CITY OF DOVER

DOVER PLANNING BOARD – AGENDA

Meeting Type:	Regular Meeting
Meeting Location:	McConnell Center Room 306, 61 Locust Street, Dover NH 03820
Meeting Date:	**Tuesday, September 25, 2018**
Meeting Time:	**7:00 pm**

1. CITIZENS' FORUM

2. APPROVAL OF THE PRIOR MINUTES

- September 11, 2018 Regular Meeting Minutes

3. OLD BUSINESS

4. NEW BUSINESS

A. Consideration and acceptance of a Lot Line Adjustment for Marker 44 Holdings, LLC, Assessor's Map 24, Lots 114 & 115-B, zoned CBD-G & CWD and located at 87 Portland Ave and Cocheco St. *(P18-36)

B. Consideration and acceptance of a Conditional Use Permit for Marker 44 Holdings, LLC, Assessor's Map 24, Lot 115B, zoned CBD-G & CWD, located at 87 Portland Ave and Cocheco St. (Proposal is to install utilities, walking path, parking, retaining wall and site grading. Impacts include 9,950 sq. ft. of 20% slope, 150 sq. ft. of Conservation District within 100 feet of Cochecho River, 11,017 sq. ft. of wetland buffer impact, 181 sq. ft. of permanent wetland impact and 589 sq. ft. of temporary wetland impact.) *(P18-35)

C. Consideration and acceptance of a Site Review for Marker 44 Holdings, LLC, Assessor's Map 24, Lots 114 & 115-B, zoned CBD-G & CWD, located at 87 Portland Ave. & Cocheco St. (Proposal is to leave the existing 2,176 sq. ft. two family dwelling and construct four 3,904 sq. ft. multi-unit apartment buildings containing a total of 32 units and construction of a 24 ft. wide driveway to access both buildings.) *(P18-34)

D. Consideration and acceptance of a Site Review for Summit Land Development, Assessor's Map K, Lot 19-4, zoned ETP (RCM Overlay), located at Pointe Place. (Proposal is to construct three buildings consisting of 8,000 sq. ft. commercial space and 119 residential units.) *(P18-37)

E. Consideration and acceptance of a Conditional Use Permit for Summit Land Development, Assessor's Map K, Lot 19-4, zoned ETP (RCM Overlay), located at Pointe Place. (Proposal is to allow work within the 50 ft wetland buffer, with a retaining wall to limit the amount of grading and prevent any direct wetland impacts. There is about 4,000 sq. ft of buffer impact.) *(P18-38)

F. Consideration and possible posting of an amendments to Chapter 170, entitled "Zoning Ordinance" of the code of the City of Dover. The amendment allows any future relief to the Cochecho Waterfront District regulations to be through a Conditional Use Permit from the Planning Board rather than by relief from the Zoning Board of Adjustment.

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:	McConnell Center Rm 306 – 61 Locust Street
Meeting Date:	**Tuesday, September 11, 2018**
Meeting Time:	**7:00 pm**

Members Present: Kirt Schuman (Chair), Gina Cruikshank (Vice Chair), Dennis Ciotti (Councilor), Frank Torr, Tom Clark, Lee Skinner, James Burdin, Dave White, Tristan Donovan (Alternate), Hayley Harmon (Alternate)

Members Not Present: Dave Landry

Staff Present: Christopher G. Parker, Assistant City Manager

The Chair called the meeting to order at 7:01 p.m.

1. CITIZENS' FORUM

Citizens Forum Open.

The Chair announced that item 4C would not be heard, as the Site Plan Amendment for 333 Central Avenue has been withdrawn.

No One Else Spoke. Citizens Forum Closed.

2. APPROVAL OF THE PRIOR MINUTES

- August 28, 2018 Regular Meeting Minutes

Motion: G. Cruikshank made a motion to approve the minutes as presented. Seconded by D. Ciotti. Vote U/A

3. OLD BUSINESS

None

4. NEW BUSINESS

A. Discussion on construction sign requirements regarding noise and other disturbances.

C. Parker introduced Megan Miller and the concerns she raised relative to construction signage.

Megan Miller presented her proposed sign changes to the Board. She highlighted the physical difficulties that can occur without construction signage as well as types of individuals who are affected by construction. She proposed a sign where the expected visual and noise levels are displayed and suggested they be updated throughout the day and/or project. Once such sign was created and utilized at a Dover construction site. She requests these signs become a requirement for project approval.

D. Ciotti asked who paid for this first sign. The construction company on site paid for it.
C. Parker has discussed the issue with Dave White and believe this could become part of the technical review process to determine how often it might be needed.
L. Skinner said if this is implemented, regulation should be named after Megan. He wondered who would enforce and/or handle complaints- Police? Planning department? It's great that the company paid for this sign voluntarily.
T. Donovan is in favor of implementing the program.

B. Public Hearing to consider amendments to Chapter 149, entitled "Site Review Regulations" of the code of the City of Dover. Amendments to Chapter 149-10 to add a section on Pest Control in the Central Business District

C. Parker explained the changes that have been made to the amendment to include a broader area of the City and to allow TRC to implement the regulation in other areas of the City if they deem it necessary.

Public hearing opened. No One Spoke. Public Hearing closed.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board table the amendments for Staff to continue working on them.

Motion: T. Clark made a motion to amend the amendments as proposed by staff. Seconded by L. Skinner. Vote U/A
Motion: J. Burdin made a motion to adopt the amendments as amended. Seconded by T. Donovan. Vote U/A

C. Consideration and acceptance of an Amendment for a previously approved Site Plan Review (03/27/18) for Hellenic Realty Partners, LLC, Assessor's Map 2, Lot 19, zoned CBD-G, and located at 333 Central Avenue. (Proposal is to amend the building facade materials and minor site plan changes). *(P18-04A)

C. Parker explained that the applicant was not ready for review and withdrew the application.

D. Consideration and acceptance of a Minor Lot Line Adjustment for John & Gloria Anastas, (Owners: John & Gloria Anastas and Ann Shine), Assessor's Map 8, Lots 8 & 8B, zoned LBW, and located at 419 & 419A Dover Point Road. (P18-43)

C. Parker explained that the application is to adjust the boundary line between two lots on Dover Point Road. This would allow for the side setbacks to be more compliant. The applicant proposes to adjust the lot lines between 2 lots. Lot 8/8 will decrease from 0.96 acres to 0.93 acres. Lot 08/8B will increase from 0.56 acres to 0.60 acres.

K. McEneaney, McEneaney, Survey, reviewed the layout and details. The property line cuts through the porch. The neighbors allowed a conveyance of a sliver of land from the Shires to the Anastas' which will make the Shire garage conform and the Anastas porch conform as much as possible.

Motion: F. Torr made a motion to accept the application. Seconded by T. Clark. Vote U/A

Public hearing opened. No one spoke. Public Hearing closed.

STAFF RECOMMENDATION:
Chapter 155 provides criteria for a lot line adjustment, which this plan meets. Staff recommends that the Planning Board approve the minor 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 P18-43
   d. Note variance for lot 8B (Z07-14)

Motion: F. Torr made a motion to approve the application subject to the staff recommended conditions. Seconded by L. Skinner. Vote U/A

E. Consideration and acceptance of a Site Review Using Transfer of Development Rights for Little Bay Marina & Development, LLC, Assessor's Map 8, Lots 9, 10, 11, & 12, zoned LBW, located at 421, 423, 425, & 427 Dover Point Road. (Proposal is to develop a condominium containing 23 units and 1 accessory dwelling unit located in a zone where 15 units plus 1 accessory unit is permitted). (P18-41)

C. Parker explained that the applicant is proposing to use the TDR ordinance to add 8 units above the allowed density. Per Chapter 170-27.2.E(4), the applicant is requesting that the Board provide feedback on the sketch plan estimating the layout of the development site for their review to determine if any waivers will be granted as allowed in 170-27.2 G.

The sketch layout shows 23 units plus 1 accessory apartment in the marina office while only 15 units plus the apartment is permitted by the zone. The applicant is also requesting an updated variance from the Zoning Board to allow the multi-family housing where up to 4 units per lot are allowed. A previous variance was granted to allow this, but the layout has adjusted, so the applicant is returning to the ZBA.

After the Board determines how many, if any, additional units are allowed to be purchased, the applicant will fully design and engineer a site plan, for future review by the Board.

Attorney Francis Bruton reviewed the plan and request. He described the current site and its improvements. He explained the ZBA process they've been through and the next one that's planned. He described the updated plan with the eight additional units for which they are seeking approval.

Motion: F. Torr made a motion to accept the application. Seconded by L. Skinner. Vote U/A

Public hearing opened.
Ann Shine, 419 Dover Point Rd thinks 23 units is too dense. 16 units seemed reasonable. What is the hardship used to seek the variance? She also described how the culvert has not been maintained over the years.

Kevin Callahan, 419 Dover Point Rd is concerned about the traffic increase and prefers no more than 16 units.
Public Hearing closed.

STAFF RECOMMENDATION:

The Planning Department recommends that the Planning Board determine if the additional units are consistent with the spirit and intent of the TDR Ordinance and if so the Board determine what number of additional units are able to be purchased.

Attorney F. Bruton addressed the public comments. The culvert will be addressed during the project.
With this proposal there will no longer be any boat storage on site. The old buildings will be removed.
He also mentioned his client expressed willingness to reduce the request from eight additional units to six.
C. Parker explained how the state has modified the hardship language.
K. Schuman asked if the Marina will remain a commercial site with public access. If so, what of the parking?
J. Burdin asked about flood plain issues.
K. McEneaney, McEneaney Survey addressed the parking and flood plain issues.

The board discussed their opinions about the number of units to allow and what concerns they have.

Conditions to Be Met Prior to Signing of Plans:

1. Future site plan shall note what relief is granted.
2. Any requirements of 170-27.2 be included on the plan.

Motion: L. Skinner made a motion to approve 4 additional units via TDR for the application subject to the staff recommended conditions. Seconded by D. Ciotti.
Discussion ensued. Vote 2-7 therefore the motion failed.

Motion: L. Skinner made a motion to table the discussion to conduct a site walk. Seconded by T. Clark. Vote 3-6 therefore the motion failed.

Motion: F. Torr made a motion to approve 23 units plus 1 accessory unit via TDR for the application subject to the staff recommended conditions. Seconded by T. Donovan. Vote 5-4. The motion passed.

5. STAFF COMMENTS

- Development update on Third Street, Washington Street and Glenwood/Central.
- Rezoning Committee met and wrapped up its review of areas for consideration. A report will follow.
- C. Parker introduced Katherine Labrecque who is a UNH fellow and MPA student who's been working on 3 projects in the Planning Department for the past few months.
- Reiterated that the Visual Preference Survey is available on the website and 93 Washington St

6. MEMBER COMMENTS

L. Skinner suggests the board keep their eyes on how TDR is going over the next several months/year.

7. ADJOURNMENT

Motion: G. Cruikshank made a motion to adjourn at 8:37p.m. Seconded by L. Skinner. Vote U/A

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P18-36

Application Type:	Minor Lot Line Adjustment for Review
Applicant(s):	Marker 44 Holdings LLC
Owner(s):	Marker 44 Holdings LLC
Location:	87 Portland Ave & Cocheco St (Assessor's Map 24, Lots 114 & 115-B)
Meeting Date:	September 25, 2018

INTENT: To adjust the lots lines between two lots. Lot 114 will decrease from 0.94 acres (41,164 s.f) to 0.23 acres (10,100 s.f.). Lot 115-B will increase from 0.91 acres (39,463 s.f.t) to 1.62 acres (70,526 s.f.)

LOTS/UNITS PROPOSED: N/A for this case

AGENDA ITEM #: 4-A

ACREAGE:	**Existing:**	**Proposed:**
Lot 114:	0.94	0.23
Lot 115-B:	0.91	1.62

ZONING DISTRICT: CBD-Downtown Gateway & CWD

EXISTING LAND USE: Residential

PROPOSED LAND USE: Multi-family residential per other case

SURROUNDING LAND USE: Residential

ZBA ACTION: H87-11: Variance denied to convert 3 rooms to 5 rooms

ATTACHMENTS: Application materials and LLA Plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED:
-Conditional Use Permits
-NHDES Notice of Intent
-NHDES Wetlands Permit

WAIVERS REQUESTED: None

Summary of Request and Background
The Lot Line Adjustment adjusts the boundary between two lots between Cocheco Street and Portland Ave.

The applicant proposes to adjust the lot lines between 2 lots. Lot 24/114 will decrease from 0.94 acres to 0.23 acres. Lot 24/115-B will increase from 0.91 acres to 1.62 acres.

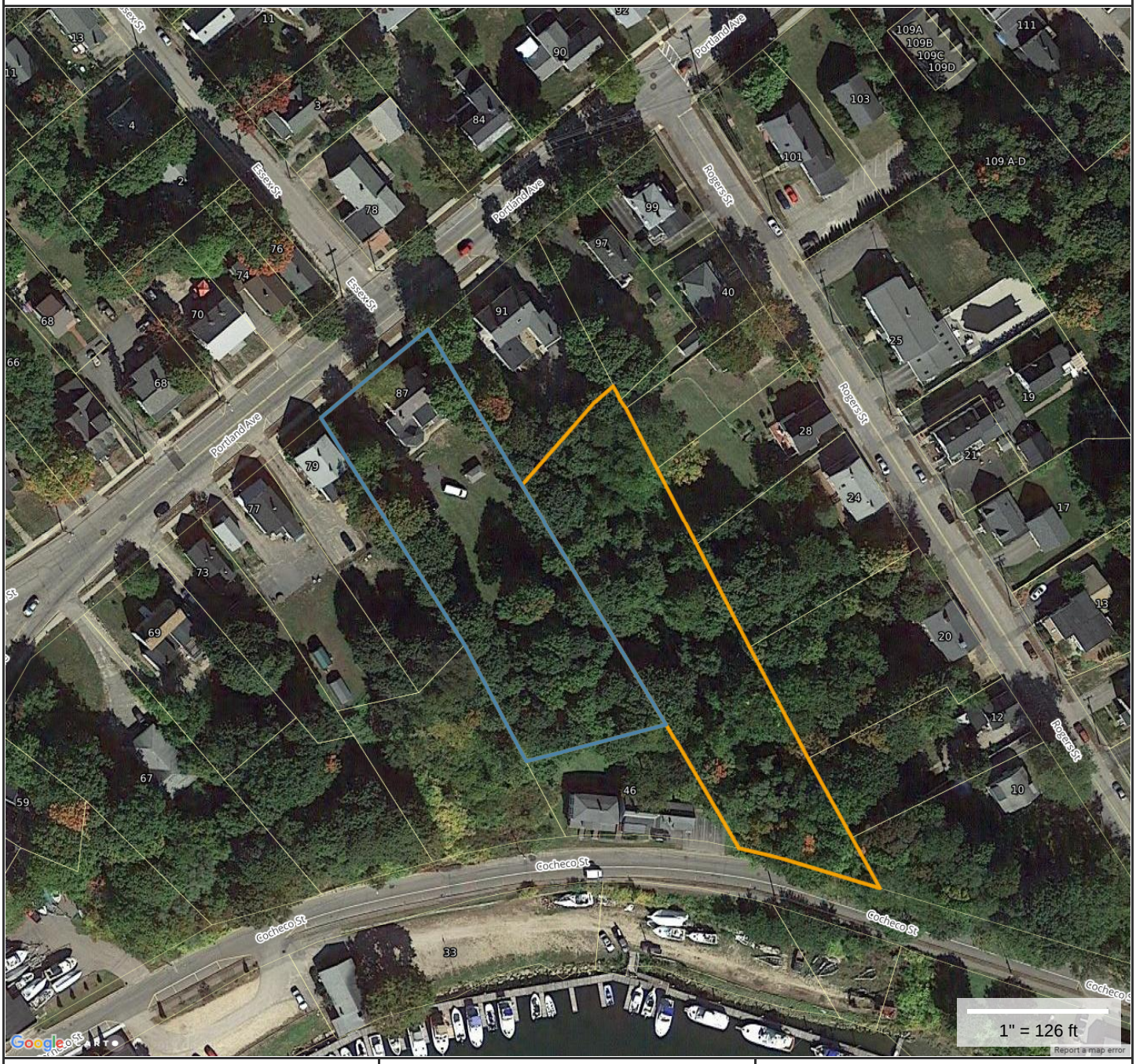
This lot line adjustment application is accompanied by a CUP application (P18-35) and a site plan (P18-34).

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.

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 P18-36
   d. Add note that sheds may stay in place as the lot line adjustment is between the same owner's two properties

87 Portland Avenue and Cocheco Street



Property Information

Property ID	24114-000000
Location	87 PORTLAND AV
Owner	MARKER 44 HOLDINGS 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 03/29/2018
Properties updated 09/18/2018

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: MARKER 44 HOLDINGS, LLC Telephone # (603) 743-6649

Address of Applicant: 130 Central Ave, Dover, NH 03820

FIRST PROPERTY OWNER AND PARCEL INFORMATION

Name of 1st Property Owner (*if different from applicant*): SAME Telephone # (603) 743-6649

Address of 1st Property Owner: Same

Address of Property: Same

Assessor's Map # 24 Lot(s) # 114

Property Deed: Book 4563 Page: 175

Zoning District(s) CBD-G Overlay District(s) CONSERVATION OVERLAY

Size of Existing Parcel (sq. ft.): 41,164 sf Size of Proposed Parcel (sq. ft.): 10,100 sf

SECOND PROPERTY OWNER AND PARCEL INFORMATION

Name of 2nd Property Owner (*if different from applicant*): Same Telephone # Same

Address of 2nd Property Owner: Same

Address of Property: Same

Assessor's Map # 24 Lot(s) # 115B

Property Deed: Book 4562 Page: 656

Zoning District(s) CWD Overlay District(s) CONSERVATION & WETLAND OVERLAY

Size of Existing Parcel (sq. ft.): 39,463 sf Size of Proposed Parcel (sq. ft.): 70,526 sf

[Use additional application form if more than two lots are being adjusted]

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin M. McEneaney P.L.S.

Address P.O. Box 681, 24 Chestnut Street, Dover, NH 03821 Telephone #: (603) 742-0911

Professional License #: 661 E-mail address: MSA@Surveynh.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: 7/19/18

Signature of Second Property Owner: _____ Date: 7/19/18

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

Signature of Agent: _____ Date: 7/20/18

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: 7/19/18

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.

First **Owner:**

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
Map 24	Lot 114	MARKER 44 HOLDINGS, LLC	130 Central Ave, Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
SAME		

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Kevin M. McEneaney P.L.S.	McEneaney Survey, Inc.	P.O. Box 681, 24 Chestnut Street, Dover, NH 03821

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

Second Owner:

Tax Map 24, Lot 115B
SAME

PLANNING BOARD
ESTIMATED FEE SCHEDULE

This is only provided to give you an estimate of the application fees. *After you submit an application, staff will invoice you a total.* All fees must be paid two weeks before the Planning Board meeting. **If the Fee has not been paid, the item will not be placed upon the agenda.**

A. TOTAL FEE paid by cash or check made payable to "City of Dover"

1. Application fee for the following:
   - SUBDIVISION $150.00 x # _____ new lots created = $ _____
   - LOT LINE ADJUSTMENT $200.00 (if more than two lots involved, add $100.00 per lot) = $ 200.00
   - SITE REVIEW - RESIDENTIAL $100.00 x # _____ per dwelling unit = $ _____
   - SITE REVIEW – NON-RESIDENTIAL (not to exceed $10,000)
     New construction $.15 sq. ft. x # _____ sq. ft. = $ _____
     Additions (new floor space) $.10 per sq. ft. x # _____sq. ft. = $ _____
   - IMPERVIOUS PAVED AREA (for new development) OR IMPERVIOUS PARKING LOT ADDITIONS (not to exceed $10,000) $.07 sq. ft. x # _____ = $ _____
   - MOTEL/HOTEL $35.00 x # ___ per lodging unit = $ _____
   - CHANGE OF USE (not to exceed $5,000)
     Existing floor space $.10 per sq. ft. x # _____ sq. ft. = $ _____
   - CONDITIONAL USE PERMIT $150.00 x # _____ per application = $ _____
   - GRAVEL PIT/ EXCAVATIONS - Application fee $50.00 & Permit fee $75.00 = $ _____
   - EXTENSIONS OF/AMENDMENTS TO/WAIVERS FOR AN APPROVED PLAN ($150.00 minimum) $50.00 x # _____ per hour of review $ _____
   - REQUEST FOR REZONING $150.00 = $ _____
   - DRIVEWAY WAIVER – $100.00 application fee =
     Letter of rejection from Engineering Department, diagram & letter from owner $ _____

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will need to provide to this office the engineer, architect, land surveyor or soil scientist whose professional seal appears on the plan with names and addresses for notices. You will be notified with the amount due, once this has been completed.

1. Applicant & Owner, engineer, architect, land surveyor or soil scientist
   Certified letters fee # _____ of x $8.00 =
2. Certified letters fee: # of abutters _____ X $8.00 = $ _____
3. First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00 = $ _____
4. Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00 = $ _____

C. Foster's newspaper public notice fee ~~$ 80.00~~

D. Digital Version of the Plan in PDF/A format or Archive Fee $1.00 x # 1 per sheet of plan set = $ _____

(Revised May 15, 2017)

TOTAL FEE $ 200.00

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: MARKER 44 HOLDINGS, LLC File Number: _____

PROPERTY LOCATION: 87 Portland Ave Tax Map: 24 Lot: 114

	Explain How Provided	Reviewed
1. Completed and signed Application form		
2. Electronic copy of the surveyed plat layout		
3. Electronic copy of supplementary materials and application		
4. List of all professional agents to be notified for Planning Board		
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:		
Location map at appropriate scale		
Planning File #		
Date, north arrow and scale		
Names of all abutting property owners		
Name and address of owners		
Signature & stamp of NH licensed land surveyor		
Zoning District boundaries, including any special or overlay districts		
Location of Conservation District areas		
Location, names and widths of existing and streets, including pavement widths, grades, curbs and crosswalks		
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		
Existing and proposed lot areas in square feet		
Existing and proposed buildings and structure locations		
Minimum building setbacks or build to lines on all lots		
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor		
Location, material and size of existing and proposed permanent monuments		
All applicable Dover Common Subdivision notes		

REVIEWED BY: _____ DATE_____

FRANCIS X. BRUTON, III
CATHERINE A. BERUBE
JANELLE B. CORMIER

OF COUNSEL
JAMES H. SCHULTE

Bruton & Berube, PLLC

ATTORNEYS AT LAW

601 Central Avenue
Dover, NH 03820

TEL (603) 749-4529
(603) 743-6300
FAX (603) 343-2986

www.brutonlaw.com

September 10, 2018

Mr. Christopher G. Parker
Dover Planning Department
288 Central Avenue
Dover, NH 03820

Re: Marker 44 Holdings, LLC
Cochecho Street, Dover, NH

Dear Mr. Parker:

I have been requested to provide an opinion concerning the effect of the boundary line adjustment between the property identified as Tax Map 24, Lot 115B and the property identified as Tax Map 24, Lot 114.

Tax Map 24, Lot 115B has frontage on Cochecho Street and is in the Cochecho Waterfront District. Tax Map 24, Lot 114 has frontage on Portland Avenue and is located in the CBD Downtown Gateway Sub-District. The proposal is to abandon the existing lot line between Lots 114 and 115B, and to move the southerly boundary of Lot 114 closer to Portland Avenue. By eliminating the lot line between Lots 114 and 115B, the southern portion of Lot 114 will become part of Lot 115B.

There are several lots along both sides of Cochecho Street which are zoned within the Cochecho Waterfront District. All of those lots which are located within the CWD along Cochecho Street are located entirely within that zoning district. For the lots along the northern side of Cochecho Street, the zoning boundary runs along the northerly boundary of those lots, regardless of the depth or other dimensions of the lot.

The zoning ordinance states that the purpose of the Cochecho Waterfront District is to provide appropriate locations for a mixture of residential and commercial uses on the waterfront parcels along the downtown portion of the Cochecho River. This district has very flexible dimensional requirements, with no minimum lot size, frontage or setback requirements. It is clearly the intent of this zone to allow for the flexible development of these lots which are located in near proximity to the river, regardless of the size or configuration of the lots.

The effect of the boundary line adjustment is to cause a portion of Lot 114 to become part of Lot 115B. As such, since the zone boundary extends across the rear property lines of all of the other lots in the CWD, the CWD zoning for Lot 115B will encompass the entire parcel.

Given the purpose of the Cochecho Waterfront District to allow flexible development along the waterfront lots and given the varying configurations of the several lots which are located within the CWD, it is my opinion that if the boundary line adjustment is approved between Lots 114 and 115B, the expanded Lot 115B will be zoned entirely in the Cochecho Waterfront District.

Sincerely,

James H. Schulte

James H. Schulte

P18-34, P18-35, P18-36 87 Portland Ave & Cocheco St.

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
24062-000000	66 PORTLAND AV	BINETTE NEIL &	JEWETT RENEE L	66 PORTLAND AVE	DOVER	NH	03820
24063-000000	68 A PORTLAND AV	HALLWORTH JOHN G &	HALLWORTH MARY BETH	68 A PORTLAND AV	DOVER	NH	03820-3540
24064-000000	68 PORTLAND AV	WESTON KAREN E		42 FRENCH CROSS RD	DOVER	NH	03820
24068-000000	74 PORTLAND AV	KALBACK JAVIERA L &	KALBACK SETH M	74 PORTLAND AV	DOVER	NH	03820
24068-B00000	2 ESSEX ST	NUTTER RICHARD F &	NUTTER DEBRA A	2 ESSEX ST	DOVER	NH	03820
24068-C00000	70 PORTLAND AV	ZELLEM THEODORE M	ZELLEM TERESA M	56 ROLLINS RD	ROLLINSFORD	NH	03869
24069-000000	76 PORTLAND AV	CARTER DIANE A		76 PORTLAND AV	DOVER	NH	03820
24070-000000	78 PORTLAND AV	PERREAULT RICHARD J &	PERREAULT HEATHER L	33 VETERANS TERRACE	SOMERSWORTH	NH	03878
24071-000000	84 86 PORTLAND AV	BATSON KEVIN A		84 86 PORTLAND AVE	DOVER	NH	03820
24072-000000	90 90A PORTLAND AV	SPELLMEYER JAY C		90 PORTLAND AV	DOVER	NH	03820
24093-000000	3 ESSEX ST	SEARS JESSE R &	LAREAU DANIELLE N	3 ESSEX ST	DOVER	NH	03820
24109-000000	69 PORTLAND AV	OXLEY AARON H		69-71 PORTLAND AVE	DOVER	NH	03820
24109-A00000	COCHECO ST	AVON HOLDINGS LLC	C/O BRADY PATRICK	36 THREE RIVERS FARM RD	DOVER	NH	03820
24110-000000	73 PORTLAND AV	MCKENNEY SALLIE J	MCKENNEY DONALD D	7 BARNARD LN	ELIOT	ME	03903-1511
24111-000000	77 PORTLAND AV	SPROWL TIMOTHY A & GAIL L TRUSTEES	SPROWL FAMILY REVOCABLE TRUST	77 PORTLAND AVE 1	DOVER	NH	03820-3525
24111-A00000	79 81 PORTLAND AV	AMITY ISLAND INVESTMENTS II LLC		9 FALKLAND PLACE B1	PORTSMOUTH	NH	03801
24112-000000	COCHECO ST	PRINTY RITA C IRREV TRUST	PRINTY JAMES W TRUSTEE	461 LOCUST ST	ROLLINSFORD	NH	03869
24113-000000	46 50 COCHECO ST	PRINTY RITA C IRREV TRUST	PRINTY JAMES W TRUSTEE	461 LOCUST ST	ROLLINSFORD	NH	03869
24115-000000	91 93 PORTLAND AV	MAHANNA GREGORY S & KAJANDER DEBORAH	MAHANNA KAJANDER REVOCABLE TRUST	3 PHEASANT LANE	PORTSMOUTH	NH	03801
24115-A00000	97 PORTLAND AV	PILLETTE KAREN KC &	PILLETTE GREGORY B JR	97 PORTLAND AV	DOVER	NH	03820
24116-000000	40 ROGERS ST	MCDONOUGH STEPHEN &	MCDONOUGH CHERYL	27 HIGHLAND ROAD	KENSINGTON	NH	03833
24116-A00000	99 PORTLAND AV	99 PORTLAND AVE LLC		13 HOLLY LN	HAMPTON	NH	03842
24117-000000	28 ROGERS ST	ROPER MATTHEW J		32 ROGERS ST	DOVER	NH	03820
24117-001000	32 ROGERS ST	KNOX MARSH DEVELOPMENT LLC		242 CENTRAL AVE	DOVER	NH	03820
24118-000000	24 26 ROGERS ST	PETROVITSIS JOHN T		72 PERKINS RD	MADBURY	NH	03823
24119-000000	20 22 ROGERS ST	MCATAVEY D JAMES TRUSTEE	MCATAVEY D JAMES REVOCABLE TRUST	26 PROSPECT STREET	DOVER	NH	03820
24120-000000	12 ROGERS ST	MCATAVEY DENNIS B		34 MOUNT VERNON STREET	DOVER	NH	03820
24121-000000	10 ROGERS ST	ZIELFELDER BARBARA A &	ZIELFELDER RICHARD JR	10 ROGERS ST	DOVER	NH	03820
24128-000000	101 PORTLAND AV	ATKINSON GREEN LLC		310 DOVER POINT RD	DOVER	NH	03820
24128-A00000	25 29 ROGERS ST	GATZOULIS NINA	GATZOULIS VASSILIOS A	25 ROGERS STREET	DOVER	NH	03820
24135-A00000	65 COCHECO ST	MAGLARAS GEORGE		33 COCHECO ST	DOVER	NH	03820
24136-000000	COCHECO ST	MAGLARAS GEORGE		33 COCHECO STREET	DOVER	NH	03820
24137-000000	COCHECO ST	MAGLARAS GEORGE		33 COCHECO STREET	DOVER	NH	03820
24138-000000	33 COCHECO ST	MAGLARAS GEORGE		33 COCHECO STREET	DOVER	NH	03820
		MARKER 44 HOLDINGS, LLC		130 CENTRAL AVENUE	DOVER	NH	03820
		KEVIN M. MCENEANEY P.L.S.		P.O. BOX 681	DOVER	NH	03820
		CIVILWORKS NE	STEPHEN J HAIGHT	P.O. BOX 1166	DOVER	NH	03820

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P18-35

Application Type:	Conditional Use Permit for Review
Applicant(s):	Marker 44 Holdings LLC
Owner(s):	Marker 44 Holdings LLC
Location:	87 Portland Ave & Cocheco St (Assessor's Map 24, Lots 114 & 115-B)
Meeting Date:	September 25, 2018

INTENT: Proposal is to install utilities, walking path, parking, retaining wall and site grading. Impacts include 9,950 sq. ft. of 20% slope, 150 sq. ft. of Conservation District within 100 feet of Cochecho River, 11,017 sq. ft. of wetland buffer impact, 181 sq. ft. of permanent wetland impact and 589 sq. ft. of temporary wetland impact

LOTS/UNITS PROPOSED: 4 new buildings with 32 units total plus an existing 2 unit building

AGENDA ITEM #: 4-B

ACREAGE: 1.85 acres

ZONING DISTRICT: CBD-Downtown Gateway & CWD

EXISTING LAND USE: Residential

PROPOSED LAND USE: Multi-family residential per other case

SURROUNDING LAND USE: Residential

ZBA ACTION: H87-11: Variance denied to convert 3 rooms to 5 rooms

ATTACHMENTS: Application materials, Conservation Commission minutes, and CUP Plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED:
-Conditional Use Permits
-NHDES Notice of Intent
-NHDES Wetlands Permit

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is requesting a Conditional Use Permit to install utilities, walking path, parking, retaining wall and site grading in the Conservation District (within 100' of the Cochecho River), wetland buffer impact, and temporary and permanent wetland impacts.

The Conservation Commission endorsed the Conditional Use Permit at their August 13, 2018 meeting.

Consistency with Land Use Regulations
The Wetlands Protection District ordinance provides for Conditional Use Permits to allow impacts to wetlands and wetland buffers if standards related to demonstration of need, avoidance, minimization, and mitigation are met. This proposal is consistent with those standards.

The Conservation District ordinance provides for Conditional Use permits to allow impacts within 100' of a tidal river if standards related to demonstration of avoidance of impact, minimization of impact, mitigation and soil erosion and sedimentation control are met. This proposal is consistent with those standards.

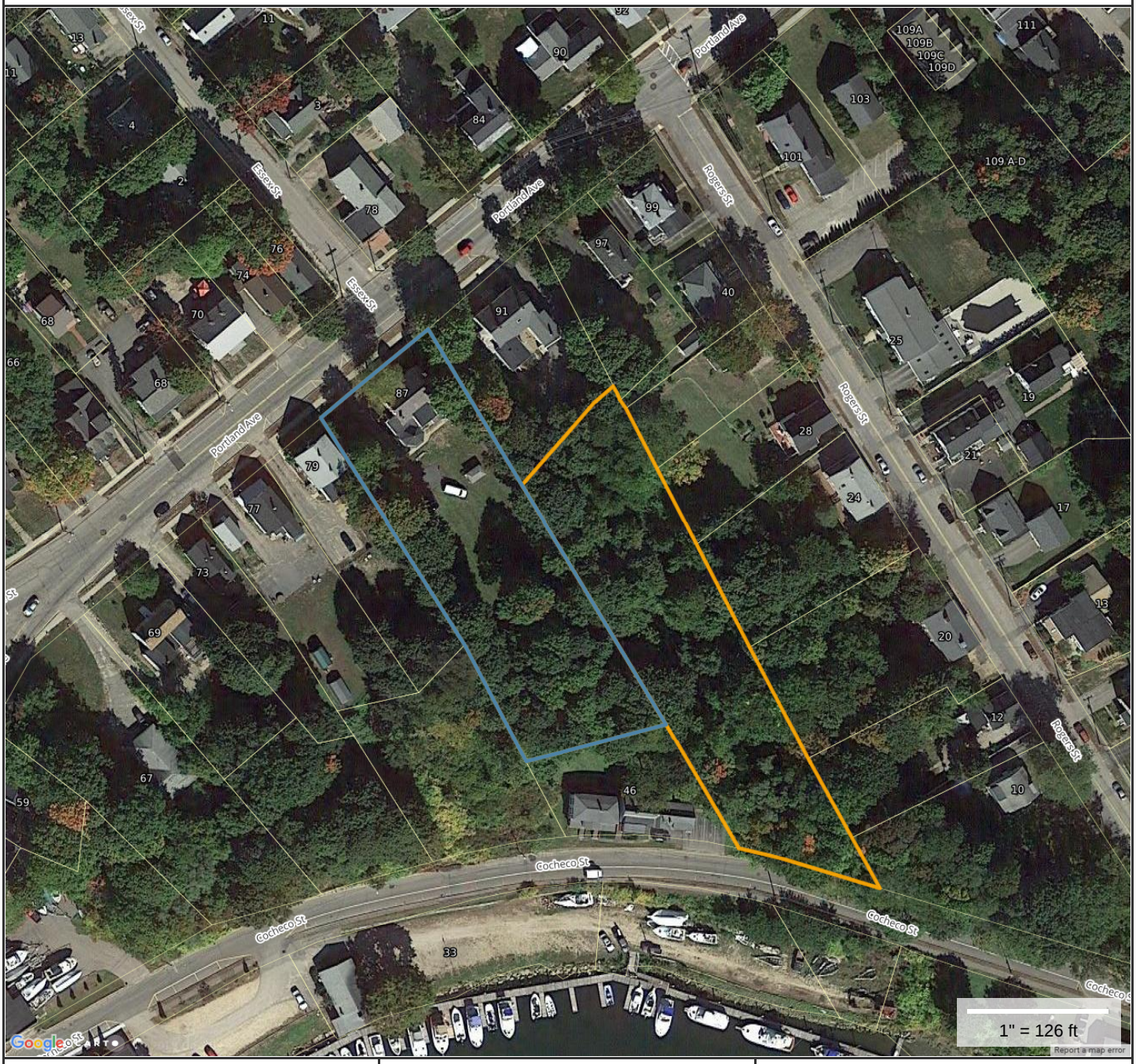
STAFF RECOMMENDATION:

The Planning Department recommends the Planning Board to accept the application, open the public hearing, and vote to approve the Conditional Use Permit with the following conditions:

Condition to Be Met Prior to the Issuance of a Conditional Use Permit:

1. Lot line adjustment (P18-36) and Site Plan (P18-34) is approved.
2. Provide NHDES wetlands permit?

87 Portland Avenue and Cocheco Street



Property Information

Property ID	24114-000000
Location	87 PORTLAND AV
Owner	MARKER 44 HOLDINGS 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 03/29/2018
Properties updated 09/18/2018

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: May 16, 2013]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Marker 44 HOLDINGS, LLC Telephone # 603-743-6649

Address of Applicant: 130 Central Street, Dover NH 03820

E-Mail Address: wfhopkins@hotmail.com

Name of Property Owner (*if different from applicant*): Same Telephone # See Above

Address of Property Owner: See Above

PROPERTY INFORMATION

Assessor's Map # 24 Lot(s) # 114, 115-B

Zoning District(s) CBD-G, CWD Overlay District(s) Wetland Protection District
Conservation Overlay District

Existing Use of Property: Residential/unimproved

CONDITIONAL USE PERMIT INFORMATION

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

☒ Conservation District
☐ Groundwater Protection
☒ Wetland Protection District
☐ RCM Use Overlay District
☐ Off-Street Parking and Loading
☒ Wetland Protection
☐ I-1 District Uses

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

The project proposes to install utilities, a walking path, parking, retaining walls and conduct site grading within a small wetland finger, the 50' wetland buffer as well as regrading of steep slopes (>20%).

Total permanent impact area within the wetlands on-site is 181 s.f., temporary wetland impact 583 s.f., total 50' Dover wetland buffer impact will be 11,787 s.f., and the total impact to slopes >20% will be 20,256 s.f. A total of 150 sf of impact of previously developed 100' tidal buffer within Cocheco Street for sewer connection.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: Minimum Expedited Wetland Permit

Name of Professional That Prepared Plans: Stephen J. Haight

Address PO Box 1166, Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: 7978 E-mail address: shaight@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 Property Owner: _____ Date: 7/19/18

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

Signature of Agent: _____ Date: 7/20/18

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: 7/19/18

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. The applicant must obtain the abutter information from the records of the Tax Assessor's Office (not more than five days prior to filing) in order to process the site review application.

ABUTTER is defined as the owner of record of a parcel of land located in New Hampshire and that adjoins or is directly within two hundred (200) feet (including land across the street or waterway) of the proposed site under consideration by the Planning Board. For a condominium or other collective form of ownership, abutter means the officers of the collective or association. *(See additional requirement below)*

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer:

NAME	COMPANY	MAILING ADDRESS

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

Abutters:

TAX MAP	LOT #	OWNER (S) OF RECORD	MAILING ADDRESS
		TO BE DONE BY CITY OF DOVER	

PLANNING BOARD
APPLICATION CHECKLIST & FEE SCHEDULE

A. If you are submitting an application for Site Review or a Major Subdivision the applicant shall meet with the Technical Review Committee (TRC). Eight (8) copies of the application and preliminary plan must be submitted. _____

B. Prior to the submission deadline for Planning Board, fifteen (15) copies of the application and fifteen (15) sets of plans must be submitted. Four (4) 22" x 34"and eleven (11) 11" x 17" (signed by owner). _____

C. **TOTAL FEE** paid by cash or check made payable to "City of Dover"

1. Application fee for the following:
   - SUBDIVISION $150.00 x # _____ new lots created = $ _____
   - LOT LINE ADJUSTMENT $200.00 (if more than two lots involved, add $100.00 per lot) = $ _____
   - SITE REVIEW - RESIDENTIAL $100.00 x # ____ per dwelling unit = $ _____
   - SITE REVIEW – NON-RESIDENTIAL (not to exceed $10,000)
     New construction $.15 sq. ft. x # _____ sq. ft. = $ _____
     Additions (new floor space) $.10 per sq. ft. x # _____sq. ft. = $ _____
   - IMPERVIOUS PAVED AREA (for new development) OR IMPERVIOUS PARKING LOT ADDITIONS (not to exceed $10,000) $.07 sq. ft. x # _____ = $ _____
   - MOTEL/HOTEL $35.00 x # ___ per lodging unit = $ _____
   - CHANGE OF USE (not to exceed $5,000)
     Existing floor space $.10 per sq. ft. x # ____ sq. ft. = $ _____
   - CONDITIONAL USE PERMIT $150.00 x # _____ per application = $ 150.00
   - GRAVEL PIT/ EXTRACTION PERMIT
     Application fee $50.00 = $ _____
     Permit fee $75.00 = $ _____
   - EXTENSIONS OF/AMENDMENTS TO/WAIVERS FOR AN APPROVED PLAN ($150.00 minimum) $50.00 x # ____ per hour of review $ _____
   - REQUEST FOR REZONING $150.00 = $ _____
   - DRIVEWAY WAIVER – $100.00 application fee =
     Letter of rejection from Engineering Department, diagram & letter from owner $ _____

D. **Mailing Labels (Avery 5160)** in triplicate including owner, engineer, architect, land surveyor, or soil scientist whose professional seal appears on the plat with names and addresses for notices.

1. Certified letters fee: # of abutters _____ X $8.00 = $ _____
2. Applicant & Owner, engineer, architect, land surveyor or soil scientist Certified letters fee # _____ of x $8.00 = $ _____
3. First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00 = $ _____
4. Creating/Printing Abutter Labels fee per sheet _____ x $10.00 = $ _____

E. **Foster's newspaper public notice fee** **$ 80.00**

F. **Digital Version of the Plan** & Archive Fee $1.00 x # _____ per sheet of plan set = $ _____

TOTAL FEE **$** 150.00

June 26, 2018

NHB Review

NEW HAMPSHIRE NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

To: Matthew Randall
181 Watson Ave
Dover, NH 03820

From: NH Natural Heritage Bureau

Date: 2/12/2018 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau of request submitted 2/5/2018

NHB File ID: NHB18-0460 **Applicant:** Matthew Randall

Location: Dover
Tax Maps: 24-114 & 24 115b

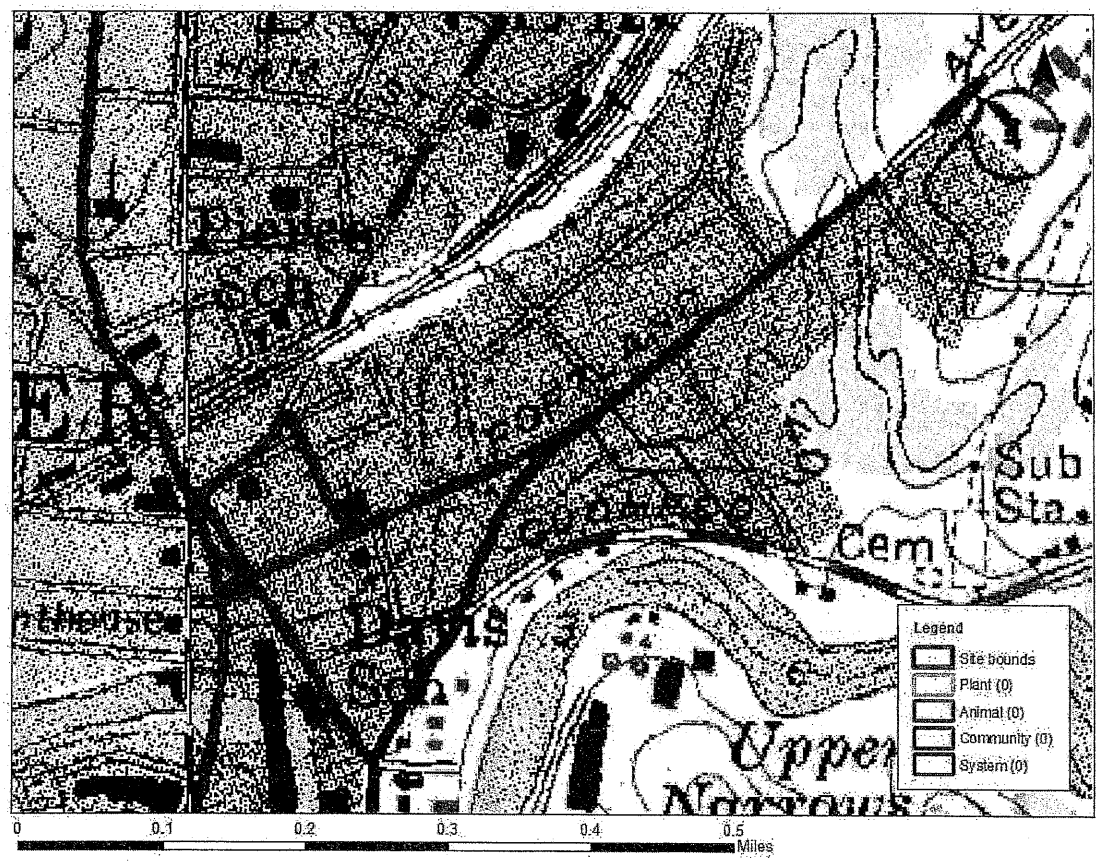
Project Description: A condominium/town house subdivision.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program 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.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 2/5/2018, and cannot be used for any other project.

MAP OF PROJECT BOUNDARIES FOR: **NHB18-0460**

NHB18-0460



Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

June 26, 2018

WETLAND REPORT

Michael Cuomo, Soil Scientist
6 York Pond Road, York, Maine 03909
207 363 4532
mcuomosoil@gmail.com

Steve Haight, P.E.
Civilworks of New England
P.O. Box 1166
Dover, NH 03820

1 December 2017

Dear Mr. Haight;

This letter is in reference to the vacant property located on Cocheco Street in Dover, NH. This is identified by the City of Dover as map 24, lot 115-B. On 30 November 2017 I inspected the property for regulated wetlands.

Wetlands were identified as defined by the State of New Hampshire.
Env-Wt 101.113 "Wetland" means "wetlands", as defined by RSA 482-A:2, X, namely "an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands include swamps, marshes, bogs and similar areas.

Wetlands were identified on site using the technical criteria in the *Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual*. These are the standards used by State and

Federal regulators and conform with local requirements.

A single wetland was identified at the southern end of the parcel. The western side of the wetland is marked with blue flags numbered 1 through 6. The east side of the wetland is marked with flags A1 to A7. The wetland continues off the property in both directions.

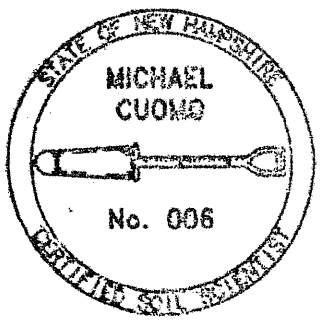
The wetland is highly manipulated by past and on-going human activity. Invasive plant species are widespread. Filling and soil excavation has occurred in the past. Dumping has occurred and is on-going. Excess run-off is sent to the site from abutting properties.

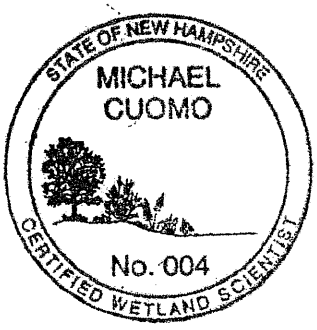
The property boundaries are not fully marked on this site. I made assumptions based on the aerial photo tax map overlay and occupation. I may need to revisit the site after the survey is finished to confirm the completeness of this work.

Please call if you have questions regarding this work.

Sincerely,

Michael Cuomo





Michael Cuomo
NH Wetland Scientist #004
NH Soil Scientist #006

Michael Cuomo, Soil Scientist
6 York Pond Road, York, Maine 03909
207 363 4532
mcuomosoil@gmail.com

Steve Haight, P.E.
Civilworks of New England
P.O. Box 1166
Dover, NH 03820

9 November 2017

Dear Mr. Haight;

This letter is in reference to the property located at 87 Portland Avenue in Dover, NH. On this date I inspected the property for regulated wetlands.

Wetlands were identified as defined by the State of New Hampshire.
Env-Wt 101.113 "Wetland" means "wetlands", as defined by RSA 482-A:2, X, namely "an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands include swamps, marshes, bogs and similar areas.

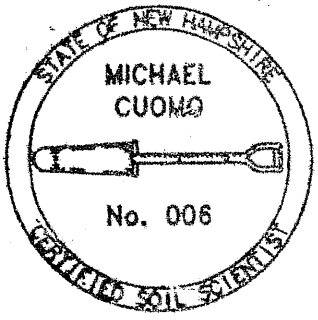
Wetlands were identified on site using the technical criteria in the *Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual*. These are the standards used by State and Federal regulators and conform with local requirements.

There are no regulated wetlands on this property.

Please call if you have questions regarding this work.

Sincerely,

Michael Cuomo
NH Wetland Scientist #004
NH Soil Scientist #006





B. NHDES Expedited Wetlands Permit and City of Dover Conditional Use Permit for Marker 44 Holdings, LLC, Assessor's Map 24 Lot 115B, zoned CBD-G & CWD, located at 87 Portland Avenue and Cocheco Street.

Matt Randall of Civilworks was present the proposal to install utilities, walking path, parking, retaining walls and site grading for a residential project. Impacts include 9,950 sq. ft. of 20% slope, 150 sq. ft. of Conservation District within 100 feet of Cochecho River, 11,017 sq. ft. of wetland buffer impact, 181 sq. ft. of permanent wetland impact and 589 sq. ft. of temporary wetland impact.32 units of multi-family housing is proposed. We will have porous pavement in the parking lots. The wetlands are low value. The 20% slopes are manmade. The tidal buffer work is actually pavement within Cocheco Street to do sewer work.

Donovan: Will the parking lots have curbs?

Randall: Yes they will be curbed.

Lyon: Do you have a storm water management plan?

Randall: Yes in the drainage plan is an operations and management plan.

Donovan: What will happen to the steep slopes?

Randall: They will be graded away so that in the end there will be no steep slopes.

Fellows confirmed that the project had been to TRC already.

Donovan: You are eliminating the steep slopes and have addressed storm water management.

Fellows made a motion to endorse the NHDES Expedited Wetlands Permit and City of Dover Conditional Use Permit, Kramer-Perry seconded. Vote: 4 in favor

Donovan signed five copies of the application.

C. City of Dover Conditional Use Permit for Summit Land Development, Assessor's Map K, Lot 19-4, zoned ETP & RCM, located at Pointe Place.

Cory Belden of Altus Engineering and Chad Kageleiry of Summit were present to explain the proposal to build a retaining wall and driveway for a mixed use project, with a wetland buffer impact of 4,000 square feet. The status of the first three stages was reviewed. This application involves the three buildings on the south side of Pointe Place. In order to reduce impervious surfaces we are having underground parking – 74 spaces. There are no new outfalls within the wetlands buffer, we are using existing outfalls. There are impacts to wetland buffers only, no wetland impacts.

Kageleiry: The driveway location really can't be altered as we want to keep a four way intersection.

Belden: Part of the lot is in a conservation easement.

Donovan: Is the driveway curbed?

Belden: Yes it will drain to a rain garden.

Fellows: Would it be practical to eliminate the driveway out onto Pointe Place in this location and just have one driveway?

DRAFT

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P18-34

Application Type:	Site Plan Review
Applicant(s):	Marker 44 Holdings LLC
Owner(s):	Marker 44 Holdings LLC
Location:	87 Portland Ave & Cocheco St (Assessor's Map 24, Lots 114 & 115-B)
Meeting Date:	September 25, 2018

INTENT: To leave existing 2,176 sq. ft. two family dwelling and construct four 3,904 sq. ft. multi-unit apartment buildings containing a total of 32 units and construction of a 24 ft. wide driveway to access both buildings.

LOTS/UNITS PROPOSED: 4 new buildings with 32 units total plus an existing 2 unit building

AGENDA ITEM #: 4-C

ACREAGE: 1.85 acres

ZONING DISTRICT: CBD-Downtown Gateway & CWD

EXISTING LAND USE: Residential

PROPOSED LAND USE: Multi-family residential per other case

SURROUNDING LAND USE: Residential

ZBA ACTION: H87-11: Variance denied to convert 3 rooms to 5 rooms

ATTACHMENTS: Application materials, 8/9/18 TRC Minutes, and Site Plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED:
-Conditional Use Permits
-NHDES Notice of Intent
-NHDES Wetlands Permit

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant proposes to leave the existing 2,176 sq. ft. two family dwelling and construct four 3,904 sq. ft. footprint multi-unit apartment buildings containing a total of 32 units and construction of a 24 ft. wide driveway to access both buildings.

The Technical Review Committee reviewed this at their August 9th meeting and then had a follow up discussion on how comments were addressed to each Department's satisfaction.

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 of various types. This plan is consistent with those regulations.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application, open the public hearing, and vote to approve the site plan with the following conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The conditional use permit (P18-35) and Lot Line Adjustment (P18-34) shall be approved
2. The applicant shall provide:
   a. A digital version of plan set
   b. Integrated Pest Management Plan documenting need or lack thereof for pest control
   c. Cross-access easements for parking and access
3. The applicant must revise final plan set to:
   a. Add the owner's signatures to the final plat submitted for signature to be recorded at the Strafford County Registry of Deeds
   b. Add LLS, PE, and Landscape Architect signatures and stamps to final plan
   c. Substitute vinyl siding with a more natural material
   d. Address any outstanding TRC comment
   e. Note Integrated Pest Management plan on demo sheet

Conditions to Be Met Prior to any Construction Activity:

4. A site construction sign with the contact information for the general contractor must be located and approved by the City Engineer or Assistant City Manager.
5. Applicant shall complete Land Use Development Tracking Form, most recently revised version, utilizing the online Pollution Tracking and Accounting Pilot Project (PTAPP) portal. https://www.unh.edu/unhsc/ptapp
6. Provision of Integrated Pest Management Plan are in place to the satisfaction of Inspection Services.

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P18-34

Application Type:	Site Plan Review
Applicant(s):	Marker 44 Holdings LLC
Owner(s):	Marker 44 Holdings LLC
Location:	87 Portland Ave & Cocheco St (Assessor's Map 24, Lots 114 & 115-B)
Meeting Date:	September 25, 2018

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

7. The new dwelling units shall be assessed and pay the current water and sewer investment fees in place at the time of application for service.

Conditions to Be Met Prior to Occupancy:

8. Issuance of a certificate of occupancy.
9. Impact fees for new dwelling units and commercial space shall be paid per the invoice included with the Notice of Decision.
10. The applicant shall provide a letter of credit or other form of security acceptable to the City for any unfinished work.

CIVILWORKS NEW ENGLAND
181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

September 11, 2018

Mr. Christopher Parker
Assistant City Manager/Director of Planning
City of Dover
288 Central Ave
Dover, NH 03820

Subject: Gundalow Landing: A Residential Apartment Development
87 Portland Ave & Cocheco Street
Dover, NH 03820
Our Reference No. 1795

Re: Site Review Application &
Conditional use Permit &
Lot Line Adjustment Application Submission

Dear Mr. Parker:

On Behalf of our clients, Marker 44 Holdings, LLC, we are pleased to submit (15) Copies of the Application(s), (15) sets of the application material, (1) set of the supporting drainage analysis, (3) full size plan sets, (12) reduced sets, and one electronic copy of the attached materials for Planning Board:

1) Site Review Application
2) Conditional Use Permit Application
3) Lot Line Adjustment Application
4) Tax Map
5) Project Narrative
6) Zoning Opinion
7) Traffic Impact Analysis
8) Utility Letters
9) Site Photographs
10) NHB Review
11) Wetland Report
12) Landscaping Operation and Maintenance Plan
13) Stormwater Inspection and Maintenance Plan
14) Drainage Report & Plans (Select Sets)
15) Design Plans

We look forward to discussing this application with the Planning Board after having been reviewed and endorsed by City Staff. If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,

Stephen J Haight, PE

CIVILWORKS NEW ENGLAND

SJH

SITE REVIEW APPLICATION

CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES - P18-34

Application Type:	Site Plan Review
Applicant(s):	Marker 44 Holdings, LLC
Owner(s):	Marker 44 Holdings, LLC
Location:	87 Portland Ave & Cocheco St (Tax Map 24, Lots 114 & 115-B)
Date:	August 9, 2018

INTENT: To leave existing 2,176 sq. ft. two family dwelling and construct four 3,904 sq.ft. multi-unit apartment buildings containing a total of 32 units and construction of a 24 ft. wide driveway to access both buildings. A request for a CUP and a LLA will also appear before the PB.

LOTS/UNITS PROPOSED: 4 new buildings with 32 units total plus an existing 2 unit building

AGENDA ITEM #: 1

ACREAGE: 1.85 acres

ZONING DISTRICT: CBD – Downtown Gateway & CWD

EXISTING LAND USE: Residential

SURROUNDING LAND USE: Residential

ZBA ACTION: One variance denied

PERMITS REQUIRED:

- Conditional Use Permit
- NHDES Notice of Intent
- NHDES Wetlands Permit

WAIVERS REQUESTED: None

ATTENDANCE:
Members:
Chris Parker, Planning
Elena Piekut, Planning Zoning
Jim Maxfield, Fire/Inspections
Sgt. Marn Speidel, Police
Dave White, Engineering

Others:
Steve Haight, Civilworks
Matt Randall, Civilworks
Bill Hopkins, Marker 44
Kristen Hopkins, Marker 44
Willy Hopkins, Marker 44

Approval of 8/2/2018 Meeting Minutes
Dave White moved to approve the minutes of August 2, 2018. Elena Piekut seconded. Vote: U/A

PLAN REVIEW:
Planning Comments:

- Impact fees and water/sewer investment fees will be assessed and due
- Please double side application packet before PB
- Discuss parking space loss in traffic analysis
- Are these condo or rental?
- Who will use the sidewalks along buildings 3 &4
- Wetland buffer placards may be needed
- Please provide
  - Streetscape sheet to plan set
  - O&M plan for walk way
  - legal opinion on the zoning boundary moving with LLA
  - Pest control before demolition or earth disturbance may be needed
  - Stormwater O&M plan
  - Landscape O&M plan
  - Neighborhood plan that meets the regulations
  - Cross-access easements for parking and access
- Please revise plan set to:
  - Revise spelling to "Cochecho"
  - Indicate LLA as P18-36, CUP as P18-35, and Site Plan as P18-34
  - Add neighborhood plan and streetscape to sheet index
  - Add common site plan notes to site plan, LLA notes LLA plan
  - Move legend down on sheet 5 to leave 2'x2' space for approval stamp
  - Number the parking space totals
  - Parking behind existing building needs to be independently accessible
  - Stockade fence can be 8' tall
  - Add fire lane signage
  - Revise Building Inspector to Building Official
  - If retaining wall is over 4', need fence. Submit stamped retaining wall design to the City Engineer and Building Official
  - Document topography 100' off site
  - Sheet 13 seems odd

- Add additional lights to buildings 1 & 3
- Provide uniformity ratio
- Confirm landscape plan meets new regulations
- Add legend to landscape plan
- Indicate materials on elevations
- Indicate vent system for garage
- Include PE, LLS, and Landscape Architect signatures and stamps on final plan submissions
- Update parking calculation to the zoning

Police Department Comments:

- Lay out new on-street parking bays with 20' buffer in each direction from new curb cut.
- Please Provide
  - Roger Street street view. This is likely to be the most drastic change.
  - A "Private Property – Pass At Own Risk" sign at Cochecho Street entrance to walking trail.
- Portland Avenue – Driveway street view does not show accurate width driveway for proposed project.
- Why no screening behind building #2 parking area?
- Landscape Concept Plan L-1 shows exaggerated tree cover along the Roger Street side.
- Sheet 17 provides no specificity for retaining walls relative to the site plan.
- Do not name the project "Cochecho Landing". Likely to be confused with Cochecho Park and Cochecho Court. Consider another name acceptable for public safety interests.

Fire/Inspections Comments:

- Please revise plan set to:
  - Include a private drive road name for numbering and 911 mapping.
  - Relocate fire hydrant by building 1 to allow for additional snow storage
  - Add blow off/hydrant at end of water main- defer to CS
  - Add a detail sheet for the construction of the accessible ramps.
  - On Sheet 5
    - Clarify accessible signs to be installed, see sheet 12 detail
    - Clarify the width of the access aisle for accessible parking space at building 1
  - On Sheet 7 Discuss the location of the FDC locations
  - On Sheet 17 Add height of fence to detail
  - A2 discuss overall percentages of glazing on east wall of building 2 and 3.
- Discuss overall site access including slopes.
- Discuss adding snow storage between building 2 and 3
- Provide design geometry of accessible ramps including handrails.
- NFPA 13 system will be required

Engineering Comments:

- Please set up a meeting to review stormwater with Engineering staff
- Drainage improvements should be made along Cochecho Street to intercept the offsite flow
- Eversource will supply the complex off the existing service pole.
- Applicant shall complete Land Use Development Tracking Form, most recently revised version, utilizing the online Pollution Tracking and Accounting Pilot Project (PTAPP) portal. https://www.unh.edu/unhsc/ptapp
- Please revise the plans to
  - Relocate the sewer run to avoid the wetlands
  - Note the smh numbers
  - Show drainage info on Cochecho St by sewer run
  - Note the type and size of the water main
  - Detail the utility connections, including separation of 7 feet between gas/UGE and water or sewer.

Economic Development Comments: None.

Planning Board Comments: None

Next Steps: Applicant intends to appear before Conservation Commission August 13th and Planning Board September 11th or 25th. Applicant will schedule second TRC with Donna Benton.

Adjournment:
A motion to adjourn TRC was made at 11:16 am by Marn Speidel and seconded by Dave White. Vote: U/A

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: April 02, 2018]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Marker 44 Holdings, LLC Telephone # (603) 743-6649

Address of Applicant: 130 Central Ave, Dover, NH 03820

E-Mail Address: wfhopkins@hotmail.com

Name of Property Owner (*if different from applicant*): same Telephone # same

Address of Property Owner: same

PROPERTY INFORMATION

Address of Property: 87 Portland Ave & Cocheco St.

Assessor's Map # 24 Lot(s) # 114, 115-B

Zoning District(s) CBD-G, CWD Overlay District(s) Wetlands Protection District

Size of Parcel: 39,463 / 41,164 sq. ft. 0.91 / 0.94 ac. Property Deed: Book 4563 / 4562 Page: 175 / 656

Existing Use of Property: residential/unimproved

SITE PLAN INFORMATION

Describe Proposed Use: (4) New Multiunit Residences & (1) existing two family dwelling

Area of Parcel to be Developed: 1.85 AC sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed: (4) New Buildings-32 Units / (1) Existing Buildings-2 Units

Number of Parking Spaces: Existing _____ Proposed 61

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

Number of Employees Total: n/a In Maximum Shift: n/a

Disposition of Parcel:

Building Footprint Proposed: 3904 sf (typ) sq. ft.

Total Building Area 17,792 sf (4 @ 3904 + 2176) sq. ft.

Paved Area _____ sq. ft.

Building Setbacks:

Front Yard 12.66' (Portland Ave) ft.

Rear Yard 53.78' (Lot 24/113) ft.

Side Yard: Right 27.69 ft. Left 8.45 ft.

City Water? x Yes ___ No How far is city water from the property? adjacent

City Sewer? x Yes ___ No How far is city sewer from the property? adjacent

BUILDING INFORMATION

Type of Building to be Built: multi-unit residential

Height of Building: Proposed Buildings < 55' Finished Floor Elevation: Proposed Buildings 62.5, 57.5, 47.0, 49.2 Existing 75.0

Number of Seats (where applicable) n/a

Estimated value of construction: _____ Refuse removal: Public/(Private) (circle one)

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: see attached

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin M. McEneaney P.L.S.

Address P.O. Box 681, 24 Chestnut Street, Dover, NH 03821 Telephone #: (603) 742-0911

Professional License #: 661 E-mail address: MSA@Surveynh.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Stephen J. Haight, Civilworks NE

Address PO Box 1166, Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: 7978 E-mail address: shaight@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. 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: 7/19/18

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

Signature of Agent: _____ Date: 7/20/18

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: 7/19/18

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: 7/19/18

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: 7/19/18

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

CITY OF DOVER SITE REVIEW
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

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

July 9, 2018

Project Narrative

PROJECT NARRATIVE
SITE REVIEW PERMIT
For

GUNDALOW LANDING
Marker 44 Holdings, LLC
130 Central Avenue
Dover, NH 03820

Tax Map 24, Lot 114 &
Tax Map 24, Lot 115B

PROJECT OVERVIEW
The project consists of the following general improvements:

- Deconstruction of the existing parking area and shed.
- Construction of four (4) multi-unit apartment buildings with a 24' wide paved driveway and associated onsite parking.
- Construction of stormwater detention and grading on-site.
- Underground utility construction
- Loam and seed disturbed areas.

PROJECT LOCATION AND SITE CHARACTERISTICS
The project site is located in portions of the Dover Downtown Gateway Sub-District as well as the Cocheco Waterfront District. The existing site consists of two parcels of land as shown on Tax Map 24, Lots 114 and 115B. The two parcels contain a total of 1.85 acres. There is an existing 2-unit, two-story apartment building and parking area on lot 24-114 and an old garage on parcel 24-115b. The parcels contain mostly woodland and generally slope from west to east. There are minor wetlands located on the eastern portion of the site which appear to have been highly manipulated by past and ongoing human activity. There is an existing drainage channel which leads to a catch basin along Cocheco Street.

The project proposes to initially combine portions of the two lots with a Lot Line Adjustment application. The existing 2-unit apartment building along Portland Avenue will remain on Map/Lot 24-114 and contain +/- 10,100 sf. The remaining land, which has frontage along Cocheco Street, will make up the remainder of Map/Lot 24-115b. The applicants propose to construct four (4) new multi-unit apartment buildings and a 24' wide driveway on lot 24-115b. The proposed driveway will be 24' wide, accessed from Portland Road, and serve both the existing building and proposed apartment buildings.

DRIVEWAY AND PARKING LAYOUT

The proposed driveway will be 24' wide with curbing and sidewalk. The proposed entrance located along Portland Road is 24' wide and will utilize the same curb cut location as the existing entrance, widening the existing entrance appropriately. This will continue to be the only driveway entrance located on the lot. The proposed driveway within the site allows for vehicular and pedestrian access to the existing building and proposed (4) multi-unit apartment buildings. Driveway grades range from 0-11%. Lighting for the proposed driveway and parking areas will be installed as per the lighting plan.

Handicap accessible routes, van accessible spaces, and accessible spaces have been coordinated within the site to accommodate ADA requirements. Double stacked parking spaces have been located behind the existing two-family home including a handicap accessible space. There are four parking "pods" located around the site. Additional to the outdoor parking there are 8 parking spots located on the ground floor for each of the (4) proposed buildings. All parking spaces shall be 9' x 18' in dimension.

For the proposed development, the City of Dover Parking maximums allow for the following:

- CBD-G (2 Units)*(1.25+.4) = 3.3 Spaces Maximum
- CWD (32 Units)*(1.4+.5) = 60.8 Spaces Maximum
    - Total for Site = **64.1 Spaces Maximum**

- Proposed (8 Garage Spaces)*(4 Buildings) = 32 Spaces
- Proposed Surface Spaces = 34 Spaces
- Total proposed = 66 Spaces (4 Accessible Spaces)

WETLAND AND MINIMUM IMPACT TYPE

The project work meets the criteria under Minimum Impact Project Type. The project work involves the alteration of significantly less than 3,000 square feet (+/- 181 sf Permanent Impact and +/- 583 sf Temporary Impact) within swamps or wet meadows. The project does not impact bogs, marshes, sand dunes, tidal wetlands, cedar swamps, undisturbed tidal buffer zone, or involve any work within 50 feet of a salt marsh. The project is not located within 100 feet of prime wetlands. There are no known or suspected archaeological resources within the project area. The wetland is dominated by invasive species and has been highly manipulated by past and on-going human activity.

The proposed development area is primarily north of the wetlands in question. This allows for the least impact to the wetlands and the buffer area on the two properties. A small portion of a wetland finger and the 50' wetland buffer zone will be impacted by the southernmost development areas planned for parking. The total amount of alteration and disturbance for the

wetland will be +/- 181 Permanent Impact and +/- 583 sf Temporary Impact sf and the amount within the 50' buffer area to be altered or disturbed will be +/- 11,787 sf.

The wetland will be temporarily impacted by utility crossings for a sewer line and then subsequently restored. A 4' asphalt walking trail will traverse across a narrow portion of the wetland. The wetlands will also be permanently impacted by a 5' walking trail leading to the waterfront via Cocheco Street. The proposed walking trail will be made of asphalt and cross the wetland for approximately 15'.

DRAINAGE

A drainage analysis was completed of two subject parcels Map 24-115b (1.62 AC) and 24-114 (0.23 AC) containing 1.85 acres under the same ownership. There is an existing 2-unit, two-story apartment building and driveway on lot 24-114 and an old, unusable garage with some pavement and lawn area located on parcel 24-115b. Overall the parcels contain mostly lawn and woodland area and generally slope from west (Portland Ave.) to east (Cocheco St.). At the lowest portion of the site is a single catch basin located along Cocheco Street. This area contains a small wetland comprised of a drainage channel leading into the existing catchbasin. The proposed development of the site will retain the existing house on lot 24-114 and remove the unusable garage and other existing improvements on lot 24-115b. The new improvements will consist of a 24' driveway, (4) 5-story apartment buildings, associated utilities, and a walking path. Aside from the walking path, sewer line, and a portion of the parking area, the improvements will remain west and upslope from the existing wetlands which will not be impacted by the construction of the apartment buildings.

Development of the site includes the use of porous pavement, catchbasin CDS stormfilters, and underground detention to achieve the suitable peak flow attenuation. In general the driveway and parking areas of the development, drain into two catchbasins with stormfilter filtration and porous pavement areas. Along the lower two parking areas an underground detention system was used to control the peak flows from the onsite impervious area and roof areas. Neglible increases in total runoff occur with all discharge points, however, the total amount will not contribute to flooding or functional impairments to streets, adjacent properties, or downstream properties. Peak flows have been attenuated for the 2 yr, 10 yr, 25 yr, and 50 yr storms for all discharge points.

TRAFFIC

A traffic study was completed for the project and is attached as a report to this submittal. Overall and as expected, there is an increase in traffic due to the proposed new 32 unit multifamily dwelling. There was an increase of 15 AM peak hour trips and 20 PM peak hour

trips. Overall weekday total trip generation (entering and exiting) will be an increase of 211 vehicle trips. In the report, it is suggested that the existing condition of street parking along Portland Ave be considered to be "no parking" for a length of seven spaces.

UTILITIES

The proposed project expects to connect to City of Dover water and sewer as well as Unitil natural gas, and eversource electric. Natural Gas lines are located within the Portland Road right-of-way which is the anticipated location for this connection. City of Dover water and sewer lines are located within both the Portland Road and Cocheco Street rights-of-way. The project anticipates connecting to City of Dover water via the Portland Road water main. Internal water services will be 6" mains with 2" connections to the buildings. Buildings will be sprinkled and connections made per the City's Community Services Utility Division and Fire Department requirements and standards. The project plans to connect to the gravity sewer lines in Cocheco Street. Electricity for the site is proposed to be provided by the existing electric lines located along Cocheco Street.

FISCAL IMPACT

A Fiscal Impact Analysis was completed for this development and is a part of this submittal. It is estimated that a total of (5) children will attend public schools due to the development and a total of 54 new residents will live in the complex. As explained in the report, there are no significantly surprising or burdensome effects from the proposed development. Tax revenue is estimated to increase to +/- $76,989 yearly for the proposed development.

July 9, 2018

Traffic Impact

CIVILWORKS NEW ENGLAND
181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: (603) 750.4266 FAX: (603) 749.7348

To: File
Cc: Marker 44 Holdings, LLC
From: Dana C. Lynch, P.E.
Date: June 6, 2018
Re: **Standard Traffic Impact Analysis**
87 Portland Avenue
Residential Development Proposal
Dover, NH
Our Reference No. 1795

1. Description of Site
The subject site consists of an existing brick structure on Lot 114, Tax Map 24 and vacant land shown as Lot 115-B. The total parcel area is 1.85 acres with street frontage and access provided via Portland Avenue. The proposal includes renovation of 2 existing units and construction of 32 new units in 5-story buildings.

2. Description of Roadways
Portland Avenue, also known as NH Route 4, is a two-way arterial roadway extending from the Dover CBD to the city limit at the Oak Street intersection, and into Maine to the east. The posted speed limit is 30 miles per hour. Adjacent land use transitions generally from residential, closer to downtown, to commercial uses and a municipal recreation complex closer to Oak Street.

In the area immediately surrounding the site, there are sidewalks along both sides of Portland Avenue. The lane configurations include 8-9 ft. wide shoulders, and in designated areas, on-street parking is permitted.

3. Sight Distance
Sight distance looking to the west (toward Portland Street) is in excess of 275 ft. at the existing drive. This meets or exceeds the guidelines set forth in the AASHTO "Green Book" for a posted speed of 30 mph.

Along the southerly side of Portland Avenue, directly in front of the subject parcel, there are approximately seven (7) designated parking spaces for on-street parking. These spaces are typically low use; however, their presence causes a potential for considerable limitation to sight distance for vehicles exiting the project site. If no vehicles are present, sight distance is well in excess of 400 ft.

In light of the provision for off-street parking addressed in the proposal and the current low use of the on-street parking spaces, consideration should be given to eliminating or reducing the on-street parking to ensure adequate sight distance, looking east toward Rogers Street, is continuously available.

4. & 5. Trip Generation and Distribution

The following is pertinent relative to trip generation and distribution associated with the subject project. It should be noted that Low-Rise Apartments (L.U.C. 221) was used to provide conservatively high values and provide ease of comparison. The proposed apartments and could also qualify as mid-rise apartments (L.U.C. 225) which have generally lower trip rates.

Data Source:
ITE Trip Generation, 7th Edition
Land Use Code (L.U.C.) 221, Low-Rise Apartment

Current Use:
2 apartment units

Proposed Project:
34 apartment units

Trip Generation:

- Current Use – Low-Rise (L.U.C. 221)

			Distribution	
Parameter	**Avg. Rate**	**Total Trip Ends**	**Entering**	**Exiting**
Average Weekday	6.59	13	6.5	6.5
A.M. Peak Hour	0.46	1	0	1
P.M. Peak Hour	0.58	1	1	0

- Proposed Use – Low-Rise Apartments (L.U.C. 221)

			Distribution	
Parameter	**Avg. Rate**	**Total Trip Ends**	**Entering**	**Exiting**
Average Weekday	6.59	224	112	112
A.M. Peak Hour	0.46	16	3	13
P.M. Peak Hour	0.58	20	13	7

Attachment A: Land Use Code 221, Low-Rise Apartment data sheets

Proposed Trip Distribution Estimates:
Data available through NHDOT indicates a June, 2014 average weekday traffic volume of 11,521 vehicles per day. This is actually very similar to counts in 1999 and less than counts from 2002, 2005, and 2008 (13,229, 13,613, and 12,092 respectively).

Predominant traffic movements, by observation, appear to be westbound (toward Dover) in the AM peak hour, and eastbound (toward Rollinsford and Maine) in the PM peak hour. Accordingly, a 60/40 split was used for distribution of the trips generated by the proposed project.

- Proposed Trip Distribution

Parameter	**Trips Entering**		**Trips Exiting**	
	From West	**From East**	**To West**	**To East**
A.M. Peak Hour	1	2	8	5
P.M. Peak Hour	8	5	3	4

6. Public Transit
   COAST bus Route 2 and Wildcat Transit Route 3 are available within ¼ mile of the site, at Janeto's Market.

Marker 44 Holdings, LLC



Property Information

Property ID	24114-000000
Location	87 PORTLAND AV
Owner	MARKER 44 HOLDINGS 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 03/29/2018
Properties updated 06/05/2018

ATTACHMENT A

ITE Trip Generation, 7th Edition
Land Use Code (L.U.C.) 221
Low-Rise Apartment

Land Use: 221
Low-Rise Apartment

Description

Low-rise apartments (rental dwelling units) are units located in rental buildings that have one or two levels (floors), such as garden apartments. Apartment (Land Use 220), high-rise apartment (Land Use 222) and mid-rise apartment (Land Use 223) are related uses.

Additional Data

The peak hour of the generator typically coincided with the peak hour of the adjacent street traffic.

The sites were surveyed from the early 1970s to the late 1990s throughout the United States and Canada.

Source Numbers

11, 21, 71, 98, 110, 177, 192, 300, 305, 306, 320, 321, 525

Low-Rise Apartment
(221)

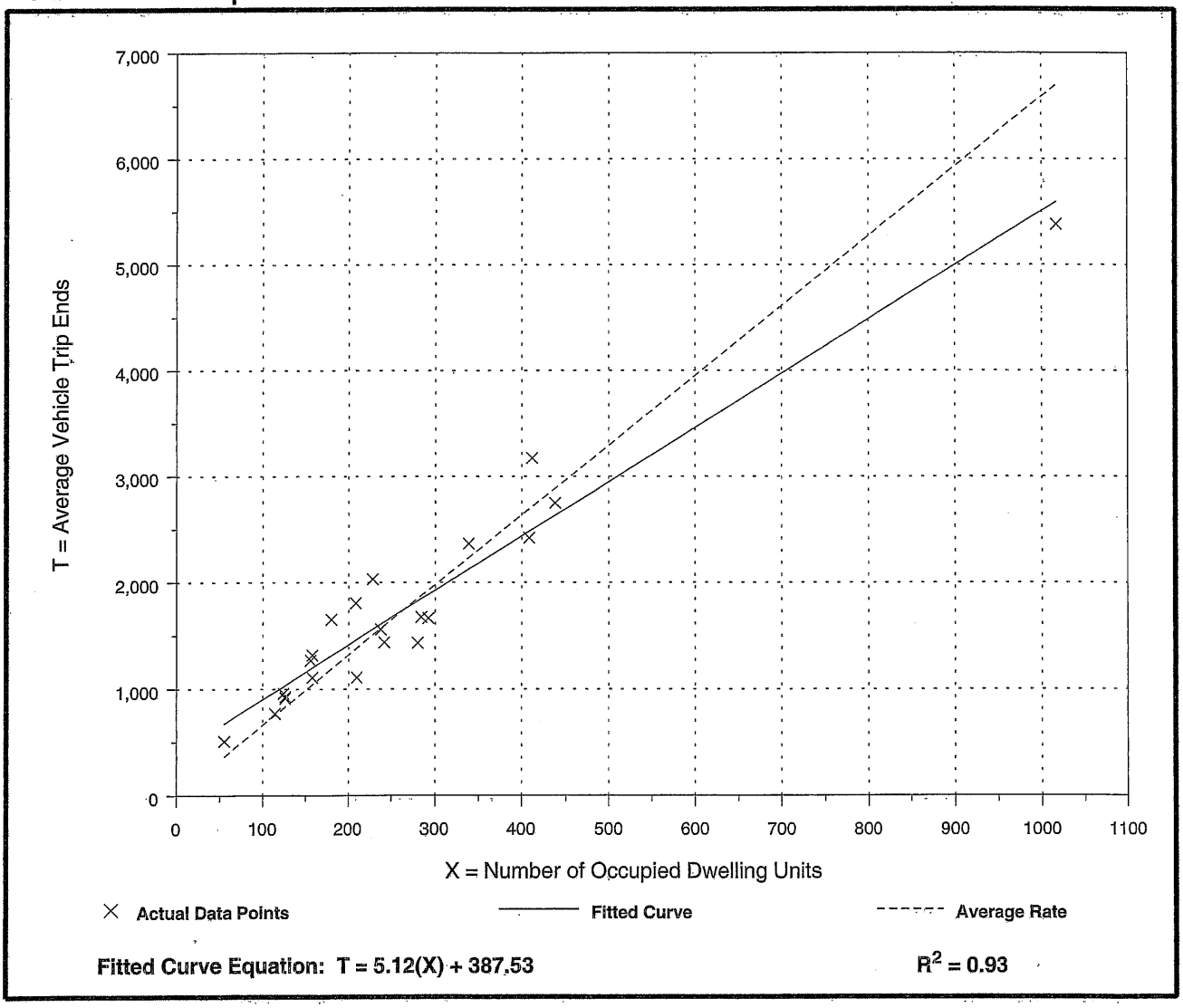
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday

Number of Studies: 22
Avg. Num. of Occupied Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.59	5.10 - 9.24	2.84

Data Plot and Equation



Fitted Curve Equation: T = 5.12(X) + 387.53

R^2 = 0.93

Low-Rise Apartment
(221)

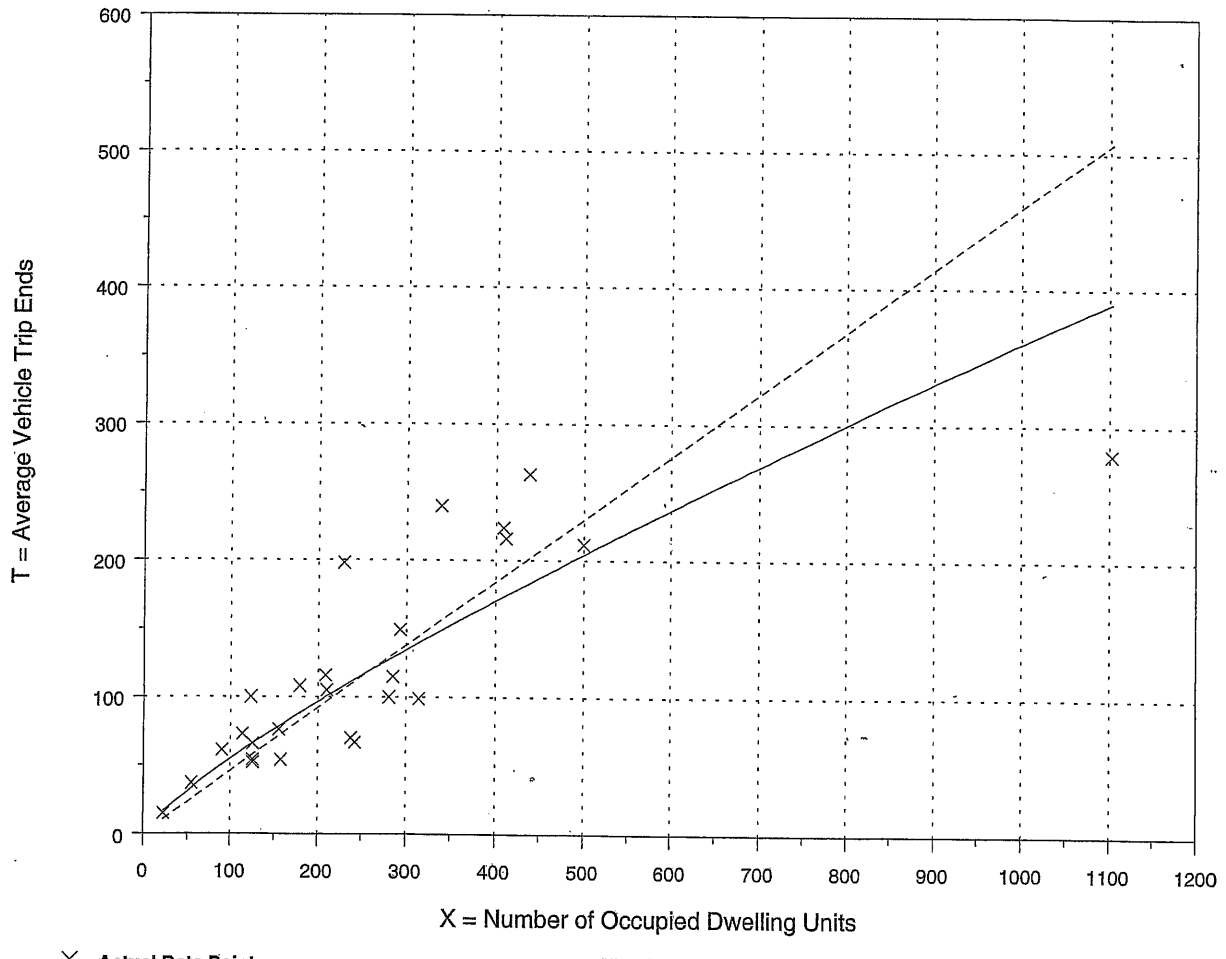
Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 27
Avg. Num. of Occupied Dwelling Units: 257
Directional Distribution: 21% entering, 79% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.25 - 0.86	0.70

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 0.23

R^2 = 0.81

Low-Rise Apartment
(221)

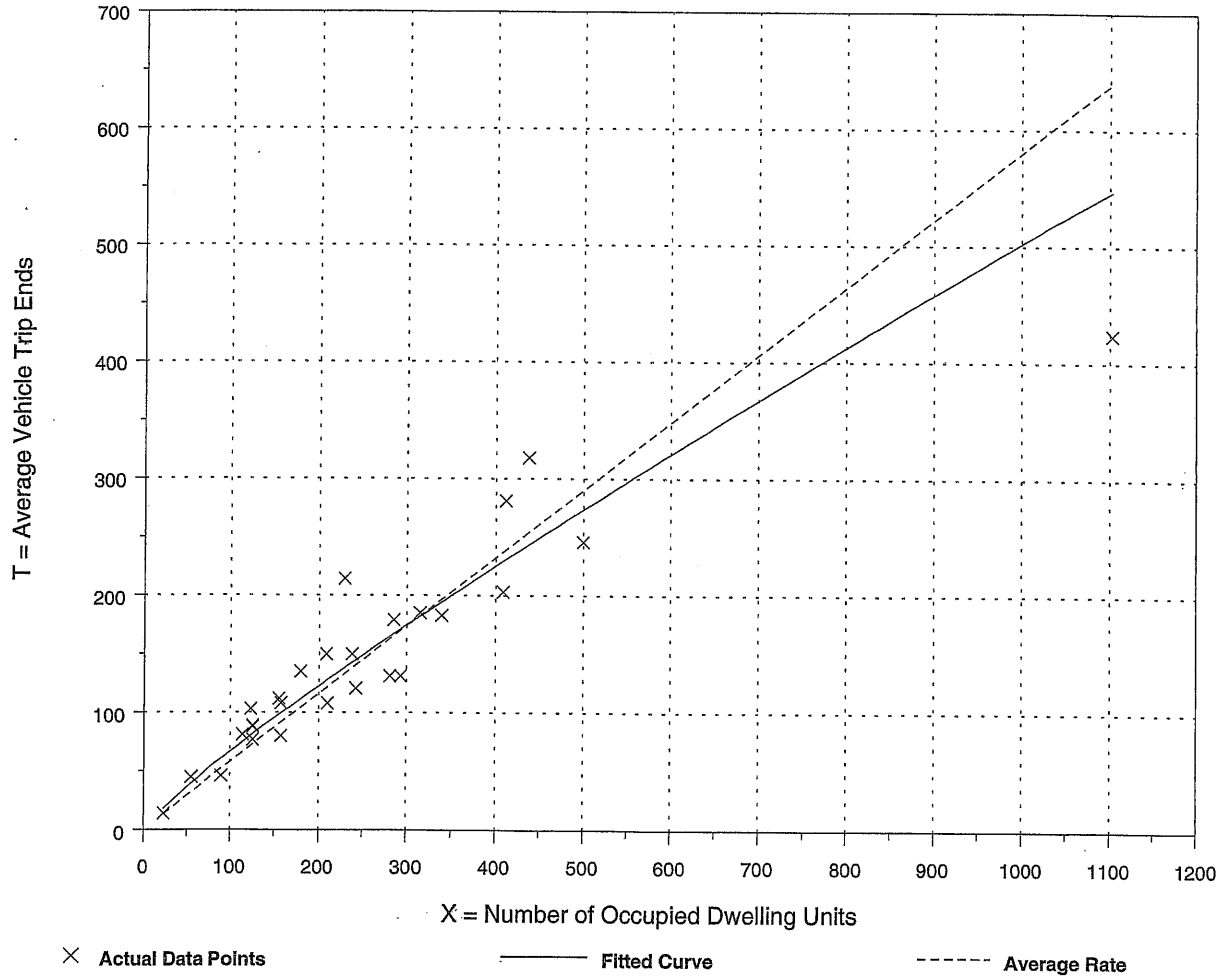
Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 27
Avg. Num. of Occupied Dwelling Units: 257
Directional Distribution: 65% entering, 35% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.58	0.38 - 0.93	0.77

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.88 Ln(X) + 0.16

R^2 = 0.92

ATTACHMENT B

NHDOT Bureau of Traffic
ATR Data for June 2014
Station 81125146-125147
Dover-NH 4, East of Essex St.

STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION - BUREAU OF TRAFFIC
IN COOPERATION WITH U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
AUTOMATIC TRAFFIC RECORDER DATA FOR THE MONTH OF JUNE 2014

2/22/2016

82 125047 DOVER- NH 4 (PORTLAND AVE) EAST OF ESSEX ST (EB-WB) (81125146-125147)

MON	DATE	DAY	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Total
6	10	3	41	18	20	83	188	524	809	761	563	514	600	618	669	694	813	878	1002	777	527	449	298	179	101	63	11189
6	11	4	33	36	27	80	193	510	827	775	585	566	596	605	589	674	885	1024	1088	757	685	416	327	195	99	88	11660
6	12	5	38	26	33	65	200	507	889	778	608	549	655	659	698	612	846	960	1006	807	554	495	332	194	137	67	11715

TYPE	STATION	YEAR	MONTH	NO. DAYS	AVERAGE SUNDAY	AVERAGE WEEKDAY	AVERAGE SATURDAY	AVERAGE DAILY	COMPUTED VOLUME	PERCENT GAIN	PERCENT LOSS
82	125047	2014	June	3	0	11521	0	*	*		

PEAK HOUR VOLUMES:

	AVERAGE AM:	AVERAGE MIDDAY:	AVERAGE PM:
SUNDAY	*	*	*
WEEKDAY	842 *	689	1032 *
SATURDAY	*	*	*

AM - 6 AM TO 10 AM
MIDDAY - 10 AM TO 2 PM
PM - 2 PM TO 8 PM

Utility Letters

Matt Randall

From: White, Dave <D.White@dover.nh.gov>
Sent: Thursday, July 05, 2018 12:02 PM
To: Steve Haight; Young, Gretchen
Cc: Kristen Hopkins; Matt Randall; Boulanger, Bill
Subject: RE: Hopkins

we can provide water and sewer to service this and are currently looking at upgrades to the cocheco street pumpstation.

Dave White, PE
City Engineer
Dover, NH

From: Steve Haight [mailto:shaight@civilworksne.com]
Sent: Friday, June 29, 2018 3:24 PM
To: White, Dave <D.White@dover.nh.gov>; Young, Gretchen <G.Young@dover.nh.gov>
Cc: Kristen Hopkins <kristenhopkins@alumni.upenn.edu>; Matt Randall <mrandall@civilworksne.com>
Subject: Hopkins

Good afternoon Dave

We are working on a site plan for Bill and Kristen Hopkins on Portland Ave and are looking for confirmation of ability to provide services.

We are proposing to tie into water in Portland Ave and to tie sewer into the sewer in Cocheco Street

There is an existing duplex on site… the proposal is to add 4 new buildings with 8 - 2bedroom each (32 bedrooms @ 150/gpd/bdrm = 9,600 gpd)

The services would serve the 4 new buildings. The existing house will remain on its current water and sewer.

If you have any questions please feel free to reach out to me or Matt from my office directly

Best regards

Steve

Stephen J. Haight, P.E.
President
Civilworks New England/Haight Engineering, PLLC
181 Watson Road
P.O. Box 1166
Dover, New Hampshire 03821
O: 603.750.4266
C: 603.817.6651

Dear Valued Customer,

Thank you for your recent electric service request. We look forward to working with you on your new electric service connection or improvement project.

Please review the following information for accuracy and call 1-800-362-7764 or email us at NHNewService@eversource.com with any updates:

* Work Request Number:	3128732
* Work Request Date:	06/26/2018
* Customer Name:	Marker 44 Holdings
* Job Location:	87 Portland Ave, Dover, NH
* Contractor Name:	Kristen Hopkins
* Contractor Number:	(603) 742-7715

Requests such as this require close collaboration between you, Eversource, and possibly the city or town where service is being requested. Our Electric Service Process and Responsibilities Guide explains in detail this collaboration, and how your request will be processed. In the case of complex projects, there may be additional steps, which would be discussed directly with you.

To check on the status of your request at any time, please visit us at www.eversource.com. If you have any questions or need to cancel your request, please contact us by telephone or by email. Our Technicians are available Monday through Friday from 7:00 a.m. to 4:30 p.m., and are happy to assist you.

Eversource Electric Service Support Center.

Sincerely,

Eversource

Electric Service Support Center Team-NH

1-800-362-7764

NHNewService@eversource.com

June 26, 2018

Inspection and Maintenance Plan

Landscape Operation & Maintenance Plan Gundalow Landing

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.

Stormwater Management System Inspection & Maintenance Plan

For

GUNDALOW LANDING

MAP 24, LOT 114
&
MAP 24, LOT 115B

87 Portland Avenue & Cocheco Street
Dover, New Hampshire
Strafford County

May 2018

Prepared For:

MARKER 44 HOLDINGS, LLC
130 Central Avenue
Dover, NH 03820

Prepared By:

CIVILWORKS NE
P.O. Box 1166
181 Watson Road
Dover, New Hampshire 03820

Introduction

Civilworks NE, has prepared the following Stormwater Management System Inspection & Maintenance Plan for Markers Landing, Dover, NH. The intent of this plan is to provide a list of procedures that document the inspection and maintenance requirements of the Stormwater Management System for this site.

The following inspection and maintenance program is necessary in order to keep the Stormwater Management System functioning properly. These measures will also help to minimize potential environmental impacts to the areas surrounding the developed site. By following the enclosed procedures, the property owners, and maintenance personnel will be able to maintain the functional design of the Stormwater Management System and maximize its ability to remove sediment and other contaminants from site generated stormwater runoff while at the same time ensuring the recharge of groundwater resources through continued infiltration.

Owner

Marker 44 Holdings, LLC
130 Central Avenue
Dover, NH 03820

In the event of a change in ownership, this Inspection and Maintenance Plan shall be transferred to the new party; transfer shall be documented to NH DES in writing.

Contact / Responsible Party

Marker 44 Holdings, LLC
130 Central Avenue
Dover, NH 03820
(603) 743-6649

The contact information for the Contact / Responsible Party shall be kept current; transfer shall be documented to NHDES in writing.

Management Company

Marker 44 Holdings, LLC
130 Central Avenue
Dover, NH 03820

The contact information for the Management Party shall be kept current.

Inspection Schedule / Record Retention

Inspection frequency should, at a minimum, be in accordance with New Hampshire Stormwater Manual, Volume 2, latest edition, as updated by NHDES. See the Inspection and Maintenance Plan for frequency requirements. A copy of the completed Stormwater Management System's Inspection & Maintenance Log and Deicing Salt Quantity Use Log shall be maintained, kept on-site, and be made available to local, state, or federal regulators as applicable by law.

Stormwater Management System Components

The Stormwater Management System associated with the project is designed to mitigate both the quantity and quality of site-generated stormwater runoff and to recharge the underlying groundwater resources. As a result, its design includes the following elements:

- Culverts
- Energy Dissipation Structures (Rip Rap)
- Swales
- Catch Basins
- Catch Basins with CDS Stormwater
- Pavement and Porous Pavement
- Outlet Structures
- Litter / Trash Removal

Structure callouts in ( ) correlate to the design plans, a copy of which shall be maintained with this Inspection and Maintenance Plan.

Inspection and Maintenance Plan

By implementing the following procedures, the owners will be able to maintain the functional design of the Stormwater Management System and maximize the system's ability to remove sediment and other contaminants from site generated stormwater runoff and to effectively recharge the underlying groundwater resources.

CULVERTS:

- Inspect once per year.
- Inspect for clogging and sediment accumulation.
- Remove all debris immediately and sediment accumulations $\geq$ 2 inches.

ENERGY DISSIPATION STRUCTURES (RIP RAP): As Applicable

- Inspect the outlet protection annually for damage and deterioration. Repair damages immediately.
- If stones become displaced from the riprap areas they should be replaced immediately and chinked in to assure stability. Add additional riprap as needed. Vegetation growing through the riprap should be eliminated at least yearly.

SWALES (INCLUDING RIP RAP LINED):

- Inspect once per year.
- Inspect for erosion, sediment accumulation, vegetation loss, and presence of invasive species.
- Remove debris and accumulated sediment, based on inspection.
- Repair eroded areas and provide additional vegetation/rip rap as needed; remove invasive species and dead vegetation.

OUTLET STRUCTURE(S):

- Inspect once per year.
- Inspect for clogging and sediment accumulation.
- Remove all debris immediately and sediment accumulations $\geq$ 2 inches.

CATCH BASIN(S):

- Inspect once per year.
- Inspect for floatables, sediment accumulation, and hydrocarbons (oils and grease).
- Remove all floatables immediately and sediment accumulations $\geq$ 2 feet.
- Hydrocarbons shall be removed immediately by skimming, absorbent materials, or other methods and should be disposed of in accordance with applicable State and Federal regulations.

CATCH BASIN CDS STORMWATER FILTERS (S):

- Inspect twice per year
- Visually inspect that the system components are in working order and there are no blockages or obstructions in the inlet or separation screen.
- Quantify the accumulation if hydrocarbons, trash, and sediment in the system.
- When sediment has accumulated to 75% of the capacity of the isolated sump or appreciable levels of hydrocarbons and trash have accumulated, maintenance shall be performed.
- Maintenance should include the system being completely drained down and the sump being fully evacuated of sediment by the vacuum truck.

POROUS PAVEMENT:

- Prohibit sanding.
- Minimize application of salt for ice control.
- Monitor periodically to ensure that the pavement surface drains effectively after storms.
- Clean periodically (1-2 times per year) using a sweeper or vacuum sweeper. Vacuum sweeping is the preferred method.

LITTER / TRASH REMOVAL:

- Routinely patrol site for litter pick up.

Inspection & Maintenance Table

System Component / BMP	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
Culverts	Annually	Check for sediment accumulation and clogging	≥ 2 in. sediment depth
Energy Dissipation (ED) Structures (RipRap)	Annually	Check for displaced stones Check for woody vegetation	Replace immediately Remove annually
Swales (Rip Rap Lined)	Annually	• Check for sediment accumulation • Check for erosion	≥ 1 in. sediment Repair immediately
Outlet Structure(s)	Annually	• Inspect once per year. • Inspect for clogging and sediment accumulation. • Remove all debris immediately and sediment accumulations ≥ 2 inches.	≥ 2 in. sediment Remove immediately
Catch Basins	Annually	• Check for sediment accumulation • Check for floatable contaminants	≥ 2 ft. sediment depth Remove all floatables
Catch Basin w/ CDS Stormwater Filter	Bi-Annually	• Check general condition of the system components and for obstructions • Check for accumulation of sediment, and blockages and appreciated levels of hydrocarbons and/or trash	>75% sediment on the catch basin floor, any blockages, appreciable mounts of trash
Pavement • Sanding • Salt Applications • Sweep/Vacuum • Trash/Debris	Limit use As Req. 1 - 2 x's Year Periodically	Minimize use to prevent tracking issues RECORD APPLICATION RATES Sweep or vacuum to prevent tracking issues Check for trash/debris	Sweep to prevent issues Minimize as Req. Sweep/Vac as needed Remove when noticed
Litter / Trash Removal	Periodically	Check for litter and trash	Remove when noticed

Inspection & Maintenance Checklist/Log

The following pages contain a blank copy of the Stormwater Management System's Inspection & Maintenance Log and a Deicing Salt Quantity Use Log. These forms are provided to assist the owners with the inspection and maintenance of the aforementioned Stormwater Management System.

Stormwater Management System's Inspection & Maintenance Log

Date of Inspection/Maintenance: _____ Inspector: _____

System Component / BMP	Cleaning / Repair Needed (List Items / Comments)	Date of Cleaning/Repair	Performed By

Deicing Salt Quantity Use Log

Date	Amount of Material Applied	Comments

Site Photographs



Picture 1



Picture 2



Picture 3



Picture 4



Picture 5



Picture 6



Picture 7



Picture 8



Picture 9



Picture 10



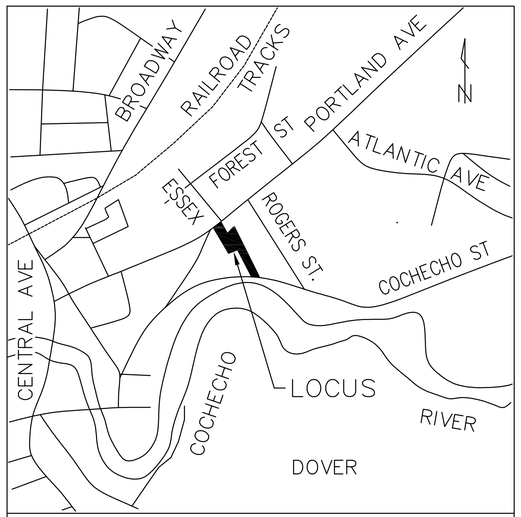
Picture 11



Picture12

SITE PLAN
GUNDALOW LANDING
A RESIDENTIAL APARTMENT DEVELOPMENT

TAX MAP 24, LOT 114 &
TAX MAP 24, LOT 115B
COCHECHO STREET
PORTLAND AVE
DOVER, NH
JULY 18, 2018
REVISED: SEPTEMBER 12, 2018



LOCATION PLAN
(NO SCALE)

GENERAL NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW SITE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF 4 – 5 STORY APARTMENT BUILDINGS. EACH BUILDING WILL HAVE A PARKING GARAGE BENEATH AND FOUR FLOORS OF APARTMENTS ABOVE, SURFACE PARKING FOR EACH BUILDING AND A WALKING PATH TO COCHECHO STREET.
2. THE FOLLOWING LOCAL, STATE AND/OR FEDERAL PERMITS HAVE BEEN ISSUED FOR THIS PROJECT:
   CITY OF DOVER: SITE PLAN APPROVAL: PENDING
   CITY OF DOVER: CONDITIONAL USE PERMIT: PENDING
   NHDES WETLAND IMPACT PERMIT: PENDING
3. VARIANCE/SPECIAL EXCEPTIONS GRANTED BY THE CITY OF DOVER ZONING BOARD OF ADJUSTMENT: NONE REQUIRED
4. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE AND APPROVED CONSTRUCTION SIGN SHALL BE IN PLACE PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.
5. A PRE–CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
6. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THIS PROJECT. THE SWPPP MUST INCLUDE THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE SITE. PARTIES RESPONSIBLE FOR DEVELOPING THE SWPPP SHOULD REFER TO THE EPA NPDES CONSTRUCTION GENERAL PERMITS NOTICE OF INTENT FOR A COMPLETE OUTLINE OR REQUIRED ELEMENTS. THESE PLANS AND THE STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN PREPARED FOR THIS PROJECT MAY BE UTILIZED IN FULFILLING THE REQUIREMENTS.
7. UPON COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN AND THE REPORTING REQUIREMENTS CONTAINED THEREIN.
8. PURSUANT TO CITY OF DOVER ORDINANCE AND APPROVALS ASSOCIATED WITH THIS WORK, CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY – FRIDAY 7AM – 6PM, SATURDAY AND SUNDAY 9AM – 4PM. HOURS OF CONSTRUCTION SHALL BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR GENERAL CONTRACTOR. SAID SIGNAGE SHALL BE LOCATED AND APPROVED BY THE CITY ENGINEER OR DIRECTOR OF PLANNING AND ASSISTANT CITY MANAGER.
9. AS–BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON REPRODUCIBLE MYLAR MEDIUM AND IN A DIGITAL DXF FORMAT ON DISK TO THE CITY ENGINEER'S OFFICE UPON COMPLETION OF THE PROJECT. AS–BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A P.E. OR AN L.L.S.
10. THIS PLAN SET INCLUDES THE LOT LINE ADJUSTMENT PLAN FILE #P18–36 A CONDITIONAL USE FILE #P18–35 AND THE SITE PLAN FILE #P18–34.

OWNER
MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

SITE CIVIL ENGINEER
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

LAND SURVEYOR
MCENEANEY SURVEY ASSOCIATES, INC.
P.O. BOX 681
24 CHESTNUT STREET
DOVER, NH 03820

WETLAND SCIENTIST
MICHAEL CUOMO
6 YORK POND ROAD
YORK, ME 03909

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

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

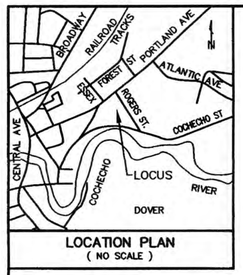
ARCHITECT
CJ ARCHITECTS
233 VAUGHAN ST.
PORTSMOUTH, NH 03801

MARKER 44 HOLDINGS, LLC DATE

SHEET INDEX

	SHEET
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TOGRAPHIC PLAN OF LAND (By McEneaney Survey Associates)	2
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LANDSCAPE PLAN (By Woodburn & Company)	L-1
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NEIGBORHOOD PLAN	EX-1
TRUCK TURNING PLAN	EX-2

PLANNING FILE NO.: P18–34



LOCATION PLAN
(NO SCALE)

No.	Bearing	Distance
L1	S31°39'37"E	47.78'
L2	N59°12'58"E	22.00'
L3	N73°16'23"W	35.25'

REFERENCE PLANS:

1.) SUBDIVISION OF LAND DOVER, NEW HAMPSHIRE – THOMAS DUMONT, SANFORD, MAINE. SCALE: 1" = 30'; DATED: NOVEMBER 26, 1984; BY: JOHN W. DURGIN ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 24A–159.

2.) PLAN OF LAND OF JOHN PRINTY – COCHECO STREET, DOVER, NEW HAMPSHIRE. SCALE: 1" = 30'; DATED: APRIL 6, 1988; BY: CIVIL CONSULTANTS. RECORDED S.C.R.D. PLAN 33A–86.

3.) LOT RESTORATION PLAN FOR KNOX MARSH DEVELOPMENT, LLC. 28 ROGERS STREET, DOVER, NH TAX MAP 24, LOT 117. SCALE: 1" = 10'; DATED: AUGUST 22, 2016; BY: BERRY SURVEYING AND ENGINEERING. RECORDED S.C.R.D. PLAN 113–53.

4.) SUBDIVISION OF LAND DOVER, N.H. FOR TIMOTHY G. PEARSON. SCALE: 1" = 30'; DATED: SEPTEMBER 10, 1979; BY: JOHN W. DURGIN ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 200–29.

5.) COCHECO STREET LAYOUT FOR THE CITY OF DOVER, N.H. SCALE: 1" = 50'; DATED: AUGUST 1, 1990, REVISED THROUGH AUGUST 22, 1990; BY: BRUCE L. POHOPEK. RECORDED S.C.R.D. PLAN 40–82.

15°37'22"
MAGNET OBS. 8/14/17
NH STATE PLANE GPS OBS. AUGUST 9, 2017

24 / 70
RICHARD J. PERREAULT
HEATHER L. PERREAULT
33 VETERANS TERRACE
SOMERSWORTH, NH 03878
4111 / 988

ESSEX STREET

24 / 69
DIANE A. CARTER
76 PORTLAND AVENUE
DOVER, NH 03820
2038 / 422

24 / 68
JAVIERA L. KALBACK
SETH M. KALBACK
74 PORTLAND AVENUE
DOVER, NH 03820
4083 / 851

24 / 68C
THEODORE M. ZELLEM
TERESA M. ZELLEM
56 ROLLINS ROAD
ROLLINSFORD, NH 03869
1642 / 752

24 / 116
STEPHEN MCDONOUGH
CHERYL MCDONOUGH
27 HIGHLAND ROAD
KENSINGTON, NH 03833
4378 / 870

24 / 115A
KAREN K.C. PILLETTE
GREGORY B. PILLETTE, JR.
97 PORTLAND AVENUE
DOVER, NH 03820
4379 / 724

24 / 117-1
KNOX MARSH DEVELOPMENT, LLC
242 CENTRAL AVENUE
DOVER, NH 03820
4382 / 827

24 / 117
KNOX MARSH DEVELOPMENT, LLC
242 CENTRAL AVENUE
DOVER, NH 03820
4382 / 827

24 / 118
JOHN T. PETROVITSIS
72 PERKINS ROAD
MADBURY, NH 03823
4452 / 891

24 / 119
D. JAMES MCATAVEY, TRUSTEE
D. JAMES MCATAVEY REVOCABLE TRUST OF 1986
26 PROSPECT STREET
DOVER, NH 03820
3530 / 93

24 / 120
DENNIS B. MCATAVEY
34 MOUNT VERNON STREET
DOVER, NH 03820
4092 / 317

24 / 121
BARBARA A. ZIELFELDER
RICHARD ZIELFELDER, JR.
10 ROGERS STREET
DOVER, NH 03820
3963 / 625

24 / 135A
GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820
2612 / 358

24 / 136
GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820
1102 / 80

24 / 137
GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820
1207 / 803

24 / 138
GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820
1208 / 46

24 / 115
D. KAJANDER & G. MAHANNA, TRUSTEES
THE MAHANNA KAJANDER REVOCABLE TRUST
3 PHEASANT LANE
PORTSMOUTH, NH 03801
4550 / 303

24 / 115B
PARCEL AREA
39,463 S.F.
0.91 Ac.

24 / 114
PARCEL AREA
41,164 S.F.
0.94 Ac.

24 / 111A
AMITY ISLAND INVESTMENTS II, LLC
9 FALKLAND PLACE B1
PORTSMOUTH, NH 03801
4408 / 858

24 / 112
RITA C. PRINTY IRREVOCABLE TRUST
JAMES W. PRINTY, TRUSTEE
461 LOCUST STREET
ROLLINSFORD, NH 03869
3154 / 944

24 / 113
RITA C. PRINTY IRREV. TRUST
JAMES W. PRINTY, TRUSTEE
461 LOCUST STREET
ROLLINSFORD, NH 03869
3154 / 944

TBM MAG HUB AT SIDEWALK ELEV. 71.66
FINISH FLOOR ELEV. 75.0
STEEL STAKE FOUND DAVIS CAP, DOWN 4" N – 255,992.923 E – 1,197,097.365 (SEE NOTE 7)
MON (TBS)
IRON PIPE FOUND 1"ø, UP 18"
IRON PIPE FOUND 1 3/4"ø, UP 15"
CONCRETE BOUND FOUND WITH 1"ø IRON PIPE WITNESS
IRON PIPE FOUND 3"ø, UP 6"
STEEL STAKE FOUND N26°22'29"W, 8.55' TO LOT CORNER
IRON ROD FOUND, CIVIL CONSULTANTS CAP, UP 14"
IRON ROD FOUND, FLUSH
IRON PIPE FOUND 1"ø, UP 12"
TBM MAG NAIL IN SIDEWALK ELEV. 20.88
IRON PIPE FOUND 2"ø, DOWN 2" N – 255,918.486 E – 1,197,008.818 (SEE NOTE 7)
IRON PIPE FOUND 1 1/2"ø, UP 6"
IRON ROD FOUND, CIVIL CONSULTANTS CAP, UP 6"
PAVED PARKING (SEE NOTE 11)
DILAPIDATED SHED
SPRING OR SEEP
HOUSE #87
SHED
PAVED DRIVE
WOOD STOCKADE FENCE
BUILDING
50' DOVER WETLAND BUFFER
PORTLAND AVENUE
COCHECO STREET
COCHECHO RIVER
TIDAL FLOW EBB

239.92' S28°22'47"E
224.34' S28°14'01"E
103.74' S31°58'37"E
229.67' S31°39'37"E
115.68' N49°56'52"E
90.38' N41°25'26"E
120.36' N31°01'01"W
95.14' N75°46'23"W
111.88' S56°50'40"W
121.68' N32°32'56"W
226.12' N32°17'14"W

ZONE – RMU LINE – CWD
ZONE – CBD DG LINE – CWD
ZONE – CWD LINE – CBD DG
ZONE – CBD DG LINE – CWD

NOTES:

1.) OWNER OF RECORD:

24 / 114 — MARKER 44 HOLDINGS, LLC, 130 CENTRAL AVENUE, DOVER, NEW HAMPSHIRE 03820, S.C.R.D. VOLUME 4563, PAGE 175

24 / 115B — MARKER 44 HOLDINGS, LLC, 130 CENTRAL AVENUE, DOVER, NEW HAMPSHIRE 03820, S.C.R.D. VOLUME 4562, PAGE 656

2.) 24 / 114 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) PARCEL AREAS:

24 / 114 = 41,164 S.F. / 0.94 Ac.

24 / 115B = 39,463 S.F. / 0.91 Ac.

4.) THE INTENT OF THIS PLAN IS TO DEPICT THE PARCELS BOUNDARIES AND EXISTING SITE CONDITIONS AS OF DECEMBER 18, 2017.

5.) ZONING DISTRICTS:

CBD DOWNTOWN GATEWAY SUB–DISTRICT (CBD DG)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= N/A
MINIMUM LOT COVERAGE	= 50 PERCENT
FRONTAGE BUILD–OUT	= 60 PERCENT MINIMUM
FRONT BUILD TO LINE	= 5 FEET MIN. / 20 FEET MAX.
SIDE SETBACK	= 5 FEET MIN.
REAR SETBACK	= 0 FEET MIN.
MAXIMUM BUILDING HEIGHT	= 2 STORY MIN. / 4 STORY MAX.

COCHECHO WATERFRONT DISTRICT (CWD)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= N/A
MAXIMUM LOT COVERAGE	= 75 PERCENT
MINIMUM FRONTAGE	= N/A
FRONT SETBACK	= 0 FEET
SIDE SETBACK	= 0 FEET
REAR SETBACK	= 0 FEET
MAXIMUM BUILDING HEIGHT	= 55 FEET

NOTES CONTINUED:

6.) THE SUBJECT PARCELS ARE NOT LOCATED WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0330; SUFFIX E; MAP NUMBER 33017C0330E; EFFECTIVE DATE SEPT. 30, 2015.

7.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 3, 2017.
VERTICAL DATUM IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 3, 2017.

8.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. ON DECEMBER 18, 2017 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

9.) PARCEL IS SUBJECT TO THE STATE OF NEW HAMPSHIRE SHORELINE WATER QUALITY PROTECTION ACT (SWQPA). THOSE AREAS WITHIN 250 FEET OF THE COCHECHO RIVER REFERENCE LINE.

10.) WETLANDS WERE DELINEATED ON NOVEMBER 30, 2017 BY MICHAEL CUOMO, CERTIFIED WETLANDS SCIENTIST #004 AND FIELD LOCATED BY THIS OFFICE ON DECEMBER 15, 2017.

11.) THE ABUTTERS PAVED PARKING AREA APPEARS TO ENCROACH ONTO PARCEL 24 / 115B (TWO PLACES, TWO ABUTTERS).

LEGEND

MON (TBS) O – BOUNDARY MONUMENT (TO BE SET)
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
S.C.R.P. – STRAFFORD COUNTY REGISTRY OF PROBATE
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
ø – DIAMETER
-o- UP – UTILITY POLE
OHU – OVERHEAD UTILITY LINES
VGC – VERTICAL GRANITE CURB
CB – CATCH BASIN
DMH – DRAIN MANHOLE
SMH – SEWER MANHOLE
WETLANDS
EDGE OF WETLAND
WF2 / A6 – WETLAND FLAG I.D.
48 – CONTOUR LINE (2 FOOT INTERVAL)

NO.	DATE	DESCRIPTION	BY	CHK
2	7/12–18	ADD ADD'L WETLAND, BUFFER, UPDATE ABUTTER	RJM	KMM
1	5/22/18	REVISE OWNERS OF RECORD	RJM	KMM

REVISIONS

17–2168	TOPOGRAPHIC	17–07	63–74
PROJECT NO	TYPE	FIELDBOOK & PAGES	

STATE OF NEW HAMPSHIRE
MICHAEL CUOMO
No. 004
CERTIFIED WETLAND SCIENTIST
Michael Cuomo
26 Jul 18

TOPOGRAPHIC PLAN OF LAND
PREPARED FOR
MARKER 44 HOLDINGS, LLC
TAX MAP 24, LOT No. 114
87 PORTLAND AVENUE
AND
MARKER 44 HOLDINGS, LLC
TAX MAP 24, LOT No. 115B
COCHECHO STREET
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 18–__

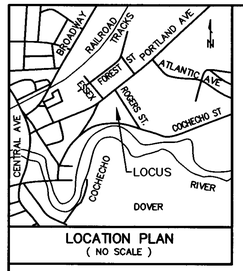
DRAWN BY: RJM | FILE: W10 CP\2168\17–2168–1A
SCALE: 1" = 30' | DATE: DECEMBER 26, 2017

30 15 0 15 30 60 90 120

STATE OF NEW HAMPSHIRE — No. 661 KEVIN M. McENEANEY — LICENSED LAND SURVEYOR

McEneaney Survey Associates, inc.
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING



LOCATION PLAN
(NO SCALE)

No.	Bearing	Distance
L1	S31°39'37"E	47.78'
L2	N59°12'58"E	22.00'
L3	N73°16'23"W	35.25'

24 / 116
STEPHEN MCDONOUGH
CHERYL MCDONOUGH
27 HIGHLAND ROAD
KENSINGTON, NH 03833
4378 / 870

24 / 115A
KAREN K.C. PILLETTE
GREGORY B. PILLETTE, JR.
97 PORTLAND AVENUE
DOVER, NH 03820
4379 / 724

24 /117-1
KNOX MARSH DEVELOPMENT, LLC
242 CENTRAL AVENUE
DOVER, NH 03820
4382 / 827

24 / 117
KNOX MARSH DEVELOPMENT, LLC
242 CENTRAL AVENUE
DOVER, NH 03820
4382 / 827

24 / 118
JOHN T. PETROVITSIS
72 PERKINS ROAD
MADBURY, NH 03823
4452 / 891

24 / 119
D. JAMES MCATAVEY, TRUSTEE
D. JAMES MCATAVEY REVOCABLE TRUST OF 1986
26 PROSPECT STREET
DOVER, NH 03820
3530 / 93

24 / 120
DENNIS B. MCATAVEY
34 MOUNT VERNON STREET
DOVER, NH 03820
4092 / 317

24 / 121
BARBARA A. ZIELFELDER
RICHARD ZIELFELDER, JR.
10 ROGERS STREET
DOVER, NH 03820
3963 / 625

24 / 135A
GEORGE MAGLARAS
33 COCHECHO STREET
DOVER, NH 03820
2612 / 358

24 / 136
GEORGE MAGLARAS
33 COCHECHO STREET
DOVER, NH 03820
1102 / 80

24 / 137
GEORGE MAGLARAS
33 COCHECHO STREET
DOVER, NH 03820
1207 / 803

24 / 138
GEORGE MAGLARAS
33 COCHECHO STREET
DOVER, NH 03820
1208 / 46

24 / 115
D. KAJANDER & G. MAHANNA, TRUSTEES
THE MAHANNA KAJANDER REVOCABLE TRUST
3 PHEASANT LANE
PORTSMOUTH, NH 03801
4550 / 303

24 / 70
RICHARD J. PERREAULT
HEATHER L. PERREAULT
33 VETERANS TERRACE
SOMERSWORTH, NH 03878
4111 / 988

ESSEX STREET

24 / 69
DIANE A. CARTER
76 PORTLAND AVENUE
DOVER, NH 03820
2038 / 422

24 / 68
JAVIERA L. KALBACK
SETH M. KALBACK
74 PORTLAND AVENUE
DOVER, NH 03820
4083 / 851

24 / 68C
THEODORE M. ZELLEM
TERESA M. ZELLEM
56 ROLLINS ROAD
ROLLINSFORD, NH 03869
1642 / 752

24 / 114
MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 4563, PAGE 175

24 / 115B
MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 4562, PAGE 656

24 / 111A
AMITY ISLAND INVESTMENTS II, LLC
9 FALKLAND PLACE B1
PORTSMOUTH, NH 03801
4408 / 858

24 / 112
RITA C. PRINTY IRREVOCABLE TRUST
JAMES W. PRINTY, TRUSTEE
461 LOCUST STREET
ROLLINSFORD, NH 03869
3154 / 944

24 / 113
RITA C. PRINTY IRREV. TRUST
JAMES W. PRINTY, TRUSTEE
461 LOCUST STREET
ROLLINSFORD, NH 03869
3154 / 944

NEW PARCEL AREA
10,100 S.F.
0.23 Ac.

NEW PARCEL AREA
70,526 S.F.
1.62 Ac.

(A)
31,063 S.F.
0.71 Ac.

REFERENCE PLANS:

1.) SUBDIVISION OF LAND DOVER, NEW HAMPSHIRE – THOMAS DUMONT, SANFORD, MAINE. SCALE: 1" = 30'; DATED: NOVEMBER 26, 1984; BY: JOHN W. DURGIN ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 24A–159.

2.) PLAN OF LAND OF JOHN PRINTY – COCHECHO STREET, DOVER, NEW HAMPSHIRE. SCALE: 1" = 30'; DATED: APRIL 6, 1988; BY: CIVIL CONSULTANTS. RECORDED S.C.R.D. PLAN 33A–86.

3.) LOT RESTORATION PLAN FOR KNOX MARSH DEVELOPMENT, LLC. 28 ROGERS STREET, DOVER, NH TAX MAP 24, LOT 117. SCALE: 1" = 10'; DATED: AUGUST 22, 2016; BY: BERRY SURVEYING AND ENGINEERING. RECORDED S.C.R.D. PLAN 113–53.

4.) SUBDIVISION OF LAND DOVER, N.H. FOR TIMOTHY G. PEARSON. SCALE: 1" = 30'; DATED: SEPTEMBER 10, 1979; BY: JOHN W. DURGIN ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 20D–29.

5.) COCHECHO STREET LAYOUT FOR THE CITY OF DOVER, N.H. SCALE: 1" = 50'; DATED: AUGUST 1, 1990, REVISED THROUGH AUGUST 22, 1990; BY: BRUCE L. POHOPEK. RECORDED S.C.R.D. PLAN 40–82.

NOTES:

1.) OWNER OF RECORD:

24 / 114 — MARKER 44 HOLDINGS, LLC, 130 CENTRAL AVENUE, DOVER, NEW HAMPSHIRE 03820, S.C.R.D. VOLUME 4563, PAGE 175 — OWNERS SIGNATURE

24 / 115B — MARKER 44 HOLDINGS, LLC, 130 CENTRAL AVENUE, DOVER, NEW HAMPSHIRE 03820, S.C.R.D. VOLUME 4562, PAGE 656 — OWNERS SIGNATURE

2.) 24 / 114 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) PLAN INTENT: TO ADJUST THE LOT LINES AS SHOWN. TRACT "A" 31,063 S.F. IS TO BE ADDED TO PARCEL 24 / 115B.

4.) PARCEL AREAS:

PARCEL:	24 / 114	24 / 115B
ORIGINAL	41,164 S.F. / 0.94 Ac.	39,463 S.F. / 0.91 Ac.
NEW	10,100 S.F. / 0.23 Ac.	70,526 S.F. / 1.62 Ac.

5.) ZONING DISTRICTS:

CBD DOWNTOWN GATEWAY SUB–DISTRICT (CBD DG)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= N/A
MINIMUM LOT COVERAGE	= 50 PERCENT
FRONTAGE BUILD–OUT	= 60 PERCENT MINIMUM
FRONT BUILD TO LINE	= 5 FEET MIN. / 20 FEET MAX.
SIDE SETBACK	= 5 FEET MIN.
REAR SETBACK	= 0 FEET MIN.
MAXIMUM BUILDING HEIGHT	= 2 STORY MIN. / 4 STORY MAX.

COCHECHO WATERFRONT DISTRICT (CWD)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= N/A
MAXIMUM LOT COVERAGE	= 75 PERCENT
MINIMUM FRONTAGE	= N/A
FRONT SETBACK	= 0 FEET
SIDE SETBACK	= 0 FEET
REAR SETBACK	= 0 FEET
MAXIMUM BUILDING HEIGHT	= 55 FEET

NOTES CONTINUED:

6.) THE SUBJECT PARCELS ARE NOT LOCATED WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0330; SUFFIX E; MAP NUMBER 33017C0330E; EFFECTIVE DATE SEPT. 30, 2015.

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9.) PARCEL IS SUBJECT TO THE STATE OF NEW HAMPSHIRE SHORELINE WATER QUALITY PROTECTION ACT (SWQPA). THOSE AREAS WITHIN 250 FEET OF THE COCHECHO RIVER REFERENCE LINE.

10.) WETLANDS WERE DELINEATED ON NOVEMBER 30, 2017 BY MICHAEL CUOMO, CERTIFIED WETLANDS SCIENTIST #004 AND FIELD LOCATED BY THIS OFFICE ON DECEMBER 15, 2017.

11.) THE ABUTTERS PAVED PARKING AREA APPEARS TO ENCROACH ONTO PARCEL 24 / 115B (TWO PLACES, TWO ABUTTERS).

12.) PARCEL 24 / 115B IS BENEFITED BY A TWENTY–TWO (22) FOOT WIDE RIGHT OF WAY OVER PARCEL 24 / 115 AS SHOWN ON REFERENCE PLAN No. 1. REFERENCE IS MADE TO STIPULATIONS SPELLED OUT IN S.C.R.D. VOL. 1157, PAGE 648 REGARDING USE OF THIS RIGHT OF WAY.

"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."

LEGEND

MON (TBS) O – BOUNDARY MONUMENT (TO BE SET)
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
S.C.R.P. – STRAFFORD COUNTY REGISTRY OF PROBATE
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
ø – DIAMETER
-O- UP – UTILITY POLE
OHU – OVERHEAD UTILITY LINES
VGC – VERTICAL GRANITE CURB
CB – CATCH BASIN
DMH – DRAIN MANHOLE
SMH – SEWER MANHOLE
WETLANDS
EDGE OF WETLAND
WF2 / A6 – WETLAND FLAG I.D.

NO.	DATE	DESCRIPTION	BY	CHK
2	6/18/18	ADD ADDITIONAL WET FLAGS & BUFFER, AND	RJM	KMM
		REVISE SIZE OF TRACT "A" PER REQUEST	RJM	KMM
1	6/6/18	REVISE OWNERS OF RECORD, ADD NOTE 12	RJM	KMM

REVISIONS

17–2168	LL ADJ	17–07	63–74
PROJECT NO	TYPE	FIELDBOOK & PAGES	

LOT LINE ADJUSTMENT PLAN
PREPARED FOR
MARKER 44 HOLDINGS, LLC
TAX MAP 24, LOT No. 114
87 PORTLAND AVENUE
AND
MARKER 44 HOLDINGS, LLC
TAX MAP 24, LOT No. 115B
COCHECHO STREET
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 18–___

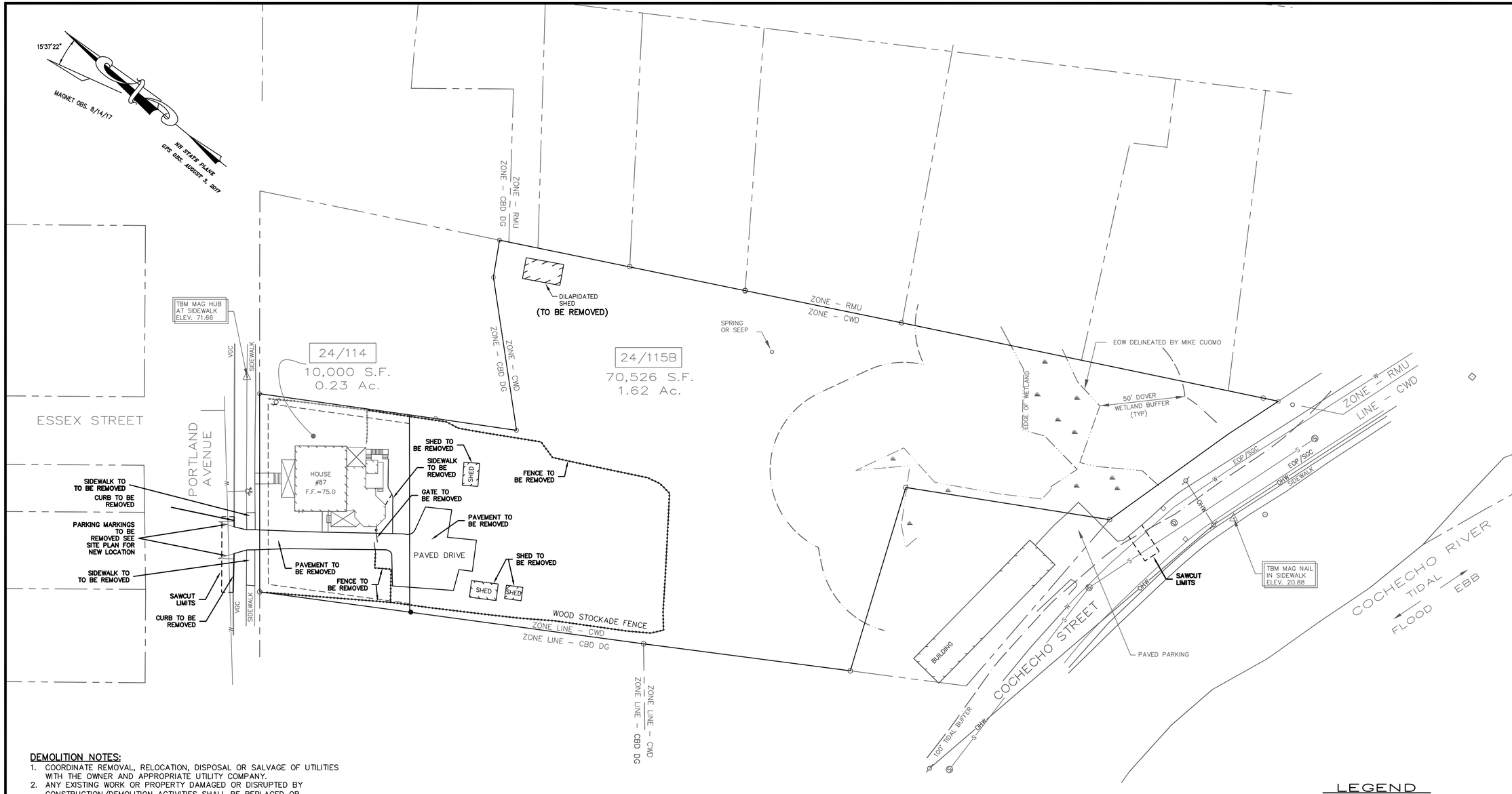
DRAWN BY: RJM | FILE: W10 CP\2168\17–2168 LLADJ–B
SCALE: 1" = 30' | DATE: APRIL 16, 2018

30 15 0 15 30 60 90 120

STATE OF NEW HAMPSHIRE — No. 661 — KEVIN M. McENEANEY — LICENSED LAND SURVEYOR — SIGNATURE

McEneaney Survey Associates, inc.
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING



DEMOLITION NOTES:

1. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
2. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY DEMOLITION/ CONSTRUCTION ACTIVITIES. (811).
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, UTILITIES AND PAVEMENT ON THE SITE TO THE LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT AND FENCES
5. IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
6. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS NOT ALREADY OBTAINED BY THE OWNER AND ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF–SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
8. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
9. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF–SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES, AND CODES.
10. CONTRACTOR SHALL PROVIDE PEST CONTROL & MANAGEMENT BEFORE DEMOLITION OR EARTH DISTURBANCE.

LEGEND

MON (TBS) O	– BOUNDARY MONUMENT (TO BE SET)
S.F.	– SQUARE FEET
Ac.	– ACRE
(TYP.)	– TYPICAL
UP	– UTILITY POLE
OHU	– OVERHEAD UTILITY LINES
VGC	– VERTICAL GRANITE CURB
EOW	– EDGE OF WETLAND
EOP	– EDGE OF PAVEMENT
SGC	– SLOPED GRANITE CURB
CB	– CATCH BASIN
DMH	– DRAIN MANHOLE
SMH	– SEWER MANHOLE
	– WETLANDS
	– EDGE OF WETLAND
WF2 / A6	– WETLAND FLAG I.D.
TBR	– TO BE REMOVED
	– FENCE
	– EXISTING BUILDING

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CITY OF DOVER
PLANNING BOARD FILE#
P18–34

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	DATE	APP'D
1	REVISION PER TRC COMMENTS	9–12–18	SJH

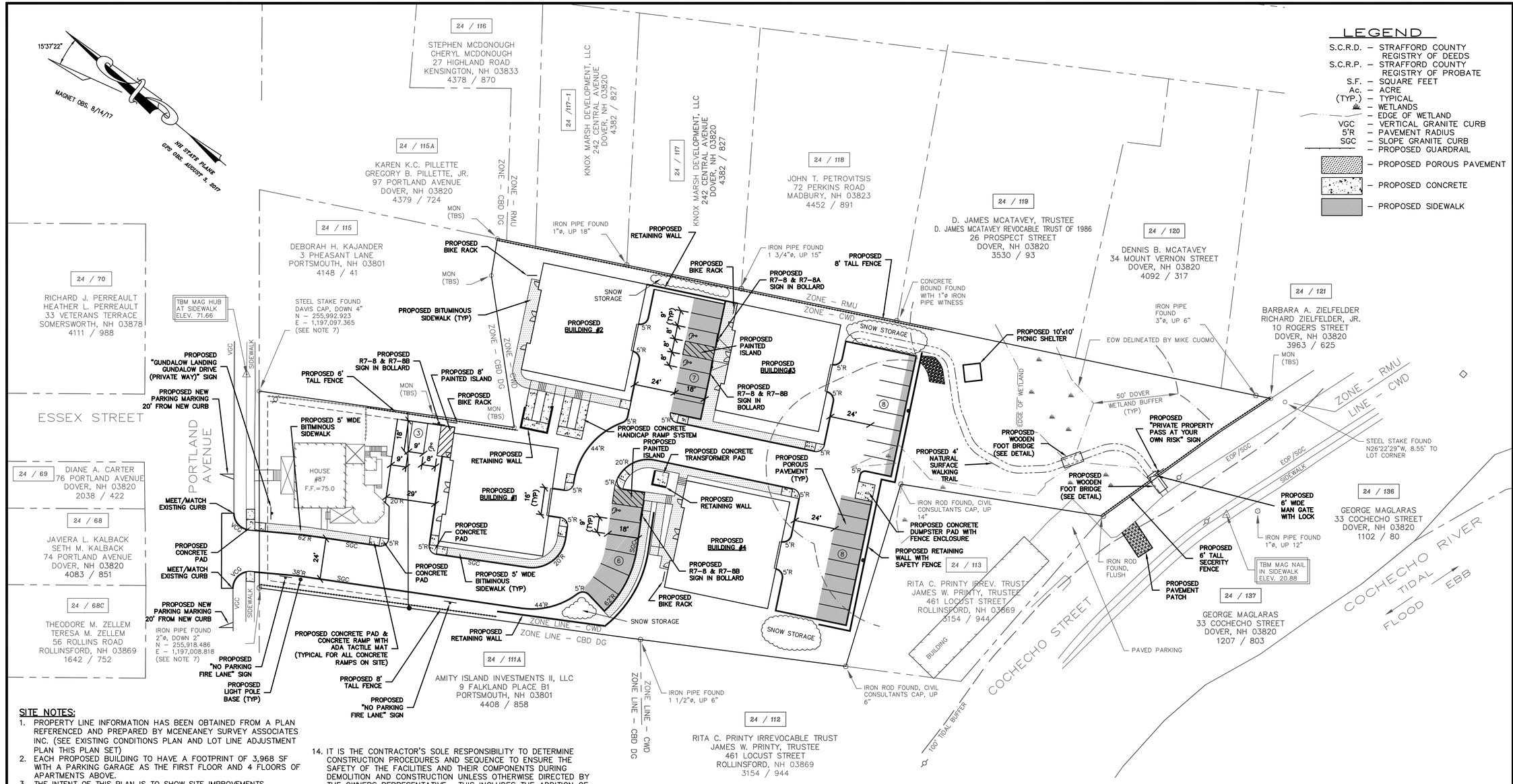
DATE: 7–18–18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

DEMOLITION PLAN

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

4



LEGEND

- S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
- S.C.R.P. – STRAFFORD COUNTY REGISTRY OF PROBATE
- S.F. – SQUARE FEET
- Ac. – ACRE
- (TYP.) – TYPICAL
- – WETLANDS
- – EDGE OF WETLAND
- VGC – VERTICAL GRANITE CURB
- 5'R – PAVEMENT RADIUS
- SGC – SLOPE GRANITE CURB
- – PROPOSED GUARDRAIL
- – PROPOSED POROUS PAVEMENT
- – PROPOSED CONCRETE
- – PROPOSED SIDEWALK

SITE NOTES:

1. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A PLAN REFERENCED AND PREPARED BY MCENEANEY SURVEY ASSOCIATES INC. (SEE EXISTING CONDITIONS PLAN AND LOT LINE ADJUSTMENT PLAN THIS PLAN SET)
2. EACH PROPOSED BUILDING TO HAVE A FOOTPRINT OF 3,968 SF WITH A PARKING GARAGE AS THE FIRST FLOOR AND 4 FLOORS OF APARTMENTS ABOVE.
3. THE INTENT OF THIS PLAN IS TO SHOW SITE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF 4 – 5 STORY APARTMENT BUILDINGS. EACH BUILDING WILL HAVE A PARKING GARAGE BENEATH AND FOUR FLOORS OF APARTMENTS ABOVE, SURFACE PARKING FOR EACH BUILDING AND A WALKING PATH TO COCHECHO STREET.
4. EXTERIOR LIGHTING SHALL BE CUT–OFF TYPE FIXTURES PER CHAPTER 149–14–E AND SHALL PROVIDE LIGHTING DIRECTED ON–SITE ONLY.
5. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.
6. ALL ON–SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
8. STRIPE PARKING AREAS AS SHOWN INCLUDING HANDICAP SYMBOLS AND PAINTED ISLANDS. ALL MARKINGS SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M–248–TYPE N.
9. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS, AND THE AMERICAN WITH DISABILITIES ACT, LATEST EDITIONS.
10. PAINTED ISLANDS SHALL BE 4 INCHES WIDE DIAGONAL LINES 3 FEET ON CENTER.
11. ON–SITE SNOW STORAGE SHALL OCCUR ALONG THE EDGES OF PROPOSED PAVEMENT.
12. LAYOUT OF BUILDING CORNERS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR AND SHALL BE BASED UPON THE ARCHITECT'S FINAL FOUNDATION PLAN AND ALL SITE LAYOUT SHALL BE PERFORMED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR UNDER CONTRACT WITH THE CONTRACTOR.
13. SEE DETAILS FOR SIGN LEGENDS.
14. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE CONSTRUCTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE OWNERS REPRESENTATIVE. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE–DOWNS. SUCH MATERIALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AT THE COMPLETION OF THE PROJECT.
15. METHODS OF DEMOLITION, CONSTRUCTION AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED. IT IS THE CONTRACTORS' RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO DUST CONTROL AND SILT BARRIERS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO STRUCTURES OR UTILITIES OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION PHASE CAUSED BY HIMSELF, HIS EMPLOYEES, HIS SUBCONTRACTORS OR EMPLOYEES OF SAME. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY FACILITIES FOR THE PROTECTION OF THE WORK, WORKERS AND PUBLIC SAFETY.
17. BUILDING ADDRESSES TO BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
18. THE SITE DESIGN IS IN COMPLIANCE WITH THE APPLICABLE ACCESSIBILITY REGULATIONS 2009 IBC AND ANSI STANDARDS.
19. THE SITE SHALL BE MAINTAINED TO PROVIDE ACCESSIBILITY IN ALL WEATHER CONDITIONS.
20. VISITOR PARKING IS ON STREET PARKING.
21. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
22. THE SUBJECT PARCEL(S) IS (ARE) SERVED BY MUNICIPAL WATER AND SEWER.
23. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTRUBAIN ACTIVITY OCCURS.

REFERENCE PLANS:

1. TOPOGRAPHIC PLAN OF LAND, PREPARED FOR: MICHAEL J. SPINELLI, JR.; TAX MAP 24, LOT NO. 114; 87 PORTLAND AVENUE AND DEAN STREET HOLDINGS, INC. TAX MAP 21, LOT NO. 115B; COCHECHO STREET, CITY OF DOVER; COUNTY OF STRAFFORD; STATE OF NEW HAMPSHIRE; PREPARED BY MCENEANEY SURVEY ASSOCIATES, INC; SCALE 1"=30'; DATED; 12–26–17.
2. LOT LINE ADJUSTMENT PLAN, PREPARED FOR MARKER 44 HOLDINGS, LLC, TAX MAP 24 LOT NO 114 87 PORTLAND AVENUE AND MARKER 44 HOLDINGS LLC TAX MAP 24, LOT NO. 115B; COCHECHO STREET; CITY OF DOVER; COUNTY OF STRAFFORD; STATE OF NEW HAMPSHIRE; PREPARED BY MCENEANEY SURVEY ASSOCIATES, INC.; SCALE 1"=30'; DATED 4–16–18.

PARKING CALCULATIONS:

CBD–G (2 UNITS*1.25+4	= 3.3 SPACES MAX.
CWD (32 UNITS)*1.5+5)	= 60.8 SPACES
TOTAL	= 64.1 SPACES
PROPOSED (8 GARAGE SPACES*(4 BUILDINGS)	= 32 SPACES
PROPOSED SURFACE SPACES	= 34 SPACES
TOTAL	= 66 SPACES (4 ACCESSIBLE SPACES)

SITE DATA

ZONING DISTRICTS:
CBD DOWNTOWN GATEWAY SUB–DISTRICT (CBD DG)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= N/A
MINIMUM LOT COVERAGE	= 50%
FRONTAGE BUILD–OUT	= 60% MINIMUM
FRONT BUILD TO LINE	= 5 FT MIN. / 20 FT MAX.
SIDE SETBACK	= 5 FT MIN.
REAR SETBACK	= 0 FT MIN.
MAXIMUM BUILDING HEIGHT	= 2 STORY MIN. / 4 STORY MAX.

COCHECHO WATERFRONT DISTRICT (CWD)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= N/A
MAXIMUM LOT COVERAGE	= 75%
MINIMUM FRONTAGE	= N/A
FRONT SETBACK	= 0 FT
SIDE SETBACK	= 0 FT
REAR SETBACK	= 0 FT
MAXIMUM BUILDING HEIGHT	= 55 FT

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CITY OF DOVER
PLANNING BOARD FILE# P18–34

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	APP'D	DATE
1	REVISION PER TRC COMMENTS	SJH	9–12–18

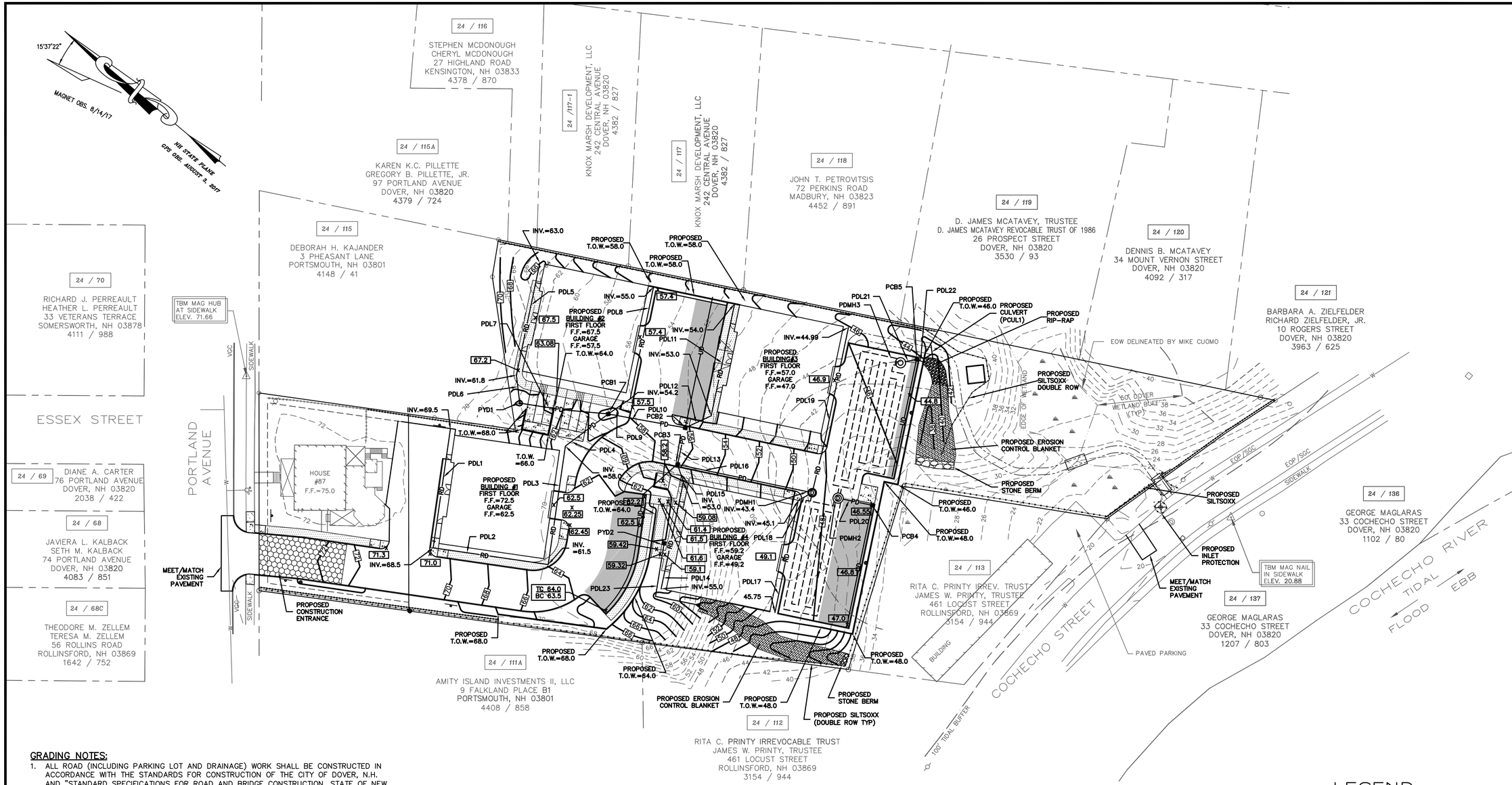
DATE: 7–18–18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

SITE PLAN

5



GRADING NOTES:

1. ALL ROAD (INCLUDING PARKING LOT AND DRAINAGE) WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR CONSTRUCTION OF THE CITY OF DOVER, N.H. AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION", LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEERING CONSULTANT APPROVED BY THE OWNER, TO CONDUCT COMPACTION TESTING AND FILL GRADATION MONITORING PER THE ABOVE REFERENCED "STANDARD SPECIFICATIONS".
3. SEE EROSION CONTROL NOTES & DETAIL SHEET FOR TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.
4. ALL DRAINAGE PIPES SHALL BE HDPE OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
5. ALL DISTURBED AREAS NOT OTHERWISE CALLED FOR SURFACE TREATMENT SHALL RECEIVE 6" OF HIGH QUALITY LOAM AND SHALL BE SEEDED WITH GRASS.
6. ALL SITEWORK CONSTRUCTION SHALL BE ADVANCED USING "BEST MANAGEMENT PRACTICES" SANCTIONED BY THE USDA SCS AND NHDES.
7. TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED, UTILIZED AND MAINTAINED UNTIL BASE MATERIALS ARE CONSTRUCTED.
8. CONTRACTOR SHALL PROVIDE A FINISH GRADED SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND UNDER RAISED STRUCTURES.
9. DENSITY REQUIREMENTS:

LOCATION	MINIMUM DENSITY
BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREA	90%

*ALL PERCENTAGES SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH AASHTO STANDARD 180, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH AASHTO STANDARD T-191, T-204, OR T-238 AND T-239.

10. SEE GENERAL EROSION CONTROL NOTES ON DETAIL SHEET.
11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS WITHIN THE WORK LIMITS AND AS SHOWN ON PLAN. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED AND UPSTREAM AREAS HAVE BEEN STABILIZED.
12. INSPECT SILT BARRIERS AFTER EACH RAIN STORM OF 1/4 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE STRUCTURE HEIGHT.
13. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THIS PROJECT. THE SWPPP MUST INCLUDE THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE SITE. PARTIES RESPONSIBLE FOR DEVELOPING THE SWPPP SHOULD REFER TO THE EPA NPDES CONSTRUCTION GENERAL PERMITS NOTICE OF INTENT FOR A COMPLETE OUTLINE OR REQUIRED ELEMENTS. THESE PLANS AND THE STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN PREPARED FOR THIS PROJECT MAY BE UTILIZED IN FULFILLING THE REQUIREMENTS.
14. TREATMENT SWALES SHALL HAVE SOD BOTTOMS.

DRAINAGE SCHEDULE

PYD1
RIM=63.90
INV.IN=58.60
INV.OUT=58.50

PYD2
RIM=59.0 (V.I.F.)
INV.OUT=56.4

PCB1**
RIM=57.00
INV.IN=53.50
INV.OUT=53.15

PCB2**
RIM=56.25
INV.IN=52.00
INV.OUT=51.90

PCB3
RIM=56.25
INV.IN=51.70
INV.OUT=51.60

PCB4
RIM=46.55
INV.IN=43.75
INV.OUT=43.65

PCB5
RIM=44.40
INV.IN=38.35
INV.OUT=38.25

** WITH TREATMENT SYSTEM CONTECH CHS UNIT

PDMH1
RIM=48.60
INV.IN=44.50
INV.OUT=42.50

PDMH2 (DPI OUTLET)
RIM=47.55
(SEE DETAIL)

PDMH3 (DP2 OUTLET)
RIM=44.90
(SEE DETAIL)

PCUL1
INV.IN=40.0
INV.OUT=38.5

DRAINAGE PIPE SCHEDULE (ADS N12 PIPE)

PIPE	LENGTH	SIZE	SLOPE
PDL1	70'	8"	0.01
PDL2	68'	8"	0.10
PDL3	70'	8"	0.05
PDL4	28'	8"	0.16
PDL5	67'	6"	0.02
PDL6	17'	8"	0.19
PDL7	50'	12"	0.10
PDL8	67'	8"	0.01
PDL9	14'	8"	0.05
PDK10	41'	15"	0.03
PDL11	67'	8"	0.01
PDL12	15'	8"	0.07
PDL13	18'	15"	0.01
DPL14	64'	8"	0.03
PDL15	9'	8"	0.03
PDL16	76'	15"	0.09
PDL17	67	8"	0.008
PDL18	7'	8"	0.008
PDL19	97'	6"	0.005
PDL20	16'	12"	0.01
PDL21	10'	15"	0.01
PDL22	4'	15"	0.01
PDL23	40'	6"	0.01
PCUL1	10'	12"	0.01

LEGEND

PDL	PROPOSED DRAIN LINE
x 74.00	EXISTING SPOT GRADE
94	EXISTING GRADE
74	PROPOSED FINISH GRADE
x 74.00	PROPOSED SPOT GRADE
PD	PROPOSED DRAIN LINE
RD	PROPOSED ROOD DRAIN
	SILT BARRIER

S.C.R.D.	– STRAFFORD COUNTY REGISTRY OF DEEDS
S.C.R.P.	– STRAFFORD COUNTY REGISTRY OF PROBATE
S.F.	– SQUARE FEET
Ac.	– ACRE
(TYP.)	– TYPICAL
	– WETLANDS
	– EDGE OF WETLAND
VGC	– VERTICAL GRANITE CURB
5'R	– PAVEMENT RADIUS
SGC	– SLOPE GRANITE CURB
	– PROPOSED GUARDRAIL
	– PROPOSED POROUS PAVEMENT
	– PROPOSED CONCRETE
	– PROPOSED SIDEWALK

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

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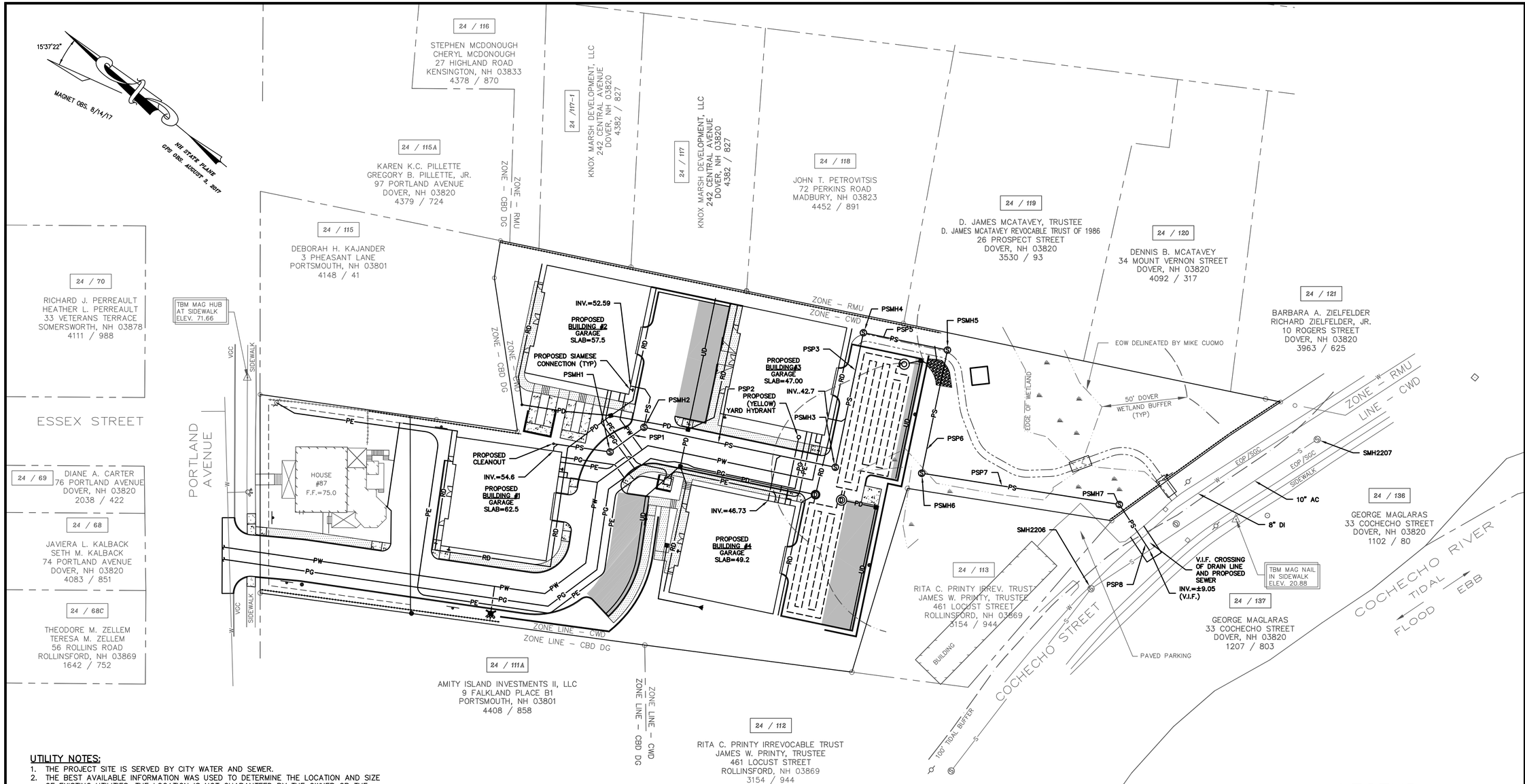
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GRADING, DRAINAGE & EROSION CONTROL PLAN

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

6



UTILITY NOTES:

1. THE PROJECT SITE IS SERVED BY CITY WATER AND SEWER.
2. THE BEST AVAILABLE INFORMATION WAS USED TO DETERMINE THE LOCATION AND SIZE OF EXISTING UTILITIES. THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. THE EXACT SIZE AND LOCATION OF UTILITIES SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING WORK. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ANTICIPATE CONFLICTS AND REPAIR EXISTING UTILITIES AS NECESSARY TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
3. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATIONS WITH THE RESPECTIVE UTILITY OWNERS PRIOR TO WORK BEING PERFORMED. CALL DIGSAFE AT 1-888-388-7233 OR "811".
4. ALL PROPOSED UTILITY SERVICES SHALL BE UNDERGROUND WITHIN THE SITE.
5. UNDERGROUND ELECTRIC, TELEPHONE, AND CABLE TV CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH/PER PSNH, VERIZON, COMCAST, AND UNITIL STANDARDS.
6. PROPOSED INSTALLATION OF UNDERGROUND CONDUITS FOR TELEPHONE, ELECTRIC AND GAS SERVICE SHALL BE COORDINATED WITH THE RESPECTIVE CONTACTS ARE AS FOLLOWS:
   - ELECTRIC: EVERSOURCE 800.362.7764
   - CABLE: COMCAST 603.334.3615
   - NATURAL GAS: UNITIL 866.933.3821
   - WATER/SEWER: CITY OF DOVER 603.516.6450
7. SEE ELECTRICAL DRAWINGS AND DETAILS FOR OUTDOOR LIGHTING CONDUIT LOCATIONS.
8. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
10. SEWAGE LOADING (PER ENV. - Wq 1008.03 TABLE 1008-1)
    32 - 2 BEDROOM RESIDENTIAL APARTMENTS =
    2 BDRMS x 150 GALS./DAY/BDRM x 32 = 9,600 GPD
11. THE PROPOSED STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 109-30 OF THE CODE OF THE CITY OF DOVER AND THE 2015 STATE BUILDING CODE.
12. APPROVED BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE ADN DOMESTIC WATER LINES.
12. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED.
13. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.
14. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 58, ARTICLE I, SECTION 58-2 OF THE CODE OF THE CITY OF DOVER.
15. ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
16. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
17. BACKFLOW PREVENTORS SHALL BE INSTALLED ON BOTH FIRE AND DOMESTIC WATER LINES.
18. ALL UNUSED WATER SERVICES SHALL BE REMOVED BACK TO THE CORPORATION AT THE MAIN.

SEWER STRUCTURE SCHEDULE:

PSMH1	PSMH4*	PSMH6*	TIE IN (COCHECHO)
RIM=60.2	RIM=±46	RIM=±33.0	INV.IN=±9.05
INV.OUT=53.9	INV.IN=40.1	INV.IN=28.00	
	INV.OUT=40.0	INV.OUT=24.62	SMH #2206
PSMH2		(DROP=3.38)	RIM=19.62
RIM=57.93	PSMH5*		DEPTH=10.7
INV.IN=51.95	RIM=±42	PSMH7*	INV=±8.92
INV.OUT=51.85	INV.IN=36.00	RIM=±20.3	
	INV.OUT=33.86	INV.IN=15.3	SMH #2207
PSMH3	(DROP=2.14)	INV.OUT=11.21	RIM=21.79
RIM=47.83		(DROP=4.09)	DEPTH=12.3
INV.IN=42.84			INV=±9.49
INV.OUT=42.74			

* SMH RIMS SHALL BE SET 6" ABOVE GRADE
* ALL DROP SHALL BE EXTERIOR DROPS

SEWER PIPE SCHEDULE:

PSP1 21 LF	PSP5 70 LF
8" SDR35 PVC	8" SDR35 PVC
S=0.08	S=0.08
PSP2 110'	PSP6 113 LF
8" SDR35 PVC	8" SDR35 PVC
S=0.08	S=0.08
PSP3 76 LF	PSP7 25 LF
8" SDR35 PVC	8" SDR35 PVC
S=0.033	S=0.08
PSP4 46 LF	PSP8 32 LF
8" SDR35 PVC	8" SRD35 PVC
S=0.08	S=0.067

LEGEND

W	EXISTING WATER LINE
S	EXISTING SEWER LINE
D	EXISTING DRAINAGE LINE
G	EXISTING GAS LINE
WV	EXISTING WATER SHUT-OFF
	EXISTING WATER VALVE
	EXISTING GAS VALVE
	EXISTING HYDRANT
	SIGN
PG	PROPOSED GAS
PW	PROPOSED WATER
PE	PROPOSED ELECTRIC
PD	PROPOSED UNDERDRAIN LINE
RD	PROPOSED ROOF DRAIN
PSMH	PROPOSED SEWER MANHOLE
PSP	PROPOSED SEWER PIPE
V.I.F.	VERIFY IN FIELD

MON (TBS) O	- BOUNDARY MONUMENT (TO BE SET)
S.C.R.D.	- STRAFFORD COUNTY REGISTRY OF DEEDS
S.C.R.P.	- STRAFFORD COUNTY REGISTRY OF PROBATE
S.F.	- SQUARE FEET
Ac.	- ACRE
(TYP.)	- TYPICAL
ø	- DIAMETER
UP	- UTILITY POLE
OHU	- OVERHEAD UTILITY LINES
VGC	- VERTICAL GRANITE CURB
CB	- CATCH BASIN
DMH	- DRAIN MANHOLE
SMH	- SEWER MANHOLE
	- WETLANDS
	- EDGE OF WETLAND
WF2 / A6	- WETLAND FLAG I.D.
TBR	TO BE REMOVED

GRAPHIC SCALE

30 0 15 30 60 120

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130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

UTILITY PLAN

7



NOTES:

1. THE SUBJECT PARCELS ARE NOT LOCATED WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0330; SUFFIX E; MAP NUMBER 33017C0330E; EFFECTIVE DATE SEPT. 30, 2015.
2. BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 3, 2017. VERTICAL DATUM IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 3, 2017.
3. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. ON DECEMBER 18, 2017 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.
4. PARCEL IS SUBJECT TO THE STATE OF NEW HAMPSHIRE SHORELINE WATER QUALITY PROTECTION ACT (SWQPA). THOSE AREAS WITHIN 250 FEET OF THE COCHECHO RIVER REFERENCE LINE.
5. WETLANDS WERE DELINEATED ON NOVEMBER 30, 2017 BY MICHAEL CUOMO, CERTIFIED WETLANDS SCIENTIST #004 AND FIELD LOCATED BY THIS OFFICE ON DECEMBER 15, 2017.
6. THE ABUTTERS PAVED PARKING AREA APPEARS TO ENCROACH ONTO PARCEL 24 / 115B (TWO PLACES, TWO ABUTTERS).
7. PARCEL 24 / 115B IS BENEFITED BY A TWENTY–TWO (22) FOOT WIDE RIGHT OF WAY OVER PARCEL 24 / 115 AS SHOWN ON REFERENCE PLAN No. 1. REFERENCE IS MADE TO STIPULATIONS SPELLED OUT IN S.C.R.D. VOL. 1157, PAGE 648 REGARDING USE OF THIS RIGHT OF WAY.

IMPACT CHART

	PERMANENT IMPACT AREA A	= 170 SF
	TEMPORARY IMPACT AREA A	= 131 SF
	PERMANENT IMPACT AREA B	= 11 SF
	TEMPORARY IMPACT AREA B	= 458 SF
	50' BUFFER IMPACT	= 11,017 SF
	20% SLOPE IMPACT	= 9,950 SF
	TIDAL BUFFER 100' IMPACT	= 150 SF

REFERENCE PLANS:

1. TOPOGRAPHIC PLAN OF LAND, PREPARED FOR: MICHAEL J. SPINELLI, JR.; TAX MAP 24, LOT NO. 114; 87 PORTLAND AVENUE AND DEAN STREET HOLDINGS, INC; TAX MAP 21, LOT NO. 115B; COCHECHO STREET, CITY OF DOVER; COUNTY OF STRAFFORD; STATE OF NEW HAMPSHIRE; PREPARED BY MCENEANEY SURVEY ASSOCIATES, INC; SCALE 1"=30'; DATED; 12–26–17.
2. LOT LINE ADJUSTMENT PLAN, PREPARED FOR MARKER 44 HOLDINGS, LLC, TAX MAP 24 LOT NO 114 87 PORTLAND AVENUE AND MARKER 44 HOLDINGS LLC TAX MAP 24, LOT NO. 115B; COCHECHO STREET, CITY OF DOVER; COUNTY OF STRAFFORD; STATE OF NEW HAMPSHIRE; PREPARED BY MCENEANEY SURVEY ASSOCIATES, INC.; SCALE 1"=30'; DATED 4–16–18.

GRAPHIC SCALE

30 0 15 30 60 120

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WETLAND & BUFFER IMPACT PLAN

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

8

DESCRIPTION

THE INTENT OF THIS PLAN IS TO SHOW SITE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF 4 – 5 STORY APARTMENT BUILDINGS. EACH BUILDING WILL HAVE A PARKING GARAGE BENEATH AND FOUR FLOORS OF APARTMENTS ABOVE, SURFACE PARKING FOR EACH BUILDING AND A WALKING PATH TO COCHECHO STREET.

PROJECT NAME AND LOCATION

GUNDALOW LANDING
PORTLAND AVENUE
DOVER, NH 03820

LATITUDE N43°11'57"
LONGITUDE W70°52'08"

DISTURBED AREA

±63,436 square feet

SEQUENCE OF MAJOR ACTIVITIES

1. CONTRACTOR SHALL PREPARE THE SWPPP, FILE FOR AND OBTAIN THE NOI A MINIMUM OF 2 WEEKS PRIOR TO COMMENCEMENT OF SITE WORK.
2. PLACE TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S PRIOR TO EARTH MOVING ACTIVITIES. ALL EROSION CONTROL AND PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO COMMENCING EARTH MOVING OPERATIONS.
3. SELECTIVE DEMOLITION.
4. REGRADE SITE TO SUBGRADE
5. INSTALL DRAINAGE STRUCTURES AND CONTROLS
6. INSTALL UNDERGROUND UTILITIES AND FOUNDATIONS FOR STRUCTURES AND RETAINING WALLS.
7. PLACE GRAVELS AND FINE GRADE
8. SWALES AND PONDS (AS APPLICABLE) SHALL BE CONSTRUCTED EARLY ON IN THE CONSTRUCTION SEQUENCE AND BEFORE ROUGH GRADING OF THE SITE AND ALL DITCHED AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. STABILIZE, ROADWAYS & PARKING LOTS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
10. ALL CUT AND FILL SLOPES SHALL BE LOAMED AND SEEDED (AS APPLICABLE) WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
11. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EVERY 1/4" OF RAINFALL.
12. IN ALL CASES THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION AND IN NO CASE SHALL EXCEED 2 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF INITIAL DISTURBANCE.
13. WHEN ALL SITE WORK IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND FILE THE EPA – N.O.T.

DEFINITIONS

AN AREA SHALL BE CONSIDERED STABLE OF ONE OF THE FOLLOWING HAS OCCURRED.

1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED
2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
3. A MINIMUM OF 3" OF NON–EROSIVE MATERIAL SUCH AS STONE OR RIP–RAP HAS BEEN INSTALLED; OR
4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. GENERAL

THESE ARE THE GENERAL INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO IMPLEMENT THE PLAN.

- O ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- O THE SMALLEST PRACTICAL PORTION OF THE SITE WILL BE DENUDED AT ONE TIME.
- O ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 1/2 INCH OR GREATER.
- O ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
- O BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE OR CHECK DAMS WHEN IT HAS REACHED ONE THIRD THE HEIGHT OF THE FENCE OR DAM.
- O ALL DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
- O TEMPORARY SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND UNHEALTHY GROWTH.
- O A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
- O A REPRESENTATIVE OF THE OWNER, WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
- O ALL AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE

B. FILTERS

1. Silt Fence
   a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

Physical Property	Test	Requirements
Filtering Efficiency	VTM–51	75% minimum
Tensile Strength at 20% Maximum Elongation*	VTM–52	Extra Strength 50 lb/lin in (min)
Standard Strength 30 lb/lin in (min)		
Flow Rate	VTM–51	0.3 gal/sf/min (min)

* Requirements reduced by 50 percent after six (6) months of installation.

Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six (6) months of expected usable construction life at a temperature range of 0 degrees F to 120 Degrees F.

   b. The height of a silt fence shall not exceed thirty–six (36) inches.
   c. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at support post, with a minimum six (6) inch overlap, and securely sealed.
   d. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.
   e. Posts for silt fences shall be 2–inch diameter wood with a minimum length of 5 feet.
   f. Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches.
   g. A trench shall be excavated approximately four (4) inches wide and four (4) inches deep along the line of posts and upslope from the barrier.
   h. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire shall extend no more than 36 inches above the original ground surfaces.
   i. The "standard strength" filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
   j. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item (I) applying.
   k. The trench shall be backfilled and the soil compacted over the filter fabric.
   l. Silt fences shall be removed when they have served their useful purpose, but not before the upslope areas has been permanently stabilized.

2. Sequence of Installation
   Sediment barriers shall be installed prior to any soil disturbance of the contributing drainage area above them.
3. Maintenance
   a. Check dams and silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.
   b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.
   c. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one third (1/3) the height of the barrier.
   d. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

C. MULCHING

1. Timing
   In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this.
   a. Apply mulch prior to any storm event. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
   b. Required Mulching within a specified time period. The time period can range from 14 to 21 days of inactivity on a area, the length of time varying with site conditions. Professional judgement shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.
2. Application Rate
   Mulch shall be applied at a rate of between 1.5 to 2 tons per acre, or 90 to 100 pounds per 1000 square feet.
3. Guidelines for Winter Mulch Application. When mulch is applied to provide protection over winter (past the growing season) it shall be at a rate of 6,000 pounds of hay or straw per acre. A tackifier may be added to the mulch.
4. Maintenance All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.
5. Excelsior Matting Excelsior Matting shall be used in place of mulch on all slopes steeper than 3:1.

D. TEMPORARY GRASS COVER

1. Seedbed Preparation
   Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.
2. Seeding
   a. Utilize annual rye grass at a rate of 40 lbs/acre.
   b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
   c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.
3. Maintenance
   Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

E. PERMANENT SEEDING

1. Bedding – stones larger than 1 ½ ", trash, roots, and other debris interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 4" to prepare a seedbed and mix fertilizer into the soil.
2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

   Agricultural Limestone @ 100 lbs. per 1,000 s.f.
   10–20–20 fertilizer @ 12 lbs. per 1,000 s.f.
3. Seed Mixture (recommended)

   Rate:

Type	LBS. per Acre	LBS. per 1,000 s.f.
Tall Fescue	20	0.45
Creeping Red Fescue	20	0.45
Birdsfoot Trefoil	8	0.20
Total	48	1.10

4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook.

   Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt) etc.
5. Provide a minimum of 4 inches (5 inches loose) of topsoil to all areas to be seeded.

F. STORM DRAIN INLET PROTECTION

1. Straw/Hay Bale Inlet Structure
   a. Bales shall be either wire bound or string tied with the bindings oriented around the sides rather than over and under the bales.
   b. Bales shall be placed lengthwise in a single row surrounding the inlet, with the ends of adjacent bales pressed together.
   c. The filter barrier shall be entrenched and backfilled. A trench shall be excavated around the inlet the width of bale to a minimum depth of four (4) inches. After the bales are staked, the excavated soil shall be backfilled and compacted against the filter barrier.
   d. Each bale shall be securely anchored and held in place by at least two (2) stakes or rebars driven through the bale.
   e. Loose straw/hay shall be wedged between bales to prevent water from entering between bales.
   f. All structures should be inspected after every rainstorm and repairs made as necessary.
   g. Sediment should be removed from the devices after the sediment has reached a maximum of one–third the depth of the trap.
   h. Haybales should be removed and the area repaired as soon as the contributing drainage area to the inlet has been completely stabilized.

TIMING OF CONTROLS/MEASURES

As indicated in the sequence of Major Activities the silt fences shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Areas where construction activity temporarily ceases for more than twenty one (21) days will be stabilized with a temporary seed and mulch within fourteen (14) days of the last disturbance. Once construction activity ceases permanently in an area, silt fences and any earth/dikes will be removed once permanent measures are established. All areas shall be stabilized within 72 hours of achieving finish grade.

WASTE DISPOSAL

A. WASTE MATERIALS

All waste materials will be collected and stored in securely lidded receptacles. All trash and construction debris from the site will be deposited in a dumpster. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedure for waste disposal by the superintendent.

B. HAZARDOUS WASTE

All hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. Site personnel will be instructed in these practices by the superintendent.

C. SANITARY WASTE

All sanitary waste will be collected from the portable units a minimum of once per week by a licensed sanitary waste management contractor.

SPILL PREVENTION

A. MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances during construction to stormwater runoff:

Good Housekeeping:

The following good housekeeping practices will be followed on site during the construction project:

- o An effort will be made to store only sufficient amounts of products to do the job.
- o All materials stored on site will be stored in a neat, orderly manner in their proper (original if possible) containers and, if possible, under a roof or other enclosure.
- o Manufacturer's recommendations for proper use and disposal will be followed.
- o The site superintendent will inspect daily to ensure proper use and disposal of materials.
- o Substances will not be mixed with one another unless recommended by the manufacturer.
- o Whenever possible all of a product will be used up before disposing of the container.

Hazardous Products:

The following practices will be used to reduce the risks associated with hazardous materials:

- o Products will be kept in their original containers unless they are not resealable.
- o Original labels and material safety data will be retained for important product information.
- o Surplus product that must be disposed of will be discarded according to the manufacturer's recommended methods of disposal.

B. PRODUCT SPECIFICATION PRACTICES

The following product specific practices will be followed on site:

Petroleum Products:

All on site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt based substances used on site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts directed by the specifications. Once applied fertilizer will be worked into the soil to limit exposure to stormwater. Storage will be in a covered shed or enclosed trailers. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid

Paints:

spills.
All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be disposed of properly according to manufacturer's instructions or state and local regulations.

Concrete Trucks:

Concrete trucks will discharge and wash out surplus concrete or drum wash water in a contained area on site.

C. SPILL CONTROL PRACTICES

In addition to good housekeeping and material management practices discussed in the previous section the following practices will be followed for spill prevention and cleanup:

- o Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- o Materials and equipment necessary for spill cleanup will be kept in the material storage area on site. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic or metal trash containers specifically for this purpose.
- o All spills will be cleaned up immediately after discovery.
- o The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- o Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- o The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to cleanup the spill if it recurs. A description of the spill, its cause, and the cleanup measures will be included.
- o The site superintendent responsible for day–to–day site operations will be the spill prevention and cleanup coordinator.

BLASTING

1) All activities associated with blasting need to be optimized to prevent the release of chemicals associated with blasting activities to the environment.
2) Identify drinking water wells located within 2000 feet of the proposed blasting activities. Develop a groundwater quality sampling program to monitor for nitrate and nitrite either in the drinking water supply wells or in other wells that are representative of the drinking water supply wells in the area. The plan must include pre and post blast water quality monitoring and be approved by NHDES prior to initiating blasting. The groundwater sampling program must be implemented once approved by NHDES.
3) The following Best Management Procedures for blasting shall be complied with:
   (1) Loading practices. The following blasthole loading practices to minimize environmental effects shall be followed:
      (a) Drilling logs shall be maintained by the driller and communicated directly to the blaster. The logs shall indicate depths and lengths of voids, cavities, and fault zones or other weak zones encountered as well as groundwater conditions.
      (b) Explosive products shall be managed on–site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off–site disposal.
      (c) Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off–site disposal.
      (d) Loaded explosives shall be detonated as soon as possible and shall not be left in the blastholes overnight, unless weather or other safety concerns reasonably dictate that detonation should be postponed.
      (e) Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment.
      (f) Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking and column rise need to be attended to.
   (2) Explosive Selection. The following BMPs shall be followed to reduce the potential for groundwater contamination when explosives are used:
      (a) Explosive products shall be selected that are appropriate for site conditions and safe blast execution.
      (b) Explosive products shall be selected that have the appropriate water resistance for the site conditions present to minimize the potential for hazardous effect of the product upon groundwater.
   (3) Prevention of Misfires. Appropriate practices shall be developed and implemented to prevent misfires.
   (4) Muck Pile Management. Muck piles (the blasted pieces of rock) and rock piles shall be managed in a manner to reduce the potential for contamination by implementing the following measures:
      (a) Remove the muck pile from the blast area as soon as reasonably possible.
      (b) Manage the interaction of blasted rock piles and stormwater to prevent contamination of water supply wells or surface water.
   (5) Spill Prevention Measures and Spill Mitigation. Spill prevention and spill mitigation measures shall be implemented to prevent the release of fuel and other related substances to the environment. The measures shall include at a minimum:
      (a) The fuel storage requirements shall include:
         1. Storage of regulated substances on an impervious surface;
         2. Secure storage areas against unauthorized entry;
         3. Label regulated containers clearly and visibly;
         4. Inspect storage areas weekly;
         5. Cover regulated containers in outside storage areas;
         6. Wherever possible, keep regulated containers that are stored outside more than 50 feet from surface water and storm drains, 75 feet from private wells, and 400 feet from public wells; and
         7. Secondary containment is required for containers containing regulated substances stored outside, except for on premise use heating fuel tanks, or aboveground or underground storage tanks otherwise regulated.
      (b) The fuel handling requirements shall include:
         1. Except when in use, keep containers containing regulated substances closed and sealed;
         2. Place drip pans under spigots, valves, and pumps;
         3. Have spill control and containment equipment readily available in all work areas;
         4. Use funnels and drip pans when transferring regulated substances; and
         5. Perform transfers of regulated substances over an impervious surface.
      (c) The training of on–site employees and the on–site posting of release response information describing what to do in the event of a spill of regulated substances.
      (d) Fueling and maintenance of excavation, earthmoving and other construction related equipment will comply with the regulations of the New Hampshire Department of Environmental Services [note these requirements are summarized in WD–DWGB–22–6 Best Management Practices for Fueling and Maintenance of Excavation and Earthmoving Equipment" or its successor document. (see <http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/documents/dwgb–22–6.pdf>

PER 149–10 F:
All site improvements which require blasting of land shall meet the following requirements prior to any blasting occurring.

1. The Applicant shall prepare a pre–blast survey of all structures within five (500) feet of the external boundaries of the proposed lot to be developed. This survey, along with a monitoring plan, shall be on file with the Dover Fire and Rescue. Upon recommendations of the Chief , the planning Board may require a pre–blast survey of all structures within one thousand (1000) feet.
2. The Applicant shall hold a neighborhood meeting to review the blasting plan and pre–blast survey, with representatives of the Fire and Rescue and the blasting company in attendance, prior to any on–site blasting. Abutters within on thousand (1000) feet of the external boundary of the project parcel shall be notified by certified mail (paid for by the applicant) of the meeting no less than ten (10) days prior to the meeting.
3. Permit holders shall be in compliance with NFPA 495, The Code for the Manufacture, Transportation, Storage and Use of Explosive Material, in addition to all other ordinances and codes set forth in the City of Dover Fire Prevention Code, which specifically prohibits the overnight storage of explosive or blasting agents. Further all storage magazines shall be locked in the open position at the end of the days' operation, for easy inspection by City Officials.
4. blasting permits may be obtained by calling the Dover Fire and Rescue during normal business hours. The permits are only active for the dates and time specified on the permit.
5. Permit holders shall hold insurance against claims for damages for personal injury and property which may arise from performance of the work.
6. Hours of operation for the blasting shall be no earlier than 8:00 am and no later than 6:00 pm Monday through Friday, excluding federal holidays.

MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES

The project proponent is responsible for the maintenance of all stormwater facilities during construction and the property owner is responsible after construction is complete.

CATCH BASINS & STORMWATER TREATMENT STRUCTURES

1. Catch basins & Stormwater treatment structures should be inspected on a monthly basis and/or after a major rainfall event to assure that debris or sediments do not reduce the effectiveness of the system.

WINTER CONSTRUCTION NOTES

1. All proposed post–development 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 placement 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.
2. All slopes which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th shall be stabilized with stone or erosion control blankets.
3. After October 15th, incomplete road surfaces shall be protected with a minimum of 3–inches of crushed gravel per NHDOT item 403.3, or if construction is to continue through the winter season be cleared of any accumulated snow after each storm event.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE
1	REVISION PER TRC COMMENTS	S.H	9–12–18

DATE: 7–18–18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:S.H
PROJECT NO:1795
FILE: SITE.DWG

CITY OF DOVER
PLANNING BOARD FILE#
P18–34

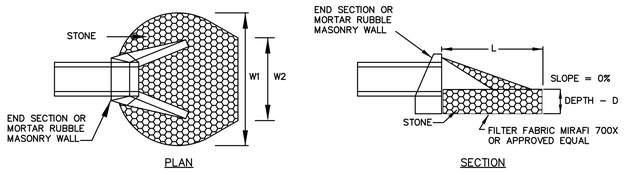
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

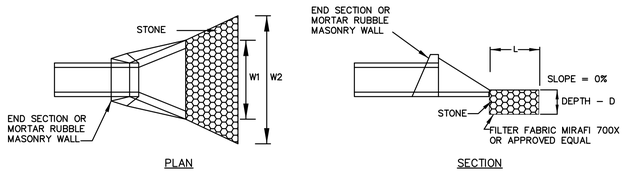
GUNDALOW LANDING
DOVER, NH

EROSION CONTROL NOTES

9



STONE APRON OUTLET PROTECTION DETAIL
OUTLET TO DEFINED CHANNEL



STONE APRON OUTLET PROTECTION DETAIL
OUTLET TO FLAT AREA, NON DEFINED CHANNEL

MAINTENANCE

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

STONE GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100	1.5 TO 2.0 D50
85	1.3 TO 1.8 D50
50	1.0 TO 1.5 D50
15	0.3 TO 0.5 D50

CONSTRUCTION SPECIFICATIONS

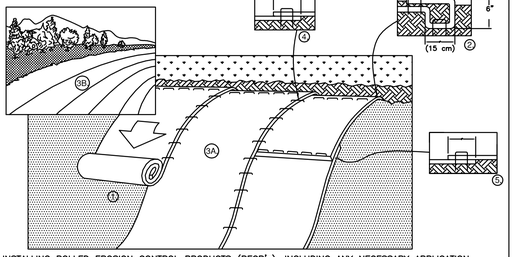
1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT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

RIP RAP OUTLET PROTECTION
NOT TO SCALE

OUTLET FROM	OUTLET TO	W1(ft)	W2(ft)	L(ft)	D (ft)	D50(IN)	CHANNEL TYPE
PCB5	TS 1	3	8	14	0.06	USE 6" MIN.	DEFINED

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS

SLOPE INSTALLATION
NORTH AMERICAN GREEN – SC150



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™ , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
6. TO BE PLACED ON ALL SLOPES.

SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS AS SUPPLIED BY AW HARRIS OF PORTSMOUTH OR APPROVED EQUAL

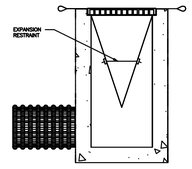
REGULAR FLOW SILTSACK●
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK●
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

OIL-ABSORBANT SILTSACK●
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)
DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK® CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK®, WITH A WOVEN PILLOW INSERT.

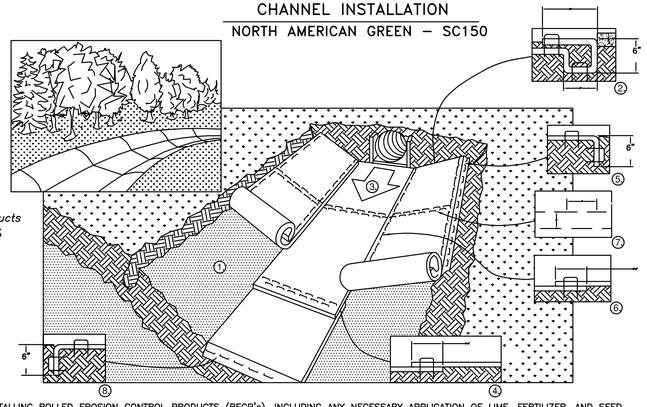


INSTALLATION DETAIL

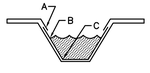
DETAIL OF INLET SEDIMENT CONTROL DEVICE
NOT TO SCALE

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS

CHANNEL INSTALLATION
NORTH AMERICAN GREEN – SC150



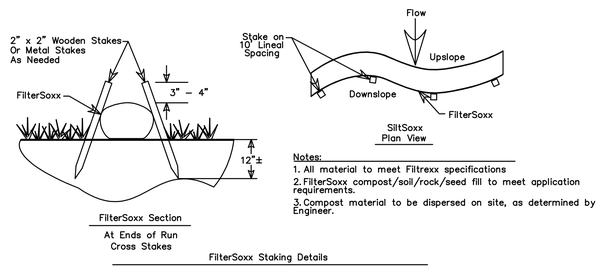
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" – 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. NOTE: * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



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

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

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



SiltSoxx Details
NOT TO SCALE

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PLANNING BOARD FILE# P18-34

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	APP'D	DATE
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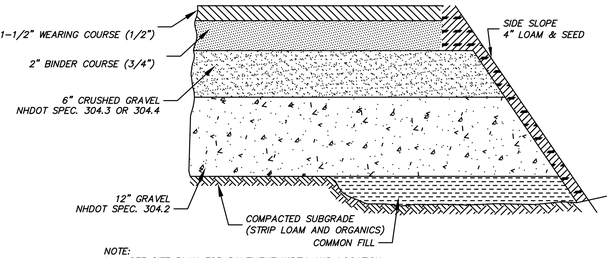
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DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

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GUNDALOW LANDING
DOVER, NH

EROSION CONTROL DETAILS

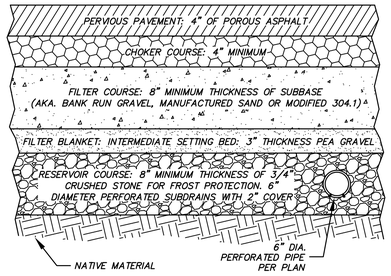
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NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS–SLOPE.

TYPICAL PAVEMENT SECTION

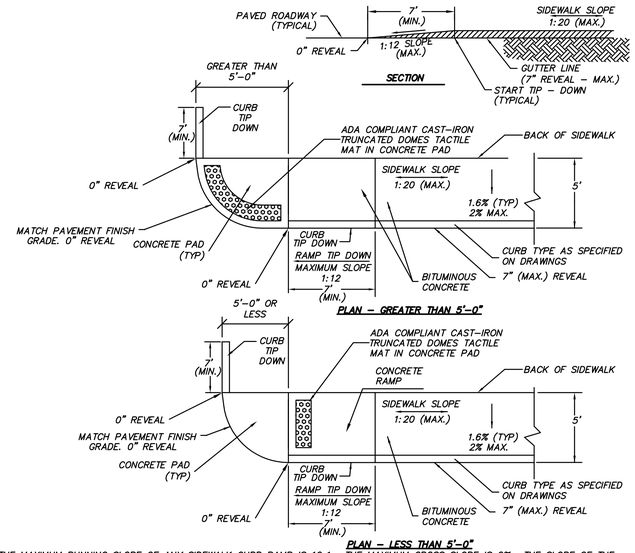
NOT TO SCALE



NOTE:
1. SEE SITE PLAN FOR LOCATION OF POROUS PAVEMENT, PAVEMENT WIDTH AND LOCATION.
2. CONSTRUCTION MATERIALS SHALL NOT BE STORED ON THE POROUS PAVEMENT OR BASE MATERIALS.
3. PLACEMENT OF POROUS PAVEMENT AND BASE MATERIALS SHALL BE MONITORED BY THE DESIGN ENGINEER. ADVISE THE CITY ENGINEER AS TO INSTALLATION SCHEDULE.
4. CRUSHED STONE, BANK RUN GRAVEL & CRUSHED GRAVEL MATERIALS SHALL CONFORM WITH NHDOT STD. SPECIFICATIONS, SECTION 304.
5. POROUS PAVEMENT SHALL CONFORM WITH GENERAL POROUS BITUMINOUS PAVING SPECIFICATIONS PREPARED BY THE UNH STORMWATER CENTER 2/14).
6. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS–SLOPE.

POROUS PAVEMENT SECTION

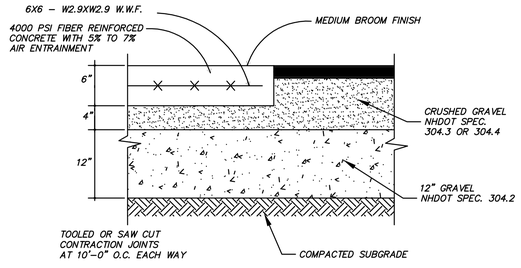
NOT TO SCALE



1. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1. THE MAXIMUM CROSS SLOPE IS 2% THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
2. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 24" FROM THE ROADWAY CURBLINE.
3. INTERCEPT DRAINAGE ALONG THE CURB IN ADVANCE OF SIDEWALK CURB RAMP OF LANDINGS. CATCH BASINS, MANHOLES, ETC. SHALL NOT BE LOCATED IN OR AT THE BASE OF SIDEWALK CURB RAMPS OR LANDINGS.
4. BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING EXCLUSIVE OF THE FLARED SIDES SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
5. THE SURFACE OF A PERPENDICULAR SIDEWALK CURB RAMP OR THE LANDING OF A PARALLEL SIDEWALK CURB RAMP SHALL CONTRAST VISUALLY WITH THE ADJOINING SIDEWALK SURFACE, EITHER ASPHALT/LIGHT–COLORED CONCRETE OR LIGHT–COLORED CONCRETE/DARK–STAINED CONCRETE. THE CONCRETE SURFACE SHALL BE SLIP RESISTANT.
6. INSTALL DETECTABLE WARNINGS TACTILE MAT (TRUNCATED DOMES) AT THE LOCATIONS SHOWN. DETECTABLE WARNINGS SHALL MEASURE 24" IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE SIDEWALK RAMP AND THE EDGE NEAREST THE CURBLINE SHALL BE LOCATED 6" – 8" FROM THE FACE OF CURBLINE.
7. PROVIDE DETECTABLE WARNING SURFACE ANYTIME THAT A CURB RAMP, BLENDED TRANSITION OR LANDING CONNECTS TO A STREET.
8. WHERE BOTH ENDS OF THE BOTTOM GRADE ARE LESS THAN 5'–0" FROM THE BACK OF THE CURB, LOCATE THE DETECTABLE WARNING PANELS ON THE RAMP SURFACE AT THE BOTTOM OF THE RAMP. WHERE EITHER END OF THE BOTTOM GRADE IS GREATER THAN 5'–0" FROM THE BACK OF THE CURB, LOCATE THE DETECTABLE WARNING AT THE BOTTOM OF THE LANDING.

SIDEWALK TIP DOWN AT CURBED RADIUS PAD

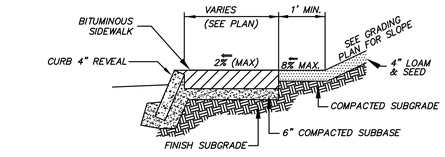
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NOTE: PITCH CONCRETE PAD GRADING TO CENTER

DUMPSTER DETAIL

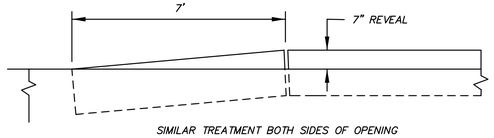
NOT TO SCALE



SLOPED GRANITE CURB & BITUMINOUS SIDEWALK

NOT TO SCALE

GRANITE CURB & MORTAR JOINTS
SLOPE LAST SECTION TO MEET EXISTING GROUND

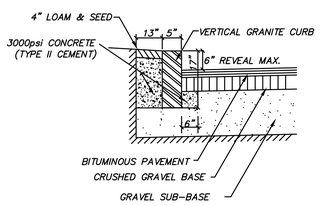


SIMILAR TREATMENT BOTH SIDES OF OPENING

"TIP–DOWN" CURB DETAIL

NOT TO SCALE

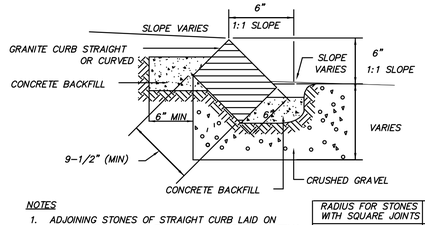
RADIUS	MAX. LENGTH
21'	3'
22'–28'	4'
29'–35'	5'
36'–42'	6'
43'–49'	7'
50'–56'	8'
57'–60'	9'
OVER 60'	10'



NOTES
1. SEE SITE PLAN FOR LIMITS OF CURBING.
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF CURB STONES = 3'
4. MAXIMUM LENGTH OF CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE CHART)
6. ALL RADII 20 FEET AND SMALLER TO BE CONSTRUCTED USING CURVED SECTIONS.

VERTICAL GRANITE CURB

NOT TO SCALE



NOTES
1. ADJOINING STONES OF STRAIGHT CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH
2. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
3. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART

RADIUS FOR STONES WITH SQUARE JOINTS	MAXIMUM LENGTH
16'–28'	1'–6"
29'–41'	2'
42'–55'	3'
56'–68'	4'
69'–82'	5'
83'–96'	6'
97'–110'	7'
OVER 110'	8'

SLOPED GRANITE CURBING

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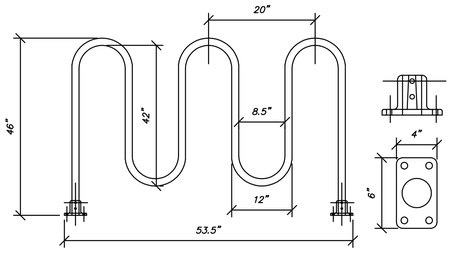
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DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

DETAIL SHEET

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

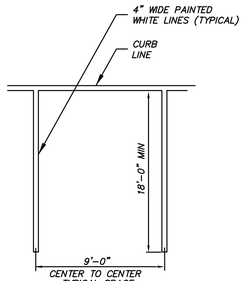
GUNDALOW LANDING
DOVER, NH

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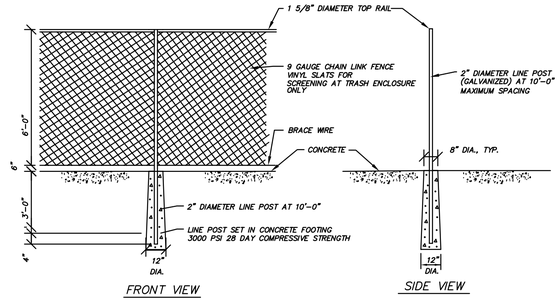


BIKE RACK DETAIL

NOT TO SCALE



STANDARD



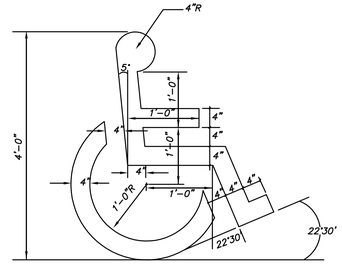
FRONT VIEW

SIDE VIEW

NOTES:
1. DUMPSTER CHAINLINK FENCE SHALL HAVE GREEN VINYL PRIVACY SLATS 6' HIGH.
2. 4' HIGH CHAINLINK FENCE INFRONT OF RETAINING WALL

CHAINLINK FENCE DETAIL

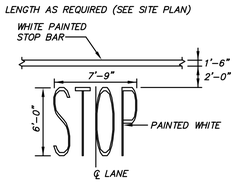
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NOTE: SYMBOL TO BE PAINTED IN ALL HANDICAPPED SPACES

PAINTED HANDICAP SYMBOL

NOT TO SCALE

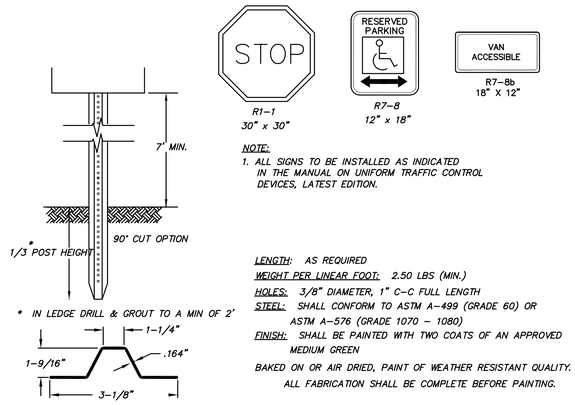


NOTE: PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS SHOWN ON THE PLANS. APPLY TWO COATS.

STOP BAR & LEGEND

PAVEMENT MARKINGS

NOT TO SCALE



NOTE:
1. ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN
BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

SIGN LEGEND & SIGN POST

NOT TO SCALE

PUNCHEON

Definition

A footway, walkway, or travel corridor constructed of wood, usually logs, to provide a dry treadway on fragile, wet terrain.

Conditions where appropriate

- In bogs, mud flats, and marshy areas where there is frequently little rock and the underlying soil is mucky or peaty and saturated during part of the year when the trail may be in use.
- In areas prone to flooding, puncheons are not recommended as they may float away.



Guidelines

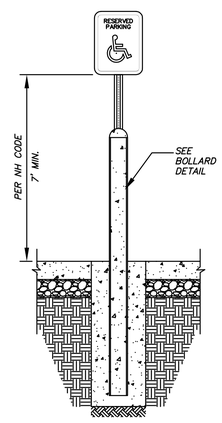
- In trail planning and construction, attempt to avoid areas where this labor-intensive and highly impactive technique is necessary.
- The simplest type of puncheon is a topped-log puncheon, made with two stringers that form the treadway and set on top of two base logs that serve as the sills.
- Hew the timbers to make a flat walking surface and score the surface with an axe.
- Level each sill and cut notches where the stringers will be attached.
- Sills should be set 2" into the soil surface to provide for added stability.
- For stringer spans over 10', a center sill should be used.

Additional considerations

- Natural rot-resistant wood such as cedar, spruce, and hemlock are preferred.
- Some puncheons can be constructed of native materials, while others may require milled lumber.
- Treated timber reduces the potential for decay.

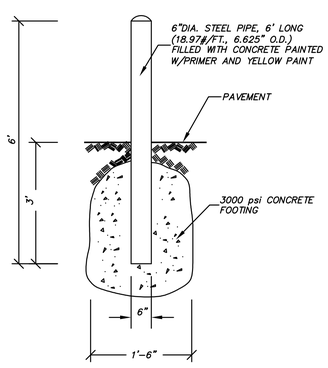
PUNCHEON DETAIL

NOT TO SCALE



SIGN IN BOLLARD

NOT TO SCALE



BOLLARD DETAIL

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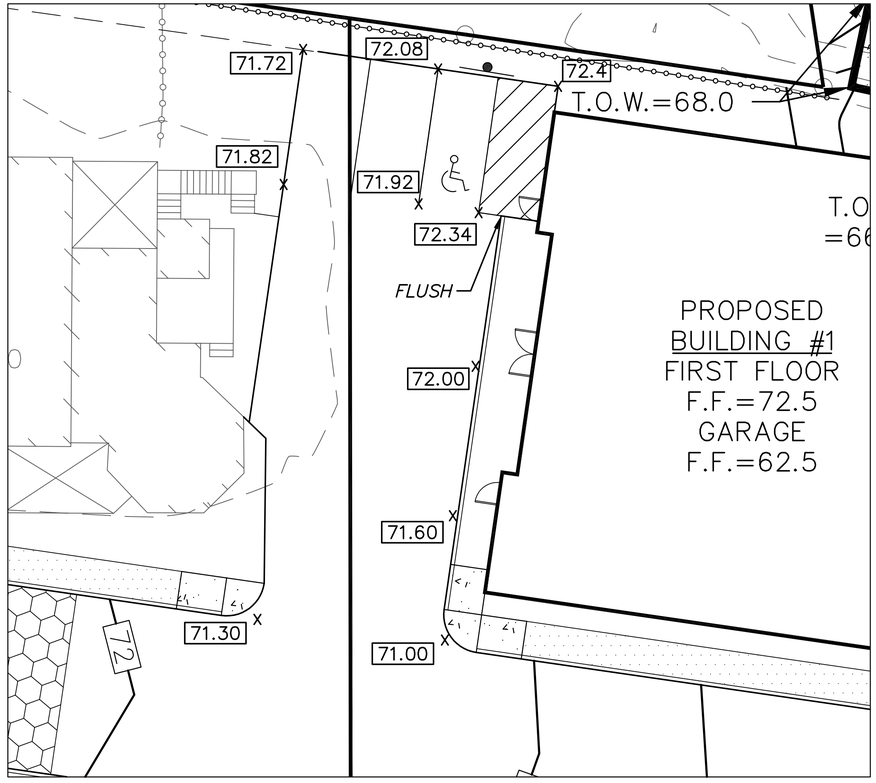
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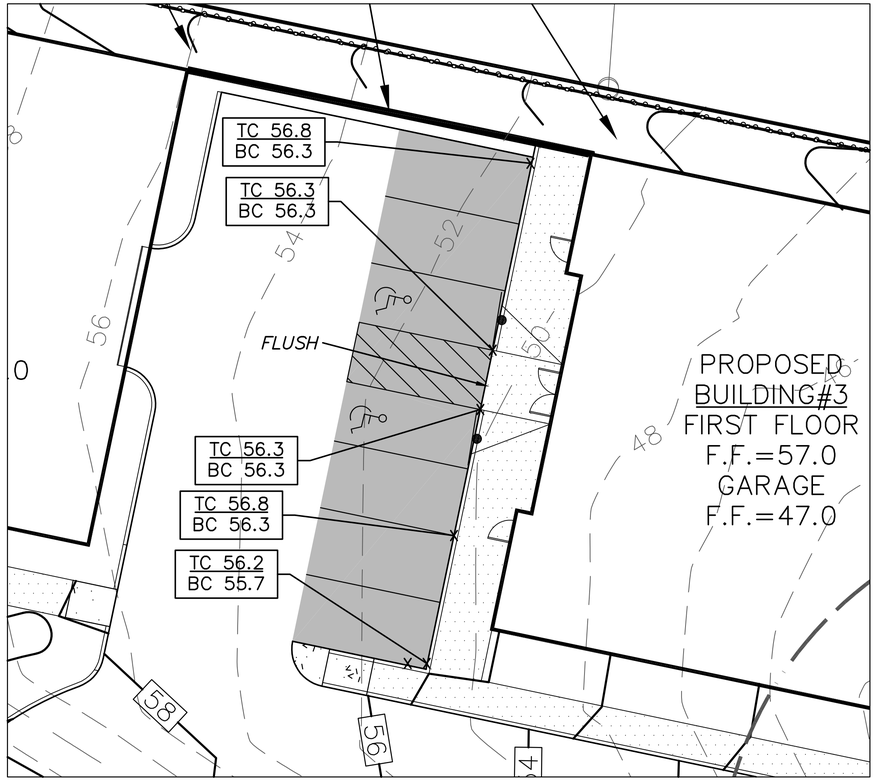
GUNDALOW LANDING
DOVER, NH

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BUILDING #1 PARKING GRADE DETAIL

SCALE 1"=10'



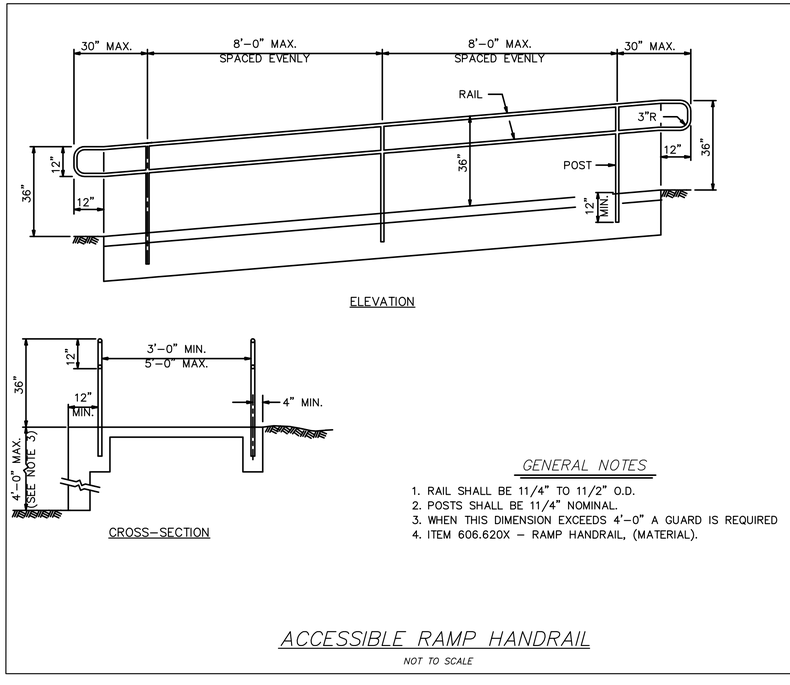
BUILDING #3 GRADING DETAIL

SCALE 1"=10'



BUILDING #2 HANIDICAP RAMP DETAIL

SCALE 1"=10'



ELEVATION

CROSS-SECTION

GENERAL NOTES

1. RAIL SHALL BE 11/4" TO 11/2" O.D.
2. POSTS SHALL BE 11/4" NOMINAL.
3. WHEN THIS DIMENSION EXCEEDS 4'-0" A GUARD IS REQUIRED
4. ITEM 606.620X – RAMP HANDRAIL, (MATERIAL).

ACCESSIBLE RAMP HANDRAIL

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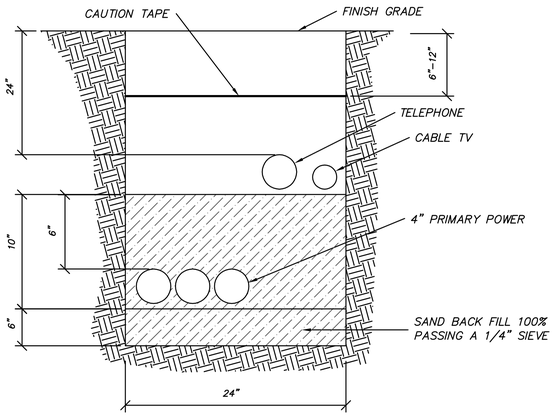
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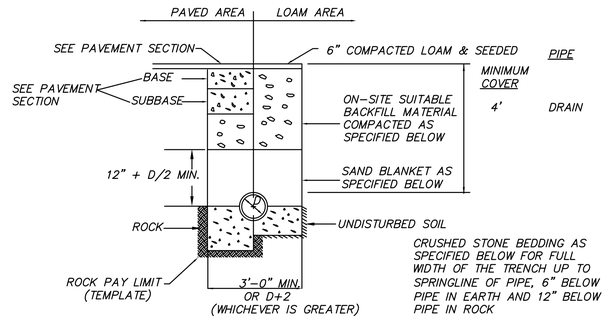
13



1. TELEPHONE CONDUIT SHALL BE 3" SCHEDULE 40 PVC, WITH STEEL SWEEPS AT RISER POLE, 90° BENDS AND AT BUILDING.
2. LEAVE PULL ROPE IN ALL CONDUITS FOR CABLE INSTALLATION.
3. FOR COMPLETE SPECIFICATIONS SEE "PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE CONSTRUCTION SPECIFICATIONS FOR UNDERGROUND CONDUIT SYSTEMS".
4. CONTRACTOR SHOULD VERIFY THE NUMBER & SIZE OF CONDUIT WITH THE APPROPRIATE UTILITIES.

UTILITY TRENCH

NOT TO SCALE



BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

SAND BLANKET & BEDDING

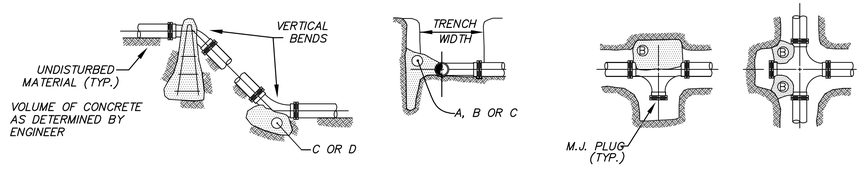
SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15
(FOR WATER MAIN BEDDING)	

3/4" CRUSHED STONE BEDDING

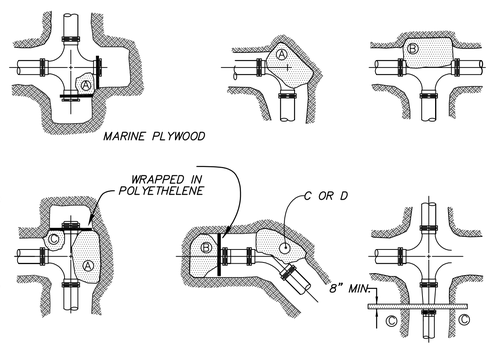
SIEVE SIZE	% FINER BY WEIGHT
1"	100
3/4"	90 – 100
1/2"	20 – 50
3/8"	0 – 20
# 4	0 – 5

DRAINAGE TRENCH

NOT TO SCALE



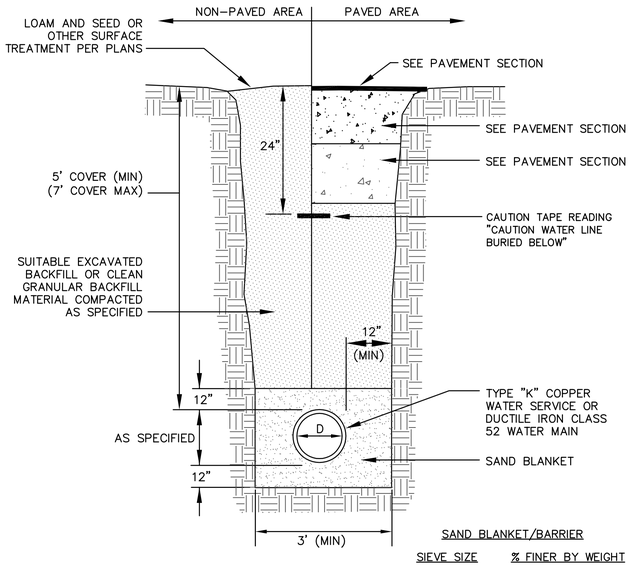
TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38



NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.

TRUST BLOCK DETAIL

NOT TO SCALE



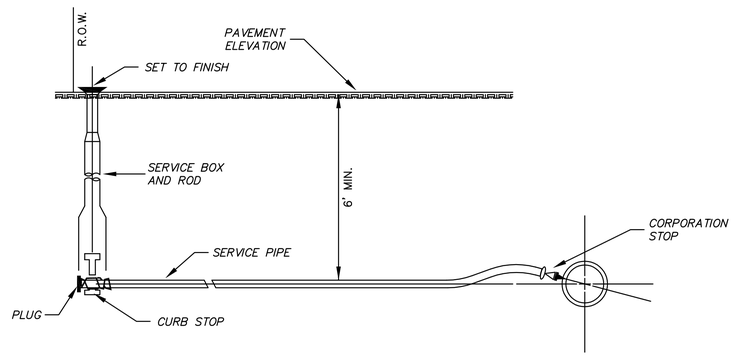
SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES
1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

WATER MAIN TRENCH

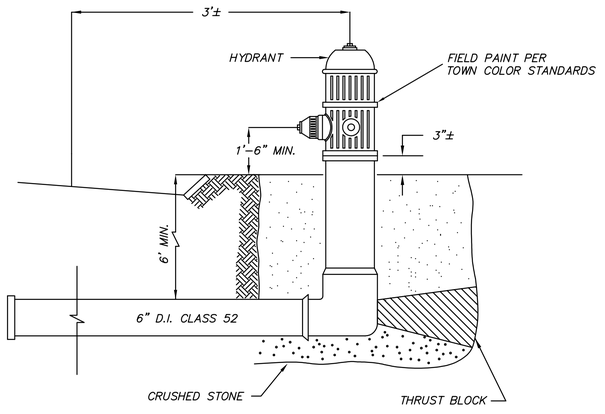
NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

NOTE:
HYDRANT INSTALLATION & OPERATION TO CONFORM TO REGULATIONS OF CITY OF DOVER FIRE DEPARTMENT.



FIRE HYDRANT DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CITY OF DOVER
PLANNING BOARD FILE#
P18-34

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CIVIL ENGINEERING
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Dover, New Hampshire 03820
(603) 749-0443

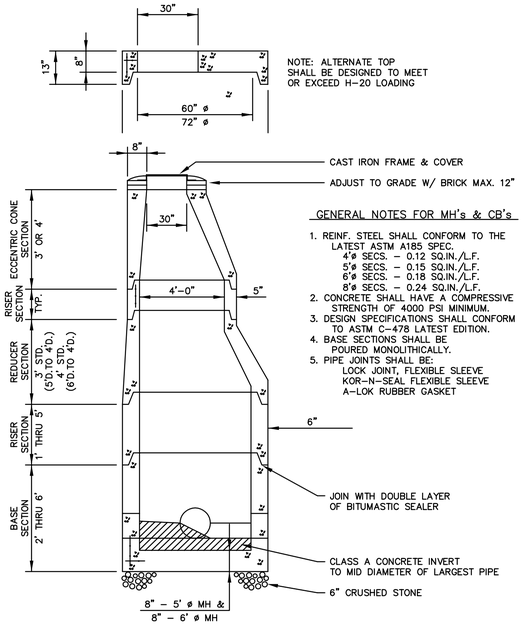
NO.	REVISION	APP'D	DATE
1	REVISION PER TRC COMMENTS	SJH	9-12-18

DATE: 7-18-18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

DETAIL SHEET

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

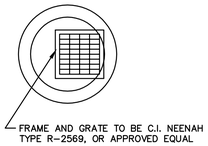


STANDARD 4 FT. DIA. MANHOLE

NOT TO SCALE

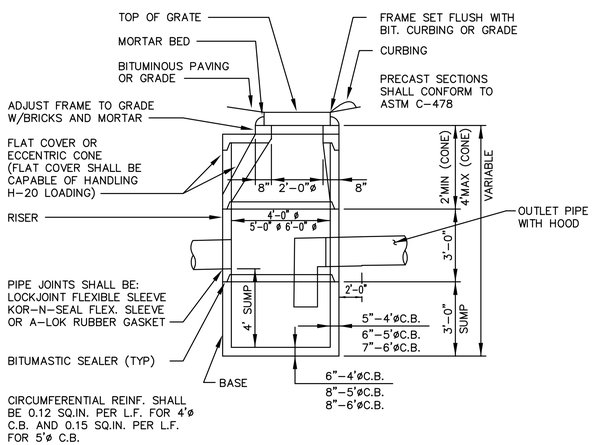
GENERAL NOTES FOR MH's & CB's

1. REINF. STEEL SHALL CONFORM TO THE LATEST ASTM A185 SPEC.
   4'ø SECS. – 0.12 SQ.IN./L.F.
   5'ø SECS. – 0.15 SQ.IN./L.F.
   6'ø SECS. – 0.18 SQ.IN./L.F.
   8'ø SECS. – 0.24 SQ.IN./L.F.
2. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI MINIMUM.
3. DESIGN SPECIFICATIONS SHALL CONFORM TO ASTM C-478 LATEST EDITION.
4. BASE SECTIONS SHALL BE POURED MONOLITHICALLY.
5. PIPE JOINTS SHALL BE:
   LOCK JOINT, FLEXIBLE SLEEVE
   KOR-N-SEAL FLEXIBLE SLEEVE
   A-LOK RUBBER GASKET



GRATE DETAIL

NOT TO SCALE



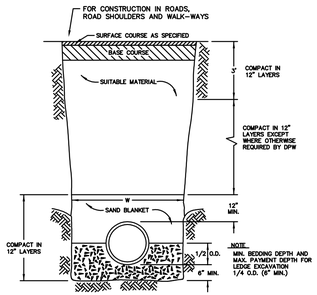
PRE-CAST REINFORCED CATCH BASIN

NOT TO SCALE

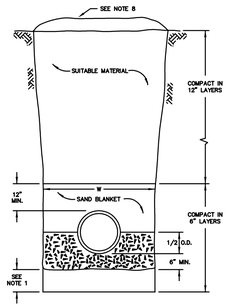
SPECIFICATIONS

1. All construction shall conform with the State of New Hampshire Department of Transportation (NHDOT), "Standard Specifications for Road and Bridge Construction"; hereinafter referred to as the "Standard Specifications".
2. Catch basins and manholes shall be pre-cast reinforced concrete designed by an engineer registered in New Hampshire, and able to withstand loadings of 8 tons (H20 Loading).
3. Manholes shall have cast iron frames and covers with 30" inside diameter openings. A 3-inch (minimum) letter "D" for drain shall be plainly cast into the center of each cover.
4. Catch basins and manholes shall be adjusted to grade with courses of brick. Maximum adjustment to grade shall be 12 inches. Frames shall be set on a full bed of mortar, true to grade and concentric with the masonry. All voids between the top of the structure and the bottom flange of the frame shall be completely filled to make a watertight fit. A ring of mortar at least one inch thick and pitched to shed water away from the frame, shall be placed over and around the outside of the bottom flange. The mortar shall extend to the outer edge of the masonry all around its circumference and shall be finished smooth. No visible leakage will be permitted.
5. Invert channels of sewer manholes shall be formed smoothly to the largest pipe radius. Changes in grade shall be formed smoothly and evenly. The floor of the structure outside the channels shall be sloped towards the channels at approximately 1/2 inch per foot. The floor at the channel shall match the crown of the largest pipe.
6. Trench construction will conform with Section 603.3.1 of the Standard Specifications (1974).
7. Wood sheeting or a suitable trench box shall be used to support the trench as necessary. If wood sheeting is used, it shall be driven at a distance of 1 foot from the outside diameter of the pipe to a depth 6 inches below the invert of the pipe. Wood sheeting shall be cut off and left in place to an elevation not less than 1 foot above the top of the pipe, but not greater than 3 feet below the finished grade.
8. Bedding shall conform with Section 603.3.2 of the Standard Specifications (1974).
9. Backfill material will conform with Section 603.3.5 of the Standard Specifications (1974) and, in addition, shall exclude debris, pieces of pavement, organic matter, top soil, all wet or soft muck, peat or clay, all excavated ledge material, frozen material, all rocks over 6 inches in largest dimension, or any material which, as determined by the Engineer, will not provide sufficient support or maintain the completed construction in a stable condition. Backfill shall not be placed on frozen or previously frozen material.
10. All backfill and bedding compaction shall meet the requirements of AASHTO 99 Method C. Density shall be 95 percent. Compaction shall be 6 inch lifts for bedding and backfill to a plane 1 foot above the pipe and in 12 inch lifts thereafter by an approved mechanical compactor.
11. Should frozen material be encountered, it shall not be placed in the backfill nor shall backfill be placed upon frozen material. Previously frozen material shall be removed as required before new backfill is placed.
12. The Contractor shall be responsible for any damage to frames and grates during and from the time of removal from the existing structure to and during the time of resetting, and shall replace in kind any damaged frames or grates at no additional compensation.
13. All trenches will be covered and debris, including any rejected materials, shall be removed daily. Strict safety precautions shall be maintained at all times.
14. Location of utilities shown on the plans are approximate.
    a) the Contractor shall, 48 hours prior to construction, notify the utility companies and have all utilities in the vicinity of the construction marked in the field.
    b) after the utilities have been located and prior to construction, the Contractor with the Engineer, shall layout the proposed drainage system in the field and rectify any utility conflicts which may be found.
    c) Any conflicts with utilities found during construction by the Contractor shall be immediately brought to the attention of the Engineer and the Utility Company and properly rectified.
    d) The Contractor is responsible for the cost of repair for any utilities damaged during construction. The Contractor shall contact the Utility Company to repair any damages, however, the Contractor may make appropriate repairs with the Utility Company's permission.
15. Complete shop drawings for pipe, manholes, catch basins, frames, grates and covers shall be submitted in triplicate for approval by the Engineer prior to the start of construction. Each shop drawing shall be checked and initialized by the Contractor to indicate approval before it is submitted to the Engineer.
16. Shop drawings for flat concrete covers shall be stamped prior to submission for approval by a New Hampshire Registered Professional Engineer.
17. Brick masonry for setting frames and brick and mortar plugs shall conform to the Standard Specification Section 604.2.4.

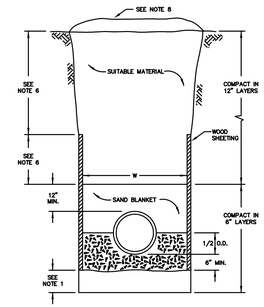
STANDARD TRENCH SECTION



LEDGE CONSTRUCTION



EARTH CONSTRUCTION



EARTH CONSTRUCTION WITH SHEETING

NOTES:

1.) ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. SEE ALSO NOTE 7.

2.) BEDDING : SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90 – 100% PASSING	3/4 INCH SCREEN
20 – 55% PASSING	3/8 INCH SCREEN
0 – 10% PASSING	#4 SIEVE
0 – 5% PASSING	#8 SIEVE

– CRUSHED STONE 1/2 INCH – 1 1/2 INCH MAY BE USED INSTEAD OF SCREENED GRAVEL WHERE ALLOWED BY THE ENGINEER.

3.) SAND BLANKET : CLEAN SAND FREE FROM ORGANIC MATTER SO GRADED THAT 90–100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE.

4.) SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALK-WAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.

IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WHEN NECESSARY, WILL BE PRESERVED.

5.) BASE COURSE , IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS, (D.O.T.).

6.) WOOD SHEETING , IF REQUIRED. WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.

7.) W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.

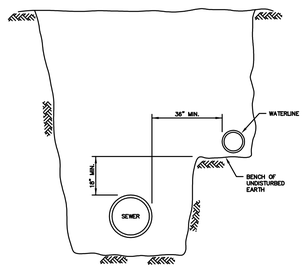
8.) FOR CROSS COUNTRY CONSTRUCTION , BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

9.) CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
CEMENT: 6.0 BAGS PER CUBIC YARD
WATER : 5.75 GALLONS PER BAG CEMENT
MAXIMUM SIZE OF AGGREGATE: 1 INCH

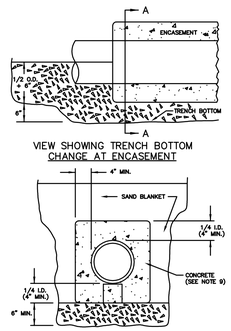
10.) NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION (NH DES) DESIGN STANDARDS REQUIRE 10 FT. SEPARATION. HOWEVER, SHOULD CONSTRUCTION OPERATIONS REVEAL OR EXPOSE A WATERLINE (MAIN OR SERVICE) RUNNING APPROXIMATELY PARALLEL AND LESS THAN 10 FT. HORIZONTAL FROM THE PROPOSED SEWER INSTALLATION AND WHERE IT IS NOT PRACTICABLE TO RELOCATE THE SEWER, THE FOLLOWING METHODS OF PROTECTION MUST BE EMPLOYED.

A. IF THE WATERLINE CAN BE KEPT AT LEAST 18 INCHES ABOVE AND 3 FEET TO ONE SIDE OF THE SEWER, AS SHOWN AND SUPPORTED ON A BENCH OF ORIGINAL SOIL, NO OTHER PROTECTION IS REQUIRED.

11.) IF FULL CASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MIN.) BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.



WATER AND SEWER IN SAME TRENCH



CONCRETE FULL ENCASEMENT

(SEE NOTE 11)

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CITY OF DOVER
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CIVIL ENGINEERING
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Dover, New Hampshire 03820
(603) 749-0443

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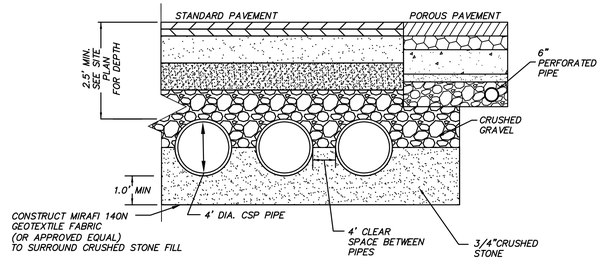
DATE: 7-18-18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

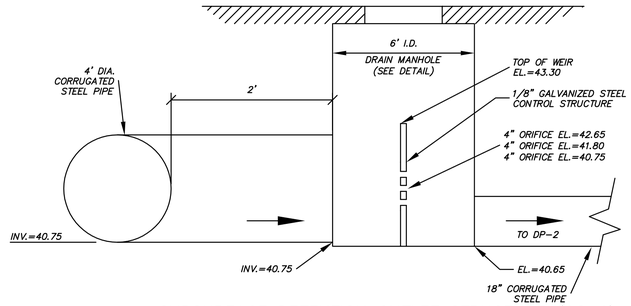
CUNDALOW LANDING
DOVER, NH

DETAIL SHEET

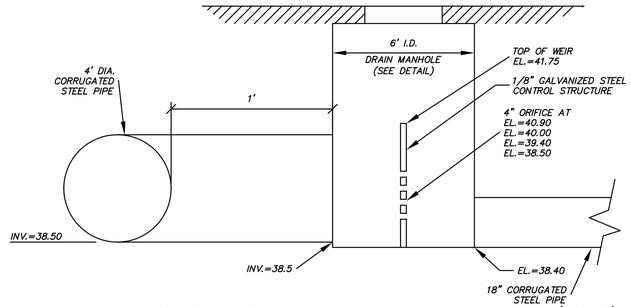
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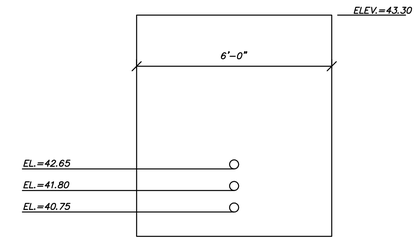
SUBSURFACE DETENTION AREA
SECTION A–A
NOT TO SCALE



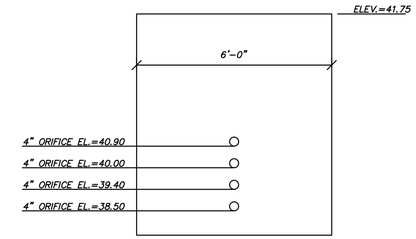
SUBSURFACE DETENTION OUTLET STRUCTURE (OS–1)
FOR DETENTION POND 1 PDMH2
NOT TO SCALE



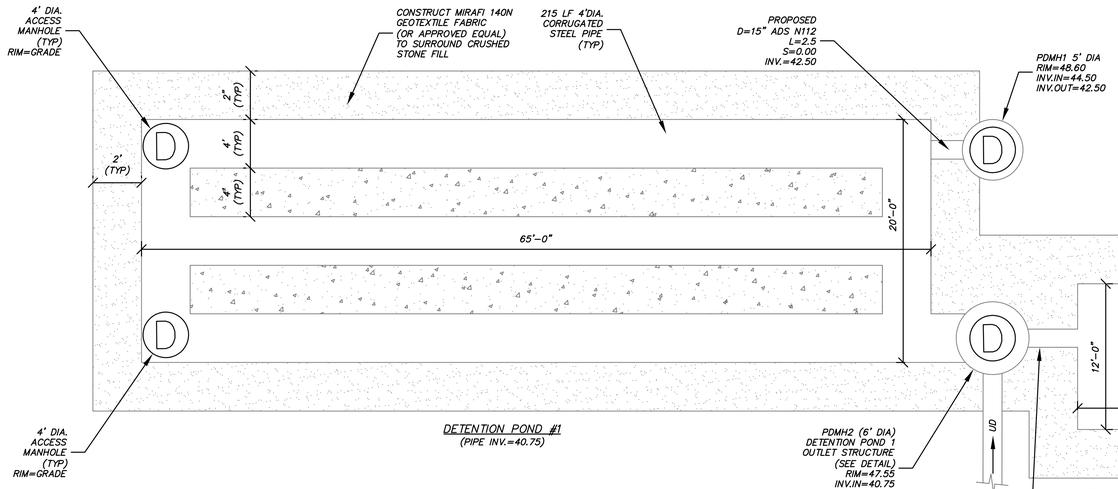
SUBSURFACE DETENTION OUTLET STRUCTURE (OS–2)
FOR DETENTION POND 2
NOT TO SCALE



1/8" GALVANIZED STEEL CONTROL STRUCTURE (DETENTION POND 1 OUTLET)
NOT TO SCALE



1/8" GALVANIZED STEEL CONTROL STRUCTURE (DETENTION POND 2 OUTLET)
NOT TO SCALE



NOTES:
1. CONTRACTOR TO CONSTRUCT (2) UNDERGROUND DETENTION SYSTEMS: (1) WITH (3) 4' DIAMETER PIPES FOR A MINIMUM OF 215 LF OF STORAGE AND INCLUDES (2) 4' DIAMETER HEADERS; AND (1) WITH (4) 4' DIAMTER PIPES FOR A MINIMUM OF 312 LF OF STORAGE WITH HEADERS AS SHOWN ON PLANS.
2. THE SUBSURFACE DETENTION SYSTEM TO BE GALVANIZED STEEL PIPE DESIGNED FOR HS–20 LOADING.
3. ALL ACCESS MANHOLES AND COVERS SHALL MEET HS–20 LOADING REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE A SUBSURFACE DETENTION SYSTEM DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN NEW HAMPSHIRE UNDER CONTRACT TO THE CONTRACTOR.
5. FOR STRUCTURAL SYSTEM DESIGN NOTE THE DEPTH OF BURY AS SHOWN ON THE GRADING PLAN.
6. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL COMPONENTS OF THE SUBSURFACE DETENTION SYSTEM COMPLETE AND IN PLACE.

SHOP DRAWING REQUIREMENTS:
1. CONTRACTOR SHALL SUBMIT AN ENGINEERED SHOP DRAWING OF THE SUBSURFACE DETENTION SYSTEM PREPARED BY AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN NEW HAMPSHIRE. THE ENGINEERED SHOP DRAWING SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND ACCEPTANCE. THE ENGINEERED SHOP DRAWING MUST BE REVIEWED AND ACCEPTED BY THE OWNER PRIOR TO ANY WORK BEGINNING ON THE DETENTION SYSTEM.
2. SHOP DRAWING INCLUDES PIPE MATERIALS AND SPECIFICATIONS, BACKFILL MATERIAL, SPECIFICATIONS AND MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES AND MATERIALS.

PERMIT REQUIREMENTS:
1. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE BUILDING INSPECTOR AND OBTAIN ANY PERMITS REQUIRED FOR THE CONSTRUCTION OF THE UNDERGROUND DETENTION SYSTEM. THIS INCLUDES PROVIDING THE BUILDING INSPECTOR WITH ANY AND ALL CALCULATIONS AND PLANS NECESSARY FOR ISSUANCE OF A BUILDING PERMIT AS REQUIRED.

CONSTRUCTION REVIEW AND CERTIFICATION:
1. THE CONTRACTORS' DESIGN ENGINEER SHALL WITNESS AND INSPECT THE DETENTION SYSTEM DURING CONSTRUCTION AND SHALL CERTIFY TO THE OWNER THAT THE DETENTION SYSTEM WAS CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERED SHOP DRAWING AND THE APPROVED PLANS AND SPECIFICATIONS SUBMITTED AND APPROVED AS PART OF THE BUILDING PERMIT.

SUBSURFACE DETENTION SYSTEM
PLAN VIEW
NOT TO SCALE

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CITY OF DOVER
PLANNING BOARD FILE#
P18–34

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DRAWN BY: SRD
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PROJECT NO:1795
FILE: SITE.DWG

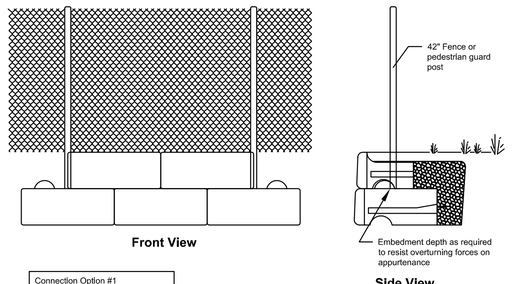
DETAIL SHEET

MARKER 44 HOLDINGS, LLC
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GUNDALOW LANDING
DOVER, NH

16

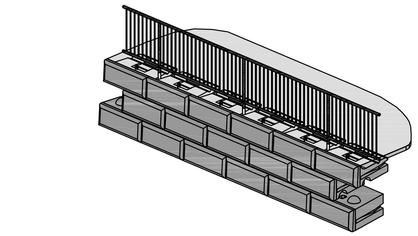
Fence or Pedestrian Guard Connection Locations



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Fence or Pedestrian Guard Connection Locations
FILE:	6 Fence or Pedestrian Guard Connection Locations 062215.dwg

Fence or Pedestrian Guard Connection Options

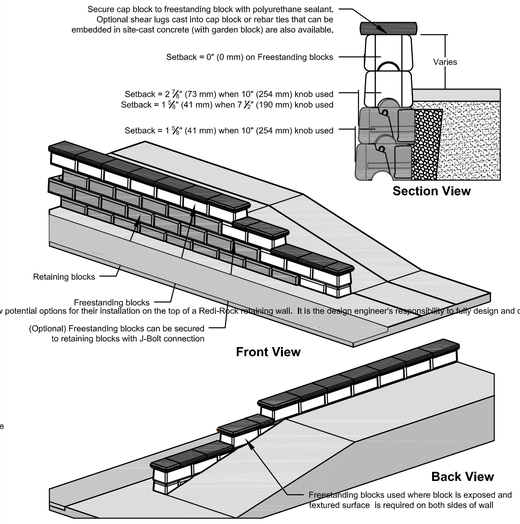


These generic pedestrian guard and fence details show a few potential options for their installation on the top of a Redi-Rock retaining wall. It is the design engineer's responsibility to fully design and detail the connection of the guard posts to the retaining wall blocks and assure adequate resistance to the applied forces. Redi-Rock blocks are not designed or manufactured to be used as a structural component in applications where they are placed on unreinforced concrete, without steel reinforcement.

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DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Fence or Pedestrian Guard Connection Options
FILE:	5 Fence or Pedestrian Guard Connection Options 062215.dwg

Freestanding Blocks with Cap at Top of Wall



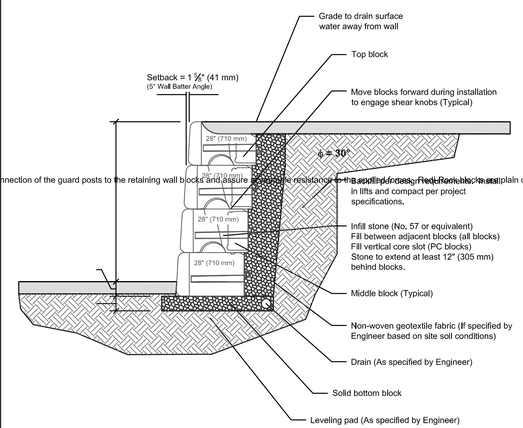
One-component, highly flexible, non-priming, gun grade, high performance elastomeric polyurethane sealant shall have movement of plus or minus 25% per ASTM C719, tensile strength greater than 200 psi (1.4 MPa) per ASTM D412, and adhesion to peel on concrete greater than 20 PLI per ASTM C794. Apply sealant in one and one half-inch (1.5") (38 mm) diameter round "hersey kiss" shaped dollops located in two rows at the top of the Freestanding blocks at 8" (203 mm) on center.

This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Freestanding Blocks with Cap at Top of Wall
FILE:	3 Freestanding Blocks with Cap at Top of Wall 062215.dwg

ϕ = 30°	FINE TO MEDIUM SAND or SILTY SAND
LOAD CONDITION A	NO LIVE LOAD SURCHARGE, NO BACK SLOPE, NO TOE SLOPE

4 BLOCK HIGH SECTION
(4) 28" (710 mm) Blocks



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site. Final wall design must address both internal and external drainage and all modes of wall stability.

DRAWN BY:	C. Kruger
APPROVED BY:	J. Johnson
DATE:	June 8, 2015
SHEET:	1 of 1
TITLE:	**Preliminary Wall Section** Fine to Medium Sand or Silty Sand, ϕ = 30° No Live Load Surcharge, No Back Slope, No Toe Slope
FILE:	A_30_B_28_72_cad.dwg

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PLANNING BOARD FILE#
P18-34

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Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	DATE	APP'D
1	REVISION PER TRC COMMENTS	9-12-18	SJH

DATE: 7-18-18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

CONTRACTOR TO COORDINATE WITH OWNER FOR FENCE STYLE

GENERAL NOTES

1. SEGMENTAL CONCRETE UNIT RETAINING WALL SHALL BE PROVIDED BY redi-rock ? OR SHEA WALL SYSTEMS OR APPROVED EQUAL.
2. RETAINING WALL DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARDS.
3. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
4. BENCH CUT ALL EXCAVATED SLOPES.
5. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
6. SITE SOILS ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
7. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN. AS STIPULATED BY THE MANUFACTURER.
8. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
9. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6" FOR WALL HEIGHTS UNDER 4 FT. AND 12" FOR WALLS OVER 4 FT. UNLESS SHOWN DIFFERENTLY.
10. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
11. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
12. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
13. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF 3 TESTS PER WALL AND/OR AS DETERMINED BY THE SITE SOILS ENGINEER.
14. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
15. IF REQUIRED SEE ELEVATION DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION.
16. IF REQUIRED GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
18. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
19. FOLLOW APPLICABLE PROVISIONS AS DICTATED BY THE MANUFACTURER.

1.4 REQUIREMENTS FOR CONTRACTOR PREPARED DESIGN AND PLANS

A. THE FINAL DESIGN TO BE SUBMITTED PRIOR TO AWARD OF CONTRACT AND SHALL INCLUDE DETAILED DESIGN COMPUTATIONS AND ALL DETAILS, DIMENSIONS, QUANTITIES AND CROSS SECTIONS NECESSARY TO CONSTRUCT THE WALL. THE DESIGN SHALL CONFORM TO ALL OF THE REQUIREMENTS OUTLINED IN SECTION 1.3 ABOVE. THE FULLY DETAILED PLANS SHALL BE ON PERMANENT, ARCHIVAL QUALITY, 24" X 36" DOUBLE MATTE MYLAR WITH PROJECT NAME, NUMBER AND DESIGN FIRM. THE PLANS TO BE SUBMITTED SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:

1. A PLAN AND ELEVATION SHEET OR SHEETS FOR EACH WALL, CONTAINING THE FOLLOWNG:
   A. AN ELEVATION VIEW OF THE WALL WHICH SHALL INDICATE THE ELEVATION AT THE TOP OF THE WALL, AT ALL HORIZONTAL AND VERTICAL BREAK POINTS AND AT LEAST EVERY FIFTY (50) FEET ALONG THE WALL, ELEVATIONS AT THE TOP OF LEVELING PADS, THE DESIGNATION AS TO THE TYPE OF UNIT, AND THE LOCATION OF THE ORIGINAL AND FINAL GROUND LINE.
   B. A PLAN VIEW OF THE WALL WHICH SHALL INDICATE THE OFFSET FROM THE CONSTRUCTION CENTERLINE OR BASELINE TO THE FACE OF THE WALL AT ALL CHANGES IN HORIZONTAL ALIGNMENT AND THE LIMIT OF THE WIDEST UNIT.
   C. ANY GENERAL NOTES REQUIRED FOR DESIGN AND CONSTRUCTION OF THE WALL.
   D. ALL HORIZONTAL AND VERTICAL CURVE DATA AFFECTING WALL CONSTRUCTION.
2. ALL DETAILS FOR LEVELING PADS, AS WELL AS ALLOWABLE AND CALCULATED MAXIMUM BEARING PRESSURES.
3. DETAILED DESIGN COMPUTATIONS.
4. THE PLANS SHALL BE PREPARED, STAMPED AND SIGNED BY A NEW HAMPSHIRE LICENSED PROFESSIONAL ENGINEER.
5. FENCE HEIGHT TO BE 42".

RETAINING WALL SYSTEM

PART 1.0 - GENERAL

1.1 THIS WORK SHALL CONSIST OF FURNISHING ALL COMPONENTS AND ERECTING A RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ORDERED.

1.2 THIS FOLLOWING TYPE OF RETAINING WALL SYSTEMS ARE ACCEPTABLE TO BE USED ON THIS PROJECT:

REDI-ROCK	(603) 428-3218
SHEA WALL SYSTEMS	(800) 696-7432

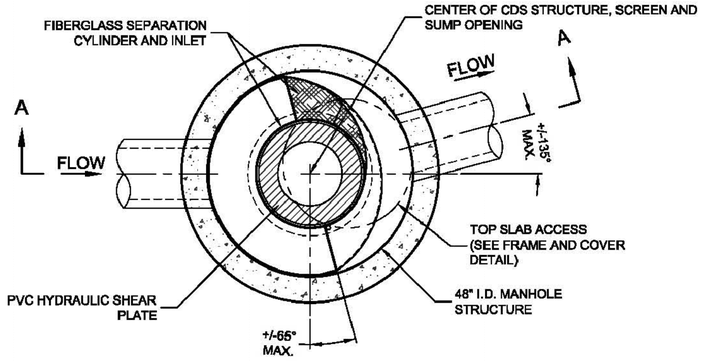
1.3 STRUCTURAL AND GEOTECHNICAL DESIGN REQUIREMENTS
   A. THE DESIGN OF THE WALL SYSTEM SHALL BE BY THE MANUFACTURER.
   B. MINIMUM SAFETY FACTORS SHALL BE AS FOLLOWS:
      1. OVERTURNING: 2.0
      2. BASE SLIDING: 1.5
      3. GLOBAL STABILITY: 1.3
      4. GRID PULLOUT:
   C. ALLOWABLE NET BEARING PRESSURE = 6 KIPS PER SQUARE FOOT MOIST SOIL UNIT WEIGHT = 125 POUNDS PER CUBIC FOOT
      FRICTION ANGLE = 32 DEGREES
   D. DESIGN LOADING SHALL CONSIDER SEISMIC LOADS IN ACCORDANCE WITH THE NEW HAMPSHIRE STATE BUILDING CODE.

DETAIL SHEET

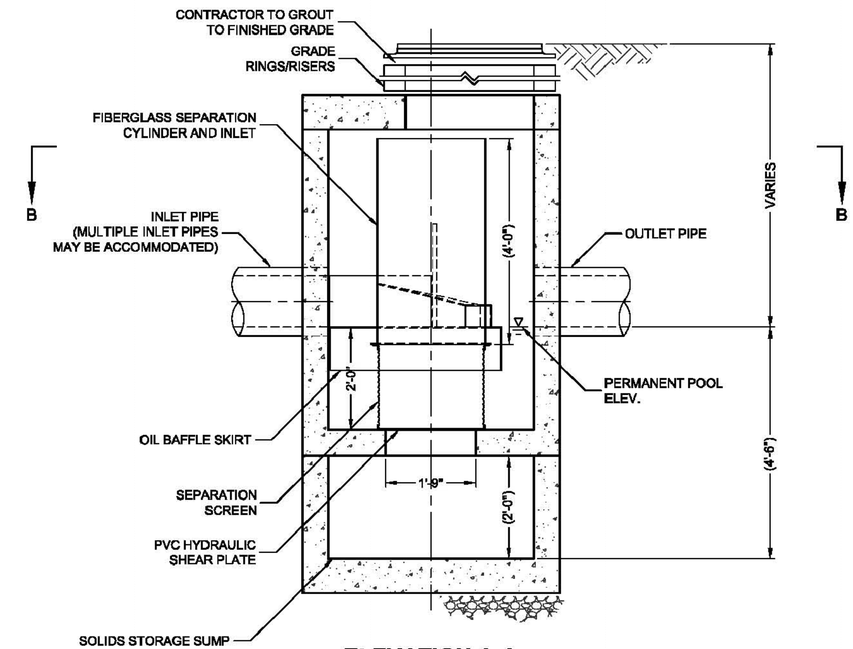
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130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

17



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,788,848; 5,641,750; 5,87 ,889; 5,951,765; AND OTHER FOREIGN PATENTS. OR OTHERS PATENTS PENDING.

CDS2015-4-C DESIGN NOTES

CDS2015-4-C RATED TREATMENT CAPACITY IS 1.4 CFS, OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 10.0 CFS. IF THE SITE CONDITIONS EXCEED 10.0 CFS, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (CFS)	*
PEAK FLOW RATE (CFS)	*
RETURN PERIOD OF PEAK FLOW (YRS)	*
SCREEN APERTURE (2400 OR 4700)	*

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH CONSTRUCTION PRODUCTS REPRESENTATIVE. www.contech-cpi.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
3. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH CONSTRUCTION PRODUCTS INC.
www.contech-cpi.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS2015-4-C
CDS INLINE
STANDARD DETAIL

USE IN CATCH BASINS PCB1 & PCB2

C:\DOCUMENTS AND SETTINGS\JGREENLEAF\LOCAL SETTINGS\TEMPORARY INTERNET FILES\CONTENT.OUTLOOK\56A0W1HV\CDS2015-4-C-DTL.DWG 10/28/2010 10:58 AM

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181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	PER TRC COMMENTS	APP'D	DATE
1	REVISION		SJH	9-12-18

DATE: 7-18-18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

DETAIL SHEET

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130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

18



Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
⊙	9	B	SINGLE	99862 / 99622
⊙	3	P	SINGLE	77911/ 1108HR (12' POLE)
⊙	28	W	SINGLE	66411 / WALL MTD 9' AFG

StatArea_1
PAVED AREAS
Illuminance (Fc)
Average = 0.35
Maximum = 2.7
Minimum = 0.0
Avg/Min Ratio = N.A.
Max/Min Ratio = N.A.

NOTES:
1. PHOTOMETRIC PERFORMED BY CHARRON INC.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

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MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

LIGHTING PLAN

19

Pole top luminaires with asymmetrical light distribution

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

Housing: Two interlocking die-cast aluminum housings. Heavy gauge .090" spun aluminum shade with rolled edge, finished white inside. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Arm: Fabricated from .125" wall aluminum extrusion formed into a continuous smooth radius, terminating and welded into a one piece die-cast aluminum fitter. Fitter slip fits a 3" O.D. pole top and is secured by six (6) socket head stainless steel set screws threaded into stainless steel inserts.

Enclosure: Lamp enclosure/optical system comprises an assembly of two pure anodized aluminum asymmetrical main beam reflectors with clear impact resistant acrylic lens with optical texture fixed to a heavy gauge .090" spun aluminum shade with rolled edge, finished white inside and rigidly fastened to the luminaire housing. Fasteners are stainless steel.

Electrical: 42.9W LED luminaire, 48 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver located in luminaire head, 0-10V dimming. Standard LED color temperature is 4000K with a >80 CRI. Available in 3000K (≥80 CRI); add suffix K3 to order.
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.

UL listed for US and Canadian Standards, suitable for wet locations. Protection class: IP65.

Weight: 27.6 lbs.

Effective Projection Area (EPA): 2.5 ft²

Luminaire Lumens: 2648
Tested in accordance with LM-79-08





Single pole-top luminaires					
	Lamp	LEED	A	B	C
77911	42.9W LED	LZ-2	26⅛	46¼	40⅛

Recommended for use with 14' to 18' poles.

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Wall luminaires with shielded light

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

Housing: Two piece die-cast aluminum with extruded aluminum arm and die-cast canopy supplied with a universal mounting bracket for direct attachment to a 3½" or 4" octagonal wiring box. A die-cast aluminum round "rotation" plate allows the housing to be precisely leveled (or rotated) after installation. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: Handblown, seamless, free-ply opal glass (≥ 75% transmissive) with screw neck. Molded high temperature silicone rubber O-ring gasket for weather tight operation. Spun aluminum shade with rolled reinforced edge, painted white inside.

Electrical: 8.9W LED luminaire, 12 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 90 CRI. Available in 4000K (90 CRI); add suffix K4 to order.
Note: LEDs supplied with luminaire. 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, suitable for wet locations. Protection class IP44

Weight: 4.0 lbs

Luminaire Lumens: 724





Lamp		A	B	C	D
66411	8.9W LED	12⅛	14½	13½	4¼

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Type:
Project:
Options:
Modified:
Luminaire:
Fixture EPA:
Optional Tenon: ☐ 2⅜"ϕ x 3½" H
GCO: ☐
GFI: ☐

Approval:

1108HR 3" - 5" Tapered round hinged pole

Shaft: Extruded from all new seamless 6063 aluminum alloy tubing, heat treated to a T-6 condition.

Anchor base: Round cast aluminum A356 alloy, heat treated to a T6 condition. Anchor base and shaft continuously welded at the outside top and inside bottom of the anchor base casting. Pole base to be round hinged two piece casting. Hinge Pole shaft to be welded to upper base casting which is secured to lower base casting by three (3) stainless steel bolts. Bolts to be fastened to cast-in stainless threaded inserts in lower casting. Cast round two piece base cover supplied with pole.

Anchor bolts: Four (4) ¾" x 17" galvanized steel anchor bolts supplied with double nuts and flat washers. Maximum bolt projection 3½". For luminaires requiring threaded inserts and pole cap -specify: 1 D (single); 2 D (@ 180°); 3 D (@ 120°).

GCO or GFI: Standard GCO/GFI location is opposite the hinge. Height above base for ballast in luminaires is 18". For single luminaires with a pole base mounted (PBM) ballast the minimum height is 24" and 42" minimum for double PBM luminaires.

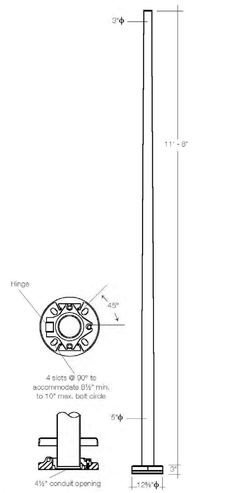
Weight: 60.0 lbs.

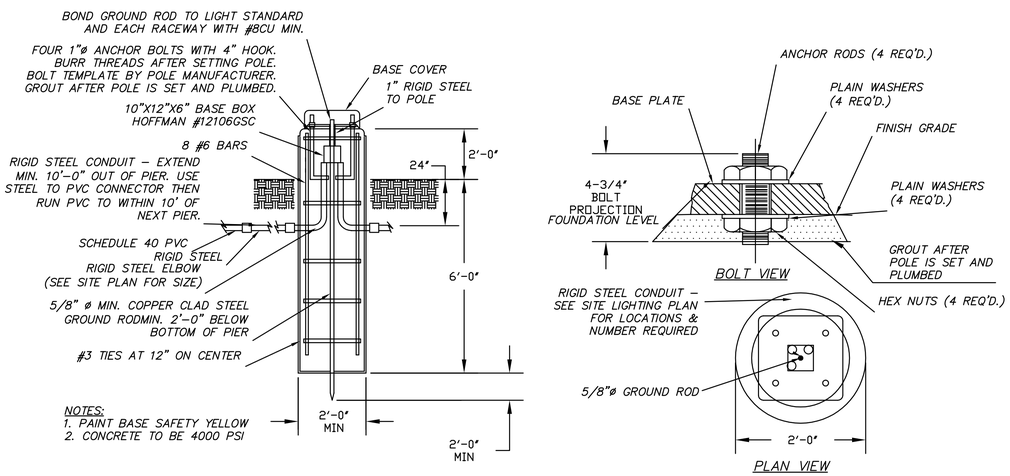
Disclaimer

BEGA-US warrants the specific anchor bolts and pole combination according to the product number(s) and description(s) indicated on this submittal sheet. Structural changes to the pole requested by the customer, including changes to pole length, may affect the compatibility of the anchor bolts and corresponding poles. BEGA-US is not responsible for the incompatibility of the anchor bolts and poles resulting from such structural changes without review by the BEGA-US engineering department. This includes, but is not limited to, any labor charges, charges for replacement materials and shipping.

Pole wind load rating:
MPH: 70 80 90 100 120
EPA: 15.5 11.5 8.7 6.8 4.4
Note: Data above assumes grade level installation and a maximum luminaire weight of 50 lbs.

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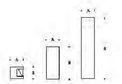
LIGHT POLE BASE
NOT TO SCALE

BEGA LED system bollard - luminaire head with unshielded light with safety guard - 180°

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

Enclosure: Housing constructed of die-cast aluminum. Die-castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy. Glass diffuser, inside white. Fully gasketed for weather tight operation using molded silicone gasket.
Installation: BEGA LED system bollards are designed for easy attachment to system bollard tubes using an interlocking stainless steel mechanism and stainless steel set screw threaded into stainless steel insert. An accompanying bollard tube must be selected for proper installation, see below chart for compatible tube options.
Electrical: 16.5W LED luminaire, 19.8 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with a >80 CRI. Available in 4000K (≥80 CRI); add suffix K4 to order.
Notes: LEDs supplied with luminaire. 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, suitable for wet locations. Protection class IP65

Luminaire Lumens: 1939



Bollard heads - shielded with reflector - 180°			
Lamp		A	B
99857	16.5 W LED	7¼	7¼

Bollard tubes for luminaire heights 19¾" - 21½"			
	A	B	Anstr. unit
99615	7½	141½	79 817

Bollard tubes for luminaire heights 31½" - 39½"					
Integrated components	Door	A	B	Anstr. unit
99 626 —	✓	7¼	32	79 816
99 644 1 LED floodlight 19.2W	✓	7¼	32	79 816
99 626 GFCI outlet	✓	7¼	32	79 816
99 656 Passive infrared motion sensor	✓	7¼	32	79 816
99 636 Emergency lighting battery 19W	✓	7¼	32	79 816



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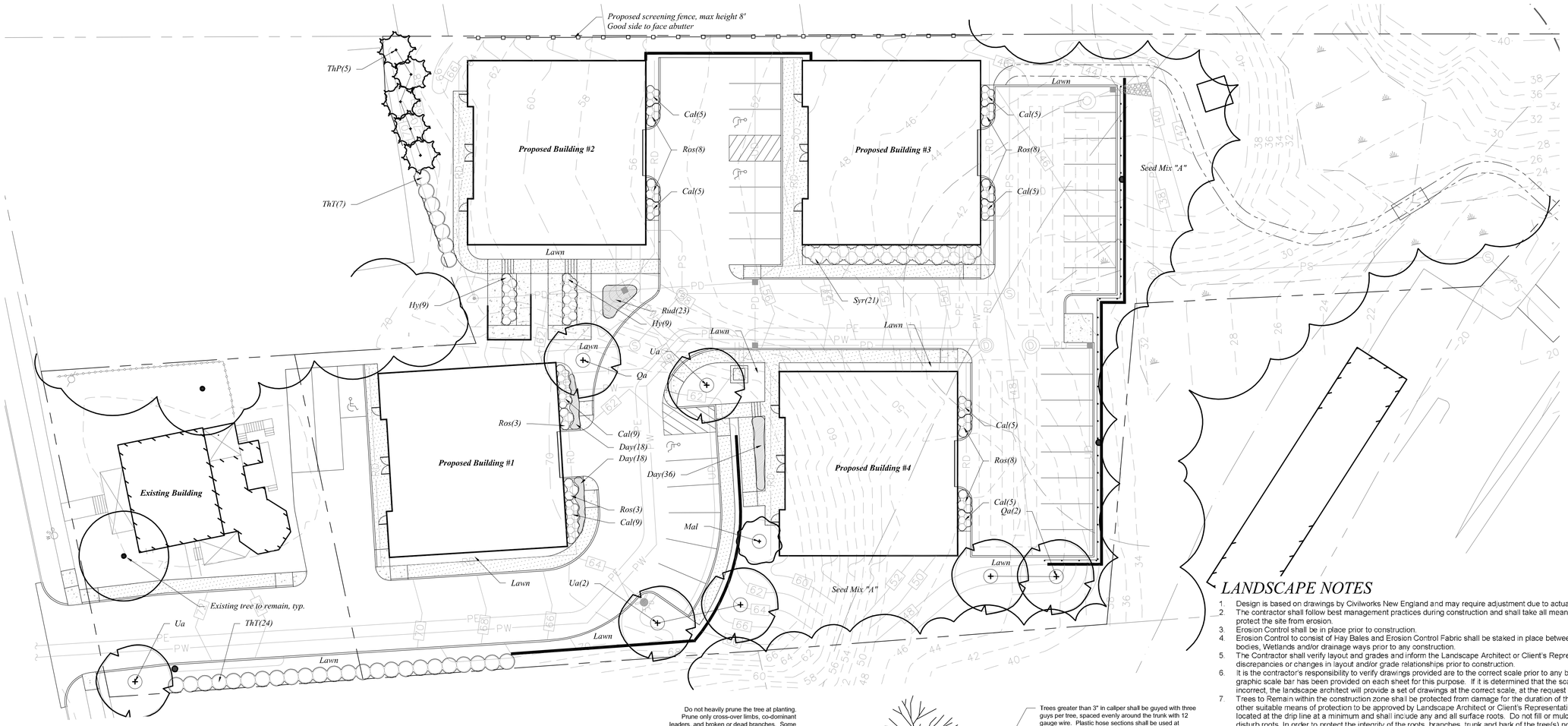
DATE: 7-18-18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

LIGHTING DETAILS

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

20



0 5 10 20 40

Seed Mix A

50% New England Wetland Plants – New England Erosion Conservation & Wildlife Mix

50% New England Wetland Plants – New England Showy Wildflower Mix

Plant List

TREES

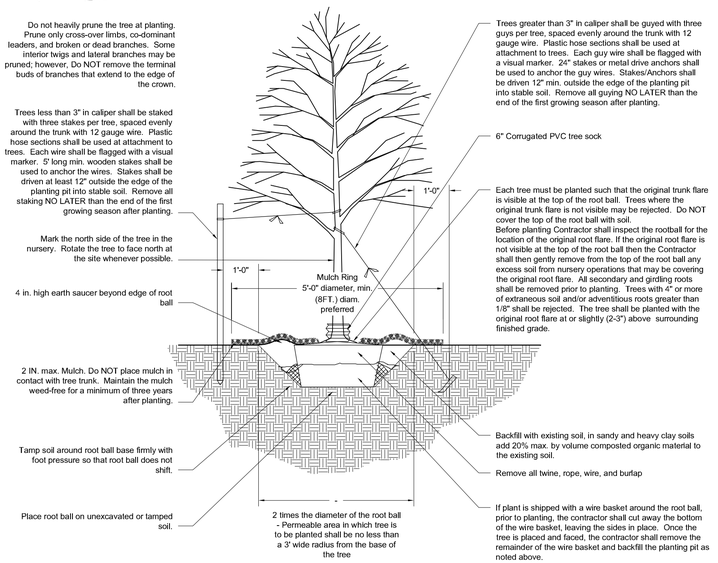
Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Mal	*Malus 'Prairiefire'*	Prairiefire Crabapple	1	2.5-3" Cal	B&B
Qa	*Quercus alba*	White Oak	3	2.5-3" Cal	B&B
ThP	*Thuja plicata 'Green Giant'*	Green Giant Arborvitae	5	7-8' Ht	B&B
Ua	*Ulmus americana 'Princeton'*	Princeton American Elm	4	2.5-3" Cal	B&B

SHRUBS

Symbol	Botanical Name	Common Name	Quantity	Size	Minimum Height	Minimum Width	Comments
Hy	*Hydrangea arborescens 'Invincibelle Wee White'*	Wee White Hydrangea	18	3 gal	18"	18"	
Ros	*Rosa 'Knockout'*	Knockout Rose	30	3 gal	18"	18"	
Syr	*Syringa 'Bloomerang'*	Bloomerang Lilac	21	5 gal	2'	2'	B&B
ThT	*Thuja occidentalis 'Techny'*	Mission Arborvitae	31	6-7' Ht			B&B

PERENNIALS, GROUNDCOVERS, VINES and ANNUALS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cal	*Calamagrostis acutifolia 'Karl Foerster'*	Feather Reed Grass	48	1 gal	
Day	*Hemerocallis 'Big Time Happy'*	Big Time Happy Daylily	72	1 gal	
Rud	*Rudbeckia fulgida 'Goldsturm'*	Black-Eyed Susan	23	1 gal	



TREE PLANTING DETAIL

LANDSCAPE NOTES

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

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

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE
1	PER TRC COMMENTS	VM	08/23/18
2	PROJECT NAME	VM	09/05/18

DESIGN BY: VM
DRAWN BY: VM
SCALE: 1"=20'
DATE: 07/16/18
PROJECT NO:1795
APPROVED BY:RW
FILE: SITE.DWG

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

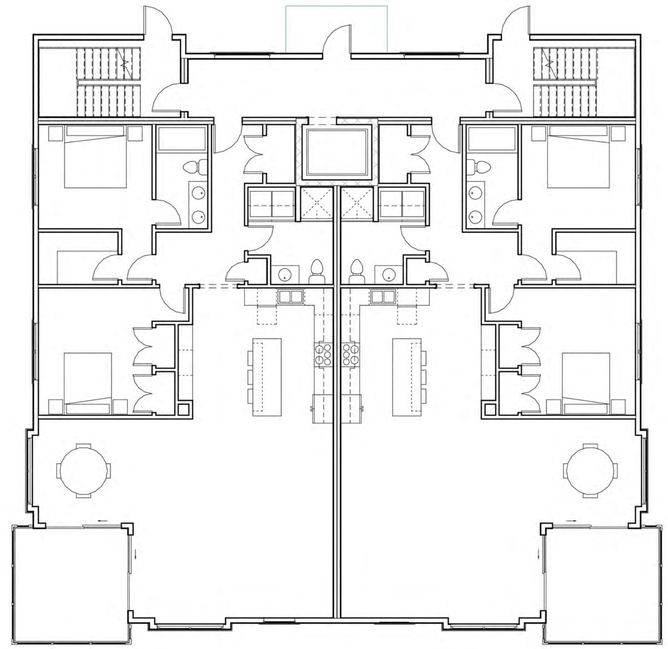
GUNDALOW LANDING
DOVER, NH

LANDSCAPE PLAN

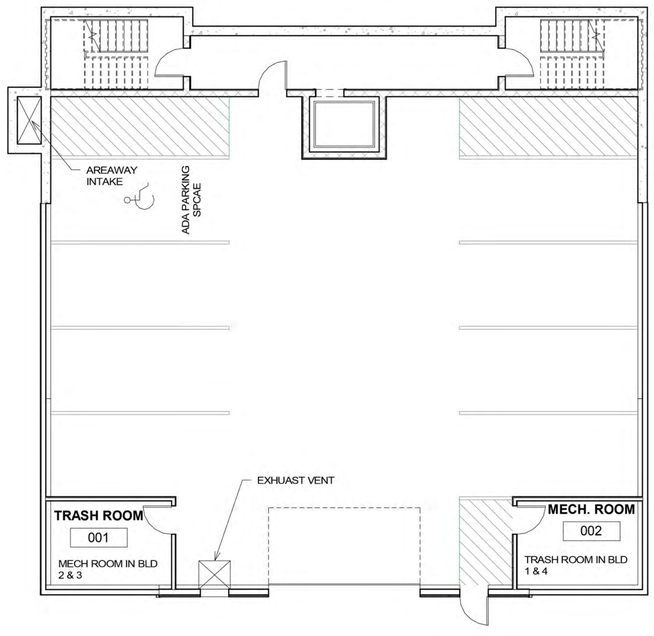
L–1



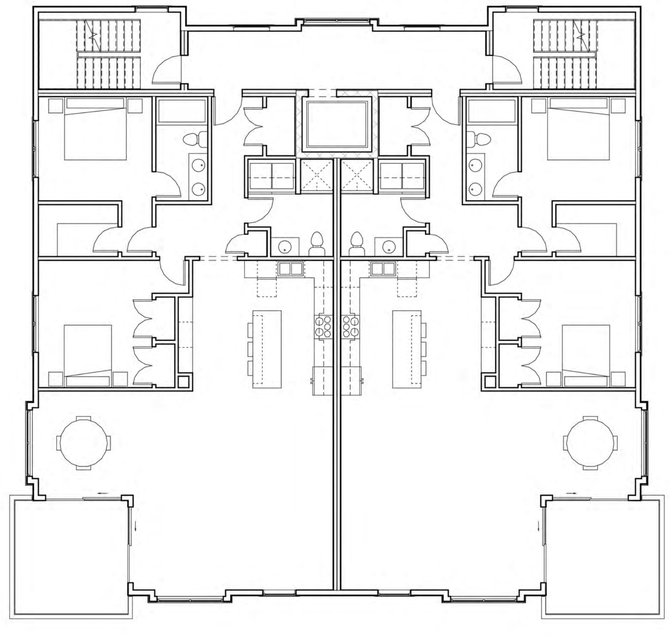
COCHECO LANDING VIEW LOOKING NORTH



2 FIRST FLOOR PLAN
1/8" = 1'-0"



1 GARAGE LEVEL
1/8" = 1'-0"



3 SECOND THRU FOURTH FLOOR PLANS
1/8" = 1'-0"

PRELIMINARY

REVISIONS:

#	DATE	DESCRIPTION

GUNDALOW LANDING

GUNDALOW DRIVE
DOVER, NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN ST · PORTSMOUTH · NH · 03801
603 · 431 · 2808

RENDERING
&
FLOOR PLANS

DATE:	09/05/18
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/8" = 1'-0"
JOB NUMBER:	21801

A1



1 BUILDING 1 SOUTH ELEVATION
1/8" = 1'-0"



2 BUILDING 1 EAST ELEVATION
1/8" = 1'-0"



3 BUILDING 1 NORTH ELEVATION
1/8" = 1'-0"



4 BUILDING 1 WEST ELEVATION
1/8" = 1'-0"

PRELIMINARY

REVISIONS:

#	DATE	DESCRIPTION

GUNDALOW LANDING

GUNDALOW DRIVE
DOVER, NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN ST · PORTSMOUTH · NH · 03801
603 431 2808

BUILDING #1
ELEVATIONS

DATE:	09/05/18
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/8" = 1'-0"
JOB NUMBER:	21801

A2



1 BUILDING 2 SOUTH ELEVATION
1/8" = 1'-0"



2 BUILDING 2 EAST ELEVATION
1/8" = 1'-0"

MAXIMUM ALLOWABLE AREA OF EXTERIOR WALL OPENINGS IS 25% WHEN DISTANCE FROM PROPERTY LINE IS BETWEEN 5' AND 10'. PER IBC 2009. BUILDING 2 EAST ELEVATION IS BETWEEN 5' AND 10' OF PROPERTY LINE, AND AREA OF EXTERIOR WALL OPENINGS IS 22.2%.



3 BUILDING 2 NORTH ELEVATION
1/8" = 1'-0"



4 BUILDING 2 WEST ELEVATION
1/8" = 1'-0"

PRELIMINARY

REVISIONS:

#	DATE	DESCRIPTION

GUNDALOW LANDING

GUNDALOW DRIVE
DOVER, NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN ST · PORTSMOUTH · NH · 03801
603 431 2808

BUILDING #2 ELEVATIONS

DATE:	09/05/18
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/8" = 1'-0"
JOB NUMBER:	21801

A3



1 BUILDING 3 SOUTH ELEVATION
1/8" = 1'-0"



2 BUILDING 3 EAST ELEVATION
1/8" = 1'-0"

MAXIMUM ALLOWABLE AREA OF EXTERIOR WALL OPENINGS IS 25% WHEN DISTANCE FROM PROPERTY LINE IS BETWEEN 5' AND 10'. PER IBC 2009.
BUILDING 3 EAST ELEVATION IS BETWEEN 5' AND 10' OF PROPERTY LINE, AND AREA OF EXTERIOR WALL OPENINGS IS 22.2%.



3 BUILDING 3 NORTH ELEVATION
1/8" = 1'-0"



4 BUILDING 3 WEST ELEVATION
1/8" = 1'-0"

PRELIMINARY

REVISIONS:

#	DATE	DESCRIPTION

GUNDALOW LANDING
GUNDALOW DRIVE
DOVER, NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN ST · PORTSMOUTH · NH · 03801
603 ·431 ·2808

BUILDING #3 ELEVATIONS

DATE:	09/05/18
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/8" = 1'-0"
JOB NUMBER:	21801

A4



1 BUILDING 4 SOUTH ELEVATION
1/8" = 1'-0"



2 BUILDING 4 EAST ELEVATION
1/8" = 1'-0"



3 BUILDING 4 NORTH ELEVATION
1/8" = 1'-0"



4 BUILDING 4 WEST ELEVATION
1/8" = 1'-0"

PRELIMINARY

REVISIONS:

#	DATE	DESCRIPTION

GUNDALOW LANDING

GUNDALOW DRIVE
DOVER, NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN ST · PORTSMOUTH · NH · 03801
603 431 2808

BUILDING #4
ELEVATIONS

DATE:	09/05/18
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/8" = 1'-0"
JOB NUMBER:	21801

A5



PORTLAND AVENUE - STREET VIEW



PORTLAND AVENUE - DRIVEWAY STREET VIEW

REVISIONS:

#	DATE	DESCRIPTION

GUNDALOW LANDING

GUNDALOW DRIVE
DOVER, NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN ST · PORTSMOUTH · NH · 03801
603 · 431 · 2808

PORTLAND AVENUE STREET VIEWS

DATE:	09/05/18
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/8" = 1'-0"
JOB NUMBER:	21801

A6



COCHECO STREET - STREET VIEW



ROGER STREET - STREET VIEW

REVISIONS:

#	DATE	DESCRIPTION

GUNDALOW LANDING

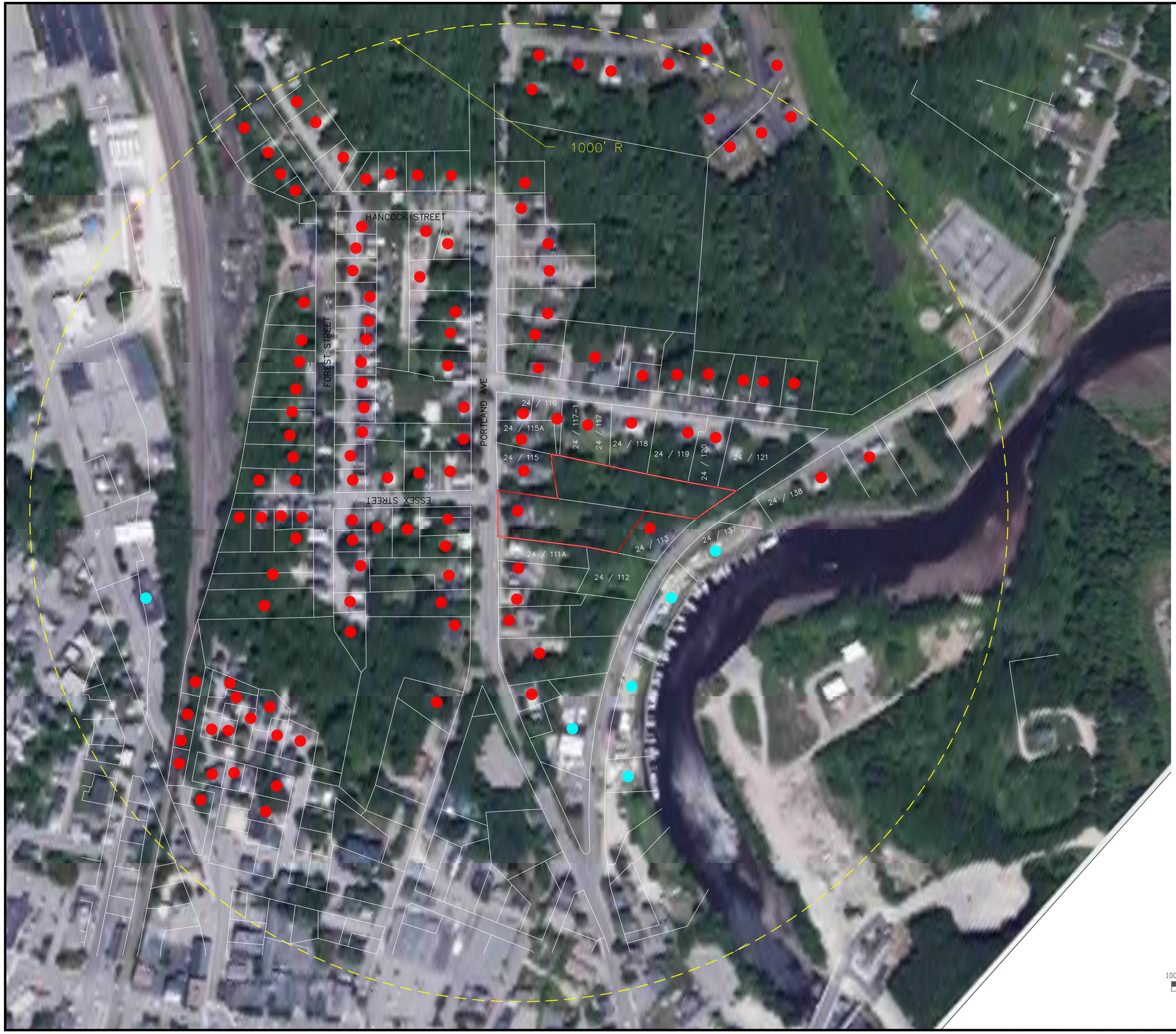
GUNDALOW DRIVE
DOVER, NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN ST · PORTSMOUTH · NH · 03801
603 · 431 · 2808

COCHECO STREET AND ROGER STREET VIEWS

DATE:	09/05/18
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/8" = 1'-0"
JOB NUMBER:	21801

A7



24 / 114 MARKER 44 HOLDINGS, LLC
130 CENTRAL AVE
DOVER, NH 03820 4563 / 175

24 / 115B MARKER 44 HOLDINGS, LLC
130 CENTRAL AVE
DOVER, NH 03820 4562 / 656

24 / 111A AMITY ISLAND INVESTMENTS II, LLC
9 FALKLAND PLACE B1
PORTSMOUTH, NH 03801 4408 / 858

24 / 112 RITA C. PRINTY IRREVOCABLE TRUST
JAMES W. PRINTY, TRUSTEE
461 LOCUST STREET
ROLLINSFORD, NH 03869 3154 / 944

24 / 113 RITA C. PRINTY IRREVOCABLE TRUST
JAMES W. PRINTY, TRUSTEE
461 LOCUST STREET
ROLLINSFORD, NH 03869 3154 / 944

24 / 115 GREGORY S. MAHANNA DEBORAH H. KAJANDER
MAHANNA KAJANDER REVOCABLE TRUST
3 PHEASANT LANE
PORTSMOUTH, NH 03801 4550 / 303

24 / 115A KAREN K.C. PILLETTE GREGORY B. PILLETTE, JR.
97 PORTLAND AVENUE
DOVER, NH 03820 4379 / 724

24 / 116 STEPHEN MCDONOUGH CHERYL MCDONOUGH
27 HIGHLAND ROAD
KENSINGTON, NH 03833 4378 / 870

24 / 116A 99 PORTLAND AVE, LLC
13 HOLLY LANE
HAMPTON, NH 03842 4440 / 915

24 / 117-1 MATTHEW J. ROPER
32 ROGERS ST
DOVER, NH 03820 4570 / 322

24 / 117 KNOX MARSH DEVELOPMENT, LLC
242 CENTRAL AVENUE
DOVER, NH 03820 4382 / 827

24 / 118 JOHN T. PETROVITSIS
72 PERKINS ROAD
MADBURY, NH 03823 4452 / 891

24 / 119 D. JAMES MCATAVEY, TRUSTEE D.
JAMES MCATAVEY REVOCABLE TRUST
26 PROSPECT STREET
DOVER, NH 03820 3530 / 93

24 / 120 DENNIS B. MCATAVEY
34 MOUNT VERNON STREET
DOVER, NH 03820 4092 / 317

24 / 121 BARBARA A. ZIELFELDER RICHARD ZIELFELDER, JR.
10 ROGERS STREET
DOVER, NH 03820 3963 / 625

24 / 135A GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820 2612 / 358

24 / 136 GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820 1102 / 80

24 / 137 GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820 1207 / 803

24 / 138 GEORGE MAGLARAS
33 COCHECO STREET
DOVER, NH 03820 1208 / 46

24 / 68C THEODORE M. ZELLEM TERESA M. ZELLEM
56 ROLLINS ROAD
ROLLINSFORD, NH 03869 1642 / 752

24 / 68 JAVIERA L. KALBACK SETH M. KALBACK
74 PORTLAND AVENUE
DOVER, NH 03820 4083 / 851

24 / 69 DIANE A. CARTER
76 PORTLAND AVENUE
DOVER, NH 03820 2038 / 422

24 / 70 RICHARD J. PERREAULT HEATHER L. PERREAULT
33 VETERANS TERRACE
SOMERSWORTH, NH 03878 4111 / 988

RESIDENTIAL

BUSINESS/RETAIL

OTHER

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

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CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	TRC COMMENTS	S.H	9-12-18
1	REVISION PER TRC COMMENTS		S.H	9-12-18

NO.	REVISION	APP'D	DATE

DATE: 7-18-18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:S.H
PROJECT NO:1795
FILE: hood

NEIGHBORHOOD PLAN

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVE
DOVER, NH 03820

COCHECO LANDING
PORTLAND AVE &
COCHECO ST.
DOVER, NH

EX-1

15°37'22"

MAGNET OBS. 8/14/17

NH STATE PLANE
GPS OBS. AUGUST 3, 2017

TBM MAG HUB
AT SIDEWALK
ELEV. 71.66

ESSEX STREET

PORTLAND AVENUE

24 / 69 DIANE A. CARTER
76 PORTLAND AVENUE
DOVER, NH 03820
2038 / 422

Dover Idder

Dover Idder

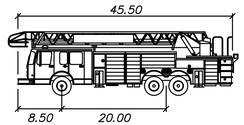
Dover Idder

Dover Idder

TBM MAG NAIL
IN SIDEWALK
ELEV. 20.88

COCHECHO STREET

100' TIDAL BUFFER



Dover Idder	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 44.0

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

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CITY OF DOVER
PLANNING BOARD FILE#
P18-34

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	APP'D	DATE
1	REVISION PER TRC COMMENTS	SJH	9-12-18

DATE: 7-18-18
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: MMR
APPROVED BY:SJH
PROJECT NO:1795
FILE: SITE.DWG

DOVER FIRE TRUCK MOVEMENT PLAN

MARKER 44 HOLDINGS, LLC
130 CENTRAL AVENUE
DOVER, NH 03820

GUNDALOW LANDING
DOVER, NH

EX-2

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P18-37

Application Type:	Site Plan Review
Applicant(s):	Summit Land Development
Owner(s):	Summit Land Development
Location:	Pointe Place (Assessor's Map K, Lots 19-4)
Meeting Date:	September 25, 2018

INTENT: To construct 3 buildings consisting of 8,000 s.f. of commercial space and 119 residential units and 231 parking spaces

LOTS/UNITS PROPOSED: 119 residential units and 8,000 s.f. commercial space

AGENDA ITEM #: 4-D

ACREAGE: 20.93 acres

ZONING DISTRICT: Residential Commercial Mixed-Use Overlay (RCM), Executive Technology Park (ETP) underlying

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Residential and Commercial Mixed Use

SURROUNDING LAND USE: Residential, mixed use, commercial, vacant land

ZBA ACTION: Building Height Variance Request on 9/20/18

ATTACHMENTS: Application materials, TRC minutes, and Site Plan

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

PERMITS REQUIRED:
Alteration of Terrain and CUP for wetland buffer

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is proposing to build 3 buildings on Pointe Place. Two would be all residential and the third would have commercial on the ground floor. The applicant is proposing to utilize the Transfer of Development Rights to allow for the additional units.

The applicant appeared before the Technical Review Committee on August 16, 2018. (minutes are attached)

The Conservation Commission endorsed the Conditional Use Permit at their August 13, 2018 meeting.

The applicant is appearing before the Zoning Board of Adjustment to request a variance to permit a building height of 44.5 feet where a maximum of 35 feet is allowed for a residential building. Staff will inform the Board of the Zoning Board's decision but did not have the outcome before packets were finalized. There may be additional conditions of approval, pending the Zoning Board's decision.

TDR Request
Board should take a TDR vote, noting what the relief that was granted including the number of units to be purchased.

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 of various types. This plan is consistent with those regulations.

STAFF RECOMMENDATION: TDR:
The Planning Department recommends that the Planning Board accept the application, open the public hearing, and approve the TDR with the following conditions:

Conditions to be Met Prior to Signing of the Plans:
1. TDR fees shall be paid.
2. Note shall be added onto the plan explaining what relief is granted.
3. Any requirements of 170-27.2 be included on the plan

STAFF RECOMMENDATION: SITE PLAN:

The Planning Department recommends the Planning Board vote to approve the Site Plan with the following conditions:

Conditions to Be Met Prior to Signing of Plans:
1. The conditional use permit (P18-38) shall be approved.
2. The applicant shall provide:
   a. A digital version of plan set
   b. Lighting plan for this application (with 3 buildings)

3. The applicant must revise final plan set to:
   a. Combine all plans and renderings into one set.
   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 LLS, PE, and Landscape Architect signatures and stamps to final plan
   d. Indicate Building 5 looks the same as Building 4
   e. Address any outstanding TRC comments.
   f. Change site construction hours to exclude Sunday hours.
   g. Add note regarding TDR calculation.
   h. Indicate percentage of residential and commercial space
   i. Provide abutter information on neighborhood plan
   j. Indicate that excess snow that cannot be stored on site will be trucked off and removed appropriately.
   k. Add Zoning Board of Adjustment information from September 20, 2018 meeting

Conditions to Be Met Prior to any Construction Activity:

4. A site construction sign with the contact information for the general contractor must be located and approved by the City Engineer or Assistant City Manager.
5. Applicant shall complete Land Use Development Tracking Form, most recently revised version, utilizing the online Pollution Tracking and Accounting Pilot Project (PTAPP) portal. https://www.unh.edu/unhsc/ptapp

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

6. The new dwelling units shall be assessed and pay the current water and sewer investment fees in place at the time of application for service.

Conditions to Be Met Prior to Occupancy:

7. Issuance of a certificate of occupancy.
8. Impact fees for new dwelling units and commercial space shall be paid per the invoice included with the Notice of Decision as well as the deed indicating the documention of the 3 acres on Cold Springs to be recorded at the Strafford County Registry of Deeds
9. The applicant shall provide a letter of credit or other form of security acceptable to the City for any unfinished work.
10. Traffic Light at Dover Point Road shall be installed before Certificate of Occupancy for Building #4 to the satisfaction of the Assistant City Manager and City Engineer.
11. Pointe Place shall meet all City standards for a public roadway.

ALTUS
ENGINEERING, INC.

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

July 26, 2018

Christopher G. Parker AICP
Assistant City Manager
Director of Planning and Strategic Initiatives.
City of Dover
Planning Department
288 Central Ave
Dover, New Hampshire 03820

Re: Site Review Application - Pointe Place –Mixed-Use Development - Phase 2
Tax Map K, Lot 19-4
P-4390.4

Dear Chris:

On behalf of the Applicant, Varney Brook Lands, LLC and Chad Kageleiry, Altus Engineering, Inc. (Altus) is pleased to submit an Application for Site Review to the Dover Technical Review Committee for the second phase of mixed-use buildings at the Pointe Place development. As you know, Chad has been methodically working on the development of the property to create a sustainable and viable development. This next phase will construct three new buildings on the south side Pointe Place, somewhat mirroring the buildings on the north side, which will finish the work along Pointe Place roadway and provide continuity and balance to the development. Phase 2 proposes to construct 8,000 square feet of additional commercial space along with 119 residential units.

On May 24, 2018 we met with the TRC in a pre-application format to discuss the design. The primary concern of the committee was the need for signal improvements at the Dover Point Rd / Pointe place intersection. Altus reviewed the intersection for a possible roundabout and found it not feasible without right of way acquisitions. Due to the changes in the master plan since the original traffic impact and access study (TIAS) in 2006, TEPP Inc. revised the calculations based on the current Pointe Place program. As noted in the attached memorandum;

> *"calculated peak-hour trip generation for the revised Pointe Place mixed-use development program is significantly less than calculated trip generation for the previous program, reduced by about one-third for the weekday AM-street-peak hour, reduced by about two-thirds for the weekday PM-street-peak hour and reduced by over one-half for the Saturday site-peak hour "*

The current plans provide the architectural details for building #3. Architectural details for buildings #4 and #5 will be provided prior to the TRC meeting for review.

Enclosed are the following documents to initiate the Technical Review process:

- Site Plan Application Form and Checklist;
- Conditional Use Permit Application (Wetlands Buffer);
- Application Fee checklist;
- 1 Professionals list & mailing labels;
- 8 copies of Site Plans (24" x 36" format);
- 8 copies of the Autoturn analysis;
- 8 copies of Color CUP Plan;
- 8 copies Thornwood Common Traffic Update (TEPP LLC);
- 8 copies of the site lighting cut sheets;
- 8 copies of utility ability to serve letter (Eversource);
- 8 copies of the Drainage Summary (full computations to be provided with NHDES Alteration of Terrain Permit application)
- 1 Disc with electronic (PDF) of submittal documents;

Under separate cover, Summit Land Development will submit the application fee. Additionally, Altus is finalizing the NHDES Alteration of Terrain Permit Application. We will provide the Community Development Department with a copy of the full submittal documents, including the Stormwater Inspection and Maintenance Manual.

We respectfully request to be placed on the agenda for the first available Technical Advisory Committee and Conservation Commission meetings.

Please call if you have any questions or require additional information.

Sincerely,

ALTUS ENGINEERING, INC.

Cory Belden, P.E.

Enclosures
copy: Chad Kageleiry, Summit Land Development

wde/4390_P4 City ltr 7-26-18.doc

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: Summit Land Development Telephone # 603.749.2800

Address of Applicant: 340 Central Avenue, Dover, NH 03820

E-Mail Address: Chad@Summitlanddev.com

Name of Property Owner (*if different from applicant*): Varney Brook Lands, LLC Telephone # Same as Applicant

Address of Property Owner: Same as Applicant

PROPERTY INFORMATION

Address of Property: Pointe Place (between Dover Point Road and Middle Road)

Assessor's Map # K Lot(s) # 19-4

Zoning District(s) RCM by Conditional Use Permit Overlay District(s) RCM

Size of Parcel: _____ sq. ft. 20.93 ac. Property Deed: Book 113 Page: 070

Existing Use of Property: Unoccupied - Formerly rose gardens and greenhouses

SITE PLAN INFORMATION

Describe Proposed Use: Residential and commercial development

Area of Parcel to be Developed: 190,000 sf (4.4 acres) sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed: 3 buildings - 119 Units

Number of Parking Spaces: Existing 0 Proposed 231 Parking stalls

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

Number of Employees Total: Not availabe In Maximum Shift: _____

Disposition of Parcel: Totals for 3 buildings

Building Footprint (43,000 SF +/-) sq. ft.

Total Building Area 172,000* sq. ft.

Paved Area 52,500 sf sq. ft.

Building Setbacks: RCM - Not applicable

Front Yard N/A ft.

Rear Yard N/A ft.

Side Yard: Right N/A ft. Left N/A ft.

* Includes 1st floor parking garages in buildings #4 and #5

*50' setback to external lot line

City Water? X Yes ___ No How far is city water from the property? 50 ft - in Pointe Place

City Sewer? X Yes ___ No How far is city sewer from the property? 30 ft - in Pointe Place

BUILDING INFORMATION

Type of Building to be Built: Steel frame

Height of Building: 51' - 8" Finished Floor Elevation: 61.0

Number of Seats (where applicable) N/A

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: None

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin McEneaney

Address P.O. Box 681, 24 Chestnut Street, Dover NH 03810 Telephone #: 603-742-0911

Professional License #: 661 E-mail address: kevin@surveynh.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Cory Belden, PE

Address 133 court St, Portsmouth, NH 30801 Telephone #: 603-303-2621

Professional License #: 14239 E-mail address: cbelden@altus-eng.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: Chad Kageleiry Date: 7/26/18

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: 7/26

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: 7/26

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: 7/26

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

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: December 15, 2017]

This site plan review checklist, as required by Chapter 149-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review 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.

Fees will be invoiced and are due along with fifteen (15), folded, copies of the plan set and materials, including response to TRC comments, will be due 3 weeks prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.

APPLICANT: Summit Land Development File Number: _____

PROJECT TITLE: Pointe Place - Mixed-Use Development - Phase 2

PROPERTY LOCATION: Pointe Place (South) Tax Map: K Lot: 19-4

	Explain How Provided	Reviewed
1. Completed and signed Application form	Application	✓
2. Electronic copy of the engineered/surveyed plan layout	Disc provided w/ PDF	✓
3. Electronic copy of supplementary materials and application	" "	✓
4. Traffic Impact Assessment and Analysis (Standard or Advanced)	Updated TIAS	✓
5. Fiscal Impact Analysis (For more than 10 units)	Provide w/ Master Plan	
6. Waiver requests to the Site Plan Review Regulations, with written justification	None	✓
7. Conditional Use Permit applications	Wetlands Buffer	✓
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	RZ	✓
9. A colored architectural plan showing all sides of buildings	A3.1 / A2.2	✓
10. List of all professional agents to be notified for Planning Board	List Provided w/ labels	✓
11. Letter to Serve from Public and Private Utilities		✓
12. Eight folded copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:		✓
Location map at appropriate scale	Cover Sht	✓
Proposed Project name and title and Planning File #	No File #	✓
Date, north arrow and scale	Site Plan	✓
Names of all abutting property owners	Plan of Land	✓
Name and address of owners and/or applicants	Cover / Title Block	✓
Signature & stamp of NH licensed land surveyor and/or engineer	Cory Belden, PE	✓
Zoning District boundaries, including any special or overlay districts	N-1 / Plan of Land	-
Location of Conservation District areas	Overall Site Plan	✓
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	Site Plan	✓
Location and widths of existing & proposed easements & right of ways	"	✓
Depict pedestrian walkways and accessible access	"	✓
Location and width of existing and proposed access/egress ways	"	✓
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	Plan of Land	✓

	Explain How Provided	Reviewed
Existing and proposed topographic information at two foot intervals	Grading Plan	✓
Existing and proposed buildings and structure locations	Architectural Plans	✓
Minimum building setbacks or build to lines on all lots	N-1	✓
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	Utilities Plan	✓
Existing and proposed water lines and fire hydrants, including materials and capacity needed	"	✓
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	"	✓
Existing and proposed stormwater lines and facilities	Drainage Plan	✓
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	Lighting Plan / cut shts	✓
Location of Flood Hazard Zone	N/A	✓
Location of all bodies of water and watercourses	Site Plans	✓
Location of wetlands and buffers	"	✓
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set	S-1, Neighborhood Plan	✓
Existing natural features and/or significant vegetation on property	Grading Plan	✓
Depict existing contours up to 100 ft. beyond project limits	"	✓
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	L-1, by Woodburn & Co	✓
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	Site Plan	✓
Location, material and size of existing and proposed pavement area	Site Plan & Details	✓
Location of proposed fire lanes	Signs on Site Plan	✓
Specify finished floor elevations of buildings	Grading Plan	✓
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	Site Plan - Dumpsters	✓
Depict all service, storage, loading bays and utility areas	N/A	✓
All applicable Dover Common Site Plan notes	N-1	✓
13. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	To be submitted w/ AoT	✓
Stormwater Management System Operation and Maintenance Plan	"	✓
Erosion and Sedimentation Control Plan	Included	✓
Landscape Operation and Maintenance Plan	To be submitted w/ AoT	✓
Proposed restrictive covenants or homeowners association documents	—	
Dates and permit numbers of all required state and federal permits	AoT - Pending	✓
If wetland buffer, indicate placards locations, as applicable	~~AoT - Pending~~	✓
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs		
Location of proposed drive-in facilities	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required		

REVIEWED BY: Cory Belden DATE 7/26/18 TRC DATE 8/16/18

CITY OF DOVER SITE REVIEW
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

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

* Professionals Provided

* Request City to Prepare Abutter List

PLANNING BOARD
ESTIMATED FEE SCHEDULE

This is only provided to give you an estimate of the application fees. *After you submit an application, staff will invoice you a total.* All fees must be paid two weeks before the Planning Board meeting. **If the Fee has not been paid, the item will not be placed upon the agenda.**

A. TOTAL FEE paid by cash or check made payable to "City of Dover"

1. Application fee for the following:
   - SUBDIVISION $150.00 x # 1 new lots created = $ —
   - LOT LINE ADJUSTMENT $200.00 (if more than two lots involved, add $100.00 per lot) = $ —
   - SITE REVIEW - RESIDENTIAL $100.00 x # 119 per dwelling unit = $ 11,900
   - SITE REVIEW – NON-RESIDENTIAL (not to exceed $10,000)
     New construction $.15 sq. ft. x # 8,000 sq. ft. = $ 1,200
     Additions (new floor space) $.10 per sq. ft. x # _____sq. ft. = $ —
   - IMPERVIOUS PAVED AREA (for new development) OR IMPERVIOUS PARKING LOT ADDITIONS (not to exceed $10,000) $.07 sq. ft. x # 52,500 = $ 3,675
   - MOTEL/HOTEL $35.00 x # ___ per lodging unit = $ —
   - CHANGE OF USE (not to exceed $5,000)
     Existing floor space $.10 per sq. ft. x # ____ sq. ft. = $ —
   - CONDITIONAL USE PERMIT $150.00 x # 1 per application = $ 150
   - GRAVEL PIT/ EXCAVATIONS - Application fee $50.00 & Permit fee $75.00 = $ —
   - EXTENSIONS OF/AMENDMENTS TO/WAIVERS FOR AN APPROVED PLAN ($150.00 minimum) $50.00 x # ____ per hour of review $ —
   - REQUEST FOR REZONING $150.00 = $ —
   - DRIVEWAY WAIVER – $100.00 application fee =
     Letter of rejection from Engineering Department, diagram & letter from owner $ —

$16,925

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will need to provide to this office the engineer, architect, land surveyor or soil scientist whose professional seal appears on the plan with names and addresses for notices. You will be notified with the amount due, once this has been completed.

1. Applicant & Owner, engineer, architect, land surveyor or soil scientist
   Certified letters fee # 6 of x $8.00 = (Provided)
2. Certified letters fee: # of abutters _____ X $8.00 = $ 48
3. First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00 = $ _____
4. Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00 = $ _____

TBD

C. Foster's newspaper public notice fee **$ 80.00**

D. Digital Version of the Plan in PDF/A format or Archive Fee $1.00 x # N/A per sheet of plan set = $ —

(Revised May 15, 2017)

TOTAL FEE $ _____

* Applicant Requests the City prepare abutter labels

Abutter's List – Professionals involved with project

Altus Engineering, Inc.
133 Court Street
Portsmouth, NH 03801

TW Designs
PO Box 69
Strafford, NH 03884

Highland Soil Services
75 Prospect Street
Somersworth, NH 03878

Woodburn & Company
103 Kent Place
Newmarket, NH 03857

Varney Brook Lands
340 Central Ave #202
Dover, NH 03820

McEneaney Survey Associates, Inc.
PO Box 681
Dover, NH 03820

Easy Peel® Labels
Use Avery® Template 5160®

Feed Paper

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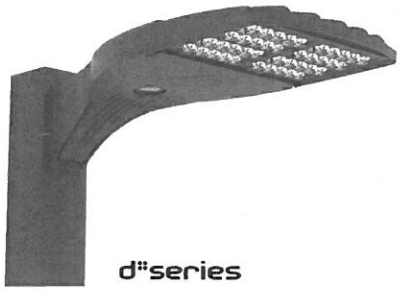
McEneaney Survey Associates, Inc.
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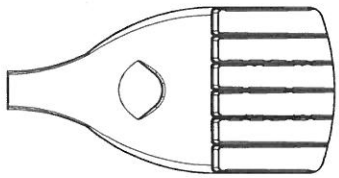
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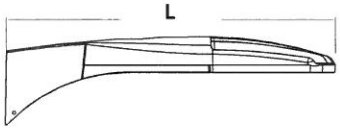
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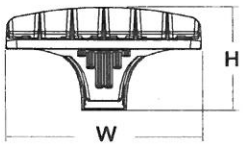
Hit the Tab key or mouse over the page to see all interactive elements

Specifications

EPA:	0.95 ft² (.09 m²)
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height:	7" (17.8 cm)
Weight (max):	16 lbs (7.25 kg)







A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA DDBXD

DSX0 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** P1 P4 P7 P2 P5 P3 P6 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[2]	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control[2,3] LCCO Left corner cutoff[2,3] RCCO Right corner cutoff[2,3]	MVOLT[4,5] 120[6] 208[5,6] 240[5,6] 277[6] 347[5,6,7] 480[5,6,7]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[8] RPUMBA Round pole universal mounting adaptor[8] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[10] PER NEMA twist-lock receptacle only (control ordered separate)[11] PER5 Five-wire receptacle only (control ordered separate)[11,12] PER7 Seven-wire receptacle only (control ordered separate)[11,12] DMG 0-10V dimming extend out back of housing for external control (control ordered separate) PIR Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[5,13,14] PIRH Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[5,13,14] PIRHN Network, Bi-Level motion/ambient sensor[15] PIR1FC3V Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[5,13,14]	PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[5,13,14] BL30 Bi-level switched dimming, 30%[5,16,17] BL50 Bi-level switched dimming, 50%[5,16,17] PNMTDD3 Part night, dim till dawn[5,18] PNMT5D3 Part night, dim 5 hrs[5,18] PNMT6D3 Part night, dim 6 hrs[5,18] PNMT7D3 Part night, dim 7 hrs[5,18] FAO Field adjustable output[19]	**Shipped installed** HS House-side shield[20] SF Single fuse (120, 277, 347V)[6] DF Double fuse (208, 240, 480V)[6] L90 Left rotated optics[1] R90 Right rotated optics[1] DDL Diffused drop lens[20] **Shipped separately** BS Bird spikes[21] EGS External glare shield[21]	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

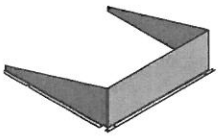
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [22]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [22]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [22]
DSHORT SBK U	Shorting cap [22]
DSX0HS 20C U	House-side shield for 20 LED unit [20]
DSX0HS 30C U	House-side shield for 30 LED unit [20]
DSX0HS 40C U	House-side shield for 40 LED unit [20]
DSX0DDL U	Diffused drop lens (polycarbonate) [20]
PUMBA DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish) [23]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [8]

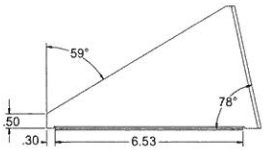
For more control options, visit DTL and ROAM online.

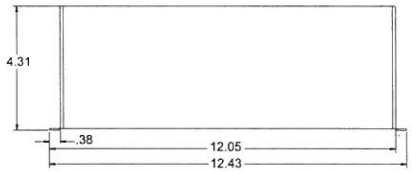
NOTES

1 P10, P11, P12 and P13 and rotated options (L90 or R90) only available together.
2 AMBPC is not available with BLC, LCCO, RCCO, P4, P7 or P13.
3 Not available with HS or DDL.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 Any PIRx with BL30, BL50 or PNMT, is not available with 208V, 240V, 347V, 480V or MVOLT. It is only available in 120V or 277V specified.
6 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
7 Not available in P4, P7 or P13. Not available with BL30, BL50 or PNMT options.
8 Existing drilled pole only. Available as a separate combination accessory; for retrofit use only: PUMBA (finish) U; 1.5 G vibration load rating per ANCI C136.31.
9 Must order fixture with SPA mounting. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
10 Must be ordered with PIRHN.
11 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
12 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Shorting Cap included.
13 Reference Motion Sensor table on page 3.
14 Reference PER Table on page 3 to see functionality.
15 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
16 Requires (2) separately switched circuits.
17 Not available with 347V, 480V or PNMT. For PER5 or PER7 see PER Table on page 3. Requires isolated neutral.
18 Not available with 347V, 480V, BL30 and BL50. For PER5 or PER7 see PER Table on page 3. Separate Dusk to Dawn required.
19 Not available with other dimming controls options.
20 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 Must be ordered with fixture for factory pre-drilling.
22 Requires luminaire to be specified with PER, PER5 or PER7 option. See PER Table on page 3.
23 For retrofit use only.

External Glare Shield

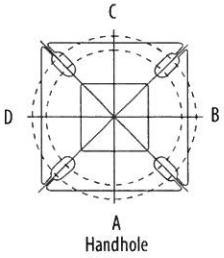




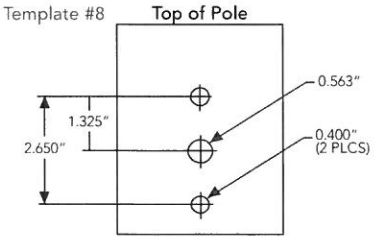


Drilling

HANDHOLE ORIENTATION



Template #8



Tenon Mounting Slipfitter**

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

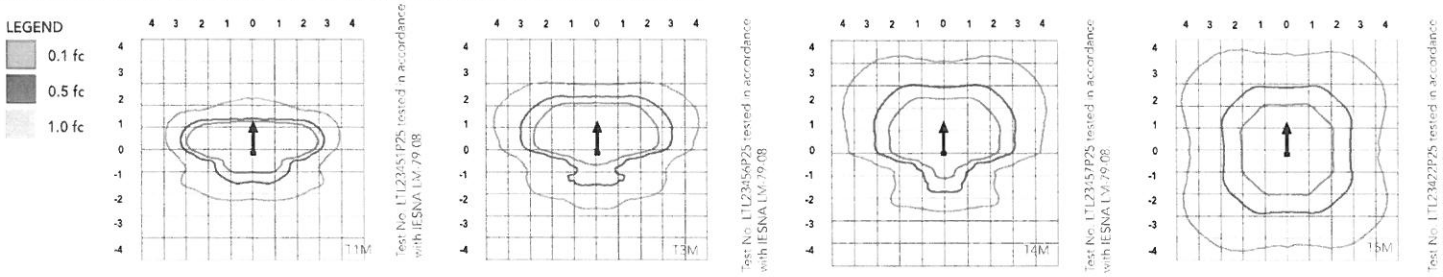
Pole drilling nomenclature: # of heads at degree from handhole (default side A)					
DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS
1 @ 90°	2 @ 280°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
Side B	Side B & D	Side B & C	Round pole only	Side B, C, & D	Sides A, B, C, D
Note: Review luminaire spec sheet for specific nomenclature					

Pole top or tenon O.D.	4.5" @ 90°	4" @ 90°	3.5" @ 90°	3" @ 90°	4.5" @ 120°	4" @ 120°	3.5" @ 120°	3" @ 120°
DSX SPA	Y	Y	Y	N	-	-	-	-
DSX RPA	Y	Y	N	N	Y	Y	Y	Y
DSX SPUMBA	Y	N	N	N	-	-	-	-
DSX RPUMBA	N	N	N	N	Y	Y	Y	N
					*3 fixtures @120 require round pole top/tenon.			

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 0 homepage.

Isofootcandle plots for the DSX0 LED 40C 1000 40K. Distances are in units of mounting height (20').



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	25000	50000	100000
Lumen Maintenance Factor	0.96	0.92	0.85

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	20	530	38	0.32	0.18	0.15	0.15	0.10	0.08
	P2	20	700	49	0.41	0.23	0.20	0.19	0.14	0.11
	P3	20	1050	71	0.60	0.37	0.32	0.27	0.21	0.15
	P4	20	1400	92	0.77	0.45	0.39	0.35	0.28	0.20
	P5	40	700	89	0.74	0.43	0.38	0.34	0.26	0.20
	P6	40	1050	134	1.13	0.65	0.55	0.48	0.39	0.29
	P7	40	1300	166	1.38	0.80	0.69	0.60	0.50	0.37
Rotated Optics (Requires L90 or R90)	P10	30	530	53	0.45	0.26	0.23	0.21	0.16	0.12
	P11	30	700	72	0.60	0.35	0.30	0.27	0.20	0.16
	P12	30	1050	104	0.88	0.50	0.44	0.39	0.31	0.23
	P13	30	1300	128	1.08	0.62	0.54	0.48	0.37	0.27

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use with Inline Dusk to Dawn or timer.						

PER Table						
Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✔	▲	Wired to dimming leads on driver	▲	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	⊘	✔	Wired to dimming leads on driver	▲	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	⊘	▲	Wires Capped inside fixture	▲	Wires Capped inside fixture	Wires Capped inside fixture
Future-proof*	⊘	▲	Wired to dimming leads on driver	✔	Wired to dimming leads on driver	Wires Capped inside fixture
Future-proof* with Motion	⊘	▲	Wires Capped inside fixture	✔	Wires Capped inside fixture	Wires Capped inside fixture

✔ Recommended
⊘ Will not work
▲ Alternate

*Future-proof means: Ability to change controls in the future.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
20	530	P1	38W	T1S	4,369	1	0	1	115	4,706	1	0	1	124	4,766	1	0	1	125	2,541	1	0	1	73
				T2S	4,364	1	0	1	115	4,701	1	0	1	124	4,761	1	0	1	125	2,589	1	0	1	74
				T2M	4,387	1	0	1	115	4,726	1	0	1	124	4,785	1	0	1	126	2,539	1	0	1	73
				T3S	4,248	1	0	1	112	4,577	1	0	1	120	4,634	1	0	1	122	2,558	1	0	1	73
				T3M	4,376	1	0	1	115	4,714	1	0	1	124	4,774	1	0	1	126	2,583	1	0	1	74
				T4M	4,281	1	0	1	113	4,612	1	0	2	121	4,670	1	0	2	123	2,570	1	0	1	73
				TFTM	4,373	1	0	1	115	4,711	1	0	2	124	4,771	1	0	2	126	2,540	1	0	1	73
				T5VS	4,548	2	0	0	120	4,900	2	0	0	129	4,962	2	0	0	131	2,650	1	0	0	76
				T5S	4,552	2	0	0	120	4,904	2	0	0	129	4,966	2	0	0	131	2,690	1	0	0	77
				T5M	4,541	3	0	1	120	4,891	3	0	1	129	4,953	3	0	1	130	2,658	2	0	0	76
				T5W	4,576	3	0	2	120	4,929	3	0	2	130	4,992	3	0	2	131	2,663	2	0	1	73
				BLC	3,586	1	0	1	94	3,863	1	0	1	102	3,912	1	0	1	103					
				LCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77					
				RCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77					
20	700	P2	49W	T1S	5,570	1	0	1	114	6,001	1	0	1	122	6,077	2	0	2	124	3,144	1	0	1	70
				T2S	5,564	1	0	2	114	5,994	1	0	2	122	6,070	2	0	2	124	3,203	1	0	1	71
				T2M	5,593	1	0	1	114	6,025	1	0	1	123	6,102	1	0	1	125	3,141	1	0	1	70
				T3S	5,417	1	0	2	111	5,835	1	0	2	119	5,909	2	0	2	121	3,165	1	0	1	70
				T3M	5,580	1	0	2	114	6,011	1	0	2	123	6,087	1	0	2	124	3,196	1	0	1	71
				T4M	5,458	1	0	2	111	5,880	1	0	2	120	5,955	1	0	2	122	3,179	1	0	1	71
				TFTM	5,576	1	0	2	114	6,007	1	0	2	123	6,083	1	0	2	124	3,143	1	0	1	70
				T5VS	5,799	2	0	0	118	6,247	2	0	0	127	6,327	2	0	0	129	3,278	2	0	0	73
				T5S	5,804	2	0	0	118	6,252	2	0	0	128	6,332	2	0	1	129	3,328	2	0	0	74
				T5M	5,789	3	0	1	118	6,237	3	0	1	127	6,316	3	0	1	129	3,288	2	0	1	73
				T5W	5,834	3	0	2	119	6,285	3	0	2	128	6,364	3	0	2	130	3,295	2	0	1	73
				BLC	4,572	1	0	1	93	4,925	1	0	1	101	4,987	1	0	1	102					
				LCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76					
				RCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76					
20	1050	P3	71W	T1S	7,833	2	0	2	110	8,438	2	0	2	119	8,545	2	0	2	120					
				T2S	7,825	2	0	2	110	8,429	2	0	2	119	8,536	2	0	2	120					
				T2M	7,865	2	0	2	111	8,473	2	0	2	119	8,580	2	0	2	121					
				T3S	7,617	2	0	2	107	8,205	2	0	2	116	8,309	2	0	2	117					
				T3M	7,846	2	0	2	111	8,452	2	0	2	119	8,559	2	0	2	121					
				T4M	7,675	2	0	2	108	8,269	2	0	2	116	8,373	2	0	2	118					
				TFTM	7,841	2	0	2	110	8,447	2	0	2	119	8,554	2	0	2	120					
				T5VS	8,155	3	0	0	115	8,785	3	0	0	124	8,896	3	0	0	125					
				T5S	8,162	3	0	1	115	8,792	3	0	1	124	8,904	3	0	1	125					
				T5M	8,141	3	0	2	115	8,770	3	0	2	124	8,881	3	0	2	125					
				T5W	8,204	3	0	2	116	8,838	4	0	2	124	8,950	4	0	2	126					
				BLC	6,429	1	0	2	91	6,926	1	0	2	98	7,013	1	0	2	99					
				LCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73					
				RCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73					
20	1400	P4	92W	T1S	9,791	2	0	2	106	10,547	2	0	2	115	10,681	2	0	2	116					
				T2S	9,780	2	0	2	106	10,536	2	0	2	115	10,669	2	0	2	116					
				T2M	9,831	2	0	2	107	10,590	2	0	2	115	10,724	2	0	2	117					
				T3S	9,521	2	0	2	103	10,256	2	0	2	111	10,386	2	0	2	113					
				T3M	9,807	2	0	2	107	10,565	2	0	2	115	10,698	2	0	2	116					
				T4M	9,594	2	0	2	104	10,335	2	0	3	112	10,466	2	0	3	114					
				TFTM	9,801	2	0	2	107	10,558	2	0	2	115	10,692	2	0	2	116					
				T5VS	10,193	3	0	1	111	10,981	3	0	1	119	11,120	3	0	1	121					
				T5S	10,201	3	0	1	111	10,990	3	0	1	119	11,129	3	0	1	121					
				T5M	10,176	4	0	2	111	10,962	4	0	2	119	11,101	4	0	2	121					
				T5W	10,254	4	0	3	111	11,047	4	0	3	120	11,186	4	0	3	122					
				BLC	8,036	1	0	2	87	8,656	1	0	2	94	8,766	1	0	2	95					
				LCCO	5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71					
					5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71					

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	700	P5	89W	T1S	10,831	2	0	2	122	11,668	2	0	2	131	11,816	2	0	2	133					
				T2S	10,820	2	0	2	122	11,656	2	0	2	131	11,803	2	0	2	133					
				T2M	10,876	2	0	2	122	11,716	2	0	2	132	11,864	2	0	2	133					
				T3S	10,532	2	0	2	118	11,346	2	0	2	127	11,490	2	0	2	129					
				T3M	10,849	2	0	2	122	11,687	2	0	2	131	11,835	2	0	2	133					
				T4M	10,613	2	0	3	119	11,434	2	0	3	128	11,578	2	0	3	130					
				TFTM	10,842	2	0	2	122	11,680	2	0	2	131	11,828	2	0	2	133					
				T5VS	11,276	3	0	1	127	12,148	3	0	1	136	12,302	3	0	1	138					
				T5S	11,286	3	0	1	127	12,158	3	0	1	137	12,312	3	0	1	138					
				T5M	11,257	4	0	2	126	12,127	4	0	2	136	12,280	4	0	2	138					
				T5W	11,344	4	0	3	127	12,221	4	0	3	137	12,375	4	0	3	139					
				BLC	8,890	1	0	2	100	9,576	1	0	2	108	9,698	1	0	2	109					
				LCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81					
				RCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81					
40	1050	P6	134W	T1S	14,805	3	0	3	110	15,949	3	0	3	119	16,151	3	0	3	121	6,206	2	0	2	68
				T2S	14,789	3	0	3	110	15,932	3	0	3	119	16,134	3	0	3	120	6,322	2	0	2	69
				T2M	14,865	3	0	3	111	16,014	3	0	3	120	16,217	3	0	3	121	6,201	2	0	2	68
				T3S	14,396	3	0	3	107	15,509	3	0	3	116	15,705	3	0	3	117	6,247	1	0	2	69
				T3M	14,829	2	0	3	111	15,975	3	0	3	119	16,177	3	0	3	121	6,308	2	0	2	69
				T4M	14,507	2	0	3	108	15,628	3	0	3	117	15,826	3	0	3	118	6,275	1	0	2	69
				TFTM	14,820	2	0	3	111	15,965	3	0	3	119	16,167	3	0	3	121	6,203	1	0	2	68
				T5VS	15,413	4	0	1	115	16,604	4	0	1	124	16,815	4	0	1	125	6,671	2	0	0	73
				T5S	15,426	3	0	1	115	16,618	4	0	1	124	16,828	4	0	1	126	6,569	2	0	0	72
				T5M	15,387	4	0	2	115	16,576	4	0	2	124	16,786	4	0	2	125	6,491	3	0	1	71
				T5W	15,506	4	0	3	116	16,704	4	0	3	125	16,915	4	0	3	126	6,504	3	0	2	71
				BLC	12,151	1	0	2	91	13,090	1	0	2	98	13,255	1	0	2	99					
				LCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74					
				RCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74					
40	1300	P7	166W	T1S	17,023	3	0	3	103	18,338	3	0	3	110	18,570	3	0	3	112					
				T2S	17,005	3	0	3	102	18,319	3	0	3	110	18,551	3	0	3	112					
				T2M	17,092	3	0	3	103	18,413	3	0	3	111	18,646	3	0	3	112					
				T3S	16,553	3	0	3	100	17,832	3	0	3	107	18,058	3	0	3	109					
				T3M	17,051	3	0	3	103	18,369	3	0	3	111	18,601	3	0	3	112					
				T4M	16,681	3	0	3	100	17,969	3	0	3	108	18,197	3	0	3	110					
				TFTM	17,040	3	0	3	103	18,357	3	0	4	111	18,590	3	0	4	112					
				T5VS	17,723	4	0	1	107	19,092	4	0	1	115	19,334	4	0	1	116					
				T5S	17,737	4	0	2	107	19,108	4	0	2	115	19,349	4	0	2	117					
				T5M	17,692	4	0	2	107	19,059	4	0	2	115	19,301	4	0	2	116					
				T5W	17,829	5	0	3	107	19,207	5	0	3	116	19,450	5	0	3	117					
				BLC	13,971	2	0	2	84	15,051	2	0	2	91	15,241	2	0	2	92					
				LCCO	10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68					
					10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68					

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Performance Data

Lumen Output

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Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P10	53W	T1S	6,727	2	0	2	127	7,247	3	0	3	137	7,339	3	0	3	138					
				T2S	6,689	3	0	3	126	7,205	3	0	3	136	7,297	3	0	3	138					
				T2M	6,809	3	0	3	128	7,336	3	0	3	138	7,428	3	0	3	140					
				T3S	6,585	3	0	3	124	7,094	3	0	3	134	7,183	3	0	3	136					
				T3M	6,805	3	0	3	128	7,331	3	0	3	138	7,424	3	0	3	140					
				T4M	6,677	3	0	3	126	7,193	3	0	3	136	7,284	3	0	3	137					
				TFTM	6,850	3	0	3	129	7,379	3	0	3	139	7,472	3	0	3	141					
				T5VS	6,898	3	0	0	130	7,431	3	0	0	140	7,525	3	0	0	142					
				T5S	6,840	2	0	1	129	7,368	2	0	1	139	7,461	2	0	1	141					
				T5M	6,838	3	0	1	129	7,366	3	0	2	139	7,460	3	0	2	141					
				T5W	6,777	3	0	2	128	7,300	3	0	2	138	7,393	3	0	2	139					
				BLC	5,626	2	0	2	106	6,060	2	0	2	114	6,137	2	0	2	116					
				LCCO	4,018	1	0	2	76	4,328	1	0	2	82	4,383	1	0	2	83					
				RCCO	4,013	3	0	3	76	4,323	3	0	3	82	4,377	3	0	3	83					
30	700	P11	72W	T1S	8,594	3	0	3	119	9,258	3	0	3	129	9,376	3	0	3	130					
				T2S	8,545	3	0	3	119	9,205	3	0	3	128	9,322	3	0	3	129					
				T2M	8,699	3	0	3	121	9,371	3	0	3	130	9,490	3	0	3	132					
				T3S	8,412	3	0	3	117	9,062	3	0	3	126	9,177	3	0	3	127					
				T3M	8,694	3	0	3	121	9,366	3	0	3	130	9,484	3	0	3	132					
				T4M	8,530	3	0	3	118	9,189	3	0	3	128	9,305	3	0	3	129					
				TFTM	8,750	3	0	3	122	9,427	3	0	3	131	9,546	3	0	3	133					
				T5VS	8,812	3	0	0	122	9,493	3	0	0	132	9,613	3	0	0	134					
				T5S	8,738	3	0	1	121	9,413	3	0	1	131	9,532	3	0	1	132					
				T5M	8,736	3	0	2	121	9,411	3	0	2	131	9,530	3	0	2	132					
				T5W	8,657	4	0	2	120	9,326	4	0	2	130	9,444	4	0	2	131					
				BLC	7,187	3	0	3	100	7,742	3	0	3	108	7,840	3	0	3	109					
				LCCO	5,133	1	0	2	71	5,529	1	0	2	77	5,599	1	0	2	78					
				RCCO	5,126	3	0	3	71	5,522	3	0	3	77	5,592	3	0	3	78					
30	1050	P12	104W	T1S	12,149	3	0	3	117	13,088	3	0	3	126	13,253	3	0	3	127					
				T2S	12,079	4	0	4	116	13,012	4	0	4	125	13,177	4	0	4	127					
				T2M	12,297	3	0	3	118	13,247	3	0	3	127	13,415	3	0	3	129					
				T3S	11,891	4	0	4	114	12,810	4	0	4	123	12,972	4	0	4	125					
				T3M	12,290	3	0	3	118	13,239	4	0	4	127	13,407	4	0	4	129					
				T4M	12,058	4	0	4	116	12,990	4	0	4	125	13,154	4	0	4	126					
				TFTM	12,369	4	0	4	119	13,325	4	0	4	128	13,494	4	0	4	130					
				T5VS	12,456	3	0	1	120	13,419	3	0	1	129	13,589	4	0	1	131					
				T5S	12,351	3	0	1	119	13,306	3	0	1	128	13,474	3	0	1	130					
				T5M	12,349	4	0	2	119	13,303	4	0	2	128	13,471	4	0	2	130					
				T5W	12,238	4	0	3	118	13,183	4	0	3	127	13,350	4	0	3	128					
				BLC	10,159	3	0	3	98	10,944	3	0	3	105	11,083	3	0	3	107					
				LCCO	7,256	1	0	3	70	7,816	1	0	3	75	7,915	1	0	3	76					
				RCCO	7,246	3	0	3	70	7,806	4	0	4	75	7,905	4	0	4	76					
30	1300	P13	128W	T1S	14,438	3	0	3	113	15,554	3	0	3	122	15,751	3	0	3	123					
				T2S	14,355	4	0	4	112	15,465	4	0	4	121	15,660	4	0	4	122					
				T2M	14,614	3	0	3	114	15,744	4	0	4	123	15,943	4	0	4	125					
				T3S	14,132	4	0	4	110	15,224	4	0	4	119	15,417	4	0	4	120					
				T3M	14,606	4	0	4	114	15,735	4	0	4	123	15,934	4	0	4	124					
				T4M	14,330	4	0	4	112	15,438	4	0	4	121	15,633	4	0	4	122					
				TFTM	14,701	4	0	4	115	15,836	4	0	4	124	16,037	4	0	4	125					
				T5VS	14,804	4	0	1	116	15,948	4	0	1	125	16,150	4	0	1	126					
				T5S	14,679	3	0	1	115	15,814	3	0	1	124	16,014	3	0	1	125					
				T5M	14,676	4	0	2	115	15,810	4	0	2	124	16,010	4	0	2	125					
				T5W	14,544	4	0	3	114	15,668	4	0	3	122	15,866	4	0	3	124					
				BLC	7919	3	0	3	62	8531	3	0	3	67	8639	3	0	3	67					
				LCCO	5145	1	0	2	40	5543	1	0	2	43	5613	1	0	2	44					
					5139	3	0	3	40	5536	3	0	3	43	5606	3	0	3	44					

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and pedestrian areas.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.95 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in 3000 K, 4000 K or 5000 K (70 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 0 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

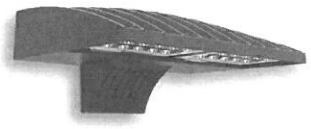
DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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D-Series Size 1
LED Wall Luminaire

Catalog Number

Notes

Type

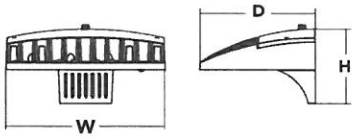
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d-series

Specifications

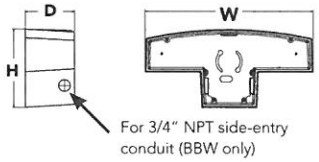
Luminaire

Width:	13-3/4" (34.9 cm)	**Weight:**	12 lbs (5.4 kg)
Depth:	10" (25.4 cm)		
Height:	6-3/8" (16.2 cm)		



Back Box (BBW, ELCW)

Width:	13-3/4" (34.9 cm)	**BBW Weight:**	5 lbs (2.3 kg)
Depth:	4" (10.2 cm)	**ELCW Weight:**	10 lbs (4.5 kg)
Height:	6-3/8" (16.2 cm)		



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

DSXW1 LED

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines) [1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A) [1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium ASYDF Asymmetric diffuse	MVOLT [2] 120 [3] 208 [3] 240 [3] 277 [3] 347 [3,4] 480 [3,4]	**Shipped included** (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry) [5]	**Shipped installed** PE Photoelectric cell, button type [6] DMG 0-10V dimming driver (no controls; wires pulled outside fixture)) PIR 180° motion/ambient light sensor, <15' mtg ht [1,7] PIRH 180° motion/ambient light sensor, 15-30' mtg ht [1,7] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [1,7] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [1,7] ELCW Emergency battery backup (includes external component enclosure), non CEC compliant [8]

Other Options

Shipped installed

SF	Single fuse (120, 277 or 347V) [3,9]
DF	Double fuse (208, 240 or 480V) [3,9]
HS	House-side shield [10]
SPD	Separate surge protection

Shipped separately [10]

BSW	Bird-deterrent spikes
WG	Wire guard
VG	Vandal guard
DDL	Diffused drop lens

Finish (required)

DDBXD	Dark bronze	DSSXD	Sandstone	DWHGXD	Textured white
DBLXD	Black	DDBTXD	Textured dark bronze	DSSTXD	Textured sandstone
DNAXD	Natural aluminum	DBLBXD	Textured black		
DWHXD	White	DNATXD	Textured natural aluminum		

Accessories

Ordered and shipped separately.

DSXWHS U	House-side shield (one per light engine)
DSXWBSW U	Bird-deterrent spikes
DSXW1WG U	Wire guard accessory
DSXW1VG U	Vandal guard accessory

NOTES

1 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4 Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
5 Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
6 Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7 Reference Motion Sensor table on page 3.
8 Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com
9 Not available with ELCW.
10 Also available as a separate accessory; see Accessories information.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70CRI)					40K (4000 K, 70CRI)					50K (5000 K, 70CRI)					AMBPC (Amber Phosphor Converted)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	350mA	13W	T2S	1,415	0	0	1	109	1,520	0	0	1	117	1,530	0	0	1	118	894	0	0	1	69
			T2M	1,349	0	0	1	104	1,448	0	0	1	111	1,458	0	0	1	112	852	0	0	1	66
			T3S	1,399	0	0	1	108	1,503	0	0	1	116	1,512	0	0	1	116	884	0	0	1	68
			T3M	1,385	0	0	1	107	1,488	0	0	1	114	1,497	0	0	1	115	876	0	0	1	67
			T4M	1,357	0	0	1	104	1,458	0	0	1	112	1,467	0	0	1	113	858	0	0	1	66
			TFTM	1,411	0	0	1	109	1,515	0	0	1	117	1,525	0	0	1	117	892	0	0	1	69
			ASYDF	1,262	1	0	1	97	1,354	1	0	1	104	1,363	1	0	1	105	797	0	0	1	61
	530 mA	19W	T2S	2,053	1	0	1	108	2,205	1	0	1	116	2,220	1	0	1	117	1,264	0	0	1	67
			T2M	1,957	1	0	1	103	2,102	1	0	1	111	2,115	1	0	1	111	1,205	0	0	1	63
			T3S	2,031	1	0	1	107	2,181	1	0	1	115	2,194	1	0	1	115	1,250	0	0	1	66
			T3M	2,010	1	0	1	106	2,159	1	0	1	114	2,172	1	0	1	114	1,237	0	0	1	65
			T4M	1,970	1	0	1	104	2,115	1	0	1	111	2,129	1	0	1	112	1,212	0	0	1	64
			TFTM	2,047	0	0	1	108	2,198	1	0	1	116	2,212	1	0	1	116	1,260	0	0	1	66
			ASYDF	1,831	1	0	1	96	1,966	1	0	1	103	1,978	1	0	1	104	1,127	0	0	1	59
	700 mA	26W	T2S	2,623	1	0	1	101	2,816	1	0	1	108	2,834	1	0	1	109	1,544	0	0	1	59
			T2M	2,499	1	0	1	96	2,684	1	0	1	103	2,701	1	0	1	104	1,472	0	0	1	57
			T3S	2,593	1	0	1	100	2,785	1	0	1	107	2,802	1	0	1	108	1,527	0	0	1	59
			T3M	2,567	1	0	1	99	2,757	1	0	1	106	2,774	1	0	1	107	1,512	0	0	1	58
			T4M	2,515	1	0	1	97	2,701	1	0	1	104	2,718	1	0	1	105	1,481	0	0	1	57
			TFTM	2,614	1	0	1	101	2,808	1	0	1	108	2,825	1	0	1	109	1,539	0	0	1	59
			ASYDF	2,337	1	0	1	90	2,510	1	0	1	97	2,525	1	0	1	97	1,376	1	0	1	53
	1000 mA	39W	T2S	3,685	1	0	1	94	3,957	1	0	1	101	3,982	1	0	1	102	2,235	1	0	1	57
			T2M	3,512	1	0	1	90	3,771	1	0	1	97	3,794	1	0	1	97	2,130	1	0	1	55
			T3S	3,644	1	0	1	93	3,913	1	0	1	100	3,938	1	0	1	101	2,210	1	0	1	57
			T3M	3,607	1	0	1	92	3,873	1	0	1	99	3,898	1	0	1	100	2,187	1	0	1	56
			T4M	3,534	1	0	2	91	3,796	1	0	2	97	3,819	1	0	2	98	2,143	1	0	1	55
			TFTM	3,673	1	0	1	94	3,945	1	0	1	101	3,969	1	0	1	102	2,228	1	0	1	57
			ASYDF	3,284	1	0	2	84	3,527	1	0	2	90	3,549	1	0	2	91	1,992	1	0	1	51
20C (20 LEDs)	350mA	23W	T2S	2,820	1	0	1	123	3,028	1	0	1	132	3,047	1	0	1	132	1,777	1	0	1	77
			T2M	2,688	1	0	1	117	2,886	1	0	1	125	2,904	1	0	1	126	1,693	1	0	1	74
			T3S	2,789	1	0	1	121	2,994	1	0	1	130	3,014	1	0	1	131	1,757	0	0	1	76
			T3M	2,760	1	0	1	120	2,965	1	0	1	129	2,983	1	0	1	130	1,739	1	0	1	76
			T4M	2,704	1	0	1	118	2,905	1	0	1	126	2,922	1	0	1	127	1,704	1	0	1	74
			TFTM	2,811	1	0	1	122	3,019	1	0	1	131	3,038	1	0	1	132	1,771	0	0	1	77
			ASYDF	2,514	1	0	1	109	2,699	1	0	1	117	2,716	1	0	1	118	1,584	1	0	1	69
	530 mA	35W	T2S	4,079	1	0	1	117	4,380	1	0	1	125	4,407	1	0	1	126	2,504	1	0	1	72
			T2M	3,887	1	0	1	111	4,174	1	0	1	119	4,201	1	0	1	120	2,387	1	0	1	68
			T3S	4,033	1	0	1	115	4,331	1	0	1	124	4,359	1	0	1	125	2,477	1	0	1	71
			T3M	3,993	1	0	2	114	4,288	1	0	2	123	4,315	1	0	2	123	2,451	1	0	1	70
			T4M	3,912	1	0	2	112	4,201	1	0	2	120	4,227	1	0	2	121	2,402	1	0	1	69
			TFTM	4,066	1	0	2	116	4,366	1	0	2	125	4,394	1	0	2	126	2,496	1	0	1	71
			ASYDF	3,636	1	0	2	104	3,904	1	0	2	112	3,928	1	0	2	112	2,232	1	0	1	64
	700 mA	46W	T2S	5,188	1	0	1	113	5,572	1	0	1	121	5,607	1	0	1	122	3,065	1	0	1	67
			T2M	4,945	1	0	2	108	5,309	1	0	2	115	5,343	1	0	2	116	2,921	1	0	1	64
			T3S	5,131	1	0	2	112	5,510	1	0	2	120	5,544	1	0	2	121	3,031	1	0	1	66
			T3M	5,078	1	0	2	110	5,454	1	0	2	119	5,487	1	0	2	119	3,000	1	0	1	65
			T4M	4,975	1	0	2	108	5,343	1	0	2	116	5,376	1	0	2	117	2,939	1	0	1	64
			TFTM	5,172	1	0	2	112	5,554	1	0	2	121	5,589	1	0	2	122	3,055	1	0	1	66
			ASYDF	4,624	1	0	2	101	4,965	1	0	2	108	4,996	1	0	2	109	2,732	1	0	1	59
	1000 mA	73W	T2S	7,204	1	0	2	99	7,736	2	0	2	106	7,784	2	0	2	107	4,429	1	0	1	61
			T2M	6,865	1	0	2	94	7,373	2	0	2	101	7,419	2	0	2	102	4,221	1	0	1	58
			T3S	7,125	1	0	2	98	7,651	1	0	2	105	7,698	1	0	2	105	4,380	1	0	1	60
			T3M	7,052	1	0	2	97	7,573	2	0	2	104	7,620	2	0	2	104	4,335	1	0	2	59
			T4M	6,909	1	0	2	95	7,420	1	0	2	102	7,466	1	0	2	102	4,248	1	0	2	58
			TFTM	7,182	1	0	2	98	7,712	1	0	2	106	7,761	1	0	2	106	4,415	1	0	2	60
			ASYDF	6,421	2	0	2	88	6,896	2	0	3	94	6,938	2	0	3	95	3,947	1	0	2	54

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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **DSXW1 LED 20C 1000** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.93	0.88

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A) 120V	208V	240V	277V	347V	480V
10C	350	14 W	0.13	0.07	0.06	0.06	-	-
	530	20 W	0.19	0.11	0.09	0.08	-	-
	700	27 W	0.25	0.14	0.13	0.11	-	-
	1000	40 W	0.37	0.21	0.19	0.16	-	-
20C	350	24 W	0.23	0.13	0.12	0.10	-	-
	530	36 W	0.33	0.19	0.17	0.14	-	-
	700	47 W	0.44	0.25	0.22	0.19	0.15	0.11
	1000	74 W	0.69	0.40	0.35	0.30	0.23	0.17

Motion Sensor Default Settings

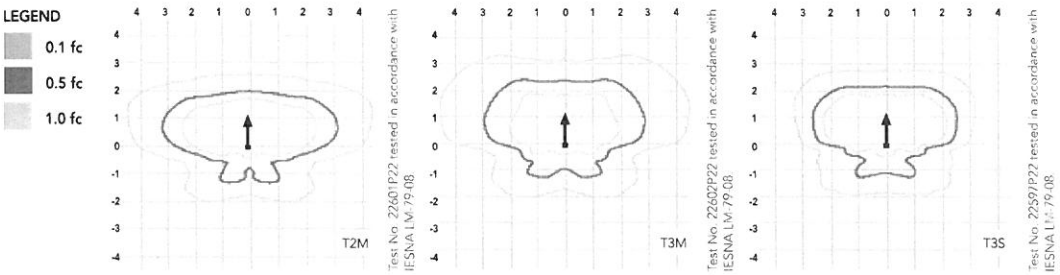
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
*PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min

*for use with Inline Dusk to Dawn or timer

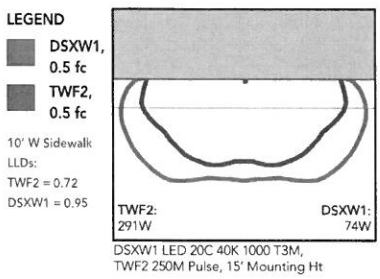
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Wall Size 1 homepage.

Isofootcandle plots for the DSXW1 LED 20C 1000 40K. Distances are in units of mounting height (15').

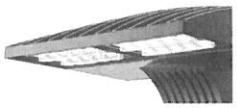


Distribution overlay comparison to 250W metal halide.

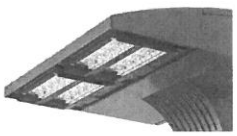


DSXW1 LED 20C 40K 1000 T3M, TWF2 250M Pulse, 15' Mounting Ht

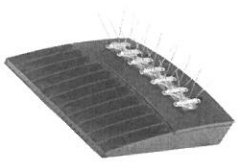
Options and Accessories



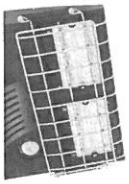
T3M (left), ASYDF (right) lenses



HS - House-side shields



BSW - Bird-deterrent spikes



WG - Wire guard



VG - Vandal guard



DDL - Diffused drop lens

FEATURES & SPECIFICATIONS

INTENDED USE
The energy savings, long life and easy-to-install design of the D-Series Wall Size 1 make it the smart choice for building-mounted doorway and pathway illumination for nearly any facility.

CONSTRUCTION
Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to building mounted applications. Light engines are available in 3000 K (70 min. CRI), 4000 K (70 min. CRI) or 5000 K (70 min. CRI) configurations.

ELECTRICAL
Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (L88/100,000 hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and a minimum 2.5KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION
Included universal mounting bracket attaches securely to any 4" round or square outlet box for quick and easy installation. Luminaire has a slotted gasket wireway and attaches to the mounting bracket via corrosion-resistant screws.

LISTINGS
CSA certified to U.S. and Canadian standards. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
Five-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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EVERSOURCE ENERGY

Electric Service Support Center PO
Box 330
Manchester, NH 03105
1-800-362-7764

July 25, 2018

Cory Belden
Altus Engineering
133 Court St
Portsmouth NH 03801

Re: Point Place Phase II
Pointe Pl, Dover NH

To Whom It May Concern:

Eversource Energy agrees to provide electric service to the above site in accordance with the Tariff for Electric Service on file with the New Hampshire Public Utilities Commission (NHPUC), subject to the applicable NHPUC rules and regulations, as well as Eversource's "Requirements for Electric Service Connections".

Please keep in mind that all requirements for providing electric service, such as, but not limited to, contracts, licenses, fees, payments, easements and inspections must be provided to Eversource prior to the construction of the electric facilities.

Should you have any questions or concerns, please call us at 1-800-362-7764

Sincerely,

Andrea Hoben, ESSC Technician
Electric Service Support Center
PO Box 330
Manchester, NH 03105-9989

DRAINAGE SUMMARY

Pointe Place – Residential and Commercial Mixed-Use Development (Phase 2) Dover, NH Tax Map K, Lot 19-4

Site Overview

The Applicant, Summit Land Development, is proposing to construct the second phase of the residential and commercial mixed-use development at Pointe Place in Dover, NH. The proposed development is the fourth phase of the Pointe Place Master Plan Development. The first phase of development was permitted in January 2015 (Permit #AOT-0849) and constructed Pointe Place Road and the Sierra Drive residential development. The second phase of the development was permitted in June 2016 (Permit #AOT-1098) for the construction of the first phase of mixed use commercial/residential buildings and townhouses. The third phase permitted a new memory care facility in April of 2017. All three of these project are currently under construction.

Phase 1 = Pointe Place and Sierra Drive Roadway and Infrastructure Project (AoT-0849, Under Construction)

Phase 2 = Pointe Place Residential and Commercial Mixed Use Development (AoT-1098, Under Construction)

Phase 3= Pointe Place Memory Care Residential Development (AoT-1244, Under Construction)

This project will construct three new building to provide both commercial and residential components to the Pointe Place Master Plan development, which is located on approximately a 56 acre site and was formerly the site of Thornwood Rose Gardens. The project site was original Tax Map K, Lot 19, but has since been subdivided in to additional lots. This proposed development is to be located on Tax Map K, Lot 19-4, which is a 20.93 acre lot. There are two conservation easements on the lot that total 15.52 acres. The proposed mixed use buildings will be located on the south side of Pointe Place with access from the street side as well as from a new a parking lot and access drive that loops around the south side of the buildings. The proposed three buildings combined are approximately 43,000 sf in size. Tow buildings will have first floor garages that will accommodate 74 parking stalls. There will be an additional 57,200 sf of impervious pavement for the exterior parking areas and 5,000 sf sidewalk for hardscape associated with the walkways and utility pads.

Pre-Development (Existing Conditions)

The pre-development site conditions reflect the area on the south side of Pointe Place roadway and do not include the recently permitted (Phase 1 and Phase 2) projects. However, it should be noted, that a portion of Phase 2 is included in the post-development model because it does drain to the site. The existing conditions reflect the development that was constructed between 1985 and 1994 as 'Thornwood Gardens'. These site improvements include two buildings (greenhouses) and an abandoned foundation totaling approximately 120,600 sf of impervious. The current site discharges to the south by surface runoff without any treatment. The Pre-Development analysis models the existing conditions from the previously developed site, prior to any of the permitted improvement for the Pointe Place master plan development. The soil data from the Site Specific Soil Survey (by Highland Soil Services) was used to compare the existing conditions to the post-development conditions. The grades and elevations shown on the plans are based on the site survey completed by McEneaney Survey Associates, Inc.

The study area for this drainage analysis as determined to be the area south of the Pointe Place Roadway and upstream from the large pond located in the southwest portion of the site. The existing watershed reflects the existing site conditions (Thornwood Gardens). All of the surface water discharges to the existing Pond. Therefore a single Points of Analysis (POA) was used for comparison of pre to post development conditions.

Site topography, existing features, proposed site improvements, proposed grading, drainage and erosion control measures are shown on the accompanying plans. Recommended erosion control measures are based upon the December 2008 edition of the "*New Hampshire Stormwater Manual Volumes 1 through 3*" prepared by NHDES and Comprehensive Environmental, Inc. as amended.

Site Soils

A Site Specific Soils Survey was performed for the project site and indicated the presence of the following soil types:

Soil Series	Description	Hydrologic Soil Group
7	Fluvaquents	HSG D
26	Windsor	HSG B
38	Eldridge	HSG C
100	Udorthents, Wet Substratum	HSG C
209	Udorthents, Smoothed	HSG C
438	Swanton, poorly drained	HSG D
936	Swanton, somewhat poorly drained	HSG C
953	Boxford, somewhat poorly drained	HSG C

A copy of Site Specific Soils Report is included in the Appendix of this report.

Post-Development (Proposed Site Design)

The proposed project will construct three new mixed use buildings totaling approximately 43,000 sf in size (footprint), approximately 57,200 sf of pavement for parking and drives, and approximately 5,000 sf of impervious areas for dumpster, utility, and bikes pads. The stormwater management system proposed for the site expansion includes deep sump catch basins, a sediment forebay, and a new 2,500 square foot infiltration pond #9. Raingarden #8 (AoT-1244) will also be expanded to 4,000 sf.

Deep sum catch basins are used for pre-treatment of the surface runoff. A sediment forebay is used for pre-treatment prior to the infiltration basin, as the stormwater to this practice is only surface (no catch basins). The "Post-Development Watershed Plan" illustrates the proposed stormwater management system. The original subcatchment has been divided into numerous smaller areas to emulate the proposed grading and stormwater management system proposed for construction. The post-development conditions were analyzed at the same primary discharge point examined in the pre-development modeling.

For modeling of the post-development conditions, a Link "1L" was created to add the flows from the mixed use development (AoT-1098) that also drains to the infiltration pond. These flows were necessary to reflect the actual post-development conditions and adequately size the infiltration pond.

Drainage Analysis

A complete summary of the drainage model is included later in this report. The project area lies within a the Great Bay communities, so the rainfall intensities obtained from the Northeast Climate Center have been increased by 15%. The following table compares pre- and post-development peak rates of runoff for all analyzed storm events:

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

	2-Year Storm (3.25 inch)	10-Year Storm (4.98 inch)	25-Year Storm (6.04 inch)	50-Year Storm (7.64 inch)
POA #100 Wetland North of Property				
Pre	13.87	29.12	44.48	54.96
Post	8.69	21.93	36.43	51.36
Net Change	**-5.18**	**-7.19**	**-8.05**	**-3.60**

As the above table demonstrates, the proposed peak rates of runoff will be decreased from the pre-development conditions at the analysis point for all analyzed storm events.

Pollutant Removal

Based on the New Hampshire Stormwater Manual (Volume 2), the following pollutant removal rates would be expected from the implementation of the infiltration practices:

Pollutant	Removal %
Total Suspended Solids (TSS)	90%
Total Nitrogen (TN)	65%
Total Phosphorus (TP)	65%

Groundwater Recharge Volume

The following Table illustrates the net impervious cover for the project by phase and in comparison to the Pre-Development site conditions.

Existing conditions:	Buildings (Greenhouses)	= 5.64 acres
(Pre-Development)	Roads, Parking, other	= 0.96 acres
(All impervious to be removed)	Total Impervious	= 6.60 acres
Phase 1: (AoT-0849)	Roads & SW	= 2.10 acres
(Pointe Place and Sierra Drive)	Houses and Driveways	= 1.98 acres
	New Impervious	= 4.08 acres
Phase 2: (AoT-1098)	Buildings	= 1.44 acres
(Mixed Used Buildings-Phase 1)	Roads, Parking other	= 2.24 acres
	New Impervious	= 3.68 acres
Phase 3: (AoT-1244)	Buildings	= 0.88 acres
(Memory Care facility)	Roads, Parking other	= 1.01 acres
	New Impervious	= 1.89 acres
Phase 4: (This application)	Buildings	= 0.99 acres
(Mixed Used Buildings-Phase 2)	Roads, Parking other	= 1.43 acres
	New Impervious	= 2.42 acres
	Post Development	**= 12.07 Acres Impervious**
	Pre Development	**= 6.60 Acres Impervious**
	NET IMPERVIOUS	**= +5.47 acres**

As noted in the Infiltration Feasibility report, the area located to the south of the proposed site has sandy soils that are conducive to infiltration. Based on the groundwater recharge volume calculations 1,986 cubic feet is required for the proposed site improvements which will increase the impervious area by 5.47 acres within the HSG C. Based on the drainage model results 14,572 cf will be infiltrated for the 2 year storm event. It should be noted that the site drains to the south, where there is a large Pond. It is anticipated that the infiltrated stormwater will enter the groundwater and deposit to the adjacent wetland and Pond in the area of the Point of Analysis for the project. Therefore the total volume of water exiting the site will not change significantly in the post development conditions.

CONCLUSION

This proposed mixed use development at Pointe Place in Dover, NH will not have an adverse effect on abutting properties and infrastructure as a result of stormwater runoff. The post-construction peak rates of runoff from the site will decrease for all of the modelled storm events (2, 10, 25, and 50 year storms). Appropriate steps will be taken to properly mitigate erosion and sedimentation through the construction of a storm water drainage system consisting of deep-sump catch basins and sediment forebays for pre-treatment, a raingarden and infiltration pond for stormwater treatment, and the use of temporary and permanent Best Management Practices for sediment and erosion control.

CALCULATION METHODS

The drainage study was completed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. Reservoir routing was performed with the Dynamic Storage Indication method which automates the calculation of Tailwater conditions. A Type III 24-hour rainfall distribution was utilized in analyzing the data for the 2, 10, 25, and 50 yr 24-hour storm events using rainfall data obtained from the Northeast Regional Climate Center (NRCC) Extreme Precipitation Tables.

Disclaimer

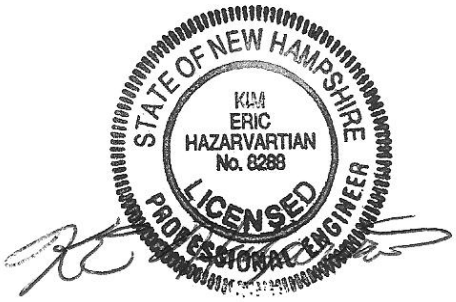
Altus Engineering, Inc. notes that stormwater modeling is limited in its capacity to precisely predict peak rates of runoff and flood elevations. Results should not be considered to represent actual storm events due to the number of variables and assumptions involved in the modeling effort. Surface roughness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

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: 1213
Subject: Thornwood Common Traffic Update
Dover, New Hampshire
From: Kim Eric Hazarvartian, Ph.D., P.E., PTOE
Principal
Date: July 19, 2018



INTRODUCTION

TEPP LLC has prepared this traffic-update memorandum regarding the Thornwood Common mixed-used development, now known as Pointe Place. This memorandum presents:

- calculated trip generation for the previous potential Thornwood Common mixed-use development program
- calculated trip generation for the revised potential Pointe Place mixed-use development program
- the September 2006 Thornwood Common draft traffic impact and access study (TIAS)[1] that reflected the previous potential Thornwood Common mixed-use development program

In conclusion:

- the TIAS presented the traffic impacts for the previous potential Thornwood Common mixed-use development program
- this memorandum presents calculated trip generation for the revised potential Pointe Place mixed-use development program
- calculated peak-hour trip generation for the revised Pointe Place mixed-use development program is significantly less than calculated trip generation for the previous program, reduced by about one-third for the weekday AM-street-peak hour, reduced by about two-thirds for the weekday PM-street-peak hour and reduced by over one-half for the Saturday site-peak hour

[1] TEPP LLC, *Draft Traffic Impact and Access Study, Proposed Thornwood Common, Dover, New Hampshire* (Salem, New Hampshire, September 2006).

- not all site trips will be added to the area, because a portion of retail traffic will be drawn from traffic otherwise passing the site
- site trips will be split amongst streets near the site, such as Dover Point Road to/from the north and south

PREVIOUS DEVELOPMENT PROGRAM

The TIAS presented the previous potential Thornwood Common mixed-use development program consisting of:

- 62 senior residential condominium dwelling units
- 85,250 square foot (sf) retail shopping facility (50,250-sf supermarket plus 35,000-sf of mixed retail shops)
- 200-seat sit-down restaurant
- 3,000-sf full-service bank with three drive-thru windows
- 4,000-sf medical office
- 20,000-sf car dealership (200-car display lot)
- 71,000-sf office/retail buildings
- 90-room congregate-care residential building

REVISED DEVELOPMENT PROGRAM

The revised potential Pointe Place mixed-use development program consists of:

- apartments, 80 dwelling units
- apartments over first-floor commercial space, 160 dwelling units
- detached senior housing, 99 dwelling units
- senior townhouses, 20 dwelling units
- congregate care, 56 units
- office, 12,000-square-foot (sf) floor area
- shopping center, 30,000-sf floor area
- new-car-dealer service facility, 16,000-sf floor area

TRIP GENERATION

BASIC TRIP GENERATION

The Institute of Transportation Engineers (ITE) compiles trip-generation information in the authoritative reference *Trip Generation Manual*.[2] This information is based on empirical data for a variety of land uses including:

- multifamily housing (mid-rise), land use 221, based on dwelling units[3]
- mid-rise residential with 1st-floor commercial, land use 231, based on dwelling units
- senior adult housing—detached, land use 251, based on dwelling units[4]
- senior adult housing—attached, land use 252, based on dwelling units[5]
- congregate care facility, land use 253, based on units[6]
- general office building, land use 710, based on floor area[7]
- shopping center, land use 820, based on floor area[8]
- automobile sales (new), land use 840, based on floor area[9]

INTERNAL TRIPS

The potential uses constitute a multi-use site. ITE states that "the total generation of external trips (that is, those entering and exiting the overall site) may be less than the simple sum of the trips generated by each discrete land use."[10] Accordingly, Table 1 shows calculated internal-capture trip reductions based on ITE information.[11]

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[2] ITE, *Trip Generation Manual*, 10th edition (Washington DC, September 2017).

[3] ITE, pages 332 to 359.

[4] ITE, Volume 2: Data—Residential (Land Uses 200-299), pages 337 to 351.

[5] ITE, Volume 2: Data—Residential (Land Uses 200-299), pages 352 to 372.

[6] ITE, Volume 2: Data—Residential (Land Uses 200-299), pages 373 to 386.

[7] ITE, Volume 2: Office—Office (Land Uses 700-799), pages 373 to 386.

[8] ITE, Volume 2: Data—Retail (Land Uses 800-899) pages 137 to 161.

[9] ITE, Volume 2: Data—Retail (Land Uses 800-899) pages 172 to 201.

[10] Kevin G. Hooper, P.E., Principal Editor, *Trip Generation Handbook*, 3rd edition (Washington DC: Institute of Transportation Engineers, June 2004), page 43.

[11] Hooper, pages 43 to 64.

Table 1. Calculated Thornwood Common trip generation.

Time and Direction	Previous Program[a]	Revised Program									
		Apartments[b]	Apartments and Commercial[c]	Senior Detached Housing[d]	Senior Townhouses[e]	Congregate Care[f]	Office[g]	Shopping Center[h]	Car Dealer[i]	Internal Trips[j]	Total
Weekday Daily	9,992	434	550	558	74	113	136	2,651	429	-	4,945
Weekday AM-Street-Peak Hour											
In	352	8	35	14	1	3	32	103	22	-6	212
Out	203	20	13	27	3	2	6	64	8	-6	137
Total	555	28	48	41	4	5	38	167	30	-12	349
Weekday PM-Street-Peak Hour											
In	536	22	40	29	3	7	2	107	20	-55	175
Out	592	14	18	19	2	6	13	116	30	-55	163
Total	1,128	36	58	48	5	13	15	223	50	-110	338
Saturday Daily	11,380	393	550	270	74	113	27	1,384	836	-	3,647
Saturday Site-Peak Hour											
In	651	17	69	11	4	7	3	124	32	-	267
Out	593	18	69	12	3	6	3	115	32	-	258
Total	1,244	35	138	23	7	13	6	239	64	-	525

[a] From TIAS, page 22.

[b] Multifamily housing (mid-rise), land use 221, 80 units. ITE, *Trip Generation Manual*, 10th Edition, Volume 2: Data—Residential (Land Uses 200-299), pages 71 to 149.

[c] Mid-rise residential with 1st-floor commercial, land use 231, 160 units. ITE, Volume 2: Data—Residential (Land Uses 200-299), pages 270 to 302. Weekday daily as estimate for Saturday daily. Weekday AM-site-peak hour as estimate for weekday AM-street-peak hour. Saturday site-peak hour estimated as 50 percent in and 50 percent out.

[d] Senior adult housing—detached, land use 251, 99 units. ITE, Volume 2: Data—Residential (Land Uses 200-299), pages 337 to 351.

[e] Senior adult housing—attached, land use 252, 20 units. ITE, Volume 2: Data—Residential (Land Uses 200-299), pages 352 to 372.

[f] Congregate care facility, land use 253, 56 units. ITE, Volume 2: Data—Residential (Land Uses 200-299), pages 373 to 386. Weekday daily as estimate for Saturday daily. Weekday PM-street-peak hour as estimate for Saturday peak hour.

[g] General office building, land use 710, 12,000-sf floor area. ITE, Volume 2: Office—Office (Land Uses 700-799), pages 373 to 386.

[h] Shopping center, land use 820, 30,000-sf floor area. ITE, Volume 2: Data—Retail (Land Uses 800-899) pages 137 to 161.

[i] Automobile sales (new), land use 840, 16,000-sf floor area. ITE, Volume 2: Data—Retail (Land Uses 800-899) pages 172 to 201.

[j] Hooper, pages 43 to 64.

Results are:

- for the weekday AM-street-peak hour, 349 revised vehicle-trips, or 63 percent of the 555 previous development-program vehicle-trips
- for the weekday PM-street-peak hour, 338 revised vehicle-trips, or 30 percent of the 1,128 previous development-program vehicle-trips
- for the Saturday site-peak hour, 525 revised vehicle-trips, or 42 percent of the 1,244 previous development-program vehicle-trips

CONCLUSION

In conclusion:

- the TIAS presented the traffic impacts for the previous potential Thornwood Common mixed-use development program, now known as Pointe Place
- this memorandum presents calculated trip generation for the revised potential Pointe Place mixed-use development program
- calculated peak-hour trip generation for the revised Pointe Place mixed-use development program is significantly less than calculated trip generation for the previous program, reduced by about one-third for the weekday AM-street-peak hour, reduced by about two-thirds for the weekday PM-street-peak hour and reduced by over one-half for the Saturday site-peak hour
- not all site trips will be added to the area, because a portion of retail traffic will be drawn from traffic otherwise passing the site
- site trips will be split amongst streets near the site, such as Dover Point Road to/from the north and south

CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES - P18-37

Application Type:	Site Plan
Applicant(s):	Summit Land Development
Owner(s):	Varney Brook Lands, LLC
Location:	Pointe Place (Tax Map K, Lot 19-4)
Date:	August 16, 2018

INTENT: To construct 3 buildings consisting of 8,000 s.f. of commercial space and 119 residential units. A related CUP will also appear before the Planning Board and was recommended for approval by the Conservation Commission on 8/13/2018.

UNITS PROPOSED: 119 residential units; 8,000 sq. ft. commercial area

AGENDA ITEM #: 1

ACRES: 20.93 acres

ZONING DISTRICT: Residential Commercial Mixed-Use Overlay (RCM), Executive Technology Park (ETP) underlying

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Residential and Commercial Mixed Use; 16 Townhouses

SURROUNDING LAND USE: Single family dwellings, mixed use, commercial, vacant land

SERVICES: Existing municipal water and sewer

ZBA ACTION: Building Height Variance?

PERMITS REQUIRED: CUP for wetland buffer, Alteration of Terrain

WAIVERS REQUESTED: None

ATTENDANCE:
Members: Chris Parker, Planning
Elena Piekut, Planning/Zoning
Dave White, Engineering
Jim Maxfield, Inspections/Fire
Sgt. Marn Speidel, Police
Lee Skinner, Planning Board

Others:
Chad Kageleiry, Owner
Corey Belden, Altus Engineering

Approval of 8/9/18 Meeting Minutes
Dave White moved to approve the minutes of August 9, 2018. Lee Skinner seconded. Vote U/A.

Plan Review
Planning Comments:

- Water and sewer investment fees,
- Impact fees: $53,605 for 39 units, $298,320 for 80 units, $12,640 for commercial
- TDR fees will be assessed and due for plan signing
  - $119,278 for 9 acres, donation of 3 acres on Cold Springs.
- Traffic analysis doesn't include first floor commercial
- Light at Dover Point Road to be installed by CO for building 4.
- Complete Pointe Place for acceptance
- What is the status of the trails?
- Do a T1 sketch from Middle Road
- Please provide:
  - Rest of floor plans
  - Rest of architectural renderings
  - Rest of streetscapes
- Plan set notes/revisions:
  - Update Planning file number (P18-37) throughout
  - LLS, PE, and Landscape architect sign and stamp plans
  - Add street names to locus map
  - Add abutter information to neighborhood plan
  - Include Signature and stamp of LLS, PE, and Licensed Landscape Architect
  - Add note that bench and trash receptacle location are TBD prior to Building Permit or Certificate of Occupancy to the satisfaction of the Assistant City Manager
  - On N-1:
    - Change parking from "required" to "allowed"
    - Add "provided" column to Dimensional Requirements table
  - On C-1, indicate the percentage of residential and the percentage of mixed-use/Commercial
  - On C-2:

DRAFT

CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES - P18-37

Application Type:	Site Plan
Applicant(s):	Summit Land Development
Owner(s):	Varney Brook Lands, LLC
Location:	Pointe Place (Tax Map K, Lot 19-4)
Date:	August 16, 2018

- Add crosswalk on southerly side of building 3
- Screen transformer
- Indicate parking underneath with circled number of spaces
- Indicate width of ingress/egress
- Provide more information for retaining wall
- Add additional bike rack (interior)?
- Indicate snow storage

o On L-1:

- Revise landscape plan to meet new regulations- not enough shrubs are provided and caliber is not big enough on trees
- Revise so landscaping does not conflict with dumpster and transformer

o On A1.1:

- Remove "Drive" from title
- Show parking space layout

o On Lighting Plan:

- Revise lighting plan to show fc on front side of building (lighting on all 4 sides).
- Bring uniformity ratio closer to 5:1

Engineering Comments:

- Applicant shall complete Land Use Development Tracking Form, most recently revised version, utilizing the online Pollution Tracking and Accounting Pilot Project (PTAPP) portal. https://www.unh.edu/unhsc/ptapp
- A section of the sidewalk on the opposite side of the street is still out of the ROW. Revise to address this.
- Show all the rim and invert data on the existing sewer and drainage.
- Plan set notes/revisions:
  - Convert the CB P313 to a curb inlet type structure instead of a DMH
  - Extend a line from CB P315 to the curbline
  - Crown the access road across from Sierra Dr and installing another CB
  - Provide outlet info for CB P312
  - Relocate the retaining wall to outside the sewer easement
  - Note the patio area is within the ROW
- Update plan to reflect existing conditions related to memory care property
- Not show trees over utilities
- Add trees to lawn area
- Remove the road connection at 17+50 across from this driveway entrance and install curb and sidewalk.

Planning Board Comments: None.

Police Department Comments:

- How far does monolithic concrete curb extend and how will these parking spaces be managed?
- Address traffic control for four-way intersection in parking lot rear of residential buildings. All-way stop is preferred.
- Add pedestrian warning signs W-11-2 and W-16-7p (placard) for the Pointe Place crosswalks
- Crosswalk marking type to be approved by City Engineer
- Remove stop signs on Pointe Place at Sierra Hill.

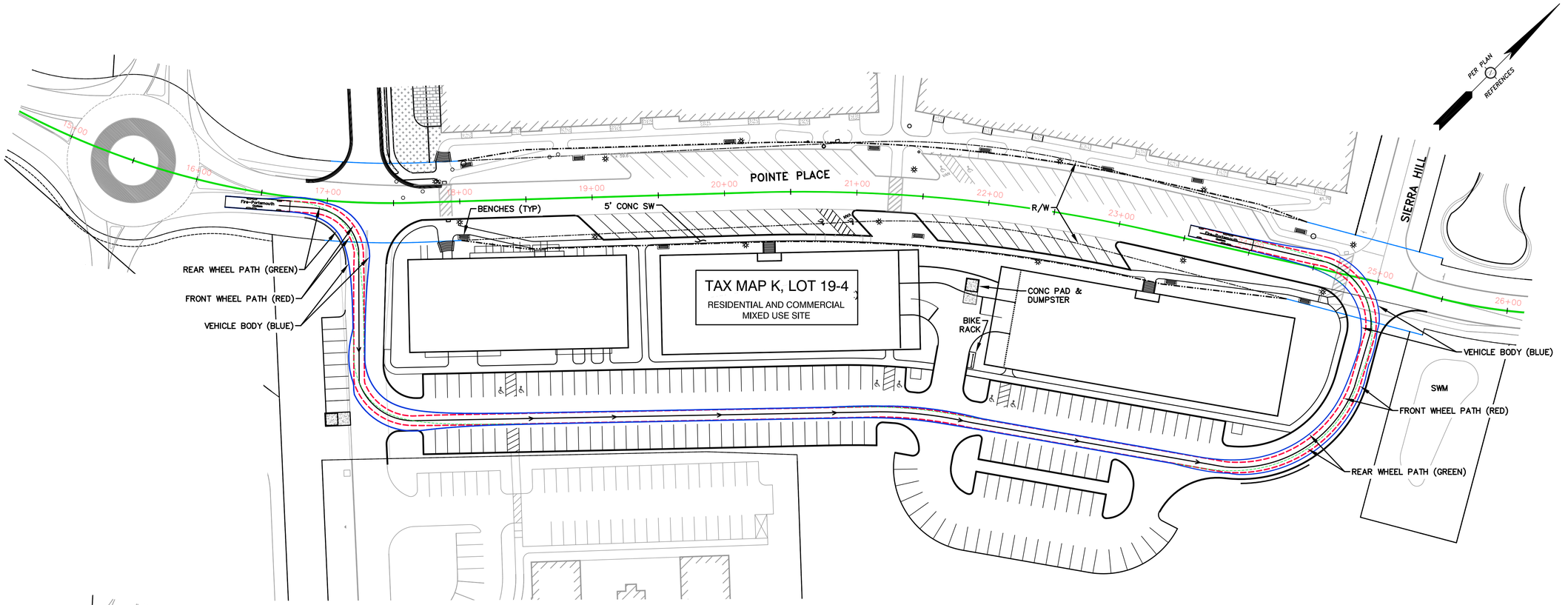
Fire/Inspections Comments:

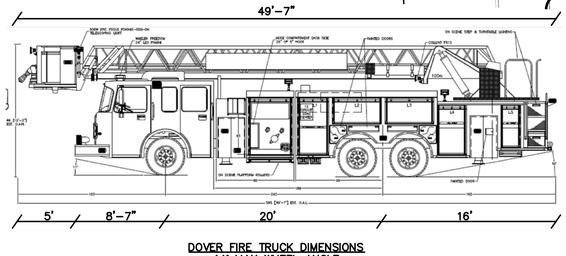
- Provide a hydrant near the intersection of Pointe Place and the access road near the Northeast corner of building #5
- Clarify the entrances and exit locations to the buildings
- Identify the location of the main entrances to each structures and access to dwelling units
- Discuss the location of the FDC for the three structures; all should be on same side of buildings
- Add note regarding conformance with NH RSA 155:A

Economic Development Comments: None.

Next Steps: Applicant and staff to meet with Fire Chief regarding road connection at 17+50. Staff to review need for building height variance; next ZBA deadline is August 30th. D.White to follow up re: Pointe Place acceptance. Follow TRC to show final plans prior to PB in Sept.

DRAFT





DOVER FIRE TRUCK DIMENSIONS
44° MAX WHEEL ANGLE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

P4390

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL REVIEW

ISSUE DATE:
JULY 26, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-DESIGN.dwg

SCALE: 24"x36" 1" = 40'
12"x18" 1" = 80'

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

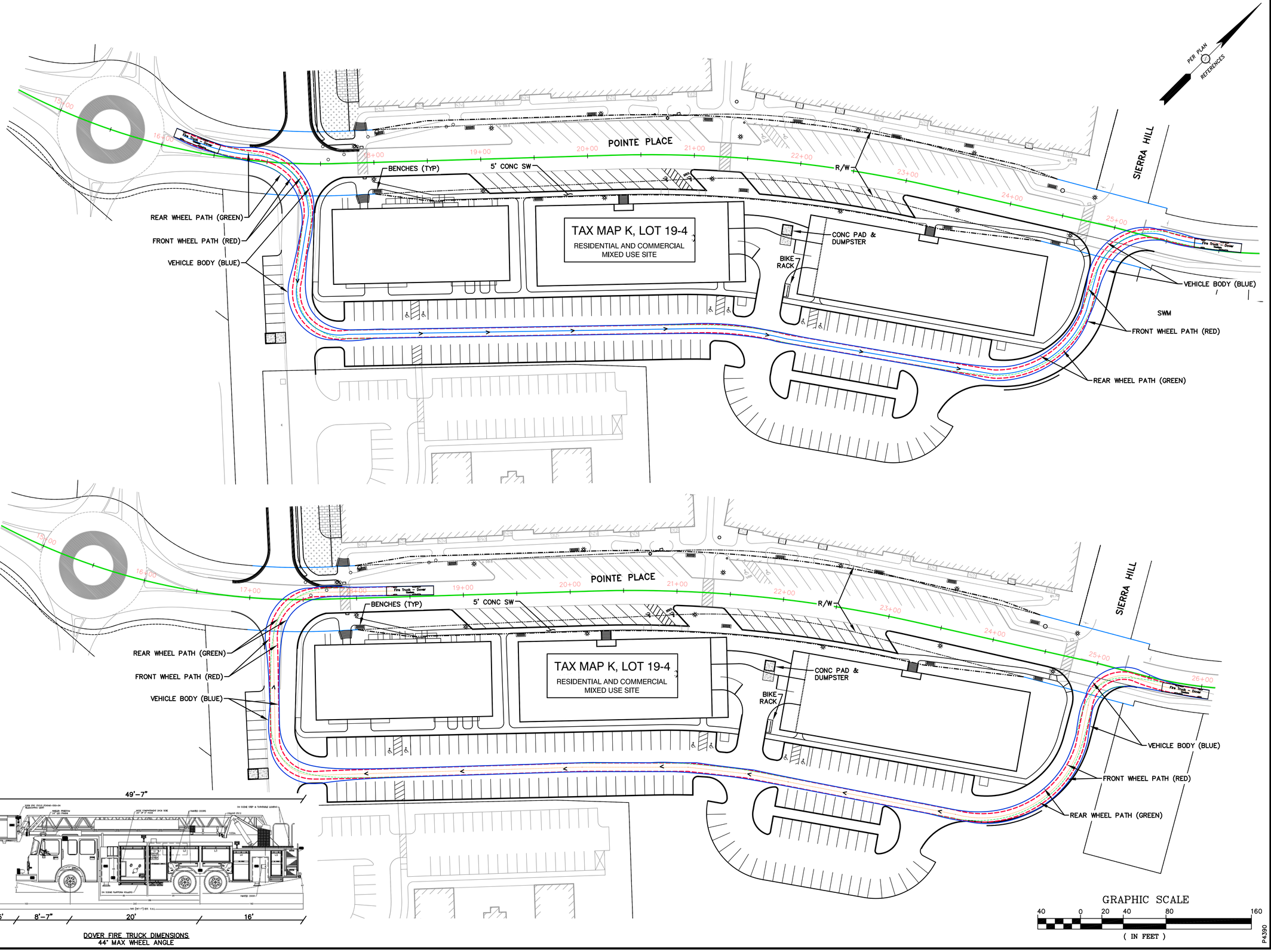
APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 2)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT

TAX MAP K, LOT 19-4
DOVER, NH

TITLE:
TRUCK TURNING PLAN (AUTOTURN)

SHEET NUMBER:
AT-1



DOVER FIRE TRUCK DIMENSIONS
44° MAX WHEEL ANGLE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

P4390

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL REVIEW

ISSUE DATE:
AUGUST 29, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	08/29/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-DESIGN.dwg

SCALE: 24"x36" 1" = 40'
12"x18" 1" = 80'

OWNER:
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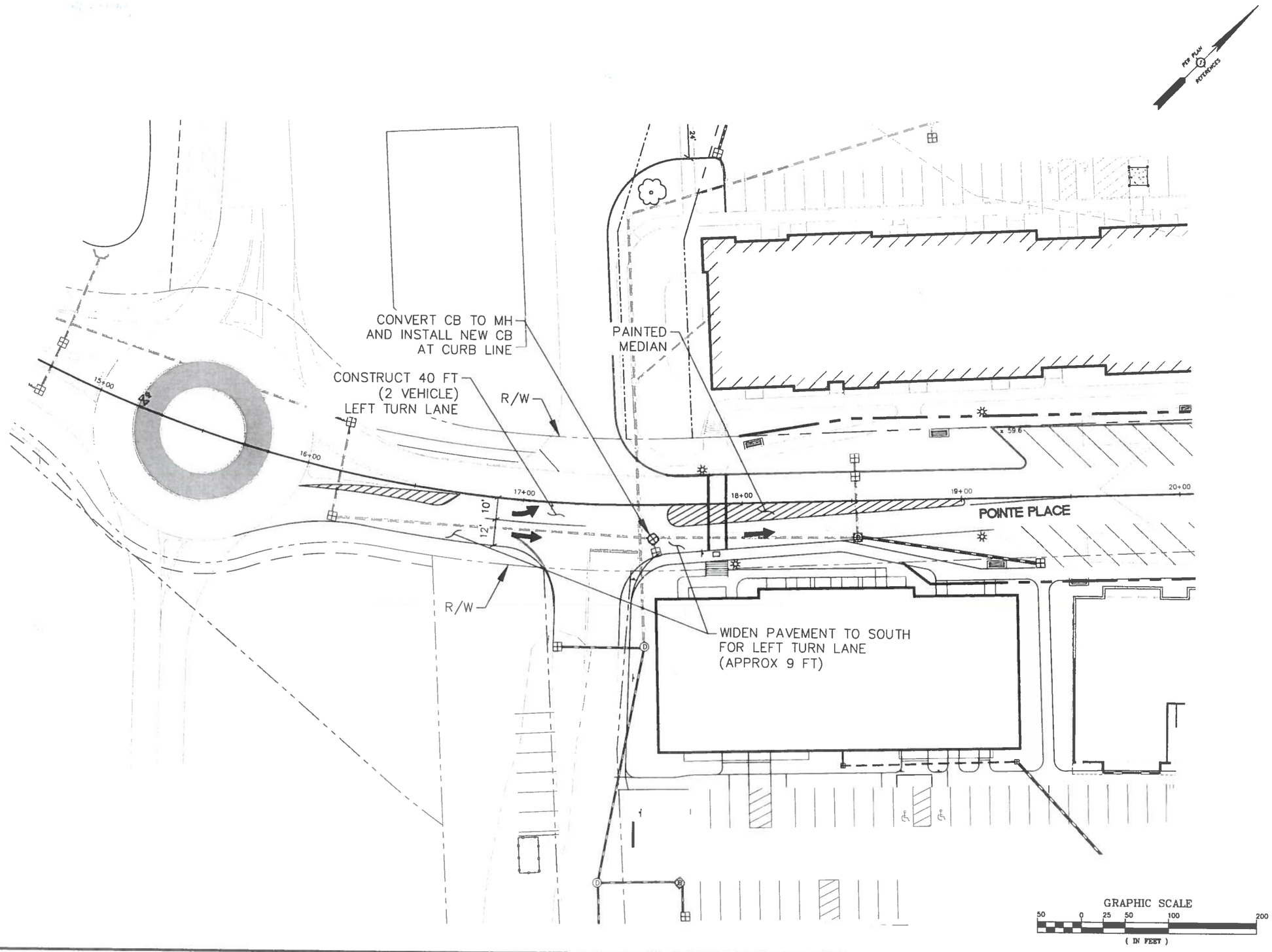
APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 2)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT

TAX MAP K, LOT 19-4
DOVER, NH

TITLE:
TRUCK TURNING PLAN (AUTOTURN)

SHEET NUMBER:
AT-2



ALTUS
ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

DRAFT

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR:
CONSTRUCTION SKETCH

ISSUE DATE:
SEPTEMBER 6, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	09/06/18

DRAWN BY:
APPROVED BY:
DRAWING FILE:

SCALE: 24"x36" 1" = 10'
12"x18" 1" = 20'

OWNER:
CURNEY BROOK LANDS, LLC
P.O. BOX 328
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
110 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE
RESIDENTIAL AND
COMMERCIAL
MIXED USE DEVELOPMENT

TAX MAP K, LOT 19-5
DOVER, NH

TITLE:
OPTION 2
LEFT TURN LANE

SHEET NUMBER:
CO-2

P4300

RECEIVED
Planning Office
SEP 14 2018
Dover, New Hampshi

SITE PLAN REVIEW
CITY OF DOVER DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
FILE NO. P18 - 37

THIS DRAWING SET HAS NOT BEEN RELEASED FOR CONSTRUCTION

POINTE PLACE - PHASE 4

RESIDENTIAL & COMMERCIAL MIXED USE DEVELOPMENT PLANS

Tax Map K, Lot 19-4

DOVER, NEW HAMPSHIRE

ISSUED FOR PLANNING BOARD APPROVAL

Owner / Applicant:

Varney Brook Lands, LLC
c/o Summit Land Development
340 Central Avenue #202
Dover, NH 03820

Owner's signature: _____

Date: _____

Civil Engineer:

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335

Architect:

TW DESIGNS
P.O. BOX 69 STRAFFORD, NH 03884
P: 603.664.2181 | F: 603.664.9508

Surveyor:

McEneaney Survey Associates
24 Chestnut Street
Dover, NH 03820
PHONE: (603) 742-0911

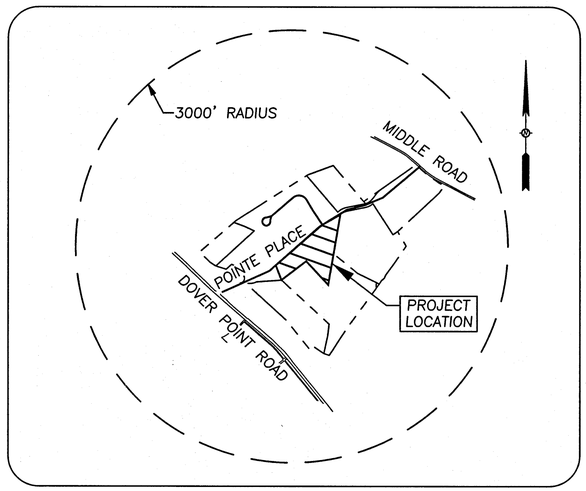
Wetland Scientist:

Highland Soil Services
75 Prospect Street
Somersworth, NH 03878
(603) 692-4457

Landscape Architect:

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

Plan Issue Date:
SEPTEMBER 10, 2018
~~July 26, 2018~~



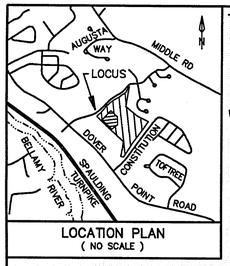
LOCUS MAP
Scale: 1" = 1000'±

Sheet Index Title	*Sheet No.:*	*Rev.*	*Date*
Plan of Land (by McEneaney Survey)	1 of 1	0	04/11/16
Notes and Legend	N-1	1	09/10/18
Neighborhood Site Plan	S-1	1	09/10/18
Overall Site Plan	C-1	1	09/10/18
Site Plan	C-2	1	09/10/18
Utility Plan	C-3	1	09/10/18
Grading and Drainage Plan	C-4	1	09/10/18
Erosion and Sediment Control Plan	C-5	1	09/10/18
Sitework Details	D-1	1	09/10/18
Sitework Details	D-2	1	09/10/18
Sitework Details	D-3	1	09/10/18
Sitework Details	D-4	1	09/10/18
Sitework Details	D-5	1	09/10/18
Sitework Details	D-6	1	09/10/18
Sitework Details	D-7	1	09/10/18
Water Details	D-8	1	09/10/18
Sewer Details	D-9	1	09/10/18
Site Lighting Plan (by Visible Light, Inc.)	1 of 1	0	07/11/18
Pointe Place Lighting Plan (by Visible Light, Inc.)	1 of 1	0	06/06/16
Landscape Plan (by Woodburn & Company)	L-1	0	07/26/18
Bldg 3 Common Floor Plates (by TW Designs)	A1.1	0	07/26/18
Bldg 4 Garage Level Plan (by TW Designs)	A1.1	0	09/10/18
Bldg 3 Elevations (by TW Designs)	A3.1	0	07/26/18
Bldg 3 Elevations (by TW Designs)	A3.2	0	07/26/18
Bldg 4 Exterior Elevations (by TW Designs)	A3.1	0	09/10/18
Bldg 4 Exterior Elevations (by TW Designs)	A3.2	0	09/10/18
Bldg 5 (Not included – Mirror of bldg 4) Schematic Renderings (by TW Designs)	R2	0	07/26/18

Permit Summary

Conditional Use Permit – Wetlands Overlay District – PENDING.
NHDES Alteration of Terrain Permit – PENDING
Building Permits – Building Permits to be obtained from the City of Dover
US-EPA Storm Water Pollution Prevention Plan (SWPPP) – To be filed by Contractor

P4390



LOCATION PLAN
(NO SCALE)

DOVER POINT ROAD

K / 19
VARNEY BROOK LANDS LLC
340 CENTRAL AVENUE SUITE 202
DOVER, NH 03820
3660 / 351; 3690 / 116;
3854 / 986

K / 19-5
VARNEY BROOK LANDS LLC
340 CENTRAL AVENUE SUITE 202
DOVER, NH 03820
3660 / 351; 3690 / 116; 3854 / 986

K / 19-3

SIERRA HILL DRIVE

EXISTING DRAINAGE EASEMENT

K/19-1-13

K/19-1-14

SMH

EXISTING 50' WIDE UTILITY EASEMENT

TERESA DRIVE

THORNWOOD LANE

JULIA DRIVE

N = 246,730.915
E = 1,199,708.164

POINTE PLACE
(VARIABLE WIDTH R.O.W.)

C1 C2 C3 C4 C5 C6 C7 C8
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16

N42°18'37"E 324.97'
N59°53'12"E 250.92'
S30°06'48"E 104.33'
N30°06'48"W 87.66'
S59°53'12"W 70.00'
N30°06'48"W 145.00'
S30°06'48"E 154.61'
S09°33'45"W 545.29'
N28°00'02"E 279.57'
S28°00'02"W 288.20'
N12°15'02"W 119.39'
N47°32'34"W 123.00'
N47°46'17"W 164.90'
S43°45'14"W 290.46'
N46°58'13"W 254.55'
S47°32'30"E 374.93'
N01°59'16"W 212.84'
N53°40'29"E 208.13'
N01°59'16"E 490.08'
S01°59'16"E 481.66'
N22°53'05"E 292.00'
S51°13'24"E 421.39'
S07°15'09"W 584.71'
N47°32'30"W 893.48'
N16°59'43"E 259.34'
N02°43'57"W 222.16'
S02°43'57"E 216.62'
N23°38'43"W 29.58'
S35°04'54"E 186.09'
N47°32'30"W 74.06'
S23°38'43"E 91.76'
N23°38'43"W 373.38'
S23°38'43"E 259.54'
317.71'
(162.17')
(129.22')
S08°16'29"W 57.66'
S32°33'39"W 154.98'
S06°54'39"W 41.89'
N06°54'39"E 158.72'
29.50'
25.58'
(227.27')
N12°15'18"E 252.85'
S64°01'38"E 334.42'
S36°28'43"W 175.68'
S35°52'24"W 137.04'
N = 246,595.954
E = 1,201,150.862
S36°32'26"W 175.45'
S36°37'49"W 175.58'
S33°14'16"W 171.85'
S33°00'29"W 171.97'

K / 19-4

REMAINING LAND
911,872 S.F.
20.93 Ac.

PROPOSED ACCESS & UTILITY EASEMENT
5,317 S.F. / 0.12 Ac.
(SEE NOTE 7)

PROPOSED 75' WIDE DRAINAGE EASEMENT
11,295 S.F.

K / 19-6
LOT 1
131,246 S.F.
3.01 Ac.

50' WETLAND BUFFER LINE (TYP.)

PROPOSED 30' WIDE SEWER EASEMENT
34,374 S.F.

PROPOSED CONSERVATION EASEMENT "B-1"
224,418 S.F.
5.15 Ac.

BITUMINOUS CONCRETE PARKING AREA

K / 19-2
DOVER POINT ROAD 252 LLC
40 DOVER POINT ROAD
DOVER, NH 03820
3671 / 136
4347 / 979

POND

20' WIDE CITY OF DOVER SEWER EASEMENT
SCRD 1009/804

EMERGENCY SPILLWAY

EARTHEN DAM

EXISTING CONSERVATION EASEMENT "A"
451,674 S.F.
10.37 Ac.
SCRD 3695/488; PLAN 96-07

30' WIDE SEWER EASEMENT 9,529 S.F.
S.C.R.D. 4347 / 979

VARNEY BROOK

K / 19-1
THORNWOOD COMMONS LLC
42 J DOVER POINT ROAD
DOVER, NH 03820
3660 / 318

M / 4

M/4-0PN

M/4-48

M/4-47

M/4-46

M/4-45

M/4-44

M/4-43

M/4-42

M/4-41

M/4-40

K / 22
PAOLINI BROTHERS DEVELOPMENT LLC
15 BRIARWOOD LANE
DOVER, NH 03820
3236 / 636

K / 21
DOVERBROOK LLC
306 DAHLIA DRIVE
WAYLAND, MA 01778-2825
1986 / 539

JULIA DRIVE ABUTTERS

M/4-40
STANLEY D. STEPHENSON
JUDYTH A. STEPHENSON
33 JULIA DRIVE
DOVER, NH 03820
4089 / 154

M/4-41
JOHN T. AMBRULEVICH
ALMEDA C. AMBRULEVICH
31 JULIA DRIVE
DOVER, NH 03820
4142 / 1002

M/4-42
GARY D. & DENISE C. DINARDO REV. LIVING TRUST
GARY D. & DENISE C. DINARDO, TRUSTEES
29 JULIA DRIVE
DOVER, NH 03820
4115 / 361

M/4-43
JAMES & FRANCES T. KAGELEIRY
27 JULIA DRIVE
DOVER, NH 03820
4100 / 478

M/4-44
JEAN L. MARTIN TRUST
1 TASKER LANE
MADBURY, NH 03823
4193 / 47

M/4-45
JOSEPH J. & JOYCE J. BRAUN
23 JULIA DRIVE
DOVER, NH 03820
4071 / 233

No.	Bearing	Distance
L1	N71°54'18"W	78.99'
L2	S47°47'48"E	81.58'
L3	S43°45'14"W	30.00'
L4	S35°58'28"W	88.01'
L5	S33°10'16"W	104.02'
L6	S43°45'14"W	21.37'
L7	N01°59'16"W	20.28'
L8	N59°53'12"E	10.75'
L9	N30°06'48"W	5.00'
L10	S41°45'27"E	20.00'
L11	N38°34'00"E	49.58'
L12	N51°26'00"W	20.00'
L13	N38°34'01"E	112.27'
L14	S79°05'44"E	57.33'
L15	S46°52'31"W	68.45'
L16	S40°45'23"E	81.64'

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	10°49'28"	630.00	119.02	118.84	N47°43'21"E
C2	17°34'34"	570.00	174.85	174.17	N51°05'55"E
C3	08°12'29"	450.00	64.47	64.41	N55°46'57"E
C4	03°26'10"	450.00	26.99	26.98	N49°57'38"E
C5	09°40'33"	470.00	79.37	79.28	N43°24'17"E
C6	05°29'41"	175.00	16.78	16.78	N41°18'51"E
C7	03°38'33"	630.00	40.05	40.04	N46°39'05"E
C8	04°39'43"	630.00	51.26	51.25	S50°48'13"W

GRID NORTH
GPS OBS. 11/11/2013

LEGEND

- SMH – SEWER MANHOLE
- □ – GRANITE BOUND (TO BE SET)
- ⊙ I.R. – IRON ROD FOUND
- ● – IRON ROD W/PLASTIC I.D.CAP (TO BE SET)
- UP – UTILITY POLE
- R.O.W. – RIGHT OF WAY
- S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
- S.F. – SQUARE FEET
- Ac. – ACRE
- – · – · – EDGE OF WETLAND
- WETLAND AREA
- N.L.L. – NEW LOT LINE
- LL TBA – LOT LINE TO BE ABANDONED

NOTES:

OWNER SIGNATURE

1.) OWNER OF RECORD:
VARNEY BROOK LANDS LLC
340 CENTRAL AVENUE, SUITE 202
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 3660, PAGE 351
S.C.R.D. VOLUME 3690, PAGE 116

2.) K / 19-4 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) PARCEL AREA = 1,043,118 S.F. / 23.95 Ac.

4.) ZONING DISTRICT IS ETP & RCM (RESIDENTIAL COMMERCIAL MIXED USE) OVERLAY. ALLOWED BY APPROVED CONDITIONAL USE PERMIT.

5.) THE SUBJECT PARCEL IS LOCATED OUTSIDE 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.

6.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED NOVEMBER 11, 2013.
VERTICAL DATUM IS NGVD29 BASED ON BENCHMARK FOUND ON THORNWOOD COMMONS PROJECT.

7.) THE INTENT OF THIS PLAN IS TO SUBDIVIDE THE SUBJECT PARCEL INTO TWO (2) LOTS AS SHOWN. THIS PLAN ALSO INTENDS TO DESCRIBE A PROPOSED ACCESS & UTILITY EASEMENT LOCATED ON PARCEL K/19-4 WHICH WILL BENEFIT PROPOSED PARCEL K/19-6.

REFERENCE PLANS:

1.) SUBDIVISION AND LOT LINE ADJUSTMENT PLAN FOR POINTE PLACE & DOVER POINT ROAD 252 LLC, TAX MAP K, LOT Nos. 19, 19-2, 19-3 & 19-4, THORNWOOD LANE, CITY of DOVER, COUNTY of STRAFFORD, STATE of NEW HAMPSHIRE. SCALE: 1" = 150'; DATED: MAY 20, 2015, REVISED THROUGH 8/3/15; BY THIS OFFICE. RECORDED S.C.R.D. PLANS 110-23, 110-24, 110-25 & 110-26.

"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."

DATE: / KEVIN M. McENEANEY LLS # 661

NO.	DATE	DESCRIPTION	BY	CHK
1	4/27/17	REVISE PER PLANNING BOARD CONDITIONS OF APPROVAL	RJM	KMM
		REVISIONS		

15-2041	SUBDIVISION	16-06	21
PROJECT NO	TYPE	FIELDBOOK & PAGES	

SUBDIVISION PLAN OF LAND
PREPARED FOR
VARNEY BROOK LANDS LLC
TAX MAP K, LOT No. 19-4
POINTE PLACE
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 17-06

DRAWN BY: RJM | FILE: VR CP\2041\2041 K-19-4 SUBD
SCALE: 1" = 80' | DATE: NOV. 17, 2016

80 40 0 40 80 160 240 320

STATE OF NEW HAMPSHIRE No. 661 KEVIN M. McENEANEY LICENSED LAND SURVEYOR SIGNATURE

McENEANEY SURVEY ASSOCIATES, INC.
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911

SURVEYING – PLANNING – CONSULTING

LEGEND

- PROPERTY LINE
- STONEWALL
- EXISTING EASEMENT
- EXISTING WETLANDS
- BUILDING SETBACK
- 50' WETLAND BUFFER
- EXISTING PAVEMENT/CURB
- VGC SGC — PROP. PAVEMENT/VERTICAL OR SLOPED GRANITE CURB
- SAWCUT LINE/MATCH EXISTING
- EXISTING GRAVEL/TRAIL
- PROPOSED GRAVEL
- PROPOSED GUARDRAIL
- EXISTING TREELINE
- CLEARING LIMITS
- EXISTING CONTOUR
- PROPOSED CONTOUR SITE
- 100.00 / 104.00TW 100.00BW — PROPOSED SPOT GRADE/TOP & BOTTOM OF WALL
- TEST PIT LOCATIONS
- W — EXISTING WATER/CURB STOP/VALVE/HYDRANT
- S — EXISTING SEWER/MANHOLE
- G — GV — EXISTING GAS/VALVE
- OHW UGE — EXIST. OVER/UNDERGROUND UTILITIES/POLE
- MH SC PB — ELEC MANHOLE/SECTOR CABINET/PULL BOX/TRANSFORMER
- D — EXISTING DRAINAGE/CB/DMH
- PW — PROPOSED THRUST BLOCK/WATER/CURB STOP/VALVE/HYDRANT
- PS — CO — PROPOSED SEWER/MANHOLE/CLEANOUT
- PG — PROPOSED GAS
- OHW — PROPOSED OVERHEAD UTILITIES/UTILITY POLE
- PE — PROPOSED UNDERGROUND ELECTRIC/PHONE/TV
- FS — PROPOSED FIRE SERVICE
- PROPOSED DRAINAGE (HARD PIPE)/CB/DCB/DMH/FES
- FD — CO — PROPOSED DRAINAGE (FOUNDATION DRAIN/PERF. PIPE)/CLEANOUT
- PROPOSED GROUND SLOPE DIRECTION
- SILTFENCE/SEDIMENT BARRIER/CONST. FENCE/CLEARING LIMITS
- STABILIZED CONSTRUCTION EXIT
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED RIPRAP

ZONING SUMMARY

TAX MAP K, LOT 19–4

ZONING DISTRICT: RESIDENTIAL COMMERCIAL MIXED USE (RCM) BY APPROVED CONDITIONAL USE PERMIT (SITE LOCATED IN ETP DISTRICT)

DIMENSIONAL REQUIREMENTS: RESIDENTIAL COMMERCIAL MIXED USE
(DOVER CODE 149–14.2 AND 170.28.2 RCM OVERLAY DISTRICT)

DIMENSIONAL REQUIREMENTS: (RCM)	REQUIRED:	PROVIDED
STRUCTURE HEIGHT:		
MIXED–USE BUILDING	55 FT	51.67 FT
MULTI–FAMILY BUILDING	35 FT	44.5 FT *
STRUCTURE SETBACK FROM EXTERNAL LOT LINE:		
MIXED–USE BUILDING	50 FT	470+ FT
MULTI–FAMILY BUILDING	50 FT	650+ FT
STRUCTURE SETBACK FORM EXTERNAL ROW:		
MIXED–USE BUILDING	50 FT	790+ FT
MULTI–FAMILY BUILDING	100 FT	970+ FT

OVERLAY DISTRICTS
RESIDENTIAL COMMERCIAL MIXED USE OVERLAY DISTRICT
WETLANDS OVERLAY DISTRICT

* VARIANCE REQUESTED FOR MULTI–FAMILY BUILDING HEIGHT OF 44.5'

GENERAL SITE NOTES:

1. THE INTENT OF THIS PLAN SUBMITTAL IS TO PROVIDE THE NECESSARY INFORMATION FOR THE DESIGN AND REVIEW OF A MIXED–USE (COMMERCIAL/RESIDENTIAL) BUILDING AND TWO MULTI–UNIT RESIDENTIAL BUILDINGS ON ASSESSOR'S PARCEL K/19–4 FOR CITY & STATE PERMIT APPLICATIONS. THIS PLAN SET IS NOT INTENDED TO BE USED FOR CONSTRUCTION. THIS PLAN SET PROVIDES DETAILED INFORMATION FOR THE GENERAL LAYOUT, GRADING, AND UTILITY LOCATIONS. ADDITIONAL DETAILED ENGINEERING DESIGN WILL BE REQUIRED TO IMPLEMENT CONSTRUCTION.
2. CURRENT OWNER: VARNEY BROOK LANDS, LLC
   P.O. BOX 728
   DOVER, NH 03821

   _____
   AUTHORIZED SIGNATURE
3. THE PROJECT PARCEL IS SHOWN AS LOT NO. K, MAP 19-4 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.
4. THE PROJECT PARCEL CONTAINS 20.93 ACRES OR 911,872 SQUARE FEET AREA OF LAND.
5. TITLE REFERENCE FOR THE PROJECT PARCEL IS THE STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK NO. 3690, PAGE NO. 116.
6. PROJECT PLAN REFERENCES:
   SUBDIVISION AND LOT LINE ADJUSTMENT PLAN FOR POINTE PLACE & DOVER POINT ROAD 252 LLC, TAX MAP K, LOT NOS. 19, 19-2. 19-3 & 19-4, THORNWOOD LANE, CITY OF DOVER, COUNTY OF STRAFFORD, STATE OF NEW HAMPSHIRE. SCALE: 1" = 150'; DATED: MAY 20, 2015, REVISED THROUGH 8/3/15; BY MCENEANEY SURVEY ASSOCIATES , INC. RECORDED S.C.R.D. PLANS 110-23, 110-24, 110-25 & 110-26
7. THE SUBJECT PROPERTY IS ENCUMBERERD BY TEH FOLLOWING EASEMENTS: SEWER, DRAINAGE, ACCESS AND UTILITY, AND CONSERVATION. ALL EASEMENTS ARE REFERENCED IN A NOTE AND SHOWN ON THE PLANS.
8. ZONING DIMENSIONAL AND DENSITY REQUIREMENTS ARE SHOWN IN TABLE BELOW LEFT ON THIS SHEET:
9. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES , INC. NOVEMBER 17, 2016 AS REFERENCED IN THE ATTACHED SUBDIVISION PLAN OF LAND.
10. SUBJECT PARCEL IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA.
11. WETLANDS WERE DELINEATED BY HIGHLAND SOIL SERVICES (MICHEAL A. MARIANO), CERTIFIED WETLANDS SCIENTIST, CERTIFICATION NUMBER 076, IN ACCORDANCE WITH CHAPTER 170-27.1 OF THE ZONING ORDINANCE AND SURVEYED BY MCENEANEY SURVEY INC. ADDITIONALLY, A SITE SPECIFIC SOILS REPORT WAS PREPARED IN ACCORDANCE WITH THE SITE-SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT, VERSION 4.0 BY THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND AND STANDARDS ESTABLISHED BY THE NATIONAL COOPERATIVE SOIL SURVEY. THE SOIL SURVEY IS ALSO MEETS THE STANDARDS FOR AN ORDER 1 SOIL SURVEY AS DEFINED IN THE NH STATE-WIDE NUMERICAL SOIL LEGEND. THE SOIL SURVEY WAS PREPARED BY MICHAEL MARIANO, NH CERTIFIED SOIL SCIENTIST #076, AND DATED JANUARY 12, 2014 .
12. PARKING CALCULATIONS ARE PROVIDED BELOW.

TOTAL COMMERCIAL GROSS LEASABLE AREA (GLA) =
BLDG 3 — 8,000 SF (GLA)

RESIDENTIAL =
APARTMENT UNITS — 1 BDRM = 49 UNITS; 2+ BDRM = 70 UNITS; TOTAL = 119 UNITS

TOTAL PARKING SPACES ALLOWED:
COMMERCIAL (8,000 @ 1 STAL/ 325 SF) = 25 STALLS
1 BDRM RESIDENTIAL (1 STALL PER UNIT) = 49 STALLS
2+ BDRM RESIDENTIAL (2 STALLS PER UNIT) = 140 STALLS
TOTAL = 214 STALLS

TOTAL PROVIDED = 212 STALLS
(INCLUDES 68 IST FLOOR GARAGE STALLS FOR BUILDINGS #4 & #5)

13. AS-BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON PAPER AND IN A DIGITAL FORMAT IN PDF AND AUTOCAD DWG, AUTOCAD DXF OR AN ESRI FORMAT TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E. DIGITAL FILES SHALL BE GEO-REFERENCED TO NEW HAMPSHIRE STATE PLANE COORDINATES NAD83 AND SHALL BE EXPRESSED IN FEET.
14. EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 149-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
15. TOPOGRAPHIC SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. FROM JUNE 2014 THROUGH NOVEMBER 2016.
16. VERTICAL DATUM IS NGVD29 BASEDON BENCHMARKS FOUND ON THRONWOOD COMMONS PROJECT.
    BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED NOVEMBER 11, 2013.
17. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 58, ARTICLE I, SECTION 58-2 OF THE CODE OF THE CITY OF DOVER.
18. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
19. THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED. SITE PLANS SHALL SHOW ANY EASEMENTS FOR THESE SERVICES.
20. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
21. ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.
22. THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS THAT MAY ACQUIRE ANY PROPERTY SUBJECT TO THE REQUIREMENTS AND RESPONSIBILITIES DESCRIBED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE NOTICE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR RECORDING CONTAINED IN RSA 477 AND 478. THE NOTICE NEED NOT SET FORTH THE REQUIREMENTS AT LEINGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.
23. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.
24. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
25. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE AND APPROVED CONSTRUCTION SIGN SHALL BE IN PLACE PRIOR TO ANY EARTH DISTURBING ACTIVITY.
26. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO:
    MONDAY-FRIDAY 7 AM-6 PM,
    SATURDAY AND SUNDAY 9 AM-4 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.
27. A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
28. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
29. APPROVED BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
30. THE *PROPOSED* STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 109- 30 OF THE CODE OF THE CITY OF DOVER AND THE 2015 STATE BUILDING CODES.
31. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED.
32. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON BOTH THE STREET SIDE AND PARKING LOT SIDES OF THE BUILDING PER REQUEST BY DOVER FIRE DEPARTMENT.
33. BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
34. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL BE ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS.
35. THE PROPOSED USE FOR THE SITE IS MIXED-USE COMMERCIAL AND RESIDENTIAL. APPROXIMAETLY 8,000 GLA OF COMMERCIAL SPACE AND 119 RESIDENTIAL UNITS WILL BE PROVIDED IN THREE BUILDINGS.
36. THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:
    NHDES ALTERATION OF TERRAIN PERMIT - APPLICATION PENDING
37. AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR CONSTRUCTION ACTIVITIES WITHIN THE 50 FOOT WETLANDS BUFFER HAS BEEN SUBMITTED . PENDING APPROVAL.

GENERAL CONSTRUCTION NOTES

1. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED. THE LANDOWNER AND CONTRACTOR ARE RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE, AND FEDERAL WETLANDS REGULATIONS, INCLUDING ANY PERMITTING AND SETBACKS REQUIREMENTS REQUIRED UNDER THESE REGULATIONS. SEE PROJECT MANUAL APPENDICES FOR COPY OF PERMITS.
2. CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AND NOTIFY CITY OF DOVER AND OWNER'S AUTHORIZED REPRESENTATIVE AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EXISTING UTILITIES INCLUDING SEWER, ELECTRICAL LINES, COMMUNICATION LINES, AND WATER MAIN PRIOR TO COMMENCING CONSTRUCTION. PRESERVE AND PROTECT UTILITY LINES TO BE RETAINED. ANY DISCREPANCIES BETWEEN FIELD AND PLAN SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE ENGINEER, SURVEYOR, OR OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR DAMAGE TO EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES AT NO EXTRA COST TO THE OWNER.
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC UTILITIES IN DOVER, NEW HAMPSHIRE AND N.H.D.O.T. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST ADDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
5. ALL STORM DRAIN PIPING SHALL BE CORRUGATED POLYETHYLENE PIPE (CPE), SMOOTH INTERIOR WALL (N–12), UNLESS OTHERWISE NOTED.
6. UPON COMPLETION OF CONSTRUCTION, THE DRAINAGE INFRASTRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND SEDIMENT.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH RS–1 IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO ADA REQUIREMENTS AND "MANUAL ON UNIFORM TRAFFIC DEVICES" AND "STANDARD ALPHABETS OF HIGHWAY SIGNS AND PAVEMENT MARKINGS" LATEST EDITIONS.
9. CONTRACTOR SHALL MAINTAIN RECORD INFORMATION AND PROVIDE RECORD DRAWINGS OR AS–BUILTS TO DOVER'S DEPARTMENT OF PUBLIC WORKS. COORDINATE SUBMITTAL REQUIREMENTS WITH DPW.
10. SEE ARCHITECTURAL DRAWINGS BY OTHERS FOR ALL WORK INCLUDING GRADING WITHIN 5' OF BUILDING FOUNDATION. FINAL LOCATIONS OF WALKS TO MATCH LOCATIONS OF DOORWAYS.

GRADING AND EARTHWORK NOTES;

1. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE SIX (6") INCHES OF LOAM, LIMESTONE, FERTILIZER, SEED, MULCH, AND APPROPRIATE SOIL STABILIZATION TECHNIQUES.
2. CONTRACTOR SHALL CONTROL DUST BY SPRAYING WATER, SWEEPING PAVED SURFACES AND VEGETATION AND/OR MULCHING STOCKPILES.
3. DISPOSE OF STUMPS AND UNSUITABLE MATERIALS OFF–SITE IN ACCORDANCE WITH NHDES REQUIREMENTS.
4. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING ON–SITE STRUCTURES, BITUMINOUS CONCRETE, DEBRIS, STUMPS, AND CONSTRUCTION WASTE PRODUCTS WHICH ARE NOT AUTHORIZED TO BE USED AS PART OF CONSTRUCTION.
5. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION. VOIDS BETWEEN STONES AND CLUMPS OF MATERIAL SHALL BE FILLED WITH FINE MATERIALS.
6. USE ON–SITE ROCK ONLY WHERE SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT. DISPOSE OF EXCESS BOULDERS BY BLASTING, CRUSHING, BURYING, IN APPROVED LOCATIONS ONLY, OR OFF–SITE DISPOSAL.
7. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ACCEPTED. ABRUPT RIDGES AT TOPS AND BOTTOM WILL NOT BE ACCEPTED.
8. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS
9. MAXIMUM SLOPE IN DISTURBED AREAS SHALL BE NO STEEPER THAN 3:1 (H: V), UNLESS OTHERWISE NOTED. WHERE SLOPES IN DISTURBED AREAS ARE STEEPER THAN 3:1, CONTRACTOR SHALL PROVIDE CURLEX II EROSION CONTROL BLANKET FROM AMERICAN EXCELSIOR COMPANY (800) 777–7645 OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL ADJUST UTILITY ELEMENTS (CLEANOUTS, UTILITY MANHOLES, CATCH BASINS, INLETS, ETC.) MEANT TO BE FLUSH WITH GRADE THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT. WITHIN PAVED AREA FLUSH WITH GRADE SHALL MEAN 1/8" TO 1/4" BELOW ADJACENT PAVEMENT.
11. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS.
12. ALL UNSUITABLE MATERIALS AND SURPLUS MATERIALS WHICH CAN NOT BE APPROPRIATELY WASTED ON SITE SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
13. THE GRADING ON THIS PLAN SHOWS THE GENERAL INTENT AND DIRECTION OF THE STORMWATER FLOW. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY FIELD CONDITIONS THAT WILL IMPACT THE GRADING DESIGN SHOWN ON THIS PLAN FOR RESOLUTION.
14. SAWCUT AND REMOVE EXISTING PAVEMENT ONE FOOT OFF PROPOSED EDGE OF PAVEMENT OR CURB LINE IN ALL AREAS WHERE NEW PAVEMENT OR CURBING ABUTS EXISTING PAVEMENT.
15. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL.
16. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATION. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST
17. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF DOVER REGULATIONS AND NHDOT STANDARDS, AS APPLICABLE.
18. THE LIMITS OF CONSTRUCTION DISTURBANCE LOCATED IN OR WITHIN THE 50 FT OF WETLANDS DISTRICT OR CONSERVATION DISTRICT SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO THE COMMENCEMENT OF SITE WORK.
19. FINAL LOCATIONS, WIDTH & DETAILS FOR STAIRS, RETAINING WALL SHALL BE DETERMINED IN FIELD. MODIFICATIONS SHALL NOT OCCUR WITHOUT CITY INSPECTION DEPARTMENT'S APPROVAL. ALL DESIGNS FOR RETAINING WALLS AND STAIRS GREATER THAN 4' IN HEIGHT SHALL BE STAMPED BY A LICENSED STRUCTURAL ENGINEER. FINAL PLANT SELECTIONS IN PLANTERS MAY BE MODIFIED IN FIELD WITH PRIOR APPROVAL FROM INSPECTION DEPARTMENT.

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433–2335 www.ALTUS–ENG.com

STATE OF NEW HAMPSHIRE — CORY D. BELDEN No. 14239 — LICENSED PROFESSIONAL ENGINEER
9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD APPROVAL

ISSUE DATE: SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/25/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390–P4–DETAILS.dwg

SCALE: NOT TO SCALE

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

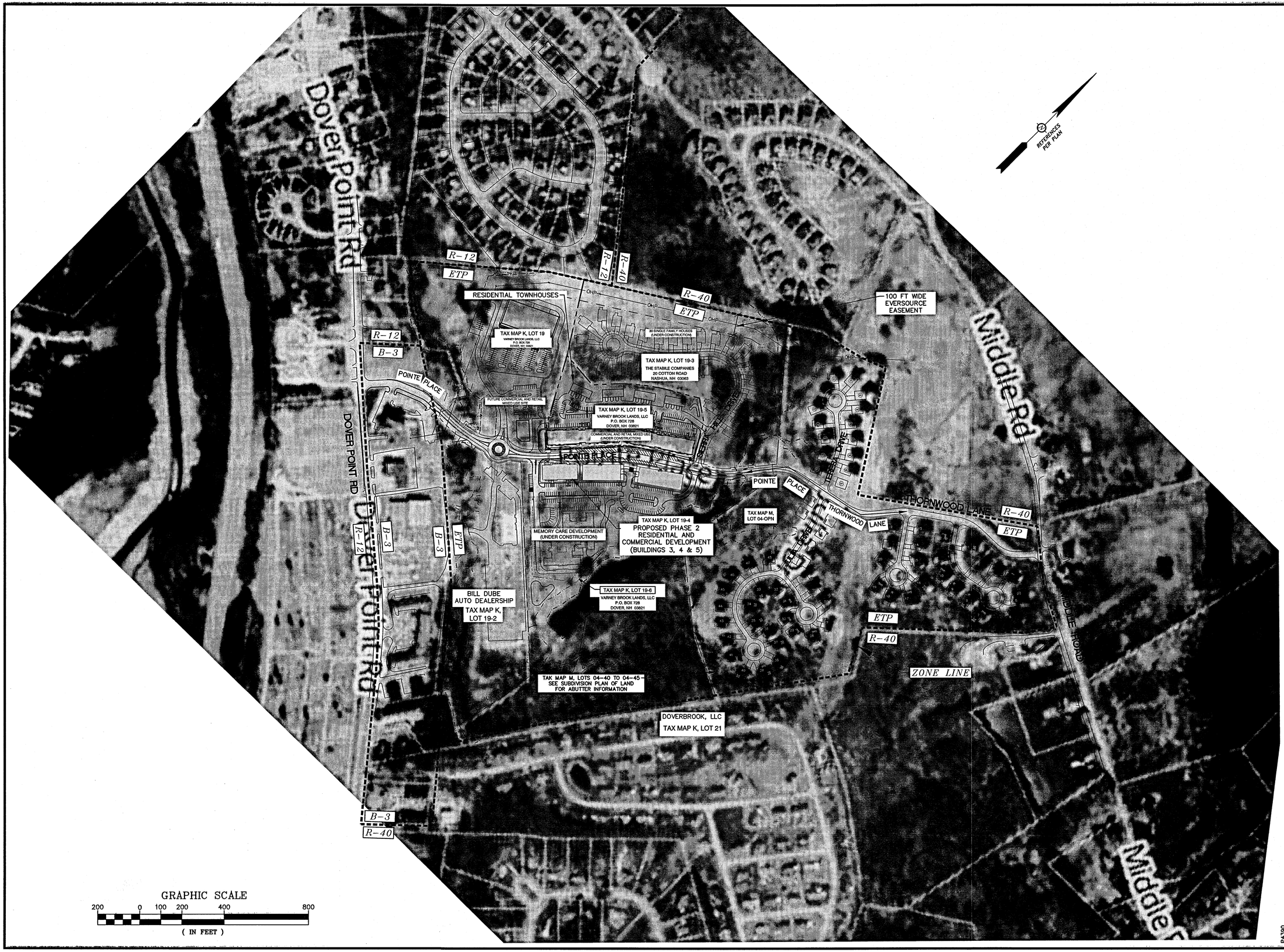
APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT
(FILE NO. P18–37)
TAX MAP K, LOT 19–4
DOVER, NH

TITLE:
NOTES AND LEGEND

SHEET NUMBER:
N-1

P4390.4



GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)

P4390

ALTUS ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE
CORY D. BELDEN
No. 14239
LICENSED PROFESSIONAL ENGINEER
9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR:
PLANNING BOARD APPROVAL

ISSUE DATE:
SEPTEMBER 11, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/11/18

DRAWN BY: _____
APPROVED BY: _____
DRAWING FILE: _____

SCALE: 24"x36" 1" = 200'
12"x18" 1" = 400'

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

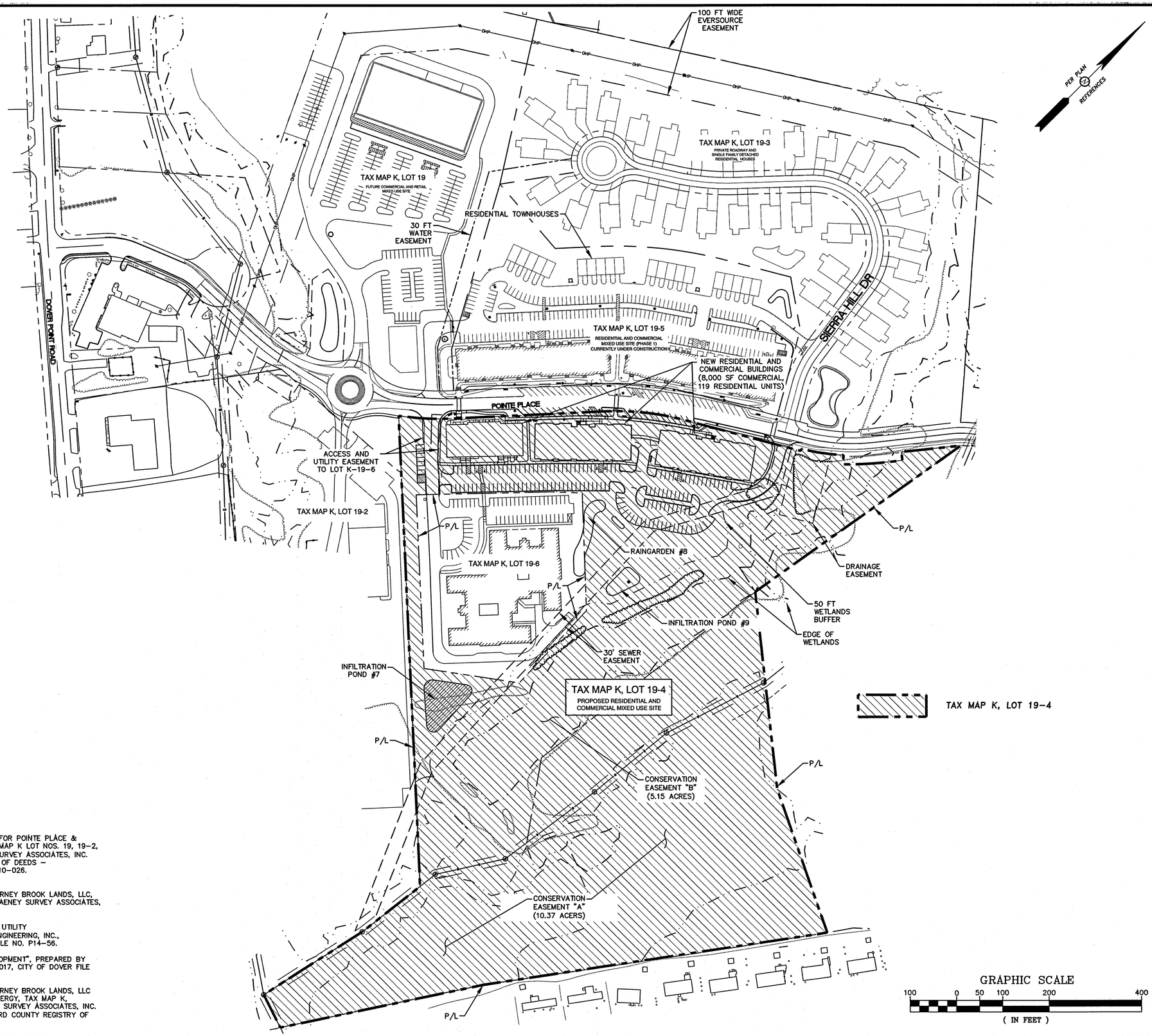
APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT

(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE:
NEIGHBORHOOD SITE PLAN

SHEET NUMBER:
S-1



PLAN REFERENCES:

1. "SUBDIVISION AND LOT LINE ADJUSTMENT PLAN" FOR POINTE PLACE & DOVER POINTE ROAD 252 LLC, SHEETS 1-4, TAX MAP K LOT NOS. 19, 19-2, 19-3, & 19-4, DATED 8/13/15 BY MCENEANEY SURVEY ASSOCIATES, INC. AND RECORDED AT STRAFFORD COUNTY REGISTRY OF DEEDS – SCRD PLANS # 110-023, 110-024, 110-025, & 110-026. CITY OF DOVER FILE NO. P15-23 & 33.
2. "SUBDIVISION PLAN OF PLAN" PREPARED FOR VARNEY BROOK LANDS, LLC, TAX MAP K, LOT NOS. 19-4 AND 19-6, BY MCENAENEY SURVEY ASSOCIATES, INC., DATED 11/17/16. SCRD PLAN 113-070.
3. "POINTE PLACE AND SIERRA DRIVE ROADWAY AND UTILITY INFRASTRUCTURE PLANS", PREPARED BY ALTUS ENGINEERING, INC., APPROVED DECEMBER 16, 2015, CITY OF DOVER FILE NO. P14-56.
3. "POINTE PLACE MEMORY CARE RESIDENTIAL DEVELOPMENT", PREPARED BY ALTUS ENGINEERING, INC., DATED FEBRUARY 21, 2017, CITY OF DOVER FILE NO. P17-05.
4. "EASEMENT RELOCATION PLAN" PREPARED FOR VARNEY BROOK LANDS, LLC AND CHANGING PLACES, LLC AND EVERSOURCE ENERGY, TAX MAP K, LOT NOS. 19, 19-1 OPN, & 19-3, BY MCENAENEY SURVEY ASSOCIATES, INC. DATED 9/30/15 AND RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS SCRD PLAN #110-043.

P4390

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR:
PLANNING BOARD APPROVAL

ISSUE DATE:
SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY:
APPROVED BY:
DRAWING FILE:

SCALE: 24"x36" 1" = 100'
12"x18" 1" = 200'

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

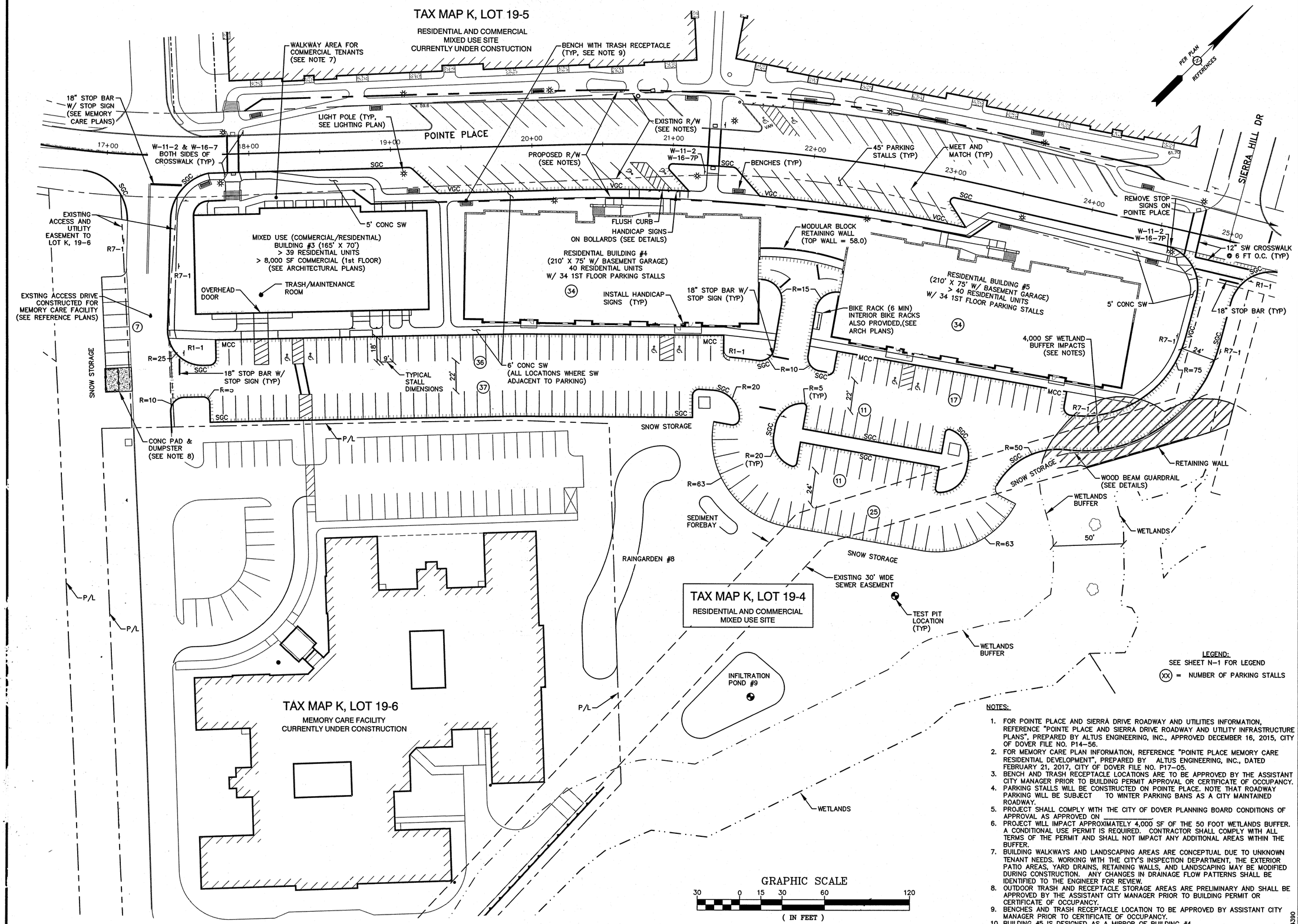
PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT

(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE:

OVERALL SITE PLAN

SHEET NUMBER:
C-1



NOTES:

1. FOR POINTE PLACE AND SIERRA DRIVE ROADWAY AND UTILITIES INFORMATION, REFERENCE "POINTE PLACE AND SIERRA DRIVE ROADWAY AND UTILITY INFRASTRUCTURE PLANS", PREPARED BY ALTUS ENGINEERING, INC., APPROVED DECEMBER 16, 2015, CITY OF DOVER FILE NO. P14-56.
2. FOR MEMORY CARE PLAN INFORMATION, REFERENCE "POINTE PLACE MEMORY CARE RESIDENTIAL DEVELOPMENT", PREPARED BY ALTUS ENGINEERING, INC., DATED FEBRUARY 21, 2017, CITY OF DOVER FILE NO. P17-05.
3. BENCH AND TRASH RECEPTACLE LOCATIONS ARE TO BE APPROVED BY THE ASSISTANT CITY MANAGER PRIOR TO BUILDING PERMIT APPROVAL OR CERTIFICATE OF OCCUPANCY.
4. PARKING STALLS WILL BE CONSTRUCTED ON POINTE PLACE. NOTE THAT ROADWAY PARKING WILL BE SUBJECT TO WINTER PARKING BANS AS A CITY MAINTAINED ROADWAY.
5. PROJECT SHALL COMPLY WITH THE CITY OF DOVER PLANNING BOARD CONDITIONS OF APPROVAL AS APPROVED ON _____
6. PROJECT WILL IMPACT APPROXIMATELY 4,000 SF OF THE 50 FOOT WETLANDS BUFFER. A CONDITIONAL USE PERMIT IS REQUIRED. CONTRACTOR SHALL COMPLY WITH ALL TERMS OF THE PERMIT AND SHALL NOT IMPACT ANY ADDITIONAL AREAS WITHIN THE BUFFER.
7. BUILDING WALKWAYS AND LANDSCAPING AREAS ARE CONCEPTUAL DUE TO UNKNOWN TENANT NEEDS. WORKING WITH THE CITY'S INSPECTION DEPARTMENT, THE EXTERIOR PATIO AREAS, YARD DRAINS, RETAINING WALLS, AND LANDSCAPING MAY BE MODIFIED DURING CONSTRUCTION. ANY CHANGES IN DRAINAGE FLOW PATTERNS SHALL BE IDENTIFIED TO THE ENGINEER FOR REVIEW.
8. OUTDOOR TRASH AND RECEPTACLE STORAGE AREAS ARE PRELIMINARY AND SHALL BE APPROVED BY THE ASSISTANT CITY MANAGER PRIOR TO BUILDING PERMIT OR CERTIFICATE OF OCCUPANCY.
9. BENCHES AND TRASH RECEPTACLE LOCATION TO BE APPROVED BY ASSISTANT CITY MANAGER PRIOR TO CERTIFICATE OF OCCUPANCY.
10. BUILDING #5 IS DESIGNED AS A MIRROR OF BUILDING #4.

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APPROVED BY: EDW
DRAWING FILE: 4390-DESIGN.dwg

SCALE: 24"x36" 1" = 30'
12"x18" 1" = 60'

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P.O. BOX 728
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL MIXED USE DEVELOPMENT
(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NII

TITLE:
SITE PLAN

SHEET NUMBER:
C-2

CB3 = EXISTING DRAINAGE STRUCTURE

SEE POINTE PLACE ROADWAY PLANS

POINTE PLACE MIXED USE DEVELOPMENT (PHASE 1) (PERMITTED & UNDER CONSTRUCTION, SEE NOTE THIS SHEET)

CB7
18+52.0, 20.0 LT
RIM = 57.90
12" INV (OUT) = 53.90

CB8
18+52.0, 20.0 RT
RIM = 57.90
12" INV (IN) = 53.60
12" INV (OUT) = 53.50

CB P313
CONVERT CB8 TO CB
WITH CURB OPENING

45' PARKING STALLS (TYP)

POINTE PLACE

POINTE PLACE R/W (SEE NOTES)

CB10
23+98.0, 20.0 RT
RIM = 58.35
12" INV (IN) = 53.95
12" INV (OUT) = 53.85

CB9
23+98.0, 20.0 LT
RIM = 58.35
12" INV (OUT) = 54.35

PER PLAN REFERENCES

SIERRA HILL DRIVE

CB P316
CONVERT TO CB
W/ CURB OPENING

CB3
17+60.0, 17.0 RT
RIM = 56.60
12" INV (IN) = 50.90
12" INV (OUT) = 50.80

CB P314

WALKWAY (SEE NOTE 5)

5' CONC SW

COMMERCIAL/ RESIDENTIAL MIXED USE BUILDING
(165' X 70')
FF=61.0

ADJUST DMH TO GRADE (58.0)

OVERHEAD DOOR TO MAINT ROOM

FLUSH CURB

RESIDENTIAL BUILDING
W/ 1ST FLOOR PARKING
(200' X 75)
FF=55.5 (GARAGE)
FF=66.0 (1ST FL)

RESIDENTIAL BUILDING
W/ 1ST FLOOR PARKING
(225' X 75')
FF=55.5 (GARAGE)
FF=66.0 (1ST FL)

CB P315

CB P301

CB P302

CB P303

DMH P304

CB P317

CB P312

SWM

CB201
RIM=55.20
12" INV. OUT=52.2

8.3% MAX SLOPE

DMH205
RIM=58.75
12" INV. IN=52.0 (CORE)
18" INV. IN=51.75
24" INV. OUT=51.65

YD1

YD2

DMH P310
REPLACE
EXIST CB

MEET AND MATCH (TYP)

CB204
RIM=57.75
18" INV. IN=50.76(P10)
24" INV. IN=50.36(P205)
24" INV. OUT=50.26

CB P311

CB P306

DMH P308

DMH P309

CB P307

CB P305

HEADWALL
18" INV. = 50.5

CB210
CB P10 (TEMP)
RIM=55.04
18" INV. OUT=50.94

RAINGARDEN #8
4,000 SF BOTTOM AREA
(SEE NOTES)

ADJUST SMH TO GRADE

ADJUST SMH TO GRADE

RETAINING WALL
TOP WALL = 54.0

12" FES
W/ RIP RAP
INV. = 48.0

SEDIMENT FOREBAY TO INFILTRATION POND #9
300 SF AREA
5 FT WEIR = 53.0

EXISTING 30' WIDE SEWER EASEMENT

TEST PIT #2

50' WETLAND BUFFER

WETLANDS

WETLANDS BUFFER

INFILTRATION POND #9
2,500 SF BOTTOM AREA
BOTTOM ELEV = 51.0
BERM = 52.5

TEST PIT #1

OVERFLOW WEIR
10 FT WIDE
ELEV= 52.0
W/ LEVEL SPREADER

12" HEADWALL
INV = 47.0

OUTLET STRUCTURE #8
RIM = 52.75 (18" BEEHIVE)
6" UD IN = 47.75
12" IN OUT = 47.65

MEMORY CARE FACILITY
(PERMITTED & UNDER CONSTRUCTION, SEE NOTE THIS SHEET)

DRAINAGE STRUCTURES

CB P301
RIM=55.00
12" INV. OUT =52.00

CB P302
RIM=54.20
12" INV. OUT=51.50

CB P303
RIM=54.20
12" INV. OUT=51.50

DMH P304
RIM=54.40
12"INV. IN=51.35 (3)
15" INV. OUT= 51.25

CB P305
RIM=45.50
15"INV. IN=51.35
15" INV. OUT= 51.25

CB P306
RIM=57.50
12" INV. OUT=53.50

CB P307
RIM=54.90
12" INV. OUT=51.20

DMH P308
RIM=55.2
15" INV. IN=51.10
12" INV. IN=51.10
15" INV. OUT=51.00

DMH P309
RIM=54.90
15" INV. IN=50.85 (3)
18" INV. OUT=50.60

DMH P310 (REPLACE CB)
RIM=59.2
12" INV. IN=54.10
15" INV. IN=51.25
18" INV. OUT=51.00

CB P311
RIM=58.7
12" INV. OUT=54.70

CB P312
RIM=54.70
12" INV. IN = 50.80
12" INV. OUT=50.70

CB P313 (CURB INLET)
RIM=59.5
(ADJUST TO GRADE)
CORE NEW 12" INV IN
FROM P314 =53.60
(MATCH EXIST)

CB P314
RIM =58.90
12" INV. OUT=54.90

CB P315
RIM =59.4
12" INV. OUT=55.5

CB P316 (CURB INLET)
CONVERT EX CB TO
CB W/CURB INLET
(MATCH EXIST)

CB P317
RIM = 54.70
12" INV. OUT = 51.00

YD1
RIM = 60.3
8" INV OUT = 57.3

YD2
RIM = 60.3
8" INV OUT = 56.3

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

NOTES:

1. FOR POINTE PLACE ROADWAY AND INFRASTRUCTURE INFORMATION. REFERENCE CITY FILE P14-56.

2. POINTE PLACE MIXED USE DEVELOPMENT ON NORTH SIDE OF POINTE PLACE (PHASE 1) PERMITTED AND UNDER CONSTRUCTION. REFERENCE CITY FILE P16-05.

3. MEMORY CARE FACILITY PERMITTED AND UNDER CONSTRUCTION. REFERENCE CITY FILE P17-05.

4. RAINGARDEN #8 HAS BEEN MODIFIED FROM THE DESIGN FOR FOR THE MEMORY CARE FACILITY (CITY FILE P17-05). THIS PROJECT EXPANDS THE RAINGARDEN TO 4,000 SF SURFACE AREA AND REVISES THE BOTTOM ELEVATION TO 50.50.

5. BUILDING PATIO AREAS ARE CONCEPTUAL DUE TO UNKNOWN TENANT NEEDS. WORKING WITH THE CITY'S INSPECTION DEPARTMENT, THE EXTERIOR PATIO AREAS, YARD DRAINS, RETAINING WALLS, AND LANDSCAPING MAY BE MODIFIED DURING CONSTRUCTION. ANY CHANGES IN DRAINAGE FLOW PATTERNS SHALL BE IDENTIFIED TO THE ENGINEER FOR REVIEW.

P4390

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STATE OF NEW HAMPSHIRE
CORY D. BELDEN
No. 14239
LICENSED PROFESSIONAL ENGINEER
9/10/2018

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SCALE: 24"x36" 1" = 40'
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DOVER, NH 03821

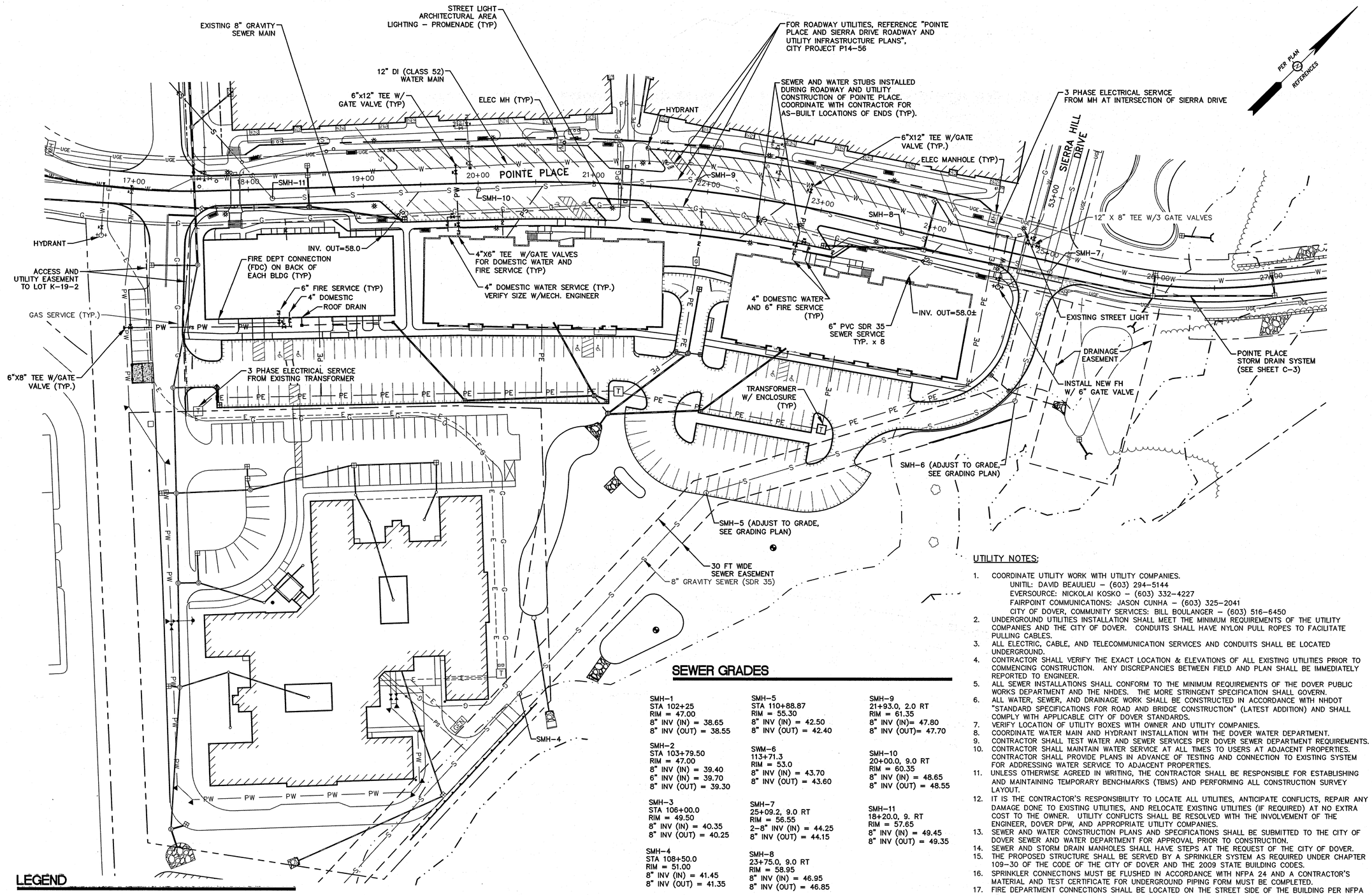
APPLICANT:
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340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT

(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE:
GRADING AND DRAINAGE PLAN

SHEET NUMBER:
C-3



SEWER GRADES

SMH-1
STA 102+25
RIM = 47.00
8" INV (IN) = 38.65
8" INV (OUT) = 38.55

SMH-2
STA 103+79.50
RIM = 47.00
8" INV (IN) = 39.40
6" INV (IN) = 39.70
8" INV (OUT) = 39.30

SMH-3
STA 106+00.0
RIM = 49.50
8" INV (IN) = 40.35
8" INV (OUT) = 40.25

SMH-4
STA 108+50.0
RIM = 51.00
8" INV (IN) = 41.45
8" INV (OUT) = 41.35

SMH-5
STA 110+88.87
RIM = 55.30
8" INV (IN) = 42.50
8" INV (OUT) = 42.40

SWM-6
113+71.3
RIM = 53.0
8" INV (IN) = 43.70
8" INV (OUT) = 43.60

SMH-7
25+09.2, 9.0 RT
RIM = 56.55
2-8" INV (IN) = 44.25
8" INV (OUT) = 44.15

SMH-8
23+75.0, 9.0 RT
RIM = 58.95
8" INV (IN) = 46.95
8" INV (OUT) = 46.85

SMH-9
21+93.0, 2.0 RT
RIM = 61.35
8" INV (IN)= 47.80
8" INV (OUT)= 47.70

SMH-10
20+00.0, 9.0 RT
RIM = 60.35
8" INV (IN) = 48.65
8" INV (OUT) = 48.55

SMH-11
18+20.0, 9. RT
RIM = 57.65
8" INV (IN) = 49.45
8" INV (OUT) = 49.35

LEGEND

- EXISTING WATER/CURB STOP/VALVE/HYDRANT
- EXISTING SEWER/MANHOLE
- EXISTING GAS/VALVE
- EXIST. OVER/UNDERGROUND UTILITIES/POLE
- ELEC MANHOLE/SECTOR CABINET/PULL BOX/TRANSFORMER
- EXISTING DRAINAGE/CB/DMH
- PROPOSED THRUST BLOCK/WATER/CURB STOP/VALVE/HYDRANT
- PROPOSED SEWER/MANHOLE/CLEANOUT
- PROPOSED NATURAL GAS
- PROPOSED OVERHEAD UTILITIES/UTILITY POLE
- PROPOSED UNDERGROUND ELECTRIC/PHONE/TV
- PROPOSED FIRE SERVICE
- PROPOSED DRAINAGE (HARD PIPE)/CB/DMH/HEADWALL

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

UTILITY NOTES:

1. COORDINATE UTILITY WORK WITH UTILITY COMPANIES.
   UNITIL: DAVID BEAULIEU – (603) 294-5144
   EVERSOURCE: NICKOLAI KOSKO – (603) 332-4227
   FAIRPOINT COMMUNICATIONS: JASON CUNHA – (603) 325-2041
   CITY OF DOVER, COMMUNITY SERVICES: BILL BOULANGER – (603) 516-6450
2. UNDERGROUND UTILITIES INSTALLATION SHALL MEET THE MINIMUM REQUIREMENTS OF THE UTILITY COMPANIES AND THE CITY OF DOVER. CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
3. ALL ELECTRIC, CABLE, AND TELECOMMUNICATION SERVICES AND CONDUITS SHALL BE LOCATED UNDERGROUND.
4. CONTRACTOR SHALL VERIFY THE EXACT LOCATION & ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD AND PLAN SHALL BE IMMEDIATELY REPORTED TO ENGINEER.
5. ALL SEWER INSTALLATIONS SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE DOVER PUBLIC WORKS DEPARTMENT AND THE NHDES. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
6. ALL WATER, SEWER, AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST ADDITION) AND SHALL COMPLY WITH APPLICABLE CITY OF DOVER STANDARDS.
7. VERIFY LOCATION OF UTILITY BOXES WITH OWNER AND UTILITY COMPANIES.
8. COORDINATE WATER MAIN AND HYDRANT INSTALLATION WITH THE DOVER WATER DEPARTMENT.
9. CONTRACTOR SHALL TEST WATER AND SEWER SERVICES PER DOVER SEWER DEPARTMENT REQUIREMENTS.
10. CONTRACTOR SHALL MAINTAIN WATER SERVICE AT ALL TIMES TO USERS AT ADJACENT PROPERTIES. CONTRACTOR SHALL PROVIDE PLANS IN ADVANCE OF TESTING AND CONNECTION TO EXISTING SYSTEM FOR ADDRESSING WATER SERVICE TO ADJACENT PROPERTIES.
11. UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBMS) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR ANY DAMAGE DONE TO EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES (IF REQUIRED) AT NO EXTRA COST TO THE OWNER. UTILITY CONFLICTS SHALL BE RESOLVED WITH THE INVOLVEMENT OF THE ENGINEER, DOVER DPW, AND APPROPRIATE UTILITY COMPANIES.
13. SEWER AND WATER CONSTRUCTION PLANS AND SPECIFICATIONS SHALL BE SUBMITTED TO THE CITY OF DOVER SEWER AND WATER DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION.
14. SEWER AND STORM DRAIN MANHOLES SHALL HAVE STEPS AT THE REQUEST OF THE CITY OF DOVER.
15. THE PROPOSED STRUCTURE SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 109-30 OF THE CODE OF THE CITY OF DOVER AND THE 2009 STATE BUILDING CODES.
16. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED.
17. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.
18. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 58, ARTICLE I, SECTION 58-2 OF THE CODE OF THE CITY OF DOVER.
19. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
20. BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
21. SEWER AND WATER SERVICE STUBS WERE INSTALLED DURING THE CONSTRUCTION OF POINTE PLACE ROADWAY. CONTRACTOR SHALL LOCATE THE ENDS OF THE EXISTING SERVICE STUBS AND EXTEND THE SERVICES TO THE BUILDINGS.
22. ALL BUILDINGS SHALL COMPLY WITH NH RSA 155:A, NH BUILDING BUILDING CODE FOR PUBLIC SAFETY AND WELFARE.
23. TRANSFORMERS TO BE SCREENED WITH ENCLOSURE. PLANTINGS MAY BE USED AS SCREENING AS APPROVED BY THE CITY OF DOVER BUILDING INSPECTION DEPT.

P4390

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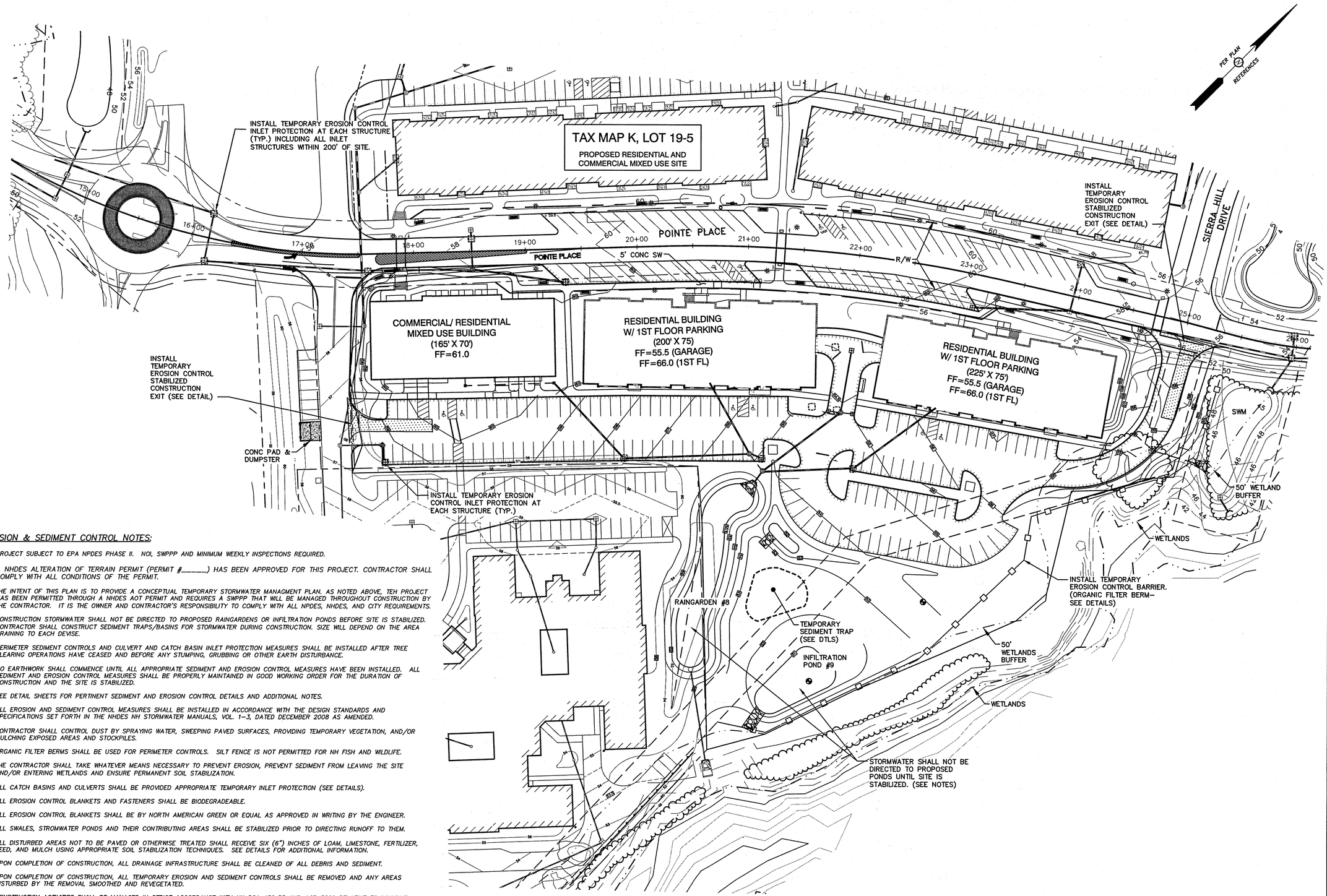
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SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
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PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT
(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE:
UTILITY PLAN

SHEET NUMBER:
C-4



EROSION & SEDIMENT CONTROL NOTES:

1. PROJECT SUBJECT TO EPA NPDES PHASE II. NOI, SWPPP AND MINIMUM WEEKLY INSPECTIONS REQUIRED.
2. A NHDES ALTERATION OF TERRAIN PERMIT (PERMIT #_____) HAS BEEN APPROVED FOR THIS PROJECT. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE PERMIT.
3. THE INTENT OF THIS PLAN IS TO PROVIDE A CONCEPTUAL TEMPORARY STORMWATER MANAGMENT PLAN. AS NOTED ABOVE, TEH PROJECT HAS BEEN PERMITTED THROUGH A NHDES AOT PERMIT AND REQUIRES A SWPPP THAT WILL BE MANAGED THROUGHOUT CONSTRUCTION BY THE CONTRACTOR. IT IS THE OWNER AND CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL NPDES, NHDES, AND CITY REQUIREMENTS.
4. CONSTRUCTION STORMWATER SHALL NOT BE DIRECTED TO PROPOSED RAINGARDENS OR INFILTRATION PONDS BEFORE SITE IS STABILIZED. CONTRACTOR SHALL CONSTRUCT SEDIMENT TRAPS/BASINS FOR STORMWATER DURING CONSTRUCTION. SIZE WILL DEPEND ON THE AREA DRAINING TO EACH DEVISE.
5. PERIMETER SEDIMENT CONTROLS AND CULVERT AND CATCH BASIN INLET PROTECTION MEASURES SHALL BE INSTALLED AFTER TREE CLEARING OPERATIONS HAVE CEASED AND BEFORE ANY STUMPING, GRUBBING OR OTHER EARTH DISTURBANCE.
6. NO EARTHWORK SHALL COMMENCE UNTIL ALL APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED IN GOOD WORKING ORDER FOR THE DURATION OF CONSTRUCTION AND THE SITE IS STABILIZED.
7. SEE DETAIL SHEETS FOR PERTINENT SEDIMENT AND EROSION CONTROL DETAILS AND ADDITIONAL NOTES.
8. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH IN THE NHDES NH STORMWATER MANUALS, VOL. 1–3, DATED DECEMBER 2008 AS AMENDED.
9. CONTRACTOR SHALL CONTROL DUST BY SPRAYING WATER, SWEEPING PAVED SURFACES, PROVIDING TEMPORARY VEGETATION, AND/OR MULCHING EXPOSED AREAS AND STOCKPILES.
10. ORGANIC FILTER BERMS SHALL BE USED FOR PERIMETER CONTROLS. SILT FENCE IS NOT PERMITTED FOR NH FISH AND WILDLIFE.
11. THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PREVENT EROSION, PREVENT SEDIMENT FROM LEAVING THE SITE AND/OR ENTERING WETLANDS AND ENSURE PERMANENT SOIL STABILIZATION.
12. ALL CATCH BASINS AND CULVERTS SHALL BE PROVIDED APPROPRIATE TEMPORARY INLET PROTECTION (SEE DETAILS).
13. ALL EROSION CONTROL BLANKETS AND FASTENERS SHALL BE BIODEGRADEABLE.
14. ALL EROSION CONTROL BLANKETS SHALL BE BY NORTH AMERICAN GREEN OR EQUAL AS APPROVED IN WRITING BY THE ENGINEER.
15. ALL SWALES, STROMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
16. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE SIX (6") INCHES OF LOAM, LIMESTONE, FERTILIZER, SEED, AND MULCH USING APPROPRIATE SOIL STABILIZATION TECHNIQUES. SEE DETAILS FOR ADDITIONAL INFORMATION.
17. UPON COMPLETION OF CONSTRUCTION, ALL DRAINAGE INFRASTRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND SEDIMENT.
18. UPON COMPLETION OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND ANY AREAS DISTURBED BY THE REMOVAL SMOOTHED AND REVEGETATED.
19. CONSTRUCTION ACTIVITIES SHALL BE MANAGED IN STRICT ACCORDANCE WITH NH RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES. NO INVASIVE SPECIES SHALL BE INSTALLED ON THE PROJECT SITE FOR ANY REASON.
20. FUGITIVE DUST SHALL BE CONTROLLED DURING CONSTRUCTION IN ACCORDANCE WITH ENV–A 1000. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DUST FROM LEAVING THE SITE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE PROACTIVE MANAGEMENT OF STOCKPILES, MATERIALS PROCESSING ACTIVITIES, VEHICULAR TRAFFIC AND THE EXCAVATION AND PLACEMENT OF EARTH MATERIALS.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

P4390

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD APPROVAL

ISSUE DATE: SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-DESIGN.dwg

SCALE: 24"x36" 1" = 40'
12"x18" 1" = 80'

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL MIXED USE DEVELOPMENT

(FILE NO. P18–37)
TAX MAP K, LOT 19–4
DOVER, NH

TITLE:
EROSION AND SEDIMENT CONTROL PLAN

SHEET NUMBER:
C-5

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

POINTE PLACE (PHASE 2) RESIDENTIAL AND COMMERCIAL MIXED USE DEVELOPMENT
DOVER POINT ROAD/MIDDLE ROAD/POINTE PLACE
DOVER, NEW HAMPSHIRE

LONGITUDE: 070° 51' 20" W
LATITUDE: 043° 10' 40" N
TAX MAP K–1 LOT 19–4

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

DESCRIPTION

The project consists of three new buildings for commercial/residential use consisting of 119 residential units and approximately 8,000 square feet of commercial space on the first floor of each building, and the associated site improvements including parking, walkways, lighting, utilities, stormwater management and landscaping improvements. The project is located on Assessor's parcel Tax Map K, Lot 19–4 in the City of Dover, NH.

DISTURBED AREA

The total area to be disturbed for the site development improvements is approximately ±190,000 SF (±4.4 acres).

PROJECT PHASING

Phase 1: Pre–load building area per geotechnical engineering recommendations.
Phase 2: Rough grade site improvements and install utility services.
Phase 3: Construct building foundations. Anticipated construction of buildings is from the west. (Building 3, Building 4 & Building 5)
Phase 4: Construct drainage system and pavement to binder coat.
Phase 5: Complete building construction.
Phase 6: Complete site improvements. Upon stabilization of site, remove temporary erosion control measures and direct storm flows to treatment practices.

NAME OF RECEIVING WATER

The majority of the site will drain to a stormwater collection system and through raingardens or an infiltration basin. The treated stormwater will outfall to a tributary that will eventually drain to Varney Brook.

SEQUENCE OF MAJOR ACTIVITIES

1. Install temporary erosion control measures including organic filter berms, stabilized construction exits and inlet sediment filters as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
2. Pre–load building area per geographical engineering recommendations,
3. Rough grade site including placement of borrow materials.
4. Construct utility services.
5. Construct drainage structures, culverts, swales and raingardens.
6. Construct building foundations, driveways and parking area base course paving & curbing.
7. Construct final grading, loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
8. Complete building construction.
9. Install top course paving, pavement markings and signs.
10. When all construction activity is complete and as each phase is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

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

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through hay bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with hay bale filters or stone check dams. Stone rip rap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

Stabilize all ditches, swales, & level spreaders prior to directing flow to them.

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

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

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

A. GENERAL

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

1. The smallest practical portion of the site shall be denuded at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.5 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built–up sediment shall be removed from silt fence or other barriers when it has reached one–third the height of the fence or bale, or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. An area shall be considered stable if one of the following has occurred:
   a. Base coarse gravels have been installed in areas to be paved;
   b. A minimum of 85% vegetated growth as been established;
   c. A minimum of 3 inches of non–erosive material such as stone of riprap has been installed; – or –
   d. Erosion control blankets have been properly installed.
9. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

B. MULCHING

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

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

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

2. Guidelines for Winter Mulch Application –

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrub plantings.
Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1–1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	* The organic matter content is between 80 and 100%, dry weight basis. * Particle size by weight is 100% passing a 6"screen and a minimum of 70 % maximum of 85% passing a 0.75" screen. * The organic portion needs to be fibrous and elongated. * Large portions of silts, clays or fine sands are not acceptable in the mix. * Soluble salts content is less than 4.0 mmhos/cm. * The pH should fall between 5.0 and 8.0.

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

C. TEMPORARY GRASS COVER

1. Seedbed Preparation –
   Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.

2. Seeding –
   a. Utilize annual rye grass at a rate of 40 lbs/acre.
   b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
   c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance –
   Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

D. FILTERS

1. Silt Fence
   a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

Physical Property	Test	Requirements
Filtering Efficiency	VTM–51	75% minimum
Tensile Strength at 20% Maximum Elongation*	VTM–52	Extra Strength 50 lb/lin in (min) Standard Strength 30 lb/lin in (min)
Flow Rate	VTM–51	0.3 gal/sf/min (min)

   * Requirements reduced by 50 percent after six (6) months of installation.

   Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizer to provide a minimum of six (6) months of expected usable construction life at a temperature range of 0 degrees F to 120° F.

   b. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location or as recommended by the manufacturer and driven securely into the ground (minimum of 16 inches).

   c. A trench shall be excavated approximately six (6) inches wide and eight (8) inches deep along the line of posts and upslope from the barrier.

   d. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire shall extend no more than 36 inches above the original ground surfaces.

   e. The "standard strength" filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

   f. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item (g) applying.

   g. The trench shall be backfilled and the soil compacted over the filter fabric.

   h. Silt fences shall be removed when they have served their useful purpose but not before the upslope areas has been permanently stabilized.

2. Sequence of Installation –
   Sediment barriers shall be installed prior to any soil disturbance of the contributing upslope drainage area.

3. Maintenance –
   a. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water, the sediment barriers shall be replaced with a temporary stone check dam.

   b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.

   c. Sediment deposits must be removed when deposits reach approximately one–third (1/3) the height of the barrier.

   d. Any sediment deposits remaining in place after the silt fence or other barrier is no longer required shall be removed. The area shall be prepared and seeded.

   e. Additional stone may have to be added to the construction entrance, rock barrier and riprap lined swales, etc., periodically to maintain proper function of the erosion control structure.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

E. PERMANENT SEEDING –

1. Bedding – stones larger than 1½", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.

2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

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

3. Seed Mixture (recommended):

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

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

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

   a. Ryegrass shall be a certified fine–textured variety such as Pennfine, Fiesta, Yorktown, Diplomat, or equal.
   b. Fescue varieties shall include – Creeping Red and/or Hard Reliant, Scaldis, Koket, or Jamestown.

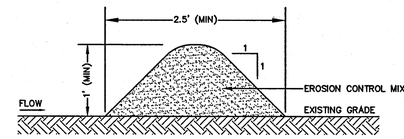
4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended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

WINTER CONSTRUCTION NOTES

1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;

2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and

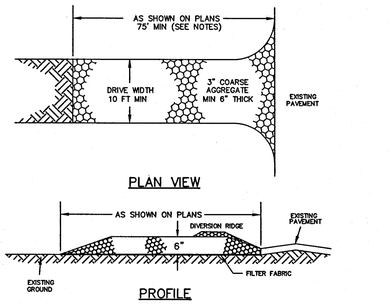
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.



NOTES

1. ORGANIC FILTER BERMS TO BE UTILIZED IN LIEU OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
2. THE EROSION CONTROL MIXTURE USED IN FILTER BERMS SHALL BE A WELL–GRADED MIX OF PARTICLE SIZES THAT MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, AND/OR ACCEPTABLE MANUFACTURED PRODUCTS AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH. EROSION CONTROL MIXTURE SHALL MEET THE FOLLOWING STANDARDS:
   a) THE ORGANIC CONTENT SHALL BE 80–100% OF DRY WEIGHT.
   b) PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70–85% PASSING A 0.75" SCREEN.
   c) THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
   d) LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE.
   e) SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
   f) THE pH SHALL BE BETWEEN 5.0 AND 8.0.
3. ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
4. ON SLOPES LESS THAN 5% OR AT THE BOTTOM OF SLOPES NO STEEPER THAN 3:1 AND UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE) AND A MINIMUM OF 36" WIDE. ON LONGER AND/OR STEEPER SLOPES, THE BERM SHALL BE TALLER AND WIDER TO ACCOMMODATE THE POTENTIAL FOR ADDITIONAL RUNOFF (MAXIMUM HEIGHT SHALL NOT EXCEED 2').
5. FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FILTER BERMS WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE BERM.
7. ORGANIC FILTER BERMS MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED PROVIDED ANY SEDIMENT DEPOSITS TRAPPED BY THEM ARE REMOVED AND DISPOSED OF PROPERLY.

ORGANIC FILTER BERM — NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. REFERENCE NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3 (LATEST EDITION), SECTION 4.2 "TEMPORARY CONSTRUCTION EXIT" REQUIREMENTS AND BMP DETAIL.
2. STONE SIZE – 3" COARSE AGGREGATE
3. THICKNESS – SIX (6) INCHES (MINIMUM).
4. LENGTH – 75 FOOT MINIMUM, OR 50 FOOT ALLOWED WHEN DIVERSION RIDGE IS PROVIDED.
5. WIDTH – 1/2 OF DRIVEWAY (10 FOOT MINIMUM).
6. FILTER FABRIC – MIRAFI 600X OR APPROVED EQUAL.
7. SURFACE WATER CONTROL – ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
8. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
9. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION EXIT — NOT TO SCALE

NOTE:
ALL FACILITIES SHOULD BE INSPECTED ON AN ANNUAL BASIS AT A MINIMUM. IN ADDITION, ALL FACILITIES SHOULD BE INSPECTED AFTER A SIGNIFICANT PRECIPITATION EVENT TO ENSURE THE FACILITY IS DRAINING APPROPRIATELY AND TO IDENTIFY ANY DAMAGE THAT OCCURRED AS A RESULT OF THE INCREASED RUNOFF. FOR THE PURPOSE OF THIS STORMWATER MANAGEMENT PROGRAM, A SIGNIFICANT RAINFALL EVENT IS CONSIDERED AN EVENT OF THREE (3) INCHES IN A 24–HOUR PERIOD OR 0.5 INCHES IN A ONE–HOUR PERIOD. IT IS ANTICIPATED THAT A SHORT, INTENSE EVENT IS LIKELY TO HAVE A HIGHER POTENTIAL OF EROSION FOR THIS SITE THAN A LONGER, HIGH VOLUME EVENT.

P4390.4

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CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD APPROVAL
ISSUE DATE: SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390–P4–DETAILS.dwg

SCALE: NOT TO SCALE

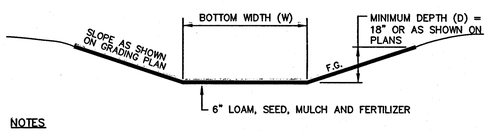
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340 CENTRAL AVE., #202
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PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT
(FILE NO. P18–37)
TAX MAP K, LOT 19–4
DOVER, NH

TITLE:
EROSION CONTROL DETAILS

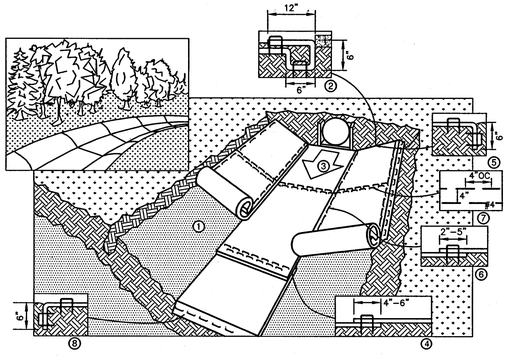
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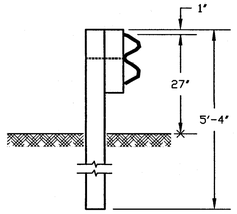


NOTES

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

VEGETATED SWALE NOT TO SCALE


12"
6"
2'-5"
4'-0" OC
4"
#4
4'-6"
1'-6"
1'-6"
1

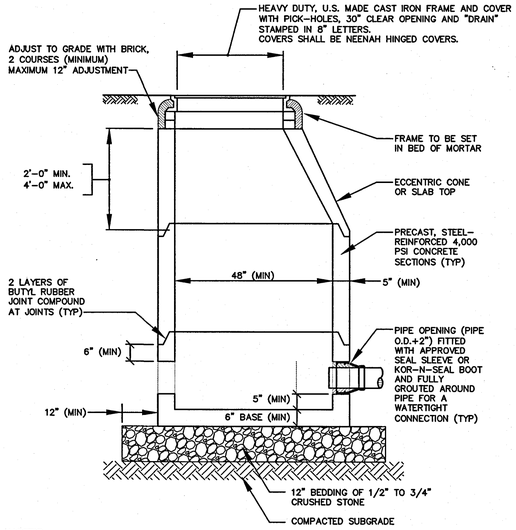


AASHTO DESIGNATION	G4(2W)
MAINE STANDARD DETAIL	HD-6
POST SPACING	6'-3"
DEFLECTION DISTANCE *	3'
POST TYPE	6" x 8" TREATED WOOD POST
BEAM TYPE	"W" SECTION, 12 GA., "CORTEN" STEEL
OFFSET BRACKETS	6" x 6" x 14" TREATED BLOCK

* CLEAR DISTANCE FROM THE BACK OF THE POST TO THE ROADSIDE OBJECTS. DECREASING THE POST SPACING TO 3.5 FEET WILL DECREASE THE DEFLECTION DISTANCE BY ONE FOOT.

"W" BEAM GUARDRAIL DETAIL (WOOD POSTS)

NOT TO SCALE

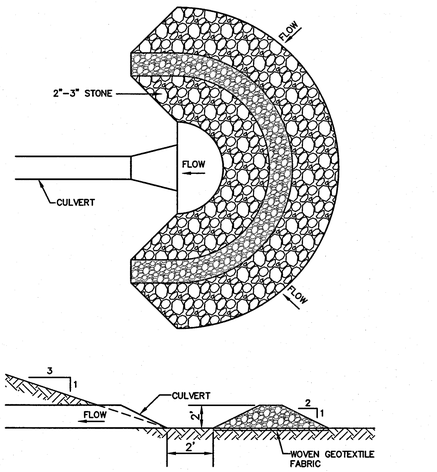


NOTES

1. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. ALL MANHOLE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. USE H-20 LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4 FT OF GRADE.
7. CITY OF DOVER INSTALLS STEPS IN DRAIN MANHOLES.

DRAIN MANHOLE DETAIL

NOT TO SCALE

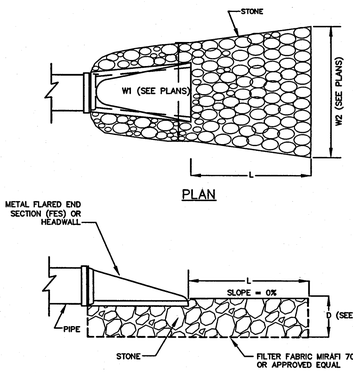


NOTES:

1. TEMPORARY CULVERT INLET PROTECTION CHECK DAMS SHALL BE CONSTRUCTED OF 2-3" CLEAN WASHED STONE OVER WOVEN GEOTEXTILE FABRIC.
2. INLET PROTECTION MEASURES SHALL BE INSTALLED AT THE OPENINGS OF ALL EXISTING AND PROPOSED CULVERTS WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER..
3. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURE WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND DISPOSED OF PROPERLY.
4. STRUCTURES SHALL BE REMOVED WHEN DIRECTED BY THE ENGINEER AND THE SITE IS STABILIZED WITH VEGETATION AND THE CHANNEL SHALL BE SMOOTHED AND REVEGETATED.

TEMPORARY CULVERT INLET PROTECTION CHECK DAM

NOT TO SCALE



PLAN

SECTION

MAINTENANCE

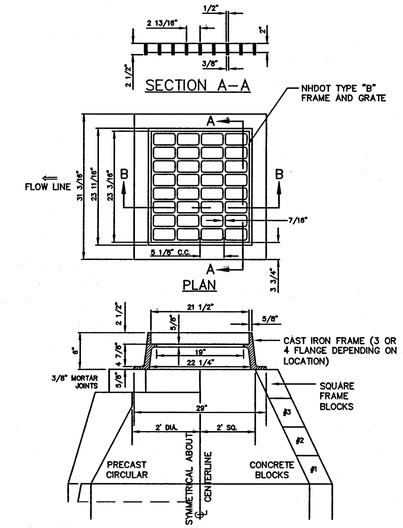
THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD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

CONSTRUCTION SPECIFICATIONS

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

RIPRAP OUTLET PROTECTION

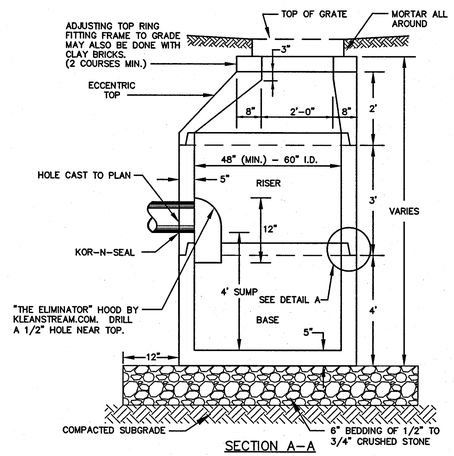
NOT TO SCALE

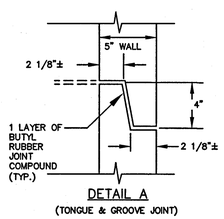


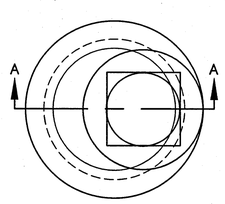
NOTES

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3. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. USE H20 LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4' OF FINISH GRADE.
7. FRAME AND GRATE DIMENSIONS ARE TYPICAL BUT MAY VARY BASED ON PRODUCT SELECTED OR EQUIVALENT APPROVED BY THE ENGINEER.

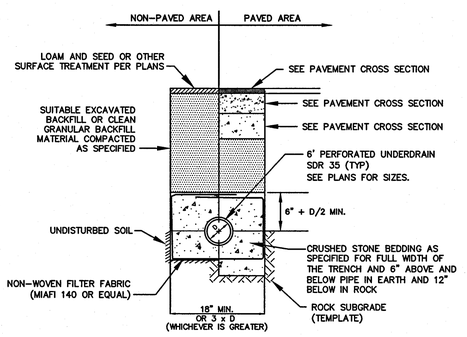
DEEP SUMP CATCH BASIN







NOT TO SCALE



BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

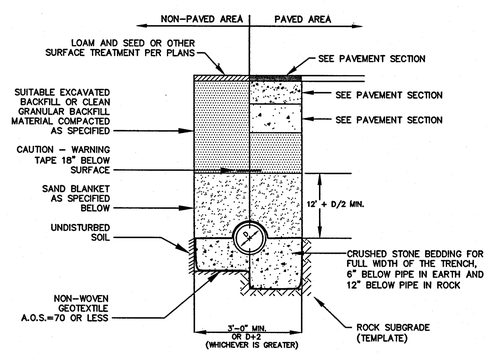
SAND BLANKET/BARRIER	
SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 - 100
200	0 - 15

SCREENED GRAVEL OR CRUSHED STONE BEDDING*	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 - 100
3/8"	20 - 55
# 4	0 - 10
# 8	0 - 5

* EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

UNDERDRAIN TRENCH SECTION

NOT TO SCALE



BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

SAND BLANKET/BARRIER	
SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 - 100
200	0 - 15

SCREENED GRAVEL OR CRUSHED STONE BEDDING*	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 - 100
3/8"	20 - 55
# 4	0 - 10
# 8	0 - 5

* EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

STORM DRAIN UTILITY TRENCH SECTION

NOT TO SCALE

P4390.4

ALTUS ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE - CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER

9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD APPROVAL

ISSUE DATE: SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-P4-DETAILS.dwg

SCALE: NOT TO SCALE

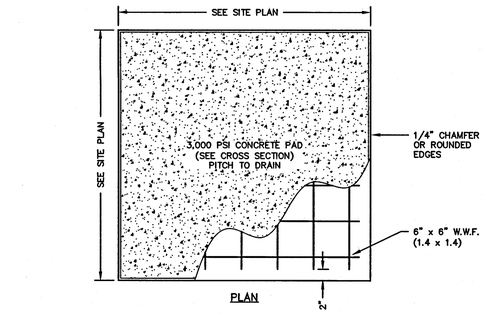
OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL MIXED USE DEVELOPMENT
(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

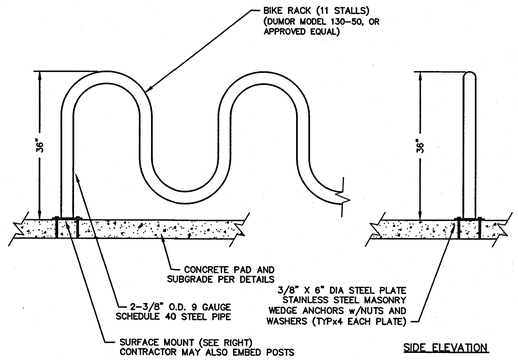
TITLE:
SITEWORK DETAILS

SHEET NUMBER:
D-3



BIKE RACK / BENCH PAD

NOT TO SCALE

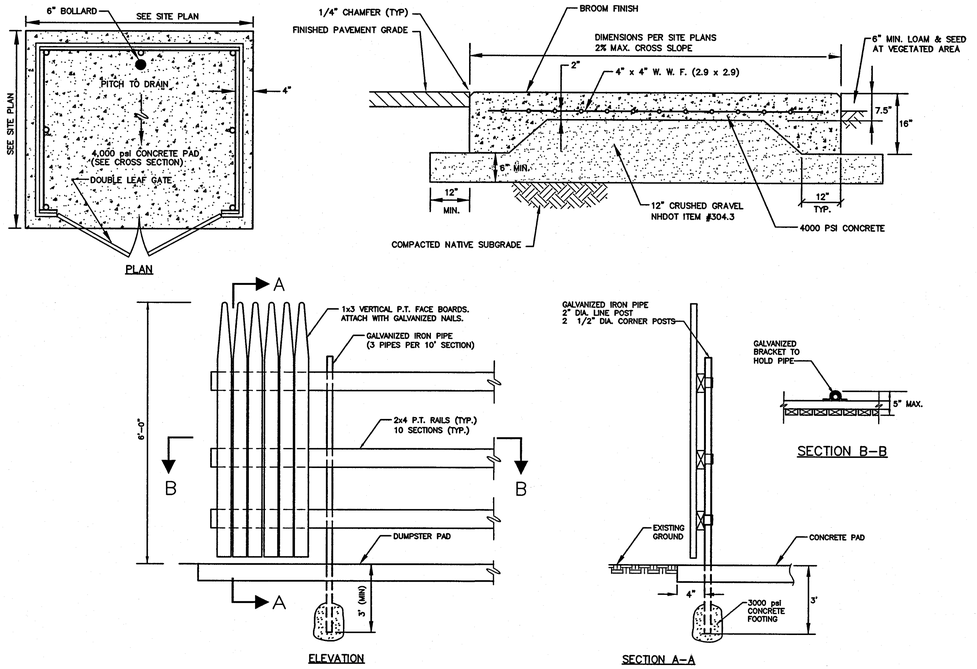


BIKE RACK

NOT TO SCALE

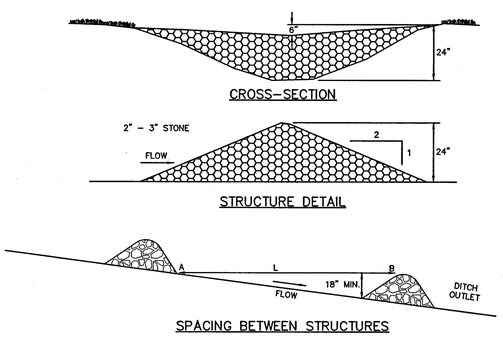
NOTES

1. ALL STEEL PIPE SHALL MEET ASTM A53.
2. ALL STEEL PLATES SHALL MEET ASTM A36.
3. RACK(S) SHALL BE INSTALLED IN THE QUANTITY AND ORIENTATION SHOWN ON THE PLANS.
4. RACK(S) TO BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
5. RACK FINISH TO BE AT THE OWNER'S DISCRETION. OPTIONS INCLUDE BUT MAY NOT BE LIMITED TO GALVANIZED, POWDER COATED OR STAINLESS STEEL.
6. BOLTS MAY BE EMBEDDED IN CONCRETE DURING POUR OR DRILLED INTO PAD AT CONTRACTOR'S DISCRETION.
7. SEE CONCRETE BIKE RACK PAD DETAIL.
8. CONTRACTOR MAY SUBSTITUTE AN IN-GROUND MOUNTED RACK AFTER REVIEW AND APPROVAL BY THE ENGINEER.



DUMPSTER ENCLOSURE AND PAD

NOT TO SCALE



1. L = DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION
2. CHECK DAM SHALL BE CONSTRUCTED OF 2" TO 3" STONE WITH COMPLETE COVERAGE OF DITCH OR SWALE TO INSURE THAT THE CENTER OF THE STRUCTURE IS LOWER THAN THE EDGES.

MAINTENANCE

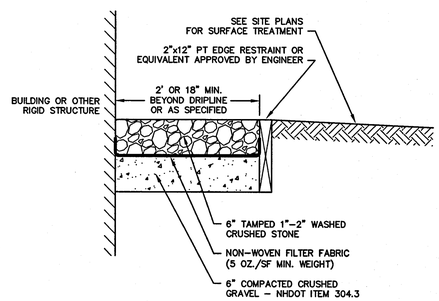
TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED, AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

CONSTRUCTION SPECIFICATIONS

1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATE VEGETATIVE BMP.
4. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

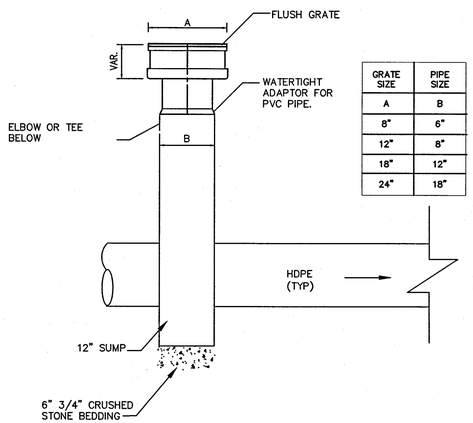
STONE CHECK DAM

NOT TO SCALE



STONE DRIP EDGE

NOT TO SCALE



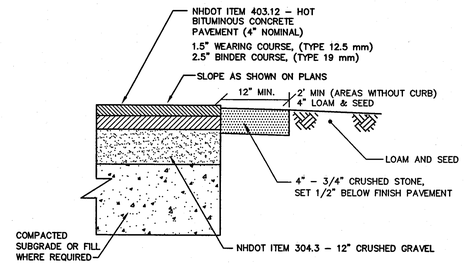
GRATE SIZE	PIPE SIZE
A	B
8"	6"
12"	8"
18"	12"
24"	18"

YARD DRAIN NOTES:

1. INLINE DRAIN TO BE PVC DIAMETER AS SPECIFIED AND AS MANUFACTURED BY ADS 1-800-821-6710 OR APPROVED EQUAL.
2. THE CONTRACTOR SHALL INSTALL THE INLINE DRAIN AS PER THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON THE DRAWINGS.

YARD DRAIN AND GRATE

NOT TO SCALE



NOTES:

1. INSTALL TACK COAT TO BINDER COURSE PAVEMENT PRIOR TO INSTALLING WEARING COURSE.
2. REMOVE LEDGE WITHIN 30" OF SURFACE.
3. ALL LOAM, CLAY, MUCK, ORGANIC AND/OR YIELDING MATERIAL SHALL BE REMOVED TO A DEPTH OF NO LESS THAN 22" BELOW FINISH GRADE. INSTALL COMPACTED SAND OR GRAVEL BORROW TO SUBGRADE, AS NECESSARY.
4. SUBGRADE SHALL BE FREE OF VOIDS THAT ALLOW MOVEMENT/SETTLEMENT OF MATERIALS.
5. SUBGRADE SHALL BE PROOF ROLLED WITH A FULLY LOADED DUMP TRUCK PRIOR TO PLACEMENT OF GRAVEL. PROOF ROLLING TO BE VIEWED AND APPROVED BY ENGINEER.

STANDARD PAVEMENT CROSS SECTION

NOT TO SCALE

P4390.4

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STATE OF NEW HAMPSHIRE
CORY D BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER
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APPROVED BY: EDW
DRAWING FILE: 4390-P4-DETAILS.dwg

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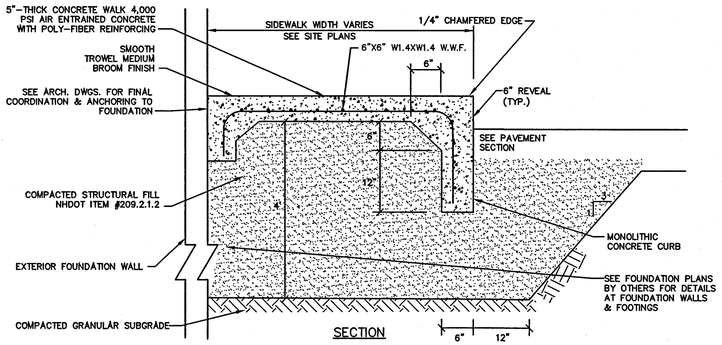
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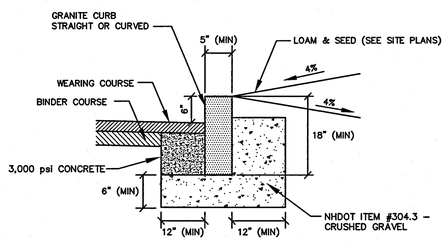
TITLE:
SITEWORK DETAILS

SHEET NUMBER:
D-4



CONCRETE SLAB (SIDEWALKS) DETAILS @ BLDG. ENTRANCE

NOT TO SCALE



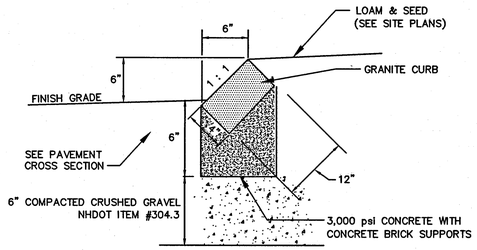
NOTES

1. SEE PLANS FOR CURB LOCATION.
2. SEE PLANS FOR PAVEMENT CROSS SECTION.
3. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
4. MINIMUM LENGTH OF CURB STONES = 4'.
5. MAXIMUM LENGTH OF CURB STONES = 10'.
6. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART.
7. CURB ENDS TO ROUNDED AND BATTERED FACES TO BE CUT WHEN CALLED FOR ON THE PLANS.
8. CURB SHALL BE INSTALLED PRIOR TO PLACEMENT OF TOP PAVEMENT COURSE.
9. JOINTS BETWEEN CURB STONES SHALL BE MORTARED.

RADIUS	MAX. LENGTH
21'	3'
22'–28'	4'
29'–35'	5'
36'–42'	6'
43'–49'	7'
50'–56'	8'
57'–60'	9'
OVER 60'	10'

VERTICAL GRANITE CURB

NOT TO SCALE



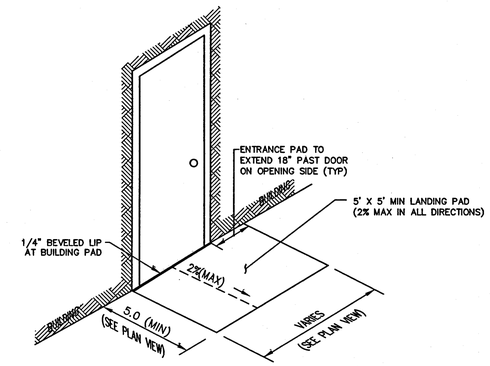
NOTES

1. SEE SITE PLAN FOR LIMITS OF CURBING
2. ADJOINING STONES OF STRAIGHT CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART

RADIUS FOR STONES WITH SQUARE JOINTS	MAXIMUM LENGTH
16'–28'	1'–6"
29'–41'	2'
42'–55'	3'
56'–68'	4'
69'–82'	5'
83'–96'	6'
97'–110'	7'
OVER 110'	8'

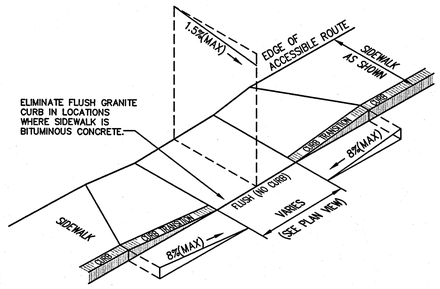
SLOPED GRANITE CURB

NOT TO SCALE



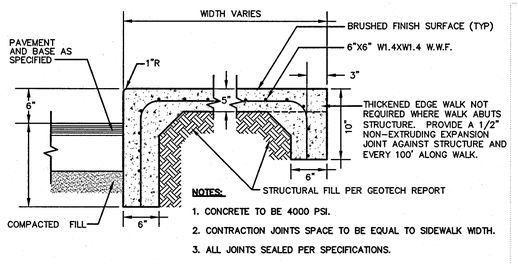
ADA ACCESSIBLE ENTRANCE PAD

NOT TO SCALE



CURB RAMP (TYPE 'A')

NOT TO SCALE

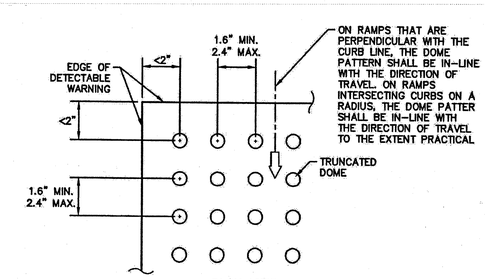


NOTES:

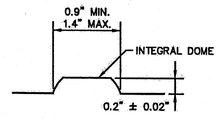
1. CONCRETE TO BE 4000 PSI.
2. CONTRACTION JOINTS SPACE TO BE EQUAL TO SIDEWALK WIDTH.
3. ALL JOINTS SEALED PER SPECIFICATIONS.

MONOLITHIC CONCRETE CURB

NOT TO SCALE



PLAN VIEW



TRUNCATED DOME

DETECTABLE WARNING NOTES:

1. BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.
2. ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES FROM THE BACK OF CURB.
3. THE TOP WIDTH OF THE DOME SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER.
4. WARNING PANELS TO BE CAST IRON.
5. PANEL SHALL BE INSTALLED SO THAT THE EDGE CLOSEST TO THE CURB LINE IS BETWEEN 6" AND 8" FROM THE CURB LINE.

DETECTABLE WARNING DETAIL

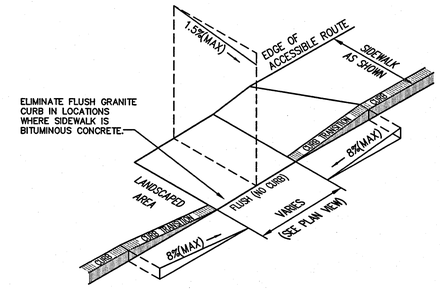
NOT TO SCALE

NOTES APPLICABLE TO ALL CURB RAMPS:

1. THE MAXIMUM ALLOWABLE CROSS SLOPE OF AN ACCESSIBLE ROUTE (SIDEWALK) AND CURB SHALL BE 1.5%
2. THE MAXIMUM ALLOWABLE RUNNING SLOPE OF AN ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%
3. THE MAXIMUM ALLOWABLE RUNNING SLOPE OF AN ACCESSIBLE ROUTE (SIDEWALK) CURB RAMP SHALL BE 8.3% FOR A MAXIMUM ELEVATION CHANGE OF 6".
4. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
5. BASE OF RAMP SHALL BE GRADED TO PREVENT THE PONDING OF WATER.
6. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
7. ALL CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) AND ALL APPLICABLE CODES.
8. FLUSH CURB SECTIONS SHALL HAVE A MAXIMUM LIP REVEAL OF 1/4" WITH A BEVEL AT THE EDGE OF PAVEMENT.
9. EDGES OF SIDEWALK FOOTINGS ALONG FLUSH CURBS SHALL BE HAUNCHED SO AS TO EXTEND TO A MINIMUM DEPTH OF 1' BELOW FINISH GRADE.
10. NO RAMP SHALL BE LESS THAN 4' IN WIDTH.
11. CURB RAMPS SHALL HAVE A FLAT 2% MAX LANDING AT THE TOP AND BOTTOM OF TEH RAMPS WHEN THERE IS A CHANGE IN DIRECTION.

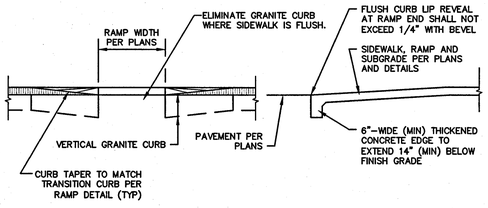
CURB RAMP NOTES

NOT TO SCALE



CURB RAMP (TYPE 'I')

NOT TO SCALE



FLUSH CURB AT RAMP DETAIL

NOT TO SCALE

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STATE OF NEW HAMPSHIRE – CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER – 9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD APPROVAL

ISSUE DATE: SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-P4-DETAILS.dwg

SCALE: NOT TO SCALE

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

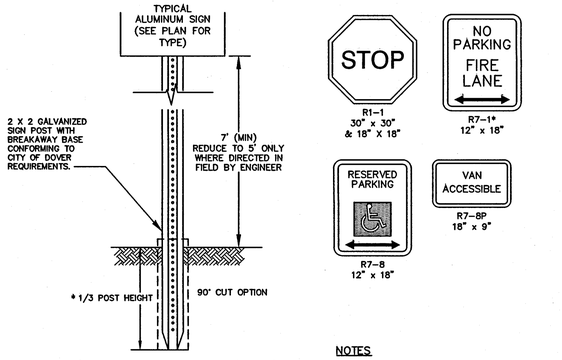
APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL MIXED USE DEVELOPMENT
(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE: *SITEWORK DETAILS*

SHEET NUMBER: D-5

P:4390.4



NOTES

1. ALL SIGNS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. ALL SIGN POSTS SHALL BE 2 X 2 GALVANIZED WITH BREAKAWAY BASE.

LENGTH: AS REQUIRED

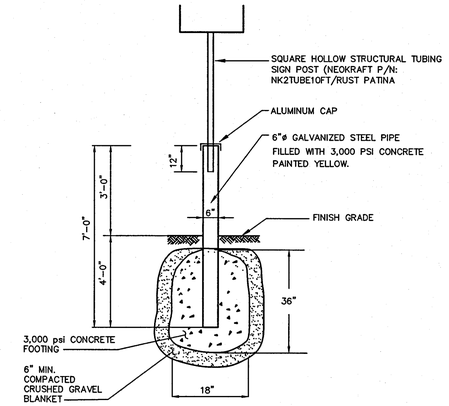
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)

HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH

STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)

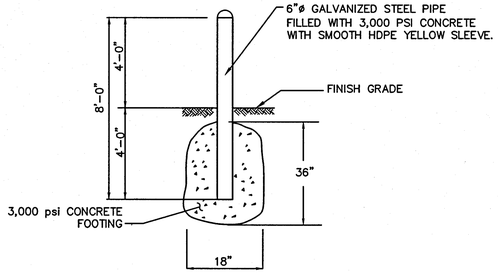
SIGN DETAILS

NOT TO SCALE



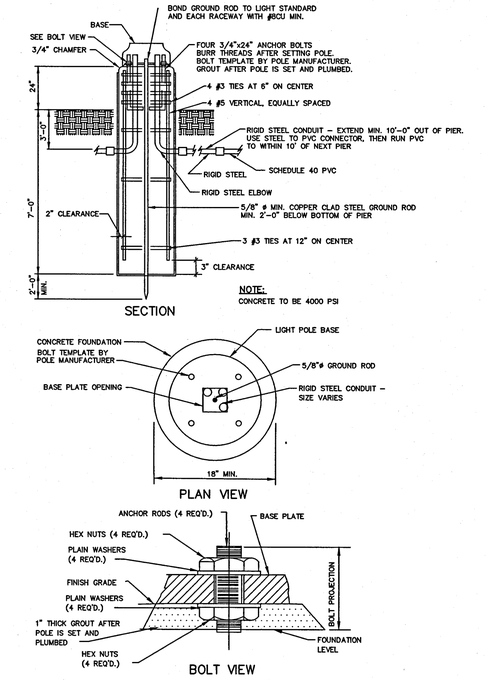
SIGN BOLLARD DETAIL

NOT TO SCALE



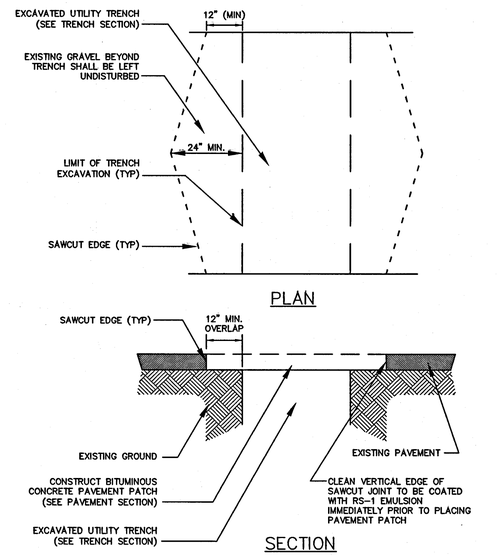
BOLLARD

NOT TO SCALE



LIGHT POLE BASE DETAIL

NOT TO SCALE

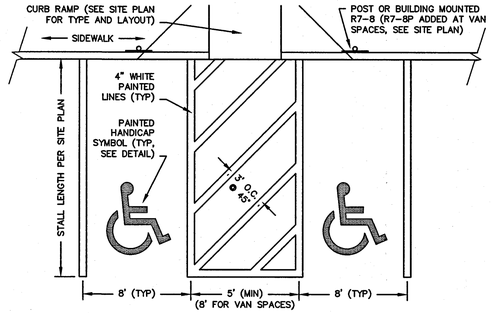


NOTES

1. MACHINE CUT EXISTING PAVEMENT.
2. ALL TEMPORARY, DAMAGED OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET NHDOT REQUIREMENTS.

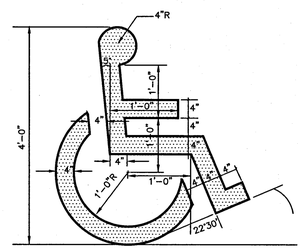
TYPICAL TRENCH PATCH

NOT TO SCALE



HANDICAP PARKING STALL LAYOUT

NOT TO SCALE

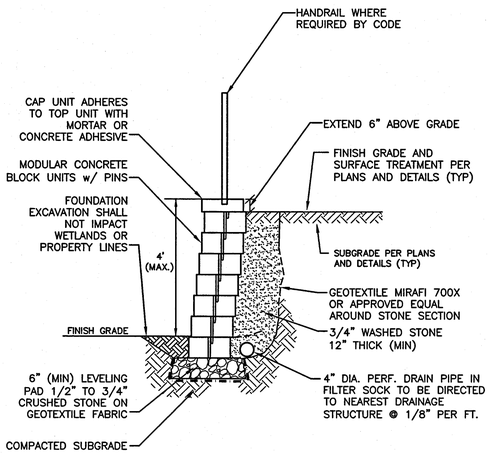


NOTES

1. SYMBOL TO BE PAINTED IN ALL HANDICAPPED ACCESSIBLE SPACES IN WHITE PAINT (BLUE-PAINTED SQUARE BACKGROUND OPTIONAL).

PAINTED HANDICAP SYMBOL

NOT TO SCALE

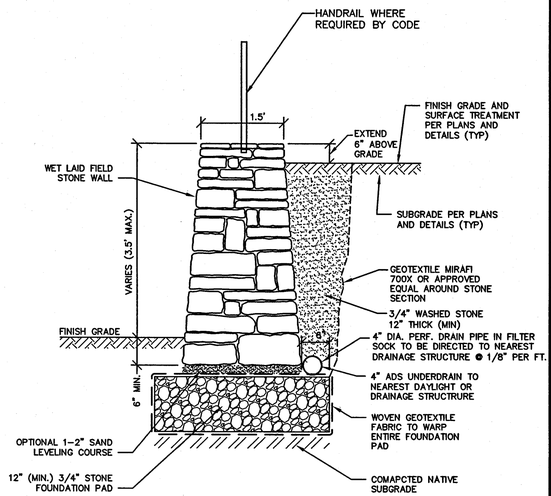


NOTES:

1. TYPICAL MODULAR BLOCK SHALL BE PRECAST CONCRETE MEASURING APPROXIMATELY 16"x12"x6". OTHER BLOCK SIZES MAY BE APPROVED BY THE ENGINEER UPON REQUEST. CAP UNITS SHALL BE PER THE STANDARDS OF THE SELECTED MANUFACTURER.
2. BLOCK MANUFACTURER SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
3. WALL SHALL BE INSTALLED PER THE REQUIREMENTS OF THE MANUFACTURER.
4. WALL HEIGHT SHALL NOT EXCEED 4' WITHOUT DESIGN DRAWINGS STAMPED BY A PROFESSIONAL STRUCTURAL ENGINEER.
5. LOCKING PINS MAY OR MAY NOT BE REQUIRED BASED ON THE WALL MANUFACTURER APPROVED BY THE ENGINEER.
6. WALL SHALL BE EMBEDDED BELOW EXISTING GRADE THE DEPTH OF AT LEAST ONE BLOCK UNLESS OTHERWISE SPECIFIED BY THE WALL MANUFACTURER.
7. WALL BATTER SHALL BE PER THE MANUFACTURER'S SPECIFICATIONS.
8. BLOCK FINISH SHALL BE AT THE DISCRETION OF THE OWNER.
9. MODULAR BLOCK RETAINING WALL SHALL BE VERSA-LOK RETAINING WALL SYSTEMS (OR APPROVED EQUAL).

MODULAR BLOCK RETAINING WALL

NOT TO SCALE



NOTES:

1. FIELD STONE FINISH PER OWNER.
2. FIELD STONE WALL TO BE WET LAID, MORTAR SPECIFICATIONS AT CONTRACTOR'S DISCRETION. MORTAR SHALL NOT BE VISIBLE FROM EXTERIOR OF WALL EXCEPT AT WALL CAP.
3. WALL HEIGHT SHALL NOT EXCEED 4' WITHOUT DESIGN DRAWINGS STAMPED BY A PROFESSIONAL STRUCTURAL ENGINEER.
4. WALL SHALL BE EMBEDDED BELOW EXISTING GRADE THE DEPTH OF AT LEAST SIX INCHES.
5. 1"-2" SAND LEVELING COURSE MAY BE USED BETWEEN FOUNDATION PAD AND AND BOTTOM OF WALL AT CONTRACTOR'S DISCRETION.
6. WALL BATTER SHALL BE 1:12 (MIN).
7. WOVEN GEOTEXTILE FABRIC SHALL WRAP AROUND ENTIRE 3/4" STONE FOUNDATION PAD.

STONE RETAINING WALL

NOT TO SCALE

P4390.4

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9/10/2018

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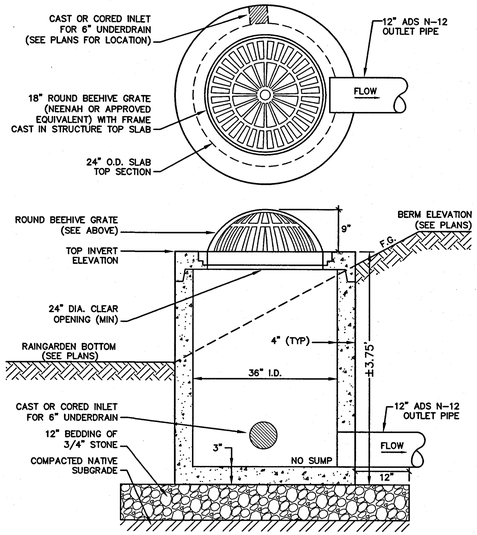
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(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE: SITEWORK DETAILS

SHEET NUMBER: D-6

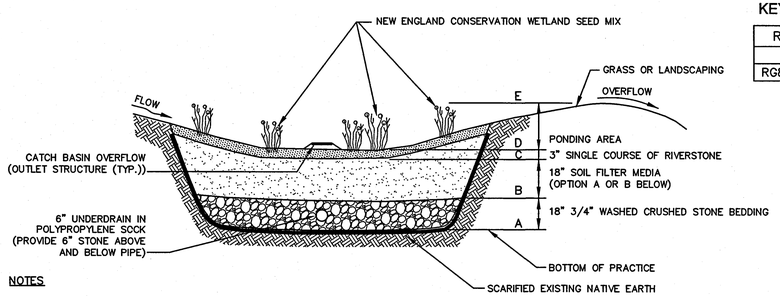


CONSTRUCTION SPECIFICATIONS

1. OUTLET STRUCTURE SHALL BE CONSTRUCTED ONSITE OR PRECAST TO EQUAL DIMENSIONS.
2. ALL JOINTS AND PIPE OPENINGS SHALL BE SEALED WATERTIGHT WITH MORTAR.
3. STRUCTURE IS TO BE BUILT TO WITHSTAND H20 LOADING.
4. SOIL UNDERLYING THE STRUCTURE'S GRAVEL BASE PAD AND THE PAD ITSELF ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR.
5. ALL CONCRETE SHALL BE 4,000 PSI MINIMUM.

OUTLET STRUCTURE

NOT TO SCALE



KEY ELEVATIONS

RAINGARDEN ELEVATIONS TABLE					
	A	B	C	D	E
RGB	47.25	48.75	50.25	50.50	54.00

NOTES

1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL FILTER MEDIA SHALL EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.

MAINTENANCE REQUIREMENTS

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, PRUNING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.

DESIGN REFERENCES

- UNH STORMWATER CENTER
- EPA (1999A)
- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.

CRUSHED STONE BEDDING *

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 –10
# 8	0 – 5

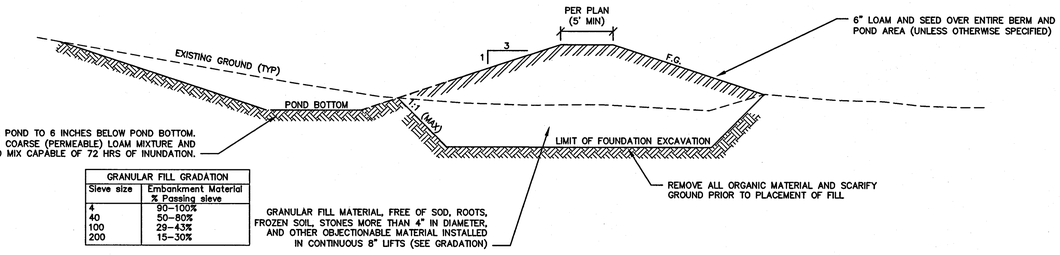
* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 OF NHDOT NHDOT STANDARD SPECIFICATIONS

FILTER MEDIA MIXTURES

Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Filter Media Option B			
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Loamy coarse sand	70 to 80	10	85 to 100
		20	70 to 100
		60	15 to 40
		200	8 to 15

TYPICAL RAINGARDEN

NOT TO SCALE



GRANULAR FILL GRADATION	
Sieve size	Embankment Material % Passing sieve
4	90–100%
40	50–80%
100	29–43%
200	15–30%

Construction Criteria

1. Foundation Preparation -- The foundation shall be cleared of trees, logs, stumps, roots, brush, boulders, sod, and rubbish. If suitable for reuse, the topsoil and sod shall be stockpiled and spread on the completed embankment and spillways. Foundation surfaces shall be sloped no steeper than 1:1. The foundation area shall be thoroughly scarified before placement of fill material. The surface shall have moisture added and/or it shall be compacted if necessary so that the first layer of fill can be bonded to the foundation.

   The cutoff trench and any other required excavations shall be dug to the lines and grades shown on the plans or as staked in the field. If they are suitable, excavated materials shall be used in the permanent fill.

   Existing stream channels in the foundation area shall be sloped no steeper than 1:1 and deepened and widened as necessary to remove all stones, gravel, sand, stumps, roots, and other objectionable material and to accommodate compaction equipment.

   Foundation areas shall be kept free of standing water when fill is being placed on them.

2. Granular Fill Placement -- The material placed in the fill shall be free of sod, roots, frozen soil, stones more than 4 inches in diameter and other objectionable material.

   Selected backfill material shall be placed around structures, pipe conduits, and drainage diaphragm at about the same rate on all sides to prevent damage from unequal loading.

   The placing and spreading of fill material shall be started at the lowest point of the foundation and the fill brought up in horizontal layers of such thickness that the required compaction can be obtained. The fill shall be constructed in 8" continuous horizontal layers except where openings or sectionalized fills are required. In those cases, the slope of the bonding surfaces between the embankment in place and the embankment to be placed shall not be steeper than 3 horizontal to 1 vertical. The bonding surface shall be treated the same as that specified for the foundation so as to insure a good bond with the new fill.

   The distribution and gradation of materials shall be such that no lenses, pockets, streaks, or layers of material differ substantially in texture of gradation from the surrounding material. If it is necessary to use materials of varying texture and gradation, the more impervious material shall be placed in the center and upstream parts of the fill. If zoned fills of substantially differing materials are specified, the zones shall be placed according to the lines and grades shown on the drawings. The complete work shall conform to the lines, grades, and elevations shown on the drawings or as staked in the field.

3. Moisture Control -- The moisture content of the fill material shall be adequate for obtaining the required compaction. Material that is too wet shall be dried to meet this requirement, and material that is too dry shall have water added and mixed until the requirement is met.

4. Compaction -- Construction equipment shall be operated over the areas of each layer of fill to insure that the required compaction is obtained. Special equipment shall be used if needed to obtain the required compaction.

   Fill material shall be compacted to not less than 95% of AASHTO T99 Method C compaction method.

   Fill adjacent to structures, pipe conduits, and drainage diaphragm shall be compacted to a density equivalent to that of the surrounding fill by means of hand tamping or manually directed power tamper or plate vibrators. Fill adjacent to concrete structures shall not be compacted until the concrete is strong enough to support the load.

5. Protection -- A protective cover of vegetation shall be established on all exposed surfaces of the embankment, spillway, and borrow area in accordance with the plans. If soil or climatic conditions preclude the use of vegetation and protection is needed, non-vegetative means, such as mulches or gravel, may be used. In some places, temporary vegetation may be used until conditions permit establishment of permanent vegetation.

Maintenance

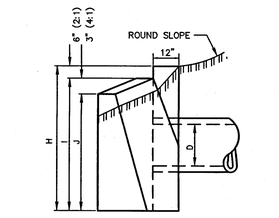
Maintenance is necessary if detention/retention basins are to continue to function as originally designed. A local government, a designated group such as a homeowners' association, or an individual must be assigned responsibility for maintaining the structures and the basin area. A maintenance plan should be developed that outlines the maintenance operations and a schedule for carrying out the procedures.

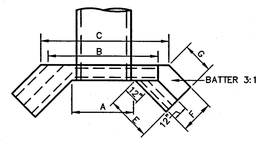
The following should be considered in formulating a maintenance plan:

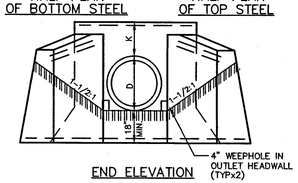
1. Embankment -- The embankment should be inspected annually to determine if rodent burrows, wet areas, or erosion of the fill is taking place.
2. Vegetation -- The vegetated areas of the structure should be protected from damage by fire, grazing, traffic, and dense weed growth. Lime and fertilizer should be applied as necessary as determined by soil tests. Trees and shrubs should be kept off the embankment and emergency spillway areas.
3. Sediment -- Sediment should be continually checked in the basin. When sediment accumulations reach the predetermined design elevation, then the sediment should be removed and properly disposed of.
4. Safety Inspections -- All permanent impoundments should be inspected by a qualified professional engineer on a periodic basis. If there is potential for significant damage or loss of life downstream, then the inspection should be carried out annually.
5. MAINTENANCE OF THE INFILTRATION BASINS WILL BE THE RESPONSIBILITY OF THE HOA AND ANNUAL INSPECTION REPORTS SHALL BE SUBMITTED TO THE TOWN CODE ENFORCEMENT OFFICER.

INFILTRATION POND BERM DETAIL

NOT TO SCALE







DIA. D INCHES	DIMENSIONS (2:1 SLOPE)									
	A	B	C	E	F	G	H	I	J	K
12"–15"	2'–0"	4'–1"	5'–4"	3'–0"	1'–9"	2'–0"	4'–3"	3'–9"	3'–4"	1'–6"
18"	2'–6"	4'–7"	5'–10"	3'–0"	1'–9"	2'–0"	4'–6"	4'–0"	3'–7"	1'–6"

CONCRETE HEADWALL w/WINGWALLS

NOT TO SCALE

P4390.4

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
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STATE OF NEW HAMPSHIRE — CORY D. BELDEN No. 14299 LICENSED PROFESSIONAL ENGINEER
9/10/2018

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ISSUED FOR: PLANNING BOARD APPROVAL

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DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-P4-DETAILS.dwg

SCALE: NOT TO SCALE

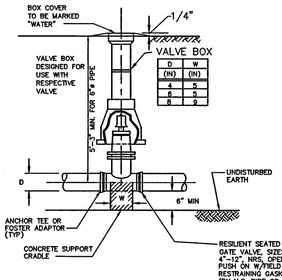
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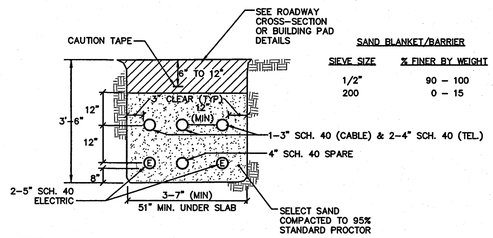
TITLE: SITEWORK DETAILS

SHEET NUMBER: D-7



WATER VALVE DETAIL

NOT TO SCALE



SAND BLANKET/BARRIER

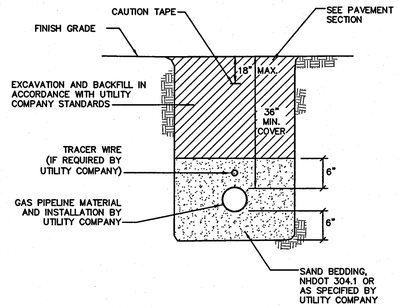
SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. ALL CONDUIT IS TO BE SCHEDULE 40 PVC, ELECTRICAL GRADE, GRAY IN COLOR AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. A 10-FOOT HORIZONTAL SECTION OF RIGID GALVANIZED STEEL CONDUIT WILL BE REQUIRED AT EACH SWEEP, UNLESS IN THE OPINION OF THE SERVICE PROVIDER DESIGNER, THE SWEEP-PVC JOINT IS NOT SUBJECT TO FAILURE DURING PULLING OF THE CABLE. ALL JOINTS ARE TO BE WATERTIGHT.
2. ALL 90 DEGREE SWEEPS WILL BE MADE WITH RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES.
3. BACKFILL MAY BE MADE WITH EXCAVATED MATERIAL OR COMPARABLE, UNLESS MATERIAL IS DEEMED UNSUITABLE BY SERVICE PROVIDER. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE IN 6-INCH LAYERS AND THOROUGHLY COMPACTED.
4. A SUITABLE PULLING STRING, CAPABLE OF 300 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE SERVICE PROVIDER IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT. A MINIMUM OF TWENTY-FOUR (24") INCHES OF ROPE SLACK SHALL REMAIN AT THE END OF EACH DUCT. PULL ROPE SHALL BE INSTALLED IN ALL CONDUIT FOR FUTURE PULLS. PULL ROPE SHALL BE NYLON ROPE HAVING A MINIMUM TENSILE STRENGTH OF THREE HUNDRED (300#) LBS.
5. SERVICE PROVIDER SHALL BE GIVEN THE OPPORTUNITY TO INSPECT ALL CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD SERVICE PROVIDER BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. TYPICAL CONDUIT SIZES ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY. HOWEVER, SERVICE PROVIDERS MAY REQUIRE DIFFERENT NUMBERS, TYPES AND SIZES OF CONDUIT THAN THOSE SHOWN HERE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDUIT SIZES, TYPES AND NUMBERS WITH EACH SERVICE PROVIDER PRIOR TO ORDERING THEM.
7. ROUTING OF CONDUIT, LOCATION OF MANHOLES, TRANSFORMERS, CABINETS, HANDHOLES, ETC., SHALL BE DETERMINED BY SERVICE PROVIDER DESIGN PERSONNEL. THE CONTRACTOR SHALL COORDINATE WITH ALL SERVICE PROVIDERS PRIOR TO THE INSTALLATION OF ANY CONDUIT.
8. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE. WHERE REQUIRED BY UTILITY PROVIDER, CONDUIT SHALL BE SUPPORTED IN PLACE USING PIPE STANCHIONS PLACED EVERY FIVE (5') FEET ALONG THE CONDUIT RUN.
9. UNDER A BUILDING SLAB THE CONDUIT SHALL BE ENCASED IN 8" OF CONCRETE ON ALL SIDES.
10. ALL CONDUIT TERMINATIONS SHALL BE CAPPED TO PREVENT DEBRIS FROM ENTERING CONDUIT.

ELECTRIC / COMMUNICATION TRENCH

NOT TO SCALE



SAND BLANKET/BARRIER

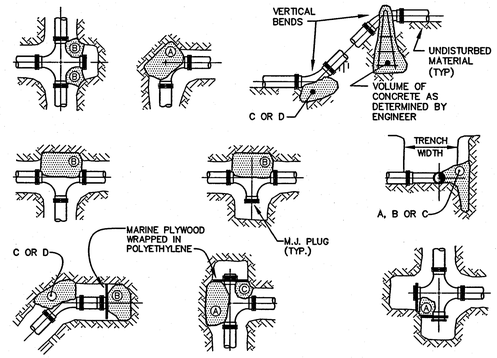
SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY AND PROVIDE ALL EXCAVATION, COMPACTION AND BACKFILL FOR PIPE INSTALLATION WITHIN THE PROJECT SITE.
2. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

GAS TRENCH

NOT TO SCALE



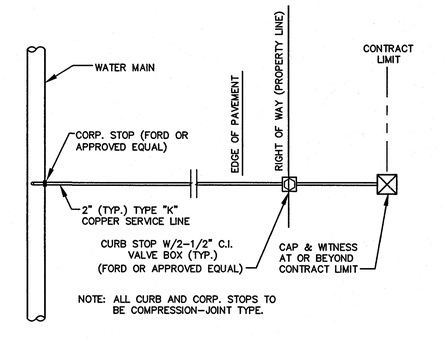
TEST PRESSURE = 150 psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38

NOTES

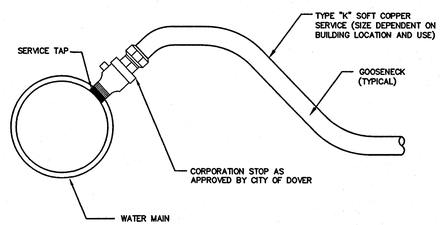
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL.
2. NO JOINTS SHALL BE COVERED WITH CONCRETE. POLYETHYLENE (6 MIL) SHALL BE PLACED AROUND FITTINGS PRIOR TO CONCRETE PLACEMENT.
3. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
4. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.

THRUST BLOCKING

NOT TO SCALE

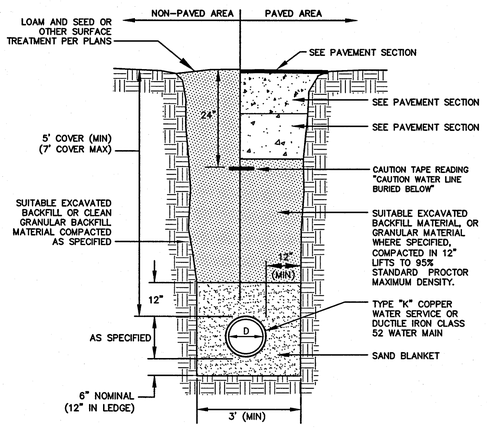


NOTE: ALL MATERIALS AND SPECIFICATIONS SHALL CONFORM TO CITY OF DOVER WATER DEPARTMENT STANDARDS AND REQUIREMENTS. VERIFY PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.



WATER SERVICE CONNECTION

NOT TO SCALE



SAND BLANKET/BARRIER

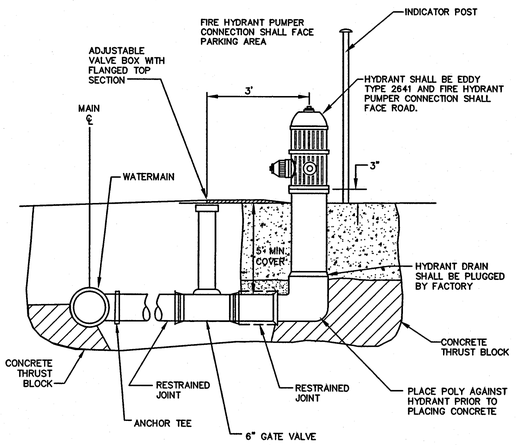
SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. WATER MAINS SHALL BE POLY WRAPPED.

WATER MAIN TRENCH

NOT TO SCALE



NOTES

1. HYDRANT INSTALLATION AND OPERATION TO CONFORM TO REGULATIONS OF THE CITY OF DOVER WATER & FIRE DEPARTMENTS.
2. FIRE HYDRANT TO BE EDDY 2641.
3. HYDRANT TO BE PAINTED RED WITH WHITE "REFLECTOR" PAINT ON BONNET.
4. FIRE HYDRANT CONNECTION SHALL USE MEGALUG (RODS NOT ALLOWED) PER CITY OF DOVER REQUIREMENTS.

FIRE HYDRANT

NOT TO SCALE

P:4390.4

ALTUS ENGINEERING, INC.
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(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE
CORY D. BELDEN
No. 14236
LICENSED PROFESSIONAL ENGINEER
9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD APPROVAL

ISSUE DATE: SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-P4-DETAILS.dwg

SCALE: NOT TO SCALE

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT
(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE: *DETAILS*

SHEET NUMBER: D-8

MANHOLE NOTES:

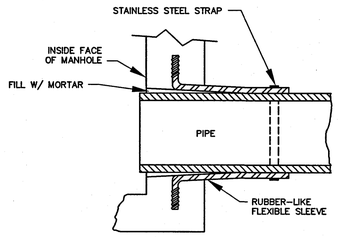
1. IT IS THE INTENTION OF THE NHDES WASTEWATER BUREAU THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE BUREAU FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH REINFORCEMENT IN ANY APPROVED MANHOLE. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE, A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2. BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED.
3. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C4706.
4. LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE NHDES REQUIREMENTS. SEE PROJECT MANUAL – TECHNICAL SPECIFICATIONS 02601 SEWER MANHOLE AND 02651 SEWER TESTING.
5. INVERTS AND SHELVES MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION. THE INVERTS SHALL BE LAID OUT IN CURVES, OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
6. FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. THE MANHOLE COVER SHALL HAVE THE WORD "SEWER" IN 3-INCH LETTERS CAST INTO THE TOP SURFACE.
7. BEDDING SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33.

100%	PASSING 1 INCH SCREEN
90–100%	PASSING 3/4 INCH SCREEN
20–55%	PASSING 3/8 INCH SCREEN
0–10%	PASSING #4 SIEVE
0–5%	PASSING #8 SIEVE

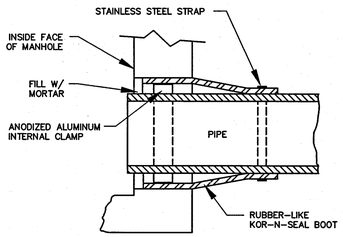
   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2" TO 1/2" SHALL BE USED.
8. CONCRETE FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000 LBS.) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS:

   CEMENT 6.0 BAGS PER CUBIC YARD
   WATER 5.75 GALLONS PER BAG CEMENT
   MAXIMUM SIZE OF AGGREGATE 1 INCH
9. FLEXIBLE JOINT A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:

   PVC PIPE – 60"
   RCP & CI PIPE – ALL SIZES – 48"
   AC & VC PIPE – UP THROUGH 12" DIAMETER – 18"
   AC & VC PIPE – LARGER THAN 12" DIAMETER – 36"
10. SHALLOW MANHOLE IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.



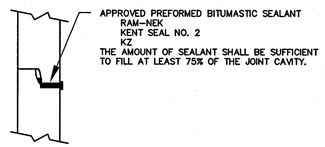
LOCK-JOINT FLEXIBLE MANHOLE SLEEVE
(OR EQUAL)



KOR-N-SEAL JOINT SLEEVE
(OR EQUAL)

NOTE: ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

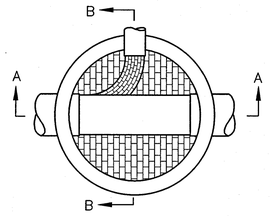
DETAIL-A



BITUMASTIC

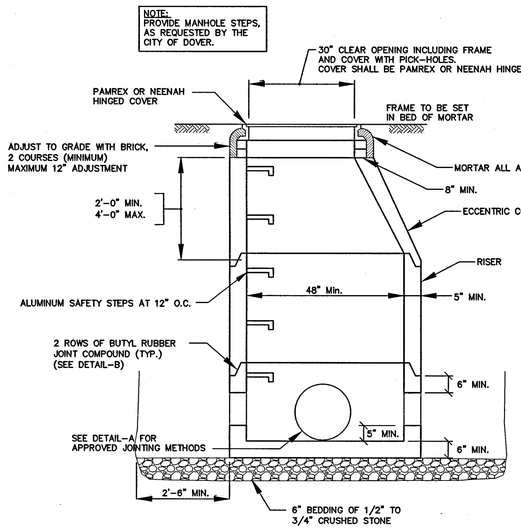
NOTE: ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

DETAIL-B
(APPROVED MANHOLE SECTION JOINTING METHODS)

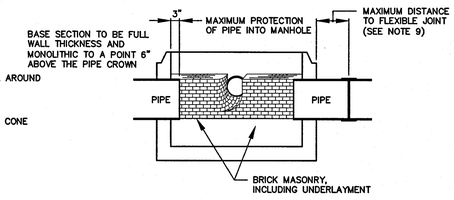


PLAN

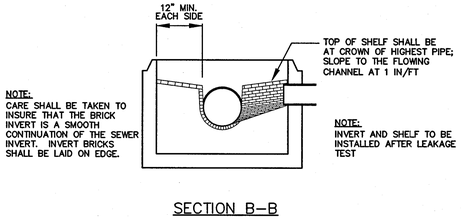
NOTE: PROVIDE MANHOLE STEPS, AS REQUESTED BY THE CITY OF DOVER.



TYPICAL SECTION

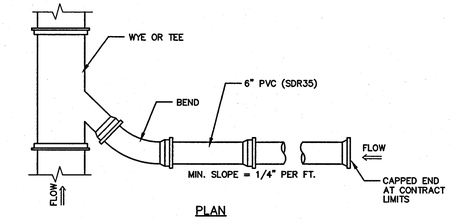


SECTION A-A

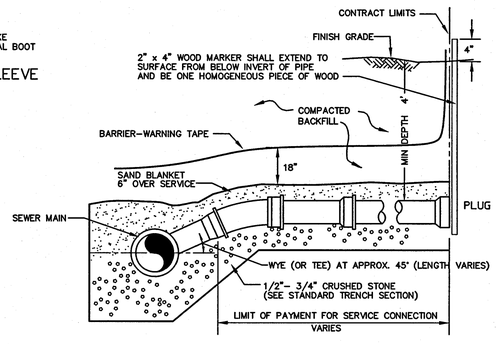


SECTION B-B

SEWER MANHOLE DETAILS NOT TO SCALE



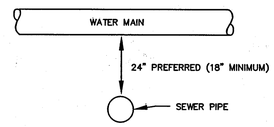
PLAN



NOTE: SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.

ELEVATION

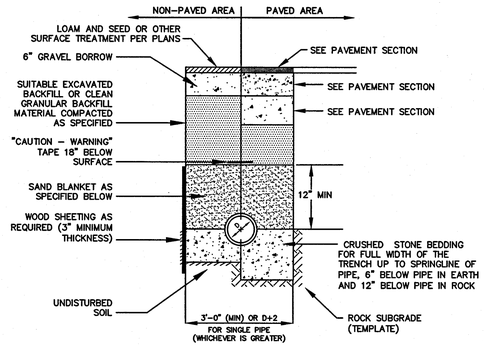
TYPICAL SERVICE CONNECTION NOT TO SCALE



NOTES

1. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER AND SEWER MAINS. A MINIMUM VERTICAL DISTANCE WITH WATER ABOVE SEWER SHALL BE MAINTAINED.
2. SEWER PIPE JOINTS SHALL BE LOCATED A MINIMUM OF 6 FEET HORIZONTALLY FROM WATER MAIN.
3. IF THE REQUIRED CONFIGURATION CANNOT BE MET, THE SEWER MAIN SHALL BE CONSTRUCTED TO MEET THE NHDES REQUIREMENTS FOR FORCE MAIN CONSTRUCTION.

WATER MAIN / SEWER CROSSING NOT TO SCALE



NOTES

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. INSULATE GRAVITY SEWER AND FORCEMAINS WHERE THERE IS LESS THAN 5'-0" OF COVER WITH 2" THICK CLOSED CELL RIGID BOARD INSULATION, 18" ON EACH SIDE OF PIPE.
3. MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDEN TRENCH ACCORDINGLY IF MULTIPLE PIPES ARE IN TRENCH.

SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

SCREENED GRAVEL OR CRUSHED STONE BEDDING*

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 – 10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

STANDARD TRENCH NOTES

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWING.
2. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH SHALL BE USED.
3. SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. BLANKET MAY BE REPLACED WITH BEDDING MATERIAL FOR CAST-IRON, DUCTILE IRON, AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE AND THE GEOTEXTILE IS RELOCATED ACCORDINGLY.
4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT, OR CLAY, ALL EXCAVATED LEDGE MATERIAL, ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION, AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN CROSS COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLE RECONSTRUCTION WILL BE PRESERVED.
5. BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES – DIVISIONS 300 AND 400 RESPECTIVELY.
6. SHEETING, IF REQUIRED: WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION 1 FOOT ABOVE THE TOP OF PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAT 1 FOOT ABOVE THE TOP OF THE PIPE.
7. W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.) ALSO, W SHALL BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
8. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL, FILL AND/OR LOAM SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
9. CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATION REQUIREMENTS FOR CLASS A (3000#)
   CONCRETE AS FOLLOWS:
   CEMENT: 6.0 BAGS PER CUBIC YARD
   WATER: 5.75 GALLONS PER BAG
   CEMENT MAXIMUM SIZE OF AGGREGATE: 1 INCH
   CONCRETE ENCASEMENT IS NOT ALLOWED FOR PVC PIPE.
10. CONCRETE FULL ENCASEMENT: IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MINIMUM). BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.
11. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES DESIGN STANDARDS REQUIRE TEN FEET (10') SEPARATION BETWEEN WATER AND SEWER. REFER TO DOVER'S STANDARD SPECIFICATIONS FOR METHODS OF PROTECTION IN AREAS THAT CANNOT MEET THESE REQUIREMENTS.

SEWER TRENCH NOT TO SCALE

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
9/10/2018

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD APPROVAL

ISSUE DATE: SEPTEMBER 10, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18
1	TRC COMMENTS	CDB	09/10/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-P4-DETAILS.dwg

SCALE: NOT TO SCALE

OWNER:
VARNEY BROOK LANDS, LLC
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DOVER, NH 03821

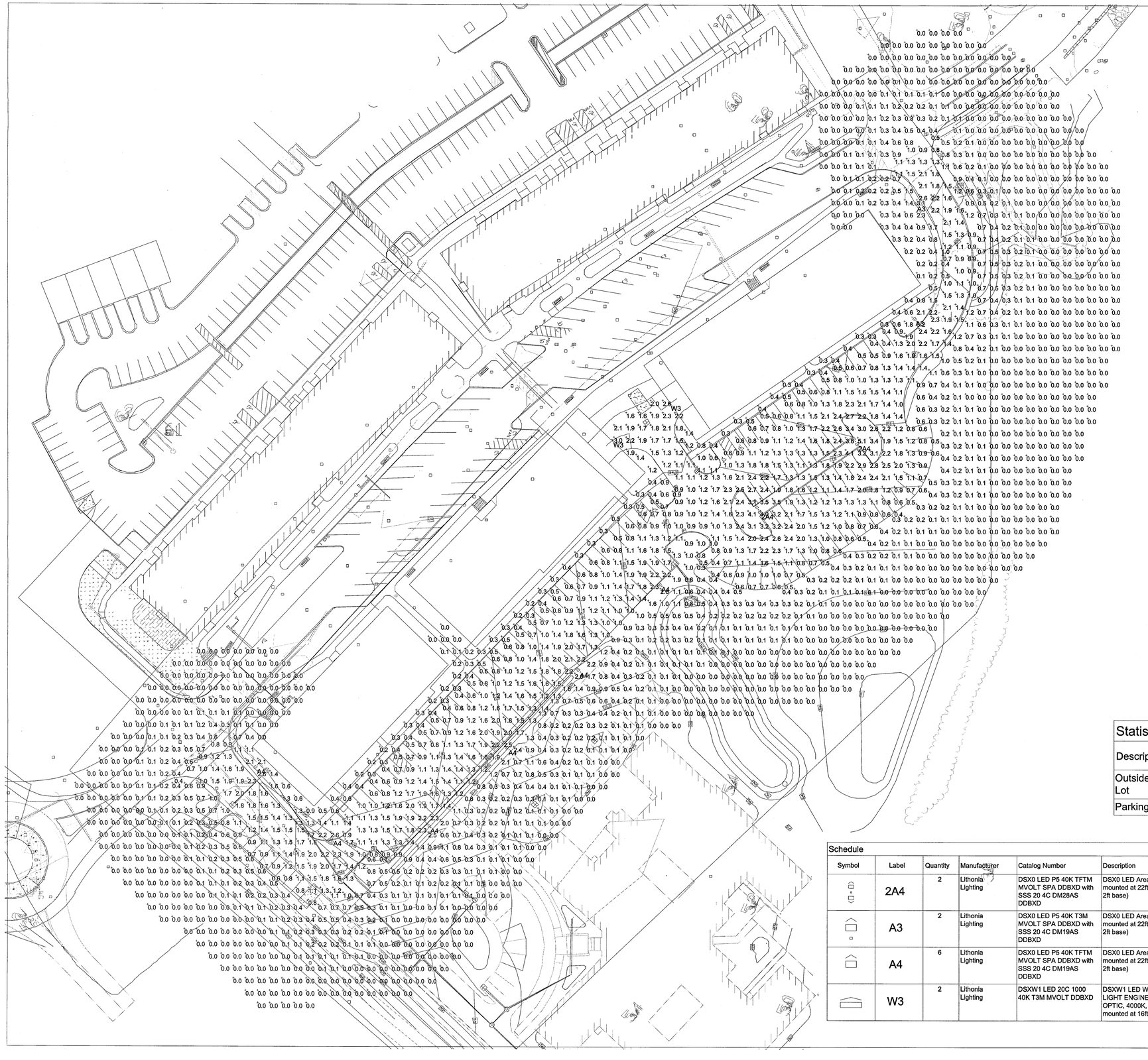
APPLICANT:
SUMMIT LAND DEVELOPMENT
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DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 4)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT
(FILE NO. P18-37)
TAX MAP K, LOT 19-4
DOVER, NH

TITLE:
SEWER DETAILS

SHEET NUMBER:
D-9

P4390.4



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Outside of Parking Lot	+	0.2 fc	3.2 fc	0.0 fc	N/A	N/A
Parking Lot	+	1.4 fc	5.1 fc	0.4 fc	12.8:1	3.5:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	2A4	2	Lithonia Lighting	DSX0 LED P5 40K TFTM MVOLT SPA DDBXD with SSS 20 4C DM28AS DDBXD	DSX0 LED Area Fixtures; mounted at 22ft (20ft pole on 2ft base)	LED	1	DSX0_LED_P5_40K_TFTM_MVOLT.ies	11680	0.9	178
	A3	2	Lithonia Lighting	DSX0 LED P5 40K T3M MVOLT SPA DDBXD with SSS 20 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 22ft (20ft pole on 2ft base)	LED	1	DSX0_LED_P5_40K_T3M_MVOLT.ies	11346	0.9	89
	A4	6	Lithonia Lighting	DSX0 LED P5 40K TFTM MVOLT SPA DDBXD with SSS 20 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 22ft (20ft pole on 2ft base)	LED	1	DSX0_LED_P5_40K_TFTM_MVOLT.ies	11680	0.9	89
	W3	2	Lithonia Lighting	DSXW1 LED 20C 1000 40K T3M MVOLT DDBXD	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T3M OPTIC, 4000K, @ 1000mA; mounted at 16ft	LED	1	DSXW1_LED_20C_1000_40K_T3M_MVOLT.ies	6192	0.9	73.2

POINTE PLACE
Phase 2 Lighting Layout
Dover, NH

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842

Date
7/11/2018

Scale
1"=40'

Drawing No.

Summary

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
North of/Between Bldgs	+	0.5 fc	13.8 fc	0.0 fc	N/A	N/A
Parking Lot	+	1.2 fc	4.5 fc	0.3 fc	15.0:1	4.0:1
South Side of Bldgs	+	0.8 fc	7.4 fc	0.0 fc	N/A	N/A

The Avg/Min result of 4.0:1 exceeds the 6.0:1 Dover requirement (the lighting is more uniform than required).

PER PLAN REFERENCES

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lamp Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	2P4	5	Lithonia Lighting	DSX0 LED 40C 700 40K TFTM MVOLT/SSS 20 4C DM28AS	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE TFTM OPTIC, 4000K, @ 700mA; mounted at 20ft	LED	1	DSX0_LED_40C_700_40K_TFTM_MVOLT.ies	9692	0.9	182.44
	A	24	Baselite	WS16/41/E1/41/LWTN/41	Warehouse Fixture mounted on Gooseneck Arm with Black Finish; mounted at 11ft	ONE LED ARRAY; LUMINAIRE OUTPUT = 1346 LMS	1	T31789.IES	1348	0.9	23.4
	B	4	Lithonia Lighting	OLWX1 LED 20W 40K DDB	20W 4000K LED WALL PACK; mounted at 12ft	LED	1	OLWX1_LED_20W_40K_DDB.ies	1840	0.9	21.77
	C	8	Brownlee Lighting	7326-NT-B12LED-40K-ES	Sconce; mounted at 9ft	LED	1	7325-B12LED-35K.ies	549	0.9	11.84
	D	6	Brownlee Lighting	7562-NT-B12LED-40K-ES	Sconce; mounted at 6ft	LED	1	7577-B12LED-35K.ies	1026	0.9	11.84
	E	4	Brownlee Lighting	7325-NT-B12LED-40K-ES	Sconce; mounted at 9ft	LED	1	7325-B12LED-35K.ies	549	0.9	11.84
	F	2	Brownlee Lighting	7590-NT-B12LED-40K-ES	Sconce; mounted at 6ft	LED	1	7577-B12LED-35K.ies	1026	0.9	11.84
	G	10	Lithonia Lighting	OLWX1 LED 20W 40K DDB	20W 4000K LED WALL PACK; mounted at 9ft	LED	1	OLWX1_LED_20W_40K_DDB.ies	1840	0.9	21.77
	P3	1	Lithonia Lighting	DSX0 LED 40C 1000 40K T3M MVOLT/SSS 20 4C DM19AS	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE T3M OPTIC, 4000K, @ 1000mA; mounted at 20ft	LED	1	DSX0_LED_40C_1000_40K_T3M_MVOLT.ies	13266	0.9	137.49
	P5	2	Lithonia Lighting	DSX0 LED 40C 1000 40K T5W MVOLT/SSS 20 4C DM19AS	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE T5W OPTIC, 4000K, @ 1000mA; mounted at 20ft	LED	1	DSX0_LED_40C_1000_40K_T5W_MVOLT.ies	13679	0.9	137.49
	R	4	Lithonia Lighting	DSXB LED 16C 700 40K SYM	D-SERIES BOLLARD WITH 16 4000K LEDS OPERATED AT 700mA AND SYMMETRIC DISTRIBUTION; mounted at 3ft	LED	1	DSXB_LED_16C_700_40K_SYM.ies	2055	0.9	39
	S	14	Sternberg Lighting	1A 1531RLED EZ FG 8ARC45T3RF MDL05	OMEGA SERIES HOUSING, LED,coated clear flt glss, blk txtrd fnsh, type3R; mounted at 20ft	112 LEDs, 8 ARC	1	1531RLED-FG-8ARC45T3R.IES	10458	0.9	125.1

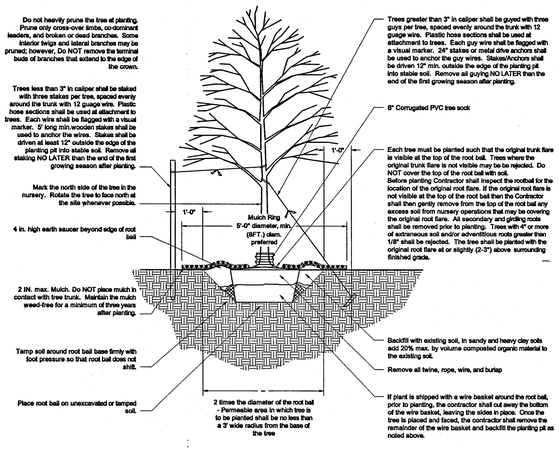
POINTE PLACE SITE LIGHTING LAYOUT
DOVER, NH

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842
Date
6/6/2016
Scale
1"=30'
Drawing No.

Summary

1 of 1

Tree Planting Detail



Seeding Specifications

Seed Mixes:

Seed Mix A
- 50% New England Wetland Plants – New England Erosion Conservation & Wildlife Mix
- 50% New England Wetland Plants – New England Showy Wildflower Mix

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

Application Rates:

Seed Mix A
- 50% @ 30lbs/acre New England Showy Wildflower Mix
- 50% @ 50lbs/acre New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites

Lawn — As recommended by seed provider

Products: Soil Mixes – see engineering specifications.
Seed Mixes – See above.
Mulch – Clean wed-free straw

Preparation: Rain garden & swale seeding shall be installed in the Spring and well established prior to release of stormwater runoff into the rain garden.

Examine finish surfaces, grades, soil quality, and depth. Do not start seeding work until unsatisfactory conditions are corrected in a manner acceptable to Owner.

Prior to seeding, soils in the rain garden area shall be loosened to a depth of 4" MIN. to mitigate compaction from construction processes.

Installation:

Do not hydroseed, apply with a mechanical spreader or by hand.

Seed immediately after preparation.

Apply seed to clean bare soil.

Perform seeding operations when the soil is dry and when winds do not exceed 5 miles per hour velocity.

Install seed evenly by sowing equal quantities in 2 directions, at right angle to each other.

Lightly rake or lightly roll to insure proper seed contact with the soil.

Mulch – A very light application of clean weed-free straw shall be applied to the finished seeding.

Contractor shall provide temporary irrigation for the seeding until a well -established stand of vegetation exists and approval is given by the Landscape Architect or Owner's representative.

Water daily to maintain adequate surface soil moisture for proper seed germination. Thereafter apply 1/2" of water twice weekly until acceptance. Continue daily watering for not less than 60 days.

Repair, rework, and re-seed all areas that have washed out, are eroded, or do not catch. Any part of seeded areas which fails to show a uniform stand shall be reseeded every twenty one days until areas are covered with established plants.

Inspection: Landscape architect or owner's representative shall inspect seeding for establishment and coverage prior to release of stormwater runoff into the rain garden.

Contractor shall overseed as needed to provide a well-established stand of plants. Any and all weed species shall be removed as directed by the Landscape Architect or Owner's Representative.

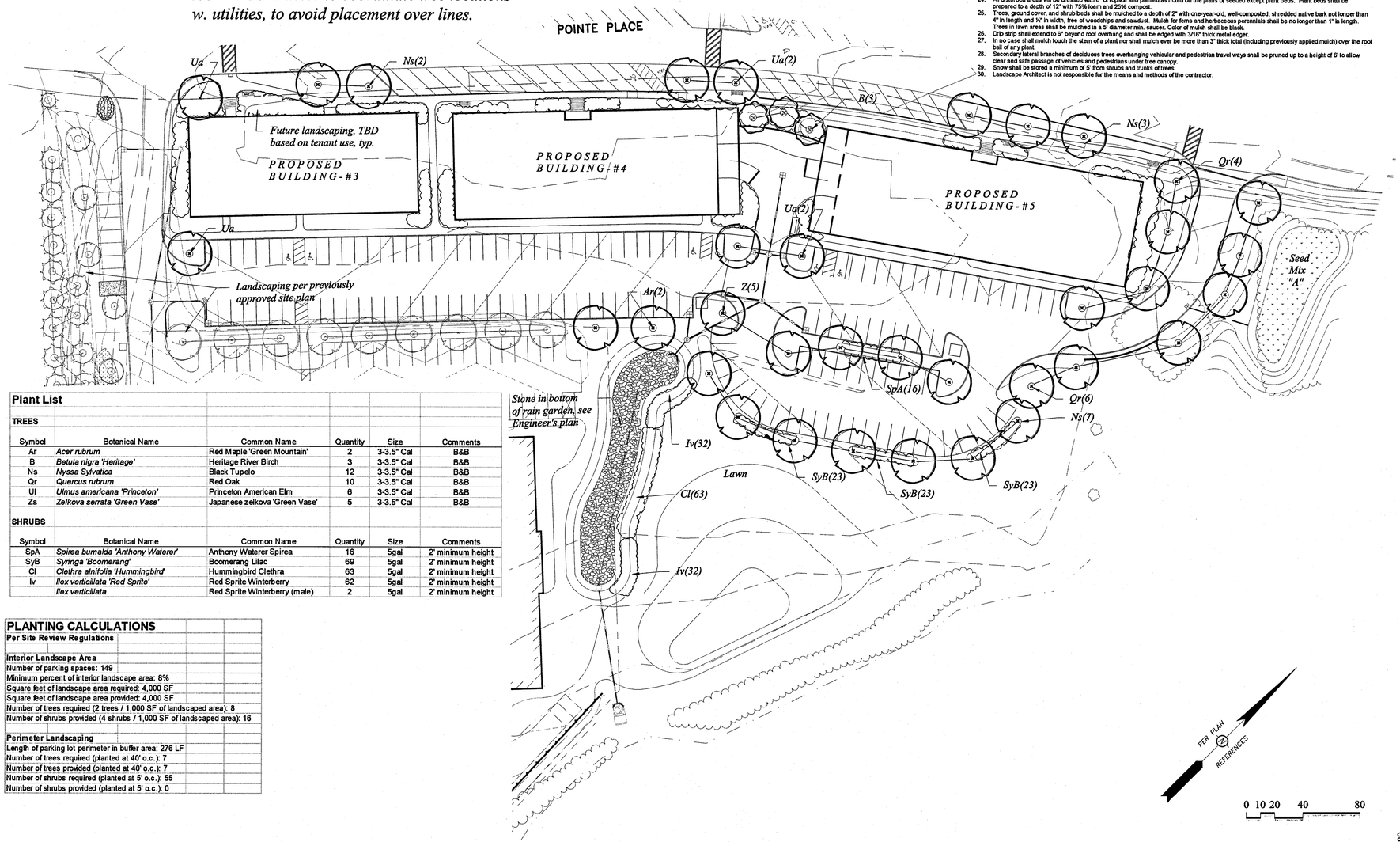
Warrantee: Provide a uniform stand of vegetation by maintaining seeded areas as specified for 1 year after final acceptance. Reseed areas which fail to provide a uniform stand, with specified materials, until all affected areas are accepted by the Owner.

Maintenance :

Seed Mix "A" vegetation must be harvested at least once every three years and no more frequently than once a year.

Biweekly inspections of vegetation health should be performed during the first growing season or until the vegetation is established. Once established, inspections of vegetation health, density, and diversity should be performed at least twice annually during both the growing and non-growing seasons. The vegetative cover must be maintained at 85 percent. If vegetation has greater than 50 percent damage, the area must be reestablished in accordance with the original specifications and the inspection requirements presented above.

NOTE: Contractor to coordinate tree locations w. utilities, to avoid placement over lines.



Plant List

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
TREES					
Ar	*Acer rubrum*	Red Maple 'Green Mountain'	2	3-3.5" Cal	B&B
B	*Betula nigra 'Heritage'*	Heritage River Birch	3	3-3.5" Cal	B&B
Ns	*Nyssa Sylvatica*	Black Tupelo	12	3-3.5" Cal	B&B
Qr	*Quercus rubrum*	Red Oak	10	3-3.5" Cal	B&B
Ul	*Ulmus americana 'Princeton'*	Princeton American Elm	6	3-3.5" Cal	B&B
Zs	*Zelkova serrata 'Green Vase'*	Japanese zelkova 'Green Vase'	5	3-3.5" Cal	B&B
SHRUBS					
Symbol	Botanical Name	Common Name	Quantity	Size	Comments
SpA	*Spirea bumalda 'Anthony Waterer'*	Anthony Waterer Spirea	16	5gal	2' minimum height
SyB	*Syringa 'Boomerang'*	Boomerang Lilac	69	5gal	2' minimum height
Cl	*Clethra alnifolia 'Hummingbird'*	Hummingbird Clethra	63	5gal	2' minimum height
Iv	*Ilex verticillata 'Red Sprite'*	Red Sprite Winterberry	62	5gal	2' minimum height
	Ilex verticillata	Red Sprite Winterberry (male)	2	5gal	2' minimum height

PLANTING CALCULATIONS

Per Site Review Regulations
Interior Landscape Area
Number of parking spaces: 149
Minimum percent of interior landscape area: 8%
Square feet of landscape area required: 4,000 SF
Square feet of landscape area provided: 4,000 SF
Number of trees required (2 trees / 1,000 SF of landscaped area): 8
Number of shrubs provided (4 shrubs / 1,000 SF of landscaped area): 16
Perimeter Landscaping
Length of parking lot perimeter in buffer area: 276 LF
Number of trees required (planted at 40' o.c.): 7
Number of trees provided (planted at 40' o.c.): 7
Number of shrubs required (planted at 5' o.c.): 55
Number of shrubs provided (planted at 5' o.c.): 0

Landscape Notes

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

ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

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

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR: TRC

ISSUE DATE: JULY 26, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	VM	07/26/18
1	PER TRC COMMENTS	VM	09/07/18

DRAWN BY: CH
APPROVED BY: RW
DRAWING FILE: 4390-DESIGN.dwg

SCALE: 24"x36" 1" = 40'
12"x18" 1" = 80'

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

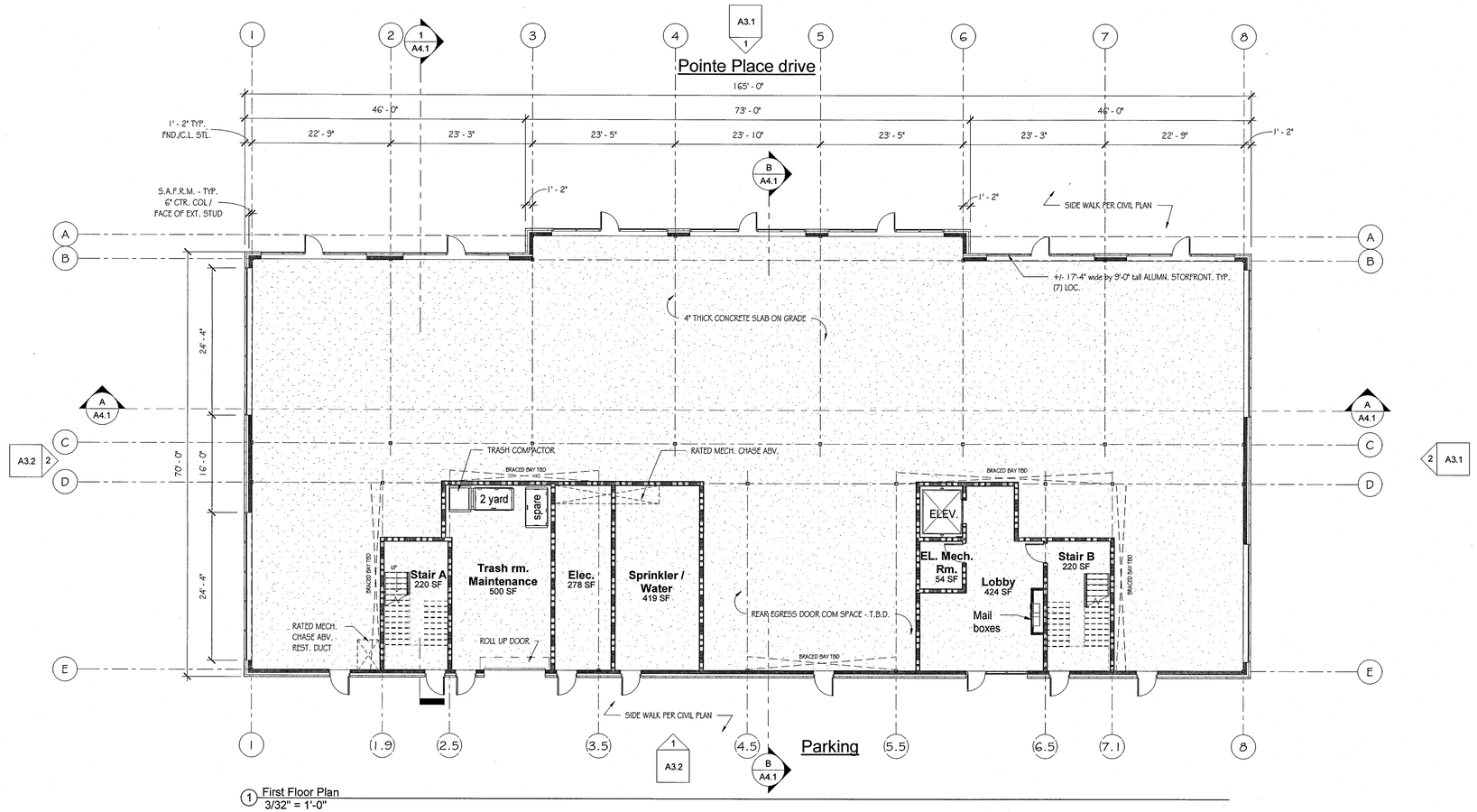
APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 2)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT
(FILE NO. P18-___)
TAX MAP K, LOT 19-4
DOVER, NH

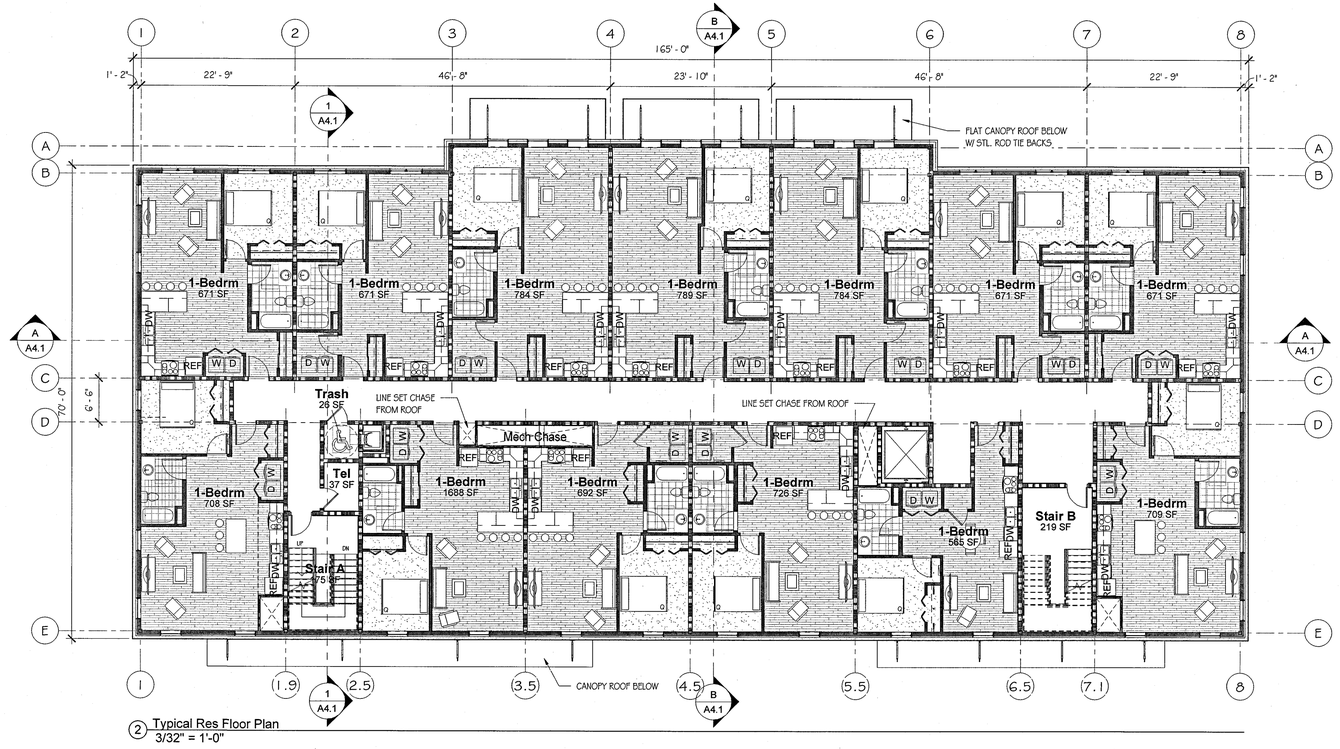
TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L-1

P4390



1 First Floor Plan
3/32" = 1'-0"



2 Typical Res Floor Plan
3/32" = 1'-0"

Unit Matrix	
	1Bed
First Floor	0
Second Floor	13
Third Floor	13
Fourth Floor	13
Totals	39

PLANNING BOARD SET
7/26/2018 11:01:56 AM

True
PROJECT NORTH

T:\3.Projects\18015-53 Pointe Place\18015_3PP.rvt

TW DESIGNS
P.O. BOX 69 STRAFFORD, NH 03884
P: 603.664.2181 | F: 603.664.9508

DESIGN | BUILD Architectural Document Set -
Prepared For Exclusive Use By :
WHITCHER BUILDERS

No. Description Date
Revision Schedule

Project Info:
Pointe Place Building 3
Pointe Place
Dover, NH

Sheet Status:
Latest Release:
Issued For: Planning Board Set
Org. Issue Date: N.F.C.
JOB NO: 18015
DRAFTED: JMT
CHECKED: JMT
SCALE: 3/32" = 1'-0"

Sheet Title:
Common Floor Plates

Sheet Number:
A1.1

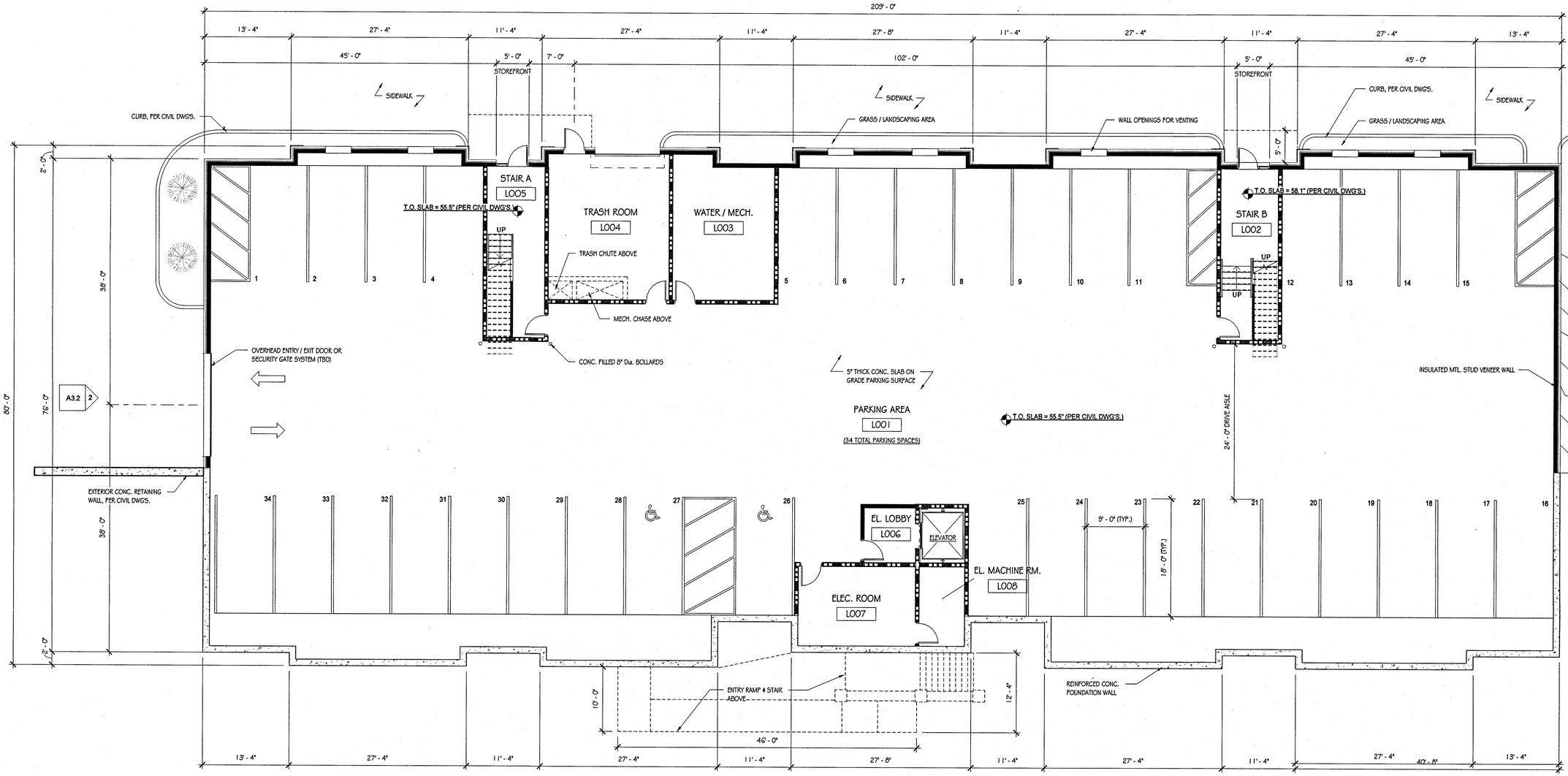
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P.O. BOX 69 STRAFFORD, NH 03884
P: 603.664.2181 | F: 603.664.9508

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WHITCHER BUILDERS

A3.2
1

REAR PARKING SIDE



STREET SIDE

A3.1

1 PARKING LEVEL FLOOR PLAN
1/8" = 1'-0"

TOTAL FOOT PRINT AREA = 16,254 S.F.

0' 5' 10' 20' 40'

True
PROJECT NORTH

No. Description Date
Revision Schedule

Project Info:
Pointe Place - Bldg. 4

57 Dover Point Rd. Dover, NH

Sheet Status:
Latest Release:
Issued For: Planning Board
Org. Issue Date: N.F.C.

JOB NO:
DRAFTED: MLN
CHECKED: JMT

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

Sheet Title:
Garage Level Plan

Sheet Number:
A1.1

Printed on: 9/10/2018 9:35:07 AM

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WHITCHER BUILDERS



1 NORTH WEST EXTERIOR ELEVATION
1/8" = 1'-0"



2 NORTH EAST EXTERIOR ELEVATION
1/8" = 1'-0"

No.	Description	Date

Revision Schedule

Project Info:

Pointe Place Building 3

Pointe Place
Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board Set
Org. Issue Date: N.F.C.

JOB NO: 18015
DRAFTED: MLN
CHECKED: JMT
SCALE: 1/8" = 1'-0"

Sheet Title:

Exterior Elevations

Sheet Number:

A3.1

PLANNING BOARD SET
7/26/2018 11:02:05 AM

Printed on: 7/26/2018 11:02:05 AM

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1 SOUTH EAST EXTERIOR ELEVATION
1/8" = 1'-0"



2 SOUTH WEST EXTERIOR ELEVATION
1/8" = 1'-0"

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PLANNING BOARD SET
7/26/2018 11:02:43 AM

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DESIGN | BUILD Architectural Document Set -
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WHITCHER BUILDERS

No. Description Date

Revision Schedule

Project Info:

Pointe Place Building 3

Pointe Place
Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board Set
Org. Issue Date: N.F.C.

JOB NO: 18015
DRAFTED: Author
CHECKED: Checker
SCALE: 1/8" = 1'-0"

Sheet Title:

Exterior Elevations

Sheet Number:

A3.2

Printed on: 7/26/2018 11:02:43 AM

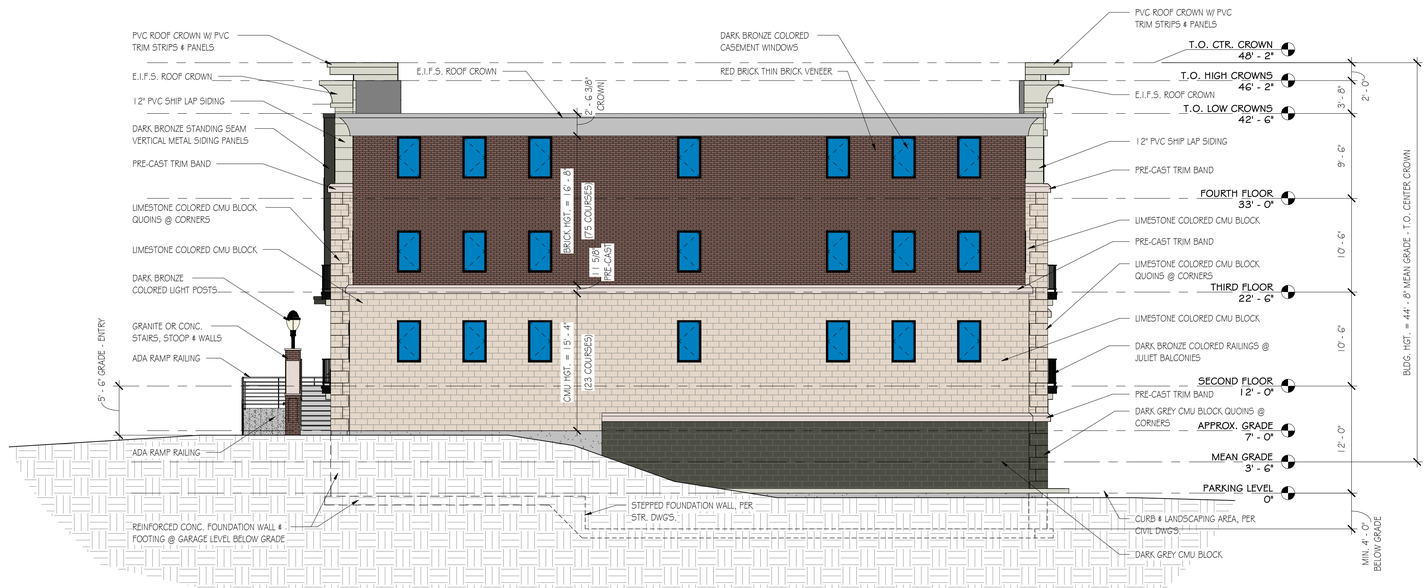
TW DESIGNS LLC
P.O. BOX 69 STRAFFORD, NH 03884
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DESIGN | BUILD Architectural Document Set -
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WHITCHER BUILDERS



1 PROPOSED NORTH WEST EXTERIOR ELEVATION
1/8" = 1'-0"



2 PROPOSED SOUTH WEST EXTERIOR ELEVATION
1/8" = 1'-0"

0' 5' 10' 20' 40'

No.	Description	Date

Revision Schedule

Project Info:

Pointe Place - Bldg. 4

57 Dover Point Rd. Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board
Org. Issue Date: N.F.C.

JOB NO:
DRAFTED: MLN
CHECKED: JMT

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

Sheet Title:

Exterior Elevations

Sheet Number:

A3.1

Printed on: 9/10/2018 9:35:15 AM

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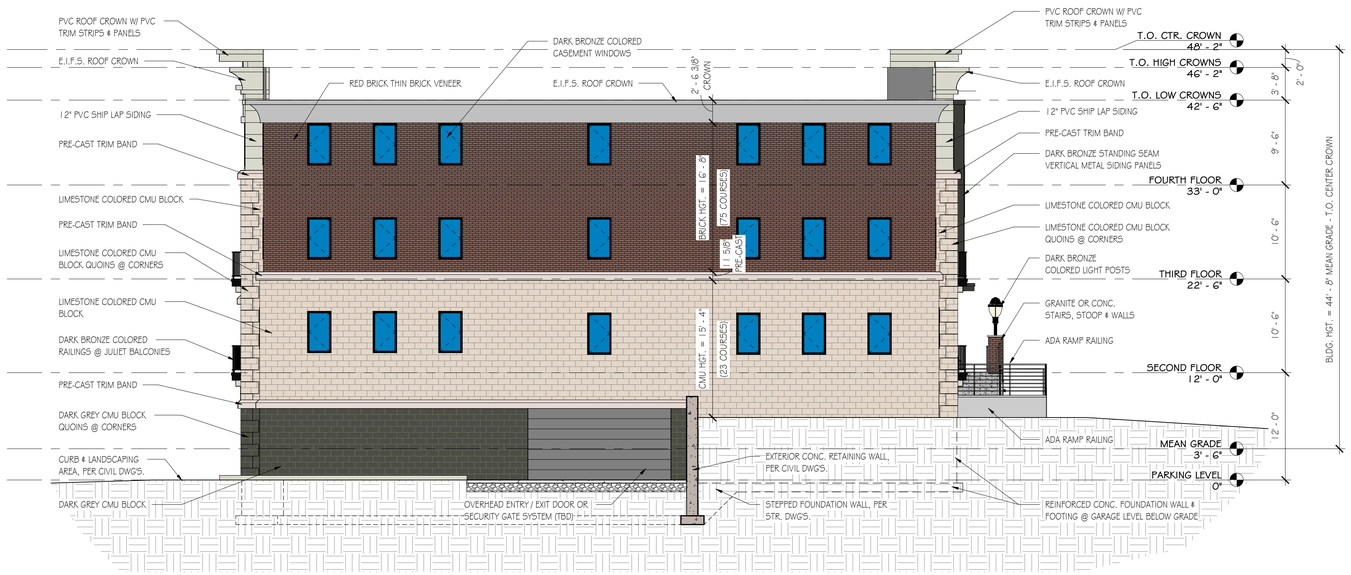
TW DESIGNS LLC
P.O. BOX 69 STRAFFORD, NH 03884
P: 603.664.2181 | F: 603.664.9508

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WHITCHER BUILDERS



PROPOSED SOUTH EAST EXTERIOR ELEVATION
1/8" = 1'-0"



PROPOSED NORTH EAST EXTERIOR ELEVATION
1/8" = 1'-0"

0' 5' 10' 20' 40'

T:\3 Projects\18032-57 Pointe Place\18032-pp_4 - 75 FEET.rvt

No.	Description	Date

Revision Schedule

Project Info:

Pointe Place - Bldg. 4

57 Dover Point Rd. Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board
Org. Issue Date: N.F.C.

JOB NO:
DRAFTED: MLN
CHECKED: JMT

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

Sheet Title:

Exterior Elevations

Sheet Number:

A3.2

Printed on: 9/10/2018 9:35:18 AM



1 Looking North East



2 Looking South East

TIW DESIGNS LLC
P.O. BOX 69 STRAFFORD, NH 03884
P: 603.664.2181 | F: 603.664.9508

DESIGN | BUILD Architectural Document Set -
Prepared For Exclusive Use By :

WHITCHER BUILDERS

No. Description Date

Revision Schedule

Project Info:

Pointe Place Building 3

Pointe Place
Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board Set
Org. Issue Date: N.F.C.

JOB NO: 18015
DRAFTED: MLN
CHECKED: JMT

SCALE:

Sheet Title:

Schematic Renderings

Sheet Number:

R2

PLANNING BOARD SET
7/26/2018 11:07:17 AM

Printed on: 7/26/2018 11:07:17 AM

T:\3 Projects\18015-53 Pointe Place\18015_3PP.rvt



1 Looking North East



2 Looking South East

T:\3 Projects\18032-57 Pointe Place\18032-pp_4 - 75 FEET.rvt

TW DESIGNS LLC
P.O. BOX 69 STRAFFORD, NH 03884
P: 603.664.2181 | F: 603.664.9508

DESIGN | BUILD Architectural Document Set -
Prepared For Exclusive Use By :

WHITCHER BUILDERS

No.	Description	Date

Revision Schedule

Project Info:

Pointe Place - Bldg. 4

57 Dover Point Rd. Dover, NH

Sheet Status:

Latest Release:
Issued For: Planning Board
Org. Issue Date: N.F.C.

JOB NO:
DRAFTED: MLN
CHECKED: JMT

SCALE:

Sheet Title:

Schematic Renderings

Sheet Number:

R2

Printed on: 9/12/2018 4:46:26 PM

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P18-38

Application Type:	Conditional Use Permit for Review
Applicant(s):	Summit Land Development
Owner(s):	Summit Land Development
Location:	Pointe Place (Assessor's Map K, Lots 110-4)
Meeting Date:	September 25, 2018

INTENT: To allow work within the 50' wetland buffer, with a retaining wall to limit the amount of grading and prevent any direct wetland impacts. There is about 4,000 s.f. of buffer impact.

LOTS/UNITS PROPOSED: N/A for this case

AGENDA ITEM #: 4-E

ACREAGE: 20.93 acres

ZONING DISTRICT: Residential Commercial Mixed-Use Overlay (RCM), Executive Technology Park (ETP) underlying

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Residential and Commercial Mixed Use

SURROUNDING LAND USE: Residential, mixed use, commercial, vacant land

ZBA ACTION: Building Height Variance Request on 9/20/18

ATTACHMENTS: Application materials, 8/13/18 Conservation Commission minutes, and CUP Plan

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

PERMITS REQUIRED:
- NHDES Alteration of Terrain
- CUP for wetland buffer

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is requesting a Conditional Use Permit to work within the 50' wetland buffer, with a retaining wall to limit the amount of grading and prevent any direct wetland impacts. There is about 4,000 s.f. of buffer impact.

The Conservation Commission endorsed the Conditional Use Permit at their August 13, 2018 meeting.

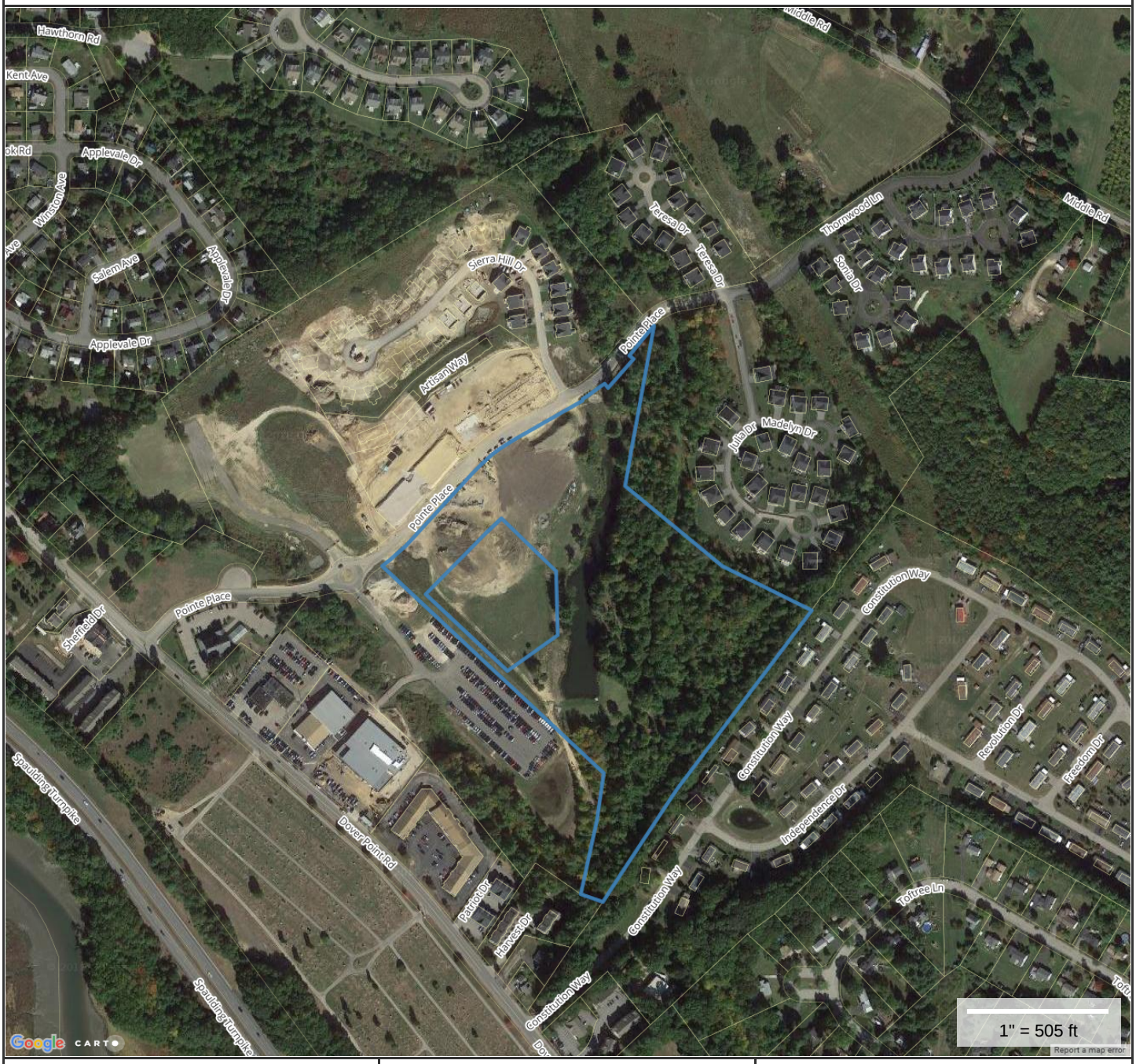
Consistency with Land Use Regulations
The Wetlands Protection District ordinance provides for Conditional Use Permits to allow impacts to wetlands and wetland buffers if standards related to demonstration of need, avoidance, minimization, and mitigation are met. This proposal is consistent with those standards.

STAFF RECOMMENDATION:

The Planning Department recommends the Planning Board to accept the application, open the public hearing, and vote to approve the Conditional Use Permit with the following conditions:

Conditions to Be Met Prior to the Issuance of a Conditional Use Permit:
1. Site Plan (P18-37) is approved.
2. Copies of the Alteration of Terrain Permit be submitted to the Planning Department.

Pointe Place



Property Information

Property ID	K0019-004000
Location	POINTE PL
Owner	VARNEY BROOK LANDS 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 03/29/2018
Properties updated 09/18/2018

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: Summit Land Development Telephone # 603.749.2800

Address of Applicant: 340 Central Avenue, Dover, NH 03820

E-Mail Address: Chad@Summitlanddev.com

Name of Property Owner (if different from applicant): Varney Brook Lands, LLC Telephone # Same as Applicant

Address of Property Owner: Same as Applicant

PROPERTY INFORMATION

Assessor's Map # K Lot(s) # 19-4

Address of Property: Pointe Place (between Dover Point Road and Middle Road)

Zoning District(s) ETP Overlay District(s) RCM

Existing Use of Property: Vacant

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:

The proposed project will have work within the 50 foot wetland buffer. A retaining wall is proposed to limit the amount of grading and prevent any direct wetland impacts. There is approximately 4,000 sf of buffer impact and 0 direct wetlands impacts.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES Alteration of Terrain Permit - Will be Submitted

Name of Professional That Prepared Plans: Cory Belden, PE - Altus Engineering Inc.

Address 133 Court Street, Portsmouth, NH 03801 Telephone #: 603-233-4335

Professional License #: 14239 E-mail address: cbelden@altus-eng.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: 7/26/18

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: 7/26/18

B. NHDES Expedited Wetlands Permit and City of Dover Conditional Use Permit for Marker 44 Holdings, LLC, Assessor's Map 24 Lot 115B, zoned CBD-G & CWD, located at 87 Portland Avenue and Cocheco Street.

Matt Randall of Civilworks was present the proposal to install utilities, walking path, parking, retaining walls and site grading for a residential project. Impacts include 9,950 sq. ft. of 20% slope, 150 sq. ft. of Conservation District within 100 feet of Cochecho River, 11,017 sq. ft. of wetland buffer impact, 181 sq. ft. of permanent wetland impact and 589 sq. ft. of temporary wetland impact.32 units of multi-family housing is proposed. We will have porous pavement in the parking lots. The wetlands are low value. The 20% slopes are manmade. The tidal buffer work is actually pavement within Cocheco Street to do sewer work.

Donovan: Will the parking lots have curbs?

Randall: Yes they will be curbed.

Lyon: Do you have a storm water management plan?

Randall: Yes in the drainage plan is an operations and management plan.

Donovan: What will happen to the steep slopes?

Randall: They will be graded away so that in the end there will be no steep slopes.

Fellows confirmed that the project had been to TRC already.

Donovan: You are eliminating the steep slopes and have addressed storm water management.

Fellows made a motion to endorse the NHDES Expedited Wetlands Permit and City of Dover Conditional Use Permit, Kramer-Perry seconded. Vote: 4 in favor

Donovan signed five copies of the application.

C. City of Dover Conditional Use Permit for Summit Land Development, Assessor's Map K, Lot 19-4, zoned ETP & RCM, located at Pointe Place.

Cory Belden of Altus Engineering and Chad Kageleiry of Summit were present to explain the proposal to build a retaining wall and driveway for a mixed use project, with a wetland buffer impact of 4,000 square feet. The status of the first three stages was reviewed. This application involves the three buildings on the south side of Pointe Place. In order to reduce impervious surfaces we are having underground parking – 74 spaces. There are no new outfalls within the wetlands buffer, we are using existing outfalls. There are impacts to wetland buffers only, no wetland impacts.

Kageleiry: The driveway location really can't be altered as we want to keep a four way intersection.

Belden: Part of the lot is in a conservation easement.

Donovan: Is the driveway curbed?

Belden: Yes it will drain to a rain garden.

Fellows: Would it be practical to eliminate the driveway out onto Pointe Place in this location and just have one driveway?

DRAFT

Kageleiry: You can't do that because Fire wants two access points.

Fellows made a motion to endorse the City of Dover Conditional Use Permit, Lyon seconded. Vote: 4 in favor

D. NHDES Expedited Wetlands Permit and City of Dover Conditional Use Permit for the City of Dover, located along Spruce Lane between Partridge Lane and Mast Road.

Gretchen Young was present to explain the proposal for the installation of a sidewalk on the north side of Spruce Lane, with 1,300 square feet of permanent wetland impact. This has been planned for years. I was before you about 18 months ago for the drainage wetland impacts. There is strong neighborhood desire for a sidewalk in this area. I have spoken with DES and they understand that this is not incremental impact.

Gasses: The sidewalk is really needed due to traffic from schools and there are a lot of pedestrians.

Young: We will need retaining walls in a few locations. We will need an AOT permit.

Donovan: It looks like you are just impacting edges of wetlands.

Fellows made a motion to endorse the NHDES Expedited Wetlands Permit and City of Dover Conditional Use Permit, Lyon seconded. Vote: 4 in favor

Donovan signed five copies of the application.

5. **REPORT FROM THE CHAIR**

A. Review of Correspondence Received From NH Department of Environmental Services:

Bird indicted that he had no correspondence this month.

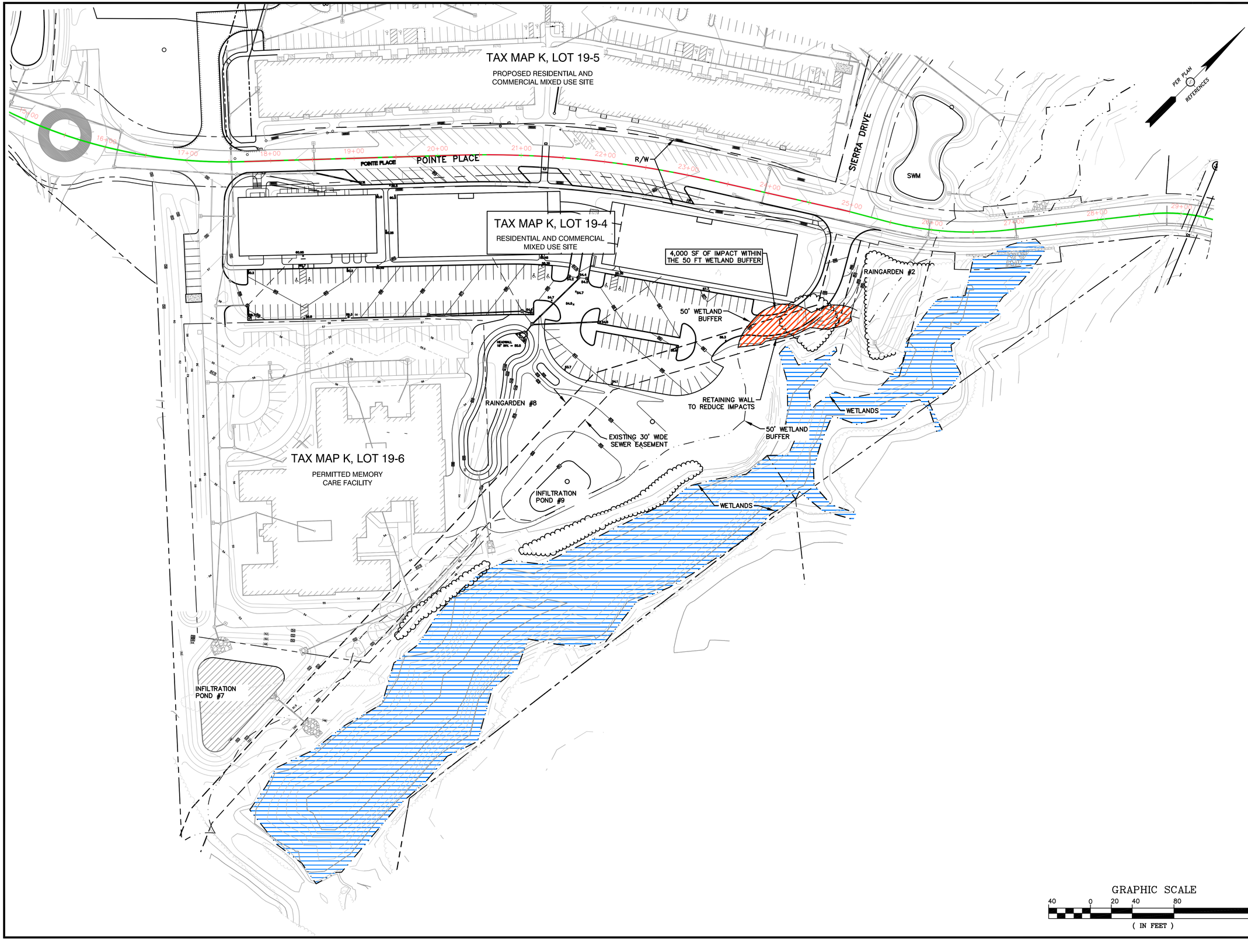
6. OTHER BUSINESS:

Lyon: The Cochecho River Advisory Committee has been formed and will meet soon.

7. ADJOURNMENT

The Chair declared the meeting adjourned at 6:50 pm.

DRAFT



ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR:
CONDITIONAL USE PERMIT

ISSUE DATE:
JULY 26, 2018

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMITTAL	CDB	07/26/18

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4390-DESIGN.dwg

SCALE: 24"x36" 1" = 40'
12"x18" 1" = 80'

OWNER:
VARNEY BROOK LANDS, LLC
P.O. BOX 728
DOVER, NH 03821

APPLICANT:
SUMMIT LAND DEVELOPMENT
340 CENTRAL AVE., #202
DOVER, NH 03820

PROJECT:
POINTE PLACE (PHASE 2)
RESIDENTIAL AND COMMERCIAL
MIXED USE DEVELOPMENT

TAX MAP K, LOT 19-4
DOVER, NH

TITLE:
CONDITIONAL USE PERMIT PLAN

SHEET NUMBER:
CUP-1

P18-37 & P18-38 **Pointe Place**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
K0019-000000	DOVER POINT RD	VARNEY BROOK LANDS LLC &	CITY OF DOVER	340 CENTRAL AVE STE 202	DOVER	NH	03820
K0019-001000	TERESA DR	CHANGING PLACES LLC		42 J DOVER POINT RD	DOVER	NH	03820
K0019-001014	2 TERESA DR	DUGAN ALAN H &	DUGAN LYNNE H	2 TERESA DR	DOVER	NH	03820
K0019-002000	DOVER POINT RD	DOVER POINT RD 252 LLC		40 DOVER POINT RD	DOVER	NH	03820
K0019-003000	SIERRA HILL DR	STABILE HOMES AT POINTE PLACE LLC		20 COTTON RD	NASHUA	NH	03063
K0019-003001	3 SIERRA HILL DR	PARKER KENDREE R &	CARTER RAY P	3 SIERRA HILL DR	DOVER	NH	03820
K0019-005000	50 60 POINTE PL	POINTE PLACE DEVELOPMENT LLC	C/O SUMMIT LAND DEVELOPMENT	340 CENTRAL AVE #202	DOVER	NH	03820
K0019-006000	35 POINTE PL	BFG DOVER PROPCO LLC		228 PARK AVE STE A	WINTER PARK	FL	32789
K0021-000000	CONSTITUTION WY	DOVERBROOK LLC		40 NEWBRIDGE RD	SALISBURY	MA	01776
K0021-000001	2 CONSTITUTION WY	STEPCHIN LORRAINE		2 CONSTITUTION WY	DOVER	NH	03820-4926
K0021-000002	4 CONSTITUTION WY	KARAS PATRICIA A &	KARAS CHRIS D	4 CONSTITUTION WY	DOVER	NH	03820-4926
K0021-000003	6 CONSTITUTION WY	HUSE ETHEL E		279 CENTRAL AVE APT 103	DOVER	NH	03820-7106
K0021-000004	8 CONSTITUTION WY	NICHOLSON SANDRA L &	KEENAN ERMINIE W	8 CONSTITUTION WAY	DOVER	NH	03820
K0021-000005	10 CONSTITUTION WY	WALLINGFORD ANTHONY D &	WALLINGFORD NANCY L	10 CONSTITUTION WY	DOVER	NH	03820
K0021-000007	14 CONSTITUTION WY	WRIGHT JOHN JR &	WRIGHT TARA L	14 CONSTITUTION WAY	DOVER	NH	03820
K0021-000008	16 CONSTITUTION WY	CARSWELL WILLIAM &	CARSWELL SANDRA	16 CONSTITUTION WY	DOVER	NH	03820
K0021-000010	20 CONSTITUTION WY	LECAROZ ALFRED L &	LECAROZ JEANETTE M	20 CONSTITUTION WAY	DOVER	NH	03820
K0021-000011	22 CONSTITUTION WY	CARLSEN LAURITS S &	CARLSEN GLORIA A	22 CONSTITUTION WAY	DOVER	NH	03820
K0021-000012	24 CONSTITUTION WY	COLGAN JOHN &	COLGAN MICHELLE	34 JULIA DR	DOVER	NH	03820
K0021-000013	26 CONSTITUTION WY	COPELAND WILLIAM E &	COPELAND PATRICIA A	26 CONSTITUTION WAY	DOVER	NH	03820
K0021-000019	18 CONSTITUTION WY	MATTHEWS DARLENE &	HEFLER VALERIE	18 CONSTITUTION WAY	DOVER	NH	03820
K0021-000044	5 CONSTITUTION WY	MERRITT NANCY S		5 CONSTITUTION WAY	DOVER	NH	03820
K0021-000052	17 CONSTITUTION WY	HANSON KENNETH L	HANSON ROSEMARY A	PO BOX 1609	DOVER	NH	03820
K0021-000053	19 CONSTITUTION WY	DEANGELIS ROBERT J TRUSTEE	PENZO MARY R IRREVOCABLE TRUST	19 CONSTITUTION WY	DOVER	NH	03820-4928
K0021-000055	23 CONSTITUTION WY	CLEVELAND RALPH D &	CLEVELAND NANCY J	23 CONSTITUTION WY	DOVER	NH	03820
K0021-00006A	12 CONSTITUTION WY	SCHELLONG KATHERINE SUCCESSOR TRUSTEE	MRC REVOCABLE TRUST	201 ALLISON RUN	WHITE RIVER JUNCTION	VT	05001
K0022-000000	1 11 HARVEST DR	PAOLINI BROTHERS DEVELOPMENT LLC		15 BRIARWOOD LN	DOVER	NH	03820
K0022-000008	8 HARVEST DR	LEVASSEUR THOMAS TRUSTEE	LEVASSEUR THOMAS REVOCABLE TRUST	8 HARVEST DR	DOVER	NH	03820
K0022-000009	9 HARVEST DR	PAQUIN DAVID ANDREW &	PAQUIN NANCY ANN	9 HARVEST DR	DOVER	NH	03820
K0022-000010	10 11 HARVEST DR	PAOLINI ROBERT V TRUSTEE	JNM REALTY TRUST	54 DOVER POINT RD STE 103	DOVER	NH	03820
K0022-B00000	48 1/2 DOVER POINT RD	LARA CHRISTOPHER &	SAPIENZA LEIGH-ANNE	48 1/2 DOVER POINT RD	DOVER	NH	03820
K0023-000000	46 DOVER POINT RD	MARKET SQUARE CONDOMINIUM	C/O RIVER VALLEY DEVELOPMENT CORP	9 PATRIOT DR	DOVER	NH	03820-4708
M0004-000000	MIDDLE RD	THORNWOOD COMMONS LLC	C/O GREAT NORTH PROPERTY MANAGEMENT	3 HOLLAND WAY	EXETER	NH	03833
M0004-000040	33 JULIA DR	STEPHENSON STANLEY D & JUDYTH A TRUSTEES	STEPHENSON STANLEY AND JUDYTH REVOCABLE	33 JULIA DR	DOVER	NH	03820
M0004-000041	31 JULIA DR	AMBRULEVICH JOHN T &	AMBRULEVICH ALMEDA C	31 JULIA DR	DOVER	NH	03820
M0004-000042	29 JULIA DR	BARSTOW THOMAS R & PATRICIA C TRUSTEES	BARSTOW THOMAS AND PATRICIA TRUSTS	29 JULIA DR	DOVER	NH	03820
M0004-000043	27 JULIA DR	KAGELEIRY JAMES &	KAGELEIRY FRANCES T	27 JULIA DR	DOVER	NH	03820-5021
M0004-000044	25 JULIA DR	DUDEK NANCY		25 JULIA DR	DOVER	NH	03820
M0004-000045	23 JULIA DR	BRAUN JOSEPH J JR &	BRAUN JOYCE J	23 JULIA DR	DOVER	NH	03820
M0004-000046	21 JULIA DR	HESS DANIEL J III & DOROTHEA P TRUSTEES	HESS DANIEL J III DOROTHEA P REVOCABLE L	21 JULIA DR	DOVER	NH	03820
		SUMMIT LAND DEVELOPMENT		340 CENTRAL AVENUE	DOVER	NH	03820
		ALTUS ENGINEERING INC		133 COURT STREET	PORTSMOUTH	NH	03801
		TW DESIGNS		P.O. BOX 69	STRAFFORD	NH	03884
		HIGHLAND SOIL SERVICES		75 PROSPECT STREET	SOMERSWORTH	NH	03878
		WOODBURN & COMPANY		103 KENT PLACE	NEWMARKET	NH	03857
		VARNEY BROOK LANDS		340 CENTRAL AVENUE #202	DOVER	NH	03820
		MCENEANEY SURVEY ASSOCIATES, INC.		P.O. BOX 681	DOVER	NH	03820

(2) The APPLICANT shall hold a neighborhood meeting to review the blasting plan and pre-blast survey, with representatives of the Fire and Rescue and the blasting company in attendance, prior to any on-site blasting. ABUTTERS within one thousand (1,000) feet of the external boundary of the project parcel shall be notified by certified mail (paid for by the APPLICANT) of the meeting no less than ten (10) days and no more than fifteen (15) days prior to the meeting. The notice shall state the time and date of the blasting, and contain a map showing the blast area, the one thousand feet (1,000') radius area, and five hundred feet (500') radius area.

(3) Permit holders shall be in compliance with NFPA 495, The Code for the Manufacture, Transportation, Storage, and Use of Explosive Materials, in addition to all other ordinances and codes set forth in the City of Dover Site Regulations 149.14A STORMWATER Management, EROSION Control, and Flood Hazards and City of Dover Fire Prevention Code, which specifically prohibits the overnight storage of explosives or blasting agents. Further all storage magazines shall be locked in the open position at the end of the days' operation, for easy inspection by City Officials.

(4) Blasting permits may be obtained by calling the Dover Fire and Rescue during normal business hours. The permits are only active for the dates and times specified on the permit.

(5) Permit holders shall hold insurance against claims for damages for personal injury and property which may arise from performance of the work.

(6) Hours of operation for the blasting shall be no earlier than 8:00 am and no later than 6:00 pm Monday through Friday, excluding federal holidays.

G. All site improvements in or within six hundred feet (600') of any sub district of the Central Business District, or as deemed necessary by the Technical Review Committee, shall meet the following requirements prior to any earth disturbance or construction activity occurring:

(1) A licensed Pest Control Specialist shall provide an Integrated Pest Management Plan documenting need or lack thereof for pest control.

(2) Where pest control is required:

(a) Said plan shall be in place with a detailed schedule of management strategies prior to final approval of pans.

(b) A note shall be added to the demolition sheet of the plan indicating the plan and schedule.

(c) Said plan shall be include pre construction and during construction activities

(d) Activity Reports shall be provided to Planning/Inspection Services as determined by the Integrated Pest Management Plan

149-11. Performance Guaranties. **[Amended per Planning Board 01-24-2012, amended per Planning Board 06-12-2018]**

A. Where the Planning Board Building Official or City Engineer requires the posting of a PERFORMANCE BOND or ESCROW AGREEMENT to secure for the City the satisfactory construction and installation of required site improvements, said surety shall be in an amount determined by the City Engineer.

B. Construction and installation of required improvements must be satisfactorily executed within the imposed time constraints, or the APPLICANT shall forfeit said surety, and it shall be used to complete and/or install said improvement in accordance with city specifications.

C. A separate PERFORMANCE BOND for landscaping shall be submitted to the City Engineer to be used in the event landscaping installed is removed, dies or is otherwise damaged during the three years following the issuance of the Certificate of Occupancy.

149-12. Inspections. **[Amended per Planning Board 03-23-2010.]**

All required site improvements shall be subject to investigation by an approval of the Community Services Director and the City Engineer, as appropriate, who shall be notified by the developer at least seventy-two (72) hours prior to the start of construction. Inspections will be conducted by said officials or their designees. No underground installation shall be covered until inspected by the appropriate city department. Any improvements completed without inspection will be considered not accepted. All fees and costs connected with inspection for the review of plans, construction and specifications shall be paid for by the developer, at a rate set forth in the City of Dover Adopted Schedule of Fees, as amended annually.

ARTICLE IV

SITE DESIGN AND DEVELOPMENT CRITERIA