CITY OF DOVER

DOVER PLANNING BOARD – AGENDA

Meeting Type:	Regular Meeting
Meeting Location:	Council Chambers, City Hall, 288 Central Ave, Dover NH 03820
Meeting Date:	**Tuesday, December 12, 2017**
Meeting Time:	**7:00 pm**

1. **CITIZENS' FORUM**
2. **APPROVAL OF THE PRIOR MINUTES**
   - November 14, 2017 Regular Meeting Minutes
3. **OLD BUSINESS**
4. **NEW BUSINESS**
   A. Presentation and discussion on Dover's Impact Fee Study by BCM Planning LLC
   B. Consideration and acceptance of a Conditional Use Permit for 104 Wash Street, LLC c/o Cathartes, (Owner: 104 Wash Street, LLC and City of Dover) Assessor's Map 2, Lots 2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9, zoned CBD-G, located at 104 Washington Street. (Proposal is to allow a 60% lot coverage where 75% is required, 65% frontage build out where 70% is required and to allow part of the ground floor for residential amenities use). *(P17-65)
   C. Consideration and acceptance of a Site Review for 104 Wash Street, LLC c/o Cathartes, (Owner: 104 Wash Street, LLC and City of Dover), Assessor's Map 2, Lots 2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9, zoned CBD-G, located at 104 Washington Street. (Proposal is for a 5-story, mixed-use development with commercial on the first floor and 130 residential units on the second through fifth floors, providing 98 on-site parking spaces. The project also includes off-site roadway improvements). *(P17-66)
   D. Consideration and acceptance of Site Review for Salty Sea, LLC, (Owner: Thomas Cauley, Sr.), Assessor's Map 40, Lot 25, zoned B-3, located at 52 Old Rochester Road. (Proposal is to renovate an existing 1,672 sq. ft. residential unit to total 3,664 sq. ft. of commercial space in Bldg A, the removal of the existing garage to construct two buildings. Bldg B is comprised of 2,436 sq. ft. of commercial space on the first floor with 8 residential townhouses in the balance of the building. Bldg C will have 7 residential townhouses). *(P17-74)
   E. Consideration and acceptance of a Conditional Use Permit for Salty Sea, LLC, (Owner: Thomas Cauley, Sr.), Assessor's Map 40, Lot 25, zoned B-3, located at 52 Old Rochester Road. (Proposal is for 52 parking spaces where 44 are allowed) *(P17-79)
   F. Consideration and acceptance of a Minor Lot Line Adjustment for Timothy & Cheryl Lindsay Rev. Trust & Robert & Lucille E. Richard Rev. Trust, Assessor's Map J, Lots 17 & 18A, zoned R-40, located at 4 & 10 Bayview Road. *(P17-77)
   G. Consideration and acceptance of a Conditional Use Permit for Frederic & Deborah Federlein, Assessor's Map L, Lot 95-1K, zoned R-20, located at 11 Landing Way. (Proposal is for site improvements and construction within the Conservation District) *(P17-78)
5. **STAFF COMMENT**
6. **MEMBER COMMENTS**
7. **ADJOURNMENT**

*Indicates that if the application is accepted for discussion, the public hearing will be held the same evening. Note that some hearings will be continued from one meeting to another and some may be postponed. Since this is only a partial description of the proposal and may change, persons with questions or wishing to see the plans are invited to visit the Planning Office, Monday through Thursday from 8:30 am to 5:30 pm and Friday 8:30 am to 4:00 pm or email Dover-Planning@dover.nh.gov. You may also view materials at www.dover.nh.gov. Follow us on Twitter @DoverNHPlanning and find us on Facebook at https://www.facebook.com/DoverNHPlanning.

CITY OF DOVER

DOVER PLANNING BOARD – MINUTES

Meeting Type:	Regular Meeting
Meeting Location:	Council Chambers 288 Central Avenue Dover, NH 03820
Meeting Date:	**Tuesday, November 14 2017**
Meeting Time:	**7:00 pm**

Members Present: Kirt Schuman (Chair), Dennis Ciotti (Councilor), Frank Torr, Dave White, James Burdin (Alternate), Tristan Donovan (Alternate), David Landry, Tom Clark, Lee Skinner

Members Not Present: Gina Cruikshank (Vice Chair), Hayley Harmon (Alternate)

Staff Present: Christopher Parker (Assistant City Manager)

The Chair called the meeting to order at 7:00 p.m. He announced that item 4A will be continued until December 12, 2017. J. Burdin sat for the vacant spot, and T.Donovan for G.Cruikshank.

1. CITIZENS' FORUM

Citizens Forum Open. Nobody spoke. Citizens Forum Closed.

2. APPROVAL OF THE PRIOR MINUTES

- October 18, 2017 Joint Planning Board and City Council Meeting Minutes and October 24, 2017 Regular Meeting Minutes.

Motion: F. Torr made a motion to approve the October 24, 2017 Regular Meeting Minutes and October 18, 2017 Joint Planning Board and City Council Meeting Minutes. Seconded by D. Ciotti. Vote UA

3. OLD BUSINESS

A. Public hearing, discussion and possible vote on the City's proposed Capital Improvements (CIP) FY 2019-2024. The CIP can be found on the City Web Site at www.dover.nh.gov and in the Library, City Clerk's office, and the Planning Department.

C. Parker stated that the Board should hold its public hearing and then there is an opportunity to have general discussion about the CIP. After that the Board can pass along its recommendation to the City Council.

Motion: D. Ciotti made a motion to remove the CIP from the table. Seconded by F. Torr. Vote UA

Public Hearing Opened. Nobody spoke. Public Hearing Closed.

L. Skinner inquired regarding the Street Utility Extension of Washington Street from River Street to Town Drive (pg. 115), in terms of how many people are going to be driving up Henry Law Avenue. C. Parker responded that the attractive alternative entrance is the Washington Street entrance, which would thereby remove traffic off of Henry Law Avenue.

D. Landry brought up the issue of permanent protection of open space at the city. He indicated that there's an opportunity here to make a recommendation that the City Council add funds either to a Capital Reserve, which may be redundant; or a line item, for utilization of permanent protection of open spaces. He went on to describe the history of permanent protection of open spaces funds, and the challenges that the City has faced; as well as what steps could be taken going forward.

L. Skinner suggested defining a percentage goal for protecting land in Dover. He pointed out the challenges of conserving land.

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C. Parker responded to D. Landry's comment regarding private donations that every water sewer bill contains a green donation envelope, which has the option for land preservation. He suggested that the Board send a request to the Conservation Commission and the Open Lands Committee to brainstorm on what they feel the permanent protection of open space funds should be, in terms of dollar amount, as well as conservation goal. Further discussion was had regarding what avenues would be best taken to achieve the desired goals of conservation.

An inquiry was raised regarding who sponsors line items in the CIP. C. Parker responded that, if there was a project, he would be the project sponsor on the Project Sheets. He went on to describe the process as to how the funds would be allocated. He also indicated that the Planning Department would be responsible for adding line items in the CIP.

Motion: T. Clark made a motion to recommend the City Council approve the Capital Improvements Program as presented. Seconded by L. Skinner. Vote UA

4. NEW BUSINESS

A. Consideration and acceptance of a Conditional Use Permit for Adam Fogg and Patricia Nagle, Assessor's Map L, Lot 13, zoned R-20, located at 25 Nute Road. (Proposal is to add five sets of exterior stairs and a walkway to an existing house within the Conservation District adjacent to the tidal Bellamy River. The total permanent impact is 410 square feet). *(P17-72)

C. Parker stated that this item had a few remaining areas to resolve and should be continued until December 12, 2017.

B. Consideration and acceptance of a Conditional Use Permit for Jeffery & Sharon Warschauer, Assessor's Map 8, Lot 32, zoned R-20, located at 3 Wentworth Terrace. (Proposal is to demolish an existing house and build a new house within the Conservation District adjacent to the tidal Piscataqua River, and construct a new dock. Total disturbance in Conservation District is 6,730 sq. ft.). *(P17-57)

C. Parker stated that the applicant is seeking a Conditional Use Permit to demolish an existing home and construct a home within the Conservation District as well as install a new dock within the Conservation District and Wetland Protection District. Total disturbance in the Conservation District is 6,730 sq. ft.

The applicant received a variance from the Zoning Board on October 19, 2017 to allow a front setback of 48.77' where a build-to-line of 20' minimum and 35' maximum is required. The Conservation Commission reviewed this plan on August 14th and endorsed this project on September 11, 2017.

Barry Gier represented the application. He described the proposal for Conditional Use Permit. He noted that they have received their Shoreland Permit from NHDES on September 26, 2017; their Wetland Permit from DES on October 25, 2017; and their variance from the ZBA to construct further from the front setback or from the build-to line than is required.

Motion: F. Torr made a motion to accept the application for item 4.A. Seconded by L. Skinner. Vote UA

Public Hearing Opened. Nobody spoke. Public Hearing Closed.

STAFF RECOMMENDATION:

C. Parker stated that the application meets the requirements of the Wetlands ordinance within chapter 170, regarding the need to impact Wetlands and Buffers if standards related to the demonstration of need, avoidance and mitigation are met. The Planning Department recommends that the Board vote to approve the application with the following Conditions:

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Conditions to Be Met Prior to Issuance of Conditional Use Permit:

1. The applicant shall revise the impact plan to:
    a. Add Planning File Number P17-57
    b. Have the LLS sign and stamp
    c. Remove the Dover approval area
    d. Add variance information
    e. Update permit status with dates
    f. Change any reference to Town of Dover to City of Dover
2. The applicant shall provide a copy of the NHDES Wetlands Permit

D. Ciotti expressed his concern to the greenhouse in the Conservation District, in terms of possible chemicals and plants that could be utilized. B. Gier responded that the Applicant sells greenhouses, and therefore would like to construct one on their property. He went on further to indicate that they meet the setback requirements for a supplemental building.

Jeffery Warschauer replied that they have an automated NFT, closed-loop system, which prevents fertilizer from getting to the ground, and that anything lost is through evaporation. Sharon Warschauer indicated that her focus is raising organic vegetables.

The Board inquired as to the construction of the greenhouse. J. Warschauer responded that it would be on a stone and weed barrier, in order to get some of the heat and moisture out of the ground, and it would meet all the Local Codes.

Motion: F. Torr made a motion to approve the Conditional Use Permit subject to staff recommended conditions. Seconded by T. Clark. Vote UA

The Chair commented that this is a really good example of redevelopment, having a lesser environmental impact than the existing use.

C. Consideration and acceptance of a Minor Lot Line Adjustment for Daniel & Lauren Fontaine & City of Dover, Assessor's Map C, Lots 28, & 28A, zoned R-40, located at 544 Tolend Road. *(P17-68)
D. Consideration and acceptance of a Minor Subdivision for Daniel & Lauren Fontaine, Assessor's Map C, Lot 28, zoned R-40, located at 544 Tolend Road. (1 new lot). *(P17-69)

The Chair announced items 4 C and D would be heard together.

C. Parker stated that this is a lot line adjustment moving 1,185 square feet from a lot the City owns to one the Fontaine's own. This will place monitoring wells for the City's Tolend Landfill site upon City owned property. It is an even swap of land. The City Council approved the land swap at its November 8th meeting.

The Fontaine's then wish to subdivide their property to create one new lot. The existing Fontaine lot has enough lot size and frontage to accomplish this.

Christopher Berry represented the application. He described the lot line adjustment and subdivision.

Motion: F. Torr made a motion to accept the application for item 4.c and 4.D. Seconded by T. Clark. Vote UA

Public Hearing Opened. Nobody spoke. Public Hearing Closed.

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STAFF RECOMMENDATION – Lot Line Adjustment:

C. Parker stated that the application meets the requirements of a minor lot line adjustment within chapter 155. The Planning Department recommends that the Board vote to approve the application with the following Conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The applicant shall provide the Planning Department with a digital version of the final plat.
2. The applicant shall revise the plat to:
    a. Include the Licensed Land Surveyor and Certified Wetland Scientist signatures and stamps
    b. Add the owner's signatures to the final plat submitted for signature to be recorded at the Strafford County Registry of Deeds
    c. Add note about previous variance granted
    d. Add common subdivision note 14
    e. Add a 25' access easement over 28A in favor of 28
3. Provide easement document to the Planning Department and record at the registry of deeds.

D. White requested further explanation on 2(e). He noted that, in looking at Sheet 2 of 2 of the subdivision, Item C, where it shows the driveway entering the parking area not on 28, it doesn't show a need of the easement. C. Berry responded that although they have the appropriate amount of frontage of the lot, they are trying to get the driveway further pushed away so they can drive into the side of the parcel, and thereby leaving the other area open for development further from the residence.

C. Parker clarified that, on the Lot Line Adjustment Plan, the starting pin stays the same on the frontage, and indicated where the easement would be placed over. He noted that the easement would be used for accessing utility.

Motion: T. Clark made a motion to approve the Lot Line Adjustment subject to staff recommended conditions. Seconded by F. Torr. Vote UA

STAFF RECOMMENDATION - Subdivision:

C. Parker stated that the application meets the requirements of a minor subdivision within chapter 155. The Planning Department recommends that the Board vote to approve the application with the following Conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The Lot Line Adjustment plan (P17-68) be approved.
2. The applicant shall provide the Planning Department with a digital version of the final plat.
3. Provide copy of NHDES Subdivision approval.
4. The applicant shall revise the plat to:
    a. Include the Licensed Land Surveyor and Certified Wetland Scientist signatures and stamps
    b. Add the owner's signatures to the final plat submitted for signature to be recorded at the Strafford County Registry of Deeds
    c. Add note about previous variances granted
    d. Add abutter owner information for lots across the street
    e. Add common subdivision notes 13, 14, & 25

Conditions to Be Met Prior to issuance of a Building Permit:

5. Easements to be recorded and recording numbers supplied to the Planning Department.

Conditions to Be Met Prior to Issuance of a Certificate of Occupancy:

6. Any new dwelling unit shall be assessed the current impact fees in place at the time of building permit application.
7. Any new dwelling unit shall be assessed the current water investment fees at time of water tie in service.

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D. Ciotti inquired regarding 2(c), and whether it is referring to the ZBA variance from 2012. C. Parker responded that that is what that is referring to.

D. White asked a question regarding the new lot line that subdivides the two lots, and why it was subdivided the way it is, orphaning the driveway and then doing an easement to incorporate it. C. Berry answered that they originally were working off of a 1980s survey, which set monumentation along Tolend Road, which they now know is 4 rods wide through that area, therefore allotting them less land than they anticipated. He concluded that that caused them to shove the lines over to make up for the difference in land area in order to meet the minimum land areas.

Motion: T. Clark made a motion to approve the minor subdivision subject to staff recommended conditions. Seconded by L. Skinner. Vote UA

E. Consideration and acceptance of a Minor Lot Line Adjustment for William & Charleen Creighton & Colleen Dean, Assessor's Map 21, Lots 26-C & 26-1, zoned R-12, located at 3 & 5 Mount Pleasant Street.*(P17-75)

C. Parker stated that this is a minor lot line adjustment between 2 lots. Lot 26-1 will go from 4.064 acres to 3.776 acres. Lot 26-C will go from 2.019 acres to 2.315 acres. Currently, the lot line has a garage crossing over it. This will correct that situation. These lots are on a private road.

Seth Creighton represented the application and described the layout.

Motion: F. Torr made a motion to accept the application for item 4.E. Seconded by T. Clark. Vote UA

Public Hearing Opened. Nobody spoke. Public Hearing Closed.

STAFF RECOMMENDATION:

C. Parker stated that the application meets the requirements of a minor lot line adjustment within chapter 155. The Planning Department recommends that the Board vote to approve the application with the following Conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The applicant shall provide the Planning Department with a digital version of the final plat.
2. The applicant shall revise the plat to:
   a. Include the Licensed Land Surveyor signature and stamp
   b. Add the owner's signatures to the final plat submitted for signature to be recorded at the Strafford County Registry of Deeds
   c. Revise Planning file number to be P17-75 on all sheets
   d. Add common subdivision note 14 about tying into Dover GIS

Motion: D. Landry made a motion to approve the Lot Line Adjustment subject to staff recommended conditions. Seconded by D. Ciotti. Vote UA

F. Consideration and acceptance of a Minor Lot Line Adjustment for David Vincent, (Owner: David Lemieux), Assessor's Map L, Lots 14N & 14A, zoned R-20, located at 53 & 55 Spur Road. *(P17-76)

C. Parker stated that this is a minor lot line adjustment between 2 lots. Lot 14-A will go from 0.55 acres to 1.39 acres. Lot 14-N will go from 1.35 acres to 0.46 acres. Both lots are within 250 feet of the Bellamy River. As this is a tidal river, the Riverfront Residential Overlay District applies, requiring all newly created lots to be 3 times the minimum lot size. Currently, neither lot is conforming. The action will result in one lot being conforming and the second lot remaining non-conforming. The conforming lot will be along the river.

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David Vincent, Land Surveyor, represented the application and described the layout. He noted that David Lemieux was present, should the Board have any questions.

Motion: D. Ciotti made a motion to accept the application for item 4.E. Seconded by D. Landry. Vote UA

Public Hearing Opened. Nobody spoke. Public Hearing Closed.

STAFF RECOMMENDATION:

C. Parker stated that the application meets the requirements of a minor lot line adjustment within chapter 155. The Planning Department recommends that the Board vote to approve the application with the following Conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The applicant shall provide the Planning Department with a digital version of the final plat.
2. The applicant shall revise the plat to:
    a. Include the Licensed Land Surveyor signature and stamp
    b. Add the owner's signatures to the final plat submitted for signature to be recorded at the Strafford County Registry of Deeds
    c. Revise Planning file number to be P17-76 on all sheets
    d. Add common subdivision notes 12, 13, & 14
    e. Correct Lot 14L to be shown as 14N
    f. Add the Riverfront Residential Overlay District dimensional standards

Motion: D. Landry made a motion to approve the Lot Line Adjustment subject to staff recommended conditions. Seconded by J. Burdin. Vote UA

5. STAFF COMMENT

C. Parker:

- Requests Mr. Bird to prepare a presentation for the December and/or second January meeting regarding the Open Lands Committee and Conservation Commission do in their activities, and the status of the updated numbers mentioned by L. Skinner.
- TRC has reviewed projects at 52 Old Rochester Road and 526 Central Avenue, of which the latter will probably not come to the Planning Board.
- Impact Fees have been reviewed and the Consultant will attend the December meeting to go over any changes with the Board.
- 3rd Street fence went up months ago, in which approved plans had gas lines in a certain location. The gas company elected to move the gas line on 3rd Street closer to the building, which failed to meet the requirements for separation between the building, the electric lines, and the gas lines. Further discussion is being had to remedy the situation.
- USA Baseball has not made any comments, or submitted any applications, since the rezoning.
- Woof meow at Central Avenue by Merry Street had some slowdown due to the waterline tie in with Hannaford's. The anticipated waterline reconnection date is November 15, 2017.
- Glenwood Avenue work has started, with clearing out of the site. There are some drainage concerns they're trying to resolve.
- Lot merger form for property on Arch Street
    - The Chair signed the merger form with no objection.
- Lot merger form for property on McKone Lane
    - The Chair signed the merger form with no objection.

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6. MEMBER COMMENTS

L. Skinner inquired at whose behest 4A was withdrawn tonight. C. Parker responded that it was continued because staff is still trying to work on the irregularity with the property owner.

F. Torr said Happy Thanksgiving to everyone.

7. ADJOURNMENT

Motion: A board member made a motion to adjourn at 8:02 pm. Seconded by D. Landry. Vote UA.

DRAFT

BCM PLANNING LLC

P. O. Box 723 – Yarmouth, Maine 04096
(207) 749-5217 bmayber1@maine.rr.com

November 30, 2017

Mr. Steve Bird, City Planner
City of Dover
288 Central Street
Dover, New Hampshire 03820

Dear Steve:

As part of the 2017 update of Dover's impact fees, BCM Planning, LLC has reviewed the provisions of Dover's zoning ordinance relating to impact fees (Section 170-23) of the Dover Code. The principal purpose of the review is to identify any conflicts between ordinance language and the calculation or assessment procedures pertaining to impact fee assessment, and to highlight language that may need to be updated or amended to support the impact fee system. The comments below follow the current outline of the ordinance, with observations made on selected sections and paragraphs of the impact fee provisions. This letter does not constitute a legal review of the ordinance.

A. Purpose

The initial paragraph lists three purposes as bullet points, which are followed by the phrase: "*For consideration in lieu of above"* which then introduces three additional numerated purposes. The "consideration in lieu" looks like it could have been a remnant from a prior edit of the purpose section. The three numbered purposes are more specific to impact fees. Perhaps there was an intent was to replace the three bullets (general purposes) with the three numbered purposes that follow, which are more specific to impact fees?

The term **New Development** is introduced under A. (2). New Development is defined in the general definitions section of the zoning ordinance. Under the definition, for impact fee purposes "new development" includes conversions or changes in use if the change creates a net increase in demand on public capital facilities that are the subject of impact fee assessments.

However, the impact fee provisions do not provide a procedure for making that determination. In some other ordinances, the provision is operationalized by more specific language. The procedure is to compare what the impact fees would be for the proposed use to the fees that would be applicable to the existing use as it stands, and compute the difference for each fee category. If the net difference is positive, then that amount is assessed for the net effect of a

conversion or change in use. In this way, the existing use is recognized as already exerting a demand on related capital facilities. Only where there is a net positive difference in the "before/after" comparison is a fee assessed.

> *Sample language: In the case of new development created by conversion or modification of an existing use, the impact fee shall be based upon the net positive increase in the impact fee assessed for the new use as compared to the highest impact fee that was or would have been assessed for the previous use in existence on or after the effective date of this Ordinance.*

If the City wants to add a more specific guideline for assessment of impact fees for redevelopment, conversions or changes in use, appropriate language might be added, either as part of **C. Assessment Methodology** or part of **D. Administration**.

D. Administration

(2) Assessment and Collection, paragraph (a):

This paragraph refers to a four year period as the time over which the fee must remain fixed after the amount of the assessment is declared at the time of subdivision or site plan approval. In 2011, the relevant statutory period was amended to **5 years.** (See RSA 674:39).

(2) Assessment and Collection, paragraph (c):

This paragraph currently provides for the fee to be **collected** at the time a **building permit** is issued (unless an alternative mutually agreeable schedule is established).

The original statutory provisions of RSA 674:21, V once permitted collection to take place at building permit stage (if the subject capital improvements had already been completed), but that language was eliminated in 2005. The 2005 amendments included a requirement for collection to take place at the time a **certificate of occupancy** is issued. (Mutually agreeable payment schedules can still be negotiated, but municipalities cannot compel the payment to be made at the building permit stage).

> Excerpt from NH RSA 674:21, V: (**bold face** added):
>
> (d) All impact fees imposed pursuant to this section shall be assessed at the time of planning board approval of a subdivision plat or site plan. When no planning board approval is required, or has been made prior to the adoption or amendment of the impact fee ordinance, impact fees shall be assessed prior to, or as a condition for, the issuance of a building permit or other appropriate permission to proceed with development. Impact fees shall be intended to reflect the effect of development upon municipal facilities at the time of the issuance of the building permit. **Impact fees shall be collected at the time a certificate of occupancy is issued.** If no certificate of occupancy is required, impact fees shall be collected when the development is ready for its intended use. Nothing in this subparagraph shall prevent the municipality and the assessed party from establishing an alternate, mutually acceptable schedule of payment of impact fees in effect at the time of subdivision plat or site plan approval by the planning board. If an alternate schedule of payment is established, municipalities may require developers to post bonds, issue letters of credit, accept liens, or otherwise provide suitable measures of security so as to guarantee future payment of the assessed impact fees.

(4) Refund of Fees Paid

While no changes are needed to the ordinance provisions for refunds, the effect of a NH Supreme Court decision on this matter is worth noting. The ordinance provides that the refund shall be to the current owner of the property that was the subject of the impact fee assessment. For a number of years, there had been some uncertainty as to the appropriate party to receive a refund (original payer vs. current owner). RSA 674:21, V is silent with respect the party to receive an *impact fee* refund (though other language pertains to refunding of exactions). The issue has since been clarified by the NH Supreme Court, which found that an impact fee refund to the property owner is appropriate *if the local ordinance includes a specific provision to that effect*. See K.L.N. Construction Company v. Town of Pelham (decision issued December 10, 2014). The decision supports the validity of the refund to property owners specified in the Dover ordinance.

F. Waivers

Waiver of School Fees for Age Restricted Housing

Paragraph (1) (a) of Part F provides for waivers of school impact fees for age restricted units that are limited to occupancy by persons age 62 or older. The same provision could be extended to age-restricted units in developments that employ deeded restrictions with an age threshold of 55 or older.

When housing is age-restricted under RSA 354-A:15 Housing for Older Persons, if the age 62+ threshold is used, the age limits must apply to all occupants in 100% of the units. In such case, there is no potential for school enrollment to be generated within the period of the deed restrictions.

When the age 55+ threshold is used, the minimum statutory requirement is that at least *80% of the units* have at least *one person in the restricted unit who is age 55 or older.* This often raises concern that the unrestricted units will generate school enrollment impacts. In practice, enrollment in age 55+ developments tends to be minimal and often zero. But not all 55+ developments are the same. Some apply the minimum age restriction provisions, while others may impose age limitations on all units in the development. In some communities, applicants proposing age 55+ developments have been required to apply the age restriction to all occupants in 100% of the units, either through regulation or negotiated conditions of approval.

In those cases where less than 100% of the units are subject to deed restrictions that preclude school age pupils from occupancy, the City could still apply the school fees to that percentage of units which are not subject to the restriction. For example, if 20% of the units remain unrestricted, then 20% of the standard school fee could be applied to each dwelling in the development. Alternatively, based on the observation that enrollment impacts have been minimal in age 55+ developments, the City could decide to enable applications for a full waiver of school fees in the same manner now applied to age 62+ developments.

Waivers Pertaining to RSA 674:39

Under the waiver provisions at paragraph (1) (b) there is another reference to the "**four year period**" relating to the provisions of RSA 674:39. Per the comments on D (2) (a) the period should be updated to read **five years**.

For Consideration: Reduced School Fees for Small Apartments

At present, school impact fees are assessed to new development based on average dwelling unit characteristics by structure type. In the case of apartments (and other types of units) there may be instances where a waiver of school impact fees might be appropriate for small dwelling units. For example, small one bedroom and studio apartments are generally associated with very low or negligible generation of school enrollment.

As we have discussed, waivers based on bedrooms are problematic from an administrative perspective. If a waiver or reduced fee provision were desirable for very low impact units, it might be done based on a living area standard. Should the City wish to add such provisions, the ordinance could allow an application for waiver or a partial waiver if the living area is less than "x" square feet. Alternatively, reduced assessments could be standardized as part of the impact fee methodology report for dwelling units below a specified size.

I hope that this review is helpful in the updating or fine-tuning of the Dover impact fee provisions.

Sincerely yours,

Bruce C. Mayberry, Principal
BCM Planning, LLC

DRAFT

Impact Fee Update 2017
Dover, New Hampshire

Basis of Assessment For:

Public Schools
Public Safety (Police and Fire)
Recreation Facilities

November 28, 2017

Prepared for:

City of Dover Planning Department
288 Central Avenue
Dover, New Hampshire 03820

Prepared by:

BCM PLANNING LLC
Bruce C. Mayberry, Principal
P. O. Box 723
Yarmouth, ME 04096
bmayber1@maine.rr.com

DRAFT

Executive Summary

This report updates the basis of assessment for impact fees assessed to new development in Dover for public schools, public safety, and public recreation facilities. The first supporting documentation for Dover school impact fees was developed in 2002. An analysis completed in 2008 updated the school impact fee, and introduced new impact fees for public safety and recreation facilities. The City's code provisions governing impact fee assessment are authorized under New Hampshire RSA 674:21, V. Under this statute, impact fees may be assessed to new development for its proportionate share of anticipated capital projects, or to recoup past capital investments made in anticipation of the needs to be generated by new development. This update of Dover impact fees has been based on the structure of the 2008 methods, but with some updates and adjustments to the capital basis of the fees and how they are allocated by land use. The revisions included:

- An update socio-economic data, demographics, and new growth projections of population, employment and non-residential floor area in Dover.

- A full recalculation of public school enrollment ratios per housing unit was conducted. This process involved matching resident enrollment counts by grade level by street address to the characteristics of the property indicated by property tax assessment data for the location. This is the first full update of address-matched enrollment ratios since the original school impact fee was developed in 2002.

- New and revised indicators of proportionate demand on public safety facilities were prepared based on several sources. This analysis included matching of public safety calls by address (where available) to property tax assessment data for that parcel. This data enabled new calculations of average Police and Fire Department call rates per housing unit and per 1000 square feet of building area.

- The replacement cost of Dover capital facilities that comprise the basis of the impact fee assessments have been updated to 2017 values; and credit allowances for certain debt service costs have been updated and revised.

- In the case of the public school impact fee, a significant increase in the fee resulted from applying a new facility floor area standard (square feet of building area per pupil capacity) for the new high school, and from the absence of traditional State Building Aid to offset a portion of its construction cost (historically 30% of principal costs had been reimbursed by the State).

Since 10 years have elapsed since the last impact fee update, the capital values assigned may have increased significantly as a result of time adjustments; the changes in the fees should be considered in that context.

The purpose of this report is to provide a rational, proportionate basis for impact fee calculations. The process of adopting revised fee schedules, and other administrative provisions relating to the assessment and collection of fees is governed by the impact fee provisions of the Dover Code.

DOVER IMPACT FEE SCHEDULE 2017 UPDATE

DOVER NEW HAMPSHIRE IMPACT FEES - 2017 FEE SCHEDULE						
Use Category	**Police**	**Fire**	**Total Public Safety**	**Recreation**	**Public Schools**	**Total City and School**
Residential Uses - Fee Per Dwelling Unit by Structure Type						
Single Detached	$325	$615	$940	$1,326	$6,629	$8,895
Townhouse	$309	$548	$857	$1,138	$2,125	$4,120
Two to Three Family	$357	$583	$940	$1,154	$4,346	$6,440
Apartments 4+ Units	$279	$447	$726	$872	$3,003	$4,601
Manufactured Housing	$402	$635	$1,037	$1,227	$4,338	$6,602
Accessory Dwelling Unit	$179	$286	$465	$558	$1,989	$3,012
Apartment over 1st Floor Non-Residential (1)	$279	$447	$726	$872	$649	$2,247
Age Restricted Unit 55+ (2)	$152	$1,163	$1,315	$349	see note (2)	$1,664
Age Restricted Unit 62+ or Congregate (2)	$181	$1,609	$1,790	$183	--	$1,973
Commercial, Industrial & Institutional Uses Per Square Foot Finished Area						
Retail, Including Restaurants, Clubs	$0.71	$0.87	$1.58	--	--	$1.58
Offices and Commercial Services	$0.33	$0.59	$0.92	--	--	$0.92
Industrial, Transp, Whse, Communications	$0.04	$0.04	$0.08	--	--	$0.08
Nursing Homes & Assisted Living	$0.13	$2.37	$2.50	--	--	$2.50
Other Institutional Uses	$0.23	$0.25	$0.48	--	--	$0.48
Average Fee (All Other)	$0.24	$0.39	$0.63	--	--	$0.63

(1) This option would provide for reduced school impact fee in apartments located on the upper floors of buildings with non-residential uses on the first floor witihin the Central Business District. The basis for a reduced school fee reflects the data on enrollment per unit in older downtown buildings of this type.

(2) Housing units in age-restricted developments governed by deed restrictions that limit occupancy to seniors, and congregate housing units, are found to have negligible enrollment impacts and are not subject to the school impact fee. In the case of an age-restricted development for age 55 or older, where the age restriction pertains to less than 100% of the units, the school fee may be assessed at the standard rate for the portion of units that are not subject to an age restriction.

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A. Socioeconomic Characteristics, History and Projections

1. Population, Households and Housing

Full counts of the City's population, households and housing units are available only from the decennial Census (data shown below for 1990, 2000 and 2010). All other data on these characteristics are based on sample survey data (American Community Survey or ACS) or estimates (NH Office of Strategic Initiatives – formerly NH Office of Energy and Planning).

DEMOGRAPHIC HISTORY AND ESTIMATES FOR DOVER, NH

Demographic Element	1990	2000	2010	2015 ACS Five Year Sample	NHOEP 2016 Data & BCM Estimates
Population					
Total	25,042	26,884	29,987	30,524	30,683
In Group Quarters	609	757	896	892	959
In Households	24,433	26,127	29,091	29,632	29,724
Population Age < 5	1,581	1,527	1,805	1,770	
Population Age 5-17 (School Age)	3,474	4,075	4,271	4,212	
Population Under 18	5,055	5,602	6,076	5,983	
% of Total Population	20.2%	20.8%	20.3%	19.6%	
Age < 5 Per Household	0.15	0.13	0.14	0.14	
School Age (5-17) Per Household	***0.34***	***0.35***	***0.33***	***0.33***	
School Age (5-17) Per Household < Age 55	0.49	0.50	0.51	*0.53*	
Total Housing Units	11,307	11,924	13,685	13,589	14,176
Households (Occupied Units)	10,345	11,573	12,827	12,668	13,255
Owner Occupied	5,190	5,920	6,970	6,521	estimated
Renter Occupied	5,155	5,653	6,037	6,147	
Homeownership Rate	50.2%	51.2%	54.3%	51.5%	
Occupied Housing Units by Age of Head of Household					
Under 25	1,199	1,032	1,046	974	
25 to 34	2,747	2,467	2,484	2,595	
35 to 44	1,886	2,616	2,344	2,052	
45 to 54	1,317	2,014	2,576	2,286	
55 to 64	1,221	1,247	1,934	2,120	
65 to 74	1,130	1,090	1,133	1,257	
75 or Older	845	1,107	1,310	1,384	
Total Households	10,345	11,573	12,827	12,668	
Percent of Heads of Households Age 55+	*30.9%*	*29.8%*	*34.1%*	*37.6%*	Estimated
Average Household Size	2.36	2.26	2.27	2.34	2.24
Total Housing Units	11,307	11,924	13,685	13,589	14,176
Vacant Units Total	962	351	858	921	*Assume:*
Percent Vacant	8.5%	2.9%	6.3%	6.8%	*6.5%*

Since 1990 the City's total population has grown from about 25,000 to nearly 31,000.

During the same period the number of housing units has increased from 11,300 units to about 14,200 units.

In 1990 about 31% of the households in Dover were headed by a person age 55 or older. As of 2015, the proportion is estimated at nearly 38%, a consequence of the aging of the baby boom population.

The ratio of the school age population (age 5-17) to households has remained fairly constant. In 1990 the ratio was 0.34 school age children per household; the ratio for 2015 is estimated at 0.33 per household.

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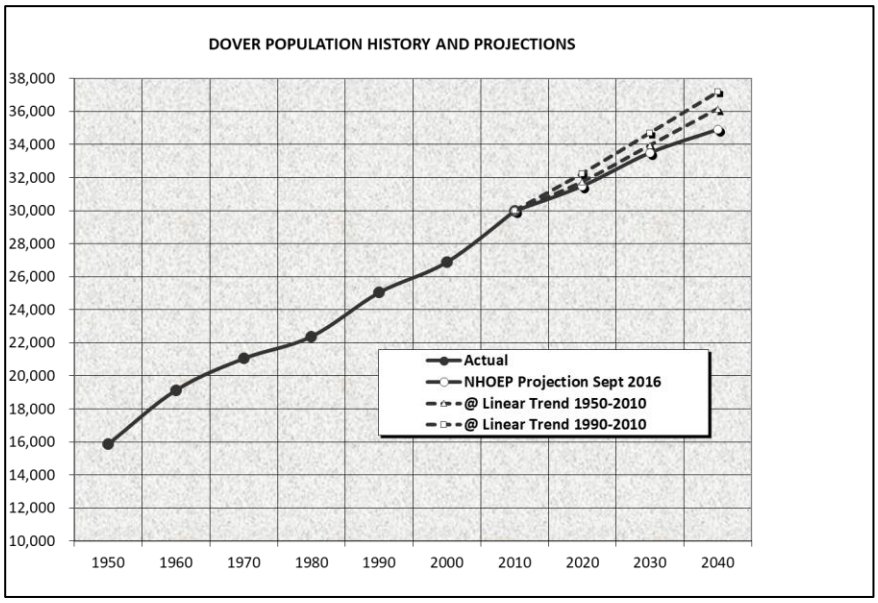
Estimated Average Household Size 2016	
Structure Type	Persons Per Occupied Unit
Single Family Detached	2.54
Attached or Townhouse	2.18
Two to Three Family	2.21
Four or More Family	1.67
Manufactured Housing	2.35
Average Household Size	2.24

Source: BCM Planning, LLC proportionate estimates by housing type based on historical data, applied to an estimated average household size of 2.24.

BCM Planning estimates that the average household size in Dover as of 2016 is 2.24 persons. Average household size per unit by type of structure is estimated here for various residential structural categories. These estimates were prepared using historical Census data by type of structure in Dover, and the American Community Survey. These ratios are used to allocate proportionate demand on residential service costs to each structure type based on its expected generation of population.



The most recent state population projections for Dover (2016) point to a potential 2040 population of 34,915. This is the approximate buildout population (35,000) estimated by the City at the time of the 2008 impact fee update. Buildout populations are difficult to predict due to future changes in average household size, changes in zoning, and housing infill potential. Linear projections based on long term trends suggest the potential for 2040 population to reach 36,000 to 37,000 if not constrained by other factors.

From 2000 to 2016, about 2,066 housing units were authorized by building permits issued in Dover (an average of 122 units per year). Of the total, about 39% of the units authorized were in two or more family structures.

By comparison, housing units authorized by permit averaged 171 during the 1970s, 259 per year in the 1980s, and only 86 per year in the 1990s.

The number of units authorized by permit average 143 per year from 2000-2009, and 91 per year from 2010 to 2016.

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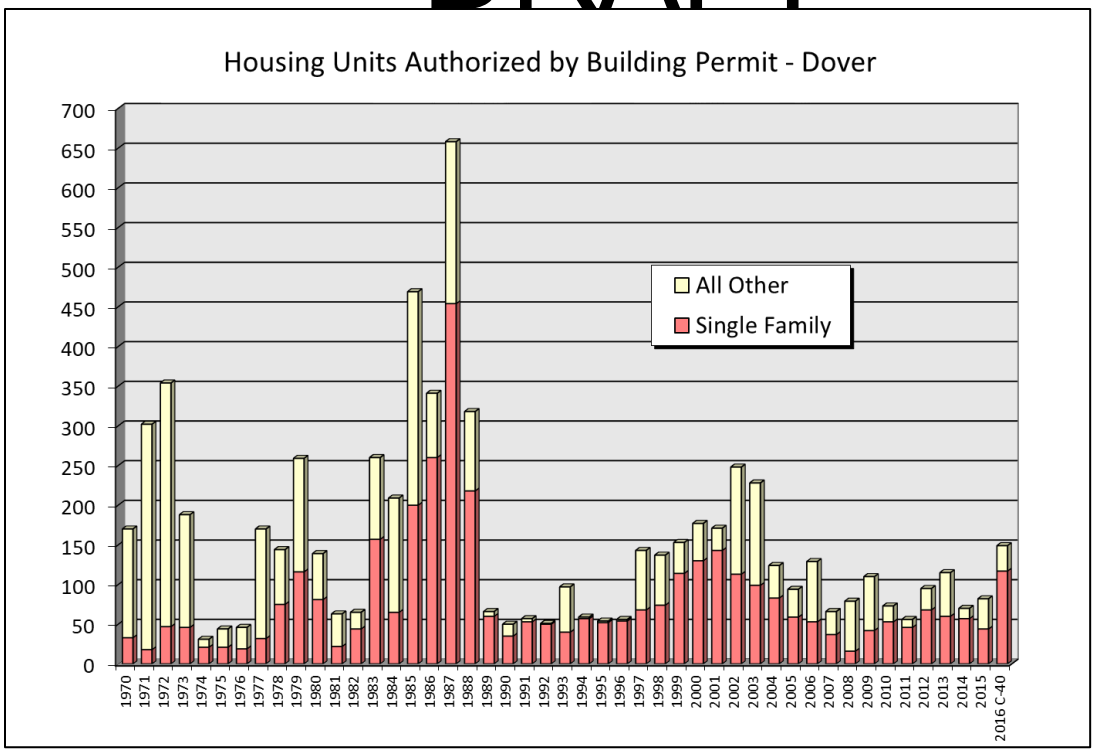

New Housing Units Authorized by Building Permits				
Total Housing Units Authorized				
Period	Single Family	2+ Family	Manuf. Housing	All Types
1970-79	428	1,191	89	1,708
1980-89	1,561	941	86	2,588
1990-99	597	212	48	857
2000-09	775	617	34	1,426
2010-16	445	189	6	640
Average Annual Units Authorized				
Period	Single Family	2+ Family	Manuf. Housing	All Types
1970-79	43	119	9	171
1980-89	156	94	9	259
1990-99	60	21	5	86
2000-09	78	62	3	143
2010-16	64	27	1	91

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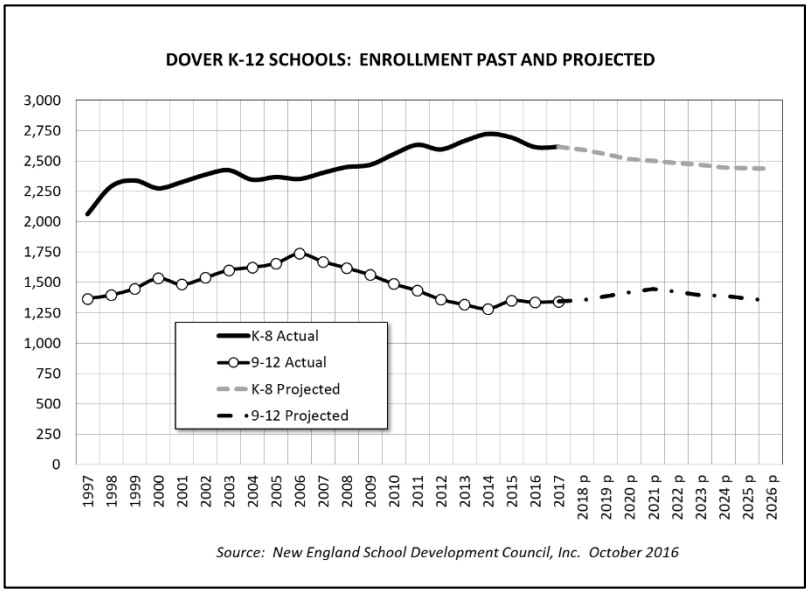
The history and projection of public school enrollment in the Dover school system indicates that high school enrollment peaked in the 2006-07 academic year, and K-8 public enrollment peaked in 2014-15.



The most recent school enrollment projections for the Dover schools forecast a decline in K-8 enrollment and a fairly level number of students in the high school grades. Since the number of housing units will continue to grow, enrollment per housing unit should decline during the projection period.

K-12 Enrollment in Dover Public Schools - Past and Projected

	Year	K-4	5-8	9-12	Total
Actual October Enrollment Excluding Pre-School	1997	1,044	1,018	1,367	3,429
	1998	1,274	1,016	1,396	3,686
	1999	1,308	1,032	1,450	3,790
	2000	1,241	1,034	1,535	3,810
	2001	1,240	1,086	1,483	3,809
	2002	1,250	1,137	1,539	3,926
	2003	1,282	1,142	1,602	4,026
	2004	1,233	1,112	1,624	3,969
	2005	1,271	1,097	1,658	4,026
	2006	1,270	1,082	1,737	4,089
	2007	1,294	1,109	1,671	4,074
	2008	1,356	1,094	1,619	4,069
	2009	1,391	1,077	1,562	4,030
	2010	1,472	1,084	1,488	4,044
	2011	1,502	1,131	1,432	4,065
	2012	1,506	1,089	1,360	3,955
	2013	1,550	1,115	1,318	3,983
	2014	1,554	1,169	1,283	4,006
	2015	1,537	1,156	1,349	4,042
	2016	1,436	1,178	1,336	3,950
	2017	1,408	1,209	1,344	3,961
2016 Enrollment Projection	*2017*	*1,425*	*1,203*	*1,330*	*3,958*
	2018	*1,410*	*1,181*	*1,354*	*3,945*
	2019	*1,399*	*1,156*	*1,386*	*3,941*
	2020	*1,364*	*1,153*	*1,419*	*3,936*
	2021	*1,365*	*1,137*	*1,447*	*3,949*
	2022	*1,360*	*1,124*	*1,422*	*3,906*
	2023	*1,356*	*1,111*	*1,393*	*3,860*
	2024	*1,350*	*1,094*	*1,390*	*3,834*
	2025	*1,363*	*1,078*	*1,368*	*3,809*
	2026	*1,360*	*1,076*	*1,350*	*3,786*

Source: New England School Development Council, Inc.; October 2016 projections provided by Dover School District

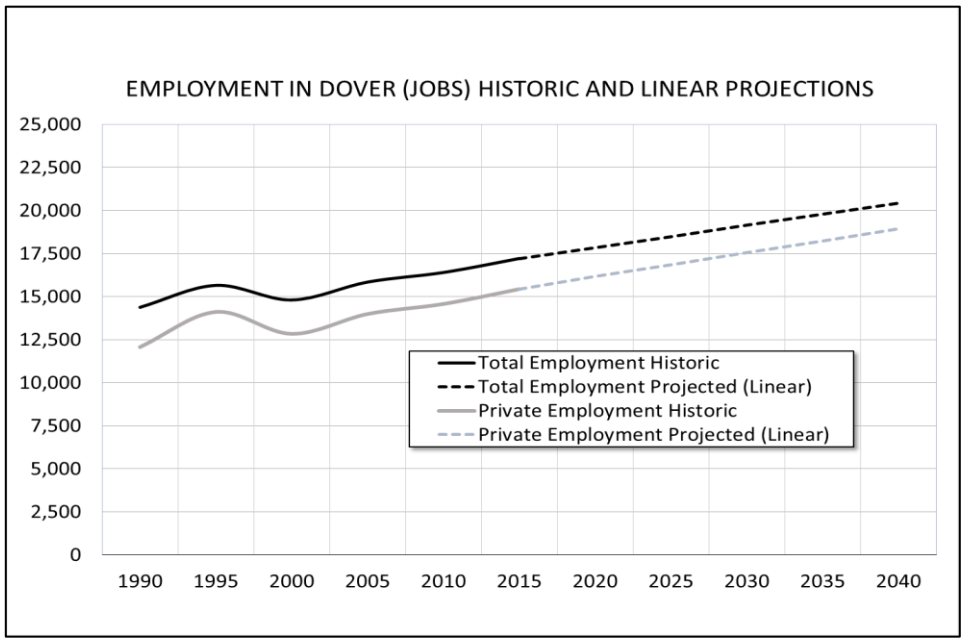
Enrollment projections are based on the historical shift in student counts based on a progression ratio from one grade to the next grade, and the number of births projected for the period.

The projections indirectly reflect the influence of the pace of new housing development during the historical period used to make the projections.

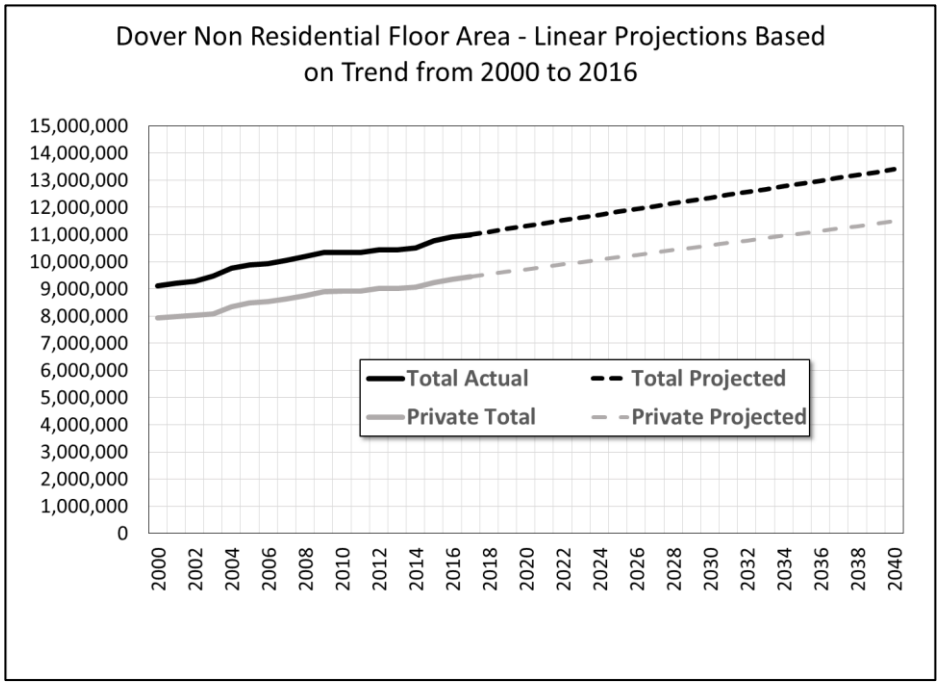
If the actual pace of housing development were to be significantly higher than that of the historical period used to measure the grade progressions, the forecast enrollment could be too low.

However, due to the aging of the population, the volume of housing growth would need to be quite high in order to offset that demographic trend and generate net growth in enrollment.

2. Employment and Non-Residential Development



Using five-year interval data for the period 1990-2015 as a basis for projections, a linear trend model suggests that total employment (jobs) in Dover could increase from about 17,500 in 2015 to just over 20,400 by 2040.



A separate linear projection of the floor area of non-residential buildings in Dover indicates potential growth from a 2016 base estimate of 10.9 million square feet to 13.4 million square feet by 2040.

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The historic relationship between employment, population, housing units and commercial floor area in Dover is summarized here based on data for 1990, 2000, 2010 and 2016. The purpose of this comparson was to develop a basis for projections of non-residential development as a function of the historical relationship between population, employment, and non-residential floor area in the City.

EMPLOYMENT, POPULATION AND NON-RESIDENTIAL FLOOR AREA RELATIONSHIPS - DOVER 1990 TO 2016

Year	Square Feet Non-Residental (BCM Planning Tabulation)	Housing Units		Population (Census 1990 to 2010 and NHOEP 2016)		Employment (Jobs in City) - NH Employment Security	Employment Ratios		Non-Residential Floor Area Ratios (Square Feet)		
		Assessment Data Tabulations BCM Planning	Census 1990-2010 and NHOEP 2016	Total	In Group Quarters		Square Feet Non-Residential Per Employee	Ratio Employment to Total Population	Per Capita (Total Population)	Per Housing Unit (Assessment Data)	Per Housing Unit (Census & NHOEP)
Floor Area of All Non-Residential Uses Relative to Housing, Population, and Employment											
1990	7,724,753	11,466	11,307	25,042	609	14,380	537	0.57	308	674	683
2000	9,118,791	12,361	11,924	26,884	757	14,807	616	0.55	339	738	765
2010	10,338,493	14,001	13,685	29,987	896	16,402	630	0.55	345	738	755
2016	10,905,019	14,663	14,176	30,683	959	17,406	627	0.57	355	744	769
Floor Area of Non-Government Uses Relative to Housing, Population, and Employment											
1990	6,547,547	11,466	11,307	25,042	609	12,070	542	0.48	261	571	579
2000	7,940,701	12,361	11,924	26,884	757	12,838	619	0.48	295	642	666
2010	8,909,875	14,001	13,685	29,987	896	14,574	611	0.49	297	636	651
2016	9,360,866	14,663	14,176	30,683	959	15,575	601	0.51	305	638	660

Source: BCM Planning, LLC tabulation and analysis of indicated source material

Key measures derived from this comparison include the floor area in non-residential uses per employee and the ratio of employment (jobs) in the City relative to its total population.

In the public safety impact fee models, BCM Planning has assumed that the City's 2016 ratio of total employment to population will remain at 0.57 and that the 2016 ratio 627 square feet of non-residential floor area per employee will be constant. This method reflects the assumption that over the long term the relative demand from the two major land use sectors (residential vs. non-residential) will remain proportionate to one another as the City continues to develop.

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B. School Impact Fee Update

This section provides an update of the public school impact fee assessment originally adopted by the City of Dover Planning Board in 2002, and updated in 2007-2008. The original methodology anticipated the need for period adjustments to the principal elements of the assessment formula. The update reviews and modifies the key elements of the basis for school impact fee assessment:

- Resident public school enrollment per housing unit
- School floor area per pupil capacity
- Cost of school facilities per square foot
- Local share of cost adjusted for State Building Aid
- Credit allowances for pre-existing needs

1. Enrollment Per Housing Unit Assumptions

The original school impact fee assessment from 2002 relied on a series of enrollment multipliers calculated by the City of Dover based on actual enrollment by address, linked to property tax assessment data. Similar information was not available to the 2008 update, which used a statistical estimate to adjust the 2002 data to 2008.

For the 2017 update, BCM Planning, LLC matched resident pupil enrollment counts by grade level and address to property tax data. Tabulations of enrollment per housing unit were made, excluding developments with age restrictions on occupancy (62 or older, or age 55+). Enrollment counts were negligible within the properties that were classified as age-restricted or retirement housing.

Dover Resident Enrollment by Housing Type Excluding Age-Restricted Developments and Mixed Use Property

Structure Type	Enrollment by Structure Type				Living Units	Average Enrollent Per Unit				Avg Living Area (Square Feet)
	Elementary	Middle	High	Total		Total	Elementary	Middle	High	
Single Family	831	733	656	2,220	6,198	0.3582	0.1341	0.1183	0.1058	1,815
Townhouse	74	47	51	172	1,232	0.1396	0.0601	0.0381	0.0414	1,402
Two to Three Family	155	93	96	344	1,570	0.2191	0.0987	0.0592	0.0611	1,147
Four or More Family	390	263	198	851	4,693	0.1813	0.0831	0.0560	0.0422	944
Sutotal Public Housing (DHA)	*73*	*62*	*32*	*167*	*221*	*0.7557*	*0.3303*	*0.2805*	0.1448	*1,029*
Subtotal Private Ownership	317	201	166	684	4,472	0.1530	0.0709	0.0449	0.0371	*939*
Manufactured Housing	6	10	11	27	180	0.1500	0.0333	0.0556	0.0611	815
Total	1,456	1,146	1,012	3,614	13,873	0.2605	0.1050	0.0826	0.0729	1,395

Source: Based on BCM Planning, LLC matching of student counts by grade level and address to housing characteristics from tax assessment data.

In addition to the enrollment count shown here for residential structures, a number of pupils were associated with addresses of mixed use properties that also contain commercial floor area. Those pupils are not shown in the above table.

For a certain class of properties, described in assessing data as "Retail/Office First Floor, Apartments Upper", enrollment ratios were tabulated based on the number of apartments within the upper floors of the buildings. Most of these are older buildings located on Central Avenue. The results showed a total of 6 pupils living in 181 upper floor apartments or an average of 0.033 pupils per unit. This ratio is 21.6% of the enrollment assigned to privately-owned multifamily properties (four or more unit buildings) at 0.1529 pupils per unit.

The enrolment ratios used in the 2017 update are shown in the next chart. Enrolment ratios are applied to two facility categories: (1) elementary and middle school level; and (2) high school level.

2017 Public School Enrollment Ratios Per Housing Unit - Dover, NH (1)
(Averages Exclude Units in Age-Restricted Developments)

Grade Level	Type of Structure					
	Single Family Detached	Two and Three Family Structures	Apartments - Four or More Family (2)	Townhouse	Manufactured Housing (3)	Average All Housing Units
Elementary	0.1341	0.0987	0.0709	0.0601	0.0426	0.1050
Middle	0.1183	0.0592	0.0449	0.0381	0.0710	0.0826
PK to Grade 8 Total	0.2524	0.1579	0.1158	0.0982	0.1136	0.1876
High School	0.1058	0.0612	0.0371	0.0414	0.0781	0.0729
Total	**0.3582**	**0.2191**	**0.1529**	**0.1396**	**0.1917**	**0.2605**

(1) Averages computed based on total housing stock, not adjusted for occupancy rate

(2) Ratio for apartments (4+ family structures) excludes public housing and other subsidized units owned by Dover Housing Authority

(3) Due to relatively small sample of units outside of age restricted developments, the ratio for manufactured housing units has been estimated based on adjusted ratios derived from American Community Survey (ACS) data (see text)

Because of the relatively small sample of manufactured housing units that are not within age restricted developments, BCM Planning computed a ration based on historical data from the American Community Survey (ACS) public use sample from 2005-2009 data (as tabulated by the NH Housing Finance Authority). The public use sample data was adjusted relative to Dover enrollment characteristics for single family homes to arrive at a 2017 estimate for manufactured housing.

2. Facility Standards: School Floor Area per Pupil Capacity

Updated estimates of school facility floor areas per pupil capacity, and enrollment as a percent of school capacity are summarized below.

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INVENTORY OF DOVER PUBLIC SCHOOLS, FLOOR AREA AND PUPIL CAPACITY - 2017						
School Facilities	Year Built and Expansion Dates	Facility Floor Area	Estimated Capacity	Gross Sq. Ft./Pupil Capacity	October 2017 Enrollment	Enrollment as % of Capacity
ELEMENTARY SCHOOLS						
Garrison Elementary	1962, 1967, 1969, 1999, 2005, 2006	65,938	672	98	440	65%
Horne Street Elementary	1957, 1993, 1999, 2002, 2008	58,233	620	94	491	79%
Woodman Elementary	1950, 1999, 2007	105,178	594	177	477	80%
Total Elementary		229,349	1,886	122	1,408	75%
MIDDLE SCHOOL						
Dover Middle School	1998, 2003	175,020	1,380	127	1,209	88%
Total Elementary and Middle		404,369	3,266	**124**	2,617	80%
HIGH SCHOOL	*Estimate of Sq. Ft. Excludes Career Tech Ctr*					
Dover High School	New High School 2017	237,248	1,500	**158**	1,344	90%
Total School System		641,617	4,766	**135**	3,961	83%

Capacities for the elementary and middle schools are based on the City's Comprehensive Annual Financial Report (CAFR) for 2016.

The capacity of the new high school reflects the estimated design capacity of the new facility (1,500 pupils) according to an on-line report from the Dover School District project archive (website) for the high school project entitled Dover High School Space Summary, describing the planned space allocation for the new high school.

Based on October 2017 enrollment counts, elementary and middle school enrollment represents 80% of school capacity, and current high school enrollment represents 90% of the capacity assigned to the new high school.

The enrollment projections reviewed in Section A of this report indicate that sufficient capacity should be available at all levels over the projection period through 2026.

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Estimated Floor Area Per Pupil Capacity - New Dover High School	
Space Component	New High School
Capacity	1,500
Classrooms	64
Core Academic Space	69,470
Art & Music	9,650
Career & Tech Ed Center (CTC)	60,350
Health & Phys. Education	27,600
Media Center	8,600
Auditorium/Drama	10,400
Dining & Food Service	13,650
Medical	910
Admin. & Guidance	5,045
Custodial & Maint	5,150
Other	7,440
District Storage	250
Net Floor Area Total Facility	218,515
Net Floor Area w/o CTC	158,165
Gross Floor Area With CTC	327,773
Grossing Factor Per Space Study	1.50
Es. Gross Floor Area High School Only	237,248
Stated Capacity of Facility	1,500
Square Feet Per Pupil Capacity	**158**

Spatial components and grossing factor from Dover School District on-line project archive report: Dover High School Space Summary

While the average floor area per pupil capacity for elementary and middle school space is virtually unchanged since the 2008 update, the design basis for the new high school represents a significant increase in the floor area standard.

Based on the estimated gross floor area of the new high school (excluding the area devoted to the Career Technical Center (CTC), BCM Planning estimates that the core and classroom space associated with the high school is 158 square feet per pupil capacity.

This raises the standard for floor area per high school pupil from the 129 square feet per pupil to an estimated 158 square feet per pupil capacity at the new high school (excluding the floor area devoted to the CTC portion of the site). This is an increase of 22.5% in the space standard applicable to high school facilities.

3. Facility Development Cost per Square Foot

Total Development Costs of New High School - Dover			
Facility Components of Project	Total Cost	Allocated Gross Sq. Ft.	Est. Cost Per Sq. Ft.
Total Facility Development Cost	$87,622,756	327,773	$267
CTC Cost @ 22.8% of Total	$19,977,988	90,525	$221
High School Cost @ 77.2%	$67,644,768	237,248	$285

Based on a review of the comprehensive development costs of the new high school, the total development costs for the new high school, including the CTC portion of the project, will average $267 per square foot. Excluding the CTC portion, the allocated cost indicates that the high school portion of total development costs will average $285 per square foot.

In keeping with the 2008 impact fee methodology, BCM Planning has assigned facility development costs using the most recent State Department of Education construction cost guidelines. The cost guidelines are intended to establish reasonable estimates of school constructions costs that will be subject to reimbursement from State Building Aid when available.

The most recent publication of cost guideline was applicable to 2015-2016 construction. Standard costs were computed by the NH Department of Education at an average of $208 per

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square foot for elementary / middle schools and at $222 for high schools in Strafford County. Using an RS Means time adjustment to 2016-2017 costs, these estimates were adjusted to **$209** and **$223** per square foot respectively for the 2017 impact fee calculation.

4. State Building Aid

The portion of the school impact fee assessed for elementary and middle school facilities reflects a recoupment of the cost of capacity that benefited from past State Building Aid provided for 30% of principal costs. While the same benefit applied to high school costs in the past, the new high school will receive State aid only for the CTC portion of construction. No State Building Aid is available to offset costs attributable to the high school portion of the project.

5. Credit Allowances

All credit allowances for bonded debt costs attributable to existing capacity needs have been updated to 2017 values using the same methods as prior updates.

The new high school construction will replace the existing facility with a more modern school that will provide more space per pupil than the old facility.

While the new high school will have sufficient capacity to accommodate projected enrollment over the next 10 years, its construction centers on providing more space per pupil in a better facility rather than a simple increase in capacity.

Deficiency in High School Space Rectified by New Facility	
Old Floor Area Standard Per Pupil	129
New High School - Area Per Pupil Capacity	158
Net Change Per Pupil	29
New High School Capacity	1,500
Floor Area Required to Meet New Standard	43,500
Gross Floor Area Estimate - High school Excluding CTC	237,248
Percent of Cost Attributable to Base Year Deficiency	18.3%

A portion of high school project cost is attributable to the increase in the floor area standard per pupil. This increase essentially represents a pre-existing space deficiency per pupil.

The credit allowance is computed at 18.3% of net school district costs for the development of the new high school (excluding CTC and the related State funds that will reimburse part of the CTC component of the project). Bonded debt service costs used in the credit calculation pertain to the non-CTC portion of debt service costs. Detailed credit allowance calculations are included at the end of this chapter.

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5. Summary Fee Schedules

a. Fee Table and Comparison 2007 vs. 2017

Dover School Impact Fee: 2017 Calculations of Fee Per Dwelling Unit		
Type of Structure	2017 School Impact Fee Per Dwelling Unit	
	A	B
	Fee as Calculated	Discounted Fee (3)
Single Family Detached	$6,629	$5,648
Townhouse	$2,125	$1,778
Two and Three Unit Structures	$4,346	$3,754
Multi-family Structures 4+ Units	$3,003	$2,644
Manufactured Housing	$4,338	$3,551
Accessory Dwelling Unit (1)	$1,989	$1,694
Apartment Over 1st Floor Non-Residential Use (2)	$649	$571
Age Restricted Dwelling Unit 55+	No Fee	No Fee
Age Restricted Dwelling Unit 62+	No Fee	No Fee
(1) Fee for ADU Computed at 30% of fee for single family detached home		
(2) Reduced fee for apartments in upper stories of buildings with commercial first floor may be subject to other specific conditions estabished by the City or limited to certain zoning districts		
(3) The discounted fee option (B) is based on applying traditional State Building Aid at 30% of principal to compute the cost basis and credit allowances for high school facility space. The fee as calculated reflects actual conditions (no State funding was applicable to the non-CTC portion of new high school)		

The results of the revised impact fee calculation for public schools is shown in column A. One of the principal reasons for the increase in the 2017 fee compared with the 2007 calculation centers on the high school. The floor are per pupil standard has increased at the high school, and the new facility will not benefit from traditional levels of State Building Aid that have historically reduced local district capital costs.

For comparison purposes column B shows what the school impact fee schedule would be if State Building Aid (at 30% of principal) was available to the new high school.

Change in Components of Dover School Impact Fee Calculation for Single Family Home						
Single Family Detached Unit - Impact Fee Components	2001-2002	2007-2008	2017-2018	Change from 2007 to 2017	% Change	Annualized Pct Change (10 Yrs)
Enrollment Per Unit						
Elementary and Middle	0.2656	0.2554	0.2524	-0.0030	-1.2%	-0.12%
High School	0.1082	0.1140	0.1058	-0.0082	-7.2%	-0.72%
Total	0.3738	0.3694	0.3582	-0.0112	-3.0%	-0.30%
Square Feet Per Pupil Capacity						
Elementary and Middle	136	125	124	-1	-0.8%	-0.08%
High School	133	129	158	29	22.5%	2.25%
Facility Cost Per Square Foot						
Elementary and Middle	$128	$151	$209	$58	38.4%	3.84%
High School	$150	$168	$223	$55	32.7%	3.27%
Total Facility Cost Attributed						
Elementary and Middle	$4,624	$4,821	$6,541	$1,720	35.7%	3.57%
High School	$2,159	$2,471	$3,728	$1,257	50.9%	5.09%
Total	$6,783	$7,292	$10,269	$2,977	40.8%	4.08%
State Building Aid % of Principal						
Elementary and Middle	30%	30%	30%	0%	0.0%	0.00%
High School	30%	30%	0%	-30%	-100.0%	-10.00%
Net Local Cost						
Elementary and Middle	$3,236	$3,374	$4,579	$1,205	35.7%	3.57%
High School	$1,511	$1,729	$3,728	$1,999	115.6%	11.56%
Total	$4,747	$5,103	$8,307	$3,204	62.8%	6.28%
Credit Allowance (Deduct from Local Cost)						
Past	$29	$113	$370	$257	227.4%	22.74%
Future	$1,759	$1,340	$1,308	-$32	-2.4%	-0.24%
Total	$1,788	$1,453	$1,678	$225	15.5%	1.55%
Impact Fee - Single Family Unit	$2,959	$3,650	$6,629	$2,979	81.6%	8.16%

This chart shows the change in the components of the Dover school impact fee as applied to a single family detached home.

The principal reasons for the increase in the single family are (1) the time adjustment (10 years) update to 2017 equivalent facility development costs; (2) the increased floor area standard for the high school; and (3) the absence of State Building Aid for the new high school facility.

2017 IMPACT FEE CALCULATION PER HOUSING UNIT BY STRUCTURE TYPE - DOVER, NEW HAMPSHIRE - A							School Cost Per Housing Unit @ Indicated $/Sq.Ft. of School Area		
	Dover Public School Enrollment Per Housing Unit			Existing Facilities Avg Sq. Ft. Per Pupil Capacity			$209	$223	Total Capital Cost Per D.U.
Structure Type	Elementary & Middle	High School	Total Public Schools	Elementary & Middle	High School	Overall Average	Elementary & Middle	High School	
Single Family Detached	0.2524	0.1058	0.3582	124	158	134	$ 6,541	$ 3,728	$ 10,269
Townhouse	0.0982	0.0414	0.1396	124	158	134	$ 2,545	$ 1,459	$ 4,004
Two and Three Unit Structures	0.1579	0.0612	0.2191	124	158	133	$ 4,092	$ 2,156	$ 6,248
Four or More Unit Structures	0.1158	0.0371	0.1529	124	158	132	$ 3,001	$ 1,307	$ 4,308
Manufactured Housing	0.1136	0.0781	0.1917	124	158	138	$ 2,944	$ 2,752	$ 5,696

	Local Capital Cost Per Unit			Credit Allowances for Debt Service (See Credit Explanations)			Impact Fee Assessment Per Dwelling Unit	
	(Total Capital Cost Less 30% State Building Aid on Elementary & Middle)						(Local Capital Cost Less Credits)	
Structure Type	Elementary And Middle	High School	Total Public Schools	Past Payments	Future Payments	Total Credit	Impact Fee Per Unit:	
Single Family Detached	$ 4,579	$ 3,728	$ 8,307	$ (370)	$ (1,308)	$ (1,678)	**$6,629**	
Townhouse	$ 1,782	$ 1,459	$ 3,241	$ (245)	$ (871)	$ (1,116)	**$2,125**	
Two and Three Unit Structures	$ 2,864	$ 2,156	$ 5,020	$ (150)	$ (524)	$ (674)	**$4,346**	
Four or More Unit Structures	$ 2,101	$ 1,307	$ 3,408	$ (89)	$ (316)	$ (405)	**$3,003**	
Manufactured Housing	$ 2,061	$ 2,752	$ 4,813	$ (105)	$ (370)	$ (475)	**$4,338**	

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b. Special Fee Categories

Accessory Dwelling Units. In Dover, an ADU is allowed only in association with a single family detached home. Dover zoning standards require that an ADU shall have an area of no less than 300 square feet and no more than 800 square feet. The living are of the ADU can be no more than 30% of the combined living area of the ADU and the principal unit, and the property owner must live in either the ADU or the principal unit. BCM Planning was not able to compute a direct enrollment ratio for accessory units, as no property tax assessment designation was available to identify single family homes with apartments. Other studies by BCM Planning have compared enrollment data for single family homes with apartments to all other single family homes in Salem, Manchester, Plaistow and Sandown. These studies indicated an average living differential of about 600 square feet between homes with accessory apartments and those without them. Those with an apartment had enrollment ratios that were 30% to 35% higher than the homes without accessory apartments.

In this update, the impact fee for an accessory dwelling unit (ADU) has been computed at 30% of the standard fee applicable to a single family detached home. Based on the Dover zoning standards, an ADU might be smaller than a typical studio apartment or as large as an average two bedroom unit. Exceptions or reductions might be considered for ADUs or other apartments that that have living area below selected thresholds.

Apartments in Upper Stories of Buildings with Commercial First Floor. The City requested a review of the enrollment impacts and a school impact fee option for apartments in the upper stories of commercial buildings. Buildings with these characteristics were identified based on City property assessment data. Total public school enrollment in these selected properties totaled 6 pupils among 181 upper floor apartments (a ratio of 0.033 per unit). That enrollment is 21.6% of the multipliers (0.1529 per unit) assigned to privately owned apartment buildings with four or more units. If a school fee category were established for units similar to this sample of center city, upper floor apartments, the fee could be computed as function of the standard apartment fee:

Apartment fee of $3,003 x 21.6% = **$649 per unit** for qualified upper floor apartments.

The sample of units from which the adjustment is derived reflects data for buildings that are an average of about 100 years old, most of which are on Central Avenue. Only a portion of these properties represent new construction or substantial renovation.

Age Restricted Housing Units. No school impact fees are proposed housing units in congregate senior housing developments or in age restricted housing units in which deed restrictions limited their occupancy to persons age 62 or older, or to persons age 55 or older. If an age-restricted housing development has less than 100% of its units restricted to these age groups, then the school impact fee may be assessed in proportion to the percentage subject to the age restriction. For example, if 80% of units are subject to an age restriction, then 20% of the school fee could be assessed per unit.

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CREDIT ALLOWANCE UPDATES: SCHOOL FACILITIES

Elementary Schools

CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bond: Garrison Elementary School - New Gym/Admin/Classrooms ($2,150,000) June 2005

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2005	$ -	$ 83,402	$ 83,402	$ -	$ 83,402
2006	$ 108,000	$ 83,402	$ 191,402	$ (32,400)	$ 159,002
2007	$ 108,000	$ 78,002	$ 186,002	$ (32,400)	$ 153,602
2008	$ 108,000	$ 72,602	$ 180,602	$ (32,400)	$ 148,202
2009	$ 108,000	$ 68,282	$ 176,282	$ (32,400)	$ 143,882
2010	$ 108,000	$ 65,042	$ 173,042	$ (32,400)	$ 140,642
2011	$ 108,000	$ 61,802	$ 169,802	$ (32,400)	$ 137,402
2012	$ 108,000	$ 58,454	$ 166,454	$ (32,400)	$ 134,054
2013	$ 108,000	$ 54,998	$ 162,998	$ (32,400)	$ 130,598
2014	$ 108,000	$ 51,434	$ 159,434	$ (32,400)	$ 127,034
2015	$ 108,000	$ 47,762	$ 155,762	$ (32,400)	$ 123,362
2016	$ 107,000	$ 43,442	$ 150,442	$ (32,100)	$ 118,342
2017	$ 107,000	$ 39,162	$ 146,162	$ (32,100)	$ 114,062
			Present Value of Past Payments		$ 2,347,664
			Percent of Capacity Utilized as of 2017		65%
			Credited Amount		$ 1,525,982
			Net Local Assessed Valuation Oct 2017		$ 3,150,231,460
			Past Payment Credit Per $1000 Raw Land Value		$ 0.48
FUTURE PAYMENTS					
2018	$ 107,000	$ 34,882	$ 141,882	$ (32,100)	$ 109,782
2019	$ 107,000	$ 30,602	$ 137,602	$ (32,100)	$ 105,502
2020	$ 107,000	$ 26,322	$ 133,322	$ (32,100)	$ 101,222
2021	$ 107,000	$ 22,042	$ 129,042	$ (32,100)	$ 96,942
2022	$ 107,000	$ 17,762	$ 124,762	$ (32,100)	$ 92,662
2023	$ 107,000	$ 13,376	$ 120,376	$ (32,100)	$ 88,276
2024	$ 107,000	$ 8,988	$ 115,988	$ (32,100)	$ 83,888
2025	$ 107,000	$ 4,494	$ 111,494	$ (32,100)	$ 79,394
Total Past & Future	$ 2,150,000	$ 966,254	$ 3,116,254	$ (645,000)	$ 3,156,576,361

Net Present Value of Future Payments (2018-2025) @ 5% discount rate:	$ 619,272
Percent of Capacity Utilized as of 2017	65%
Credited Amount	$ 402,527
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 0.13

CREDIT CALCULATION (PER DWELLING UNIT)

Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$269,000	$ 34,970	$ (17)	$ (35)
Townhouse	$179,000	$ 23,270	$ (11)	$ (23)
Two and Three Family	$108,000	$ 14,040	$ (7)	$ (14)
Four or More Family	$65,000	$ 8,450	$ (4)	$ (8)
Manufactured Housing	$76,000	$ 9,880	$ (5)	$ (10)

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CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bonds: Woodman Park Elementary - 17-Room Addition - $4,805,000 - June 2006

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2006	$ -	$ 204,850	$ 204,850	$ -	$ 204,850
2007	$ 240,000	$ 204,850	$ 444,850	$ (72,000)	$ 372,850
2008	$ 245,000	$ 192,600	$ 437,600	$ (73,500)	$ 364,100
2009	$ 240,000	$ 182,700	$ 422,700	$ (72,000)	$ 350,700
2010	$ 240,000	$ 173,100	$ 413,100	$ (72,000)	$ 341,100
2011	$ 240,000	$ 163,500	$ 403,500	$ (72,000)	$ 331,500
2012	$ 240,000	$ 153,900	$ 393,900	$ (72,000)	$ 321,900
2013	$ 240,000	$ 141,900	$ 381,900	$ (72,000)	$ 309,900
2014	$ 240,000	$ 132,300	$ 372,300	$ (72,000)	$ 300,300
2015	$ 240,000	$ 120,300	$ 360,300	$ (72,000)	$ 288,300
2016	$ 240,000	$ 110,100	$ 350,100	$ (72,000)	$ 278,100
2017	$ 240,000	$ 100,500	$ 340,500	$ (72,000)	$ 268,500

Present Value of Past Payments	$ 4,978,393
Percent of Capacity Utilized as of 2017	80%
Amount Credited	$ 3,982,715
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Past Payment Credit Per $1000 Land Value	$ 1.26

FUTURE PAYMENTS					
2018	$ 240,000	$ 90,900	$ 330,900	$ (72,000)	$ 258,900
2019	$ 240,000	$ 81,300	$ 321,300	$ (72,000)	$ 249,300
2020	$ 240,000	$ 71,700	$ 311,700	$ (72,000)	$ 239,700
2021	$ 240,000	$ 61,800	$ 301,800	$ (72,000)	$ 229,800
2022	$ 240,000	$ 51,600	$ 291,600	$ (72,000)	$ 219,600
2023	$ 240,000	$ 41,400	$ 281,400	$ (72,000)	$ 209,400
2024	$ 240,000	$ 31,200	$ 271,200	$ (72,000)	$ 199,200
2025	$ 240,000	$ 21,000	$ 261,000	$ (72,000)	$ 189,000
2026	$ 240,000	$ 10,500	$ 250,500	$ (72,000)	$ 178,500
Total Past and future	$ 4,805,000	$ 2,342,000	$ 7,147,000	$ (1,441,500)	$ 3,164,898,070

Net Present Value of Future Payments (2018-2026) @ 5% discount rate:	$ 1,581,686
Percent of Capacity Utilized as of 2017	80%
Amount Credited	$ 1,265,349
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 0.40

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$ 269,000	$ 34,970	$ (14)	($108)
Townhouse	$ 179,000	$ 23,270	$ (9)	($72)
Two and Three Family	$ 108,000	$ 14,040	$ (6)	($43)
Four or More Family	$ 65,000	$ 8,450	$ (3)	($26)
Manufactured Housing	$ 76,000	$ 9,880	$ (4)	($30)

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CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bonds: Horne Street School - Two Improvement Bonds $365,000 (2003) and $225,000 (2004)

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2004	$ -	$ 10,262	$ 10,262	$ -	$ 10,262
2005	$ 25,000	$ 18,324	$ 43,324	$ (7,500)	$ 35,824
2006	$ 40,000	$ 17,824	$ 57,824	$ (12,000)	$ 45,824
2007	$ 40,000	$ 16,800	$ 56,800	$ (12,000)	$ 44,800
2008	$ 40,000	$ 15,774	$ 55,774	$ (12,000)	$ 43,774
2009	$ 40,000	$ 14,688	$ 54,688	$ (12,000)	$ 42,688
2010	$ 40,000	$ 13,538	$ 53,538	$ (12,000)	$ 41,538
2011	$ 40,000	$ 12,326	$ 52,326	$ (12,000)	$ 40,326
2012	$ 40,000	$ 11,014	$ 51,014	$ (12,000)	$ 39,014
2013	$ 40,000	$ 9,664	$ 49,664	$ (12,000)	$ 37,664
2014	$ 40,000	$ 8,252	$ 48,252	$ (12,000)	$ 36,252
2015	$ 40,000	$ 6,902	$ 46,902	$ (12,000)	$ 34,902
2016	$ 40,000	$ 5,502	$ 45,502	$ (12,000)	$ 33,502
2017	$ 40,000	$ 4,036	$ 44,036	$ (12,000)	$ 32,036

Present Value of Past Payments	$ 721,733
Percent of Capacity Utilized as of 2017	79%
Amount Credited	$ 570,169
Net Local Assessed Valuation Nov 2016	$ 3,150,231,460
Past Payment Credit Per $1000 Land Value	$ 0.18

FUTURE PAYMENTS					
2018	$ 35,000	$ 2,706	$ 37,706	$ (10,500)	$ 27,206
2019	$ 35,000	$ 1,336	$ 36,336	$ (10,500)	$ 25,836
2020	$ 15,000	$ 676	$ 15,676	$ (4,500)	$ 11,176
Total	$ 590,000	$ 169,624	$ 759,624	$ (177,000)	$ 3,152,105,987

Net Present Value of Future Payments (2018-2029) @ 5% discount rate:	$ 58,999
Percent of Capacity Utilized as of 2007	79%
Amount Credited	$ 46,609
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 0.01

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$ 269,000	$ 34,970	$ (6)	($3)
Townhouse	$ 179,000	$ 23,270	$ (4)	($2)
Two and Three Family	$ 108,000	$ 14,040	$ (3)	($1)
Four or More Family	$ 65,000	$ 8,450	$ (2)	($1)
Manufactured Housing	$ 76,000	$ 9,880	$ (2)	($1)

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CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bonds: Horne Street School - Improvement Bonds 11/15/08 and 4/15/2010

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2009	$ 25,000	$ 18,944	$ 43,944	$ (7,500)	$ 36,444
2010	$ 25,000	$ 110,882	$ 135,882	$ (7,500)	$ 128,382
2011	$ 337,942	$ 215,463	$ 553,405	$ (101,383)	$ 452,022
2012	$ 335,000	$ 205,368	$ 540,368	$ (100,500)	$ 439,868
2013	$ 335,000	$ 195,256	$ 530,256	$ (100,500)	$ 429,756
2014	$ 335,000	$ 185,081	$ 520,081	$ (100,500)	$ 419,581
2015	$ 335,000	$ 174,906	$ 509,906	$ (100,500)	$ 409,406
2016	$ 335,000	$ 164,669	$ 499,669	$ (100,500)	$ 399,169
2017	$ 335,000	$ 154,369	$ 489,369	$ (100,500)	$ 388,869

Present Worth of Past Payments	$ 3,669,095
Percent of Capacity Utilized as of 2017	79%
Amount Credited	$ 2,898,585
Net Local Assessed Valuation Nov 2016	$ 3,150,231,460
Past Payment Credit Per $1000 Land Value	$ 0.92

FUTURE PAYMENTS					
2018	$ 335,000	$ 144,069	$ 479,069	$ (100,500)	$ 378,569
2019	$ 325,000	$ 133,656	$ 458,656	$ (97,500)	$ 361,156
2020	$ 325,000	$ 123,506	$ 448,506	$ (97,500)	$ 351,006
2021	$ 320,000	$ 113,045	$ 433,045	$ (96,000)	$ 337,045
2022	$ 320,000	$ 102,278	$ 422,278	$ (96,000)	$ 326,278
2023	$ 320,000	$ 91,125	$ 411,125	$ (96,000)	$ 315,125
2024	$ 320,000	$ 79,775	$ 399,775	$ (96,000)	$ 303,775
2025	$ 320,000	$ 68,040	$ 388,040	$ (96,000)	$ 292,040
2026	$ 320,000	$ 55,920	$ 375,920	$ (96,000)	$ 279,920
2027	$ 320,000	$ 43,603	$ 363,603	$ (96,000)	$ 267,603
2028	$ 320,000	$ 30,000	$ 350,000	$ (96,000)	$ 254,000
2029	$ 300,000	$ 18,000	$ 318,000	$ (90,000)	$ 228,000
2030	$ 300,000	$ 6,000	$ 306,000	$ (90,000)	$ 216,000
Total Past and future	$ 6,542,942	$ 2,433,954	$ 8,976,896	$ (1,962,883)	$ 7,014,014

Net Present Value of Future Payments (2018-2026) @ 5% discount rate:	$ 2,353,409
Percent of Capacity Utilized as of 2007	79%
Amount Credited	$ 1,859,193
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 0.59

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$ 269,000	$ 34,970	$ (14)	($108)
Townhouse	$ 179,000	$ 23,270	$ (9)	($72)
Two and Three Family	$ 108,000	$ 14,040	$ (6)	($43)
Four or More Family	$ 65,000	$ 8,450	$ (3)	($26)
Manufactured Housing	$ 76,000	$ 9,880	$ (4)	($30)

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Middle School

CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bonds: Middle School Construction - 1999 Series C

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2000	$ 493,171	$ 15,615	$ 508,786	$ (147,951)	$ 360,835
2001	$ 1,165,337	$ 81,827	$ 1,247,165	$ (349,601)	$ 897,563
2002	$ 1,171,583	$ 151,115	$ 1,322,698	$ (351,475)	$ 971,223
2003	$ 1,108,253	$ 212,357	$ 1,320,610	$ (332,476)	$ 988,134
2004	$ 1,047,263	$ 269,885	$ 1,317,148	$ (314,179)	$ 1,002,969
2005	$ 992,290	$ 324,883	$ 1,317,173	$ (297,687)	$ 1,019,486
2006	$ 939,029	$ 376,519	$ 1,315,548	$ (281,709)	$ 1,033,839
2007	$ 890,830	$ 426,305	$ 1,317,135	$ (267,249)	$ 1,049,886
2008	$ 843,876	$ 472,922	$ 1,316,798	$ (253,163)	$ 1,063,635
2009	$ 798,246	$ 516,289	$ 1,314,535	$ (239,474)	$ 1,075,061
2010	$ 756,788	$ 558,422	$ 1,315,210	$ (227,036)	$ 1,088,174
2011	$ 716,302	$ 597,384	$ 1,313,685	$ (214,890)	$ 1,098,795
2012	$ 668,879	$ 641,081	$ 1,309,960	$ (200,664)	$ 1,109,296
2013	$ 632,735	$ 676,162	$ 1,308,898	$ (189,821)	$ 1,119,077
2014	$ 599,659	$ 710,563	$ 1,310,223	$ (179,898)	$ 1,130,325
2015	$ 566,927	$ 741,390	$ 1,308,318	$ (170,078)	$ 1,138,239
2016	$ 534,610	$ 768,421	$ 1,303,031	$ (160,383)	$ 1,142,648
2017	$ 498,096	$ 806,435	$ 1,304,531	$ (149,429)	$ 1,155,102

Present Worth of Past Payments	$ 27,898,678
Percent of Capacity Utilized as of 2017	88%
Credited Amount	$ 24,550,837
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Past Payment Credit Per $1000 Land Value	$ 7.79

FUTURE PAYMENTS					
2018	$ 466,687	$ 835,969	$ 1,302,656	$ (140,006)	$ 1,162,650
2019	$ 439,264	$ 857,398	$ 1,296,663	$ (131,779)	$ 1,164,883
2020	$ 411,201	$ 885,024	$ 1,296,225	$ (123,360)	$ 1,172,865
Total Past and future	$ 15,741,027	$ 10,925,965	$ 26,666,992	$ (4,722,308)	$ 21,944,684

Net Present Value of Future Payments (2018-2020) @ 5% discount rate:	$ 3,177,034
Percent of Capacity Utilized as of 2007	88%
Credited Amount	$ 2,795,790
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 0.89

CREDIT CALCULATION (PER DWELLING UNIT)

Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$ 269,000	$ 34,970	($272)	($239)
Townhouse	$ 179,000	$ 23,270	($181)	($159)
Two and Three Family	$ 108,000	$ 14,040	($109)	($96)
Four or More Family	$ 65,000	$ 8,450	($66)	($58)
Manufactured Housing	$ 76,000	$ 9,880	($77)	($68)

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CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bonds: Middle School Improvement Bond - Two-wing addition - $1,000,000 June 2003

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2003	0	$ 31,538	$ 31,538	$ -	$ 31,538
2004	$ 50,000	$ 31,538	$ 81,538	$ (15,000)	$ 66,538
2005	$ 50,000	$ 30,534	$ 80,534	$ (15,000)	$ 65,534
2006	$ 50,000	$ 29,538	$ 79,538	$ (15,000)	$ 64,538
2007	$ 50,000	$ 28,538	$ 78,538	$ (15,000)	$ 63,538
2008	$ 50,000	$ 27,412	$ 77,412	$ (15,000)	$ 62,412
2009	$ 50,000	$ 26,162	$ 76,162	$ (15,000)	$ 61,162
2010	$ 50,000	$ 24,788	$ 74,788	$ (15,000)	$ 59,788
2011	$ 50,000	$ 23,288	$ 73,288	$ (15,000)	$ 58,288
2012	$ 50,000	$ 21,788	$ 71,788	$ (15,000)	$ 56,788
2013	$ 50,000	$ 20,162	$ 70,162	$ (15,000)	$ 55,162
2014	$ 50,000	$ 18,662	$ 68,662	$ (15,000)	$ 53,662
2015	$ 50,000	$ 17,062	$ 67,062	$ (15,000)	$ 52,062
2016	$ 50,000	$ 15,362	$ 65,362	$ (15,000)	$ 50,362
2017	$ 50,000	$ 13,612	$ 63,612	$ (15,000)	$ 48,612
			Present Worth of Past Payments		$ 1,229,442
			Percent of Capacity Utilized as of 2017		88%
			Amount Credited		$ 1,081,909
			Net Local Assessed Valuation Oct 2017		$ 3,150,231,460
			Past Payment Credit Per $1000 Land Value		$ 0.34
FUTURE PAYMENTS					
2018	$ 50,000	$ 11,800	$ 61,800	$ (15,000)	$ 46,800
2019	$ 50,000	$ 9,950	$ 59,950	$ (15,000)	$ 44,950
2020	$ 50,000	$ 8,050	$ 58,050	$ (15,000)	$ 43,050
2021	$ 50,000	$ 6,050	$ 56,050	$ (15,000)	$ 41,050
2022	$ 50,000	$ 4,050	$ 54,050	$ (15,000)	$ 39,050
2023	$ 50,000	$ 2,050	$ 52,050	$ (15,000)	$ 37,050
Total Past and future	$ 1,000,000	$ 401,934	$ 1,401,934	$ (300,000)	$ 1,101,934

Net Present Value of Future Payments (2018-2024) @ 5% discount rate:	$ 214,546.53
Percent of Capacity Utilized as of 2017	88%
Amount Credited	$ 188,801
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 0.06

CREDIT CALCULATION (PER DWELLING UNIT)

Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$ 269,000	$ 34,970	($12)	($16)
Townhouse	$ 179,000	$ 23,270	($8)	($11)
Two and Three Family	$ 108,000	$ 14,040	($5)	($6)
Four or More Family	$ 65,000	$ 8,450	($3)	($4)
Manufactured Housing	$ 76,000	$ 9,880	($3)	($5)

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High School (old)

CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bonds: High School - 8 Room Addition - 2 Bonds $1,783,000 and $500,000 June 2003

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2003	$ 119,000	$ 64,714	$ 183,714	$ (35,700)	$ 148,014
2004	$ 154,000	$ 61,144	$ 215,144	$ (46,200)	$ 168,944
2005	$ 154,000	$ 58,064	$ 212,064	$ (46,200)	$ 165,864
2006	$ 154,000	$ 54,984	$ 208,984	$ (46,200)	$ 162,784
2007	$ 154,000	$ 51,904	$ 205,904	$ (46,200)	$ 159,704
2008	$ 154,000	$ 48,438	$ 202,438	$ (46,200)	$ 156,238
2009	$ 154,000	$ 44,590	$ 198,590	$ (46,200)	$ 152,390
2010	$ 154,000	$ 40,356	$ 194,356	$ (46,200)	$ 148,156
2011	$ 154,000	$ 35,736	$ 189,736	$ (46,200)	$ 143,536
2012	$ 154,000	$ 31,116	$ 185,116	$ (46,200)	$ 138,916
2013	$ 154,000	$ 26,110	$ 180,110	$ (46,200)	$ 133,910
2014	$ 149,000	$ 21,490	$ 170,490	$ (44,700)	$ 125,790
2015	$ 149,000	$ 16,722	$ 165,722	$ (44,700)	$ 121,022
2016	$ 148,000	$ 11,656	$ 159,656	$ (44,400)	$ 115,256
2017	$ 148,000	$ 6,476	$ 154,476	$ (44,400)	$ 110,076

Present Value of Past Payments	$ 3,166,603
Percent of Capacity Utilized as of 2017 (Old HS)	76%
Credited Amount	$ 2,406,618
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Past Payment Credit Per $1000 Land Value	$ 0.76

FUTURE PAYMENTS					
2018	$ 30,000	$ 1,110	$ 31,110	$ (9,000)	$ 22,110
Total Past & Future	$ 2,283,000	$ 574,610	$ 2,857,610	$ (684,900)	$ 3,157,977,393

Net Present Value of Future Payments (2018)@ 5% discount rate:	$ 21,057
Percent of Capacity Utilized as of 2017 (Old HS)	76%
Credited Amount	$ 16,003
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 0.01

CREDIT CALCULATION (PER DWELLING UNIT)

Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$ 269,000	$ 34,970	($27)	($3)
Townhouse	$ 179,000	$ 23,270	($18)	($2)
Two and Three Family	$ 108,000	$ 14,040	($11)	($1)
Four or More Family	$ 65,000	$ 8,450	($6)	($1)
Manufactured Housing	$ 76,000	$ 9,880	($8)	($1)

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High School (New)

CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT

Bonds: New High School - Excluding CTE Portion of Development

State Building Aid on Bond:	None
Discount Rate:	5%
Local Debt Svc Cost Excluding CTE Portion:	93%
Portion of Debt Service on Non-CTE Space Credited:	18.3%

Year	Total Principal Payment	Total Interest Payment	Total Payment	Adjusted to Exclude Local Cost of CTE	18.3% of Adjusted Debt Service Credited
PAST PAYMENTS					
2016	$ -	$ 1,854,556	$ 1,854,556	$ 1,724,737	$ 315,627
2017	$ -	$ 2,607,969	$ 2,607,969	$ 2,425,411	$ 443,850
			Present Value of Past Payments		$ 775,258
			Enrollment as Percent of New HS Capacity		90%
			Credited Amount		$ 697,732
			Net Local Assessed Valuation Oct 2017		$ 3,150,231,460
			Past Payment Credit Per $1000 Land Value		$ 0.22
FUTURE PAYMENTS					
2018	$ -	$ 2,607,969	$ 2,607,969	$ 2,425,411	$ 443,850
2019	$ 60,000	$ 2,606,469	$ 2,666,469	$ 2,479,816	$ 453,806
2020	$ 155,000	$ 2,601,094	$ 2,756,094	$ 2,563,167	$ 469,060
2021	$ 1,545,000	$ 2,581,769	$ 4,126,769	$ 3,837,895	$ 702,335
2022	$ 1,660,000	$ 2,524,819	$ 4,184,819	$ 3,891,881	$ 712,214
2023	$ 1,825,000	$ 2,437,694	$ 4,262,694	$ 3,964,305	$ 725,468
2024	$ 1,940,000	$ 2,343,569	$ 4,283,569	$ 3,983,719	$ 729,021
2025	$ 2,105,000	$ 2,242,444	$ 4,347,444	$ 4,043,123	$ 739,892
2026	$ 2,265,000	$ 2,133,194	$ 4,398,194	$ 4,090,320	$ 748,529
2027	$ 2,500,000	$ 2,014,069	$ 4,514,069	$ 4,198,084	$ 768,249
2028	$ 3,190,000	$ 1,887,769	$ 5,077,769	$ 4,722,325	$ 864,185
2029	$ 3,300,000	$ 1,757,969	$ 5,057,969	$ 4,703,911	$ 860,816
2030	$ 3,435,000	$ 1,631,856	$ 5,066,856	$ 4,712,176	$ 862,328
2031	$ 3,860,000	$ 1,513,844	$ 5,373,844	$ 4,997,675	$ 914,575
2032	$ 3,990,000	$ 1,396,094	$ 5,386,094	$ 5,009,067	$ 916,659
2033	$ 4,125,000	$ 1,274,369	$ 5,399,369	$ 5,021,413	$ 918,919
2034	$ 4,255,000	$ 1,148,669	$ 5,403,669	$ 5,025,412	$ 919,650
2035	$ 4,410,000	$ 1,018,694	$ 5,428,694	$ 5,048,685	$ 923,909
2036	$ 4,565,000	$ 881,216	$ 5,446,216	$ 5,064,981	$ 926,892
2037	$ 4,740,000	$ 735,825	$ 5,475,825	$ 5,092,517	$ 931,931
2038	$ 4,895,000	$ 582,219	$ 5,477,219	$ 5,093,813	$ 932,168
2039	$ 5,020,000	$ 421,100	$ 5,441,100	$ 5,060,223	$ 926,021
2040	$ 5,220,000	$ 251,438	$ 5,471,438	$ 5,088,437	$ 931,184
2041	$ 4,840,000	$ 81,675	$ 4,921,675	$ 4,577,158	$ 837,620
Total Past & Future	$ 73,900,000	$ 43,138,346	$ 117,038,346	$ 108,845,662	$ 19,918,758

NPV Future Payments (2018-2041)@ 5% discount rate:	$ 10,372,721
Enrollment as Percent of New HS Capacity	90%
Credited Amount	$ 9,335,449
Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
Credit per thousand assessed value of completed home:	$ 2.96

CREDIT CALCULATION (PER DWELLING UNIT)

Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	$ 269,000	$ 34,970	($8)	($796)
Townhouse	$ 179,000	$ 23,270	($5)	($530)
Two and Three Family	$ 108,000	$ 14,040	($3)	($320)
Four or More Family	$ 65,000	$ 8,450	($2)	($192)
Manufactured Housing	$ 76,000	$ 9,880	($2)	($225)

Note: The new high school has a design capacity that is less than that of the old high school on which the original fees were based. The floor area per pupil capacity standard has increased from 129 square feet per pupil to 158 square feet per pupil capacity. Credit is given for the portion of the bond related to the change in the floor area standard per pupil. The floor area required to meet that deficiency in space is estimated to be 18.3% of the floor area of the new high school (excluding CTC space).

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C. Public Safety Impact Fees

1. Proportionate Demand Factors

a. Residential vs. Non-Residential Demand Measures.

Because public safety services provide protection for all persons and property, impact fees for safety facilities must recognize proportionate demand from both the residential and commercial sectors. The first step in the update was to review alternative measures of proportionate demand on these services by type of property.

PROPORTIONATE DEMAND MEASURES FOR DOVER PUBLIC SAFETY FACILITIES

Demand Sector	Assessed Valuation 2016 (Assessor)	Square Feet Building Area 2017 (Millions)	Household Population and Total Employment 2016 (NHOEP and NH Employment Security) *	Police Department Calls Assignable by Address (July 2015 through June 2017)	Fire Dept Calls Assignable by Address (July 2015 through June 2017)	Fire Department NFIRS Incident Data (October 2015 through September 2017)**
Residential Uses	$2.178	20.43	29,724	12,394	4,011	6,572
Non-Residential Uses Excluding Utilities	$0.754	10.86	17,406	7,964	1,987	4,171
City Total	$2.932	31.29	47,130	20,358	5,998	10,743
Residential Share	*74%*	*65%*	*63%*	*61%*	*67%*	*61%*
Non-Residential Share	*26%*	*35%*	*37%*	*39%*	*33%*	*39%*

** Total population for 2016 estimated at 30,683. Group quarters population of 959 deducted to estimate household population*

*** Count excludes incidents related to unknown property type, or responses to vacant or undeveloped land*

The chart above compares proportionate demand ratios for residential vs. non-residential demand in Dover. Police and Fire Department call data shown in the chart are for a two year period, and are limited to the number of calls to which a specific street address was assigned by Dover Police Department dispatch records.

These data were drawn from records for the period July 2015 to June 2017, and the counts by address were paired to property tax assessment data by BCM Planning, LLC.

The Fire Department incident records shown in the last column are based on records classified by property use using the National Fire Incident Reporting Service (NFIRS). These records were compiled by the Fire Department for the period October 2015 to September 2017. The next chart shows a more detailed breakdown of the NFIRs data for Dover.

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FIRE DEPARTMENT PROPERTY USE REPORT (NFIRS) FOR DOVER - TWO YEAR PERIOD (INCIDENTS 10-1-2015 TO 9-30-2017)		
Generalized Property Classification	Incidents Assignable to Developed Property Class	
	Number	% of Total
One and Two Family Dwelling	3,144	29%
Multifamily Residential	3,428	32%
Retail, Restaurant, Lodging, Entertainment	691	6%
Office	510	5%
Commercial Services	1,582	15%
Industrial, Tranportation, Storage, Util.	142	1%
Institutional - Non Public	810	8%
Institutional - Public & Gov't	436	4%
Total Assignable to Developed Property	10,743	100%
Residential	6,572	61%
Non-Residential	4,171	39%

This summary of NFIRs data for the Dover Fire Department reflects only those incidents which were reported under use codes associated with developed property. Using this particular measure, 61% of incidents were associated with residential uses and 39% with non-residential uses.

In computing an average residential /non-residential split in service demand, the generic factors of property valuation, building floor area, and the population-employment relationship ratios comprise were weighted 50% while the call and incident data for each department were also weighted 50% in computing an overall percentage.

Weighted average for Police Department Factors: 64.2 % residential
Weighted average for Fire Department Factors: 65.8 % residential

For the purpose of general cost allocations, BCM Planning applied a cost allocation of 65% residential and 35% non-residential demand to both the Police Department and Fire Department impact fee calculations. [1]

b. Relative Call Ratios by Land Use Categories

Residential Uses. Using the public safety call data that was available by address, calls were tabulated by type of housing unit for residential units and by commercial sector for non-residential units. Annualized calls per unit (residential) and calls per 1,000 square foot of building area (both residential and non-residential) were tabulated.

In general, two to three family and multifamily properties generate Police Department call rates that are well above those for single family, townhouse, or manufactured housing. Call ratios for Fire/EMS services were higher for multifamily units and manufactured housing than for single family, townhouse, or two to three family units.

[1] In the 2008 public safety impact fee models, future demand was estimated based on projected calls for service estimated independently for each of the two sectors. The 2008 allocation of future costs used a 50/50 residential to non- residential demand ratio for the Police Department and a 60/40 ratio for Fire Department demand.

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In the residential sector, senior housing generated significantly higher call ratios per dwelling unit for Fire and EMS services than the housing stock that was not age-restricted, but had lower call rates per unit for Police Department services.

Analysis of Public Safety Calls Associated with Specific Residential Locations

Structure Type	Calls Last Two Years - Residential Property *		Housing Characteristics			Annualized Calls Per Dwelling		Annualized Calls Per 1000 Square Feet	
	Police	Fire/EMS	Living Area	Dwelling Units	Avg Living Area Per Unit	Police	Fire/EMS	Police	Fire/EMS
Single Family	4,281	1,633	11,368,366	6,262	1,815	0.34	0.13	0.19	0.07
Townhouse	446	233	1,762,088	1,247	1,413	0.18	0.09	0.13	0.07
Two to Three Family	1,792	399	1,801,313	1,570	1,147	0.57	0.13	0.50	0.11
Four or More Family	5,620	2,411	5,014,211	5,166	971	0.54	0.23	0.56	0.24
Excluding DHA Housing	*4,530*	*1,859*	*4,463,263*	*4,721*	*945*	*0.48*	*0.20*	*0.51*	*0.21*
Manufactured Housing	255	199	444,300	424	1,048	0.30	0.23	0.29	0.22
Total	12,394	4,875	20,390,278	14,669	1,390	0.42	0.17	0.30	0.12
Senior Housing Comparison (Excluding Assisted Living Facilties)									
Age 55+ (SF, TH and MF)	94	172	450,022	323	1,393	0.15	0.27	0.10	0.19
Total All SF, TH and MF Units	4,982	2,065	13,574,754	7,509	1,808	0.33	0.14	0.18	0.08
Ratio Call Rate Age 55+ Housing to Average for Same Structure Types						***44%***	***194%***	***57%***	***251%***
Age 62+ and Congregate/Ind. Lvg.	332	799	585,627	473	1,238	0.35	0.84	0.28	0.68
All Multifamily Housing	5,620	2,411	5,014,211	5,166	971	0.54	0.23	0.56	0.24
Ratio Call Rate Age 62+ and Independent Living to Average Multifamily Unit						***65%***	***362%***	***51%***	***284%***

** Raw data for calls by address provided by Dover Police Department for the period 10-01-2015 to 09-30-2017. Call data was associated to property characteristics by BCM Planning, LLC. Calls tabulated in these columns include only those that could be associated with a specific street address and assigned to a developed property*

Within senior housing developments associated with age 55+ occupancy, Fire/EMS call generation per unit was nearly twice that of similar units with no age restriction.

For housing developments that have an even older resident profiles (limited to age 62+ and congregate housing) the call rate was about 3.6 times that of similar housing units that are not age restricted.

For both age restricted housing categories, however, the call rate for Police Department services was much lower than it was for units without an age restriction.

Non-Residential Uses. Public safety call rates for non-residential categories were computed per 1000 square feet of building area and indexed relative to the average of all non-residential properties.

The highest call ratios for Police Department activity occur among retail-food-entertainment uses.

Fire and EMS calls per 1,000 square feet were also high for the same category, and very high for nursing home and assisted living uses, where the advanced age of residents is associated with frequent calls for emergency medical services.

Analysis of Public Safety Calls to Non-Residential Property							
Structure Type	Calls Last Two Years - Residential Property *		Square Feet Floor Area	Annualized Calls Per 1000 Square Feet		Index to Non-Residential Average	
	Police	Fire/EMS		Police	Fire/EMS	Police	Fire/EMS
Retail-Food-Entertainment-Lodging	3,529	817	1,582,599	1.11	0.26	2.71	2.17
Offices and Commercial Services	1,512	475	1,383,199	0.55	0.17	1.34	1.42
Industrial, Transportation and Storage	687	202	4,119,068	0.08	0.02	0.20	0.17
Nursing Homes & Assisted Living	126	332	240,583	0.26	0.69	0.63	5.75
Private Institutional	929	161	1,055,453	0.44	0.08	1.07	0.67
Mixed Use	907	214	947,129	0.48	0.11	1.17	0.92
Total / Average Private Commercial Uses	7,690	2,201	9,328,031	0.41	0.12	1.00	1.00
Public Institutional Uses	1,181	361	1,544,153	0.38	0.12	0.93	1.00
Total Non-Residential Uses	**8,871**	**2,562**	**10,872,184**	**0.41**	**0.12**	**1.00**	**1.00**

** Raw data for calls by address provided by Dover Police Department for the period 10-01-2015 to 09-30-2017. Call data was associated to property characteristics by BCM Planning, LLC. Calls tabulated in these columns include only those that could be associated with a specific street address and assigned to a developed property.*

Proportionate Adjustments in Fee Models Based on Call Ratios. In the impact fee model, fees for various categories of non-residential development are adjusted relative to the call rate per 1000 square associated with the commercial use category. These categories may be collapsed into more generalized divisions to simplify the fee allocation using less specific categories of assessment for commercial uses.

The 2017 update of public safety fees has used average household size by type of unit to allocate per capita costs by type of structure. The 2008 method used relative call demand to assign capital costs by type of unit. After testing both methods in the 2017 update, BCM Planning is of the opinion that a more equitable result for residential uses can be achieved using the per capita cost method. [2] However, relative call demand per unit has been applied to compute adjusted fees for *age-restricted* dwelling units.

2. Police Department Impact Fee

In order to define a service capacity and cost allocation basis for an expanded Police Department facility serving estimated long term needs, the following assumptions comprise the basis for the impact fee:

a. Under 2016 conditions, the number of full time sworn personnel in the Police Department averages 1.65 per 1000 residents, and the number of total full time personnel averaged 2.59 per 1000 persons. It is assumed that the ratio of total to population will remain at this level in future years.

b. The new police station (constructed 2015-2016) has a gross floor area of 29,837 square feet. The design process centered on accommodating projected needs through the year 2035.[3]

[2] Residential fee calculations based on adjusted call rates have been computed and are available as an alternative to the per capital assignment of costs per dwelling unit.

[3] Architects Design Group, October 21, 2013 letter to Dover Police Department summarizing spatial needs and design concepts.

POLICE DEPARTMENT PROPORTIONATE DEMAND AND FACILITY STANDARD				
Service Demand Factor	Base Year of Fee Calculation (2008)	Current Conditions (2016-2017)	Supportable Service Base @ Design Population of 35,000	Change from Base Year
RESIDENTIAL SECTOR				
Population (Residential Demand)				
Total Persons	28,703	30,683	35,000	6,297
Group Quarters Population	959	959	1,094	135
Household Population	27,744	29,724	33,906	6,162
Households (Occupied Units)	12,554	13,255	16,082	3,528
Average Household Size	2.21	2.24	2.11	-0.10
Total Housing Units	13,077	14,176	17,200	4,123
NON-RESIDENTIAL SECTOR				
Employment (Total Including Government)	16,300	17,406	19,855	3,555
Employment to Total Population Ratio	0.57	0.57	0.57	
Non-Residential Floor Area Total	10,185,000	10,905,000	12,439,299	2,254,299
Non-Residential Uses: Floor Area Per Employee	625	627	627	
Police Department Staffing				
Full Time Sworn (Officers)	50.5	50.5	57.6	*Assumes constant staff ratio per 1000 population*
Full Time Staff including Officers	78.1	79.5	90.7	
Full Time Officers Per 1000 City Population	1.76	1.65	1.65	
Full Time Staff Per 1000 City Population	2.72	2.59	2.59	
Floor Area of Facilities	**2008 Conditions**	**2016-17 Conditions (New Police Station)**	**With New Police Station (2015-2016)**	**Change from Base Year**
Floor Area of PD Buildings - (Gross Sq. Ft.)	16,213	29,837	29,837	13,624
Actual Floor Area Per FT Officer	321	591	518	197
Actual Floor Area Per FT Staff (Sq. Ft.)	208	375	329	121
Min. Staff Area Needed @ 2040 Staff Ratio	74.4			
Min. Base Year Space Needed at 2040 Standard	24,475			
Base Year Floor Area Deficiency Relative to Standard	(8,262)			

c. Based on the ratios of police department staff to population, and design floor area for a target future population of 35,000 generates a space standard of 329 square feet of police station space per full time employee.

d. Measured at that the long term design ratio of 329 square feet per full time employee, and minimum of 2.59 full time personnel per thousand population, we estimate that the comparable pre-existing police department space (16,213 square feet in the 2008 base year) was deficient by 8,262 square feet. [4]

e. The estimated base year deficiency of 8,262 square feet represents 28% of the space constructed in the new police station. This is a need that already existed at the time the impact fee was established. Therefore, a credit allowance based on tax payments made to support 28% of debt service costs for the new station.

[4] Comparable space available to the Police Department prior to construction of the new station included the headquarters with 13,159 square feet in the lower level of City Hall, 2,340 square feet of garage space on River Street, and 360 square feet in storage buildings. (Source: Space Needs Assessment, City of Dover, June 2007, AG Architects, P. C.)

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f. The comprehensive development cost of the new police station totaled $9.9 million or about $332 per square foot at the time of construction. The cost has been adjusted to an estimated 2017 cost of $10.039 million (or about $336 per square foot) using an RS Means Square Foot Cost index.

g. Based on the combination of proportionate indicators introduced earlier, about 65% of the demand on Police Department services is estimated to be associated with residential land uses and 35% from non-residential uses.

h. The service population associated with the new police station is assigned at 35,000 (approximately the same as a 2040 population projection). Employment in the City of Dover is assumed to maintain a constant ratio to resident population at a 2016 average of 0.57 jobs per capita. Non-residential floor area per employee is assumed to remain constant at the 2016 average of 627 square feet per employee.

i. Residential costs associated with new development are assigned by structure type based on estimated household size in the dwelling unit.[5]

j. Non-residential costs are assigned per square foot of floor area. Adjustments to the average fee per square foot are assigned to various commercial use categories based on the relative number of calls for service per 1,000 square feet in that category.

k. Credit allowances are deducted from the assignable capital cost for each use based on the estimated present value of debt service costs required to rectify pre-existing police station deficiencies in space.

l. Residential impact fees are assigned to accessory dwelling units (ADUs) at 64% of the standard rate for apartments based relative living area of the unit. Based on other studies, BCM Planning estimates an average ADU will have about 600 square feet of living area. That size is 64% of the average gross living area in apartment buildings estimated at 930 square feet per unit.

m. A police department impact fee has been computed for age restricted housing based on the relative call volume per unit in age-restricted developments compared to the City average for residential units of the same structural categories. Police Department impact fees are computed at 44% of the average fee applicable to single family and townhouse units. Fees for units limited to persons age 62+ or in congregate housing are assigned at 65% of the fee applicable to standard apartment units.

[5] The original (2008) methodology adjusted the Police Department fees per unit based on relative call rates per unit by structure type. BCM Planning is of the opinion that the per capita method generates a more equitable assessment. An alternative calculation using relative call volume has been prepared and is available as an alternative.

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POLICE FACILITY COST APPORTIONMENT AND IMPACT FEE - DOVER, NH - 2017			
Capital Facility Cost Allocation and Impact Fee	Base Year of Fee Calculation (2008)	Supportable Service Base @ Design Population of 35,000	Change from Base Year
	Cost Apportionment of Capital Facilities		
Building Costs for Police Department HQ	Attributed to Base Year Demand	Police Facility Replacement Cost	Attributed to New Development
Police Station Development Cost (2015-16)		$9,900,000	
Adjusted to 2017 (RS Means Index)		1.014	
Attributed Building Costs - Police Department	$8,234,566	$10,038,600	$1,804,034
Public Safety Demand By Sector - Police Department	Base Year of Fee	Future Year	New Development
Residential Share of Demand	65%	65%	65%
Non-Residential Share of Demand	35%	35%	35%
Apportioned to Residential Development	$5,352,468	$6,525,090	$1,172,622
Apportioned to Commercial Development	$2,882,098	$3,513,510	$631,412
Residential Cost Per Capita (Household Pop)	$193	$192	**$190**
Non-Residential Cost Per Sq. Ft.	$0.28	$0.28	**$0.28**

PUBLIC SAFETY FACILTY COSTS PER UNIT OF NEW DEVELOPMENT - POLICE DEPARTMENT		
Residential Capital Cost Per Dwelling Unit	Average Household Size	Capital Cost Per Unit (1)
Average Household	2.24	$426
Single Family Detached	2.54	$483
Townhouse / Attached	2.18	$414
Two to Three Family Structure	2.21	$420
Four or More Unit Structure	1.67	$317
Manufactured Housing	2.35	$447
Commercial Cost Per Square Foot	Non-Residential PD Call Multiplier	Capital Cost Per Sq. Ft.
Average Non-Residential	1.00	$0.28
Retail-Food-Entertainment-Lodging	2.71	$0.76
Offices and Commercial Services	1.34	$0.38
Industrial, Transportation, Whse, Storage	0.20	$0.06
Nursing Homes & Assisted Living	0.63	$0.18
Other Institutional Uses	1.07	$0.30

Credit Allowances for Base Year Deficiency and Net Impact Fee Assessment	**Assessed Value**	**Credit Allowance Per Housing Unit**	**Impact Fee Schedule Per Dwelling Unit**
Residential Uses	Per Dwelling Unit		
Single Family Detached	$ 269,000	($158)	**$325**
Townhouse / Attached	$ 179,000	($105)	**$309**
Two to Three Family Structure	$ 108,000	($63)	**$357**
Four or More Unit Structure	$ 65,000	($38)	**$279**
Manufactured Housing	$ 76,000	($45)	**$402**
Non-Residential Uses	Per Square Foot	Credit Per Sq. Foot	**Fee Per Square Foot**
Average Non-Residential	$ 64	($0.04)	**$0.24**
Retail-Food-Entertainment-Lodging	$ 83	($0.05)	**$0.71**
Offices and Commercial Services	$ 96	($0.05)	**$0.33**
Industrial, Transportation, Whse, Storage	$ 43	($0.02)	**$0.04**
Nursing Homes & Assisted Living	$ 85	($0.05)	**$0.13**
Other Institutional Uses	$ 133	($0.07)	**$0.23**

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CREDIT CALCULATION FOR POLICE STATION BASE YEAR DEFICIENCY			
Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment
Past Payments			
2015	$306,460.04	$307,810.87	$614,270.91
2016	$438,193.54	$332,049.76	$770,243.30
2017	$460,149.12	$310,140.08	$770,289.20
		Present Worth Past Payments @ 5%	$2,256,278
		Percent of Project Rectifying Space Deficiencies	28%
		Credited Amount	$631,758
		Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
		Credit Per $1000 Valuation Raw Land	**$0.20**
Future Payments			
2018	$480,148.66	$287,132.64	$767,281.30
2019	$504,100.21	$263,125.20	$767,225.41
2020	$528,051.76	$237,920.18	$765,971.94
2021	$555,995.23	$211,517.60	$767,512.83
2022	$583,938.70	$183,717.84	$767,656.54
2023	$612,281.36	$154,520.90	$766,802.26
2024	$642,220.79	$123,906.84	$766,127.63
2025	$288,616.15	$91,795.80	$380,411.95
2026	$276,640.36	$83,137.32	$359,777.68
2027	$254,684.78	$74,838.10	$329,522.88
2028	$248,696.89	$67,197.56	$315,894.45
2029	$238,717.09	$59,736.66	$298,453.75
2030	$309,374.13	$52,276.74	$361,650.87
2031	$309,374.13	$42,222.08	$351,596.21
2032	$309,374.13	$32,167.42	$341,541.55
2033	$309,374.13	$21,726.04	$331,100.17
2034	$311,370.10	$10,897.96	$322,268.06
Total Bond	$7,967,761.30	$2,947,837.59	$10,915,598.89
		NPV of Future Payments (2018-2034) @ 5% discount rate:	$6,306,425
		Percent of Project Rectifying Space Deficiencies	28%
		Credited Amount	$1,765,799
		Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
		Credit per thousand assessed value	**$0.56**

CREDIT ALLOWANCES FOR POLICE STATION BASE YEAR DEFICIENCY					
Type of Development	Assessed Valuation Land & Bldgs	Assessed Value Raw Land @ 13% Of Valuation	Credit For Past Payments	Credit For Future Payments	Total Credit amount
Residential Uses Per Dwelling Unit					
Single Family Detached	$ 269,000	$ 34,970	$ (7)	$ (151)	$ (158)
Townhouse	$ 179,000	$ 23,270	$ (5)	$ (100)	$ (105)
Two and Three Unit Structures	$ 108,000	$ 14,040	$ (3)	$ (60)	$ (63)
Multifamily Structures 4+ Units	$ 65,000	$ 8,450	$ (2)	$ (36)	$ (38)
Manufactured Housing	$ 76,000	$ 9,880	$ (2)	$ (43)	$ (45)
Non-Residential Uses Per Sq. Ft.					
Average Non-Residential	$ 72	$ 9	$ -	$ (0.04)	$ (0.04)
Retail-Food-Entertainment-Lodging	$ 82	$ 11	$ -	$ (0.05)	$ (0.05)
Offices and Commercial Services	$ 96	$ 12	$ -	$ (0.05)	$ (0.05)
Industrial, Transportation, Whse, Storage	$ 43	$ 6	$ -	$ (0.02)	$ (0.02)
Nursing Homes & Assisted Living	$ 85	$ 11	$ -	$ (0.05)	$ (0.05)
Other Institutional Uses	$ 133	$ 17	$ -	$ (0.07)	$ (0.07)

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3. Fire Department Impact Fee

a. Fire Station Space

At the time the original Fire Department impact fee was being calculated in 2008, the Dover Fire & Rescue Department was anticipating construction of a new North End fire station, which has since been completed, providing 14,845 square feet of station space. Prior to this construction, the two pre-existing stations (the old Central Fire Station and the South Station built in the 1960s) contained a combined floor area of 14,500 square feet. The construction and improvement of the new North Station (2009-2012) doubled the total floor area of Fire & Rescue Department buildings serving the City.

While the construction of North Station was needed to accommodate new development, the 2008 study found a portion of the new space was attributable to pre-existing space needs in that base year. The North Station had been cited as a need since the 1988 City Master Plan was published. For purposes of impact fee assessment, the existing fire stations, including the newest facility (North Station) are assumed to be sufficient to serve a population of 35,000 along with related proportionate increases in non-residential development.

Another fire station is anticipated by the Fire Department as a long term need. The Fire Chief has provided a rough estimate of cost at $3 million for a future station to be located somewhere on Dover Point Road. Other long term improvements have been indicated including a new training facility and more parking for the North Station.

As of November 2017, there do not appear to be specific designs established for these improvements, nor are the projects currently found in the City CIP (2018-2023). Therefore it may be premature to add these capital values into the fee system at this time. If the costs were to be added, then the long term service population (assumed at 35,000) should also be reconsidered in assigning the facility costs per capita for the fee computation.

For the purpose of impact fee assessment, the fire stations and fire / rescue vehicles are viewed as providing a city-wide network providing coverage to all land uses in Dover. It is necessary for staffing and equipment housed at one station to provide backup coverage to the others. Therefore, capital cost requirements are assumed to be distributed across the entire City rather than limited to serving particular geographic areas.

At the time the Fire Department impact fee was established in 2008, a portion of the new space to be constructed was attributed to existing baseline space deficiencies. If the floor area of the three stations serves a target population of 35,000 then an average of 0.84 square feet of station space per capita is indicated as a reasonable floor area standard. At that ratio an additional 9,565 square feet of station space was already needed in 2008 to meet baseline needs at the time the impact fee was first established.

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The construction of North Station added 14,845 square feet of fire station space. If the base year deficiency was 9,565 square feet, then 64% of the new space created at North Station is attributable to a pre-existing need at the time the impact fee was initiated. As part of the impact fee calculation, 64% of the present value of debt service payments for the development of North Station has been computed as a credit allowance within the impact fee model.

FIRE DEPARTMENT PROPORTIONATE DEMAND AND FACILITY STANDARD				
Service Demand Factor	Base Year of Fee Calculation (2008)	Current Conditions (2016-2017)	Service Base at Population of 35,000	Change from Base Year
RESIDENTIAL SECTOR				
Total Persons	28,703	30,683	35,000	6,297
Group Quarters Population	959	959	1,094	135
Household Population	27,744	29,724	33,906	6,162
Households (Occupied Units)	12,554	13,255	16,082	3,528
Average Household Size	2.21	2.24	2.11	-0.10
Total Housing Units	13,077	14,176	17,200	4,123
NON-RESIDENTIAL SECTOR				
Employment (Total Including Government)	16,300	17,406	19,855	3,555
Employment to Total Population Ratio	0.57	0.57	0.57	
Non-Residential Floor Area Total	10,185,000	10,905,000	12,439,299	2,254,299
Non-Residential Uses: Floor Area Per Employee	625	627	627	
Floor Area of Facilities	Base Year of Impact Fee	Current Conditions	Facilities Available	Change from Base Year
Floor Area of Fire Stations (Sq. Ft.)	14,500	29,435	29,345	14,845
Station Space Required Per Capita	0.84	0.96	0.84	
Station Space Needed @ Facilty Standard	24,065			
Space Deficiency in Base Year of Fee	9,565			

The total cost of North Station was estimated using the City's fixed asset files pertaining to North Station improvement costs from 2009 to 2012, with cost components indexed to 2017 using R.S. Means Square Foot Costs time adjustment factors. Comprehensive costs were estimated at a 2017 equivalent of about $3.53 million, or about $238 per square foot. This cost per square foot was assigned as the average replacement cost for all City fire stations indicating a total cost for buildings at $6.984 million.

Replacement Cost of Major Capital Equipment - Dover Fire Department					
Item	Number of Units	Vehicle Cost New	Associated Equipment	Total Per Unit	Total Capital Value
Engines	5	$590,000	$100,000	$690,000	$3,450,000
Ladder / Platform	1	$1,100,000	$100,000	$1,200,000	$1,200,000
Quint	1	$890,000	$100,000	$990,000	$990,000
Ambulances	4	$240,000	$100,000	$340,000	$1,360,000
Heavy Rescue	1	$325,000	$100,000	$425,000	$425,000
Forestry Pickup	1	$70,000	included	$70,000	$70,000
SUV's & Pkckups	7	$55,000	included	$55,000	$385,000
Total Major Capital Equipment					**$7,880,000**
Source: Replacement and equipment costs per vehicle estimated by Dover Fire Chief					

The City also has a substantial investment in major fire and rescue vehicles and apparatus. Based on estimates from the Dover Fire Chief, the replacement cost (new) for the major vehicles plus on-board gear and equipment is about $7.88 million.

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FIRE DEPARTMENT COST APPORTIONMENT AND IMPACT FEE - DOVER, NH - 2017			
	Cost Apportionment of Capital Facilities		
Building Costs for Fire Stations	Attributed to Base Year of Fee	Total Capital Investment	Apportioned to New Development
Fire Station Development Cost/Sq. Ft. Adj. to 2017		$238	
Attributed Building Costs - Fire Department	$5,727,569	$6,984,110	**$1,256,541**
Major Apparatus & Vehicles - Replacement Cost	$6,462,275	$7,880,000	**$1,417,725**
Total Capital Facility Investment - Fire Dept.	$12,189,844	$14,864,110	**$2,674,266**
Public Safety Demand By Sector - Fire and EMS	Base Year	Future Year	Average
Residential Share of Demand	65%	65%	**65%**
Non-Residential Share of Demand	35%	35%	**35%**
Apportioned to Residential Development			$1,738,273
Apportioned to Non-Residential Development			$935,993
Residential Cost Per Capita			**$282**
Non-Residential Cost Per Sq. Ft.			**$0.42**

PUBLIC SAFETY FACILTY COSTS PER UNIT OF NEW DEVELOPMENT - FIRE DEPARTMENT		
Residential Capital Cost Per Dwelling Unit	Average Household Size	Capital Cost Impact Per Unit
Average Dwelling Unit	2.24	$632
Single Family Detached	2.54	$716
Townhouse / Attached	2.18	$615
Two to Three Family Structure	2.21	$623
Four or More Unit Structure	1.67	$471
Manufactured Housing	2.35	$663

Non-Residential Capital Cost Per Square Foot	Non-Residential FD Call Multiplier	Capital Cost Per Sq. Ft.
Average Non-Residential	1.00	$0.42
Retail-Food-Entertainment-Lodging	2.17	$0.91
Offices and Commercial Services	1.42	$0.60
Industrial, Transportation, Whse, Storage	0.17	$0.07
Nursing Homes & Assisted Living	5.75	$2.42
Other Institutional Uses	0.67	$0.28

Credit Allowances for Base Year Deficiency and Net Impact Fee		Credit Allowance for	**Impact Fee Per**
Residential Uses	Assessment Per Dwelling Unit	Base Year Deficiency	**Dwelling Unit**
Single Family Detached	$ 269,000	($101)	**$615**
Townhouse / Attached	$ 179,000	($67)	**$548**
Two to Three Family Structure	$ 108,000	($40)	**$583**
Four or More Unit Structure	$ 65,000	($24)	**$447**
Manufactured Housing	$ 76,000	($28)	**$635**

Non-Residential Uses	Assessment Per Sq. Foot	Credit Per Sq. Foot	**Fee Per Square Foot**
Average Non-Residential	$ 64	($0.03)	**$0.39**
Retail-Food-Entertainment-Lodging	$ 83	($0.04)	**$0.87**
Offices and Commercial Services	$ 96	($0.01)	**$0.59**
Industrial, Transportation, Whse, Storage	$ 43	($0.03)	**$0.04**
Nursing Homes & Assisted Living	$ 85	($0.05)	**$2.37**
Other Institutional Uses	$ 133	($0.03)	**$0.25**

Together the total investment (at current replacement cost) for fire stations and major capital equipment totals to $14.86 million.

The impact fee model assigns a portion of this total investment to new development based on the horizon population of 35,000 and proportionate growth in commercial development at that population level.

As with the Police Department impact fee, residential uses are assigned an average per capita cost multiplied by the expected average household size for various types of dwelling units. [6]

Non-residential uses are assigned a cost per square foot of floor area, then adjusted according to the relative call rates associated with commercial land use categories.

[6] The original (2008) methodology adjusted the Fire Department fees per unit based on relative call rates per unit by structure type. BCM Planning is of the opinion that the per capita method generates a more equitable assessment. An alternative calculation using relative call volume has been prepared and is available as an alternative.

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CREDIT CALCULATION FIRE STATION BASE YEAR DEFICIENCY Portion of North Station Construction Bond			
Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment
Past Payments			
2008	$150,000.00	$131,368.76	$281,368.76
2009	$150,000.00	$124,618.76	$274,618.76
2010	$150,000.00	$118,243.76	$268,243.76
2011	$150,000.00	$111,868.76	$261,868.76
2012	$150,000.00	$105,493.76	$255,493.76
2013	$150,000.00	$99,118.76	$249,118.76
2014	$150,000.00	$92,743.76	$242,743.76
2015	$150,000.00	$86,368.72	$236,368.72
2016	$150,000.00	$79,993.76	$229,993.76
2017	$150,000.00	$73,618.76	$223,618.76
		Present Worth Past Payments @ 5%	$ 3,206,210
		Base Year Deficiency in Space as % of Project	64%
		Credited Amount	$ 2,051,974
		Net Local Assessed Valuation Oct 2017	$ 3,150,231,460
		Credit Per $1000 Valuation Raw Land	**$0.65**
Future Payments			
2018	$145,000.00	$67,243.76	$212,243.76
2019	$145,000.00	$61,081.24	$206,081.24
2020	$145,000.00	$54,737.50	$199,737.50
2021	$145,000.00	$48,031.26	$193,031.26
2022	$145,000.00	$41,325.00	$186,325.00
2023	$145,000.00	$34,437.50	$179,437.50
2024	$145,000.00	$27,550.00	$172,550.00
2025	$145,000.00	$20,662.50	$165,662.50
2026	$145,000.00	$13,775.00	$158,775.00
2027	$145,000.00	$6,887.50	$151,887.50
		NPV of Future Payments (2018-2027) @ 5% discount rate:	$1,430,645
		Base Year Deficiency in Space as % of Project	64%
		Credited Amount	$915,613
		Net Local Assessed Valuation Oct 2017	$3,150,231,460
		Credit per thousand assessed value	**$0.29**

The basis for the debt service credit allowances assigned in the Fire Department impact fee calculation are detailed here and in the summary chart that follows.

CREDIT ALLOWANCES FOR FIRE STATION BASE YEAR SPACE DEFICIENCY					
Type of Development	Assessed Valuation Land & Bldgs	Assessed Value Raw Land @ 13% Of Valuation	Credit For Past Payments	Credit For Future Payments	Total Credit amount
Residential Uses Per Dwelling Unit					
Single Family Detached	$ 269,000	$34,970	$ (23)	$ (78)	$ (101)
Townhouse	$ 179,000	$23,270	$ (15)	$ (52)	$ (67)
Two and Three Unit Structures	$ 108,000	$14,040	$ (9)	$ (31)	$ (40)
Multifamily Structures 4+ Units	$ 65,000	$8,450	$ (5)	$ (19)	$ (24)
Manufactured Housing	$ 76,000	$9,880	$ (6)	$ (22)	$ (28)
Non-Residential Uses Per Sq. Ft.					
Average Non-Residential	$ 72	$9	$ (0.01)	$ (0.02)	$ (0.03)
Retail-Food-Entertainment-Lodging	$ 82	$11	$ (0.01)	$ (0.02)	$ (0.03)
Offices and Commercial Services	$ 96	$12	$ (0.01)	$ (0.03)	$ (0.04)
Industrial, Transportation, Whse, Storage	$ 43	$6	$ -	$ (0.01)	$ (0.01)
Nursing Homes & Assisted Living	$ 85	$11	$ (0.01)	$ (0.02)	$ (0.03)
Other Institutional Uses	$ 133	$17	$ (0.01)	$ (0.04)	$ (0.05)

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Residential impact fees are assigned to *accessory dwelling units* (ADUs) at 64% of the standard rate for apartments based relative living area of the unit. Based on other studies in other New Hampshire communities, BCM Planning estimates that a typical ADU will result in a net addition of about 600 square feet of living area. That size is 64% of the average gross living area in Dover apartment buildings estimated at 930 square feet per unit. This ratio is used to assign a fire department impact fee to the ADU.

An adjusted Fire Department impact fee has been computed for *age restricted housing.* The basis for the adjusted fee is the relative call volume per unit found in Dover's age-restricted developments compared to the City average for residential units of the the same structural categories. For units restricted to age 55 or older, fire department impact fees are computed at 1.94 times the average fee for single family and townhouse units. Fees for age restricted units for persons age 62+ or in congregate housing are assigned at 3.6 times the fee applicable to standard apartment units.

4. Summary Fee Schedules: Public Safety

PUBLIC SAFETY IMPACT FEE ASSESSMENT SCHEDULE - 2017			
Use Category	**Public Safety Impact Fees Per Dwelling Unit**		
Residential Uses	Police	Fire	**Total Public Safety**
Single Detached	$325	$615	**$940**
Townhouse	$309	$548	**$857**
Two to Three Family	$357	$583	**$940**
Apartments 4+ Units	$279	$447	**$726**
Manufactured Housing	$402	$635	**$1,037**
Accessory Dwelling Unit	$179	$286	**$465**
Age Restricted Unit 55+	$152	$1,163	**$1,315**
Age Restricted Units 62+ or Congregate	$181	$1,609	**$1,790**
Commercial, Industrial & Institutional Uses	**Public Safety Impact Fees Per Square Foot**		
	Police	Fire	**Total Public Safety**
Retail-Food-Entertainment-Lodging	$0.71	$0.87	**$1.58**
Offices and Commercial Services	$0.33	$0.59	**$0.92**
Industrial, Transportation, Whse, Storage	$0.04	$0.04	**$0.08**
Nursing Homes & Assisted Living	$0.13	$2.37	**$2.50**
Other Institutional Uses	$0.23	$0.25	**$0.48**
Average Non-Residential or Other	$0.24	$0.39	**$0.63**

It is possible to assess a single fee for "public safety facilities". However, it is recommended that the fees collected be placed in two separate capital facility amounts: one for Police Department and one for Fire & Rescue Department facilities.

In this way, appropriate allocation of fee revenue may be made from the respective capital accounts to offset part of the debt service on for the police station or fire stations, retaining a connection to the particular the facilities for which they were assessed. Public safety Impact fees in Dover may also be used to offset a portion of the cost of new equipment or improved replacement equipment that enhances the response time or capacity of either department to serve new development.

The models for impact fee assessment should always reflect, rather than define, capital improvement planning for related facilities and services. The impact fee assessment models are intended to reasonably represent the level of capital investment that the City will support, with a proportionate allocation of that cost to new development. The models should not be used to limit the way in which future capital improvement needs are defined for public safety facilities.

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D. Recreation Facilities Impact Fee

1. Background

An impact fee for Dover public recreation facilities was first computed in a 2008. In the 2008 study, after testing a number of possible approaches, the option cited as the "investment approach" was adopted by the City as its basis of assessment. At that time, the use of individual facility standards (such as tennis courts per thousand persons, etc.) to anticipate specific incremental numbers of fields and facilities was not viewed as a method that would best reflect the types of improvements the City intended to make in recreation facilities.

The anticipated focus of recreation improvements in Dover was more focused on improvement and diversification of existing park and recreation sites. Consequently, the chosen method uses an average recreation capital investment amount per capita as the facility standard, rather than a ratio of the number of individual facilities to be provided.

In the 2017 update, the fee is based on a blended estimate of the replacement cost of existing facilities, plus the projected costs for future facility development anticipated within the term of the current Capital Improvement Program (CIP). The total estimated replacement cost of City recreation facilities is then apportioned across a future horizon service population (projected at 35,000 persons as a horizon year, or buildout, population) to arrive at a per capita cost.

2. Replacement Cost of Existing Recreation Facilities

The City Finance Department provided a listing of assets assigned to the Recreation Department. From this inventory, BCM Planning listed the selected asset, its original acquisition year (year placed in service) and original cost. For the purpose of this study, we excluded vehicles, capitalized interest, and assets placed in service over 40 years ago. The selected asset values comprise athletic fields, buildings and office equipment, tennis and basketball courts, playgrounds and related structures, fencing, paved surfaces, swimming pools and related equipment. Land values are not part of this asset inventory.

Summary of Estimated Replacement Cost Dover Recreation Facilities	
Building Improvements	$3,680,037
Building Systems	$653,870
Buildings	$2,583,231
Land	$319,049
Land Improvements	$9,086,462
Machinery / Equipment	$577,595
Roadways	$190,784
Utilities	$216,654
Total Capital Investment	**$17,307,682**

A current replacement cost for each asset was estimated by adjusting the original cost in the year placed in service to 2017 using one of several adjustment factors. For buildings, costs were indexed using R.S. Means Square Foot Costs time adjustment factors for Manchester, NH. For ballfields, parks, general construction, and utilities, costs were adjusted using the Engineering News Record (ENR) Construction Cost Index. For machinery and other assets, the Consumer Price Index (CPI) was applied. The total estimated replacement value is $17.3 million.

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2. Cost of Planned Facilities

In the 2008 study, a number of long term recreation facility improvements were added to the capital investment total, which were later offset in part by credit allowances to reflect the increased capital spending per capita that the additional projects would represent. Inclusion of the full value of these improvements proved premature, as projects did not move forward at the scale anticipated.

The City's capital expenditures on new recreation facilities or improvements since the last update have been very limited compared to the new project goals anticipated by the 2008 fee calculation. The investment in facilities placed in service over the past 10 years has averaged only $127,000 per year compared to a 20-year average of about $400,000 per year (2017 dollars). This means that the average capital investment in recreation facilities per capita may decline over time. Consequently, the incorporation of large scale multi-million dollar projects within the fee basis is likely to generate an impact fee that is too high.

In this update the capital basis of the recreation impact fee has been limited to existing completed capital facilities, plus recreation improvements already incorporated into the current CIP for the period 2018-2023. We identified $400,000 in recreation improvements (not including replacement and maintenance costs). Improvements are planned at Garrison Hill Park (including new trails), and a new indoor pool solarium is indicated in the CIP.

3. Cumulative Investment Per Capita

The total investment value of existing and planned (CIP-based) improvements is just over $17.7 million. The existing and planned facilities are assumed to be of benefit to a year 2040 scenario with a total population projected at 35,000 persons.

The impact fee is calculated on the household population of the City, excluding the group quarters and institutional population (nursing homes, licensed care, dormitories, group homes, etc.). The 2016 household population is estimated by the NH Office of Strategic Initiatives (formerly NH Office of Energy and Planning) at 29,724. A proportionate estimate of the household population for 2040 is 33,906 of a total population of 35,000.

The cumulative recreation facility investment as of 2016 averages $582 per capita across the household population. The projected investment for the horizon year of 2040 is **$522** per capita.

4. Impact Fee per Dwelling Unit – Facility Investment Method

The recreation impact fee is computed based on the 2040 horizon year investment in recreation facilities per person, times estimated average household size. Due to NH statutory

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requirements[7], the fees are based on facility development costs and do not include allowances for raw land parcels that do not have improved recreation facilities.

The recreation impact fee is based on the assumption that continued investment in recreation facilities will occur, and that a fee may be assessed to new development to recoup the average recreation investment per capita that has been incurred by the City.

DOVER RECREATION IMPACT FEE 2017		
Recreation Facility		2017 Estimated Replacement Cost
Recreation - Long Term Facility Investments		
Buildings, Systems and Improvements		$6,917,138
Land Improvements		$9,405,511
Machinery & Equipment		$577,595
Roads and Utilities		$407,438
Total Existing Facilities		$17,307,682
CIP Planned Improvements 2018-2023		
Garrison Hill Park improvements, new trails		$250,000
Indoor Pool Solarium		$150,000
Total Estimated Replacement Cost of Facilities		$17,707,682
Service Population		
Pop. in Households (Excluding Group Quarters)	2016 Estimate	29,724
	2040 Projected	33,906
Average Capital Investment Per Person	*Service population excludes group quarters and institutional population*	Per Capita Avg
Recreation Investment Per Capita 2016		$582
Recreation Investment Per Capita Horizon Year		**$522**
Dover Recreation Impact Fee	Avg Household Size 2016 Est.	Impact Fee Per Unit Facility Value Only
Structure Type and Recreation Fee		
Single Family Detached	2.54	$1,326
Townhouse / Attached	2.18	$1,138
Two or Three Family Structure	2.21	$1,154
Four or More Family Structure	1.67	$872
Manufactured Housing	2.35	$1,227
Accessory Dwelling Unit	64% of Apt Rate	$558
Age Restricted Dwelling 55+	40% of Apt Rate	$349
Age Restricted Dwelling 62+ or Congregate	21% of Apt Rate	$183

Accessory Dwelling Units. As with the public safety fees, the fee for an ADU is based on the anticipated size of a typical ADU relative to the City average for multifamily apartments and is computed at 64% of the standard fee per apartment unit (4 or more family structures).

[7] The fee schedules were computed in a manner that excluded investments that are solely to provide public open space. Under NH RSA 674:21, V impact fees may be assessed for public recreation facilities, *"…not including public open space."*

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Age Restricted Dwelling Units. The recreation impact fees for age-restricted units were computed as a percentage of the standard rate applicable to apartments. Units in four or more family structures are estimated to have an average household size (1.67) that is close to the probable average size of senior households (about 1.5 persons per household for households headed by persons age 65 or older).

The adjustment factor used to compute a reduced impact fee for age restricted units is based on their relative demand on active recreation facilities. The adjustments presume that the frequency of use of active public recreation facilities is inversely related to the prevalence of disability in the adult population by age.

National surveys of developments that are limited to age 55+ residents indicates that about ¾ of residents in these developments are likely to be 65 or older. In developments for age 62 and older (primarily apartments) and congregate housing, the typical age of residents tends to be between 75 and 80.

The prevalence of disability in these older age groups can be expected to be considerably higher than the average for the younger adult population. Consequently, we would expect participation and use of recreation facilities to be proportionately lower than that of the average household.

Age Group	% With Disability (1)	Index Relative to Disability Rate for Age 18 to 64	Inverse of Index as Percent
18 to 34	5.8%	--	--
35 to 44	12.9%	--	--
18 to 64	10.3%	1.00	100%
65 to 74	25.5%	2.48	40%
75 or Older	50.2%	4.87	21%

** Derived by BCM Planning from American Community Survey (ACS) 2011-2015 5-year sample data for the United States. Ratios based on the non-institutionalized population by age group.*

Disability statistics for the United States (2015 estimates) indicate that the prevalence of disability is considerably higher among adults age 65-74 and age 75+ than among younger adults (age 18-64).

Based on the relative prevalence of disability by age group, the recreation impact fee for an age restricted unit for age 55+ occupants has been computed at 40% of the standard apartment fee per unit (in four or more unit structures).

The recreation fee for age restricted units for age 62+ occupancy and congregate housing is computed at 21% of the standard fee applicable to an apartment in a four or more unit structure.

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Detail of Dover Recreation Facility Capital Investments				
Improvement Category & Description	Placed in Service Date	Original Acquisition Cost	Cost Adjustment Method	2017 Estimated Cost New
Building Improvements				
Lockerrooms/Showers	01/01/1985	$70,077	RSM	$180,712
Renovation, Butterfield Gym	01/01/1993	$160,000	RSM	$337,778
Renovation, Jenny Thompson Pool	01/01/1993	$140,000	RSM	$295,556
Renovation, Butterfield Gym	01/01/1995	$50,000	RSM	$94,554
Renovation, Butterfield Gym	01/01/1997	$85,000	RSM	$157,634
Renovation, Indoor Pool	01/01/1999	$450,000	RSM	$826,916
Renovation, Butterfield Gym	01/01/2001	$75,000	RSM	$129,991
Renovation, Indoor Pool	01/01/2001	$50,000	RSM	$86,661
Renovation, Indoor Pool	01/01/2003	$68,040	RSM	$111,954
Renovation, Jenny Thompson Pool	01/01/2004	$22,788	RSM	$36,952
Indoor Pool Lobby Renovations	01/01/2005	$302,917	RSM	$445,961
Butterfield Gym Improvements	01/01/2005	$70,050	RSM	$103,129
Indoor Pool Lobby Renovations	01/01/2005	$115,150	RSM	$169,526
Band shell	01/01/2005	$250,952	RSM	$369,457
Recr - Indoor Pool Lobby Renovations	01/01/2006	$2,737	RSM	$3,758
Recr - Butterfield Gym Improvements	01/01/2007	$77,780	RSM	$98,336
Recr - Butterfield Gym Improvments	01/01/2007	$118,798	RSM	$150,194
Recr - Butterfield Gym Imprvmnts	01/01/2008	$40,100	RSM	$49,699
Butterfield Gym Pool locker room improveme	01/01/2008	$14,385	RSM	$17,829
Henry Law Park Band Shell	01/01/2009	$1,584	RSM	$1,834
Henry Law Park Bandshell	01/01/2009	$1,213	RSM	$1,404
Indoor Pool Filtration	01/01/2010	$2,902	RSM	$3,388
Recr - Indoor Pool Lobby Renovation	01/01/2014	$5,725	RSM	$5,800
Indoor Pool Roof Replacement	01/01/2015	$1,000	RSM	$1,014
				$3,680,037
Building Systems				
Dehumidifier	01/01/1993	$26,954	RSM	$56,903
Energy Conservation Proj	01/01/1997	$311,789	RSM	$578,217
Boiler	01/01/1998	$10,250	RSM	$18,750
				$653,870
Buildings				
Jenny Thompson Pool	01/01/1977	$333,431	RSM	$1,417,328
Pool Filtration Building	01/01/1977	$108,603	RSM	$461,644
Bath House	01/01/1980	$89,623	RSM	$318,906
Pavilion	01/01/1980	$15,209	RSM	$54,117
Concession/Pressbox	01/01/1988	$14,613	RSM	$34,931
Recreation Administration Building	01/01/2001	$80,000	RSM	$138,657
Recr - Shaws Lane Building	01/01/2008	$125,100	RSM	$155,047
Shaws Lane Rec Building	01/01/2009	$281	RSM	$325
Thompson Pool Filtration	01/01/2011	$1,998	RSM	$2,276
				$2,583,231

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Detail of Dover Recreation Facility Capital Investments				
Improvement Category & Description	Placed in Service Date	Original Acquisition Cost	Cost Adjustment Method	2017 Estimated Cost New
Land				
Athletic Field	01/01/2005	$225,000	ENR CCI	$319,049
				$319,049
Land Improvements				
Jenny Thompson Pool	01/01/1977	$871,700	ENR CCI	$3,668,855
Guppey Park Deck & Fencing	01/01/1980	$88,000	ENR CCI	$294,747
Group of Asphalt Paving	01/01/1985	$40,507	ENR CCI	$104,690
Group of Chain Link Fencing	01/01/1985	$10,311	ENR CCI	$26,648
Multipurpose Field	01/01/1985	$25,000	ENR CCI	$64,613
Site Work, Maglaras Park	01/01/1987	$125,000	ENR CCI	$307,592
Group of Outdoor Lighting	01/01/1988	$36,548	ENR CCI	$87,686
Basketball Court	01/01/1990	$12,388	ENR CCI	$28,384
Basketball Court	01/01/1990	$17,583	ENR CCI	$40,287
Group of Chain Link Fencing	01/01/1990	$14,386	ENR CCI	$32,962
Group of Minor Land Improvements	01/01/1990	$10,603	ENR CCI	$24,294
Group of Minor Land Improvements	01/01/1990	$11,310	ENR CCI	$25,913
Tennis Court	01/01/1990	$35,966	ENR CCI	$82,406
Tennis Court	01/01/1990	$39,962	ENR CCI	$91,562
Tennis Court	01/01/1990	$87,917	ENR CCI	$201,436
Group of Minor Land Improvements	01/01/1991	$17,710	ENR CCI	$39,713
Observation Tower	01/01/1992	$60,000	ENR CCI	$130,495
Multipurpose Field	01/01/1993	$15,000	ENR CCI	$31,215
Brick Courtyard	01/01/1995	$97,000	ENR CCI	$192,227
Group of Minor Land Improvements	01/01/1995	$48,427	ENR CCI	$95,970
Group of Iron Fencing	01/01/1996	$13,524	ENR CCI	$26,090
Recreation field	01/01/1998	$40,000	ENR CCI	$73,257
Skate Park	01/01/1998	$40,000	ENR CCI	$73,257
Group of Minor Land Improvements	01/01/2000	$13,548	ENR CCI	$23,608
Outdoor Ice Rink	01/01/2000	$20,000	ENR CCI	$34,851
Group of Chain Link Fencing	01/01/2001	$20,000	ENR CCI	$34,186
Basketball Court	01/01/2001	$10,000	ENR CCI	$17,093
System, Irrigation	01/01/2001	$15,000	ENR CCI	$25,639
Trails	01/01/2001	$75,000	ENR CCI	$128,196
Parking Lot	01/01/2002	$204,067	ENR CCI	$338,406
Multipurpose Field	01/01/2003	$40,000	ENR CCI	$63,946
Parking Lot Improvements	01/01/2003	$120,278	ENR CCI	$192,282
Multipurpose Field	01/01/2004	$499,628	ENR CCI	$741,237
Parking Lot Improvements	01/01/2004	$169,550	ENR CCI	$251,540
Band shell	01/01/2005	$183,677	ENR CCI	$260,453
Athletic Field Development	01/01/2005	$233,942	ENR CCI	$331,729
Athletic Field Development	01/01/2005	$108,058	ENR CCI	$153,226
Athletic Field Development	01/01/2005	$98,244	ENR CCI	$139,310
Recr - Park Improvements	01/01/2006	$53,898	ENR CCI	$74,082
Recr - Athletic Field Development	01/01/2006	$69,331	ENR CCI	$95,295
Recr - Park Improvements	01/01/2007	$135,567	ENR CCI	$181,683
Recr - Park Improvements	01/01/2007	$750	ENR CCI	$895
Recr - Athletic Field Development	01/01/2007	$22,370	ENR CCI	$29,980
Recr - Park Improvements	01/01/2008	$6,357	ENR CCI	$8,519
Recr - Athletic Field Development	01/01/2008	$183	ENR CCI	$232
Woodman Park Tennis Courts	01/01/2009	$102,956	ENR CCI	$129,181
Recr - Park Improvements	01/01/2009	$553	ENR CCI	$694
Recr - Park Improvements 2004 Cip	01/01/2009	$12,265	ENR CCI	$15,389
Woodman Park Tennis Courts	01/01/2010	$15,467	ENR CCI	$18,757
Tennis & BB Courts	01/01/2010	$13,843	ENR CCI	$16,788
Athletic Fields Development	01/01/2011	$10,031	ENR CCI	$11,858
Recr - Woodman Park Tennis Courts	01/01/2012	$1,285	ENR CCI	$1,480
Shaws Lane Building (Field)	01/01/2016	$21,008	ENR CCI	$21,628
				$9,086,462

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Detail of Dover Recreation Facility Capital Investments				
Improvement Category & Description	Placed in Service Date	Original Acquisition Cost	Cost Adjustment Method	2017 Estimated Cost New
Machinery & Equipment				
Dehumidifier	01/01/1990	$100,000	CPI	$186,917
Playstructure	01/01/1990	$15,000	CPI	$28,037
Playstructure	01/01/1992	$12,000	CPI	$20,895
Generator, Emergency	01/01/1997	$62,347	CPI	$94,900
Playstructure	01/01/1999	$12,000	CPI	$17,597
Group of Minor Pool Equipment	01/01/2000	$23,359	CPI	$33,139
Playstructure	01/01/2000	$60,000	CPI	$85,122
Playstructure	01/01/2000	$60,000	CPI	$85,122
Playstructure	01/01/2004	$20,000	CPI	$25,866
				$577,595
Roadways (Parking)				
Group of Asphalt Paving	01/01/1995	$35,000	ENR CCI	$69,360
Group of Asphalt Paving	01/01/1995	$61,272	ENR CCI	$121,424
				$190,784
Utility Systems				
Park Improvements	01/01/2011	$3,000	ENR - CCI	$3,546
Recr - Thompson Pool Bath House Imprv	01/01/2012	$185,000	ENR - CCI	$213,108
				$216,654
Total Recreation Facilities				
Total Selected Improvements				**$17,307,682**

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P17-65

Application Type:	Conditional Use Permit
Applicant(s):	104 Wash Street, LLC
Owner(s):	104 Wash Street, LLC & City of Dover
Location:	104 Washington (Tax Map 2, Lots 2,3,4,5,6,6A, 7, 8, 8A, & 9)
Meeting Date:	December 12, 2017

INTENT: To obtain a Conditional Use Permit to allow 60% lot coverage where 75% is required, 65% frontage build out where 70% is required and to allow part of the ground floor for residential amenities

LOTS/UNITS PROPOSED: 130 units

AGENDA ITEM: # 4-B

ACREAGE: 1.07 acres

ZONING DISTRICT: Central Business District-General (CBD-G)

EXISTING LAND USE: Commercial, Parking lot

PROPOSED LAND USE: Commercial/Residential

SURROUNDING LAND USE: Commercial/Residential

ZBA ACTION:

- Variance granted on February 20, 1986 to allow a 3rd sign to be installed (H86-5)
- Variance granted December 17, 1987 to allow a wall sign to be 16'x8' (H87-68)

ATTACHMENTS:
CUP application and materials

APPLICATION IS COMPLETE: Yes

NOTICES SENT: Abutter notices were sent by certified mail to all abutters for this meeting

PERMITS REQUIRED:
-Conditional Use Permit

WAIVERS REQUESTED: None for this case

Summary of Request and Background
The applicant is requesting to build a 5 story, mixed-use development with commercial on the first floor and 130 residential units on the second through fifth floors. Part of the ground floor space will be for residential amenities.

They are requesting three different Conditional Use Permits. The first request is to allow a 60% minimum lot coverage where as 75% is allowed. The second is requesting 65% frontage build out where 70% is the minimum. Lastly, they are requesting that part of the ground floor footprint be used for the residential leasing, management offices and residential amenities where the CBD-G zoning table states that only non-residential uses shall be on the ground floor level. In the application materials, the applicant provided a table of these three requests with their reasoning.

Consistency with Land Use Regulations
The CBD-General Overlay table requires a minimum lot coverage of 75% and a minimum frontage build out of 70% and for only commercial uses to be on the ground floor. Since the applicant is not proposing a building which meets those requirements, a Conditional Use Permit is required. If this property were in any other zone, a variance would be required, however the CBD reliefs are provided by the Planning Board, rather than the Zoning Board.

Chapter 170-20-B(1) of the City Code states that conditional use approval for relief from the standards may be granted by the Planning Board provided that the proposed project complies with the following standards:

(a) That both public and private BUILDINGs and landscaping shall contribute to the physical definition of RIGHTs OF WAY as CIVIC SPACEs.
(b) That development shall adequately accommodate automobiles, while respecting the pedestrian and the spatial form of public areas.
(c) That the design of STREETs and BUILDINGs shall reinforce safe environments, but not at the expense of accessibility.
(d) That architecture and landscape design shall grow from local climate, topography, history, and BUILDING practice.
(e) That BUILDINGs shall provide their inhabitants with a clear sense of geography and climate through energy efficient methods.
(f) That CIVIC BUILDINGs and public gathering places shall be provided as locations that reinforce community identity and activity.
(g) That CIVIC BUILDINGs shall be distinctive and appropriate to a role more important than the other BUILDINGs that constitute the fabric of the city.

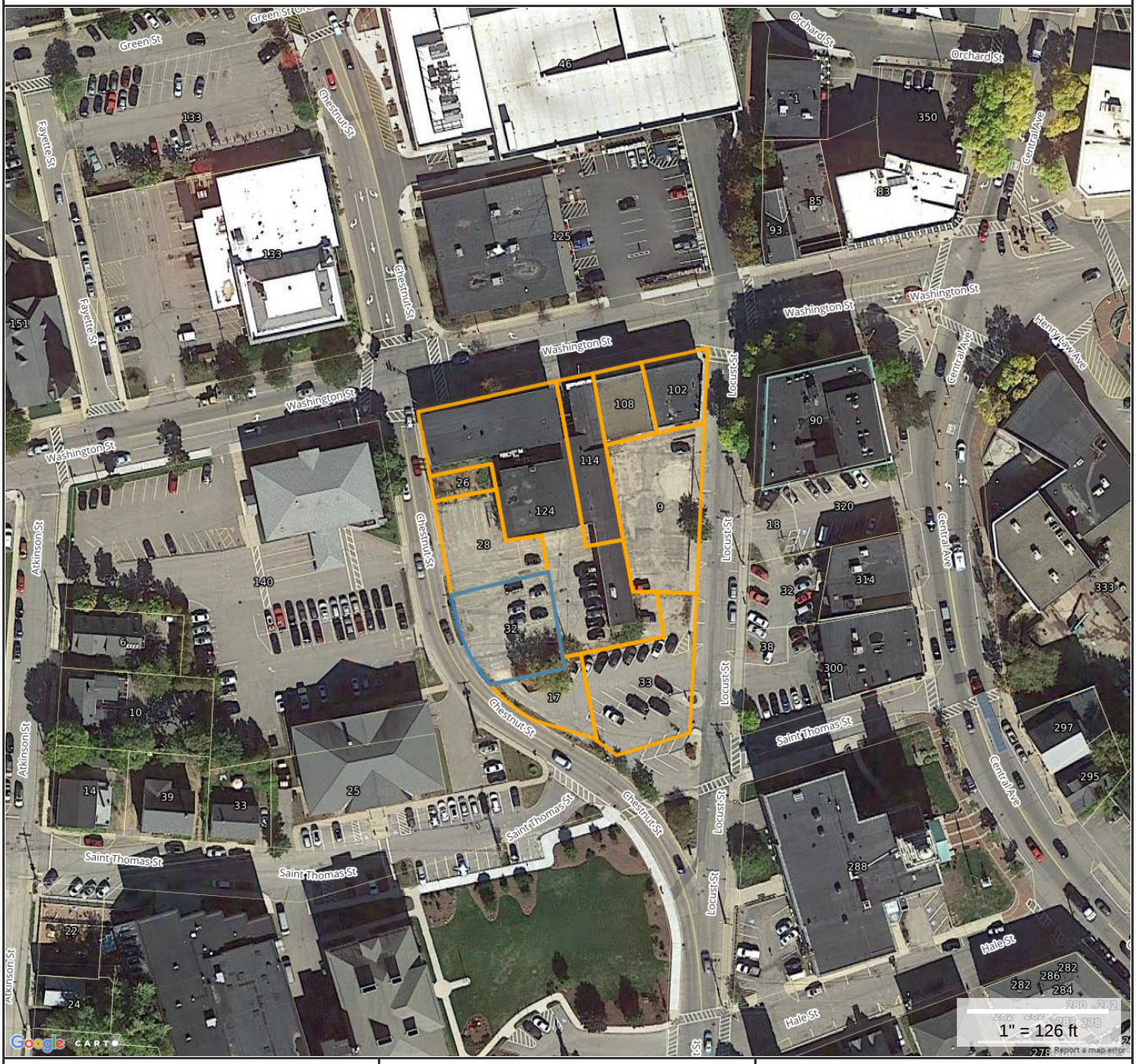
(h) That the preservation and renewal of historic BUILDINGs shall be facilitated.
(i) That the harmonious and orderly evolution of urban areas shall be advanced by the proposed BUILDING and/or use.

Considering their reasoning provided in the table attached to the application, the Conditional Use Permit request meet these requirements.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application for review, open the public hearing, and vote to approve the Conditional Use Permits with the following conditions as it meets the criteria of the CUP:

1. The applicant shall be subject to a formal agreement between the Planning Board and the applicant. Said agreement shall be recorded at the Strafford County Registry of Deeds per Chapter 170-20-B(3).

104 Washington Street



Property Information

Property ID	02009-000000
Location	32 WALNUT ST
Owner	104 WASH STREET LLC

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 6/13/2017
Properties updated 12/06/2017

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: May 18, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: 104 Wash Street, LLC Telephone # 617.840.4778

Address of Applicant: 11 Beacon Street, STE 1120 Boston, MA 02108

E-Mail Address: Robs@cathartes.com

Name of Property Owner (if different from applicant): N/A Telephone # N/A

Address of Property Owner: N/A

PROPERTY INFORMATION

Assessor's Map # 2 Lot(s) # 2,3,4,5,6,6A,7,8,8A,9

Address of Property: 104 Washington Street

Zoning District(s) CBD - General(CBD-G) Overlay District(s) N/A

Existing Use of Property: Vacant, Formerly Robbins Auto Parts

CONDITIONAL USE PERMIT INFORMATION

Type of Conditional Use Permit (Check All That Apply):

☐ Conservation District ☐ RCM Use Overlay District ☐ I-1 District Uses

☐ Groundwater Protection ☐ Off-Street Parking and Loading ☐ Alternative Treatment Center

☐ Wetland Protection District ☒ Central Business District ☐ Heritage Residential District

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

See Attached

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES Sewer Connection Permit - Pending

Name of Professional That Prepared Plans: Tighe & Bond, Patrick Crimmins

Address 177 Corporate Drive, Portsmouth, NH 03801 Telephone #: 603-433-8818

Professional License #: 12378 E-mail address: pcrimmins@tigheBond.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 11/20/17

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 11/20/17

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
2	2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9	104 Wash Street, LLC. c/o Cathartes	11 Beacon Street, Suite 1120 Boston, MA 02108

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Patrick Crimmins	Tighe & Bond (Engineer)	177 Corporate Drive, Portsmouth NH, 03801
William Doucet	Doucet Survey Inc. (Surveyor)	102 Kent Place, Newmarket , NH 03857
Robert Del Savio	EMBARC Studio (Architect)	60 K Street, 3r Floor, Boston MA 02127
Robbi Woodburn	Woodburn & Company (Landscape Architect)	103 Kent Place, Newmarket, NH 03857

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

Applicant – 104 Wash Street LLC
Property – 104 Washington Street, Map 2, Lots 2, 3, 4, 5, 6, 6A, 7, 8, 8a & 9

Requests for Conditional Use Permits

Central Business District – General Sub District

Conditional Use Permits -

Approval for relief of standards may be granted after public hearing provided project complies with following standards:

- Design of Street & Buildings reinforces safe environments
- Arch and landscape design shall grow from local climate, history, building practice
- Preservation of historic buildings facilitated
- Requested use is compatible with abutting uses and surrounding area
- Requested use will not create traffic or impair safety of pedestrian
- Will not result in odor or noise

Proposed Conditional Use Permits: (3)

Zoning Section	Zoning Requirement	PROPOSED	REASON
CBD Table – Min. Lot Coverage	*75%*	60%	We don't feel it would be feasible at this time to have retail down Locust and Chestnut streets. In addition, to have a viable residential project we need parking on site and going underground is prohibitive.
CBD Table – Frontage Build-Out	*70% Min.*	65%	The current design has provided great commercial activity on Washington Street which is the busier thoroughfare. Our proposed screening for the parking in the rear will help alleviate any parking lot screening concerns. In addition, to have a viable residential project we need parking on site and going underground is prohibitive.
CBD Table – Ground Floor Standards -170-20(D)(3)(h)	*Only non-residential uses shall be on the ground floor level*	Part of the ground floor footprint is for the Residential Leasing, Management & Amenity.	We have made sure our ground floor design maximizes the retail frontage along Washington street. However, to be competitive in the market we need a visible and inviting leasing area as well as a generous amenity space.

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P17-66

Application Type:	Site Plan Review
Applicant(s):	104 Wash Street, LLC c/o Cathartes
Owner(s):	104 Wash Street, LLC & City of Dover
Location:	104 Washington (Tax Map 2, Lots 2,3,4,5,6,6A, 7, 8, 8A, & 9)
Meeting Date:	December 12, 2017

INTENT: Site plan to construct a 5 story, mixed-use development with commercial on the first floor and 130 residential units on the second through fifth floors, providing 98 on-site parking spaces. The project also includes off-site roadway improvements.

LOTS/UNITS PROPOSED: 130 units

AGENDA ITEM: # 4-C

ACREAGE: 1.07 acres

ZONING DISTRICT: Central Business District-General (CBD-G)

EXISTING LAND USE: Commercial, Parking lot

PROPOSED LAND USE: Commercial/Residential

SURROUNDING LAND USE:
Commercial/Residential

ZBA ACTION:
- Variance granted on February 20, 1986 to allow a 3rd sign to be installed (H86-5)
- Variance granted December 17, 1987 to allow a wall sign to be 16'x8' (H87-68)

ATTACHMENTS:
Site Plan application and materials, 10/12/17 TRC minutes, and plan

APPLICATION IS COMPLETE: Yes

NOTICES SENT: Abutter notices were sent by certified mail to all abutters for this meeting

PERMITS REQUIRED:
-Conditional Use Permit

WAIVERS REQUESTED:
Requesting that the in lieu of the Recreation, Police, & Fire Impact Fee, (approximately $357,461) that improvements be made around the project site per 170.23.F

Summary of Request and Background
The applicant is requesting to build a 5 story, mixed-use development with commercial on the first floor and 130 residential units on the second through fifth floors. Part of the ground floor space will be for residential amenities. They are proposing 98 on-site parking spaces and some off-site roadway improvements. The site is to be serviced by municipal water and sewer.

The applicant came before the Technical Review Committee on October 12 (minutes attached).

Consistency with Land Use Regulations
Chapter 149-4 of the Site Review Regulations of the City Code provides for site review by the Planning Board of new construction or redevelopment of various types.

The Zoning ordinance provides for the Planning Board to grant full or partial waivers of impact fees if one of three criteria is met. In this case criterion (b) is being met:
b): The PLANNING BOARD may agree to waive all or part of an IMPACT FEE ASSESSMENT and accept in lieu of a cash payment, a proposed contribution of real property or facility improvements of equivalent value and utility to the public. Prior to acting on a request for a waiver of IMPACT FEEs under this provision that would involve a contribution of real property or the construction of capital facilities; the PLANNING BOARD shall submit a copy of the waiver request to the City Council or its review and consent prior to its acceptance of the proposed contribution. The value of contributions or improvements shall be credited only toward facilities of like kind, and may not be credited to other categories of IMPACT FEE ASSESSMENT. The APPLICANT shall pay all costs incurred by the City for the review of such proposal, including consultant and counsel fees.

The Council has already consented to accept the improvements in lieu of the impact fees.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application for review, open the public hearing, and vote as follows:

Waiver Request:
The Planning Department recommends that the Board approve the waiver per Section 170-23.F(1)(b) with the following condition:

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P17-66

Application Type:	Site Plan Review
Applicant(s):	104 Wash Street, LLC c/o Cathartes
Owner(s):	104 Wash Street, LLC & City of Dover
Location:	104 Washington (Tax Map 2, Lots 2,3,4,5,6,6A, 7, 8, 8A, & 9)
Meeting Date:	December 12, 2017

Condition to Be Met Prior to Signing of Plans:

1. A note shall be added to the site plan that the waiver was granted for the reasons stated by the applicant and that the Board found the criteria of 149-19 have been met.

Site Plan:

The Planning Department recommends that the Board approve the site plan with the following conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The Conditional Use Permits (P17-65) shall be approved.
2. The applicant shall provide:
    a. a digital version of plan set
    b. signalization plan to the satisfaction of the City Engineer
    c. a license plan sheet to accompany the park license
3. The applicant must revise final plan set to:
    a. Add the owner's signatures
    b. Include the Professional Engineer, Licensed Land Surveyor, Architect, and Licensed Landscape Architect stamp and signatures
    c. Move oil grease separator onto property rather than in public right of way.
    d. Add note that should additional Fire Department Connections (FDC) be required the proposed locations shall be approved by Dover Fire & Rescue, Inspection Services.
    e. Add note indicating how the Dover Fire & Rescue will have access to the site without exiting the fire apparatus since the parking lot access gates will be closed (lowered) at night
    f. Add note that if walk through access is not available between the 98 space open parking to the 37 covered parking area (17,755 sq ft parking area) then additional standpipe shall be installed as approved by Dover Fire and Rescue, Inspection Services.

Conditions to Be Met Prior to Any Construction Activity:

4. Site Construction hours shall be limited to Monday-Friday 7 AM-6 PM, Saturday and Sunday 8 AM-5 PM. Hours of construction must be documented on a site construction sign along with the contact information for the general contractor. Said signage must be located and approved by the City Engineer or Assistant City Manager.

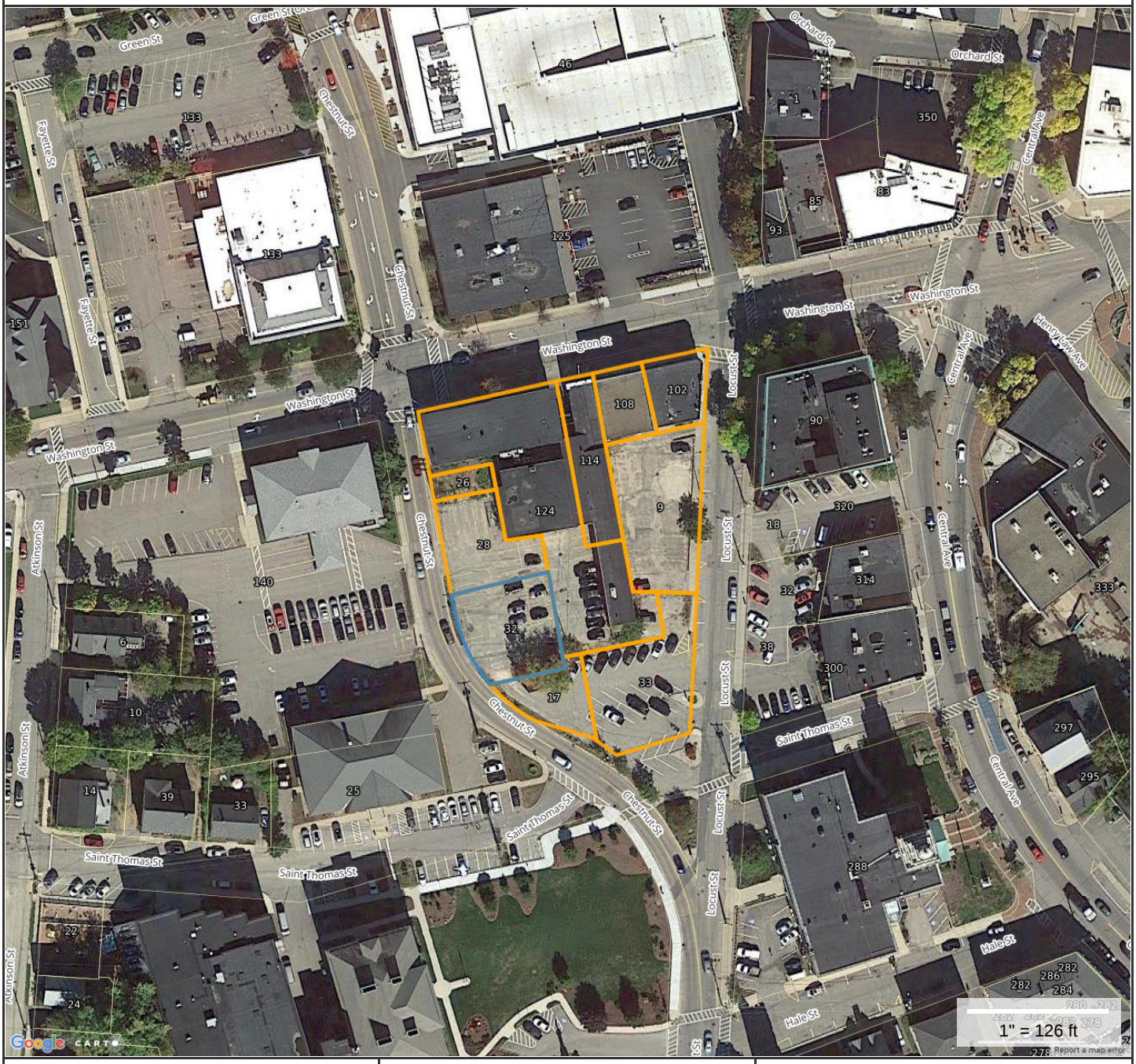
Conditions to Be Met Prior to Issuance of a Building Permit:

5. The new dwelling units shall be assessed the current water and sewer investment fees in place at the time of application for service.
6. Once it is determined how the brown space along Locust Street will look (whether mural or another feature), revised architectural renderings shall be submitted and approved by the Assistant City Manager.

Conditions to Be Met Prior to Occupancy:

7. Issuance of a certificate of occupancy.
8. Any new dwelling units and commercial space shall be assessed the current school impact fees in place at the time of building permit application.
9. The applicant shall provide a letter of credit or other form of security acceptable to the City for any unfinished work.

104 Washington Street



Property Information

Property ID	02009-000000
Location	32 WALNUT ST
Owner	104 WASH STREET LLC

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 6/13/2017
Properties updated 12/06/2017

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: May 18, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: 104 Wash Street, LLC. c/o Cathartes (for Map: 2 Lots: 4, 5, 6, 6A, 7,8, 8A & 9) / City of Dover (for Map: 2 Lots: 2 & 3)

elephone # (617) 742-6000 / (603) 743-6008

Address of Applicant: 11 Beacon Street, Suite 1120 Boston, MA 02108 / 288 Central Ave, Dover, NH 03820

E-Mail Address: robs@cathartes.com / c.parker@dover.nh.gov

Name of Property Owner (*if different from applicant*): N/A Telephone # N/A

Address of Property Owner: N/A

PROPERTY INFORMATION

Address of Property: 104 Washington Street

Assessor's Map # 2 Lot(s) # 2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9

Zoning District(s) Central Business District – General (CBD-G) Overlay District(s) N/A

Size of Parcel: ±52,935 sq. ft. ±1.22 ac. Property Deed: Book N/A Page: N/A

Existing Use of Property: Commercial

SITE PLAN INFORMATION

Describe Proposed Use: The proposed project is for a mixed-use development with the first floor proposed as commercial and the upper floors proposed as residential.

Area of Parcel to be Developed: ±52,935 sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed: 130 Units

Number of Parking Spaces: Existing ±61 (Striped On Site) ±17 (Striped Street)
Proposed 98 (On site) 21 (Street)

Highway Access (check where applicable): N/A City Street N/A State Highway

Number of Employees Total: In Maximum Shift:

Disposition of Parcel:
Building Footprint ±31,888 (Roof) sq. ft.

Total Building Area ±139,395 (GFA) sq. ft.

Paved Area ±14,778 (Non Roof On Site) sq. ft.

Building Setbacks:
Front Yard ±1.3 ft.

Rear Yard ±11.5 ft.

Side Yard: Right ±1.3 ft.

Left ±1.3 ft.

City Water? __X__ Yes ____ No How far is city water from the property? ±31'

City Sewer? __X__ Yes ____ No How far is city sewer from the property? ±44'

BUILDING INFORMATION

Type of Building to be Built: 5 – Story Mix-Used (Commercial on first floor, Residential on upper floors)

Height of Building: 5 – story's (±57'-6") Finished Floor Elevation: Varies (±46.2' - ±50')

Number of Seats (where applicable) ±35

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: N/A

Justification for waiver request(s) (*attach additional sheets as needed*): N/A

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Doucet Survey Inc.

Address 102 Kent Place, Newmarket , NH 03857 Telephone #: 603.659.6560

Professional License #: _____ E-mail address: _____

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Tighe & Bond Engineers

Address 177 Corporate Drive, Portsmouth, NH 03801 Telephone #: 603.433.8818

Professional License #: _____ E-mail address: PMCrimmins@TigheBond.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 11/21/17

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 11/21/17

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 11/21/17

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: 11/21/17

Signature of Applicant (*if different from owner*): _____ Date: _____

Owner/Applicant:
104 Wash Street, LLC. c/o Cathartes
11 Beacon Street, Suite 1120
Boston, MA 02108

Engineer:
Patrick Crimmins / Tighe & Bond
177 Corporate Drive
Portsmouth NH, 03801

Surveyor:
Doucet Survey Inc.
102 Kent Place
Newmarket , NH 03857

Architect:
EMBARC Studio
60 K Street, 3r Floor
Boston MA 02127

Landscape Architect:
Woodburn & Company
103 Kent Place
Newmarket, NH 03857

HOLGATE LIMITED PARTNERSHIP
130 CENTRAL AVE
DOVER, NH 03820
2-38-0-0

90 TEMPLE ASSOCIATES LIM PART C/O CPM INC
80 NASHUA RD
LONDONDERRY, NH 03053
2-14-0-0

CITY OF DOVER
288 CENTRAL AVE
DOVER, NH 03820
2-15-0-0

TRI COUNTY REALTY INC
192 DOVER POINT RD
DOVER, NH 03820-4632
2-16-0-0

TRI COUNTY REALTY INC C/O ROBERT FOSTER
192 DOVER POINT RD
DOVER, NH 03820-4632
2-17-0-0

TRI COUNTY REALTY INC C/O ROBERT FOSTER
192 DOVER POINT RD
DOVER, NH 03820-4632
2-11-0-0

CITY OF DOVER
288 CENTRAL AVE
DOVER, NH 03820
2-1-0-0

CITY OF DOVER
288 CENTRAL AVE
DOVER, NH 03820
9-57-0-0

STATE OF NH DEPT OF ADMIN SERVICES
25 CAPITOL ST
CONCORD, NH 03301
1-14-0-0

TRELA ASSOCIATES C/O SHAHEEN AND GORDON PA
PO BOX 977
DOVER, NH 03821-0977
1-20-0-0

US TREASURY
133 WASHINGTON ST
DOVER, NH 03820
1-25-0-0

ONE TWENTY FIVE WASHINGTON ST INC
PO BOX 1535
DOVER, NH 03821-1535
2-53-0-0

CITY OF DOVER
288 CENTRAL AVE
DOVER, NH 03820
2-83-0-0

CJS HOLDINGS LLC,
1 ORCHARD STREET
DOVER, NH 03820
2-44-0-0

MTI
85 WASHINGTON ST
DOVER, NH 03820
2-40-A-0

340 CENTRAL LLC
340 CENTRAL AVE STE 202
DOVER, NH 03820
2-40-0-0

CITY OF DOVER,
288 CENTRAL AVE
DOVER, NH 03820
2-13-0-0

TRI COUNTY REALTY INC
192 DOVER POINT RD
DOVER, NH 03820-4632
2-12-0-0

Tighe&Bond
Engineers | Environmental Specialists

C-0960-03
November 21, 2017

Mr. Christopher G. Parker
Assistant City Manager/Director of Planning and Strategic Initiatives
City of Dover Planning and Community Development
288 Central Avenue
Dover, New Hampshire 03820

Re: **Proposed Residential Development – Site Plan Review Application**
104 Washington Street, Dover, New Hampshire

Dear Chris:

On behalf of 104 Wash Street, LLC. c/o Cathartes, we are pleased to submit the following materials to support a Site Plan Review Application for the above referenced project.

- Fifteen (15) copies of the Site Review Application last revised November 21, 2017
- Fifteen (15) copies of the Conditional Use Permit Application last revised November 21, 2017
- Fifteen (15) copies of the Notice of Merger Form dated November 6, 2017
- Fifteen (15) copies of the Impact Fee Waiver Request Form dated November 11, 2017
- Fifteen (15) copies of the TRC Comment Response dated November 21, 2017
- Fifteen (15) copies of Site Plans last revised November 21, 2017
- Fifteen (15) copies of the Off-Site Improvement Plans last revised November 21, 2017
- Fifteen (15) copies of the Fire Truck Turning Exhibits dated November 21, 2017
- Fifteen (15) copies of the Traffic Impact Assessment and Analysis Memorandum prepared by Stephen G. Pernaw & Company, Inc. last revised October 31, 2017
- Fifteen (15) copies of the Drainage Report dated September 13, 2017
- Fifteen (15) copies of the Projected Water and Wastewater Flows and Invest Fee Memorandum dated September 13, 2017
- Fifteen (15) copies of the Geotechnical Evaluation Memorandum dated October 10, 2017
- Fifteen (15) copies of the Landscape Operation & Maintenance Plan
- One (1) copy of the List of Abutters
- Three (3) copies of Abutters Mailing Labels
- One (1) CD containing digital (PDF) copies of the above listed information

The proposed project consists of an existing site that is comprised of ten (10) separate parcels bound by Washington Street, Chestnut Street and Locust Street. The proposed project includes a lot consolidation and boundary line adjustment for these lots which results in portions of land being conveyed between 104 Wash Street, LLC and the City of Dover.

The proposed project is a mixed-use development with associated site improvements as depicted in the enclosed Site Plans. The first-floor commercial use consists of 3,299 SF of restaurant space, 3,601 SF of retail space, and 3,842 SF of leasing management and residential amenities space. The second through fifth floor of the building consist of 130 residential dwelling units. The proposed project will provide 98 on-site parking spaces. Other associated site improvements will include utilities, lighting, landscaping, and a stormwater management system. As the result of the proposed on-site improvements, there will be a net reduction of impervious area of approximately 627 SF. In addition to the on-site improvements, the applicant will also construct a public park to the south of the site.

The project also includes off-site roadway improvements to the public right of ways adjacent to the site which have been designed by the applicant as part of this project and will be constructed by the City of Dover. Off-site improvements will be constructed on Washington Street to the north, Chestnut Street to the west, and Locust Street to the east. The off-site improvements will result in an additional four (4) public parking spaces from the existing condition.

On October 12, 2017, the applicant met with the Technical Review Committee (TRC). The enclosed information has been revised to address comments from TRC and a comment response report is enclosed.

We respectfully request to be placed on the next Planning Board agenda for December 12, 2017. Please contact me by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com if you have any questions or need any additional information.

Sincerely,

TIGHE & BOND, INC.

Patrick M. Crimmins, P.E.
Project Manager

Enclosures

Copy: 104 Wash Street, LLC. c/o Cathartes

J:\C\C0960 Cathartes\C-0960-003 Dover\Report_Evaluation\Applications\City of Dover\Planning Board\Cover Letter.docx

NOTICE OF MERGER

This notice of Merger is made this 6th day of November, 2017. Be it known that 104 Wash Street LLC, c/o Cathartes of 11 Beacon Street, Suite #1120 being the owner(s) of Tax Map See attached, Lot See attached, a parcel described in deed Book See Attached, Page See Attached recorded at the Strafford County Registry of Deeds and Tax Map See Attached, Lot See Attached, a parcel described in deed book See Attached, page See Attached recorded at the Strafford County Registry of Deeds has/have requested that said parcels be merged. The landowner(s) certify (ies) that the above described lots have at least one common boundary and are located in the City of Dover, NH, in the County of Strafford.

The above described lots shall not be conveyed as individual lots, but shall be conveyed as one. The intent is that any common boundaries between or among the lots shall be abandoned. The resulting merged lot may only be subdivided upon approval by the Planning Board based on the regulations existing at the time of application for the subdivision.

It is further understood that the above described lots shall be assessed as one lot for property tax evaluation purposes.

The owner(s) of the above described parcels has/have notified all mortgage holders for the above described parcels that said parcels are being merged and the owner(s) accepts full liability for this merger.

The Planning Board of the City of Dover, New Hampshire has signed this Notice of Merger as required by RSA 674:39-a ~~and accepts~~ no liability for this merger.

Owner Signature — Witness

Jeff Johnston
(Print owner name)

Owner Signature — Witness

(Print owner name)

Owner Signature — Witness

(Print owner name)

Kirt Schuman – Planning Board Chair — Witness

Tax Map	Lot No.	Book No.	Page No.
2	4	4451	291
2	5	4451	291
2	6	4451	291
2	6A	4451	291
2	7	4451	291
2	8	4451	291
2	8A	4451	291
2	9	4451	291

City of Dover, New Hampshire
Impact Fee Waiver Request Form

[Revision Date: November 18, 2014]

Office Use Only	Date Received: _____	Date of Planning Board Meeting: _____
	Waiver Request #: _____	

PROPERTY OWNER AND PARCEL INFORMATION

Name of Property Owner: 104 Wash Street LLC Telephone #(617) 840-4778

Address of Property Owner: 11 Beacon Street, Ste 1120, Boston, MA 02108

Address of Property Being Assessed Impact Fee: 104 Washington Street

Assessor's Map # 2 Lot(s) # 2,3,4,5,6,6A,7,8,8A & 9

Type of Building Proposed (check one):

RESIDENTIAL

_____ Single Family Detached
_____ Single Family Attached (townhouse)
_____ Duplex or 3-Unit Structure
__x__ Multi-family Structure (4+ Units)
_____ Manufactured Home

NON-RESIDENTIAL

__x__ Retail, Restaurant, or Club building
_____ Office or Commercial Services building
_____ Industrial, Transportation, Warehouse or Communication Building
_____ Nursing Home or Assisted Living Building
_____ Other Institutional Use Building

Amount of impact fee invoiced by City: $ Approx. 357,461

Use the space provided to explain why you feel that the impact fee assessed for your property should be waived by the Planning Board, per Chapter 170-23 F. (attach additional sheet if necessary):

We are not asking for the Impact fees to be waived but rather that we be allowed to put the amounts for Recreation, Police & Fire towards infrastructure and park upgrades around the project site. This is more specifically described in the Development Agreement. The Impact fee for the Schools will be paid in full to the City.

Owner's Signature

11/14/17
Date

PROPOSED RESIDENTIAL DEVELOPMENT - TECHNICAL REVIEW COMMITTEE COMMENTS (10/12/2017) STATUS REPORT

104 Washington Street
Dover, New Hampshire
November 21, 2017

Prepared by: CML
Project # C0960-003

	Comment	Response	Corresponding Plan Sheet #
Planning Comments			
1	Impact fees and water and sewer investment fees will be assessed (Dev. Agreement rec and public safety)	See enclosed Impact Fee Waiver Request Form.	N/A
2.1	Please revise the plan set to add City as co-owner	The Plan Sets have been revised to identify the City of Dover as co-Owners. In addition, the City of Dover has been added to the Site Plan Appllcation.	Cover Sheets
2.2	Please revise the plan set to include the plan number (P17-66) on all sheets	The site plan sheets have been revised to include the City of Dover Project Plan Number P17-66.	All Sheets
2.3	Please revise the plan set to indicate Eversource instead of PSNH	The only reference to PSNH is for the utility poles identification labels which is how they are still marked in the field.	N/A
2.4	Please revise the plan set to ensure landscaping inside fence as shown on site plan doesn't conflict with landscaping plan.	The site plans and landscape plans have been revised to ensure no conflict between the proposed wall/fence and landscaping.	C-102 & L-101
2.5	Please revise the plan set to ensure the fence detail for stockade fence no longer conflicts with metal picket fence called out elsewhere.	The plans have been revised to include a mason wall with metal fence detail on the landscape details.	L-102
2.6	Please revise the plan set to the build-to-line calculation/provided part of the table needs to be filled in	The approximate build-to-line value has been identified in the Site Data Block.	C-102
2.7	Please revise the plan set to minimum lot size N/A on lot consolidation plan	The Lot Consolidation Plan has been revised to identify the minimum lot size requirement as N/A	V-104
2.8	Please revise the plan set to add indoor bike parking and show where	The site plans have been revised to include indoor bike parking location.	C-102
2.9	Please revise the plan set to revise bench locations near corner of Locust and Washington	The site plans have been revised to adjust the bench locations near the corner of Locust and Washington Street.	C-102 & L-101
2.10	Please revise the plan set to add owner's signatures	The cover sheets have been revised to include an Owner/Applicant as well as Co-Owner signature block.	Cover Sheets
2.11	Please revise the plan set to remove Dover approval box on survey sheet	The survey sheets have been revised to not include the Dover Planning Board Approval Block.	V-101
2.12	Please revise the plan set to consistently number sheet pages throughout set	The plan sets have been revised to consistently number sheet pages throughout, based on the Uniform Drawings System sheet number convention.	All Sheets
2.13	Please revise the plan set to add owner information on C-102	The site plans have been revised to include the owner information in the title blocks.	C-102
2.14	Please revise the plan set to ensure uniformity ratio of 5:1 on lighting plan	The photometrics design has been revised to ensure a uniformity ratio of 5:1 for on-site lighting.	C-105
2.15	Please revise the plan set to add stormwater plan recording note	The general note have been revised to include the requested stormwater plan recording note. See Grading & Drainage Note #8.	G-101
2.16	Please revise the plan set to add additional street trees especially on Locust Street near loading area	The site plans have been revised to include additional street trees along Locust Street	C-102 & L-101
2.17	Please revise the plan set to revise angled parking to parallel per off-site plans	The site plans have been revised to remove the proposed angled parking and provided parallel parking on Locust Street	C-102
2.18	Please revise the plan set to show masonry wall	The plans have been revised to show a masonry wall with fence along Chestnut Street	L-101 & L-102
2.19	Please revise the plan set to, on architectural plans, Blend residential entry middle gray area better	Architectural plans have been revised	A-201
2.20	Please revise the plan set to, on architectural plans, Improve Chestnut St. area blank walls	Applicant has submitted a letter to the City of Dover requesting a meeting with the Arts Commission to discuss opportunities for public art display on these blank walls.	A-201
2.21	Please revise the plan set to, on architectural plans, Lighten up some of the dark gray areas on Locust Street	Architectural plans have been revised	A-201
3.1	Please provide digital version of the revised plan set	Digital versions of the revised plan sets have been provided on the enclosed CD.	N/A
3.2	Please provide a neighborhood plan with more recent photo underlay	A more recent aerial overlay photo has been provided for the Neighborhood plan.	G-102
3.3	Please provide a lot merger application	A lot merger application is enclosed.	N/A

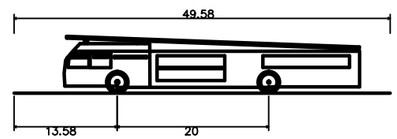
3.4	Please provide a 3D model/rendering of all sides (see Third Street project for example) for Planning Board meeting	Renderings for views at the corner of Washington & Locust and the park at Locust & Chestnut have been included in the plan set. Applicant agrees to have 3D perspectives for Planning Board presentation.	A-901 & A-902
3.5	Please provide floor plans	Floor plans & roof plan have been added to the plan set.	A-101 thru A-106
3.6	Please provide Traffic impact study that provides all components required such as public transit	A revised traffic impact study is enclosed and includes a public transit component.	N/A
3.7	Please provide CUP supporting documentation	A revised CUP application and supporting doucmentation are enclosed.	N/A
3.8	Please provide Landscape O&M plan	The landscape Operations and Maintenance plan is enclosed	N/A
4	The Professional Engineer and Licensed Land Surveyor will need to sign and date final plans	Final plans are stamped and dated by professional engineer and licensed land surveyor.	Cover Sheets
5	Storm Water Management Plan depicting the existing and proposed storm drainage system and engineered drainage analysis to the satisfaction of the City Engineer	Grading, Drainage & Erosion Control Plan depict the existing and proposed stormwater management systems. An engineered drainage analysis was previously submitted with the TRC package and copies are enclosed.	C-103
6	Storm Water Management Plan System Operation and Maintenance Plan to the satisfaction of the City Engineer	Storm Water Management Plan System Operation and Maintenance Plan was enclosed with the drainage analysis submitted in the TRC package. Copies of the analysis with the O&M are enclosed.	N/A
7	Consider adding a fountain to park area	This has discussed this with the applicants landscape architect and it was determined the fountain would take up valuable seating and planting space.	N/A
Police Department Comments			
1	Sheet C-101 (Off Site Improvement plan set): change the lane designations for Chestnut Street NB approach from shared thru/left + dedicated right to shared thru/right + dedicated left	The site plans have been revised to change the lane designations for Chestnut Street NB approach from shared thru/left + dedicated right to shared thru/right + dedicated left.	C-101 (OS)
2	The new angle parking configuration of Locust Street simplifies multi-space metering and traffic flow	Per coordination with TRC the angled parking spaces have been eliminated and replaced with parallel parking spaces.	N/A
3	The pedestrian bump-out at Locust/Washington is good. Can you smooth the transition to on-street parking to immediate east of here?	The site plans have been revised to smooth the transition to the on-street parking on Washington Street for the proposed pedestrian bump-out.	C-101 (OS)
4	Why does the site driveway prohibit left turn departures?	The proposed drive entrance prohibits left turns out of the site due to concerns with sight distance.	N/A
5	We prefer not to prohibit left turns at the end of Locust Street. It's not clear from the plans, but Mr. Pernaw's June 20, 2017 makes a reference to this	The off-site plans have been revised to remove the proposed no left turn sign at the intersection of Locust and Washington Street.	C-101 (OS)
6	Is the dotted line on Sheet C-102 (development plan set) the outline of the building overhang? This is not clear from the plan drawings	Confirmed, see upper floor inset.	C-102
7	How will snow be stored or cleaned in the surface lot that is uncovered?	The plans have been revised to indicate a proposed snow storage area. Also a note has been added stating, "property manager will be responsible for timely snow removal from all private sidewalks, driveways, and parking areas. Snow removal will be hauled off-site and legally disposed of when snow banks exceed 3 feet in height". See General Note #18	G-101 & C-102
Engineering Comments			
1.1	Offsite plans, bench, kiosk, light pole locations along the parking on Washington may conflict with car doors.	The off-site plans have been revised to ensure potential conflicts with car doors of parked cars and the proposed benchs, kiosk, and light poles have been eliminated.	C-101 (OS)
1.2	Offsite plans, Suggest grouping benchs on the three corners of the project	The off-site plans have been revised to adjust the proposed bench locations.	C-101 (OS)
1.3	Offsite plans, Do you need an 8 inch sewer service? Can you do two or three 6 inch services into the main to eliminate the need for a sewer manhole.	The site plans have been revised to provide 2-6" sewer services with lateral connections in lieu of an 8" service with manhole connection.	C-104
1.4	Offsite plans, On SMH 1294- if this is an inside drop we have a special detail that uses a bowl on the top of the pipe and rework the invert.	The site plans have been revised to include an inside drop manhole detail.	C-504
1.5	Offsite plans, You may need to adjust the water service location into the building due to proposed electrical conduit.	The proposed water service connection has been reviewed and a conflict with the proposed electric design is not anticipated , as coordinated with Eversource.	C-102 (OS)
1.6	Offsite plans, The street lights we use are spring city hancock ductile iron poles. See detail provided.	The off-site plans have been revised to callout City of Dover specific street lights.	C-101 (OS)
1.7	Offsite plans, Please space three lights along Washington street and one or two in the park area.	The off-site plans have been revised to include three (3) spaced lights along Washington Street as well as two (2) lights within the proposed park area.	C-101 (OS)
1.8	Offsite plans, C502-sing posts in the right of way are to be 2 inch square with break away base.	The site plans have been revised to include the City of Dover 2" square with break away base sign post.	C-502 & C-502 (OS)
1.9	Offsite plans, C503- detectable warning panels to be cast iron black coating.	The site plans have been revised such that the detectable warning panels are to be cast iron black coating.	C-503
1.10	Offsite plans, We specify a 9inch crushed gravel base for under sidewalks	The site plans have been revised such that the crushed gravel base below sidewalks are called out to be 9".	C-502 & C-503

1.11	Offsite plans, We have an updated brick sidewalk detail. See attached	The off-site plans have been revised such that the proposed brick sidewalk detail meets the City requirements.	C-503 (OS)
1.12	Offsite plans, All manhole covers in right of way shall be hinged	The City required hinged manhole detail has been added to the Off-Site details sheet.	C-503 (OS)
1.13	Offsite plans, Gas needs to come up from Henry law so adjust gas entrance into the building accordingly.	Per coordination with Unitil (email 10/31/2017) the proposed connection location is acceptable.	C-102 (OS)
1.14	Offsite plans, C506-finish the design of the stormtech.	Design specifications and details have been coordinated with ADS (email 10/26/2017). The detail sheet has been revised accordingly.	C-506
2.1	Onsite plans, What happens to the existing tree at locust and Washington	The existing tree at Locust and Washington Street is proposed to remain.	C-101
2.2	Onsite plans, Update plans to show Eversource proposed underground electric	The proposed underground electric design is shown on the plans as per various correspondence with Eversource and a site walk conducted on 11/13/17 with Eversource.	C-102 (OS)
2.3	Onsite plans, On Chestnut at 2+30lt and 3+98 lt there needs to be five ft of clear space on the sidewalk to plow	The off-site plans have been revised to ensure a 5' clear space on all sidewalks to provided room for plowing activities.	C-101 (OS)
2.4	Onsite plans, Add a catch basin on Chestnut 3+55+/- and change the existing cb grate to a dmh cover.	The off-site plans have been revised to add a catch basin on Chestnut 3+55+/- and change the existing catch basin grate to a manhole cover.	C-102 (OS)
2.5	Onsite plans, What happens to the existing CB at 3+98	The existing catch basin at 3+98 is to be relocated/reset along the proposed curb line.	C-101
2.6	Onsite plans, What happens with the existing CB on Locust at 0+85 Rt and 3+50 Rt	The existing catch basin at 0+85 to be removed and CB at 3+50 to be reset to finished grade and aligned with the proposed curb.	C-102 (OS)
2.7	Onsite plans, Improve the drainage on Locust to accommodate the parallel parking.	The off-site plans include an additional catch basin in proposed parallel parking on Locust Street to improve the drainage.	C-102 (OS)
2.8	Onsite plans, Can PCB06 go to the existing CB across chestnut	PCB06 is proposed to connect to DMH 1199 as originally designed. The invert elevation(s) for CB1165 are unknown as the structure is filled with standing water. A note has been added to the plans stating, "Prior to construction the contractor shall confirm w/ community development which existing drainage structure pcb-05 is to connect into".	C-102 (OS)
2.9	Onsite plans, Show where the existing water and sewer services are to be discontinued	The existing service locations have been added to the demolition plan. In addition, there is a note on the plans stating that, "all utilities shall be terminated at the main line per utility company and City of Dover Standards..." (See Demolition Note #7)	G-101
2.10	Onsite plans, Add new signs and post at the end of locust street (stop and do not enter)	The site plans have been revised to include proposed "Stop" and Do Not Enter" signs at the intersection of Locust and Washington Street.	C-101 (OS)
2.11	Onsite plans, An electrical design will need to be done for the new street lights.	The site plans have been revised to include a conduit and meter for the proposed street lighting.	C-102 (OS)
2.12	Onsite plans, Provide a signalization upgrade plan.	The applicant has coordinated with the City for record plans of the signal and preliminary signal design is in progress. The applicant intends to meet with the City engineer to review the preliminary design prior to the completion of the final signal plans.	N/A
2.13	Onsite plans, Has any thought been given to installing some sort of rain garden or other stormwater treatment from a catch basin in the park area?	The on-site stormwater is proposed to be treated via an underground infiltration/detention system below the parking area. Alternatives such as rain garden were reviewed but the site topography and layout prohibited such BMP's.	C-103
Fire / Inspection Comments			
1	Provide a fire hydrant on the project side of Washington Street (or equivalent location) acceptable to the Fire Department	The off-site plans have been revised to include a proposed fire hydrant on Washington street.	C-102 (OS)
2	Provide elevation plans	Architectural plans have been revised to include elevation plans	A-201 & A-202
3	Clarify parking lot access design (one or two roadways, raised or cobble stone island) and gate layout (i.e. one or two gates)	The site plans have been revised to callout a mountable concrete cobble stamped island at the proposed driveway entrance and a detail has been included.	C-102 & C-502
4	Provide turning template into the parking lot	fire truck turning templates have been provided showing the firetruck accessing the proposed parking lot in either direction from of Chestnut Street.	Fire Truck Turning Exhibit 1 of 1
5	Provide means to maintain accessible route between gas meters and parking spaces	The site plans have been revised to include bollards to protect the gas meters, as well as help maintain a 4' access from the parking spaces.	C-102
6	Accessible parking spaces to be located nearest the entrance	The site plans have been revised such that the proposed ADA accessible parking spaces are located nearest the residential lobby entrance.	C-102
7	Accessible aisle on plan C-502 shall be revised for compliance with van space sizing	The detail for the accessible aisle has been revised to indicate van accessible aisles are to be 8' in width.	C-502
8	Add a note to the plan indicating Building official will assign street, apartment and suite numbers	The site plans have been revised to include a note stating, "The City of Dover building official shall assign street, apartment and suite numbers for the residential units." See General Note #19	G-101

9	Site plan shall be designed and reviewed for accessibility. Also include code references with IBC 2009 edition and NH RSA 155-A;5	The site plans have been revised to include a note stating, "All work shall meet the accessibility standards per RSA 155-a and the International Building Code (IBC) 2009 edition." See Site Note #16.	G-101
10	A preconstruction meeting shall occur prior to the issuance of a demolition permit	The site plans have been revised to include a note stating, "A pre-construction meeting with the City shall be occur prior to the issuance of a demolition permit." See General Note #20	G-101
11	Hydrant locations and access to site will be reviewed further once turning template and access road plan are complete to determine minimum width of gate openings	The off-site plans have been revised to include a proposed fire hydrant on Washington street.	C-102 (OS) & Fire Truck Turning Exhibit 1 of 2 & 2 of 2
Planning Board Comments			
1	Commercial on first floor and parking underground	The current design has provided for great commercial activity on Washington Street which is the busier thoroughfare. In addition, to have a viable residential project we need parking on site and going underground is cost prohibitive. Regarding underground parking, the project Geotechnical Engineer has provided a memorandum summarizing the subsurface soil conditions and recommendations that the desing team shall consider a building with no basement or underground parking.	N/A
2	Concerned about overhead lines	Per coordination with Eversource all overhead electric lines on site are to be relocated to underground duct banks as part of the propsoed work.	C-102 (OS)
3	In future, if left turn is limited, street pavement marking should be used	Per discussion with TRC, left turns will not be prohibited off Locust Street.	N/A
4	Coordinate with Woodman Museum for any historical aspects	Representatives of the Woodman museum have had a walk through the building and they have identified a list of items they would be interested in. We will address getting these items to the museum prior to Demo.	N/A
5	Please reference City Hall and not Police Department	The reference to the Dover Police Department has been revised to be Dover City Hall	All Sheets
6	Mechanicals on roof need to be screened	Architectural plans have been revised to included a roof plan for reference. The mechanicals on the roof are all inset about 30' from the building edge. The highest they protrude from the roof is approx. 4-5'. Therefore, the applicant does not feel screening will be necessary as nothing can be seen from street level.	A-106

NHSP(NAD27)

Dover NH – Ladder Truck



Dover NH – Ladder Truck	
Overall Length	49.580ft
Overall Width	8.330ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	44.00°

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

PROPOSED RESIDENTIAL DEVELOPMENT
DOVER, NEW HAMPSHIRE

FIRE TRUCK TURNING EXHIBIT
1 OF 2

DATE:	11/21/2017
FILE:	C0960-003_DSGN.DWG
DRAWN BY:	CML
CHECKED:	PMC
APPROVED:	BLM

Tighe&Bond
Engineers | Environmental Specialists

Last Save Date: November 21, 2017 9:35 AM By: CML
Plot Date: Tuesday, November 21, 2017 Plotted By: Craig M. Langton
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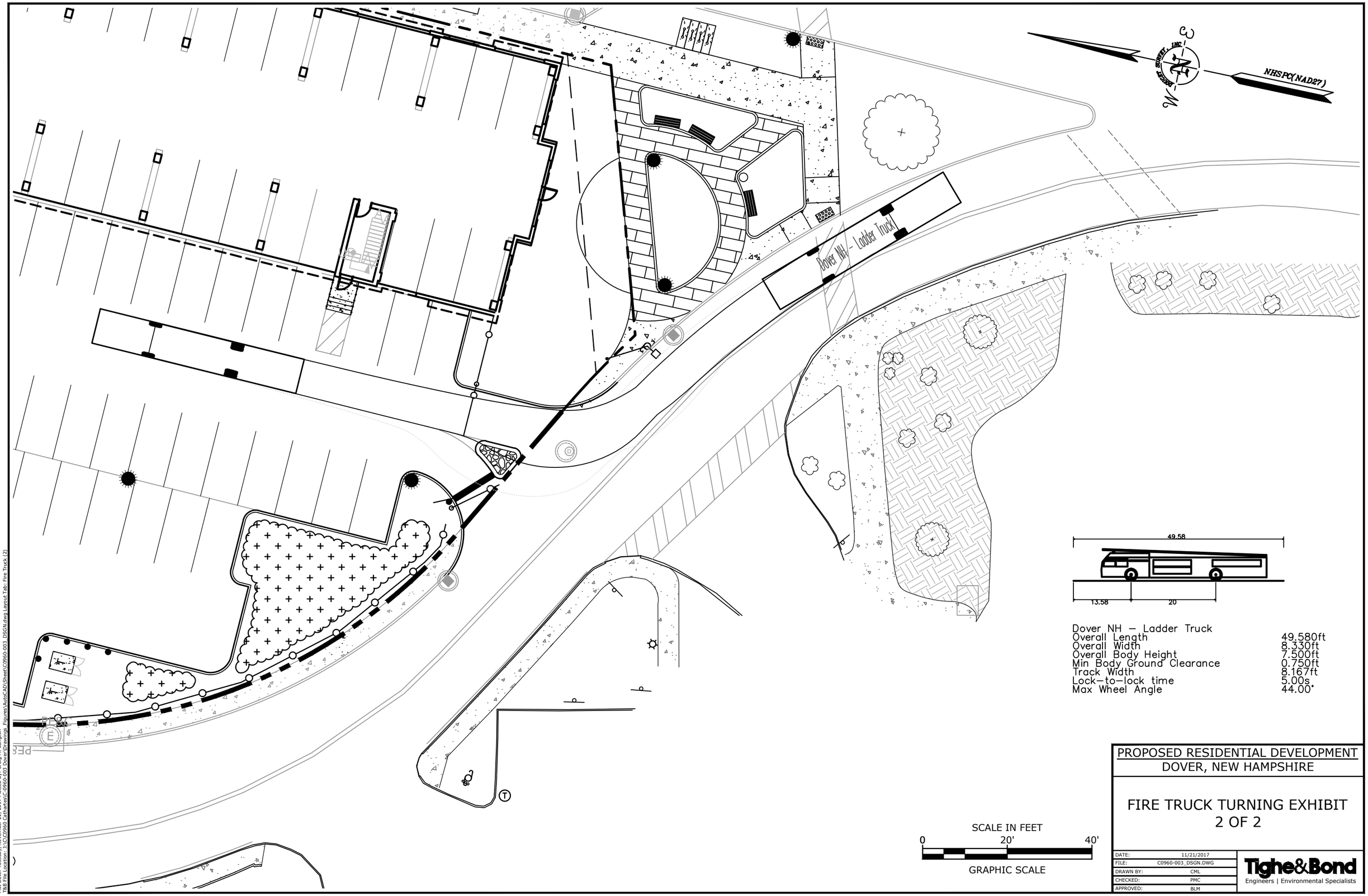

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SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

PROPOSED RESIDENTIAL DEVELOPMENT
DOVER, NEW HAMPSHIRE

FIRE TRUCK TURNING EXHIBIT
2 OF 2

DATE:	11/21/2017
FILE:	C0960-003_DSGN.DWG
DRAWN BY:	CML
CHECKED:	PMC
APPROVED:	BLM

Tighe&Bond
Engineers | Environmental Specialists

Last Save Date: November 21, 2017 7:35 AM By: CML
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T&B File Location : J:\CC\0960 Cathartes\C-0960-003 Dover\Drawings_Figures\AutoCAD\Sheet\C0960-003_DSGN.dwg Layout Tab: Fire Truck (2)

Stephen G. Pernaw & Company, Inc.
P.O. Box 1721 • Concord, NH 03302
tel: (603) 731-8500 • fax: (866) 929-6094 • sgp@ pernaw.com
Transportation: Engineering • Planning • Design

M E M O R A N D U M

Ref: 1787A

To: Rob Simmons
Cathartes

From: Stephen G. Pernaw, P.E., PTOE

Subject: Proposed Residential Development - 104 Washington Street
Dover, New Hampshire

Date: June 20, 2017 (Revised October 31, 2017)

BACKGROUND

On June 20, 2017 Pernaw & Company, Inc. published a traffic memorandum that compared the differences between the previously approved "Kostis" site plan and a modified plan proposed by Cathartes dated 6/12/17 for the development project located at 104 Washington Street in Dover, New Hampshire. The initial traffic memorandum dated 5/12/16 contained existing traffic count data, No-Build traffic projections for the study area, a trip generation analysis for the proposed development, Build traffic projections, and a summary of the intersection capacity and Level of Service analyses.

At this juncture, Cathartes, a private real estate firm, has modified the development proposal recently. The purpose of this memorandum is to reevaluate the trip generating characteristics of the proposed development mix, and to comment on the site plan modifications.

CURRENT DEVELOPMENT PROPOSAL

According to the draft plan entitled *"Proposed Residential Development"* prepared by Tighe & Bond, Inc., dated 9/13/17 (see Attachment 1), the proposed building will be occupied by a quality restaurant, retail space, and 130 residential apartments. The following table compares the previous and current development proposals.

	Kostis Development Proposal	**Current Development Proposal**	Change
Apartments (units) [1]	101	**130**	+29 units
Retail (sf) [2]	6,750	**3,956**	-2794 sf
Restaurant (sf) [3]	9,750	**3,299**	-6451 sf

The site plan also shows several significant modifications relative to parking, access and circulation:

- The previously proposed angle parking along the Washington Street frontage has been replaced with several parallel parking stalls.
- The proposed site driveway on Chestnut Street has been relocated further to the south to improve sight distance and to maximize its separation from the traffic signal on Washington Street.
- The previously proposed widening of the Chestnut Street approach to Washington Street is being maintained, and this approach will be delineated with an exclusive left-turn lane and a shared right-through lane.
- Locust Street will remain one-way in the northbound direction with a 14-foot travel lane with parallel parking on the west side of the street.

These modifications are certainly acceptable from a traffic operations, capacity, and safety standpoint.

TRAFFIC GENERATION ESTIMATES

The previous Kostis development proposal was expected to generate 149 (AM) and 138 (PM) vehicle-trips during the weekday peak hour periods. Table 1 from the previous traffic memorandum is included on the following page. Table 1A on the following page summarizes the results of the trip generation analysis for the current development proposal and it shows that the current proposal will generate fewer trips during the peak hour periods, when compared to the previous development proposal. The trip generation calculations are attached.

PUBLIC TRANSPORTATION

The Coast Bus system provides multiple bus routes throughout the City. Route 33 passes through the study area with nine stops a day.

CONCLUSIONS

Recognizing that the Build traffic volumes with the current development proposal are lower than the previously published traffic volumes, there is no need to update the capacity and Level of Service analyses for this project. Suffice it to say that the results in our previous traffic memorandum are conservative on the "high" side. We concur with the site plan modifications relative to parking, access and circulation.

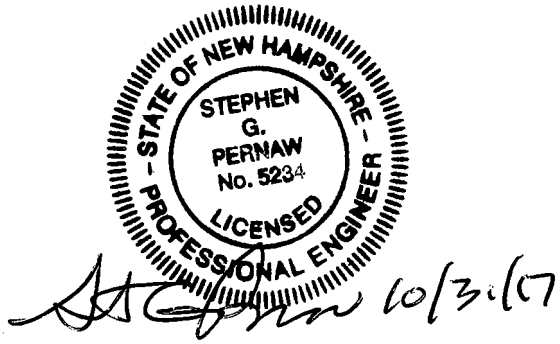


Table 1 — Trip Generation Summary - KOSTIS Enterprises[1]

	Phase 1 & 2			Phase 3 & 4 & 5			
	Total Trips	Less Internal Trips	Net External Trips	Total Trips	Less Internal Trips	Net External Trips	Total External Trips
AM Peak Hour							
Entering	48	-3	45	25	-4	21	**66**
Exiting	50	-3	47	40	-4	36	**83**
Total	98	-6	92	65	-8	57	**149**
PM Peak Hour							
Entering	67	-18	49	44	-5	39	**88**
Exiting	47	-18	29	26	-5	21	**50**
Total	114	-36	78	70	-10	60	**138**

[1] Source: Pernaw & Company, Inc. memorandum dated 5/12/16

Table 1A — Trip Generation Summary - CATHARTES [2]

	Current Development Proposal			Previous Development Proposal	
	Total Trips	Less Internal Trips	Net External Trips	Net External Trips	Difference
AM Peak Hour					
Entering	17	0	**17**	66	**-49**
Exiting	56	0	**56**	83	**-27**
Total	73	0	**73**	149	**-76**
PM Peak Hour					
Entering	77	-11	**66**	88	**-22**
Exiting	44	-11	**33**	50	**-17**
Total	121	-22	**99**	138	**-39**

[2] Source: See Attachment

Attachment 1

SITE DATA:
LOCATION: TAX MAP 2, LOTS 2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9
WASHINGTON STREET
DOVER, NEW HAMPSHIRE

ZONING DISTRICT: CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G)
ALLOWED USE: RETAIL/ PERSONAL SERVICES, EATING & DRINKING ESTABLISHMENTS, AND RESIDENTIAL (RESIDENTIAL ONLY ON UPPER FLOORS)

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
LOT AREA:	N/A	±1.22 ACRES OR ±52,935 SF
MINIMUM SETBACKS:		
• FRONT - BUILD TO LINE:	±0 FT(1)	±5 FT
• SIDE:	0-24 FT	0 FT
• REAR:	10 FT	11.5 FT
MAXIMUM BUILDING HEIGHT:	5 STORIES	5 STORIES
MINIMUM LOT COVERAGE:	75 %	±60 %
MINIMUM FRONTAGE BUILDOUT:	70 %	±65 %

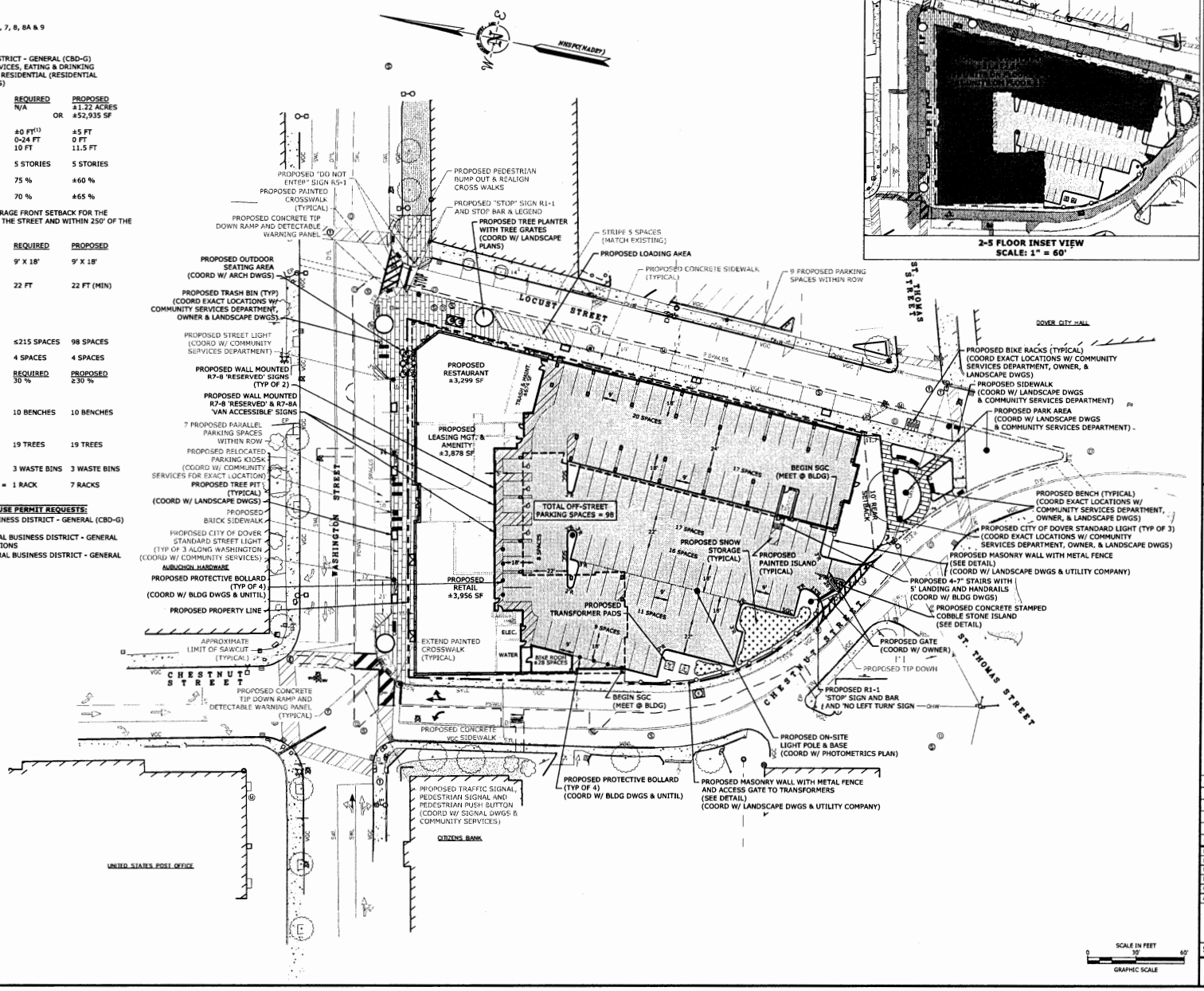
(1) - ZERO (0) FEET IS THE APPROXIMATE AVERAGE FRONT SETBACK FOR THE ADJACENT BUILDINGS (ON THE SAME SIDE OF THE STREET AND WITHIN 250' OF THE CENTER OF THE PROPOSED FRONT LOT LINE).

OFF STREET PARKING REQUIREMENTS:	REQUIRED	PROPOSED
PARKING STALL LAYOUT:		
• STANDARD 90°	9' X 18'	9' X 18'
DRIVE AISLE WIDTH:		
• 90° (2-WAY TRAFFIC)	22 FT	22 FT (MIN)
MAXIMUM PARKING SPACES:		
RESIDENTIAL (CBD-G):		
1.25 SPACES / UNIT		
+0.4 VISITOR SPACES / UNIT		
= 130 UNITS / 1,25 SPACES / UNIT		
+0.4 SPACES /UNIT x 130 UNITS =	≤215 SPACES	98 SPACES
ADA PARKING SPACES:	4 SPACES	4 SPACES

GROUND FLOOR REQUIREMENTS:	REQUIRED	PROPOSED
MINIMUM FACADE TO BE WINDOWS:	30 %	≥30 %
STREETSCAPE REQUIREMENTS:		
1 BENCH / 75' OF FRONTAGE		
= ±750' / 1 BENCH / 75' FRONTAGE =	10 BENCHES	10 BENCHES
STREET TREES @ AVERAGE SPACES OF 25'-30' OC PER BLOCK FACE		
= ±570' / 30' =	19 TREES	19 TREES
1 WASTE BIN / CORNER BLOCK		
= 3 CORNERS =	3 WASTE BINS	3 WASTE BINS
1 BICYCLE RACK / RESIDENTIAL PROJECT =	1 RACK	7 RACKS

SUMMARY OF CONDITIONAL USE PERMIT REQUESTS:

1. MINIMUM LOT COVERAGE — CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G) TABLE OF DIMENSIONAL REGULATIONS
2. MINIMUM FRONTAGE BUILD-OUT — CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G) TABLE OF DIMENSIONAL REGULATIONS
3. RESIDENTIAL ON GROUND FLOOR — CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G) GROUND FLOOR STANDARDS



Tighe&Bond
Engineers | Environmental Specialists

DRAFT

Proposed Residential Development

Owner:
104 Wash Street LLC, c/o Cathartes

Co-Owner:
City of Dover

Dover Plan Number:
P17-66

Dover, New Hampshire

MARK	DATE	DESCRIPTION
B	11/21/2017	Planning Board Submission
A	9/13/2017	Submitted for Technical Review Committee

PROJECT NO: C0960-003
DATE: 9/13/2017
FILE: C0960-003_DSGN.DWG
DRAWN BY: CML
CHECKED: PNC
APPROVED: BLM

SITE PLAN

SCALE: AS SHOWN

C-102

Last Save Date: October 27, 2017 4:25 PM By: CML
Plot Date: Friday, October 27, 2017 Plotted By: Craig M. Langdon
File Name: J:\C0960 Cathartes\C0960-003 Dover\Drawings, Figures\AutoCAD\Sheet\C0960-003_DSGN.dwg Layout Tab: Site

Trip Generation Summary

Alternative: Alternative 1 (CURRENT DEVELOPMENT PROPOSAL)
Phase: CATHARTES-DOVER
Project: 1787A 103117

Open Date: 10/31/2017
Analysis Date: 10/31/2017

ITE	Land Use		Weekday Average Daily Trips *	Enter	Exit	Total	Weekday AM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total	Weekday PM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total
220	APT 1			433	432	865		13	53	66		53	28	81
	130	Dwelling Units												
820	CENTERSHOPPING 1			85	84	169		2	2	4		7	8	15
	3.96	Gross Leasable Area 1000 SF												
931	RESTAURANTQ 1			149	148	297		2	1	3		17	8	25
	3.3	Gross Floor Area 1000 SF												
Unadjusted Volume				667	664	1331		17	56	73		77	44	121
Internal Capture Trips				0	0	0		0	0	0		11	11	22
Pass-By Trips				0	0	0		0	0	0		5	5	10
Volume Added to Adjacent Streets				667	664	1331		17	56	73		61	28	89

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 18 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012

TRIP GENERATION 2014, TRAFFICWARE, LLC

Attachment 2

Trip Generation Summary

Alternative: Kostis Enterprises, LLC
Phase: Phase 1-2
Project: 1608A

Open Date: 4/28/2016
Analysis Date: 4/28/2016

ITE	Land Use		Weekday Average Daily Trips *	Enter	Exit	Total	Weekday AM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total	Weekday PM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total
220	APT 1			123	123	246		4	15	19		15	8	23
	37	Dwelling Units												
820	CENTERSHOPPING 1			144	144	288		4	2	6		12	13	25
	6.75	Gross Leasable Area 1000 SF												
932	RESTAURANTHT 1			429	429	858		40	33	73		40	26	66
	6.75	Gross Floor Area 1000 SF												
Unadjusted Volume				696	696	1392		48	50	98		67	47	114
Internal Capture Trips				0	0	0		3	3	6		18	18	36
Pass-By Trips				0	0	0		0	0	0		13	13	26
Volume Added to Adjacent Streets				696	696	1392		45	47	92		36	16	52

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 6 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 32 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012

Trip Generation Summary

Alternative: Kostis Enterprises, LLC
Phase: Phase 3-5
Project: 1608A

Open Date: 4/28/2016
Analysis Date: 4/28/2016

ITE	Land Use		Weekday Average Daily Trips *	Enter	Exit	Total	Weekday AM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total	Weekday PM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total
220	APT 2			213	213	426		7	26	33		26	14	40
	64	Dwelling Units												
932	RESTAURANTHT 2			191	190	381		18	14	32		18	12	30
	3	Gross Floor Area 1000 SF												
Unadjusted Volume				404	403	807		25	40	65		44	26	70
Internal Capture Trips				0	0	0		4	4	8		5	5	10
Pass-By Trips				0	0	0		0	0	0		5	5	10
Volume Added to Adjacent Streets				404	403	807		21	36	57		34	16	50

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 12 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 14 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012
TRIP GENERATION 2014, TRAFFICWARE, LLC

Attachment 4

October 10, 2017

CATHARTES
11 Beacon Street, Suite 1120
Boston, MA 02108

Attention: Mr. Rob Simmons

RE: GEOTECHNICAL EVALUATION
BUILDING DEVELOPMENT AT
104 WASHINGTON STREET
Dover, New Hampshire

Dear Mr. Simmons:

As requested and according with our discussions, we review the project information which includes the existing subsurface information, laboratory testing and conceptual plans for the proposed development located at 104 Washington Street in Dover, New Hampshire. Our evaluation was prepared to conform to the needs of the project and in accordance with the applicable provisions of the New Hampshire Building Code (NH-Code) which comprises with the 2009 International Building Code (IBC).

Reference is made to the following documents:

- Project Boring and Test Pit Logs prepared by John Turner Consulting, Inc. (JTC).
- Project Conceptual Plans prepared by Embarc Studio, Inc., Drawings 01 and 08, both dated October 18, 2017.

Based on the review of the available borings and test pits, the generalized subsurface profile consist of approximately 5 to 6 feet thick layer of Fill, underlain by Marine Clays to a depth ranging from 30 to about 40-feet below existing surface grade (BSG). The clay deposits are underlain by a dense Glacial Till. Test pits indicate that the fill is composed of granular material inter-mixed with construction debris, some cobbles and boulders.

Although the design development is ongoing and other conceptual plans are been evaluated, we understand that a 5-story buildings is being proposed to occupy the subjected site and steel framing with cast-in-place slab on deck are under consideration. Foundation loads are relatively moderate regardless of the selected framing system and/or spacing of the column loads.

No environmental assessment or chemical testing was included as part of this review. Similarly, no evaluation of other construction issues such as but not limited to drainage and infiltration system, proposed and existing utilities. Therefore, we have no basis to evaluating the cost of off-site disposal. If the fill contains contaminants the disposal costs will be very high.

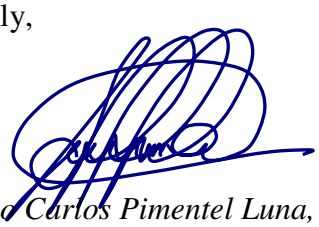
Fill, organic matter and clays are NOT suitable for direct support of the foundation loads. The Marine clays preclude the use of shallow foundations unless some type of soil improvement is used to properly control the level of settlement. Soil improvement can be successfully accomplished by the use of rammed aggregate piers or rigid inclusions. Deep foundation elements are other option to support the proposed structure.

Preparing this analysis, several deep foundation systems were evaluated with regards to the suitability of the structural load support, constructability at this site and cost. At this moment, soil improvement is considered both technically feasible and cost competitive. The soil improvement will avoid cost with a structural slab and the footings can be designed as conventional spread footings. However some extensive site preparation may be required.

Cost considerations and additional analysis, including environmental assessment, shall be considered on the design preparation of the proposed development. We do not recommend any excavations that remove the top stiff clay located about 6 feet bellow surface grade which will limit the option to a deep foundation element, pile caps, grade beams and structural concrete slab. Therefore the design team shall consider the buildings with no basement or underground spaces.

It has been our pleasure serving you and we trust that the foregoing and attached are sufficient for your immediate needs. Should you have any questions, or need further assistance, please do not hesitate to contact us

Sincerely,



Severino Carlos Pimentel Luna, PE
Geotechnical Engineer
John Turner Consulting, Inc. (JTC)
19 Dover Street
Dover, NH 03820
(603) 749-1841

SL/cdl

Landscape Operation & Maintenance Plan For Washington Street Development

Weekly Tasks

1. Mow and edge lawns if needed. Lawns to be cut to 3.5" height.
2. Prune back any shrubs overhanging curbs or sidewalks.
3. Prune back any groundcover overhanging curbs or sidewalks.
4. Remove litter and leaves from plants, planters, and parking lots.
5. Remove any broken or fallen branches from trees. Remove sucker growth from tree trunks.
6. Remove any weeds larger than 2 inches (5 cm) high or wide from planters. Weeds 2 inches (5 cm) and larger must be removed, not just killed.
7. Replace bark mulch which has been knocked or washed out of planters. Smooth mulch layer if it has been disturbed.
8. Replace decorative rock which has been knocked or washed out of drip strips. Smooth decorative rock surface if it has been disturbed.
9. Check plants for signs of stress, pests or disease. Request authorization to replace other dead or missing plants. Note: Maintenance contractor must request authorization to make replacements within one week of the damage becoming evident.
10. Sweep or blow clean all walkways, curbs, and gutters.
11. Treat for any signs of disease or pest infestation.
12. Complete any items required on the Monthly Checklist.
13. Hand water any plants that are dry and stressed.
14. Check the irrigation system (if there is a system). Make emergency repairs as needed or request authorization to make major repairs. Note: Maintenance contractor must request authorization for repairs within one week of the damage becoming evident.
15. Adjust the irrigation controllers for current water needs of plants.
16. **Gently prune shrubs at appropriate time of year based on species, for shape and form. DO NOT shear.**

Yearly Tasks

Early Spring

1. Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly to encourage strong growth.
2. Apply granular fertilizer to shrubs beds and lawns. Be sure to make application prior to a moderate rainfall in drip-irrigated planters so the rain will wash the fertilizer in.
3. Submit receipts to owner's authorized representative as proof of fertilizer purchase.
4. Trim any perennial foliage left in the fall for winter interest to within six inches of the ground.
5. Add new mulch to planters where the mulch depth has been reduced to less than 2 inches (5 cm) thick. Mulch depth shall not exceed 2". Additional mulch not required where shrubs or groundcover completely hide the soil surface from view.

6. Where there is irrigation and after threat of frost is gone, flush out irrigation systems as needed and check for proper operation of each valve zone.
7. Clean or replace plugged sprinkler nozzles. Replace plugged drip emitters.
8. Replace irrigation controller program back-up batteries.

June:

No additional items

July:

No additional items

August:

No additional items

September:

1. Inventory all plant materials. Inventory shall include an exact count of all shrubs and trees, itemized by planter. Replace any dead or missing plants.

October:

1. Prepare irrigation system for winter. Make sure backflow preventer is well insulated or drained prior to first freeze. Blow out pipes using compressed air in areas where freezing could result in breakage.
2. Mow field areas.

November:

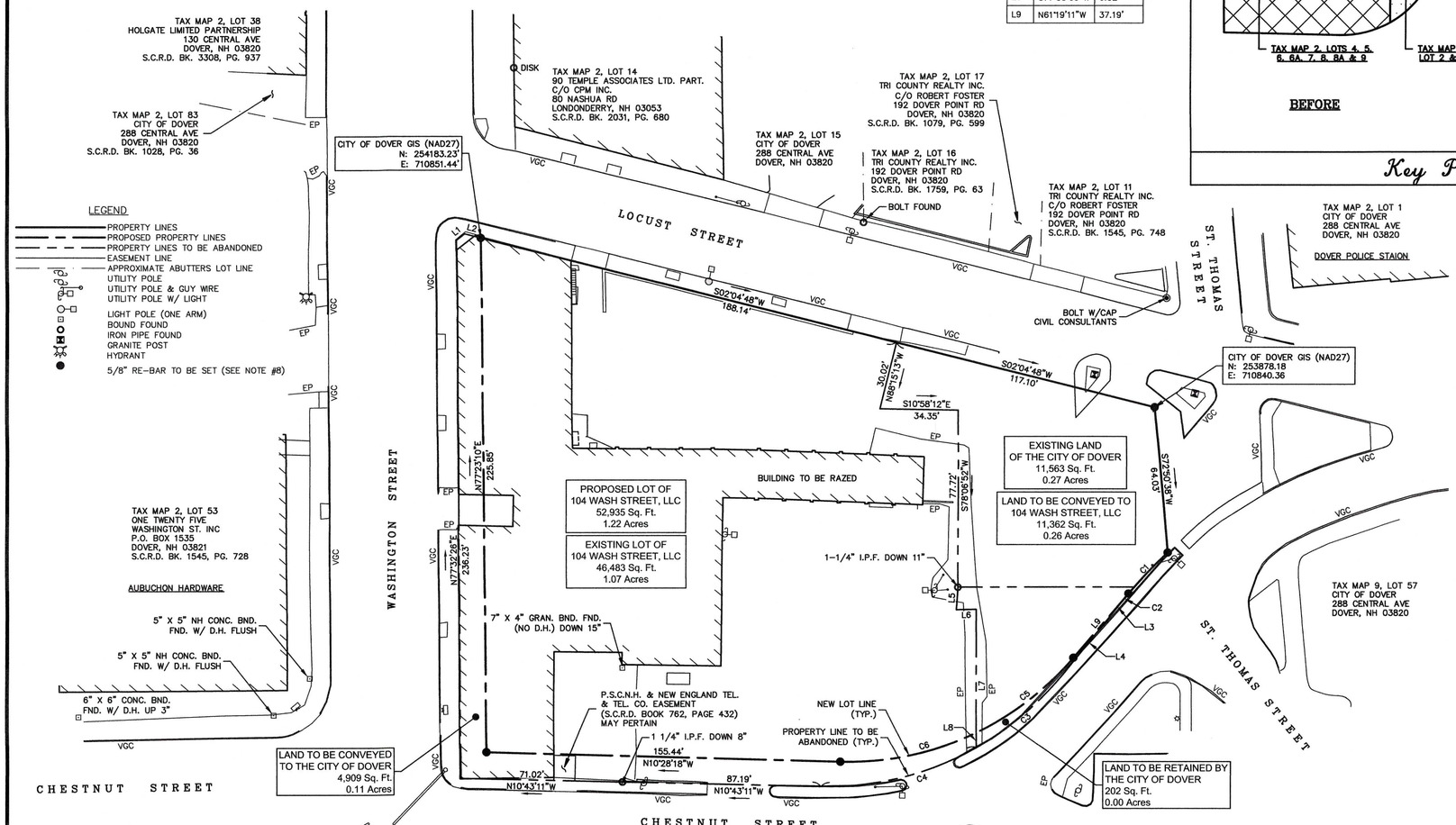
1. "WILT-PRUF" broadleaf evergreens when temperature permits.

December:

1. Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly to encourage strong growth.

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	25.03'	217.00'	6°36'36"	N58°11'46"W	25.02'
C2	5.57'	217.00'	1°28'12"	N62°14'10"W	5.57'
C3	50.08'	133.00'	21°34'27"	N52°11'03"W	49.78'
C4	71.21'	133.00'	30°40'38"	N26°03'30"W	70.36'
C5	54.27'	130.00'	23°55'13"	N49°38'07"W	53.88'
C6	61.72'	130.00'	27°12'12"	N24°04'24"W	61.14'

PARCEL LINE TABLE		
LINE	BEARING	DISTANCE
L1	S50°27'04"E	4.56'
L2	S2°04'48"W	7.36'
L3	N62°58'16"W	4.12'
L4	N62°58'16"W	36.07'
L5	S82°28'20"W	9.93'
L6	S12°50'01"E	8.75'
L7	S77°55'09"W	54.15'
L8	S77°55'09"W	6.52'
L9	N61°19'11"W	37.19'



LEGEND

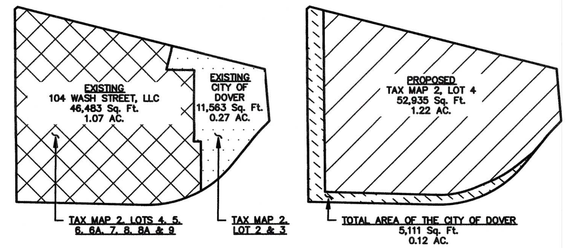
- PROPERTY LINES
- PROPOSED PROPERTY LINES
- PROPERTY LINES TO BE ABANDONED
- EASEMENT LINE
- APPROXIMATE ABUTTERS LOT LINE
- UTILITY POLE
- UTILITY POLE & GUY WIRE
- UTILITY POLE W/ LIGHT
- LIGHT POLE (ONE ARM)
- BOUND FOUND
- IRON PIPE FOUND
- GRANITE POST
- HYDRANT
- 5/8" RE-BAR TO BE SET (SEE NOTE #8)

GRAPHIC SCALE

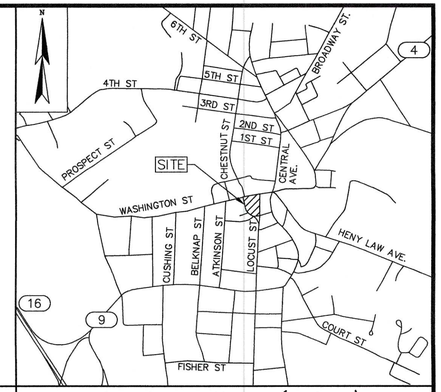
30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.



Key Plan (n.t.s.)



Location Map (n.t.s.)

NOTES:

1. REFERENCE: TAX MAP 2, LOTS 2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9
2. TOTAL PARCEL AREAS (SEE KEY PLAN):

   EXISTING:

   104 WASH STREET, LLC
   (TAX MAP 2, LOTS 4, 5, 6, 6A, 7, 8, 8A & 9) — 46,483 Sq. Ft. OR 1.07 AC.

   CITY OF DOVER (TAX MAP 2, LOTS 2 & 3) — 11,563 Sq. Ft. OR 0.27 AC.

   PROPOSED:

   TAX MAP 2, LOT 4 — 52,935 Sq. Ft. OR 1.22 AC.

   TOTAL AREA TO BE CONVEYED 104 WASH STREET, LLC TO THE CITY OF DOVER — 4,909 Sq. Ft. OR 0.11 AC.

   TOTAL AREA TO BE CONVEYED FROM THE CITY OF DOVER TO 104 WASH STREET, LLC — 11,362 Sq. Ft. OR 0.26 AC.

   TOTAL AREA RETAINED BY THE CITY OF DOVER — 202 Sq. Ft. OR 0.00 AC.

3. OWNERS OF RECORD:

(TAX MAP 2, LOTS 4, 5, 6, 6A, 7, 8, 8A & 9)	(TAX MAP 2, LOTS 2 & 3)
104 WASH STREET, LLC P.O. BOX 1535 DOVER, NH 03821 S.C.R.D. BOOK 1656, PAGE 496 S.C.R.D. BOOK 4451, PAGE 291	CITY OF DOVER 288 CENTRAL AVE DOVER, NH 03820 S.C.R.D. BOOK 1177, PAGE 636 S.C.R.D. BOOK 1177, PAGE 666

4. ZONE: CBD (CENTRAL BUSINESS)
   DIMENSIONAL REQUIREMENTS:

MIN. LOT SIZE	N/A		
MIN. LOT COVERAGE	75%	MIN. SIDE SETBACK	0 ft.
MIN. FRONTAGE BUILD-OUT	70%	MAX. SIDE SETBACK	24 ft.
FRONT PRIMARY BUILD TO LINE	5± ft.	MIN. REAR SETBACK	10 ft.
FRONT SECONDARY BUILD TO LINE	5± ft.	MIN./MAX. BUILDING HEIGHT	2 STORY/5 STORY

5. FIELD SURVEY PERFORMED BY N.J.M. & L.P.S. DURING JUNE 2015 AND BY P.J.S. & J.P.E. DURING SEPTEMBER 2015 USING A TRIMBLE S6 TOTAL STATION WITH A TRIMBLE TSC3 DATA COLLECTOR AND A SOKKIA B21 AUTO LEVEL. SURVEY ALSO BY W.J.D DURING JUNE 2015 USING A LEICA C10 HDS SCANNER. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.
6. HORIZONTAL DATUM BASED ON NAD27 DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK.
7. THE INTENT OF THIS PLAN IS TO CONSOLIDATE THE EIGHT INDIVIDUAL PARCELS OWNED BY 104 WASH STREET, LLC WITH THE TWO CITY OF DOVER PARCELS. THE INTENT IS ALSO TO HAVE A LOT LINE REVISION BETWEEN THESE TWO ENTITIES.
8. PROPOSED MONUMENTS SHALL BE SET SUBSEQUENT TO BUILDING DEMOLITION. FINAL MONUMENTATION MAY BE DIFFERENT THAN THE PROPOSED MONUMENTATION SHOWN HEREON, DUE TO THE FACT THAT SITE CONDITIONS WILL DICTATE THE ACTUAL LOCATION AND TYPE OF MONUMENTS INSTALLED IN THE FIELD. PLEASE REFER TO EITHER THE "MONUMENTATION LOCATION PLAN" TO BE RECORDED OR CONTACT DOUCET SURVEY, INC. FOR CLARIFICATION OF MONUMENTS SET. (A RECORDED PLAN WILL BE PRODUCED AT THE DISCRETION OF DOUCET SURVEY, INC.).

PLAN REFERENCES:

"PLAN OF LAND OF 104 WASH STREET, LLC (TAX MAP 2, LOTS 4, 5, 6, 6A, 7, 8, 8A & 9) WASHINGTON, LOCUST & WALNUT STREETS DOVER, NEW HAMPSHIRE" DATED FEB. 10, 2016 BY DOUCET SURVEY, INC.

NO.	DATE	DESCRIPTION	BY
1	10/31/17	REV. PER TNC COMMENTS	MWF

NOTE:
ALL ELECTRIC, GAS, TEL. WATER, SEWER AND DRAIN SERVICES ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN ON THIS SITE USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.

STATE OF NEW HAMPSHIRE — LICENSED LAND SURVEYOR — No. 1018 — PATRICK J. SHARKEY — SIGNATURE

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

L.L.S. #1018

11/29/2017 DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

LOT CONSOLIDATION AND BOUNDARY LINE ADJUSTMENT PLAN

BETWEEN

104 WASH STREET, LLC

(TAX MAP 2, LOTS 4, 5, 6, 6A, 7, 8, 8A & 9)

&

THE CITY OF DOVER

(TAX MAP 2, LOTS 2 & 3)

WASHINGTON, LOCUST & WALNUT STREETS

DOVER, NEW HAMPSHIRE

DRAWN BY:	W.D.C.	DATE:	AUGUST 1, 2017
CHECKED BY:	P.J.S.	DRAWING NO.:	4016C
JOB NO.:	4016	SHEET	V-104 OF

DOUCET SURVEY INC
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

FILE NAME: Y:\PROJECTS\4873 C3D\DWG\4873B-CONSOLIDATION & BLA PLAN.dwg LAYOUT NAME: 4016C CONSOLIDATION PLAN PLOTTED: Wednesday, November 01, 2017 - 8:47am

SITE DATA:
LOCATION: TAX MAP 2, LOTS 2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9
WASHINGTON STREET
DOVER, NEW HAMPSHIRE

ZONING DISTRICT: CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G)
ALLOWED USE: RETAIL/ PERSONAL SERVICES, EATING & DRINKING ESTABLISHMENTS, AND RESIDENTIAL (RESIDENTIAL ONLY ON UPPER FLOORS)

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
LOT AREA:	N/A	±1.22 ACRES OR ±52,935 SF
MINIMUM SETBACKS:		
• FRONT - BUILD TO LINE:	±0 FT(1)	±5 FT
• SIDE:	0-24 FT	0 FT
• REAR:	10 FT	11.5 FT
MAXIMUM BUILDING HEIGHT:	5 STORIES	5 STORIES
MINIMUM LOT COVERAGE:	75 %	±60 %
MINIMUM FRONTAGE BUILDOUT:	70 %	±65 %

(1) - ZERO (0) FEET IS THE APPROXIMATE AVERAGE FRONT SETBACK FOR THE ADJACENT BUILDINGS (ON THE SAME SIDE OF THE STREET AND WITHIN 250' OF THE CENTER OF THE PROPOSED FRONT LOT LINE).

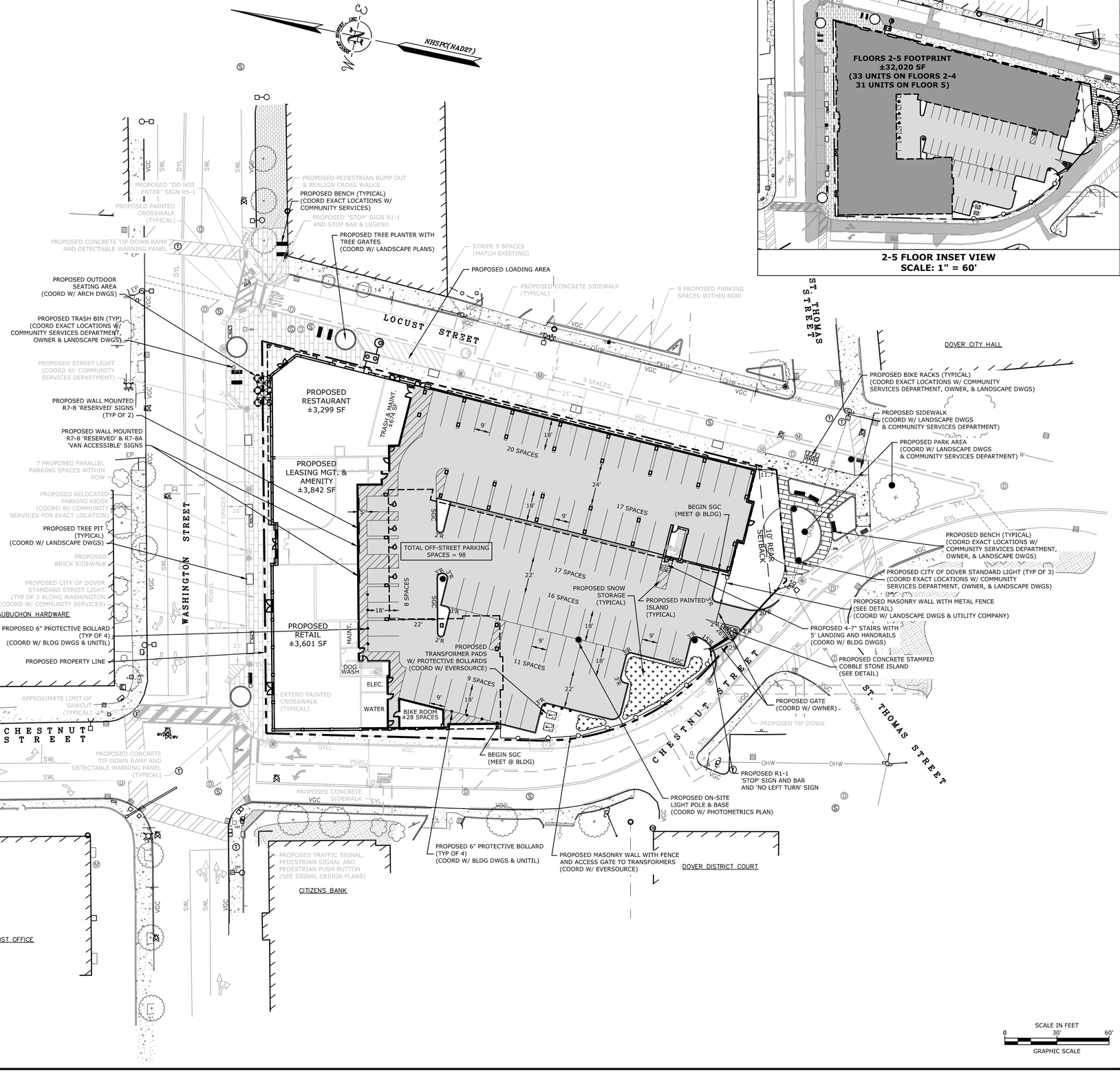
OFF STREET PARKING REQUIREMENTS:	REQUIRED	PROPOSED
PARKING STALL LAYOUT:		
• STANDARD 90°	9' X 18'	9' X 18'
DRIVE AISLE WIDTH:		
• 90° (2-WAY TRAFFIC)	22 FT	22 FT (MIN)
MAXIMUM PARKING SPACES:		
RESIDENTIAL (CBD-G):		
1.25 SPACES / UNIT		
+0.4 VISITOR SPACES / UNIT		
= 130 UNITS / 1.25 SPACES / UNIT		
+0.4 SPACES /UNIT x 130 UNITS =	≤215 SPACES	98 SPACES
ADA PARKING SPACES:	4 SPACES	4 SPACES

GROUND FLOOR REQUIREMENTS:	REQUIRED	PROPOSED
MINIMUM FACADE TO BE WINDOWS:	30 %	≥30 %

STREETSCAPE REQUIREMENTS:		
1 BENCH / 75' OF FRONTAGE		
= ±750' / 1 BENCH / 75' FRONTAGE =	10 BENCHES	10 BENCHES
STREET TREES @ AVERAGE SPACES OF 25'-30' OC PER BLOCK FACE		
= ±570' / 30' =	19 TREES	19 TREES
1 WASTE BIN / CORNER BLOCK		
= 3 CORNERS =	3 WASTE BINS	3 WASTE BINS
1 BICYCLE RACK / RESIDENTIAL PROJECT =	1 RACK	7 RACKS

SUMMARY OF CONDITIONAL USE PERMIT REQUESTS:

1. MINIMUM LOT COVERAGE — CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G) TABLE OF DIMENSIONAL REGULATIONS
2. MINIMUM FRONTAGE BUILD-OUT — CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G) TABLE OF DIMENSIONAL REGULATIONS
3. RESIDENTIAL ON GROUND FLOOR — CENTRAL BUSINESS DISTRICT - GENERAL (CBD-G) GROUND FLOOR STANDARDS



Tighe&Bond
Engineers | Environmental Specialists

PATRICK M. CUMMINS No. 12375 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE 11-21-17

PATRICK M. CUMMINS No. 12375 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE 11-21-17

Proposed Residential Development

Owner/Applicant:
104 Wash Street LLC, c/o Cathartes

Co-Owner:
City of Dover

Dover Plan Number:
P17-66

Dover, New Hampshire

MARK	DATE	DESCRIPTION
B	11/21/2017	Planning Board Submission
A	9/13/2017	Submitted for Technical Review Committee

PROJECT NO:	C0960-003
DATE:	9/13/2017
FILE:	C0960-003_DSGN.DWG
DRAWN BY:	CML
CHECKED:	PMC
APPROVED:	BLM

SITE PLAN

SCALE: AS SHOWN

C-102

Last Save Date: November 21, 2017 1:10 PM By: CML
Plot Date: Tuesday, November 21, 2017 1:10 PM By: Craig M. Langton
T&B File Location: I:\C\C0960 Cathartes\C-0960-003 Dover\Drawings_Figures\AutoCAD\Sheet\C0960-003_DSGN.dwg Layout Tab: Site

WASHINGTON STREET ELEVATION

CHESTNUT STREET ELEVATION

CHESTNUT STREET ELEVATION - SHORT

SCALE 1" = 10'

0 5' - 0" 10' - 0" 20' - 0"

EMBARC STUDIO
ARCHITECTURE + DESIGN

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BUILDING ELEVATIONS
DOVER
104 WASHINGTON STREET DOVER, NH 03820

A-201

NOVEMBER 17, 2017 | EMBARC

LOCUST STREET ELEVATION

LOCUST STREET ELEVATION - SHORT

SCALE 1" = 10'

0 5' - 0" 10' - 0" 20' - 0"

EMBARC STUDIO
ARCHITECTURE • DESIGN

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BUILDING ELEVATIONS
DOVER
104 WASHINGTON STREET DOVER, NH 03820

A-202

NOVEMBER 17, 2017 | EMBARC

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VIEW FROM CORNER OF WASHINGTON & LOCUST
DOVER
104 WASHINGTON STREET DOVER, NH 03820

A-901

NOVEMBER 17, 2017 | EMBARC

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ARCHITECTURE + DESIGN

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VIEW FROM PARK
DOVER
104 WASHINGTON STREET DOVER, NH 03820

A-902

NOVEMBER 17, 2017 | *EMBARC*

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P17-74

Application Type: Site Plan Review
Applicant(s): Salty Sea, LLC
Owner(s): Thomas Cauley, Sr.
Location: 52 Old Rochester Road (Tax Map 40, Lot 25)
Meeting Date: December 12, 2017

INTENT: Site plan to redevelop one dwelling and 1,992 sq. ft. of commercial space into three buildings with a total of 15 dwelling units and 6,100 sq. ft. of commercial space.

LOTS/UNITS PROPOSED: 15 residential, 2+ commercial

AGENDA ITEM: # 4-D

ACREAGE: 1.723 acres

ZONING DISTRICT: Thoroughfare Business (B-3)

EXISTING LAND USE: Commercial and one residential unit

PROPOSED LAND USE: Residential and Commercial

SURROUNDING LAND USE: Office/warehouse, Long Hill Dog Park, single- and two-family dwellings

ZBA ACTION:
- H85-68: Approved variance to permit an apartment to be added to the existing retail building
- Z17-11: Approved variance from sp. ex. criteria requiring residential to be on second floor or higher (permitting garages for building C)
- Z17-10: Approved Special Exception to permit multi-family dwellings

ATTACHMENTS:
Site Plan application and materials, 11/9/17 TRC minutes, and plan

APPLICATION IS COMPLETE: Yes

NOTICES SENT: Abutter notices were sent by certified mail to all abutters for this meeting

PERMITS REQUIRED:
-Conditional Use Permit
-EPA NOI

WAIVERS REQUESTED:
-Section 149-14(E)(2)(b)-lighting standards

Summary of Request and Background
The applicant is requesting to renovate an existing 1,672 sq. ft. residential unit to total 2,664 sq. ft. of commercial space in Building A, the removal of the existing garage to construct two buildings. Building B is comprised of 2,436 sq. ft. of commercial space on the first floor with 8 residential townhouses in the balance of the building and Building C will have 7 residential townhouses.

The applicant came before the Technical Review Committee on November 9 (minutes attached).

The applicant is requesting a CUP (P17-79) to allow for 8 additional parking spaces.

Consistency with Land Use Regulations
Chapter 149-4 of the Site Review Regulations of the City Code provides for site review by the Planning Board of new construction or redevelopment of various types.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application for review, open the public hearing, and vote as follows:

Waiver Request:
The Planning Department recommends that the Board approve the waiver from Section 149-14 (E)(2)(b) with the following condition:

Condition to Be Met Prior to Signing of Plans:
1. A note shall be added to the site plan that the waiver was granted for the reasons stated by the applicant and that the Board found the criteria of 149-19 have been met.

Site Plan:
The Planning Department recommends that the Board approve the site plan with the following conditions:

Conditions to Be Met Prior to Signing of Plans:
1. The Conditional Use Permit (P17-79) shall be approved.
2. The applicant shall provide the Planning Department with:
    a. a digital version of plan set
    b. Letters from utilities regarding ability to provide service to the development
3. The applicant must revise plan set to:

a. Add the owner's signatures
b. Include the Professional Engineer, Licensed Land Surveyor, and Licensed Landscape Architect stamp and signatures
c. Revise architectural sheet to indicate color and materials
d. Revise Sewer note S-3 which points to the underground gas piping on plan sheet SP-3
e. Add note that the Building Official shall assign mailing addresses
f. Add note that the street sign (indicating Private) shall be placed on site at the time the curb cut for new road is created.
g. Indicate location where waste toters will be collected on collection day
h. Add note about bike racks provided inside residential buildings and label commercial bike rack.
i. Indicate how the applicant plans to mitigate the issues brought up in the traffic study regarding sight distance concerns (e.g. signage, education of residents, etc.).

Conditions to Be Met Prior to Any Construction Activity:

4. Site Construction hours shall be limited to Monday-Friday 7 AM-6 PM, Saturday 9 AM-4 PM with no Sunday hours. Hours of construction must be documented on a site construction sign along with the contact information for the general contractor. Said signage must be located and approved by the City Engineer or Assistant City Manager.

Conditions to Be Met Prior to Issuance of a Building Permit:

5. The new dwelling units shall be assessed the current water and sewer investment fees in place at the time of application for service.
6. Applicant shall provide a financial contribution in lieu of providing the active and passive open space per 170-15.A to the satisfaction of the Assistant City Manager.
7. The applicant shall provide a gate to the dog park to the satisfaction of the Recreation Director.

Conditions to Be Met Prior to Occupancy:

8. Certificate of Occupancy be issued.
9. Any new dwelling units and commercial space shall be assessed the current impact fees in place at the time of building permit application.
10. The applicant shall provide a letter of credit or other form of security acceptable to the City for any unfinished work.
11. Implement traffic study recommendations to the satisfaction of the Assistant City Manager.

52 Old Rochester Road

Property Information

Property ID	40025-000000
Location	52 OLD ROCHESTER RD
Owner	CAULEY THOMAS J SR

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 6/13/2017
Properties updated 12/06/2017

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: August 02, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: Salty Sea, LLC Telephone # (603)834-0987

Address of Applicant: 356 Tolend Road, Dover, NH 03820

E-Mail Address: Jocartelli@yahoo.com

Name of Property Owner (*if different from applicant*): Thomas J. Cauley, Sr. Telephone #

Address of Property Owner: 52A Old Rochester Road, Dover, NH 03820

PROPERTY INFORMATION

Address of Property: 52 Old Rochester Road, Dover, NH 03820

Assessor's Map # 40 Lot(s) # 25

Zoning District(s) B-3 Overlay District(s) N/A

Size of Parcel: 75,032 sq. ft. 1.723 ac. Property Deed: Book 2134 Page: 379

Existing Use of Property: 1 Residential Townhouse and 3,144 Sq.Ft. of Commercial Space.

SITE PLAN INFORMATION

Describe Proposed Use: 15 Residential Townhouses and 6,100 Sq.Ft. of Commercial Space

Area of Parcel to be Developed: 75,032 sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed: 15 Units in 2 Buildings

Number of Parking Spaces: Existing 26 Proposed 40

Highway Access (check where applicable): X City Street ____ State Highway

Number of Employees Total: Varies In Maximum Shift: Varies

Disposition of Parcel:

Building Footprint 13,200 sq. ft.

Total Building Area 34,840 sq. ft.

Paved Area 14,860 (New) sq. ft.

Building Setbacks:

Front Yard 40 (Existing) ft.

Rear Yard 20 ft.

Side Yard: Right 12(Existing) ft. Left 60 ft.

City Water? X Yes ___ No How far is city water from the property? _____

City Sewer? X Yes ___ No How far is city sewer from the property? _____

BUILDING INFORMATION

Type of Building to be Built: Wood Frame

Height of Building: 3 Story Finished Floor Elevation: 206 +/-

Number of Seats (where applicable) N/A

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: _____

Justification for waiver request(s) (*attach additional sheets as needed*): _____

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Robert J. Stowell

Address 755 Central Avenue, Dover, NH 03820 Telephone #: (603)742-8107

Professional License #: 884 E-mail address: rjs@tritecheng.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Robert J. Stowell

Address 755 Central Avenue, Dover, NH 03820 Telephone #: (603)742-8107

Professional License #: 9903 E-mail address: rjs@tritecheng.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 11/20/17

Signature of Applicant (*if different from owner*): _____ Date: 11/20/17

Signature of Agent: _____, PRESIDENT Date: 11/20/17

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 11/20/17

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 11/20/17

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: 11/20/17

Signature of Applicant (*if different from owner*): _____ Date: 11/20/17

TRITECH
ENGINEERING CORPORATION

755 Central Avenue
Dover, New Hampshire 03820

Telephone 603.742.8107
Facsimile 603.742.3830

November 21, 2017

Ms. Donna Benton
Assistant City Planner
City of Dover, Planning Department
288 Central Avenue
Dover, New Hampshire 03820

Subject: *Site Review Application*
Salty Sea, LLC
52 Old Rochester Road
Tax Map 40, Lot 25
Job No. 17102

Dear Donna:

Our client, Salty Sea, LLC, is proposing a redevelopment of the property located at 52 Old Rochester Road, owned by Thomas Cauley, Sr. The project involves renovations to the existing structure, removal of the existing garage and construction of two (2) new buildings.

Building "A" is an existing structure that contains one (1) residential dwelling unit and 1,992 square feet of commercial space. As part of this redevelopment, the 1,672 square foot residential unit will be converted to additional commercial space leaving Building "A" with a total of 3,664 square feet of commercial space. The existing garage, which presently provides and installs automotive accessories, will be razed and removed from the site. The balance of the redevelopment involves new construction.

Building "B" is new construction that is comprised of 2,436 square feet of commercial space on the first floor and eight (8) residential townhouses in the balance of the building.

Building "C" is new construction that is comprised of seven (7) residential townhouses.

The project involves onsite extension of water, sewer and underground utilities, as well as 15,000 square feet of new pavement area, providing 37 exterior and 15 interior parking spaces.

On November 9, 2017 we met with the Technical Review Committee. Below please find our responses as to how our plans have been revised to address their comments.

Planning Department Comments:

Planning Comments:

1. Impact fees and water/sewer investment fees will be assessed
   - *The applicant is aware of these fees.*

2. Resubmit signature page from August 2017 revision of application form with the first signature line including the following text signed: "Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting."
   - *Enclose please find the application with signatures as requested.*

3. Submit letters from utilities regarding ability to provide service to the development
   - *Requests have been made to the appropriate utilities. We are awaiting confirmation.*

4. Where is fuel storage, if site is not served by natural gas?
   - *The connection to natural gas has been added to the Utility Plan (Sheet SP-3).*

5. Narrow space between buildings B and C and consider one-way traffic flow
   - *We feel this separation is necessary for the proper functionality of the parking area.*

6. Remove 11 parking spaces or submit CUP application; retaining the excess spaces will require two electric vehicle charging stations and porous pavement
   - *Three (3) parking spaces have been eliminated from the design. The design has been revised to include eight (8) porous pavement parking spaces. Enclosed please find our Conditional Use request for these additional eight (8) spaces.*

7. Landscape in front of building B if parking is removed
   - *That parking area was reduced by two (2) spaces but no landscaping was added.*

8. Provide active and passive open space per 170-15.A
   - *The applicant desires to provide a financial contribution in lieu of providing this requirement on site.*

9. Demonstrate compliance with interior landscaping requirement, 149-14.G(1)
   - *We have calculated the interior landscaping to be over 11 percent where 5 percent is required.*

10. Coordinate with City to add a gate to dog park
    - *The applicant is working with the Parks and Recreation Director to facilitate a gate.*

11. Schedule meeting with Planning, Engineering, and Police Department to evaluate sight distance on site
    - *We have reviewed the Police Department Memorandum regarding the sight distance for this project with our Traffic Engineer, Kim Hazarvartian.*

      We are working with Kim to address the Police Departments' concerns. Automatic Traffic Counters were dispatched on November 20th and November 21st which will allow us to answer the questions regarding the 85th percentile speeds and the corresponding AASHTO sight distance recommendations.

      We look forward to providing this information to the Police Department and addressing their concerns.

12. Please revise plan to:
    a) Add planning file number (P17-74) to all sheets
       This file number has been added to all sheets.

    b) Revise notes regarding variance and special exception to include file numbers (Z17-11 and Z17-10, respectively) and conditions of approval
       These notes have been revised as requested.

    c) Indicate snow storage areas and address snow removal
       Snow storage areas have been added to the Landscape Plan (Sheet La-1).

    d) Indicate trash/recycling toter location
       Trash toters/containers will be stored inside the individual units.

    e) Provide bike rack
       Bike storage will be inside individual residential units. A rack has been added for the commercial units. Two (2) bike capacity (22 Space X 5%).

f) Correct minor errors in SP-1 Note 14: "10.9" typo and replace "required" with "allowed"
This note has been corrected.

g) Add street name
The desired street name "Perro Drive" has been added to the plans.

h) Add one-way sign on SP-2
Two (2) do not enter signs have been added to the plans.

i) Add note regarding state and federal permits if applicable
Note 15 has been added to Sheet SP-1.

j) LLS, PE & LLA to sign and stamp revised plans
These stamps will be added to the final plans.

k) Revise lighting plan to include table showing required and provided minimum illumination and uniformity ratio
This information has been added to the Lighting Plan (Sheet Li-1). We are requesting a waiver to allow for less lighting than required (see attached waiver).

Police Department Comments:

1. See attached memorandum pertaining to TAM
   - *We have reviewed the Police Department Memorandum regarding the sight distance for this project with our Traffic Engineer, Kim Hazarvartian.*

     We are working with Kim to address the Police Departments' concerns. Automatic Traffic Counters were dispatched on November 20th and November 21st which will allow us to answer the questions regarding the 85th percentile speeds and the corresponding AASHTO sight distance recommendations.

     We look forward to providing this information to the Police Department and addressing their concerns.

Fire/Inspections Comments:

1. Indicate locations of Fire Department connections
   - *These locations have been added to the Utility Plan (Sheet SP-3).*
2. Clarify width of sidewalk in front of building B and how an accessible aisle of 36" minimum will be maintained (curb stops, bollards, or additional sidewalk width)
   - *The sidewalk width has been increased to 7 feet to allow for large vehicle encroachment while providing 36" clear for ADA Access.*
3. Indicate building entrances on plan
   - *Entrances have been added to the plans.*
4. Development requires private road name
   - *The desired street name "Perro Drive" has been added to the plans.*
5. Add physical address for Map D Lot 9
   - *This has been added to Sheets EX-1 and Sheet SP-1.*
6. Provide active and passive open space
   - *The applicant desires to provide a financial contribution in lieu of providing this requirement on site.*
7. Indicate locations of fuel storage tanks if site is not to be served by natural gas
   - *The connection to natural gas has been added to the Utility Plan (Sheet SP-3).*

8. Plans shall indicate design compliance with applicable accessible regulations (i.e. State adopted Building Code w/ amendments, ANSI 117, etc.) for the completed site and be stamped by the qualified design professional. Plans shall also indicate compliance with RSA-155-A:5.
   - *Note 22 on Sheet SP-2 has been revised to meet this requirement.*

Engineering Comments:

1. Can the overall area of disturbance be reduced? This would reduce the impervious area.
   - *We feel this separation is necessary for the proper functionality of the parking area.*
2. Try to keep existing trees around the perimeter of the site.
   - *The Landscape Plan has been revised to add eight (8) additional trees.*
3. Add additional landscaping trees to make up for loss of existing trees.
   - *The Landscape Plan has been revised to add eight (8) additional trees.*
4. Relocate hydrant and line gate to corner beyond mail kiosk and transformer
   - *The hydrant and line gate have been relocated as requested.*
5. Show existing water and sewer service sizes
   - *The sizes have been added to the Utility Plan (Sheet SP-3).*
6. Add note that existing sign at entrance is to be removed
   - *This has been added to the Demolition Plan (Sheet DE-1).*
7. Include small plan with the O&M plan
   - *An 11" X 17" Drainage & Grading Plan (Sheet SP-4) has been added to the O&M Plan.*
8. SP-6: add six inches of stone under pipe on infiltration practice detail
   - *This detail has been revised as requested.*
9. SP-8: remove clean out detail
   - *This detail has been removed as requested.*
10. SP-9: correct sewer service coupling detail
    - *This detail has been revised as requested.*
11. Is interior parking lot landscaping needed?
    - *We have calculated the interior landscaping to be over 11 percent where 5 percent is required.*

Economic Development Comments:

1. Sight distance is problematic
   - *We have reviewed the Police Department Memorandum regarding the sight distance for this project with our Traffic Engineer, Kim Hazarvartian.*

     We are working with Kim to address the Police Departments' concerns. Automatic Traffic Counters were dispatched on November 20th and November 21st which will allow us to answer the questions regarding the 85th percentile speeds and the corresponding AASHTO sight distance recommendations.

     We look forward to providing this information to the Police Department and addressing their concerns.
2. Architectural renderings underwhelming
   - *We have provided the non-color building elevations that better depicts the appealing design.*

Planning Board Comments:

1. Revise construction hours to exclude Sunday
   - *The hours of construction have been revised as requested.*
2. Add indication that rear of building C has lighting fixtures
   - *Lights have been added to the back of Building "C".*

Enclosed please find the following:

- Four (4) full-size copies of the Site Plan set.
- Eleven (11) half-size copies of the Site Plan set.
- Eight (8) copies of the following Supporting Documentation:

  This response letter.
  The Site Plan Application.
  The Site Plan Application Checklist.
  The Conditional Use Application & Narrative.
  The Lighting Plan Waiver Request with alternate Lighting Plan.
  11" X 17" of the Colored Elevations of the Proposed Buildings (4).
  11" X 17" of the Non-Color Front Elevation.
  11" X 17" of the Fire Truck Turning Exhibit.
  The Stormwater Management System Operation & Maintenance Plan with 11" X 17" of SP-4.
  The Landscape Operation & Maintenance Plan.
  The Test Pit Logs.
  The Proposed Lighting Specifications.

We look forward to discussing this application with the Planning Board on December 12, 2017.

Please advise should you have any questions.

Very truly yours,
TRITECH ENGINEERING CORP.

Robert J. Stowell, P.E., L.L.S.
President

RJS / rms
Enclosures

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Waiver Request

from

Site Review Regulation

ARTICLE IV – SITE DESIGN & DEVELOPMENT CRITERIA

Specifically: Chapter 149-14 (E) 2b Site Development Plan

"Parking Area Lighting Standards"

PERRO PLACE

Tax Map 40 Lot 25

52 Old Rochester Road

Dover, New Hampshire

Job No. 17102

In Accordance with Chapter 149-19 Waivers, Site Review Regulations, City of Dover Code, we are formally requesting a waiver from Section 149-14 (E) 2b, "Parking Area Lighting Standards".

As required by Article VI of the Dover Code, Administration, Chapter 149-19, Waivers, we submit the following in support of our waiver request:

Waiver

1. Chapter 149-14 (E) 2b – Parking Area Lighting Standard Table.

2. Chapter 149-19 - Waivers, allows: the Planning Board may waive specific provisions of these regulations. The Planning Board may only grant a waiver if the Planning Board finds, by majority vote, that: "Specific circumstances relative to the subdivision, or conditions of the land in such site PLAN, indicate that the waiver will properly carry out the spirit and intent of the regulations."

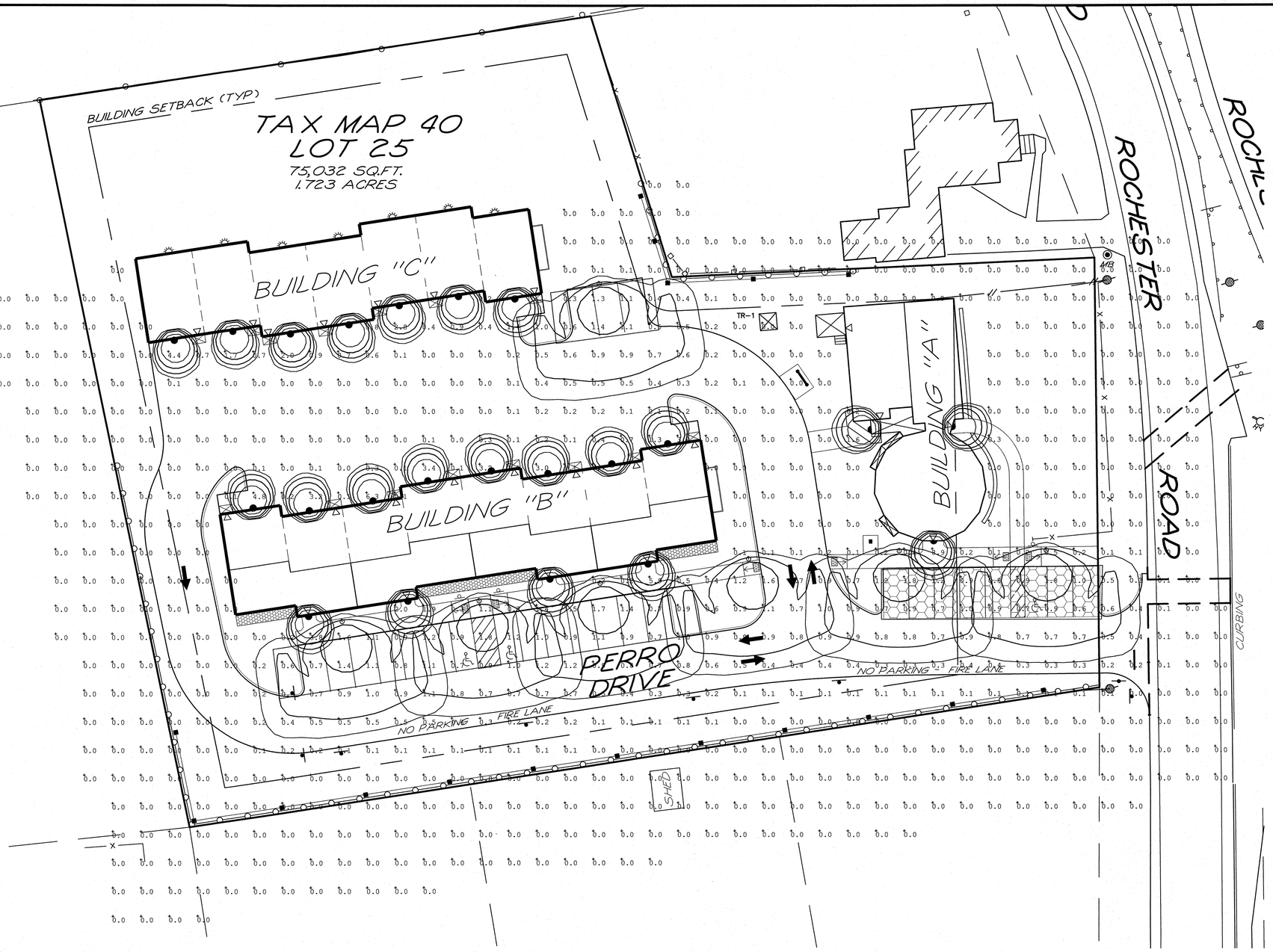
3. We respectfully submit that the: "Specific circumstances relative to the subdivision, or conditions of the land in such site PLAN, indicate that the waiver will properly carry out the spirit and intent of the regulations." Said specific circumstances being:

   Although this parcel is located in the B-3 District, it is bordered on the south and west by the R-12 District.

   The project abuts four (4) single family residential abutters to the south and one (1) single family residential abutter to the north.

   In order to meeting the standards set forth in Chapter 149-14 (E) 2b it would require the installation of seven (7) 20 Foot High Pole Lights directly adjacent to the residential abutters (see attached alternate Lighting Plan).

   This is a mixed use project and we feel that the lighting should have more of a residential feel to blend with the surrounding area.



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TRITECH
ENGINEERING CORPORATION

20 0 10 20 40 80

1"=20'

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
⊖	7	S	SINGLE	ICS-E01-LED-E1-SL4-HSS/ VA1006-BK / SRX4A15SBK1
⊙	22	W1	SINGLE	33542/ WALL MTD 10' AFG

StatArea_1
PARKING SPACES IN FRONT OF BLDG A
Illuminance (Fc)
Average = 0.97
Maximum = 1.8
Minimum = 0.5
Avg/Min Ratio = 1.94
Max/Min Ratio = 3.60

StatArea_2
PARKING SPACES IN FRONT OF BLDG B
Illuminance (Fc)
Average = 1.01
Maximum = 1.8
Minimum = 0.5
Avg/Min Ratio = 2.02
Max/Min Ratio = 3.60

StatArea_3
PARKING SPACES IN NEAR BLDG C
Illuminance (Fc)
Average = 0.84
Maximum = 1.4
Minimum = 0.3
Avg/Min Ratio = 2.80
Max/Min Ratio = 4.67

TRITECH
ENGINEERING CORPORATION
735 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
TELEPHONE 603 742 8107
FAX 603 742 3830

REVISIONS
DATE: DESCRIPTION:

ALTERNATE SITE LIGHTING PLAN

PERRO PLACE

52 OLD ROCHESTER ROAD
DOVER, NEW HAMPSHIRE

NOVEMBER 21, 2017 JOB No. 1710 2

SCALE: 1" = 20'

SHEET No. Li-2

(P17-74)

FISCAL IMPACT ANALYSIS

as required by Article IV 149-13.A.18 of
CITY OF DOVER, N.H. SITE DESIGN AND DEVELOPMENT CRITERIA

as prepared for
SALTY SEA, LLC

for

PERRO PLACE
52 Old Rochester Road
DOVER, NEW HAMPSHIRE
Tax Map 40, Lot 25

prepared by

Tritech Engineering Corporation
755 Central Avenue
Dover, NH 03820

October 19, 2017

Salty Sea, LLC proposes to develop the subject property (Tax Map 40, Lot 25) as 15 Residential Townhouses and 7 Commercial Spaces as prescribed by Chapter 155 of the Dover Site Development Criteria. The total parcel is 1.723 acres in size. The units will be serviced by city water and city sewer.

As required by Article IV 149-13.A.18 the aspects of concern identified therein are addressed below, with the probable effects of the development described within:

a) **Attendance at Public Schools:** It is estimated that children from the Development will attend public schools (Source: "Housing and School Enrollment in New Hampshire: A Decade of Dramatic Change", dated June 2012, prepared by Applied Economic Research, Laconia, New Hampshire. (0.170 children / five or more unit building X 15 units = 3 children)

b) **Increase in Vehicular Traffic:** It is anticipated that approximately 224 daily vehicle trip ends will be generated from the Development, including 7 trip ends during the A.M. Peak Hour, and 16 trip ends during the P.M. Peak Hour.

c) **Changes in the Number of Legal Residents:** It is estimated that the increase in the number of legal residents will be approximately 37 (source: 2010 US Census) (2.27 residents / Townhouse unit X 15 single family units = 34 new residents).

d) **Increases in Municipal Costs:** The subject premises are serviced by municipal water and sewer. Refuse will be collected on-site by a private refuse hauler. The builder will pay Sewer, Water, Recreation, Police, Fire, and School Impact Fees.

(i) Average cost per student ($11,448.28 X 3 students / 15 units) = $2,289.66/unit (Source: City of Dover Website)

(ii) Average cost for municipal services ($36,934,563 / 13,735 units) = $2,689.08/unit (Source: City of Dover Finance and Planning Department)

(iii) Tax revenues from Development

Residential - $103,000/Unit X 15 Units X $26.29 =	$40,618
Commercial - $100/s.f. X 6100 s.f. (0.95) X $26.29 =	$15,235
Total Tax Revenue	$55,853

(Source: Dover Tax Assessor)

(iv) Impact / $18,828 negative annual revenue to City.

e) **Load on Public Utilities or Future Demand for Them:** There is an anticipated load on city sewer and city water estimated at 450 GPD/Residential Units, 45 GPD/Commercial Units or 7,065 GPD total.

f) **Public Safety:** The Development will not have an adverse effect on public safety.

g) **Changes in Tax Revenue:** The proposed use under the current tax structure and rate will generate $55,853 of tax revenue annually to the City of Dover.

h) **Changes in Surface Drainage:** There will be a beneficial change in surface drainage; groundwater will be recharged in infiltration beds.

i) **Increased Consumption of Groundwater:** It is not anticipated that there will be any adverse effect on groundwater due to the proposed construction/drainage design recharges the groundwater on-site. Municipal well water demand will be 7,065 GPD for the Development.

j) **Increased Refuse Disposal:** It is recognized that each unit will generate refuse, however, a private refuse hauling service will be used to offset refuse disposal cost.

k) **Pollution of Water or Air:** No pollution of water or air is contemplated from this Development.

l) **Land Erosion or Loss of Tree Cover:** The subject premises are primarily open and developed. The impact to tree cover will be approximately ½ acre. All areas will be stabilized; no erosion is anticipated.

m) **Disturbance to other Aspects of the Natural Ecology:** There will be no significant disturbance to the natural ecology; this site is already developed and in a highly developed area.

n) **Blocking of Views**: There will be no significant blocking of views.

o) **Harmony with the Character of Surrounding Development:** This project received a Variance and a Special Exception.

p) **Location of Utilities:** Public water and sewer are in close proximity of the site. Sewer and Water Impact Fees will be paid.

SCRD 2094-201

REBAR (FND)

REBAR (FND)

REBARS (FND)

N 81°18'33" E
197.13'

REBAR (FND)

S 17°11'33" E

BUILDING SETBACK (TYP.)

TAX MAP 40
LOT 25
75,032 SQ.FT.
1.723 ACRES

TAX MAP 40
LOT 24
MARK W. MOCLOCK
54 OLD ROCHESTER ROAD
DOVER, N.H. 03820
SCRD 4386-779

OLD ROCHESTER ROAD

ROCHESTER ROAD

MAP 40
LOT 18-18E
GILBERT CAMPBELL 2006 REV. TRUST
176 CHURCH STREET
DOVER, N.H. 03820
SCRD 3745-411

96.56'

IP (FND)

N 87°25'22" E

149.56'

REBAR (FND)

R-12
B-3

BUILDING "C"

TR-1

S 00°36'15" W

152.14'

IP (FND)

REBAR (FND)

BUILDING "A"

N 11°32'14" W
262.58'

BUILDING "B"

PERRO DRIVE

NO PARKING - FIRE LANE

NO PARKING FIRE LANE

REBAR (FND)

S 81°14'54" W

289.49'

B-3
R-12

36.15'

S.S (FND)

S 81°28'53" W IP (FND)

S.S (FND)

SHED

TAX MAP D
LOT 9
RICKY & MARY BRILLARD RE. LIV. TR.
167 VARNEY ROAD
(50 OLD ROCHESTER ROAD)
DOVER, N.H. 03820
SCRD 3175-270

B-3
R-12

30'
PAVEMENT

VARIES
R.O.W.

CURBING

MAP 40
LOT 44
MIDON PROPERTY
MANAGEMENT SERVICES
60 NEW ROCHESTER ROAD
DOVER, N.H. 03820
SCRD 2266-330

TAX MAP D
LOT 10P
D & L KELLEHER REV. TR.
3 STRAFFORD ROAD
DOVER, N.H. 03820
SCRD 1992-574

TAX MAP D
LOT 10T
CONRAD & MADELEINE GAGNON
1 STRAFFORD ROAD
DOVER, N.H. 03820
SCRD 1202-741

MAP D
T 9G
INELORE WATKINS
FFORD ROAD
N.H. 03820
846-393

20 0 10 20 40 80
1"=20'

N

TRITECH
ENGINEERING CORPORATION

795 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
TELEPHONE 603 742 8407
FAX 603 742 3830

REVISIONS
DATE: DESCRIPTION:

PARKING PLAN
PERRO PLACE
52 OLD ROCHESTER ROAD
DOVER, NEW HAMPSHIRE
NOVEMBER 17, 2017 JOB No. 1710 2
SCALE: 1" = 20'

SHEET No.
P-1

(P17-74)

TRITECH
ENGINEERING CORPORATION

755 Central Avenue
Dover, New Hampshire 03820

Telephone 603.742.8107
Facsimile 603.742.3830

December 5, 2017

Ms. Donna Benton
Assistant City Planner
City of Dover, Planning Department
288 Central Avenue
Dover, New Hampshire 03820

Subject: *Site Review Application*
Salty Sea, LLC
52 Old Rochester Road
Tax Map 40, Lot 25
Job No. 17102

Dear Donna:

Enclosed please find Infiltration Testing Results compiled by S.W. Cole for the Perro Place project. The testing was performed at the precise location and elevation of the proposed infiltration practices. This data was used to make minor adjustments to our drainage model and some minor revisions to Sheet SP-4 attached.

I have enclosed four (4) full size and eleven (11) half size copies of the revised Sheet SP-4 along with fifteen (15) copies of the S.W. Cole results.

Please advise should you have any questions.

Very truly yours,
TRITECH ENGINEERING CORP.

Robert J. Stowell, P.E., L.L.S.
President

RJS / rms
Enclosures

\\17102_TRC_Response Ltr~ColeRes.doc

17-1408 S

November 29, 2017

Tritech Engineering Corporation
Attention: Robert J. Stowell, PE, LLS
755 Central Avenue
Dover, New Hampshire 03820

Subject: Field Infiltration Testing Services
52 Old Rochester Road
Dover, New Hampshire

Dear Bob:

In accordance with our Agreement dated November 21, 2017, we performed field infiltration testing for the above referenced site. The findings are subject to the limitations included in Attachment A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to perform field infiltration testing and to report the testing results. Our scope of services has included two (2) field infiltration tests and preparation of this letter report.

1.2 Project Understanding

The site is located on the west side of Old Rochester Road in Dover, New Hampshire. Commercial structures are located in the east portion of the site and the west portion of the site is open lawn area. The existing site features are presented on the attached plan provided by Tritech Engineering Corp.

2.0 FIELD INFILTRATION TESTING

S. W. Cole Engineering, Inc. (S.W.COLE) performed field infiltration testing at the site on November 21, 2017. Two tests were performed adjacent to test pit locations TP-07 and TP-08, previously undertaken by Tritech Engineering Corp. Tests were performed using a Guelph Permeameter in accordance with the NHDES analysis method. The location of

field infiltration tests are depicted on the attached site plan. The following table depicts the testing results.

FIELD INFILTRATION TESTING RESULTS			
Location	**Material**	**Depth (ft)**	**Rate (in/hour)**
TP-07	Coarse Sand and Gravel trace Silt	3	166
TP-08	Coarse Sand and Gravel trace Silt	2	89

The results above are the direct value from the field testing and no safety factor has been applied.

3.0 CLOSURE

We trust this letter report meets your current needs. If you have any questions, please do not hesitate to contact us.

Sincerely,

S. W. Cole Engineering, Inc.

Chad B. Michaud, P.E.
Senior Geotechnical Engineer

CBM:rtc

N

TRITECH ENGINEERING CORPORATION

BUILDING "C"
FF ELEV = 208.00

BUILDING "B"
FF ELEV = 205.50

BUILDING "A"
FF=205.65'
FF=205.38'
FF=204.77'

OLD ROCHESTER ROAD

SHED

TR-1

(D-1) DRAINAGE NOTES

1. INSTALL C.B. #1 IN ACCORDANCE WITH DETAIL 6, SHEET SP-6
   RIM ELEV. = 202.25'
   INVERT TO I.P. #1 = 199.00'
2. INSTALL 8'x80' OF INFILTRATION PRACTICE (I.P. #1) IN ACCORDANCE WITH DETAIL 3, SHEET SP-6
   INVERT ELEV. = 200.00'
3. INSTALL C.B. #2 IN ACCORDANCE WITH DETAIL 6, SHEET SP-6
   RIM ELEV. = 203.65'
   INVERT TO I.P. #2 = 200.00'
4. INSTALL 12'x153' OF INFILTRATION PRACTICE (I.P. #2) IN ACCORDANCE WITH DETAIL 3, SHEET SP-6
   INVERT ELEV. = 200.00'
5. INSTALL C.B. #3 IN ACCORDANCE WITH DETAIL 6, SHEET SP-6
   RIM ELEV. = 204.55'
   INVERT TO I.P. #2 = 200.00'
   INVERT OUT = 201.70'
6. INSTALL 35' OF 12"ø HPDE DRAIN PIPE
   SLOPE = 0.049 FT/FT
   FROM C.B. #3 TO C.B. #4
7. INSTALL C.B. #4 IN ACCORDANCE WITH DETAIL 6, SHEET SP-6
   RIM ELEV. = 203.60
   INVERT IN = 200.00
   INVERT IN = 200.00
8. INSTALL 85' OF 12"ø HDPE DRAIN PIPE
   SLOPE = 0.005 FT/FT
   FROM C.B. #5 TO C.B. #4
9. INSTALL C.B. #5 IN ACCORDANCE WITH DETAIL 6, SHEET SP-6
   RIM ELEV. = 203.8
   INVERT OUT = 200.40
10. INSTALL 36" WIDE BY 12" DEEP STONE DRIP EDGE IN ACCORDANCE WITH DETAIL 10, SHEET SP-5.
11. INSTALL POROUS PAVEMENT PER DETAIL 1, SHEET SP-8.
12. INSTALL 125' OF 36" WIDE BY 15" DEEP STONE DRIP EDGE IN ACCORDANCE WITH DETAIL 10, SHEET SP-5.

LEGEND

- EXISTING UTILITY POLE
- EXISTING WATER LINE
- EXISTING HYDRANT
- EXISTING WATER GATE VALVE
- PROPOSED CATCH BASIN (CB)
- PROPOSED 8" CLDI WATER MAIN
- PROPOSED UNDERGROUND ELECTRICAL, TELEPHONE & CATV.
- PROPOSED TRANSFORMER PAD
- PROPOSED DRAIN LINE
- PROPOSED WATER GATE VALVE
- PROPOSED THRUST BLOCK
- PROPOSED HYDRANT
- PROPOSED FINISH CONTOUR
- PROPOSED FINISH GRADE
- STOP SIGN & STOP BAR
- PROPOSED STONE DRIP EDGE
- PROPOSED POROUS PAVEMENT

20 0 10 20 40 80
1"=20'

TRITECH
ENGINEERING CORPORATION
755 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
TELEPHONE 603 742 8107
FAX 603 742 3830

REVISIONS
DATE: DESCRIPTION:
11-21-17 REVISED PER TRC COMMENTS
11-30-17 REVISED DRAINAGE

GRADING AND DRAINAGE PLAN

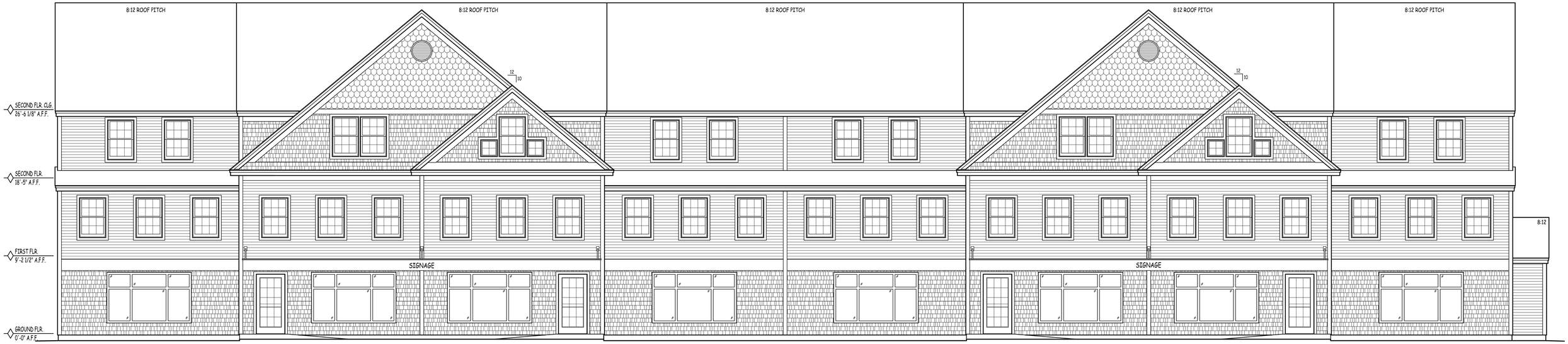
PERRO PLACE

52 OLD ROCHESTER ROAD
DOVER, NEW HAMPSHIRE

OCTOBER 9, 2017 JOB No. 17102
SCALE: 1" = 20'

SHEET No. SP-4

(P17-74)



REAR ELEVATION

SCALE: 3/16" = 1'-0"

REFER TO SECTIONS R612.2 FOR WINDOW SILL HEIGHT ABOVE GROUND (OR SURFACE BELOW) AND TO SECTION 310 FOR EGRESS WINDOWS & BASEMENTS PRIOR TO PLACING WINDOW ORDER

REFER TO SECTION 311 FOR MEANS OF EGRESS PRIOR TO ORDERING DOORS

EGRESS NOTE:
AT LEAST ONE WINDOW PER SLEEPING ROOM TO MEET MINIMUM LOCAL, STATE, AND NATIONAL REQUIREMENTS OF NET CLEAR OPENING WIDTH, HEIGHT, AREA AND SILL HEIGHT FOR EGRESS - IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72" ABOVE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24" ABOVE THE FINISHED FLOOR IN WHICH THE WINDOW IS LOCATED (REFER TO SECTION R612.2 OF THE I.R.C. 2009)

ADMISSION OF ERROR, OMISSION AND/OR OVERSIGHT:

WHILE IT IS OUR INTENT TO DELIVER OUR SERVICES FREE OF ERROR, OMISSION OR OVERSIGHT, WE WILL ADMIT TO BE HUMAN, AND, THEREFORE, FSM DRAWINGS LLC, ACTING SOLELY AS THE DRAFTING COMPANY, WILL RELY ON THE EXPERIENCED CONTRACTOR USING THESE PLANS TO THOROUGHLY REVIEW THEM FOR DIMENSIONAL ACCURACY, COMPLETENESS AND APPROPRIATENESS. THE CONTRACTOR USING THESE PLANS ASSUMES ALL RESPONSIBILITY FOR THEM AND WILL IF HE/SHE DEEMS NECESSARY HIRE A LICENSED PROFESSIONAL ENGINEER TO ASSIST IN THE REVIEW.

FSM DRAWINGS
27 Lowell Street Suite 803
Manchester, New Hampshire 03101
T | 603.836.5666 info@fsmdrawings.com
F | 603.836.5661 www.fsmdrawings.com

PROJECT:
52 OLD ROCHESTER RD. DOVER, NH
BUILDING "B"

PREPARED FOR:
SALTY SEA, LLC.

DRAWN BY:	MM
CHECKED BY:	
DATE DRAWN:	9/14/17
DATE ISSUED:	9/14/17
SCALE:	1/4" = 1'-0"
JOB NO.:	FSM17-148MF

REVISIONS

NO.	DATE	REVISION
1	9/6/17	PRELIMINARY PLAN ISSUED FOR REVIEW
2	9/8/17	REVISED ELEVATIONS AS DISCUSSED
3	9/14/17	REVISED ELEVATIONS AS DISCUSSED

TEPP LLC TRANSPORTATION ENGINEERING, PLANNING AND POLICY

93 Stiles Road, Suite 201, Salem, New Hampshire 03079 USA
800 Turnpike Street, Suite 300, North Andover, Massachusetts 01845 USA
Phone (603) 212-9133 and Fax (603) 226-4108
Email tepp@teppllc.com and Web www.teppllc.com

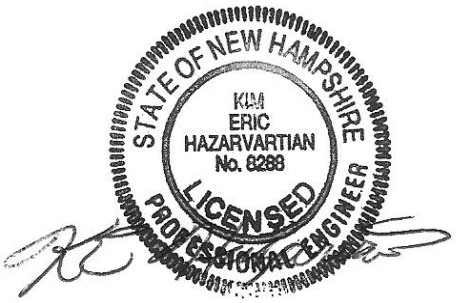
MEMORANDUM

Ref: 1402

Subject: Revised Traffic Assessment
Proposed Perro Place Development
52 Old Rochester Road
Dover, New Hampshire

From: Kim Eric Hazarvartian, Ph.D., P.E., PTOE
Principal

Date: November 30, 2017



INTRODUCTION

Tritech Engineering Corporation has retained TEP LLC to prepare this revised traffic-assessment memorandum (TAM). This TAM regards the proposed Perro Place development at 52 Old Rochester Road in the City of Dover, New Hampshire.

This TAM includes:

- existing site description
- proposed project description
- road description
- public transit
- vehicle speeds
- sight distances
- trip generation
- trip distribution/assignment
- potential traffic impacts

This TAM concludes that:

- relevant sight distances at the Old Rochester Road/driveway intersection are adequate
- the proposed project is not anticipated to add significant new traffic to the area

EXISTING SITE DESCRIPTION

The site:

- is along the west side of Old Garrison Road
- has an area of about 1.723 acres
- includes one apartment unit and 3,144 square feet (sf) of retail floor area
- includes one driveway along the west side of Old Rochester Road
- is bounded on the north and south by residential development
- is bounded on the east by Old Rochester Road
- is bounded on the west by wooded land

PROPOSED PROJECT DESCRIPTION

The project:

- will add 14 apartment units, for a total of 15 apartment units
- will add 2,956-sf of retail floor area, for a total of 6,100 sf
- will essentially use the existing driveway location along the west side of Old Rochester Road

ROAD DESCRIPTION

Old Rochester Road:

- is a north-south collector street under the jurisdiction of the City
- to and from the north connects with New Rochester Road, an arterial highway
- has connections to and from the north with northern Dover and the Cities of Somersworth and Rochester, New Hampshire
- has connections to and from the south with New Rochester Road, Indian Brook Drive and the Spaulding Turnpike, all arterial highways or streets
- has connections to and from the south with central Dover
- has curvilinear horizontal alignment near the site
- has near-level vertical alignment near the site

- has asphalt cement concrete pavement in overall good condition
- has one travel lane per direction
- includes sidewalk along the east side at or near the site
- has pavement markings including double-yellow lines, separating traffic directions, and single-white edge lines
- includes utility poles along the east side north of the site and on the west side south of the site

PUBLIC TRANSIT

Cooperative Alliance for Seacoast Transportation (COAST) Route 2 bus runs along New Rochester Road near the site. Route 2:

- connects, to and from the north, with Rochester and Somersworth
- connects, to and from the south, with central Dover
- has a northbound stop near the site at Winchester Arms apartments
- has a southbound stop near the site at Strafford Farms Restaurant

A direct pedestrian connection between the site and the stop at the Winchester Arms apartment would involve crossing:

- Old Rochester Road mid-block
- New Rochester Road mid-block
- either two guardrails or private land between Old Rochester Road and New Rochester Road

Therefore, a direct pedestrian connection does not appear practicable.

VEHICLE SPEEDS

TEPP LLC obtained vehicle speeds by automatic traffic recorder (ATR):

- on Old Rochester Road north of the driveways
- from Monday, November 20, 2017, to Tuesday, November 21, 2017

The data are attached and are summarized in Table 1.

Table 2 indicates that Old Rochester Road has:

Table 2. Vehicle speeds.

Location and Direction	Speeds (mph)		
	Speed Limit	Mean[a]	85th Percentile[a]
Old Rochester Road North of Driveways			
Northbound	30	32	36
Southbound	30	31	34

[a]From ATR conducted from Monday, November 20, 2017, to Tuesday, November 21, 2017.

- a speed limit of 30 miles per hour
- an northbound mean speed of 32 mph and 85th percentile speed of 36 mph
- a southbound mean speed of 31 mph and 85th percentile speed of 34 mph

SIGHT DISTANCES

The American Association of State Highway and Transportation Officials (AASHTO) has established authoritative policy for sight distances at unsignalized intersections in terms of:

- stopping sight distance (SSD)
- optional intersection sight distance (ISD)[1]

SSD:

- provides for safety
- enables a driver, on the major road, to perceive and react accordingly to a vehicle entering the major road from a minor road
- is conservative because it encompasses a wide range of brake-reaction times and deceleration rates[2]

Optional ISD:

[1] AASHTO, *A Policy on Geometric Design of Highways and Streets*, 6th Edition (Washington, DC, 2011), pages 9-28 to 9-29.

[2] AASHTO, pages 3-2 to 3-6.

- is ordinarily greater than SSD and may enhance traffic operations
- is not required for safety

Table 2 shows SSD for observed 85th percentile speeds. Information provided by Tritech Engineering Corporation shows that at least these sight distances are available. This does not indicate a BLIND DRIVEWAY warning sign, which is not included in the *Manual on Uniform Traffic Control Devices for Streets and Highways*.[3]

Table 2. Sight distances.

		Distances (feet)	
Intersection and View	85th Percentile Speed (mph)	SSD[a]	Available Sight Distance[b]
Old Rochester Road/Driveway			
Old Rochester Road to/from South	36	257	at least 800[c]
Old Rochester Road to/from North	34	236	237[c] to 313[d]

[a] AASHTO, page 3-4.

[b] Information provided by Tritech Engineering Corporation. With appropriate roadside and vegetation maintenance.

[c] This sight distance is available within the right of way.

[d] This sight line goes outside the right of way.

CALCULATED TRIP GENERATION

The Institute of Transportation Engineers (ITE) compiles and publishes trip-generation information for a variety of land uses in *Trip Generation Manual*.[4] This authoritative guide for calculating site traffic includes information for:

- specialty retail, land use 826, based on floor area[5]
- apartment, land use 220, based on number of dwelling units[6]

Table 2 shows differences due to the proposed project as:

[3] Federal Highway Administration (FHWA), *Manual on Uniform Traffic Control Devices for Streets and Highways*, 2009 Edition with Revisions 1 and 2 (Washington, DC, December 2009), section 4C, pages 436 to 448.

[4] ITE, *Trip Generation Manual*, 9th edition (Washington DC, 2012).

[5] ITE, *Trip Generation Manual*, pages 1578 to 1587.

[6] ITE, *Trip Generation Manual*, pages 332 to 359.

Table 2. Calculated vehicle-trip generation.

	Weekday							Saturday			
		AM Street-Peak Hour			PM Street-Peak Hour				Peak Hour		
	Daily	In	Out	Total	In	Out	Total	Daily	In	Out	Total
Existing											
Apartment[a]	7	0	1	1	1	0	1	6	1	0	1
Retail[b]	139	0	0	0	4	5	9	132	4	5	9
Total	146	0	1	1	5	5	10	138	5	5	10
Proposed											
Apartments[c]	100	2	6	8	6	3	9	96	4	4	8
Retail[c]	270	0	0	0	8	9	17	256	8	9	17
Total	370	2	6	8	14	12	26	352	12	13	25
Differences[e]	224	2	5	7	9	7	16	214	7	8	15

[a] Based on ITE, *Trip Generation Manual*, 9th edition, apartment, land use 220, 15 dwelling units.

[b] Based on ITE, *Trip Generation Manual*, 9th edition, specialty retail, land use 826, 3,144-sf floor area. Weekday PM-street-peak hour used for Saturday peak hour.

[c] Based on ITE, *Trip Generation Manual*, 9th edition, apartment, land use 220, 15 dwelling units. Used 50 percent in and 50 percent out for Saturday peak hour.

[d] Based on ITE, *Trip Generation Manual*, 9th edition, specialty retail, land use 826, total 6,100-sf floor area. Weekday PM-street-peak hour used for Saturday peak hour.

[e] Conservatively does not account for reductions in retail primary vehicle-trips due to retail pass-by vehicle trips. Conservatively does not account for reductions to external trips due to internal trips between apartments and retail.

- weekday daily, 224 (total of in and out)
- weekday AM-street-peak hour, 7 (2 in and 5 out)
- weekday PM-street-peak hour, 16 (9 in and 7 out)
- Saturday daily 214 (total of in and out)
- Saturday peak hour, 15 (7 in and 8 out)

Calculated trip generation is conservative in that it does not account for:

- reductions in retail primary vehicle-trips due to pass-by vehicle trips
- reductions to external trips due to internal trips between apartments and retail

TRIP DISTRIBUTION/ASSIGNMENT

Calculated trip generation is so low that area traffic operations are not sensitive to trip distribution/assignment. Vehicle-trips to and from the south may predominate to due area development patterns and transportation network.

POTENTIAL TRAFFIC IMPACTS

The calculations show less than 100 peak-hour primary vehicle-trips, due to the proposed project. More specifically, calculated peak-hour trip generation is:

- 7 to 16 vehicle-trips
- split entering versus exiting the site
- further split by orientation to and from the north and south

Therefore, the proposed project is not anticipated to add significant new traffic to the area.

CONCLUSION

In conclusion:

- relevant sight distances at the Old Rochester Road/driveway intersection are adequate
- the proposed project is not anticipated to add significant new traffic to the area

Accurate Counts

978-664-2565

Location : Old Rochester Road
Location : Just North of Site
City/State: Dover, NH

1402SPD1

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/20/17	0	0	0	2	4	1	0	0	0	0	0	0	0	0	7
01:00	0	0	0	1	3	1	0	0	0	0	0	0	0	0	5
02:00	0	0	0	4	8	2	0	0	0	0	0	0	0	0	14
03:00	0	0	1	1	8	2	1	0	0	0	0	0	0	0	13
04:00	0	0	0	11	24	10	0	0	0	0	0	0	0	0	45
05:00	0	0	0	22	71	30	3	0	0	0	0	0	0	0	126
06:00	2	0	5	52	148	72	7	0	0	0	0	0	0	0	286
07:00	3	0	3	56	186	76	7	1	0	0	0	0	0	0	332
08:00	4	0	4	41	145	83	3	0	0	0	0	0	0	0	280
09:00	1	2	13	61	112	41	3	0	0	0	0	0	0	0	233
10:00	3	1	6	38	89	40	3	0	0	0	0	0	0	0	180
11:00	0	0	9	42	78	29	2	0	0	0	0	0	0	0	160
12 PM	3	0	3	24	102	33	5	0	0	0	0	0	0	0	170
13:00	2	1	7	39	69	19	5	0	0	0	0	0	0	0	142
14:00	2	5	9	54	80	24	0	2	0	0	0	0	0	0	176
15:00	5	1	9	62	90	29	1	0	0	0	0	0	0	0	197
16:00	10	2	4	40	77	26	0	0	0	0	0	0	0	0	159
17:00	5	0	8	43	84	22	2	0	0	0	0	0	0	0	164
18:00	2	0	3	24	56	21	2	0	0	0	0	0	0	0	108
19:00	1	0	0	15	21	13	1	0	0	0	0	0	0	0	51
20:00	0	0	2	6	15	7	3	0	0	0	0	0	0	0	33
21:00	0	0	0	8	10	6	0	1	0	0	0	0	0	0	25
22:00	0	0	0	5	15	3	0	0	0	0	0	0	0	0	23
23:00	1	0	1	9	5	2	0	0	0	0	0	0	0	0	18
Total	44	12	87	660	1500	592	48	4	0	0	0	0	0	0	2947

Daily

15th Percentile :	27 MPH
50th Percentile :	32 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	32 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	2160
Percent in Pace :	73.3%
Number of Vehicles > 30 MPH :	2144
Percent of Vehicles > 30 MPH :	72.8%

Accurate Counts

978-664-2565

Location : Old Rochester Road
Location : Just North of Site
City/State: Dover, NH

1402SPD1

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/21/17	0	0	0	0	4	3	0	0	0	0	0	0	0	0	7
01:00	0	0	0	4	3	0	0	0	0	0	0	0	0	0	7
02:00	0	0	0	2	3	2	1	0	0	0	0	0	0	0	8
03:00	0	0	1	0	7	3	1	0	0	0	0	0	0	0	12
04:00	0	0	0	8	27	10	2	0	0	0	0	0	0	0	47
05:00	0	0	1	28	63	32	2	0	0	0	0	0	0	0	126
06:00	1	0	2	57	159	49	6	1	0	0	0	0	0	0	275
07:00	6	0	1	63	190	83	4	0	0	0	0	0	0	0	347
08:00	3	0	6	51	142	68	7	0	0	0	0	0	0	0	277
09:00	2	1	7	50	100	37	2	1	0	0	0	0	0	0	200
10:00	1	1	8	38	87	26	1	0	0	0	0	0	0	0	162
11:00	2	2	15	45	62	22	3	0	0	0	0	0	0	0	151
12 PM	2	0	3	42	91	35	0	0	0	0	0	0	0	0	173
13:00	1	4	5	34	81	28	2	0	0	0	0	0	0	0	155
14:00	2	0	4	47	83	34	4	0	0	0	0	0	0	0	174
15:00	2	2	2	44	91	34	3	0	0	0	0	0	0	0	178
16:00	4	0	9	50	82	19	3	0	0	0	0	0	0	0	167
17:00	2	2	8	49	93	36	1	0	0	0	0	0	0	0	191
18:00	3	0	1	32	66	19	0	0	0	0	0	0	0	0	121
19:00	1	0	1	19	40	16	0	0	0	0	0	0	0	0	77
20:00	0	0	2	9	28	13	1	0	0	0	0	0	0	0	53
21:00	0	0	2	16	24	8	1	0	0	0	0	0	0	0	51
22:00	1	0	0	6	12	5	0	0	0	0	0	0	0	0	24
23:00	0	0	0	5	8	2	0	0	0	0	0	0	0	0	15
Total	33	12	78	699	1546	584	44	2	0	0	0	0	0	0	2998

Daily

15th Percentile :	27 MPH
50th Percentile :	32 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	32 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	2245
Percent in Pace :	74.9%
Number of Vehicles > 30 MPH :	2176
Percent of Vehicles > 30 MPH :	72.6%

Grand Total	77	24	165	1359	3046	1176	92	6	0	0	0	0	0	0	5945

Overall

15th Percentile :	27 MPH
50th Percentile :	32 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	32 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	4405
Percent in Pace :	74.1%
Number of Vehicles > 30 MPH :	4320
Percent of Vehicles > 30 MPH :	72.7%

Accurate Counts

978-664-2565

Location : Old Rochester Road
Location : Just North of Site
City/State: Dover, NH

1402SPD1

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/20/17	0	0	0	1	6	0	0	0	0	0	0	0	0	0	7
01:00	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
04:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
05:00	0	0	1	1	6	2	0	0	0	0	0	0	0	0	10
06:00	3	1	4	12	11	4	0	0	0	0	0	0	0	0	35
07:00	3	0	2	20	40	16	1	0	0	0	0	0	0	0	82
08:00	6	0	2	28	60	17	1	0	0	0	0	0	0	0	114
09:00	2	0	7	27	51	10	0	0	0	0	0	0	0	0	97
10:00	3	0	1	36	47	14	0	0	0	0	0	0	0	0	101
11:00	1	0	3	29	62	17	1	0	0	0	0	0	0	0	113
12 PM	2	1	3	39	97	15	0	0	0	0	0	0	0	0	157
13:00	3	3	11	28	59	16	1	0	0	0	0	0	0	0	121
14:00	6	2	13	44	91	21	0	0	0	0	0	0	0	0	177
15:00	5	0	9	77	134	27	1	0	0	0	0	0	0	0	253
16:00	9	0	5	98	151	14	0	0	0	0	0	0	0	0	277
17:00	1	0	5	101	112	11	0	0	0	0	0	0	0	0	230
18:00	3	0	4	47	99	16	1	0	0	0	0	0	0	0	170
19:00	0	0	3	47	57	11	0	0	0	0	0	0	0	0	118
20:00	0	0	1	20	54	7	0	0	0	0	0	0	0	0	82
21:00	0	0	1	13	22	10	0	0	0	0	0	0	0	0	46
22:00	0	0	0	4	15	6	0	0	0	0	0	0	0	0	25
23:00	1	0	0	8	18	3	0	0	0	0	0	0	0	0	30
Total	48	7	76	683	1196	237	6	0	0	0	0	0	0	0	2253

Daily

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	34 MPH
95th Percentile :	37 MPH
Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	1879
Percent in Pace :	83.4%
Number of Vehicles > 30 MPH :	1439
Percent of Vehicles > 30 MPH :	63.9%

Accurate Counts

978-664-2565

Location : Old Rochester Road
Location : Just North of Site
City/State: Dover, NH

1402SPD1

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/21/17	0	0	0	3	6	2	1	0	0	0	0	0	0	0	12
01:00	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
02:00	0	0	1	1	3	0	0	0	0	0	0	0	0	0	5
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	1	4	8	1	0	1	0	0	0	0	0	0	15
06:00	2	1	1	14	19	7	0	0	0	0	0	0	0	0	44
07:00	6	0	1	15	41	18	2	0	0	0	0	0	0	0	83
08:00	3	0	3	21	48	9	1	0	0	0	0	0	0	0	85
09:00	1	0	3	20	36	15	2	0	0	0	0	0	0	0	77
10:00	4	1	3	24	49	18	1	0	0	0	0	0	0	0	100
11:00	3	0	10	32	51	18	1	0	0	0	0	0	0	0	115
12 PM	3	1	8	42	64	22	3	0	0	0	0	0	0	0	143
13:00	4	2	8	29	53	23	1	0	0	0	0	0	0	0	120
14:00	1	1	6	26	96	33	0	0	0	0	0	0	0	0	163
15:00	1	0	3	40	161	25	2	0	0	0	0	0	0	0	232
16:00	11	1	10	76	144	29	1	0	0	0	0	0	0	0	272
17:00	5	0	4	82	160	21	0	0	0	0	0	0	0	0	272
18:00	3	0	10	55	99	11	0	0	0	0	0	0	0	0	178
19:00	1	0	4	37	77	13	1	0	0	0	0	0	0	0	133
20:00	0	0	4	17	63	13	1	0	0	0	0	0	0	0	98
21:00	0	0	0	21	39	11	2	0	0	0	0	0	0	0	73
22:00	1	0	0	13	15	4	0	0	0	0	0	0	0	0	33
23:00	0	0	0	8	21	4	1	0	0	0	0	0	0	0	34
Total	49	7	80	582	1255	297	20	1	0	0	0	0	0	0	2291

Daily

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	32 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	1837
Percent in Pace :	80.2%
Number of Vehicles > 30 MPH :	1573
Percent of Vehicles > 30 MPH :	68.7%

Grand Total	97	14	156	1265	2451	534	26	1	0	0	0	0	0	0	4544

Overall

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	3716
Percent in Pace :	81.8%
Number of Vehicles > 30 MPH :	3012
Percent of Vehicles > 30 MPH :	66.3%

(PI7-74)

SHEET No.

DP-1

DRIVEWAY PERMIT PLAN

PERRO PLACE

52 OLD ROCHESTER ROAD
DOVER, NEW HAMPSHIRE

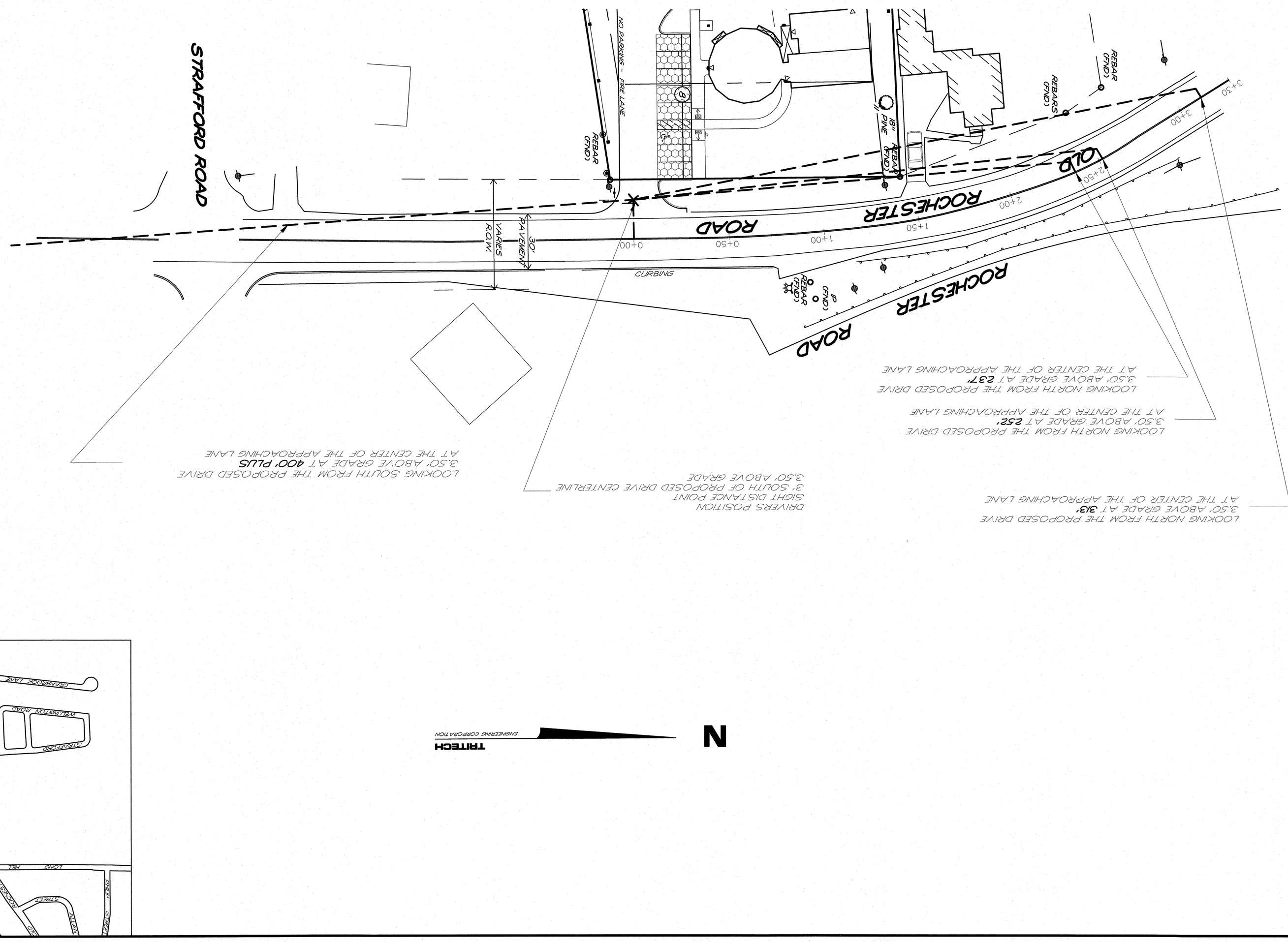
NOVEMBER 30, 2017 JOB No. 17102
SCALE: 1" = 30'

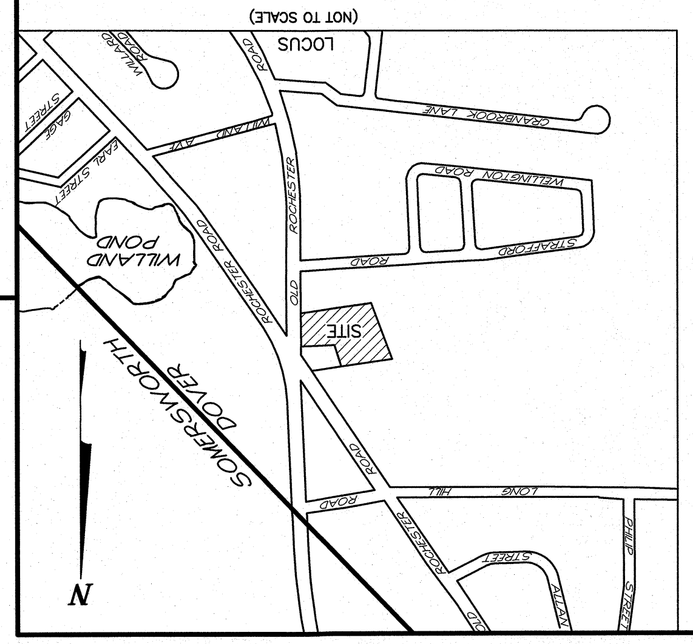
REVISIONS
DATE: DESCRIPTION:

TRITECH
ENGINEERING CORPORATION

755 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
TELEPHONE 603 749 6107
FAX 603 742 3830

1"=30'





Wall luminaires with fixed light distribution

Housing: One piece die-cast aluminum supplied with universal mounting bracket for direct attachment to 3½" or 4" wiring box. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: One piece die-cast aluminum cover frame, secured by captive socket head, stainless steel screws threaded into stainless steel inserts. Interior of lamp compartment painted gloss white. Clear safety glass. Fully gasketed for weather tight operation using a molded silicone rubber gasket. Pure anodized aluminum reflector.

Electrical: 7.9 W LED luminaire, 10 total system watts, -30° C start temperature. Integral 120V – 277V electronic LED Driver. 0-10V dimming, 120V only. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to ordwer.

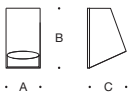
Note: Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV).To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards . Protection class: IP64.

Weight: 3.3 lbs.

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



Fixed light distribution

	Lamp	A	B	C
33 542	7.9 W LED	4⅜	7½	4¾

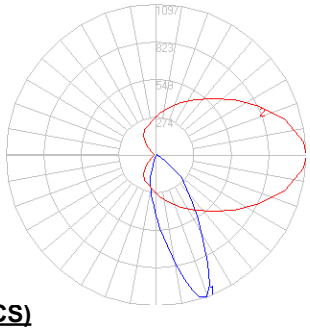
BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com
©copyright BEGA 2017 Updated 09/17

BEGA

Photometric Filename: 33542.ies

TEST: L08120606
TEST LAB: LIGHT LABORATORY, INC
DATE: 8/9/2012
LUMINAIRE: 33 542
LAMP: 13W LED

All results in accordance with IESNA LM-79-08

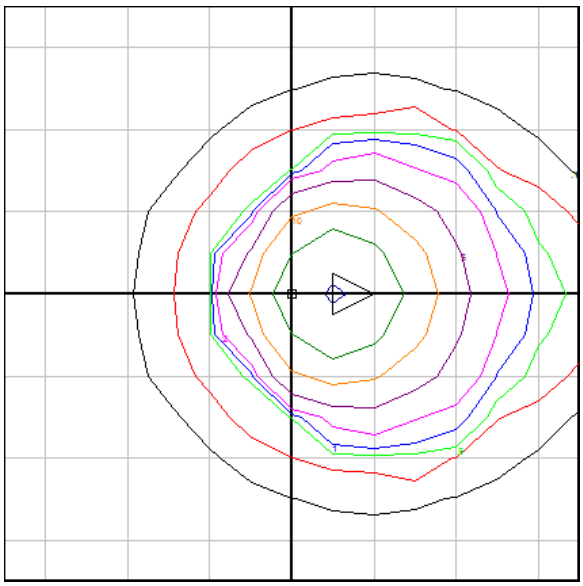


Characteristics

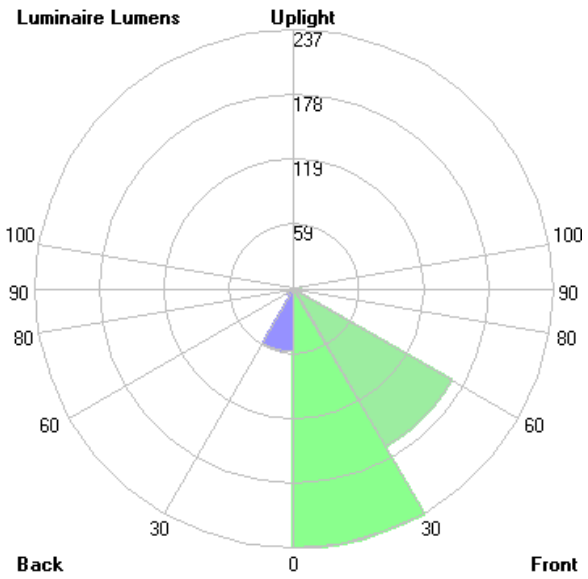
IES Classification	Type I
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	479
Downward Total Efficiency	N.A.
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	33
Total Luminaire Watts	14.65
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Max. Cd.	1097 (0H, 19.5V)
Max. Cd. (<90 Vert.)	1097 (0H, 19.5V)
Max. Cd. (At 90 Deg. Vert.)	4 (0.8%Lum)
Max. Cd. (80 to <90 Deg. Vert.)	6 (1.3%Lum)
Cutoff Classification (deprecated)	N.A. (absolute)
R9 Value	53.99

Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	237.1	N.A.	49.4
FM (30-60)	166.7	N.A.	34.8
FH (60-80)	7.3	N.A.	1.5
FVH (80-90)	1.8	N.A.	0.4
BL (0-30)	57.3	N.A.	11.9
BM (30-60)	6.7	N.A.	1.4
BH (60-80)	1.1	N.A.	0.2
BVH (80-90)	< 0.05	N.A.	0.0
UL (90-100)	1.1	N.A.	0.2
UH (100-180)	0.5	N.A.	0.1
Total	479.6	N.A.	100.0
BUG Rating	**B0-U1-G0**		



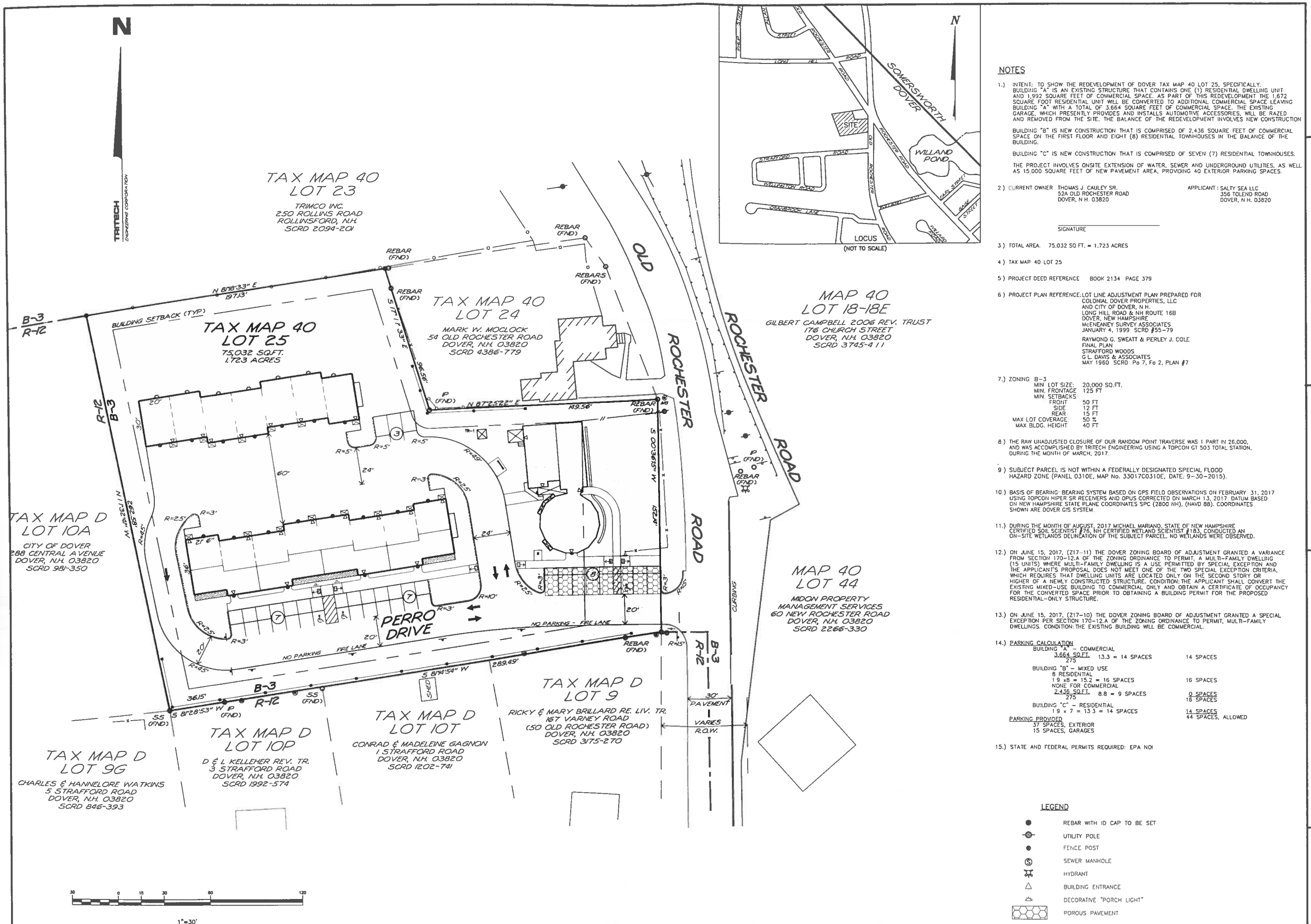
Mounting Height = 4 ft. Grid Spacing = 2 ft.



In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

P17-74 & P17-79 52 Old Rochester Road

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
40019-000000	55 OLD ROCHESTER RD	STEWART JUDY N		55 OLD ROCHESTER RD	DOVER	NH	03820
D0009-G00000	5 STRAFFORD RD	WATKINS HANNELORE E	WATKINS CHARLES A	5 STRAFFORD ROAD	DOVER	NH	03820
D0009-E00000	9 STRAFFORD RD	TRASK TOD A		10 IONA AVE	DOVER	NH	03820
40018-C00000	51 NEW ROCHESTER RD	CAMPBELL GILBERT G TRUSTEE	CAMPBELL GILBERT 2006 REVOCABLE TRUST	176 CHURCH ST	LOWELL	MA	01852
D0010-P00000	3 STRAFFORD RD	KELLEHER DANIEL T TRUSTEE	KELLEHER D AND L REV TRUST	3 STRAFFORD RD	DOVER	NH	03820
D0009-000000	50 OLD ROCHESTER RD	BRILLARD RICKY A & MARY S REV LIV TRUST	BRILLARD RICKY A AND MARY S TRUSTEES	167 VARNEY RD	DOVER	NH	03820
40018-E00000	47 NEW ROCHESTER RD	CAMPBELL GILBERT G TRUSTEE	CAMPBELL GILBERT 2006 REVOCABLE TRUST	176 CHURCH ST	LOWELL	MA	01852
40044-000000	60 NEW ROCHESTER RD	MIDON PROPERTY MANAGEMENT SERVICES		60 NEW ROCHESTER RD	DOVER	NH	03820
D0010-A00000	32 LONG HILL RD	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
40018-D00000	49 NEW ROCHESTER RD	CAMPBELL GILBERT G TRUSTEE	CAMPBELL GILBERT 2006 REVOCABLE TRUST	176 CHURCH ST	LOWELL	MA	01852
40024-000000	54 OLD ROCHESTER RD	MOCLOCK MARK W		54 OLD ROCHESTER RD	DOVER	NH	03820
40023-000000	56 OLD ROCHESTER RD	TRIMCO INC		250 ROLLINS ROAD	ROLLINSFORD	NH	03869
D0010-T00000	1 STRAFFORD RD	GAGNON MADELEINE	GAGNON CONRAD	1 STRAFFORD ROAD	DOVER	NH	03820
D0009-D00000	7 STRAFFORD RD	MARSHALL CRAIG	MARSHALL BARBARA J	7 STRAFFORD RD	DOVER	NH	03820
40043-000000	58 NEW ROCHESTER RD	STRAFFORD FARMS RESTAURANT INC		58 NEW ROCHESTER ROAD	DOVER	NH	03820
		CAULEY THOMAS J SR		52A OLD ROCHESTER ROAD	DOVER	NH	03820
		SATY SEA DOG		356 TOLEND ROAD	DOVER	NH	03820
		STOWELL ROBERT PE, LLS	TRITEC ENGINEERING CORP	755 CENTRAL AVE	DOVER	NH	03820
		BRUTON FRANCIS III, ESQUIRE	BRUTON & BERUBE, PLLC	798 CENTRAL AVE	DOVER	NH	03820



NOTES

1.) INTENT: TO SHOW THE REDEVELOPMENT OF DOVER TAX MAP 40 LOT 25, SPECIFICALLY: BUILDING "A" IS AN EXISTING STRUCTURE THAT CONTAINS ONE (1) RESIDENTIAL DWELLING UNIT AND 1,992 SQUARE FEET OF COMMERCIAL SPACE. AS PART OF THIS REDEVELOPMENT THE 1,672 SQUARE FOOT RESIDENTIAL UNIT WILL BE CONVERTED TO ADDITIONAL COMMERCIAL SPACE LEAVING BUILDING "A" WITH A TOTAL OF 3,664 SQUARE FEET OF COMMERCIAL SPACE. THE EXISTING GARAGE, WHICH PRESENTLY PROVIDES AND INSTALLS AUTOMOTIVE ACCESSORIES, WILL BE RAZED AND REMOVED FROM THE SITE. THE BALANCE OF THE REDEVELOPMENT INVOLVES NEW CONSTRUCTION

BUILDING "B" IS NEW CONSTRUCTION THAT IS COMPRISED OF 2,436 SQUARE FEET OF COMMERCIAL SPACE ON THE FIRST FLOOR AND EIGHT (8) RESIDENTIAL TOWNHOUSES IN THE BALANCE OF THE BUILDING.

BUILDING "C" IS NEW CONSTRUCTION THAT IS COMPRISED OF SEVEN (7) RESIDENTIAL TOWNHOUSES.

THE PROJECT INVOLVES ONSITE EXTENSION OF WATER, SEWER AND UNDERGROUND UTILITIES, AS WELL AS 15,000 SQUARE FEET OF NEW PAVEMENT AREA, PROVIDING 40 EXTERIOR PARKING SPACES.

2.) CURRENT OWNER THOMAS J. CAULEY SR.
52A OLD ROCHESTER ROAD
DOVER, N.H. 03820

APPLICANT: SALTY SEA LLC
356 TOLEND ROAD
DOVER, N.H. 03820

SIGNATURE

3.) TOTAL AREA. 75,032 SQ.FT. = 1.723 ACRES

4.) TAX MAP 40 LOT 25

5.) PROJECT DEED REFERENCE BOOK 2134 PAGE 379

6.) PROJECT PLAN REFERENCE: LOT LINE ADJUSTMENT PLAN PREPARED FOR
COLONIAL DOVER PROPERTIES, LLC
AND CITY OF DOVER, N.H.
LONG HILL ROAD & NH ROUTE 16B
DOVER, NEW HAMPSHIRE
McENEANEY SURVEY ASSOCIATES
JANUARY 4, 1999 SCRD #55-79

RAYMOND G. SWEATT & PERLEY J. COLE
FINAL PLAN
STRAFFORD WOODS
G.L. DAVIS & ASSOCIATES
MAY 1960 SCRD Po 7, Fo 2, PLAN #7

7.) ZONING B-3

MIN. LOT SIZE:	20,000 SQ.FT.
MIN. FRONTAGE	125 FT
MIN. SETBACKS:	
FRONT	50 FT
SIDE	12 FT
REAR	15 FT
MAX LOT COVERAGE	50 %
MAX BLDG. HEIGHT	40 FT

8.) THE RAW UNADJUSTED CLOSURE OF OUR RANDOM POINT TRAVERSE WAS 1 PART IN 26,000, AND WAS ACCOMPLISHED BY TRITECH ENGINEERING USING A TOPCON GT 503 TOTAL STATION, DURING THE MONTH OF MARCH, 2017.

9.) SUBJECT PARCEL IS NOT WITHIN A FEDERALLY DESIGNATED SPECIAL FLOOD HAZARD ZONE (PANEL 0310E, MAP No. 33017C0310E, DATE. 9-30-2015).

10.) BASIS OF BEARING: BEARING SYSTEM BASED ON GPS FIELD OBSERVATIONS ON FEBRUARY 31, 2017 USING TOPCON HIPER SR RECEIVERS AND OPUS CORRECTED ON MARCH 13, 2017. DATUM BASED ON NEW HAMPSHIRE STATE PLANE COORDINATES SPC (2800 NH), (NAVD 88). COORDINATES SHOWN ARE DOVER GIS SYSTEM.

11.) DURING THE MONTH OF AUGUST, 2017 MICHAEL MARIANO, STATE OF NEW HAMPSHIRE CERTIFIED SOIL SCIENTIST #176, NH CERTIFIED WETLAND SCIENTIST #183, CONDUCTED AN ON-SITE WETLANDS DELINEATION OF THE SUBJECT PARCEL. NO WETLANDS WERE OBSERVED.

12.) ON JUNE 15, 2017, (Z17-11) THE DOVER ZONING BOARD OF ADJUSTMENT GRANTED A VARIANCE FROM SECTION 170-12.A OF THE ZONING ORDINANCE TO PERMIT, A MULTI-FAMILY DWELLING (15 UNITS) WHERE MULTI-FAMILY DWELLING IS A USE PERMITTED BY SPECIAL EXCEPTION AND THE APPLICANT'S PROPOSAL DOES NOT MEET ONE OF THE TWO SPECIAL EXCEPTION CRITERIA, WHICH REQUIRES THAT DWELLING UNITS ARE LOCATED ONLY ON THE SECOND STORY OR HIGHER OF A NEWLY CONSTRUCTED STRUCTURE. CONDITION: THE APPLICANT SHALL CONVERT THE EXISTING MIXED-USE BUILDING TO COMMERCIAL ONLY AND OBTAIN A CERTIFICATE OF OCCUPANCY FOR THE CONVERTED SPACE PRIOR TO OBTAINING A BUILDING PERMIT FOR THE PROPOSED RESIDENTIAL-ONLY STRUCTURE.

13.) ON JUNE 15, 2017, (Z17-10) THE DOVER ZONING BOARD OF ADJUSTMENT GRANTED A SPECIAL EXCEPTION PER SECTION 170-12.A OF THE ZONING ORDINANCE TO PERMIT, MULTI-FAMILY DWELLINGS. CONDITION: THE EXISTING BUILDING WILL BE COMMERCIAL.

14.) PARKING CALCULATION

BUILDING "A" - COMMERCIAL		
3,664 SQ.FT. / 275	13.3 = 14 SPACES	14 SPACES
BUILDING "B" - MIXED USE		
8 RESIDENTIAL		
1.9 x 8 = 15.2 = 16 SPACES		16 SPACES
NONE FOR COMMERCIAL		
2,436 SQ.FT. / 275	8.8 = 9 SPACES	0 SPACES
		16 SPACES
BUILDING "C" - RESIDENTIAL		
1.9 x 7 = 13.3 = 14 SPACES		14 SPACES
		44 SPACES, ALLOWED
PARKING PROVIDED		
37 SPACES, EXTERIOR		
15 SPACES, GARAGES		

15.) STATE AND FEDERAL PERMITS REQUIRED: EPA NOI

LEGEND

- REBAR WITH ID CAP TO BE SET
- UTILITY POLE
- FENCE POST
- SEWER MANHOLE
- HYDRANT
- BUILDING ENTRANCE
- DECORATIVE "PORCH LIGHT"
- POROUS PAVEMENT

TRITECH
ENGINEERING CORPORATION
795 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
TELEPHONE 603 742 8107
FAX 603 742 3690

REVISIONS:

DATE:	DESCRIPTION:
11-21-17	REVISED PER TRC COMMENTS

GENERAL SITE DEVELOPMENT PLAN

PERRO PLACE

52 OLD ROCHESTER ROAD
DOVER, NEW HAMPSHIRE

OCTOBER 19, 2017 JOB No. 1710 2

SCALE: 1" = 30'

SHEET No. SP-1

(P17-74)

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P17-79

Application Type:	Conditional Use Permit
Applicant(s):	Salty Sea, LLC
Owner(s):	Thomas Cauley, Sr.
Location:	52 Old Rochester Road (Tax Map 40, Lot 25)
Meeting Date:	December 12, 2017

INTENT: To obtain a Conditional Use Permit to allow 52 parking spaces where 44 is the maximum allowed per 149-14.D(3).

LOTS/UNITS PROPOSED: 15 residential, 2+ commercial

AGENDA ITEM: # 4-E

ACREAGE: 1.723 acres

ZONING DISTRICT: Thoroughfare Business (B-3)

EXISTING LAND USE: Commercial and one residential unit

PROPOSED LAND USE: Residential and Commercial

SURROUNDING LAND USE:
Office/warehouse, Long Hill Dog Park, single- and two-family dwellings

ZBA ACTION:
- H85-68: Approved variance to permit an apartment to be added to the existing retail building
- Z17-11: Approved variance from sp. ex. criteria requiring residential to be on second floor or higher (permitting garages for building C)
- Z17-10: Approved sp. ex. to permit multi-family dwellings

ATTACHMENTS:
Site Plan application, materials, and parking plan

APPLICATION IS COMPLETE: Yes

NOTICES SENT: Abutter notices were sent by certified mail to all abutters for this meeting

PERMITS REQUIRED:
-Conditional Use Permit
-EPA NOI

WAIVERS REQUESTED: N/A for this case

Summary of Request and Background
The applicant is requesting 8 additional parking spaces which will be on permeable pavement as shown on the attached parking plan.

The applicant came before the Technical Review Committee on November 9 (minutes attached).

Consistency with Land Use Regulations
Chapter 149-14.D(3) allows for a Conditional Use Permit to be granted by the Planning Board (RSA 674:21 II) after proper public notice and public hearing for the purpose of altering any provisions of Chapter 149-14-D, Parking Regulation Table provided that the proposed project complies with the following standards:

(i) The APPLICANT shall submit an analysis justifying a request for increased parking requirements.

(ii) The Conditional Use Permit application shall describe why increased parking is essential to each USE.

(iii) The APPLICANT must show that the use(s) cannot be adequately served by a combination of on and off street parking.

(iv) The APPLICANT shall design and construct the additional vehicle storage areas, for additional parking requested, using pervious materials. The design of the area shall meet or exceed standards developed and outlined in the New Hampshire Stormwater Manual. The APPLICANT shall also be required to retain the design engineer as an inspector for the duration of construction of the parking area.

(v) The APPLICANT shall include provide one (1) ELECTRIC VEHICLE CHARGING STATION for every ten (10) parking spaces requested over the required cap. ELECTRIC VEHICLE CHARGING STATION spaces shall comply with Chapter 149-14-D) 5) unless determined otherwise by the Planning Board.

(vi) There shall be no detrimental effects on surrounding properties by any proposal.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application, hold the public hearing, and approve the Conditional Use Permit as it meets the criteria of a CUP.

52 Old Rochester Road

Property Information

Property ID	40025-000000
Location	52 OLD ROCHESTER RD
Owner	CAULEY THOMAS J SR

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 6/13/2017
Properties updated 12/06/2017

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: May 18, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: 104 Wash Street, LLC Telephone # 617.840.4778

Address of Applicant: 11 Beacon Street, STE 1120 Boston, MA 02108

E-Mail Address: Robs@cathartes.com

Name of Property Owner (if different from applicant): N/A Telephone # N/A

Address of Property Owner: N/A

PROPERTY INFORMATION

Assessor's Map # 2 Lot(s) # 2,3,4,5,6,6A,7,8,8A,9

Address of Property: 104 Washington Street

Zoning District(s) CBD - General(CBD-G) Overlay District(s) N/A

Existing Use of Property: Vacant, Formerly Robbins Auto Parts

CONDITIONAL USE PERMIT INFORMATION

Type of Conditional Use Permit (Check All That Apply):

☐ Conservation District ☐ RCM Use Overlay District ☐ I-1 District Uses

☐ Groundwater Protection ☐ Off-Street Parking and Loading ☐ Alternative Treatment Center

☐ Wetland Protection District ☒ Central Business District ☐ Heritage Residential District

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

See Attached

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES Sewer Connection Permit - Pending

Name of Professional That Prepared Plans: Tighe & Bond, Patrick Crimmins

Address 177 Corporate Drive, Portsmouth, NH 03801 Telephone #: 603-433-8818

Professional License #: 12378 E-mail address: pcrimmins@tigheBond.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 11/20/17

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 11/20/17

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
2	2, 3, 4, 5, 6, 6A, 7, 8, 8A & 9	104 Wash Street, LLC. c/o Cathartes	11 Beacon Street, Suite 1120 Boston, MA 02108

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Patrick Crimmins	Tighe & Bond (Engineer)	177 Corporate Drive, Portsmouth NH, 03801
William Doucet	Doucet Survey Inc. (Surveyor)	102 Kent Place, Newmarket , NH 03857
Robert Del Savio	EMBARC Studio (Architect)	60 K Street, 3r Floor, Boston MA 02127
Robbi Woodburn	Woodburn & Company (Landscape Architect)	103 Kent Place, Newmarket, NH 03857

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

Applicant – 104 Wash Street LLC
Property – 104 Washington Street, Map 2, Lots 2, 3, 4, 5, 6, 6A, 7, 8, 8a & 9

Requests for Conditional Use Permits

Central Business District – General Sub District

Conditional Use Permits -

Approval for relief of standards may be granted after public hearing provided project complies with following standards:

- Design of Street & Buildings reinforces safe environments
- Arch and landscape design shall grow from local climate, history, building practice
- Preservation of historic buildings facilitated
- Requested use is compatible with abutting uses and surrounding area
- Requested use will not create traffic or impair safety of pedestrian
- Will not result in odor or noise

Proposed Conditional Use Permits: (3)

Zoning Section	Zoning Requirement	PROPOSED	REASON
CBD Table – Min. Lot Coverage	*75%*	60%	We don't feel it would be feasible at this time to have retail down Locust and Chestnut streets. In addition, to have a viable residential project we need parking on site and going underground is prohibitive.
CBD Table – Frontage Build-Out	*70% Min.*	65%	The current design has provided great commercial activity on Washington Street which is the busier thoroughfare. Our proposed screening for the parking in the rear will help alleviate any parking lot screening concerns. In addition, to have a viable residential project we need parking on site and going underground is prohibitive.
CBD Table – Ground Floor Standards -170-20(D)(3)(h)	*Only non-residential uses shall be on the ground floor level*	Part of the ground floor footprint is for the Residential Leasing, Management & Amenity.	We have made sure our ground floor design maximizes the retail frontage along Washington street. However, to be competitive in the market we need a visible and inviting leasing area as well as a generous amenity space.

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P17-77

Application Type:	Minor Lot Line Adjustment for Review
Applicant(s):	Timothy & Cheryl Lindsay Rev. Trust & Robert & Lucille E. Richard Rev. Trust
Owner(s):	Timothy & Cheryl Lindsay Rev. Trust & Robert & Lucillle E. Richard Rev.Trust
Location:	4 & 10 Bay View Road (Assessor's Map J, Lots 17 & 18A)
Meeting Date:	December 12, 2017

INTENT: To adjust a lot line between two lots. Lot 17 will go from 0.64 acres to 0.665 acres. Lot 18-A will go from 1.25 acres to 1.231 acres.

LOTS/UNITS PROPOSED: N/A

AGENDA ITEM #: 4-F

ACREAGE	**Existing:**	**Proposed**
Lot 17:	27,985 s.f	28,987 s.f
Lot 18-A:	54, 629 s.f	53,627 s.f

ZONING DISTRICT: Rural Residential District (R-40)

EXISTING LAND USE: Residential

PROPOSED LAND USE: N/A

SURROUNDING LAND USE: Residential

ZBA ACTION: None

ATTACHMENTS: Application, LLA Plan

APPLICATION IS COMPLETE: Yes

NOTICES SENT: Abutter notices were sent by certified mail to all abutters for this meeting

PERMITS REQUIRED: None

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant proposes to adjust the lot lines between 2 lots. Lot 17 will go from 27,985 s.f (0.642 acres) to 28,987 s.f (0.665 acres). Lot 18-A will go from 54,629 s.f. (1.254 acres) to 53,627 s.f. (1.231 acres).

Lot 17 is already non-conforming (40,000 square feet minimum lot size and the lot is currently 27,985 square feet and will be 28,987 square feet. So this does not create a new non-conformity.

The lot line is moving 5.04' easterly which will make lot 17 slightly more conforming in lot area although not enough to make it conform to the 40,000 s.f. minimum lot area. Since lot 17 is a corner lot, it meets the frontage requirement of 150'. Lot 18-A remains conforming to the minimum frontage and the minimum lot area.

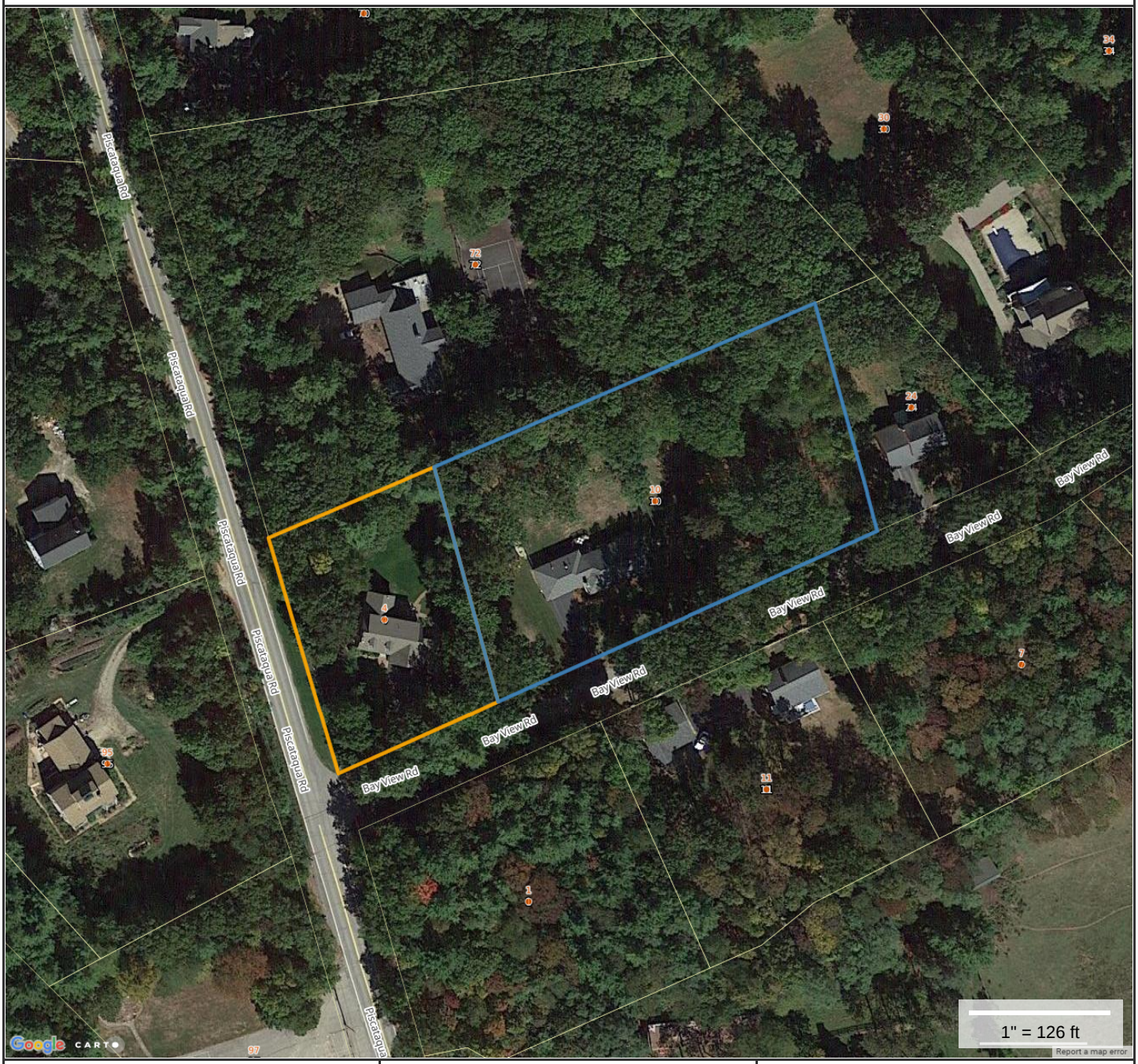
Consistency with Land Use Regulations
Chapter 155-18 of the Land Subdivision Regulations of the City Code provides for the adjustment of existing lot lines between two or more lots. This plan is consistent with those regulations by lessening the non-conformity.

Staff Recommendation:
The Planning Department recommends that the Board accept the application, open the public hearing, and vote to approve the lot line adjustment plan with the following conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The applicant shall provide the Planning Department with a digital version of the final plat.
2. The applicant shall revise the plat to:
   a. Include the Licensed Land Surveyor signature and stamp
   b. Add the owner's signatures to the final plat submitted for signature to be recorded at the Strafford County Registry of Deeds
   c. Add Planning file number to be P17-77 on all sheets
   d. Revise note 4 to indicate proposed and existing area in both square feet and acres.
   e. Revise lot area calculations to indicate acres in addition to square feet.
   f. Indicate well radii
   g. Add common minor subdivision note 14 about Dover GIS tie in.

4 and 10 Bayview Road



Property Information

Property ID	J0018-A00000
Location	10 BAY VIEW RD
Owner	RICHARD ROBERT A &

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 6/13/2017
Properties updated 12/06/2017

City of Dover, New Hampshire
MINOR LOT LINE ADJUSTMENT APPLICATION

[Revision Date: May 18, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT INFORMATION

Name of Applicant: Timothy Lindsay Telephone #603-516-2612 w

Address of Applicant: 4 Bayview Road, Dover, NH

FIRST PROPERTY OWNER AND PARCEL INFORMATION

Name of 1st Property Owner (*if different from applicant*): Same Telephone #_____

Address of 1st Property Owner: _____

Address of Property: 4 Bayview Road, Dover, NH

Assessor's Map # J Lot(s) # 17

Property Deed: Book 4334 Page: 156

Zoning District(s) R-40 Overlay District(s) _____

Size of Existing Parcel (sq. ft.): 27,985 Size of Proposed Parcel (sq. ft.): 28,987

SECOND PROPERTY OWNER AND PARCEL INFORMATION

Name of 2nd Property Owner (*if different from applicant*): Lucille E. Richard Rev. Trust of 2000 Telephone #_____

Address of 2nd Property Owner: 10 Bayview Road, Dover, NH

Address of Property: 10 Bayview Road, Dover, NH

Assessor's Map # J Lot(s) # 18A

Property Deed: Book 2225 Page: 335

Zoning District(s) R-40 Overlay District(s) _____

Size of Existing Parcel (sq. ft.): 54,629 Size of Proposed Parcel (sq. ft.): 53,627

[Use additional application form if more than two lots are being adjusted]

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Paul J. Connolly, P.E., P.L.S.

Address Civilworks New England, PO Box 1166, Dover NH 03821 Telephone #: 603.749.0443

Professional License #: 683 E-mail address: pconnolly@civilworksne.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of First Property Owner: _____ Date: 10/24/17

Signature of Second Property Owner: Lucille E. Richard Date: 10/24/17

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: 10.30.17

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 10/24/17

CITY OF DOVER MINOR LOT LINE ADJUSTMENT
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
J	18A	Timothy Lindsay	4 Bayview Road, Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Paul J. Connolly	Civilworks New England	PO Box 1166, Dover, NH 03821

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

City of Dover, New Hampshire
LOT LINE ADJUSTMENT SUBMISSION CHECKLIST

[Revision Date: May 15, 2017]

This review checklist is intended to assist the applicant in the planning process of preparing a Subdivision application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

Fifteen (15), folded, copies of the plan set and materials will be due 3 weeks prior to the Planning Board meeting. Fees will be invoiced and are due 2 weeks prior to Planning Board.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision requirements. Please refer to the Subdivision Regulations for full details.

APPLICANT: Timothy Lindsay File Number: P17

PROPERTY LOCATION: 4 & 10 Bayview Road Tax Map: J Lot: 17 & 18A

	Explain How Provided	Reviewed
1. Completed and signed Application form	x	
2. Electronic copy of the surveyed plat layout	x	
3. Electronic copy of supplementary materials and application	x	
4. List of all professional agents to be notified for Planning Board	x	
5. Fifteen copies of LLA plan w/scale of not less than 1"=50' or 1"=100' for larger adjustments. Plans shall contain the following items as appropriate:	x	
Location map at appropriate scale	x	
Planning File #	x	
Date, north arrow and scale	x	
Names of all abutting property owners	x	
Name and address of owners	x	
Signature & stamp of NH licensed land surveyor	x	
Zoning District boundaries, including any special or overlay districts	x	
Location of Conservation District areas		
Location, names and widths of existing and streets, including pavement widths, grades, curbs and crosswalks	x	
Location and widths of existing & proposed easements & right of ways		
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	x	
Existing and proposed lot areas in square feet	x	
Existing and proposed buildings and structure locations	x	
Minimum building setbacks or build to lines on all lots	x	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	x	
Location, material and size of existing and proposed permanent monuments	x	
All applicable Dover Common Subdivision notes	x	

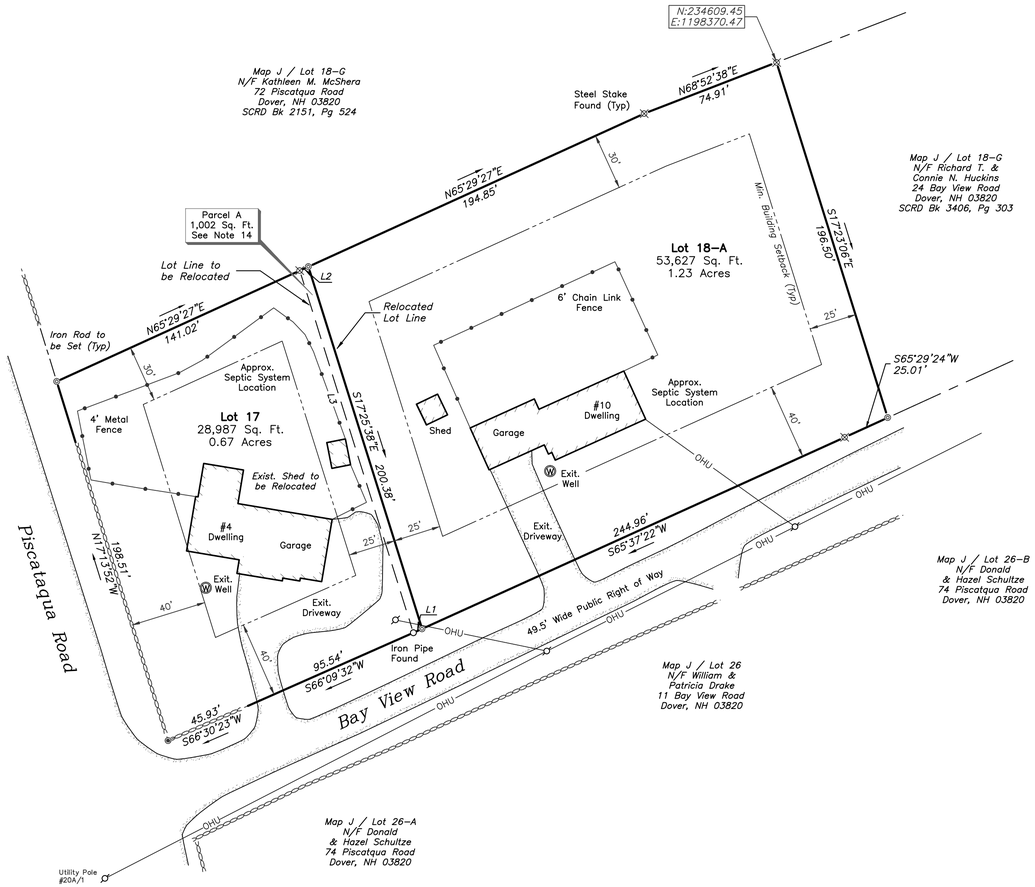
REVIEWED BY: _____ DATE_____

Legend:

L1	See Curve Table
N/F	Now or Formerly
OHU	Overhead Utilities
SCRD	Strafford County Registry of Deeds
o	Iron Pipe Found
⊠	Steel Stake Found
◉	Drill Hole to be Set
◎	Iron Rod to be Set
○	Utility Pole
	Stone Wall
	Building Setback

Length Table:

LINE	BEARING	DISTANCE
L1	S65°37'22"W	5.04'
L2	N65°29'27"E	5.04'
L3	N17°25'38"W	200.37'



Lot Area Calculations:

LOT NO.	EXISTING LOT AREA	PROPOSED LOT AREA	EXISTING FRONTAGE	PROPOSED FRONTAGE
17	27,985 S.F.	28,987 S.F.	141.48'	146.51'
18–A	54,629 S.F.	53,627 S.F.	275.00'	269.96'

N

See Note 10.

For Registry of Deeds Purposes

Notes:

1. The intent of this plan is to relocate the existing lot line between the subject properties.
2. Owners of Record are: Lot 17
   Timothy D. & Cheryl A. Lindsay
   4 Bay View Road
   Dover, NH 03820

   _____
   Authorized Signature

   Lot 18–A
   Robert A. & Lucille E. Richard
   10 Bay View Road
   Dover, NH 03820

   _____
   Authorized Signature
3. The parcels are shown as Lot No. 17 & 18–A, Map J of the City of Dover Tax Assessor's Maps.
4. Lot 17 contains 0.64 acres or 27,985 sq. ft. area of land and Lot 18–A contains 1.25 acres or 54,629 sq. ft. area of land.
5. Title reference for the project parcels are the Strafford County Registry of Deeds, Book No. 4334, Page No. 156 (Lot 17) and Book No. 1717, Page No. 657 (Lot 18–A).
6. Reference Plans:
   a.) "Plan of Land Belonging to George E. Prescott, Dover, NH," dated Nov. 1970, prepared by K. E. Moore & B. G. Staples, SCRD Plan #35, Pocket #1, Folder #13.
   b.) "Plan of Land Belonging to Franklin Prescott, Dover, NH," dated Dec. 1970, prepared by K. E. Moore & B. G. Staples, SCRD Plan #59, Pocket #1, Folder #13.
7. Zoning dimensional and density requirements are as follows:
   a. Zoning districts R–40
   b. Minimum lot size is 40,000 sq. ft.
   c. Minimum lot frontage is 150 ft.
   d. Minimum yard setbacks:
      Front 40 ft.
      Side 25 ft.
      Rear 30 ft.
      Abut–a–street 40 ft.
   e. Maximum lot coverage 10%
   f. Maximum building height 35 ft.

   Outbuildings/Accessory Use
   Minimum yard setbacks:
      Front 40 ft.
      Side 10 ft.
      Rear 10 ft.
      Abut–a–street 40 ft.
8. Property line information has been obtained from an on the ground survey performed by Civilworks New England October 4, 2017, with an error of closure not greater than 1 in 10,000.
9. Subject parcels are not located within a Federally designated flood hazard area as depicted on FEMA Community panel number 33017C0340E, Effective Date: September 30, 2015.
10. Basis of bearing is the New State Plane USA/NAD83–86 was used to determine location and orientation datum.
11. Both parcels are currently served by overhead utilities.
12. Both parcels lots are currently served by private well and subsurface septic systems.
13. The existing use for each lot is single family.
14. Parcel A is to be conveyed from Lot 18–A to Lot 17 and is not to be considered a separate lot.

I certify, that this plan, based upon the plan reference and an on the ground field survey conducted October 4, 2017, meet the minimum requirements for accuracy and completeness per the the City of Dover and that the lot lines shown hereon have an error of closure of 1:10,000 or better.

_____
Paul J. Connolly, NH Licensed Land Surveyor #683 Date

GRAPHIC SCALE: 1"=40'

40 0 20 40 80 160

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	BY	APP'D	DATE

DATE: 10–30–17
SCALE: 1"=40'
DRAWN BY: DWV
DESIGN BY: PJC
APPROVED BY:PJC
PROJECT NO:1773
FILE:

LOT LINE ADJUSTMENT PLAN

4 & 10 BAY VIEW ROAD
DOVER, NH
COUNTY OF STRAFFORD

LOT LINE ADJUSTMENT PLAN PREPARED FOR
TIMOTHY D. & CHERYL A. LINDSEY AND
ROBERT A. & LUCILLE E. RICHARD
TAX MAP J, LOTS 17 & 18–A

C–1

ONLY SHEET C–1 IS TO BE RECORDED

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P17-78

Application Type:	Conditional Use Permit
Applicant(s):	Frederic & Deborah Federlein
Owner(s):	Frederic & Deborah Federlein
Location:	11 Landing (Tax Map L, Lot 95-1K)
Meeting Date:	December 12, 2017

INTENT: To obtain a Conditional Use Permit to conduct work adjacent to the Piscataqua River in a tidal wetland with 883 sq. ft. of temporary impact and 205 sq. ft. of permanent impact.

LOTS/UNITS PROPOSED: N/A

AGENDA ITEM: # 4-G

ACREAGE: 0.64 acres

ZONING DISTRICT: Low-Density Residential (R-20)

EXISTING LAND USE: Residential

PROPOSED LAND USE: N/A

SURROUNDING LAND USE: Residential, Piscataqua River

ZBA ACTION: None

ATTACHMENTS:
CUP application and materials, November 13 Conservation Commission minutes, and plan

APPLICATION IS COMPLETE: Yes

NOTICES SENT: Abutter notices were sent by certified mail to all abutters for this meeting

PERMITS REQUIRED:
-Conditional Use Permit
-NH Wetlands & Shorelands Permit

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is requesting a Conditional Use Permit to build a pervious paver patio with retaining wall and a new walkway to existing dock, within the 100 foot Conservation District adjacent to the tidal Piscataqua River, with 883 square feet of temporary impact and 205 square feet of permanent impact. Three existing retaining walls are proposed to be rebuilt but only one is in the Conservation District.

The Conservation Commission reviewed and endorsed this project at their November 13, 2017 meeting (minutes attached).

Consistency with Land Use Regulations
The Conservation District ordinance provides for Conditional Use Permits to allow impacts within 100' of a tidal river if standards related to demonstration of need, avoidance, minimization, and mitigation are met. This proposal is consistent with those standards, best management practices and the City's regulations.

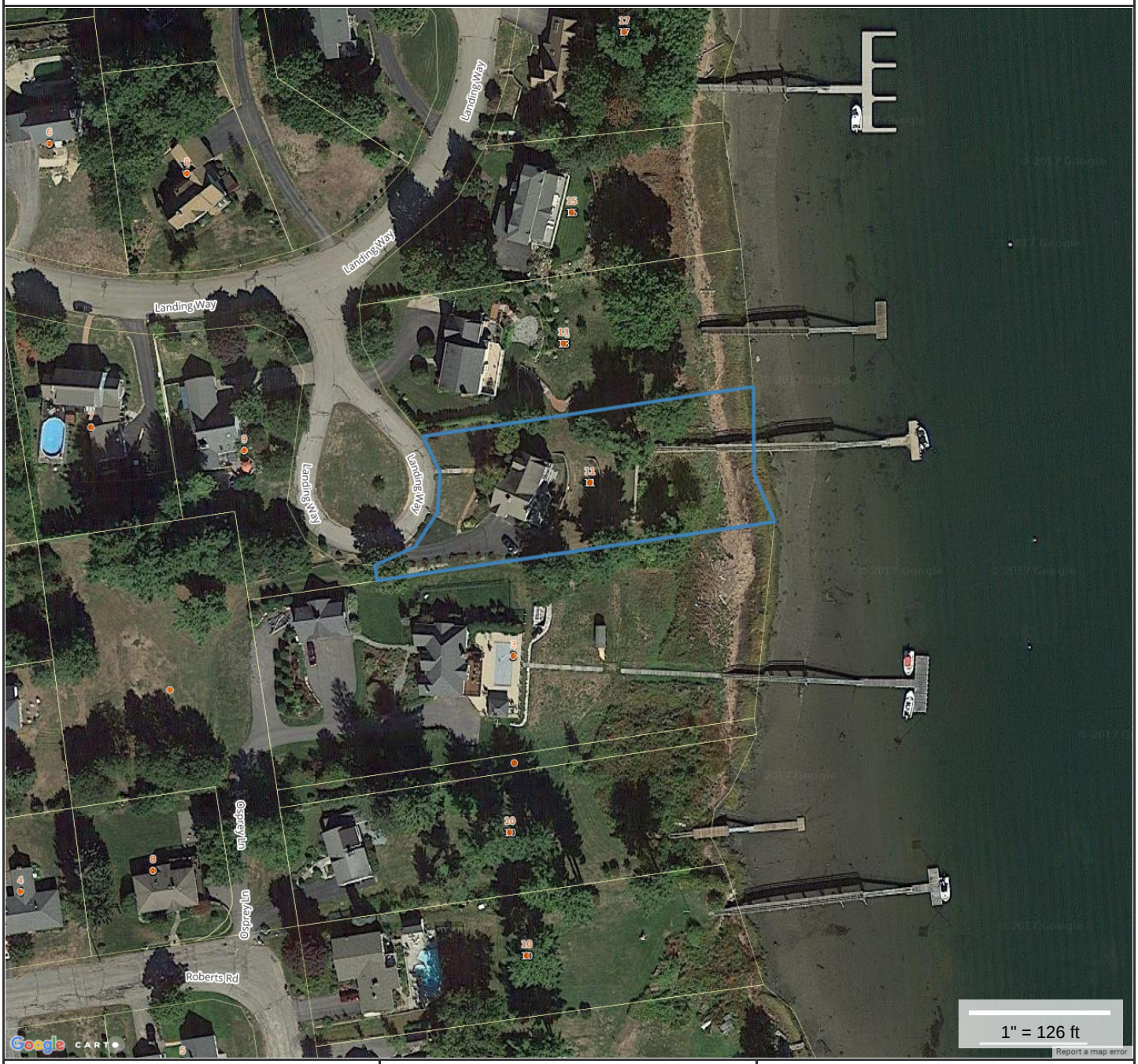
STAFF RECOMMENDATION:

The Planning Department recommends the Planning Board accept the application, open the public hearing, and then approve the application with the following Conditions:

Conditions to Be Met Prior to the Issuance of the Conditional Use Permit:

1. The applicant shall revise the plat to:
    a. Add the owner's signatures.
    b. Add Planning File Number P17-78
    c. Have the Certified Wetland Scientist, Licensed Land Surveyor, and Professional Engineer re-stamp and sign
    d. Add note about tying into Dover GIS and supplying a DWG to the City
2. The applicant shall provide:
    a. Copy of the NHDES Wetlands & Shorelands permit.

11 Landing Way



Property Information

Property ID	L0095-01K000
Location	11 LANDING WY
Owner	FEDERLEIN FREDERIC H &

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 6/13/2017
Properties updated 12/06/2017

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: May 18, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: Frederic H. & Deborah Federlein Telephone # 603-842-5575

Address of Applicant: 11 Landing Way, Dover, NH 03820

E-Mail Address: fredf@netfred.com

Name of Property Owner (if different from applicant): _____ Telephone #_____

Address of Property Owner: _____

PROPERTY INFORMATION

Assessor's Map # L Lot(s) # 95-1-K

Address of Property: 11 Landing Way, Dover, NH 03820

Zoning District(s) Low Density Residential R-20 Overlay District(s) Conservation/Wetland Protection

Existing Use of Property: Residential

CONDITIONAL USE PERMIT INFORMATION

Type of Conditional Use Permit (Check All That Apply):

☒ Conservation District ☐ RCM Use Overlay District ☐ I-1 District Uses

☐ Groundwater Protection ☐ Off-Street Parking and Loading ☐ Alternative Treatment Center

☐ Wetland Protection District ☐ Central Business District ☐ Heritage Residential District

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

Please see attached letter.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NH DES Wetlands/NH DES Shoreland (to be submitted)

Name of Professional That Prepared Plans: John Chagnon, PE, LLS

Address 200 Griffin Road, Unit 3, Portsmouth, NH, 03801 Telephone #: 603-430-9282

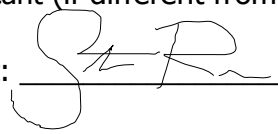
Professional License #: PE-7651, LLS-738 E-mail address: jrc@ambitengineering.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

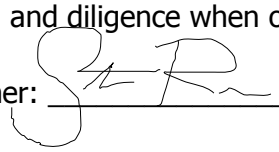
Signature of Property Owner: _____ Date: _____

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent:  Agent-See Authorization Date: 11/2/2017

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner:  Agent-See Authorization Date: 11/2/2017

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
L	95-1-K	Frederic H. & Deborah Federlein	11 Landing Way, Dover, NH, 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Steven D. Riker, CWS	Ambit Engineering, Inc.	200 Griffin Road, Unit 3, Portsmouth, NH 03820

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

2 November 2017

Wetland Inspector
New Hampshire Department of Environmental Services
Wetlands Bureau
29 Hazen Drive / P.O. Box 95
Concord, New Hampshire 03302

Re: NHDES Minimum Impact Expedited Wetland Application
Tax Map L, Lot 95-1-K
11 Landing Way
Dover, New Hampshire

Dear Wetland Inspector:

This letter transmits a New Hampshire Department of Environmental Services (NHDES) Minimum Impact Expedited Wetland Application request to permit 883 sq. ft. of temporary impact, and 205 sq. ft. of permanent impact to the previously developed 100' Tidal Buffer Zone for site improvements on the subject lot.

The project proposes 883 sq. ft. of temporary impact, and 205 sq. ft. of permanent impact for site improvements including replacement of an existing retaining wall, construction of a pervious paver patio, and construction of a new walkway leading to the existing tidal docking structure.

Attached to this application you will find a "DES Permit Plan-C2" which depicts the existing lot, jurisdictional areas, abutting parcels, existing structures, proposed work, and temporary impact areas.

In order to complete the application package for this project, the DES Wetlands Bureau rules in Chapter Env-Wt 300 have been thoroughly reviewed, specifically Env-Wt 302.04 (b) and Env-Wt 302.04(c). Items listed in rule Env-Wt 302.04 (b) are addressed below.

1. Type of wetlands impacted;
   The project proposes no wetland impacts. The impacts are to the previously developed 100' Tidal Buffer Zone. The wetlands located adjacent to the property are part of a larger tidal wetland system (Piscataqua River). The tidal wetlands associated with the site are classified as an estuarine intertidal emergent persistent wetland system that is regularly flooded by the tides (E2EM1P).

2. The surface area of the wetlands that will be impacted;
   The project proposes no wetland impacts. The impacts are to the previously developed 100' Tidal Buffer Zone.

3. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters;

The project proposes no wetland impacts. The impacts are to the previously developed 100' Tidal Buffer Zone. The wetlands located adjacent to the property are part of a larger tidal wetland system.

4. The impact to abutting owners pursuant to RSA 482-A:11, II;

There are no impacts to the abutters interests.

5. Lack of alternatives with lesser wetlands and surface water impacts.

The project proposes no wetland impacts or surface water impacts. The impacts are to the previously developed 100' Tidal Buffer Zone.

Items listed in rule Env-Wt 302.04 (c) are addressed below.

1. The extent to which a project impacts beach or tidal flat sediment replenishment and movement of sediments along a shore;

The project proposes no impact to a beach or tidal flat. There will be no impacts to sediment replenishment or the movement of sediments along a shore.

2. The impact on a tidal wetlands ability to dissipate wave energy and storm surge;

There will be no impacts to the tidal wetland that exists on site which functions to dissipate wave energy and/or storm surge.

3. The impact of project runoff on salinity levels in tidal environments.

The project will have no impact on the lots ability to contain stormwater or runoff and provide treatment before it enters adjacent resource areas.

Please contact me if you have any questions or concerns regarding this application.

Respectfully submitted,

Steven D. Riker, CWS
NH Certified Wetland Scientist/Permitting Specialist
Ambit Engineering, Inc.

30 August, 2017

To Whom It May Concern

RE: New Hampshire Department of Environmental Services Application and City of Dover Conditional Use Permit Application for residential site improvements for Frederic H. & Deborah Federlein, 11 Landing Way, Dover, NH.

This letter is to inform the New Hampshire Department of Environmental Services and the City of Dover, in accordance with State Law that Ambit Engineering is authorized to represent me as my agent in the approval process.

Please feel free to call me if there is any question regarding this authorization.

Sincerely,

Frederic H. & Deborah Federlein
11 Landing Way
Dover, NH 03820
603-842-5575

X Frederic H Federlein

X

NHDES-W-06-012

WETLANDS PERMIT APPLICATION

Land Resources Management
Wetlands Bureau
Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: RSA 482-A/ Env-Wt 100-900

Administrative Use Only	*Administrative Use Only*	*Administrative Use Only*	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME:
Indicate your Review Time below. Refer to Guidance Document A for instructions.

☐ Standard Review (Minimum, Minor or Major Impact) ☒ Expedited Review (Minimum Impact only)

2. PROJECT LOCATION:
Separate applications must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: **11 Landing Way**			TOWN/CITY: **Dover**
TAX MAP: **L**	BLOCK:	LOT: **95-1-K**	UNIT:
USGS TOPO MAP WATERBODY NAME: **Piscataqua River** ☐ NA		STREAM WATERSHED SIZE: ☒ NA	
LOCATION COORDINATES (If known): **X:1,206,058.5258** **Y: 236,499.8669** ☒ State Plane		☐ Latitude/Longitude ☐ UTM	

3. PROJECT DESCRIPTION:
Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The project proposes 883 sq. ft. of temporary impact, and 205 sq. ft. of permanent impact for site improvements including replacement of an existing retaining wall, construction of a pervious paver patio, and construction of a new walkway leading to the existing tidal docking structure.

4. SHORELINE FRONTAGE

☐ NA This lot has no shoreline frontage. SHORELINE FRONTAGE: **116.5 feet**

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

5. RELATED PERMITS, ENFORCEMENT, EMERGENCY AUTHORIZATION, SHORELAND, ALTERATION OF TERRAIN, ETC.

6. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:
See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **17**___- **2702**___.

b. ☐ Designated River the project is in ¼ miles of: _____ ; and
date a copy of the application was sent to the Local River Management Advisory Committee: Month: __ Day: __ Year: ____
☒ NA

7. APPLICANT INFORMATION (Desired permit holder)			
LAST NAME, FIRST NAME, M.I.: **Federlein, Frederic H. & Deborah**			
TRUST / COMPANY NAME:	MAILING ADDRESS: **11 Landing Way**		
TOWN/CITY: **Dover**		STATE: **NH**	ZIP CODE: **03820**
EMAIL or FAX: **fredf@netfred.com**	PHONE: **603-842-5575**		
ELECTRONIC COMMUNICATION: By initialing here: _____, I hereby authorize NHDES to communicate all matters relative to this application electronically			
8. PROPERTY OWNER INFORMATION (If different than applicant)			
LAST NAME, FIRST NAME, M.I.:			
TRUST / COMPANY NAME:	MAILING ADDRESS:		
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL or FAX:	PHONE:		
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically			
9. AUTHORIZED AGENT INFORMATION			
LAST NAME, FIRST NAME, M.I.: **Riker, Steven, D.**	COMPANY NAME:**Ambit Engineering, Inc.**		
MAILING ADDRESS: **200 Griffin Road, Unit 3**			
TOWN/CITY: **Portsmouth**		STATE: **NH**	ZIP CODE: **03801**
EMAIL or FAX: **sdr@ambitengineering.com**	PHONE: **603-430-9282**		
ELECTRONIC COMMUNICATION: By initialing here SR, I hereby authorize NHDES to communicate all matters relative to this application electronically			
10. PROPERTY OWNER SIGNATURE: See the Instructions & Required Attachments document for clarification of the below statements			

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.

Agent-See Authorization Property Owner Signature	**Steven D. Riker** Print name legibly	11 / 2 / 2017 Date

MUNICIPAL SIGNATURES

11. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.

2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.

3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

12. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

Town/City Clerk Signature	Print name legibly	Town/City	Date
⇨			

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

13. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland		☐ ATF		☐ ATF
Scrub-shrub wetland		☐ ATF		☐ ATF
Emergent wetland		☐ ATF		☐ ATF
Wet meadow		☐ ATF		☐ ATF
Intermittent stream		☐ ATF		☐ ATF
Perennial Stream / River	/	☐ ATF	/	☐ ATF
Lake / Pond	/	☐ ATF	/	☐ ATF
Bank - Intermittent stream	/	☐ ATF	/	☐ ATF
Bank - Perennial stream / River	/	☐ ATF	/	☐ ATF
Bank - Lake / Pond	/	☐ ATF	/	☐ ATF
Tidal water	/	☐ ATF	/	☐ ATF
Salt marsh		☐ ATF		☐ ATF
Sand dune		☐ ATF		☐ ATF

Prime wetland		☐ ATF		☐ ATF
Prime wetland buffer		☐ ATF		☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)		☐ ATF		☐ ATF
Previously-developed upland in TBZ	205	☐ ATF	883	☐ ATF
Docking - Lake / Pond		☐ ATF		☐ ATF
Docking - River		☐ ATF		☐ ATF
Docking - Tidal Water		☐ ATF		☐ ATF
TOTAL	205 /		883 /	

14. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☒ Minimum Impact Fee: Flat fee of $ 200

☐ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) _____ sq. ft. X $0.20 = $ _____

Temporary (seasonal) docking structure: _____ sq. ft. X $1.00 = $ _____

Permanent docking structure: _____ sq. ft. X $2.00 = $ _____

Projects proposing shoreline structures (including docks) add $200 = $ _____

Total = $ **200.00**

The Application Fee is the above calculated Total or $200, whichever is greater = $ **200.00**

Map by NH GRANIT

Legend

- State
- County
- City/Town

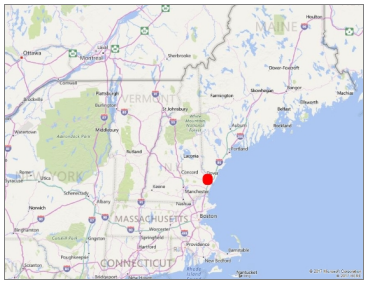
Map Scale

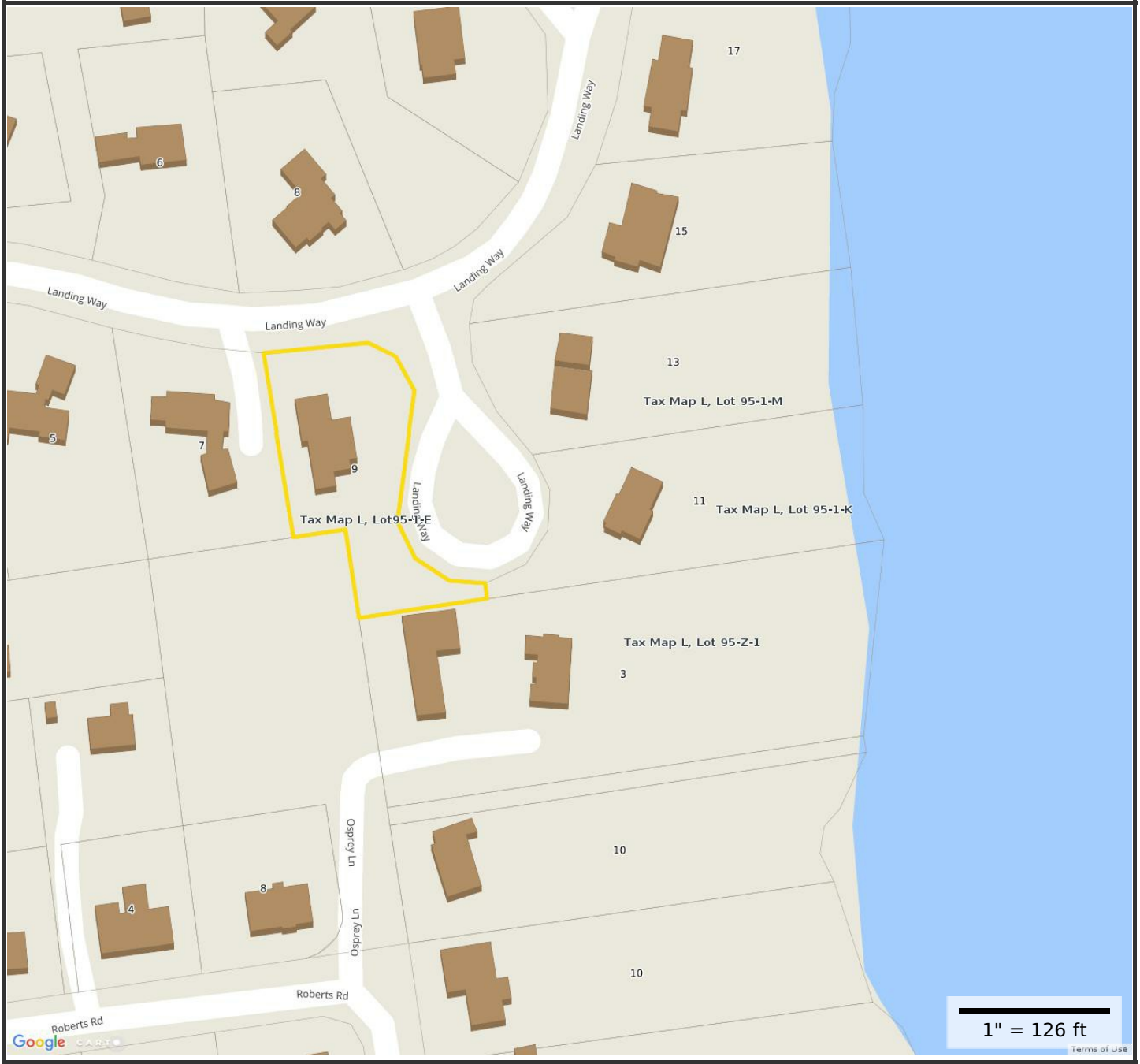
1: 25,977

© NH GRANIT, www.granit.unh.edu

Map Generated: 8/30/2017

Notes





Property Information

Property ID	L0095-01E000
Location	9 LANDING WY
Owner	BLAHUT LAWRENCE A &

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 6/13/2017
Properties updated 10/29/2017

ABUTTER'S LIST

JN 2818
Client: Frederic H. & Deborah Federlein
Project Address: 11 Landing Way, Dover, NH.

MAP	LOT	NAME(S)	PO BOX	STREET ADDRESS	CITY/STATE/ZIP
L	95-1-E	Lawrence A. & Nancy E. Blahut		9 Landing Way	Dover, NH 03820
L	95-1-M	Christopher & Kulli Barrett Rev. Trust Christopher & Kulli Barrett Trustees		12 Landing Way	Dover, NH 03820
L	95-Z-1	Doyle F. Skeels & Karen Wendell	PO Box 22425		Portsmouth, NH 03802

AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

2 November, 2017

Lawrence A. & Nancy E. Blahut
9 Landing Way
Dover, NH 03820

RE: New Hampshire Wetland & Shoreland Applications for site improvements for Frederic H. & Deborah Federlein, 11 Landing Way, Dover, NH.

Dear Property Owner,

Under NH RSA 482-A & RSA 483-B, this letter is to inform you in accordance with State Law that a Wetlands and Shoreland Permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to **impact the previously developed 100' Tidal Buffer Zone and the 250' Protected Shoreland for site improvements,** on behalf of your abutter, **Frederic H. & Deborah Federlein.**

This letter is sent to inform you as an abutter to the above-referenced property (according to local Municipal records) that **Frederic H. & Deborah Federlein** proposes a project that requires construction in the previously developed tidal buffer zone, the 250' Protected Shoreland, and jurisdictional wetland areas.

Plans are on file at this office, and once the application is filed, plans that show the proposed project and wetland and other jurisdictional impacts will be available for viewing during normal business hours at the office of the **Dover** clerk, **Dover City offices**, or once received by DES, at the offices of the DES Wetlands Bureau, (8 a.m. to 4 p.m.) (603) 271-2147. It is suggested that you call ahead to the appropriate office to ensure the application is available for review.

Please feel free to call if you have any questions or comments.

Sincerely,

Steven D. Riker
NH Certified Wetland Scientsist/Permitting Specialist

CERTIFIED MAIL/Return Receipt Requested

AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

2 November, 2017

Christopher & Kulli Barrett Revocable Trust
12 Landing Way
Dover, NH 03820

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AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

2 November, 2017

Doyle F. Skeels & Karen Wendell
PO Box 22425
Portsmouth, NH 03802

RE: New Hampshire Wetland & Shoreland Application for site improvements for Frederic H. & Deborah Federlein, 11 Landing Way, Dover, NH.

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Sincerely,

Steven D. Riker
NH Certified Wetland Scientsist/Permitting Specialist

CERTIFIED MAIL/Return Receipt Requested

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Extra Services & Fees (check box, add fee as appropriate)
Return Receipt (hardcopy) $
Return Receipt (electronic) $
Certified Mail Restricted Delivery $
Adult Signature Required $
Adult Signature Restricted Delivery $
Postage
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Total Po
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Sent To Lawrence A. & Nancy E. Blahut
Street a 9 Landing Way
City, Sta Dover, NH 03820
OCT 31 2017
Postmark Here
7017 0660 0001 1096 2989

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Street ar PO Box 22425
City, Sta Portsmouth, NH 03802
OCT 31 2017
Postmark Here
7017 0660 0001 1096 2965

NH DES Permit Application
Frederic H. & Deborah Federlein
Landscape Improvements

SITE PHOTOGRAPHS
Dover, NH

Site Photograph #1 September 2017

Site Photograph #2 September 2017

Site Photograph #3 September 2017

Site Photograph #4 September 2017

Site Photograph #5 September 2017

Site Photograph #6 September 2017

New Hampshire Natural Heritage Bureau

To: John Chagnon
200 Griffin Road
Unit 3
Portsmouth, NH 03801

Date: 8/30/2017

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 8/30/2017

VALID ONLY FOR NOTIFICTION OR MINIMUM EXPEDITED APPLICATIONS SUBMITTED TO THE NHDES WETLANDS BUREAU

NHB File ID: NHB17-2702

Applicant: Frederic H. & Deborah Federlein

Location: Tax Map(s)/Lot(s): Tax Map l, Lot 95-1-K
Dover

Project Description: The project proposes site improvements including a new stairway accessing the tidal dock, repair/replacement of the existing retaining walls, and re-configuration of the existing deck/patio.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 8/29/2018.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB17-2702

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

CONSTRUCTION SEQUENCE

DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.

INSTALL SILTSOXX TO CONTROL EROSION AND SEDIMENTATION PRIOR TO ANY EARTH MOVING ACTIVITIES.

STRIP AND STOCKPILE LOAM FROM SITE. STOCKPILES SHALL BE SURROUNDED WITH SILT FENCE TO CONTROL SEDIMENT RUN OFF.

INSTALL AND MAINTAIN EROSION CONTROL DEVICES AS SHOWN ON THE PLANS.

CONSTRUCT SITE IMPROVEMENTS.

LOAM AND SEED DISTURBED AREAS IN ACCORDANCE WITH VEGETATIVE PRACTICE AND GENERAL CONSTRUCTION NOTES. CUT AND FILL SLOPES SHALL BE SEEDED IMMEDIATELY AFTER THEIR CONSTRUCTION.

PLANT LANDSCAPING.

REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

GENERAL CONSTRUCTION NOTES

THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE". 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.

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED FOR MORE THAN 45 DAYS.

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

DUST CONTROL: IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

SILT FENCES AND SILTSOXX SHALL BE PERIODICALLY INSPECTED DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM. ALL DAMAGED SILT FENCES AND SILTSOXX SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

AVOID THE USE OF FUTURE OPEN SPACES (LOAM AND SEED AREAS) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ACCESS DRIVES AND PARKING AREAS.

ADDITIONAL TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS--CONSTRUCT SILT FENCE OR SILTSOXX AROUND TOPSOIL STOCKPILE.

AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL. STUMPS SHALL BE DISPOSED OF IN AN APPROVED FACILITY.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.

ALL NON-STRUCTURAL, SITE-FILL SHALL BE PLACED AND COMPACTED TO 90% MODIFIED PROCTOR DENSITY IN LAYERS NOT EXCEEDING 18 INCHES IN THICKNESS UNLESS OTHERWISE NOTED.

FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIAL, TRASH, WOODY DEBRIS, LEAVES, BRUSH OR ANY DELETERIOUS MATTER SHALL NOT BE INCORPORATED INTO FILLS.

FILL MATERIAL SHALL NOT BE PLACED ON FROZEN FOUNDATION SUBGRADE.

DURING CONSTRUCTION AND UNTIL ALL DEVELOPED AREAS ARE FULLY STABILIZED, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH ONE HALF INCH OF RAINFALL.

THE CONTRACTOR SHALL MODIFY OR ADD EROSION CONTROL MEASURES AS NECESSARY TO ACCOMMODATE PROJECT CONSTRUCTION.

ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- BASE COURSE GRAVELS HAVE BEEN INSTALLED ON AREAS TO BE PAVED
- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
- A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED
- EROSION CONTROL BLANKETS HAVE BEEN INSTALLED

VEGETATIVE PRACTICE

FOR PERMANENT MEASURES AND PLANTINGS:

LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 2 TONS PER ACRE.

FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER.

SEED SHALL BE SOWN AT THE RATES SHOWN IN THE TABLE BELOW. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO
THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AT A RATE OF 1.5 TO 2 TONS PER ACRE, AND SHALL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE EROSION AND SEDIMENT CONTROL HANDBOOK.

THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.

A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE:

GENERAL COVER	PROPORTION	SEEDING RATE
CREEPING RED FESCUE	50%	100 LBS/ACRE
KENTUCKY BLUEGRASS	50%	

SLOPE SEED (USED ON ALL SLOPES GREATER THAN OR EQUAL TO 3:1)

CREEPING RED FESCUE	42%	
TALL FESCUE	42%	48 LBS/ACRE
BIRDSFOOT TREFOIL	16%	

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH APPLICABLE STATE AND FEDERAL SEED LAWS.

FOR TEMPORARY PROTECTION OF DISTURBED AREAS:
MULCHING AND SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES:
PERENNIAL RYE: 0.7 LBS/1,000 S.F.
MULCH: 1.5 TONS/ACRE

MAINTENANCE AND PROTECTION

THE CONTRACTOR SHALL MAINTAIN ALL LOAM & SEED AREAS UNTIL FINAL ACCEPTANCE AT THE COMPLETION OF THE CONTRACT. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REMOVAL OF STONES AND OTHER FOREIGN OBJECTS OVER 1/2 INCHES IN DIAMETER WHICH MAY APPEAR AND THE FIRST TWO (2) CUTTINGS OF GRASS NO CLOSER THEN TEN (10) DAYS APART. THE FIRST CUTTING SHALL BE ACCOMPLISHED WHEN THE GRASS IS FROM 2 1/2 TO 3 INCHES HIGH. ALL BARE AND DEAD SPOTS WHICH BECOME APPARENT SHALL BE PROPERLY PREPARED, LIMED AND FERTILIZED, AND RESEEDED BY THE CONTRACTOR AT HIS EXPENSE AS MANY TIMES AS NECESSARY TO SECURE GOOD GROWTH. THE ENTIRE AREA SHALL BE MAINTAINED, WATERED AND CUT UNTIL ACCEPTANCE OF THE LAWN BY THE OWNER'S REPRESENTATIVE.

THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO PROTECT THE GRASS WHILE IT IS DEVELOPING.

TO BE ACCEPTABLE, SEEDED AREAS SHALL CONSIST OF A UNIFORM STAND OF AT LEAST 90 PERCENT ESTABLISHED PERMANENT GRASS SPECIES, WITH UNIFORM COUNT OF AT LEAST 100 PLANTS PER SQUARE FOOT.

SEEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.

THE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATION IS ESTABLISHED.

THE SILT FENCE OR SILTSOXX BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

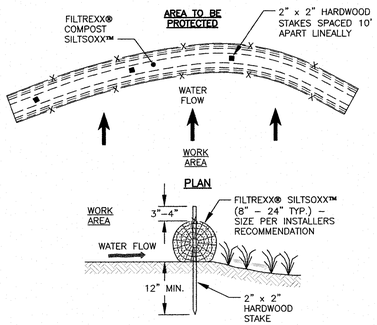
SILT FENCING AND SILTSOXX SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED, AND DISTURBED AREAS RESULTING FROM SILT FENCE AND SILTSOXX REMOVAL SHALL BE PERMANENTLY SEEDED.

WINTER NOTES

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 COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

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.

AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.



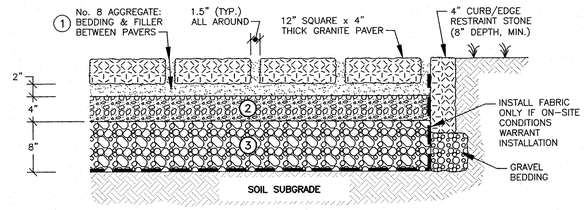
NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILLTREXX SYSTEM SHALL BE INSTALLED BY A CERTIFIED FILTREXX INSTALLER.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTRATION SYSTEM IN A FUNCTIONAL CONDITION AT ALL TIMES. IT WILL BE ROUTINELY INSPECTED AND REPAIRED WHEN REQUIRED.
4. SILTSOXX DEPICTED IS FOR MINIMUM SLOPES, GREATER SLOPES MAY REQUIRE ADDITIONAL PLACEMENTS.
5. THE COMPOST FILTER MATERIAL WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.

A / C2 FILTREXX® SILTSOXX™ FILTRATION SYSTEM
NTS

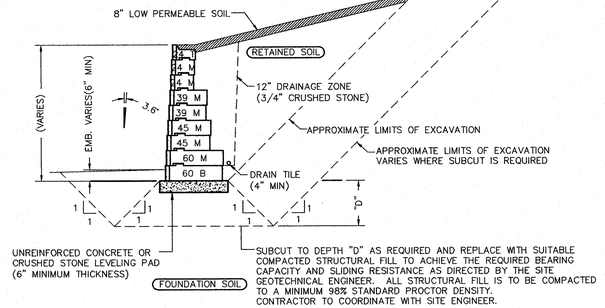
ASTM D 448 GRADATION TABLE

①		②		③	
ASTM No. 8 BEDDING & JOINT FILLER		ASTM No. 57 STONE OPEN GRADED BASE		ASTM No. 2 STONE SUBBASE	
SIEVE SIZE	PASSING BY WEIGHT (%)	SIEVE SIZE	PASSING BY WEIGHT (%)	SIEVE SIZE	PASSING BY WEIGHT (%)
1/2" (12.5mm)	100	1.5" (37.5mm)	100	3" (75mm)	100
3/8" (9.5mm)	85-100	1" (25mm)	95-100	2.5" (63mm)	90-100
No. 4 (4.75mm)	10-30	1/2" (12.5mm)	25-60	2" (50mm)	35-70
No. 8 (2.36mm)	0-10	No. 4 (4.75mm)	0-10	1.5" 37.5mm)	0-15
No. 16 (1.16mm)	0-5	No. 8 (2.36mm)	0-5	3/4" (19mm)	0-5

NOTES:
1) PAVING SYSTEM BASE DESIGN IS SIMILAR TO BASE REQUIRED FOR THE UNI ECO-STONE PAVER. INSTALLATION SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS FOR PLACEMENT OF BASE MATERIALS.
2) ALL STONE SHALL BE ANGULAR, WITH 90% FRACTURED FACES. STONE SHALL BE WASHED WITH LESS THAN 1% PASSING THE 200 SIEVE.
3) CONTRACTOR SHALL SUBMIT SIEVE ANALYSIS FOR EACH COURSE MATERIAL TO PROJECT ENGINEER FOR APPROVAL PRIOR TO PLACEMENT.



B / C2 POROUS PAVEMENT SECTION
12" SQUARE GRANITE PAVERS OR APPROVED EQUAL
NTS



C / C2 GRAVITY RETAINING WALL
NTS

RECON RETAINING WALL NOTES:

1. WALL CONSTRUCTION SHALL FULLY COMPLY WITH RECON WALL SYSTEMS SPECIFICATIONS AND INSTALLATION

2. UNDER DRAINS SHALL BE PERFORATED GEOTEXTILE WRAPPED, 4" DIAMETER, AND SHALL MEET THE REQUIREMENTS OF AASHTO M252 AND/OR ASTM F949. UNDER DRAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DRAINS NOT SPECIFIED TO TIE INTO THE SITE DRAINAGE SHALL DRAIN TO DAYLIGHT.

3. RETAINED SOIL SHALL BE DETERMINED TO MEET OR EXCEED THE REQUIREMENTS BELOW IN THE ABSENCE OF A GEOTECHNICAL ENGINEERING STUDY. SOILS NOT MEETING THESE REQUIREMENTS SHALL BE EXCAVATED AND REPLACED WITH ACCEPTABLE SOILS.

4. LEVELING PAD SHALL BE 3/4 CRUSHED STONE WITH NO MORE THAN 5% PASSING A #200 SIEVE.

5. SELECT BACKFILL SHALL BE FREE-DRAINING, WELL GRADED SAND/GRAVEL AND SHALL MEET OR EXCEED THE REQUIREMENTS BELOW. MIRAFI 140N OR A APPROVED EQUAL FILTER FABRIC SHALL BE PLACED BETWEEN ALL INTERFACES OF DRAINAGE MATERIAL AND VIRGIN AND/OR SILTY MATERIALS. EXPOSED DRAINAGE STONE SHALL BE PROTECTED FROM FINE SOIL MIGRATION THROUGHOUT CONSTRUCTION.

6. ALL BACKFILL AND FOUNDATION SOIL SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698). ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE BACK OF THE WALL BLOCKS. BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL AS THE WALL IS INSTALLED. SPREAD BACKFILL IN UNIFORM LIFTS NOT EXCEEDING 8 INCHES. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. CONTRACTOR SHALL ENSURE THAT FOUNDATION SOIL IS CAPABLE OF SUPPORTING THE WALL.

7. THE FOLLOWING SOIL PROPERTIES WERE USED IN THE DESIGN:

	SOIL WEIGHT [PSF]	FRICTION ANGLE [DEG]
RETAINED SOIL	120	32
FOUNDATION SOIL	120	32
LEVELING PAD	125	40

8. ENSURE THAT THE FIRST COURSE OF WALL UNITS IS IN FULL CONTACT WITH FOUNDATION. INSTALL NEXT COURSE OF UNITS SUCH THAT THE VERTICAL GAPS ARE STAGGERED BETWEEN ADJACENT COURSES. GAPS SHALL BE FILLED WITH FREE-DRAINING GRAVEL PRIOR TO STARTING THE NEXT COURSE.

9. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EXCAVATIONS ARE STABLE AND MEET OSHA REQUIREMENTS.

10. PROPOSED LAYOUT MUST BE FIELD VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. DESIGN BASED ON APPROXIMATE FIELD MEASUREMENTS FOR ESTIMATING PURPOSES.

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road - Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:
1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

FEDERLEIN RESIDENCE
11 LANDING WAY
DOVER, N.H.

NO.	DESCRIPTION	DATE
0	REVISED FOR CLIENT	11/1/17

REVISIONS

STATE OF NEW HAMPSHIRE - JOHN R. CHAGNON NO. 7651 LICENSED PROFESSIONAL ENGINEER

SCALE: AS SHOWN NOVEMBER 2017

NHDES PERMIT DETAILS

D1

FB 318 PG 1 | DOVER FILE No. 2818

AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

2 November 2017

Kirt Schuman, Chair
Dover Planning Board
288 Central Avenue
Dover, NH 03820

RE: Conditional Use Permit Application
Residential Site Improvements
Tax Map L, Lot 95-1-K
11 Landing Way
Dover, NH

Dear Kirt,

This letter transmits a City of Dover Conditional Use Application for construction under the City of Dover Zoning Ordinance *Article VIII, Section 170-27* for work within the Conservation District. It is our understanding that the applicant will need a Conditional Use Permit from the City of Dover for the proposed project.

The project proposes site improvements including in-kind replacement of the existing wooden deck, replacement of the existing retaining walls, construction of two pervious paver patios, and construction of a new walkway leading to the existing tidal docking structure. There are 3 existing retaining walls on the property (only 1 wall located within the Conservation District). All three (3) walls are in disrepair and in need of replacement (Please see attached photo log).

Ambit Engineering, Inc. performed a wetland delineation on the above referenced property on September 1, 2017. The subject parcel is located directly adjacent to the Piscataqua River, and approximately 50% of the lot area is within the City of Dover Conservation District.

Attached to this transmittal letter please find a Conditional Use Application, a plan set depicting existing and proposed conditions, a signed client authorization form, a photo log, and an abutters list.

According to the City of Dover Zoning Ordinance, *Article VIII, Section 170-27, C.2.A.,* Conditional Use approval may be granted by the Planning Board provided that the proposed construction complies with the following standards:

The proposed construction is essential to the productive use of land not in the Conservation District;

The replacement of the existing retaining walls in similar locations maintains the use of the property due to the steep slope toward the Piscataqua River. The proposed construction will allow for productive use of the land not in the district, as they will allow for grading and maintaining a level area to accommodate the proposed pervious patios. The construction of the walkway leading to the existing tidal docking structure will

provide safe walking access to the dock, as currently the owners navigate a steep, grassed slope to the dock accessway.

Is located and constructed to minimize any detrimental impact of such use upon the surface waters or other environmentally sensitive areas;

The project proposes to replace the existing retaining walls in the similar footprints to the greatest extent practicable. The existing buffer will remain in its current state under this proposal and any disturbance within the buffer for construction of the new retaining walls will be restored to previously existing conditions. Additionally, the new walls will be constructed of a pre-fabricated concrete block, which is layered and locked into place before backfilling. It is anticipated that this construction material will have a much longer life expectancy than the existing hardscape material, preventing future slope failure which could detrimentally impact the adjacent wetland resource.

This proposal also includes two (2) pervious paver patios, only one of which is located within the Conservation District, which will capture and percolate stormwater, improving water quality that leaves the site and enters the Piscataqua River. The proposed walkway will utilize steps within the retaining walls to accommodate for elevation change creating a short walkway to the existing docking structure with minimal grading to construct.

Where it is physically impossible to locate such use on land not in the district;

The project proposes to replace the existing retaining walls in the similar footprints to the greatest extent practicable. Due to the configuration of the lot, steep slope associated with the lot, and the location of the wetland resources, relocating the use outside the district severely limits the use of outdoor space. There is no alternative location on the parcel outside of the district that achieves the same purpose and also provides recreational boating access.

Economic advantage alone shall not be deemed a sufficient reason for such a proposed use.

The proposal is to replace existing retaining walls that are in failure on the subject lot. The need for the proposed use does not improve the applicant's financial position.

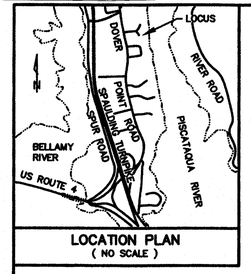
A NH DES Wetland Permit Approval will be required for this project for impacts to the previously developed tidal buffer zone.

Please contact me if you have any questions or concerns regarding this application.

Respectfully submitted,

Steven D. Riker
NH Certified Wetland Scientist/Environmental Permitting Specialist
Ambit Engineering, Inc.

Cc: Frederic & Deborah Federlein-Owner/Applicant



LOCATION PLAN
(NO SCALE)

REFERENCE PLANS:

1.) PLAN OF LOTS – RIVER KNOLL ESTATES – FOR MATT R. AND HELEN WILLIAMS, JR., DOVER POINT ROAD, DOVER, NEW HAMPSHIRE 03820. SCALE: 1" = 50'; DATED: 9 NOV., 84, REVISED THROUGH 4/29/85; BY: ROARING BROOK CONSULTANTS. RECORDED S.C.R.D. PLAN 27–55.

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	121°26'05"	65.00	137.76	113.39	N20°06'06"E

No.	Bearing	Distance	Record Bearing
L1	N09°10'52"W	10.00'	[N06°02'55"E]
L2	N49°23'04"E	9.53'	[N64°36'50"E]

NOTES:

1.) OWNERS OF RECORD:
FREDERIC H. FEDERLEIN
DEBORAH FEDERLEIN
11 LANDING WAY
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOL. 4142, PAGE 0950

2.) L/95–1K – DENOTES TAX MAP AND PARCEL NUMBER.

3.) PLAN INTENT: TO SHOW THE PARCEL BOUNDARIES AND IMPROVEMENTS LOCATED THEREON.

4.) PARCEL AREA = 27,875 S.F.± / 0.64 Ac.±
REFERENCE LINE IS BOUNDARY LINE AT RIVER.

5.) BASIS OF BEARINGS IS NH STATE PLANE GRID FROM GPS OBSERVATION TAKEN ON JUNE 17, 2014. VERTICAL DATUM IS NAVD88

6.) ZONING DISTRICT IS LOW DENSITY RESIDENTIAL (R–20) DISTRICT
SETBACK REQUIREMENTS:
FRONT = EXISTING STRUCTURES HAVE A 20 FOOT SETBACK FOR EXPANSIONS OR RENOVATION.
SIDE = 20 FEET
REAR = 30 FEET
OUTBUILDINGS
SIDE = 10 FEET
REAR = 10 FEET

NOTES CONTINUED;

7.) A PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0340; SUFFIX E; MAP NUMBER 33017C0340E; EFFECTIVE DATE SEPT. 30, 2015. ZONE AE – ELEVATION 8.

8.) REFERENCE PLAN NO. 1 DEPICTS THE AREA OF THE SUBJECT PARCEL AS 33,000 SF±, CALCULATED TO THE APPROXIMATE LOW WATER LINE OF THE PISCATAQUA RIVER.
THE PARCEL AREA ON THIS PLAN, 27,875 SF ± IS CALCULATED TO THE HIGHEST OBSERVABLE TIDE LINE (HOTL).

9.) PARCEL IS SUBJECT TO THE STATE OF NEW HAMPSHIRE SHORELINE WATER QUALITY PROTECTION ACT (SWQPA).
THOSE AREAS WITHIN 250 FEET OF THE REFERENCE LINE, HIGHEST OBSERVABLE TIDE LINE (HOTL).

10.) HIGHEST OBSERVABLE TIDE LINE DELINEATED BY STEVEN D. RIKER, CWS IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
A) U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. TECHNICAL REPORT Y–87–1 (JAN. 1987) AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
B) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.1, USDA–NRCS, 2017 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEIWPCC WETLANDS WORK GROUP (2017).
C) NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). USFWS (MAY 1988).
D) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS–79/31 (1997).
E) "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE" (1997). NEW HAMPSHIRE FISH AND GAME DEPARTMENT.

11.) FRESHWATER WETLAND AND HIGHEST OBSERVABLE TIDE LINE (HOTL) DELINEATED BY STEVE RIKER, CWS OF AMIT ENGINEERING, INC. (AEI) ON SEPTEMBER 1, 2017, AND FIELD LOCATED BY THIS OFFICE ON SEPTEMBER 7, 2017.

STATE OF NEW HAMPSHIRE · STEVEN D. RIKER · 11/6/17 · No. 219 · CERTIFIED WETLAND SCIENTIST

L/95–1E
LAWRENCE A. BLAHUT
NANCY E. BLAHUT
9 LANDING WAY
DOVER,NH 03820
1820/400

L/95–1H

L/95–1N

IRON ROD FOUND

LANDING WAY
{50' WIDE R.O.W.}

L/95–1I

GRANITE BOUND W/ DRILL HOLE FOUND

GRANITE BOUND W/ DRILL HOLE FOUND

GRANITE BOUND W/ DRILL HOLE FOUND

L/95–1M
CHRISTOPHER & KULLI BARRETT, TRUSTEES
CHRISTOPHER AND KULLI BARRETT REV TRUSTS
13 LANDING WAY
DOVER,NH 03820
3660/361

15°13'46"
REF. PLAN
NH STATE PLANE GRID AZIMUTH

IRON ROD FOUND
N – 236,553.326
E – 1,205,945.386
(SEE NOTE 5)

[S83°57'05"E]
N80°49'09"E 230.21'

L2

GRANITE BOUND W/ DRILL HOLE FOUND

EDGE OF PAVEMENT (TYP.)

SWQPA 250'

SWQPA 150'

WETLAND 100'

ABUTTERS BRICK AND STONE WALKWAY DOWN TO WATER

FRESHWATER WETLANDS (AEI 2017)

FEMA ZONE AE LINE ELEV. 8.0

SWQPA 50'

H.O.T.L.

REFERENCE LINE HIGHEST OBSERVABLE TIDE LINE (HOTL) (AEI 2017)

63'±

APPROXIMATE LIMITS OF TIDAL VEGETATION

L/95–1K
PARCEL AREA
27,875 S.F.±
0.64 Ac.±

20' SIDE SETBACK

20' SIDE SETBACK

WOODEN RAMP AND PIER TO FLOATING DOCK

MUD SLOPE

BLOCK RETAINING WALL WITH ALUMINUM FENCE ALONG TOP

BLOCK RETAINING WALL

WOODEN RETAINING WALL

20' FRONT SETBACK

BRICK WALK

WOOD FRAME HOUSE #11
GARAGE F.F. ELEV. = 41.2

WOOD STEPS

ELEVATED DECKS

BRICK PATIO

CONCRETE RETAINING WALL

115.56'

S00°37'14"W
SURVEY TIE LINE

MUD SLOPE

APPROXIMATE "LOW" WATER LINE

PISCATAQUA RIVER
FLOOD TIDAL EBB

LANDING WAY

C1

BRICK WALK

ASPHALT DRIVEWAY

20' SIDE SETBACK

DMH

15' DRAINAGE EASEMENT

5' PEDESTRIAN EASEMENT

9.6'±

71'±

IRON PIPE FOUND

116.5'± ALONG REFERENCE LINE; HIGHEST OBSERVABLE TIDE LINE = BOUNDARY LINE (AEI 2017)

NH DES SWQPA 50' REF. LINE WATERFRONT BUFFER

DOVER 50' WETLAND BUFFER

CB

L1

S80°49'09"W 274.13'
[N83°57'05"W]

DRIVEWAY ENCROACHES ONTO ABUTTER PARCEL

NH DES SWQPA 150' REF. LINE NATURAL WOODLAND BUFFER

100' SETBACK FROM REFERENCE LINE TIDAL BUFFER ZONE & DOVER 100' CONSERVATION DISTRICT

L/95–2

IRON PIPE FOUND

IRON PIPE FOUND
N – 236,430.770
E – 1,205,900.777
(SEE NOTE 5)

BLACK METAL FENCE

NH DES SWQPA 250' REF. LINE PROTECTED SHORELAND

L/95–2I
KAREN WENDELL
F. DOYLE SKEELS
P.O. Box 22425
PORTSMOUTH, NH 03802
3496/348

LEGEND

I.R.(set) o – IRON ROD W/ I.D. CAP (SET)
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
□ CB – CATCH BASIN
Ⓓ DMH – DRAIN MANHOLE
H.O.T.L. – HIGHEST OBSERVABLE TIDE LINE
SWQPA – SHORELAND WATER QUALITY PROTECTION ACT FROM H.O.T.L.
WETLAND 100' – NH DES WETLAND BUREAU 100 FOOT MARK
[N54°16'32"E] – RECORD BEARING
AEI – AMBIT ENGINEERING, INC.

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

14–2056	EXIST. COND.	14–04	49–56
PROJECT NO	TYPE	FIELDBOOK & PAGES	

"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." (RSA 676:18)

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

10/2/17 Kevin McEneaney
DATE: / KEVIN M. McENEANEY LLS # 661

EXISTING CONDITIONS PLAN
PREPARED FOR
FREDERIC H. AND DEBORAH FEDERLEIN
TAX MAP L, LOT No. 95–1K
11 LANDING WAY
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DRAWN BY: RJM	FILE: VR CP\2056\14–2056
SCALE: 1" = 20'	DATE: OCTOBER 2, 2017

20 10 0 10 20 40 60 80

STATE OF NEW HAMPSHIRE · No. 661 · LICENSED LAND SURVEYOR · KEVIN M. McENEANEY

McEneaney Survey Associates, inc.
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING

IMPERVIOUS SURFACE AREAS
(PROPERTY ALL WITHIN 250' SWQPA)

STRUCTURE	EXISTING IMPERVIOUS (S.F.)	PROPOSED IMPERVIOUS (S.F.)
MAIN STRUCTURE	1,718	1,718
DECK	380	0
BRICK PATIO	34	0
STEPS	104	117
STONE WALKWAY	0	128
DOCK ACCESSWAY	258	258
BRICK WALKS	413	413
PAVED DRIVE	2171	2171
RETAINING WALLS	207	489
HVAC PAD	26.0	26.0
TOTAL	5,311	5,320
LOT SIZE W 250'	19,117	19,117
% LOT COVERAGE	27.8%	27.8%

NHDES IMPACTS
(IN SQ. FT.)

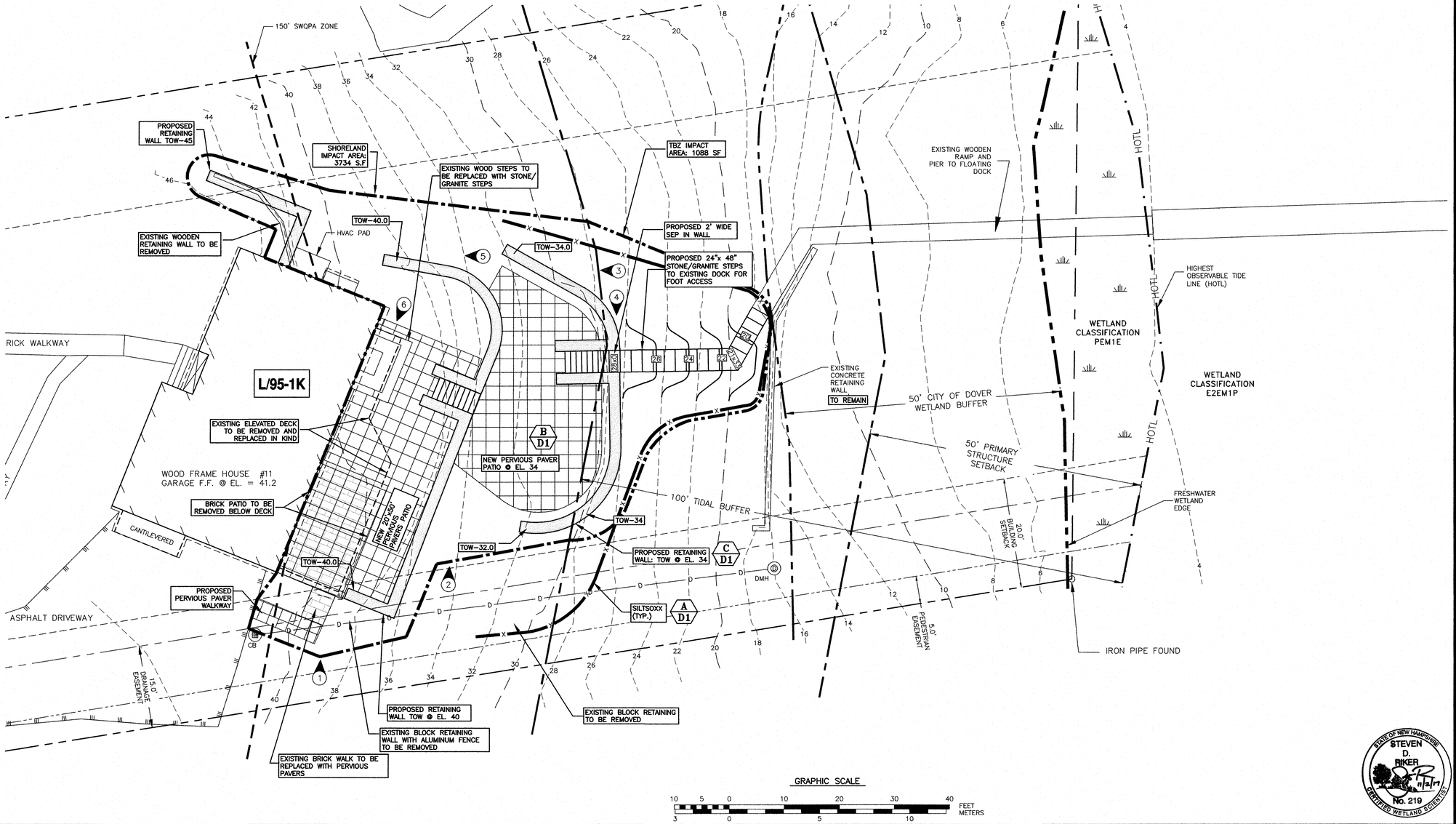
	TEMPORARY IMPACT (S.F.)	PERMANENT IMPACT (S.F.)
TBZ IMPACT	883	205
SHORELAND IMPACT	3378	356
TOTAL	4,261	561

DOVER NORTH

CITY OF GRID

LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
11/27	MAP 11/LOT 21
IP FND	IRON PIPE FOUND
	OVERHEAD ELECTRIC / WIRES
MHW	MEAN HIGH WATER LINE
	EDGE OF WETLAND
	WETLAND SETBACK
	SHORELAND LINE
	SHORELAND SETBACK
100	CONTOUR
	WOODS / TREE LINE
	UTILITY POLE (w/ GUY)
A-1	EDGE OF WETLAND FLAGGING
3	SITE PHOTO LOCATION/DIRECTION
	EXISTING TREE LOCATION



GRAPHIC SCALE

10 5 0 10 20 30 40 FEET
3 0 5 10 METERS

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road – Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

4) PURPOSE OF THIS PLAN IS TO SHOW REMOVAL OF EXISTING RETAINING WALLS, LOCATION OF PROPOSED RETAINING WALLS, PERVIOUS PATIOS, AND NEW STONE WALKWAYS ON LOT L/95-1K, 11 LANDING WAY, DOVER NH.

FEDERLEIN RESIDENCE
11 LANDING WAY
DOVER, N.H.

NO.	DESCRIPTION	DATE
1	REVISED PER CLIENT	11/1/17
0	ISSUED FOR COMMENT	10/17/17

REVISIONS

STATE OF NEW HAMPSHIRE JOHN R. CHAGNON No. 7851 LICENSED PROFESSIONAL ENGINEER

STATE OF NEW HAMPSHIRE NO. 738 JOHN R. CHAGNON LICENSED LAND SURVEYOR

STATE OF NEW HAMPSHIRE STEVEN D. RIKER 11/2/17 No. 219 CERTIFIED WETLAND SCIENTIST

SCALE: 1" = 10' OCTOBER 2017

NHDES PERMIT PLAN

C2

FB 318 PG 1 | DOVER FILE No. | 2818

P17-78 **11 Landing Way**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
L0095-E00000	10 ROBERTS RD	SCHULTZ ANN D TRUSTEE	SCHULTZ ANN REVOCABLE TRUST	10 ROBERTS RD	DOVER	NH	03820
L0095-Y00000	DOVER POINT RD	HOGINSKI STEPHEN E		230 DOVER POINT ROAD	DOVER	NH	03820
L0095-01J000	7 LANDING WY	SHIEMBOB E & I FAMILY LIVING TRUST	SHIEMBOB EDWARD H AND BARBARA K TRUSTEES	7 LANDING WY	DOVER	NH	03820
L0095-01N000	8 LANDING WY	THOMSON PATRICK &	COOKE JENNA LYNN	8 LANDING WY	DOVER	NH	03820-4667
L0095-01M000	13 LANDING WY	BARRETT CHRISTOPHER & KULLI TRUSTEES	BARRETT CHRISTOPHER AND KULLI REV TRUSTS	13 LANDING WAY	DOVER	NH	03820
L0095-01I000	15 LANDING WY	LANG JENNY L		15 LANDING WAY	DOVER	NH	03820
L0095-01E000	9 LANDING WY	BLAHUT LAWRENCE A &	BLAHUT NANCY E	9 LANDING WAY	DOVER	NH	03820
L0095-Z00001	3 OSPREY LN	WENDELL KAREN &	SKEELS F DOYLE	PO BOX 22425	PORTSMOUTH	NH	03802
L0095-01H000	10 LANDING WY	LESNIAK JAMIE		10 LANDING WY	DOVER	NH	03820
L0095-Z00000	DOVER POINT RD	HOGINSKI FRANCES L TRUSTEE	HOGINSKI FRANCES L LIVING REV TRUST	230 DOVER POINT ROAD	DOVER	NH	03820
		FREDERIC H. & DEBORAH FEDERLEIN		11 LANDING WAY	DOVER	NH	03820
		STEVEN D. RIKER, CWS	AMBIT ENGINEERING, INC.	20 GRIFFIN ROAD, UNIT 3	PORTSMOUTH	NH	03820