TOWN OF STRATHAM
Incorporated 1716
10 Bunker Hill Avenue· Stratham, NH 03885
Town Clerk/Tax Collector 603-772-4741
Select Board/Administration/Assessing 603-772-7391
Code Enforcement/Building Inspections/Planning 603-772-7391
Fax (All Offices) 603-775-0517

ZONING BOARD OF ADJUSTMENT
MEETING AGENDA
NOVEMBER 3, 2026, 7:00 PM

1) CALL TO ORDER/ROLL CALL/SEATING OF ALTERNATES

2) PLEDGE OF ALLEGIANCE

3) APPROVAL OF MINUTES

A. Meeting minutes from October 6, 2026.

4) PUBLIC HEARING (NEW BUSINESS):

5) Case #695: 41 Portsmouth Ave LLC (Owner) & Orr & Reno (Applicant) request variance from Section 7.9.b.vi.2 General Regulations Wall/Building Signage of the Stratham Zoning Ordinance to permit more than two (2) wall signs at heights greater than 18 feet above grade. The property is located at 41 Portsmouth Ave, Stratham, NH 03885, Tax Map 9, Lot 4, within the Gateway Commercial Business & Residential/Agricultural Zoning Districts.

6) OTHER BOARD BUSINESS

7) ADJOURNMENT

Materials related to the above meeting are posted to the Zoning Board of Adjustment website at www.strathamnh.gov or are available for review at the Municipal Center and during normal business hours. For more information, contact the Stratham Building Department at 603-772-7391 ext.180.

The Zoning Board of Adjustment welcomes public comments. Individuals wishing to address the Board must provide his or her name and address for publication in the Meeting Minutes. When deemed necessary, the ZBA Chair may limit the duration of public comments to ensure an efficient public meeting. Items may be taken out of order.
A motion to enter Non-Public Session in accordance with RSA 91-A:3 may occur at any time during the meeting.

Stratham Zoning Board of Adjustment Meeting Minutes
October 6, 2026
Stratham Municipal Center
Time: 7:00 pm

Members Present: Drew Pierce, Chair
Brent Eastwood, Vice Chair
Lucy Cushman, Member
Donna Jensen, Member
Matt Malone, Member
Anita Giulietti, Alternate

Staff Present: Joe O'Callaghan, Building Inspector/Code Enforcement Officer

CALL TO ORDER/ROLL CALL/SEATING OF ALTERNATES

Mr. Pierce called the meeting to order at 7:02 pm and took roll call. Mr. Pierce stated for the record that Mr. Malone asked to recuse himself from voting tonight. Mr. Pierce appointed Ms. Giulietti as a voting member and Mr. Malone can participate in Board deliberations.

PLEDGE OF ALLEGIANCE

APPROVAL OF MINUTES

A. Meeting minutes from September 1, 2026.
Mr. Eastwood requested a correction of his name on line 215. Ms. Cushman made a motion to accept the September 1, 2026, meeting minutes as amended. Ms. Jensen seconded the motion. All voted in favor; motion passed 5-0.

B. Meeting minutes from September 22, 2026.
Ms. Cushman made a motion to approve the September 22, 2026 meeting minutes as presented. Ms. Jensen seconded the motion. All voted in favor; motion passed 5-0.

PUBLIC HEARING (OLD BUSINESS)

Case #694: Sons on the Beach Trust, Kirk Trachy & Gail Avery, Trustees (Owners) request variances from Section 5.4.3 Regulations and Section 5.4.3(d) of the Stratham Zoning Ordinance to permit more than one (1) accessory dwelling unit (ADU) and to allow the size of the ADU to be less than 400 sq ft. The property is located at 105 Winnicutt Road, Stratham, New Hampshire 03885, Tax Map 14, Lot 88, within the Residential/Agricultural Zoning District.

Mr. Pierce invited the applicant to present the application.

Kirk Trachy spoke. He thanked the Board for their time at the site walk on September 22nd and thanked the Building Inspector for his report. He stated the report shed a lot of light and put some clarity on this.

Mr. Trachy's understanding of the October memorandum/zoning determination is that the existing house is considered a two-family dwelling and therefore the proposed ADU in the existing accessory structure does not constitute a second ADU requiring relief under Article 5.4.3. He stated that accordingly, unless the Board believes otherwise, it appears that the only variance remaining for the Board to consider tonight is the minimum size requirement. The structure is 240 square feet, and the Ordinance requires 400 to 1,000 square feet. Mr. Trachy believes the impact of a smaller structure is more in keeping with the intensity of it down and that a smaller footprint is not as intense and he asked the Board to grant that variance. He stated the structure already exists and the Board has inspected it and the property. Allowing the small size doesn't increase the footprint or the intensity. He stated that he hopes the Board feels it is a modest ADU consistent with the purpose of allowing accessory dwelling units while preserving the care for the property and the neighborhood. He asked the Board if they have any questions.

Mr. Pierce asked for confirmation that Mr. Trachy withdrew the variance for the setback. Mr. Trachy replied he did not submit a variance for the setback. Mr. O'Callaghan added that a variance is not required per NH RSA 674:72.

Mr. Pierce commented that there appears to be a discrepancy between the size of the proposed ADU and he would like that clarified for the record. Mr. Trachy confirmed the size is 12 feet by 20 feet which is 240 square feet. Mr. O'Callaghan stated that Mr. Trachy needs to withdraw the variance for the second ADU because he doesn't already have an ADU, the house is considered a two-family house. Mr. Pierce asked Mr. Trachy if he wanted to withdraw the application for the second ADU. Mr. Trachy replied yes.

Mr. Malone asked for confirmation that the only variance before the Board is for an ADU with a size less than 400 square feet. Mr. Pierce confirmed.

Ms. Cushman commented that she would have a problem with it being larger, but she does not have a problem with it being smaller; so, she does not have an objection to the smaller than 400 square foot size if it satisfies what they are using it for.

Mr. Pierce asked if any Board members were part of the drafting of that requirement in the Ordinance. He wonders what the intent of the 400 square foot minimum is. Ms. Cushman replied that it is probably the State's definition. Mr. O'Callaghan replied that the State does not have a minimum size. Ms. Cushman stated then it was something from the Planning Board. Mr. O'Callaghan added that there is not a minimum size now, but that does not mean there wasn't one in the past. Ms. Giulietti thought it was a State requirement. Mr. O'Callaghan replied it may have been at one point, but there is currently no minimum requirement. Ms. Jensen stated that State Law currently says that a municipality may not restrict the total living space to less than 750 square feet. Mr. O'Callaghan confirmed that is the case and added that one can technically make it as small as one wants and that the Town has established a 400 square foot minimum.

Mr. Pierce asked Mr. Trachy to present his justification to the five criteria.

Criteria 5. Literal enforcement of the provisions of the ordinance would result in an unnecessary hardship.

Mr. Trachy began with the hardship requirement. He stated that adhering to a 400 square foot minimum would be a hardship to the property with the footprint. It is physically possible to add square footage to it to make it to 400, but it would probably mean adding a second one of those buildings, so there'd be two of those there and that wouldn't be a desire for them. Mr. Trachy stated that regarding the character

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of the neighborhood, he believes it settles in there nicely and he doesn't think it clashes. It is not a bright pinky color or strangely constructed building. He thinks its character looks kind of nice in there.

Criteria 1. The variance will not be contrary to the public interest.
Mr. Trachy stated that if an ADU is an approvable structure, he questioned in what way would this be more harmful. He believes it is consistent with the intention of the ADU regulations.

Criteria 2. The spirit of the ordinance is observed.
Mr. Trachy stated that hopefully the Board feels that way, having inspected it. It is not like he is going up to the maximum of 1,000 square feet; it is a minimalist intention. He loves the simplicity of it, like how it is not sprawling. It is self-contained.

Criteria 3. Substantial justice is done.
Mr. Trachy stated that he supposed one could say that it was unjust of him to convert this shed to a space, and it really became a labor of love and a hobby. He uses it as his office and it just kind of morphed that way. He stated it is not meant to be major injustice of any kind; it's quiet, peaceful, and he hopes acceptable to the Board.

Criteria 4. The values of surrounding properties are not diminished.
Mr. Trachy stated that he will let the Board determine how they feel it was from the walk through. He thinks it increases the value of both his property and if someone was looking at it, he doesn't think it would have any impact at all to the surrounding neighborhood.

Mr. Pierce thanked Mr. Trachy and asked if he had anything to add before opening the meeting to public discussion. Mr. Trachy thanked Mr. O'Callaghan for his comments. He stated there are other things in the report that Mr. Trachy is following through with. He has a meeting set up for this Friday to address the Building Inspector's concerns about building permits and he is very willing to accommodate any questions about that.

Mr. Pierce asked the Board for additional questions. There were none.

Mr. Pierce made a motion to open the meeting to public comment. Mr. Eastwood seconded the motion. All voted in favor and the motion passed.

Mr. Pierce asked Mr. O'Callaghan if any written comments were submitted. Mr. O'Callaghan replied no, but he received about 30 or 40 pictures from the Applicant showing the construction of the shed.

Mr. Pierce stated that public comment is open.

Gerald Gelinas spoke. He stated that it is a detriment on his property with it being allowed to be used as a rental property. He stated at the last meeting the Board asked Mr. Trachy to get a complete survey of his property for tonight's meeting. Mr. Gelinas said there was no survey done and his boundary markers had been moved by Mr. Trachy when he put his fence in. Mr. Gelinas believes the structure is only four to six feet off of his property line and stated it is supposed to be 20 feet off. If it was converted back to a shed, it is still illegal because it is over 120 square feet. If it is over 120 square feet, it has to be 20 feet off the property line. If it is used as an ADU, it has to be 20 feet off the property line; that's the state law. You have to follow all of the town guidelines. Mr. Gelinas stated there are cameras on the structure that look over onto Mr. Gelinas's property and he is not happy with that and that is why he wants it moved. He added this is becoming a real legal battle. He stated the Board can make their decision as to what

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they want and he gave the Board all of his information last week. Mr. Gelinas stated he is telling the Board what his feelings are, and that as far as he is concerned, it's a liability to his property as a rental. He added it has no septic system hook up permission.

Mr. Pierce thanked him for his comments and asked if there was anybody else in the public that would like to speak. Nobody spoke.

Mr. Pierce made a motion to close the public session of the hearing. Ms. Cushman seconded the motion. All voted in favor and the motion passed.

Mr. Pierce summarized that the Board is deliberating if the ADU can be less than 400 square feet and not discussing setbacks or the legality of it being an ADU.

Ms. Cushman stated that Mr. Gelinas may not be aware of the change in state law that the Board has been made aware of since the last meeting and she asked Mr. O'Callaghan to read the law. Mr. O'Callaghan read aloud "a municipality shall allow accessory dwelling units to be converted from existing structures, included but not limited to direct detached garages, regardless of whether such structures violate current dimensional requirements for setbacks for lot coverage". He added that he believes the shed has been there since 2011 and the State says if it has been there since 2025, it can become an ADU. Mr. Gelinas replied that it was built illegally without permits and this is an end runaround to allow him to come in after the fact to get permits for everything he has done. Mr. Pierce replied that the Zoning Board is here to hear the application as it was submitted and all the other stuff is really not that relevant to us. Mr. Gelinas replied it is relevant. Mr. Pierce suggested if this gets approved and Mr. Gelinas disagrees with that, he can appeal the ZBA decision or the building permit. Mr. Pierce added that the Board cannot rule on other things that are outside of what the Board is being asked to rule on; so, in fairness to the applicant, that's what the Board going to rule on tonight is what's on the application. Mr. Gelinas replied, okay, if that's what you want to do, that's fine.

Mr. Pierce directed the Board to discuss the criteria.

Regarding criteria 1, contrary to the public interest, Mr. Pierce stated that ADUs are a permitted use. Mr. Eastwood stated he believes putting a lower limit on the size does not make sense, especially if the State says you should not do that. He believes an upper limit makes sense as he doesn't want to have a huge accessory dwelling, so he does not believe it is contrary to the public interest to allow smaller than 400 square feet. Ms. Cushman agreed. Ms. Giulietti stated that ADUs are a new a new world and she believes the reason they have been accepted is because housing is so very expensive, and people want to be able to have family members in their homes when they can. She added that ADUs are very new and are kind of like a frontier and the Board needs to be very cautious on this. Ms. Giulietti stated that if the Board has been given rules about ADUs since they're new, she thinks the Board should adhere to the new rules until we really see what the future looks like with those buildings as residences.

Regarding criteria 2, spirit of the ordinance, Mr. Pierce stated that ADUs are a permitted use in this zoning district and that seems pretty straightforward to him. Mr. Malone commented if the only issue before the Board is the size of the building, then the thought of doubling the size to become compliant does not serve anyone's benefit. He added that if the Building Inspector believes it is safe the way it is configured in size, then he doesn't see a problem.

Regarding criteria 3, substantial justice, Mr. Pierce asked for Board comments. Ms. Jensen stated that the staff memo says granting the requested variance allows an existing structure to be brought into

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compliance while ensuring all applicable septic and building requirements are satisfied. She agrees with that because she thinks it is a very important thing to have the septic sized properly, and that is not a little thing because it really does affect neighbors and water quality. She added she would not agree to approving the variance without a condition to make sure that the building was in full compliance in terms of its electrical, as mentioned by Mr. O'Callaghan, and to make improvements to the septic. Ms. Cushman stated that the Building Inspector's review indicates that he has inspected things and that the electrical will be reviewed by a licensed electrician and there will a new septic system, so it seems like every effort is being made to bring the building into compliance. She stated that the fact that it is smaller, to her, is a non-issue; if it was larger, then that's more of an issue. She added that the State says we can't restrict how small it can be anyway. Ms. Giulietti agreed and added that the Board cannot deliberate something that State law would overrule. Mr. Pierce added that the State includes dimensional requirements in the subject of existing structures being converted, and square footage is a dimensional requirement, so he thinks that is fairly black and white. Ms. Cushman agreed.

Regarding criteria 4, values of surrounding properties are not diminished, Mr. Pierce said that from the site walk, his opinion is that the building is very well maintained and has some architectural quality to it. He stated it is a beautiful building and he thinks it would increase surrounding properties. Ms. Cushman added that she thinks it is beautiful inside and out and it seems to fit well on the site.

Regarding criteria 5, unnecessary hardship, Mr. Pierce stated that owing to special conditions of the property, that there is no fair and substantial relationship between the purpose of the application and the use, and the use is reasonable. It's a good use of the property. It is a reasonable and unique situation, which is why we're here. Ms. Cushman agreed.

Mr. Pierce discussed possible conditions with the Board pertaining to electrical inspections and the septic system. Ms. Jensen asked Mr. O'Callaghan to explain the process regarding those. Mr. O'Callaghan replied that the applicant will hire a third-party electrician and they will test to make sure everything works properly. The electrician will review the 2021 electric code which is the current code cycle. He believes the applicant already has somebody testing and designing the septic system. Mr. Trachy stated they have already done the testing. Ms. Jensen asked if a permit from the state has been issued. Mr. O'Callaghan replied not yet. Mr. Trachy explained that in this situation it would be a shelf permit where they get the permit and shelf it, so in case the septic fails, the design is done. He stated the septic system has been in use for years and has not failed to their knowledge. Mr. O'Callaghan believes he needs to upgrade the system. Mr. Trachy replied it is his understanding that the purpose of the septic design was to prove that, in fact, if it should ever fail, that the property supports the enlargement of the system. A test pit was completed. The soil was ideal for this with no elevation required at all for the septic; it's just natural grade, and that it would be a paper design to prove that it would be buildable.

Mr. Pierce asked the Board if they have any further questions on septic design vs. replacement. Ms. Cushman replied she understands the explanation. Ms. Jensen stated that because it's done by the State, the Town is not supervising that work, so that concerns her. Mr. O'Callaghan asked Mr. Trachy if the existing system was looked at. Mr. Trachy replied yes, Exeter and Epping Septic did that and those are the photographs he submitted. Mr. O'Callaghan asked if he got a permit from the State to do that. Mr. Trachy replied no, but it will exist in the new plans because they came out and took measurements, distance from well, and test pits. He was told it would be about four weeks to receive the septic plan.

Mr. Pierce asked the Board if there were any other conditions they would like to discuss. There were none. Mr. Pierce asked for a motion. There was further clarification from Mr. O'Callaghan that no inspections have been completed yet and a certificate of occupancy will not be issued until the Building

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Department is satisfied including the septic and it cannot be used until the certificate of occupancy is issued.

Mr. Pierce summarized that if the variance is granted, the applicant would need to apply for a building permit for the building, which he may or may not have already done and Mr. O'Callaghan will ask for information needed and the permit will have to be approved before a certificate of occupancy is granted to use the building for residential purposes. Ms. Jensen questioned if that is a condition or a matter of course. Ms. Cushman replied that when a variance is granted, the Board does not instruct the applicant to obtain a certificate of occupancy, it is just part of the process, so that wouldn't be a condition. She compared this process to an example where the Board might require that an applicant record an easement for something. Ms. Jensen commented that the Board could choose to not grant the variance until a certificate of occupancy is obtained. The Board members replied that the applicant should not complete the building process without the variance. Mr. Pierce summarized that granting a variance does not allow the building to be used as an ADU; there are other steps. The Town needs to act on that application and the town requirements already exist for what Ms. Jensen is asking for. Ms. Jensen understands the process and that is why she said it is a matter of course. However, she is uncomfortable with that process. Ms. Cushman provided an example of an addition within the setback; that the Board would not make a condition of the addition approval that the applicant obtain a certificate of occupancy. Ms. Jensen replied that is a false equivalence because this structure is already in use. Ms. Cushman replied that he cannot use it now. Mr. O'Callaghan added that the applicant doesn't even have a building permit until it is approved to use a size under 400 square feet. He agrees it is wishy-washy, but that is the process. Mr. Pierce added that would be a code enforcement issue not within the scope of the Board. If the applicant is doing something illegal, that has nothing to do with this application, that would be at the code enforcement office. Ms. Jensen understands. She stated we are not punitive and not punishing anyone, but she would be more reassured if things were done before the variance was granted because it is already a functioning accessory dwelling unit. Ms. Cushman replied he is not allowed to use it as a dwelling unit until he gets everything in order.

Mr. Gelinas stated from the audience that it is rented illegally, he didn't apply for permits, and he hasn't dug a test pit. Mr. Pierce reminded Mr. Gelinas that the public comment portion of the hearing is closed.

Ms. Cushman made a motion to grant a variance from Article 5.4.3 to allow an ADU to be less than 400 square feet. Mr. Eastwood seconded the motion. Mr. Pierce, Mr. Eastwood, and Ms. Cushman voted aye. Ms. Jenson voted nay. Ms. Giulietti abstained. The motion passed three to one with one abstention.

Mr. Pierce summarized that the motion passed and there is a 30-day appeal period.

OTHER BOARD BUSINESS

Mr. Pierce asked if there is any other business. Mr. O'Callaghan replied there is a new application for a sign for the new Kia dealership that has been submitted.

ADJOURNMENT

Ms. Pierce closed the meeting without objection at 7:47 pm.

Respectfully submitted by Susan Connors

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TOWN OF STRATHAM

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Fax (All Offices) 603-775-0517

TO: Zoning Board of Adjustment Members

FROM: Joseph O'Callaghan, Building Inspector & Code Enforcement Officer

FOR: November 3, 2026, Meeting

RE: Case 695: 41 Portsmouth Ave LLC (Owner) & Orr & Reno (Applicant) request a variance from Section 7.9.b.vi.2 General Regulations Wall/Building Signage of the Stratham Zoning Ordinance to permit more than two (2) wall signs at heights greater than 18 feet above grade. The property is located at 41 Portsmouth Ave, Stratham, NH 03885, Tax Map 9, Lot 4, within the Gateway Commercial Business & Residential/Agricultural Zoning Districts.

EXISTING CONDITIONS: No building has been constructed yet/ Proposed use as an automotive dealership has been approved. Construction permits are currently under review.

STAFF REVIEW: Proposed KIA sign proposed to be 21'-1.5'' feet to top of letters and the McFarland sign proposed to be 20'-4'' to top of letters.

APPLICATION INFORMATION: Section VII---7.9 General regulations for Signs in the Gateway Commercial business district under section vi. Wall/Building signage paragraph #2
Wall signage must be located no more than 18 feet above grade level or below the lowest part of the roof line, whatever is lowest.

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TOWN OF STRATHAM

Zoning Board of Adjustment
10 Bunker Hill Avenue, Stratham NH 03885
Building Department (603) 772-7391
www.strathamnh.gov

VARIANCE APPLICATION

This completed application (including all required application package contents) must be filed with the Zoning Board of Adjustment's Agent no later than 12:00 PM on the deadline day published in the ZBA's Schedule of Regular Board Meetings.

1. PROPERTY OWNER AND APPLICANT INFORMATION:			
PROPERTY OWNER NAME:	41 Portsmouth Ave LLC		
Phone #:	603-658-9026	Email Address:	clane@mcfarlandford.com
Mailing Address:	151 Portsmouth Avenue, Exeter, NH, 03833		
APPLICANT/PRIMARY CONTACT: (Company and contact name if not Property Owner)	Christopher J. Lane, Manager		
Phone #:	603-658-9026	Email Address:	clane@mcfarlandford.com
Mailing Address:	151 Portsmouth Avenue, Exeter, NH 03833		

2. PROPERTY/PROJECT INFORMATION:					
Property Address:	41 Portsmouth Avenue, Stratham, NH				
Tax Map:	9	Property Deed Information:	Book: 6460	Page: 1178	
Lot(s):	4	Total parcel area (SF):	360,676	Total parcel area (acres):	8.28

Zoning District(s): Check all that apply.

- ☐ Commercial/Light Industrial/Office
- ☐ Flexible/Mixed Use Development
- ■ Gateway Commercial Business
- ☐ Industrial
- ☐ Manufactured Housing/Mobile Home
- ☐ Professional/Residential
- ■ Residential/Agricultural
- ☐ Retirement Planned Community
- ☐ Route 33 Legacy Highway Heritage
- ☐ Special Commercial
- ☐ Town Center

Overlay District(s): Check all that apply.

- ☐ Aquifer Protection
- ☐ Floodplain Management
- ☐ Shoreline Protection
- ☐ Wetland Conservation

3. PROFESSIONAL SUPPORT (Include additional sheets if necessary):			
COMPANY NAME:	Orr & Reno	Contact:	Meredith Farrell Goldstein
Phone #:	603-223-9183	Email Address:	mgoldstein@orr-reno.com
Mailing Address:	45 S. Main Street, PO Box 3550, Concord, NH 03302		
COMPANY NAME:	Emanuel Engineering, Inc.	Contact:	Bruce Scamman
Phone #:	603-772-4400	Email Address:	bscamman@emanuelengineering.com
Mailing Address:	118 Portsmouth Avenue, Stratham, NH 03885		
COMPANY NAME:		Contact:	
Phone #:		Email Address:	
Mailing Address:	See abutter list for additional professional support information		

Docusign Envelope ID: B8EBD9F8-655A-4A29-89DA-2AD1DD3B6FBE

4. PROJECT DESCRIPTION

Provide a brief description of your project, including your intended use of the property and/or intended improvements to the property, if applicable:

See attached narrative

5. VARIANCE REQUEST

A variance is requested from Section (include subsection, if applicable)_____of the Zoning Ordinance and asks that said terms be waived to permit the following:

See attached narrative

The applicant bears the burden of presenting evidence sufficient to allow the Zoning Board to reach conclusions and make findings to support the authorization of a variance. To do so, the undersigned alleges that the following legal criteria for granting a variance are satisfied, and submits the accompanying written statement, records, photographs, and other materials to justify the granting of the variance and to explain how each of the criteria for the variance is or will be satisfied. Facts supporting this request:

i. The variance will not be contrary to the public interest because:

See attached narrative

ii. The spirit of the ordinance is observed because:

See attached narrative

iii. Substantial justice is done because:

See attached narrative

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iv. The values of surrounding properties are not diminished because:

See attached narrative

v. Literal enforcement of the provisions of the ordinance would result in an unnecessary hardship.

1. For purposes of this subparagraph, "unnecessary hardship" means that, owing to special conditions of the property that distinguish it from other properties in the area:
   a. No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of that provision to the property because:

See attached narrative

And:

   b. The proposed use is a reasonable one because:

See attached narrative

2. Explain how, if the criteria in subparagraph 1. above are not established, an unnecessary hardship will be deemed to exist if, and only if, owing to special conditions of the property that distinguish it from other properties on the area, the property cannot be reasonably used in strict conformance with the ordinance, and a variance is therefore necessary to enable a reasonable use of it.

Docusign Envelope ID: B8EBD9F8-655A-4A29-89DA-2AD1DD3B6FBE

6. APPLICANT'S CERTIFICATION:

I/We declare under penalty of perjury that all of the submitted information is true and correct to the best of my knowledge and belief. I/We have read and agree to abide by the regulations of the Town of Stratham. I/We understand that any misrepresentations of submitted data may invalidate any approval of this application. If the use is not operated in compliance with these regulations, the permit may be revoked by the Code Enforcement Officer or the Zoning Board of Adjustment.

By signing this application, you are agreeing to all rules and regulations of the Town of Stratham, and are agreeing to allow agents of the Town of Stratham to conduct inspections, during normal town business hours, or your property, to ensure compliance with all Stratham Zoning, Subdivision and/or Site Plan Review regulations while your application is under consideration. The Town accepts electronic signatures on this application. Electronic signatures carry the same validity, enforceability and admissibility, as handwritten signatures.

I/We, the undersigned, authorize Orr & Reno, P.A. to act as the professional and primary contact representing this application before the Stratham Planning Board. Communications related to this application, including those from the Stratham Planning Department, will be directed to this representative.

DocuSigned by: Christopher J. Lane AB3ED5A09E7E468...	Christopher J. Lane	5/30/2025
Signature of Applicant	**Print Applicant's Name**	**Date**
DocuSigned by: Christopher J. Lane AB3ED5A09E7E468...	Christopher J. Lane	5/30/2025
Signature of Property Owner*	**Print Property Owner's Name**	**Date**

*This application must be signed by the owner of the property or other person having the legal right to apply as an agent of the owner. If signed by a person other than the owner of the property, documentation of the legal right to apply as an agent of the owner must be included as part of the application submittal.

PROPERTY OWNER'S INFORMATION IF APPLICANT IS RENTING/LEASING:
You must submit a signed letter from the property owner stating that you have their permission to conduct the proposed business project on their property. This letter must include the property owner's name, current address, and telephone number.

APPLICATION CHECKLIST:

- Nine (9) copies of the completed and signed application and supporting materials, including plats or drawings, which provide information in support of the variance.
- Abutters list (downloadable from https://next.axisgis.com/StrathamNH/).
- Application Fee and Pubic Notice Costs. All checks are to be made payable to the Town of Stratham.
  Application Fee = $100.00 plus notice costs.
  Public Notice Costs = $150.00 plus $5.00 per abutter/applicant/consultant for the costs of all notice requirements including newspaper publication and postage for certified mail and regular mail.
- Three (3) sets of abutter/applicant/consultant mailing labels.

PLEASE DO NOT WRITE BELOW THIS LINE – FOR TOWN USE ONLY

ZBA Case Number:_____ Check Number:_____

Application Fee:_____ Check Amount:_____

Notice and Abutter Fee:_____ Check Payor:_____

Narrative in Support of Variance Application

This variance application is related to the property located at 41 Portsmouth Avenue (the "Property"), owned by 41 Portsmouth Ave LLC. The majority of the Property is located in the Gateway Commercial Business District, but a small rectangular portion in the back of the lot is in the Residential/Agriculture District.

41 Portsmouth Ave LLC plans to build a 30,000 square foot Kia car dealership on the Property. A majority of the project will be located on the large portion of the Property located in the Gateway Commercial Business District, but 41 Portsmouth Ave LLC is planning to use the small rectangular portion of the lot in the Residential/Agricultural District for vehicle storage. Motor vehicle dealerships are only permitted in the Gateway Commercial Business District by conditional use permit. 41 Portsmouth Ave LLC's conditional use permit application is pending with the Planning Board. Parking lots and motor vehicle dealerships are not permitted in the Residential/ Agricultural District.

The Planning Board held a public hearing on 41 Portsmouth Ave LLC's site plan application on April 16, 2025. During that hearing, the Planning Board determined that vehicle storage in the portion of the Property zoned Residential/Agriculture would require a variance.

Accordingly, 41 Portsmouth Ave LLC requests a variance from Section 3.6 Table of Uses of the Stratham Zoning Ordinance to permit vehicle storage on the portion of the Property located in the Residential/Agricultural District.

1. The variance will not be contrary to the public interest.

The New Hampshire Supreme Court has noted that the first and second criteria – the requirement that the variance not be contrary to the public interest and that the variance be consistent with the spirit of the ordinance – are related and intertwined. *See Harborside Associates, L.P. v. Parade Residence Hotel, LLC*, 162 N.H. 508, 514 (2011) (quoting *Farrar v. City of Keene*, 158 N.H. 684, 691(2009)). A variance is contrary to the public interest if it would "unduly, and in a marked degree conflict with the ordinance such that it violates the ordinance's basic zoning objectives." *Id*.

The New Hampshire Supreme Court has recognized two methods for ascertaining whether granting a variance would violate an ordinance's "basic zoning objectives." *Id*. One way is to examine whether granting the variance would "alter the essential character of the neighborhood." *Id.* Another approach "is to examine whether granting the variance would threaten the public health, safety or welfare." *Id.*

Here, granting 41 Portsmouth Ave LLC a variance would not alter the essential character of the neighborhood. The Property is located on a main road near several other car dealerships. The small portion of the Property in the Residential/Agricultural District abuts one property in the Gateway Commercial Business District and two properties that are also split by the zoning district boundary line. One of the properties divided by the district boundary line is a residential home. The home abuts the Property on two sides, one being the side where the dealership will be located in the Gateway Commercial Business District and the other being the proposed vehicle

storage area, on the Residential/Agricultural border. The other property divided by the district boundary line is a large 206.8 acre lot. There are two conservation easements on this land. Both easements prohibit development, except for minor agricultural structures. The conserved land abuts the back portion of the lot proposed for vehicle storage. Allowing vehicle storage on the small portion of the Property behind the dealership storefront will not alter the character of the neighborhood.

The variance also would not threaten the public health, safety or welfare. The storage of vehicle inventory on site is relatively unobtrusive and actually enhances public safety. If vehicles could not be stored here, they would have to be stored off-site at another location. That would require shuttling customers and vehicles to and from the site for test-drives and viewing. Having the inventory stored on site reduces those vehicle trips, which improves traffic and pedestrian safety, and also the customer experience and convenience.

2. The spirit of the ordinance is observed.

As noted above, the New Hampshire Supreme Court has determined that the requirement that a variance not be contrary to the public interest "is co-extensive and related to the requirement that a variance be consistent with the spirit of the ordinance." *Chester Rod & Gun Club v. Town of Chester*, 152 NH 577, 580 (2005); *see also Harborside Associates*, 162 N.H. at 514. As such, this criterion overlaps with the public interest requirement and for the reasons set forth above, the variance would not run contrary to the spirit of the ordinance as found in its basic zoning objective.

The Residential/Agricultural District is intended to preserve open space and low-density residential development. However, the Property is bisected by the zoning district boundary and only a small portion at the rear is located in the Residential/Agricultural district. Given that the front of the Property will be developed for an auto dealership, there is no practical way to use the rear of the Property for a residential use that would be permitted in the district.

3. Substantial justice is done.

Substantial justice is done where granting a variance will not cause harm to the general public that outweighs the benefit to the applicant. See Malachy Glen Associates v. Town of Chichester, 155 N.H. 102, 109 (2007). Allowing this variance will not harm the general public. The Property is located in the Gateway Commercial Business District, except for a small rectangular piece in the back of the lot that extends into the Residential/Agricultural District. Permitting vehicle storage in the back small rectangle will not cause harm to the general public. 41 Portsmouth Ave LLC will benefit greatly from this variance because it will allow it to make use of the residentially-zoned portion of the Property, and to provide a much better customer experience for vehicle shoppers. As such, substantial justice will be done by granting this variance.

4. The values of the surrounding properties will not be diminished.

Granting this variance will not diminish surrounding property values. As noted above, the Property is located on a main road where several other car dealership businesses are located. The proposed vehicle storage would be on the small rectangular portion of the Property behind the dealership building.

The proposed storage area abuts two properties that are divided by the zoning district line. The first is the large 206 acre property directly behind the proposed storage area preserved by conservation easements. No development is permitted on this property except for limited structures related to agriculture. The value of this property will not be harmed by the proposed variance.

The residential property that abuts the Property will not be negatively impacted either, because it is already divided by the zoning line, with half Residential/Agricultural and half Gateway Commercial Business District. As such, it already abuts the commercial zoning district and will abut the proposed car dealership regardless of whether vehicles are stored in the rear portion. Additionally, the proposed vehicle storage area will have a minimal visual impact and will blend in with the rest of the dealership.

5. Literal enforcement of the provisions of the ordinance would result in unnecessary hardship.

This Property is unique for several reasons. First, it is a large parcel that is mostly in the Gateway Commercial Business District but includes a small rectangular piece that extends into the Residential/Agricultural District. Second, the residentially zoned portion is at the rear of the Property and is not subdividable from the commercially zoned front portion of the Property. As such, there isn't a feasible way to develop the residentially zoned portion of the Property for a permitted use separate from the auto dealership. The only feasible use of the residentially zoned portion is in conjunction with the auto dealership. Third, the small rectangular piece of the Property that extends into the Residential/Agricultural District abuts other properties that will not be impacted by the storage of vehicle inventory. The conservation land cannot be developed and will never have another abutting residential use. The abutting residence is on a property that is also located in the commercial and residential districts. It will abut the dealership even if the proposed vehicle storage is not allowed. Accordingly, there is no meaningful impact on it by granting the variance.

No fair and substantial relationship exists between the general public purpose of the ordinance and specific application of Section 3.6 to the Property. The general public purpose of the Residential/Agricultural District is to preserve open space and foster low-density residential development. Permitting the small rear portion of the Property to be used for vehicle storage will not hinder this intent. This Property's unique location on the zoning district boundary line, its only residential abutter's location on the zoning district boundary line, and the large abutting parcel protected by conservation easements behind the proposed vehicle storage area, ensuring open space behind the Property, demonstrate that no fair and substantial relationship exists

between the general public purpose of the ordinance and the specific application of the ordinance to this Property. The proposed vehicle storage will be on the border of the Gateway Commercial Business District, will blend in with the dealership, and significant open space behind the Property will remain. If the variance were not granted, there would be a small island of residentially-zoned land at the rear of the Property that could not be put to any reasonable use.

The proposed use is reasonable because it will allow 41 Portsmouth Ave LLC to keep excess vehicles on the same Property as the dealership. The variance will have minimum, if any, impact on the surrounding area and the general public. The proposed use is part of the car dealership business and will blend in seamlessly with the dealership.

AMENDED SITE PLAN FOR 41 PORTSMOUTH AVE LLC

41 PORTSMOUTH AVENUE - STRATHAM TAX MAP 9 LOT 4

APPLICANT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

OWNER:
41 PORTSMOUTH AVENUE REALTY LLC
124 BEDFORD CENTER ROAD, SUITE D
BEDFORD, NH 03110

CIVIL ENGINEER:
EMANUEL ENGINEERING, INC.
118 PORTSMOUTH AVENUE, SUITE A202
STRATHAM, NH 03885

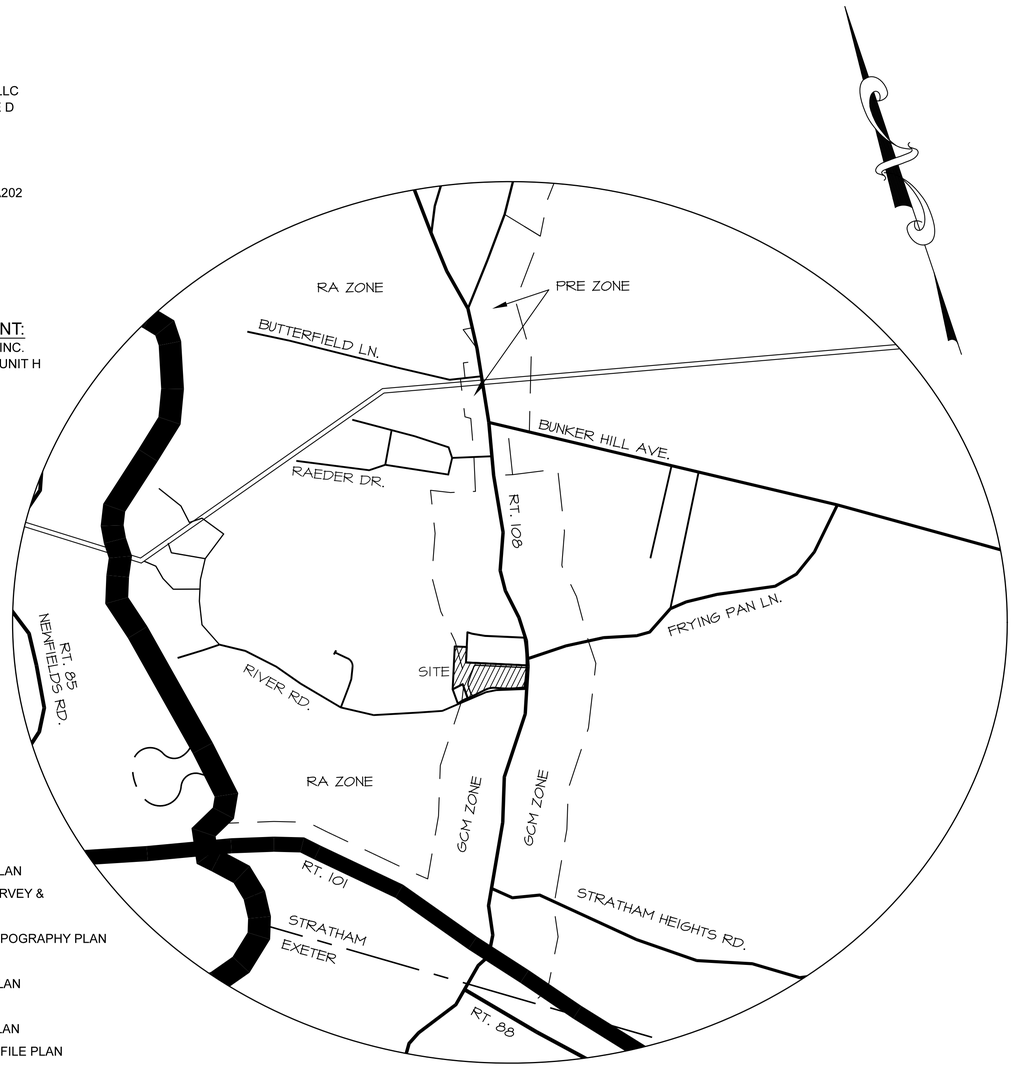
LAND SURVEYOR:
JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8
NEWINGTON, NH 03801

SOIL/WETLAND CONSULTANT:
GOVE ENVIRONMENTAL SERVICES, INC.
8 CONTINENTAL DRIVE, BUILDING 2 UNIT H
EXETER, NH 03833

ARCHITECT:
PRAXIS3
100 PEACHTREE STREET NW #1450
ATLANTA, GA 30303

LANDSCAPE ARCHITECT:
WOODBURN & COMPANY
LANDSCAPE ARCHITECTURE, LLC
103 KENT PLACE
NEWMARKET, NH 03857

LIGHTING DESIGNER:
VISIBLE LIGHT, INC.
24 STICKNEY TERRACE, SUITE 6
HAMPTON, NH 03842



PROJECT LOCUS PLAN

1" = 1,000 '

PROJECT DRAWING SET:

COVER	COVER SHEET
B1 & B2	ALTA BOUNDARY PLAN
E1	EASEMENT PLAN
C1	EXISTING CONDITIONS PLAN
C2	HIGH INTENSITY SOIL SURVEY & TOPOGRAPHY PLAN
C2.1	SITE-SPECIFIC SOIL & TOPOGRAPHY PLAN
C3	SITE PLAN
C4	GRADING & DRAINAGE PLAN
C5	UTILITIES PLAN
C6	PAVING AND CURBING PLAN
C7	ROAD ALIGNMENT & PROFILE PLAN
SD1 & SD2	SUBSURFACE DISPOSAL SYSTEM
D1	NOTES
D1A	POROUS PAVEMENT NOTES
D2 & D3	SITE DETAILS
D4	UTILITY DETAILS
D5	EROSION CONTROL DETAILS
D6-D9	DRAINAGE DETAILS
L1 & L2	LANDSCAPING PLANS
A01-A05	ARCHITECTURAL PLANS
1 OF 2	SITE LIGHTING LAYOUT (BY VISIBLE LIGHT, INC.)
2 OF 2	SITE LIGHTING LAYOUT (BY VISIBLE LIGHT, INC.)

APPROVED BY THE TOWN OF STRATHAM PLANNING BOARD

CHAIRPERSON DATE

PROJECT GENERAL NOTES:

1. OWNER OF RECORD -
STRATHAM TAX MAP 9 LOT 4:
41 PORTSMOUTH AVENUE REALTY LLC
124 BEDFORD CENTER ROAD, SUITE D
BEDFORD, NH 03110
RCRD BK6460 PG1178
2. THE INTENT OF THIS PLAN IS TO SHOW SITE PLAN IMPROVEMENTS FOR TAX MAP 9 LOT 4. THE SITE PLAN IS FOR AN AUTOMOTIVE DEALERSHIP.
3. THIS IS NOT A BOUNDARY PLAN. SEE REFERENCE PLANS PREPARED BY EMANUEL ENGINEERING, INC. FOR BOUNDARY.
4. THESE PARCELS ARE NOT IN A FLOOD HAZARD ZONE PER FEMA FLOOD INSURANCE RATE MAP 33015C0245F EFFECTIVE DATE JANUARY 29, 2021.
5. SUBJECT PARCEL IS ZONED GATEWAY "COMMERCIAL BUSINESS DISTRICT- CENTRAL ZONE" AND "RESIDENTIAL - AGRICTULTURAL" AND IS NOT LOCATED IN THE STRATHAM AQUIFER PROTECTION DISTRICT PER THE TOWN OF STRATHAM OFFICIAL ZONING MAP 2022.
6. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
7. RIVER ROAD IS A TOWN ROAD AND HAS VARYING WIDTHS PER TOWN ROAD AGENT FRED HUTTON, 2004. A 1-1/2 ROD WIDTH WAS MAINTAINED TO THE CENTERLINE OF ROAD EXCEPT AT INTERSECTION ON TO ROUTE 108. AT THE INTERSECTION 3 RODS WERE MAINTAINED TO THE SIDE LINE OF MAP 9 LOT 3. DUE TO PAST ROAD IMPROVEMENTS PER SITE PLAN OF MAP 9 LOT 3 THE ROAD IS NOT CENTERED IN THE RIGHT OF WAY.
8. REFERENCE BEARING AND ELEVATION FROM REFERENCE PLAN #1. HORIZONTAL DATUM: NAD83/96, PROJECTION: NH STATE PLANE. VERTICAL DATUM: NGVD29 (FROM NHDOT DISK 153-380) A STANDARD NHDOT DISK SET IN THE SOUTHEAST ABUTMENT OF ROUTE 101 OVERPASS.
9. EXISTING SITE CONDITIONS AND FIELD WORK BY BDS, JJM, DFE, & RKP IN 2014 BASED UPON THE LOCATION OF MONUMENTS SHOWN THEREON. THE HORIZONTAL ERROR OF CLOSURE WAS LESS THAN 1 FOOT IN 10,000 FEET.
10. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 72 HOURS BEFORE COMMENCING WORK BY THE CONTRACTOR. CALL DIG SAFE @ 1-888-344-7233.
11. THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION OF ANY DISCREPANCY TO THE PLAN FOUND ON SITE.
12. WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC., 8 CONTINENTAL DRIVE, BUILDING 2 UNIT H, EXETER, NH 03833, ON APRIL 1, 2014.
13. SOILS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC., 8 CONTINENTAL DRIVE, BUILDING 2 UNIT H, EXETER, NH 03833, ON AUGUST 8, 2013, IN ACCORDANCE WITH HIGH INTENSITY SOIL MAPS FOR NEW HAMPSHIRE STANDARDS, PUBLICATION NO. 1, APRIL 2008. SOILS WERE REVISED ON APRIL 1, 2014.
14. ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE AND LOCAL ZONING ORDINANCES, REGULATIONS, AND STANDARDS.
15. STRATHAM ZONING ORDINANCE (AMENDED MARCH 2024) - DIMENSIONAL REGULATIONS ("GCBD" ZONE):
   - MINIMUM LOT SIZE REQUIRED: 1 AC (8.27 AC PROVIDED)
   - MINIMUM FRONTAGE FOOTPRINT: 200' (1072.63' PROVIDED)
   - MAXIMUM BUILDING: 75,000 SF (28,190 PROPOSED)
   - MAXIMUM BUILDING HEIGHT: 3 STORIES OR 40' (39'-6" PROPOSED)
   - MINIMUM FRONT YARD SETBACK: GREATER OF 15' FROM STATE R.O.W. (PORTSMOUTH AVENUE) OR 40' FROM EDGE OF PAVEMENT (PORTSMOUTH AVE.)
   - MAXIMUM FRONT YARD SETBACK: 40'
   - REAR AND SIDE YARD SETBACK: 10' MINIMUM (0' IF SECONDARY FRONTAGE)
   - ABUTTING RESIDENTIAL USE VEGETATED BUFFER: 30'
   - MINIMUM PUBLIC SPACE AND OPEN SPACE REQUIREMENT: 15% (46.18% PROPOSED)

   FOR THE "R/A" ZONE:
   - REAR AND SIDE YARD SETBACK: 20' MINIMUM
16. STRATHAM PARKING REGULATIONS - OCTOBER 2023 SITE PLAN PARKING AREAS & ACCESS DRIVES:
   - PARKING SPACE DIMENSIONS: 9' WIDE 18' LONG.
   - MINIMUM AISLE WIDTHS SHALL BE 24' FOR TWO-WAY AISLES (WITH 90° PARKING ANGLE).

   REQUIRED PARKING:
   - MOTOR VEHICLE SALES AND SERVICE: 2.5 SPACE FOR EACH 1,000 SF GFA INTERIOR SALES AREA, PLUS 1.5 SPACE PER 1,000 SF GFA INTERIOR OR STORAGE/DISPLAY AREA, PLUS 2 PER SERVICE BAY

   PROPOSED PARKING:
   - SALES: 6,000 SF X 2.5 SPACE/1,000 SF=15 SPACES
   - BUILDING: 36,000 SF 1.5 SPACES/1,000 SF=54 SPACES
   - SERVICE BAYS: 19 SERVICE BAYS X 2 SPACES/BAY = 38 SPACES
   - TOTAL SPACES REQUIRED = 107 SPACES
   - TOTAL SPACES PROVIDED = 107 SPACES (INCLUDES 6 EV SPACES)

   ADDITIONAL VEHICLE DISPLAY & STORAGE PARKING:
   - 500+ SPACES. THE NUMBER OF VEHICLES WILL DEPEND ON THE SIZE OF THE VEHICLES.
   - ALL DISPLAY VEHICLES SHALL REMAIN IN THE DELINEATED AREAS EXCEPT DURING SNOW REMOVAL, OR WHEN A SNOWSTORM IS IMMINENT.
17. UPON APPROVAL, THIS PLAN IS INTENDED TO BE RECORDED AT THE RCRD. SEE DESIGN PLAN SET AT TOWN OF STRATHAM OR EEI FOR ADDITIONAL INFORMATION AND DESIGN.
18. BEST MANAGEMENT PRACTICES ARE TO BE USED FOR ALL EROSION AND SEDIMENT MEASURES PRIOR TO AND DURING CONSTRUCTION. COMPLIANCE TO THE STORM WATER MANAGEMENT PLAN IS A CONDITION OF SITE PLAN APPROVAL.
19. SITE WILL BE SERVICED BY ON SITE WATER AND SEPTIC SYSTEMS. THE PROPOSED WASTE WATER SYSTEM DESIGN INTENT SUPPORTS 1,750 GPD.
20. FIRE SUPPRESSION SYSTEM, FIRE ALARM, AND KNOX BOX WILL BE PROVIDED PER FIRE DEPT. SPECIFICATIONS. PROPOSED BUILDING SHALL BE SERVICED BY CISTERN FROM MAP 9 LOT 5.
21. SITE & STATE APPROVALS (SOME PERMITS/ APPROVALS HAVE EXPIRED AND MAY REQUIRE RENEWAL):
   NHDOT DRIVEWAY PERMIT:
   # 06-431-436, 07/22/2014
   NHDES WATER SYSTEM OPERATIONAL PERMIT:
   #DR 999992, 08/26/14
   NHDES SUBSURFACE OPERATIONAL PERMIT:
   #CA2014119379, 08/27/14
   NHDES HOLDING TANK REGISTRATION:
   SITE # 201407017, 07/11/14
   RSN # 33308, 07/11/14
   ACTIVITY # 209960, 07/11/14
   NHDES ALTERATION OF TERRAIN:
   AOT-0747 07/01/14
22. AS A CONDITION OF THE PLANNING BOARD'S APPROVAL, THE APPLICANT MUST EXECUTE A LEGAL AGREEMENT, WHICH SPECIFIES THE TERMS AND CONDITIONS, AND THE UNDERSTANDINGS BETWEEN THE PARTIES WITH RESPECT TO TOWN REGULATIONS.
23. WAIVERS GRANTED BY THE PLANNING BOARD MARCH 19, 2014:
   - SECTION 5.2.C.13 - PLANT MATERIAL LOCATED WITHIN 20 FEET OF PAVED AREAS
   - SECTION 5.2.E.2 - LANDSCAPE SCREENING OF BUILDINGS AND PARKING AREAS
   - SECTION 5.2.H.4 - PARKING AREA / DIVIDER ISLANDS
   - SECTION 5.2.H.5 - PARKING AREA / TERMINAL ISLANDS
   - SECTION 5.9.10 - MITIGATING THE IMPACTS OF PARKING LOTS
   - SECTION 5.15.I - VEHICLE ENTRY DOORS

   THE FOLLOWING WAIVERS WERE SUBMITTED TO THE PLANNING BOARD ON JANUARY 22, 2024:
   - SECTION 4.3.2.j - PHOTOMETRIC PLAN
   - ADDENDUM B - DIGITAL SUBMISSION
24. ALL NEW LIGHTING SHALL BE "DARK SKY" COMPLIANT AND MEET THE REQUIREMENTS OF SECTION 5.8 OF THE SITE PLAN REGULATIONS.
25. ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.

REFERENCE PLANS:

1. "STRATHAM FIRE PROTECTION DISTRICT WATER LINE" DRAWING SET 8 SHEETS, BY EMANUEL ENGINEERING, INC., DATED 2-18-08, NOT RECORDED.
2. "LOT LINE ADJUSTMENT PLAN" BY EMANUEL ENGINEERING, INC., DATED JAN. 5, 2007, RCRD D-34505.
3. "ALTA / ACSM LAND TITLE SURVEY PROJECT COVER SHEET FOR AUTOFAIR REALTY II, LLC 45 PORTSMOUTH AVENUE (SITE) STRATHAM, NH 03885" DRAWING SET 5 SHEETS, BY EMANUEL ENGINEERING. INC., DATED 10-14-11, NOT RECORDED.
4. "SUBDIVISION PLAN & LOT LINE REVISION PLAN OF LAND OF W. DOUGLAS SCAMMAN JR. REVOCABLE TRUST SHEILA A SCAMMAN REVOCABLE TRUST ROLAND & MONICA SCHELLER ROUTE 108 & RIVER ROAD STRATHAM, NEW HAMPSHIRE" BY DOUCET SURVEY, INC., DATED 2-12-10, NOT RECORDED, SHEETS 1 OF 4.
5. "AMENDED SITE PLAN FOR AUTOFAIR REALTY II, LLC. d/b/a NISSAN OF STRATHAM 45 PORTSMOUTH AVENUE STRATHAM, NH 03885", BY EMANUEL ENGINEERING. INC., DATED 1-4-12, RCRD D-37086.
6. "SITE PLAN FOR AUTOFAIR REALTY II, LLC" (25 SHEETS) BY EMANUEL ENGINEERING, INC., DATED NOVEMBER 24, 2014, NOT RECORDED.

LEGEND

- NEW HAMPSHIRE HIGHWAY BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND
- (TYP) TYPICAL
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND SYMBOL
- SOIL DELINEATION
- XXX EXISTING CONTOUR
- XXX PROPOSED CONTOUR
- XXXX PROPOSED SPOT GRADE
- EDGE OF PAVEMENT (EOP)
- UG UNDERGROUND UTILITIES
- OHE OVERHEAD UTILITIES
- UTILITY POLE
- GUY WIRE
- DRAIN MANHOLE
- SERVICE CLEANOUT
- S SEPTIC LINE
- D DRAIN LINE
- G PROPANE TANK
- W WATER LINE
- WELL
- GAS GAS LINE
- SIGN
- XX # OF PARKING SPACES
- TREE LINE
- TREE

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
3	APR 23, 2025	FOR APPROVAL	
2	MAR 19, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	

DRAWN: JJM | DESIGN: JJM
CHECKED: BDS | CHECKED: BDS

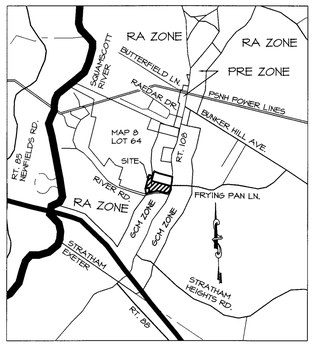
EMANUEL ENGINEERING
118 PORTSMOUTH AVENUE, A202
STRATHAM, NH 03885
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL:

TITLE:
COVER SHEET
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS NOTED	COVER



LOCUS
SCALE 1"=3000'

LEGEND:
- DRILL HOLE
- (350') REF. PLAN DISTANCE
- POWER/UTILITY POLE
- STONE WALL
- EXISTING WELL
- ANGLE IRON FOUND 2"
- GRANITE BOUND FOUND 4"X4"
- TEST PIT (TYP)
- BARB WIRE FENCE
- ZONING DISTRICT
- ABUTTER LINE
- EASEMENT LINE
- REBAR 5/8"
- GUY WIRE
- GAS RISER

ABUTTERS:

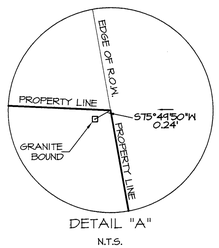
9/17 — N/F WILMA K. GUILFOYLE REVOC. TRUST
PO BOX 213
STRATHAM, NH 03885
3446-1098, 3446-1096
2061-0235, 3409-1899

9/114 — N/F HARALAMPOS SIDIROPOULOS
365 MAIN ST.
TEWKSBURY, MA. 01876
3952-0466

9/115 — N/F LIONHEART INVESTMENTS PROP.
210 COMMERCE WAY
PORTSMOUTH, NH 03801
3093-1624
C/O THE KANE CO.

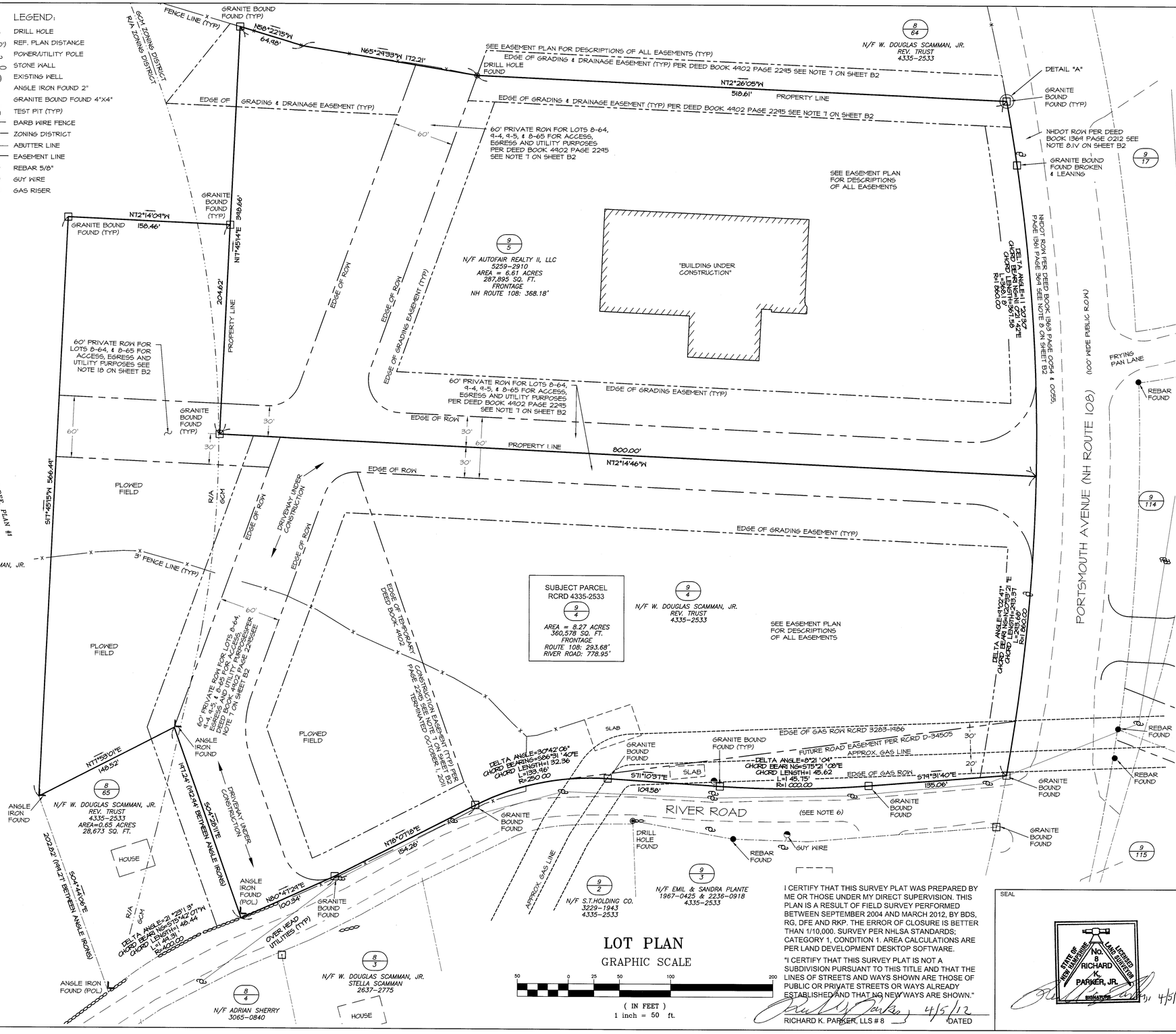
GAS R.O.W. — N/F PORTLAND NATURAL GAS
N/F MARITIMES & NORTHEAST PIPELINE, LLC
3283-1986

8/64 — N/F W. DOUGLAS SCAMMAN, JR.
REV. TRUST
4335-2533



DETAIL "A"
N.T.S.

REFERENCE PLANS:
1. "STRATHAM FIRE PROTECTION DISTRICT WATER LINE" DRAWING SET 8 SHEETS, BY EMANUEL ENGINEERING, INC., DATED 2-18-08, NOT RECORDED.
2. "LOT LINE ADJUSTMENT PLAN" BY EMANUEL ENGINEERING, INC., DATED JAN. 5, 2007, RCRD D-34505.
3. "ALTA / ACSM LAND TITLE SURVEY PROJECT COVER SHEET FOR AUTOFAIR REALTY II, LLC 45 PORTSMOUTH AVENUE (SITE) STRATHAM, NH 03885" DRAWING SET 5 SHEETS, BY EMANUEL ENGINEERING, INC., DATED 10-14-11, NOT RECORDED.
4. "SUBDIVISION PLAN & LOT LINE REVISION PLAN OF LANF OF W. DOUGLAS SCAMMAN JR. REVOCABLE TRUST SHEILA A SCAMMAN REVOCABLE TRUST ROLAND & MONICA SCHELLER ROUTE 108 & RIVER ROAD STRATHAM, NEW HAMPSHIRE" BY DOUCET SURVEY, INC., DATED 2-12-10, NOT RECORDED, SHEETS 1 OF 4.
5. "AMENDED SITE PLAN FOR AUTOFAIR REALTY II, LLC. d/b/a NISSAN OF STRATHAM 45 PORTSMOUTH AVENUE STRATHAM, NH 03885", BY EMANUEL ENGINEERING, INC., DATED 1-4-12, RCRD D-37086.



LOT PLAN
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

GENERAL NOTES:

1. OWNER OF RECORD TAX MAP 8 LOTS 64 & 65 AND TAX MAP 9 LOT 4 N. DOUGLAS SCAMMAN JR. REVOCABLE TRUST 64 PORTSMOUTH AVE, STRATHAM, NH 03885, RCRD BOOK 4335 PAGE 2533.

OWNER OF RECORD TAX MAP 9 LOT 5 AUTOFAIR REALTY II, LLC 1477 SOUTH WILLOW STREET MANCHESTER, NH 03103, BOOK 5259 PAGE 2910

2. THE INTENT OF THIS PLAN IS TO SHOW LOT LINES FOR TAX MAP 9 LOTS 4 & 5.

3. ALL PARTIES ACKNOWLEDGE THAT THE SUBJECT PROPERTY ABUTS OR IS IN PROXIMITY TO AGRICULTURAL OPERATIONS AS DEFINED IN NEW HAMPSHIRE RSA 21:34a. ALL PARTIES FURTHER ACKNOWLEDGE THAT THEIR RIGHTS, IF ANY TO CLAIM SUCH AGRICULTURAL OPERATIONS ARE A PUBLIC OR PRIVATE NUISANCE MAY BE LIMITED BY STATUTE AND OR COMMON LAW, INCLUDING BUT NOT LIMITED TO THE PROVISIONS OF NEW HAMPSHIRE RSA 432.

4. THESE PARCELS ARE NOT IN A FLOOD HAZARD ZONE PER FEMA FLOOD INSURANCE RATE MAP 33015C0245E EFFECTIVE DATE MAY 17, 2005.

5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.

6. RIVER ROAD IS A TOWN ROAD AND HAS VARYING WIDTHS PER TOWN ROAD AGENT. A 1-1/2 ROD WIDTH WAS MAINTAINED TO THE CENTERLINE OF ROAD EXCEPT AT INTERSECTION ON TO ROUTE 108. AT THE INTERSECTION 3 RODS WERE MAINTAINED TO THE SIDE LINE OF MAP 9 LOT 3. DUE TO PAST ROAD IMPROVEMENTS PER SITE PLAN OF MAP 9 LOT 3 THE ROAD IS NOT CENTERED IN THE RIGHT OF WAY.

7. SEE TOPOGRAPHY & SOILS PLAN FOR DOUGLAS SCAMMAN, STRATHAM, NH BY EMANUEL ENGINEERING, INC. FOR SOILS AND TEST PIT INFORMATION.

8. BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 72 HOURS BEFORE COMMENCING WORK BY THE CONTRACTOR. CALL DIG SAFE @ 1-888-344-7233.

9. REFERENCE BEARING AND ELEVATION FROM REFERENCE PLAN #1. HORIZONTAL DATUM: NAD83/96, PROJECTION: NH STATE PLANE. VERTICAL DATUM: NGVD29 (FROM NHDOT DISK 153-380) A STANDARD NHDOT DISK SET IN THE SOUTHEAST ABUTMENT OF ROUTE 101 OVERPASS.

10. STRATHAM TAX MAPS AND LOTS WERE REVISED AND RENUMBERED IN 2010. NUMBERS ON THIS PLAN REFLECT THE NEW CURRENT NUMBERING SYSTEM.

11. SEE SHEET AB1, AS-BUILT PLAN, FOR ZONING SETBACKS.

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
1	APR. 5, 2012	FOR TITLE INSURANCE PURPOSES ONLY	

DRAWN: BDS | DESIGN: BDS
CHECKED: DFE | CHECKED: RKP

EMANUEL ENGINEERING, INC.
CIVIL & STRUCTURAL CONSULTANTS
118 PORTSMOUTH AVE.
STRATHAM, NH 03885
Tel: (603) 772-4400 Fax: (603) 772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
AUTOFAIR REALTY II, LLC
1477 SOUTH WILLOW STREET
MANCHESTER, NH 03103

I CERTIFY THAT THIS SURVEY PLAT WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. THIS PLAN IS A RESULT OF FIELD SURVEY PERFORMED BETWEEN SEPTEMBER 2004 AND MARCH 2012, BY BDS, RG, DFE AND RKP. THE ERROR OF CLOSURE IS BETTER THAN 1/10,000. SURVEY PER NHLSA STANDARDS; CATEGORY 1, CONDITION 1. AREA CALCULATIONS ARE PER LAND DEVELOPMENT DESKTOP SOFTWARE.

"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."

RICHARD K. PARKER, LLS # 8 — DATED 4/5/12

SEAL
STATE OF NEW HAMPSHIRE — No. 8 — RICHARD K. PARKER, JR. — LAND SURVEYOR — SIGNATURE
4/5/12

TITLE:
ALTA / ACSM LAND TITLE SURVEY BOUNDARY PLAN
FOR
AUTOFAIR REALTY II, LLC
41 PORTSMOUTH AVENUE (SITE)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
12-037	1"=50'	B1

SELECTED SECTIONS OF THE MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS REQUIRING COMMENTS BY EMANUEL ENGINEERING, INC (EEI) (EFFECTIVE FEBRUARY 23, 2011) (EEI NOTES & COMMENTS ARE IN ITALICS)

2. REQUEST FOR SURVEY -
   - *AUTOFAIR REALTY II, LLC. HAS REQUESTED AN "ALTA/ACSM LAND TITLE SURVEY" TO BE PERFORMED BY EMANUEL ENGINEERING, INC.*

4. RECORDS RESEARCH - IT IS RECOGNIZED THAT FOR THE PERFORMANCE OF AN ALTA/ACSM LAND TITLE SURVEY, THE SURVEYOR WILL BE PROVIDED WITH APPROPRIATE DATA WHICH CAN BE RELIED UPON IN THE PREPARATION OF THE SURVEY. THE REQUEST FOR AN ALTA/ACSM LAND TITLE SURVEY SHALL SET FORTH THE CURRENT RECORD DESCRIPTION OF THE PROPERTY TO BE SURVEYED OR, IN THE CASE OF AN ORIGINAL SURVEY, THE CURRENT RECORD DESCRIPTION OF THE PARENT PARCEL THAT CONTAINS THE PROPERTY TO BE SURVEYED. COMPLETE COPIES OF THE MOST RECENT TITLE COMMITMENT, THE CURRENT RECORD DESCRIPTION OF THE PROPERTY TO BE SURVEYED (OR, IN THE CASE OF AN ORIGINAL SURVEY, THE PARENT PARCEL), THE CURRENT RECORD DESCRIPTIONS OF ADJOINERS, ANY RECORD EASEMENTS BENEFITING THE PROPERTY, THE RECORD EASEMENTS OR SERVITUDES AND COVENANTS BURDENING THE PROPERTY (ALL HEREINAFTER REFERRED TO COLLECTIVELY AS "RECORD DOCUMENTS"), DOCUMENTS OF RECORD REFERRED TO IN THE RECORD DOCUMENTS, DOCUMENTS NECESSARY TO ASCERTAIN, IF POSSIBLE, THE JUNIOR/SENIOR RELATIONSHIP PURSUANT TO SECTION 6.B.VII. BELOW, AND ANY OTHER DOCUMENTS CONTAINING DESIRED APPROPRIATE INFORMATION AFFECTING THE PROPERTY BEING SURVEYED, AND TO WHICH THE ALTA/ACSM LAND TITLE SURVEY SHALL MAKE REFERENCE, SHALL BE PROVIDED TO THE SURVEYOR FOR USE IN CONDUCTING THE SURVEY. REFERENCE IS MADE TO SECTION 3.B. ABOVE.
   - *NOT ALL RECORD DOCUMENTS WERE PROVIDED.*

5. FIELD WORK -
   - *EMANUEL ENGINEERING, INC HAS PERFORMED SURVEY FIELD WORK ON THE GROUND ON OR BETWEEN SEPTEMBER 2004 AND MARCH 2012.*

(EXCEPT AS OTHERWISE NEGOTIATED PURSUANT TO TABLE A, ITEM 15 BELOW, IF SELECTED BY THE CLIENT), AND THE FIELD WORK INCLUDES THE FOLLOWING:

A. MONUMENTS

I. THE LOCATION AND DESCRIPTION OF ANY MONUMENTS OR LINES THAT CONTROL THE BOUNDARIES OF THE SURVEYED PROPERTY.
   - *SEE BOUNDARY PLAN FOR LOCATIONS AND DESCRIPTIONS.*

II. THE LOCATION, SIZE AND TYPE OF ANY MONUMENTS FOUND (OR SET, IF TABLE A, ITEM 1 IS REQUESTED BY THE CLIENT, OR IF OTHERWISE REQUIRED - SEE SECTION 3.B. ABOVE) ON THE BOUNDARY OF THE SURVEYED PROPERTY.
   - *SEE BOUNDARY PLAN FOR LOCATIONS AND DESCRIPTIONS.*

B. RIGHTS OF WAY AND ACCESS

I. THE DISTANCE FROM THE APPROPRIATE CORNER OR CORNERS OF THE SURVEYED PROPERTY TO THE NEAREST RIGHT OF WAY LINE, IF THE SURVEYED PROPERTY DOES NOT ABUT A RIGHT OF WAY.
   - *ALL KNOWN RIGHTS OF WAY AND ACCESS HAVE BEEN SHOWN ON THE PLAN SHEETS AT THE TIME OF THE SURVEY.*

II. THE NAME OF ANY STREET, HIGHWAY OR OTHER PUBLIC OR PRIVATE WAY ABUTTING THE SURVEYED PROPERTY, AND THE WIDTH AND LOCATION OF THE TRAVELED WAY RELATIVE TO THE NEAREST BOUNDARY LINE OF THE SURVEYED PROPERTY.
   - *STREET NAMES HAVE BEEN PROVIDED ON THE PLAN SHEETS .*

III. VISIBLE EVIDENCE OF PHYSICAL ACCESS (SUCH AS, BUT NOT LIMITED TO, CURB CUTS AND DRIVEWAYS) TO ANY ABUTTING STREETS, HIGHWAYS OR OTHER PUBLIC WAYS.
   - *VISIBLE EVIDENCE OF PHYSICAL ACCESS HAS BEEN SHOWN ON THE PLAN SET SHEETS.*

IV. THE LOCATION AND CHARACTER OF VEHICULAR, PEDESTRIAN OR OTHER FORMS OF ACCESS BY OTHER THAN THE APPARENT OCCUPANTS OF THE SURVEYED PROPERTY TO OR ACROSS THE SURVEYED PROPERTY, INCLUDING, BUT NOT LIMITED TO DRIVEWAYS, ALLEYS, PRIVATE ROADS, SIDEWALKS AND FOOTPATHS OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *VISIBLE EVIDENCE OF PHYSICAL ACCESS HAS BEEN SHOWN ON THE PLAN SET SHEETS.*

V. WITHOUT EXPRESSING A LEGAL OPINION AS TO OWNERSHIP OR NATURE, THE LOCATION AND EXTENT OF ANY POTENTIALLY ENCROACHING DRIVEWAYS, ALLEYS, AND OTHER WAYS OF ACCESS FROM ADJOINING PROPERTIES ONTO THE SURVEYED PROPERTY OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *VISIBLE EVIDENCE OF PHYSICAL ACCESS HAS BEEN SHOWN ON THE PLAN SET SHEETS.*

VI. WHERE DOCUMENTATION OF THE WIDTH OR LOCATION OF ANY ABUTTING STREET, ROAD OR HIGHWAY RIGHT OF WAY WAS NOT DISCLOSED IN RECORD DOCUMENTS PROVIDED TO THE SURVEYOR OR WAS NOT OTHERWISE AVAILABLE FROM THE CONTROLLING JURISDICTION (SEE SECTION 6.C.IV. BELOW), THE EVIDENCE AND LOCATION OF PARCEL CORNERS RECOVERED WHICH MIGHT INDICATE THE WIDTH OR LOCATION OF SUCH RIGHT OF WAY LINES.
   - *SEE PLAN SET SHEETS FOR WIDTH AND LOCATION INFORMATION FOR ABUTTING STREET.*

VII. EVIDENCE OF ACCESS TO AND FROM WATERS ADJOINING THE SURVEYED PROPERTY, SUCH AS PATHS, BOAT SLIPS, LAUNCHES, PIERS AND DOCKS OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *NO VISIBLE EVIDENCE OF PHYSICAL ACCESS HAS BEEN OBSERVED AT THE TIME OF THE SURVEY.*

C. LINES OF POSSESSION, AND IMPROVEMENTS ALONG THE BOUNDARIES

I. THE CHARACTER AND LOCATION OF EVIDENCE OF POSSESSION OR OCCUPATION ALONG THE PERIMETER OF THE SURVEYED PROPERTY, BOTH BY THE OCCUPANTS OF THE SURVEYED PROPERTY AND BY ADJOINERS, OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *NO EVIDENCE OF POSSESSION OR OCCUPATION OF THE SURVEY PROPERTY HAS BEEN OBSERVED AT THE TIME OF THE SURVEY.*

II. THE CHARACTER AND LOCATION OF ALL WALLS, BUILDINGS, FENCES, AND OTHER IMPROVEMENTS WITHIN FIVE FEET OF EACH SIDE OF THE BOUNDARY LINES, OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *NO EVIDENCE OF IMPROVEMENTS OF THE SURVEY PROPERTY OR WITHIN FIVE FEET OF BOUNDARY LINES HAVE BEEN OBSERVED AT THE TIME OF THE SURVEY, EXCEPT AS NOTED ON THE PLAN SHEETS.*

III. WITHOUT EXPRESSING A LEGAL OPINION AS TO THE OWNERSHIP OR NATURE OF THE POTENTIAL ENCROACHMENT, THE EVIDENCE, LOCATION AND EXTENT OF POTENTIALLY ENCROACHING STRUCTURAL APPURTENANCES AND PROJECTIONS OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY, SUCH AS FIRE ESCAPES, BAY WINDOWS, WINDOWS AND DOORS THAT OPEN OUT, FLUE PIPES, STOOPS, EAVES, CORNICES, AREAWAYS, STEPS, TRIM, ETC., BY OR ONTO ADJOINING PROPERTY, OR ONTO RIGHTS OF WAY, EASEMENTS OR SETBACK LINES DISCLOSED IN RECORD DOCUMENTS PROVIDED TO THE SURVEYOR.
   - *NO EVIDENCE OF ENCROACHMENT WAS OBSERVED ON THE PROPERTY AT THE TIME OF THE SURVEY.*

D. BUILDINGS

BASED ON THE NORMAL STANDARD OF CARE, THE LOCATION OF ALL BUILDINGS ON THE SURVEYED PROPERTY SHOWN PERPENDICULAR TO THE NEAREST PERIMETER BOUNDARY LINE(S) AND EXPRESSED TO THE APPROPRIATE DEGREE OF PRECISION.
   - *THERE ARE NO BUILDINGS LOCATED ON THE SURVEYED PROPERTY AT THE TIME OF THE SURVEY.*

E. EASEMENTS AND SERVITUDES

I. EVIDENCE OF ANY EASEMENTS OR SERVITUDES BURDENING THE SURVEYED PROPERTY, DISCLOSED IN THE RECORD DOCUMENTS PROVIDED TO THE SURVEYOR AND OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *ALL KNOWN EASEMENTS OR SERVITUDES BURDENING THE SURVEYED PROPERTY HAVE BEEN SHOWN ON THE PLAN SHEETS OR DISCLOSED AS RECORD DOCUMENTS. REFERENCE IS HEREBY MADE TO SITE PLANS DESCRIBED IN COMMITMENT FOR TITLE INSURANCE SCHEDULE B SECTION 2 PARAGRAPHS 7, 10, 16, 17, & 18 REGARDING STORMWATER MANAGEMENT IMPROVEMENTS*

II. EVIDENCE OF EASEMENTS OR SERVITUDES NOT DISCLOSED IN THE RECORD DOCUMENTS PROVIDED TO THE SURVEYOR, BUT OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY, SUCH AS THOSE CREATED BY ROADS; RIGHTS OF WAY; WATER COURSES; DITCHES; DRAINS; TELEPHONE, FIBER OPTIC LINES, OR ELECTRIC LINES; WATER, SEWER, OIL OR GAS PIPELINES ON OR ACROSS THE SURVEYED PROPERTY AND ON ADJOINING PROPERTIES IF THEY APPEAR TO AFFECT THE SURVEYED PROPERTY.
   - *ALL KNOWN EASEMENTS OR SERVITUDES BURDENING THE SURVEYED PROPERTY HAVE BEEN SHOWN ON THE PLAN SHEETS OR DISCLOSED AS RECORD DOCUMENTS AT THE TIME OF THE SURVEY.*

III. SURFACE INDICATIONS OF UNDERGROUND EASEMENTS OR SERVITUDES ON OR ACROSS THE SURVEYED PROPERTY OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *NO SURFACE INDICATIONS OF UNDERGROUND EASEMENTS ON THE SUBJECT PARCEL WERE OBSERVED AT THE TIME OF THE SURVEY, EXCEPT AS NOTED ON THE PLAN SET SHEETS. THERE WERE GAS RISER MARKING THE HIGH PRESSURE BURIED GAS LINE ALONG SOUTHERN PROPERTY LINE.*

IV. EVIDENCE OF USE OF THE SURVEYED PROPERTY BY OTHER THAN THE APPARENT OCCUPANTS OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *THERE WERE NO APPARENT OCCUPANTS OBSERVED AT THE TIME OF THE SURVEY.*

F. CEMETERIES

AS ACCURATELY AS THE EVIDENCE PERMITS, THE LOCATION OF CEMETERIES, GRAVE SITES, AND BURIAL GROUNDS (I) DISCLOSED IN THE RECORD DOCUMENTS PROVIDED TO THE SURVEYOR, OR (II) OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY.
   - *THERE WAS NO VISIBLE EVIDENCE OF CEMETERIES OBSERVED OR DOCUMENTS PRODUCED REGARDING CEMETERIES AT THE TIME OF THE SURVEY.*

G. WATER FEATURES

I. THE LOCATION OF SPRINGS, TOGETHER WITH THE LOCATION OF PONDS, LAKES, STREAMS, AND RIVERS BORDERING ON OR RUNNING THROUGH THE SURVEYED PROPERTY, OBSERVED DURING THE PROCESS OF CONDUCTING THE SURVEY. SEE TABLE A, ITEM 19 FOR WETLANDS LOCATIONS.
   - *WETLANDS HAVE BEEN DELINEATED, NOTED, AND SHOWN ON THE PLAN SHEETS.*

II. THE LOCATION OF ANY WATER BOUNDARY ON THE SURVEYED PROPERTY. THE ATTRIBUTE(S) OF THE WATER FEATURE LOCATED (E.G. TOP OF BANK, EDGE OF WATER, HIGH WATER MARK, ETC.) SHOULD BE CONGRUENT WITH THE BOUNDARY AS DESCRIBED IN THE RECORD DESCRIPTION OR, IN THE CASE OF AN ORIGINAL SURVEY, IN THE NEW DESCRIPTION. (SEE SECTION 6.B.VI. BELOW).
   - *THERE ARE NOT ANY WATER BOUNDARIES ON THE PROPERTY.*

COMMITMENT FOR TITLE INSURANCE - SCHEDULE B, SECTION 2 EXCEPTIONS (EEI NOTES & COMMENTS ARE IN ITALICS)

SCHEDULE B OF THE POLICY OR POLICIES TO BE ISSUED WILL CONTAINS EXCEPTIONS TO THE FOLLOWING MATTERS UNLESS THE SAME ARE DISPOSED OF TO THE SATISFACTION OF THE COMPANY:

1. ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN IN THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY AN INSPECTION OF THE LAND OR BY MAKING INQUIRY OF PERSONS IN POSSESSION OF THE LAND.
   - *SEE COMMITMENT FOR TITLE INSURANCE ISSUE BY FIRST AMERICAN TITLE INSURANCE COMPANY PREPARED BY STEBBINS, LAZOS, & VAN DER BEKEN, P.A. DATED FEBRUARY 7, 2012.*

2. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE, INCLUDING DISCREPANCIES, CONFLICTS IN BOUNDARY LINES, SHORTAGES IN AREA, OR ANY OTHER FACTS THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND, AND THAT ARE NOT SHOWN IN THE PUBLIC RECORDS.
   - *SEE COMMITMENT FOR TITLE INSURANCE ISSUE BY FIRST AMERICAN TITLE INSURANCE COMPANY PREPARED BY STEBBINS, LAZOS, & VAN DER BEKEN, P.A. DATED FEBRUARY 7, 2012.*

3. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW AND NOT SHOWN BY THE PUBLIC RECORDS.
   - *SEE COMMITMENT FOR TITLE INSURANCE ISSUE BY FIRST AMERICAN TITLE INSURANCE COMPANY PREPARED BY STEBBINS, LAZOS, & VAN DER BEKEN, P.A. DATED FEBRUARY 7, 2012.*

4. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT.
   - *SEE COMMITMENT FOR TITLE INSURANCE ISSUE BY FIRST AMERICAN TITLE INSURANCE COMPANY PREPARED BY STEBBINS, LAZOS, & VAN DER BEKEN, P.A. DATED FEBRUARY 7, 2012.*

5. REAL ESTATE TAXES AND MUNICIPAL CHARGES AS FOLLOWS: PAID THROUGH DECEMBER 31, 2011.
   - *SEE COMMITMENT FOR TITLE INSURANCE ISSUE BY FIRST AMERICAN TITLE INSURANCE COMPANY PREPARED BY STEBBINS, LAZOS, & VAN DER BEKEN, P.A. DATED FEBRUARY 7, 2012.*

6. IF THE INSURED PREMISES IS A CONDOMINIUM UNIT: COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS, LIENS FOR ASSESSMENTS, OPTIONS, POWERS OF ATTORNEY, AND LIMITATIONS ON TITLE, CREATED BY THE LAWS OF THE STATE OF THE INSURED PREMISES OR SET FORTH IN THE MASTER DEED OR DECLARATION OF CONDOMINIUM, IN THE RELATED BY-LAWS, IN THE DECLARATION OF TRUST, OR SITE PLANS AND FLOOR PLANS AS DULY RECORDED IN THE APPROPRIATE LAND RECORDS OFFICE AND AS THE SAME MAY HAVE BEEN LAWFULLY AMENDED, AND IN ANY INSTRUMENT CREATING THE ESTATE OR INTEREST INSURED BY THIS POLICY.
   - *SEE COMMITMENT FOR TITLE INSURANCE ISSUE BY FIRST AMERICAN TITLE INSURANCE COMPANY PREPARED BY STEBBINS, LAZOS, & VAN DER BEKEN, P.A. DATED FEBRUARY 7, 2012.*

7. SUBJECT TO THE TERMS OF, AND TOGETHER WITH THE RIGHTS AND EASEMENTS APPURTENANT TO SAID LOT 1-13-11 UNDER, THE DECLARATION OF EASEMENTS MADE BY W. DOUGLAS SCAMMAN, JR., TRUSTEE DATED APRIL 1, 2008, RECORDED AT BOOK 4902, PAGE 2295 AND AS SHOWN ON A PLAN ENTITLED: EASEMENT PLAN FOR DOUGLAS SCAMMAN PORTSMOUTH AVE. & RIVER RD., STRATHAM, NH 03885 RECORDED FEBRUARY 7, 2007 AS PLAN D-34506.
   - *SEE SHEET E1 OF THIS SURVEY FOR THESE DEEDS & PLAN.*

8. SUBJECT TO THE RIGHTS OF THE STATE OF NEW HAMPSHIRE TO EXTEND AND MAINTAIN SLOPES AND EMBANKMENTS, AND TO CONSTRUCT AND MAINTAIN DRAINAGE UNDER THE FOLLOWING INSTRUMENTS, TO THE EXTENT THE SAME AFFECT THE WITHIN CONVEYED PREMISES:
   - *SHOWN AS PORTSMOUTH AVENUE A.K.A. NH ROUTE 108 ON PLANS.*

I. DEED OF WARRANTY OF W. DOUGLAS SCAMMON (SIC) TO STATE OF NEW HAMPSHIRE DATED JUNE 22,1955, RECORDED AT BOOK 1361, PAGE 369;

II. DEED OF W. DOUGLAS SCAMMON (SIC), GUARDIAN OF FRANCES G. SCAMMON (SIC) TO STATE OF NEW HAMPSHIRE DATED JUNE 22, 1955, RECORDED AT BOOK 1363, PAGE 54;

III. DEED OF W. DOUGLAS SCAMMON (SIC) TO STATE OF NEW HAMPSHIRE DATED JULY 22, 1955, RECORDED AT BOOK 1363, PAGE 55.

IV. DEED OF WILLIAM E. SIMS AND RUBY L. SIMS TO THE STATE OF NEW HAMPSHIR DATED SEPTEMBER 9, 1955 AND RECORDED AT BOOK 1369, PAGE 212.

9. SUBJECT TO ALL MATTERS AS NOTED ON SUBDIVISION PLAN RECORDED AUGUST 3,2005 AS PLAN D-32903.
   - *SUPERSEDED BY LOT LINE ADJUSTMENT PLANS D-34505 & D-36673.*

10. RIGHT OF WAY AGREEMENT EASEMENT DEED OF W. DOUGLAS SCAMMAN JR. TO PORTLAND NATURAL GAS TRANSMISSION SYSTEMS AND MARITIMES & NORTHEAST PIPELINE, L.L.C. RECORDED APRIL 13, 1998, AT BOOK 3283, PAGE 1986 (IF APPLICABLE).
   - *SEE SHEET E1 OF THIS SURVEY FOR THESE DEEDS.*

11. SUBJECT TO ALL MATTERS AS NOTED ON LOT LINE ADJUSTMENT PLAN FOR DOUGLAS SCAMMAN, PORTSMOUTH AVE. & RIVER RD., STRATHAM, NH 03885 RECORDED FEBRUARY 7, 2007 AS PLAN D-34505.
   - *SEE PLANS B1 AND E1 OF THIS PLAN SET.*

12. SUBJECT TO MATTERS AS NOTED ON THE SUBDIVISION PLAN AND LOT LINE REVISION PLAN DATED SEPTEMBER 22, 2009 AND RECORDED ON PLAN #D-36673

13. NOTICE OF RIGHT OF FIRST REFUSAL DATED APRIL 1, 2008 BETWEEN ROGER C. GROUX AND W. DOUGLAS SCAMMAN JR., TRUSTEE OF THE W. DOUGLAS SCAMMAN JR. REVOCABLE TRUST u/t/a DATED JUNE 3, 2004 AND RECORDED IN BOOK 4902, PAGE 2305

14. EASEMENT TO TOWN OF STRATHAM-WARRANTY ACCESS AND PUBLIC UTILITY EASEMENT DEED (IF APPLICABLE) DATED JANUARY 30, 2010 IN BOOK 5182, PAGE 412.
   - *THIS EASEMENT IS LOCATED TO THE NORTH OF TAX MAP 9 LOT 5 AND RUNS NORTH OVER TAX MAP 8 LOT 64 TO TAX MAP 9 LOT 6. ADDITIONAL EASEMENTS GRANTED TO TOWN ON TAX MAP 8 LOT 64 ARE RCRD BOOK AND PAGES 5182-0394, 5182-0403, 5182-0421, AND 5182-0451.*

15. CURRENT USE APPLICATION DATED APRIL 15, 1994 AND RECORDED IN BOOK 3066, PAGE 1675.

16. SUBJECT TO ALL MATTERS NOTED ON A SITE PLAN OF SITE PLAN OF NISSAN OF STRATHAM, 45 PORTSMOUTH AVENUE, STRATHAM, NH RECORDED ON FEBRUARY 7, 2007 AS PLAN 34504.

ADDITIONAL EASEMENT & CONDITIONS FOUND BY EMANUEL ENGINEERING, INC. IN ADDITION TO THE SCHEDULE B, SECTION 2 EXCEPTIONS:

17. SUBJECT SITE AND TAX MAP 9 LOT 5 ARE SUBJECT TO AMENDED SITE PLAN APPROVAL BY THE TOWN OF STRATHAM PLANNING BOARD DATED JANUARY 4, 2012. RECORDED PLAN # D-37086. SAID APPROVAL SUPERSEDES APPROVED SITE PLAN DESCRIBED IN PARAGRAPH 16, ABOVE.

18. SUBJECT TO ALL MATTERS NOTED ON SUBDIVISION PLAN & LOT LINE REVISION PLAN OF LAND OF W. DOUGLAS SCAMMAN JR. REVOCABLE TRUST SHEILA A SCAMMAN REVOCABLE TRUST ROLAND & MONICA SCHELLER ROUTE 108 & RIVER ROAD STRATHAM, NEW HAMPSHIRE" BY DOUCET SURVEY, INC., DATED 2-12-10, NOT RECORDED, SHEETS 1 OF 4.

LAND BOUNDARY DESCRIPTION OF SURVEYED PREMISES

CERTAIN REAL PROPERTY LOCATED ON THE WESTERLY SIDE OF PORTSMOUTH AVENUE A/K/A NEW HAMPSHIRE ROUTE 108 AND THE CORNER OF RIVER ROAD SHOWN AS TAX MAP 9 LOT 4 ON A CERTAIN PLAN TITLED "ALTA / ACSM LAND TITLE SURVEY BOUNDARY PLAN FOR AUTOFAIR REALTY II, LLC 41 PORTSMOUTH AVENUE (SITE) STRATHAM, NH 03885" TO BE RECORDED, AND SHOWN AS MAP 1, LOT 13-11 ON THE PLAN TITLED "SUBDIVISION PLAN AND LOT LINE REVISION PLAN FOR W. DOUGLAS SCAMMAN JR. REVOCABLE TRUST ET AL." DATED SEPTEMBER 22, 2009 BY DOUCET SURVEY INC. AND FILED AS PLAN #D-36673 IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS, AND THE APPURTENANT EASEMENTS THEREWITH, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE WESTERLY SIDE OF PORTSMOUTH AVENUE MARKED BY A GRANITE BOUND, WHICH IS THE SOUTHEAST CORNER OF THE WITHIN DESCRIBED LOT; THENCE

1. CONTINUING ALONG THE WESTERLY SIDE OF PORTSMOUTH AVENUE ALONG THE ARC OF A CURVE HAVING A DELTA ANGLE = 09° 02' 47", CHORD BEARING = N 20° 33' 21" E CHORD LENGTH = 293.37, L = 293.68" R = 1860.00 TO A POINT ON THE WESTERLY SIDE OF PORTSMOUTH AVENUE; THENCE TURNING AND RUNNING
2. NORTH 72° 14' 46" WEST A DISTANCE OF 800.00 FEET ALONG OTHER LAND OF AUTOFAIR REALTY II, LLC, TO A GRANITE BOUND FOUND; THENCE TURNING AND RUNNING
3. NORTH 17° 45' 14" EAST A DISTANCE OF 204.62 FEET ALONG OTHER LAND OF AUTOFAIR REALTY II, LLC, TO A GRANITE BOUND FOUND; THENCE TURNING AND RUNNING
4. NORTH 72° 14' 09" WEST A DISTANCE OF 158.46 FEET ALONG OTHER LAND OF THE SCAMMAN TRUST TO A GRANITE BOUND FOUND; THENCE TURNING AND RUNNING
5. SOUTH 17° 45' 15" WEST A DISTANCE OF 566.49 FEET ALONG OTHER LAND OF THE SCAMMAN TRUST TO AN ANGLE IRON FOUND; THENCE TURNING AND RUNNING
6. NORTH 77° 53' 01" EAST A DISTANCE OF 148.52 FEET ALONG OTHER LAND OF THE SCAMMAN TRUST TO AN ANGLE IRON FOUND; THENCE TURNING AND RUNNING
7. SOUTH 04° 28' 11" EAST A DISTANCE OF 197.24 FEET ALONG OTHER LAND OF THE SCAMMAN TRUST TO AN ANGLE IRON FOUND; THENCE TURNING AND RUNNING
8. NORTH 80° 47' 29" EAST A DISTANCE OF 100.34 FEET ALONG THE NORTHERLY SIDE OF RIVER ROAD TO A GRANITE BOUND FOUND; THENCE
9. NORTH 78° 07' 18" EAST A DISTANCE OF 154.26 FEET ALONG THE NORTHERLY SIDE OF RIVER ROAD TO A GRANITE BOUND FOUND; THENCE
10. CONTINUING ALONG THE NORTHERLY SIDE OF RIVER ROAD ALONG THE ARC OF A CURVE HAVING A DELTA ANGLE = 30° 42' 06", CHORD BEARING = S 86° 31' 40" E CHORD LENGTH = 132.36, L = 133.96" R = 250.00 TO A GRANITE BOUND FOUND; THENCE
11. SOUTH 71°10' 37" EAST A DISTANCE OF 109.58 FEET ALONG THE NORTHERLY SIDE OF RIVER ROAD TO A GRANITE BOUND FOUND; THENCE
12. CONTINUING ALONG THE NORTHERLY SIDE OF RIVER ROAD ALONG THE ARC OF A CURVE HAVING A DELTA ANGLE = 8° 21' 04", CHORD BEARING = S 75° 21' 08" E CHORD LENGTH = 145.62, L = 145.75" R = 1000.00 TO A GRANITE BOUND FOUND; THENCE
13. SOUTH 79° 31' 40" EAST A DISTANCE OF 135.06 FEET ALONG THE NORTHERLY SIDE OF RIVER ROAD TO A GRANITE BOUND FOUND; AND THE POINT OF BEGINNING.

SHOWN TO CONTAIN 8.27 ACRES, MORE OR LESS.

I CERTIFY THAT THIS SURVEY PLAT WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. THIS PLAN IS A RESULT OF FIELD SURVEY PERFORMED BETWEEN SEPTEMBER 2004 AND MARCH 2012, BY BDS, RG, DFE AND RKP. THE ERROR OF CLOSURE IS BETTER THAN 1/10,000. SURVEY PER NHLSA STANDARDS; CATEGORY 1, CONDITION 1. AREA CALCULATIONS ARE PER LAND DEVELOPMENT DESKTOP SOFTWARE.

"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."

RICHARD K. PARKER, LLS # 8 — DATED 4/5/12

CERTIFICATION - THE PLAT OR MAP OF AN ALTA/ACSM LAND TITLE SURVEY SHALL BEAR ONLY THE FOLLOWING CERTIFICATION, UNALTERED, EXCEPT AS MAY BE REQUIRED PURSUANT TO SECTION 3.B. IN THE MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS:

TO JP MORGAN CHASE BANK N.A., THE SUCCESSORS AND ASSIGNS OF JP MORGAN CHASE BANK N.A., FIRST AMERICAN TITLE INSURANCE COMPANY, STEBBINS, LAZOS & VAN DER BEKEN PROFESSIONAL ASSOCIATION, & AUTOFAIR REALTY II, LLC:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED MARCH 2012.

DATE OF PLAT OR MAP: APRIL 5, 2012

RICHARD K. PARKER, LLS # 8 — DATED 4/5/12

SEAL: STATE OF NEW HAMPSHIRE — NO. 8 — RICHARD K. PARKER, JR. — LICENSED LAND SURVEYOR — SIGNATURE — 4/5/12

1	APR. 5, 2012	FOR TITLE INSURANCE PURPOSES ONLY	
ISS.	DATE:	DESCRIPTION OF ISSUE:	ERK.
DRAWN: DFE		DESIGN: BDS	
CHECKED: BDS		CHECKED: RKP	

EMANUEL ENGINEERING, INC.
CIVIL & STRUCTURAL CONSULTANTS
118 PORTSMOUTH AVE.
STRATHAM, NH 03885
Tel: (603) 772-4400 Fax: (603) 772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:

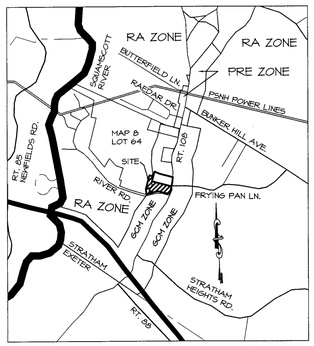
AUTOFAIR REALTY II, LLC
1477 SOUTH WILLOW STREET
MANCHESTER, NH 03103

TITLE:

ALTA / ACSM LAND TITLE SURVEY NOTES

FOR
AUTOFAIR REALTY II, LLC
41 PORTSMOUTH AVENUE (SITE)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
12-037	1"=50'	B2



LOCUS

SCALE 1"=3000'

LEGEND:

- DRILL HOLE
- (350') REF. PLAN DISTANCE
- POWER/UTILITY POLE
- STONE WALL
- EXISTING WELL
- ANGLE IRON FOUND 2"
- GRANITE BOUND FOUND 4"X4"
- TP1 TEST PIT (TYP)
- BARB WIRE FENCE
- ZONING DISTRICT
- ABUTTER LINE
- EASEMENT LINE
- REBAR 5/8"
- GUY WIRE
- GAS RISER

8/64 N/F W. DOUGLAS SCAMMAN, JR. REV. TRUST 4335-2533

9/17 N/F WILMA K. GUILFOYLE REVOC. TRUST PO BOX 213 STRATHAM, NH 03885 3446-1098, 3446-1096 2061-0235, 3409-1899

9/114 N/F HARALAMPOS SIDIROPOULOS 365 MAIN ST. TEWKSBURY, MA. 01876 3952-0466

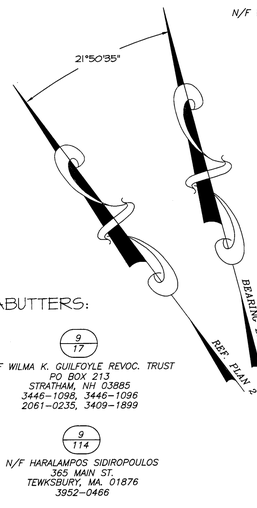
9/115 N/F LIONHEART INVESTMENTS PROP. 210 COMMERCE WAY PORTSMOUTH, NH 03801 3093-1624 C/O THE KANE CO.

GAS R.O.W. N/F PORTLAND NATURAL GAS N/F MARITIMES & NORTHEAST PIPELINE, LLC 3283-1986

REFERENCE PLANS:

1. "STRATHAM FIRE PROTECTION DISTRICT WATER LINE" DRAWING SET 8 SHEETS, BY EMANUEL ENGINEERING, INC., DATED 2-18-08, NOT RECORDED.
2. "LOT LINE ADJUSTMENT PLAN" BY EMANUEL ENGINEERING, INC., DATED JAN. 5, 2007, RCRD D-34505.
3. "ALTA / ACSM LAND TITLE SURVEY" PROJECT COVER SHEET FOR AUTOFAIR REALTY II, LLC 45 PORTSMOUTH AVENUE (SITE) STRATHAM, NH 03885" DRAWING SET 5 SHEETS, BY EMANUEL ENGINEERING, INC., DATED 10-14-11, NOT RECORDED.
4. "SUBDIVISION PLAN & LOT LINE REVISION PLAN OF LANF OF W. DOUGLAS SCAMMAN JR. REVOCABLE TRUST SHEILA A SCAMMAN REVOCABLE TRUST ROLAND & MONICA SCHELLER ROUTE 108 & RIVER ROAD STRATHAM, NEW HAMPSHIRE" BY DOUCET SURVEY, INC., DATED 2-12-10, NOT RECORDED, SHEETS 1 OF 4.
5. "AMENDED SITE PLAN FOR AUTOFAIR REALTY II, LLC. d/b/a NISSAN OF STRATHAM 45 PORTSMOUTH AVENUE STRATHAM, NH 03885", BY EMANUEL ENGINEERING, INC., DATED 1-4-12, RCRD D-31086.

EASEMENT CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
EC1	95.39	60.00	91°05'11"	N26°42'10"W	85.65
EC2	94.12	60.00	94°38'54"	N60°25'47"E	88.22
EC3	54.85	32.00	107°04'55"	S18°34'44"E	51.50
EC4	40.68	32.00	72°50'05"	N71°20'10"E	37.99
EC5	40.68	32.00	72°50'05"	S71°20'11"W	37.99
EC6	65.31	95.00	39°23'20"	S15°13'24"W	64.03
EC7	60.24	35.43	97°24'48"	S53°10'21"E	53.24



ABUTTERS:

GENERAL NOTES:

1. OWNER OF RECORD TAX MAP 8 LOTS 64 & 65 AND TAX MAP 9 LOT 4 IN. DOUGLAS SCAMMAN JR. REVOCABLE TRUST 69 PORTSMOUTH AVE., STRATHAM, NH 03885, RCRD BOOK 4335 PAGE 2533.

OWNER OF RECORD TAX MAP 9 LOT 5 AUTOFAIR REALTY II, LLC 1471 SOUTH WILLOW STREET MANCHESTER, NH 03103, BOOK 5259 PAGE 2910

2. THE INTENT OF THIS PLAN IS TO LOCATE EASEMENTS ASSOCIATED WITH THESE LOTS AND THEIR ABUTTING LOTS. THE EASEMENTS ARE SHOWN ON RECORDED PLAN RCRD D-34506 AND IN EASEMENT DEED RECORDED AT ROCKINGHAM COUNTY REGISTRY OF DEEDS BOOK 4902 PAGE 2245. ALSO TO SHOW EASEMENTS REFERENCED ON SHEET B2 OF THIS SET LIST UNDER "COMMITMENT FOR TITLE INSURANCE - SCHEDULE B, SECTION 2 EXCEPTIONS".

3. THESE PARCELS ARE NOT IN A FLOOD HAZARD ZONE PER FEMA FLOOD INSURANCE RATE MAP 33015C0245E EFFECTIVE DATE MAY 17, 2005.

4. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.

5. RIVER ROAD IS A TOWN ROAD AND HAS VARYING WIDTHS PER TOWN ROAD AGENT. A 1-1/2 ROD WIDTH WAS MAINTAINED TO THE CENTERLINE OF ROAD EXCEPT AT INTERSECTION ON TO ROUTE 108. AT THE INTERSECTION 3 RODS WERE MAINTAINED TO THE SIDE LINE OF MAP 9 LOT 3. DUE TO PAST ROAD IMPROVEMENTS PER SITE PLAN OF MAP 9 LOT 3 THE ROAD IS NOT CENTERED IN THE RIGHT OF WAY.

6. REFERENCE BEARING AND ELEVATION FROM REFERENCE PLAN #1. HORIZONTAL DATUM: NAD83/86, PROJECTION: NH STATE PLANE. VERTICAL DATUM: NGVD29 (FROM NHDOT DISK 153-380) A STANDARD NHDOT DISK SET IN THE SOUTHEAST ABUTMENT OF ROUTE 101 OVERPASS.

7. STRATHAM TAX MAPS AND LOTS WERE REVISED AND RENUMBERED IN 2010. NUMBERS ON THIS PLAN REFLECT THE NEW CURRENT NUMBERING SYSTEM.

SUBJECT PARCEL
RCRD 4335-2533
9/4
AREA = 8.27 ACRES
360,578 SQ. FT.
FRONTAGE
ROUTE 108: 293.68'
RIVER ROAD: 778.95'

9/5 N/F AUTOFAIR REALTY II, LLC 5259-2910 AREA = 6.61 ACRES 287,895 SQ. FT. FRONTAGE NH ROUTE 108: 368.18'

8/65 N/F W. DOUGLAS SCAMMAN, JR. REV. TRUST 4335-2533 AREA=0.65 ACRES 28,673 SQ. FT.

9/4 N/F W. DOUGLAS SCAMMAN, JR. REV. TRUST 4335-2533

8/3 N/F W. DOUGLAS SCAMMAN, JR. STELLA SCAMMAN 2637-2775

8/4 N/F ADRIAN SHERRY 3065-0840

9/2 N/F S.T.HOLDING CO. 3229-1943 4335-2533

9/3 N/F EMIL & SANDRA PLANTE 1967-0425 & 2236-0918 4335-2533

LOT PLAN
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

I CERTIFY THAT THIS SURVEY PLAT WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. THIS PLAN IS A RESULT OF FIELD SURVEY PERFORMED BETWEEN SEPTEMBER 2004 AND MARCH 2012, BY BDS, RG, DFE AND RKP. THE ERROR OF CLOSURE IS BETTER THAN 1/10,000. SURVEY PER NHLSA STANDARDS; CATEGORY 1, CONDITION 1. AREA CALCULATIONS ARE PER LAND DEVELOPMENT DESKTOP SOFTWARE.

"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."

RICHARD K. PARKER, LLS # 8 — DATED 4/5/12

SEAL

STATE OF NEW HAMPSHIRE — No. 8 — RICHARD K. PARKER, JR. — LICENSED LAND SURVEYOR — SIGNATURE — 4/5/12

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
1	APR. 5, 2012	FOR TITLE INSURANCE PURPOSES ONLY	

DRAWN: BDS — DESIGN: BDS
CHECKED: DFE — CHECKED: RKP

EMANUEL ENGINEERING, INC.
CIVIL & STRUCTURAL CONSULTANTS
118 PORTSMOUTH AVE.
STRATHAM, NH 03885
Tel: (603) 772-4400 Fax: (603) 772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
AUTOFAIR REALTY II, LLC
1477 SOUTH WILLOW STREET
MANCHESTER, NH 03103

TITLE:
ALTA / ACSM LAND TITLE SURVEY EXISTING EASEMENT PLAN
FOR
AUTOFAIR REALTY II, LLC
41 PORTSMOUTH AVENUE (SITE)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
12-037	1"=50'	E1

ADDITIONAL ABUTTERS:

B 3
N/F DOUGLAS W. SCAMMAN, JR REVOCABLE TRUST
69 PORTSMOUTH AVENUE
STRATHAM, NH 03885
RCRD BK 6442 PG 1722

B 4
N/F ADRIANNE R. SHERRY REVOCABLE TRUST
11 RIVER ROAD
STRATHAM, NH 03885
RCRD BK 6550 PG 2465

B 64
N/F DOUGLAS W. SCAMMAN, JR REVOCABLE TRUST
69 PORTSMOUTH AVENUE
STRATHAM, NH 03885
RCRD BK 4335 PG 2533

A 5
N/F TT OF HILLSBOROUGH, LLC
505 SOUTH FLAGLER DRIVE, SUITE 1400
WEST PALM BEACH, FL 33401
RCRD BK 6363 PG 2045

A 115
N/F SHEARWATER INVESTMENTS CORPORATION
P.O. BOX 432
STRATHAM, NH 03885
RCRD BK 5117 PG 1412

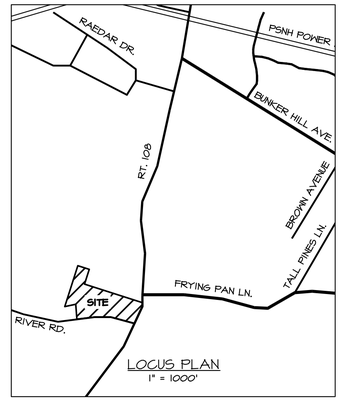
LEGEND

- NEW HAMPSHIRE HIGHWAY BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND
- (TYP) TYPICAL
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND SYMBOL
- SOIL DELINEATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE
- EDGE OF PAVEMENT (EOP)
- UG UNDERGROUND UTILITIES
- OHE OVERHEAD UTILITIES
- UTILITY POLE
- GUY WIRE
- DRAIN MANHOLE
- SERVICE CLEANOUT
- SEPTIC LINE
- DRAIN LINE
- PROPANE TANK
- WATER LINE
- WELL
- GAS GAS LINE
- SIGN
- XX # OF PARKING SPACES
- TREE LINE
- TREE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



LOCUS PLAN
1" = 1000'

NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 PG1178
2. THE INTENT OF THIS PLAN IS TO PROVIDE EXISTING CONDITIONS OF STRATHAM TAX MAP 9 LOT 4 CURRENT TO 2014.
3. SEE EEI DRAWING SET COVER SHEET FOR PROJECT GENERAL NOTES.

20' SIDE/REAR YARD SETBACK
EDGE OF ROW
60'
30'
10' SIDE/REAR YARD SETBACK
HEADWALL (TYP)
STOP SIGN
END OF PIPE START OF SWALE
30" HDPE PIPE
18" HDPE PIPE
CATCH BASIN
4" CONDUIT
WATER VALVE (TYP)
GAS VALVE (TYP)
EDGE OF PAVEMENT (EOP)
GRAVEL
APPROXIMATE SWALE
EXISTING CAR DEALERSHIP WITHIN 200' OF SITE
GAS LINE (TYP)
3"DIA TREE (TYP)
LIGHT POLE (TYP)
FLOOD LIGHT (TYP)
STREET SIGN DO NOT ENTER
STREET SIGN KEEP RIGHT
STREET SIGN NO LEFT TURN & DO NOT ENTER
STREET SIGN STOP & DO NOT ENTER
EXISTING MONITORING WELL
40' MAXIMUM FRONT SETBACK
15' MINIMUM FRONT SETBACK
PORTSMOUTH AVENUE (NH ROUTE 108)
B 64
A 65
N/F DOUGLAS W. SCAMMAN, JR REVOCABLE TRUST
69 PORTSMOUTH AVENUE
STRATHAM, NH 03885
RCRD BK 4335 PG 2533
EXISTING 3-BEDROOM HOUSE
20' SIDE/REAR YARD SETBACK
30' VEGETATED BUFFER TO RESIDENTIAL USE
APPROX. R1A* ZONE
APPROX. 160FT* ZONE
EOG
EOP
24'
24" DIA HICKORY TREE
CONSTRUCTION SOIL STOCKPILES
A 4
N/F 41 PORTSMOUTH AVENUE REALTY LLC
124 BEDFORD CENTER ROAD, SUITE D
BEDFORD, NH 03110
RCRD BK 6460 PG 1178
AREA = 8.27 ACRES
FRONTAGE = 1072.63 FEET
SLAB
APPROX. GAS LINE EASEMENT
APPROX. GAS LINE
EDGE OF GAS ROW
CATCH BASIN (TYP)
GUARD RAIL
RIVER ROAD
GUY WIRE (TYP)
UP5
UP4
UP 77-1
UP 77-2
24" HDPE PIPE
10' SIDE/REAR YARD SETBACK
PAVED ACCESS ROAD
STREET SIGN DO NOT ENTER
STOP SIGN
TWO (2) 3-BEDROOM HOUSES WITHIN 200 FT OF SITE
A 2
N/F ST HOLDING COMPANY LLC
C/O EXETER SUBARU
P.O. BOX 1208
STRATHAM, NH 03885
RCRD BK 3224 PG 1143
A 114
N/F HARALAMPOS SIDIROPOULOS
245 ANDOVER STREET, 2ND FLOOR #201
PEABODY, MA 01960
RCRD BK 3452 PG 0466
A 115

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
2	MAR 19, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	

DRAWN: JJM | DESIGN: JJM
CHECKED: BDS | CHECKED: BDS

EMANUEL ENGINEERING
118 Portsmouth Avenue, A202
Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
www.emanuelengineering.com

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL:

TITLE:
EXISTING CONDITIONS
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	1"=40'	C1

TEST PIT LOGS & SOIL DATA

AUTOFAIR REALTY II, LLC 41 PORTSMOUTH AVENUE, STRATHAM, NH
EEI PROJECT 13-041

PERFORMED ON SEPTEMBER 22 2004 BY JAMES SHEPHARD OF NH SOIL CONSULTANTS, INC. AND BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC., WITNESSED BY MIKE CUOMO OF RCGD.

TEST PIT #1
ESHWT 22", TERMINATED 48", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-6" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 6-22" 10YR4/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 22-48" 10YR4/2 , FINE SANDY LOAM, MASSIVE, FRIABLE, MOTTLES COMMON.

TEST PIT #2
ESHWT NONE TERMINATED 45", REFUSAL 40", NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-8" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 8-40" 10YR4/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 40-45" RIPPABLE BEDROCK.

TEST PIT #3
ESHWT NONE, TERMINATED 40", REFUSAL 36", NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-10" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 10-36" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 36-40" RIPPABLE BEDROCK.

TEST PIT #4
ESHWT 28", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-8" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 8-28" 10YR4/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 28-64" 10YR5/3 , FINE SANDY LOAM, MASSIVE, FRIABLE, MOTTLES COMMON.

TEST PIT #5
ESHWT 40", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-40" MIXED, 40-64" 10YR5/3, FINE SANDY LOAM, MOTTLES COMMON.

TEST PIT #6
ESHWT 36", TERMINATED 65", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-20" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 20-36" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 36-42" 10YR5/3 , VERY FINE SANDY LOAM, MASSIVE, FRIABLE, MOTTLES COMMON, 42-65" 10YR5/3 , VERY FINE SANDY LOAM, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #7
ESHWT 36", TERMINATED 60", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-12" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 12-36" 10YR4/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 36-60" 10YR5/3 , FINE SANDY LOAM, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #8
ESHWT 40", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-22" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 22-40" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 40-64" 10YR5/3 , FINE SANDY LOAM, PLATY, FIRM, MOTTLES COMMON.

TEST PIT #9
ESHWT 30", TERMINATED 65", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-12" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 12-30" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 30-65" 10YR5/3 , FINE SANDY LOAM, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #10
ESHWT NONE", TERMINATED 24", REFUSAL 24", NO OBSERVED WATER, ROOTS NONE OBSERVED, BEDROCK AT 24"

PERFORMED ON JANUARY 4, 2012 BY BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC., WITNESSED BY MIKE CUOMO OF RCGD.

TEST PIT #12-5
ESHWT 28", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, 0-18" 10YR3/2, LOAM, GRANULAR, FRIABLE, 18-40" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 40-64" 2.5Y5/4, SILTY LOAM, BLOCKY, FIRM, MOTTLES COMMON.

TEST PIT #12-6
ESHWT 40", TERMINATED 72", NO REFUSAL, NO OBSERVED WATER, 0-14" 10YR3/2, LOAM, GRANULAR, FRIABLE, 14-28" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 28-36" 2.5Y5/4 , GRAVELLY SANDY LOAM, BLOCKY, FIRM, MOTTLES COMMON, 36-72" 2.5Y5/4, SILTY LOAM, BLOCKY, FIRM, MOTTLES COMMON.

PERFORMED ON JULY 3, 2013 BY LINDSAY BYBOTH OF GOVE ENVIRONMENTAL SERVICES AND BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC., WITNESSED BY MIKE CUOMO OF RCGD.

TEST PIT #13-1
ESHWT 44", TERMINATED 62", NO REFUSAL, NO OBSERVED WATER, ROOTS 24", 0-7" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 7-30" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 30-44" 10YR5/6 , VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-62" 10YR5/3, FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-2
ESHWT 44", TERMINATED 66", NO REFUSAL, NO OBSERVED WATER, ROOTS 11", 0-7" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 7-26" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 26-44" 2.5Y5/3 , VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-62" 2.5Y5/3, STONY FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-3
ESHWT 44", TERMINATED 70", NO REFUSAL, NO OBSERVED WATER, ROOTS 12", 0-12" 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE,12-26" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 26-44" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-70" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-4 FAILED
ESHWT 22", TERMINATED 67", NO REFUSAL, NO OBSERVED WATER, NO OBSERVED ROOTS, 0-7", FINE SANDY LOAM, GRANULAR, 7-22", FINE SANDY LOAM, GRANULAR, 22-34", SILT, BLOCKY, FRIABLE, MOTTLES COMMON, 34-67" , SILT CLAY, MASSIVE, FIRM.

TEST PIT #13-5
ESHWT 41", TERMINATED 60", NO REFUSAL, NO OBSERVED WATER, NO OBSERVED ROOTS, 0-20" 10YR3/2, LOAM, GRANULAR, FRIABLE, 20-30" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 30-41" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 41-60" , 2.5Y5/3, SILT CLAY, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #13-6
ESHWT 41", TERMINATED 62", NO REFUSAL, NO OBSERVED WATER, NO OBSERVED ROOTS, 0-17" 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE, 17-26" 10YR3/2, SAND, GRANULAR, FRIABLE, 26-41" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 41-62" , FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-7
ESHWT 32", TERMINATED 60", NO REFUSAL, NO OBSERVED WATER, ROOTS 32", 0-16" 10YR3/2, SAND, GRANULAR, FRIABLE, 16-24" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 24-32" 10YR5/4, FINE SANDY LOAM, GRANULAR, FRIABLE, 32-60" , FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-8
NO ESHWT, TERMINATED 32", REFUSAL 32", NO OBSERVED WATER, NO OBSERVED ROOTS, 0-6" 10YR3/3, LOAM, GRANULAR, FRIABLE, 6-32" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE.

TEST PIT #13-9
NO ESHWT, TERMINATED 32", REFUSAL 32", NO OBSERVED WATER, NO OBSERVED ROOTS, 0-3" 10YR3/3, LOAM, GRANULAR, FRIABLE, 3-32" 10YR5/6, SILTY CLAY, BLOCKY, FRIABLE.

TEST PIT #13-10
ESHWT 27", TERMINATED 42", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-17" 10YR5/5, FINE SANDY LOAM, GRANULAR, FRIABLE,17-27" 10YR5/3, SILT CLAY, BLOCKY, FIRM, 27-40" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON, 40-42" 10YR5/3, VERY STONY SILTY CLAY, BLOCKY, FIRM, MOTTLES COMMON.

TEST PIT #13-11
ESHWT 26", TERMINATED 40", NO REFUSAL, NO OBSERVED WATER, ROOTS 22", 0-17" 10YR3/3, LOAM, GRANULAR, FRIABLE,17-22" 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE, 22-26" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 26-35" 10YR5/2, SILTY CLAY, BLOCKY, FIRM, MOTTLES COMMON, 35-40" 2.5Y5/2, SILTY CLAY, MASSIVE, FIRM, MOTTLES COMMON.



NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 P5117B
2. THE INTENT OF THIS PLAN IS TO DELINEATE SOIL TYPES AND SHOW TOPOGRAPHY FOR STRATHAM TAX MAP 9 LOT 4.
3. SEE EEI DRAWING SET COVER SHEET FOR PROJECT GENERAL NOTES.
4. SOILS WERE INITIALLY DELINEATED BY LINDSAY BYBOTH, SOIL SCIENTIST APPRENTICE OF GOVE ENVIRONMENTAL SERVICES, INC., 8 CONTINENTAL DRIVE, BUILDING 2 UNIT H, EXETER, NH 03833, ON AUGUST 8, 2013, IN ACCORDANCE WITH HIGH INTENSITY SOIL SURVEY MAPS FOR NEW HAMPSHIRE STANDARDS, PUBLICATION NO. 1, APRIL 2008. SOILS REVISED AND WETLANDS DELINEATED BY JAMES GOVE, CSS # 4 ON APRIL 1, 2014.
5. THIS SOIL MAP WAS PREPARED BY A PROFESSIONAL SOIL SCIENTIST AND MEETS THE TECHNICAL STANDARDS OF THE SSSNNE PUBLICATION NO. 1, HIGH INTENSITY SOIL MAPS FOR NH, APRIL 2008. SOILS WERE IDENTIFIED USING THE KEY TO SOIL TYPES.

WETLAND MAPPING STANDARDS:

1. 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.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 7.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2010).
3. NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.2.1 (2009).
4. CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS-79/31 (1979).

GRAPHIC SCALE

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

HIGH INTENSITY MAP SYMBOL **523BH**

DRAINAGE CLASS
5
1. Excessively drained
2. Well drained
3. Moderately well drained
4. Somewhat poorly drained
5. Poorly drained
6. Very Poorly drained
7. Not determined

PARENT MATERIAL
2
1. Glaciofluvial
2. Glacial Till
3. Marine or glaciolacustrine very fine sand and silt
4. Marine or glaciolacustrine loamy/sandy over silt/clay
5. Marine or glaciolacustrine silt and clay
6. excavated, regraded or filled
7. Alluvial deposits
8. Organic materials fresh water
9. Organic materials tidal marsh

IDENTIFIER
H
H. Indicates high intensity soil map
P. Indicates preliminary map

SLOPE CLASS
B
B. 0 to 8%
C. 8 to 15%
D. 15 to 25%
E. More than 25%

RESTRICTIVE FEATURE
3
1. None
2. Bouldery, with more than 15% of surface covered
3. Mineral restrictive layer(s) are present at less than 40 in. depth.
4. Bedrock 0 in. to 40 in. depth
5. Subject to flooding
6. Does not meet fill standards
x. Depth to bedrock variable, complex of soil types

High Intensity Map Symbol 523BH indicates a poorly drained glacial till soil with a restrictive features, on a slope of 0 to 8%.

Developed from Society of Soil Scientists of Northern New England. " Special Publication No. 1, High Intensity Soil Maps For New Hampshire, Standards and Orgins"

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
1	JAN 22, 2025	FOR APPROVAL	

DRAWN: JJM | DESIGN: JJM
CHECKED: BDS | CHECKED: BDS

EMANUEL ENGINEERING
118 Portsmouth Avenue, A202
Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
www.emanuelengineering.com

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL:

TITLE:
HIGH INTENSITY SOIL SURVEY & TOPOGRAPHY PLAN
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	1"=40'	C2

TEST PIT LOGS & SOIL DATA

AUTOFAIR REALTY II, LLC 41 PORTSMOUTH AVENUE, STRATHAM, NH
EEI PROJECT 13-041

PERFORMED ON SEPTEMBER 22 2004 BY JAMES SHEPHARD OF NH SOIL CONSULTANTS, INC. AND BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC., WITNESSED BY MIKE CUOMO OF RCCD.

TEST PIT #1
ESHWT 22", TERMINATED 48", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-6" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 6-22" 10YR4/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 22-48" 10YR4/2 , FINE SANDY LOAM, MASSIVE, FRIABLE, MOTTLES COMMON.

TEST PIT #2
ESHWT NONE TERMINATED 45", REFUSAL 40", NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-8" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 8-40" 10YR4/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 40-45" RIPPABLE BEDROCK.

TEST PIT #3
ESHWT NONE, TERMINATED 40", REFUSAL 36", NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-10" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 10-36" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 36-40" RIPPABLE BEDROCK.

TEST PIT #4
ESHWT 28", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-8" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 8-28" 10YR4/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 28-64" 10YR5/3 , FINE SANDY LOAM, MASSIVE, FRIABLE, MOTTLES COMMON.

TEST PIT #5
ESHWT 40", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-40" MIXED, 40-64" 10YR5/3, FINE SANDY LOAM, MOTTLES COMMON.

TEST PIT #6
ESHWT 36", TERMINATED 65", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-20" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 20-36" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 36-42" 10YR5/3 , VERY FINE SANDY LOAM, MASSIVE, FRIABLE, MOTTLES COMMON, 42-65" 10YR5/3 , VERY FINE SANDY LOAM, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #7
ESHWT 36", TERMINATED 60", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-12" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 12-36" 10YR4/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 36-60" 10YR5/3 , FINE SANDY LOAM, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #8
ESHWT 40", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-22" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 22-40" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 40-64" 10YR5/3 , FINE SANDY LOAM, PLATY, FIRM, MOTTLES COMMON.

TEST PIT #9
ESHWT 30", TERMINATED 65", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-12" 10YR3/3, SANDY LOAM, GRANULAR, FRIABLE, 12-30" 10YR4/6, SANDY LOAM, GRANULAR, FRIABLE, 30-65" 10YR5/3 , FINE SANDY LOAM, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #10
ESHWT NONE", TERMINATED 24", REFUSAL 24", NO OBSERVED WATER, ROOTS NONE OBSERVED, BEDROCK AT 24"

PERFORMED ON JANUARY 4, 2012 BY BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC., WITNESSED BY MIKE CUOMO OF RCCD.

TEST PIT #12-5
ESHWT 28", TERMINATED 64", NO REFUSAL, NO OBSERVED WATER, 0-18" 10YR3/2, LOAM, GRANULAR, FRIABLE, 18-40" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 40-64" 2.5Y5/4, SILTY LOAM, BLOCKY, FIRM, MOTTLES COMMON.

TEST PIT #12-6
ESHWT 40", TERMINATED 72", NO REFUSAL, NO OBSERVED WATER, 0-14" 10YR3/2, LOAM, GRANULAR, FRIABLE, 14-28" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 28-36" 2.5Y5/4 , GRAVELLY SANDY LOAM, BLOCKY, FIRM, MOTTLES COMMON, 36-72" 2.5Y5/4, SILTY LOAM, BLOCKY, FIRM, MOTTLES COMMON.

PERFORMED ON JULY 3, 2013 BY LINDSAY BYBOTH OF GOVE ENVIRONMENTAL SERVICES AND BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC., WITNESSED BY MIKE CUOMO OF RCCD.

TEST PIT #13-1
ESHWT 44", TERMINATED 62", NO REFUSAL, NO OBSERVED WATER, ROOTS 24", 0-7" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 7-30" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 30-44" 10YR5/6 , VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-62" 10YR5/3, FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-2
ESHWT 44", TERMINATED 66", NO REFUSAL, NO OBSERVED WATER, ROOTS 7", 0-7" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 7-26" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 26-44" 2.5Y5/3 , VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-62" 2.5Y5/3, STONY FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-3
ESHWT 44", TERMINATED 70", NO REFUSAL, NO OBSERVED WATER, ROOTS 12", 0-12" 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE,12-26" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 26-44" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-70" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-4 FAILED
ESHWT 22", TERMINATED 67", NO REFUSAL, NO OBSERVED WATER, NO OBSERVED ROOTS, 0-7", FINE SANDY LOAM, GRANULAR, 7-22", FINE SANDY LOAM, GRANULAR, 22-34", SILT, BLOCKY, FRIABLE, MOTTLES COMMON, 34-67" , SILT CLAY, MASSIVE, FIRM.

TEST PIT #13-5
ESHWT 41", TERMINATED 60", NO REFUSAL, NO OBSERVED WATER, NO OBSERVED ROOTS, 0-20" 10YR3/2, LOAM, GRANULAR, FRIABLE, 20-30" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 30-41" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 41-60" , 2.5Y5/3, SILT CLAY, MASSIVE, FIRM, MOTTLES COMMON.

TEST PIT #13-6
ESHWT 41", TERMINATED 62", NO REFUSAL, NO OBSERVED WATER, NO OBSERVED ROOTS, 0-17" 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE, 17-26" 10YR3/2, SAND, GRANULAR, FRIABLE, 26-41" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 41-62" , FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-7
ESHWT 32", TERMINATED 60", NO REFUSAL, NO OBSERVED WATER, ROOTS 32", 0-16" 10YR3/2, SAND, GRANULAR, FRIABLE, 16-24" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 24-32" 10YR5/4, FINE SANDY LOAM, GRANULAR, FRIABLE, 32-60" , FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.

TEST PIT #13-8
NO ESHWT, TERMINATED 32", REFUSAL 32", NO OBSERVED WATER, NO OBSERVED ROOTS, 0-6" 10YR3/3, LOAM, GRANULAR, FRIABLE, 6-32" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE.

TEST PIT #13-9
NO ESHWT, TERMINATED 32", REFUSAL 32", NO OBSERVED WATER, NO OBSERVED ROOTS, 0-3" 10YR3/3, LOAM, GRANULAR, FRIABLE, 3-32" 10YR5/6, SILTY CLAY, BLOCKY, FRIABLE.

TEST PIT #13-10
ESHWT 27", TERMINATED 42", NO REFUSAL, NO OBSERVED WATER, ROOTS NONE OBSERVED, 0-17" 10YR5/5, FINE SANDY LOAM, GRANULAR, FRIABLE,17-27" 10YR5/3, SILT CLAY, BLOCKY, FIRM, 27-40" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON, 40-42" 10YR5/3, VERY STONY SILTY CLAY, BLOCKY, FIRM, MOTTLES COMMON.

TEST PIT #13-11
ESHWT 26", TERMINATED 40", NO REFUSAL, NO OBSERVED WATER, ROOTS 22", 0-17" 10YR3/3, LOAM, GRANULAR, FRIABLE,17-22" 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE, 22-26" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 26-35" 10YR5/2, SILTY CLAY, BLOCKY, FIRM, MOTTLES COMMON, 35-40" 2.5Y5/2, SILTY CLAY, MASSIVE, FIRM, MOTTLES COMMON.

SITE SPECIFIC SOIL MAP LEGEND

SYMBOL	MAP UNIT	HYDROLOGIC SOIL GROUP
38	ELDRIDGE	C
42	CANTON	B
460	PENNICHUCK	C

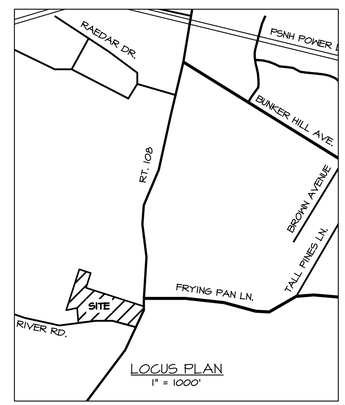


NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 PG1178
2. THE INTENT OF THIS PLAN IS TO DELINEATE SOIL TYPES AND SHOW TOPOGRAPHY OF STRATHAM TAX MAP 9 LOT 4 FOR A NHDES AOT PERMIT APPLICATION.
3. SEE EEI DRAWING SET COVER SHEET FOR PROJECT GENERAL NOTES.
4. THE SITE SPECIFIC SOIL SURVEY WAS PRODUCED APRIL 1, 2014, AND WAS PREPARED BY JAMES P. GOVE, CSS # 004, GOVE ENVIRONMENTAL SERVICES, INC.
5. SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE # 10, JANUARY 2011. 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.

WETLAND MAPPING STANDARDS:

1. 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.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 7.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2010).
3. NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.2.1 (2009).
4. CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS-79/31 (1979).



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

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
1	JAN 22, 2025	FOR APPROVAL	

DRAWN: JJM | DESIGN: JJM
CHECKED: BDS | CHECKED: BDS

EMANUEL ENGINEERING
118 PORTSMOUTH AVENUE, A202
STRATHAM, NH 03885
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL:

TITLE:
SITE-SPECIFIC SOIL & TOPOGRAPHY PLAN
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	1"=40'	C2.1

ADDITIONAL ABUTTERS:

B 3
N/F DOUGLAS W. SCAMMAN, JR REVOCABLE TRUST
64 PORTSMOUTH AVENUE
STRATHAM, NH 03885
RCRD BK 6442 PG 1722

B 4
N/F ADRIANNE R. SHERRY REVOCABLE TRUST
11 RIVER ROAD
STRATHAM, NH 03885
RCRD BK 6550 PG 2465

B 64
N/F DOUGLAS W. SCAMMAN, JR REVOCABLE TRUST
64 PORTSMOUTH AVENUE
STRATHAM, NH 03885
RCRD BK 4335 PG 2533

A 115
N/F SHEARWATER INVESTMENTS CORPORATION
P.O. BOX 492
STRATHAM, NH 03885
RCRD BK 5117 PG 1912

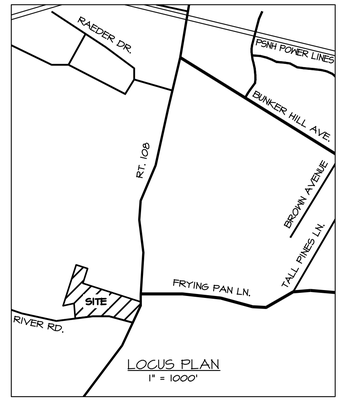
LEGEND

- NEW HAMPSHIRE HIGHWAY BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND (TYP)
- TYPICAL
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND SYMBOL
- SOIL DELINEATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE
- EDGE OF PAVEMENT (EOP)
- UG — UNDERGROUND UTILITIES
- OHE — OVERHEAD UTILITIES
- UTILITY POLE
- GUY WIRE
- DRAIN MANHOLE
- SERVICE CLEANOUT
- SEPTIC LINE
- DRAIN LINE
- PROPANE TANK
- WATER LINE
- WELL
- GAS — GAS LINE
- SIGN
- (XX) # OF PARKING SPACES
- TREE LINE
- TREE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



LOCUS PLAN
1" = 1000'

NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 PG1178
2. THE INTENT OF THIS PLAN IS SHOW THE CONSTRUCTION OF AN AUTOMOTIVE DEALERSHIP BUILDING, AND ASSOCIATED IMPROVEMENTS FOR STRATHAM TAX MAP 9, LOT 4.
3. SEE EEI DRAWING SET COVER SHEET FOR PROJECT GENERAL NOTES.
4. DECOMMISSION ALL EXISTING WELLS AND MONITORING WELLS ON SITE PER NHDES REGULATIONS.

SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE (FOR THE NON-EASEMENT AREA) OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000)."

LICENSED LAND SURVEYOR DATE

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
3	APR 23, 2025	FOR APPROVAL	
2	MAR 19, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	

DRAWN: JJM | DESIGN: JJM
CHECKED: BDS | CHECKED: BDS

EMANUEL ENGINEERING
118 PORTSMOUTH AVENUE, A202
STRATHAM, NH 03885
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

APPROVED BY THE TOWN OF STRATHAM PLANNING BOARD
CHAIRPERSON DATE

SEAL:

TITLE:
SITE PLAN
FOR
AUTOFAIR REALTY II, LLC
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	1"=40'	C3

LEGEND

- NEW HAMPSHIRE HIGHWAY BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND
- (TYP) TYPICAL
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND SYMBOL
- SOIL DELINEATION
- XXX EXISTING CONTOUR
- XXXX PROPOSED CONTOUR
- XXXX PROPOSED SPOT GRADE
- EDGE OF PAVEMENT (EOP)
- UG UNDERGROUND UTILITIES
- OHE OVERHEAD UTILITIES
- UTILITY POLE
- GUY WIRE
- DRAIN MANHOLE
- SERVICE CLEANOUT
- S SEPTIC LINE
- DRAIN LINE
- PROPANE TANK
- W WATER LINE
- WELL
- GAS GAS LINE
- SIGN
- (XX) # OF PARKING SPACES
- TREE LINE
- TREE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Drainage Structure Chart

Structure #	Structure	Diameter	Lid/Rim	Rim Elevation	Sump	Inlet	Inlet Elevation
CB 104P	Concrete Catch Basin	10'	NEENAH # R-3570	85.50	3'	See Lid/Rim	See Lid/Rim
CB 250P	Nyloplast Basin	30"	30" Domed Grate	84.75	3'	See Lid/Rim	See Lid/Rim
CB 251P	Nyloplast Basin	30"	30" Domed Grate	85.00	3'	See Lid/Rim	See Lid/Rim
CB 252P	Nyloplast Basin	30"	30" Domed Grate	83.50	3'	See Lid/Rim	See Lid/Rim
CB 253P	Nyloplast Basin	30"	30" Domed Grate	88.50	3'	See Lid/Rim	See Lid/Rim
CB 255P	Nyloplast Basin	30"	30" Domed Grate	87.50	3'	See Lid/Rim	See Lid/Rim
CB 258P	Nyloplast Basin	30"	30" Domed Grate	82.00	3'	See Sheet D6	See Sheet D6
CB 259P	Nyloplast Basin	30"	30" Domed Grate	87.50	3'	See Lid/Rim	See Lid/Rim
CB 261P	Nyloplast Basin	30"	30" Domed Grate	90.50	3'	See Lid/Rim	See Lid/Rim
CB 262P	Nyloplast Basin	30"	30" Domed Grate	90.75	3'	See Lid/Rim	See Lid/Rim
CB 263P	Concrete Manhole	6'	NEENAH # R-1557	89.00	None	See Lid/Rim	See Lid/Rim

Notes:
1. Proposed concrete catch basins and drywells to be by Shea Concrete, ADS Pipe, or equal.
2. Catch basins 104P, 252, 258P, 261P, 262P, and 263P, to have pipe snouts installed on outlet pipes from the catch basin. See detail on Sheet D6.
4. Silk Sack - Type C by ACF Environmental or equal, to be installed within all catch basins on site with a grate. See Sheet D5.
5. All concrete structures must be installed in accordance with New Hampshire Department of Transportation Standards and specifications for Road and Bridge Construction.

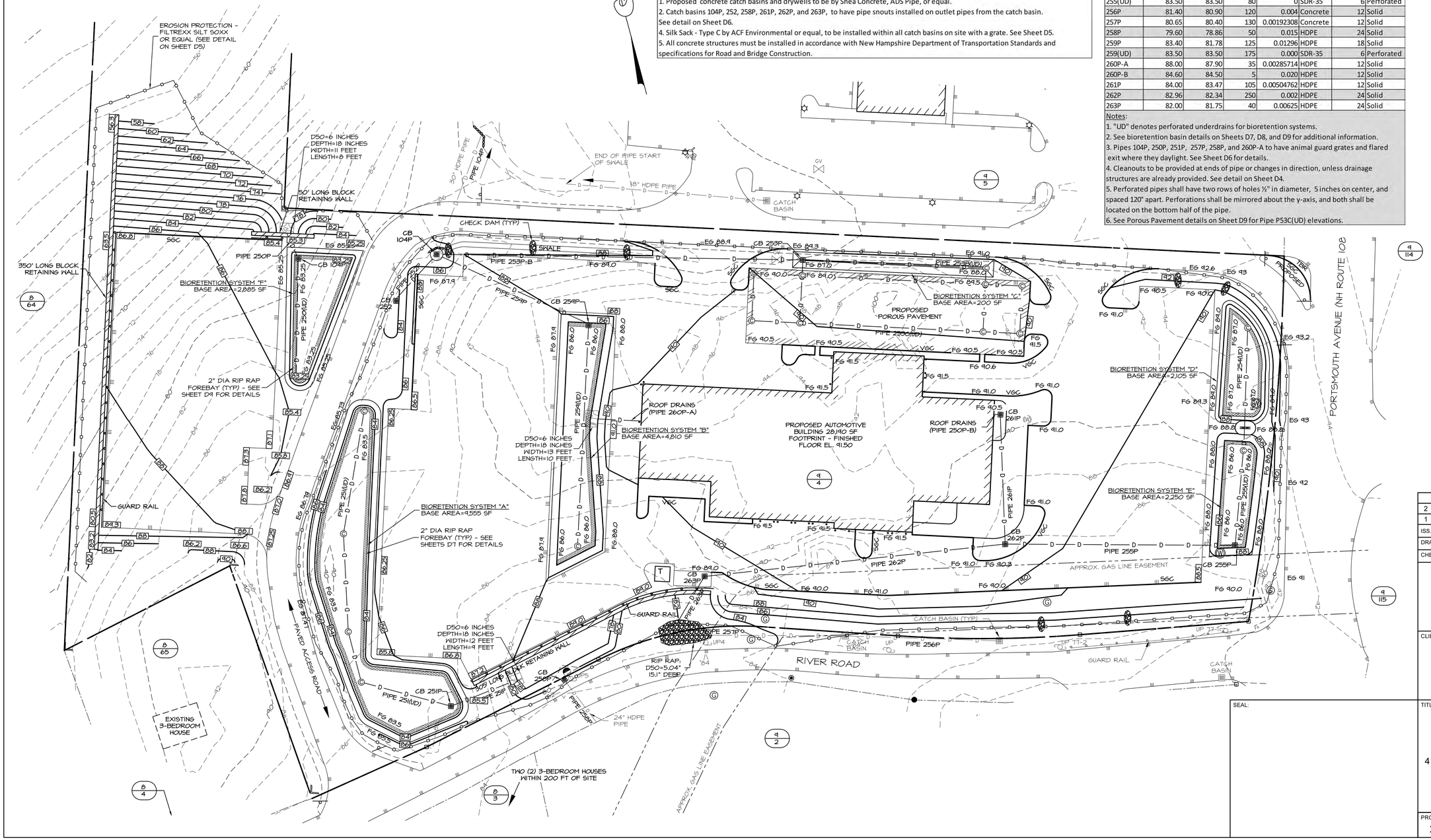
Drainage Pipe Listing

Pipe #	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	Material	Diameter (inches)	Pipe Type
104P	81.77	81.14	100	0.006	HDPE	30	Solid
250P	80.75	80.50	20	0.0125	HDPE	12	Solid
250(UD)	80.75	80.75	90	0.000	SDR-35	6	Perforated
251P	81.00	80.75	50	0.005	HDPE	12	Solid
251(UD)	81.00	81.00	295	0.000	SDR-35	6	Perforated
252P	82.18	81.96	45	0.00488889	HDPE	18	Solid
253P-B	82.55	81.80	285	0.003	HDPE	12	Solid
253B(UD)	85.50	84.50	145	0.00689655	SDR-35	6	Perforated
253C(UD)	See Note 6	See Note 6	605	See Note 6	SDR-35	6	Perforated
254(UD)	84.50	83.50	90	0.01111111	SDR-35	6	Perforated
255P	83.50	83.06	178	0.002	HDPE	18	Solid
255(UD)	83.50	83.50	80	0	SDR-35	6	Perforated
256P	81.40	80.90	120	0.004	Concrete	12	Solid
257P	80.65	80.40	130	0.00192308	Concrete	12	Solid
258P	79.60	78.86	50	0.015	HDPE	24	Solid
259P	83.40	81.78	125	0.01296	HDPE	18	Solid
259(UD)	83.50	83.50	175	0.000	SDR-35	6	Perforated
260P-A	88.00	87.90	35	0.00285714	HDPE	12	Solid
260P-B	84.60	84.50	5	0.020	HDPE	12	Solid
261P	84.00	83.47	105	0.00504762	HDPE	12	Solid
262P	82.96	82.34	250	0.002	HDPE	24	Solid
263P	82.00	81.75	40	0.00625	HDPE	24	Solid

Notes:
1. "UD" denotes perforated underdrains for bioretention systems.
2. See bioretention basin details on Sheets D7, D8, and D9 for additional information.
3. Pipes 104P, 250P, 251P, 257P, 258P, and 260P-A to have animal guard grates and flared exit where they daylight. See Sheet D6 for details.
4. Cleanouts to be provided at ends of pipe or changes in direction, unless drainage structures are already provided. See detail on Sheet D4.
5. Perforated pipes shall have two rows of holes ½" in diameter, 5 inches on center, and spaced 120° apart. Perforations shall be mirrored about the y-axis, and both shall be located on the bottom half of the pipe.
6. See Porous Pavement details on Sheet D9 for Pipe P53C(UD) elevations.

NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 PG1178
2. THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED GRADING AND DRAINAGE STRUCTURES FOR STRATHAM TAX MAP 9 LOT 4.
3. SEE EEI DRAWING SET COVER SHEET FOR PROJECT GENERAL NOTES.
4. SEE DETAIL SHEETS FOR THE CONSTRUCTION DETAILS AND SPECIFICATIONS FOR EACH BIORETENTION SYSTEM AND COMPONENTS.



2	MAR 19, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	
ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.

DRAWN:	JJM	DESIGN:	JJM
CHECKED:	BDS	CHECKED:	BDS

EMANUEL ENGINEERING
118 PORTSMOUTH AVENUE, A202
STRATHAM, NH 03885
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL:

TITLE:
GRADING & DRAINAGE PLAN
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	1"=40'	C4

LEGEND

- NEW HAMPSHIRE HIGHWAY BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND
- (TYP) TYPICAL
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND SYMBOL
- SOIL DELINEATION
- XXX EXISTING CONTOUR
- XXXX PROPOSED CONTOUR
- XXXX PROPOSED SPOT GRADE
- EDGE OF PAVEMENT (EOP)
- UG UNDERGROUND UTILITIES
- OHE OVERHEAD UTILITIES
- UTILITY POLE
- GUY WIRE
- DRAIN MANHOLE
- SEWER CLEANOUT
- S SEPTIC LINE
- D DRAIN LINE
- PROPANE TANK
- W WATER LINE
- WELL
- GAS GAS LINE
- SIGN
- (XX) # OF PARKING SPACES
- TREE LINE
- TREE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Drainage Structure Chart

Structure #	Structure	Diameter	Lid/Rim	Rim Elevation	Sump	Inlet	Inlet Elevation
CB 104P	Concrete Catch Basin	10'	NEENAH # R-3570	85.50	3'	See Lid/Rim	See Lid/Rim
CB 250P	Nyloplast Basin	30"	30" Domed Grate	84.75	3'	See Lid/Rim	See Lid/Rim
CB 251P	Nyloplast Basin	30"	30" Domed Grate	85.00	3'	See Lid/Rim	See Lid/Rim
CB 252P	Nyloplast Basin	30"	30" Domed Grate	83.50	3'	See Lid/Rim	See Lid/Rim
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CB 255P	Nyloplast Basin	30"	30" Domed Grate	87.50	3'	See Lid/Rim	See Lid/Rim
CB 258P	Nyloplast Basin	30"	30" Domed Grate	82.00	3'	See Sheet D6	See Sheet D6
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CB 261P	Nyloplast Basin	30"	30" Domed Grate	90.50	3'	See Lid/Rim	See Lid/Rim
CB 262P	Nyloplast Basin	30"	30" Domed Grate	90.75	3'	See Lid/Rim	See Lid/Rim
CB 263P	Concrete Manhole	6'	NEENAH # R-1557	89.00	None	See Lid/Rim	See Lid/Rim

Notes:
1. Proposed concrete catch basins and drywells to be by Shea Concrete, ADS Pipe, or equal.
2. Catch basins 104P, 252, 258P, 261P, 262P, and 263P, to have pipe snouts installed on outlet pipes from the catch basin. See detail on Sheet D6.
4. Silk Sack - Type C by ACF Environmental or equal, to be installed within all catch basins on site with a grate. See Sheet D5.
5. All concrete structures must be installed in accordance with New Hampshire Department of Transportation Standards and specifications for Road and Bridge Construction.

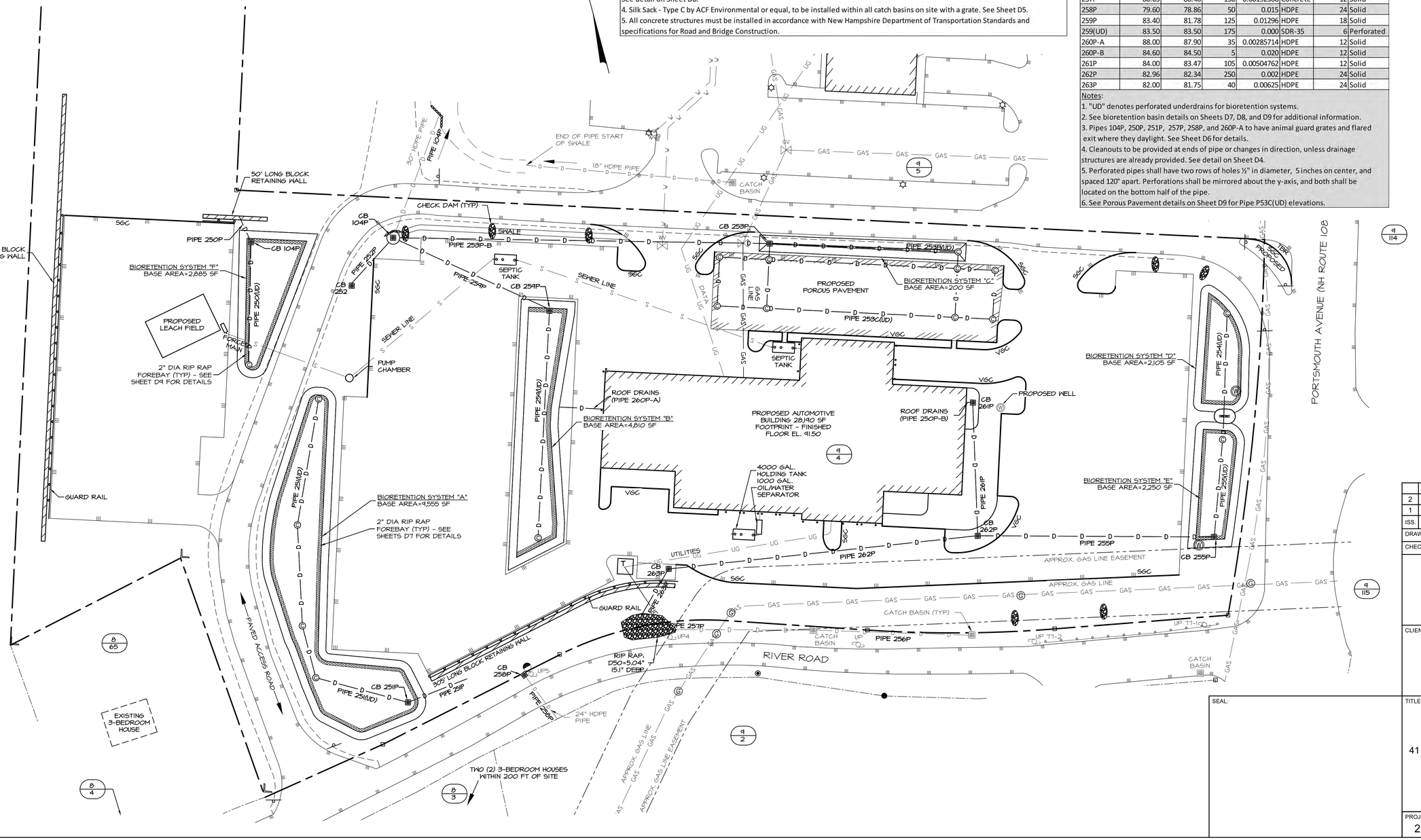
Drainage Pipe Listing

Pipe #	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	Material	Diameter (inches)	Pipe Type
104P	81.77	81.14	100	0.006	HDPE	30	Solid
250P	80.75	80.50	20	0.0125	HDPE	12	Solid
250(UD)	80.75	80.75	90	0.000	SDR-35	6	Perforated
251P	81.00	80.75	50	0.005	HDPE	12	Solid
251(UD)	81.00	81.00	295	0.000	SDR-35	6	Perforated
252P	82.18	81.96	45	0.00488889	HDPE	18	Solid
253P-B	82.55	81.80	285	0.003	HDPE	12	Solid
253B(UD)	85.50	84.50	145	0.00689655	SDR-35	6	Perforated
253C(UD)	See Note 6	See Note 6	605	See Note 6	SDR-35	6	Perforated
254(UD)	84.50	83.50	90	0.01111111	SDR-35	6	Perforated
255P	83.50	83.06	178	0.002	HDPE	18	Solid
255(UD)	83.50	83.50	80	0	SDR-35	6	Perforated
256P	81.40	80.90	120	0.004	Concrete	12	Solid
257P	80.65	80.40	130	0.00192308	Concrete	12	Solid
258P	79.60	78.86	50	0.015	HDPE	24	Solid
259P	83.40	81.78	125	0.01296	HDPE	18	Solid
259(UD)	83.50	83.50	175	0.000	SDR-35	6	Perforated
260P-A	88.00	87.90	35	0.00285714	HDPE	12	Solid
260P-B	84.60	84.50	5	0.020	HDPE	12	Solid
261P	84.00	83.47	105	0.00504762	HDPE	12	Solid
262P	82.96	82.34	250	0.002	HDPE	24	Solid
263P	82.00	81.75	40	0.00625	HDPE	24	Solid

Notes:
1. "UD" denotes perforated underdrains for bioretention systems.
2. See bioretention basin details on Sheets D7, D8, and D9 for additional information.
3. Pipes 104P, 250P, 251P, 257P, 258P, and 260P-A to have animal guard grates and flared exit where they daylight. See Sheet D6 for details.
4. Cleanouts to be provided at ends of pipe or changes in direction, unless drainage structures are already provided. See detail on Sheet D4.
5. Perforated pipes shall have two rows of holes ½" in diameter, 5 inches on center, and spaced 120° apart. Perforations shall be mirrored about the y-axis, and both shall be located on the bottom half of the pipe.
6. See Porous Pavement details on Sheet D9 for Pipe P53C(UD) elevations.

NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 PG1178
2. THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED UTILITIES FOR STRATHAM TAX MAP 9 LOT 4.
3. SEE EEI DRAWING SET COVER SHEET FOR PROJECT GENERAL NOTES.
4. SEE DETAIL SHEETS FOR THE CONSTRUCTION DETAILS AND SPECIFICATIONS FOR EACH BIORETENTION SYSTEM AND COMPONENTS.



2	MAR 19, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	
ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.

DRAWN: JJM | DESIGN: JJM
CHECKED: BDS | CHECKED: BDS

EMANUEL ENGINEERING
118 Portsmouth Avenue, A202
Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
www.emanuelengineering.com

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL:

TITLE:
UTILITIES PLAN
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	1"=40'	C5

TRAFFIC CONTROL SIGN SCHEDULE

MANUFACTURE	SIGN NUMBER	SIGN (N.T.S.)	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	DESCRIP.	MOUNT TYPE	MOUNT HEIGHT	REMARKS
GRIMCO INC. OR EQUAL	R1-1 (TWO LOCATIONS)	STOP	30"	30"	WHITE ON RED	ULTI-MATE OR EQUAL	7'-0"	REFLECTORIZED
GRIMCO INC. OR EQUAL	CUSTOM (TWO LOCATIONS)	RT 108N RT 108S	24"	18"	GREEN ON WHITE	ULTI-MATE OR EQUAL	7'-0"	REFLECTORIZED
GRIMCO INC. OR EQUAL	CUSTOM (TWO LOCATIONS)	RT 108S RT 108N	24"	18"	GREEN ON WHITE	ULTI-MATE OR EQUAL	7'-0"	REFLECTORIZED
GRIMCO INC. OR EQUAL	R3-2 (ONE LOCATION)		24"	24"	RED AND BLACK ON WHITE	ULTI-MATE OR EQUAL	5'-0"	REFLECTORIZED
GRIMCO INC. OR EQUAL	R4-7 (ONE LOCATION)		24"	30"	BLACK ON WHITE	ULTI-MATE OR EQUAL	7'-0"	REFLECTORIZED
USA TRAFFIC SIGNS OR EQUAL	M4-5 (ONE LOCATION)	TO	24"	12"	BLACK ON WHITE	ULTI-MATE OR EQUAL	9'-0"	REFLECTORIZED
USA TRAFFIC SIGNS OR EQUAL	M1-5-NH (ONE LOCATION)	108	24"	24"	BLACK ON WHITE	ULTI-MATE OR EQUAL	7'-0"	REFLECTORIZED
GRIMCO INC. OR EQUAL	M6-1 (ONE LOCATION)		21"	15"	BLACK ON WHITE	ULTI-MATE OR EQUAL	5'-9"	REFLECTORIZED

NOTES: 1. ALL SIGNS AND SIGN POSTS IN THE NHDOT RIGHT OF WAY TO MEET 2009 MUTCD STANDARDS WITH REVISION NUMBERS 1 AND 2 INCORPORATED, DATED MAY 2012.
2. ALL MOUNTING HEIGHTS ARE MEASURED FROM THE GROUND TO THE BOTTOM OF THE SIGN.

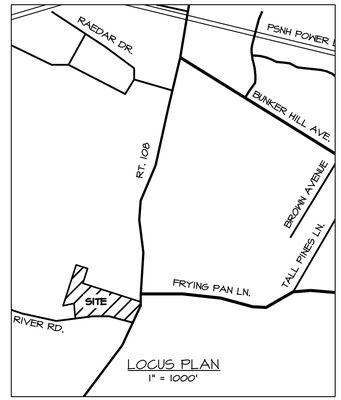
LEGEND

- NEW HAMPSHIRE HIGHWAY BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND (TYP)
- TYPICAL
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND SYMBOL
- SOIL DELINEATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE
- EDGE OF PAVEMENT (EOP)
- UG — UNDERGROUND UTILITIES
- OHE — OVERHEAD UTILITIES
- UTILITY POLE
- GUY WIRE
- DRAIN MANHOLE
- SERVICE CLEANOUT
- SEPTIC LINE
- DRAIN LINE
- PROPANE TANK
- WATER LINE
- WELL
- GAS — GAS LINE
- SIGN
- (XX) # OF PARKING SPACES
- TREE LINE
- TREE

GRAPHIC SCALE

40 0 20 40 80 160

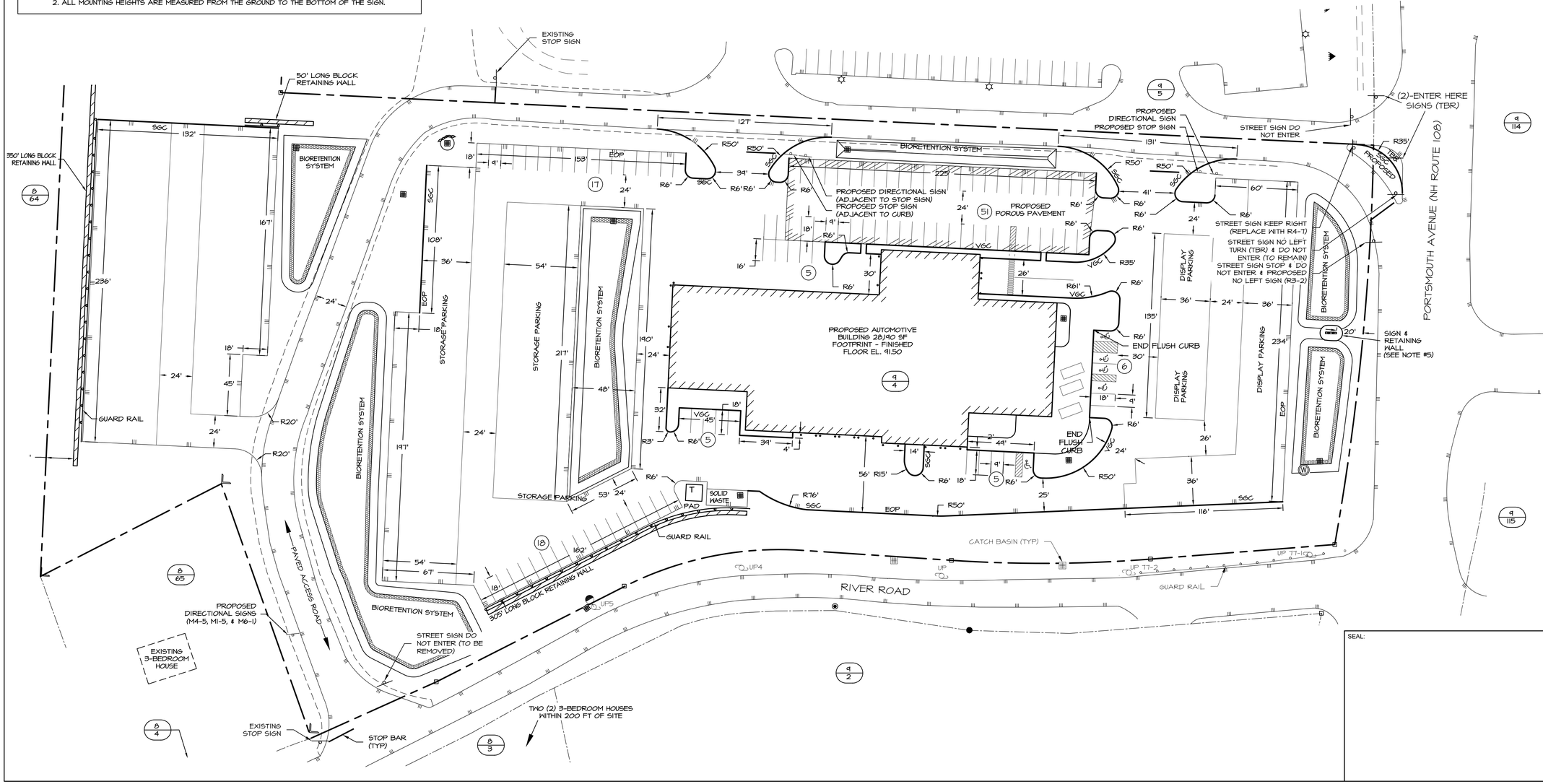
(IN FEET)
1 inch = 40 ft.



LOCUS PLAN
1" = 1000'

NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 PG1178
2. THE INTENT OF THIS PLAN IS TO SHOW THE PAVING AND CURBING RELATED SPECIFICATIONS FOR THE PROPOSED AUTOMOTIVE DEALERSHIP ON STRATHAM TAX MAP 9 LOT 4.
3. ALL SIGNS AND SIGN POSTS IN THE NHDOT RIGHT OF WAY TO MEET 2009 MUTCD STANDARDS WITH REVISION NUMBERS 1 AND 2 INCORPORATED, DATED MAY 2012.
4. SEE EEI DRAWING SET COVER SHEET FOR PROJECT GENERAL NOTES.
5. ALL SIGNAGE MUST COMPLY WITH THE REQUIREMENTS OUTLINED IN SECTION VII OF THE TOWN OF STRATHAM, NH ZONING ORDINANCE, AS AMENDED IN MARCH 2024. SEE SIGN DETAIL ON SHEET D3.



ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
4	APR 23, 2025	FOR APPROVAL	
3	APR 9, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	
DRAWN:	JJM	DESIGN:	JJM
CHECKED:	BDS	CHECKED:	BDS

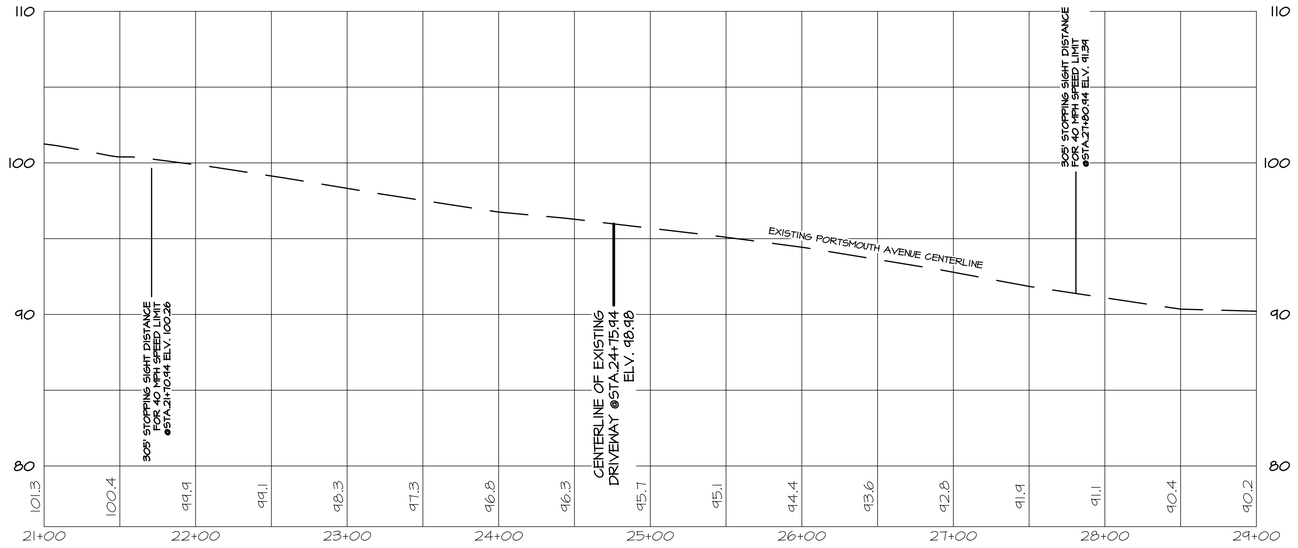
EMANUEL ENGINEERING
118 PORTSMOUTH AVENUE, A202
STRATHAM, NH 03885
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL:

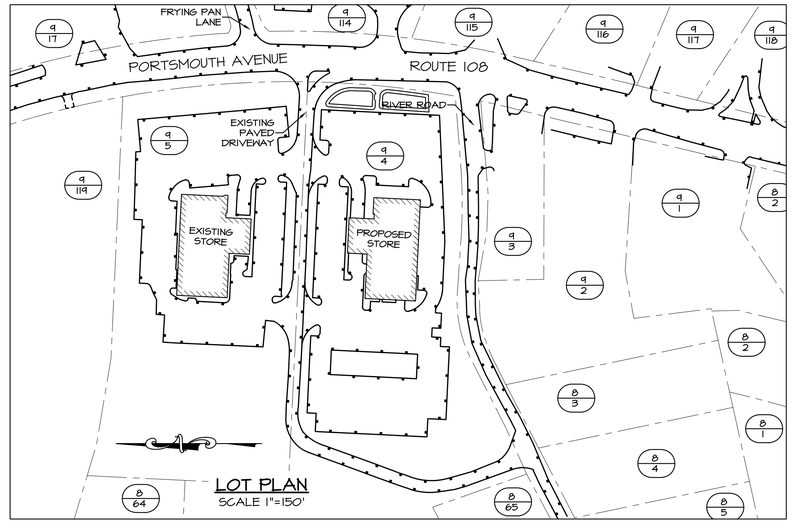
TITLE:
PAVING AND CURBING PLAN
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	1"=40'	C6



PORTSMOUTH AVENUE ROAD PROFILE

HORIZONTAL SCALE 1"=50' - VERTICAL SCALE 1"=5'



LOT PLAN

SCALE 1"=150'

REFERENCES:

1. SUBDIVISION PLAN & LOT LINE REVISION PLAN FOR W. DOUGLAS SCAMMAN JR., ROUTE 108 & RIVER ROAD, STRATHAM, NH, PREPARED BY DOUCET SURVEY, INC., DATED SEPTEMBER 22, 2004, RCRD #D-36613.

2. SUBDIVISION PLAN FOR W. DOUGLAS SCAMMAN JR., STRATHAM, NH, PREPARED BY EMANUEL COMPANIES, INC., DATED FEBRUARY 24, 1993, RCRD #D22283.

3. LOT LINE ADJUSTMENT PLAN FOR DOUGLAS SCAMMAN, PORTSMOUTH AVE & RIVER RD., STRATHAM, NH 03885, REVISION #3 DATED JAN 5, 2007 BY EMANUEL ENGINEERING, INC., RCRD PLAN #D-34505.

4. DRIVEWAY PLAN AND DRIVEWAY PROFILE FOR NISSAN OF STRATHAM, 45 PORTSMOUTH AVENUE, STRATHAM, NH 03885, DATED JAN 5, 2007 BY EMANUEL ENGINEERING, INC.

NOTES:

1. OWNER OF RECORD:
   TAX MAP 9, LOT 4
   41 PORTSMOUTH AVENUE REALTY LLC
   124 BEDFORD CENTER ROAD, SUITE D
   BEDFORD, NH 03110
   RCRD BK6460 P611178

2. THE INTENT OF THIS PLAN IS TO OBTAIN A DRIVEWAY PERMIT FOR AN ADDITIONAL 25,600 SQUARE FOOT AUTOMOTIVE DEALERSHIP BUILDING WITH VEHICLE MAINTENANCE FACILITY ACCESSED BY EXISTING DRIVEWAY/ROAD.

3. A PREVIOUSLY APPROVED NHDOT TEMPORARY DRIVEWAY PERMIT WAS GRANTED AS PERMIT # 06-431-413, DATED APRIL 23, 2009.

4. PORTSMOUTH AVENUE IS A 40 MPH ROAD. THE DESIGN STOPPING SIGHT DISTANCE FOR A 40 MPH ROAD IS 305 FEET (AASHTO GREEN BOOK 2001).

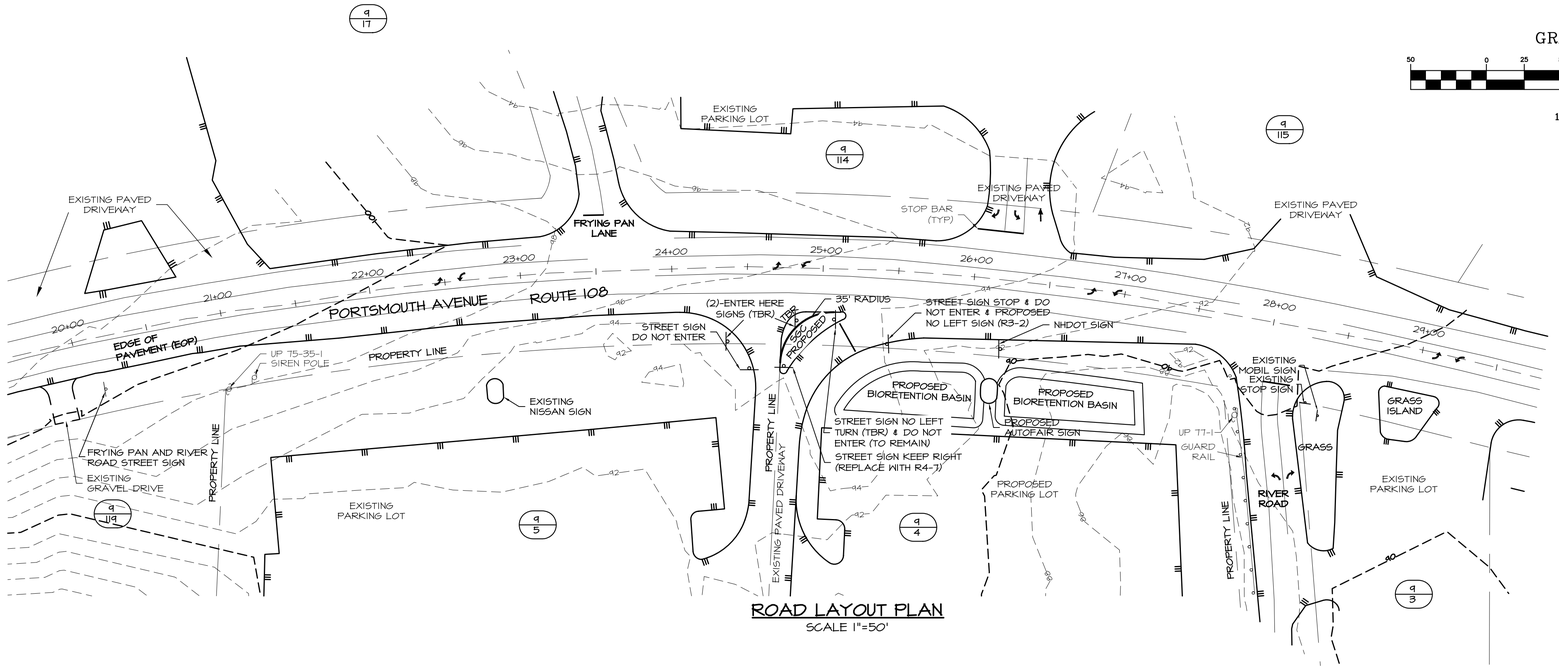
5. ALL SIGNS AND SIGN POSTS IN THE NHDOT RIGHT OF WAY TO MEET MUTCD STANDARDS.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.



ROAD LAYOUT PLAN

SCALE 1"=50'

LEGEND

- NEW HAMPSHIRE HIGHWAY BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND (TYP)
- TYPICAL
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND SYMBOL
- SOIL DELINEATION
- XXX EXISTING CONTOUR
- XXX PROPOSED CONTOUR
- XXXX PROPOSED SPOT GRADE
- EDGE OF PAVEMENT (EOP)
- UG UNDERGROUND UTILITIES
- OHE OVERHEAD UTILITIES
- UTILITY POLE
- GUY WIRE
- DRAIN MANHOLE
- SERVICE CLEANOUT
- SEPTIC LINE
- DRAIN LINE
- PROPANE TANK
- WATER LINE
- WELL
- GAS GAS LINE
- SIGN
- XX # OF PARKING SPACES
- TREE LINE
- TREE

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
2	MAR 19, 2025	FOR APPROVAL	
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DRAWN: JJM | DESIGN: JJM
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CLIENT:

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151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL

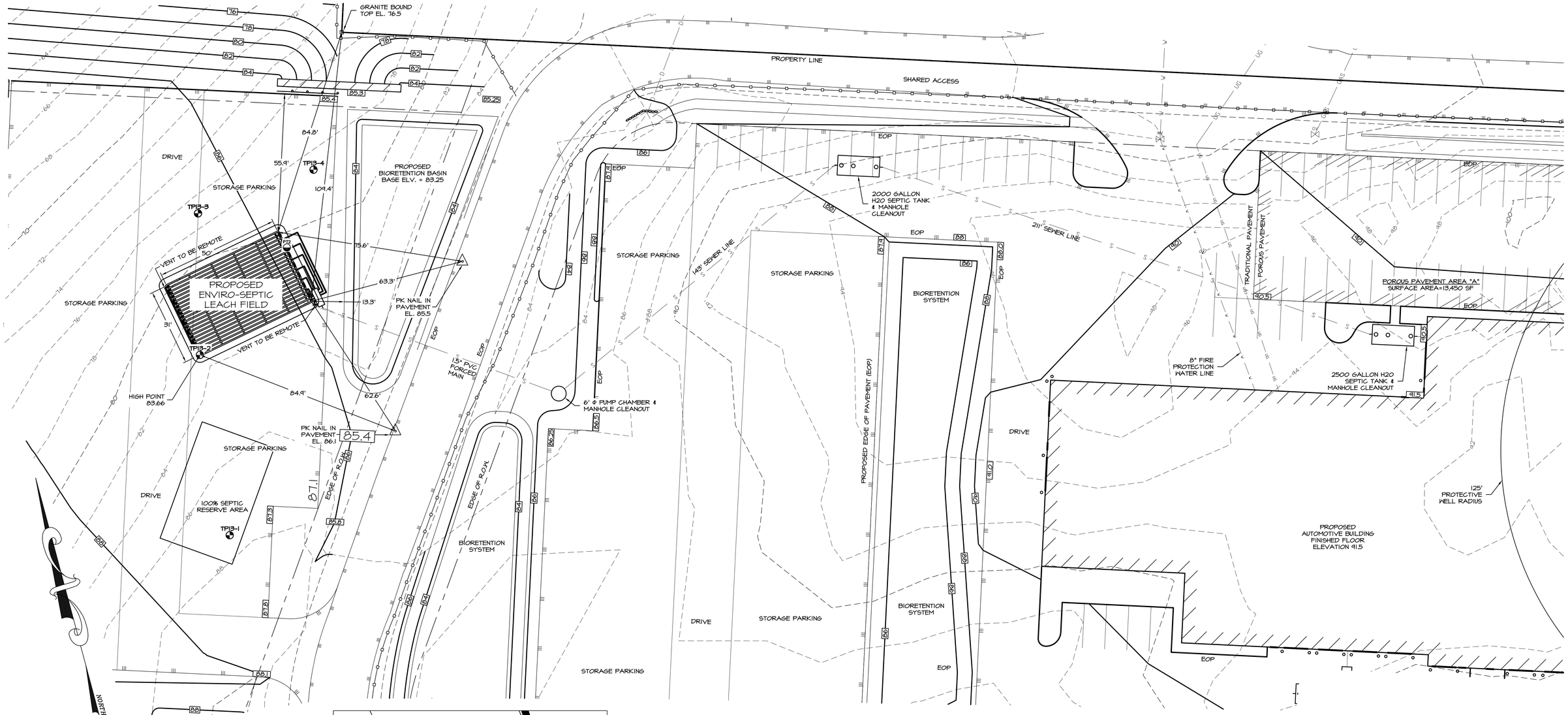
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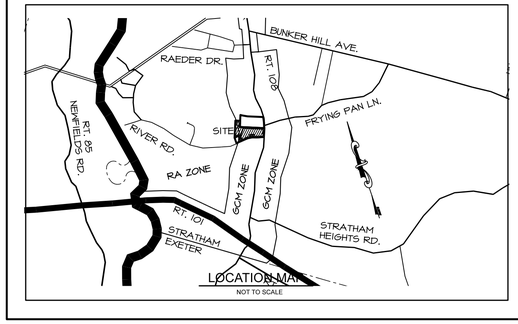
ROAD ALIGNMENT & PROFILE PLAN

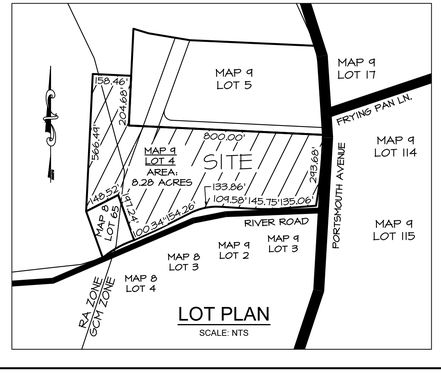
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS SHOWN	C7

PREVIOUS APPROVAL #CA2014119379







PLOT PLAN

SCALE: 1" = 20'

ELEVATION OF BENCHMARK IS ASSUMED

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

DESIGN INTENT:

ENVIRO-SEPTIC PIPE BOTTOM TO BE INSTALLED NO MORE THAN 14 INCHES BELOW ORIGINAL GRADE, ON THE UPSLOPE SIDE, TO MAINTAIN 30 INCHES ABOVE THE SEASONAL HIGH WATER TABLE AND 30 INCHES ABOVE LEDGE, HARDPAN OR IMPERMEABLE MATERIAL.

THIS PLAN IS NOT TO BE CONSTRUTED AS A BOUNDARY SURVEY. FOR NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES SUBSURFACE BUREAU PURPOSES ONLY. INFORMATION SHOWN ON THIS PLAN IS FROM THE TOWN ASSESSORS TAX MAP, BOUNDARY PLANS, AND DEEDS.

MAINTENANCE REQUIRED:
RECOMMEND CLEANING SEPTIC TANK AT LEAST ONCE EVERY 2 YEARS

REVISION 4	REVISION 3	REVISION 2
REVISE SEWAGE LOAD & LOT LAYOUT 03/19/25 JJM	PREVIOUS APPROVAL HAS EXPIRED 01/22/25 JJM	REVISE SEWAGE LOAD 12/01/22 JJM

EMANUEL ENGINEERING
civil & structural consultants, land planners
118 Portsmouth Avenue, A202
Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
www.emanuelengineering.com

DESIGNED:	BDS 1-30-14
DRAWN:	BDS 1-30-14
CHECKED:	DFE 1-30-14
SCALE:	1" = 20'
DWG:	SDI
JOB:	25-1001

SUBSURFACE DISPOSAL SYSTEM

41 PORTSMOUTH AVENUE REALTY LLC

41 PORTSMOUTH AVENUE (SITE)

STRATHAM, NH 03885

PREVIOUS APPROVAL #CA20141119379

LOCATION:

COUNTY: ROCKINGHAM TOWN: STRATHAM
SUBDIVISION TITLE: SUBDIVISION PLAN FOR DOUGLAS SCAMMAN PORTSMOUTH AVE. & RIVER RD. STRATHAM, NH 03885" RCRD # D-32903 AND "LOT LINE ADJUSTMENT PLAN FOR DOUGLAS SCAMMAN PORTSMOUTH AVE. & RIVER RD. STRATHAM, NH 03885" RCRD # D-34505
NH SUBDIVISION APPROVAL NO. : N/A > 5 ACRES
TAX MAP: 9 LOT NO. 4 DEED: BK 6460 PG 1178

CLIENT:
41 PORTSMOUTH AVENUE REALTY LLC
124 BEDFORD CENTER ROAD, SUITE D
BEDFORD, NH 03110
(603) 696-7626

DESIGN INTENT:

ENVIRO-SEPTIC PIPE BOTTOM TO BE INSTALLED NO MORE THAN 14 INCHES BELOW ORIGINAL GRADE, ON THE UPSLOPE SIDE, TO MAINTAIN 30 INCHES ABOVE THE SEASONAL HIGH WATER TABLE AND 30 INCHES ABOVE LEDGE, HARDPAN OR IMPERMEABLE MATERIAL.

SYSTEM DESIGN DATA:

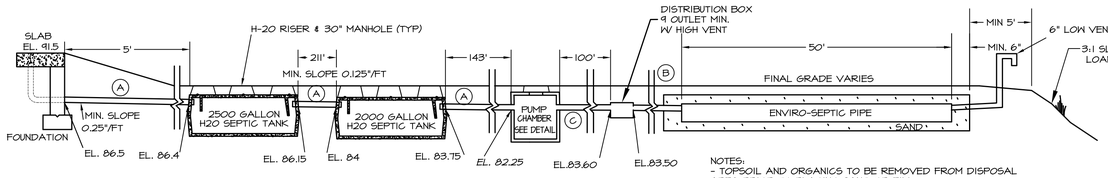
BUILDING TYPE: 36,000 S.F. NEW CAR DEALERSHIP W/ SERVICE
SEWAGE LOAD: 1550 GPD
40 OFFICE STAFF X 15 GPD/PERSON = 600 GPD
19 BAYS X 50 GPD/BAY = 950 GPD
TOTAL = 600 + 950 = 1550 GPD
GARBAGE DISPOSAL: NONE
TYPE OF CELLAR: SLAB ON GRADE
FOUNDATION DRAINS: NONE
SEPTIC TANK SIZE: 2,500 GAL. H-20 & 2,000 GAL. H-20
DISTRIBUTION BOX: 9 OUTLET MINIMUM
LEACH BED REQUIREMENTS:
ENVIRO-SEPTIC PIPE REQUIRED:
1550 GPD * 60 LF / 100 GPD = 930 LF
ENVIRO-SEPTIC PIPE PROVIDED: 1050 LINEAR FEET
SEWAGE PUMP: YES
DRINKING WATER: WELL LOCATION APPROVAL ON AUGUST 26, 2014 (APPROVAL #DR-999992)
WELL INSTALLED PRIOR TO 1984: NO
NEAREST ABUTTING WELL: >> 75 FT AWAY
HYDRIC SOILS: >> 50 FT AWAY TO HYDRIC B SOIL
NEAREST SURFACE WATER: >> 75 FT AWAY

TEST PIT LOGS & SOIL DATA

41 PORTSMOUTH AVENUE REALTY LLC, 41 PORTSMOUTH AVENUE, STRATHAM, NH
EEI PROJECT 25-1001
PERFORMED ON JULY 3, 2013 BY LINDSAY BYBOTH OF GOVE ENVIRONMENTAL SERVICES BRUCE SCAMMAN OF EMANUEL ENGINEERING, INC., WITNESSED BY MIKE CUOMO OF RCCD.
SOIL CLASSIFICATION: 140B/140C CHATFIELD HOLLIS CANTON COMPLEX
PERC TEST 2: DEPTH 24" RATE 12 MINUTES/INCH
TEST PIT #13-1
ESHWT 44", TERMINATED 62", NO REFUSAL, NO OBSERVED WATER, ROOTS 24", 0-7" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 7-30" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 30-44" 10YR5/6 , VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-62" 10YR5/3, FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.
TEST PIT #13-2
ESHWT 44", TERMINATED 66", NO REFUSAL, NO OBSERVED WATER, ROOTS 7", 0-7" 10YR3/3, FINE SANDY LOAM, GRANULAR, FRIABLE, 7-26" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 26-44" 2.5Y5/3 , VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-62" 2.5Y5/3, STONY FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.
TEST PIT #13-3
ESHWT 44", TERMINATED 70", NO REFUSAL, NO OBSERVED WATER, ROOTS 12", 0-12" 10YR3/2, FINE SANDY LOAM, GRANULAR, FRIABLE12-26" 10YR5/6, FINE SANDY LOAM, GRANULAR, FRIABLE, 26-44" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, 44-70" 10YR5/6, VERY STONY FINE SANDY LOAM, GRANULAR, FRIABLE, MOTTLES COMMON.
TEST PIT #13-4 FAILED
ESHWT 20", TERMINATED 67", NO REFUSAL, NO OBSERVED WATER, NO OBSERVED ROOTS, 0-7", FINE SANDY LOAM, GRANULAR, 7-22", FINE SANDY LOAM, GRANULAR, 22-34", SILT, BLOCKY, FRIABLE, MOTTLES COMMON, 34-67" , SILT CLAY, MASSIVE, FIRM.

ENVIRO-SEPTIC PIPE ELEVATIONS																					
LINE NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
TOP OF ENVIRO PIPE	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'	83.50'
4" PVC PIPE INVERT	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'	83.08'
BOTTOM OF ENVIRO PIPE	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'	82.50'

PIPE INDEX
(A) 4" SCH 40 PVC
(B) 4" SOLID SXD PVC
(C) 1.5" SCH 80 PVC

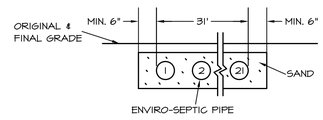


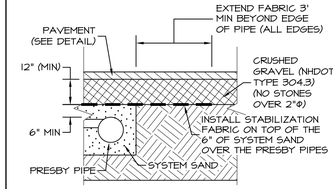
NOTES:
- TOPSOIL AND ORGANICS TO BE REMOVED FROM DISPOSAL AREA PRIOR TO PLACING SAND OR FILL.
- FINAL GRADING TO SHED SURFACE WATER AWAY FROM SYSTEM COMPONENTS.

EFFLUENT DISPOSAL SYSTEM
CROSS SECTION
NOT TO SCALE

EFFLUENT DISPOSAL AREA CROSS SECTION

NOT TO SCALE
(LEVEL DISPOSAL AREA)
NUMBER OF ENVIRO-SEPTIC LINES: 21
CENTER-TO-CENTER PIPE SPACING: 1.5'

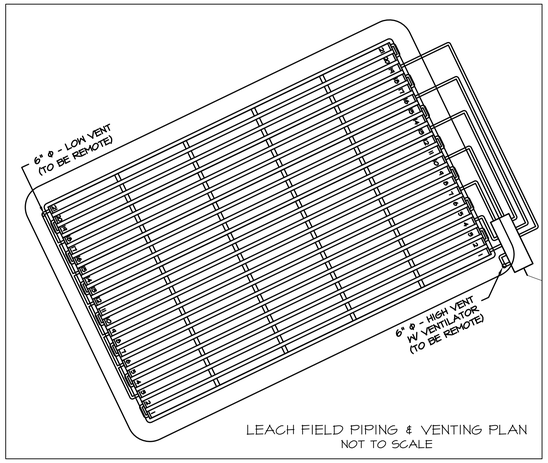




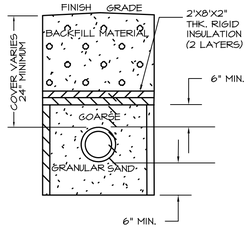
NOTES:
1. FABRIC TO HAVE A "GRAB TENSILE STRENGTH OF 315 LBS PER ASTM 4632".
2. SYSTEM SAND 6" MIN ABOVE AND BELOW PRESBY PIPES. NO SAND VOIDS ALLOWED. WALK BETWEEN ROWS TO ENSURE SAND FILLS ALL VOIDS AROUND PRESBY PIPES (REPEAT IF NECESSARY).
3. VENTING REQUIRED FOR ALL H-20 SYSTEMS.

H-20 WHEEL LOADING OVER LEACH FIELD

NOT TO SCALE

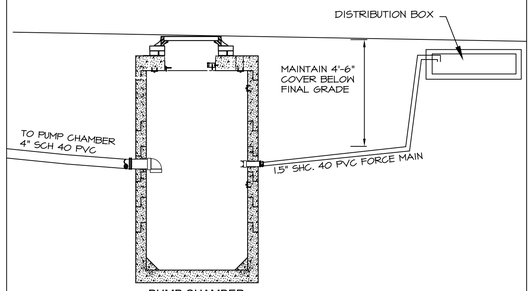


LEACH FIELD PIPING & VENTING PLAN
NOT TO SCALE



NOTES
1. INSULATE FORCE MAIN WHERE PIPE WILL BE LESS THAN 6' BELOW PLOWED AREAS OR LESS THAN 4' BELOW AREAS RUNNING CROSS COUNTRY.
2. JOINTS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2'X2'X2" PIECE OF INSULATION CENTERED OVER JOINT.

FORCE MAIN TRENCH SECTION
N.T.S.



PUMP CHAMBER
N.T.S.

GENERAL NOTES:

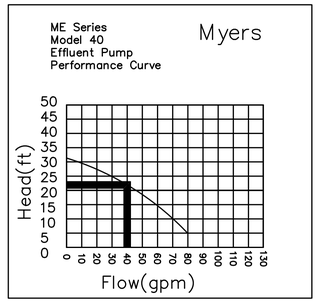
1. SYSTEM TO BE INSTALLED IN ACCORDANCE WITH PRODUCT DESIGN AND INSTALLATION MANUAL, STATE AND LOCAL REGULATIONS. FOR PRODUCT INFORMATION THE NEAREST DEALER CONTACT PRESBY ENVIRONMENTAL, INC. 143 AIRPORT ROAD WHITEFIELD, NH 03598 - PHONE:1-800-473-5298 - WWW.PRESBYECO.COM SEE PLAN FOR ARRANGEMENT OF ENVIRO-SEPTIC PIPES.
2. PIPES SHALL BE DESIGNED FOR H-10 LIVE LOADING. NO VEHICULAR OR LIVESTOCK TRAVEL NOR SNOW REMOVAL ALLOWED IN AREA OF SYSTEM.
3. ALL 4 INCH PVC PIPE SHALL BE SCHEDULE 40. PIPE OUTSIDE LEACHING AREA SHALL BE WATERTIGHT. ALL JOINTS, INLETS, OUTLETS, ETC. TO BE SEALED WITH A NON-SHRINK GROUT, "WATER-PLUG" OR EQUAL.
4. IN EVENT OF FUTURE SYSTEM FAILURE, REPLACEMENT SYSTEM SHALL BE BUILT IN THE SAME LOCATION AS THE ORIGINAL SYSTEM AFTER CONTAMINATED MATERIALS HAVE BEEN REMOVED.
5. ALL PRE CAST UNITS, (TANKS, D-BOXES) SHALL BE MANUFACTURED BY SHEA CONCRETE OR EQUAL.
6. THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY.
7. BOUNDARY INFORMATION TAKEN FROM PLAN ENTITLED: SUBDIVISION PLAN FOR DOUGLAS SCAMMAN PORTSMOUTH AVE. & RIVER RD. STRATHAM, NH 03885" RCRD # D-32903 AND "LOT LINE ADJUSTMENT PLAN FOR DOUGLAS SCAMMAN PORTSMOUTH AVE. & RIVER RD. STRATHAM, NH 03885" RCRD # D-34505
8. RECORD DEED: BK 5305 PG 0782
9. THE DESIGN AND INSTALLATION GUIDELINES FOR THE ENVIRO-SEPTIC LEACHING SYSTEMS (FOR USE IN THE STATE OF NEW HAMPSHIRE SHALL BECOME A PART OF THIS DESIGN.
8. EQUALIZER FLOW INSERTS SHALL BE INSTALLED IN DISTRIBUTION BOX OUTLETS.
9. INSTALLER ADVISED TO CONTACT DIG SAFE PRIOR TO CONSTRUCTION.
10. DO NOT INSTALL SYSTEM ON FROZEN GROUND OR LEAVE SYSTEM UNCOVERED FOR EXTENDED PERIODS OF TIME.
11. THIS DOCUMENT IS FOR THE CONSTRUCTION OF THE EFFLUENT DISPOSAL SYSTEM SHOWN. ANYONE USING INFORMATION FROM THIS DOCUMENT FOR ANY OTHER PURPOSE DOES SO AT THEIR OWN RISK.
12. SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH ENV-WS 1000. "APPROVAL FOR CONSTRUCTION" IS VALID FOR 4 YEARS FROM DATE OF ISSUE.
13. WHERE SEWER LINES CROSS WATERLINES THE WATER LINE MUST BE ENCASED IN CONCRETE FOR 10 FEET IN BOTH DIRECTIONS. SEE Env. Wq. 1009.02.

SITE PREPARATION:

1. CHECK DESIGN INTENT AND VERIFY THE ELEVATION OF EXISTING GROUND-UPSLOPE SIDE BEFORE DISTURBING SITE. CONTACT THE DESIGNER SHOULD ANY DISCREPANCY OCCUR.
2. REMOVE ALL TREES, BRUSH, BOULDERS, AND DEBRIS FROM THE LEACH FIELD SITE.
3. REMOVE TOPSOIL. LEAVE SUBSOIL IN PLACE. DO NOT COMPACT SUBSOIL WITH MACHINERY; SCARIFY AS NEEDED BEFORE FILLING.
4. FILL 6" UNDER LEACHING AREA, AROUND THE CIRCUMFERENCE OF ENVIRO-SEPTIC PIPES, AND FILL EXTENSION WITH MEDIUM TO COARSE TEXTURED SAND (LESS THAN 2% PASSING A #200 SIEVE).
5. SAND FILL TO BE PUSHED ONTO PREPARED SURFACE FROM THE SIDE.
6. FILL FOR BACKFILING SHALL BE CLEAN, PERMEABLE FILL, FREE OF STONES LARGER THAN 6 INCHES.
7. SIDE SLOPE OF FILL 3:1, (3' HORIZONTAL FOR EVERY 1' VERTICAL).
8. PLACE 6 INCHES OF LOAM AS A BLANKET ON SIDE SLOPES WHERE REQUIRED.
9. ENTIRE DISTURBED AREA SHALL BE LOAMED AND SEEDED AS SOON AS POSSIBLE AFTER BACKFILLING TO PREVENT EROSION.
10. BACKFILL DEPTH OVER SYSTEM TO BE 6 TO 12 INCHES.
11. FINAL GRADING SHALL PROVIDE FOR DRAINAGE OF SURFACE RUNOFF AWAY FROM LEACHING AREA.

OPERATION AND MAINTENANCE:

1. SYSTEM IS NOT DESIGNED TO HANDLE A GARBAGE DISPOSAL UNIT OR DISCHARGE FROM A HOT TUB OR SIMILAR LARGE VOLUME WATER USES.
2. EVERY SYSTEM'S DESIGN CAPACITY IS LIMITED. CAREFUL AND REASONABLE WATER USE IS REQUIRED TO MAXIMIZE THE SYSTEM'S LIFE.
3. DO NOT DISPOSE OF GREASE, CHEMICALS, SOLVENTS, ETC. VIA THIS SYSTEM.
4. SEPTIC TANK MUST BE PUMPED BY A LICENSED HAULER AT LEAST EVERY TWO YEARS. KEEP PUMPING RECEIPTS AS PROOF OF MAINTENANCE. CHECK TANK YEARLY. IF SLUDGE AND SURFACE SCUM EXCEED 1/3 OF LIQUID DEPTH, HAVE THE TANK PUMPED.
5. DO NOT ALLOW VEHICULAR TRAFFIC OVER ANY COMPONENT OF THE SYSTEM UNLESS THAT STRUCTURE IS DESIGNED TO WITHSTAND AN H-20 WHEEL LOAD.



PUMP CALCULATIONS:

MEYERS ME40 EFFLUENT PUMP @ 40 GPM
TOTAL HEAD LOSS=STATIC+FRICTION
STATIC=83.6-75.5=8.10FT
FRICTION=(100+25)*(10.1/100)=13.38

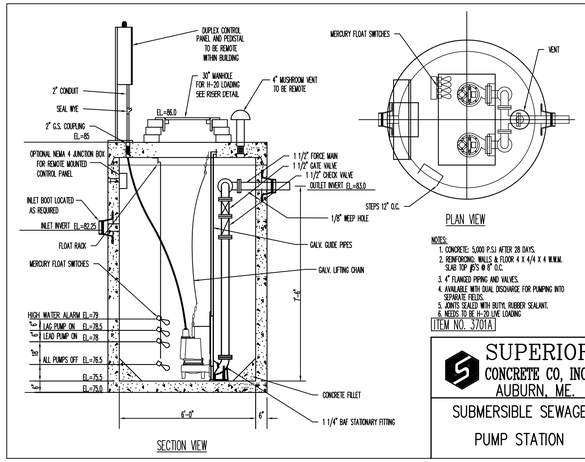
TOTAL HEAD LOSS=8.10+13.38=21.48
SEE PERFORMANCE CURVE @ 40 GPM

DOSING CALCULATIONS:

6' DIAM. PUMP CHAMBER=211 GAL/FT
DAILY FLOW=1550 GPD
1.5 FT/DOSE*211 GAL/FT=317.24 GAL/DOSE
1550 GPD/317.24 GAL=4.89 DOSES/DAY
317.24 GAL/40 GPM PUMP= 7.93 MIN CYCLE

TANK & CHAMBER RESERVE CAPACITY:

DEPTH = 82.25-79 = 3.25'
PUMP CHAMBER = 211.49 GAL/FT
CAPACITY=211*3.25=687.34 GAL.
687.34 GAL./ 1550 GAL/DAY= 0.44 DAYS



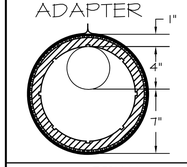
NOTES:
1. CONCRETE: 5,000 P.S.I AFTER 28 DAYS.
2. REINFORCING: WALLS & FLOOR 4 1/2"X4"X4" WWM. SLAB TOP @3.5"@8" O.C.
3. 4" FLANGED PIPING AND VALVES.
4. AVAILABLE WITH DUAL DISCHARGE FOR PUMPING INTO SEPARATE FIELDS.
5. JOINTS SEALED WITH BUTYL RUBBER SEALANT.
6. NEEDS TO BE H-20 LIVE LOADING

ITEM NO. 370TA

SUPERIOR CONCRETE CO, INC.
AUBURN, ME.

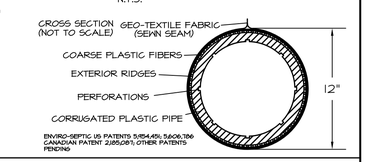
SUBMERSIBLE SEWAGE PUMP STATION

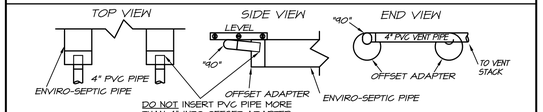
OFFSET ADAPTER



ENVIRO - SEPTIC LEACHING SYSTEM

N.T.S.





DO NOT INSERT PVC PIPE MORE THAN 4" INTO OFFSET ADAPTER

RAISED CONNECTION

N.T.S.

REVISION 4	REVISION 3	REVISION 2
REVISE SEWAGE LOAD & LOT LAYOUT 03/19/25 JJM	PREVIOUS APPROVAL HAS EXPIRED 01/22/25 JJM	REVISE SEWAGE LOAD 12/01/22 JJM

MAINTENANCE REQUIRED:
RECOMMEND CLEANING SEPTIC TANK AT LEAST ONCE EVERY 2 YEARS

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civil & structural consultants, land planners
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Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
www.emanuelengineering.com

DESIGNED:	BDS 1-30-14
DRAWN:	BDS 1-30-14
CHECKED:	DFE 1-30-14
SCALE:	1" = 20'
DWG:	SD2
JOB:	13-041

SUBSURFACE DISPOSAL SYSTEM

41 PORTSMOUTH AVENUE REALTY LLC

41 PORTSMOUTH AVENUE (SITE)
STRATHAM, NH 03885

EROSION AND SEDIMENTATION CONTROL - CONSTRUCTION PHASING AND SEQUENCING:

1. SEE "EROSION AND SEDIMENTATION CONTROL GENERAL NOTES" WHICH ARE TO BE AN INTEGRAL PART OF THIS PROCESS.
2. INSTALL SILT FENCING AND/OR HAY BALE BARRIERS AS PER DETAILS AND AT SEDIMENT MIGRATION.
3. CONSTRUCT TREATMENT SWALES , LEVEL SPREADERS AND DETENTION STRUCTURES AS DEPICTED ON DRAWINGS.
4. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE(S) AS PER DETAIL AND AT LOCATIONS SHOWN ON THE DRAWINGS. MAINTAIN (TOP DRESS) REGULARLY TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS.
5. STRIP AND STOCKPILE TOPSOIL. STABILIZE PILES OF SOIL CONSTRUCTION MATERIAL.
6. ROUGH GRADE SITE. INSTALL CULVERTS AND ROAD DITCHES.
7. FINISH GRADE AND COMPACT SITE.
8. RE-SPREAD AND ADD TOPSOIL TO ALL ROADSIDE SLOPES. TOTAL TOPSOIL THICKNESS TO BE A MINIMUM OF FOUR TO SIX INCHES.
9. STABILIZE ALL AREAS OF BARE SOIL WITH MULCH AND SEEDING.
10. RE-SEED PER EROSION AND SEDIMENTATION CONTROL GENERAL NOTES.
11. SILT FENCING AND HAY BALES TO REMAIN AND BE MAINTAINED FOR TWENTY FOUR MONTHS AFTER CONSTRUCTION TO INSURE ESTABLISHMENT OF ADEQUATE SOIL STABILIZATION AND VEGETATIVE COVER. ALL SILT FENCING, HAY BALES AND TRAPPED SILT ARE THEN TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
12. PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
13. PONDS AND SWALES SHALL BE INSTALLED EARLY ON IN THE CONSTRUCTION SEQUENCE - BEFORE ROUGH GRADING THE SITE.
14. ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
15. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
16. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
17. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
18. BUOYANCY CALCULATIONS HAVE NOT BEEN PERFORMED. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANCHORAGE FOR ALL TANKS WHERE REQUIRED.

WINTER CONSTRUCTION NOTES (OCTOBER 15 TO MAY 1):

1. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPETED IN ADVANCE OF THAW OR SPRING MELT EVENT.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

EROSION AND SEDIMENTATION CONTROL - GENERAL NOTES:

1. CONDUCT ALL CONSTRUCTION IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE PHYSICAL ENVIRONMENT, <u>BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED</u>. SEE ENV-WQ 1505.03.
2. ALL EROSION AND SEDIMENTATION CONTROL MEASURES IN THE PLAN SHALL MEET THE DESIGN BASED ON NEW HAMPSHIRE STORMWATER MANUAL, VOLUMES 1-3: DATED DECEMBER 2008, PREPARED BY NHDES.
3. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
   - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED.
   - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. SEE WINTER CONSTRUCTION NOTES IF SCHEDULE AND DATES ARE APPLICABLE.
6. ALL DITCHES, SWALES AND PONDS MUST BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
7. ALL GROUND AREAS OPENED UP FOR CONSTRUCTION WILL BE STABILIZED IN THE SHORTEST PRACTICAL TIME. ALL SOILS FINISH GRADED MUST BE STABILIZED WITHIN SEVENTY TWO HOURS OF DISTURBANCE.
8. EMPLOY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS DETAILED ON THIS PLAN AS NECESSARY UNTIL ADEQUATE STABILIZATION HAS BEEN ASSURED.
9. TEMPORARY & LONG TERM SEEDING: USE SEED MIXTURES, FERTILIZER, LIME AND MULCHING AS RECOMMENDED (SEE SEEDING AND STABILIZATION NOTES).
10. STRAW OR HAY BALE BARRIERS AND SILTATION FENCING TO BE SECURELY EMBEDDED AND STAKED AS DETAILED. WHEREVER POSSIBLE A VEGETATED STRIP OF AT LEAST TWENTY FIVE FEET IS TO BE KEPT BETWEEN SILT FENCE AND ANY EDGE OF WET AREA.
11. SEEDED AREAS WILL BE FERTILIZED AND RE-SEEDED AS NECESSARY TO ENSURE VEGETATIVE ESTABLISHMENT.
12. SEDIMENT BASIN(S), IF REQUIRED, TO BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND CLEANED AS NEEDED TO RETAIN DESIGN CAPACITY.
13. STRAW BALE AND/OR SILT FENCE BARRIERS WILL BE CHECKED REGULARLY AND AFTER EACH SIGNIFICANT RAINFALL. NECESSARY REPAIRS WILL BE MADE TO CORRECT UNDERMINING OR DETERIORATION OF THE BARRIER AS WELL AS CLEANING, REMOVAL AND PROPER DISPOSAL OF TRAPPED SEDIMENT.
14. TREATMENT SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATIVE COVER HAS BEEN ESTABLISHED.
15. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
16. TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) MUST BE USED AS NECESSARY UNTIL AREAS ARE STABILIZED.

SEEDING AND STABILIZATION FOR LOAMED SITE:

1. FOR TEMPORARY & LONG TERM SEEDINGS (BY SEPTEMBER 15 OF THE SAME YEAR OF DISTURBANCE) USE AGWAY'S SOIL CONSERVATION GRASS SEED OR EQUAL.
2. COMPONENTS: ANNUAL RYE GRASS, PERENNIAL RYE GRASS, WHITE CLOVER, 2 FESCUES, SEED AT A RATE OF 100 POUNDS PER ACRE.
3. FERTILIZER & LIME:
   NITROGEN (N) 50 LBS/ACRE, PHOSPHATE (P205) 100 LBS/ACRE, POTASH (K20) 100 LBS/ACRE, LIME 2000 LBS/ACRE.
4. MULCH: HAY OR STRAW 1.5-2 TONS/ACRE.
5. GRADING AND SHAPING:
   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.
6. SEED BED PREPARATION
   - SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   - 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 A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

STABILIZATION CONSTRUCTION ENTRANCE SPECIFICATIONS:

1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE (MINIMUM), RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 75 FEET (OR 50 FEET WITH A 3 TO 6 INCH MOUNTABLE BERM).
3. THE THICKNESS OF THE STONE FOR THE STABILIZATION 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 TOWARDS 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 OF ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED PROMPTLY.
8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

FILTREXX LAND IMPROVEMENT SYSTEMS INSPECTION & MAINTENANCE:

1. CONSULT FILTREXX SWPP CUT SHEETS FOR ALL FILTREXX PRODUCTS PRIOR TO INSTALLATION AND FOR MAINTENANCE GUIDELINES. HTTP://WWW.FILTREXX.COM/DESIGN_CUT_SHEETS.HTM
2. ROUTINE INSPECTION SHOULD BE CONDUCTED WITHIN 24 HRS OF A RUNOFF EVENT OR AS DESIGNATED BY THE REGULATING AUTHORITY. UNITS SHOULD BE REGULARLY INSPECTED TO MAKE SURE THEY MAINTAIN THEIR SHAPE AND ARE PRODUCING ADEQUATE HYDRAULIC FLOW-THROUGH, DITCH/CHANNEL EROSION CONTROL, AND SEDIMENT REMOVAL.
3. IF PONDING BECOMES EXCESSIVE, ADDITIONAL CHECK DAMS, LEVEL SPREADERS, OR SEDIMENT CONTROL UNITS FOR SEDIMENT REMOVAL MAY BE REQUIRED.
4. SEDIMENT ACCUMULATION SHOULD BE REMOVED ONCE IT REACHES THE HEIGHT OF THE CHECK DAM OR UNIT. ALTERNATIVELY, ANOTHER UNIT MAY BE INSTALLED SLIGHTLY UPSLOPE, ON TOP OF THE EXISTING ONE. THIS PROCESS IS NOT CONSIDERED A SOIL DISTURBING ACTIVITY.
5. STORM DEBRIS ACCUMULATION BEHIND CHECK DAMS, LEVEL SPREADER, SEDIMENT CONTROL UNIT, ETC. SHOULD NEVER BE HIGHER THAN THE SIDES OF THE CHECK DAM/UNIT. STORM RUNOFF OVERFLOW SHALL MAINTAIN THE UNITS IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
6. IF A UNIT HAS BEEN DAMAGED, IT SHALL BE REPAIRED, OR REPLACED IF BEYOND REPAIR.
7. THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF UNITS WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE SOXX, OR AS DIRECTED BY THE ENGINEER.
8. AS AN ALTERNATIVE, ANOTHER SOXX UNIT MAY BE INSTALLED ADJACENT AND PARALLEL TO THE UPSLOPE SIDE OF THE ORIGINAL TO INCREASE SEDIMENT STORAGE CAPACITY. SOXX SEDIMENT BACKUP IN CENTER OF THE DITCH/CHANNEL SHALL REMAIN LOWER THAN THE SIDES.
9. IF SOXX UNIT BECOMES CLOGGED WITH DEBRIS AND SEDIMENT, IMMEDIATE REMOVAL OF DEBRIS AND SEDIMENT SHOULD BE CONDUCTED TO ASSURE PROPER DRAINAGE AND WATER FLOW THROUGH THE DITCH OR CHANNEL. STORM RUNOFF OVERFLOW OF THE SOXX UNIT IS ACCEPTABLE.
10. SOXX UNITS SHALL BE MAINTAINED UNTIL DISTURBED AREA AROUND THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.
11. THE FILTERMEDIATM MAY BE DISPERSED ON SITE ONCE DISTURBED AREA HAS PERMANENTLY STABILIZED, CONSTRUCTION ACTIVITY CEASED, OR DETERMINED BY THE ENGINEER.
12. PERMANENT VEGETATED FILTER STRIPS WILL BE LEFT INTACT.

RIP RAP SWALE MAINTENANCE

1. THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED, OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY.
2. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS; FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAIL WATER DEPTHS ON THE PIPES.
3. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

GRASS SWALE MAINTENANCE

1. TIMELY MAINTENANCE IS IMPORTANT TO KEEP THE VEGETATION IN THE SWALE IN GOOD CONDITION. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO KEEP THE VEGETATION IN VIGOROUS CONDITION AND TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION, HOWEVER, IT SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE FILTERING EFFECT. FERTILIZE ON AN "AS NEEDED" BASIS TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION CAN RESULT IN THE SWALE BECOMING A SOURCE OF POLLUTION.
2. THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE SWALE. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

POND MAINTENANCE

1. EMBANKMENT - THE EMBANKMENT SHOULD BE INSPECTED ANNUALLY TO DETERMINE IF RODENT BURROWS, WET AREAS, OR EROSION OF THE FILL IS TAKING PLACE.
2. VEGETATION - THE VEGETATED AREAS OF THE STRUCTURE SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. LIME AND FERTILIZER SHOULD BE APPLIED AS NECESSARY AS DETERMINED BY SOIL TESTS. TREES AND SHRUBS SHOULD BE KEPT OFF THE EMBANKMENT AND EMERGENCY SPILLWAY AREAS.
3. INLETS - PIPE INLETS AND SPILLWAY STRUCTURES SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. ACCUMULATED DEBRIS AND SEDIMENT SHOULD BE REMOVED. IF PIPES ARE COATED, THE COATING SHOULD BE CHECKED AND REPAIRED AS NECESSARY.
4. OUTLETS - PIPE OUTLETS SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. THE CONDITION OF THE PIPES SHOULD BE NOTED AND REPAIRS MADE AS NECESSARY. IF EROSION IS TAKING PLACE, THEN MEASURES SHOULD BE TAKEN TO STABILIZE AND PROTECT THE AFFECTED AREA OF THE OUTLET.
5. SEDIMENT - SEDIMENT SHOULD BE CONTINUALLY CHECKED IN THE BASIN. WHEN SEDIMENT ACCUMULATIONS REACH THE PREDETERMINED DESIGN ELEVATION, THEN THE SEDIMENT SHOULD BE REMOVED AND PROPERLY DISPOSED OF.
6. SAFETY INSPECTIONS - A QUALIFIED PROFESSIONAL ENGINEER ON A PERIODIC BASIS SHOULD INSPECT ALL PERMANENT IMPOUNDMENTS. IF THERE IS POTENTIAL FOR SIGNIFICANT DAMAGE OR LOSS OF LIFE DOWNSTREAM, THEN THE INSPECTION SHOULD BE CARRIED OUT ANNUALLY. THE DESIGNATED INDIVIDUAL OR GROUP SHOULD ALSO MAKE INSPECTIONS AFTER EVERY MAJOR STORM EVENT.

SECTION I- GENERAL (POROUS ASPHALT PAVEMENTS)

1.01 SUBMITTALS
- A. THE CONTRACTOR SHALL SUBMIT TO THE SUPERVISORY ENGINEER THE PROPOSED SOURCE AND QUALIFICATIONS OF THE PROPOSED SOURCE(S) OF THE HOT MIX ASPHALT AT LEAST 14 DAYS IN ADVANCE OF ANTICIPATED PAVING DATE.
- B. THE CONTRACTOR SHALL SUBMIT TO THE SUPERVISORY ENGINEER THE PROPOSED INSTALLER QUALIFICATIONS AT LEAST 14 DAYS IN ADVANCE OF ANTICIPATED PAVING DATE.
- C. THE CONTRACTOR SHALL SUBMIT TO THE SUPERVISORY ENGINEER THE CONTRACTOR'S PROPOSED CONSTRUCTION PHASING PLAN AT LEAST 14 DAYS IN ADVANCE OF MOBILIZING TO THE SITE FOR CONSTRUCTION. UPDATES TO THE CONSTRUCTION PHASING PLAN SHALL BE PROVIDED TO THE SUPERVISORY ENGINEER AT LEAST 48 HOURS IN ADVANCE OF THE PROPOSED. THE CONSTRUCTION PHASING PLAN SHALL CONTAIN THE ELEMENTS AS DETAILED WITHIN THIS SECTION AND DRAWINGS.
- D. THE CONTRACTOR SHALL SUBMIT TO THE SUPERVISORY ENGINEER THE PROPOSED THIRD PARTY QUALITY CONTROL FIRM TO CONDUCT THIRD PARTY QUALITY CONTROL OF THE ASPHALT HOT MIX PLANT PRODUCTION AT LEAST 14 DAYS IN ADVANCE OF ANTICIPATED PAVING DATE.
- E. THE CONTRACTOR SHALL SUBMIT TO THE SUPERVISORY ENGINEER THE QUALITY CONTROL RESULTS AND JOB MIX FORMULA FOR THE POROUS ASPHALT MATERIAL AT LEAST 14 DAYS IN ADVANCE OF THE ANTICIPATED PAVING DATE.

1.02 QUALIFICATIONS
- A. THE POROUS ASPHALT SHALL BE SUPPLIED FROM A HOT MIX MATERIAL PROVIDER THAT HAS THE FOLLOWING MINIMUM QUALIFICATIONS:
  1. SHALL HAVE SUCCESSFULLY PRODUCED A MINIMUM OF THREE (3) POROUS ASPHALT PAVING JOBS IN THE PAST FIVE (5) YEARS.
  2. CAPABLE OF PRODUCING POROUS ASPHALT WITH A PG76-28 BINDER; UNDER NO CIRCUMSTANCES IS A PGAB 64-28 ACCEPTABLE IN REPLACE OF PG 76-28.
  3. CAPABLE OF CONDUCTING THE MATERIALS TESTING FOR QUALITY CONTROL AS DOCUMENTED IN SECTION IV PART 4, TABLE 3, TABLE 4, TABLE 5;
  4. CAPABLE OF PROVIDING MATERIAL CERTIFICATES SIGNED BY THE PLANTS' AUTHORIZED REPRESENTATIVE; AND
  5. CAPABLE OF PROVIDING THE MOST RECENT ANNUAL PLANT SCALE TESTING DOCUMENTATION.
- B. THE POROUS ASPHALT INSTALLER SHALL HAVE THE FOLLOWING MINIMUM QUALIFICATIONS:
  1. SHALL HAVE SUCCESSFULLY COMPLETED A MINIMUM OF THREE (3) POROUS ASPHALT PAVING JOBS IN THE PAST FIVE (5) YEARS.
  2. PROVIDE A SITE SUPERINTENDENT THAT WILL BE ON-SITE DURING THE PROJECT THAT HAS SUCCESSFULLY COMPLETED A MINIMUM OF THREE (3) POROUS ASPHALT PAVING JOBS IN THE PAST FIVE (5) YEARS.

1.03 TRANSPORTATION AND SHIPPING
- A. POROUS ASPHALT MATERIALS SHALL BE TRANSPORTED TO THE SITE SUCH THAT THE TEMPERATURE OF THE ASPHALT AT THE TIME OF DISCHARGE FROM THE HAUL VEHICLE SHALL BE AS PER SECTION IV - 3.05 E TEMPERATURE REQUIREMENTS, UNLESS OTHERWISE SPECIFIED BY THE HOT MIX PLANT AND APPROVED BY THE SUPERVISORY ENGINEER.

1.04 ENVIRONMENTAL CONDITIONS
- A. THE ASPHALT PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY EROSION AND SEDIMENT CONTROLS THAT ARE DAMAGED FROM PAVING ACTIVITIES.
- B. WASTE GENERATED DURING ASPHALT PAVING SHALL BE PROPERLY DISPOSED OF ACCORDING TO THE PROJECT SPECIFICATIONS AND LOCAL, STATE, AND FEDERAL REGULATIONS.
- C. ASPHALT HAUL TRUCKS SHALL EXIT THE SITE THROUGH THE DESIGNATED STABILIZED CONSTRUCTION ENTRANCE TO PREVENT TRACK OUT.

1.05 SCHEDULE FOR CONSTRUCTION DATES
- A. AFTER MAY 15 OR THE DATE OF ASPHALT PLANT OPENING UNTIL DECEMBER 1 OR THE DATE OF ASPHALT PLANT CLOSURE OR PER APPROVAL OF SUPERVISING ENGINEER.

1.06 REQUIREMENTS FOR CONSTRUCTION PHASING
- A. CONSTRUCTION PHASING, SEQUENCING AND ENGINEERING OVERSIGHT IS REQUIRED TO ENSURE THE SUCCESSFUL PRODUCTION, INSTALLATION, AND LONG-TERM PERFORMANCE OF POROUS PAVEMENT SYSTEMS. PROPER COORDINATION OF THESE PROCEDURES WITH THE CONTRACTOR AND INSPECTION OF THE PAVEMENT SUBGRADE DURING CONSTRUCTION IS CRITICAL TO PROVIDE ACCESS AND PREVENT DAMAGE TO POROUS PAVEMENT SYSTEM COMPONENTS. TEMPORARY CONSTRUCTION METHODS AND PHASING CONSIDERATIONS ACCOUNT FOR THE NECESSARY USE OF LARGE CONSTRUCTION EQUIPMENT OVER THE POROUS PAVEMENT LAYERS WHILE MAINTAINING ITS STRUCTURAL INTEGRITY AND INFILTRATIVE CAPACITY. THE CONTRACTOR'S CONSTRUCTION PHASING SEQUENCE PLAN SHALL INCLUDE PROTECTIVE AND CORRECTIVE ACTIONS DETAILED BELOW FOR EXPECTED IMPACTS FROM CONSTRUCTION ACTIVITIES.
- B. THE FOLLOWING CONSTRUCTION PHASING IS INTENDED AS A GUIDE. PHASING MUST BE PLANNED SUCH THAT NO CONSTRUCTION TRAFFIC IS PERMITTED ON A COMPLETED POROUS ASPHALT WEARING COURSE SURFACE AREA. CONSTRUCTION TRAFFIC IS PERMITTED ON THE TEMPORARY CONSTRUCTION ROAD, SUBGRADE AND ON THE SUBBASE DURING PREPARATION. THE USE OF A TEMPORARY POROUS ASPHALT CONSTRUCTION ROAD SHOULD ENABLE CONSTRUCTION TRAFFIC TO PROCEED WITH PHASED COMPLETION AND CLOSURE OF AREAS. INFILTRATION BEDS WILL NEED TO BE PROTECTED FROM EROSION AND SEDIMENTATION RUN-ON. IT IS RECOMMENDED THAT AREAS ARE COMPLETED INCREMENTALLY UNTIL PAVING IS COMPLETED. THE PHASING PLAN WILL BE ADAPTED BASED ON FEEDBACK WITH THE CLIENT, THE SUPERVISORY ENGINEER, AND THE CONTRACTOR.
- C. THE CONTRACTOR SHALL INCLUDE THE ELEMENTS OF THIS PHASING IN THE CONTRACTOR'S CONSTRUCTION PHASING PLAN.
  1. CONTRACTOR SUBMITTALS AND APPROVALS
  2. HOST A PRE-CONSTRUCTION MEETING AT THE SITE
  3. EROSION AND SEDIMENTATION CONTROL BMPS ESTABLISHED INCLUDING SEDIMENTATION POND AT DOWNHILL END OF SITE. POROUS PAVEMENT RESERVOIRS MAY BE USED FOR TEMPORARY SEDIMENTATION PONDS. ACCUMULATED FINES SHALL BE REMOVED PRIOR TO PLACEMENT OF AGGREGATE AND APPROVED BY THE SUPERVISING ENGINEER.
  4. ROUGH GRADE SITE (CUT/FILL)
  5. FINE GRADE SUBGRADE
  6. PERFORM TOPOGRAPHICAL SURVEY OF SUBGRADE
  7. SUPERVISORY ENGINEER TO INSPECT SUBGRADE AND PERFORM INFILTRATION TESTS TO VERIFY SUITABILITY OF SUBGRADE FROM COMPACTION DURING CONSTRUCTION OR WHERE EROSION HAS CAUSED ACCUMULATION OF FINE MATERIALS. REWORK MATERIALS THAT DO NOT MEET INFILTRATION REQUIREMENTS PER THE DRAWINGS AND SPECIFICATIONS. THESE MATERIALS SHALL BE REMOVED AND/OR SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES, AND RETESTED FOR COMPACTION AND INFILTRATION AS PER SPECIFICATIONS.
  8. INSTALL GEOTEXTILE VERTICAL BARRIERS PLACED ALONG PERIMETER OF POROUS PAVEMENT PARKING AREA PER THE DRAWINGS.
  9. INSTALL CAPILLARY BARRIER AND GEOTEXTILE INTERNAL GRADE CONTROLS
  10. PLACE UTILITIES LINES OVER THE GRADED CAPILLARY BARRIER LAYER
  11. PLACE AND COMPACT FILTER COURSE PER THIS SECTION
  12. SUPERVISORY ENGINEER TO INSPECT FILTER COURSE AND PERFORM INFILTRATION TESTS TO VERIFY SUITABILITY OF COMPACTION AND INFILTRATION PER THIS SECTION.
  13. PLACE AND GRADE CHOKER COARSE
  14. PLACE AND COMPACT POROUS ASPHALT BINDER COURSE.

1.07 PLACEMENT OF TEMPORARY ROAD OF POROUS ASPHALT BINDER COURSE (OPTIONAL)
- A. INSTALL AT THICKNESS INDICATED ON DRAWINGS (IN PLACE) LAYER OF BINDER COURSE PER THIS SECTION.
- B. INSTALL FRAME, GRATES, AND LANDSCAPING. SPECIAL CARE IS TO BE TAKEN TO PROTECT FRESH BINDER COURSE.
- C. ALL TRUCKS (INCLUDING CONCRETE TRUCKS) WILL BE STOPPED PRIOR TO ENTERING THE SITE AND INSTRUCTED AS TO SPECIAL CONCERNS FOR PAVEMENT DURABILITY.
- D. A WASHOUT AREA FOR ALL CONCRETE TRUCKS SHALL BE DESIGNATED OUTSIDE OF POROUS PAVEMENT AREA ON THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN.
- E. POROUS PAVEMENT SURFACE SHALL BE PROTECTED ON HOT DAYS DURING THE PAVEMENT CURE PERIOD (2-3 DAYS). SURFACE TEMPERATURES CAN QUICKLY REACH OVER 145°F IN DIRECT SUN.
- F. A TEMPERATURE GUN SHALL BE AVAILABLE ONSITE TO ASSESS PAVEMENT SURFACE TEMPERATURES. PAVEMENT TEMPERATURES GREATER THAN 100°F SHOULD BE OBSERVED CAREFULLY FOR PAVEMENT DURABILITY. AS NEEDED, COOLING OF PAVEMENT SURFACE BY APPLICATION OF WATER FROM A WATER TRUCK SHOULD OCCUR WHEN HEAVY VEHICULAR TRAFFIC IS EXPECTED SUCH AS CONCRETE TRUCKS FOR DRY WELL FRAME AND GRATE INSTALLATION. IN THE EVENT THIS IS INEFFECTIVE FOR COOLING AND PAVEMENT DEFORMATION IS STILL OBSERVED, THE USE OF 3/4" PLYWOOD UNDER LARGE VEHICLE WHEELS MAY BE REQUIRED.
- G. TRUCKS AND OTHER CONSTRUCTION TRAFFIC WILL NOT BE ALLOWED TO ACCESS THE SITE WHILE THE PAVEMENT IS EXCESSIVELY HOT >130°F OR IF UNACCEPTABLE DAMAGE IS OBSERVED. COSMETIC DAMAGE TO BINDER COURSE IS ACCEPTABLE NOT INCLUDING LOSS OF INFILTRATION CAPACITY.
- H. NO STOCKPILING OF MATERIALS (E.G. SOIL, STONE, LANDSCAPING MATERIALS) WILL BE ALLOWED ON POROUS PAVEMENTS.
- I. MATERIALS EXCAVATED FOR FINISH WORKS SHALL BE PLACED OUTSIDE OF POROUS PAVEMENT AREAS.
- J. VACUUMING THROUGHOUT CONSTRUCTION MAY BE NECESSARY FOR SURROUNDING PAVED AREAS TO PREVENT RUN-ON OR TRACKING ONTO POROUS PAVEMENTS. FREQUENCY SHALL BE ADJUSTED AS NEEDED.
- K. REPEAT PHASE 1 AND 2 INCREMENTALLY UNTIL FULL PAVING IS COMPLETED.

SECTION II-PAVEMENT SUBGRADE (POROUS ASPHALT PAVEMENTS)

PART 1 EXECUTION

1.01 EXAMINATION
- A. EXAMINE SPACES TO BE FILLED BEFOREHAND AND REMOVE ALL UNSUITABLE MATERIALS AND DEBRIS INCLUDING SHEETING, FORMS, TRASH, STUMPS, PLANT LIFE, ETC.
- B. INSPECT BACKFILL AND FILL MATERIALS BEFOREHAND AND REMOVE ALL ROOTS, VEGETATION, ORGANIC MATTER, OR OTHER FOREIGN DEBRIS. STONES LARGER THAN 12 INCHES IN ANY DIMENSION SHALL ALSO BE REMOVED OR BROKEN INTO SMALLER PIECES.
- C. NO BACKFILL OR FILL MATERIAL SHALL BE PLACED ON FROZEN GROUND NOR SHALL THE MATERIAL ITSELF BE FROZEN OR CONTAIN FROZEN SOIL FRAGMENTS.
- D. SPACES TO BE FILLED SHALL BE FREE FROM STANDING WATER SO THAT PLACEMENT AND COMPACTION OF THE FILL MATERIALS CAN BE ACCOMPLISHED IN "DRY" CONDITIONS.
- E. ALL UNDERGROUND UTILITY INSTALLATIONS, INCLUDING CULVERTS, SHALL BE COMPLETED, BACKFILLED AND COMPACTED PRIOR TO COMPLETION OF SUBGRADE.
- F. VERIFY THAT TRAFFIC CONTROLS AND EROSION AND SEDIMENT CONTROLS ARE IN PLACE.

1.02 PREPARATION
- A. TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION OF SUBGRADE.
- B. TAKE ANY OTHER NECESSARY STEPS TO PREVENT SEDIMENT FROM WASHING INTO INFILTRATION BEDS DURING CONSTRUCTION. WHEN THE SITE IS FULLY STABILIZED, TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED.
- C. TEMPORARY DRAINS AND DITCHES SHALL BE CONSTRUCTED AS NECESSARY TO REMOVE WATER FROM THE SUBGRADE AREA.
  1. TEMPORARY DRAINAGE OPENINGS IN EXISTING CATCH BASINS MAY BE MADE IN A MANNER ACCEPTABLE TO THE ENGINEER. SUCH OPENINGS TO BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.
  2. CONTRACTOR TO PREVENT THE ENTRANCE OF DEBRIS, STONES AND SILT FROM ENTERING DRAINAGE SYSTEMS, INCLUDING THE USE OF BALES OF HAY, SCREENS AND OTHER DESILTING METHODS.
- D. BACKFILLED AREAS SHALL BE RETESTED AT THE DISCRETION OF THE ENGINEER.
- E. MINIMIZE TRAFFIC AND COMPACTION UPON SUBGRADE.
- F. IN MOST INSTANCES TRAVEL UPON SUBGRADE IS UNAVOIDABLE, AND A CAREFUL ASSESSMENT OF DEGREE OF SUBGRADE COMPACTION IS NEEDED. TILLING AND OR REMOVAL OF COMPACTED SUBGRADE MAY BE NEEDED.
- G. SUBGRADE COMPACTED DURING EXCAVATION OR WHERE EROSION HAS CAUSED ACCUMULATION OF FINE MATERIALS, THIS MATERIAL SHALL BE REMOVED AND/OR SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES.
- H. PRIOR TO PLACEMENT OF THE AGGREGATE RESERVOIR (AGGREGATE BASE COURSE), THE INFILTRATION RATE OF THE SUBGRADE SHALL BE DETERMINED BY ASTM D3385 OR APPROVED ALTERNATE AT THE DISCRETION OF THE ENGINEER. THE INFILTRATION RATE SHALL BE NO LESS 5-30 FT/DAY OR 50% OF THE HYDRAULIC CONDUCTIVITY (D2434) AT 95% STANDARD PROCTOR COMPACTION.
- I. SEE TABLE 2 FOR COMPACTION AND INFILTRATION REQUIREMENTS.
- J. THE DENSITY OF SUBGRADE COURSES SHALL BE DETERMINED BY AASHTO T 191 (SAND-CONE METHOD), AASHTO T 204 (DRIVE CYLINDER METHOD), OR AASHTO T 238 (NUCLEAR METHODS), OR OTHER APPROVED METHODS AT THE DISCRETION OF THE ENGINEER.
- K. UNSUITABLE MATERIALS SHALL BE REMOVED AND REWORKED TO THE SATISFACTION OF THE ONSITE ENGINEER.
- L. UPON COMPLETION OF SUBGRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT HIS/HER DISCRETION BEFORE PROCEEDING WITH THE POROUS MEDIA BED INSTALLATION.

1.03 FIELD QUALITY CONTROL
- A. FOR COMPACTION REQUIREMENTS SEE TABLE 2.
- B. TOLERANCES - THE FINAL SUBGRADE SURFACE SHALL NOT VARY MORE THAN $\pm$1/2 INCH FROM THE DESIGN GRADE ELEVATION AT ANY LOCATION, PARALLEL TO THE FINAL ROAD SURFACE AS DEFINED BY THE TOTAL ROADWAY THICKNESS.
- C. PROOF ROLLED - PRIOR TO THE PLACEMENT OF THE NEXT PAVEMENT COURSE, THE SUBGRADE SURFACE SHALL BE PROOF ROLLED TO LOCATE AREAS OF INADEQUATE COMPACTION OR DEFECTIONS OR SOFT OR RUTTING AREAS REQUIRING UNDERCUTTING, WITH 8- TO 10-TON PNEUMATIC TIRE COMPACTORS.
  1. AREAS OF INADEQUATE COMPACTION TO BE RECOMPACTED.
  2. IF ADDITIONAL ROLLING DOES NOT CORRECT AN AREA OF UNSTABLE CONDITION, THEN THIS AREA AND SOFT OR RUTTED AREAS SHALL BE REMOVED AND REPLACED WITH SELECT ON-SITE MATERIAL AND COMPACTED.
  3. WHERE NO SUITABLE ON-SITE MATERIAL IS AVAILABLE, GRANULAR MATERIALS SHALL BE INSTALLED AND COMPACTED; AREAS INACCESSIBLE TO ROLLERS TO BE COMPACTED BY MECHANICAL METHODS.

SECTION III: AGGREGATE BASE COURSE (POROUS ASPHALT PAVEMENTS)

PART 1 EXECUTION

1.01 EXAMINATION
- A. VERIFY PAVEMENT SUBGRADE HAS BEEN ACCEPTED FOR PLACEMENT OF AGGREGATE BASE COURSE.
  1. GRADIENTS, CROWNS AND ELEVATIONS ARE CORRECT.
  2. SUBGRADE IS DRY.
  3. PRIOR TO PLACEMENT OF THE AGGREGATE, THE INFILTRATION RATE OF THE SUBGRADE SHALL BE DETERMINED BY ASTM D3385 OR APPROVED ALTERNATE AT THE DISCRETION OF THE ENGINEER. THE INFILTRATION RATE SHALL BE NO LESS 5-30 FT/DAY OR 50% OF THE HYDRAULIC CONDUCTIVITY (D2434) AT 95% STANDARD PROCTOR COMPACTION.
- B. VERIFY THAT TRAFFIC CONTROLS ARE IN PLACE.

1.02 EDGE LINER INSTALLATION
- A. EDGE GEOTEXTILE OR PVC LINER SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION.
- B. THE EDGE LINER IS TO BE PLACED ALONG THE ENTIRE PERIMETER OF THE VERTICAL WALLS OF BOTH SIDES OF THE EXCAVATION AND LOCATED BEHIND THE CURB, SIDEWALK, OR TRANSITION ELEMENT TO THE DIMENSIONS AND LOCATIONS AS SHOWN WITHIN THE CONTRACT DRAWINGS.
- C. THE LINER IS TO BE PLACED BEHIND THE CURB OR TRANSITION WITHIN CONCRETE FOOTING.
- D. THE EDGE LINER SHOULD TEMPORARILY BE STAKED VERTICALLY AT 12-18" ABOVE THE SUBGRADE, PRIOR TO PLACEMENT BEHIND CURB, TO FUNCTION AS EROSION CONTROL MEASURE TO PREVENT FINES FROM WASHING INTO RESERVOIR BASE.
- E. PENETRATIONS TO THE PVC LINER SHALL BE WRAPPED WITH A STAINLESS STEEL PIPE CLAMP, SEALED BY HEAT-SHRINK, OR SIMILAR METHOD TO ACHIEVE LOW PRESSURE WATER TIGHT SEAL OR APPROVED EQUAL TO PREVENT THE MIGRATION OF SEDIMENT ACROSS THE PENETRATION.
- F. INTERNAL GRADE PVC LINER GRADE CONTROL TO BE PLACED EVERY 12" OF GRADE LOSS AT EQUAL ELEVATION ALONG THE CONTOUR. THE INTERNAL GRADE CONTROL ARE TO CONTAIN THE FLOW ON SLOPE WITHIN THE PAVEMENT RESERVOIR AND MUST BE KEYED INTO EDGE PVC LINER AND CONTAIN THE RESERVOIR BED AND SUBGRADE.
- G. THE INTERNAL GRADE CONTROL PVC LINER IS TO BE PLACED ALONG AN EQUAL ELEVATION CONTOUR AS PER THE DIMENSIONS AND LOCATIONS AS SHOWN WITHIN THE CONTRACT DRAWINGS.
- H. PENETRATIONS FROM UTILITIES TO THE PVC LINER ARE TO BE MINIMIZED AND LOCATED BENEATH THE PVC LINER IF POSSIBLE.
- I. UTILITY PIPING WITHIN THE ROADBED SHALL BE WATERTIGHT AND SEALED WITH FOAM, CAULKING, OR OTHER SUITABLE METHOD.
- J. ALL UTILITY TRENCHES THAT INTERSECT OR TRAVEL BELOW THE PAVEMENT SUBBASE SHALL HAVE CONSIDERATIONS TO PREVENT SOIL PIPING AND INFILTRATION AND INFLOW. THIS MAY INCLUDE SEEPAGE COLLAR, COVER WITH LINER, OR OTHER METHOD APPROVED BY ENGINEER.
- K. IN AREAS WHERE THE LINER IS NOT CONTINUOUS, A 12-INCH OVERLAP IS REQUIRED.

1.03 FILTER COURSE PREPARATION
- A. RESERVOIR COURSE AND CAPILLARY BARRIER AGGREGATE SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION AND INSTALLATION OF EDGE GEOTEXTILE. ANY ACCUMULATION OF DEBRIS OR SEDIMENT WHICH HAS TAKEN PLACE AFTER APPROVAL OF SUBGRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF GEOTEXTILE AT NO EXTRA COST TO THE OWNER.
- B. SEE TABLE 1 FOR SPECIFICATIONS FOR FILTER COURSE AND RESERVOIR COURSE / CAPILLARY BARRIER.
- C. SEE TABLE 2 FOR COMPACTION AND INFILTRATION REQUIREMENTS OF SUBBASE.
- D. INSTALL FILTER COURSE AGGREGATE IN 12-INCH MAXIMUM LIFTS TO 95 TO 98% STANDARD PROCTOR COMPACTION (ASTM D698 / AASHTO T99). INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
- E. THE INFILTRATION RATE OF THE FILTER COURSE SHALL BE DETERMINED BY ASTM D3385 OR APPROVED ALTERNATE AT THE DISCRETION OF THE SUPERVISING ENGINEER. THE INFILTRATION RATE SHALL BE NO LESS 5-30 FT/DAY OR 50% OF THE HYDRAULIC CONDUCTIVITY (D2434) AT 95% STANDARD PROCTOR COMPACTION.
- F. THE DENSITY OF FILTER COURSE SHALL BE DETERMINED BY AASHTO T 191 (SAND-CONE METHOD), AASHTO T 204 (DRIVE CYLINDER METHOD), OR AASHTO T 238 (NUCLEAR METHODS), OR OTHER APPROVED METHODS AT THE DISCRETION OF THE SUPERVISING ENGINEER.
- G. VIBRATORY COMPACTION SHALL BE PERFORMED USING TWO-AXLE TANDEM ROLLERS WITH A GROSS MASS (WEIGHT) OF NOT LESS THAN 5 METRIC TONS (5.5 TONS) AND NOT MORE THAN 10 METRIC TONS (12 TONS) AND SHALL BE CAPABLE OF PROVIDING A MINIMUM COMPACTIVE EFFORT OF 44 KN/M (250 POUNDS PER INCH) OF WIDTH OF THE DRIVE ROLL. ALL ROLLS SHALL BE AT LEAST 1 M (42 INCHES) IN DIAMETER.
- H. COMPACTION OF SUBGRADE COURSE MATERIAL SHALL BE DONE WITH A METHOD AND ADEQUATE WATER TO MEET THE REQUIREMENTS. ROLLING AND SHAPING SHALL CONTINUE UNTIL THE REQUIRED DENSITY IS ATTAINED. WATER SHALL BE UNIFORMLY APPLIED OVER THE SUBBASE COURSE MATERIALS DURING COMPACTION IN THE AMOUNT NECESSARY FOR PROPER CONSOLIDATION.

1.04 POROUS AGGREGATE SUBBASE INSTALLATION
- A. RESERVOIR BED AGGREGATE SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION AND INSTALLATION OF EDGE PVC LINER. ANY ACCUMULATION OF DEBRIS OR SEDIMENT WHICH HAS TAKEN PLACE AFTER APPROVAL OF SUBGRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF PVC LINER AT NO EXTRA COST TO THE OWNER.
- B. SEE TABLE 2 FOR COMPACTION AND INFILTRATION REQUIREMENTS.
- C. INSTALL RESERVOIR BED AGGREGATE IN 12-INCH MAXIMUM LIFTS TO 95 TO 98% STANDARD PROCTOR COMPACTION (ASTM D698 / AASHTO T99). INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
- D. VIBRATORY COMPACTION SHALL BE PERFORMED USING TWO-AXLE TANDEM ROLLERS WITH A GROSS MASS (WEIGHT) OF NOT LESS THAN 5 METRIC TONS (5.5 TONS) AND NOT MORE THAN 10 METRIC TONS (12 TONS) AND SHALL BE CAPABLE OF PROVIDING A MINIMUM COMPACTIVE EFFORT OF 44 KN/M (250 POUNDS PER INCH) OF WIDTH OF THE DRIVE ROLL. ALL ROLLS SHALL BE AT LEAST 1 M (42 INCHES) IN DIAMETER.
- E. COMPACTION OF SUBGRADE COURSE MATERIAL SHALL BE DONE WITH A METHOD AND ADEQUATE WATER TO MEET THE REQUIREMENTS. ROLLING AND SHAPING SHALL CONTINUE UNTIL THE REQUIRED DENSITY IS ATTAINED. WATER SHALL BE UNIFORMLY APPLIED OVER THE SUBBASE COURSE MATERIALS DURING COMPACTION IN THE AMOUNT NECESSARY FOR PROPER CONSOLIDATION.
- F. ADD SMALL QUANTITIES OF FINE AGGREGATE TO COARSE AGGREGATE AS APPROPRIATE TO ASSIST COMPACTION.
- G. IF EXCESS WATER IS APPARENT, REMOVE AGGREGATE AND AERATE TO REDUCE MOISTURE CONTENT.
- H. USE MECHANICAL VIBRATING TAMPING IN AREAS INACCESSIBLE TO COMPACTION EQUIPMENT.
- I. THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT THE LINER AND SUBBASE INFILTRATION CAPACITY AT HIS/HER DISCRETION BEFORE PROCEEDING WITH THE PLACEMENT OF SELECT ROAD BASE MATERIALS.
- J. INSPECTION OF INFILTRATION CAPACITY WILL VERIFY SUITABILITY OF SUBBASE FROM COMPACTION DURING CONSTRUCTION OR WHERE EROSION HAS CAUSED ACCUMULATION OF FINE MATERIALS. IF NEEDED, COMPACTED/ACCUMULATED MATERIALS SHALL BE REMOVED AND/OR SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES AND RETESTED FOR COMPACTION AND INFILTRATION AS PER SPECIFICATIONS.
- K. INSTALL INFILTRATION TRENCH PER CONSTRUCTION DETAIL. INFILTRATION TRENCH MAY BE ELIMINATED IN THE EVENT OF SHALLOW UTILITIES THAT WILL INTERSECT THE EXCAVATION.

1.05 PROTECTION
- A. IN THE EVENT THE SUBBASE IS USED FOR MAINTENANCE OF TRAFFIC OR IS DISTURBED OR LOOSENED BY ANY CAUSE, THEN PRIOR TO PLACING OF THE NEXT PAVING COURSE, THE SUBBASE SHALL BE REGRADED AND RECOMPACTED TO ITS FINISHED GRADE AND SPECIFIED DENSITY.

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151 PORTSMOUTH AVENUE
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TITLE:
NOTES
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT: 25-1001 SCALE: AS SHOWN SHEET: D1

SECTION IV- POROUS ASPHALT PAVING (POROUS ASPHALT PAVEMENTS)

DR. ROBERT ROSEEN OF WATERSTONE ENGINEERING, INC. (OR EQUAL) SHALL REVIEW ALL ASPECTS OF PREPARATION, INSTALLATION, AND TESTING FOR THE POROUS PAVEMENT SECTIONS. PHONE: (603) 686-2488

PART 1
1.01 SCHEDULING
- A. SCHEDULE THE PAVING OPERATIONS SUCH THAT ALL PAVING NECESSARY TO PROVIDE SAFE AND ADEQUATE MAINTENANCE AND PROTECTION OF TRAFFIC OR FOR PROTECTION OF PREVIOUSLY LAID COURSES IS COMPLETED WITHIN THE WEATHER AND SEASONAL LIMITATIONS.
  - 1. SUCH SCHEDULING SHALL INCLUDE EXPEDITING CONSTRUCTION OPERATIONS TO PERMIT PAVING BEFORE THE SEASONAL LIMITATIONS OR BY LIMITING THE LENGTH OF WORK TO THAT WHICH CAN BE COMPLETED BEFORE THE SEASONAL SHUTDOWN.
  - 2. THE COST OF SCHEDULING AND SEQUENCING OF WORK TO CONFORM TO THE SEASONAL LIMITATIONS SHALL BE REFLECTED IN THE BID PRICES FOR THE RELATED CONTRACT ITEMS.

PART 2 PRODUCTS
2.01 ASPHALT CONCRETE
- A. BINDER COURSE - THE PAVEMENT BINDER COURSE SHALL BE CONSTRUCTED OF THE FOLLOWING TYPE AND TO THE WIDTHS AND DEPTHS AS SHOWN ON THE DRAWINGS.
  - 1. THIS BINDER COURSE SHALL BE IN ACCORDANCE WITH NHDOT SPECIFICATION FOR BITUMINOUS CONCRETE.
- B. PAVEMENT WEARING COURSE (SURFACE COURSE) - PAVEMENT WEARING COURSE SHALL BE CONSTRUCTED OF THE FOLLOWING TYPE AND TO THE WIDTH AND DEPTH AS SHOWN ON THE DRAWINGS.
  - 1. THIS WEARING COURSE SHALL BE IN ACCORDANCE WITH NHDOT SPECIFICATION FOR BITUMINOUS CONCRETE.
- C. PAINTED TRAFFIC MARKINGS - CONTRACTOR SHALL REPLACE ALL MARKINGS IN ACCORDANCE WITH LOCAL, COUNTY, OR STATE SPECIFICATIONS (DEPENDING ON JURISDICTION).

2.02 POROUS ASPHALT
- A. THIS IS A PERFORMANCE SPECIFICATION; ALTERNATIVES CAN BE SUBSTITUTED IF THE MIX DESIGN MEETS THE MINIMUM QC PERFORMANCE CRITERIA FOR GRADATION, ASPHALT CONCRETE (AC) CONTENT, PERCENT (%) VOID SPACE, % DRAIN DOWN, RETAINED TENSILE STRENGTH (TSR), AND CANTABRO WEAR TEST AND ACCEPTED IN WRITING BY THE ENGINEER.
- B. POLYMER MODIFIED PERFORMANCE GRADED ASPHALT BINDER AND MIX DESIGNS
  - 1. POROUS ASPHALT WEARING COURSE: GRADATION, AC CONTENT, % VOID SPACE, % DRAIN DOWN, TSR, CANTABRO AS INDICATED IN TABLE 3. THE ASPHALT BINDER SHALL BE A TERMINAL BLENDED PG76-28 MODIFIED WITH A STYRENE BUTADIENE STYRENE.
  - 2. POROUS ASPHALT BINDER COURSE: GRADATION, AC CONTENT, % VOID SPACE, % DRAIN DOWN, TSR, CANTABRO AS INDICATED IN TABLE 3. THE ASPHALT BINDER SHALL BE A TERMINAL BLENDED PG76-28 MODIFIED WITH A STYRENE BUTADIENE STYRENE.
  - 3. POROUS ASPHALT MIX DESIGNS: THE CONTRACTOR SHALL SIZE, UNIFORMLY GRADE, AND COMBINE THE AGGREGATE FRACTIONS IN PROPORTIONS THAT PROVIDE A MIXTURE MEETING THE REQUIREMENTS SPECIFIED.

PART 3 EXECUTION
3.01 PREPARATION - RESET MANHOLE FRAMES
- A. PRIOR TO PLACING WEARING (TOP) COURSE, MAKE FINAL ADJUSTMENTS OF MANHOLE FRAMES, CATCH BASIN FRAMES, VALVE BOXES AND ANY OTHER UTILITY STRUCTURES LOCATED IN THE PAVEMENT IN RELATION TO FINISHED GRADE.
  - 1. MANHOLE FRAMES, VALVE BOXES, ETC. TO SET 1/2 INCH BELOW FINISHED GRADE AND PARALLEL TO FINISHED CROWN.
  - 2. CATCH BASIN FRAMES TO SET 1 INCH BELOW FINISHED GRADE AND PARALLEL TO FINISHED CROWN.
    - a. BEVEL SLOPE OF WEARING COURSE (FOR 6-INCH WIDTH) AROUND CATCH BASIN FRAME.

3.02 POROUS ASPHALT BINDER COURSE INSTALLATION
- A. TEST STRIP (OPTIONAL)
  - 1. AN OPTIONAL TEST STRIP SHALL BE CONDUCTED TO DETERMINE OPTIMAL COMPACTION PROCEDURES FOR THE BINDER COURSE AT A THICKNESS AS INDICATED IN THE DRAWINGS. THE TEST STRIP WILL BE CONSTRUCTED IN A PORTION OF THE SITE TO ESTABLISH AND ENSURE THE PROPER MIX DESIGN, PRODUCTION AND PLACEMENT.
  - 2. THE TEST STRIP SHALL BE OVERSEEN BY THE ENGINEER.
  - 3. TWO MIX SAMPLES SHALL BE COLLECTED AT THE ASPHALT PLANT BY A 3RD PARTY QC TECHNICIAN DURING BINDER COURSE PRODUCTION FROM EACH TEST STRIP FOR ASPHALT CONTENT, AND GRADATION.
  - 4. FIELD TESTING OF INFILTRATION CAPACITY SHALL BE PERFORMED ON THE TEST STRIP FOR INFILTRATION BY THE ENGINEER.
  - 5. TWO CORES SHALL BE COLLECTED FROM EACH TEST STRIP AND EVALUATED FOR COMPACTION, DENSITY, AND POROSITY.
  - 6. THESE CRITERIA ONCE ESTABLISHED WILL BE APPLIED TO ALL POROUS ASPHALT INSTALLATIONS.
- B. CONDITIONING OF EXISTING SURFACE
  - 1. THE CONTRACTOR SHALL THOROUGHLY CLEAN THE SURFACE UPON WHICH THE BINDER COURSE IS TO BE PLACED OF ALL OBJECTIONABLE MATERIAL.
- C. PREPARATION OF AGGREGATES
  - 1. THE CONTRACTOR SHALL DRY AND HEAT THE AGGREGATES FOR THE BINDER COURSE TO THE REQUIRED TEMPERATURE.
- D. MIXING
  - 1. THE CONTRACTOR SHALL COMBINE THE DRIED AGGREGATE IN THE MIXER IN THE AMOUNT OF EACH FRACTION OF AGGREGATE REQUIRED TO MEET THE SPECIFICATIONS. ONCE MIXED THE BINDER COURSE SHALL BE PLACED AS SOON AS POSSIBLE.
- E. SPREADING AND FINISHING
  - 1. ON AREAS WHERE IRREGULARITIES OR UNAVOIDABLE OBSTACLES MAKE THE USE OF MECHANICAL SPREADING AND FINISHING IMPRACTICABLE, THE CONTRACTOR SHALL SPREAD AND RAKE THE BINDER COURSE WITH HAND TOOLS TO PROVIDE THE REQUIRED COMPACTED THICKNESS.
  - 2. SOLVENT BASED AGENTS DEVELOPED TO STRIP ASPHALTS FROM AGGREGATES WILL NOT BE ALLOWED AS A RELEASE AGENT.
  - 3. JOINTS SHALL BE FULLY COATED WITH PGAB 76-28 JUST PRIOR TO THE PLACEMENT OF THE ADJOINING COURSE. AREAS THAT BECOME CONTAMINATED OR STRIPPED OF ASPHALT COATING WILL BE RETREATED WITH ASPHALT PRIOR TO PLACING THE ADJOINING COARSE.
- F. COMPACTION
  - 1. THE ACTUAL METHODS AND EQUIPMENT USED TO COMPACT THE BINDER COURSE WILL BE DETERMINED DURING THE PLACEMENT AND COMPACTION OF THE TEST STRIP AND AS TABLE 2.
  - 2. IMMEDIATELY AFTER THE ASPHALT TREATED PERMEABLE BASE HAS BEEN SPREAD, STRUCK OFF, AND ANY SURFACE IRREGULARITIES ADJUSTED, THE CONTRACTOR SHALL THOROUGHLY AND UNIFORMLY COMPACT THE BINDER COURSE BY ROLLING.
  - 3. THE BINDER COURSE SHALL BE COMPACTED BY A MAXIMUM OF THREE COMPLETE PASSES OF A STEEL ROLLER HAVING A MINIMUM WEIGHT OF 12 TONS OPERATED IN STATIC MODE, OR 10 TONS IF EQUIPPED WITH OSCILLATORY COMPACTION AND OPERATED IN LOW FREQUENCY, LOW AMPLITUDE MODE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PNEUMATIC ROLLERS WILL NOT BE USED TO COMPACT THE BINDER COURSE.
  - 4. THE CONTRACTOR SHALL ROLL THE SURFACE WHEN THE MIXTURE IS IN THE PROPER CONDITION AND WHEN THE ROLLING DOES NOT CAUSE UNDUE DISPLACEMENT, CRACKING, OR SHOVING. THE CONTRACTOR SHALL PREVENT ADHESION OF THE BINDER COURSE TO THE ROLLERS OR VIBRATING COMPACTORS WITHOUT THE USE OF FUEL OIL OR OTHER PETROLEUM, OR SOLVENT BASED RELEASE AGENTS. SOLVENTS DESIGNED TO STRIP ASPHALT BINDERS FROM AGGREGATES WILL NOT BE PERMITTED AS RELEASE AGENTS ON EQUIPMENT, TOOLS OR BINDER COURSE SURFACES.
  - 5. THE CONTRACTOR SHALL IMMEDIATELY CORRECT ANY DISPLACEMENT OCCURRING AS A RESULT OF THE REVERSING OF THE DIRECTION OF A ROLLER OR FROM OTHER CAUSES TO THE SATISFACTION OF THE ENGINEER.
  - 6. ANY OPERATION THAT RESULTS IN BREAKDOWN OF THE AGGREGATE SHALL BE DISCONTINUED.
- G. TRAFFIC
  - 1. AFTER A 24 HOUR CURING PERIOD OF THE BINDER COURSE, LIMITED TRAFFIC MAY BE ROUTED OVER THE BINDER COURSE SURFACE. UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER, CONSTRUCTION EQUIPMENT, AND TRAFFIC SHALL BE PROHIBITED FROM TRAVELING OVER THE BINDER COURSE SURFACE UNTIL THE ENTIRE PAVEMENT STRUCTURE IS IN PLACE.
  - 2. DAMAGE TO THE BINDER COURSE LAYER CAUSED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE REMEDIED BY COMPLETE REMOVAL REPLACEMENT OF THE DAMAGED AREA TO THE LIMITS DETERMINED BY THE ENGINEER. THERE WILL BE NO ADDITIONAL PAYMENT FOR REPAIRS, OR ASSOCIATED WORK.

3.03 PLACEMENT OF POROUS ASPHALT BINDER COURSE
- A. INSTALL THE BINDER COURSE COURSE AT A THICKNESS AS INDICATED IN DRAWINGS.
- B. INSTALL FRAME, GRATES, AND LANDSCAPING. SPECIAL CARE IS TO BE TAKEN TO PROTECT FRESH BINDER COURSE.
- C. ALL TRUCKS (INCLUDING CONCRETE TRUCKS) WILL BE STOPPED PRIOR TO ENTERING THE SITE AND INSTRUCTED AS TO SPECIAL CONCERNS FOR PAVEMENT DURABILITY.
- D. A WASHOUT AREA FOR ALL CONCRETE TRUCKS SHALL BE DESIGNATED OUTSIDE OF POROUS PAVEMENT AREA ON THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN OR ON DETAIL SHEET.
- E. POROUS PAVEMENT SURFACE SHALL BE PROTECTED ON HOT DAYS DURING THE PAVEMENT CURE PERIOD (2-3 DAYS). SURFACE TEMPERATURES CAN QUICKLY REACH OVER 145°F IN DIRECT SUN.
- F. A TEMPERATURE GUN SHALL BE AVAILABLE ONSITE TO ASSESS PAVEMENT SURFACE TEMPERATURES. PAVEMENT TEMPERATURES GREATER THAN 100°F SHOULD BE OBSERVED CAREFULLY FOR PAVEMENT DURABILITY. AS NEEDED, COOLING OF PAVEMENT SURFACE BY APPLICATION OF WATER FROM A WATER TRUCK SHOULD OCCUR WHEN HEAVY VEHICULAR TRAFFIC IS EXPECTED SUCH AS CONCRETE TRUCKS FOR DRY WELL FRAME AND GRATE INSTALLATION. IN THE EVENT THIS IS INEFFECTIVE FOR COOLING AND PAVEMENT DEFORMATION IS STILL OBSERVED, THE USE OF 3/4" PLYWOOD UNDER LARGE VEHICLE WHEELS MAY BE REQUIRED.
- G. TRUCKS AND OTHER CONSTRUCTION TRAFFIC WILL NOT BE ALLOWED TO ACCESS THE SITE WHILE THE PAVEMENT IS EXCESSIVELY HOT >130°F.
- H. NO STOCKPILING OF MATERIALS (E.G. SOIL, STONE, LANDSCAPING MATERIALS) WILL BE ALLOWED ON POROUS PAVEMENTS.
- I. MATERIALS EXCAVATED FOR FINISH WORKS SHALL BE PLACED OUTSIDE OF POROUS PAVEMENT AREAS.
- J. VACUUMING THROUGHOUT CONSTRUCTION MAY BE NECESSARY FOR SURROUNDING PAVED AREAS TO PREVENT RUN-ON OR TRACKING ONTO POROUS PAVEMENTS. FREQUENCY SHALL BE ADJUSTED AS NEEDED.

3.04 INSPECTION, CORRECTIVE ACTION, REMOVAL AND REPLACEMENT OF BINDER COURSE
- A. PRIOR TO INSTALLATION OF THE POROUS ASPHALT WEARING COURSE, THE BINDER COURSE WILL BE INSPECTED FOR DAMAGE AND REDUCED INFILTRATION CAPACITY.
- B. BINDER COURSE CLOGGING WILL BE CORRECTED BY VACUUM AND PRESSURE WASHING TO THE SATISFACTION OF THE ENGINEER.
- C. BINDER COURSE AREAS WILL BE REMOVED AND REPLACED IN AREAS WHERE STRUCTURAL DAMAGE OR INFILTRATION CAPACITY IS SUBSTANTIALLY COMPROMISED AT THE DISCRETION OF THE ENGINEER.
- D. THE CHOKER COURSE SHALL BE INSPECTED FOR VOIDS AND FINES PRIOR TO REPLACEMENT OF THE BINDER COURSE. IF VOID SPACE IS COMPROMISED, STONE WILL BE ADDED AND/OR REPLACED FOR CORRECTIVE ACTION.
- E. THERE WILL BE NO ADDITIONAL PAYMENT FOR BINDER COURSE REPAIRS, CLEANING, REPLACEMENT, OR ASSOCIATED WORK.

3.05 POROUS ASPHALT WEARING COURSE INSTALLATION
- A. GENERAL
  - 1. VERIFY BINDER COURSE CONDITION AND PREPARATION FOLLOWING CONSTRUCTION PRIOR TO PAVING THE POROUS ASPHALT WEARING COURSE AS DESCRIBED IN SECTION 3.07.
  - 2. THE ENGINEER SHALL BE NOTIFIED AND INSPECT THE BINDER COURSE AT THEIR DISCRETION PRIOR TO PAVING THE POROUS ASPHALT WEARING COURSE.
  - 3. TEMPORARY CONSTRUCTION FENCING WILL BE USED TO CLOSE POROUS PAVEMENT AREAS TO CONSTRUCTION TRAFFIC AFTER PAVING DURING PROJECT COMPLETION.
- B. TEST STRIP
  - 1. A TEST STRIP SHALL BE CONDUCTED TO DETERMINE OPTIMAL COMPACTION PROCEDURES OF THE POROUS ASPHALT AT A THICKNESS AS INDICATED IN THE DRAWINGS. THE TEST STRIP WILL BE CONSTRUCTED IN A PORTION OF THE SITE TO ESTABLISH AND ENSURE THE PROPER MIX DESIGN, PRODUCTION AND PLACEMENT.
  - 2. THE TEST STRIP SHALL BE OVERSEEN BY THE ENGINEER.
  - 3. TWO MIX SAMPLES SHALL BE COLLECTED AT THE ASPHALT PLANT BY A 3RD PARTY QC TECHNICIAN DURING PRODUCTION FROM EACH TEST STRIP FOR ASPHALT CONTENT, GRADATION, AND CANTABRO WEAR.
  - 4. FIELD TESTING OF INFILTRATION CAPACITY SHALL BE PERFORMED ON THE TEST STRIP FOR INFILTRATION BY THE ENGINEER.
  - 5. TWO CORES SHALL BE COLLECTED FROM EACH TEST STRIP AND EVALUATED FOR COMPACTION, DENSITY, AND POROSITY.
  - 6. THESE CRITERIA ONCE ESTABLISHED WILL BE APPLIED TO ALL POROUS ASPHALT INSTALLATIONS.
- C. ROLLERS
  - 1. ROLLERS OR OSCILLATING VIBRATORY ROLLERS, RANGING FROM 8-12 TONS, SHALL BE USED FOR COMPACTION, AND 1-2 TONS ROLLER FOR FINISHING. THE NUMBER, MASS (WEIGHT), AND TYPE OF ROLLERS FURNISHED SHALL BE SUFFICIENT TO OBTAIN THE REQUIRED COMPACTION WHILE THE MIXTURE IS IN A WORKABLE CONDITION. GENERALLY, ONE BREAKDOWN ROLLER WILL BE NEEDED FOR EACH PAVER USED IN THE SPREADING OPERATION.
  - 2. ADDITIONAL ROLLING MAY BE EXCESSIVE, CAUSING A BREAK IN THE BOND OF ASPHALT BETWEEN AGGREGATE PARTICLES, PARTICULARLY AFTER THE MIX HAS COOLED.
  - 3. TO PREVENT ADHESION OF THE MIXTURE TO THE ROLLS, ROLLS SHALL BE KEPT MOIST WITH WATER OR WATER MIXED WITH VERY SMALL QUANTITIES OF DETERGENT OR OTHER APPROVED MATERIAL. EXCESS LIQUID WILL NOT BE PERMITTED.
  - 4. OTHER COMBINATIONS OF ROLLERS AND/OR METHODS OF COMPACTING MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER, PROVIDED THE COMPACTION REQUIREMENTS ARE MET. THE SPEED OF THE ROLLER SHALL BE SLOW AND UNIFORM TO AVOID DISPLACEMENT OF THE MIXTURE, AND THE ROLLER SHOULD BE KEPT IN AS CONTINUOUS OPERATION AS PRACTICAL. ROLLING SHALL CONTINUE UNTIL ALL ROLLER MARKS AND RIDGES HAVE BEEN ELIMINATED.
  - 5. ROLLERS WILL NOT BE STOPPED OR PARKED ON THE FRESHLY PLACED MAT. THE SPEED OF THE ROLLER SHALL BE SLOW AND UNIFORM TO AVOID DISPLACEMENT OF THE MIXTURE, AND THE ROLLER SHOULD BE KEPT IN AS CONTINUOUS OPERATION AS PRACTICAL. ROLLING SHALL CONTINUE UNTIL ALL ROLLER MARKS AND RIDGES HAVE BEEN ELIMINATED.
  - 6. ROLLERS WILL NOT BE STOPPED OR PARKED ON THE FRESHLY PLACED MAT.
- D. CONDITIONING OF EXISTING SURFACE
  - 1. CONTACT SURFACES SUCH AS CURBING, GUTTERS, AND MANHOLES SHALL BE PAINTED WITH A THIN, UNIFORM COAT OF TYPE RS-1 EMULSIFIED ASPHALT IMMEDIATELY BEFORE THE ASPHALT MIXTURE IS PLACED AGAINST THEM.
- E. TEMPERATURE REQUIREMENTS
  - 1. THE TEMPERATURE OF THE ASPHALT MIXTURE, AT THE TIME OF DISCHARGE FROM THE HAUL VEHICLE AND AT THE PAVER, SHALL BE BETWEEN 135-163°C (275 TO 325°F), WITHIN 6 °C (10 °F) OF THE COMPACTION TEMPERATURE FOR THE APPROVED MIX DESIGN.
  - 2. THE TEMPERATURE OF THE ASPHALT MIXTURE, AT THE TIME OF DISCHARGE FROM THE HAUL VEHICLE AND AT THE PAVER, SHALL BE BETWEEN 135-163°C (275 TO 325°F), WITHIN 6 °C (10 °F) OF THE COMPACTION TEMPERATURE FOR THE APPROVED MIX DESIGN.
  - 3. BREAKDOWN ROLLING SHALL OCCUR WHEN THE MIX TEMPERATURE IS BETWEEN 135-163°C (275 TO 325°F).
  - 4. INTERMEDIATE ROLLING SHALL OCCUR WHEN THE MIX TEMPERATURE IS BETWEEN 93-135°C (200 TO 275°F).
  - 5. FINISH ROLLING SHALL OCCUR WHEN THE MIX TEMPERATURE IS BETWEEN 66-93°C (150 TO 200°F)
- F. SPREADING AND FINISHING
  - 1. THE POROUS ASPHALT WEARING COURSE SHALL BE PLACED IN ONE APPLICATION TO A THICKNESS AS INDICATED ON THE DRAWINGS.
  - 2. THE CONTRACTOR SHALL PROTECT ALL EXPOSED SURFACES THAT ARE NOT TO BE TREATED FROM DAMAGE DURING ALL PHASES OF THE PAVEMENT OPERATION.
  - 3. NO TRAFFIC WILL BE PERMITTED ON MATERIAL PLACED UNTIL THE MATERIAL HAS BEEN THOROUGHLY COMPACTED AND HAS BEEN PERMITTED TO COOL TO BELOW 38 °C (100 °F). THE ENGINEER RESERVES THE RIGHT TO REQUIRE THAT ALL WORK ADJACENT TO THE PAVEMENT, SUCH AS GUARDRAIL, CLEANUP, AND TURF ESTABLISHMENT, IS COMPLETED PRIOR TO PLACING THE WEARING COURSE WHEN THIS WORK COULD CAUSE DAMAGE TO THE PAVEMENT.
- G. COMPACTION
  - 1. PLACING MIX IN AN APPROPRIATE AMBIENT TEMPERATURE AND ON A SURFACE SUFFICIENTLY WARM TO MINIMIZE THE RISK OF EXCESSIVE COOLING BEFORE COMPLETION OF ROLLING IS OF PARAMOUNT IMPORTANCE. HOLDING THE AGGREGATE PARTICLES IN PLACE IS SOLELY THE FUNCTION OF THE FILM OF ASPHALT. THE ASPHALT CANNOT PERFORM THIS FUNCTION PROPERLY IF THE MIX IS TOO COOL WHEN ROLLED.
  - 2. IT IS IMPORTANT TO KEEP THE TIME BETWEEN THE POROUS ASPHALT AND WEARING COURSE AND BINDER COURSE PLACEMENTS SHALL BE MINIMAL AND KEEP THE FIRST LAYER CLEAR FROM DUST AND MOISTURE, AND MINIMIZE TRAFFIC ON THE FIRST LAYER.
  - 3. A THIN COURSE COMPRESSES VERY LITTLE UNDER THE ROLLER AND, AS IT COOLS QUICKLY, IT MUST BE ROLLED AS SOON AS POSSIBLE.
  - 4. A HIGH DEGREE OF DENSIFICATION IS NOT THE GOAL WITH THIS TYPE OF MIX; THE AIM IS FIRM SEATING AND CONTACT OF THE AGGREGATE PARTICLES.
  - 5. WHEN OVERTAKEN BY SUDDEN STORMS, THE ENGINEER MAY PERMIT WORK TO CONTINUE UP TO THE AMOUNT WHICH MAY BE IN TRANSIT FROM THE PLANT AT THE TIME, PROVIDED THE MIXTURE IS WITHIN TEMPERATURE LIMITS SPECIFIED.
  - 6. IMMEDIATELY AFTER THE ASPHALT MIXTURE HAS BEEN SPREAD, STRUCK OFF, AND SURFACE IRREGULARITIES ADJUSTED, IT SHALL BE THOROUGHLY AND UNIFORMLY COMPACTED BY ROLLING. THE COMPACTION OBJECTIVE IS 18% - 22% IN PLACE VOID CONTENT (CORELOCK). GREAT CARE SHALL BE TAKEN TO AVOID OVER-COMPACTION.
  - 7. IF THE ENGINEER DETERMINES THAT UNSATISFACTORY COMPACTION OR SURFACE DISTORTION IS BEING OBTAINED OR DAMAGE TO HIGHWAY COMPONENTS AND/OR ADJACENT PROPERTY IS OCCURRING USING VIBRATORY COMPACTION EQUIPMENT, THE CONTRACTOR SHALL IMMEDIATELY CEASE USING THIS EQUIPMENT AND PROCEED WITH THE WORK IN ACCORDANCE WITH THE FIFTH PARAGRAPH OF THIS SUBSECTION.
  - 8. ALONG FORMS, CURBS, HEADERS, WALLS, AND OTHER PLACES NOT ACCESSIBLE TO THE ROLLERS, THE MIXTURE SHALL BE THOROUGHLY COMPACTED WITH HOT OR LIGHTLY OILED HAND TAMPERS, SMOOTHING IRONS OR WITH MECHANICAL TAMPERS. ON DEPRESSED AREAS, EITHER A TRENCH ROLLER OR CLEATED COMPRESSION STRIPS MAY BE USED UNDER THE ROLLER TO TRANSMIT COMPRESSION TO THE DEPRESSED AREA.
- H. JOINTS
  - 1. UNLESS OTHERWISE SPECIFIED, THE LONGITUDINAL JOINTS SHALL BE ROLLED FIRST. NEXT, THE CONTRACTOR SHALL BEGIN ROLLING AT THE LOW SIDE OF THE PAVEMENT AND SHALL PROCEED TOWARDS THE CENTER OR HIGH SIDE WITH LAPPED ROLLINGS PARALLEL TO THE CENTERLINE.
  - 2. PLACEMENT OF THE SURFACE COURSE SHALL BE CAREFULLY PLANNED TO ASSURE THAT THE LONGITUDINAL JOINTS IN THE SURFACE COURSE WILL CORRESPOND WITH THE EDGES OF THE PROPOSED TRAFFIC LANES. THEY SHALL NOT BE LOCATED WITHIN THE NORMAL WHEELPATH OF VEHICULAR TRAFFIC.
  - 3. WHEN PAVING ADJOINING LANES, THE ASPHALT CONCRETE SHALL BE LAID SUCH THAT IT UNIFORMLY OVERLAPS THE ADJACENT LANE 2 INCHES TO 3 INCHES. THE THICKNESS OF THE OVERLAP MATERIAL SHALL BE APPROXIMATELY 1/4 THE COMPACTED THICKNESS OF THE COURSE, SO AS TO RESULT IN A SMOOTH AND WELL COMPACTED JOINT AFTER ROLLING. THE OVERLAPPED MATERIAL SHALL BE BROOMED OR RAKED BACK ONTO THE ADJACENT HOT LANE SO THAT THE ROLLER OPERATOR CAN CROWD THE SMALL EXCESS INTO THE HOT SIDE OF THE JOINT. IF THE OVERLAP IS EXCESSIVE, THE EXCESS MATERIAL SHALL BE TRIMMED OFF SO THAT THE MATERIAL ALONG THE JOINT IS UNIFORM.
  - 4. THE COARSE PARTICLES OF AGGREGATE IN THE OVERLAP MATERIAL SHALL BE REMOVED AND WASTED IF DEEMED NECESSARY BY THE ENGINEER.
  - 5. TRANSVERSE JOINTS SHALL BE STAGGERED A MINIMUM OF 10 FEET FROM ADJACENT LANES.
- I. TRAFFIC
  - 1. ALL TRUCKS (INCLUDING CONCRETE TRUCKS) WILL BE STOPPED PRIOR TO ENTERING THE SITE AND INSTRUCTED AS TO SPECIAL CONCERNS FOR PAVEMENT DURABILITY.
  - 2. TRUCKS AND OTHER CONSTRUCTION TRAFFIC WILL NOT BE ALLOWED TO ACCESS THE SITE WHILE THE PAVEMENT IS EXCESSIVELY HOT.
  - 3. POROUS PAVEMENT SURFACE SHALL BE PROTECTED ON HOT DAYS DURING THE PAVEMENT CURE PERIOD (1-2 WEEKS).
  - 4. A TEMPERATURE GUN SHALL BE AVAILABLE ONSITE TO ASSESS PAVEMENT SURFACE TEMPERATURES. PAVEMENT TEMPERATURES IN EXCESS OF 100OF SHOULD BE OBSERVED CAREFULLY FOR PAVEMENT DURABILITY.
  - 5. COOLING OF PAVEMENT SURFACE BY APPLICATION OF WATER FROM A WATER TRUCK SHOULD OCCUR WHEN HEAVY VEHICULAR TRAFFIC IS EXPECTED, SUCH AS CONCRETE TRUCKS FOR CURB INSTALLATION. IN THE EVENT THIS IS INEFFECTIVE FOR COOLING AND PAVEMENT DEFORMATION IS STILL OBSERVED, 3/4" PLYWOOD SHALL BE PLACED ON TOP OF THE PAVEMENT.
  - 6. AFTER A 24 HOUR CURING PERIOD OF THE POROUS ASPHALT WEARING COURSE, LIMITED TRAFFIC MAY BE ROUTED OVER THE FINISHED SURFACE.
  - 7. TRAVEL OF CONSTRUCTION EQUIPMENT, AND TRAFFIC IS ALLOWED OVER THE BINDER COURSE ROAD.
  - 8. TRACKING OF DEBRIS SHALL BE MINIMIZED TO A FEASIBLE EXTENT DURING CONSTRUCTION THROUGH THE USE OF STONE ENTRANCES, AND ROUTINE PAVEMENT VACUUMING.
  - 9. UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER, CONSTRUCTION EQUIPMENT, AND TRAFFIC SHALL BE PROHIBITED FROM TRAVELING OVER THE COMPLETED POROUS ASPHALT SURFACE UNTIL THE ENTIRE PAVEMENT STRUCTURE IS IN PLACE.
  - 10. DAMAGE TO THE BINDER COURSE LAYER CAUSED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE REMEDIED BY COMPLETE REMOVAL AND REPLACEMENT OF THE DAMAGED AREA TO THE LIMITS DETERMINED BY THE ENGINEER.
- J. OTHER
  - 1. OTHER COMBINATIONS OF ROLLERS AND/OR METHODS OF COMPACTING MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER, PROVIDED THE COMPACTION REQUIREMENTS ARE MET.
  - 2. A WASHOUT AREA FOR ALL CONCRETE TRUCKS SHALL BE DESIGNATED OUTSIDE OF POROUS PAVEMENT AREA ON EROSION CONTROL PLAN.
  - 3. NO STOCKPILING OF MATERIALS (SOIL, STONE, LANDSCAPING MATERIALS, ETC.) WILL BE ALLOWED ON POROUS PAVEMENTS.
  - 4. MATERIALS EXCAVATED FOR CURB INSTALLATION AND LANDSCAPING STOCKPILES SHALL BE PLACED OUTSIDE OF POROUS PAVEMENT AREA.
  - 5. WEEKLY VACUUMING OF THE POROUS PAVEMENT AND SURROUNDING AREAS (20-FEET BEYOND LIMITS OF POROUS PAVEMENT) SHALL BE PERFORMED BY THE CONTRACTOR AS NECESSARY. FREQUENCY SHALL BE INCREASED IF REQUIRED BY CONSTRUCTION ACTIVITIES.

3.06 DRIVEWAYS AND PARKING AREAS
- A. PAVING MATERIALS, TYPE OF PAVING, DEPTH OF VARIOUS COURSES, ETC., SHALL BE AS SHOWN ON THE DRAWINGS.
  - 1. THE DRIVEWAYS AND PARKING AREAS SHALL BE CUT BACK 12 INCHES FROM OUTSIDE DISTURBED OR DAMAGED AREAS AS DESCRIBED ABOVE.
  - 2. THE MINIMUM DEPTH OF SUBBASE SHALL BE AS INDICATED ON THE DRAWINGS AND NHDOT AGGREGATE SPECIFICATIONS.
  - 3. THE WORK SHALL INCLUDE PROPER COMPACTION OF ANY NECESSARY SUBBASE, BASE COURSE AND PAVING COURSES.
- B. BITUMINOUS SURFACES SHALL BE RESTORED WITH ASPHALT CONCRETE MATCHING EXISTING, BUT IN NO CASE SHALL BE LESS THAN 2 INCHES OF BINDER AND 1 INCH OF TOP COURSE AS SPECIFIED IN THE APPLICABLE ARTICLES OF THIS SECTION.
- C. NON-BITUMINOUS SURFACES - WHERE SHOWN ON THE DRAWINGS, CONSTRUCT NEW DRIVEWAYS AND PARKING AREAS OR RESTORE EXISTING DRIVEWAYS AND PARKING AREAS AS FOLLOWS:
  - 1. GRAVEL SURFACES SHALL BE RESTORED USING SCREENED GRAVEL, MATCHING EXISTING, BUT IN NO CASE SHALL BE LESS THAN 6 INCHES THICK. THE GRAVEL SHALL BE GRADED, SHAPED AND COMPACTED. LOOSE STONES SHALL BE REMOVED.
  - 2. CRUSHED STONE SURFACES SHALL BE RESTORED MATCHING EXISTING STONE, BUT IN NO CASE SHALL BE LESS THAN 1 INCH THICKNESS OF STONE. STONE SHALL BE COMPACTED WITH A ROLLER.

3.07 SEAL AND TACK COAT
- A. APPLY SEAL COAT TO DENSE MIX ASPHALT AND ASPHALT CURBS ONLY AND IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS.
- B. SEAL COAT APPLICATION TO POROUS PAVEMENTS IS PROHIBITED.
- C. BITUMINOUS MATERIAL FOR THE TACK COAT SHALL BE EMULSIFIED ASPHALT, GRADE RS-1 CONFORMING TO NHDOT SPECIFICATION.

3.08 TOLERANCES
- A. SURFACE TOLERANCE - THE PAVEMENT SURFACE SHALL BE CONSTRUCTED TO A 1/4-INCH TOLERANCE. IF, IN THE OPINION OF THE ENGINEER, THE PAVEMENT SURFACE IS NOT BEING CONSTRUCTED OR HAS NOT BEEN CONSTRUCTED TO THIS TOLERANCE BASED UPON VISUAL OBSERVATION OR UPON RIDING QUALITY, HE MAY TEST THE SURFACE WITH A 16-FOOT STRAIGHT EDGE (FURNISHED BY THE CONTRACTOR) OR STRING LINE PLACED PARALLEL TO THE CENTERLINE OF THE PAVEMENT AND WITH A 10-FOOT STRAIGHT EDGE OR STRING LINE PLACED TRANSVERSELY TO THE CENTERLINE OF THE PAVEMENT ON ANY PORTION OF THE PAVEMENT.
  - 1. VARIATIONS EXCEEDING 1/4-INCH SHALL BE SATISFACTORILY CORRECTED OR THE PAVEMENT RELAYED AT NO ADDITIONAL COST AS ORDERED BY THE ENGINEER.
- B. THICKNESS TOLERANCE - THE THICKNESS INDICATED FOR EACH OF THE VARIOUS COURSES OF BITUMINOUS PAVEMENT IS THE NOMINAL THICKNESS. THE PAVEMENT SHALL BE SO CONSTRUCTED THAT THE FINAL COMPACTED THICKNESS IS AS NEAR TO THE NOMINAL THICKNESS AS IS PRACTICAL, AND WITHIN THE TOLERANCES SPECIFIED BELOW.
  - 1. MATERIAL WHICH IS PART OF A TRUING OR LEVELING COURSE OR SHIM COURSE WILL NOT BE CONSIDERED IN PAVEMENT THICKNESS DETERMINATIONS.
  - 2. A TOLERANCE NOT TO EXCEED 1/4-INCH FROM THE NOMINAL THICKNESS REQUIRED FOR THE COURSE SPECIFIED UNDER ONE PAY ITEM WILL BE ACCEPTABLE WHERE THE REQUIRED NOMINAL THICKNESS IS 4 INCHES OR LESS. A TOLERANCE NOT TO EXCEED 1/2-INCH FROM THE NOMINAL THICKNESS REQUIRED FOR THE COURSE OR COURSES SPECIFIED UNDER ONE PAY ITEM WILL BE ACCEPTABLE WHERE THE REQUIRED NOMINAL THICKNESS IS OVER 4 INCHES. IN ADDITION, THE SUM TOTAL THICKNESS OF ALL BITUMINOUS MIXTURE COURSES SHALL NOT VARY FROM THE TOTAL OF THE NOMINAL THICKNESS INDICATED ON THE PLANS BY MORE THAN 1/4-INCH WHERE THE TOTAL NOMINAL THICKNESS IS 4 INCHES OR LESS; OR MORE THAN 1/2-INCH WHERE THE TOTAL NOMINAL THICKNESS IS OVER 4 INCHES BUT NOT MORE THAN 8 INCHES; AND BY NOT MORE THAN 5/8-INCH WHERE THE TOTAL NOMINAL THICKNESS IS MORE THAN 8 INCHES.

3.09 PROTECTION
- A. ANY PAVEMENT, CONSTRUCTED OR RECONSTRUCTED, WHICH IS SUBSEQUENTLY DAMAGED DUE TO ACTIVITY OF WORK UNDER THIS CONTRACT, SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- B. PROTECT PAVEMENT FROM VEHICULAR TRAFFIC UNTIL COMPACTION IS COMPLETED.

3.10 PAVEMENT MARKING
- A. PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATION.
- B. STRIPING PAINT FOR POROUS ASPHALT SHALL BE LATEX, WATER-BASE EMULSION, READY-MIXED, AND COMPLYING WITH PAVEMENT MARKING SPECIFICATIONS PS TT-P-1952 AND IN ACCORDANCE WITH UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS, REV. OCTOBER 2009 OR MOST RECENT UPDATE LOCATED AT HTTP://WWW.UNH.EDU/UNHSC/SPECS-AND-FACT-SHEETS-0

PART 4: QUALITY ASSURANCE AND QUALITY CONTROL
4.01 GENERAL
- A. PERFORM WORK IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, AS AMENDED TO DATE AND AS THEY APPLY TO THE FOLLOWING AND UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS OR MOST RECENT UPDATE LOCATED AT HTTP://WWW.UNH.EDU/UNHSC/SPECS-AND-FACT-SHEETS-0.:
  - 3. MATERIALS AND BATCH PLANT REQUIREMENTS.
  - 4. CONSTRUCTION PROCEDURES EXCEPT AS MODIFIED HEREIN.
  - 5. WEATHER AND SEASONAL LIMITATIONS EXCEPT AS MODIFIED HEREIN.
- A. PAVING WORK SHALL BE PERFORMED BY A QUALIFIED PAVING CONTRACTOR OR SUBCONTRACTOR ACCEPTABLE TO THE OWNER AND ENGINEER.
- B. OBTAIN ASPHALT CONCRETE MATERIALS FROM SAME SOURCE THROUGHOUT PROJECT.

4.02 QUALITY ASSURANCE/CONTROL DURING SUBBASE AND SUBGRADE PREPARATION

4.03 THIRD PARTY QUALITY CONTROL OF HOT MIX PLANT PRODUCTION
- A. THE CONTRACTOR SHALL PROVIDE AT CONTRACTOR'S EXPENSE AND THE ENGINEER'S APPROVAL A THIRD PARTY QUALITY CONTROL INSPECTOR TO OVERSEE AND DOCUMENT BOTH 1) MIX PRODUCTION OF THE POROUS ASPHALT WEARING COURSE AND BINDER COURSE MATERIALS USED FOR THE PROJECT, AND 2) FIELD TESTING FOR IN PLACE MATERIALS, AS PER TABLE 5.
- B. ALL MIX TESTING RESULTS DURING PRODUCTION SHOULD BE SUBMITTED TO THE ENGINEER ON A DAILY BASIS.
- C. QUALITY ASSURANCE FIELD TESTING SHALL BE CONDUCTED FOR IN-PLACE MATERIALS FOR THE POROUS ASPHALT SYSTEM BY A THIRD PARTY AT THE CONTRACTOR'S EXPENSE IN COORDINATION WITH THE ENGINEER.
- D. THE CONTRACTOR SHALL COORDINATE WITH THE THIRD PARTY QUALITY CONTROL FIRM TO SUBMIT RESULTS TO THE ENGINEER DAILY AND ON AN ON-GOING BASIS.

4.04 REVIEW SUBMITTALS OF QUALITY ASSURANCE/CONTROL OF PRODUCTION
- A. PROVIDE CERTIFICATION OF APPROVED JOB MIX FORMULAS FOR TYPES TO BE USED ON THIS PROJECT.
- B. THE MIXING PLANT SHALL EMPLOY A QUALITY CONTROL INSPECTOR. THE INSPECTOR WILL PERFORM QA/QC TESTING AND WILL BE CERTIFIED IN THE DISCIPLINE OF HMA PLANT TECHNICIAN BY THE RELEVANT CERTIFYING AGENCY (E.G. NETTCP IN NEW ENGLAND). THE CONTRACTOR SHALL SAMPLE, TEST AND EVALUATE THE MIX IN ACCORDANCE WITH THE METHODS AND MINIMUM FREQUENCIES SUMMARIZED IN TABLE 5.
- C. IF AN ANALYZED SAMPLE IS OUTSIDE THE TESTING TOLERANCES IMMEDIATE CORRECTIVE ACTION WILL BE TAKEN. AFTER THE CORRECTIVE ACTION HAD BEEN TAKEN THE RESULTING MIX WILL BE SAMPLED AND TESTED. IF THE RE-SAMPLED MIX TEST VALUES ARE OUTSIDE THE TOLERANCES THE ENGINEER WILL BE IMMEDIATELY INFORMED. THE ENGINEER MAY DETERMINE THAT IT IS IN THE BEST INTEREST OF THE PROJECT THAT PRODUCTION IS CEASED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL MIX PRODUCED FOR THE PROJECT.
- D. TESTING TOLERANCES DURING CONSTRUCTION. THE PAVING MIXTURE PRODUCED SHOULD NOT VARY FROM THE DESIGN CRITERIA FOR AGGREGATE GRADATION AND BINDER CONTENT BY MORE THAN +/- 5 PERCENT (%) OR APPROVAL BY ENGINEER.
- E. SHOULD THE PAVING MIXTURE PRODUCED VARY FROM THE DESIGNATED GRADING AND ASPHALT CONTENT SPECIFIED BY MORE THAN THE ABOVE TOLERANCES, THE APPROPRIATE PRODUCTION MODIFICATIONS ARE TO BE MADE UNTIL THE POROUS ASPHALT MIX IS WITHIN THESE TOLERANCES.

4.05 QUALITY ASSURANCE/CONTROL DURING PAVING
- A. QA/QC REQUIREMENTS DURING PAVING ARE SUMMARIZED IN TABLE 4 AND TABLE 5
- B. MONITOR QUALITY CONTROL OVER SUPPLIERS, MANUFACTURERS, PRODUCTS, SERVICES, SITE CONDITIONS, AND WORKMANSHIP, TO PRODUCE WORK OF SPECIFIED QUALITY.

PART 5: SIGNAGE FOR OPERATIONS AND MAINTENANCE

RECOMMENDED SIGNAGE SHOULD READ AS FOLLOWS:
POROUS PAVEMENT PARKING FACILITY FOR STORMWATER MANAGEMENT
POROUS ASPHALT ROADWAY-ENVIRONMENTALLY FRIENDLY STREET
- REDUCES POLLUTION AND FLOODING FROM STORMWATER
- PROTECTS AND CONSERVES WATER RESOURCES
- REDUCES EXCESS URBAN HEAT
- REDUCES WINTER SALT FOR DEICING

ROUTINE MAINTENANCE
- SANDING, SEALCOATING, AND CRACKSEALING PROHIBITED.
- DO NOT STORE STOCKPILES ON POROUS SURFACE SUCH AS SAND, SALT, MULCH, LOAM, OR GRASS CLIPPINGS.
- VACUUM 3X PER YEAR (SPRING, SUMMER, FALL) OR AS NEEDED.
- POWER-WASH AT A 45° ANGLE FOR CHRONICALLY CLOGGED AREAS.
- ALL SWEEPINGS MUST BE DISPOSED OF IN A LEGAL MANNER.
- PREVENT RUN-ON OF SEDIMENT AND DEBRIS THROUGH EROSION CONTROL OF NEARBY AREAS.

WINTER MAINTENANCE
- MECHANICAL REMOVAL OF SNOW AND ICE BY SNOW PLOW.
- APPLY DEICING TREATMENTS DURING, AND AFTER STORMS AS NECESSARY TO CONTROL COMPACT SNOW AND ICE NOT REMOVED BY PLOWING.
- LITTLE OR NO ROAD SALT MAY BE NECESSARY BETWEEN STORMS. UP TO 75% REDUCED USE OF ROAD SALT MAY BE FEASIBLE AND MINIMIZE POTENTIAL IMPACT TO GROUNDWATER AND WETLAND RESOURCES.
- NO DEICING MATERIALS SHALL BE STORED ON SITE.

TABLE 1: SUB-BASE MATERIAL GRADATION REQUIREMENTS

MATERIAL TYPE	CHOKER COURSE	RESERVOIR COURSE PEA GRAVEL ASTM NO. 67	FILTER COURSE (NHDOT 304.1 MODIFIED)
SIEVE DESIGNATION (INCH/MM)	PERCENT PASSING (%), CRITERIA	PERCENT PASSING (%), CRITERIA	PERCENT PASSING (%), CRITERIA
6/150			100
2/50			
1½/37.5	100		
1/25	75 – 100	100	
¾/19	45 - 65	90-100	
½/12.5	20 - 35		
3/8/9.5	0- 25	20-55	
#4/4.75		0-10	70-100
#8/2.36		0-5	
#200/0.075			0-6**
VOIDS (ASTM C29)	>40%	>40%	

* ALL RANGE +/-5% OR APPROVAL BY REVIEW ENGINEER
**PREFERABLY LESS THAN 4% FINES

TABLE 2: TESTING REQUIREMENTS FOR COMPACTION AND INFILTRATION FOR SUBGRADE AND SUBBASE

CONSTRUCTION ELEMENT	LAYER THICKNESS (IN)	FIELD TESTING REQ.	COMPACTION LEVEL STANDARD PROCTOR (D698)	INFILTRATION RATE (FT/DAY)	FREQUENCY 1X PER SF
I. EMBANKMENTS AND FILLS					
A. NON-POROUS AREAS FILL AND SUBGRADE UNDER STREETS, PARKING AREAS, AND OTHER PAVED AREAS	12	T138	95%	N/A	
B. POROUS AREAS FILL AND SUBGRADE	12	T138 D3385	95-99%	>5-30'	10,000
C. POROUS AREAS SUBBASE (FILTER COURSE)	12	T138 D3385	95-99%	>5-30'	40,000
D. ROUGH SITE GRADING	24	T138	85%	N/A	
II. TRENCHES					
A. PIPE SIDEFILLS AND TOP 4 FEET OF PIPE BACKFILL UNDER PAVEMENTS"	12	T138	93%	N/A	
B. BACKFILL BELOW 4 FEET UNDER PAVEMENT	18	T138	90%	N/A	

*THE INFILTRATION RATE SHALL BE NO LESS 5-30 FT/DAY OR 50% OF THE HYDRAULIC CONDUCTIVITY (D2434) AT 95% STANDARD PROCTOR COMPACTION; SUBGRADE REFERS TO EVERYTHING 2' BELOW FINISHED GRADE OF PAVEMENT; SUBBASE REFERS TO CONSTRUCTED PAVEMENT MATERIALS ABOVE SUBGRADE AND BELOW PAVEMENT SURFACE.

TABLE 3: POROUS ASPHALT MIX DESIGN CRITERIA.

SIEVE DESIGNATION (INCH/MM)	PERCENT PASSING (%), CRITERIA
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
PGAB CONTENT (AASHTO T164)	5.7-6.2%
MIXING TEMPERATURE RANGE	290°F-350°F OR AS PER PGAB SUPPLIER
PGAB GRADE	PG 76-28
STYRENE BUTADIENE STYRENE (SBS)	3% OR TBD
AIR VOID CONTENT (ASTM D6752/AASHTO T275)	18.0-22.0%
DRAINDOWN (ASTM D6390)	< 0.3 %
RETAINED TENSILE STRENGTH (TSR) (AASHTO 283)	> 80 %
CANTABRO ABRASION TEST ON UNAGED SAMPLES (ASTM D7064-04)	< 12%

*TESTING TOLERANCES SHOULD BE WITHIN THE SPECIFIED RANGE, OR FOR SINGLE CRITERIA SHOULD NOT VARY BY MORE THAN +/- 5 PERCENT (%) OR BY APPROVAL OF ENGINEER.
**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), THEN IN 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%.
****UNDER NO CIRCUMSTANCES IS A PGAB 64-28 ACCEPTABLE IN REPLACE OF PG 76-28.

TABLE 4: QA/QC REQUIREMENTS DURING PAVING

ACTIVITY	SCHEDULE/ FREQUENCY	TOLERANCE
INSPECT TRUCK BEDS FOR POOLING (DRAIN DOWN)	EVERY TRUCK	N/A
TAKE SURFACE TEMP. BEHIND JOINT HEATER	EACH PULL	6°C (10°F) OF COMPACTION TEMP.
CONSULT WITH ENGINEER TO DETERMINE LOCATIONS OF BUTT JOINTS	AS NEEDED	N/A
TEST SURFACE SMOOTHNESS & POSITIVE DRAINAGE WITH 10 FT STRAIGHTEDGE	AFTER COMPACTION	4.5 MM (3/16")
CONSULT WITH ENGINEER TO MARK CORE LOCATIONS FOR QA TESTING	AFTER COMPACTION	N/A

TABLE 5: QA/QC TESTING REQUIREMENTS BY SAMPLES AT ASPHALT PLANT AND FIELD SAMPLES BY CORE

TEST	POROUS ASPHALT WEARING COURSE RANGE/SAMPLE LOCATION	ASPHALT TREATED PERMEABLE BASE RANGE/SAMPLE LOCATION	FREQUENCY MINIMUM X PER DAY, CRITERIA
BINDER CONTENT (AASHTO T164)	5.7 – 6.25%, ASPHALT PLANT	2.7%, ASPHALT PLANT	2X, PER 500 TONS
AIR VOID CONTENT (ASTM D6752/AASHTO T275)	16 – 22%, FIELD CORE	>27%, FIELD CORES	2X, PER 500 TONS
DRAINDOWN (ASTM D6390)	≤0.3%, ASPHALT PLANT	N/A	2X, PER 500 TONS
CANTABRO ABRASION TEST ON UNAGED SAMPLES (ASTM D7064-04)	≤12%, ASPHALT PLANT	N/A	2X, PER 500 TONS
INFILTRATION RATE (HOSE TEST)*	>1000 IN/HR	>3000 IN/HR	2X, PER 500 TONS

*INFILTRATION WILL BE REDUCED FOR TESTS PERFORMED ON SLOPE; HOSE TESTS WILL BE PERFORMED BY USE OF A WATER TRUCK WITH HOSE AND MEASURED FLOW, AND DETERMINED BY DIAMETER OF PUDDLE.
**INFILTRATION TESTS WILL BE COLLOCATED WITH CORE SAMPLES.
***TESTING TOLERANCES SHOULD NOT VARY FROM THE DESIGN CRITERIA BY MORE THAN +/- 5 PERCENT (%) OR APPROVAL BY ENGINEER

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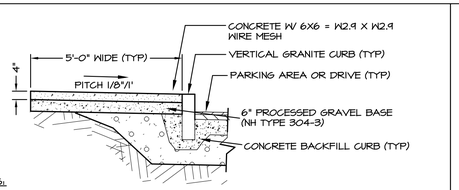
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CLIENT:
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151 PORTSMOUTH AVENUE
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TITLE:
POROUS PAVEMENT NOTES
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

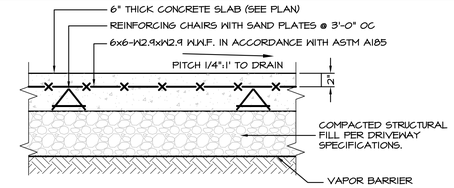
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CONCRETE NOTES:

1. CONCRETE WORK SHALL CONFORM TO THE FOLLOWING NOTES AND SPECIFICATIONS.
   - "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" - ACI 301-05.
   - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" - ACI 318-05.
2. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 4000 PSI AFTER 28 DAYS WITH 5 - 7% AIR ENTRAINMENT, W.R. GRACE "ECLIPSE PLUS" SHRINKAGE ADMIXTURE, AND W.R. GRACE "DCI-S" CORROSION INHIBITOR, AND A MIDRANGE WATER REDUCER.
3. FINISH CONCRETE W/ BROOM FINISH, TOOLED CONTROL JOINTS @ 5'-0" MAX SPACING, AND TOOLED JOINT ALONG ALL EDGES OF SIDEWALK.
4. SLAB SHALL BE WATER CURED FOR A MINIMUM OF 5 DAYS USING WET BURLAP.

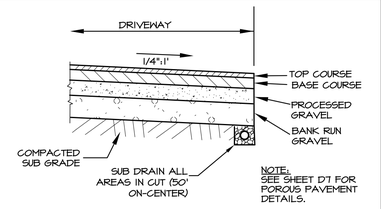
TYPICAL CONCRETE SIDEWALK DETAIL
N.T.S.



CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO THE FOLLOWING NOTES AND SPECIFICATIONS.
   - "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" - ACI 301-05.
   - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" - ACI 318-08.
2. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 4000 PSI AFTER 28 DAYS WITH 5 TO 7% AIR ENTRAINMENT FOR EXTERIOR SLABS, W.R. GRACE "ECLIPSE PLUS" SHRINKAGE ADMIXTURE, AND W.R. GRACE "DCI-S" CORROSION INHIBITOR, AND A MIDRANGE WATER REDUCER.
3. FINISH SLAB W/ BROOM FINISH AND TOOLED JOINT ALONG ALL EDGES OF SLAB.
4. SLAB SHALL BE WATER CURED FOR A MINIMUM OF 5 DAYS USING WET BURLAP.
5. W.W.F. SHALL BE SHEETS ONLY, LAP TWO SQUARES AT ALL JOINTS AND TIE @ 3'-0" ON CENTER.

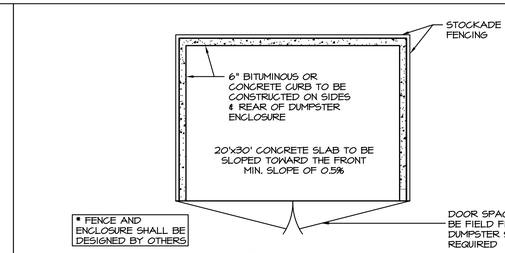
TYPICAL EXTERIOR CONCRETE PAD DETAIL
N.T.S.



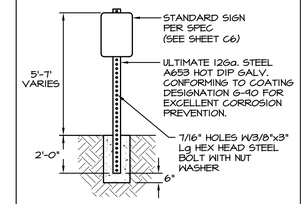
PAVEMENT COMPONENTS:
MATERIALS AND PLACEMENT METHODS SHOULD MEET CURRENT NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) REQUIREMENTS.

DRIVEWAY & PARKING AREA:
1-1/2" ASPHALT WEARING SURFACE, NHDOT ½" NOMINAL MAXIMUM AGGREGATE SIZE
2-1/2" ASPHALT BASE, NHDOT ¾" NOMINAL MAXIMUM AGGREGATE SIZE
6" CRUSHED GRAVEL BASE, NHDOT TYPE 304.3
12" GRAVEL SUB BASE, NHDOT TYPE 304.2

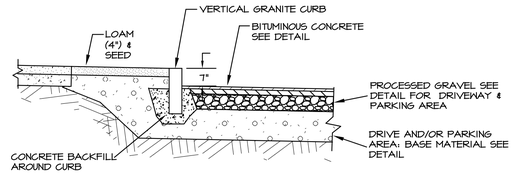
PAVED DRIVEWAY SECTION
N.T.S.



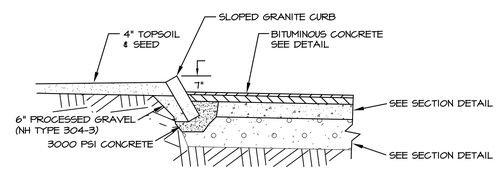
DUMPSTER SLAB DETAIL



STANDARD SIGN MOUNTING DETAIL
N.T.S.

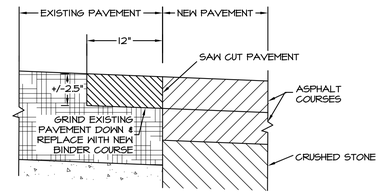


VERTICAL CURB DETAIL
N.T.S.

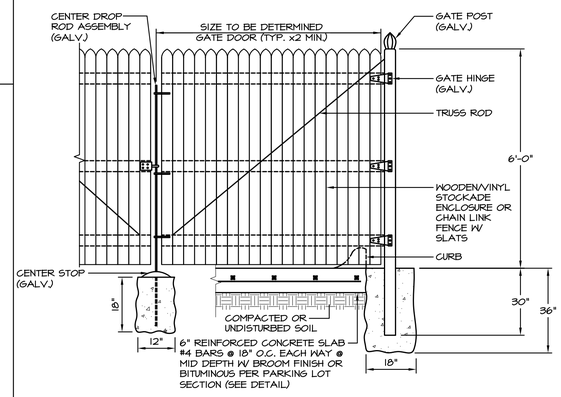


SLOPED CURB DETAIL
N.T.S.

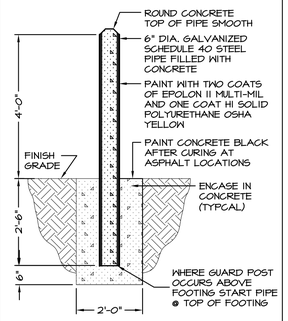
NOTES:
1. ALL GRAVEL AND SUBGRADE TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 WITHIN 3% OF OPTIMUM MOISTURE CONTENT.
2. MATERIALS MAY VARY UNDERNEATH EXISTING SECTION.



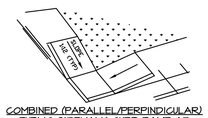
SAW CUT & GRIND DOWN DETAIL
NOT TO SCALE



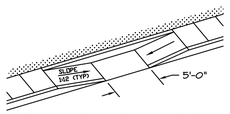
STOCKADE DUMPSTER ENCLOSURE DETAIL
N.T.S.



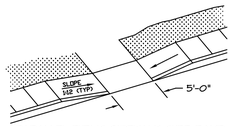
BOLLARD DETAIL
N.T.S.



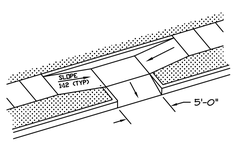
COMBINED (PARALLEL/PERPINDICULAR) PUBLIC SIDEWALK CURB RAMP AT SIDEWALK CORNER
N.T.S.



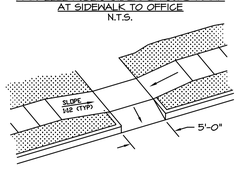
PARALLEL PUBLIC SIDEWALK CURB RAMP
N.T.S.



PARALLEL PUBLIC SIDEWALK CURB RAMP AT SIDEWALK TO OFFICE
N.T.S.



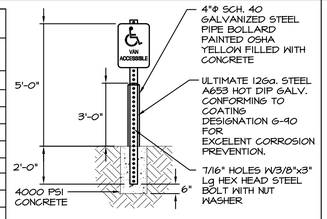
COMBINED (PARALLEL/PERPENDICULAR) PUBLIC SIDEWALK CURB RAMP
N.T.S.



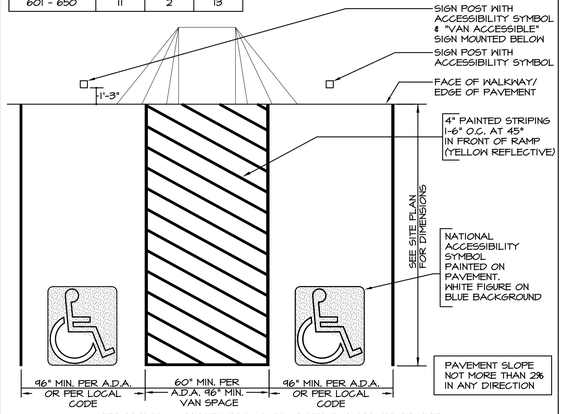
COMBINED (PARALLEL/PERPENDICULAR) PUBLIC SIDEWALK CURB RAMP AT SIDEWALK TO OFFICE
N.T.S.

ACCESSIBILITY RAMP DETAILS
N.T.S.

PARKING & PASSENGER LOADING ZONES			
TOTAL # PARKING SPACES	MINIMUM ACCESSIBLE SPACES		
	STAND.	VAN	TOTAL
1 - 25	0	1	1
26 - 50	1	1	2
51 -75	2	1	3
76 - 100	3	1	4
101 - 150	4	1	5
151 - 200	5	1	6
201 - 300	6	1	7
301 - 400	7	1	8
401 - 500	7	2	9
501 - 550	9	2	11
551 - 600	10	2	12
601 - 650	11	2	13

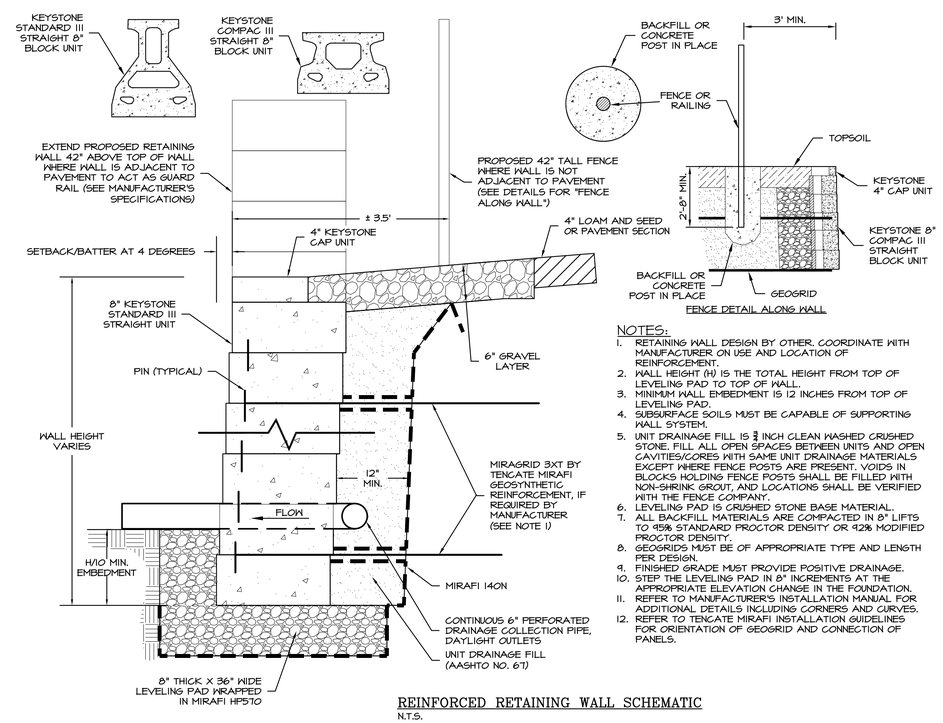


ACCESSIBILITY SIGN MOUNTING DETAIL



SEE PARKING & PASSENGER LOADING ZONES FOR SPACES REQUIRED.

PARKING STALL FOR THE PHYSICALLY CHALLENGED
N.T.S.



FENCE DETAIL ALONG WALL

NOTES:
1. RETAINING WALL DESIGN BY OTHER. COORDINATE WITH MANUFACTURER ON USE AND LOCATION OF REINFORCEMENT.
2. WALL HEIGHT (H) IS THE TOTAL HEIGHT FROM TOP OF LEVELING PAD TO TOP OF WALL.
3. MINIMUM WALL EMBEDMENT IS 12 INCHES FROM TOP OF LEVELING PAD.
4. SUBSURFACE SOILS MUST BE CAPABLE OF SUPPORTING WALL SYSTEM.
5. UNIT DRAINAGE FILL IS ¾ INCH CLEAN WASHED CRUSHED STONE. FILL ALL OPEN SPACES BETWEEN UNITS AND OPEN CAVITIES/CORES WITH SAME UNIT DRAINAGE MATERIALS EXCEPT WHERE FENCE POSTS ARE PRESENT. VOIDS IN BLOCKS HOLDING FENCE POSTS SHALL BE FILLED WITH NON-SHRINK GROUT, AND LOCATIONS SHALL BE VERIFIED WITH THE FENCE COMPANY.
6. LEVELING PAD IS CRUSHED STONE BASE MATERIAL.
7. ALL BACKFILL MATERIALS ARE COMPACTED IN 8" LIFTS TO 95% STANDARD PROCTOR DENSITY OR 92% MODIFIED PROCTOR DENSITY.
8. GEOGRIDS MUST BE OF APPROPRIATE TYPE AND LENGTH PER DESIGN.
9. FINISHED GRADE MUST PROVIDE POSITIVE DRAINAGE.
10. STEP THE LEVELING PAD IN 8" INCREMENTS AT THE APPROPRIATE ELEVATION CHANGE IN THE FOUNDATION.
11. REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL DETAILS INCLUDING CORNERS AND CURVES.
12. REFER TO TENCATE MIRAFI INSTALLATION GUIDELINES FOR ORIENTATION OF GEOGRID AND CONNECTION OF PANELS.

REINFORCED RETAINING WALL SCHEMATIC
N.T.S.

SEAL

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
1	JAN 22, 2025	FOR APPROVAL	

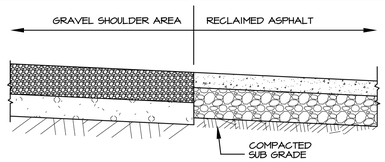
DRAWN:	JJM	DESIGN:	JJM
CHECKED:	BDS	CHECKED:	BDS

EMANUEL ENGINEERING
civil & structural consultants, land planners
118 Portsmouth Avenue, A202
Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
www.emanuelengineering.com

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

TITLE:
SITE DETAILS
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS SHOWN	D2

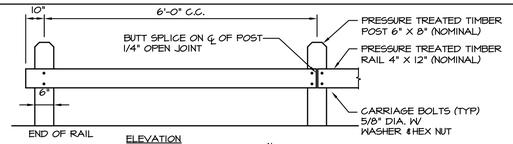


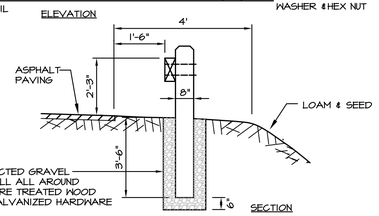
COMPONENTS:
MATERIALS AND PLACEMENT METHODS SHOULD MEET CURRENT NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) REQUIREMENTS.

RECLAIMED ASPHALT:
6" RECLAIMED STABILIZED BASE, COMPACTED, NHDOT TYPE 306.206
12" CRUSHED STONE (VERY COURSE), NHDOT TYPE 304.6
MIRAF 500X, OR EQUAL, WOVEN FABRIC TO BE PLACED ON COMPACTED SUBGRADE

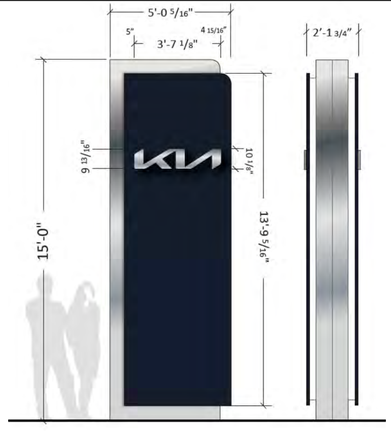
GRAVEL SHOULDER AREA:
10" CRUSHED GRAVEL BASE, NHDOT TYPE 304.3
12" GRAVEL SUB BASE, NHDOT TYPE 304.2

GRAVEL SHOULDER & RECLAIMED PAVEMENT SECTION
NTS





TIMBER GUARD RAIL DETAIL
N.T.S.



Logo: 3 Sq. Ft.
Total: 75.39 Sq. Ft.

Colors

- Black KIA ACM – TBD
- Metallic Silver KIA ACM – Alfrex Exotic Mica
- Accent Lighting Lens – 7328 White
- LED – 7100K White Illumination

Specifications

Cladding – 4MM KIA Black and Metallic Silver ACM
Accent Lighting – 7100K LED illumination with 7328 White Polycarbonate Lens
KIA Wordmark – Milled Aluminum and Plastic "Sandwich" Design with 7100K LED illumination thru edge of filler

SIGN DETAIL
N.T.S.

GENERAL SPECIFICATIONS

NO. REQ'D: (1)
CAPACITY: 1000 GALLON
TYPE: HTC, HIGHGUARD, DOUBLE WALL
MATERIAL: MILD CARBON STEEL
FLOW RATE: 100 GPM

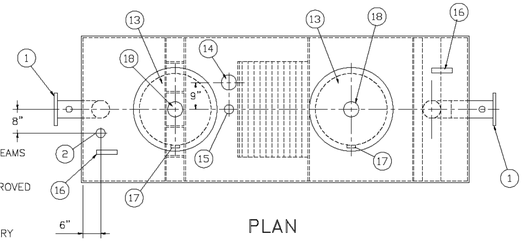
GAUGE:	INNER	OUTER
SHELL–	7 GA.	10 GA.
HEADS–	7 GA.	10 GA.

SURFACE PREP:
SSPC NO.6 BLAST ALL EXTERIOR SURFACES

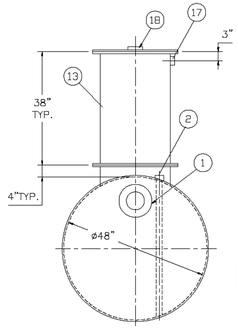
COATING:	MATERIAL	THICKNESS
EXTERIOR–	POLYURETHANE	(75 MILS)
INTERIOR–	NONE	

CONSTRUCTION : LAP FIT & WELD ALL EXTERIOR SEAMS
OPERATING PRESSURE : ATMOSPHERIC

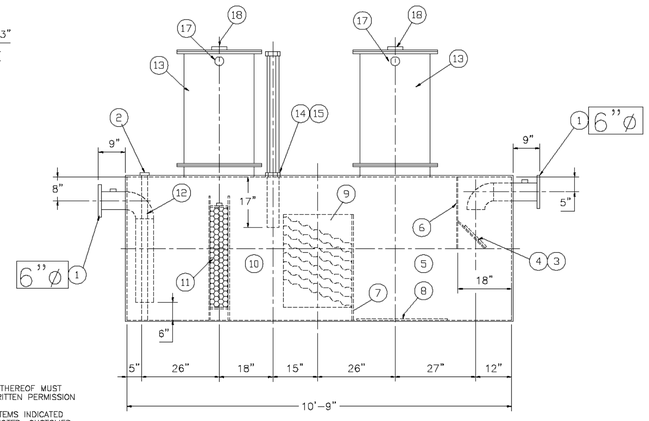
NOTES:
1. POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS
2. ALL VENT PIPING BY INSTALLER
3. 15000 VOLT SPARK TEST PROVIDED AT FACTORY



PLAN



END VIEW



ELEVATION

PROVIDED EQUIPMENT

1. 150# R.F.S.O. FLANGE W/ 2" NPT FOR VENT
2. 2"ø FTG. FOR LEAK DETECTION
3. VELOCITY HEAD DIFFUSION BAFFLE
4. WEAR PLATE
5. SEDIMENT CHAMBER
6. UNDERFLOW BAFFLE
7. SLUDGE BAFFLE
8. STRIKER PLATES
9. PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES
10. OIL/WATER SEPARATOR CHAMBER
11. 6" THICK PETROSCREEN COALESCER MATERIAL INSTALLED WITH PULL ROD SHIPPED LOOSE
12. OUTLET DOWNCOMER
13. 24"ø MANWAY WITH BOLT–ON EXTENSION SHIPPED LOOSE
14. 4"ø FTG. FOR OIL PUMPOUT W/ INTERNAL PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
15. 2"ø FTG. FOR LEVEL SENSOR W/ RISER PIPE SHIPPED LOOSE
16. LIFTING LUG
17. 2"ø FTG. FOR VENT TYP. BOTH MANWAYS
18. 4"ø FTG. FOR GAUGE WITH PLUG TYP. BOTH MANWAYS

NOTE :
ALL RIGHTS RESERVED. THIS DRAWING OR ANY PART THEREOF MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANK.
HIGHLAND TANK SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS FABRICATION DRAWING UNLESS OTHERWISE NOTED. CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE / LOCATION OF FITTINGS , ACCESSORIES & COATINGS SHOWN ON THIS DRAWING

REVISIONS

Highland Tank
U.S. Patent #4,722,800 #6,606,224 Canadian Patent # 1,296,263 # 2,389,065

1000 GALLON OIL WATER SEPARATOR
HTC, HIGHGUARD, DOUBLE WALL

CUSTOMER:
PROJECT:
QUOTE NO:
CHK'D BY:

SCALE:	DATE:	DWG. BY:	DWG. NO.:
1/2"=1'-0"	7-30-07		01000HGDWHTCHDS

SEAL

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
2	APR 23, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	

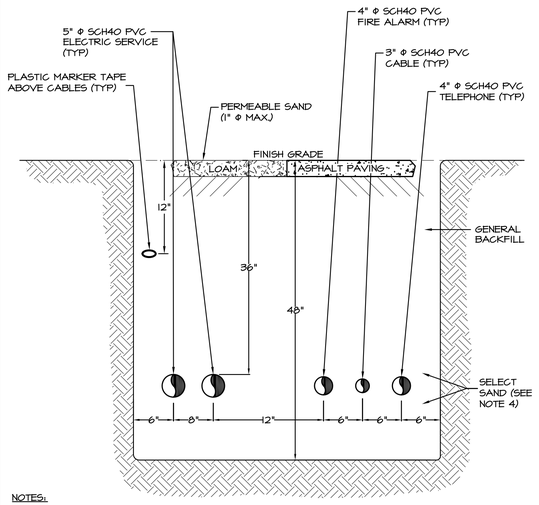
DRAWN:	DESIGN:
JJM	JJM
CHECKED: BDS	CHECKED: BDS

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118 Portsmouth Avenue, A202
Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
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CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

TITLE:
SITE DETAILS
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS SHOWN	D3

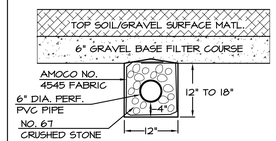


NOTES:

VERIFY NUMBER OF CONDUIT RUNS AND TYPES OF CONDUITS REQUIRED WITH ELECTRICAL AND MECHANICAL DESIGNERS BEFORE INSTALLATION

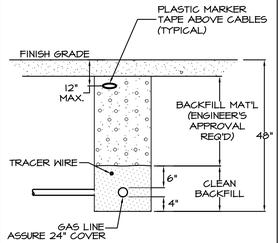
1. ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.
2. SERVICE BOX CONNECTIONS SHALL BE "FLUSH MOUNT" TO GREATEST EXTENT POSSIBLE AND LOCATED AT PROPERTY LINE CORNERS.
3. PIPE SIZES ARE MINIMUM SIZES TO BE INSTALLED.
4. BACKFILL: SHALL BE SELECTED SAND, 100% SHALL PASS THROUGH 1/4" SCREEN, UP TO 1% MAY BE ROUNDED PEBBLES UP TO 3/8" IN SIZE.
5. TRENCH WIDTH IS TO BE 12" MINIMUM, DEPENDING ON NUMBER OF UTILITIES IN TRENCH, UNLESS CABLE IS PLOWED IN.
6. UTILITIES ARE TO BE LOCATED IN ROAD SHOULDERS AND ROW'S AS DETERMINED BY PLANS. ALL WORK TO BE COORDINATED WITH UTILITY COMPANIES.
7. THERE MAY BE MORE OR LESS SERVICES TO BE INSTALLED IN TRENCH VERIFY WITH UTILITIES PLAN.
8. VERIFY & REFER TO PROJECT ELECTRICAL DRAWINGS AND DETAILS FOR SPECIFICS.

TYPICAL UTILITY TRENCH DETAIL
N.T.S.

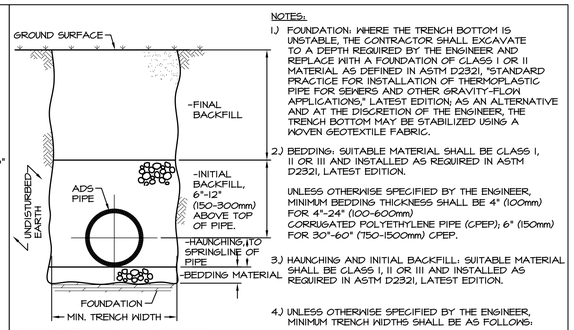


NOTE:
1. SUB DRAINS SHALL DRAIN TO DRAINAGE STRUCTURE OR TO DAYLIGHT PER SHEET C4.

SUBSOIL DRAIN DETAIL
N.T.S.



GAS LINE INSTALLATION
N.T.S.



TYPICAL TRENCH CROSS-SECTION
N.T.S.

NOTES:

1.) FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.

2.) BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100-600mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-60" (750-1500mm) CPEP.

3.) HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

4.) UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

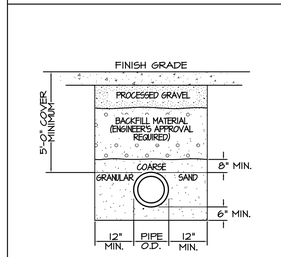
NOMINAL Φ in (mm)	MIN. RECOMMENDED TRENCH WIDTH, in (mm)
4 (100)	21 (530)
6 (150)	23 (580)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
24 (600)	48 (1220)
30 (750)	66 (1680)
36 (900)	78 (1980)
42 (1050)	83 (2110)
48 (1200)	89 (2260)
60 (1500)	102 (2590)

5.) MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300), 24 (600) FOR 60" (1500) PIPE*
H25 (RIGID PAVEMENT)	12 (300), 24 (600) FOR 60" (1500) PIPE
E80 RAILWAY	24 (600)
HEAVY CONSTRUCTION	48 (1200)

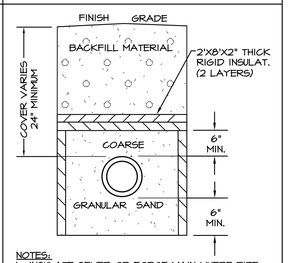
* TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

EXCAVATED TRENCH INSTALLATION DETAIL
N.T.S.



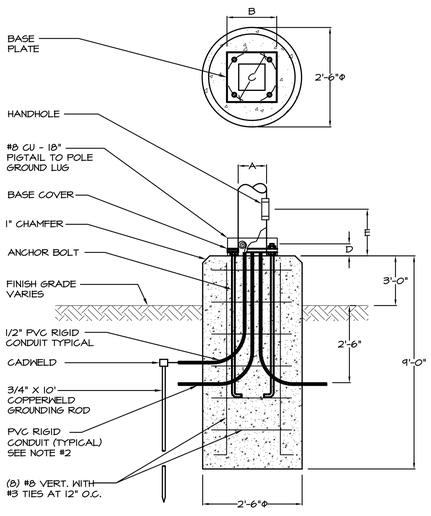
NOTE:
1. SEE SITE PLAN FOR PIPE SIZES AND SERVICES.

WATERLINE INSTALLATION
N.T.S.



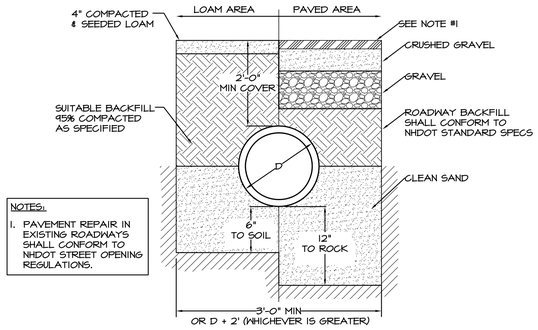
NOTES:
1. INSULATE SEWER OR FORCE MAIN WHERE PIPE WILL BE LESS THAN 6' BELOW PLOWED AREAS OR LESS THAN 4'-6" BELOW AREAS RUNNING CROSS COUNTRY.
2. GAPS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2'x2'x2" PIECE OF INSULATION CENTERED OVER GAP.

SEWER PIPE INSTALLATION DETAIL
N.T.S.



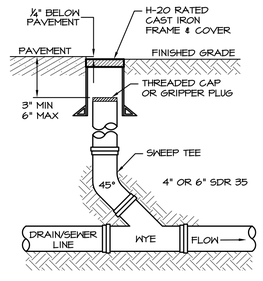
NOTES:
1. REFER TO MANUFACTURER FOR A, B, C, D AND E DIMENSIONS.
2. FIELD COORDINATE QUANTITY AND SIZE OF CONDUITS AT EACH LOCATION.
3. CONCRETE BASE BY THE GENERAL CONTRACTOR.

LIGHT POLE CONCRETE BASE DETAIL
N.T.S.

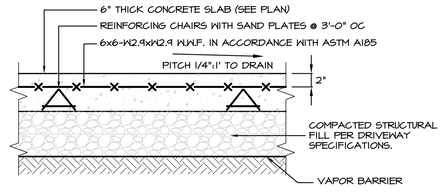


NOTES:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO NHDOT STREET OPENING REGULATIONS.

DRIVEWAY & PARKING LOT TYPICAL PIPE-RUN SECTION
N.T.S.



SERVICE CLEANOUT DETAIL
N.T.S.



CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO THE FOLLOWING NOTES AND SPECIFICATIONS.
   - "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" - ACI 301-05.
   - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" - ACI 318-08.
2. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 4000 PSI AFTER 28 DAYS WITH 5 TO 7% AIR ENTRAINMENT FOR EXTERIOR SLABS, W.R. GRACE "ECLIPSE PLUS" SHRINKAGE ADMIXTURE, AND W.R. GRACE "DCI-S" CORROSION INHIBITOR, AND A MIDRANGE WATER REDUCER.
3. FINISH SLAB W/ BROOM FINISH AND TOOLED JOINT ALONG ALL EDGES OF SLAB.
4. SLAB SHALL BE WATER CURED FOR A MINIMUM OF 5 DAYS USING WET BURLAP.
5. W.W.F. SHALL BE SHEETS ONLY, LAP TWO SQUARES AT ALL JOINTS AND TIE @ 3'-0" ON CENTER.

TYPICAL EXTERIOR CONCRETE PAD FOR TRANSFORMER DETAIL
N.T.S.

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
1	JAN 22, 2025	FOR APPROVAL	

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CHECKED: BDS | CHECKED: BDS

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118 Portsmouth Avenue, A202
Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
www.emanuelengineering.com

CLIENT:

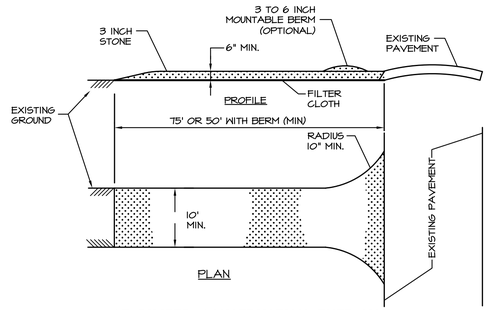
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL

TITLE:

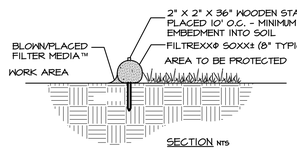
UTILITY DETAILS
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS SHOWN	D4

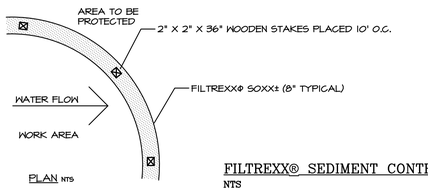


STABILIZED CONSTRUCTION ENTRANCE
N.T.S

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. ADDITIONAL INFO AVAILABLE AT HTTP://WWW.FILTREXX.COM

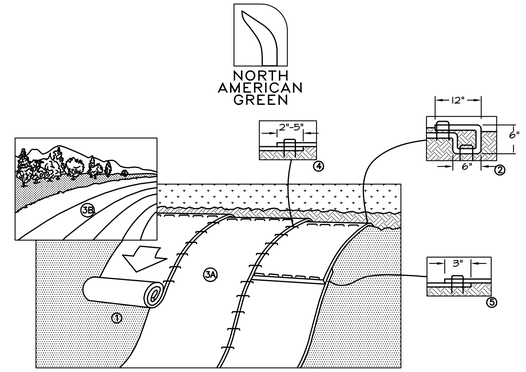


SECTION NTS



PLAN NTS

FILTREXX® SEDIMENT CONTROL
NTS



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (15cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

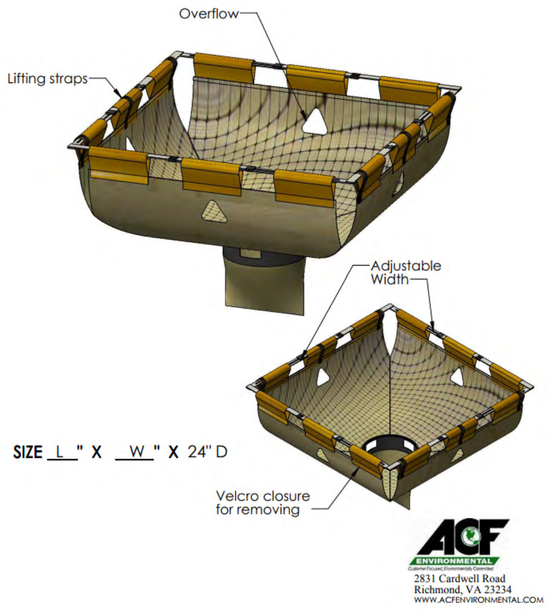
NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

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

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENTHS IN EXCESS OF 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

14648 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47725
USA 1-800-772-2040 CANADA 1-800-448-2040
www.nagreen.com

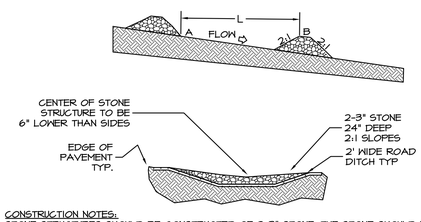
Silt Sack - Type C



2831 Cardwell Road
Richmond, VA 23234
WWW.ACFENVIRONMENTAL.COM

SPACING BETWEEN STRUCTURES

L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.



CONSTRUCTION NOTES:
STONE STRUCTURES SHOULD BE CONSTRUCTED OF 2-3" STONE. THE STONE SHOULD BE PLACED ACCORDING TO ABOVE DETAIL. CAREFUL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO INSURE THAT THE CENTER OF THE STRUCTURE IS LOWER THAN THE EDGES.

TEMPORARY GRADE STABILIZATION STRUCTURE
NTS

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
1	JAN 22, 2025	FOR APPROVAL	

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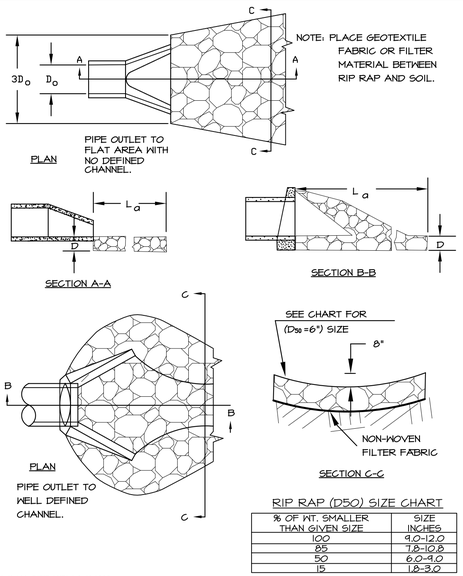
EMANUEL ENGINEERING
civil & structural consultants, land planners
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Stratham, NH 03885
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL

TITLE:
EROSION CONTROL DETAILS
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS SHOWN	D5

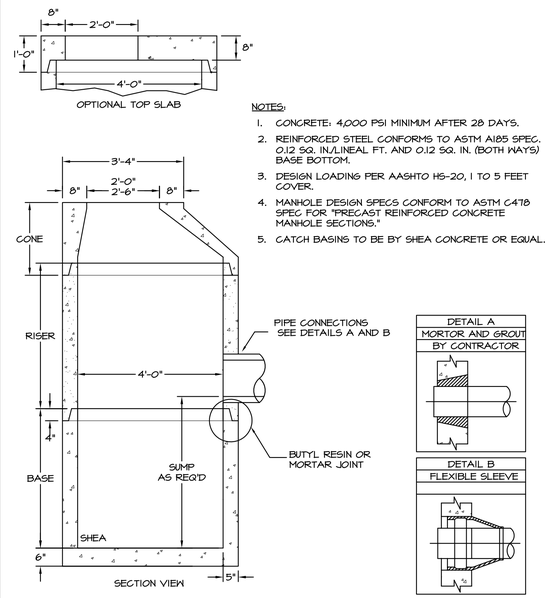


RIP RAP (D50) SIZE CHART

% OF WT. SMALLER THAN GIVEN SIZE	SIZE INCHES
100	9.0-12.0
85	7.2-10.8
50	6.0-9.0
15	1.2-3.0

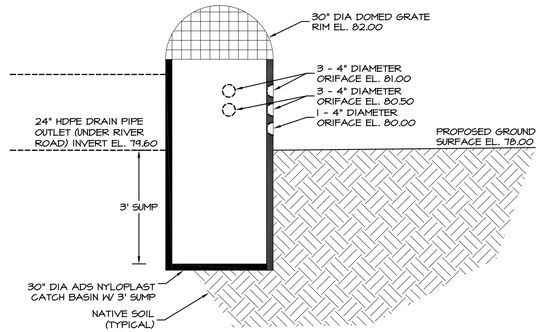
CONSTRUCTION SPECIFICATIONS:
1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OF GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIPRAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

PIPE OUTLET PROTECTION
N.T.S.



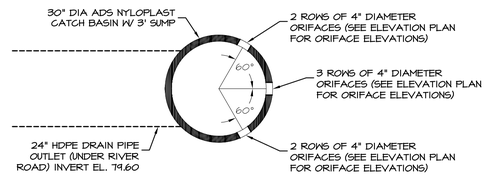
NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. DESIGN LOADING PER AASHTO HS-20, 1 TO 5 FEET COVER.
4. MANHOLE DESIGN SPECS CONFORM TO ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
5. CATCH BASINS TO BE BY SHEA CONCRETE OR EQUAL.

TYPICAL CATCH BASIN/MANHOLE DETAIL
N.T.S.

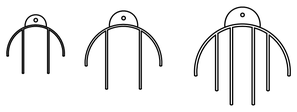


STAGED ORIFACE POND OUTLET (UNDER RIVER ROAD) – ELEVATION VIEW
SCALE 1"=2'

NOTES:
1. ORIFACES ARE TO BE FIELD FABRICATED



STAGED ORIFACE POND OUTLET (UNDER RIVER ROAD) – PLAN VIEW
SCALE 1"=2'

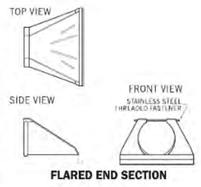


ANIMAL GUARD GRATE
(FINGER STYLE)
STANDARD SIZES:
4", 6", 8", 10", 12", 15", 18", 24", 30", 36" & 42"

NOTES:
1.) PRODUCTS SHOWN MANUFACTURED BY ADVANCE DRAINAGE SYSTEM INC. WWW.ADS-PIPE.COM
2.) USE ADVANCE DRAINAGE SYSTEM INC. OR EQUAL
3.) FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS

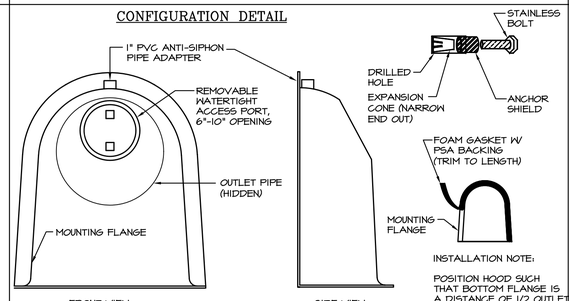
FLARED END SECTIONS

SIZE	PRODUCT CODE
10" (250mm)	1015NP
12" (300mm) / 15" (375mm)	1215NP
18" (450mm)	1810NP
24" (600mm)	2410NP
30" (750mm)	3015NP
36" (900mm)	3615NP

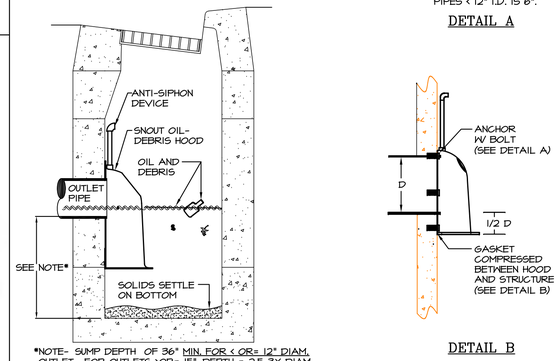


FLARED END SECTION

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR



*NOTE- SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3x DIAM.

DETAIL B

SNOUT INSTALLATION DETAIL
N.T.S.

SNOUT NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE SNOUT OR EQUAL
AS MANUFACTURED BY:
BEST MANAGEMENT PRODUCTS, INC.
53 MT. ARCHER RD.
LYME, CT 06371
(860) 434-0277, (860) 434-3195 FAX
TOLL FREE: (800) 504-8008 OR (888) 354-7585
WEB SITE: www.bestmp.com
OR PRE-APPROVED EQUAL

2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.

3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)

4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.

5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.

6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.

7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.

8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)

9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE:
A. INSTALLATION INSTRUCTIONS
B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
D. 3/8" STAINLESS STEEL BOLTS
E. ANCHOR SHIELDS

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
2	MAR 19, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	

DRAWN: JJM | DESIGN: JJM
CHECKED: BDS | CHECKED: BDS

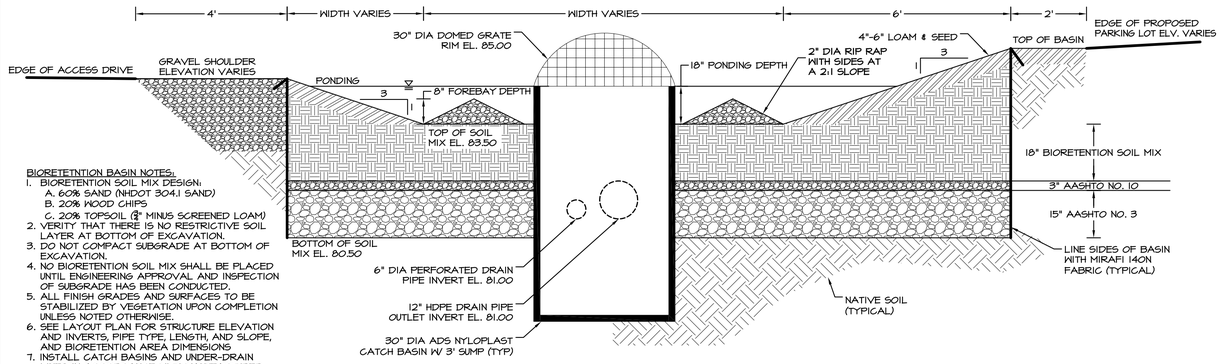
EMANUEL ENGINEERING
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CLIENT:
41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

SEAL

TITLE:
DRAINAGE DETAILS
FOR
41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS SHOWN	D6



BIORETETNTION BASIN NOTES:

1. BIORETENTION SOIL MIX DESIGN:
   A. 60% SAND (NHDOT 304.1 SAND)
   B. 20% WOOD CHIPS
   C. 20% TOPSOIL (¼" MINUS SCREENED LOAM)
2. VERIFY THAT THERE IS NO RESTRICTIVE SOIL LAYER AT BOTTOM OF EXCAVATION.
3. DO NOT COMPACT SUBGRADE AT BOTTOM OF EXCAVATION.
4. NO BIORETENTION SOIL MIX SHALL BE PLACED UNTIL ENGINEERING APPROVAL AND INSPECTION OF SUBGRADE HAS BEEN CONDUCTED.
5. ALL FINISH GRADES AND SURFACES TO BE STABILIZED BY VEGETATION UPON COMPLETION UNLESS NOTED OTHERWISE.
6. SEE LAYOUT PLAN FOR STRUCTURE ELEVATION AND INVERTS, PIPE TYPE, LENGTH, AND SLOPE, AND BIORETENTION AREA DIMENSIONS
7. INSTALL CATCH BASINS AND UNDER-DRAIN LINES IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AND WITH ANTI-FLOTATION DEVICES AS REQUIRED.
8. FOLLOW STORM WATER POLLUTION PREVENTION PLAN (SWPPP), MAINTENANCE, AND SOURCE CONTROL PLAN BY EEI, LATEST VERSION.

BIORETENTION SYSTEM A SECTION

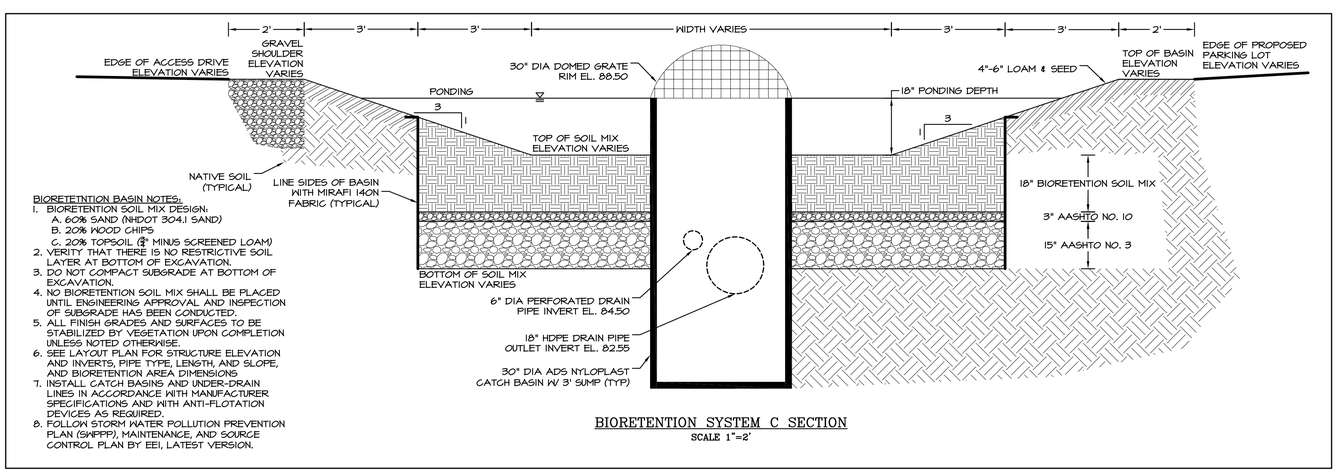
SCALE 1"=2'

BIORETETNTION BASIN NOTES:

1. BIORETENTION SOIL MIX DESIGN:
   A. 60% SAND (NHDOT 304.1 SAND)
   B. 20% WOOD CHIPS
   C. 20% TOPSOIL (¼" MINUS SCREENED LOAM)
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3. DO NOT COMPACT SUBGRADE AT BOTTOM OF EXCAVATION.
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7. INSTALL CATCH BASINS AND UNDER-DRAIN LINES IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AND WITH ANTI-FLOTATION DEVICES AS REQUIRED.
8. FOLLOW STORM WATER POLLUTION PREVENTION PLAN (SWPPP), MAINTENANCE, AND SOURCE CONTROL PLAN BY EEI, LATEST VERSION.

BIORETENTION SYSTEM B SECTION

SCALE 1"=2'

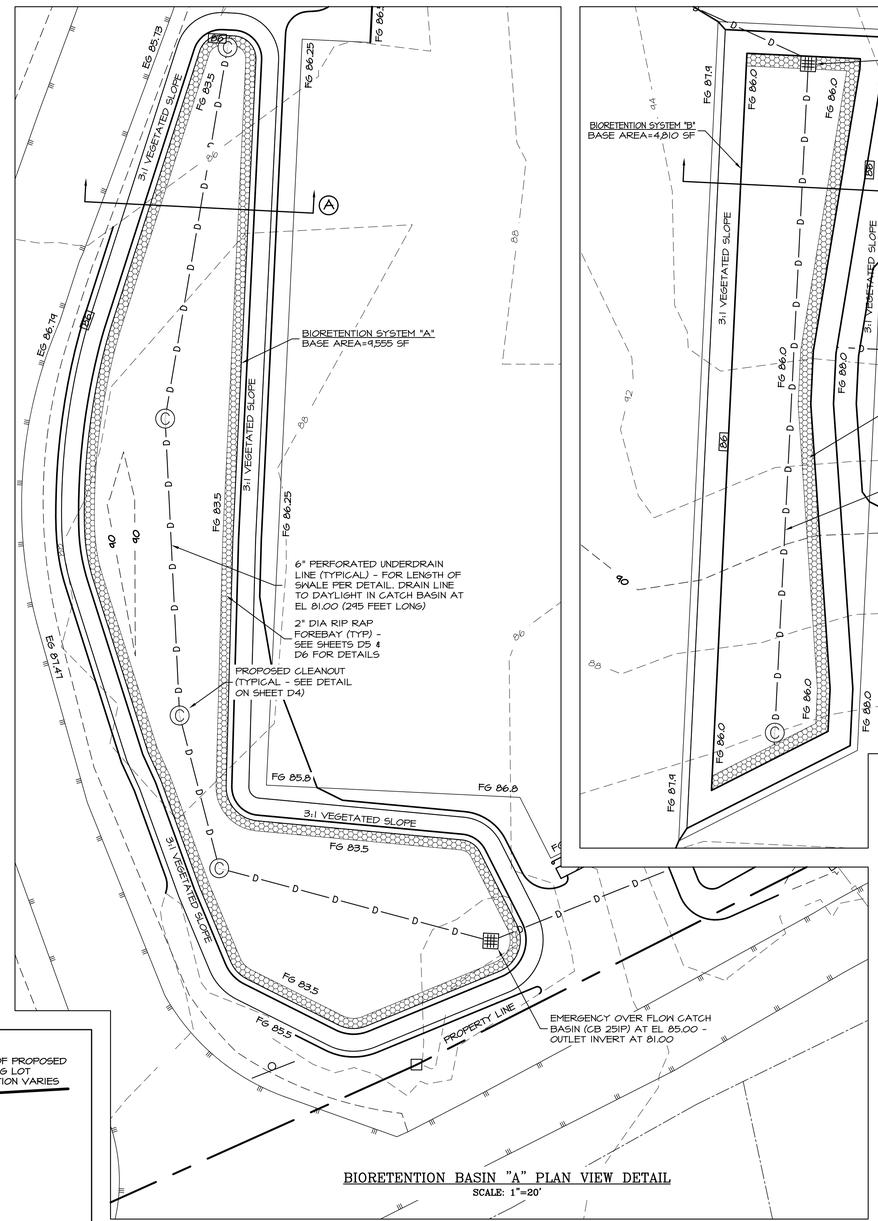


BIORETETNTION BASIN NOTES:

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BIORETENTION SYSTEM C SECTION

SCALE 1"=2'

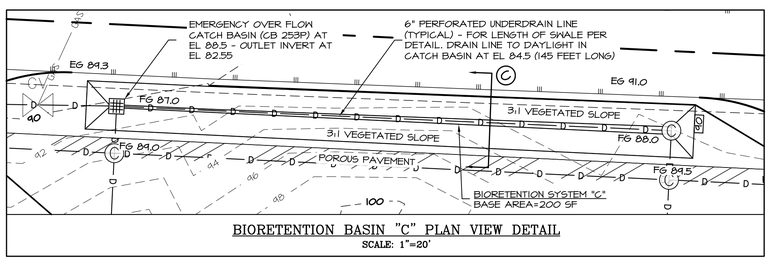


BIORETENTION BASIN "A" PLAN VIEW DETAIL

SCALE: 1"=20'

BIORETENTION BASIN "B" PLAN VIEW DETAIL

SCALE: 1"=20'



BIORETENTION BASIN "C" PLAN VIEW DETAIL

SCALE: 1"=20'

SEAL

ISS.	DATE:	DESCRIPTION OF ISSUE:	CHK.
2	MAR 19, 2025	FOR APPROVAL	
1	JAN 22, 2025	FOR APPROVAL	

DRAWN: JJM	DESIGN: JJM
CHECKED: BDS	CHECKED: BDS

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CLIENT:

41 PORTSMOUTH AVE LLC
151 PORTSMOUTH AVENUE
EXETER, NH 03833

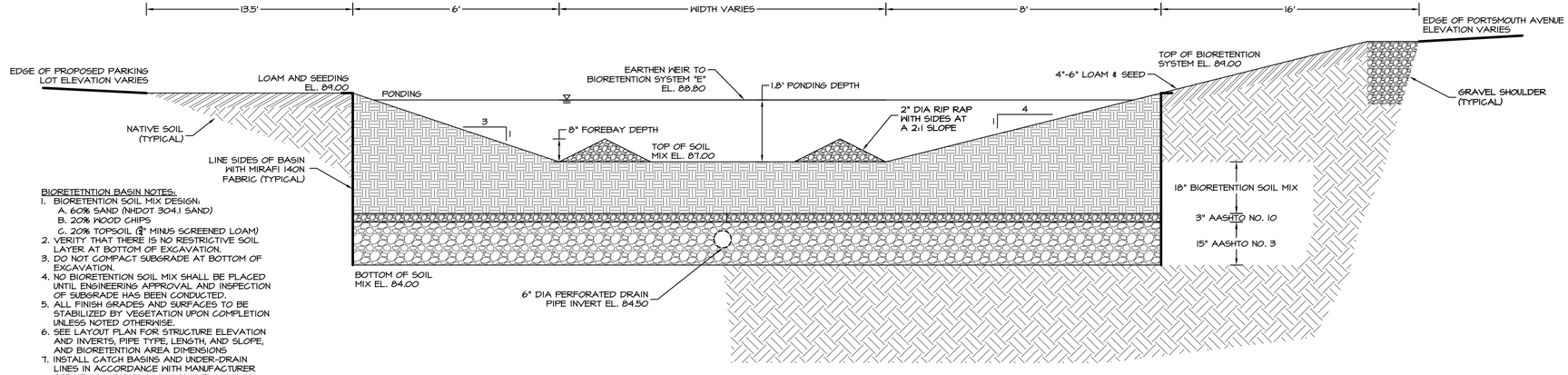
TITLE:

DRAINAGE DETAILS

FOR

41 PORTSMOUTH AVENUE REALTY LLC
41 PORTSMOUTH AVE (SITE)
(STRATHAM TAX MAP 9 LOT 4)
STRATHAM, NH 03885

PROJECT:	SCALE:	SHEET:
25-1001	AS NOTED	D7

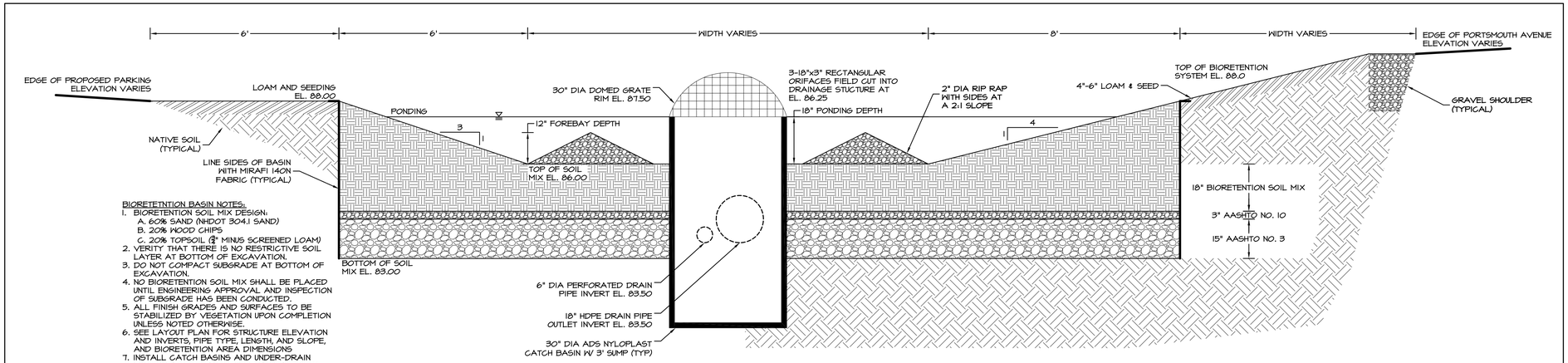


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BIORETENTION SYSTEM D SECTION

SCALE 1"=2'

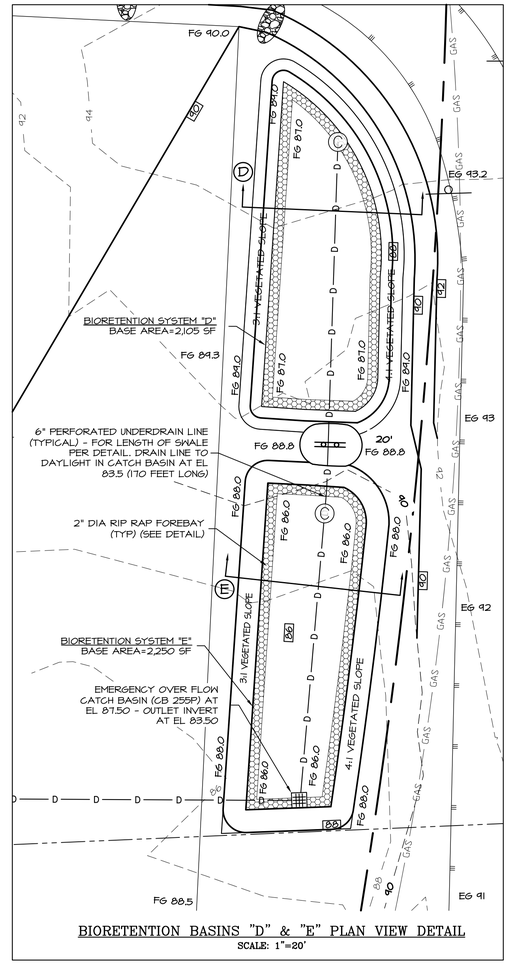


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BIORETENTION SYSTEM E SECTION

SCALE 1"=2'



BIORETENTION BASINS "D" & "E" PLAN VIEW DETAIL

SCALE: 1"=20'

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DRAWN: JJM | DESIGN: JJM

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SEAL

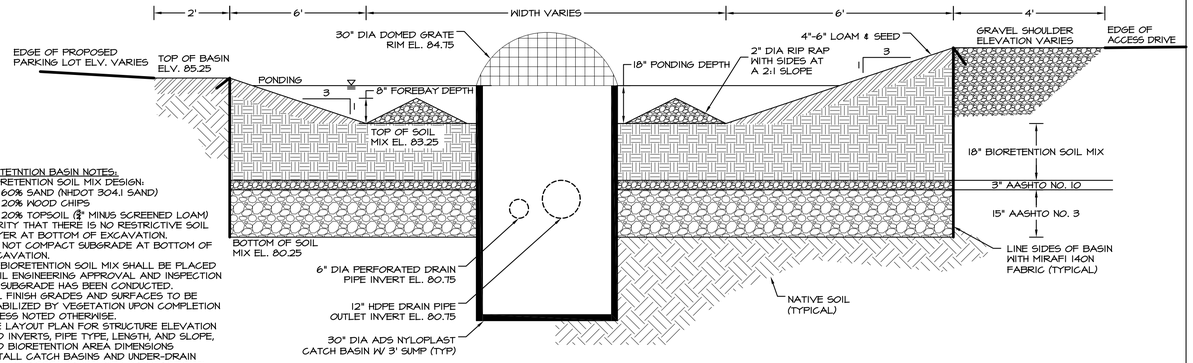
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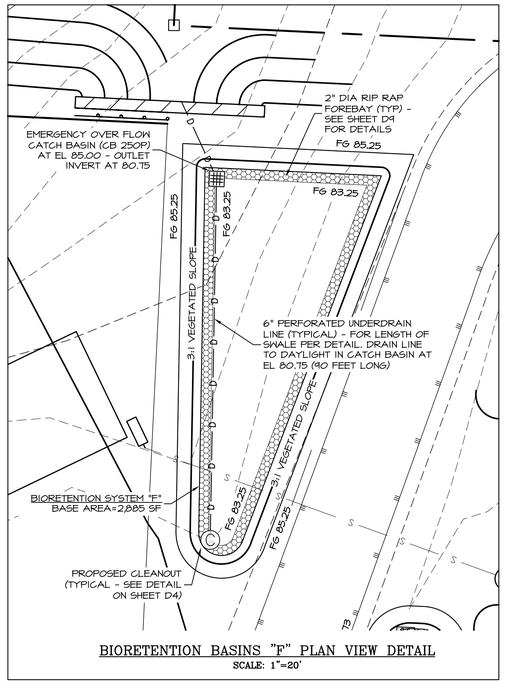
PROJECT:	SCALE:	SHEET:
25-1001	AS NOTED	D8



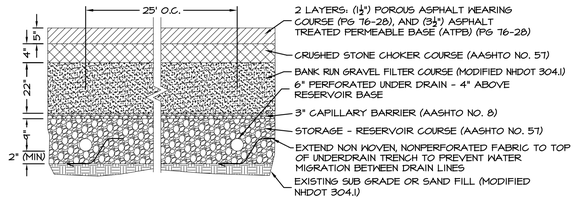
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BIORETENTION SYSTEM F SECTION
SCALE 1"=2'

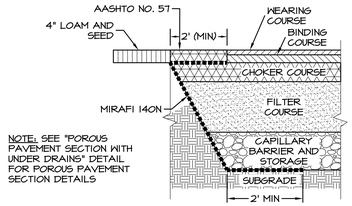


BIORETENTION BASINS "F" PLAN VIEW DETAIL
SCALE: 1"=20'



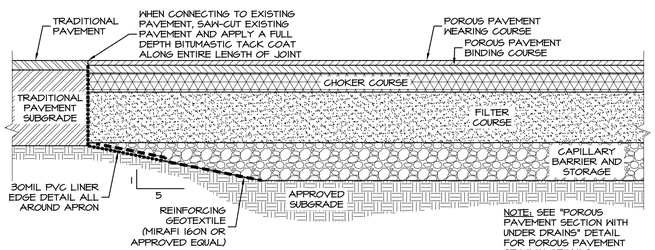
NOTE:
1. SEE SHEETS D1 & D2 FOR ADDITIONAL NOTES ON POROUS PAVEMENT, AND TABLE 1 SEPCIFICALLY FOR MODIFIED NHDOT 304.1 GRADATION.

POROUS PAVEMENT SECTION WITH UNDERDRAINS
N.T.S.

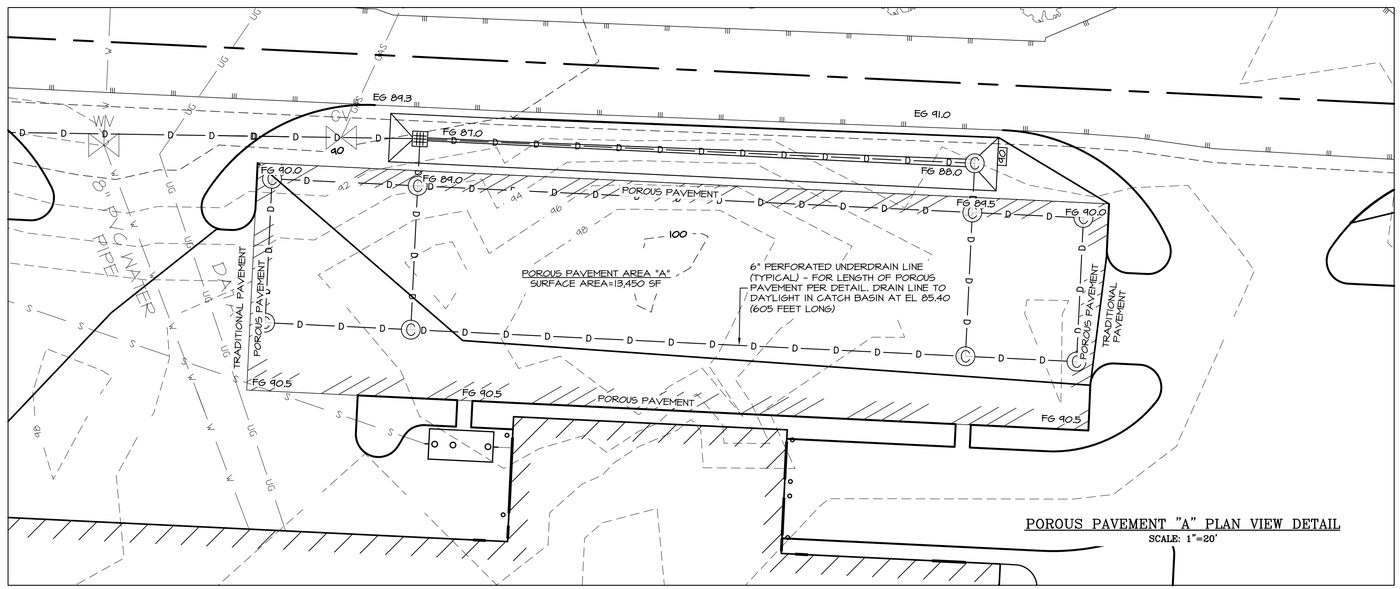


NOTE: SEE "POROUS PAVEMENT SECTION WITH UNDER DRAINS" DETAIL FOR POROUS PAVEMENT SECTION DETAILS

POROUS PAVEMENT EDGE DETAIL
N.T.S.



POROUS PAVEMENT TRANSITION TO TRADITIONAL PAVEMENT DETAIL
N.T.S.



POROUS PAVEMENT "A" PLAN VIEW DETAIL
SCALE: 1"=20'

SEAL

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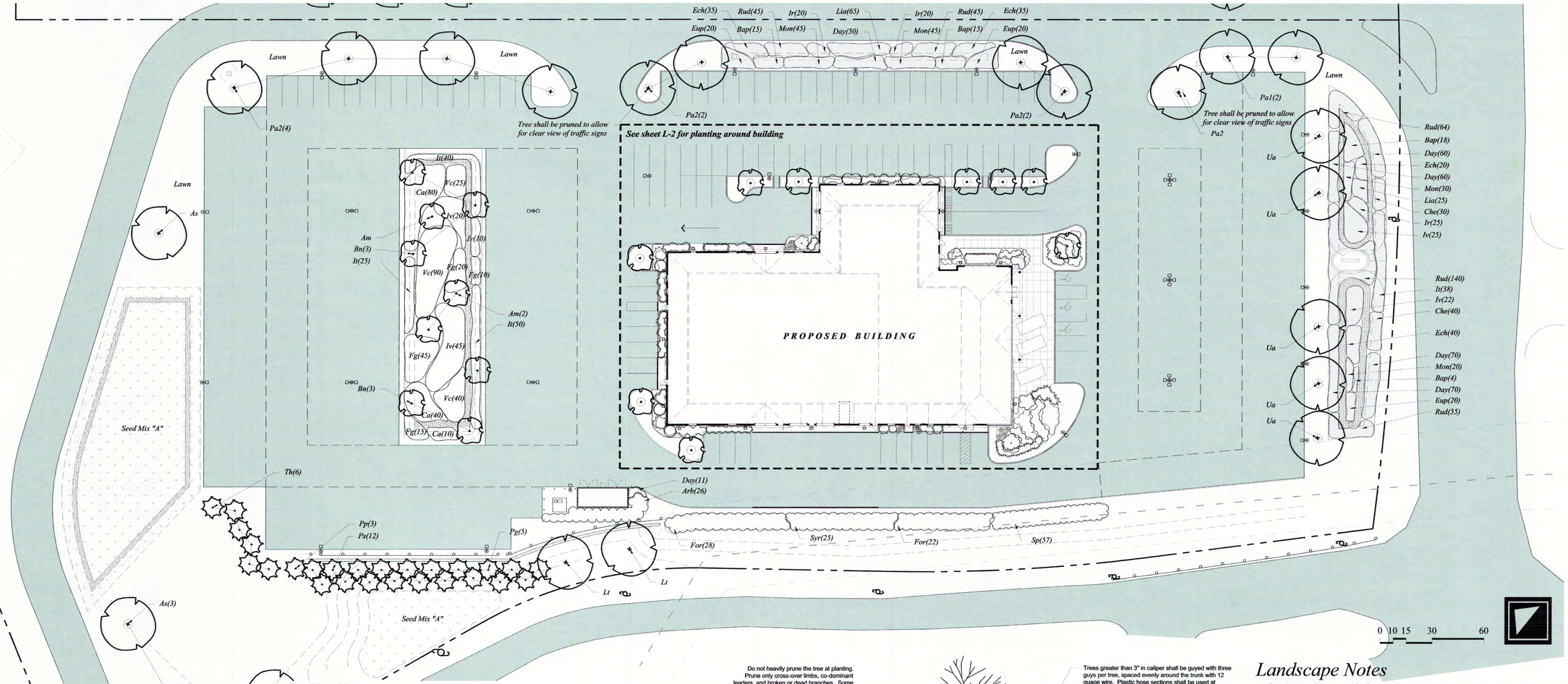
DRAWN: JJM | DESIGN: JJM
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TITLE:
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FOR
41 PORTSMOUTH AVENUE REALTY LLC
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(STRATHAM TAX MAP 9 LOT 4)
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PROJECT:	SCALE:	SHEET:
25-1001	AS NOTED	D9



Site Plant List

TREES

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Am	*Amelanchier x grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	3	8-10' Ht	14' Ht. min. B&B
As	*Acer saccharum 'Bonfire'*	Bonfire Sugar Maple	4	3.5" Cal	14' Ht. min. B&B
Bn	*Betula nigra 'Heritage'*	Heritage River Birch	6	10-12' Ht	14' Ht. min. B&B
Pa1	*Platanus x acerifolia 'Bloodgood'*	Bloodgood London Planetree	2	3.5" Cal	17' Ht. min. B&B
Pa2	*Platanus x acerifolia 'Bloodgood'*	Bloodgood London Planetree	9	3.5" Cal	14' Ht. min. B&B
Lt	*Liriodendron tulipifera*	Tuliptree	2	3.5" Cal	14' Ht. min. B&B
Pg	*Picea glauca*	White Spruce	5	8' Ht	B&B
Pp	*Picea pungens' Glauca'*	Colorado Blue Spruce	3	8' Ht	B&B
Ps	*Pinus strobus*	White Pine	12	10' Ht	B&B
Th	*Thuja plicata 'Green Giant'*	Green Giant Arborvitae	6	10' Ht	B&B
Ua	*Ulmus americana 'Valley Forge'*	Valley Forge American Elm	5	3.5" Cal	17' Ht. min. B&B
Zs2	*Zelkova serrata 'Green Vase'*	Green Vase Zelkova	2	3.5" Cal	17' Ht. min. B&B

SHRUBS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Arb	*Thuja occidentalis 'Smaragd'*	Emerald Green Arborvitae	26	7-8' Ht	B&B
Ca	*Clethra alnifolia 'Compacta'*	Compact Summersweet	130	3 gal	
Fg	*Fothergilla gardenii*	Dwarf Fothergilla	90	3 gal	
For	*Forsythia 'New Hampshire Gold'*	New Hampshire Gold Forsythia	50	3-4' Ht	
It	*Itea virginica 'Little Henry'*	Little Henry Sweetspire	153	3 gal	
Iv	*Ilex verticillata 'Red Sprite'*	Red Sprite Winterberry	122	3 gal	
Sp	*Spiraea x bumalda 'Anthony Waterer'*	Anthony Waterer Spirea	57	5 gal	
Syr	*Syringa meyeri 'Palibin'*	Dwarf Korean Lilac	25	3-4' Ht	
Vc	*Vaccinium corymbosum 'Friendship'*	Blueberry 'Friendship'	155	2 gal	

PERENNIALS, GROUNDCOVERS, VINES and ANNUALS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Bap	*Baptisia australis*	False Blue Indigo	52	1 gal	
Che	*Chelone glabra*	Turtlhead	70	1 gal	
Day	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily	321	1 gal	
Ech	*Echinacia 'Kim's Knee High'*	Kim's Knee High	130	1 gal	
Eup	*Eupatorium maculatum 'Gateway'*	Joe-pye Weed	60	1 gal	
Ir	*Iris versicolor*	Blue Flag Iris	65	1 gal	
Lia	*Liatris spicata*	Gayfeather	90	1 gal	
Mon	*Monarda 'Jacob Cline'*	Red Bee Balm	140	1 gal	
Rud	*Rudbeckia fulgida 'Goldsturm'*	Black-Eyed Susan	349	1 gal	

I certify that the landscape design as depicted hereon is compatible with and complementary to the building and hardscape design for the site.

Signed: _____ 7/24/14
Project Landscape Architect

I Roberta WoodBurn, hereby certify that I prepared or have sufficiently reviewed this plan and am confident that the design meets the requirements of the Town of Stratham Landscape design Standards. I am a Landscape Architect licensed by the State of NH # 002.

Seed Mixes:

Seed Mix A 50% New England Wetland Plants – New England Wetland Mix
50% New England Wetland Plants – New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites

Lawn Tall fescue bluegrass mix, such as Pennington Smartseed Tall Fescue Bluegrass Mix – or Approved equal

Application Rates:

Seed Mix A 50% @ 22lbs/acre New England Wetland Mix
50% @ 50lbs/acre New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites

Lawn As recommended by seed provider

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 guage 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.

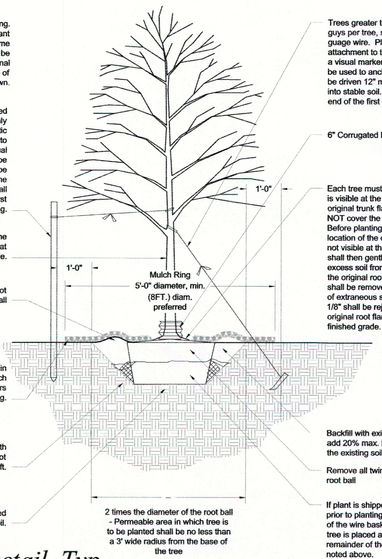
Mark the north side of the tree in the nursery. Rotate the tree to face north at the site whenever possible.

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.



Tree Planting Detail, Typ.

Trees greater than 3" in caliper shall be guyed with three guys per tree, spaced evenly around the trunk with 12 guage 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 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 from top half of root ball

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.

Landscape Notes

1. Design is based on drawings by ArchCon-Group, Inc. dated 6/11/2013 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. Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
5. 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.
6. 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.
7. 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.
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 either of the following
    a. An underground sprinkling system
    b. An outside hose attachment within 150 feet
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. 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.
22. 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.
23. 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.
24. 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.
25. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
26. Landscape Architect is not responsible for the means and methods of the contractor.

WOODBURN & COMPANY
Landscape Architecture, LLC
103 Kent Place
Newmarket, NH 03857
Tel 603.659.5949
Fax: 603.659.5939

Auto Fair

Site Landscape Plan

41 Portsmouth Avenue Stratham, New Hampshire

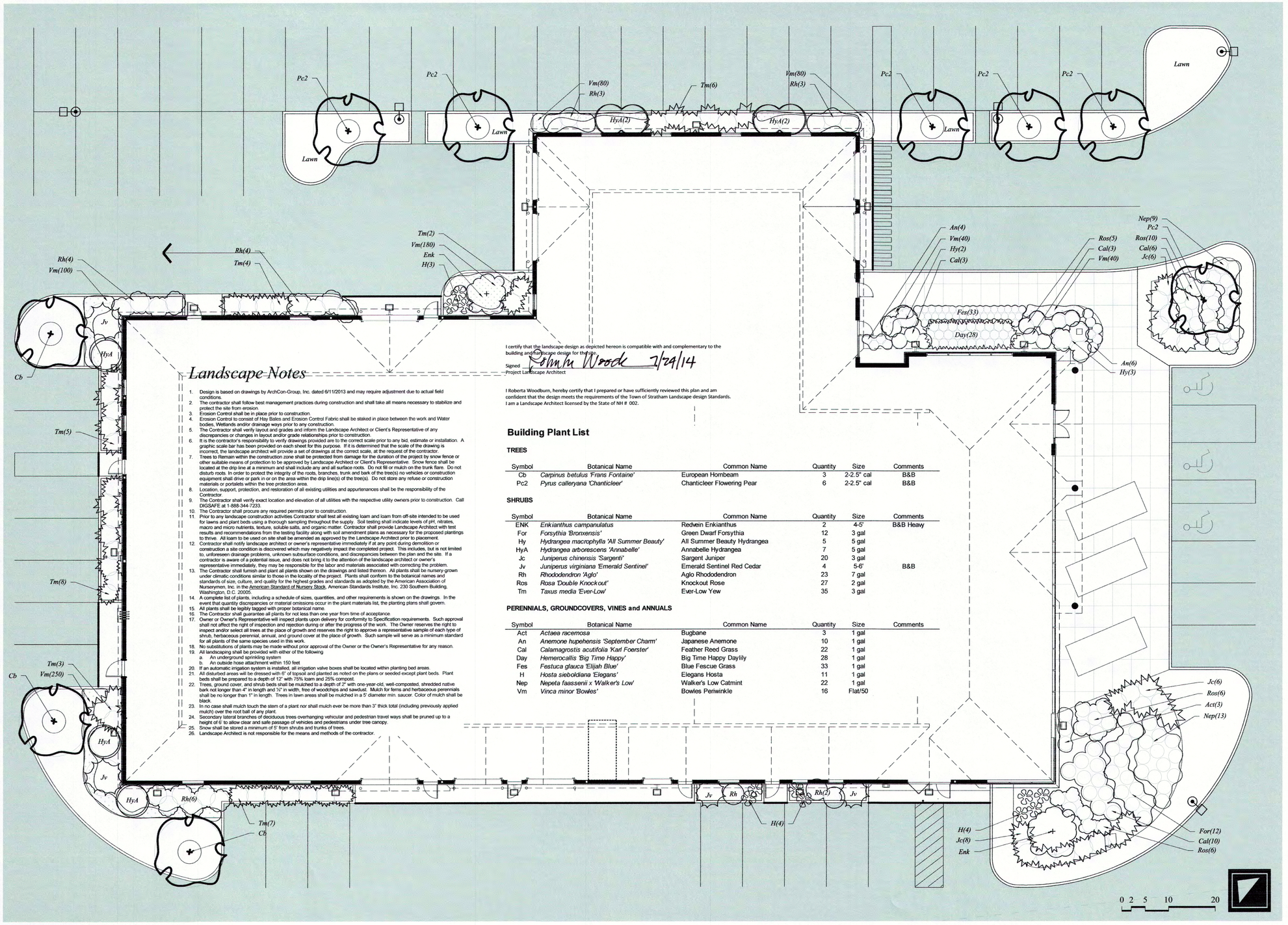
REGISTERED LANDSCAPE ARCHITECT ROBERTA WOODBURN 002 STATE OF NEW HAMPSHIRE

Drawn By:	*VB*
Checked By:	*RW*
Scale:	*1" = 30' - 0"*
Date:	*June 18, 2013*
Revisions:	*February 19, 2014*
	July 17, 2014

L-1

Sheet 1 of 2

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Landscape Notes

1. Design is based on drawings by ArchCon-Group, Inc. dated 6/11/2013 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. Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
5. 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.
6. 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.
7. 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.
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 either of the following
    a. An underground sprinkling system
    b. An outside hose attachment within 150 feet
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. 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.
22. 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.
23. 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.
24. 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.
25. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
26. Landscape Architect is not responsible for the means and methods of the contractor.

I certify that the landscape design as depicted hereon is compatible with and complementary to the building and hardscape design for the site.

Signed Roberta Woodburn 7/24/14
Project Landscape Architect

I Roberta Woodburn, hereby certify that I prepared or have sufficiently reviewed this plan and am confident that the design meets the requirements of the Town of Stratham Landscape design Standards. I am a Landscape Architect licensed by the State of NH # 002.

Building Plant List

TREES

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cb	*Carpinus betulus 'Frans Fontaine'*	European Hornbeam	3	2-2.5" cal	B&B
Pc2	*Pyrus calleryana 'Chanticleer'*	Chanticleer Flowering Pear	6	2-2.5" cal	B&B

SHRUBS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
ENK	*Enkianthus campanulatus*	Redvein Enkianthus	2	4-5'	B&B Heavy
For	*Forsythia 'Bronxensis'*	Green Dwarf Forsythia	12	3 gal	
Hy	*Hydrangea macrophylla 'All Summer Beauty'*	All Summer Beauty Hydrangea	5	5 gal	
HyA	*Hydrangea arborescens 'Annabelle'*	Annabelle Hydrangea	7	5 gal	
Jc	*Juniperus chinensis 'Sargenti'*	Sargent Juniper	20	3 gal	
Jv	*Juniperus virginiana 'Emerald Sentinel'*	Emerald Sentinel Red Cedar	4	5-6'	B&B
Rh	*Rhododendron 'Aglo'*	Aglo Rhododendron	23	7 gal	
Ros	*Rosa 'Double Knockout'*	Knockout Rose	27	2 gal	
Tm	*Taxus media 'Ever-Low'*	Ever-Low Yew	35	3 gal	

PERENNIALS, GROUNDCOVERS, VINES and ANNUALS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Act	*Actaea racemosa*	Bugbane	3	1 gal	
An	*Anemone hupehensis 'September Charm'*	Japanese Anemone	10	1 gal	
Cal	*Calamagrostis acutifolia 'Karl Foerster'*	Feather Reed Grass	22	1 gal	
Day	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily	28	1 gal	
Fes	*Festuca glauca 'Elijah Blue'*	Blue Fescue Grass	33	1 gal	
H	*Hosta sieboldiana 'Elegans'*	Elegans Hosta	11	1 gal	
Nep	*Nepeta faassenii x 'Walker's Low'*	Walker's Low Catmint	22	1 gal	
Vm	*Vinca minor 'Bowles'*	Bowles Periwinkle	16	Flat/50	

WOODBURN & COMPANY
Landscape Architecture, LLC
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41 Portsmouth Avenue Stratham, New Hampshire

LICENSED LANDSCAPE ARCHITECT Roberta A. Woodburn 002 STATE OF NEW HAMPSHIRE

Drawn By:	*VB*
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Date:	*June 18, 2013*
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L-2

Sheet 2 of 2

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PROGRAM	LEVEL 1	LEVEL 2	TOTAL
SHOWROOM	11,612	4,324	15,936
SERVICE SHOP	15,421	-	15,421
PARTS	1,157	3,445	4,602
TOTAL	28,190	7,769	**35,959**

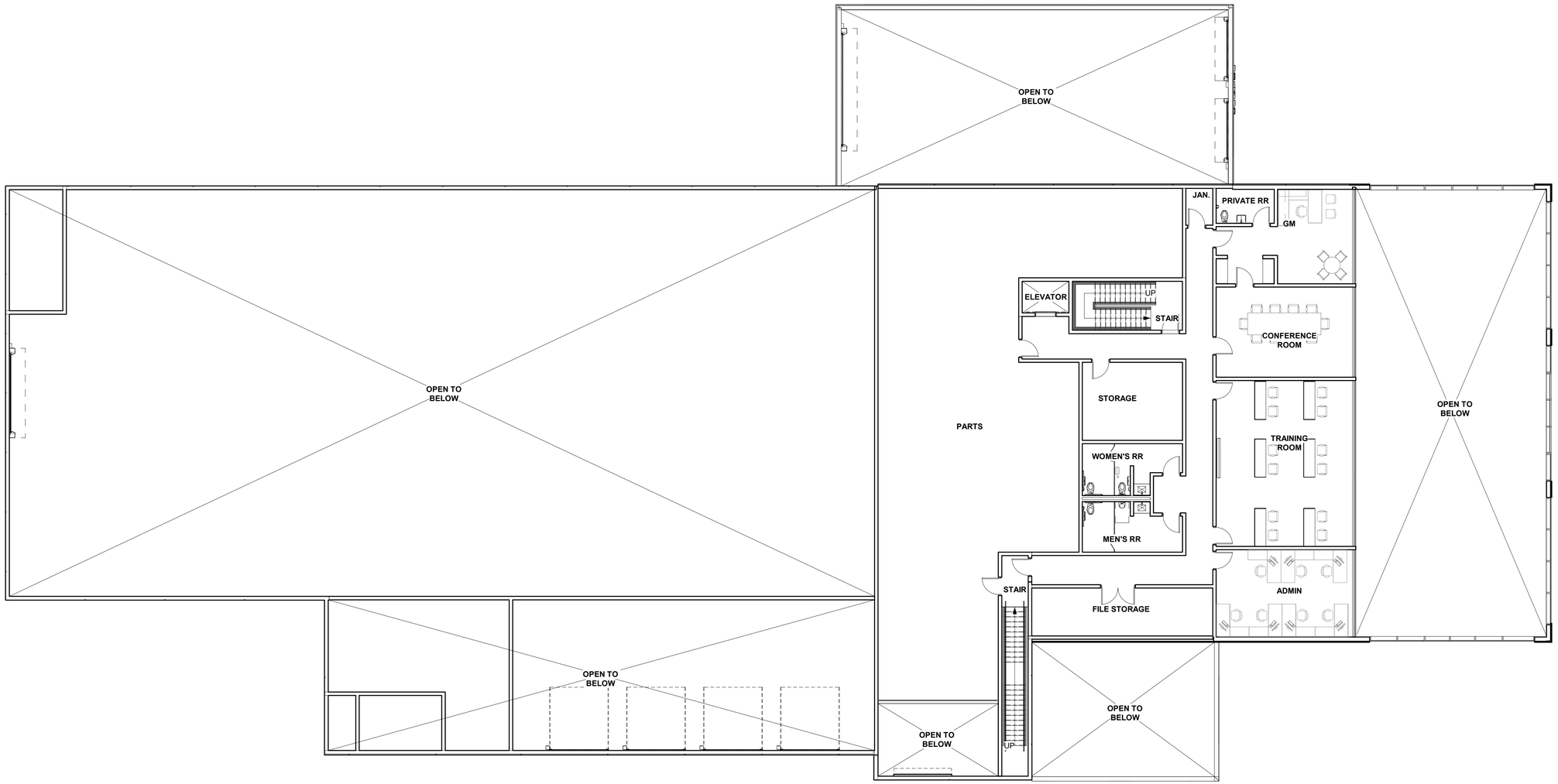


1 / A01 FLOOR PLAN - LEVEL 1
3/32" = 1'-0"

0' 10.5' 21' 42'

PRAXIS3	McFarland	McFarland Kia Stratham, NH	FLOOR PLAN - LEVEL 1	Project No. 25004	2025-03-12	A01

PROGRAM	LEVEL 1	LEVEL 2	TOTAL
SHOWROOM	11,612	4,324	15,936
SERVICE SHOP	15,421	-	15,421
PARTS	1,157	3,445	4,602
TOTAL	28,190	7,769	**35,959**



1 A02 FLOOR PLAN - LEVEL 2
3/32" = 1'-0"

0' 10.5' 21' 42'

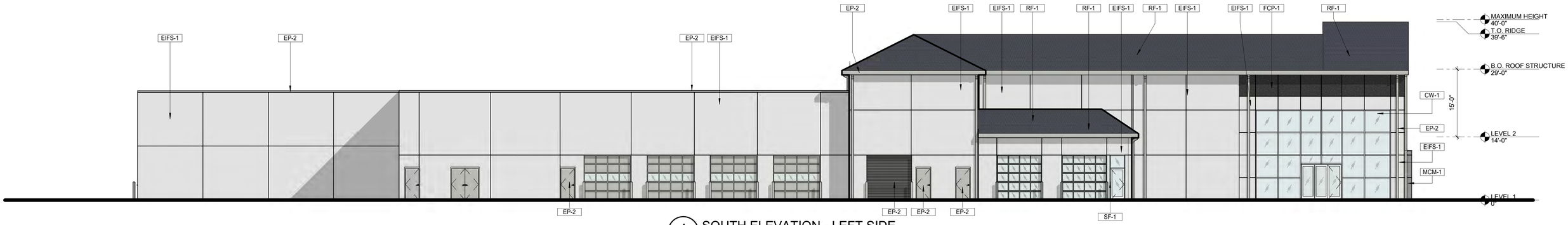
PRAXIS3	McFarland	McFarland Kia Stratham, NH	FLOOR PLAN - LEVEL 2	Project No. 25004	2025-03-12	A02

FACADE GLAZING BREAKDOWN

FACADE:	EAST ELEVATION - FRONT
TOTAL FACADE SF	4,638 SF
TOTAL GLAZING SF	1,605 SF
GLAZING PERCENTAGE OF WHOLE	± 35%

EXTERIOR FINISH SCHEDULE

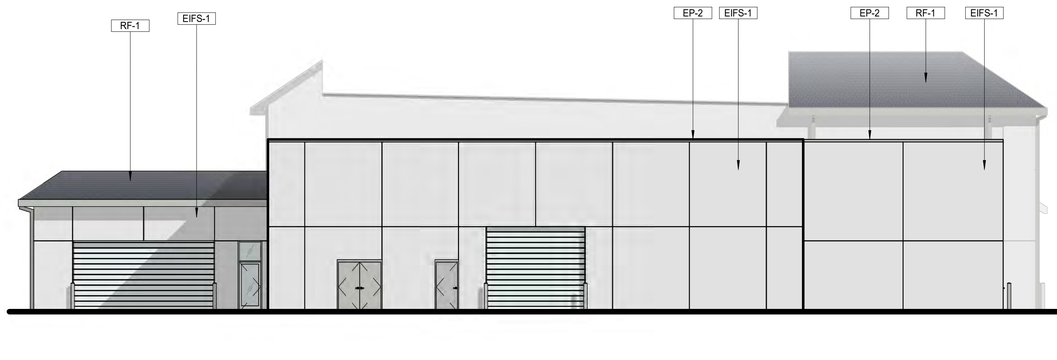
	CODE	MATERIAL	COLOR	NOTES
PAINT	EP-1	PAINT	KIA METALLIC SILVER	EXTERIOR PAINTED LOGO - BACK-LIT
	EP-2	PAINT	BM HC-169 CONVENTRY GRAY - EGGSHELL	EXTERIOR LATEX PAINT
CLADDING	MCM-1	METAL COMPOSITE MATERIAL	BRIGHT SILVER METALLIC - JY-3510	ENTRY FRAME MATERIAL
	FCP-1	FIBER CEMENT PANEL	NICHIHA ILLUMINATION - 'RAVEN' - BLACK	SHOWROOM FACADE ABOVE CURTAINWALL
	EIFS-1	EXTERIOR INSULATION FINISH SYSTEM	DRYVIT, TO MATCH: EP-2	PRIMARY FACADE MATERIAL
FRAME...	CW-1	CURTAIN WALL	ANNODIZED ALUMINUM AND GLASS	CURTAINWALL AND STOREFRONT SYSTEMS
MISC	MC-1	METAL COPING	METAL COPING TO MATCH EP-2	-
ROOFING	RF-1	ROOFING SHINGLES	GAF ROOFING SHINGLES - 'CHARCOAL'	-



4 A03-b SOUTH ELEVATION - LEFT SIDE
3/32" = 1'-0"



3 A03-b NORTH ELEVATION - RIGHT SIDE
3/32" = 1'-0"



2 A03-b WEST ELEVATION - REAR
3/32" = 1'-0"



1 A03-b EAST ELEVATION - FRONT
3/32" = 1'-0"

0' 10.5' 21' 42'

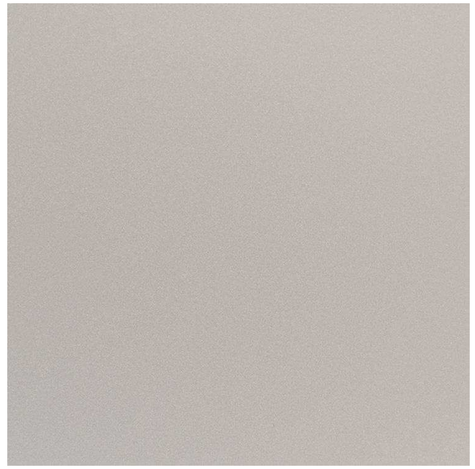
PRAXIS3	McFarland	McFarland Kia Stratham, NH	COLOR BUILDING ELEVATIONS	Project No. 25004	2025-03-12	A03



PRAXIS3	McFarland	McFarland Kia Stratham, NH	BUILDING COLOR RENDERING	Project No. 25004	2025-03-12	A04

EXTERIOR FINISH SCHEDULE

	CODE	MATERIAL	COLOR	NOTES
PAINT	EP-1	PAINT	KIA METALLIC SILVER	EXTERIOR PAINTED LOGO - BACK-LIT
	EP-2	PAINT	BM HC-169 CONVENTRY GRAY - EGGSHELL	EXTERIOR LATEX PAINT
CLADDING	MCM-1	METAL COMPOSITE MATERIAL	BRIGHT SILVER METALLIC - JY-3510	ENTRY FRAME MATERIAL
	FCP-1	FIBER CEMENT PANEL	NICHIHA ILLUMINATION - 'RAVEN' - BLACK	SHOWROOM FACADE ABOVE CURTAINWALL
	EIFS-1	EXTERIOR INSULATION FINISH SYSTEM	DRYVIT, TO MATCH: EP-2	PRIMARY FACADE MATERIAL
FRAME...	CW-1	CURTAIN WALL	ANNODIZED ALUMINUM AND GLASS	CURTAINWALL AND STOREFRONT SYSTEMS
MISC	MC-1	METAL COPING	METAL COPING TO MATCH EP-2	-
ROOFING	RF-1	ROOFING SHINGLES	GAF ROOFING SHINGLES - 'CHARCOAL'	-



MCM-1 - METAL COMPOSITE PANEL - BRIGHT SILVER METALLIC - JY-3510



MC-1 - METAL COPING - MATCH EP-2



EIFS-1 - EXTERIOR INSULATION FINISH SYSTEM - DRYVIT COLOR MATCH EP-2



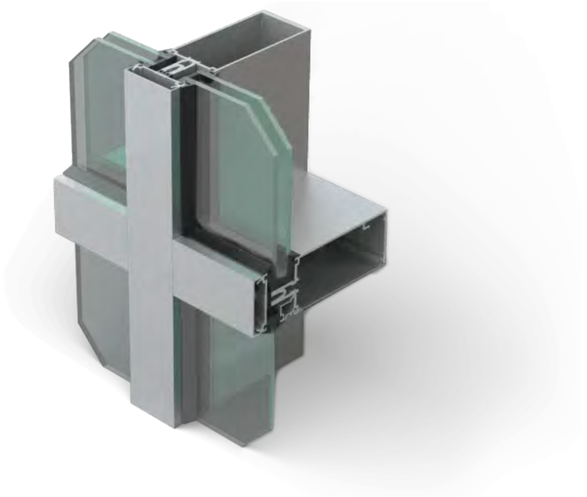
RF-1 - ROOFING SHINGLES - GAF ROOFING - CHARCOAL



EP-1 - EXTERIOR PAINT - KIA METALLIC SILVER



EP-2 - EXTERIOR PAINT - BENJAMIN MOORE HC169 CONVENTRY GRAY - EGGSHELL



CW-1 - ALUMINUM AND GLASS CURTAIN WALL SYSTEM



FCP-1 - FIBER CEMENT PANELS - NICHIHA ILLUMINATION - RAVEN BLACK

PRAXIS3	McFarland	McFarland Kia Stratham, NH	COLOR AND MATERIAL BOARD	Project No. 25004	2025-03-12	A05

N/F ADRIANNE R. SHERRY REVOCABLE TRUST
11 RIVER ROAD
STRATHAM, NH 03885
RCRD BK 6550 PG 2465

8/64

N/F DOUGLAS W. SCAMMAN, JR REVOCABLE TRUST
64 PORTSMOUTH AVENUE
STRATHAM, NH 03885
RCRD BK 4335 PG 2533

9/115

N/F SHEARWATER INVESTMENTS CORPORATION
P.O. BOX 432
STRATHAM, NH 03885
RCRD BK 5717 PG 1912

20' SIDE/REAR YARD SETBACK

20' SIDE/REAR YARD SETBACK

50' LONG BLOCK RETAINING WALL

SNOW STORAGE

350' LONG BLOCK RETAINING WALL

10' SIDE/REAR YARD SETBACK

PROPOSED BIORETENTION BASIN

BIORETENTION SYSTEM "F"
BASE AREA=2,885 SF

2" DIA RIP RAP FOREBAY (TYP) - SEE SHEET D4 FOR DETAILS

STORAGE PARKING (VARIANCE REQUIRED)

20' SIDE/REAR YARD SETBACK

GUARD RAIL

SNOW STORAGE

30' VEGETATED BUFFER TO RESIDENTIAL USE

20' SIDE/REAR YARD SETBACK

PAVED ACCESS ROAD

8/65

N/F DOUGLAS H. SCAMMAN, JR REVOCABLE TRUST
64 PORTSMOUTH AVENUE
STRATHAM, NH 03885
RCRD BK 4335 PG 2533

EXISTING 3-BEDROOM HOUSE

8/4

8/3

STORAGE PARKING

STORAGE PARKING

BIORETENTION SYSTEM "A"
BASE AREA=4,950 SF

2" DIA RIP RAP FOREBAY (TYP) - SEE SHEETS D7 FOR DETAILS

PROPOSED BIORETENTION BASIN

SOLID WASTE PAD

GUARD RAIL

309' LONG BLOCK RETAINING WALL

BIORETENTION SYSTEM "B"
BASE AREA=4,810 SF

PROPOSED AUTOMOTIVE BUILDING 28,190 SF
FOOTPRINT - FINISHED FLOOR EL. 91.50

9/4

N/F 41 PORTSMOUTH AVENUE REALTY LLC
124 BEDFORD CENTER ROAD, SUITE D
BEDFORD, NH 03110
RCRD BK 6460 PG 1178
AREA = 8.27 ACRES
FRONTAGE = 1912.63 FEET

BIORETENTION SYSTEM "C"
BASE AREA=200 SF

PROPOSED POROUS PAVEMENT

CATCH BASIN (TYP)

SNOW STORAGE

DISPLAY PARKING

DISPLAY PARKING

BIORETENTION SYSTEM "D"
BASE AREA=2,105 SF

EXISTING MONITORING WELL (SEE NOTE 4)

BIORETENTION SYSTEM "E"
BASE AREA=2,250 SF

EXISTING DUG WELL (SEE NOTE 4)

APPROX. GAS LINE EASEMENT

SNOW STORAGE

SNOW STORAGE

RIVER ROAD

GUARD RAIL

9/115

N/F HARALAMPOS SIDIRA
245 ANDOVER STREET, 2ND
PEABODY, MA 019
RCRD BK 3452 PG

9/5

N/F TT OF HILLSBOROUGH, LLC
505 SOUTH FLAGLER DRIVE, SUITE 1400
WEST PALM BEACH, FL 33401
RCRD BK 6383 PG 2095

9/2

N/F ST HOLDING COMPANY LLC
C/O EXETER SUBARU
P.O. BOX 1208
STRATHAM, NH 03885
RCRD BK 3224 PG 1443

TWO (2) 3-BEDROOM HOUSES WITHIN 200 FT OF SITE

APPROX. GAS LINE EASEMENT

APPROVED BY THE TOWN OF STRATHAM PLANNING BOARD

CHAIRPERSON DATE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Plan View
Scale - 1" = 40ft

LEGEND

PROPERTY LINE	PROPOSED SPOT GRADE
EASEMENT LINE	EDGE OF PAVEMENT (EOP)
SETBACK	UNDERGROUND UTILITIES
	OVERHEAD UTILITIES
	UTILITY POLE
	GUY WIRE
	# OF PARKING SPACES
	TREE LINE
	TREE

LOCUS PLAN

1" = 1,000'

RT. 108
BROWN AVENUE
TALL PINES LN.
FRYING PAN LN.
SITE
RIVER RD.

1. SEE EEI DRAWING S
PROJECT GENERAL

2. DECOMMISSION ALL
MONITORING WELLS
REGULATIONS.

3. SEE EEI DRAWING S

4. IMPROVEMENTS FOR STRATHAM TAX MAP 9, LOT 4

SURVEYOR'S CER

"I HEREBY CERTIFY THAT
WERE PREPARED BY ME
DIRECT SUPERVISION AND
ACTUAL FIELD SURVEY M
HAS AN ERROR OF CLOS
NON-EASEMENT AREA) OF
THAN ONE PART IN FIFTE

LICENSED LAND SURVEYO

ISS.	DATE:	DES
2	MAR 19, 2025	FO
1	JAN 22, 2025	FO

DRAWN: JJM
CHECKED: BDS

EN
EN
118 P
P: 603-77
www

CLIENT:
41 PORTSM
151 PORTSM
EXETER

SEAL:

TITLE:
SITE
AUTOFAIR
41 PORTSMOUTH
41 PORTSM
(STRATHAM
STRATHA

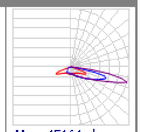
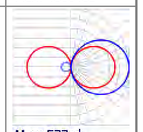
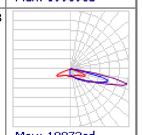
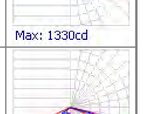
PROJECT: 25-1001
SCALE: 1

41 PORTSMOUTH AVE STRATHAM, NH
Site Lighting Layout

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842
Date
04/22/2025
Scale
1"=40'
Drawing No.

Summary

Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Lumens per Lamp	LLF	Wattage	Polar Plot
	DP4	11	Acuity	DSX2 LED P14 (L90/R90) 30K 80CRI TFTM MVOLT SPA DBLXD with SSS 5G DM28AS DBLXD	2 D-Series Size 2 Area Fixture with Forward Throw Optics; mounted at 22ft (20ft pole on 2ft base)	LED	50129	0.8	830	 Max: 45164cd
	F	2	Brownlee	7178 56 GM H41 30K	Beam V2 Sconce; mounted at 3ft	LED	3793	0.9	41.11	 Max: 577cd
	S3	1	Acuity	DSX2 LED P2 30K 80CRI T3M MVOLT SPA DBLXD with SSS 5G DM19AS DBLXD	D-Series Size 2 Area Fixture with Type 3 Medium Optics; mounted at 22ft (20ft pole on 2ft base)	LED	21710	0.9	179.22	 Max: 18171cd
	S4	12	Acuity	DSX2 LED P2 30K 80CRI TFTM MVOLT SPA DBLXD with SSS 5G DM19AS DBLXD	D-Series Size 2 Area Fixture with Forward Throw Optics; mounted at 22ft (20ft pole on 2ft base)	LED	22186	0.9	179.22	 Max: 19989cd
	S4-HS	2	Acuity	DSX2 LED P2 30K 80CRI TFTM HS MVOLT SPA DBLXD with SSS 5G DM19AS DBLXD	D-Series Size 2 Area Fixture with Forward Throw Optics and Houseside Shield; mounted at 22ft (20ft pole on 2ft base)	LED	18606	0.9	179.2228	 Max: 18072cd
	S5	2	Acuity	DSX2 LED P2 30K 80CRI T5M MVOLT SPA DBLXD with SSS 5G DM19AS DBLXD	D-Series Size 2 Area Fixture with Type 5 Medium Optics; mounted at 22ft (20ft pole on 2ft base)	LED	22670	0.9	179.22	 Max: 12436cd
	W1	14	Acuity	WDGE2 LED P2 30K 80CRI TFTM MVOLT SRM DBLXD	WDGE2 LED P2 Wallpack; mounted at 10ft	LED	1934	0.9	18.9815	 Max: 1330cd
	W2	13	Acuity	WDGE2 LED P4 30K 80CRI TFTM MVOLT SRM DBLXD	WDGE2 LED P4 Wallpack; mounted at 16ft	LED	4002	0.9	46.6589	 Max: 2752cd

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Balance of Main Parking Lot	+	3.3 fc	21.7 fc	0.5 fc	43.4:1	6.6:1
Display Parking	+	22 fc	34 fc	11 fc	3.1:1	2.0:1
Outside of Parking Lot	+	0.6 fc	28.9 fc	0.0 fc	N/A	N/A
Remote Parking	+	1.8 fc	4.3 fc	0.5 fc	8.6:1	3.6:1

41 PORTSMOUTH AVE STRATHAM, NH
Site Lighting Layout

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Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842
Date
04/22/2025
Scale
1"=40'
Drawing No.

Summary