPERTY LINE TO 10' OUTSIDE OF BUILDING SHALL BE INSTALLED UNDER THIS CONTRACT ONLY WHEN OUTSIDE THE TRENCH DEWATERING OR LEDGE EXCAVATION IS REQUIRED.
2) PIPE DEPTH AT HOUSE SHALL BE ABOVE THE SEASONAL GROUND WATER LEVEL.
3) SEWER SHALL BE BELOW SLAB ONLY WHEN BASEMENT TOILETS EXIST.
4) JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AST AT THE STREET SEWER WYE OR, AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED
5) WYES: WHERE WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE FOLLOWING MANUFACTURERS INSTRUCTIONS USING A BOLTED, CLAMPED, OR EPOXY-CEMENTED SADDLE, TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER.

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CONSTRUCTION DETAILS

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	NTS
PROJ. NO:	NH-1531	SHEET NO.	10

CONSTRUCTION SPECIFICATIONS FOR POROUS ASPHALT
THE UNH STORM WATER CENTER

INSTALLATION RECOMMENDATIONS

INSTALLATION
A. PERCOLATION BEDS (REFERS TO NO 57 STONE)
I. OWNER SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO ALL PERCOLATION BED AND POROUS PAVING WORK.
2. SUB GRADE PREPARATION
A.EXISTING SUB GRADE UNDER BED AREAS SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO STONE BED PLACEMENT.
B. WHERE EROSION OF SUB GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT AND LIGHT TRACTOR.
C. BRING SUB GRADE OF STONE PERCOLATION BED TO LINE, GRADE, AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING, OR TRAFFIC COMPACTION BEFORE THE PLACING OF STONE. ALL BED BOTTOMS ARE LEVEL GRADE.
3. RECHARGE BED INSTALLATION (REFERS TO NO 3 STONE)
A.UPON COMPLETION OF SUB GRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT HIS DISCRETION BEFORE PROCEEDING WITH PERCOLATION BED INSTALLATION.
B.PERCOLATION BED AGGREGATE SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUB GRADE PREPARATION. ANY ACCUMULATION OF DEBRIS OR SEDIMENT WHICH HAS TAKEN PLACE AFTER APPROVAL OF SUB GRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF AGGREGATE AT NO EXTRA COST TO THE OWNER.
C.INSTALL COARSE AGGREGATE NO. 3 (1 1/2" STONE) IN 8–INCH MAXIMUM LIFTS. LIGHTLY COMPACT EACH LAYER WITH EQUIPMENT, KEEPING EQUIPMENT MOVEMENT OVER STORAGE BED SUBGRADES TO A MINIMUM. INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
D. INSTALL 3" LIFT PEA GRAVEL LAYER TO PREVENT MIGRATION OF FINES FROM THE FILTER COARSE (NHDOT 304.1)
E.INSTALL FILTER COARSE (NHDOT 304.1 SAND LESS THAN 2% FINES) IN 2, 4" LIFTS. LIGHTLY COMPACT EACH LAYER WITH EQUIPMENT, KEEPING EQUIPMENT MOVEMENT OVER STORAGE BED SUBGRADES TO A MINIMUM. INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
F. INSTALL CHOKER BASE COURSE (AASHTO # 57 STONE) AGGREGATE EVENLY OVER SURFACE OF STONE BED, SUFFICIENT TO ALLOW PLACEMENT OF PAVEMENT, AND NOTIFY ENGINEER FOR APPROVAL. CHOKER BASE COURSE SHALL BE SUFFICIENT TO ALLOW FOR EVEN PLACEMENT OF ASPHALT BUT NO THICKER THAN 4–INCH IN DEPTH.
4. SURROUNDING AREAS
A.BEFORE THE POROUS PAVEMENT IS INSTALLED, ADJACENT SOIL AREAS SHOULD BE SLOPED AWAY FROM ALL PAVEMENT EDGES, TO PREVENT POTENTIAL SEDIMENT FROM WASHING ONTO THE PAVEMENT SURFACE.
B.TO ACCOMPLISH THIS, A SEQUENCE OF SWALES SHOULD BE EXCAVATED INTO ALL EARTHEN (UNPAVED) AREAS AT LEAST ON THE UPHILL SIDES OF THE PAVEMENT, AND WHERE NECESSARY, TO BELOW THE CURB OR PAVEMENT ELEVATION. ITS SHAPE AND PAINTINGS CAN BE INTEGRATED WITH THE PROJECT'S ARCHITECTURE AND LANDSCAPE, AND DESIGNED TO MAXIMIZE INFILTRATION. SWALE OVERFLOW, WHEN IT OCCURS, CAN BE DISCHARGED FROM ONE SWALE TO ANOTHER BY CONNECTING PIPES UNDER DRIVEWAYS.
C.BUILDING BASEMENTS AND FOUNDATIONS SHOULD BE WATERPROOFED AS NECESSARY, WHERE THE POROUS PAVEMENT ABUTS BUILDINGS.
B. POROUS ASPHALT
1. TRANSPORTING MATERIAL
A.TRANSPORTING OF MIX TO THE SITE SHALL BE IN VEHICLES WITH SMOOTH, CLEAN DUMP BEDS THAT HAVE BEEN SPRAYED WITH A NON–PETROLEUM RELEASE AGENT.
B.THE MIX SHALL BE COVERED DURING TRANSPORT TO CONTROL COOLING.
2. POROUS BITUMINOUS ASPHALT SHALL NOT BE STORED IN EXCESS OF 90 MINUTES BEFORE PLACEMENT.
3. ASPHALT PLACEMENT
A.THE POROUS BITUMINOUS SURFACE COURSE SHALL BE LAID IN ONE LIFT DIRECTLY OVER THE CHOKER COARSE, FILTER COARSE, AND CRUSHED STONE BASE COURSE TO A 4–INCH FINISHED THICKNESS. THE SURFACE CAN BE LAID IN TWO LIFTS IF SECOND LIFT IS DONE WITHIN 10 BUSINESS DAYS
AND THE INITIAL COURSE IS CLEAN AND FREE OF SEDIMENT.
B.THE LAYING TEMPERATURE OF THE BITUMINOUS MIX SHALL BE BETWEEN 300 DEGREES FAHRENHEIT AND 350 DEGREES FAHRENHEIT (BASED ON THE RECOMMENDATIONS OF THE ASPHALT SUPPLIER).
C.INSTALLATION SHALL TAKE PLACE WHEN AMBIENT TEMPERATURES ARE 55 DEGREES FAHRENHEIT OR ABOVE, WHEN MEASURED IN THE SHADE AWAY FROM ARTIFICIAL HEAT.
D.THE USE OF A REMIXING MATERIAL TRANSFER DEVICE BETWEEN THE TRUCKS AND THE PAVER IS HIGHLY RECOMMENDED TO ELIMINATE COLD LUMPS IN THE MIX.
E. THE POLYMER–MODIFIED ASPHALT IS VERY DIFFICULT TO RAKE, A WELL–HEATED SCREED SHOULD BE USED TO MINIMIZE THE NEED FOR RAKING.
F. COMPACTION OF THE SURFACE COURSE SHALL TAKE PLACE WHEN THE SURFACE IS COOL ENOUGH TO RESIST A 10–TON ROLLER. (140°F. SURFACE TEMPERATURE) ONE OR TWO PASSES IS ALL THAT IS REQUIRED FOR PROPER COMPACTION. MORE ROLLING COULD CAUSE A REDUCTION IN THE SURFACE POROSITY WHICH IS UNACCEPTABLE.
4. IN THE EVENT CONSTRUCTION SEDIMENT IS INADVERTENTLY DEPOSITED ON THE FINISHED POROUS
SURFACE, IT MUST BE IMMEDIATELY REMOVED BY VACUUMING.
5. AFTER FINAL ROLLING, NO VEHICULAR TRAFFIC OF ANY KIND SHALL BE PERMITTED ON THE SURFACE UNTIL COOLING AND HARDENING HAS TAKEN PLACE, AND IN NO CASE WITHIN THE FIRST 48 HOURS. PROVIDE BARRIERS AS NECESSARY AT NO EXTRA COST TO THE OWNER TO PREVENT VEHICULAR USE; REMOVE AT THE DISCRETION OF THE ENGINEER.
6. STRIPING PAINT FOR TRAFFIC LANES AND PARKING BAYS SHALL BE CHLORINATED RUBBER BASE, FACTORY MIXED, NON–BLEEDING, FAST DRYING, BEST QUALITY, WHITE TRAFFIC PAINT WITH A LIFE EXPECTANCY OF TWO YEARS UNDER NORMAL TRAFFIC USE.
A.PAVEMENT–MARKING PAINT; LATEX, WATER–BASE EMULSION, READY–MIXED, COMPLYING WITH PS TT–P–1952.
B.SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST.
C.PAINT 4 INCH WIDE TRAFFIC LANE STRIPING IN ACCORDANCE WITH LAYOUTS OF PLAN. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. APPLY IN TWO COATS AT MANUFACTURER'S RECOMMENDED RATES. PROVIDE CLEAR, SHARP LINES USING WHITE TRAFFIC PAINT, INSTALLED IN ACCORDANCE WITH NHDOT SPECIFICATIONS.
6. WORK SHALL BE DONE EXPERTLY THROUGHOUT, WITHOUT STAINING OR INJURY TO OTHER WORK.
TRANSITION TO ADJACENT IMPERVIOUS BITUMINOUS PAVING SHALL BE MERGED NEATLY WITH FLUSH, CLEAN LINE. FINISHED PAVING SHALL BE EVEN, WITHOUT POCKETS, AND GRADED TO ELEVATIONS SHOWN ON DRAWING.
7. POROUS PAVEMENT BEDS SHALL NOT BE USED FOR EQUIPMENT OR MATERIALS STORAGE DURING CONSTRUCTION, AND UNDER NO CIRCUMSTANCES SHALL VEHICLES BE ALLOWED TO DEPOSIT SOIL ON PAVED POROUS SURFACES.
8. REPAIR OF DAMAGED PAVING
A.ANY EXISTING PAVING ON OR ADJACENT TO THE SITE THAT HAS BEEN DAMAGED AS A RESULT OF CONSTRUCTION WORK SHALL HE REPAIRED TO THE SATISFACTION OF THE OWNER WITHOUT ADDITIONAL COST TO THE OWNER.
9. FIELD QUALITY CONTROL
A. THE FULL PERMEABILITY OF THE PAVEMENT SURFACE SHALL BE TESTED BY APPLICATION OF CLEAN WATER AT THE RATE OF AT LEAST 5 GPM OVER THE SURFACE, USING A HOSE OR OTHER DISTRIBUTION DEVISE. WATER USED FOR THE TEST SHALL BE CLEAN, FREE OF SUSPENDED SOLIDS AND DELETERIOUS LIQUIDS AND WILL BE PROVIDED AT NO EXTRA COST TO THE OWNER. ALL APPLIED WATER SHALL INFILTRATE DIRECTLY WITHOUT PUDDLE FORMATION OR SURFACE RUNOFF, AND SHALL BE OBSERVED BY THE ENGINEER AND OWNER.
B. TEST IN–PLACE BASE AND SURFACE COURSE FOR COMPLIANCE WITH REQUIREMENTS FOR THICKNESS AND SURFACE SMOOTHNESS. REPAIR OR REMOVE AND REPLACE UNACCEPTABLE WORK AS DIRECTED BY THE OWNER.
C. SURFACE SMOOTHNESS: TEST FINISHED SURFACE FOR SMOOTHNESS AND EVEN DRAINAGE, USING A TEN–FOOT TO CENTERLINE OF PAVED AREA. SURFACE WILL NOT BE ACCEPTED IF GAPS OR RIDGES EXCEED 3116 OF AN INCH.

MINIMUM COMPACTION REQUIREMENTS

COMPACTION SHALL BE PERFORMED TO NOT LESS THAN NINETY–FIVE PERCENT (95%) MAXIMUM DENSITY AS DETERMINED IN A LABORATORY COMPACTION TEST, PERFORMED UNDER THE SPECIFICATIONS OF ASTM D1557–64T, METHOD "A", (BACK FILL MATERIAL OF A STONY NATURE SHALL BE TESTED UNDER METHOD "C" OR "D" OF THE SAME ASTM DESIGNATION) OR OTHER APPROVED ASTM OR AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) SPECIFICATIONS. SUCH TEXT SHALL ALSO BE USED FOR ESTABLISHING THE OPTIMUM MOISTURE CONTENT OF THE MATERIALS. THE IN–PLACE DRY UNIT WEIGHT OF THE COMPACTED MATERIALS SHALL BE DETERMINED BY METHODS SPECIFIED UNDER ASTM "D" 1556–58T OR OTHER APPROVED ASTM OR AASHTO SPECIFICATIONS. THE IN–PLACE COMPACTION TEST TO BE CONSISTENT WITH THE APPROVED LABORATORY COMPACTION TEST.

TABLE 5. POROUS ASPHALT MIX DESIGN CRITERIA.

SIEVE SIZE (INCH/MM)	PERCENT PASSING (%)
0.75/19	100
0.50/12.5	85–100
0.375/9.5	55–75
NO.4/4.75	10–25
NO.8/2.36	5–10
NO.200/0.075 (#200)	2–4
BINDER CONTENT (AASHTO T164)	6.0–6.5%
AIR VOID CONTENT BY CORELOK (ASTM D6752)*	16.0–20.0%
AIR VOID CONTENT BY PARAFFIN WAX (AASHTO T275)*	18.0–22.0%
DRAINDOWN (ASTM D6390)**	<= 0.3 %
RETAINED TENSILE STRENGTH (AASHTO 283)***	>= 80 %

* EITHER METHOD IS ACCEPTABLE
**CELLULOSE OR MINERAL FIBERS MAY BE USED TO REDUCE DRAINDOWN.
***IF THE TSR (RETAINED TENSILE STRENGTH) VALUES FALL BELOW 80% WHEN TESTED PER NAPA IS 131 (WITH A SINGLE FREEZE THAW CYCLE RATHER THAN 5). STEP 4, THE CONTRACTOR SHALL EMPLOY AN ANTISTRIP ADDITIVE, SUCH AS HYDRATED LIME (ASTM C977) OR A FATTY AMINE, TO RAISE THE TSR VALUE ABOVE 80%.

MIX SUMMARY
POROUS ASPHALT PAVEMENT MIX
THE UNH STORM WATER CENTER

POROUS ASPHALT SHALL BE FOUR INCHES THICK WITH A BITUMINOUS MIX OF 6% TO 6.5% BY WEIGHT DRY AGGREGATE AND AIR VOIDS OF 18–22% IN ACCORDANCE WITH ASTM D6390, DRAIN DOWN OF THE BINDER SHALL BE NO GREATER THAN 0.3%. IF MORE ABSORPTIVE AGGREGATES, SUCH AS LIMESTONE, ARE USED IN THE MIX, THEN THE AMOUNT OF BITUMEN IS TO BE BASED ON THE TESTING PROCEDURES OUTLINED IN THE NATIONAL ASPHALT PAVEMENT ASSOCIATION'S INFORMATION SERIES 131 – "PERVIOUS ASPHALT PAVEMENTS" (2003) OR NHDOT EQUIVALENT. MIX SUPPLIERS MAY HAVE A SUITABLE IN–HOUSE SPECIFICATION FOR OPEN GRADED FRICTION COURSE (OGFC) THAT CAN BE USED.

USE NEAT ASPHALT BINDER MODIFIED WITH AN ELASTOMERIC POLYMER TO PRODUCE A BINDER MEETING THE REQUIREMENTS OF PG 76–22 AS SPECIFIED IN AASHTO MP– 1. THE ELASTOMER POLYMER SHALL BE STYRENE–BUTADIENE–STYRENE (SBS), OR APPROVED EQUAL, APPLIED AT A RATE OF 3% BY WEIGHT OF THE TOTAL BINDER. THE COMPOSITE MATERIALS SHALL BE THOROUGHLY BLENDED AT THE ASPHALT REFINERY OR TERMINAL PRIOR TO BEING LOADED INTO THE TRANSPORT VEHICLE. THE POLYMER MODIFIED ASPHALT BINDER SHALL BE HEAT AND STORAGE STABLE.

AGGREGATE SHALL BE MINIMUM 90% CRUSHED MATERIAL AND HAVE A GRADATION OF:

COMPOSITION OF MIXTURE
SIEVE SIZE (INCH/MM)PERCENT PASSING0.75/191000.50/12.585–1000.375/9.555–75NO.4/4.7510–25NO.8/2.365–10NO.200/0.0752–4TOTAL AGGREGATES93–5–94% ASPHALT OF TOTAL MIX6–6.5
ADD HYDRATED LIME AT A DOSAGE RATE OF 1.0% BY WEIGHT OF THE TOTAL DRY AGGREGATE TO MIXES CONTAINING GRANITE. HYDRATED LIME SHALL MEET THE REQUIREMENTS OF ASTM C 977. THE ADDITIVE MUST BE ABLE TO PREVENT THE SEPARATION OF THE ASPHALT BINDER FROM THE AGGREGATE AND ACHIEVE A REQUIRED TENSILE STRENGTH RATIO (TSR) OF AT LEAST 80% ON THE ASPHALT MIX WHEN TESTED IN ACCORDANCE WITH AASHTO T 283. THE ASPHALTIC MIX SHALL BE TESTED FOR ITS RESISTANCE TO STRIPPING BY WATER IN ACCORDANCE WITH ASTM D–1664. IF THE ESTIMATED COATING AREA IS NOT ABOVE 95 PERCENT, ANTI–STRIPPING AGENTS SHALL BE ADDED TO THE ASPHALT.

NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR HAS SUBMITTED AND THE ENGINEER HAS APPROVED A MIX DESIGN INCLUDING THE PERCENTAGE OF EACH INGREDIENT INCLUDING BINDER, POLYMER, AND THE JOB–MIX FORMULA FROM SUCH A COMBINATION. THE JOB–MIX FORMULA SHALL ESTABLISH A SINGLE PERCENTAGE OF AGGREGATE PASSING SIEVE AND A SINGLE PERCENTAGE OF BITUMINOUS MATERIAL TO BE ADDED TO THE AGGREGATE. NO CHANGE IN THE JOB MIX FORMULA MAY BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER. THE JOB–MIX FORMULA MUST FALL WIT H THE MASTER RANGE SPECIFIED IN COMPOSITION OF MIXTURE TABLE.

TRANSPORTING MATERIAL: SEE CONSTRUCTION AND INSTALL SPECIFICATIONS

FOR QUESTIONS ON MIX SPECIFICATIONS CONTACT ROBERT ROSEEN, PHD, AT THE UNH STORM WATER CENTER. 603–862–4024.

MAINTENANCE SPECIFICATIONS FOR POROUS ASPHALT PARKING LOT AREAS AND LOW VOLUME ROADS
THE UNH STORM WATER CENTER

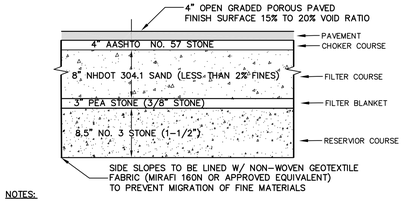
THE FOLLOWING RECOMMENDATIONS WILL HELP ASSURE THAT THE PAVEMENT IS MAINTAINED TO PRESERVE ITS HYDROLOGIC EFFECTIVENESS.

WINTER MAINTENANCE:

1. SANDING FOR WINTER TRACTION IS PROHIBITED. DEICING IS PERMITTED (NAC1, MGC12, OR EQUIVALENT). REDUCED SALT APPLICATION IS POSSIBLE AND CAN BE A COST SAVINGS FOR WINTER MAINTENANCE. NONTOXIC, ORGANIC DEICERS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE–BASED LIQUID PRODUCTS OR AS PRETREATED SALT, ARE PREFERABLE.
2. PLOWING IS ALLOWED, BLADE SHOULD BE SET APPROXIMATELY 1" ABOVE ROAD SURFACE. ICE AND LIGHT SNOW ACCUMULATION ARE GENERALLY NOT AS PROBLEMATIC AS FOR STANDARD ASPHALT. SNOW WILL ACCUMULATE DURING HEAVIER STORMS AND SHOULD BE PLOWED.

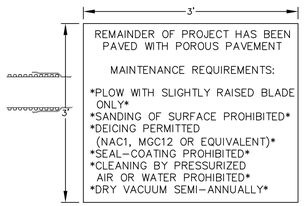
ROUTINE MAINTENANCE;

1. ASPHALT SEAL COATING MUST BE ABSOLUTELY FORBIDDEN. SURFACE SEAL COATING IS NOT REVERSIBLE.
2. THE PAVEMENT SURFACE SHOULD BE VACUUMED 1 OR 2 TIMES PER YEAR, AND AT ANY ADDITIONAL TIMES SEDIMENT IS SPILLED, ERODED, OR TRACKED ONTO THE SURFACE.
3. PLANTED AREAS ADJACENT TO PERVIOUS PAVEMENT SHOULD BE WELL MAINTAINED TO PREVENT SOIL WASHOUT ONTO THE PAVEMENT. IF ANY BARE SPOTS OR ERODED AREAS ARE OBSERVED WITHIN THE PLANTED AREAS, THEY SHOULD BE REPLANTED AND/OR STABILIZED AT ONCE.
4. IMMEDIATELY CLEAN ANY SOIL DEPOSITED ON PAVEMENT. SUPERFICIAL DIRT DOES NOT NECESSARILY CLOG THE PAVEMENT VOIDS. HOWEVER, DIRT THAT IS GROUND IN REPEATEDLY BY TIRES CAN LEAD TO CLOGGING. THEREFORE, TRUCKS OR OTHER HEAVY VEHICLES SHOULD BE PREVENTED FROM TRACKING OR SPILLING DIRT ONTO THE PAVEMENT.
5. DO NOT ALLOW CONSTRUCTION STAGING, SOIL/MULCH STORAGE, ETC. ON UNPROTECTED PAVEMENT SURFACE.
6. REPAIRS: POTHOLES OF LESS THAN 50 SQUARE FEET CAN BE PATCHED BY ANY MEANS SUITABLE WITH STANDARD PAVEMENT OR A PERVIOUS MIX IS PREFERRED. FOR AREAS GREATER THAN 50 SQ. FT. IN NEED OF REPAIR, APPROVAL OF PATCH TYPE SHOULD BE SOUGHT FROM A QUALIFIED ENGINEER. ANY REQUIRED REPAIR OF DRAINAGE STRUCTURES SHOULD BE DONE PROMPTLY TO ENSURE CONTINUED PROPER FUNCTIONING OF THE SYSTEM.
7. WRITTEN AND VERBAL COMMUNICATION TO THE POROUS PAVEMENT'S FUTURE OWNER SHOULD MAKE CLEAR THE PAVEMENT'S SPECIAL PURPOSE AND SPECIAL MAINTENANCE REQUIREMENTS SUCH AS THOSE LISTED HERE.
8. A PERMANENT SIGN SHOULD BE ADDED AT THE ENTRANCE AND END OF THE POROUS ASPHALT AREA, TO INFORM RESIDENTS AND MAINTENANCE STAFF OF THE SPECIAL NATURE AND PURPOSE OF THE PAVEMENT, AND ITS SPECIAL MAINTENANCE REQUIREMENTS.

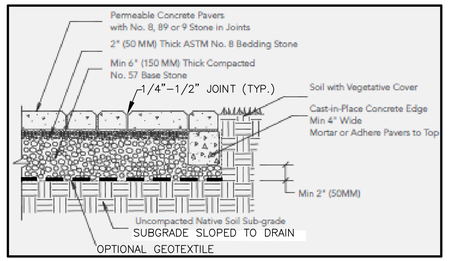


NOTES:
1. 4" FRICTION COARSE CONSISTS OF COARSER AGGREGATE AND STIFFER BINDER. SEE TABLE
2. A WORKING COURSE 4" THICK CONSISTS OF AASHTO NO. 57 STONE.
3. TOP COAT SHOULD BE VACUUMED A MINIMUM OF TWICE A YEAR.
5. ADJACENT AREAS TO POROUS PAVEMENT SHOULD BE GRADED AWAY FROM PAVEMENT TO PREVENT SEDIMENT FROM RUNNING ONTO POROUS AREA AND CLOGGING PORES. ROOF RUNOFF TO BE DIRECTED INTO SUBBASE MATERIAL.

POROUS PAVEMENT
NOT TO SCALE



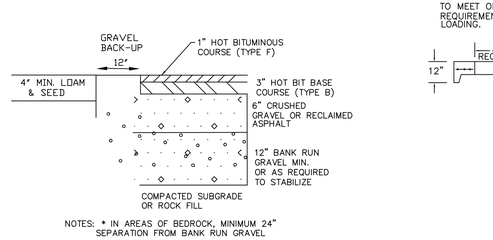
POROUS PAVEMENT SIGN DETAIL
NOT TO SCALE



ROUTINE MAINTENANCE: VISUAL INSPECTION OF THE PERVIOUS PAVERS TO ENSURE THAT THEY ARE CLEAN OF DEBRIS AND SEDIMENTS. ROUTINE CLEANING PROCEDURES WOULD INCLUDE BLOWING (WITH LEAF BLOWER OR SIMILAR) IN FALL, TRUCK–SWEEPING AND/OR DRY VACUUMING. ADD STONE TO REFILL JOINT SPACE AFTER SWEEPING/VACUUMING IF NEEDED.

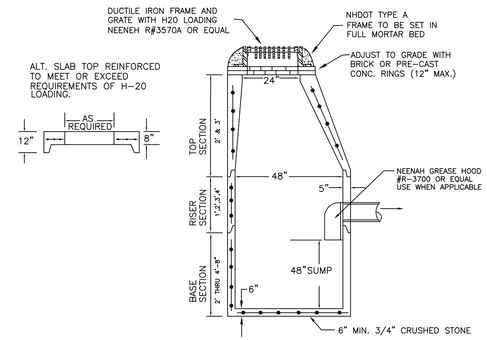
PERVIOUS PAVER DETAIL
TO BE "TREMRON" OR APPROVED EQUAL

NOT TO SCALE

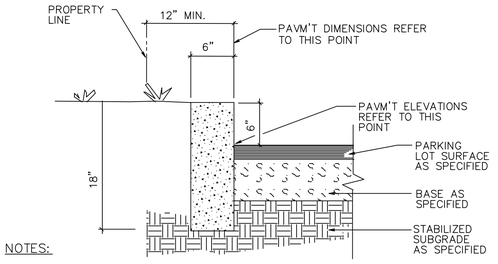


NOTES: * IN AREAS OF BEDROCK, MINIMUM 24" SEPARATION FROM BANK RUN GRAVEL
* PAVEMENT TRENCH PATCH SHALL MATCH EXISTING PAVEMENT DEPTHS.

TYPICAL PAVEMENT SECTION
NEW ASPHALT



PRECAST CATCH BASIN
NOT TO SCALE



NOTES:
1. EDGING TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.
2. JOINTS BETWEEN STONES SHALL BE MORTARED.

6" VERTICAL GRANITE CURB
NOT TO SCALE

PREPARED FOR:
112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No.9900
PROFESSIONAL ENGINEER

REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

CONSTRUCTION DETAILS

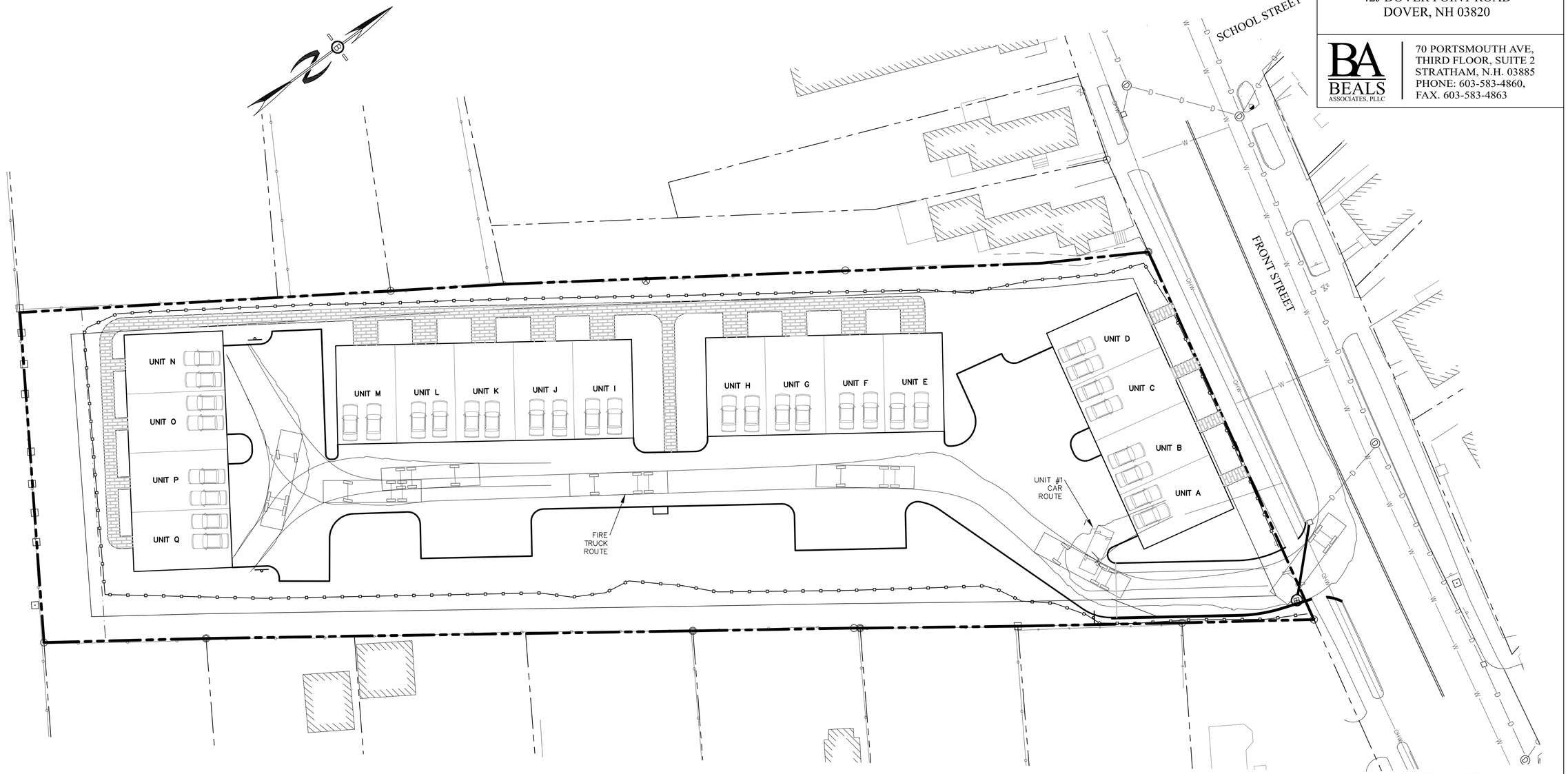
RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	NTS
PROJ. NO:	NH-1531	SHEET NO.	11

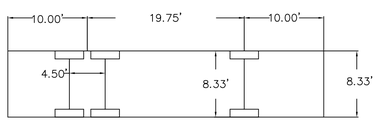
PREPARED FOR:

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BA BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863



Exeter Aerial Ladder Truck



Tire Diameter: 3.6 FEET

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH No. 9900
PROFESSIONAL ENGINEER

EXETER LADDER TRUCK MANEUVERING PLAN

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

REVISIONS:	DATE:
REVISED PER REVIEW COMMENTS	01/17/25

DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. N0:	NH-1531	SHEET NO.	12

FRONT ELEVATION (FACING FRONT STREET)

SCALE: 1/4" = 1'-0"

StoneArch Development

REVISIONS

NO.	DATE	REVISION
6	1/2/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW F
2	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW B
3	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW C
4	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW D
5	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW E

FRONT ELEVATION

112 FRONT STREET
EXETER, NH (UNITS 1-4)

JOB # 24121MF

A-1

REAR ELEVATION (FACING PARKING LOT)

SCALE: 1/4" = 1'-0"

StoneArch Development

REVISIONS

NO.	DATE	REVISION
6	1/2/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW F
2	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW B
3	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW C
4	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW D
5	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW E

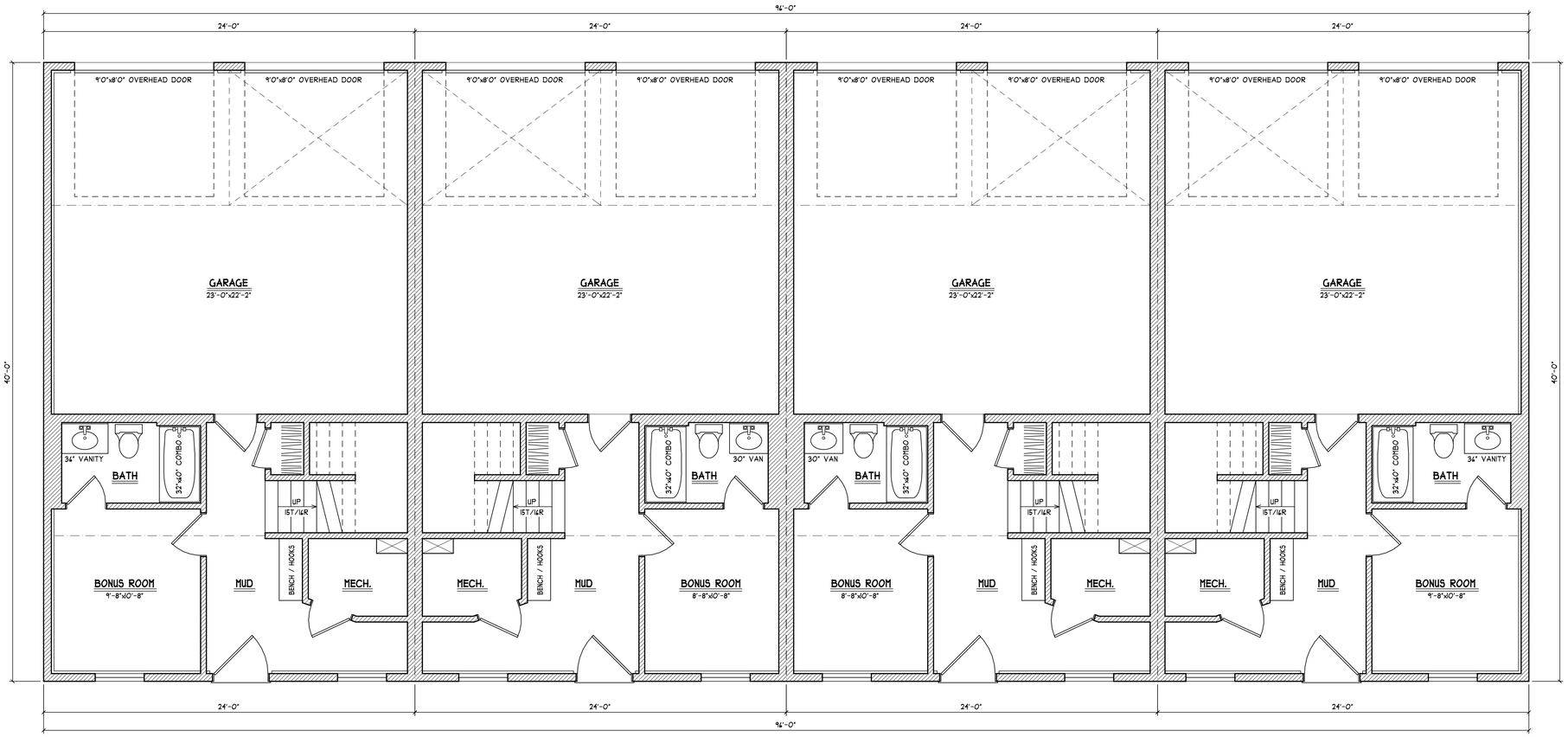
ELEVATION

REAR ELEV

112 FRONT STREET
EXETER, NH (UNITS 1-4)

JOB # 24121MF

A-2



GROUND FLOOR PLAN

SCALE: 1/4" = 1'-0"

StoneArch Development

REVISIONS

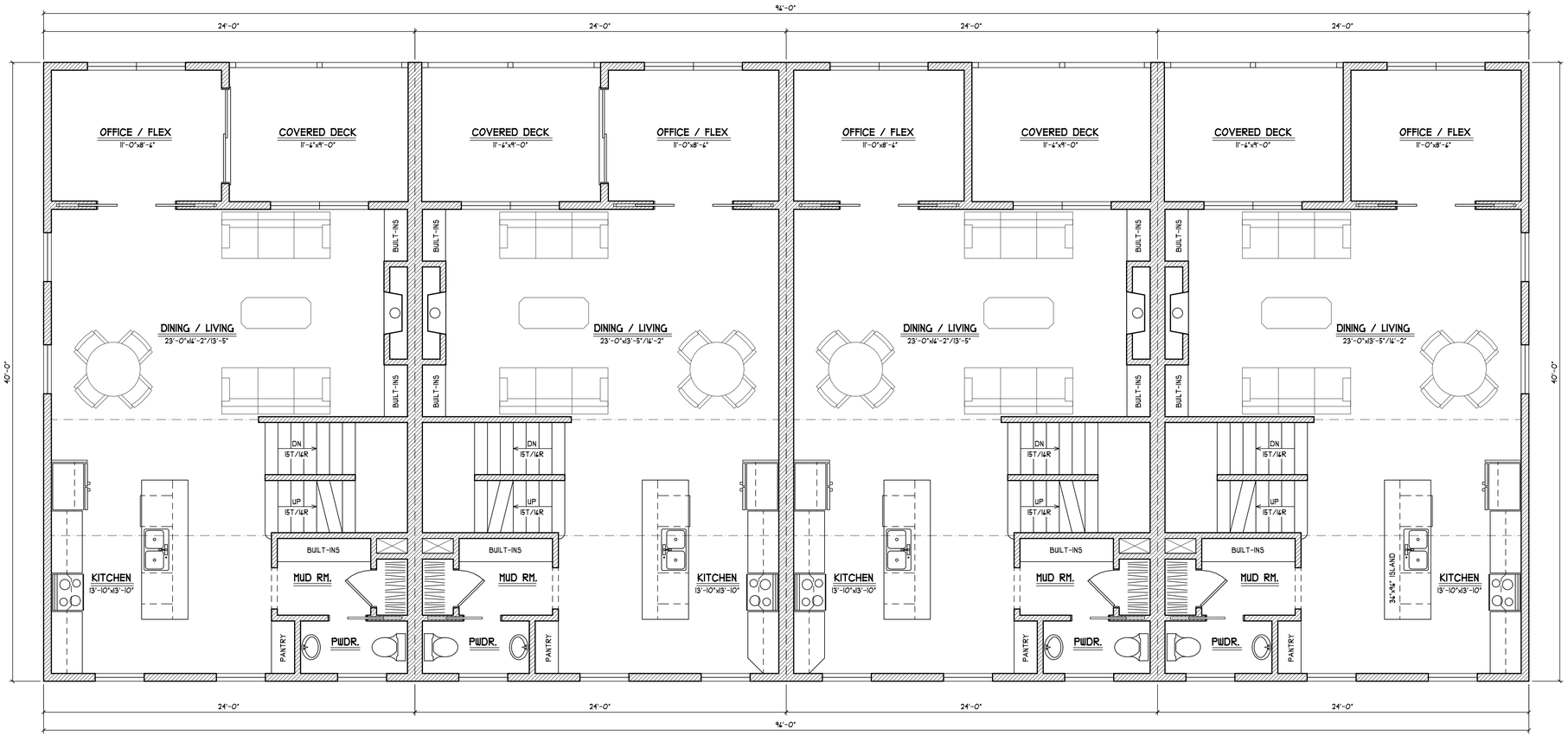
NO.	DATE	REVISION
6	1/2/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW F
2	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW B
3	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW C
4	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW D
5	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW E

GROUND FLOOR PLAN

112 FRONT STREET
EXETER, NH (UNITS 1-4)

JOB # 24121MF

A-3



SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

StoneArch Development

REVISIONS

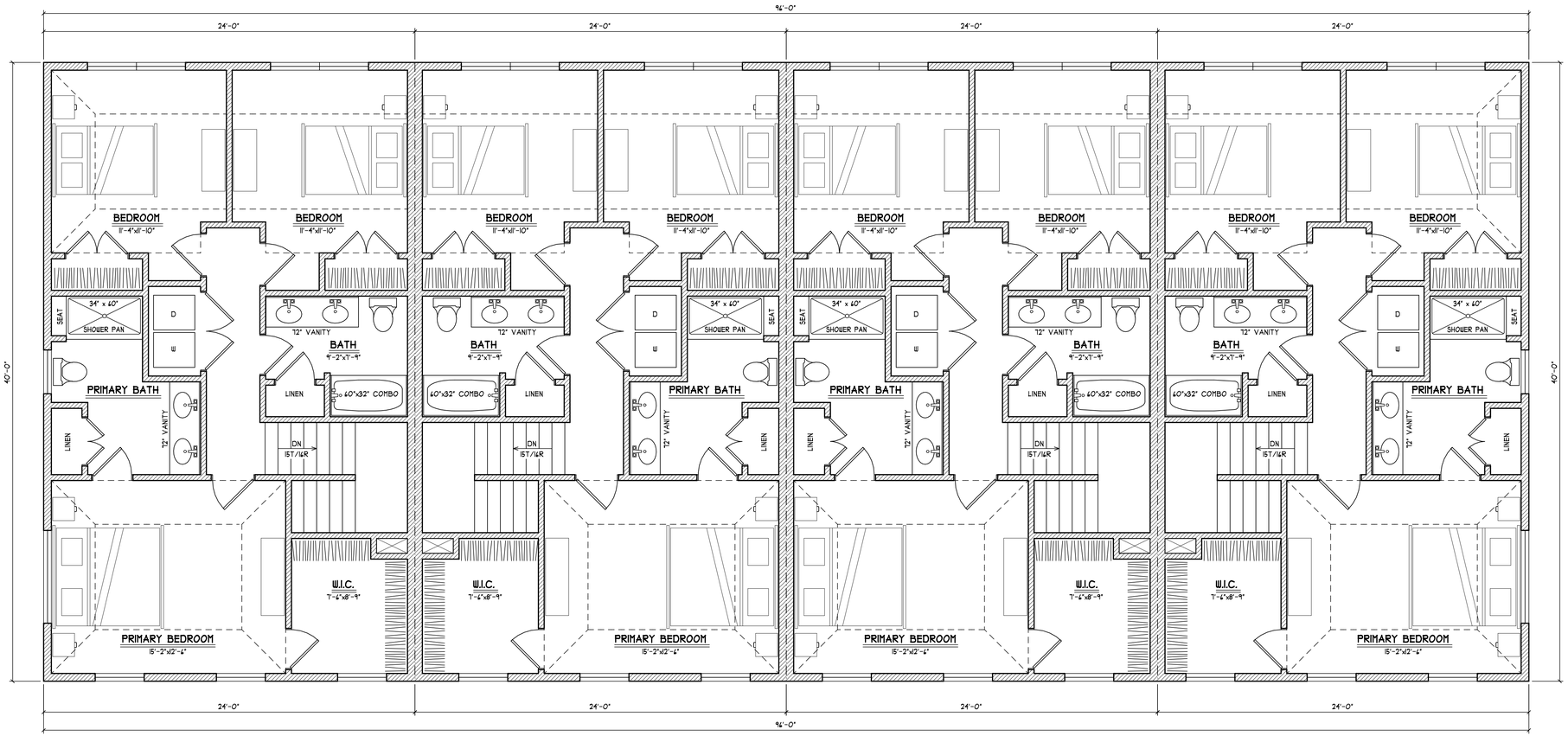
NO.	DATE	REVISION
6	1/2/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW F
2	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW B
3	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW C
4	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW D
5	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW E

SECOND FLOOR PLAN

112 FRONT STREET
EXETER, NH (UNITS 1-4)

JOB # 24121MF

A-4



THIRD FLOOR PLAN

SCALE: 1/4" = 1'-0"

REVISIONS		
NO.	DATE	REVISION
6	1/2/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW F
2	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW B
3	12/30/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW C
4	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW D
5	12/31/24	UPDATED PRELIMINARY PLANS RELEASED FOR REVIEW E

THIRD FLOOR PLAN

112 FRONT STREET
EXETER, NH (UNITS 1-4)

JOB # 2412IMF

A-5

ABUTTER AND/OR PUBLIC COMMENT LETTERS

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

Regarding Development of 112 Front Street

1 message

Jim Nealon <momo_22101@yahoo.com> Thu, Jan 30, 2025 at 9:21 PM
Reply-To: Jim Nealon <momo_22101@yahoo.com>
To: "deastman@exeternh.gov" <deastman@exeternh.gov>, "bmcevoy@exeternh.gov" <bmcevoy@exeternh.gov>, Kristin new X <momo_22101@yahoo.com>

Please ensure that this letter is included in the package for the Planning Board. Thank you.

Dear Mr. Eastman, Ms. McEvoy and the Exeter Planning Board:

My name is James Nealon and I live at 5 Gill St. Our property abuts 112 Front Street, where a developer has proposed knocking down a 160 year old building and replacing it with a 17 unit, high-density development.

I have scrutinized the Planning Board's website and read again, with great interest, the Master Plan. I was gratified to be reminded that the Master Plan lays out a clear vision for the town:

"Our community will continue to see our natural landscapes, historic setting, and rich culture as the foundation for shaping our future. Our local government, residents, and business owners will act as stewards of our precious resources and we will work to connect these special places in a way that fosters enjoyment and healthy living. Our community will continue to grow so that we can maintain its vibrancy for future generations, and development will occur in a way that bolsters the local economy, provides options for good homes, and respects the natural and cultural setting that is central to our identity."

It is also gratifying to know that the Planning Board, as one of the key "stewards" cited in the Plan, exists to serve the interests of the town and its residents. Those of us who abut 112 Front Street are confident that the Planning Board will pay very close attention to our equities and not just rubber stamp the wishes of the developer.

I have two sets of issues with the proposed development at 112 Front Street and I hope you will give careful consideration to both.

Exeter's Cultural Heritage

First, As the Strategic Plan makes clear and as every citizen of our town knows, Exeter is special. And a key element that makes our town so special is that we have a richness of cultural heritage that other towns don't have. Our stock of historic housing is something that every visitor comments on. But we are losing that heritage house by house. At the demolition hearing for 112 Front Street, a committee member lamented that there was nothing that the town can do to prevent historic homes from being torn down. In fact there is: We can stop tearing down historic homes, in this case an iconic 160 year old dwelling.

While 112 Front is not in the town's historic district, it is very close. And it abuts the Gill Street neighborhood which dates from the 1890s and is one of the most beautiful and iconic streets in town, with it's own special character. Heading out of town on Front Street we have a mish mash of zoning and architecture that nobody can claim fits with the town's character. The future of the property at 112 Front Street presents the town and the Planning Board with the opportunity to draw a line between development that is appropriate to the town's character and the existing hodge-podge.

The proposed development at 112 Front Street is a high-density, multi-unit footprint that is way out of character with the neighborhood. The proposed 17 units with 36 parking places implies a huge footprint on a small piece of land which will forever change the area. Remember what your mother told you: Just because you CAN do something doesn't mean you SHOULD do something. I hope the Board will listen to the overwhelming consensus among the abutters that the proposed development is too dense and too out of character.

Specific Issues

In addition to the above "macro" issues, I have a number of more specific questions that need to be answered. I hope the Board will listen to my concerns as well as those of other citizens, slow the process down, and give us time to sit down with the developer and get commitments in writing. As the Board well knows, verbal commitments carry no weight in law.

I am concerned about the setback of the driveway; the snow storage area; runoff from snow storage and the parking lot; contamination of my property from salt, pesticides and other contaminants; line of sight issues (as proposed, the dwelling units will be over 30 feet tall and will have line of sight into our living spaces); screening; noise; lighting; traffic; and a host of other issues.

I will attend the walk-through of the property on February 6 and the next meeting of the Planning Board on February 13. Like my fellow citizens, I look forward to the opportunity to voice my concerns and have them weighed against the wishes of the developer. In the spirit of our great town, I'm sure we can come to a win-win and not a win-lose solution. Again, you represent us. I know you will honor the Master Plan's vision - Exeter's "historic setting, and rich culture as the foundation for shaping our future."

Respectfully,

James Nealon
5 Gill Street

My previous letter to the Board:

Dear Mr. Eastman:

My name is James Nealon and my wife and I live at 5 Gill Street. My property abuts 112 Front Street which is slated for demolition and the property for development.

Along with about 20 others, I attended the public hearing last night convened by the Heritage Committee's sub-committee on demolition.

Let me say up front that the committee meeting was very confusing to those of us in attendance. There were no introductory remarks regarding the role of the committee, their purview, the purpose of the public hearing, potential outcomes, or timelines. Towards the end of the meeting I asked if the committee members could back up and give us those details but we left without that information, including without a precise definition of the timeline. We were left with the impression that the committee could recommend denying permission to demolish the house at 112 Front Street. The developer, who was present, said that in fact there was no way to prevent demolition. You understand our confusion. I've served on countless boards and committees and transparency and communication are always the most important elements of committee work.

All that said, I'd like to make sure you and the planning commission are aware of the concerns of the abutters and other neighbors and concerned citizens. Those concerns were well articulated at the hearing and we're all available to provide further commentary if that would be helpful. One property owner in particular made a very pragmatic and sensible suggestion. In response to a committee member who hinted that there was nothing that could be done to prevent the knocking down of historic buildings, she responded that in fact there is something that could be done: Exeter could stop knocking down historic properties.

Another excellent point made by a property owner is that we have an opportunity with the Front Street property to draw a line between the historic district, which begins just a couple hundred yards down Front Street, and the ghastly mishmash of development in the other direction. Let's make sure that the "ghastly" ends where it currently sits. Exeter is still a beautiful town but it is losing that charm one building at a time.

So, to summarize: The process is poorly explained and confusing. The potential outcomes are not clear. The timeline has not been communicated. I want to make sure that the abutters and other concerned citizens receive timely notification of every upcoming meeting regarding 112 Front Street. Thank you for your attention and I look forward to active participation in this process.

James Nealon
5 Gill Street

cc: Kristin Nealon and Gill St. property owners

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

112 Front Street Concerns

1 message

Adele Russman <agr27@yahoo.com> Fri, Jan 31, 2025 at 4:45 PM
To: "deastman@exeternh.gov" <deastman@exeternh.gov>, "bmcevoy@exeternh.gov" <bmcevoy@exeternh.gov>

To the Planning Board:

My name is Adele Robertson and I live at 106 Front Street which abuts the property at 112 Front Street. As the Board is aware a developer is proposing to tear down the historic home at 112 Front Street and replace it with a high-density townhouse development.

I have lived at 106 Front Street, for 37 years, buying the property August 17, 1987. My family and I were drawn to the neighborhood because of its historic charm and special character. Tearing down the 160 year old house and replacing it with 17 townhouses and the accompanying vehicles (36 parking spaces), pavement, outbuildings, lighting, noise, traffic, the tearing down of old trees, the runoff from salt, pesticides and snow into my yard - all of this is grossly out of character with the existing neighborhood. I am in full agreement with the other abutters and neighborhood residents that the proposed development is way out of scale and character to our historic neighborhood.

In addition, I have very specific concerns that I would like to see addressed in writing. As the proposed buildings are over 30 feet tall, no amount of screening will prevent line of sight into my house. There are six windows from my site line that look directly at the proposed site.

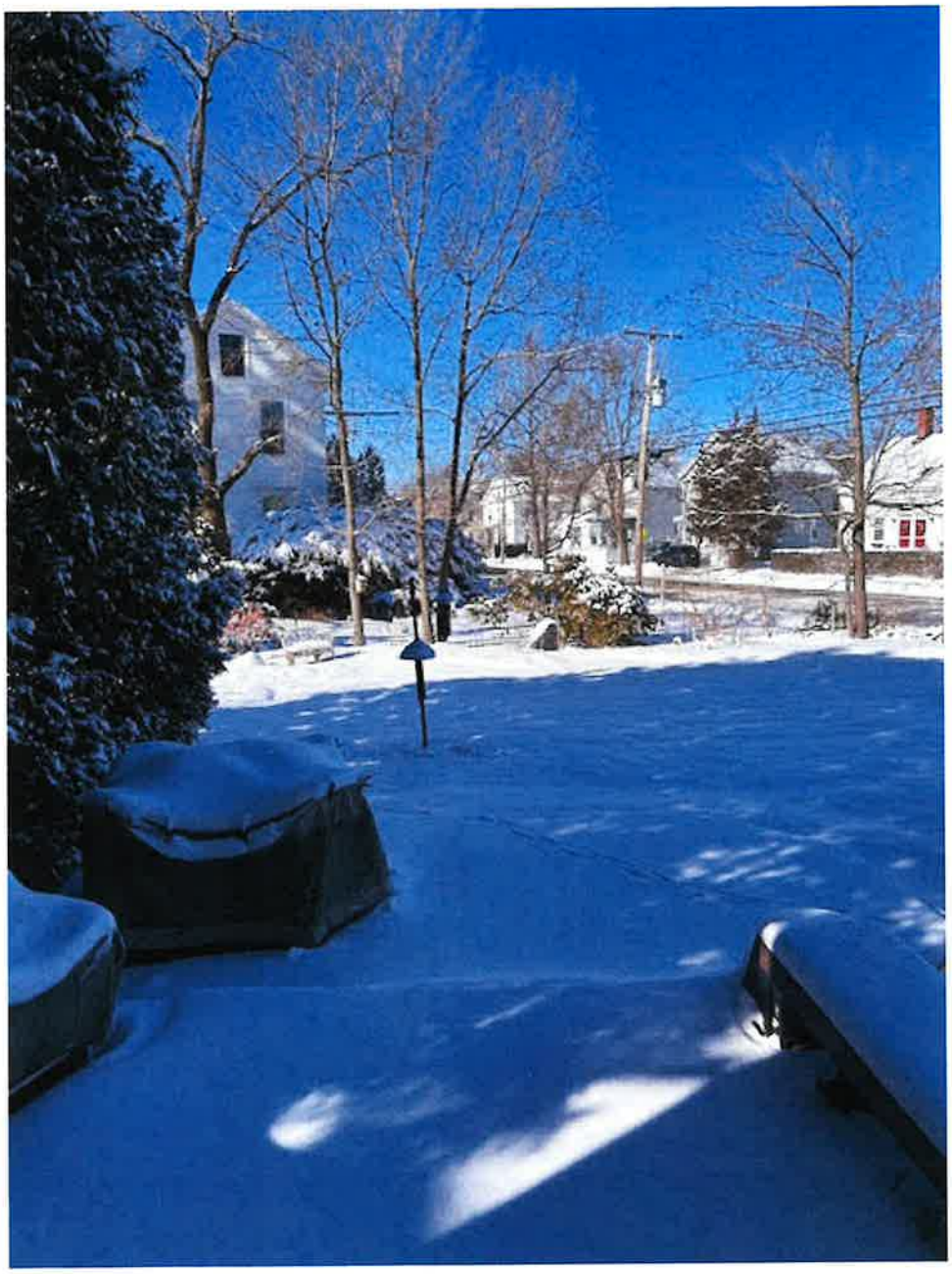
I'm also very concerned about the driveway, which runs right up against my fence line. Is there only one way in and out of the property? This seems dangerous for a high-density development

with 36 vehicles on site. What happens when emergency vehicles must get in? How do people get out?
I love our town and both I and my late husband, Carl Robertson taught school here for decades. My son has his law practice right down the street. I am deeply invested in Exeter's rich cultural heritage and hope that the Planning Board, as stewards of our special character, will think deeply about the implications of this proposed development.

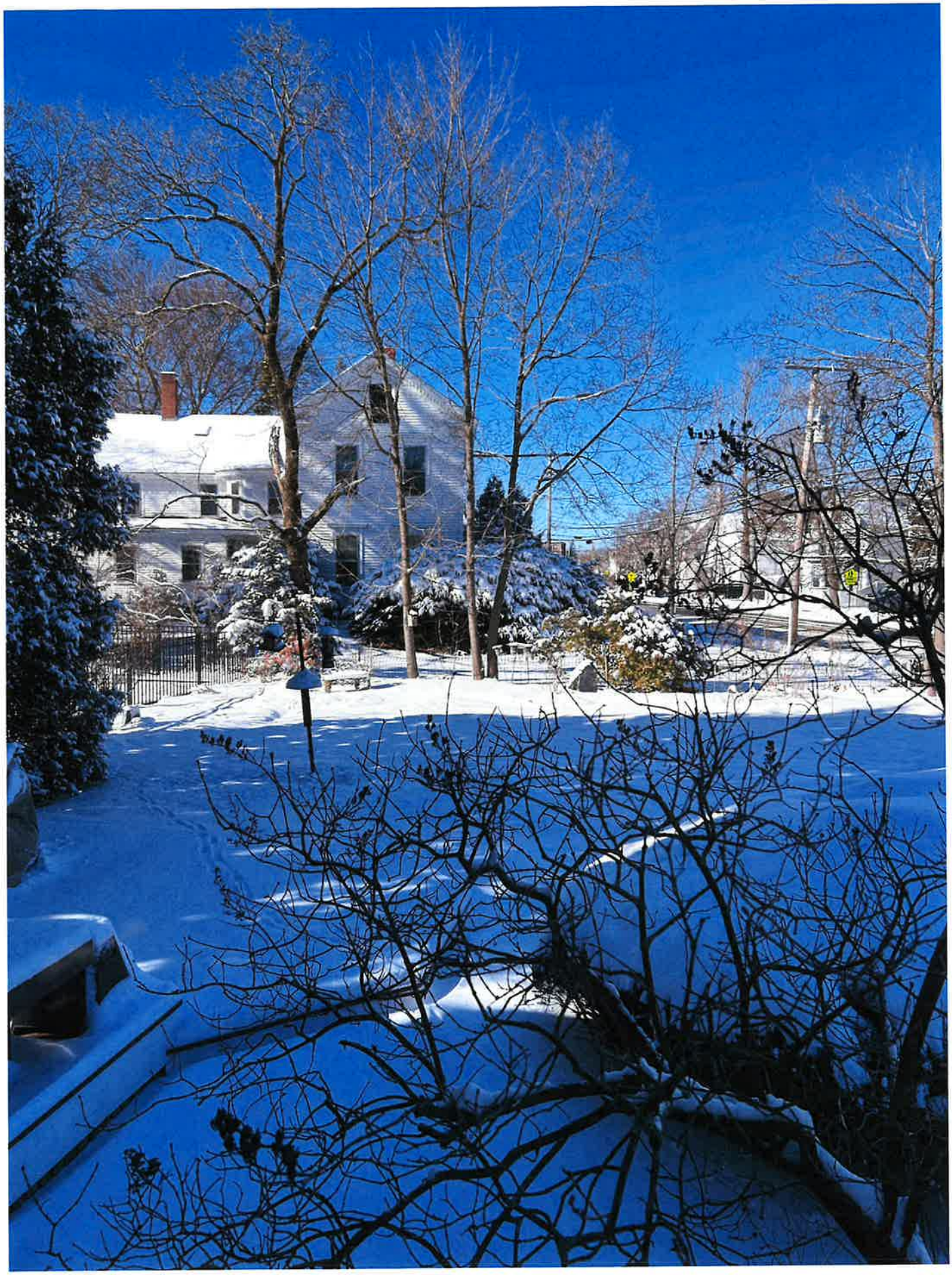
See attached photos·

There are two additional bedroom windows on the **3rd floor** that over look the proposed site.

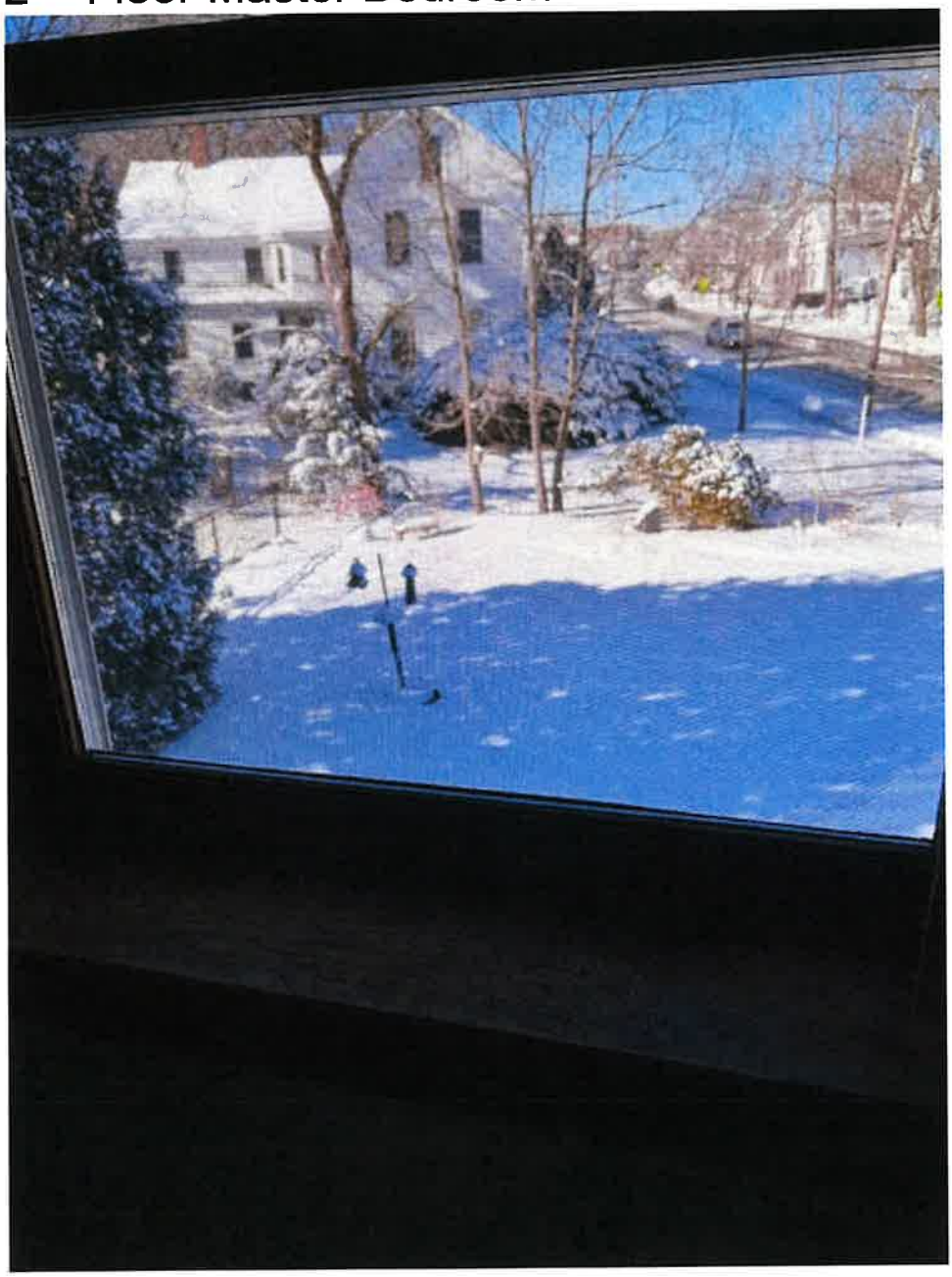
1st Floor Deck Window



1st Floor, full ceiling floor window



2nd Floor Master Bedroom



Respectfully,

Adele Robertson

106 Front Street

Exeter, New Hampshire 03833

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

Objection to 112 Front Street Proposed Development--please include in Planning Board materials for February 13

1 message

Wolff, Ellen <ewolff@exeter.edu> Sun, Feb 2, 2025 at 4:15 PM
To: "deastman@exeternh.gov" <deastman@exeternh.gov>, "bmcevoy@exeternh.gov" <bmcevoy@exeternh.gov>
Cc: "Wolff, Ellen" <ewolff@exeter.edu>

Dear Mr. Eastman and Planning Board:

My name is Ellen Wolff and I live at 3 Gill Street. I am writing to object to the proposed demolition of 112 Front Street and construction of a 17-unit development on that property.

Please include this letter in the Planning Board's packet for the next meeting.

I have lived in Exeter for 30 years and oppose the demolition of an historic house so close to the town's Historic District and to so many other historic homes. As for the proposed 112 Front Street development: it would entail a visible and distressing encroachment on the nearby historic neighborhood. Its 17-unit density (in 30-feet tall structures) and footprint (including 36 parking spaces), not to mention the resulting light pollution and traffic, would tangibly impinge on the character of this gateway neighborhood and on my and my neighbors' use and enjoyment of our historic properties.

I fervently hope the Board will heed my and others' strenuous opposition to the proposed development, which would be detrimental to the rich historic and cultural character of our unique town.

Sincerely,

Ellen Wolff

3 Gill Street

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

Development of 112 Front Street

1 message

Brett Hall <thydian@gmail.com> Sun, Feb 2, 2025 at 10:08 PM
To: deastman@exeternh.gov
Cc: bmcevoy@exeternh.gov

Dear Mr. Eastman and Planning Board:

My name is Brett Hall, and I have been a resident of Exeter for 15 years. My wife and I originally purchased a home at 9 Gill Street, and we currently reside at 17 Gill Street. Our property abuts 112 Front Street, which includes a historic home slated for demolition and a parcel soon to be developed. We wanted to express our concern for 1) the proposed density and scale of the development plan and 2) the environmental impact of the proposed build on local wildlife and abutting neighbors.

Although we have always expected an eventual development of the open parcel of land, we were dismayed by a build to the scale of a high-density, 17-unit townhouse development with a multitude of parking spaces and dwellings over 30 feet tall. The historic charm and character of the Gill Street neighborhood, with its single-family homes dating back to the late 1800s, is integral to the identity of this town. The proposed townhouse development has a strongly conflicting sensibility, with densely packed dwellings and building heights too out of proportion with abutting properties.

Front Street is a high-volume pedestrian and vehicle traffic area anchored by two elementary schools, The Seacoast School of Technology, the YMCA and other local businesses. We have concerns for the negative impact the new high-density housing development will have feeding into the existing and sometimes challenging traffic patterns.

The current green space and trees within and adjacent to the property are busy habitats for resident and migrating birds, with proximity to Little River and the Morrissette Conservation Property. The parcel is a recurring site for mating American Woodcock species in the spring and the tall trees are frequent perches for Red Tailed hawks, Coopers hawks, Merlins and a multitude of North American backyard birds. Does the development proposal maintain most if not all of the many existing trees on the property and will the plan include adding natural landscaping in support of local birds and wildlife to replace the lost green space?

I plan to attend the Board walk-through on the property on February 6. I look forward at that time to learning more about the proposed development and how our concerns are being addressed.

Sincerely,

Brett Hall
17 Gill Street

Please include this letter in the Board's package for the next meeting.

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

Proposed Development at 12 Gill Street

1 message

Don J Briselden <briseldens@live.com> Mon, Feb 3, 2025 at 11:36 AM
To: Doug Eastman <deastman@exeternh.gov>, "bmcevoy@exeternh.gov" <bmcevoy@exeternh.gov>
Cc: "nbelanger@exeternh.gov" <nbelanger@exeternh.gov>, Jim Nealon <momo_22101@yahoo.com>, Kristin Nealon <nealonkristin@gmail.com>, "cfrench.planner@gmail.com" <cfrench.planner@gmail.com>, Dana Gastich French <dana.gastich@gmail.com>, Mary Jo Briselden <mjbriselden@outlook.com>

To: Doug Eastman, Town Code Enforcement Officer, and Langdon Plumer, Planning Board Chairman.

We, Don and Mary Jo Briselden, are residents of 12 Gill Street, Exeter and as such have an acute interest in the proposed demolition of the home at 112 Front Street and the proposed development of the property to include 17 town houses; which abuts the Gill Street neighborhood. The proposed development significantly and negatively impacts the direct abutters and those of us who own homes in the Gill Street neighborhood. The proposed development is out of character for the surrounding community, is much too dense with 17 proposed units, will aggravate traffic flow in the area, and has the potential of negatively impacting the neighborhood property values.

We disagree with the proposal to demolish the former Merrill home at 112 Front Street. As the Town's Strategic Plan makes clear and as every citizen of our town knows, Exeter is special. And a key element that makes our town so special is that we have a rich cultural heritage that other towns don't have. Our stock of historic housing is something that every visitor comments on. But we are losing that heritage house by house. At the Heritage Committee's demolition hearing for 112 Front Street, a committee member lamented that there was nothing that the town could do to prevent historic homes from being torn down. In fact, there is: We can stop tearing down historic homes, in this case this iconic 160-year-old dwelling that was the home of one of Exeter's prominent families. Contrary to what the developer asserts, that the building should be demolished and not renovated, we believe that it should be renovated, and if the development goes forward, be part of the development plan.

While 112 Front is not in the town's historic district, it is very close. And it abuts the Gill Street neighborhood which dates from the 1890s and is one of the most beautiful and iconic streets in town, with its own special character. The future of the property at 112 Front presents the town and the Planning Board with the opportunity to guide and approve development that is appropriate to the town's character.

The proposed development at 112 Front Street is a high-density, multi-unit footprint that is way out of character with the neighborhood. The proposed 17 units with 36 parking places results in a huge footprint on a small piece of land which will forever change the area, including the Gill Street neighborhood. We trust that the Board will listen to the overwhelming consensus among the abutters and the Gill Street neighbors; that the proposed development is too dense and too out of character, and as a result will not approve the proposed development plan.

Sincerely:

Don and Mary Jo Briselden
12 Gill Steet, Exeter, NH

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

112 Front Street proposed development - letter from abutters at 9 Gill St.

1 message

Dana Gastich French <dana.gastich@gmail.com> Mon, Feb 3, 2025 at 11:50 AM
To: Doug Eastman <deastman@exeternh.gov>, "bmcevoy@exeternh.gov" <bmcevoy@exeternh.gov>
Cc: Evagelia Maskwa <egeorgakilas@gmail.com>, Nealon Kristin <nealonkristin@yahoo.com>, Nealon Jim <momo_22101@yahoo.com>, Atkins Dale Ann <atkins.dale@gmail.com>, Robertson A <Agr27@yahoo.com>, AnnMarie Powers <annmariepowers@hotmail.com>, Vince Powers <vppowers@hotmail.com>, MINI MAHATA <mmahata1@gmail.com>, Briselden Don J <briseldens@live.com>, Mary Jo briselden <mjbriselden@outlook.com>, Charlie French <cfrench.planner@gmail.com>

Dana and Charles Gastich French
9 Gill Street
Exeter, NH 03833
Friday, January 31, 2025

Planning Board
Exeter, NH 03833

Subject: Concerns Regarding Proposed Development Project

Dear Mr. Eastman and Members of the Planning Board,

We are writing as residents of 9 Gill Street, abutters to the proposed property development at 112 Front Street and a family of 5 who values our neighborhood, its pride and character, and our thus far private backyard. We would like to express our concerns regarding the scale and impact of the proposed development adjacent to our neighborhood. While we recognize the need for additional housing and welcome thoughtful development, we believe that the current proposal does not adequately integrate with or preserve the existing character of our community.

The property in question runs between Gill Street and Parker Street, both of which are tree-lined residential neighborhoods of proudly maintained single-family homes. A development of the proposed scale threatens to disrupt the character and privacy of our community, particularly given the density and the height of the planned structures. We strongly urge reconsideration of the project's size and design to better align with the surrounding neighborhood.

Additionally, we request that proactive measures be taken to mitigate the impact on current residents. Specifically, we ask that a 6' privacy fence and tall, mature plantings be included along the full length of Gill Street, with clear commitments for their maintenance and replacement as needed. We request these assurances be documented in writing to ensure their implementation.

As members of this community, we support responsible and well-integrated development that meets the need for housing without overwhelming the existing neighborhood. We respectfully ask the board to consider modifications to the proposal that would allow for a more harmonious transition between new and existing residences.

Thank you for your time and attention to these concerns. We appreciate your efforts in balancing the growth of our town with the preservation of its neighborhoods.

Sincerely,

Dana and Charles Gastich French
9 Gill Street
Exeter, NH 03833

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

112 Front street Project

1 message

MICHAEL URBANO <MICHAELURBANO1@msn.com> Mon, Feb 3, 2025 at 3:47 PM
To: "bmcevoy@exeternh.gov" <bmcevoy@exeternh.gov>, "deastman@exeternh.gov" <deastman@exeternh.gov>

Hello,

My name is Michael Urbano and I live at 6 Gill street around the corner from the proposed 112 Front street project. I have a few concerns about the proposal in its current form I wish to highlight. I feel it's much too large in scope for the property as well as the neighborhood. Building 17 units is not, in my opinion, in keeping with the character of the street. In comparison we currently have only 13 homes on Gill street. A better example of responsible new development would be 102 Front street in which they updated the current property while providing more housing without changing the character of the street. I understand the responsibility of the city to provide more housing for its residents, but I don't think it needs to be on this scale.

The density of cars and traffic will also make worse our already unsafe traffic flow created by 3 nearby schools (Seacoast School of Technology, Lincoln Street School and the Exeter Developmental preschool), poor intersection site lines, difficult to enforce excessive speeds and an outdated intersection at Pine, Linden and Front street. However the board plans to vote I hope they consider a traffic study impact prior to approval.

Please reconsider approval of this project in its current form. Thank you for taking time to read my and all of our neighbor's concerns and thank you both for serving our city. We really love Exeter and where we live but I'm afraid I cannot support this project. Could you also include this letter in the board's package for the next meeting.

Sincerely,

Michael Urbano

Town of Exeter

Barbara Mcevoy <bmcevoy@exeternh.gov>

Concerns Regarding Development 112 Front St

1 message

AnnMarie Powers <annmarie-powers@outlook.com> Thu, Feb 6, 2025 at 2:37 PM
To: "deastman@exeternh.gov" <deastman@exeternh.gov>, "bmcevoy@exeternh.gov" <bmcevoy@exeternh.gov>
Cc: My Husband Vince <vppowers@hotmail.com>

AnnMarie and Vince Powers

13 Gill Street

Exeter, NH 03833

February 5, 2025

Dear Mr. Eastman and Members of the Planning Board,

Vince and I are residents of 13 Gill Street, abutters to the proposed property development at 112 Front Street.

We would like to express our concerns regarding the scale and impact of the proposed development. While we recognize the need for additional housing we would like to respectfully request that the Planning Board consider reducing the number of units in order to align with the neighborhoods character as well as ensure minimal disruption to the environment. We believe that the current proposal does not adequately integrate with or preserve the existing character of our community.

In particular, we are most concerned about the impact of the development on the natural landscape, especially the trees along the property line. These mature trees serve as an important role in providing a natural green screen that helps preserve the visual and environmental integrity of the area. The preservation of this tree line is essential to maintaining the ascetic as well as reducing artificial light exposure to the properties along Gill Street. The old growth trees keep the environmental value of the neighborhood, as well as ensuring privacy for existing residents. Maintaining this green space will not only enhance the visual appeal of the development but also contribute to the ecological health of the area.

A smaller scale development could help mitigate other potential issues. Increased traffic with the density of 17 units could cause strain on local infrastructure to an already congested area along Front Street. Additionally with the higher volume of people and cars, noise pollution with be exacerbated.

We appreciate your attention to these concerns and hope that you will consider a thoughtful approach that balances the need for new housing with the preservation of our community's natural environment. We ask for a written commitment from the developer to keep the integrity and maintenance of the tree line along the Gill Street property line. We are also asking for a reduction in the number of units to align with the existing neighborhood environment. We respectfully ask the board to consider these modifications.

Thank you for your time and attention to this matter.

Sincerely,

AnnMarie and Vince Powers

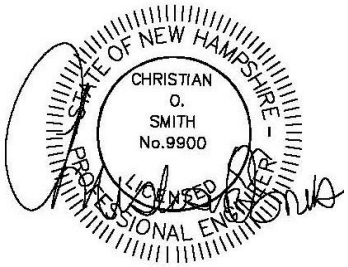
DRAINAGE ANALYSIS & SEDIMENT AND EROSION CONTROL PLAN

Prepared for:
112 FRONT STREET, LLC
RESIDENTIAL DEVELOPMENT

Prepared by:

BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVENUE
STRATHAM, NH 03885

Project Number:
NH-1531
112 Front Street
Exeter, New Hampshire
December 9, 2024
Revised January 17, 2025



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1.0 ANALYSIS SUMMARY

112 Front Street, LLC proposes to construct a residential development to establish 17 residential units on a 1.6+/- acre parcel located at 112 Front Street in Exeter, New Hampshire. A drainage analysis of 1.6 acres of the proposed site improvement was conducted for the purpose of estimating the peak rate of stormwater run-off and to subsequently design adequate drainage structures. Two models were compiled: one for the area in its existing (pre-construction) condition and a second for its proposed (post-construction) condition. The analysis was conducted using Extreme Precipitation data provided by Cornell University for the following 24-hour duration storm events:

Storm Event	Rainfall Depth (inches)
WQV	1.00
2-Year	3.21
10-Year	4.89
25-Year	6.23
50-Year	7.48

These storm events use the USDA NRCS TR-20 method within the HydroCAD Stormwater Modeling System environment to model the rainfall and predict stormwater runoff flows and volumes. A Type III storm pattern was used in the model. The purpose of this analysis is to estimate the peak rates of run-off from the site for detention adequacy purposes, and to compare the peak rate of run-off between the existing and proposed conditions.

Peak Rate of Discharge

		Component Peak Rate of Discharge (CFS)				
Analysis Point # Analysis Point Description	**Condition**	**WQV**	**2-Year**	**10-Year**	**25-Year**	**50-Year**
Reach #100	Existing	0.00	0.13	0.55	0.98	1.44
Southeast	Proposed	0.00	0.04	0.18	0.32	0.48
Reach #200	Existing	0.06	0.34	1.00	1.65	2.32
East	Proposed	0.00	0.02	0.09	0.17	0.26
Reach #300	Existing	0.03	0.12	0.21	0.29	0.37
East	Proposed	0.00	0.01	0.01	0.02	0.03
Reach #400	Existing	0.01	0.06	0.16	0.26	0.36
North	Proposed	0.00	0.01	0.04	0.07	0.10
Reach #500	Existing	0.02	0.06	0.13	0.19	0.24
Northeast	Proposed	0.03	0.12	0.21	0.28	0.36

Channel Protection

Analysis Point # Analysis Point Description	Condition	2-Year Storm Volume (Acre-Feet)
Reach #100	Existing	0.021
Southeast	Proposed	0.007

Reach #200 East	Existing Proposed	0.041 0.002
Reach #300 East	Existing Proposed	0.010 0.000
Reach #400 North	Existing Proposed	0.006 0.001
Reach #500 Northeast	Existing Proposed	0.005 0.010

The proposed residential development includes a driveway off of Front Road at the same location as the existing driveway along with parking and maneuvering areas on site. The proposed improvement area includes five different sub-catchments. The peak rate of run-off and channel protection volumes in the proposed conditions are decreased from that of the existing conditions, due to the addition of infiltration basins and a porous pavement system, except for Reach #500 where there is a slight increase due to the conventional pavement placed along the driveway entrance. All roadway runoff, except the conventional pavement at the entrance, receives treatment from the porous pavement system including a sand filter course prior to infiltrating into the ground below. In addition, the potential for increased erosion and sedimentation is handled by way of silt barrier surrounding the disturbed areas. The use of Best Management Practices per the Rockingham Conservation District / DES Handbook have been applied to the design of these structures and will be observed during all stages of construction. All land disturbed during construction will be stabilized within 30 days of groundbreaking. Existing wetlands and abutters will suffer no adverse effects resulting from this proposed development.

2.0 EXISTING CONDITIONS ANALYSIS

The existing property is located on a parcel consisting of a single-family residence with a gravel driveway, trees and woodlands, and lawn areas. The existing topography is such that the site analysis is divided into five sub-catchments within the area proposed to be improved. Final Reach #100 flows to the southeast of the proposed improvement area, Reaches #200 and #300 flow to east, Reach #400 flows north towards Front Street, and Reach #500 flows into a catch basin in Front Street.

Classified by Site-Specific Soil Mapping, the land is composed of flat slopes and soils categorized into the Hydrologic Soil Group (HSG) B (See appendix for Hiss/HSG designations).

3.0 PROPOSED CONDITIONS ANALYSIS

The addition of the impervious area, clearing of trees, and grading of slopes causes an increase in the curve number (Cn) and a decrease in the time of concentration (Tc) which results in a potential increase in peak rates of run-off from the site. To reduce these flows to pre-development conditions, various stormwater management systems will be proposed. Porous pavement is proposed in lieu of traditional impervious pavement for the majority of the site along with two

infiltration ponds. The proposed development divides the site into five different post-construction sub-catchments. The run-off is directed to the pervious pavement or infiltration ponds through HydroCAD “reaches” and “ponds”.

In an effort to prevent the sedimentation of abutting properties, the majority of the roofs will be directed via pipe to the underground reservoir course of the porous pavement system, pavement areas will directly infiltrate into the porous pavement system, and other areas will be directed towards infiltration ponds. During construction, appropriate Best Management Practices (BMP's) will be applied so as to negate the potential for sediment-laden run-off to discharge towards abutting properties prior to the final stabilization of the proposed grading. The structures outlined in this proposal provide for adequate treatment of stormwater run-off for sediment control. Based on NHDES pollutant removal efficiencies, each of the infiltration ponds and permeable pavement system will result in a reduction of Total Suspended Solids (TSS) of 90%, Total Nitrogen (TN) of 60%, and Total Phosphorous (TP) of 65%.

4.0 SEDIMENT & EROSION CONTROL PLANS BEST MANAGEMENT PRACTICES (BMP’s)

The proposed site development is protected from erosion and the roadways and abutting properties are protected from sediment by the use of Best Management Practices as outlined in the New Hampshire Stormwater Manual. Any area disturbed by construction will be re-stabilized within 30 days, and abutting properties and wetlands will not be adversely affected by this development. All swales and drainage structures will be constructed and stabilized prior to having run-off directed to them.

4.1 Silt Barrier / Construction Fence

The plan set demonstrates the location of silt barriers for sediment control. The Erosion and Sediment Control Details sheet has the specifications for installation and maintenance of the silt barriers selected for the site. In areas where the limits of construction need to be emphasized to operators, construction fence for added visibility will be installed. Orange construction fence will be VISI Perimeter Fence by Conwed Plastic Fencing, or approved equal. The four-foot construction fencing is to be installed using six-foot posts buried at least two feet into the ground spaced six to eight feet apart.

4.2 Vegetated Stabilization

All areas that are disturbed during construction will be stabilized with vegetated material within 30 days of disturbance. Construction will be managed in such a manner that erosion is prevented and that no abutter’s property will be subjected to any siltation, unless otherwise permitted. All areas to be planted with grass for long-term cover will follow the specifications on Sheet E-1 using the seeding mixture below:

Mixture C	Pounds per Acre	Pounds per 1,000 sf
Tall Fescue	20	0.45
Creeping Red Fescue	20	0.45
Birdsfoot Trefoil	8	0.20
Total	**48**	**1.10**

4.3 Stabilized Construction Entrance/Exit

A temporary gravel construction entrance/exit provides an area where mud can be dislodged from tires before the vehicle leaves the construction site to reduce the amount of mud and sediment transported onto paved municipal and state roads. The stone size for the gravel pad should be between 1- and 2-inch coarse aggregate and the pad itself constructed to a minimum length of 50' for the full width of the access road. The aggregate should be placed at least six inches thick. The Erosion and Sediment Control Details sheet has the plan and profile view details.

4.2 Drainage Swales / Stormwater Conveyance Channels

Drainage swales will be stabilized with vegetation for long term cover as outlined below using seed mixture C. As a general rule, velocities in the swale should not exceed 3.0 feet per second for a vegetated swale although velocities as high as 4.5 FPS are allowed under certain soil conditions.

4.5 Level Spreaders

Level spreaders enable any run-off directed towards them to be spread evenly into sheet flow prior to discharge into wetlands or treatment by a filter strip, thus allowing for better filter strip efficiency and a lesser potential for erosion.

4.6 Vegetated Buffers

Vegetated buffers are areas of land with natural or planted vegetation designed to receive sheet run-off from upgradient development. These natural areas, preferably wooded, are effective in removing sediment and sediment-laden pollutants from such run-off, although their effectiveness is severely diminished when forced to deal with concentrated flow and must therefore be equipped with a level-spreading device. Vegetated buffers should not have a slope exceeding fifteen percent and have a minimum length of seventy-five feet.

4.6 Filter Strips

Filter strips are areas of land with natural or planted vegetation designed to receive sheet run-off from upgradient development. These natural areas, preferably wooded, are effective in removing sediment and sediment-laden pollutants from such run-off, although their effectiveness is severely diminished when forced to deal with concentrated flow and must therefore be equipped with a level-spreading device. Filter strips should not have a slope exceeding fifteen percent and have a minimum length of seventy-five feet.

4.4 Environmental Dust Control

Dust will be controlled on the site using multiple Best Management Practices. Mulching and temporary seeding will be the first line of protection to be utilized where problems occur. If dust

problems are not solved by these applications, the use of water and calcium chloride can be applied. Calcium chloride will be applied at a rate that will keep the surface moist but not cause pollution.

4.5 Construction Sequence

1. Cut and remove trees in construction areas as directed or required.

2. Construct and/or install temporary and permanent sediment erosion and detention control facilities, as required. Erosion, sediment, and facilities shall be installed and stabilized prior to any earth moving operation, and prior to directing run-off to them.

3. Clear, cut, grub, and dispose of debris in approved facilities.

4. Excavate and stockpile topsoil / loam. All disturbed areas shall be stabilized immediately after grading.

5. Construct the paved area, drainage, and buildings.

6. Begin permanent and temporary seeding and mulching. All cut and fill slopes and disturbed areas shall be seeded and mulched as required or directed.

7. Daily, or as required, construct temporary berms, drainage ditches, sediment traps, etc. to prevent erosion on the site and prevent any siltation of abutting waters or property.

8. Inspect and maintain all erosion and sediment control measures during construction.

9. Complete permanent seeding and landscaping.

10. Remove temporary erosion control measures after seeding areas have established themselves and site improvements are complete. Smooth and re-vegetate all disturbed areas.

11. All swales and drainage structures will be constructed and stabilized prior to having run-off being directed to them.

4.6 Temporary Erosion Control Measures

1. The smallest practical area of land shall be exposed at any one time.

2. Erosion and sediment control measures shall be installed as shown on the plans and at locations as required, or directed by the engineer.

3. All disturbed areas shall be returned to original grades and elevations. Disturbed areas shall be loamed with a minimum of 4" of loam and seeded with not less than 1.10 pound of seed per 1,000 square feet (48 pounds per acre) of area.

4. Silt barriers shall be inspected periodically and after every rainstorm during the life of the project. All damaged areas shall be repaired and sediment deposits shall periodically be removed and properly disposed of.

5. After all disturbed areas have been stabilized, the temporary erosion control measures are to be removed and the area disturbed by the removal smoothed and revegetated.

6. Areas must be seeded and mulched within 5 days of final grading, permanently stabilized within 15 days of final grading, or temporarily stabilized within 30 days of initial disturbance of soil.

4.7 Inspection and Maintenance Schedule

Silt barriers shall be inspected during and after storm events to ensure that the fence still has integrity and is not allowing sediment to pass.

5.0 CONCLUSION

This proposed site development off of Front Street in Exeter, NH will have no adverse effect on the abutting property owners by way of stormwater run-off or siltation. The post-construction peak rates of run-off from the site towards abutters will be lower than the existing conditions for the storm events, as shown in the tables above. Appropriate steps will be taken to eliminate erosion and sedimentation; these will be accomplished through the construction of a drainage system consisting of porous pavement and infiltration ponds. The Best Management Practices developed by the State of New Hampshire have been utilized in the design of this system and these applications will be enforced throughout the construction process.

An Alteration of Terrain Permit (RSA 485: A-17) is not required for this project due to the area of disturbance being less than 100,000 square feet.

Respectfully Submitted,

BEALS ASSOCIATES, *PLLC*.

Christian O. Smith

Christian O Smith, PE
Principal

Appendix I

Existing Conditions Analysis

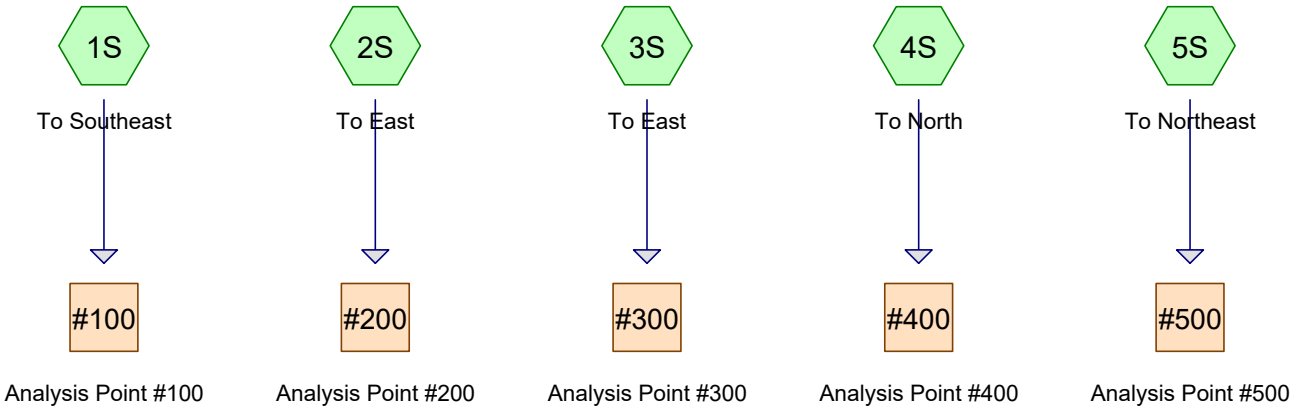
WQV 24-Hour Summary

2-Year 24-Hour Summary

10-Year 24-Hour Complete

25-Year 24-Hour Complete

50-Year 24-Hour Summary



Subcat Reach Pond Link

Routing Diagram for NH-1531 Existing
Prepared by Beals Associates, PLLC, Printed 1/15/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.072	61	>75% Grass cover, Good, HSG B (1S, 2S, 3S, 4S, 5S)
0.074	98	Paved parking, HSG B (2S, 3S, 4S, 5S)
0.073	98	Roofs, HSG B (2S, 3S, 4S)
0.355	55	Woods, Good, HSG B (1S, 2S, 3S, 4S, 5S)
1.574	**63**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.574	HSG B	1S, 2S, 3S, 4S, 5S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
1.574		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: To Southeast Runoff Area=26,874 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=261' Tc=18.6 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment2S: To East Runoff Area=32,169 sf 11.01% Impervious Runoff Depth=0.09"
Flow Length=216' Tc=10.9 min CN=WQ Runoff=0.06 cfs 0.005 af

Subcatchment3S: To East Runoff Area=3,132 sf 48.60% Impervious Runoff Depth=0.38"
Tc=6.0 min CN=WQ Runoff=0.03 cfs 0.002 af

Subcatchment4S: To North Runoff Area=4,156 sf 14.73% Impervious Runoff Depth=0.12"
Tc=6.0 min CN=WQ Runoff=0.01 cfs 0.001 af

Subcatchment5S: To Northeast Runoff Area=2,251 sf 33.05% Impervious Runoff Depth=0.26"
Tc=6.0 min CN=WQ Runoff=0.02 cfs 0.001 af

Reach #100: Analysis Point #100 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach #200: Analysis Point #200 Inflow=0.06 cfs 0.005 af
Outflow=0.06 cfs 0.005 af

Reach #300: Analysis Point #300 Inflow=0.03 cfs 0.002 af
Outflow=0.03 cfs 0.002 af

Reach #400: Analysis Point #400 Inflow=0.01 cfs 0.001 af
Outflow=0.01 cfs 0.001 af

Reach #500: Analysis Point #500 Inflow=0.02 cfs 0.001 af
Outflow=0.02 cfs 0.001 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.010 af Average Runoff Depth = 0.07"
90.64% Pervious = 1.427 ac 9.36% Impervious = 0.147 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: To Southeast Runoff Area=26,874 sf 0.00% Impervious Runoff Depth=0.42"
Flow Length=261' Tc=18.6 min CN=WQ Runoff=0.13 cfs 0.021 af

Subcatchment2S: To East Runoff Area=32,169 sf 11.01% Impervious Runoff Depth=0.67"
Flow Length=216' Tc=10.9 min CN=WQ Runoff=0.34 cfs 0.041 af

Subcatchment3S: To East Runoff Area=3,132 sf 48.60% Impervious Runoff Depth=1.64"
Tc=6.0 min CN=WQ Runoff=0.12 cfs 0.010 af

Subcatchment4S: To North Runoff Area=4,156 sf 14.73% Impervious Runoff Depth=0.76"
Tc=6.0 min CN=WQ Runoff=0.06 cfs 0.006 af

Subcatchment5S: To Northeast Runoff Area=2,251 sf 33.05% Impervious Runoff Depth=1.28"
Tc=6.0 min CN=WQ Runoff=0.06 cfs 0.005 af

Reach #100: Analysis Point #100 Inflow=0.13 cfs 0.021 af
Outflow=0.13 cfs 0.021 af

Reach #200: Analysis Point #200 Inflow=0.34 cfs 0.041 af
Outflow=0.34 cfs 0.041 af

Reach #300: Analysis Point #300 Inflow=0.12 cfs 0.010 af
Outflow=0.12 cfs 0.010 af

Reach #400: Analysis Point #400 Inflow=0.06 cfs 0.006 af
Outflow=0.06 cfs 0.006 af

Reach #500: Analysis Point #500 Inflow=0.06 cfs 0.005 af
Outflow=0.06 cfs 0.005 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.084 af Average Runoff Depth = 0.64"
90.64% Pervious = 1.427 ac 9.36% Impervious = 0.147 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: To Southeast Runoff Area=26,874 sf 0.00% Impervious Runoff Depth=1.24"
Flow Length=261' Tc=18.6 min CN=WQ Runoff=0.55 cfs 0.064 af

Subcatchment2S: To East Runoff Area=32,169 sf 11.01% Impervious Runoff Depth=1.57"
Flow Length=216' Tc=10.9 min CN=WQ Runoff=1.00 cfs 0.096 af

Subcatchment3S: To East Runoff Area=3,132 sf 48.60% Impervious Runoff Depth=2.85"
Tc=6.0 min CN=WQ Runoff=0.21 cfs 0.017 af

Subcatchment4S: To North Runoff Area=4,156 sf 14.73% Impervious Runoff Depth=1.68"
Tc=6.0 min CN=WQ Runoff=0.16 cfs 0.013 af

Subcatchment5S: To Northeast Runoff Area=2,251 sf 33.05% Impervious Runoff Depth=2.39"
Tc=6.0 min CN=WQ Runoff=0.13 cfs 0.010 af

Reach #100: Analysis Point #100 Inflow=0.55 cfs 0.064 af
Outflow=0.55 cfs 0.064 af

Reach #200: Analysis Point #200 Inflow=1.00 cfs 0.096 af
Outflow=1.00 cfs 0.096 af

Reach #300: Analysis Point #300 Inflow=0.21 cfs 0.017 af
Outflow=0.21 cfs 0.017 af

Reach #400: Analysis Point #400 Inflow=0.16 cfs 0.013 af
Outflow=0.16 cfs 0.013 af

Reach #500: Analysis Point #500 Inflow=0.13 cfs 0.010 af
Outflow=0.13 cfs 0.010 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.201 af Average Runoff Depth = 1.53"
90.64% Pervious = 1.427 ac 9.36% Impervious = 0.147 ac

Summary for Subcatchment 1S: To Southeast

Runoff = 0.55 cfs @ 12.29 hrs, Volume= 0.064 af, Depth= 1.24"
Routed to Reach #100 : Analysis Point #100

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
4,475	55	Woods, Good, HSG B
22,399	61	>75% Grass cover, Good, HSG B
0	98	Paved parking, HSG B
0	98	Roofs, HSG B
26,874		Weighted Average
26,874		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	21	0.0070	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.92"
4.4	29	0.0139	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.92"
4.1	196	0.0128	0.79		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	15	0.0267	0.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.6	261	Total			

Summary for Subcatchment 2S: To East

Runoff = 1.00 cfs @ 12.16 hrs, Volume= 0.096 af, Depth= 1.57"
Routed to Reach #200 : Analysis Point #200

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
8,913	55	Woods, Good, HSG B
19,715	61	>75% Grass cover, Good, HSG B
1,767	98	Paved parking, HSG B
1,774	98	Roofs, HSG B
32,169		Weighted Average
28,628		88.99% Pervious Area
3,541		11.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	50	0.0360	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.92"
5.9	157	0.0040	0.44		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	9	0.0060	0.54		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.9	216	Total			

Summary for Subcatchment 3S: To East

Runoff = 0.21 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 2.85"
Routed to Reach #300 : Analysis Point #300

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
645	55	Woods, Good, HSG B
965	61	>75% Grass cover, Good, HSG B
486	98	Paved parking, HSG B
1,036	98	Roofs, HSG B
3,132		Weighted Average
1,610		51.40% Pervious Area
1,522		48.60% Impervious Area

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

Summary for Subcatchment 4S: To North

Runoff = 0.16 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 1.68"
Routed to Reach #400 : Analysis Point #400

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
1,340	55	Woods, Good, HSG B
2,204	61	>75% Grass cover, Good, HSG B
231	98	Paved parking, HSG B
381	98	Roofs, HSG B
4,156		Weighted Average
3,544		85.27% Pervious Area
612		14.73% Impervious Area

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

Summary for Subcatchment 5S: To Northeast

Runoff = 0.13 cfs @ 12.09 hrs, Volume= 0.010 af, Depth= 2.39"
Routed to Reach #500 : Analysis Point #500

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
104	55	Woods, Good, HSG B
1,403	61	>75% Grass cover, Good, HSG B
744	98	Paved parking, HSG B
0	98	Roofs, HSG B
2,251		Weighted Average
1,507		66.95% Pervious Area
744		33.05% Impervious Area

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

Summary for Reach #100: Analysis Point #100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.617 ac, 0.00% Impervious, Inflow Depth = 1.24" for 10-YR event
Inflow = 0.55 cfs @ 12.29 hrs, Volume= 0.064 af
Outflow = 0.55 cfs @ 12.29 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #200: Analysis Point #200

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.738 ac, 11.01% Impervious, Inflow Depth = 1.57" for 10-YR event
Inflow = 1.00 cfs @ 12.16 hrs, Volume= 0.096 af
Outflow = 1.00 cfs @ 12.16 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #300: Analysis Point #300

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.072 ac, 48.60% Impervious, Inflow Depth = 2.85" for 10-YR event
Inflow = 0.21 cfs @ 12.09 hrs, Volume= 0.017 af
Outflow = 0.21 cfs @ 12.09 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #400: Analysis Point #400

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.095 ac, 14.73% Impervious, Inflow Depth = 1.68" for 10-YR event
Inflow = 0.16 cfs @ 12.09 hrs, Volume= 0.013 af
Outflow = 0.16 cfs @ 12.09 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #500: Analysis Point #500

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.052 ac, 33.05% Impervious, Inflow Depth = 2.39" for 10-YR event
Inflow = 0.13 cfs @ 12.09 hrs, Volume= 0.010 af
Outflow = 0.13 cfs @ 12.09 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: To Southeast Runoff Area=26,874 sf 0.00% Impervious Runoff Depth=2.08"
Flow Length=261' Tc=18.6 min CN=WQ Runoff=0.98 cfs 0.107 af

Subcatchment2S: To East Runoff Area=32,169 sf 11.01% Impervious Runoff Depth=2.44"
Flow Length=216' Tc=10.9 min CN=WQ Runoff=1.65 cfs 0.150 af

Subcatchment3S: To East Runoff Area=3,132 sf 48.60% Impervious Runoff Depth=3.92"
Tc=6.0 min CN=WQ Runoff=0.29 cfs 0.023 af

Subcatchment4S: To North Runoff Area=4,156 sf 14.73% Impervious Runoff Depth=2.56"
Tc=6.0 min CN=WQ Runoff=0.26 cfs 0.020 af

Subcatchment5S: To Northeast Runoff Area=2,251 sf 33.05% Impervious Runoff Depth=3.40"
Tc=6.0 min CN=WQ Runoff=0.19 cfs 0.015 af

Reach #100: Analysis Point #100 Inflow=0.98 cfs 0.107 af
Outflow=0.98 cfs 0.107 af

Reach #200: Analysis Point #200 Inflow=1.65 cfs 0.150 af
Outflow=1.65 cfs 0.150 af

Reach #300: Analysis Point #300 Inflow=0.29 cfs 0.023 af
Outflow=0.29 cfs 0.023 af

Reach #400: Analysis Point #400 Inflow=0.26 cfs 0.020 af
Outflow=0.26 cfs 0.020 af

Reach #500: Analysis Point #500 Inflow=0.19 cfs 0.015 af
Outflow=0.19 cfs 0.015 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.315 af Average Runoff Depth = 2.40"
90.64% Pervious = 1.427 ac 9.36% Impervious = 0.147 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: To Southeast Runoff Area=26,874 sf 0.00% Impervious Runoff Depth=2.95"
Flow Length=261' Tc=18.6 min CN=WQ Runoff=1.44 cfs 0.152 af

Subcatchment2S: To East Runoff Area=32,169 sf 11.01% Impervious Runoff Depth=3.34"
Flow Length=216' Tc=10.9 min CN=WQ Runoff=2.32 cfs 0.206 af

Subcatchment3S: To East Runoff Area=3,132 sf 48.60% Impervious Runoff Depth=4.96"
Tc=6.0 min CN=WQ Runoff=0.37 cfs 0.030 af

Subcatchment4S: To North Runoff Area=4,156 sf 14.73% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=WQ Runoff=0.36 cfs 0.028 af

Subcatchment5S: To Northeast Runoff Area=2,251 sf 33.05% Impervious Runoff Depth=4.41"
Tc=6.0 min CN=WQ Runoff=0.24 cfs 0.019 af

Reach #100: Analysis Point #100 Inflow=1.44 cfs 0.152 af
Outflow=1.44 cfs 0.152 af

Reach #200: Analysis Point #200 Inflow=2.32 cfs 0.206 af
Outflow=2.32 cfs 0.206 af

Reach #300: Analysis Point #300 Inflow=0.37 cfs 0.030 af
Outflow=0.37 cfs 0.030 af

Reach #400: Analysis Point #400 Inflow=0.36 cfs 0.028 af
Outflow=0.36 cfs 0.028 af

Reach #500: Analysis Point #500 Inflow=0.24 cfs 0.019 af
Outflow=0.24 cfs 0.019 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.434 af Average Runoff Depth = 3.31"
90.64% Pervious = 1.427 ac 9.36% Impervious = 0.147 ac

Appendix II

Proposed Conditions Analysis

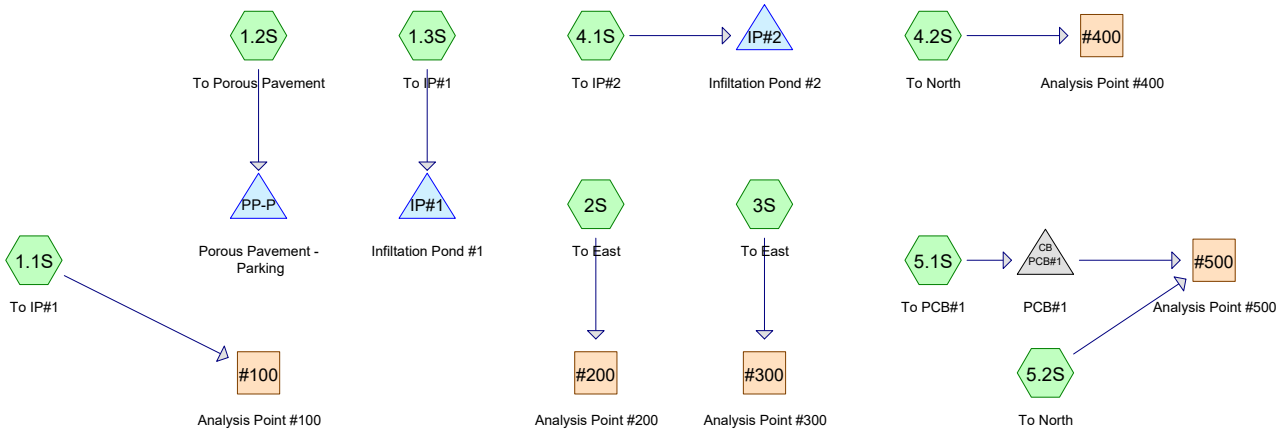
WQV 24-Hour Summary

2-Year 24-Hour Summary

10-Year 24-Hour Complete

25-Year 24-Hour Complete

50-Year 24-Hour Summary



Subcat Reach Pond Link

Routing Diagram for NH-1531 Proposed
Prepared by Beals Associates, PLLC, Printed 1/15/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.586	61	>75% Grass cover, Good, HSG B (1.1S, 1.2S, 1.3S, 2S, 3S, 4.1S, 4.2S, 5.1S, 5.2S)
0.429	98	Paved parking, HSG B (1.2S, 5.1S)
0.375	98	Roofs, HSG B (1.2S)
0.184	55	Woods, Good, HSG B (1.1S, 2S, 3S, 4.1S)
1.574	**79**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.574	HSG B	1.1S, 1.2S, 1.3S, 2S, 3S, 4.1S, 4.2S, 5.1S, 5.2S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
1.574		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: To IP#1 Runoff Area=9,610 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=313' Tc=19.6 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment1.2S: To Porous Pavement Runoff Area=36,151 sf 92.44% Impervious Runoff Depth=0.73"
Flow Length=26' Slope=0.0100 '/' Tc=64.6 min CN=WQ Runoff=0.26 cfs 0.051 af

Subcatchment1.3S: To IP#1 Runoff Area=5,562 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment2S: To East Runoff Area=3,589 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment3S: To East Runoff Area=500 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment4.1S: To IP#2 Runoff Area=9,290 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment4.2S: To North Runoff Area=1,190 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment5.1S: To PCB#1 Runoff Area=2,507 sf 63.90% Impervious Runoff Depth=0.51"
Tc=6.0 min CN=WQ Runoff=0.03 cfs 0.002 af

Subcatchment5.2S: To North Runoff Area=183 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Reach #100: Analysis Point #100 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach #200: Analysis Point #200 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach #300: Analysis Point #300 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach #400: Analysis Point #400 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach #500: Analysis Point #500 Inflow=0.03 cfs 0.002 af
Outflow=0.03 cfs 0.002 af

Pond IP#1: Infiltation Pond #1 Peak Elev=53.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Pond IP#2: Infiltation Pond #2 Peak Elev=52.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Pond PCB#1: PCB#1 Peak Elev=47.33' Inflow=0.03 cfs 0.002 af
6.0" Round Culvert n=0.010 L=29.0' S=0.0100 '/' Outflow=0.03 cfs 0.002 af

Pond PP-P: Porous Pavement - Parking Peak Elev=53.00' Storage=0 cf Inflow=0.26 cfs 0.051 af
Outflow=0.26 cfs 0.051 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.053 af Average Runoff Depth = 0.40"
48.94% Pervious = 0.771 ac 51.06% Impervious = 0.804 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: To IP#1 Runoff Area=9,610 sf 0.00% Impervious Runoff Depth=0.38"
Flow Length=313' Tc=19.6 min CN=WQ Runoff=0.04 cfs 0.007 af

Subcatchment1.2S: To Porous Pavement Runoff Area=36,151 sf 92.44% Impervious Runoff Depth=2.79"
Flow Length=26' Slope=0.0100 '/' Tc=64.6 min CN=WQ Runoff=0.93 cfs 0.193 af

Subcatchment1.3S: To IP#1 Runoff Area=5,562 sf 0.00% Impervious Runoff Depth=0.45"
Tc=6.0 min CN=WQ Runoff=0.04 cfs 0.005 af

Subcatchment2S: To East Runoff Area=3,589 sf 0.00% Impervious Runoff Depth=0.35"
Tc=6.0 min CN=WQ Runoff=0.02 cfs 0.002 af

Subcatchment3S: To East Runoff Area=500 sf 0.00% Impervious Runoff Depth=0.33"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Subcatchment4.1S: To IP#2 Runoff Area=9,290 sf 0.00% Impervious Runoff Depth=0.40"
Tc=6.0 min CN=WQ Runoff=0.06 cfs 0.007 af

Subcatchment4.2S: To North Runoff Area=1,190 sf 0.00% Impervious Runoff Depth=0.45"
Tc=6.0 min CN=WQ Runoff=0.01 cfs 0.001 af

Subcatchment5.1S: To PCB#1 Runoff Area=2,507 sf 63.90% Impervious Runoff Depth=2.06"
Tc=6.0 min CN=WQ Runoff=0.12 cfs 0.010 af

Subcatchment5.2S: To North Runoff Area=183 sf 0.00% Impervious Runoff Depth=0.45"
Tc=6.0 min CN=WQ Runoff=0.00 cfs 0.000 af

Reach #100: Analysis Point #100 Inflow=0.04 cfs 0.007 af
Outflow=0.04 cfs 0.007 af

Reach #200: Analysis Point #200 Inflow=0.02 cfs 0.002 af
Outflow=0.02 cfs 0.002 af

Reach #300: Analysis Point #300 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach #400: Analysis Point #400 Inflow=0.01 cfs 0.001 af
Outflow=0.01 cfs 0.001 af

Reach #500: Analysis Point #500 Inflow=0.12 cfs 0.010 af
Outflow=0.12 cfs 0.010 af

Pond IP#1: Infiltation Pond #1 Peak Elev=53.01' Storage=11 cf Inflow=0.04 cfs 0.005 af
Outflow=0.03 cfs 0.005 af

Pond IP#2: Infiltation Pond #2 Peak Elev=52.14' Storage=60 cf Inflow=0.06 cfs 0.007 af
Outflow=0.01 cfs 0.007 af

Pond PCB#1: PCB#1 Peak Elev=47.44' Inflow=0.12 cfs 0.010 af
6.0" Round Culvert n=0.010 L=29.0' S=0.0100 '/' Outflow=0.12 cfs 0.010 af

Pond PP-P: Porous Pavement - Parking Peak Elev=53.06' Storage=401 cf Inflow=0.93 cfs 0.193 af
Outflow=0.82 cfs 0.193 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.225 af Average Runoff Depth = 1.72"
48.94% Pervious = 0.771 ac 51.06% Impervious = 0.804 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: To IP#1 Runoff Area=9,610 sf 0.00% Impervious Runoff Depth=1.17"
Flow Length=313' Tc=19.6 min CN=WQ Runoff=0.18 cfs 0.021 af

Subcatchment1.2S: To Porous Pavement Runoff Area=36,151 sf 92.44% Impervious Runoff Depth=4.40"
Flow Length=26' Slope=0.0100 '/' Tc=64.6 min CN=WQ Runoff=1.45 cfs 0.304 af

Subcatchment1.3S: To IP#1 Runoff Area=5,562 sf 0.00% Impervious Runoff Depth=1.30"
Tc=6.0 min CN=WQ Runoff=0.18 cfs 0.014 af

Subcatchment2S: To East Runoff Area=3,589 sf 0.00% Impervious Runoff Depth=1.12"
Tc=6.0 min CN=WQ Runoff=0.09 cfs 0.008 af

Subcatchment3S: To East Runoff Area=500 sf 0.00% Impervious Runoff Depth=1.08"
Tc=6.0 min CN=WQ Runoff=0.01 cfs 0.001 af

Subcatchment4.1S: To IP#2 Runoff Area=9,290 sf 0.00% Impervious Runoff Depth=1.20"
Tc=6.0 min CN=WQ Runoff=0.26 cfs 0.021 af

Subcatchment4.2S: To North Runoff Area=1,190 sf 0.00% Impervious Runoff Depth=1.30"
Tc=6.0 min CN=WQ Runoff=0.04 cfs 0.003 af

Subcatchment5.1S: To PCB#1 Runoff Area=2,507 sf 63.90% Impervious Runoff Depth=3.44"
Tc=6.0 min CN=WQ Runoff=0.20 cfs 0.017 af

Subcatchment5.2S: To North Runoff Area=183 sf 0.00% Impervious Runoff Depth=1.30"
Tc=6.0 min CN=WQ Runoff=0.01 cfs 0.000 af

Reach #100: Analysis Point #100 Inflow=0.18 cfs 0.021 af
Outflow=0.18 cfs 0.021 af

Reach #200: Analysis Point #200 Inflow=0.09 cfs 0.008 af
Outflow=0.09 cfs 0.008 af

Reach #300: Analysis Point #300 Inflow=0.01 cfs 0.001 af
Outflow=0.01 cfs 0.001 af

Reach #400: Analysis Point #400 Inflow=0.04 cfs 0.003 af
Outflow=0.04 cfs 0.003 af

Reach #500: Analysis Point #500 Inflow=0.21 cfs 0.017 af
Outflow=0.21 cfs 0.017 af

Pond IP#1: Infiltation Pond #1 Peak Elev=53.11' Storage=146 cf Inflow=0.18 cfs 0.014 af
Outflow=0.04 cfs 0.014 af

Pond IP#2: Infiltation Pond #2 Peak Elev=52.53' Storage=348 cf Inflow=0.26 cfs 0.021 af
Outflow=0.03 cfs 0.021 af

Pond PCB#1: PCB#1 Peak Elev=47.51' Inflow=0.20 cfs 0.017 af
6.0" Round Culvert n=0.010 L=29.0' S=0.0100 '/' Outflow=0.20 cfs 0.017 af

Pond PP-P: Porous Pavement - Parking Peak Elev=53.13' Storage=905 cf Inflow=1.45 cfs 0.304 af
Outflow=1.26 cfs 0.304 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.390 af Average Runoff Depth = 2.97"
48.94% Pervious = 0.771 ac 51.06% Impervious = 0.804 ac

Summary for Subcatchment 1.1S: To IP#1

Runoff = 0.18 cfs @ 12.31 hrs, Volume= 0.021 af, Depth= 1.17"
Routed to Reach #100 : Analysis Point #100

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
3,516	55	Woods, Good, HSG B
6,094	61	>75% Grass cover, Good, HSG B
9,610		Weighted Average
9,610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	21	0.0070	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.92"
4.4	29	0.0139	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.92"
5.1	248	0.0133	0.81		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	15	0.0267	0.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.6	313	Total			

Summary for Subcatchment 1.2S: To Porous Pavement

Runoff = 1.45 cfs @ 12.85 hrs, Volume= 0.304 af, Depth= 4.40"
Routed to Pond PP-P : Porous Pavement - Parking

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
2,734	61	>75% Grass cover, Good, HSG B
17,097	98	Paved parking, HSG B
16,320	98	Roofs, HSG B
36,151		Weighted Average
2,734		7.56% Pervious Area
33,417		92.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	26	0.0100	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.92"
60.0					**Direct Entry, Flow Thru Selects**
64.6	26	Total			

Summary for Subcatchment 1.3S: To IP#1

Runoff = 0.18 cfs @ 12.10 hrs, Volume= 0.014 af, Depth= 1.30"
Routed to Pond IP#1 : Infiltation Pond #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
5,562	61	>75% Grass cover, Good, HSG B
0	98	Roofs, HSG B
5,562		Weighted Average
5,562		100.00% Pervious Area

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

Summary for Subcatchment 2S: To East

Runoff = 0.09 cfs @ 12.10 hrs, Volume= 0.008 af, Depth= 1.12"
Routed to Reach #200 : Analysis Point #200

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
1,756	55	Woods, Good, HSG B
1,833	61	>75% Grass cover, Good, HSG B
3,589		Weighted Average
3,589		100.00% Pervious Area

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

Summary for Subcatchment 3S: To East

Runoff = 0.01 cfs @ 12.10 hrs, Volume= 0.001 af, Depth= 1.08"
Routed to Reach #300 : Analysis Point #300

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
293	55	Woods, Good, HSG B
207	61	>75% Grass cover, Good, HSG B
500		Weighted Average
500		100.00% Pervious Area

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

Summary for Subcatchment 4.1S: To IP#2

Runoff = 0.26 cfs @ 12.10 hrs, Volume= 0.021 af, Depth= 1.20"
Routed to Pond IP#2 : Infiltation Pond #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
2,456	55	Woods, Good, HSG B
6,834	61	>75% Grass cover, Good, HSG B
0	98	Roofs, HSG B
9,290		Weighted Average
9,290		100.00% Pervious Area

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

Summary for Subcatchment 4.2S: To North

Runoff = 0.04 cfs @ 12.10 hrs, Volume= 0.003 af, Depth= 1.30"
Routed to Reach #400 : Analysis Point #400

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
1,190	61	>75% Grass cover, Good, HSG B
1,190		Weighted Average
1,190		100.00% Pervious Area

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

Summary for Subcatchment 5.1S: To PCB#1

Runoff = 0.20 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 3.44"
Routed to Pond PCB#1 : PCB#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
1,602	98	Paved parking, HSG B
905	61	>75% Grass cover, Good, HSG B
2,507		Weighted Average
905		36.10% Pervious Area
1,602		63.90% Impervious Area

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

Summary for Subcatchment 5.2S: To North

Runoff = 0.01 cfs @ 12.10 hrs, Volume= 0.000 af, Depth= 1.30"
Routed to Reach #500 : Analysis Point #500

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.89"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
183	61	>75% Grass cover, Good, HSG B
183		Weighted Average
183		100.00% Pervious Area

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

Summary for Reach #100: Analysis Point #100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.221 ac, 0.00% Impervious, Inflow Depth = 1.17" for 10-YR event
Inflow = 0.18 cfs @ 12.31 hrs, Volume= 0.021 af
Outflow = 0.18 cfs @ 12.31 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #200: Analysis Point #200

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.082 ac, 0.00% Impervious, Inflow Depth = 1.12" for 10-YR event
Inflow = 0.09 cfs @ 12.10 hrs, Volume= 0.008 af
Outflow = 0.09 cfs @ 12.10 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #300: Analysis Point #300

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.011 ac, 0.00% Impervious, Inflow Depth = 1.08" for 10-YR event
Inflow = 0.01 cfs @ 12.10 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.10 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #400: Analysis Point #400

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.027 ac, 0.00% Impervious, Inflow Depth = 1.30" for 10-YR event
Inflow = 0.04 cfs @ 12.10 hrs, Volume= 0.003 af
Outflow = 0.04 cfs @ 12.10 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach #500: Analysis Point #500

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.062 ac, 59.55% Impervious, Inflow Depth = 3.30" for 10-YR event
Inflow = 0.21 cfs @ 12.09 hrs, Volume= 0.017 af
Outflow = 0.21 cfs @ 12.09 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond IP#1: Infiltation Pond #1

[58] Hint: Peaked 0.11' above defined flood level

Inflow Area = 0.128 ac, 0.00% Impervious, Inflow Depth = 1.30" for 10-YR event
Inflow = 0.18 cfs @ 12.10 hrs, Volume= 0.014 af
Outflow = 0.04 cfs @ 12.57 hrs, Volume= 0.014 af, Atten= 78%, Lag= 28.5 min
Discarded = 0.04 cfs @ 12.57 hrs, Volume= 0.014 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 53.11' @ 12.57 hrs Surf.Area= 1,392 sf Storage= 146 cf
Flood Elev= 53.00' Surf.Area= 1,260 sf Storage= 0 cf

Plug-Flow detention time= 26.6 min calculated for 0.014 af (100% of inflow)
Center-of-Mass det. time= 26.6 min (900.6 - 873.9)

Volume	Invert	Avail.Storage	Storage Description
#1	53.00'	1,938 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
53.00	1,260	0	0	1,260
54.00	2,708	1,938	1,938	2,716

Device	Routing	Invert	Outlet Devices
#1	Discarded	53.00'	**1.210 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.04 cfs @ 12.57 hrs HW=53.11' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Summary for Pond IP#2: Infiltation Pond #2

Inflow Area = 0.213 ac, 0.00% Impervious, Inflow Depth = 1.20" for 10-YR event
Inflow = 0.26 cfs @ 12.10 hrs, Volume= 0.021 af
Outflow = 0.03 cfs @ 13.71 hrs, Volume= 0.021 af, Atten= 89%, Lag= 96.8 min
Discarded = 0.03 cfs @ 13.71 hrs, Volume= 0.021 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 52.53' @ 13.71 hrs Surf.Area= 1,020 sf Storage= 348 cf
Flood Elev= 60.00' Surf.Area= 1,929 sf Storage= 1,050 cf

Plug-Flow detention time= 150.6 min calculated for 0.021 af (100% of inflow)
Center-of-Mass det. time= 150.6 min (1,028.8 - 878.2)

Volume	Invert	Avail.Storage	Storage Description
#1	52.00'	1,050 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
52.00	359	0	0	359
53.01	1,929	1,050	1,050	1,933

Device	Routing	Invert	Outlet Devices
#1	Discarded	52.00'	**1.200 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.03 cfs @ 13.71 hrs HW=52.53' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Summary for Pond PCB#1: PCB#1

Inflow Area = 0.058 ac, 63.90% Impervious, Inflow Depth = 3.44" for 10-YR event
Inflow = 0.20 cfs @ 12.09 hrs, Volume= 0.017 af
Outflow = 0.20 cfs @ 12.09 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min
Primary = 0.20 cfs @ 12.09 hrs, Volume= 0.017 af
Routed to Reach #500 : Analysis Point #500

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 47.51' @ 12.09 hrs
Flood Elev= 51.40'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.23'	**6.0" Round Culvert** L= 29.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.23' / 46.94' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.20 cfs @ 12.09 hrs HW=47.51' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.20 cfs @ 1.80 fps)

Summary for Pond PP-P: Porous Pavement - Parking

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=566)

Inflow Area = 0.830 ac, 92.44% Impervious, Inflow Depth = 4.40" for 10-YR event
Inflow = 1.45 cfs @ 12.85 hrs, Volume= 0.304 af
Outflow = 1.26 cfs @ 13.09 hrs, Volume= 0.304 af, Atten= 13%, Lag= 14.9 min
Discarded = 1.26 cfs @ 13.09 hrs, Volume= 0.304 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 53.13' @ 13.09 hrs Surf.Area= 16,821 sf Storage= 905 cf
Flood Elev= 55.75' Surf.Area= 16,821 sf Storage= 15,041 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 4.5 min (810.0 - 805.5)

Volume	Invert	Avail.Storage	Storage Description
#1	53.00'	15,041 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.00	16,821	0.0	0	0
54.00	16,821	40.0	6,728	6,728
54.25	16,821	40.0	1,682	8,411
54.92	16,821	30.0	3,381	11,792
55.25	16,821	40.0	2,220	14,012
55.59	16,821	18.0	1,029	15,041

Device	Routing	Invert	Outlet Devices
#1	Discarded	53.00'	**1.211 in/hr Exfiltration over Surface area**

Conductivity to Groundwater Elevation = 52.92'

Discarded OutFlow Max=1.26 cfs @ 13.09 hrs HW=53.13' (Free Discharge)
↑—**1=Exfiltration** (Controls 1.26 cfs)

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: To IP#1 Runoff Area=9,610 sf 0.00% Impervious Runoff Depth=1.97"
Flow Length=313' Tc=19.6 min CN=WQ Runoff=0.32 cfs 0.036 af

Subcatchment1.2S: To Porous Pavement Runoff Area=36,151 sf 92.44% Impervious Runoff Depth=5.70"
Flow Length=26' Slope=0.0100 '/' Tc=64.6 min CN=WQ Runoff=1.87 cfs 0.394 af

Subcatchment1.3S: To IP#1 Runoff Area=5,562 sf 0.00% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=WQ Runoff=0.31 cfs 0.023 af

Subcatchment2S: To East Runoff Area=3,589 sf 0.00% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=WQ Runoff=0.17 cfs 0.013 af

Subcatchment3S: To East Runoff Area=500 sf 0.00% Impervious Runoff Depth=1.86"
Tc=6.0 min CN=WQ Runoff=0.02 cfs 0.002 af

Subcatchment4.1S: To IP#2 Runoff Area=9,290 sf 0.00% Impervious Runoff Depth=2.03"
Tc=6.0 min CN=WQ Runoff=0.48 cfs 0.036 af

Subcatchment4.2S: To North Runoff Area=1,190 sf 0.00% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=WQ Runoff=0.07 cfs 0.005 af

Subcatchment5.1S: To PCB#1 Runoff Area=2,507 sf 63.90% Impervious Runoff Depth=4.61"
Tc=6.0 min CN=WQ Runoff=0.27 cfs 0.022 af

Subcatchment5.2S: To North Runoff Area=183 sf 0.00% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=WQ Runoff=0.01 cfs 0.001 af

Reach #100: Analysis Point #100 Inflow=0.32 cfs 0.036 af
Outflow=0.32 cfs 0.036 af

Reach #200: Analysis Point #200 Inflow=0.17 cfs 0.013 af
Outflow=0.17 cfs 0.013 af

Reach #300: Analysis Point #300 Inflow=0.02 cfs 0.002 af
Outflow=0.02 cfs 0.002 af

Reach #400: Analysis Point #400 Inflow=0.07 cfs 0.005 af
Outflow=0.07 cfs 0.005 af

Reach #500: Analysis Point #500 Inflow=0.28 cfs 0.023 af
Outflow=0.28 cfs 0.023 af

Pond IP#1: Infiltation Pond #1 Peak Elev=53.23' Storage=324 cf Inflow=0.31 cfs 0.023 af
Outflow=0.04 cfs 0.023 af

Pond IP#2: Infiltation Pond #2 Peak Elev=52.79' Storage=679 cf Inflow=0.48 cfs 0.036 af
Outflow=0.04 cfs 0.036 af

Pond PCB#1: PCB#1 Peak Elev=47.56' Inflow=0.27 cfs 0.022 af
6.0" Round Culvert n=0.010 L=29.0' S=0.0100 '/' Outflow=0.27 cfs 0.022 af

Pond PP-P: Porous Pavement - Parking Peak Elev=53.20' Storage=1,315 cf Inflow=1.87 cfs 0.394 af
Outflow=1.62 cfs 0.394 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.532 af Average Runoff Depth = 4.06"
48.94% Pervious = 0.771 ac 51.06% Impervious = 0.804 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: To IP#1 Runoff Area=9,610 sf 0.00% Impervious Runoff Depth=2.83"
Flow Length=313' Tc=19.6 min CN=WQ Runoff=0.48 cfs 0.052 af

Subcatchment1.2S: To Porous Pavement Runoff Area=36,151 sf 92.44% Impervious Runoff Depth=6.92"
Flow Length=26' Slope=0.0100 '/' Tc=64.6 min CN=WQ Runoff=2.27 cfs 0.479 af

Subcatchment1.3S: To IP#1 Runoff Area=5,562 sf 0.00% Impervious Runoff Depth=3.05"
Tc=6.0 min CN=WQ Runoff=0.45 cfs 0.032 af

Subcatchment2S: To East Runoff Area=3,589 sf 0.00% Impervious Runoff Depth=2.75"
Tc=6.0 min CN=WQ Runoff=0.26 cfs 0.019 af

Subcatchment3S: To East Runoff Area=500 sf 0.00% Impervious Runoff Depth=2.69"
Tc=6.0 min CN=WQ Runoff=0.03 cfs 0.003 af

Subcatchment4.1S: To IP#2 Runoff Area=9,290 sf 0.00% Impervious Runoff Depth=2.89"
Tc=6.0 min CN=WQ Runoff=0.70 cfs 0.051 af

Subcatchment4.2S: To North Runoff Area=1,190 sf 0.00% Impervious Runoff Depth=3.05"
Tc=6.0 min CN=WQ Runoff=0.10 cfs 0.007 af

Subcatchment5.1S: To PCB#1 Runoff Area=2,507 sf 63.90% Impervious Runoff Depth=5.73"
Tc=6.0 min CN=WQ Runoff=0.34 cfs 0.027 af

Subcatchment5.2S: To North Runoff Area=183 sf 0.00% Impervious Runoff Depth=3.05"
Tc=6.0 min CN=WQ Runoff=0.01 cfs 0.001 af

Reach #100: Analysis Point #100 Inflow=0.48 cfs 0.052 af
Outflow=0.48 cfs 0.052 af

Reach #200: Analysis Point #200 Inflow=0.26 cfs 0.019 af
Outflow=0.26 cfs 0.019 af

Reach #300: Analysis Point #300 Inflow=0.03 cfs 0.003 af
Outflow=0.03 cfs 0.003 af

Reach #400: Analysis Point #400 Inflow=0.10 cfs 0.007 af
Outflow=0.10 cfs 0.007 af

Reach #500: Analysis Point #500 Inflow=0.36 cfs 0.029 af
Outflow=0.36 cfs 0.029 af

Pond IP#1: Infiltation Pond #1 Peak Elev=53.36' Storage=530 cf Inflow=0.45 cfs 0.032 af
Outflow=0.05 cfs 0.032 af

Pond IP#2: Infiltation Pond #2 Peak Elev=53.01' Storage=1,047 cf Inflow=0.70 cfs 0.051 af
Outflow=0.05 cfs 0.051 af

Pond PCB#1: PCB#1 Peak Elev=47.61' Inflow=0.34 cfs 0.027 af
6.0" Round Culvert n=0.010 L=29.0' S=0.0100 '/' Outflow=0.34 cfs 0.027 af

Pond PP-P: Porous Pavement - Parking Peak Elev=53.25' Storage=1,701 cf Inflow=2.27 cfs 0.479 af
Outflow=1.96 cfs 0.479 af

Total Runoff Area = 1.574 ac Runoff Volume = 0.672 af Average Runoff Depth = 5.12"
48.94% Pervious = 0.771 ac 51.06% Impervious = 0.804 ac

Appendix III

Charts, Graphs, and Calculations

Extreme Precipitation Tables

Northeast Regional Climate Center

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

Metadata for Point

Smoothing	Yes
State	New Hampshire
Location	New Hampshire, United States
Latitude	42.977 degrees North
Longitude	70.958 degrees West
Elevation	10 feet
Date/Time	Mon Nov 18 2024 14:30:25 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day
1yr	0.26	0.40	0.50	0.66	0.82	1.04	**1yr**	0.71	0.99	1.22	1.57	2.04	2.68	2.89	**1yr**	2.37	2.78	3.19	3.90
2yr	0.32	0.50	0.62	0.82	1.02	1.30	**2yr**	0.88	1.18	1.52	1.94	2.49	3.21	3.55	**2yr**	2.84	3.42	3.93	4.66
5yr	0.38	0.58	0.73	0.98	1.26	1.62	**5yr**	1.08	1.47	1.90	2.44	3.15	4.08	4.57	**5yr**	3.61	4.40	5.03	5.96
10yr	0.42	0.66	0.83	1.13	1.46	1.91	**10yr**	1.26	1.73	2.25	2.92	3.78	4.89	5.54	**10yr**	4.33	5.32	6.06	7.17
25yr	0.49	0.77	0.98	1.35	1.80	2.37	**25yr**	1.55	2.16	2.81	3.67	4.79	6.23	7.13	**25yr**	5.51	6.86	7.76	9.18
50yr	0.55	0.88	1.12	1.57	2.11	2.80	**50yr**	1.82	2.55	3.34	4.39	5.74	7.48	8.64	**50yr**	6.62	8.31	9.36	11.07
100yr	0.61	0.99	1.27	1.81	2.47	3.32	**100yr**	2.13	3.01	3.98	5.25	6.88	8.98	10.47	**100yr**	7.95	10.07	11.30	13.35
200yr	0.69	1.13	1.46	2.10	2.89	3.93	**200yr**	2.50	3.56	4.72	6.26	8.24	10.79	12.69	**200yr**	9.55	12.20	13.63	16.11
500yr	0.82	1.34	1.75	2.55	3.58	4.91	**500yr**	3.09	4.45	5.93	7.92	10.47	13.76	16.37	**500yr**	12.18	15.74	17.48	20.68

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day
1yr	0.24	0.37	0.45	0.61	0.75	0.89	**1yr**	0.65	0.87	0.96	1.24	1.52	2.29	2.53	**1yr**	2.02	2.44	2.89	3.45
2yr	0.32	0.49	0.60	0.82	1.01	1.19	**2yr**	0.87	1.16	1.37	1.81	2.33	3.11	3.47	**2yr**	2.75	3.33	3.83	4.54
5yr	0.36	0.55	0.68	0.94	1.19	1.42	**5yr**	1.03	1.39	1.62	2.12	2.73	3.79	4.22	**5yr**	3.35	4.06	4.66	5.60
10yr	0.40	0.61	0.75	1.05	1.36	1.63	**10yr**	1.18	1.59	1.82	2.40	3.07	4.35	4.88	**10yr**	3.85	4.70	5.39	6.53
25yr	0.46	0.69	0.86	1.23	1.62	1.96	**25yr**	1.40	1.91	2.12	2.78	3.58	4.94	5.92	**25yr**	4.37	5.69	6.53	7.99
50yr	0.51	0.77	0.96	1.38	1.86	2.25	**50yr**	1.60	2.20	2.36	3.12	4.02	5.58	6.83	**50yr**	4.94	6.57	7.53	9.32
100yr	0.57	0.86	1.08	1.56	2.14	2.59	**100yr**	1.85	2.53	2.65	3.49	4.49	6.30	7.86	**100yr**	5.57	7.56	8.70	10.85
200yr	0.64	0.96	1.22	1.76	2.46	2.97	**200yr**	2.12	2.91	2.95	3.90	5.02	7.07	9.73	**200yr**	6.25	9.36	10.05	12.64
500yr	0.75	1.12	1.44	2.09	2.97	3.60	**500yr**	2.56	3.52	3.41	4.50	5.85	8.19	11.93	**500yr**	7.25	11.47	12.15	15.45

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day
1yr	0.28	0.44	0.53	0.72	0.88	1.08	**1yr**	0.76	1.05	1.26	1.70	2.16	2.95	3.13	**1yr**	2.61	3.01	3.55	4.25
2yr	0.33	0.51	0.63	0.85	1.05	1.26	**2yr**	0.91	1.23	1.48	1.94	2.48	3.38	3.67	**2yr**	2.99	3.53	4.06	4.84
5yr	0.40	0.62	0.77	1.06	1.34	1.61	**5yr**	1.16	1.58	1.87	2.47	3.16	4.39	4.95	**5yr**	3.88	4.76	5.43	6.33
10yr	0.48	0.73	0.91	1.27	1.64	1.97	**10yr**	1.41	1.93	2.26	3.01	3.79	5.46	6.22	**10yr**	4.84	5.98	6.82	7.85
25yr	0.59	0.90	1.12	1.59	2.10	2.56	**25yr**	1.81	2.50	2.92	3.90	4.85	7.58	8.46	**25yr**	6.71	8.14	9.17	10.45
50yr	0.69	1.05	1.31	1.88	2.53	3.11	**50yr**	2.19	3.04	3.56	4.75	5.87	9.50	10.69	**50yr**	8.41	10.28	11.52	12.98
100yr	0.82	1.23	1.54	2.23	3.06	3.78	**100yr**	2.64	3.69	4.33	5.80	7.10	11.92	13.51	**100yr**	10.55	12.99	14.45	16.16
200yr	0.96	1.44	1.83	2.65	3.69	4.61	**200yr**	3.18	4.50	5.29	7.07	8.58	15.00	15.97	**200yr**	13.27	15.36	18.16	20.10
500yr	1.19	1.78	2.28	3.32	4.72	5.96	**500yr**	4.07	5.83	6.87	9.23	11.05	20.35	21.49	**500yr**	18.01	20.67	24.53	26.86

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Northeast Regional Climate Center

Pollutant Removal Efficiencies for Best Management Practices for Use in Pollutant Loading Analysis

Best Management Practice (BMP) removal efficiencies for pollutant loading analysis for total suspended solids (TSS), total nitrogen (TN), and total phosphorus (TP) are presented in the table below. These removal efficiencies were developed by reviewing various literature sources and using best professional judgment based on literature values and general expectation of how values for different BMPS should relate to one another. The intent is to update this information and add BMPs and removal efficiencies for other parameters as more information/data becomes available in the future.

NHDES will consider other BMP removal efficiencies if sufficient documentation is provided.

Please note that all BMPs must be designed in accordance with the specifications in the Alteration of Terrain (AoT) Program Administrative Rules (Env-Wq 1500). If BMPs are not designed in accordance with the AoT Rules, NHDES may require lower removal efficiencies to be used in the analysis.

BMP in Series: When BMPs are placed in series, the BMP with the highest removal efficiency shall be the efficiency used in the model for computing annual loadings. Adding efficiencies together is generally not allowed because removals typically decrease rapidly with decreasing influent concentration and, in the case of primary BMPs (i.e., stormwater ponds, infiltration and filtering practices), pre-treatment is usually part of the design and is therefore, most likely already accounted for in the efficiencies cited for these BMPs.

Pollutant Removal Efficiencies for Best Management Practices for Use in Pollutant Loading Analysis				Values Accepted for Loading Analyses		
BMP Type	**BMP**	**Notes**	**Lit. Ref.**	**TSS**	**TN**	**TP**
Stormwater Ponds	Wet Pond		B, F	70%	35%	45%
	Wet Extended Detention Pond		A, B	80%	55%	68%
	Micropool Extended Detention Pond	TBA				
	Multiple Pond System	TBA				
	Pocket Pond	TBA				
Stormwater Wetlands	Shallow Wetland		A, B, F, I	80%	55%	45%
	Extended Detention Wetland		A, B, F, I	80%	55%	45%
	Pond/Wetland System	TBA				
	Gravel Wetland		H	95%	85%	64%
Infiltration Practices	Infiltration Trench (≥75 ft from surface water)		B, D, I	90%	55%	60%
	Infiltration Trench (<75 ft from surface water)		B, D, I	90%	10%	60%
	Infiltration Basin (≥75 ft from surface water)		A, F, B, D, I	90%	60%	65%
	Infiltration Basin (<75 ft from surface water)		A, F, B, D, I	90%	10%	65%
	Dry Wells			90%	55%	60%
	Drip Edges			90%	55%	60%
Filtering Practices	Aboveground or Underground Sand Filter that infiltrates WQV (≥75 ft from surface water)		A, F, B, D, I	90%	60%	65%
	Aboveground or Underground Sand Filter that infiltrates WQV (<75 ft from surface water)		A, F, B, D, I	90%	10%	65%
	Aboveground or Underground Sand Filter with underdrain		A, I, F, G, H	85%	10%	45%
	Tree Box Filter	TBA				
	Bioretention System		I, G, H	90%	65%	65%
	Permeable Pavement that infiltrates WQV (≥75 ft from surface water)		A, F, B, D, I	90%	60%	65%
	Permeable Pavement that infiltrates WQV (<75 ft from surface water)		A, F, B, D, I	90%	10%	65%
	Permeable Pavement with underdrain		Use TN and TP values for sand filter w/ underdrain and outlet pipe	90%	10%	45%

Pollutant Removal Efficiencies for Best Management Practices for Use in Pollutant Loading Analysis				Values Accepted for Loading Analyses		
BMP Type	**BMP**	**Notes**	**Lit. Ref.**	**TSS**	**TN**	**TP**
Treatment Swales	Flow Through Treatment Swale	TBA				
Vegetated Buffers	Vegetated Buffers		A, B, I	73%	40%	45%
Pre-Treatment Practices	Sediment Forebay	TBA				
	Vegetated Filter Strip		A, B, I	73%	40%	45%
	Vegetated Swale		A, B, C, F, H, I	65%	20%	25%
	Flow-Through Device - Hydrodynamic Separator		A, B, G, H	35%	10%	5%
	Flow-Through Device - ADS Underground Multichamber Water Quality Unit (WQU)		G, H	72%	10%	9%
	Other Flow-Through Devices	TBA				
	Off-line Deep Sump Catch Basin		J, K, L, M	15%	5%	5%

GOVE ENVIRONMENTAL SERVICES, INC

SITE-SPECIFIC SOIL SURVEY REPORT
For
112 Front Street, Exeter, NH
By
GES, Inc.
Project # 2024085
Date: 11-12-2024

1. MAPPING STANDARDS

Site-Specific Soil Mapping Standards for New Hampshire and Vermont. SSSNNE Special Publication No. 3, Version 7.0, July, 2021.

This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, intended for infiltration requirements by the NH DES Alteration of Terrain Bureau. The soil map was produced by a professional soil scientist and is not a product of the USDA Natural Resources Conservation Service. This report accompanies the soil map.

The site-specific soil map (SSSM) was produced 11-12-2024; prepared by JP Gove, CSS #004, GES, Inc.

Soils were identified with the New Hampshire State-wide Numerical Soils Legend, USDA NRCS, Durham, NH. Issue # 10, January 2011.

Hydrologic Soil Group was determined using SSSNNE Special Publication No. 5, Ksat Values for New Hampshire Soils, September 2009.

High Intensity Soil Map symbols, based upon SSSNNE Special Publication 1, December 2017, were added to the Soil Legend.

Scale of soil map: Approximately 1" = 20"

Contours Interval: 2 feet

2. LANDFORMS & EXISTING CONDITIONS:

The site is located on a broad outwash sand plain that is entirely developed. The site is located in the urban area of Exeter and is virtually surrounded by housing. There is building and pavement adjacent Front Street, but the rear of the lot is undeveloped and natural. There are a few trees, but mostly mowed field.

3. DATE SOIL MAP PRODUCED

Date(s) of on-site field work: 9-11-2024 (Included test pits and wetland determination.)

Test pits recorded by: James Gove, CSS#004

4. GEOGRAPHIC LOCATION AND SIZE OF SITE

City or town where soil mapping was conducted: Exeter

Location: Tax Map 73, Lot 14

Size of area: Approximately 1.6 acres

Was the map for the entire lot? Yes

If no, where was the mapping conducted on the parcel: n/a

5. PURPOSE OF THE SOIL MAP

Was the map prepared to meet the requirement of Alteration of Terrain? Yes

If no, what was the purpose of the map? n/a

Who was the map prepared for? Beals Associates

6. SOIL IDENTIFICATION LEGEND

Map Unit Symbol	Map Unit Name	HISS Symbol	Hydrologic Soil Group
313	Deerfield, loamy sand	311	B
699	Urban Land	n/a	Impervious

SLOPE PHASE:

0-8%	B	8-15%	C	15-25%	D
25%-50%	E	50%+	F		

7. NARRATIVE MAP UNIT DESCRIPTIONS

SITE-SPECIFIC MAP UNIT: 313

CORRELATED SOIL SERIES: Deerfield

LANDSCAPE SETTING: Flat plain

CHARACTERISTIC SURFACE FEATURES: Flat, mowed

DRAINAGE CLASS: Moderately well drained

PARENT MATERIAL: Glaciofluvial (Outwash Sands)

NATURE OF DISSIMILAR INCLUSIONS: Windsor and Udorthents

ESTIMATED PERCENTAGE OF DISSIMILAR INCLUSIONS: 5%

SOIL PROFILE DESCRIPTIONS- horizon designation, depth, soil texture, Munsell color notation, Munsell color of redox features, soil structure, soil consistence, estimated coarse fragments, estimated seasonal high water table (ESHWT), observed water table (OBSWT), kind of water table (perched, apparent, or both), depth to lithic or paralithic contact:

Test pit D1 is representative of all four pits dug on the site.

Test Pit No.	**D1**	Soils Series:	Deerfield
ESHWT::	25”	Landscape:	Flat
Termination @	No	Slope:	A
Refusal:	No	Parent Material:	Outwash
Obs. Water:	None	Hydrologic Soil Group:	B

Horizon	Color (Munsell)	Texture	Structure-Consistence-Redox
A 0-15”	10YR3/3	Loamy Sand	granular-friable-none
B 15-25”	10YR4/6	Loamy Sand	massive-friable-none
C 25-60”	2.5Y5/3	Sandy	single grain- loose-

30% Redox 5YR5/6, ESHWT =25”, no OBSWT, apparent water table, no lithic contact, less than 5% coarse fragments.

699 Urban Land – impervious surfaces - buildings, pavement.

8. RESPONSIBLE SOIL SCIENTIST

Name: James Gove

Certified Soil Scientist Number: 004

9. OTHER DISTINGUISHING FEATURES OF SITE

Must have been in agriculture due to the deep plow layer of the surface horizon.

TEST PIT DATA

Project 112 Front Street, Exeter, NH
Client John O'Neil
GES Project No. 2024085
09-11-2024 James Gove, CSS#004, Aspynn Kutz

Test Pit No.	**D1**	Soils Series:	Deerfield
ESHWT::	25"	Landscape:	Flat
Termination @	No	Slope:	A
Refusal:	No	Parent Material:	Outwash
Obs. Water:	None	Hydrologic Soil Group:	B

Horizon	Color (Munsell)	Texture	Structure-Consistence-Redox
A 0-15"	10YR3/3	Loamy Sand	granular-friable-none
B 15-25"	10YR4/6	Loamy Sand	massive-friable-none
C 25-60"	2.5Y5/3	Sandy	single grain- loose-30% Redox

Test Pit No.	**D2**	Soils Series:	Deerfield
ESHWT::	24"	Landscape:	Falt
Termination @	No	Slope:	A
Refusal:	No	Parent Material:	Outwash
Obs. Water:	None	Hydrologic Soil Group:	B

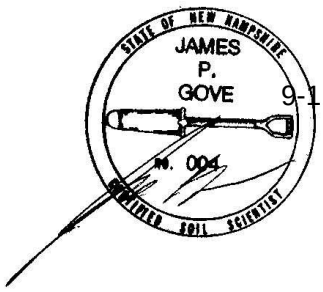
Horizon	Color (Munsell)	Texture	Structure-Consistence-Redox
A 0-8"	10YR3/2	Loamy Sand	granular-friable-none
B 8-24"	10YR5/6	Loamy Sand	massive-friable-none
C 24-66"	2.5Y5/2	Sandy	single grain- loose-20% Redox

Test Pit No.	**D3**	Soils Series:	Deerfield
ESHWT::	31"	Landscape:	Flat
Termination @	No	Slope:	A
Refusal:	No	Parent Material:	Outwash
Obs. Water:	None	Hydrologic Soil Group:	B

Horizon	Color (Munsell)	Texture	Structure-Consistence-Redox
A 0-10"	10YR3/2	Loamy Sand	granular-friable-none
B 10-31"	10YR4/6	Loamy Sand	massive-friable-none
C 31-60"	2.5Y5/3	Sandy	single grain- loose-10% Redox

Test Pit No.	**D4**	Soils Series:	Deerfield
ESHWT::	38”	Landscape:	Flat
Termination @	No	Slope:	A
Refusal:	No	Parent Material:	Outwash
Obs. Water:	None	Hydrologic Soil Group:	B

Horizon	Color (Munsell)	Texture	Structure-Consistence-Redox
A 0-8”	10YR3/3	Loamy Sand	granular-friable-none
B 8-38”	10YR4/4	Loamy Sand	massive-friable-none
C 38-120”	2.5Y5/3	Sandy	single grain- loose-10% Redox


STATE OF NEW HAMPSHIRE
JAMES
P.
GOVE
NO. 004
CERTIFIED SOIL SCIENTIST

9-11-24

GOVE ENVIRONMENTAL SERVICES, INC.

Amoozemeter Data Sheet

Site: 112 Front Street, Exeter , NH
GES Project: 2024085
Date: 11/15/2024
Performed by: Brenden Quigley

Air Temp: 60 F
Water Source: Tap

Test Location: D2-1

Soil Series:
Soil Moisture Content %:
Horizon: 27 cm
Outflow Chamber(s): Small (1on)___ ($20.0cm^2$) Both (2on) X ($105.0cm^2$)

Water Depth in Hole
Initial: 15.1 cm
Final: 15 cm

Minutes	cm dropped	Chamber	min/hr	Q	H (cm)	A	Ksat (cm/hr)	Ksat (in/hr)
1.00	0.8	105	0.01667	5038.992202	15	0.001056	5.3212	2.0950
2.00	0.9	105	0.01667	5668.866227	15	0.001056	5.9863	2.3568
3.00	0.6	105	0.01667	3779.244151	15	0.001056	3.9909	1.5712
4.00	0.7	105	0.01667	4409.118176	15	0.001056	4.6560	1.8331
5.00	0.8	105	0.01667	5038.992202	15	0.001056	5.3212	2.0950
6.00	0.7	105	0.01667	4409.118176	15	0.001056	4.6560	1.8331
						Mean Ksat	4.9886	1.9640
						Std Deviation	0.8587	0.3381

Test Location: D2-2

Soil Series:
Soil Moisture Content %:
Horizon: 31 cm
Outflow Chamber(s): Small (1on)___ ($20.0cm^2$) Both (2on) X ($105.0cm^2$)

Water Depth in Hole
Initial: 15.1 cm
Final: 15.3 cm

Minutes	cm dropped	Chamber	min/hr	Q	H (cm)	A	Ksat (cm/hr)	Ksat (in/hr)
1.00	1.1	105	0.01667	6928.614277	15	0.001056	7.3166	2.8806
2.00	1	105	0.01667	6298.740252	15	0.001056	6.6515	2.6187
3.00	1	105	0.01667	6298.740252	15	0.001056	6.6515	2.6187
4.00	1	105	0.01667	6298.740252	15	0.001056	6.6515	2.6187
5.00	1.1	105	0.01667	6928.614277	15	0.001056	7.3166	2.8806
						Mean Ksat	6.8178	2.6842
						Std Deviation	0.3326	0.1309

D2-2 1min

Test Location: D2-3

Soil Series:
Soil Moisture Content %:
Horizon: 28 cm
Outflow Chamber(s): Small (1on)___ ($20.0cm^2$) Both (2on) X ($105.0cm^2$)

Water Depth in Hole
Initial: 15.2 cm
Final: 15.3 cm

Minutes	cm dropped	Chamber	min/hr	Q	H (cm)	A	Ksat (cm/hr)	Ksat (in/hr)
1.00	1.1	105	0.01667	6928.614277	15	0.001056	7.3166	2.8806
2.00	1	105	0.01667	6298.740252	15	0.001056	6.6515	2.6187
3.00	0.9	105	0.01667	5668.866227	15	0.001056	5.9863	2.3568
4.00	1	105	0.01667	6298.740252	15	0.001056	6.6515	2.6187
5.00	0.9	105	0.01667	5668.866227	15	0.001056	5.9863	2.3568
						Mean Ksat	6.6515	2.6187
						Std Deviation	0.5431	0.2138

D2-3 1min

GOVE ENVIRONMENTAL SERVICES, INC.

Test Location: D4-1

Soil Series:
Soil Moisture Content %:
Horizon: 48 cm
Outflow Chamber(s): Small (1on)___ ($20.0cm^2$) Both (2on) X ($105.0cm^2$)

Water Depth in Hole
Initial: 15 cm
Final: 14.9 cm

Minutes	cm dropped	Chamber	min/hr	Q	H (cm)	A	Ksat (cm/hr)	Ksat (in/hr)
1.00	1.3	105	0.01667	8188.362328	15	0.001056	8.6469	3.4043
2.00	1.4	105	0.01667	8818.236353	15	0.001056	9.3121	3.6662
3.00	1.4	105	0.01667	8818.236353	15	0.001056	9.3121	3.6662
4.00	1.4	105	0.01667	8818.236353	15	0.001056	9.3121	3.6662
5.00	1.4	105	0.01667	8818.236353	15	0.001056	9.3121	3.6662
						Mean Ksat	9.1790	3.6138
						Std Deviation	0.2975	0.1171

Test Location: D4-2

Soil Series:
Soil Moisture Content %:
Horizon: 48 cm
Outflow Chamber(s): Small (1on)___ ($20.0cm^2$) Both (2on) X ($105.0cm^2$)

Water Depth in Hole
Initial: 14.8 cm
Final: 14.9 cm

Minutes	cm dropped	Chamber	min/hr	Q	H (cm)	A	Ksat (cm/hr)	Ksat (in/hr)
1.00	2.4	105	0.01667	15116.9766	15	0.001056	15.9635	6.2849
2.00	2.5	105	0.01667	15746.85063	15	0.001056	16.6287	6.5467
3.00	2.5	105	0.01667	15746.85063	15	0.001056	16.6287	6.5467
4.00	2.5	105	0.01667	15746.85063	15	0.001056	16.6287	6.5467
5.00	2.4	105	0.01667	15116.9766	15	0.001056	15.9635	6.2849
						Mean Ksat	16.4624	6.4813
						Std Deviation	0.3326	0.1309

Test Location: D4-3

Soil Series:
Soil Moisture Content %:
Horizon: 49 cm
Outflow Chamber(s): Small (1on)___ ($20.0cm^2$) Both (2on) X ($105.0cm^2$)

Water Depth in Hole
Initial: 15.3 cm
Final: 15.5 cm

Minutes	cm dropped	Chamber	min/hr	Q	H (cm)	A	Ksat (cm/hr)	Ksat (in/hr)
1.00	2	105	0.01667	12597.4805	15	0.001056	13.3029	5.2374
2.00	2	105	0.01667	12597.4805	15	0.001056	13.3029	5.2374
3.00	2	105	0.01667	12597.4805	15	0.001056	13.3029	5.2374
4.00	2	105	0.01667	12597.4805	15	0.001056	13.3029	5.2374
5.00	1.9	105	0.01667	11967.60648	15	0.001056	12.6378	4.9755
						Mean Ksat	13.3029	5.2374
						Std Deviation	0.0000	0.0000

Infiltration Rate Calculations

Prepared For:
112 Front Street, LLC
Residential Development

Prepated By:
Beals Associates, PLLC
70 Portsmouth Avenue
Stratham, NH 03885

Project: NH-1531
112 Front Street, Exeter, NH

Test Location D2	**Ksat (in/hr)**
Test 1	1.9640
Test 2	2.6842
Test 3	2.6187
Average =	2.4223
Design (Average x 0.5)	**1.2112**

Test Location D4	**Ksat (in/hr)**
Test 1	3.6138
Test 2	6.4813
Test 3	5.2374
Average =	5.1108
Design (Average x 0.5)	**2.5554**

STORMWATER MANAGEMENT / BMP
INSPECTION & MAINTENANCE PLAN

112 FRONT STREET, LLC
RESIDENTIAL DEVELOPMENT

NH-1531
December 2024

Proper construction, inspections, maintenance, and repairs 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.

For the purpose of this Stormwater Management Program, a significant rainfall event is considered an event of three (3) inches or more in a 24-hour period or at least 0.5 inches in a one-hour period. During construction, inspections should be conducted every two weeks or after a 0.25" rainfall event in a 24-hour period per the EPA NPDES Phase II SWPPP, until the entire disturbed area is fully restabilized. Upon full stabilization of the project and filing of an NOI, inspections need only be conducted after a significant rainfall event as described above or as described in the maintenance guidelines below.

During construction activities 112 Front Street, LLC with an address of 42J Dover Point Road, Dover, NH 03820 and a phone of (978) 375-3153 or their heirs and/or assigns, shall be responsible for inspections and maintenance activities for the above project site. 112 Front Street, LLC shall be responsible for *ongoing inspection and maintenance* of the BMP drainage structures and treatment areas.

The owner is responsible to ensure that any subsequent owner has copies of the Log Form and Annual Report records and fully understands the responsibilities of this plan. The grantor owner(s) will ensure this document is provided to the grantee owner(s) by duplicating the Ownership Responsibility Sheet which is found toward the back of this document, which will be maintained with the Inspection & Maintenance Logs and provided to the Town of Exeter upon request.

Documentation:
A maintenance log (i.e., report) will be kept summarizing inspections, maintenance, and any corrective actions taken. The log will include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task (see Stormwater System Operation and Maintenance Plan Inspection & Maintenance Manual Checklist attached). If a maintenance task requires the clean-out of any sediments or debris, the location where the sediment and debris was disposed after removal shall be indicated.

Best Management Practices (BMP) Maintenance Guidelines

The following provides a list of recommendations and guidelines for managing the Stormwater facilities. The cited areas, facilities, and measures will be inspected and the identified deficiencies will be corrected. Clean-out must include the removal and legal disposal of any accumulated sediments and debris.

DURING CONSTRUCTION

1. Stabilized Construction Entrance

A temporary gravel construction entrance provides an area where mud can be dislodged from tires before the vehicle leaves the construction site to reduce the amount of mud and sediment transported onto paved municipal and state roads. The stone size for the pad should be between 1 and 2-inch coarse aggregate, and the pad itself constructed to a minimum length of 50' for the full width of the access road. The aggregate should be placed at least six inches thick. A plan view and profile are shown on the Sediment and Erosion Control Detail Plan.

2. Dust Control

Dust will be controlled on the site using multiple BMPs. Mulching and temporary seeding will be the first line of protection to be utilized where problems occur. If dust problems are not solved by these applications, the use of water and calcium chloride can be applied. Calcium chloride will be applied at a rate that will keep the surface moist but not cause pollution.

3. Temporary Erosion and Sediment Control Devices / Barriers

Function – Temporary erosion and sediment control devices are utilized during construction period to divert, store and filter stormwater from non-stabilized surfaces. These devices include, but are not limited to: silt fences, hay bales, filters, sediment traps, stone check dams, mulch and erosion control blankets.

Maintenance – Temporary erosion and sediment control devices shall be inspected and maintained on a weekly basis and following a significant storm event (>0.5-inch rain event) throughout the construction period to ensure that they still have integrity and are not allowing sediment to pass. Sediment build-up in swales will be removed if it is deeper than six inches. Sediment is to be removed from sumps in the catch basin semi-annually. Refer to the Site Plan drawings for the maintenance of temporary erosion and sediment control devices.

4. Invasive Species

THE NH COMMISSIONER OF AGRICULTURE PROHIBITS THE COLLECTION, POSSESSION, IMPORTATION, TRANSPORTATION, SALE, PROPAGATION, TRANSPLANTATION, OR CULTIVATION OF PLANTS BANNED BY NH LAW RSA 430:53 AND NH CODE ADMINISTRATIVE RULES AGR 3800. THE PROJECT SHALL MEET ALL REQUIREMENTS AND THE INTENT OF. RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.

POST CONSTRUCTION / LONG TERM MAINTENANCE:

5. Vegetated Areas

Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. The facilities will be inspected after major storms and any identified deficiencies will be corrected.

6. Roadways and Paved Surfaces

Clear accumulations of winter sand along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader.

7. Winter Maintenance

The plowing and application of de-icing materials shall be conducted by a certified Green Snow Pro contractor trained in best management practices for road salt/deicing at the expense of the owner. No snow dump shall be allowed onsite. In the event that snow storage areas are inundated in any given winter, snow will be trucked offsite and disposed of in a legal fashion.

8. Stormwater Infiltration Facilities

- Inspect all upstream pre-treatment measures for sediment and floatables accumulation. Remove and dispose of sediments or debris as needed.
- The infiltration facility will be inspected within the first three months after construction.
- After the initial three months, the infiltration facility will be inspected 2 times per year to ensure that the filter is draining within 72 hours of a rain event equivalent to 1/2" or more.
- Failure to drain in 72 hours will require part or all of the top 3 inches of the infiltration area to be removed and replaced with new like material. If the infiltration system does not drain within 72-hours following a rainfall event, then a qualified professional should assess the condition of the facility to determine measures required to restore infiltration function.
- Vegetated infiltration ponds or swales will be mowed at least annually or otherwise maintained to control the growth of woody vegetation and to control the accumulation of

sediments in order to maintain the water quality volume. Any woody vegetation or accumulated sediment must be removed.

- The facilities will be inspected after major storms and any identified deficiencies will be corrected.

9. Porous Pavement

- Check for standing water remaining on the surface of the pavement after a precipitation event within 30 minutes.
- 1-2 times per year, use a vacuum sweeper to remove sediment from porous pavement. Use of a power washer or compressed air blower at an angle of 30 degrees or less can be effective.
- As part of vacuuming, inspect adjacent vegetated areas to verify no signs of erosion and run-on to permeable pavement. Repair or replace any damaged structural parts if required.
- Check for debris accumulation, particularly in the winter.
- Loose debris such as leaves or trash can be removed using a power/leaf blower or gutter broom.
- Fall and spring cleanup should be accompanied by pavement vacuuming.
- Accumulation of sediment and organic debris on the pavement surface.
- Repairs to damaged pavement should be repaired as they are identified.

10. Invasive Species

Background

Invasive plants are introduced, alien, or non-native plants, which have been moved by people from their native habitat to a new area. Some exotic plants are imported for human use such as landscaping, erosion control, or food crops. They also can arrive as "hitchhikers" among shipments of other plants, seeds, packing materials, or fresh produce. Some exotic plants become invasive and cause harm by:

- Becoming weedy and overgrown;
- Killing established shade trees;
- Obstructing pipes and drainage systems;
- Forming dense beds in water;
- Lowering water levels in lakes, streams, and wetlands;
- Destroying natural communities;
- Promoting erosion on stream banks and hillsides; and
- Resisting control except by hazardous chemical.

During maintenance activities, check for the presence of invasive plants and remove in a safe manner. They should be controlled as described on the following fact sheet prepared by the University of New Hampshire Cooperative Extension entitled Methods for Disposing Non-Native Invasive Plant dated January 2010.

In the event that invasive species are noticed growing in any of the stormwater management practices, the invasive vegetation shall be removed completely to include root matter and

disposed of properly. Prior to disposal, the vegetation shall be placed on and completely cover with a plastic tarp for a period of two – three weeks until plants are completely dead. If necessary or to expedite the process, spray only the invasive vegetation and roots with a systemic nonselective herbicide after placement on the tarp (to prevent chemical migration) and then cover.

Annual Report

Description: The owner is responsible to keep an **Inspection & Maintenance Activity Log** that documents inspection, maintenance, and repairs to the storm water management system, and a **Deicing Log** to track the amount and type of deicing material applied to the site. The original owner is responsible to ensure that any subsequent owner (s) have copies of the Stormwater System Operation and Maintenance Plan & Inspection and Maintenance Manual, copies of past logs and check lists. This includes any owner association for potential condominium conversion of the property. The Annual Report will be prepared and submitted to the Town of Exeter DPW upon request.

Disposal Requirements

Disposal of debris, trash, sediment, and other waste materials should be done at suitable disposal/recycling sites and in compliance with all applicable local, state, and federal waste regulations.

STORMWATER SYSTEM OPERATION AND MAINTENANCE PLAN

Inspection & Maintenance Manual Checklist

Residential Development

112 Front Street, LLC

112 Front Street, Exeter, NH

BMP / System	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
Stabilized Construction Entrance	Weekly	Inspect adjacent roadway for sediment tracking Inspect stone for sediment accumulation	Sweep adjacent roadways as soon as sediment is tracked Top dress with additional stone when necessary to prevent tracking
Sediment Control Devices / Barriers	Weekly	Inspect accumulated sediment level, rips, and tears	Repair or replace damaged lengths Remove and dispose of accumulated sediment once level reaches 1/3 of barrier height
Pavement Sweeping	Spring and Fall	Removal of sand and litter from impervious areas	N/A
Litter/Trash Removal	Routinely	Inspect dumpsters, outdoor waste receptacles area, and yard areas, as well as ponds and swale areas.	Site will be free of litter/trash.
Deicing Agents	N/A	N/A	Use salt as the primary agent for roadway safety during winter.
Landscaping	Maintained as required and mulched each Spring	N/A	Trash/debris and weed removal
Infiltration Basin	Spring and Fall and after every 2.5” of rain or greater in a 24-hour period	Monitoring and evaluation of wetland vegetation, inspection of sediment on pond surface, inlet/outlet and appurtenance structure	Remove dead & diseased vegetation along with all debris; take corrective measures, reseed and repair inlet/outlet structures and

		evaluation. 72-Hour drawdown time evaluation and vegetation evaluation. Photograph each infiltration basin.	appurtenances if required. Mow embankments and remove woody vegetation. Restore infiltration by removing accumulated sediments and reconstruction of the infiltration basin as necessary.
Porous Pavement	Spring and Fall	Check for standing water. Check for damaged pavement.	Remove debris from porous pavement and adjacent areas. Vacuum sweep pavement. Repair damaged pavement.
Annual Report	1 time per year	Submit Annual Report to Town of Exeter Inspector upon request	

Inspection Notes:

STORMWATER SYSTEM OPERATION AND MAINTENANCE PLAN

Inspection & Maintenance Manual Log Form

Residential Development

112 Front Street, LLC

112 Front Street, Exeter, NH

BMP / System	Date Inspected	Inspected By	Cleaning/Repair (List Items & Comments)	Date Repaired	Repairs Performed By

INSPECTION CHECKLIST AND MAINTENANCE GUIDANCE

INFILTRATION POND - INSPECTION CHECKLIST

Location: _____

Owner Change Since Last Inspection? Y N

Owner Name, Address, Phone: _____

Date:_____Time:_____Site Conditions: _____

Inspection Items	Satisfactory (S) or Unsatisfactory (U)	Comments/Corrective Action
Sand Filter Inspection List		
Complete drainage of the filter in about 40 hours after a rain event?		
Clogging of filter surface?		
Clogging of inlet/outlet structures?		
Clogging of filter fabric?		
Clear of debris and functional?		
Leaks or seeps in filter?		
Obstructions of spillway(s)?		
Animal burrows in filter?		
Sediment accumulation in filter bed (less than 50% is acceptable)?		
Cracking, spalling, bulging or deterioration of concrete?		
Erosion in area draining to sand filter?		
Erosion around inlets, filter bed, or outlets?		
Pipes and other structures in good		
Undesirable vegetation growth?		
Other (describe)?		
Hazards		
Have there been complaints from residents?		
Public hazards noted?		

If any of the above inspection items are **UNSATISFACTORY**, list corrective actions and the corresponding completion dates below:

Corrective Action Needed	Due Date

Inspector Signature:_____

Inspector Name (printed):_____

Date:_____

Anti-icing Route Data Form

Truck Station:

Date:

Air Temperature	Pavement Temperature	Relative Humidity	Dew Point	Sky

Reason for applying:

Route:

Chemical:

Application Time:

Application Amount:

Observation (first day):

Observation (after event):

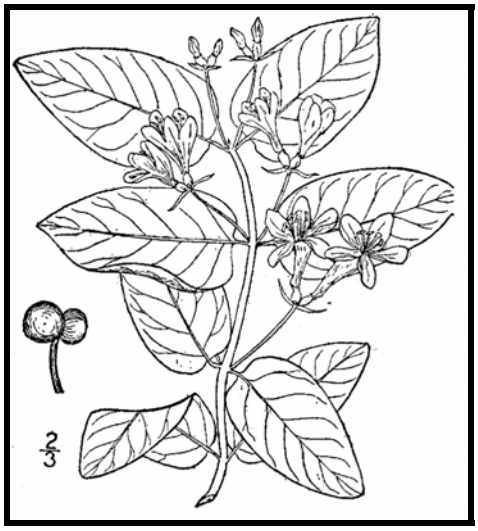
Observation (before next application);

Name:

University of New Hampshire Cooperative Extension

Methods for Disposing Non-Native Invasive Plants

Prepared by the Invasives Species Outreach Group, volunteers interested in helping people control invasive plants. Assistance provided by the Piscataquog Land Conservancy and the NH Invasives Species Committee. Edited by Karen Bennett, Extension Forestry Professor and Specialist.



Tatarian honeysuckle
Lonicera tatarica
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 282.

Non-native invasive plants crowd out natives in natural and managed landscapes. They cost taxpayers billions of dollars each year from lost agricultural and forest crops, decreased biodiversity, impacts to natural resources and the environment, and the cost to control and eradicate them.

Invasive plants grow well even in less than desirable conditions such as sandy soils along roadsides, shaded wooded areas, and in wetlands. In ideal conditions, they grow and spread even faster. There are many ways to remove these non-native invasives, but once removed, care is needed to dispose the removed plant material so the plants don't grow where disposed.

Knowing how a particular plant reproduces indicates its method of spread and helps determine the appropriate disposal method. Most are spread by seed and are dispersed by wind, water, animals, or people. Some reproduce by vegetative means from pieces of stems or roots forming new plants. Others spread through both seed and vegetative means.

Because movement and disposal of viable plant parts is restricted (see NH Regulations), viable invasive parts can't be brought to most transfer stations in the state. Check with your transfer station to see if there is an approved, designated area for invasives disposal. This fact sheet gives recommendations for rendering plant parts non-viable.

Control of invasives is beyond the scope of this fact sheet. For information about control visit www.nhinvasives.org or contact your UNH Cooperative Extension office.

New Hampshire Regulations

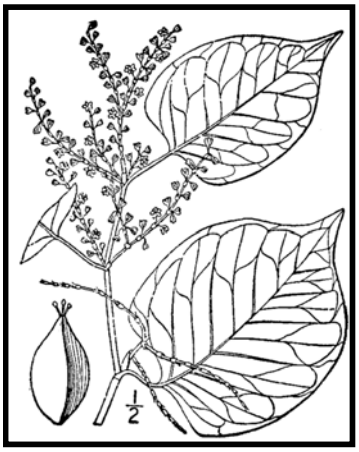
Prohibited invasive species shall only be disposed of in a manner that renders them nonliving and nonviable. (Agr. 3802.04)

No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1 of the New Hampshire prohibited invasive species list. (Agr 3802.01)

How and When to Dispose of Invasives?

To prevent seed from spreading remove invasive plants before seeds are set (produced). Some plants continue to grow, flower and set seed even after pulling or cutting. Seeds can remain viable in the ground for many years. If the plant has flowers or seeds, place the flowers and seeds in a heavy plastic bag "head first" at the weeding site and transport to the disposal site. The following are general descriptions of disposal methods. See the chart for recommendations by species.

Burning: Large woody branches and trunks can be used as firewood or burned in piles. For outside burning, a written fire permit from the local forest fire warden is required unless the ground is covered in snow. Brush larger than 5 inches in diameter can't be burned. Invasive plants with easily airborne seeds like black swallow-wort with mature seed pods (indicated by their brown color) shouldn't be burned as the seeds may disperse by the hot air created by the fire.



Japanese knotweed
Polygonum cuspidatum
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 676.

Bagging (solarization): Use this technique with softer-tissue plants. Use heavy black or clear plastic bags (contractor grade), making sure that no parts of the plants poke through. Allow the bags to sit in the sun for several weeks and on dark pavement for the best effect.

Tarping and Drying: Pile material on a sheet of plastic and cover with a tarp, fastening the tarp to the ground and monitoring it for escapes. Let the material dry for several weeks, or until it is clearly nonviable.

Chipping: Use this method for woody plants that don't reproduce vegetatively.

Burying: This is risky, but can be done with watchful diligence. Lay thick plastic in a deep pit before placing the cut up plant material in the hole. Place the material away from the edge of the plastic before covering it with more heavy plastic. Eliminate as much air as possible and toss in soil to weight down the material in the pit. Note that the top of the buried material should be at least three feet underground. Japanese knotweed should be at least 5 feet underground!

Drowning: Fill a large barrel with water and place soft-tissue plants in the water. Check after a few weeks and look for rotted plant material (roots, stems, leaves, flowers). Well-rotted plant material may be composted. A word of caution- seeds may still be viable after using this method. Do this before seeds are set. This method isn't used often. Be prepared for an awful stink!

Composting: Invasive plants can take root in compost. Don't compost any invasives unless you know there is no viable (living) plant material left. Use one of the above techniques (bagging, tarping, drying, chipping, or drowning) to render the plants nonviable before composting. Closely examine the plant before composting and avoid composting seeds.

Be diligent looking for seedlings for *years* in areas where removal and disposal took place.

Suggested Disposal Methods for Non-Native Invasive Plants

This table provides information concerning the disposal of removed invasive plant material. If the infestation is treated with herbicide and left in place, these guidelines don't apply. Don't bring invasives to a local transfer station, unless there is a designated area for their disposal, or they have been rendered non-viable. This listing includes wetland and upland plants from the New Hampshire Prohibited Invasive Species List. The disposal of aquatic plants isn't addressed.

<table>
<tr><th>Woody Plants</th><th>Method of Reproducing</th><th>Methods of Disposal</th></tr>
<tr><td rowspan="2">Norway maple
(Acer platanoides)
European barberry
(Berberis vulgaris)
Japanese barberry
(Berberis thunbergii)
autumn olive
(Elaeagnus umbellata)
burning bush
(Euonymus alatus)
Morrow's honeysuckle
(Lonicera morrowii)
Tatarian honeysuckle
(Lonicera tatarica)
showy bush honeysuckle
(Lonicera x bella)
common buckthorn
(Rhamnus cathartica)
glossy buckthorn
(Frangula alnus)</td><td rowspan="2">Fruit and Seeds
  </td><td>Prior to fruit/seed ripening
Seedlings and small plants
▪ Pull or cut and leave on site with roots exposed. No special care needed.
Larger plants
▪ Use as firewood.
▪ Make a brush pile.
▪ Chip.
▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe
Don't remove from site.
▪ Burn.
▪ Make a covered brush pile.
▪ Chip once all fruit has dropped from branches.
▪ Leave resulting chips on site and monitor.</td></tr>
<tr><td rowspan="2">oriental bittersweet
(Celastrus orbiculatus)
multiflora rose
(Rosa multiflora)</td><td rowspan="2">Fruits, Seeds, Plant Fragments
  </td><td>Prior to fruit/seed ripening
Seedlings and small plants
▪ Pull or cut and leave on site with roots exposed. No special care needed.
Larger plants
▪ Make a brush pile.
▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe
Don't remove from site.
▪ Burn.
▪ Make a covered brush pile.
▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.</td></tr>
</table>

<table>
<tr><th>Non-Woody Plants</th><th>Method of Reproducing</th><th>Methods of Disposal</th></tr>
<tr><td rowspan="2">garlic mustard
(Alliaria petiolata)
spotted knapweed
(Centaurea maculosa)
▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling.
black swallow-wort
(Cynanchum nigrum)
▪ May cause skin rash. Wear gloves and long sleeves when handling.
pale swallow-wort
(Cynanchum rossicum)
giant hogweed
(Heracleum mantegazzianum)
▪ Can cause major skin rash. Wear gloves and long sleeves when handling.
dame’s rocket
(Hesperis matronalis)
perennial pepperweed
(Lepidium latifolium)
purple loosestrife
(Lythrum salicaria)
Japanese stilt grass
(Microstegium vimineum)
mile-a-minute weed
(Polygonum perfoliatum)</td><td rowspan="2">Fruits and Seeds
  </td><td>Prior to flowering
Depends on scale of infestation
Small infestation
▪ Pull or cut plant and leave on site with roots exposed.

Large infestation
▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting).
▪ Monitor. Remove any re-sprouting material.</td></tr>
<tr><td>During and following flowering
Do nothing until the following year or remove flowering heads and bag and let rot.

Small infestation
▪ Pull or cut plant and leave on site with roots exposed.

Large infestation
▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting).
▪ Monitor. Remove any re-sprouting material.</td></tr>
<tr><td>common reed
(Phragmites australis)
Japanese knotweed
(Polygonum cuspidatum)
Bohemian knotweed
(Polygonum x bohemicum)</td><td>Fruits, Seeds, Plant Fragments
Primary means of spread in these species is by plant parts. Although all care should be given to preventing the dispersal of seed during control activities, the presence of seed doesn’t materially influence disposal activities.</td><td>Small infestation
▪ Bag all plant material and let rot.
▪ Never pile and use resulting material as compost.
▪ Burn.

Large infestation
▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile.
▪ Monitor and remove any sprouting material.
▪ Pile, let dry, and burn.</td></tr>
</table>

January 2010

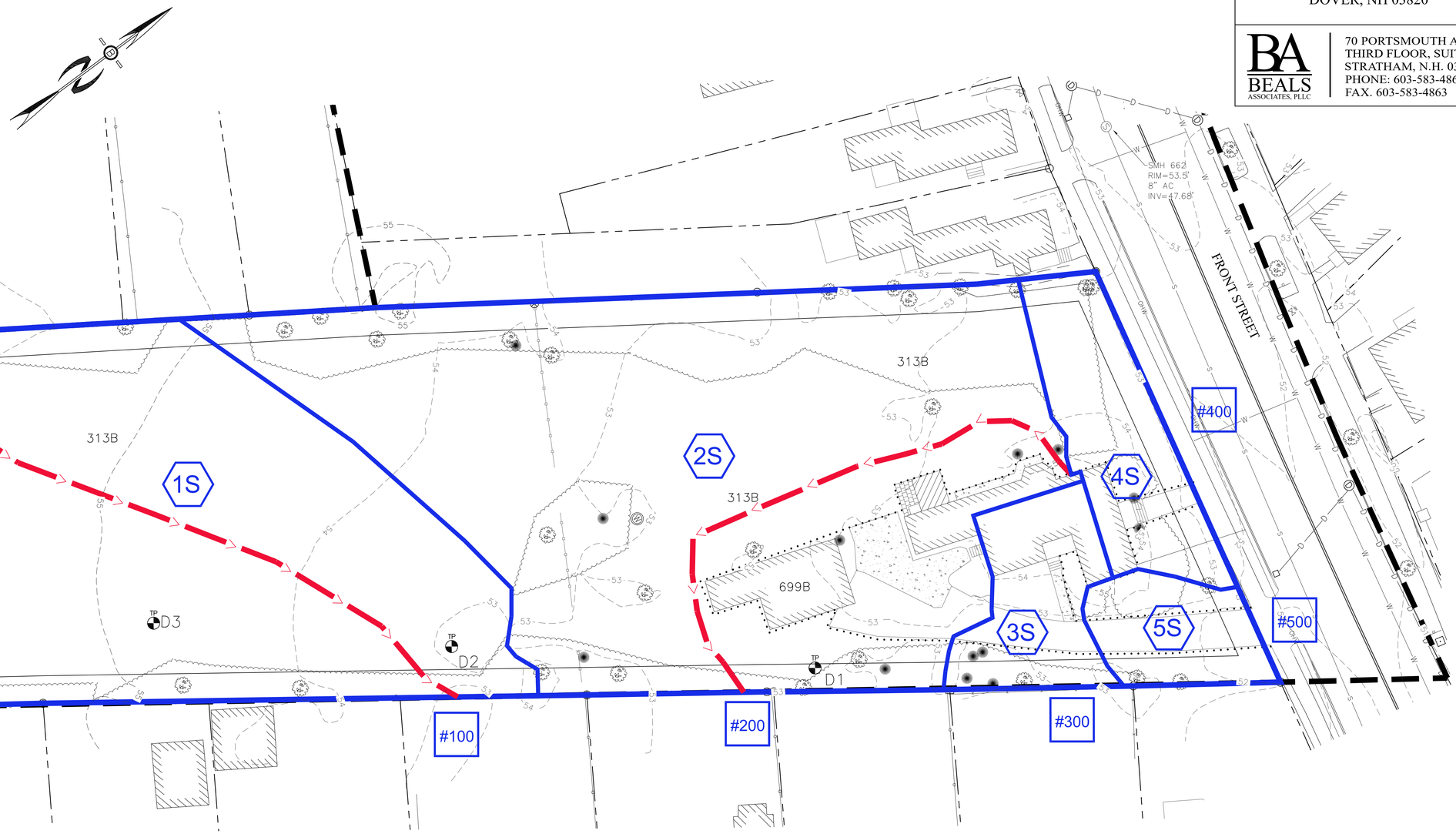
Appendix IV

Plans

PREPARED FOR:

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BA BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863



This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, intended for infiltration requirements by the NH DES Alteration of Terrain Bureau. It was produced by a professional soil scientist, and is not a product of the USDA Natural Resources Conservation Service. There is a report that accompanies this map. The site specific soil map was produced 11–12–2024, and was prepared by James P. Gove, CSS # 004, Gove Environmental Services, Inc.

SOIL IDENTIFICATION LEGEND

Map Unit Symbol	Map Unit Name	HISS Symbol	Hydrologic Soil Group
313	Deerfield loamy sand	311	B
699	Urban Land	n/a	Impervious

SLOPE PHASE:
0–8% B, 8–15% C, 15–25% D
25%–50% E, 50%+ F

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No.9900
LICENSED PROFESSIONAL ENGINEER

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

REVISED PER REVIEW COMMENTS	01/17/25
REVISIONS:	DATE:

EXISTING WATERSHED PLAN

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. NO:	NH-1531	SHEET NO.	W1

PREPARED FOR:

112 FRONT STREET, LLC
42J DOVER POINT ROAD
DOVER, NH 03820

BA BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
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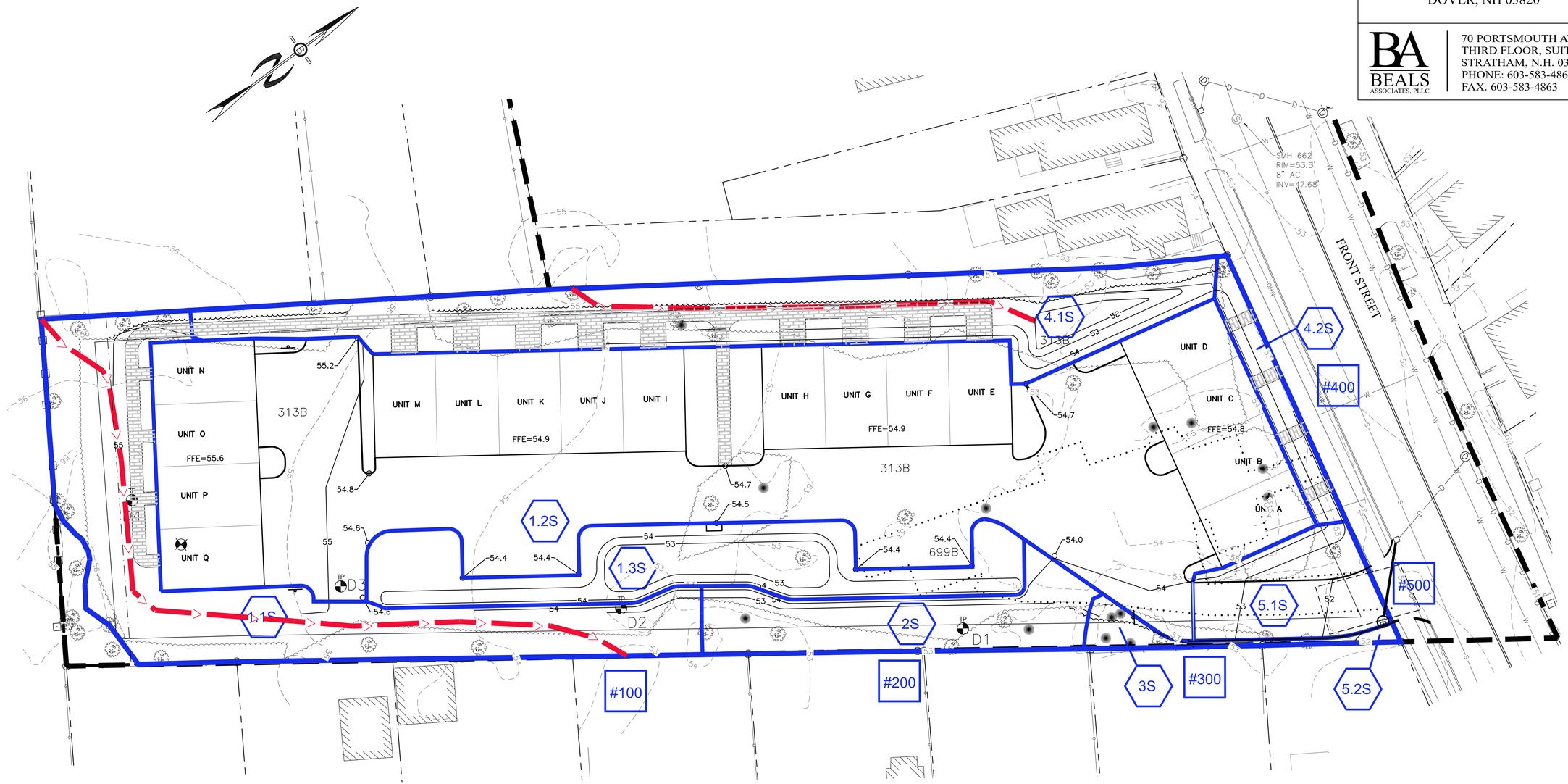

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SLOPE PHASE:
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STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No.9900
PROFESSIONAL ENGINEER

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

REVISIONS:	DATE:
REVISED PER REVIEW COMMENTS	01/17/25

PROPOSED WATERSHED PLAN

RESIDENTIAL DEVELOPMENT
112 FRONT STREET
EXETER, NH
TAX MAP 73, LOT 14

DATE:	DEC 9, 2024	SCALE:	1" = 20'
PROJ. N0:	NH-1531	SHEET NO.	W2