CITY OF DOVER

DOVER CONSERVATION COMMISSION – AGENDA

REVISED

Meeting Type: Regular Meeting
Meeting Location: City Council Conference Room - 288 Central Avenue Dover NH
Meeting Date: Monday, August 11, 2025
Meeting Time: **5:30 pm**

1. **CALL TO ORDER AND ROLL CALL**

2. **CITIZEN'S FORUM**

3. **APPROVAL OF THE PRIOR MEETING MINUTES** – July 14, 2025

4. **OLD BUSINESS**

5. **NEW BUSINESS**

   A. Conditional Use Permit for Tina M. Sawtelle Assessor's Map B, Lot 1-C, zoned R-40, located at 476 Sixth Street. Proposal seeks to allow wetland buffer impacts and conservation district impacts for the expansion of an existing single-family home with approx. 216 s.f. of permanent wetland buffer impacts and approx. 150 s.f. of temporary buffer disturbance. There are no direct wetland impacts proposed.

   B. City of Dover Conditional Use Permit for City of Dover, c/o Cathartes and Tighe & Bond. Assessor's ~~Map 22, Lot 1-7, zoned CWD (Cochecho Waterfront District) located at 40 River St. Proposal seeks to~~ allow wetland buffer impacts as part of a Site Plan Amendment for the construction of the Cochecho Waterfront Development Building F. Proposed permanent buffer impacts are 587 s.f. with temporary buffer impacts proposed at 2,674 s.f.

   C. City of Dover Conditional Use Permit for City of Dover, c/o Tighe & Bond and Dover School ~~District. Assessor's Map H, Lot 12, zoned R-20, located at 25 Alumni Drive. Proposal seeks to allow~~ for temporary and permanent impacts to the wetland buffer for the renovation of the Dover High School Athletic Complex. Proposed permanent buffer impacts of 378 s.f. and proposed temporary buffer impacts of 1,230 s.f.

   D. City of Dover Conditional Use Permit for City of Dover, c/o Tighe & Bond and Dover School ~~District. Assessor's Map H, Lot 12, zoned R-20, located at 25 Alumni Drive. Proposal seeks to allow~~ relief from the Secondary Groundwater Protection District for development that creates more than 20% impervious surface for the renovation of the Dover High School Athletic Complex.

   E. Conceptual Conditional use Permit for Liberty Mutual, c/o Brady Sullivan properties, LLC. Assessor's ~~Map E, Lot 24, zoned IT located at 50,100,150 Liberty Way. Proposal is to consider conceptual~~ environmental impacts on a yield plan. *Yield plan will be used to determine density for future development.*

   F. City of Dover Conditional Use Permit for The Stabile Companies. Assessor's Map 35, Lot 64, zoned R-12, located at 141 Sixth Street. Proposal seeks to allow 35.15% impervious where 20% max is allowed within the secondary groundwater for the construction of a residential development. *Eight (8) units were approved through Transfer of Development Rights (TDR) for a proposed total of twenty units, where twelve units are allowed by right.*

6. **REPORT FROM THE CHAIR**

   A. Review of Correspondence Received from NH Department of Environmental Services

CITY OF DOVER

DOVER CONSERVATION COMMISSION – AGENDA

REVISED

Meeting Type: Regular Meeting
Meeting Location: City Council Conference Room - 288 Central Avenue Dover NH
Meeting Date: Monday, August 11, 2025
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7. OTHER BUSINESS

- **A.** Sixth Street Culvert – Signature needed
- **B.** Update from Forest Management Subcommittee
- **C.** Conservation Commission Training Assessment: Abigail Lyon
- **D.** Conversation with DBIDA- Tentative Meeting August 14th

8. ADJOURNMENT

CITY OF DOVER

DOVER CONSERVATION COMMISSION – MINUTES

Meeting Type:	Regular Meeting
Meeting Location:	City Council Conference Room - 288 Central Avenue, Dover, NH
Meeting Date:	Monday July 14, 2025
Meeting Time:	**5:30 pm**

MEMBERS PRESENT: Bill Hunt (Chair), Russ Warnock, Kristen Murphy, Brianna Group (Alternate), Robert Atwood (Secretary)
Absent (Excused): Steve Fellows (Vice Chair), Abigail Lyon
Absent (Unexcused):
STAFF PRESENT: Makayla Edgecomb (Conservation Planner)
OTHERS PRESENT:

1. **CALL TO ORDER AND ROLL CALL**
   The meeting was convened at 5:30 PM.

2. **CITIZENS' FORUM**
   None

3. **APPROVAL OF THE PRIOR MEETING MINUTES** (SPECIAL MEETING) JUNE 16TH, 2025

R. Atwood moved to approve the minutes of June 16th. R. Warnock seconded. Vote: 4 in favor with 1 abstention

4. **OLD BUSINESS:**
   None

5. **NEW BUSINESS**

   A. City of Dover Conditional Use Permit for Dover Development, LLC, Assessor's Map 40, Lot 25, zoned C, located at 52 Old Rochester Road. Proposal seeks to allow 44.15% impervious surface coverage within the Secondary Groundwater Protection District where 20% is allowed.

Christopher Berry, Berry Surveying and Engineering presented and explained the proposal highlighting the soils on site, existing uses on site, existing impervious surface coverage, location and surroundings.
He explained the proposal to create a small parking lot and three mixed-used buildings. He gave details regarding drainage, pavement areas, storm water changes and improvements, and porous areas.

Mr. Berry clarified additional information for the commission members relating to treatment areas, landscaping plan, ownership and maintenance responsibilities, porous/impervious drive areas and regulations for future oversight.
The members discussed following the ordinance verses the technologies that have come since some of the regulations were put in place.

R. Warnock moved to endorse the CUP as presented. K. Murphy seconded. Vote: 5 in favor

   B. City of Dover Conditional Use Permit for McDonald's USA LLC (c/o Bohler), Assessor's Map H, Lot 4-3, located at 30 Grapevine Drive. Proposal seeks to allow construction of a new McDonald's restaurant and parking with impacts within the Wetland Protection District. The proposed activity results in approx. 7,630 s.f. of re-contouring and grading of land and the construction of parking lots within the 50' wetland buffer. There are no direct wetland impacts proposed.

DRAFT

Connor Ennis, Bohler Engineering, presented the item highlighting background information of the existing conditions on site, and details of the proposed new restaurant with drive-thru. These included parking, landscaping, impacts to wetlands/buffers and storm water management.

The members discussed details of drainage and storm water with the applicant. Additional discussion occurred about the proposed small paving area over the wetlands buffer, traffic patterns, and snow storage.

K. Murphy moved to endorse the CUP with the condition that the snow storage be relocated outside the buffer. R. Atwood seconded. Vote: 4 in favor with 1 opposed.

> **C**. City of Dover Conditional Use Permit for True North Development, LLC Assessor's Map 7, Lot 14, zoned R-20, located at 35 Boston Harbor Rd. Proposal seeks to allow Conservation District impacts for the construction of two single-family homes. Proposal includes temporary impacts related to underground utility installation and permanent impacts due to grading and drainage improvements totaling approx. 6,000 s.f. [NHDES approvals were received and provided as part of this application per previous conditions set by the Conservation Commission]

Joe Griffin, CivilWorks presented and explained the proposal highlighting the existing conditions and details of the proposal including impacts to shore land and buffer. The item was before the Commission in February, and the applicant was asked to address three items:

- Wetlands Bureau feedback
  - DES endorsed all applications
- City Engineer and abutters agree and approve of the proposed culverts
  - Storm water treatment
- Review sea level rise scenario based on UNH predictive trends
  - Review done and explained

Additional details were given to the members relating to location of the culverts and scenarios used in the models. The Chair noted it appears the request of the Commission in February has been met.

R. Atwood moved to endorse the CUP as presented. R. Warnock seconded. Vote: All in favor

> **D.** City of Dover Conditional Use Permit for Eric Latour, Assessor's Map B, Lot 18-43, zoned R-40, located at 28 Cornerstone Drive. Proposal seeks to allow wetland buffer impacts for the construction of a garage and small mudroom that will result in approx. 2,435 s.f. of buffer impacts from two overlapping wetland buffers. There are no direct wetland impacts proposed.

Eric Latour, owner, presented the item and explained the request by highlighting the existing site, proposed garage and mudroom details, and description of wetlands. Stating that one wetland was not naturally occurring.

R. Warnock made a motion to endorse the CUP as presented. Seconded by R. Atwood. Vote: All in favor

> **E.** City of Dover Conditional Use Permit for Tina M. Sawtelle Assessor's Map B, Lot 1-C, zoned R-40, located at 476 Sixth Street. Proposal seeks to allow wetland buffer impacts and conservation district impacts for the expansion of an existing single-family home with approx. 216 s.f. of permanent wetland buffer impacts and approx. 150 s.f. of temporary buffer disturbance. There are no direct wetland impacts proposed.

DRAFT

As no applicant was present to address the item, the item was not heard and will go to the August meeting upon applicant request.

> **F.** City of Dover Conditional Use Permit for Summit Land Development, LLC, Assessor's Map G, Lot 2, zoned CM, located at Littleworth Road. Proposal seeks to allow approx. 16, 678 s.f. of wetland buffer impacts for the construction of an accessway and grading for the installation of a bioretention pond with internal reservoir. Applicant is proposing the CUP as part of the construction of a light industrial building. There are no direct wetland impacts proposed.

Joe Griffin, CivilWorks presented and explained the proposal highlighting site location, details of the proposed building, required permits, impacts, required storm water management practices (bioretention reservoir), drainage.

Details were clarified for the members relating to access, location, and plans for temporary impact areas.

A member reiterated a comment he made last month noting the mismatch of priorities for this area of the City. This area is the single largest hot spot of un-conserved land with the highest priority value for natural resources, yet it's zoned industrial and it's getting built over.

Additional conversation occurred regarding the poor soils in the area and seed specification for the temporary impact areas not being included in the information packet provided.

B. Group made a motion to endorse the CUP as presented with the condition that a note is added to the plan indicating seed specification. Seconded by K. Murphy. Vote: All in favor

Additional conversation occurred expounding on options for preserving and conserving land in that area.

- Land owner initiative
- Zoning changes
- Request to Open Lands Committee for a discussion

6. REPORT FROM THE CHAIR

a. Review of Correspondence Received from NH Department of Environmental Services

None

7. OTHER BUSINESS

A. Update from Forest Management Subcommittee

- Ash Tree Info Walk recap
  - Another one planned for August
  - Need better marketing and more advanced marketing
  - Feedback from participants

B. Other:

- Board member handbook is being revised
- Workshop tentative for July 21st

8. ADJOURNMENT

R. Warnock moved and R. Atwood seconded to adjourn. Vote: U/A
The meeting was adjourned at 7:13 PM.

DRAFT

PERMIT SNAPSHOT REPORT COND-2025-0014
FOR CITY OF DOVER, N.H.

Permit Type	Conditional Use	**Project:**		**App Date:**	07/02/2025
Work Class:	Environmental	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	In Review	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Blonigen, Rachel	**Approval Expire Date:**	

Description: We are requesting updated guidance and approval from the City of Dover for a revised Conditional Use Permit for a significantly scaled-down residential renovation project at 476 Sixth Street. This replaces the prior application submitted in 2023 with conditional use approved by the City of Dover (see attachments).

Parcel:	B0001-C00000 Main	**Address:**	476 Sixth St Dover, NH Main	**Zone:**	R-40(Residential - Rural)

Owner	Plan Preparer	Applicant
Tina Sawtelle 476 6th Street Dover, NH 03820 Mobile: (603) 978-4611	Tina Sawtelle 476 6th Street Dover, NH 03820 Mobile: (603) 978-4611	Tina Sawtelle 476 6th Street Dover, NH 03820 Mobile: (603) 978-4611

Permit Custom Fields

Select Permit Type	Wetland Protection District	General Purpose	Alteration / Addition	Project Zone	Residential
New Change in Impervious/Paved Area (sq ft)	0	Work	We are requesting updated guidance and approval from the City of Dover for a revised Conditional Use Permit for a significantly scaled-down residential renovation project at 476 Sixth Street. This replaces the prior application submitted in 2023 with conditional use approved by the City of Dover (see attachments). The original proposal included a substantial front-facing addition to the garage and Creek Room area, which has since been eliminated. The new scope is focused solely on enclosing the existing rear deck and adding a modest 1-foot x 16-foot bumpout, totaling approximately 16 square feet of additional structure beyond the current footprint. The purpose is to convert the existing Creek Room into usable interior space without the need for extensive excavation, foundation work, or major alterations to the site. This revised design results in a much smaller buffer impact compared to		the original project, which proposed a new full foundation extension. No garage or driveway expansion is being proposed. This effort prioritizes thoughtful, low-impact design that meets the family's space needs while minimizing environmental disturbance.

PERMIT SNAPSHOT REPORT (COND-2025-0014)

permitstatefed

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Tina_Sawtelle_7/2/2025.jpg	07/02/2025 13:44	Sawtelle, Tina		Uploaded via CSS
Permit Snapshot Report.pdf	07/02/2025 13:45	Service, EnerGov		Attached by IO - ATTACH: Initial Permit Snapshot

Invoice No.	Fee	Fee Amount	Amount Paid
INV-2025013122	Planning General Application Fee	$200.00	$200.00
	Total for Invoice INV-2025013122	$200.00	$200.00
	Grand Total for Permit	**$200.00**	**$200.00**

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Conditional Use Review v.1	In Review	07/02/2025	07/11/2025		No	No

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Edgecomb, Makayla	In Review	07/02/2025	07/30/2025	

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		07/02/2025 15:38	
Confirm application complete v.1	Generic Action		07/02/2025 15:38
Conditional Use Review v.1	Receive Submittal	07/02/2025 0:00	
Planning Board v.1			
Planning Board Agenda v.1	Task		
Invoice for Notices v.1	Task		
Send Notices v.1	Task		
Planner Creates Staff Recommendations v.1	Permit Activity		
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Permit Activity		
NOD Sent to Applicant v.1	Create Report		
Issue Permit v.1			
Verify Fees Prior to Permit v.1	Generic Action		
Issue and Review Permit v.1	Generic Action		
Print and Email Permit v.1	Generic Action		
Plans uploaded to Treeno v.1	Generic Action		
Internal Notification of Plan Completion v.1	Generic Action		
Recording v.1	Task		

Wetland Permit Narrative – Creek Room Renovation Project

Property Address: 476 Sixth Street, Dover, NH
Prepared for: City of Dover Planning Department
Prepared by: Tina Sawtelle (homeowner)

Date: July 2, 2025

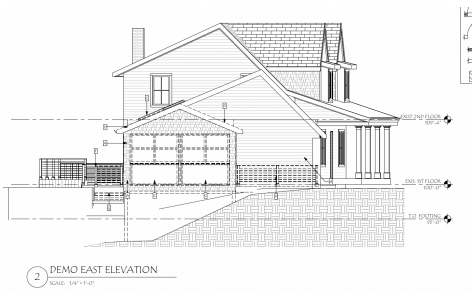
Project Overview

We are requesting updated guidance and approval from the City of Dover for a **revised Conditional Use Permit** for a significantly scaled-down residential renovation project at 476 Sixth Street. This replaces the prior application submitted in 2023 with conditional use approved by the City of Dover (see attachments).

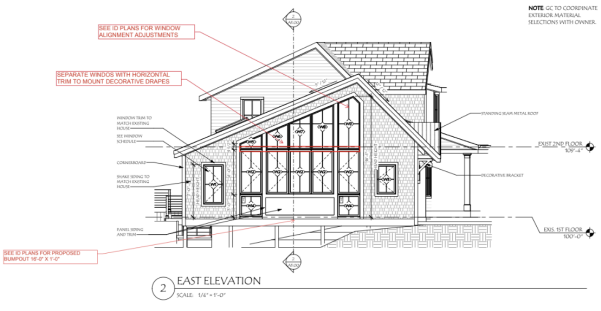
The original proposal included a substantial front-facing addition to the garage and Creek Room area, which has since been eliminated. The **new scope is focused solely on enclosing the existing rear deck and adding a modest 1-foot x 16-foot bumpout**, totaling approximately **16 square feet of additional structure** beyond the current footprint. The purpose is to convert the existing **Creek Room into usable interior space** without the need for extensive excavation, foundation work, or major alterations to the site.

This revised design results in a **much smaller buffer impact** compared to the original project, which proposed a new full foundation extension. No garage or driveway expansion is being proposed. This effort prioritizes thoughtful, low-impact design that meets the family's space needs while minimizing environmental disturbance.

Existing Creek Room



Proposed Creek Room



Wetland Delineation and Environmental Considerations

A **wetland delineation was performed by Joseph W. Noel, Certified Wetland Scientist (#086)**, in **March 2023**. His review and recommendations were part of the 2023 Conditional Use Permit submission, which included a complete site survey and topographical overlay.

Although the current project is a fraction of the original scope, we remain committed to following Mr. Jacobs' recommendations. These include:

- Minimizing disturbance within the wetland buffer zone
- Avoiding unnecessary tree removal
- Implementing best practices for erosion control during construction
- Ensuring buffer vegetation restoration post-construction if needed

---

Proposed Work and Wetland Buffer Impact

The revised scope includes:

- Enclosure of the existing rear deck off the Creek Room (no footprint change)
- A new 1-foot x 16-foot bumpout addition to slightly expand interior space
- No changes to the garage, driveway, or utility services

Impact Summary:

- **Permanent Wetland Buffer Impact:** Approximately **216 square feet** (200 SF from the existing deck footprint + 16 SF bumpout)
- **Temporary Buffer Disturbance:** To be minimized during access and staging; estimated **less than 150 square feet**
- **Wetland Impact: None** – all work remains outside the delineated wetland edge

The **original wetland line and 100-foot buffer** as documented in the 2023 site plan remain accurate and valid. An **updated site plan** is being developed to reflect this current, reduced scope and will include:

- Wetland boundary and buffer zones
- Existing and proposed structures
- Areas of disturbance in square footage
- Construction access routes

Request for City Guidance

Before incurring additional architectural and engineering fees to finalize construction drawings and full permit materials, we respectfully request **preliminary feedback and direction from the City of Dover Planning Department**.

We believe this revised plan—significantly reduced in size and environmental impact—aligns with the City's wetland protection standards. We are eager to move forward in full compliance and with minimal disruption to the surrounding natural features.

DONNA P. BENTON, AICP
Director of Planning and
Community Development
d.benton@dover.nh.gov

288 Central Avenue
Dover, New Hampshire 03820-4169
(603) 516-6008
Fax: (603) 516-6049
www.dover.nh.gov

City of Dover, New Hampshire

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

NOTICE OF DECISION

May 11, 2023

Tina M. Sawtelle
476 Sixth Street
Dover, NH 03820

Re: Conditional Use Permit for Altus Engineering (Owner: Tina Sawtelle), Assessor's Map B, Lot 1-C, zoned R-40, located at 476 Sixth Street. (Proposal is to construct a building addition in a previously developed area creating 773 square feet of overlapped impact to the Conservation District and wetland buffer. *(COND-2023-0035)

Dear Ms. Sawtelle,

Please be advised that on Tuesday, May 9, 2023 the Dover Planning Board voted to conditionally grant final approval of the above referenced Conditional Use Permit and found the criteria of 170-27.1-F have been met.

The specific subsequent condition to be Met Prior to the Issuance of the Conditional Use Permit is:

1. ☐ The owner shall sign the final plans before Planning Board signature

If you have any questions, please do not hesitate to contact my office.

Sincerely,

Donna P. Benton

Donna P. Benton, AICP
Director of Planning & Community Development

EC: Inspection Services
Engineering Office
Assessing Office
Altus Engineering

THIS DRAWING SET HAS NOT BEEN RELEASED FOR CONSTRUCTION

CONDITIONAL USE PERMIT APPLICATION PLANS

CITY OF DOVER DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

FILE No. P23-xx

SAWTELLE RESIDENCE

476 Sixth Street

Dover, New Hampshire

Assessor's Parcel B-1-C-0

ISSUED FOR PERMITTING

Plan Issue Date:

March 20, 2023

Owner/Applicant:

TINA M. SAWTELLE
476 Sixth Street
Dover, NH 03820

Signature: _____
Date: _____

Civil Engineer:

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

Architect:

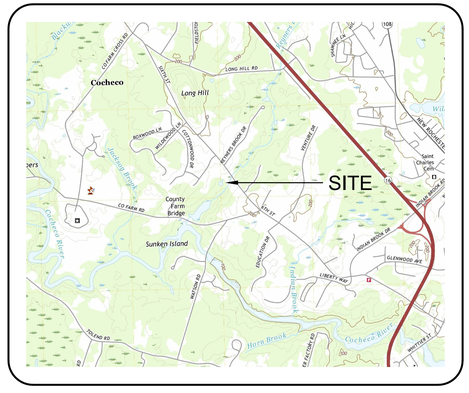
MARKET SQUARE ARCHITECTS
104 Congress Street
Suite 203
Portsmouth, NH 03801
(603) 501-0202

Surveyor:

Civilworks New England
civil engineering
P.O. Box 1166 181 Watson Road
Dover, NH 603-749-0443

Wetlands Scientist:

Joseph W. Noel, CWS #086
P.O. Box 174
South Berwick, Maine 03908



LOCUS NOT TO SCALE

Sheet Index Title	*Sheet Desig.*	*Sheet No.:*	*Rev.*	*Date*
Existing Conditions Worksheet	2	1	0	05/11/17
Demolition Plan	3	C-1	0	03/20/23
Site Plan	4	C-2	0	03/20/23
Conditional Use Permit Plan	5	C-3	0	03/20/23
Detail Sheet	6	D-1	0	03/20/23
Overall Floor Plans (Garage)	7	A1.01	0	12/01/22
Exterior Elevations (Garage)	8	A2.00	0	12/01/22
Overall Floor Plans (House)	9	A1.01	0	12/01/22
Overall Roof Plans (House)	10	A1.02	0	12/01/22
Exterior Elevations (House)	11	A2.00	0	12/01/22

P5297

EXISTING RIP-RAP
INV.=128.87
INV.=129.24
EXISTING CULVERT
EXISTING CULVERT
INV.=126.79
INV.=128.00
UTILITY POLE AND GUY
EXISTING CULVERT
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INV.=124.69
EXISTING GUARDRAIL
Sixth Street
Pond El=130
INV.=131.04
INV.=131.94
EXISTING GRAVEL
EXISTING GRAVEL PATHWAY
EXISTING CULVERT
GRANITE RETAINING WALL
UG Gas Tank
EXISTING WALK
EXISTING WALK
EXISTING STAIRS
EXISTING HOUSE
EXISTING DECK
EXISTING CULVERT
INV.=131.09
INV.=126.85
Reyners Brook
EXISTING STAIRS
EXISTING DECK
EXISTING DECK

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

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

NO.	REVISION	APP'D	DATE

DATE: 5-11-17
SCALE: 1"=20'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1715
FILE: SITE.DWG

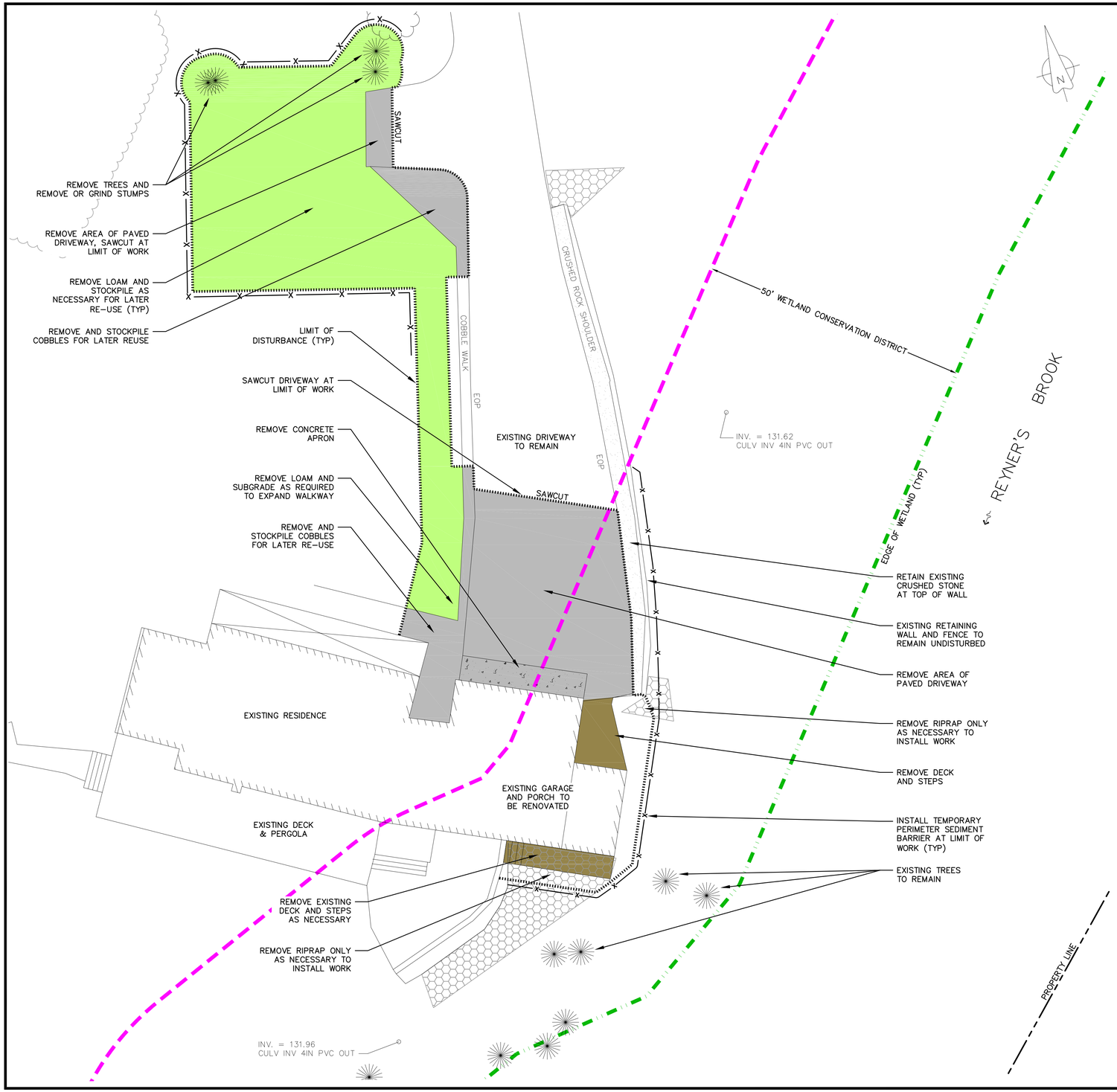
STATE OF NEW HAMPSHIRE
STEPHEN J. HAIGHT
No. 7973
LICENSED PROFESSIONAL ENGINEER
5/11/17

EXISTING CONDITIONS

TINA SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

DRIVEWAY RECONSTRUCTION
DOVER, NH

1



DEMOLITION NOTES

1. CITY DEMOLITION PERMIT MAY BE REQUIRED PRIOR TO ANY DEMOLITION ACTIVITIES. CONTRACTOR IS NOTIFIED THAT THIS PERMIT PROCESS MAY REQUIRE A 30-DAY LEAD TIME AND IS ENCOURAGED TO VERIFY THIS REQUIREMENT WITH THE CITY.
2. CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES AND SITE ELEMENTS SCHEDULED TO REMAIN.
3. ALL MATERIALS SCHEDULED FOR DEMOLITION OR REMOVAL ON PRIVATE PROPERTY SHALL REMAIN THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ITEMS INDICATED TO BE STOCKPILED SHALL BE REUSED ON-SITE IF DEEMED SUITABLE BY THE ENGINEER.
4. ALL MATERIAL SCHEDULED TO BE REMOVED SHALL BE LEGALLY DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS/CODES.
5. NO BURNING SHALL BE PERMITTED PER LOCAL REGULATIONS.
6. HAZARDOUS MATERIALS ENCOUNTERED DURING DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE ABATED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS.
7. THIS PLAN IS INTENDED TO PROVIDE MINIMUM GUIDELINES FOR THE DEMOLITION OF EXISTING SITE FEATURES. UNLESS OTHERWISE NOTED TO REMAIN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL BUILDINGS, PAVEMENT, CONCRETE, CURBING, SIGNS, POLES, UTILITIES, FENCES, VEGETATION AND OTHER EXISTING FEATURES AS NECESSARY TO FULLY CONSTRUCT THE PROJECT.
8. LOCATIONS OF PAVEMENT REMOVAL & SAWCUT LIMITS ARE SHOWN TO DEPICT THE GENERAL LIMITS OF WORK. CONTRACTOR'S MEANS & METHODS & PAVEMENT CONDITION WILL DICTATE THE EXACT LIMITS OF PAVEMENT REMOVAL.
9. SHOULD GROUNDWATER BE ENCOUNTERED DURING EXCAVATION, APPROPRIATE BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED TO ENSURE SEDIMENT LADEN WATER IS NOT DISCHARGED INTO A CITY DRAINAGE SYSTEM OR ADJACENT WETLANDS.
10. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE. CATCH BASINS, MANHOLES, WATER GATES, ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY PROVIDERS AND GOVERNMENTAL AGENCIES. AS SUCH, THEY ARE NOT INCLUSIVE AS OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE NOT SHOWN ON THE PLANS MAY EXIST. THE ENGINEER, SURVEYOR AND OWNER ACCEPT NO RESPONSIBILITY FOR POTENTIAL INACCURACIES IN THE PLAN AND/OR UNFORESEEN CONDITIONS. THE CONTRACTOR SHALL NOTIFY, IN WRITING, SAID AGENCIES, UTILITY PROVIDERS, CITY OF DOVER DPW AND OWNER'S AUTHORIZED REPRESENTATIVE AND CALL DIG SAFE AT 1 (800) DIG-SAFE AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION WORK.
11. PRIOR TO CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING AND PROPOSED STORMWATER AND UTILITY LINES. CONFLICTS SHALL BE ANTICIPATED AND ALL EXISTING LINES TO BE RETAINED SHALL BE PROTECTED. ANY DAMAGE DONE TO EXISTING UTILITIES SHALL BE REPAIRED AND, IF NECESSARY, EXISTING UTILITIES SHALL BE RELOCATED AT NO EXTRA COST TO THE OWNER. ALL CONFLICTS SHALL BE RESOLVED WITH THE INVOLVEMENT OF THE ENGINEER, DPW AND APPROPRIATE UTILITIES.

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

STATE OF NEW HAMPSHIRE - ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER
3/20/23

NOT FOR CONSTRUCTION

ISSUED FOR: PERMITTING

ISSUE DATE: MARCH 20, 2023

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PERMITTING	EBS	03/20/23

DRAWN BY: RLH
APPROVED BY: EBS
DRAWING FILE: 5297.DWG

SCALE:
22" x 34" - 1" = 10'
11" x 17" - 1" = 20'

OWNER:
TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

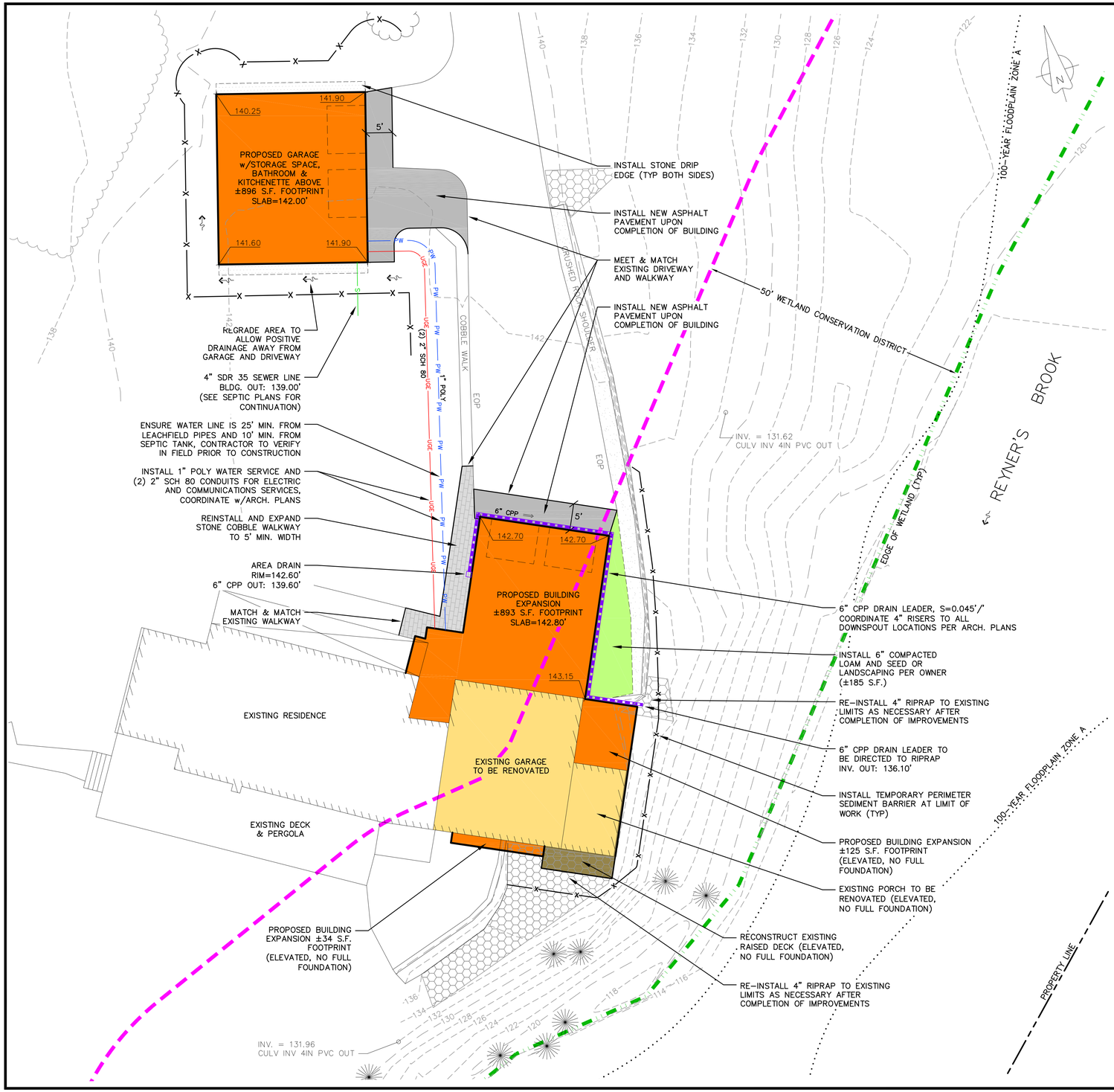
APPLICANT:
TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

PROJECT:
SAWTELLE RESIDENCE
PARCEL B-1-C-0
476 SIXTH STREET
DOVER, NEW HAMPSHIRE

TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C-1

P5297



SITE NOTES

1. DESIGN INTENT – THIS PLAN SET IS INTENDED TO DEPICT AN ADDITION TO AN EXISTING SINGLE FAMILY RESIDENCE AND OTHER SITE IMPROVEMENTS.
2. THE BOUNDARY AND EXISTING CONDITIONS SHOWN HERE WERE OBTAINED FROM A PLAN ENTITLED "EXISTING CONDITIONS" DATED 05/11/17 AND AN UNPUBLISHED AS-BUILT SURVEY WORKSHEET DATED APRIL 2022, BOTH PREPARED BY CIVILWORKS NEW ENGLAND.
3. APPROXIMATE LOT AREA: ±8.08 AC.
4. ZONE: R-40
5. DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA:	40,000 S.F.
MIN. STREET FRONTAGE:	150'
FRONT SETBACK:	40'
SIDE SETBACK:	25'
REAR SETBACK:	30'
MAX. BLDG HEIGHT:	35'
MAX. LOT COVERAGE:	10%

6. PORTIONS OF THE LOT ARE WITHIN THE 50' CONSERVATION DISTRICT.
7. THE SUBJECT PARCEL IS SHOWN AS DOVER PARCEL NUMBER B-1-C-0.
8. REFERENCE DEED: STRAFFORD COUNTY REGISTRY OF DEEDS BOOK 4445 PAGE 620.
9. OVERALL AREA OF DISTURBANCE UNDER 100,000 S.F., NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED.
10. AREA OF DISTURBANCE UNDER 43,560 SF, COVERAGE UNDER EPA NPDES PHASE II CONSTRUCTION GENERAL PERMIT NOT REQUIRED.
3. A PORTION OF THE LOT LIES WITHIN FEMA ZONE A AS SHOWN ON FIRM PANEL 33017C0310E EFFECTIVE 09/30/15.
4. SELECTED WETLANDS WERE DELINEATED BY JOSEPH NOEL ON DECEMBER 30, 2021 IN ACCORDANCE WITH THE U.S. ARMY CORPS OF ENGINEERS (ACOE) WETLAND DELINEATION MANUAL (1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH-CENTRAL AND NORTHEAST REGION (VERSION 2). HYDRIC SOIL DETERMINATIONS WERE CONDUCTED IN ACCORDANCE WITH THE U.S. DEPT. OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE'S FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES (VERSION 7.0, 2010) ALONG WITH THE MANUAL FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND (VERSION 3, APRIL 2004). PLANT SPECIES INDICATOR STATUS WAS BASED ON THE ACOE'S THE NATIONAL WETLAND PLANT LIST (2013).
5. ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION.
6. THE CONTRACTOR SHALL VERIFY ALL BENCHMARKS AND TOPOGRAPHY IN THE FIELD PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL VERIFY ALL BUILDING DIMENSIONS WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PRIOR TO CONSTRUCTION. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR RESOLUTION.
8. BUILDING AREA SHOWN IS BASED ON FOOTPRINT MEASURED TO THE EDGE OF FOUNDATIONS AND/OR SLABS. ACTUAL INTERIOR SPACE WILL DIFFER.
9. CONDITIONAL USE PERMIT UNDER SECTION 170-27.C OF THE DOVER ZONING ORDINANCE REQUIRED FOR WORK WITHIN THE CONSERVATION DISTRICT.
10. THE SITE IS SERVED BY MUNICIPAL WATER FROM THE CITY OF DOVER AND A PRIVATE SUBSURFACE SANITARY DISPOSAL SYSTEM.
11. ALL NEW WATER LINES SHALL BE PRIVATE AND CONSTRUCTED AT A MINIMUM DEPTH OF 5' BELOW FINISH GRADE.
12. 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 SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITIONS. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
13. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE. CATCH BASINS, MANHOLES, WATER GATES, ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY PROVIDERS AND GOVERNMENTAL AGENCIES. AS SUCH, THEY ARE NOT INCLUSIVE AS OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE NOT SHOWN ON THE PLANS MAY EXIST. THE ENGINEER, SURVEYOR AND OWNER ACCEPT NO RESPONSIBILITY FOR POTENTIAL INACCURACIES IN THE PLAN AND/OR UNFORESEEN CONDITIONS. THE CONTRACTOR SHALL NOTIFY, IN WRITING, SAID AGENCIES, UTILITY PROVIDERS, CITY OF DOVER DPW AND OWNER'S AUTHORIZED REPRESENTATIVE AND CALL DIG SAFE AT 1 (800) DIG-SAFE AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION WORK.
14. THESE PLANS ARE INTENDED FOR PERMITTING PURPOSES ONLY. COORDINATE SITE GRADES, DRAINAGE AND UTILITIES WITH THE ENGINEER AND ARCHITECT PRIOR TO INITIATING CONSTRUCTION.

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

STATE OF NEW HAMPSHIRE – ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER
3/20/23

NOT FOR CONSTRUCTION

ISSUED FOR: PERMITTING

ISSUE DATE: MARCH 20, 2023

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PERMITTING	EBS	03/20/23

DRAWN BY: RLH
APPROVED BY: EBS
DRAWING FILE: 5297.DWG

SCALE:
22" x 34" – 1" = 10'
11" x 17" – 1" = 20'

OWNER:
TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

APPLICANT:
TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

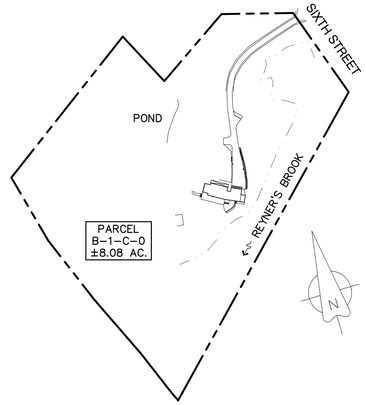
PROJECT:
SAWTELLE RESIDENCE
PARCEL B-1-C-0
476 SIXTH STREET
DOVER, NEW HAMPSHIRE

TITLE:
SITE AND UTILITIES PLAN

SHEET NUMBER:
C-2

P5297

OVERALL LOT PLAN 1" = 160'



CUP AND EROSION CONTROL NOTES

1. TOTAL PROJECT AREA OF DISTURBANCE = ±4,158 S.F. (±0.10 AC.). NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED. PROJECT NOT SUBJECT TO EPA NPDES PHASE II – NOI, SWPPP AND MINIMUM WEEKLY INSPECTIONS NOT REQUIRED.
2. PERIMETER SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AFTER TREE CLEARING OPERATIONS HAVE CEASED AND BEFORE ANY STUMPING, GRUBBING OR OTHER EARTH DISTURBANCE.
3. GRIND STUMPS AND REUSE GRINDINGS FOR EROSION CONTROL WHERE POSSIBLE OR TRUCK OFFSITE. NO STUMPS SHALL BE BURIED ON SITE.
4. 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.
5. SEE DETAIL SHEETS FOR PERTINENT SEDIMENT AND EROSION CONTROL DETAILS AND ADDITIONAL NOTES.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH BY THE NEW HAMPSHIRE OF ENVIRONMENTAL SERVICES.
7. 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.
8. 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.
9. UPON COMPLETION OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND ANY AREAS DISTURBED BY THE REMOVAL SMOOTHED AND REVEGETATED.
10. CONTRACTOR SHALL READ AND FOLLOW ALL CONDITIONS OF APPROVAL IN THE SITE'S CITY OF DOVER CONDITIONAL USE PERMIT.
11. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.
12. CONSERVATION DISTRICT ANALYSIS –

	EXISTING	PROPOSED
IMPERVIOUS SURFACES:	±1,887 S.F.	±1,722 S.F. (165 S.F. REDUCTION)
AREA OF DISTURBANCE:		±773 S.F.

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TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

PROJECT:
SAWTELLE RESIDENCE
PARCEL B-1-C-0
476 SIXTH STREET
DOVER, NEW HAMPSHIRE

TITLE:
CONDITIONAL USE PERMIT PLAN

SHEET NUMBER:
C-3

P5297

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

476 SIXTH STREET
DOVER, NEW HAMPSHIRE
TAX MAP B LOT 1–C

LATITUDE: 43°12'10" N
LONGITUDE: 70°52'00" W

OWNER/APPLICANT:
TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

DESCRIPTION

The project consists of the renovation/conversion of existing building spaces, several new building additions and a separate standalone garage together with associated site improvements.

DISTURBED AREA

The total area to be disturbed for the development is ±4,210 S.F. (±0.10 acres).

PROJECT PHASING

The proposed demolition, conversion and construction of building improvements along with associated improvements will be completed in one phase. Construction of a separate garage may be completed in a separate phase.

NAME OF RECEIVING WATER

The site drains over land to Reyner's Brook.

SEQUENCE OF MAJOR ACTIVITIES

1. Cut trees designated for removal in the project area.
2. Install temporary erosion control measures including perimeter controls as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
3. Remove landscaping, brush, and stumps strip loam and stockpile.
4. Demolish existing site features, etc. as shown on Demolition Plan.
5. Construct garage foundation.
6. Rough grade site including placement of borrow materials.
7. Construct new building additions and associated improvements.
8. Construct drainage structures & pavement base course materials.
9. Install base course paving.
10. Install top course paving.
11. Loam (6" min) and seed on all disturbed areas not paved or otherwise stabilized.
12. Install landscaping.
13. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

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

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

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

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

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

A. GENERAL

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

1. The smallest practical portion of the site shall be denuded at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.5 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 perimeter barriers when it has reached one–third the height of the barrier or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. An area shall be considered stable if one of the following has occurred:
   a. Base coarse gravels have been installed in areas to be paved;
   b. A minimum of 85% vegetated growth as been established;
   c. A minimum of 3 inches of non–erosive material such as stone of riprap has been installed; – or –
   d. Erosion control blankets have been properly installed.
9. Areas disturbed during construction shall be left exposed for more than 45 days.

B. MULCHING

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

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

2. Guidelines for Winter Mulch Application –

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrubs.
Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1–1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	* The organic matter content is between 80 and 100%, dry weight basis. * Particle size by weight is 100% passing a 6"screen and a minimum of 70 % maximum of 85% passing a 0.75" screen. *The organic portion needs to be fibrous and elongated. *Large portions of silts, clays or fine sands are not acceptable in the mix. * Soluble salts content is less than 4.0 mmhos/cm. *The pH should fall between 5.0 and 8.0.

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

C. PERMANENT SEEDING –

1. Bedding – stones larger than 1½", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.

2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and organic fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

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

3. Seed Mixture (recommended):

Type	Lbs. / Acre	Lbs. / 1,000 sf
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
LAWN OR PLANTING BED		
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.

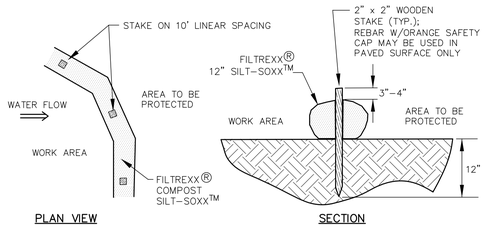
4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended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

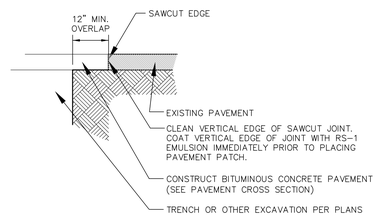
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and

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.

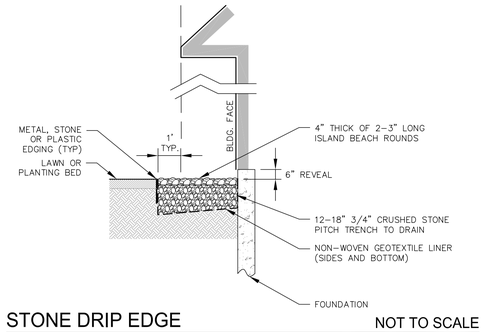


NOTES:
1. SILTSOXX MAY BY USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
3. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
4. ALL SEDIMENT TRAPPED BY SILTSOXX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

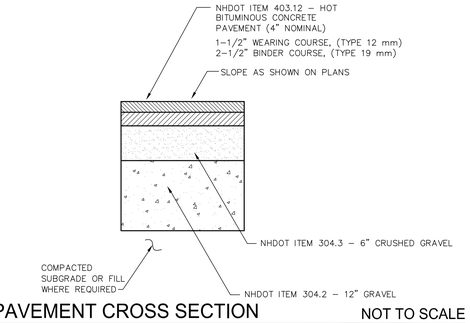
TUBULAR SEDIMENT BARRIER NOT TO SCALE



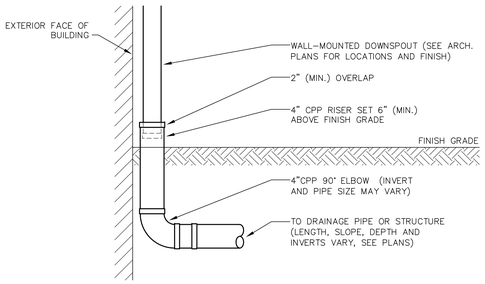
TYPICAL PAVEMENT SAWCUT NOT TO SCALE



STONE DRIP EDGE NOT TO SCALE

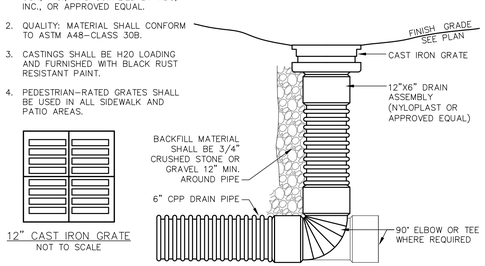


PAVEMENT CROSS SECTION NOT TO SCALE

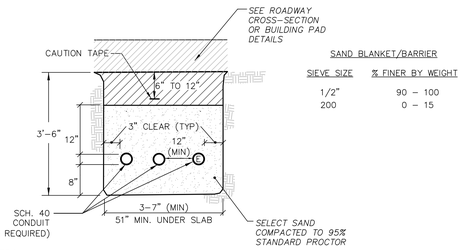


EXTERIOR ROOF DRAIN CONNECTION NOT TO SCALE

NOTES:
1. YARD DRAINS TO BE NYLOPLAST USA, INC., AND SUPPLIED BY ADS, INC., OR APPROVED EQUAL.
2. QUALITY: MATERIAL SHALL CONFORM TO ASTM A48–CLASS 30B.
3. CASTINGS SHALL BE H20 LOADING AND FURNISHED WITH BLACK RUST RESISTANT PAINT.
4. PEDESTRIAN–RATED GRATES SHALL BE USED IN ALL SIDEWALK AND PATIO AREAS.



YARD DRAIN (YD) NOT TO SCALE



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

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NO.	DESCRIPTION	BY	DATE
0	PERMITTING	EBS	03/20/23

DRAWN BY: RLH
APPROVED BY: EBS
DRAWING FILE: 5297.DWG

SCALE: 22" x 34" – NOT TO SCALE

OWNER:
TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

APPLICANT:
TINA M. SAWTELLE
476 SIXTH STREET
DOVER, NH 03820

PROJECT:
SAWTELLE RESIDENCE
PARCEL B–1–C–0
476 SIXTH STREET
DOVER, NEW HAMPSHIRE

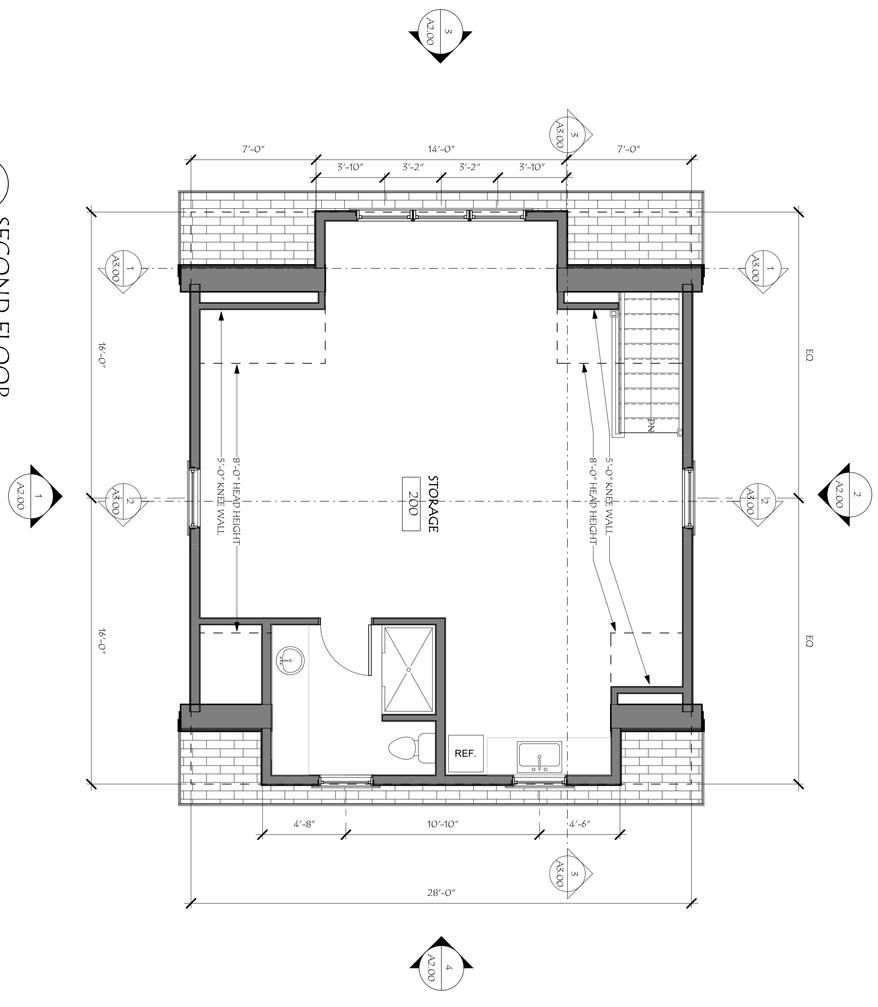
TITLE:
DETAIL SHEET

SHEET NUMBER:
D-1

P5297

2 SECOND FLOOR

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



1 FIRST FLOOR

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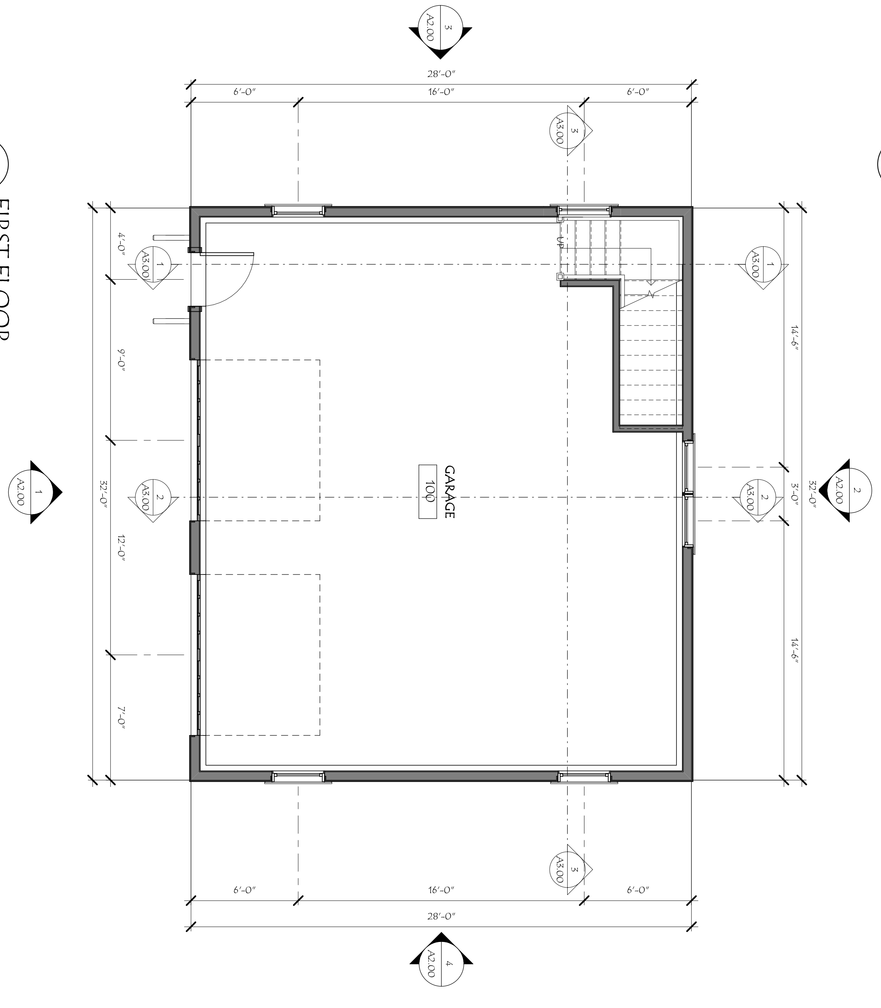

3 ROOF

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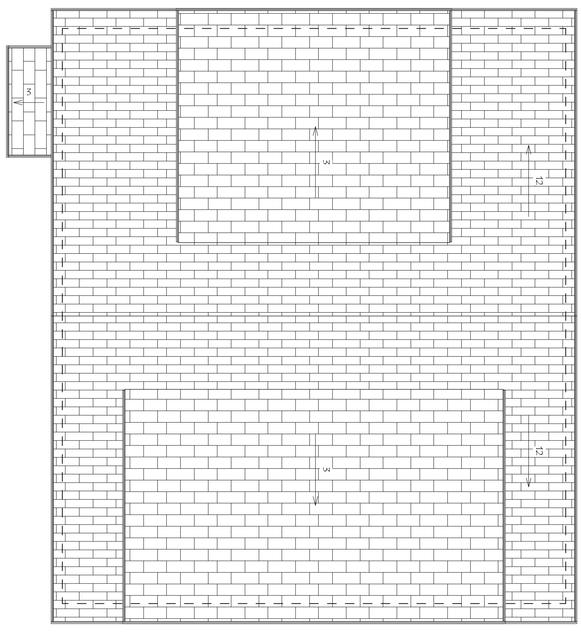


Title:	OVERALL FLOOR PLANS
	A1.01
Scale:	1/4" = 1'-0"
Drawn By:	ANR
Checked By:	RJH
Project No.:	2022044
	SCHEMATIC DESIGN
Date:	12/1/22

Revisions:

Description	Date

NOT FOR CONSTRUCTION

SAWTELLE GARAGE

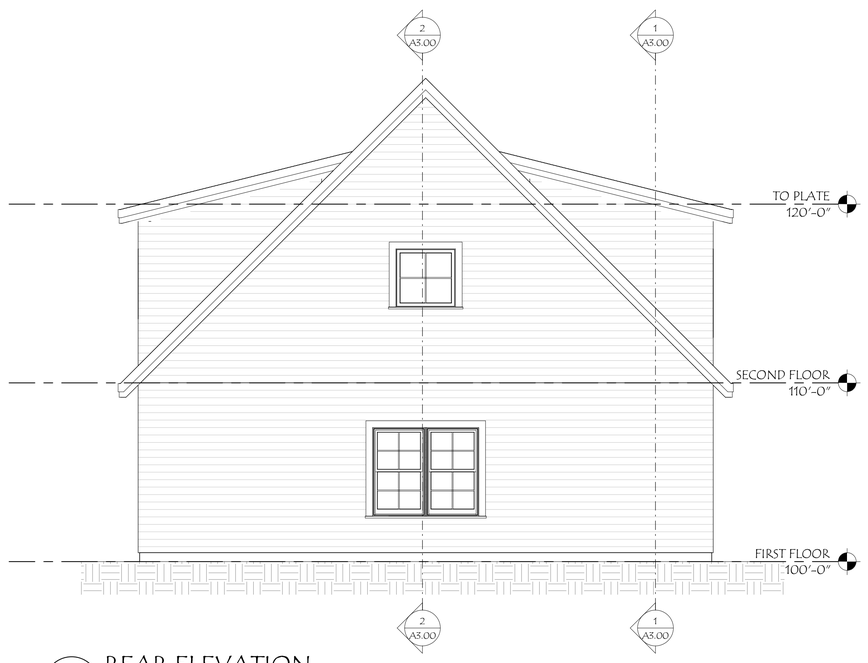
476 6TH STREET
DOVER, NH 03820

MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH: 603.501.0202

* 2022 Market Square Architects 12/1/2022 11:12:45 AM

4 LEFT ELEVATION

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



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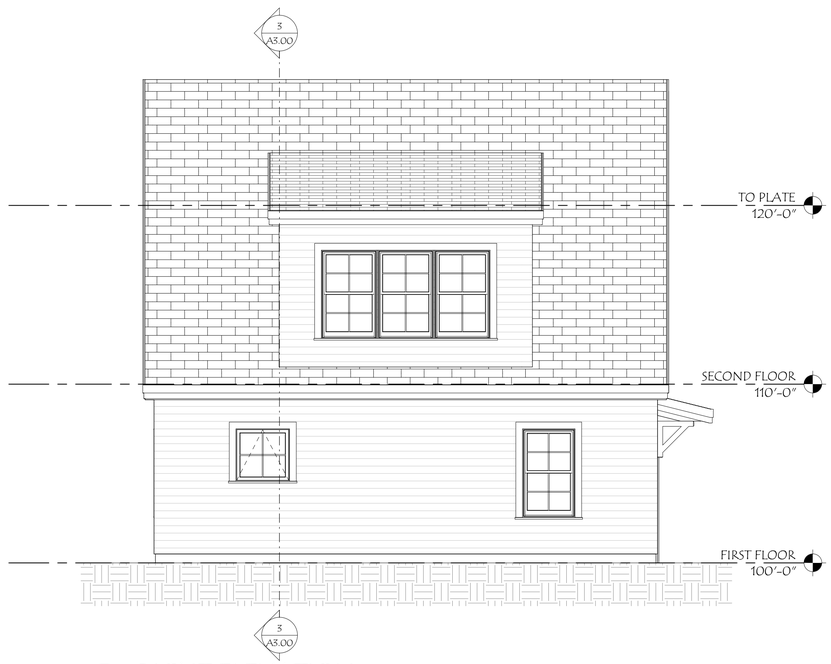


3 RIGHT ELEVATION

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

1 FRONT ELEVATION

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

MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH. 603.501.0202

SAWTELLE GARAGE

476 6TH STREET
DOVER, NH 03820

NOT FOR CONSTRUCTION

Revisions:

Description	Date

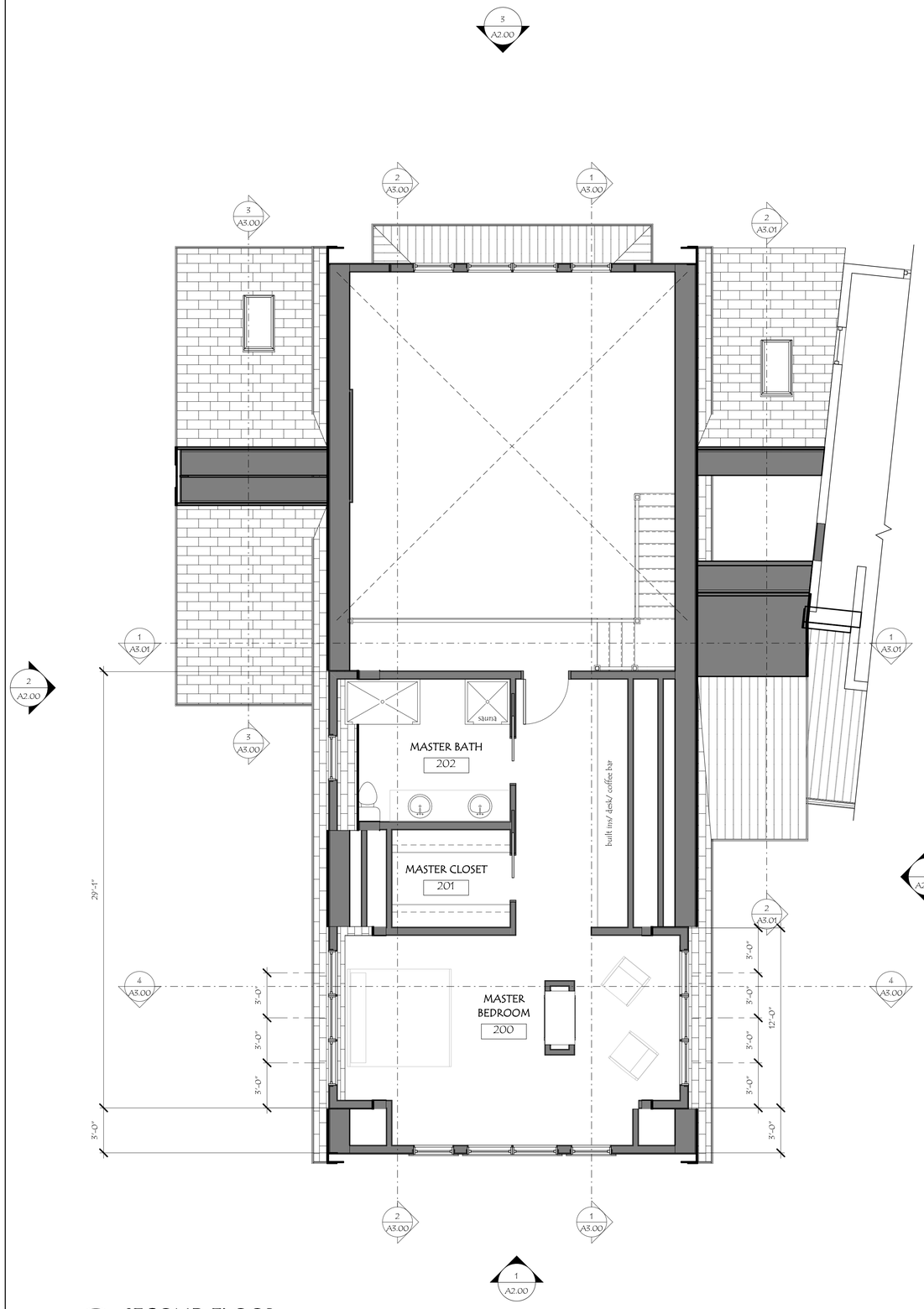
Scale: 1/4" = 1'-0"
Drawn By: ANR
Checked By: RJH
Project No.: 2022044
SCHEMATIC DESIGN
Date: 12/1/22

Title: EXTERIOR ELEVATIONS

A2.00

2022 Market Square Architects

12/1/2022 11:12:44 AM



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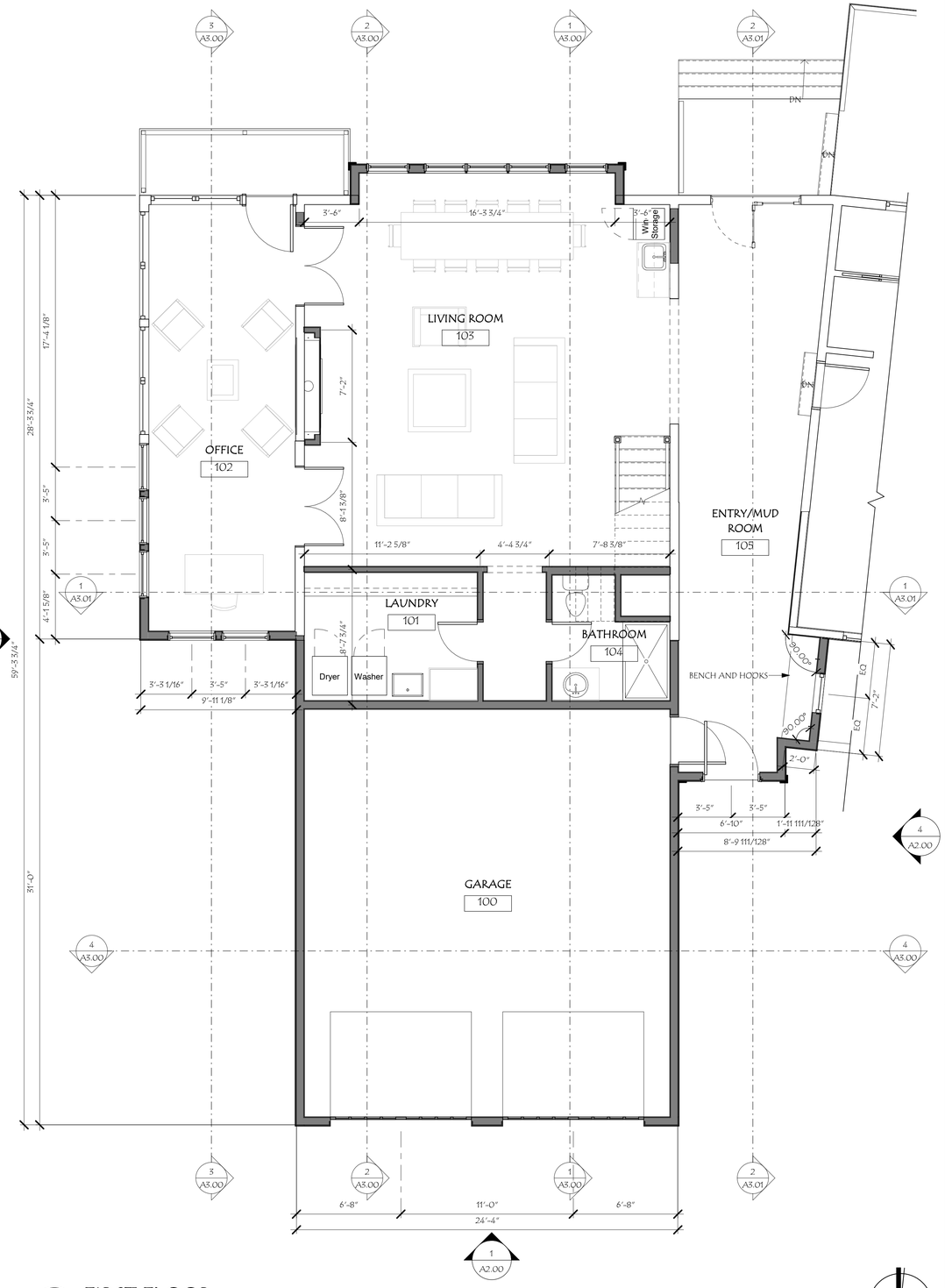

1 FIRST FLOOR

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

MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH. 603.501.0202

SAWTELLE RESIDENCE

476 6TH STREET
DOVER, NH 03820

NOT FOR CONSTRUCTION

Revisions:

Description	Date

Scale: 1/4" = 1'-0"
Drawn By: ANR
Checked By: RJH
Project No.: 2022044
SCHEMATIC DESIGN
Date: 12/1/22

Title: OVERALL FLOOR PLANS

A1.01

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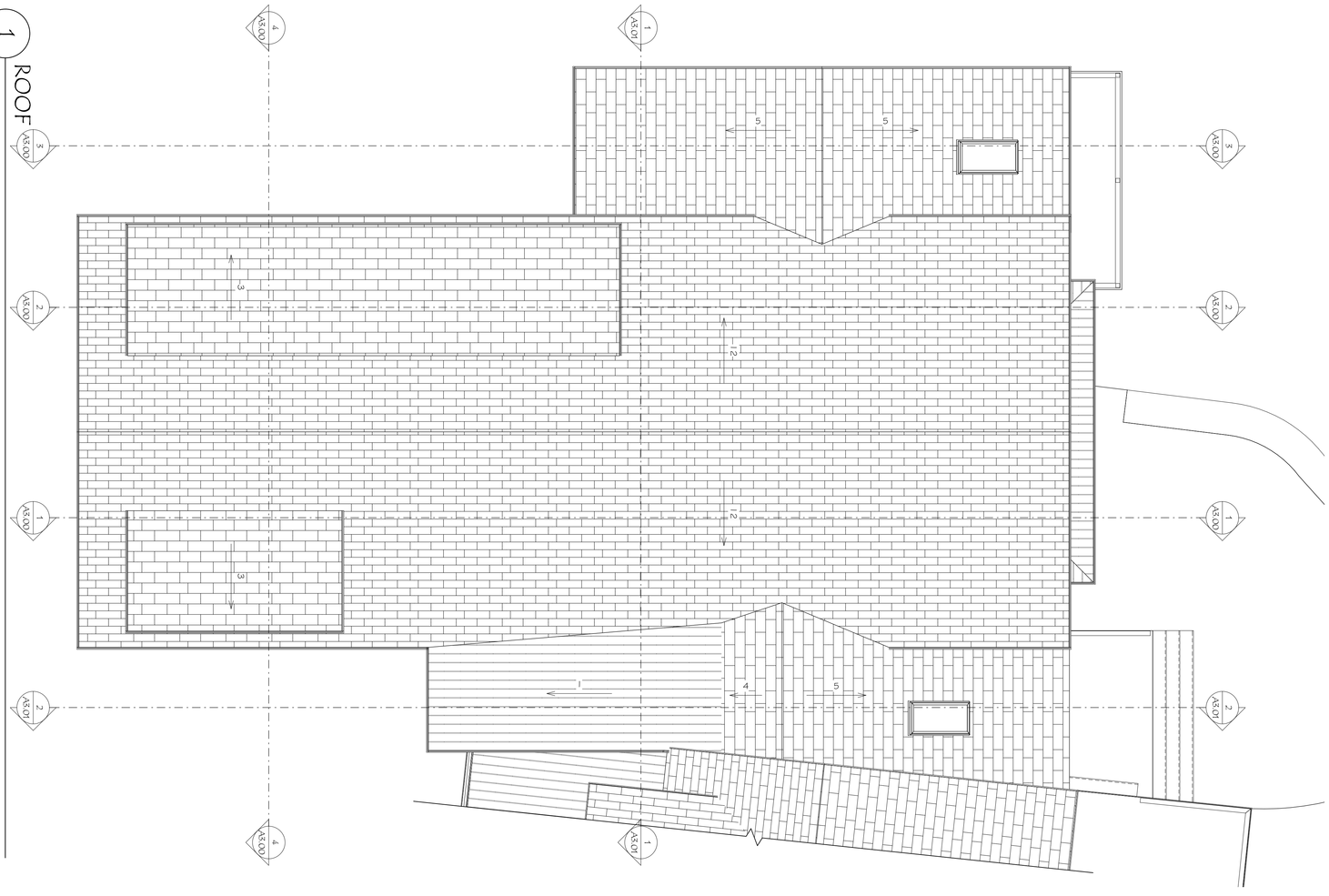
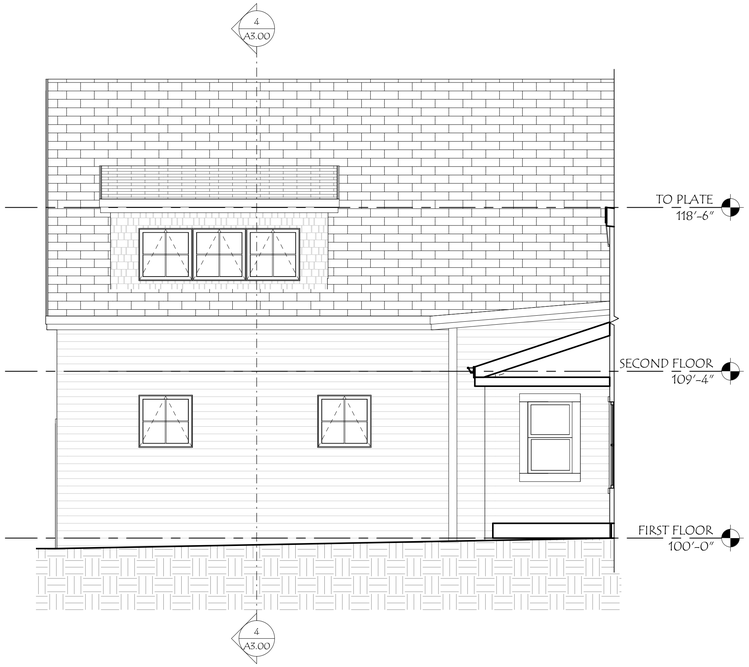
12/1/2022 11:43:45 AM



Title: OVERALL ROOF PLAN	Scale: 1/4" = 1'-0"	Revisions:	NOT FOR CONSTRUCTION	SAWTELLE RESIDENCE	MARKET SQUARE ARCHITECTS
A1.02	Drawn By: Author	Description Date		476 6TH STREET DOVER, NH 03820	104 Congress St., STE 203 Portsmouth, NH 03801 PH: 603.501.0202
	Checked By: Checker				
	Project No.: 2022044				
	SCHEMATIC DESIGN				
	Date: 12/1/22				

Sheet 10 of 11

© 2022 Market Square Architects 12/1/2022 11:43:45 AM



4 RIGHT ELEVATION

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

2 LEFT ELEVATION

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

3 REAR ELEVATION

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

1 FRONT ELEVATION

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

MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH: 603.501.0202

SAWTELLE RESIDENCE

476 6TH STREET
DOVER, NH 03820

NOT FOR CONSTRUCTION

Revisions:

	Description	Date

Scale: 1/4" = 1'-0"
Drawn By: ANR
Checked By: RJH
Project No.: 2022044
SCHEMATIC DESIGN
Date: 12/1/22

Title: EXTERIOR ELEVATIONS

A2.00

2022 Market Square Architects

12/1/2022 11:43:46 AM

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Tina M. Sawtelle Telephone # (603) 766-2172

Address of Applicant: 476 Sixth Street Dover, NH 03820

E-Mail Address: tsawtelle@themusichall.org

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

Address of Property Owner: _____

PROPERTY INFORMATION

Assessor's Map # B Lot(s) # 1-C

Address of Property: 476 Sixth Street

Zoning District(s) R-40 Overlay District(s) Conservation District Wetlands Protection District

Existing Use of Property: Single Family Residence

CONDITIONAL USE PERMIT INFORMATION

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

☒ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☐ 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:

Expansion of an existing single-family home in a previously disturbed area. No wetland impacts are proposed.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: N/A

Name of Professional That Prepared Plans: Altus Engineering

Address 133 Court Street, Portsmouth, NH 03801 Telephone #: (603) 433-2335

Professional License #: PE - 7634 E-mail address: esaari@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: _____

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

Signature of Agent: _____ Erik Saari, Agent Date: 03/27/23
(See attached Letter of Authorization)

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: _____ Erik Saari (Agent) Date: 03/27/23
(See attached Letter of Authorization)

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
B	1-C	Tina M. Sawtelle	tsawtelle@themusichall.org

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Erik Saari	Altus Engineering	133 Court St., Portsmouth, NH 03801
Robert Harbeson	Market Square Architects	104 Congress St. Portsmouth NH 03801

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 1, 2021)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan Review Fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☒ CONDITIONAL USE PERMIT Application fee $200.00 x # 1 per Application = $ 200
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____

2. TOTAL IMPERVIOUS PAVED AREA (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # _____ sq. ft. = $_____

SUBTOTAL PLAN REVIEW FEE (A) = $ 200

AND

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 review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

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

C. Foster's newspaper public notice fee $100.00 x # 1 applications = $ 100

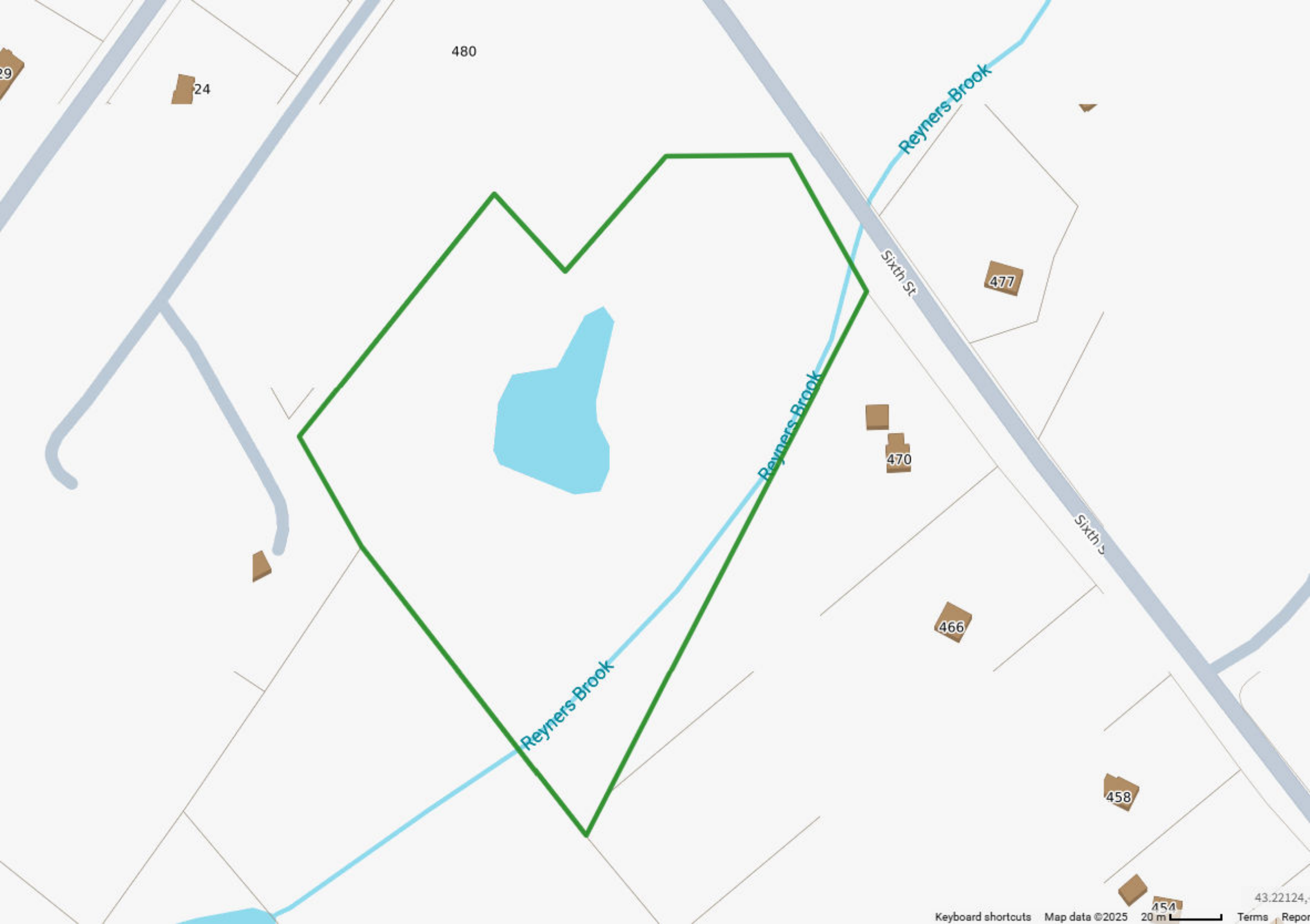
SUBTOTAL NOTICE FEE (B & C) = $_____

TOTAL INVOICE AMOUNT (A, B & C) = $_____

PLAN REVIEW FEE COLLECTED/PAID = $ _____

BALANCE DUE = $ _____

The balance due must be paid 28 hours prior to the Planning Board Meeting, to be heard.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Reyners Brook
Sixth St
477
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Reyners Brook
Reyners Brook
466
458
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Keyboard shortcuts
Map data ©2025
20 m
Terms

PERMIT SNAPSHOT REPORT COND-2025-0017
FOR CITY OF DOVER, N.H.

Permit Type	Conditional Use	**Project:**		**App Date:**	08/01/2025
Work Class:	Environmental	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	In Review	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Edgecomb, Makayla	**Approval Expire Date:**	

Description: The construction of a new Residential Structure. The proposed work will result in 587 SF of permanent and 2,674 SF of temporary impacts to the wetland buffer.

Parcel: 22001-007000 Main	**Address:** 40 River St Dover, NH Main	**Zone:** CWD(Cocheco Waterfront District)

Applicant	Applicant	Owner	Plan Preparer
Rob Simmons	Colter Krzcuik	City of Dover, NH	Neil Hansen
11 Portwalk Place, Portsmouth NH 03801	177 Corporate Drive Portsmouth, NH 03801		Business: (603) 294-9213
Portsmouth,, NH 03801	Business: (603) 294-9233		
Business: (617) 840-4778	Mobile: (413) 686-0499		

Permit Custom Fields

Select Permit Type	Wetland Protection District	General Purpose	New Construction	Project Zone	Mixed Use
What is the parcel zoned?	CWD	New Change in Impervious/Paved Area (sq ft)	587	Work	The construction of a new Residential Structure. The proposed work will result in 587 SF of permanent and 2,674 SF of temporary impacts to the wetland buffer.
permitstatefed	NHDES AoT, NHDES Sewer Connection, NPDES Construction General Permit, City of Dover Site Plan Review Permit, City of Dover CUP for Building Height and Unit Density				

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Colter_Krzcuik_8/1/2025.jpg	08/01/2025 10:40	Krzcuik, Colter		Uploaded via CSS
Permit Snapshot Report.pdf	08/01/2025 10:41	Service, EnerGov		Attached by IO - ATTACH: Initial Permit Snapshot

Invoice No.	Fee	Fee Amount	Amount Paid
INV-2025013413	Planning General Application Fee	$200.00	$0.00
	Planning Impervious Paved Area Fee	$41.09	$0.00
	Total for Invoice INV-2025013413	$241.09	$0.00
	Grand Total for Permit	**$241.09**	**$0.00**

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Conditional Use Review v.1	In Review	08/01/2025	08/08/2025		No	No

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Edgecomb, Makayla	In Review	08/01/2025	08/29/2025	

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		08/01/2025 14:25	
Confirm application complete v.1	Generic Action		08/01/2025 14:25
Conditional Use Review v.1	Receive Submittal	08/01/2025 0:00	

PERMIT SNAPSHOT REPORT (COND-2025-0017)

Planning Board v.1	
Planning Board Agenda v.1	Task
Invoice for Notices v.1	Task
Send Notices v.1	Task
Planner Creates Staff Recommendations v.1	Permit Activity
Distribute Planning Board Materials v.1	Task
Planning Board Hearing v.1	Hold Hearing
Planning Board Decision v.1	Permit Activity
NOD Sent to Applicant v.1	Create Report
Issue Permit v.1	
Verify Fees Prior to Permit v.1	Generic Action
Issue and Review Permit v.1	Generic Action
Print and Email Permit v.1	Generic Action
Plans uploaded to Treeno v.1	Generic Action
Internal Notification of Plan Completion v.1	Generic Action
Recording v.1	Task

C0960-007
August 1, 2025

Ms. Donna Benton, AICP
Director of Planning and Community Development
City of Dover Planning and Community Development
288 Central Avenue
Dover, New Hampshire 03820

Re: Wetland Conditional Use Permit Application
Cochecho Waterfront Development – Building F
40 River Street, Dover, NH

Dear Donna:

On behalf of Cochecho 1 Owner, LLC (applicant) and the City of Dover (owner), we are pleased to submit electronic file (.pdf) of the following information to support a request for a Wetland Conditional Use Permit (CUP) for the above referenced project:

- Site Plan Set, last revised August 1, 2025;
- Wetland Conditional Use Permit Application, dated August 1, 2025;
- Wetland and Jurisdictional Resource Area Assessment, dated August 1, 2025;
- Tidal Buffer Impact Exhibit, dated August 1, 2025;
- Wetland Buffer Impact Exhibit, dated August 1, 2025;
- NHDES Wetland Permit #2019-03464, dated May 7, 2024;

The applicant is pleased to provide the enclosed supplemental information which has been prepared to summarize how the Project complies with the standards for a conditional use permit allowed under section 170-28.F of the City of Dover Zoning Ordinance.

Project Background

The proposed development is a multi-family, mixed-use development located on a parcel of land along River Street and Payne Street. The proposed project is part of the City of Dover's larger Cochecho Waterfront Development along the Cochecho River waterfront. This project is being developed as part of a land development agreement between the applicant and the City of Dover. As outlined in this agreement the City of Dover will be constructing new City owned roadways and waterfront park improvements. As part of the City's improvements, the parcels for the private development portion of the project will be constructed to a "pad ready" condition. This work consists of the removal of vegetation, site features, ledge, and the remediation of known contaminants on site from the property's historic uses as a wastewater treatment facility.

The private development portion of the project includes the construction of three (3) mixed use buildings, two (2) multi-family buildings, and three (3) clusters of townhouses. The buildings are identified as Buildings A through F on the enclosed site plans. A Site Review Permit (P21-69) was granted by the City of Dover Planning Board for the project on June 14, 2022. Additionally, a NHDES Alteration of Terrain Permit (AoT-2572) was granted for the project on April 11, 2024. Due to the project's size, it is being constructed in multiple phases in accordance with the permits received.

Phase 1 consists of the construction of Buildings C, Building D, and the three (3) clusters of townhouses as well as their associated site improvements such as paving, stormwater management, utilities, lighting, and landscaping. Phase 1 of construction began in the Spring

of 2024 and is actively under construction running concurrently with the City's roadway and waterfront park improvements.

Phase 2 of the private development project will consists of the construction of Building F on the 1.02-acre parcel of land identified as Map 22 Lot 1-7 on the City of Dover's tax maps. Building F is a 5-story multifamily building consisting of 43 residential units with ground-floor parking garage and amenity space. This phase of construction includes the associated site improvements such as paving, stormwater management, utilities, lighting, and landscaping.

Buildings A & B will be constructed at a later date under a separate phase and are not subject to the Wetland Conditions Use permit approval we are seeking under this cover.

Building F Parcel

Current Conditions

In preparation for the private development construction on the Building F parcel, the city completed the "pad ready" condition, which consisted of clearing and grubbing of existing vegetation and regrading efforts. The city completed the work in accordance with their NHDES Wetland Permit (#2019-03464) which granted ground disturbance up to but not beyond a narrow strip of wetland to the northeast of the subject parcel. This wetland was delineated by GZA GeoEnvironmental, Inc. on March 2, 2016 in conjunction with the City's permitting efforts relative to their improvements.

On July 10, 2025, a Tighe & Bond Wetland Scientist visited the project site to verify and update the wetland delineation previously completed by GZA. A subsequent Wetland and Jurisdictional Resource Area Assessment was completed and is enclosed in the letter which identifies the methodology, assessment, functions, and values of the existing wetland.

2022 Proposed Conditions

The Building F proposed in 2022 was a 16,025 SF 5-story 42-unit multi-family residential building which included ground floor parking spaces with the upper four (4) floors consisting of a mix of studio, 1-bedroom, 2-bedroom and 3-bedroom apartments. The ground floor consisted of a singular vehicular access from the face of the building along the City Right of Way and five (5) pedestrian access doors. Two of these pedestrian doors faced the city right of way and three (3) doors directed pedestrians to the north and east of the proposed building.

The site improvements on this lot consisted of a 33-space surface parking lot directly to the southwest of the building, granting access to the first-floor residential and lobby space. Additional site improvements for the proposed lot included concrete sidewalks, lighting, stormwater, and utility improvements. Directly to the southeast of the proposed building, a large grassed hill was proposed to make up for the change in grade between the surface parking lot and the abutting City-owned parcel.

2025 Proposed Conditions

Since the 2022 approved plan, the project team has reevaluated the constructability and the viability of the unit layout of the proposed building. This redesign effort resulted in a 17,504 SF 5-story 43-unit building, which includes a more efficient ground floor parking layout. This efficient parking layout allows for the removal of 4 surface parking spaces, resulting in a reduction of paved parking area. Additionally, this refined building layout has resulted in improved ground floor pedestrian egress with three (3) doors, two of which are along the right of way, directing pedestrians to the City's roadway improvements and sidewalks. The final pedestrian access is proposed to the southeast of the building providing emergency access out of the garage space to the upper surface parking area via concrete stairs.

The proposed site improvement on this lot consists of a reduced surface parking lot in the same location as the 2022 improvements and the associated concrete sidewalks, lighting, stormwater, and utility improvements.

Improvements to Layout

The building and site modifications provide significant advantages to the previous design while fully remaining within the limits of disturbance that were previously approved. The revised site layout maintains that boundary and simply relocates building elements within the existing disturbance envelope.

The revised building and site layout are completely outside of the 100' tidal riverfront buffer, whereas the previous layout had minor encroachment consisting of approximately 368 SF of permanent impervious surface impacts and 602 SF of permanent pervious surface impacts within the tidal buffer. We have prepared a Tidal Buffer Impact Exhibit illustrating the complete removal of the building within the 100' tidal buffer zone, which has been enclosed in this letter. In addition to removing any intrusion into the tidal buffer, the revised layout further improves protection of sensitive areas by pulling the building farther away from the abutting City park.

The revised layout includes the construction of a permanent protective fence along the northeast and southeast sides of the building. This fence will serve to physically discourage residents from encroaching into the 50' wetland buffer area, re-establishing a natural vegetated area. All areas disturbed within the 50' wetland buffer will be re-established with a conservation wildlife seed mix, further enhancing the re-naturalization of this area. We further emphasize that the ground floor of the proposed structure is a garage, with no direct access to the buffer zone. There are no doors, windows, or openings on the buffer-facing elevation. This design approach eliminates any potential for pedestrian traffic to access or impact the sensitive area behind the building.

The proposed drainage improvements ensure that no runoff from the building or parking areas will discharge toward the wetland. All stormwater will be properly managed through the approved stormwater infrastructure, and there will be no drainage connections or outlets directed into the buffer or wetland resource areas.

Conditional Use Permit

The proposed location of Building F is within 50 feet of Wetland 1A/1B. Within the 50-foot wetland buffer, the proposed layout results in approximately 2,674 SF of temporary disturbance and 587 SF of permanent disturbance. As such, the project is subject to jurisdiction of the City of Dover Zoning Ordinance, §170-28 Wetlands Protection District. As outlined in the City Dover Zoning Ordinance 170-28.F(1), the Planning Board may grant the construction of structures within the 50' wetland buffer provided the proposed construction complies with sections 170-28.F(1)(a) through 170-28.F(1)(f). The following addresses how the proposed project complies with the conditional use approval standards.

(a) Practicable alternative. There is no practicable alternative that would have a less adverse impact on the area.

The Cochecho Waterfront Development Project meets a major long term goal of the City of Dover to enhance this area of the Cocheco River shoreline. The current development plans for the site are the result of several years of stakeholder engagement led by the Cochecho Waterfront Development Advisory Committee which has included continual opportunities for public involvement. As a result, the proposed project represents the most practicable alternative to meet the City's goals and vision for the property. The proposed location of Building F is located

outside of wetland resources in an area that has been previously altered and is not of high ecological value.

Furthermore, the revised site layout improves upon the previous layout by keeping all disturbance within the previously proposed limits of disturbance while relocating the proposed building to improve environmental protection. The building has been completely pulled out of the 100-foot tidal riverfront buffer, thus eliminating previous minor encroachments and further avoiding sensitive areas.

(b) Avoidance. The potential impacts have been avoided to the maximum extent practicable. The applicant will demonstrate by plan and example that the proposed construction represents the least impacting alternative.

The proximity of the proposed Building F development to Wetland 1A/1B has been minimized to the maximum extent practicable within the site constraints as the area to the south of the proposed location consists of steep ledge unsuitable for construction. An alternative design was considered which sited the parking lot closer to Wetland 1A/1B and the building to the southwest however, this would result in more pedestrian and vehicular traffic immediately adjacent to Wetland 1A/1B. The site as currently designed allows for the capture and treatment of stormwater from the parking lot and building to avoid direct impacts to the adjacent wetland.

Additionally, the revised building design includes no windows, doors, or openings along the elevation facing the buffer zone, and incorporates a permanent protective fence along this edge, effectively discouraging residents from accessing the sensitive area. Where disturbance within the 50-foot buffer is unavoidable, all affected areas will be re-established with a conservation wildlife seed mix to promote long-term restoration.

(c) Minimization. Any unavoidable impacts have been minimized. No reasonable alternative to the proposed construction exists which does not impact a wetland or which has less detrimental impact on a wetland. Design, construction and maintenance methods will be prepared by a registered engineer to minimize detrimental impacts to the wetlands and will include restoration of the site as nearly as possible to its original grade.

The proposed design of the Building F development includes a stormwater management system that will capture and treat runoff from the parking lot and building. The remaining area between the proposed building and Wetland 1A/1B will be restored with loam, seeded with a conservation wildlife seed mix comprised of native species, and will be managed as a "no-mow" zone to provide an intact vegetative buffer. The existing condition of the site results in untreated stormwater that flows over the disturbed buffer zone and discharges directly to Wetland 1A/1B. The proposed design minimizes disturbance and construction within the buffer zone, and minimizes the discharge of untreated stormwater to the maximum extent practicable resulting in an improvement over the existing conditions of the buffer zone.

Erosion control barriers consisting of compost filter tubes or other similarly effective devices will be used to protect Wetland 1A/1B throughout the duration of construction. These protective measures will be inspected after significant precipitation events and repaired or replaced as necessary. The proposed design includes the construction of a fence separating Building F from Wetland 1A/1B to prevent access to the wetland and resultant disturbance.

In addition to these measures, the revised layout further reduces long-term impacts by removing all development from the tidal buffer zone and improving permanent stormwater management. The building footprint has been adjusted without expanding the disturbance envelope, demonstrating that necessary functions can be accommodated while maintaining environmental protection. The absence of any buffer-facing building access also minimizes long term potential impacts to the wetland post-construction. These updates represent a meaningful enhancement over the original layout and ensure that unavoidable impacts are kept to an minimum.

(d) Mitigation. If the applicant is required by state rules to prepare a compensatory mitigation plan, the applicant shall provide the Conservation Commission and Planning Board with one copy each of said plan for their review.

The project is not required by state or federal regulations to include a compensatory mitigation plan.

(e) Approval for the wetlands impact has been received from the New Hampshire Department of Environmental Services Wetlands Bureau pursuant to Section G(3) below.

The work associated with the City's portion of the Cochecho Waterfront Development Project has been approved by the NHDES Wetlands Bureau under Wetlands Permit 2019-03464, enclosed in this letter. The proposed private development portion of the project does not result in any direct impacts to wetlands, therefore does not require a NHDES Wetland Permit.

(f) To assess and summarize the wetlands' functions and values as denoted in the NH Method and § 170-28B(2).

A wetland functions and values assessment was completed as part of the wetland delineation conducted on July 10, 2025 and is further outlined in the Wetland and Jurisdictional Resource Area Assessment.

Conclusion

We trust the above described and enclosed materials address the criteria to grant a Conditional Use Permit for the proposed project. The applicant respectfully requests to be placed on the Conservation Commission regular meeting agenda for August 11, 2025. If you have any questions or need any additional information, please contact Neil Hansen by phone at (603) 294-9213 or by email at nahansen@tighebond.com.

Sincerely,
TIGHE & BOND, INC.

Neil A. Hansen, PE
Project Manager

Patrick M. Crimmins, PE
Vice President

Copy: Cochecho 1 Owner, LLC
City of Dover

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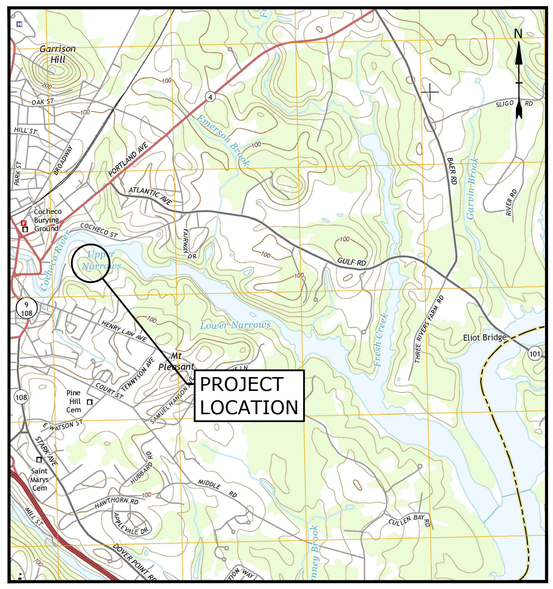
COCHECHO WATERFRONT DEVELOPMENT
BUILDING F

40 RIVER STREET
DOVER, NH
DOVER FILE#: P21-69
MARCH 21, 2025
LAST REVISED AUGUST 1, 2025

PLAN SET INDEX		
	SHEET TITLE	LAST REVISED
	COVER SHEET	8/1/2025
G-100	GENERAL NOTES SHEET	8/1/2025
G-101	LEGEND & ABBREVIATIONS SHEET	8/1/2025
G-102	FISH & GAME NOTES	8/1/2025
C-301	EXISTING CONDITIONS AND DEMOLITION PLAN	8/1/2025
C-302	OVERALL SITE PLAN	8/1/2025
C-302.1	SITE PLAN	8/1/2025
C-303	GRADING PLAN	8/1/2025
C-304	DRAINAGE & EROSION CONTROL PLAN	8/1/2025
C-305	UTILITIES PLAN	8/1/2025
C-501	EROSION CONTROL NOTES & DETAILS SHEET	8/1/2025
C-502	DETAILS SHEET	8/1/2025
C-503	DETAILS SHEET	8/1/2025
C-504	DETAILS SHEET	8/1/2025
C-505	DETAILS SHEET	8/1/2025
C-506	DETAILS SHEET	8/1/2025
LP1.0	PLANTING PLAN	7/25/2025
LD1.0	PLANTING DETAILS	7/25/2025
A1	EXTERIOR RENDERING	6/3/2025
A2	EXTERIOR ELEVATIONS	6/3/2025
A3	FLOOR PLANS	7/21/2025
A4	FLOOR PLANS	7/21/2025
A5	FLOOR PLANS	7/21/2025

LIST OF PERMITS & APPROVALS		
LOCAL	STATUS	DATE
SITE PLAN REVIEW PERMIT (P21-69)	APPROVED	6/14/2022
AMENDMENT TO SITE PLAN REVIEW PERMIT	PENDING	
WETLAND CONDITIONAL USE PERMIT	PENDING	
STATE		
NHDES - ALTERATION OF TERRAIN (AoT-2572)	APPROVED	4/11/2024
NHDES - SEWER CONNECTION PERMIT	NOT SUBMITTED	
FEDERAL		
NPDES - CONSTRUCTION GENERAL PERMIT (NHR1001YK)	APPROVED	3/26/2024
NPDES - CONSTRUCTION GENERAL PERMIT (NHR1001YZ)	APPROVED	4/4/2024



LOCATION MAP
SCALE: 1" = 2,000'

CONSTRUCTION NOTES:
1. THE CONTRACTOR SHALL NOT RELY ON SCALED DIMENSIONS AND SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A REQUIRED DIMENSION IS NOT PROVIDED ON THE PLANS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, AND FOR SITE CONDITIONS THROUGHOUT CONSTRUCTION. NEITHER THE PLANS NOR THE SEAL OF THE ENGINEER AFFIXED HEREON EXTEND TO OR INCLUDE SYSTEMS REQUIRED FOR THE SAFETY OF THE CONTRACTOR, THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND IMPLEMENTING SAFETY PROCEDURES AND SYSTEMS AS REQUIRED BY THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ANY STATE OR LOCAL SAFETY REGULATIONS.
3. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION OF TIGHE & BOND.

PREPARED BY:
Tighe&Bond
177 CORPORATE DRIVE
PORTSMOUTH, NH 03801
603-433-8818

APPLICANT:
COCHECHO 1 OWNER, LLC
11 PORTWALK PLACE
PORTSMOUTH, NH 03801
617-840-4778

SIGNATURE: DocuSigned by: Rob Simmons F8034200EFE6045A...
DATE: 8/1/2025

OWNER:
CITY OF DOVER
288 CENTRAL AVENUE
DOVER, NH 03820

SIGNATURE: _____
DATE: _____

LANDSCAPE ARCHITECT:
KZLA
4228 WASHINGTON STREET
BOSTON MA, 02131
617-451-1018

ARCHITECT:
CJ ARCHITECTS
233 VAUGHAN STREET
PORTSMOUTH, NH 03801
603-431-2808

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

STATE OF NEW HAMPSHIRE - NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER - 8/1/25
STATE OF NEW HAMPSHIRE - PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER - 8/1/25

811 DigSafe MA-ME-NH-RI-VT

CITY OF DOVER PERMIT APPLICATIONS
COMPLETE SET 23 SHEETS

Last Save Date: July 24, 2025 11:46 PM By: CKRZCUK
Plot Date: Monday, July 21, 2025 - 2:13pm By: CKRZCUK
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cocheco Waterfront\Drawings, Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-CS.dwg Layout Tab: CS P2 CD

GENERAL NOTES:

1. THE PROPOSED USE FOR THE SITE INCLUDES THREE (3) MIXED USE BUILDINGS, TWO (2) MULTI-FAMILY BUILDINGS AND THREE (3) SETS OF TOWNHOUSES.
2. OWNER OF RECORD IS: CITY OF DOVER
   288 CENTRAL AVE.
   DOVER, NH 03820
3. THE PROPOSED PROJECT PARCELS ARE SHOWN AS PARCELS 1-2, 1-4, 1-5, 1-6, AND 1-7 ON MAP 22 & PARCEL 15 ON MAP 23 OF THE CITY OF DOVER TAX ASSESSOR'S MAP.
4. THE PROPOSED TOTAL SUBJECT PARCELS CONTAINS 10.47 ACRES OR 456,282 SQ. FT. AREA OF LAND.
5. TITLE REFERENCE FOR THE PROJECT PARCELS IS THE STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK NO.225, PAGE NO. 493.
6. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM "COCHECHO DEVELOPMENT SUBDIVISON PLAN", PREPARED BY DOUCET SURVEY, INC.
7. THE SUBJECT PARCEL IS LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA (FIRM PANEL NUMBER 33017C0310E, EFFECTIVE DATE: SEPTEMBER 30, 2015).
8. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
9. BUILDING ADDRESSES (INCLUDING APT/UNIT NUMBERS) SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
10. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
11. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE 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.
12. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE CITY OF DOVER.
13. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
14. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES AND COMPLY WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
16. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
17. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
18. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATION AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
19. AS-BUILT PLANS OF THE SUBDIVISION SHALL BE SUBMITTED ON PAPER AND IN DIGITAL FORMAT AUTOCAD DWG, AUTOCAD DXF OR ESRI FORMAT TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT ID A STREET IS PROPOSED FOR CITY ACCEPTANCE. 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.
20. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
21. SEE EXISTING CONDITIONS PLANS (REFERENCE PLAN #1) FOR BENCH MARK INFORMATION.
22. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7 AM-6 PM AND SATURDAY 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.
23. 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 AND BEFORE ISSUING A DEMOLITION PERMIT.
24. SITE SHALL BE ACCESSIBLE IN ALL WEATHER CONDITIONS AND AT ALL TIMES DURING CONSTRUCTION PER CITY OF DOVER COMMUNITY SERVICES DIRECTOR AND THE CITY OF DOVER FIRE DEPARTMENT REQUIREMENTS.
25. 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
26. THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES 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 LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.
27. PROPOSED PROPERTY LINES SHOWN ON PLANS ARE APPROXIMATE. FINAL SUBDIVISION PLANS TO BE PREPARED BY CITY OF DOVER.
28. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50FT OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.
29. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
30. THE PROPOSED SITE SHALL REMAIN ACCESSIBLE IN ALL WEATHER CONDITIONS YEAR ROUND.
31. SEE PLAN NOTE #3 ON SHEET C-2 OF REFERENCE PLAN NUMBER 3.
32. THE AMENDMENT THE APPLICANT WISHES TO SEEK UNDER THIS PLAN SET IS FOR BUILDING F AND ITS IMMEDIATE SURROUNDING AREA ONLY.

EXISTING CONDITIONS NOTES:

1. EXISTING TOPOGRAPHY DEPICTED ON EACH LOT ARE TAKEN FROM VARIOUS REFERENCE PLANS. EACH LOTS REFERENCE PLAN ARE OUTLINED BELOW.

TAX MAP	LOT	REFERENCE PLAN
22	2	#2
22	1-1	#3
22	1-6	#3 (DASHED LINES)
22	1-6	#4 (CONTINUOUS LINES)
22	1-7	#2
RIVER STREET R.O.W.		#3

2. EXISTING TOPOGRAPHY WITHIN THE PROJECTS LIMITS MAY DIFFER FROM WHAT IS SHOWN ON THE REFERENCE PLANS.
3. CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHY PRIOR TO CONSTRUCTION.
4. WETLANDS WERE DELINEATED BY TIGHE & BOND, INC. IN JULY 2025 IN ACCORDANCE WITH THE UNITED STATES ARMY CORPS OF ENGINEERS' (USACE) WETLANDS DELINEATION MANUAL AND REGIONAL SUPPLEMENT (2012), FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND (VERSION 4, 2017), AND THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES: DELINEATION AND CLASSIFICATION OF JURISDICTIONAL AREAS (CHAPTER ENV-WT 400). THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. CONSERVATION AND WETLANDS DISTRICTS SHALL BE STAKED, FLAGGED, AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTURBING ACTIVITY.
5. TEST PITS TO REFUSAL PERFORMED BY SEVERINO TRUCKING IN JUNE OF 2019.
6. EXISTING CONDITIONS WITHIN THE PROJECTS LIMITS MAY DIFFER FROM WHAT IS SHOWN ON THE PLANS.
7. EXISTING CONDITIONS SHALL BE UPDATED TO REFLECT THE MOST CURRENT VERSION OF THE CITY OF DOVER'S WATERFRONT PROJECT DESIGN, REFERENCE PLAN #3.

DEMOLITION NOTES:

1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
2. 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.
3. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
4. 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.
5. SAW CUT AND REMOVE PAVEMENT TWO (2) FEET OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
6. 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.
7. UTILITIES AND SERVICES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY AND CITY OF DOVER STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK UNLESS OTHERWISE NOTED. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
8. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
9. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED OR INTENDED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
10. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
11. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
12. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT MAY RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.50 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
13. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
14. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
15. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT FOR THE REMOVAL OR SALVAGE AND REUSE OF EXISTING GRANITE CURB WITHIN THE CITY RIGHT OF WAY.

SITE NOTES:

1. PAVEMENT MARKINGS SHALL BE INSTALLED AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, FIRE LANES, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES. ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE PAVEMENT MARKINGS. ALL THERMOPLASTIC PAVEMENT MARKINGS INCLUDING LEGENDS, ARROWS, CROSSWALKS AND STOP BARS SHALL MEET THE REQUIREMENTS OF AASHTO M249. ALL PAINTED PAVEMENT MARKINGS INCLUDING CENTERLINES, LANE LINES AND PAINTED MEDIANS SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F".
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PAVEMENT MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE, WHITE THERMOPLASTIC AND CONFORM TO CURRENT MUTCD STANDARDS.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS, STAIRS & SIDEWALKS ADJACENT TO BUILDING. COORDINATE WITH OFF-SITE IMPROVEMENT PLANS PREPARED BY THE CITY OF DOVER.
9. COORDINATE ALL OFF-SITE SITE WORK WITH OFF-SITE IMPROVEMENT PLANS PREPARED BY THE CITY OF DOVER. SEE REFERENCE PLAN #3.
10. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
11. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
12. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
13. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
14. ALL WORK SHALL MEET THE ACCESSIBILITY STANDARDS PER RSA 155-A AND THE INTERNATIONAL BUILDING CODE (IBC), LATEST EDITION.
15. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
16. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
17. FIRE DEPARTMENT ACCESS ROAD(S) SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.
18. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.
19. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS (I.E. IBC, ANSI-117.1) AND NH RSA 155-A:5.
20. COCHECHO WATERFRONT DEVELOPMENT ROADWAY IMPROVEMENTS TO BE CONSTRUCTED BY CITY OF DOVER. SITE DEVELOPMENT SHALL BE COORDINATED WITH THE FINAL CITY ROADWAY IMPROVEMENT PLANS PRIOR TO CONSTRUCTION.
21. SITE TRASH WILL BE INTERNAL TO THE BUILDINGS AND BE PRIVATELY MANAGED.
22. PROPERTY MANAGEMENT WILL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PRIVATE SIDEWALKS, DRIVEWAYS, AND PARKING AREAS. SNOW REMOVAL WILL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF WHEN SNOW BANKS EXCEED 3 FEET IN HEIGHT.
23. COORDINATE WITH OWNER FOR ENTRANCE GATE TYPE.
24. FINAL LOCATION AND TYPE OF KEY PAD TO BE COORDINATE WITH THE CITY OF DOVER FIRE DEPARTMENT.
25. BUILDINGS B, C & D TRASH PICKUP SHALL BE INTERNAL TO THE PROJECT SITE. BUILDING A TRASH PICKUP SHALL BE ON RIVER STREET LOADING ZONE. DUMPSTERS FOR BUILDING A SHALL NOT BE LEFT OUTSIDE OVERNIGHT AND AFTER THEY ARE EMPTIED IN THE MORNING, THEY SHALL BE REMOVED FROM THE STREET PROMPTLY. BUILDINGS E & F SHALL ACCOMMODATE TRASH WITH TYPICAL TRASH TOTES AND BE PICKED UP ONCE A WEEK PER THE CITY'S SCHEDULE.

GRADING AND DRAINAGE NOTES:

1. COMPACTION REQUIREMENTS:

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

   * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL), UNLESS OTHERWISE SPECIFIED.
3. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
4. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
5. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
6. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
7. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
8. STORMWATER CONNECTIONS TO THE MUNICIPAL DRAINAGE SYSTEM SHALL BE VERIFIED PRIOR TO CONSTRUCTION AND COORDINATED WITH THE FINAL CITY OF DOVER ROADWAY IMPROVEMENT PLANS.

EROSION CONTROL NOTES:

1. SEE SHEET C-501 FOR GENERAL EROSION CONTROL NOTES AND DETAILS.

UTILITY NOTES:

1. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
2. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY AND CITY OF DOVER INSPECTION SERVICES DEPARTMENT.
   - NATURAL GAS - UNITIL
   - WATER - CITY OF DOVER COMMUNITY SERVICES DEPARTMENT
   - SEWER - CITY OF DOVER COMMUNITY SERVICES DEPARTMENT
   - ELECTRIC - EVERSOURCE
   - COMMUNICATIONS - CONSOLIDATED COMMUNICATIONS, BREEZELINE & COMCAST
3. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.
4. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT.
5. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
6. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO CITY OF DOVER STANDARDS.
7. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE COMMUNITY SERVICES DEPARTMENT STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
8. THE INSTALLATION OF ANY ELECTRIC POWER, CABLE TELEVISION, AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.
9. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
10. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES.
11. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
12. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
13. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
14. A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION WITH WATER ABOVE SEWER SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
15. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
16. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF DOVER.
17. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF DOVER.
18. ALL SEWER PIPE WITH LESS THAN 6' OF COVER WITHIN ROADWAY LOCATIONS OR LESS THAN 4' OF COVER IN ALL CROSS-COUNTRY LOCATIONS SHALL BE INSULATED.
19. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
20. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER. EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
21. CITY OF DOVER COMMUNITY SERVICES APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
22. THE PROPOSED STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 81-27 OF THE CODE OF THE CITY OF DOVER AND THE 2015 STATE BUILDING CODES.
23. 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.
24. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.
25. UTILITY SERVICE CONNECTION LOCATIONS SHOWN HEREIN ARE BASED ON REFERENCE PLAN #3. UTILITY SERVICE CONNECTIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION AND COORDINATED WITH FINAL CITY OF DOVER ROADWAY IMPROVEMENTS PLANS AND CITY OF DOVER INSPECTION SERVICES DEPARTMENT.
26. ALL ELECTRICAL CONDUIT DUCT BANKS CONSTRUCTED WITHIN THE CITY RIGHT OF WAY SHALL BE ENCASED IN CONCRETE. ANY ELECTRICAL DUCT BANKS OUTSIDE OF THE CITY RIGHT OF WAY SHALL NOT BE ENCASED IN CONCRETE.
27. CONTRACTOR SHALL MATCH THE SLOPE OF THE EXISTING SEWER SERVICE LINE STUB. CONTRACTOR TO CONFIRM SLOPE WITH THE AS-BUILTS OF THE ROADWAY IMPROVEMENTS PROJECT PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DEVIATIONS FROM THE PLANS.

PEST CONTROL NOTES

1. THE CONTRACTOR SHALL ENGAGE A LICENSED EXTERMINATOR WHO PRACTICES INTEGRATED PEST MANAGEMENT (IPM) TO INSPECT THE PROJECT SITE AND PREPARE A PEST MANAGEMENT PLAN TO ELIMINATE RODENTS, NOXIOUS INSECTS AND ALL OTHER PESTS PRIOR TO DEMOLITION ACTIVITIES.
2. THE PEST MANAGEMENT PLAN SHALL BE COORDINATED WITH THE OWNER WHOSE WRITTEN APPROVAL SHALL BE REQUIRED PRIOR TO THE APPLICATION OF ANY PEST CONTROL MEASURE. CONTROL THE PROPOSED PLAN SHALL BE SUBMITTED TO THE OWNER AND ARCHITECT FOR REVIEW AND SHALL CLEARLY INDICATE THE FOLLOWING:
   - AREAS TO BE TREATED.
   - MANUFACTURER'S PRINTED INSTRUCTIONS AND MSDS FOR EACH CHEMICAL TO BE USED.
   - POLLUTION PREVENTATIVE MEASURES TO BE EMPLOYED.

REFERENCE PLANS:

1. "EXISTING CONDITIONS PLAN FOR HORSLEY WITTEN GROUP OF TAX MAP 22 LOT 1," PREPARED BY DOUCET SURVEY, INC., DATED AUGUST 2017.
2. "8573F (BLDG F TOPO) SHIPPED" PREPARED BY DOUCET SURVEY, INC., DATED MAY 9, 2025.
3. "COCHECHO WATERFRONT 90% CONSTRUCTION DRAWINGS", PREPARED BY HORSLEY WITTEN GROUP, INC., DATED MAY 27, 2022.
4. "COHCECHO WATERFRONT DEVELOPMENT - PHASE 1," PREPARED BY TIGHE AND BOND, INC., LAST REVISED JANUARY 2, 2025.
5. "COCHECHO DEVELOPMENT SUBDIVISION PLAN" PREPARED BY DOUCET SURVEY, INC, DATED SEPTEMBER 2020.
6. "AS-BUILT RAP SUBGRADE PLAN" PREPARED BY DOUCET SURVEY, INC., LAST REVISED FEBRUARY 20, 2025.

Tighe&Bond

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
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D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DSGN-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

GENERAL NOTES SHEET

SCALE: AS SHOWN

G-100

Last Save Date: July 25, 2025 11:16 AM By: CKRZCIJK
Plot Date: Thursday, July 31, 2025 2:15 PM By: CKRZCIJK
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cochecho Waterfront\Drawings, Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: G-100-P2

LEGEND

	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE
	DESIGNATED CAP AREA
	EXISTING VERNAL POOL
	PROPOSED LIMIT OF WORK
	EXISTING FENCE
	PROPOSED FENCE
	EXISTING CONCRETE SIDEWALK
	PROPOSED CONCRETE SIDEWALK
	PROPOSED PAVEMENT SECTION
	PROPOSED SNOW STORAGE AREAS
	EXISTING TREE LINE
	PROPOSED BUILDING
	PROPOSED GRANITE CURBING
	PROPOSED ENTRANCE GATE
	PROPOSED SIGN
	PROPOSED BOLLARD MOUNTED SIGN
	PROPOSED LIGHT POLE BASE
25	EXISTING MAJOR CONTOUR
26	EXISTING MINOR CONTOUR
25	PHASE 1 DESIGN MAJOR CONTOUR
26	PHASE 1 DESIGN MINOR CONTOUR
25	PROPOSED MAJOR CONTOUR
26	PROPOSED MINOR CONTOUR
	PROPOSED FLOW DIRECTION
3.15%	PROPOSED SLOPE ARROW
26.30	PROPOSED SPOT GRADE

	EXISTING DRAIN MANHOLE
	EXISTING CATCH BASIN
	EXISTING YARD DRAIN
	EXISTING DRAIN LINE
XD	AS BUILT EXISTING DRAIN LINE
	PROPOSED DRAIN MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED YARD DRAIN
	PROPOSED DRAIN LINE
	PROPOSED INLET PROTECTION BARRIER
	PROPOSED PERIMETER EROSION CONTROL
	EXISTING SEWER MANHOLE
XS	AS BUILT EXISTING SEWER LINE
PS	EXISTING SEWER LINE
	PROPOSED SEWER MANHOLE
PS	PROPOSED SEWER LINE
XE	AS BUILT EXISTING ELECTRIC LINE
XCOM	AS BUILT EXISTING COMMUNICATIONS LINE
PE	EXISTING ELECTRIC LINE
T	PROPOSED TRANSFORMER
PE	PROPOSED ELECTRIC LINE
COM	PROPOSED COMMUNICATIONS LINE
XS	AS BUILT EXISTING GAS LINE
G	EXISTING GAS LINE
G	PROPOSED GAS LINE
XW	AS BUILT EXISTING WATER LINE
	AS BUILT EXISTING FIRE HYDRANT
PW	PROPOSED WATER LINE
	PROPOSED FDC LOCATION
	PROPOSED GATE VALVE
	PROPOSED THRUST BLOCK

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
AC	ACRES
ADA	AMERICANS WITH DISABILITIES ACT
AGGR	AGGREGATE
BLDG	BUILDING
BC	BOTTOM OF CURB
BW	BOTTOM OF WALL
CB	CATCH BASIN
CONST	CONSTRUCT
COORD	COORDINATE
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DMH	DRAINAGE MANHOLE
DWG	DRAWING
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EV	ELECTRIC VEHICLE
FF	FINISHED FLOOR
FGC	FLUSH GRANITE CURB
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
L	LENGTH
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
PAD	PROPOSED AREA DRAIN
PCB	PROPOSED CATCH BASIN
PDMH	PROPOSED DRAINAGE MANHOLE
PFI	PROPOSED FIELD INLET
POS	PROPOSED OUTLET STRUCTURE
PROP	PROPOSED
PSMH	PROPOSED SEWER MANHOLE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PYD	PROPOSED YARD DRAIN
R	RADIUS
RL	ROOF LEADER
ROW	RIGHT OF WAY
SGC	SLOPED GRANITE CURB
SF	SQUARE FEET
STD	STANDARD
TBR	TO BE REMOVED
TC	TOP OF CURB
TW	TOP OF WALL
TYP	TYPICAL
UD	UNDERDRAIN
VGC	VERTICAL GRANITE CURB
W	WIDTH
W/	WITH
YD	YARD DRAIN

Tighe&Bond

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
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D	6/4/2025	Updated Admin Approval Set
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A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DSGN-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

LEGEND & ABBREVIATIONS SHEET

SCALE: AS SHOWN

G-101

Last Save Date: July 25, 2025 11:16 AM By: CKRZCUIK
Plot Date: Thursday, July 31, 2025 Plotted By: CKRZCUIK
T&B File Location: J:\C\C0960 Catharter\C-0960-007 Cochecho Waterfront\Drawings, Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: G-101-P2

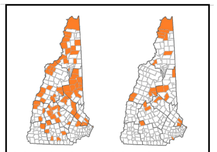
RECOMMENDED PERMIT CONDITIONS:

1. CLIFF SWALLOW (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THIS SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION. CLIFF SWALLOWS AND THEIR NESTS ARE PROTECTED UNDER STATE AND FEDERAL LAWS.
2. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT.
3. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES. SEE PLAN SHEET C-502.
4. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES OR THEIR NESTS ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION.
5. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE.
6. IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.
7. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

Cliff Swallows in New Hampshire: Fast Facts

Distribution and trends (see maps):
Early 1980s: over 80 colonies
Early 2000s: fewer than 40 colonies
2015-2019: 20-25 colonies

Existing colonies are primarily located in northern Coos County, with a second cluster in the Lakes Region. Most are on houses or barns, with two known sites on bridges. They range in size from single pairs to over 30, with most in the 5-10 range.



Colony distribution early 1980s | Colony distribution 2015-19

Migration:

- Arrive in early May and depart in August
- Rarely linger into September

Breeding:

- Lay eggs by end of May (sometimes later in the north)
- Incubation for two weeks
- Young leave nest in three weeks
- Most breeding completed by end of July

Cliff Swallows belong to a group of birds collectively known as "aerial insectivores," meaning that they feed primarily on insects caught while in flight. This group includes all swifts, swallows, flycatchers, and nightjars (nighthawks and whip-poor-wills), and shows some of the strongest declines among North American birds.

Most aerial insectivores in the Northeast are declining, and several additional species are considered "species of greatest conservation need" in New Hampshire including:

Common Nighthawk (endangered)
Purple Martin (threatened)
Bank Swallow
Chimney Swift
Eastern Whip-poor-will
Olive-sided Flycatcher

For more information on these species, please see the NH Wildlife Action Plan

https://www.wildlife.state.nh.us/wildlife/wap.html

For more detail on NH Cliff Swallows or to report sightings, contact Pam Hunt at NH Audubon (phunt@nhaudubon.org, 603-224-9909 x328). Additional information available at: https://www.cliffswallow.org/

Acknowledgments

Brochure developed by NH Audubon and the NH Fish and Game Department's Nongame Program with funding from a USFWS State Wildlife Grant and private donations.

NH's Threatened

Cliff Swallows

Photo by Alan Schmierer

The Cliff Swallow (*Petrochelidon pyrrhonota*) is a colonial swallow that builds mud nests on vertical surfaces across most of North America. The number of colonies in New Hampshire has declined from over 80 in the 1980s to less than 25 today, and as a result it was added to the state's list of threatened species in 2017.

Cliff Swallow in a nest in Pittsburg (Pam Hunt)

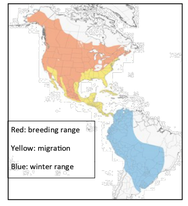
The nest is gourd-shaped, made of mud, and attached to a vertical surface under an overhang (e.g., building eave). Nests are often very close together, even overlapping.

Species Overview

Cliff Swallows may be confused with the related Barn Swallow, which is far more common in NH. Barn Swallows are easily recognized by their long forked tails, while those of Cliff Swallows are short and square. They also have a buffy rump and white forehead.

Photo by Dick Dionne

Cliff Swallows breed across most of North America and spend the winter in South America.



Historically, they nested on vertical natural cliffs in western North America, but were rare in the largely forested east. Agricultural clearing in the late 1800s created the open habitat needed for foraging, and allowed the species to expand its range into New England. The birds that colonized the east tended to nest on buildings, since natural cliffs were rare. More recently the species also took to nesting on bridges.

Threats to Cliff Swallows

Disturbance

Cliff Swallows and active nests are protected under state and federal law but nests are sometimes removed by homeowners who do not want mud or droppings on the sides of their houses. Nests are also vulnerable to removal during bridge-cleaning.

Competition

Non-native House Sparrows often occur in the same agricultural settings as Cliff Swallows, and may take up residence in old swallow nests before swallows arrive in the spring. Even if swallows build new nests, the sparrows may take them over, and are also known to remove eggs or kill nestling swallows in the process.

Pesticides

Pesticide use in heavily agricultural landscapes may result in declines in Cliff Swallows' insect prey. Data linking agricultural intensification to swallow reproductive success are inconclusive, and more research is needed.

Climate change

Cold wet weather in late spring suppresses flying insects, and thus reduces food availability for swallows. If weather patterns become increasingly variable in this manner, swallows may fail to reproduce or suffer direct mortality.

Habitat loss

As farms are abandoned, the availability of barns for nesting and associated fields for foraging may become lower. Many formerly-occupied sites in NH do not appear to have changed so this threat is presumed low.

How You Can Help Cliff Swallows

Please don't knock down their nests!

With so few colonies in NH, we need to help Cliff Swallows as much as we can. If nests are resulting in a mess on the outside of your house, please wait until August to remove them and contact NH Audubon or NHFG for further guidance. Cliff Swallows and active nests are protected under state and federal law.

Provide artificial nests

Sometimes Cliff Swallows will build their nests on clay replicas attached to eaves of buildings, and this may be a way to get them to move locations. Nests should be placed at the top of a wall and directly under the eaves, and taken down for cleaning over the winter.

Provide a source of mud

If you do have nesting Cliff Swallows, you can help them out by maintaining a mud puddle nearby. They'll use this throughout the season to refurbish their nests. Make sure the mud is sticky (e.g., a good clay content).

Cliff Swallows gathering mud in Missouri (Pam Hunt)

Minimize use of insecticides

Report colonies to NH Audubon

If you see Cliff Swallows on your property during the summer, report them, even if you don't see nests.

Tighe&Bond

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

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FISH & GAME NOTES

SCALE: AS SHOWN

G-102

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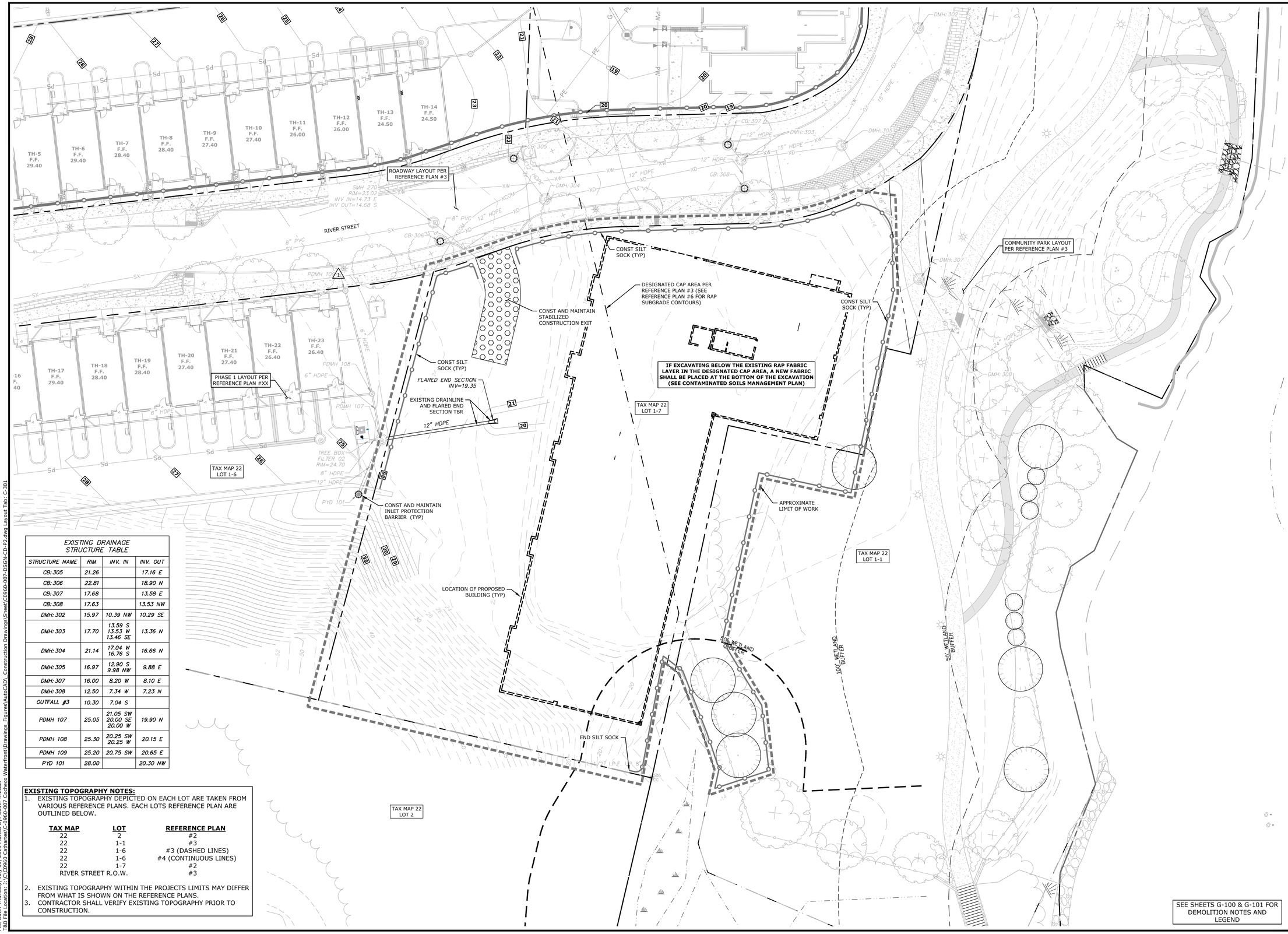


EXISTING DRAINAGE STRUCTURE TABLE			
STRUCTURE NAME	RIM	INV. IN	INV. OUT
CB: 305	21.26		17.16 E
CB: 306	22.81		18.90 N
CB: 307	17.68		13.58 E
CB: 308	17.63		13.53 NW
DMH: 302	15.97	10.39 NW	10.29 SE
DMH: 303	17.70	13.59 S 13.53 W 13.46 SE	13.36 N
DMH: 304	21.14	17.04 W 16.76 S	16.66 N
DMH: 305	16.97	12.90 S 9.98 NW	9.88 E
DMH: 307	16.00	8.20 W	8.10 E
DMH: 308	12.50	7.34 W	7.23 N
OUTFALL #3	10.30	7.04 S	
PDMH 107	25.05	21.05 SW 20.00 SE 20.00 W	19.90 N
PDMH 108	25.30	20.25 SW 20.25 W	20.15 E
PDMH 109	25.20	20.75 SW	20.65 E
PYD 101	28.00		20.30 NW

EXISTING TOPOGRAPHY NOTES:

1. EXISTING TOPOGRAPHY DEPICTED ON EACH LOT ARE TAKEN FROM VARIOUS REFERENCE PLANS. EACH LOTS REFERENCE PLAN ARE OUTLINED BELOW.

TAX MAP	LOT	REFERENCE PLAN
22	2	#2
22	1-1	#3
22	1-6	#3 (DASHED LINES)
22	1-6	#4 (CONTINUOUS LINES)
22	1-7	#2
RIVER STREET R.O.W.		#3

2. EXISTING TOPOGRAPHY WITHIN THE PROJECTS LIMITS MAY DIFFER FROM WHAT IS SHOWN ON THE REFERENCE PLANS.
3. CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHY PRIOR TO CONSTRUCTION.

Last Save Date: July 25, 2025 11:16 AM By: CKRZCUIK
Plot Date: July 31, 2025 1:30 PM By: CKRZCUIK
T&B File Location: J:\C0960 Cathartes\C-0960-007 Cocheco Waterfront\Drawings, Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: C-301

Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

JEREMY M. DEGLER NO. 301 CERTIFIED WETLAND SCIENTIST – STATE OF NEW HAMPSHIRE

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DSGN-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

PHASE 2
EXISTING CONDITIONS & DEMOLITION PLAN

SCALE: AS SHOWN

C-301

SITE DATA:

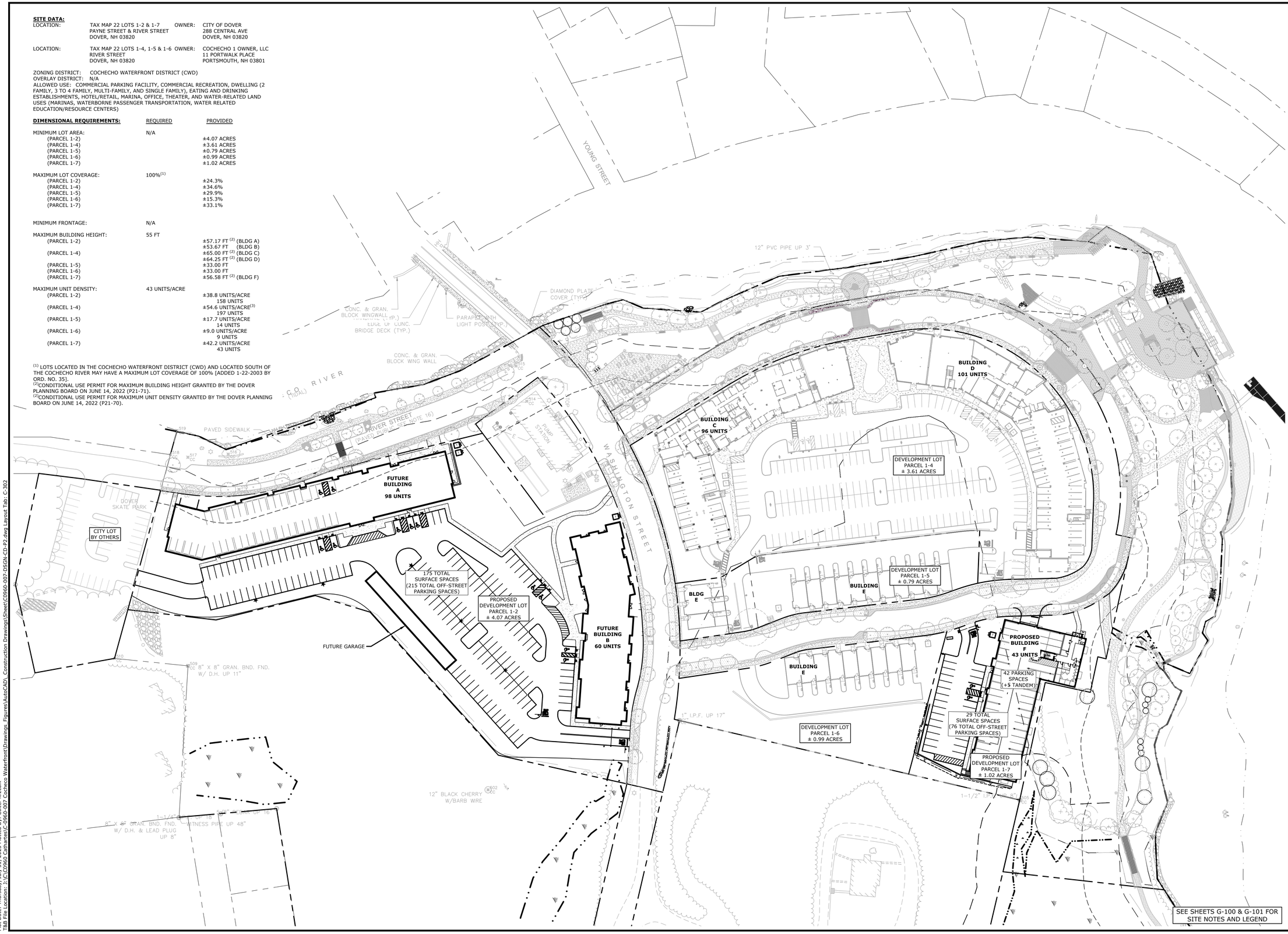
LOCATION: TAX MAP 22 LOTS 1-2 & 1-7 OWNER: CITY OF DOVER
PAYNE STREET & RIVER STREET 288 CENTRAL AVE
DOVER, NH 03820 DOVER, NH 03820

LOCATION: TAX MAP 22 LOTS 1-4, 1-5 & 1-6 OWNER: COCHECHO 1 OWNER, LLC
RIVER STREET 11 PORTWALK PLACE
DOVER, NH 03820 PORTSMOUTH, NH 03801

ZONING DISTRICT: COCHECHO WATERFRONT DISTRICT (CWD)
OVERLAY DISTRICT: N/A
ALLOWED USE: COMMERCIAL PARKING FACILITY, COMMERCIAL RECREATION, DWELLING (2 FAMILY, 3 TO 4 FAMILY, MULTI-FAMILY, AND SINGLE FAMILY), EATING AND DRINKING ESTABLISHMENTS, HOTEL/RETAIL, MARINA, OFFICE, THEATER, AND WATER-RELATED LAND USES (MARINAS, WATERBORNE PASSENGER TRANSPORTATION, WATER RELATED EDUCATION/RESOURCE CENTERS)

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROVIDED
MINIMUM LOT AREA:	N/A	
(PARCEL 1-2)		±4.07 ACRES
(PARCEL 1-4)		±3.61 ACRES
(PARCEL 1-5)		±0.79 ACRES
(PARCEL 1-6)		±0.99 ACRES
(PARCEL 1-7)		±1.02 ACRES
MAXIMUM LOT COVERAGE:	100%(1)	
(PARCEL 1-2)		±24.3%
(PARCEL 1-4)		±34.6%
(PARCEL 1-5)		±29.9%
(PARCEL 1-6)		±15.3%
(PARCEL 1-7)		±33.1%
MINIMUM FRONTAGE:	N/A	
MAXIMUM BUILDING HEIGHT:	55 FT	
(PARCEL 1-2)		±57.17 FT (2) (BLDG A)
		±53.67 FT (BLDG B)
(PARCEL 1-4)		±65.00 FT (2) (BLDG C)
		±64.25 FT (2) (BLDG D)
(PARCEL 1-5)		±33.00 FT
(PARCEL 1-6)		±33.00 FT
(PARCEL 1-7)		±56.58 FT (2) (BLDG F)
MAXIMUM UNIT DENSITY:	43 UNITS/ACRE	
(PARCEL 1-2)		±38.8 UNITS/ACRE 158 UNITS
(PARCEL 1-4)		±54.6 UNITS/ACRE(3) 197 UNITS
(PARCEL 1-5)		±17.7 UNITS/ACRE 14 UNITS
(PARCEL 1-6)		±9.0 UNITS/ACRE 9 UNITS
(PARCEL 1-7)		±42.2 UNITS/ACRE 43 UNITS

(1) LOTS LOCATED IN THE COCHECHO WATERFRONT DISTRICT (CWD) AND LOCATED SOUTH OF THE COCHECHO RIVER MAY HAVE A MAXIMUM LOT COVERAGE OF 100% [ADDED 1-22-2003 BY ORD. NO. 35].
(2)CONDITIONAL USE PERMIT FOR MAXIMUM BUILDING HEIGHT GRANTED BY THE DOVER PLANNING BOARD ON JUNE 14, 2022 (P21-71).
(3)CONDITIONAL USE PERMIT FOR MAXIMUM UNIT DENSITY GRANTED BY THE DOVER PLANNING BOARD ON JUNE 14, 2022 (P21-70).



SEE SHEETS G-100 & G-101 FOR SITE NOTES AND LEGEND

Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
8/1/25

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
8/1/25

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DSGN-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

PHASE 2
OVERALL SITE PLAN

SCALE: AS SHOWN

C-302

Last Save Date: July 25, 2025 11:16 AM By: CKRZCUIK
Plot Date: Thursday, July 31, 2025 1:30 PM By: CKRZCUIK
T&B File Location: J:\C\0960 Catharten\C-0960-007 Cocheco Waterfront\Drawings, Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: C-302

SITE DATA:

LOCATION: TAX MAP 22 LOTS 1-7
PROPOSED LOTS: RIVER STREET, DOVER, NH 03820

OWNER: CITY OF DOVER, 288 CENTRAL AVE, DOVER, NH 03820

ZONING DISTRICT: COCHECHO WATERFRONT DISTRICT (CWD)
OVERLAY DISTRICT: N/A
ALLOWED USE: COMMERCIAL PARKING FACILITY, COMMERCIAL RECREATION, DWELLING (2 FAMILY, 3 TO 4 FAMILY, MULTI-FAMILY, AND SINGLE FAMILY), EATING AND DRINKING ESTABLISHMENTS, HOTEL/RETAIL, MARINA, OFFICE, THEATER, AND WATER-RELATED LAND USES (MARINAS, WATERBORNE PASSENGER TRANSPORTATION, WATER RELATED EDUCATION/RESOURCE CENTERS)

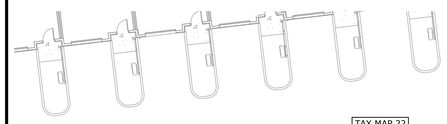
DIMENSIONAL REQUIREMENTS:

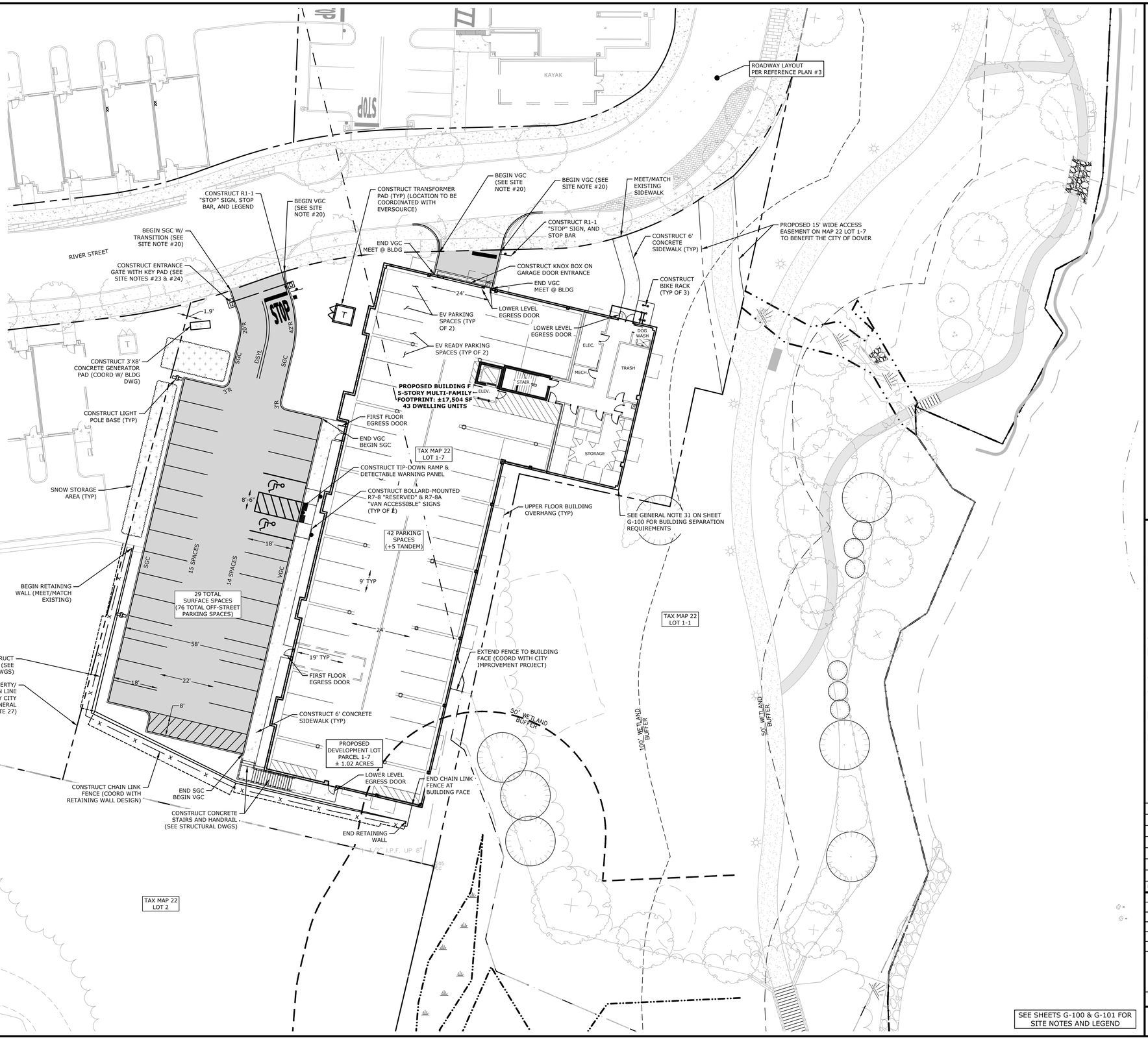
	REQUIRED	PROVIDED
MINIMUM LOT AREA: (PARCEL 1-7)	N/A	±1.02 ACRES
MAXIMUM LOT COVERAGE: (PARCEL 1-7)	100%(1)	±39.4%
MINIMUM FRONTAGE:	N/A	
MAXIMUM BUILDING HEIGHT: (PARCEL 1-7)	55 FT	±56.58 FT (2) (BLDG F)
MAXIMUM UNIT DENSITY: (PARCEL 1-7)	43 UNITS/ACRE	±42.15 UNITS/ACRE 43 UNITS

(1) LOTS LOCATED IN THE COCHECHO WATERFRONT DISTRICT (CWD) AND LOCATED SOUTH OF THE COCHECHO RIVER MAY HAVE A MAXIMUM LOT COVERAGE OF 100% (ADDED 1-22-2003 BY ORD. NO. 35).
(2)CONDITIONAL USE PERMIT FOR MAXIMUM BUILDING HEIGHT GRANTED BY THE DOVER PLANNING BOARD ON JUNE 14, 2022 (P21-71).

OFF STREET PARKING REQUIREMENTS:

	REQUIRED	PROPOSED
PARKING STALL LAYOUT: STANDARD 90°	9' X 18'	9' X 18'
DRIVE AISLE WIDTH: 90° (2-WAY TRAFFIC)	22 FT	22 FT (MIN)
MAXIMUM PARKING SPACES: RESIDENTIAL (NON-GBD-G): 1.4 SPACES / UNIT +0.5 VISITOR SPACES / UNIT = 1.4 SPACES / UNIT * 43 UNITS +0.5 SPACES / UNIT * 43 UNITS =	≤82 SPACES	76 SPACES
ADA PARKING SPACES:	2 SPACES	3 SPACES
MINIMUM BICYCLE STORAGE: =5%*MAXIMUM PARKING SPACES =5%*(82 SPACES)	≤5 SPACES	6 SPACES
EV CHARGING STATION: =5%*PROVIDED PARKING SPACES =5%*(76 SPACES)	≤4 SPACES	4 SPACES





Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

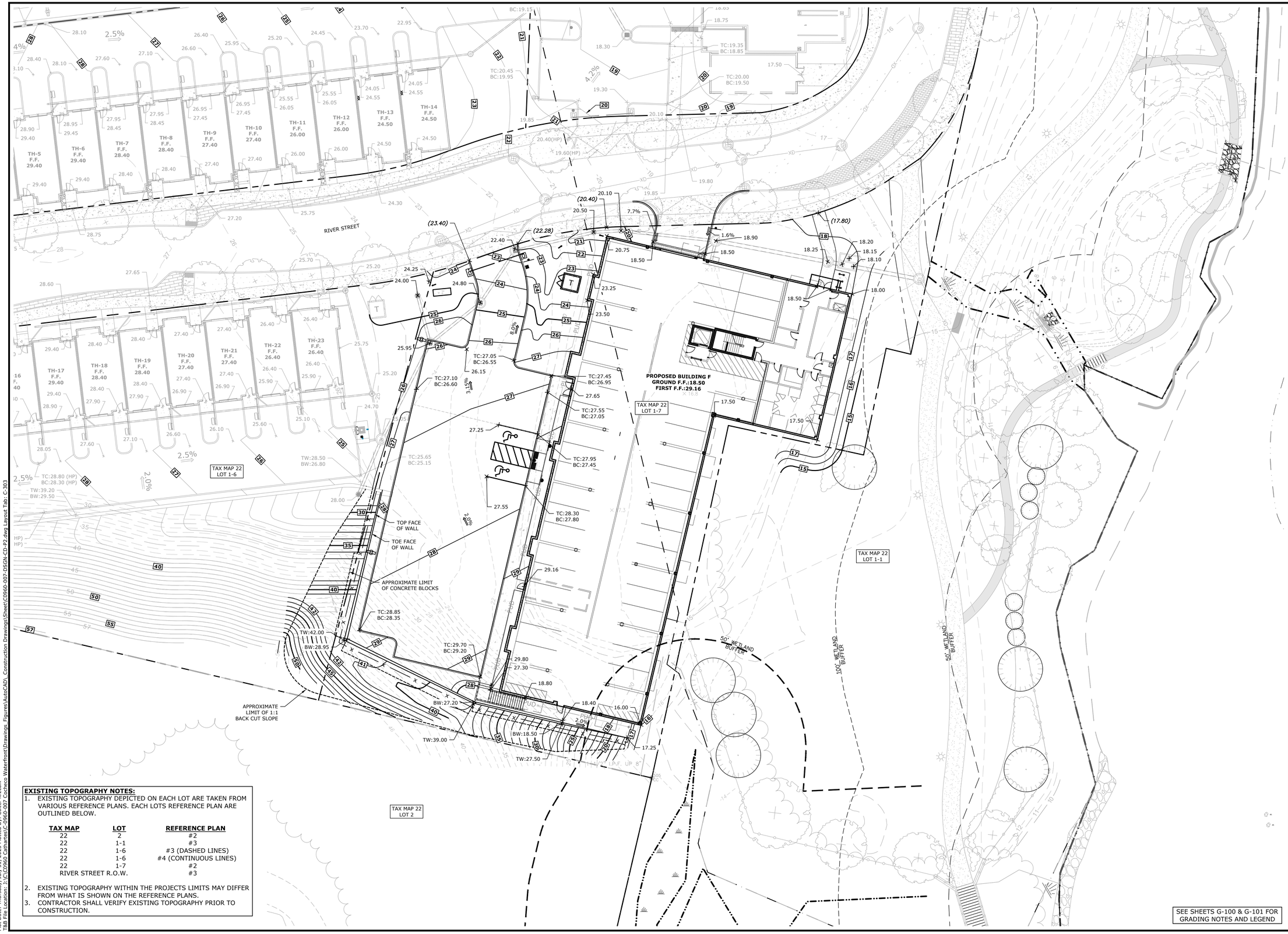
PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DSGN-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

PHASE 2
SITE PLAN

SCALE: AS SHOWN

C-302.1

Last Save Date: July 25, 2025 11:16 AM By: CKRZCIJK
Plotted: Thursday, July 31, 2025 By: CKRZCIJK
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cochecho Waterfront\Drawings_Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: C-302.1



EXISTING TOPOGRAPHY NOTES:

1. EXISTING TOPOGRAPHY DEPICTED ON EACH LOT ARE TAKEN FROM VARIOUS REFERENCE PLANS. EACH LOTS REFERENCE PLAN ARE OUTLINED BELOW.

TAX MAP	LOT	REFERENCE PLAN
22	2	#2
22	1-1	#3
22	1-6	#3 (DASHED LINES)
22	1-6	#4 (CONTINUOUS LINES)
22	1-7	#2
RIVER STREET R.O.W.		#3

2. EXISTING TOPOGRAPHY WITHIN THE PROJECTS LIMITS MAY DIFFER FROM WHAT IS SHOWN ON THE REFERENCE PLANS.
3. CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHY PRIOR TO CONSTRUCTION.

SEE SHEETS G-100 & G-101 FOR GRADING NOTES AND LEGEND

Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
8/1/25

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
8/1/25

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
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B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DSGN-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

PHASE 2
GRADING PLAN

SCALE: AS SHOWN

C-303

Last Save Date: July 25, 2025 11:16 AM By: CKRZCUIK
Plot Date: July 31, 2025 7:35 AM By: CKRZCUIK
T&B File Location: J:\C\0960 Cathartes\C-0960-007 Cocheco Waterfront\Drawings_Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: C-303

STRUCTURE TABLE			
STRUCTURE NAME	RIM	INV. IN	INV. OUT
PCB 201	22.40	18.00 SE	17.90 N
PCB 202	24.80	18.60 S	18.50 NW
PCB 203	26.95	19.10 SE 19.10 W	19.00 N
PCS 3	18.65	10.75 SW	9.20 NE
PDMH 202	16.44	13.00 S 11.35 SE 11.35 SW	11.25 NE
PROPOSED JELLYFISH JFPD0806 TREATMENT UNIT-03	VARIES	9.10 SW	8.60 NE
PYD 201 SOLID COVER	20.20	12.00 SW	11.90 NE
PYD 202	20.50	16.75 S 14.50 SE	12.15 NE
PYD 203	24.10		19.35 E

EXISTING DRAINAGE STRUCTURE TABLE			
STRUCTURE NAME	*RIM*	*INV. IN*	*INV. OUT*
CB: 305	*21.26*		*17.16 E*
CB: 306	*22.81*		*18.90 N*
CB: 307	*17.68*		*13.58 E*
CB: 308	*17.63*		*13.53 NW*
DMH: 302	*15.97*	*10.39 NW*	*10.29 SE*
DMH: 303	*17.70*	*13.59 S* *13.53 W* *13.46 SE*	*13.36 N*
DMH: 304	*21.14*	*17.04 W* *16.76 S*	*16.66 N*
DMH: 305	*16.97*	*12.90 S* *9.98 NW*	*9.88 E*
DMH: 307	*16.00*	*8.20 W*	*8.10 E*
DMH: 308	*12.50*	*7.34 W*	*7.23 N*
OUTFALL #3	*10.30*	*7.04 S*	
PDMH 107	*25.05*	*21.05 SW* *20.00 SE* *20.00 W*	*19.90 N*
PDMH 108	*25.30*	*20.25 SW* *20.25 W*	*20.15 E*
PDMH 109	*25.20*	*20.75 SW*	*20.65 E*
PYD 101	*28.00*		*20.30 NW*

EXISTING TOPOGRAPHY NOTES:

1. EXISTING TOPOGRAPHY DEPICTED ON EACH LOT ARE TAKEN FROM VARIOUS REFERENCE PLANS. EACH LOTS REFERENCE PLAN ARE OUTLINED BELOW.

TAX MAP	LOT	REFERENCE PLAN
22	2	#2
22	1-1	#3
22	1-6	#3 (DASHED LINES)
22	1-6	#4 (CONTINUOUS LINES)
22	1-7	#2
RIVER STREET R.O.W.		#3

2. EXISTING TOPOGRAPHY WITHIN THE PROJECTS LIMITS MAY DIFFER FROM WHAT IS SHOWN ON THE REFERENCE PLANS.
3. CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHY PRIOR TO CONSTRUCTION.

Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
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A	3/21/2025	50% Construction Drawings

PROJECT NO: C-0960-007
DATE: March 21, 2025
FILE: C0960-007-DSGN-CD-P2.DWG
DRAWN BY: CJK
CHECKED: NAH
APPROVED: PMC

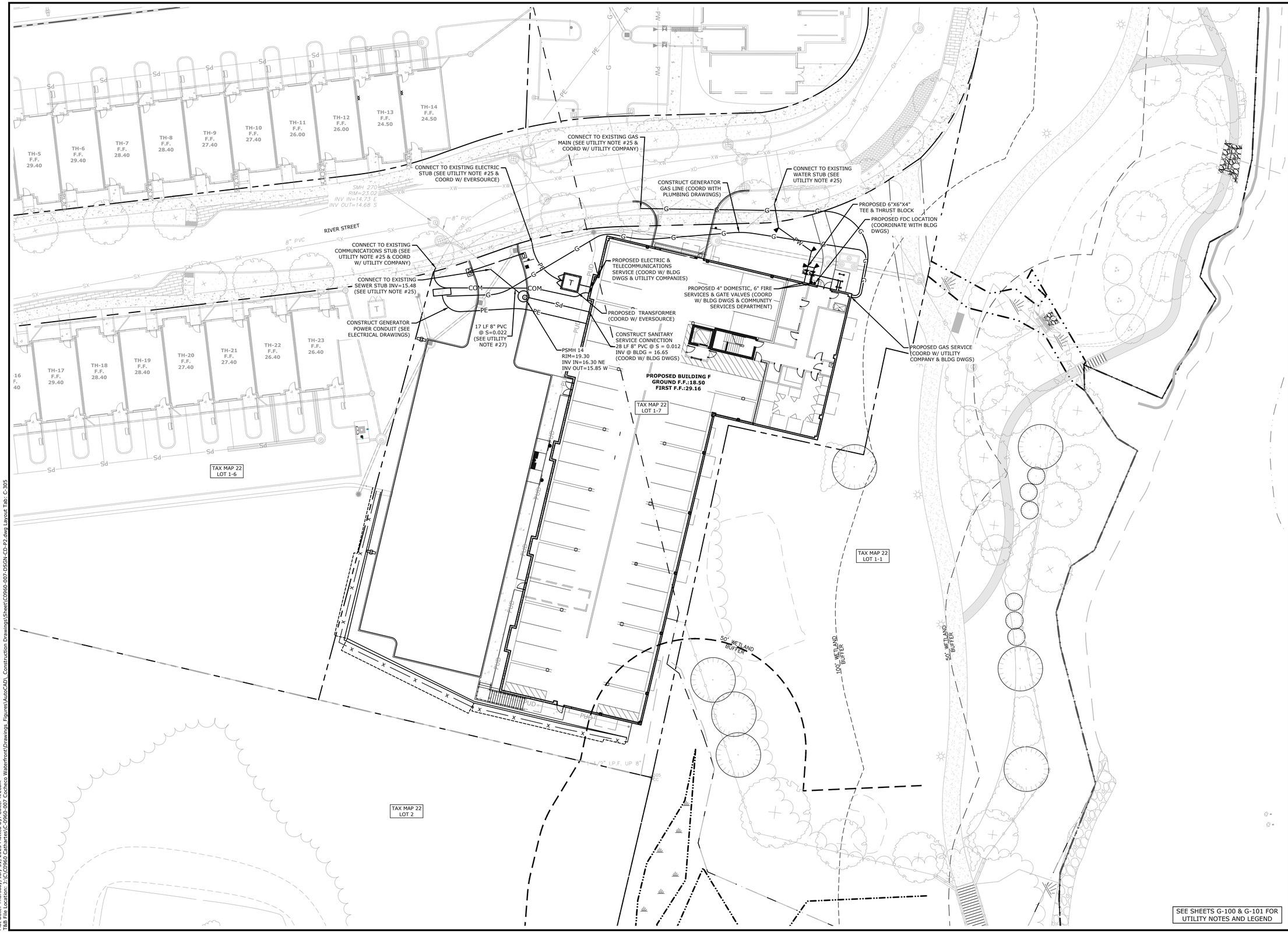
PHASE 2 DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-304

SEE SHEETS G-100 & G-101 FOR DRAINAGE NOTES AND LEGEND

Last Save Date: July 25, 2025 11:16 AM By: CKRZCUK
Plotted Date: July 25, 2025 11:16 AM By: CKRZCUK
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cocheco Waterfront\Drawings_Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: C-304



SEE SHEETS G-100 & G-101 FOR UTILITY NOTES AND LEGEND

Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
8/1/25

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
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A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DSGN-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

PHASE 2
UTILITY PLAN

SCALE: AS SHOWN

C-305

Last Save Date: July 25, 2025 11:16 AM By: CKRZCUIK
Plot Date/Time: Jul 31, 2025 - 7:55am Plotted By: CKRZCUIK
T&B File Location: J:\CC\C0960 Cathartes\C-0960-007 Cocheco Waterfront\Drawings, Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: C-305

GENERAL PROJECT INFORMATION

PROJECT OWNER:	CITY OF DOVER 288 CENTRAL AVE DOVER, NEW HAMPSHIRE 03820
PROJECT NAME:	COCHECHO WATERFRONT DEVELOPMENT
PROJECT ADDRESS:	RIVER STREET DOVER, NEW HAMPSHIRE 03820
PROJECT MAP / LOT:	MAP 22 / LOT 1-2, 1-4, 1-5, 1-6, & 1-7
PROJECT LATITUDE:	43°11'41.4"N
PROJECT LONGITUDE:	70°52'09.5"W

PROJECT DESCRIPTION

THE PROPOSED PROJECT CONSISTS OF THREE (3) MIXED USE BUILDINGS, TWO (2) MULTI-FAMILY BUILDINGS AND THREE (3) SETS OF TOWN HOUSES ALONG RIVER STREET AND WASHINGTON STREET, INCLUDING ASSOCIATED SITE IMPROVEMENTS.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 10.47 ACRES.

SOIL CHARACTERISTICS

BASED ON THE NRCS WEB SOIL SURVEY FOR STRAFFORD COUNTY - NEW HAMPSHIRE, THE SOILS ON SITE CONSIST OF BUXTON AND SUFFIELD SILT LOAM SOILS WHICH HAVE A SLOW INFILTRATION RATE WHEN THOROUGHLY WET. THESE SOILS HAVE A HYDROLOGIC SOIL GROUP RATING OF C/D.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA OVERLAND FLOW TO A CLOSED DRAINAGE SYSTEM THAT ULTIMATELY FLOWS TO THE COCHECHO RIVER. THE COCHECHO RIVER HAS BEEN LISTED AS IMPAIRED ACCORDING TO NHDES 2012 303(D) LIST, WATERBODY ID: NHEST600030608-01.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. BUILDING DEMOLITION AND SITE FEATURE DEMOLITION.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   - NEW CONSTRUCTION
   - DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE
   - CONTROL OF DUST
   - CONSTRUCTION OF ACCESS
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE. DISTURBED AREAS SHALL NOT EXCEED 5 ACRES AT ANY ONE TIME BEFORE BEING STABILIZED. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
2. THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT OR THEIR DESIGNATED AGENT SHALL HAVE ACCESS TO THE SITE TO COMPLETE ROUTINE INSPECTIONS.
   A. THE COMMUNITY SERVICES DEPARTMENT SHALL BE NOTIFIED 24-HOURS PRIOR TO INSTALLATION OF A STORMWATER BMP IN ORDER TO SCHEDULE AN INSPECTION. THESE INSPECTIONS SHALL BE COMPLETED DURING NORMAL WORKING HOURS.
3. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALE, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:

1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
2. WINTER STABILIZATION PRACTICES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
   C. AFTER OCTOBER 15, 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, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   A. TEMPORARY SEEDING;
   B. MULCHING.
4. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
5. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY NOVEMBER 15.

DUST CONTROL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

1. TEMPORARY GRASS COVER:
   A. SEEDBED PREPARATION:
      a. 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;
   B. 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;
   C. MAINTENANCE:
      a. TEMPORARY SEEDING 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.).
2. VEGETATIVE PRACTICE:
   A. FOR PERMANENT MEASURES AND PLANTINGS:
      a. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
      b. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
      c. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
      d. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
      e. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
      f. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
      g. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
      h. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
TALL FESCUE	15 LBS/ACRE
CREEPING RED FESCUE	10 LBS/ACRE
BIRDSFOOT TREFOIL	8 LBS/ACRE

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.

3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
   B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
   C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
   D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

1. FIRE-FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;
12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

SPILL PREVENTION:

1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
      a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
      b. ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE;
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
      d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
      e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
      f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      g. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      h. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      i. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
      a. PETROLEUM PRODUCTS:
         - ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
         - PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
      b. FERTILIZERS:
         - FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
         - ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
         - STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
      c. PAINTS:
         - ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
         - EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
         - EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
      b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL 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;
      c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
      d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
      e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
      f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
   E. VEHICLE FUELING AND MAINTENANCE PRACTICE:
      a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPTMENT/VEHICAL FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
      b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
      c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
      d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
      e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
      f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

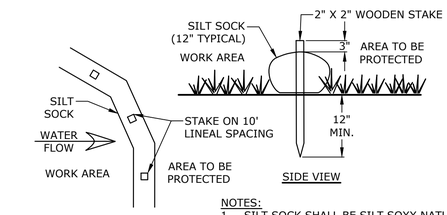
THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY THE [CONTRACTOR]. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.

THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:

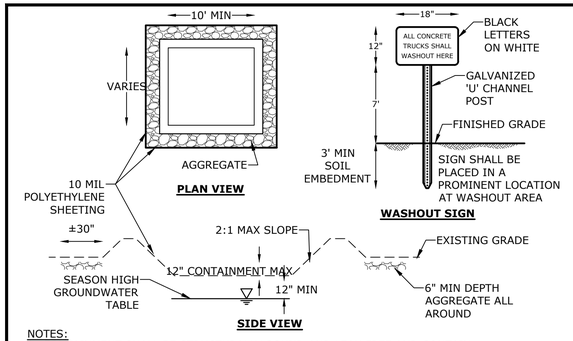
1. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE [CONTRACTOR] AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
2. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, THE CONTRACTOR, AND THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT;
3. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
4. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

BLASTING NOTES:

1. CONTRACTOR SHALL CONTACT THE NHDES PRIOR TO COMMENCING ANY BLASTING ACTIVITIES
2. FOR ANY PROJECT FOR WHICH BLASTING OF BEDROCK IS ANTICIPATED, THE APPLICANT SHALL SUBMIT:
   A. A BLASTING PLAN THAT IDENTIFIES:
      a. WHERE THE BLASTING ACTIVITIES ARE ANTICIPATED TO OCCUR;
      b. THE ESTIMATED QUANTITY OF BLAST ROCK IN CUBIC YARDS; AND
      c. SITE-SPECIFIC BLASTING BEST MANAGEMENT PRACTICES.
3. IF MORE THAN 5000 CUBIC YARDS OF BLAST ROCK WILL BE GENERATED AND THERE ARE ONE OR MORE PUBLIC DRINKING WATER WELLS WITHIN 2000 FEET OF THE BLASTING ACTIVITIES, A PLAN TO MONITOR GROUNDWATER TO DETECT ANY CONTAMINATION IN SUFFICIENT TIME TO PROTECT THE WATER SUPPLY WELLS SHALL BE PROVIDED TO THE NHDES. THE GROUNDWATER MONITORING PLAN SHALL INCLUDE:
   A. MONITORING 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:
      a. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY THE NHDES.
   B. THE FOLLOWING BEST MANAGEMENT PROCEDURES FOR BLASTING SHALL BE COMPLIED WITH:
      a. LOADING PRACTICES - THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:
         i. 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;
         ii. 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;
         iii. 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;
         iv. 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;
         v. 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;
         vi. 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.
      b. EXPLOSIVE SELECTION - THE FOLLOWING BMPS SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:
         i. EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION;
         ii. 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
      c. PREVENTION OF MISFIRES. APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO PREVENT MISFIRES.
      d. MUCK PILES 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:
         i. REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE;
         ii. MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT CONTAMINATION OF WATER SUPPLY WELLS OR SURFACE WATER.
   C. SPILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND OTHER RELATED SUBSTANCES TO THE ENVIRONMENT DURING BLASTING OPERATIONS. THE MEASURES TO PREVENT SUCH RELEASES SHALL BE DETAILED IN THE GROUNDWATER MONITORING REPORT AND COMPLY WITH THE MEASURES AND BEST MANAGEMENT PRACTICES LISTED ON THIS SHEET.

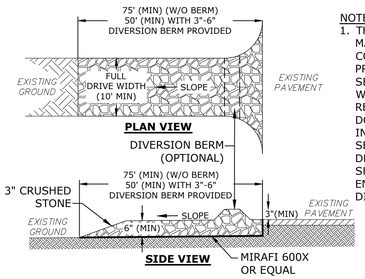


NOTES:
1. SILT SOCK SHALL BE SILT SOXX NATURAL ORIGINAL BY FILTREXX OR APPROVED EQUAL



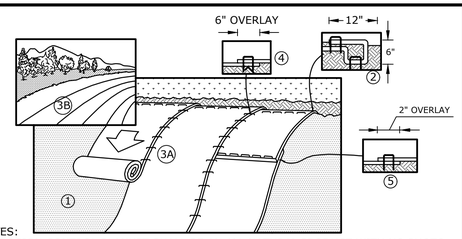
NOTES:
1. CONTAINMENT SHALL BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT SHALL BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREAS SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY, REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT AREA
NO SCALE



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION EXIT
NO SCALE

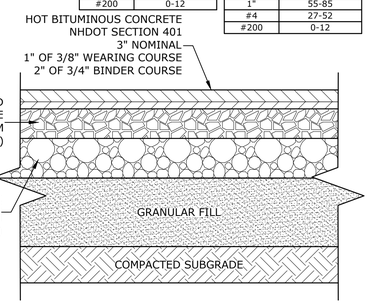


NOTES:
1. EROSION CONTROL BLANKET SHALL BE AN ALL NATURAL PRODUCT WITH NO PHOTO DEGRADABLE COMPONENTS, NORTH AMERICAN GREEN SC150BN OR APPROVED EQUAL.
2. STAKES SHALL BE BIODEGRADABLE BIOSTAKES OR ALL NATURAL WOOD ECOSTAKES OR APPROVED EQUAL. THE LENGTH OF STAKES SHALL BE BASED OFF OF THE MANUFACTURERS RECOMMENDATION.
3. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, COMPOST AND SEED.
4. BEGIN AT THE TOP OF THE SLOPE, 36" OVER THE GRADE BREAK, BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UPSLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAKES IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAKING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAKES ACROSS THE WIDTH OF THE BLANKET.
5. ROLL THE BLANKETS DOWN THE SLOPE. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SOIL SURFACE BY PLACING STAKES IN APPROPRIATE LOCATIONS AS SHOWN ON THE MANUFACTURERS PATTERN GUIDE.

EROSION CONTROL BLANKET
NO SCALE

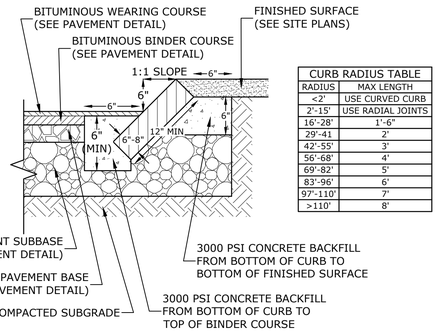
NHDOT ITEM No. 304.2 (GRAVEL)	
SIEVE SIZE	% PASSING
6"	100
#4	25-70
#200	0-12

NHDOT ITEM No. 304.3 (CRUSHED GRAVEL)	
SIEVE SIZE	% PASSING
3"	100
2"	95-100
1"	55-85
#4	27-52
#200	0-12



NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.

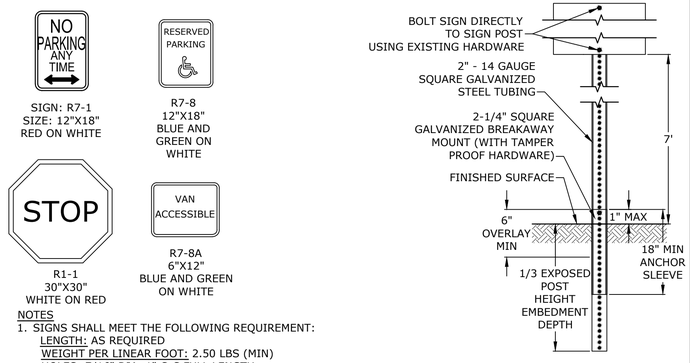
TYPICAL PAVEMENT SECTION
NO SCALE



CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<2'	USE CURVED CURB
2'-15'	USE RADIAL JOINTS
16'-28'	1'-6"
29'-41'	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-96'	6'
97'-110'	7'
>110'	8'

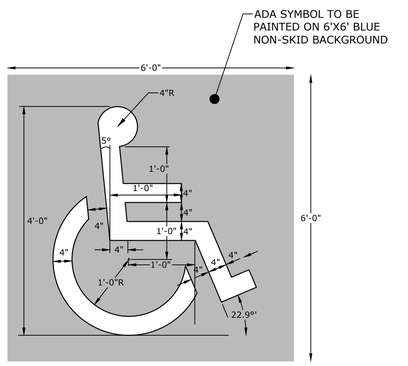
NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

SLOPED GRANITE CURB
NO SCALE



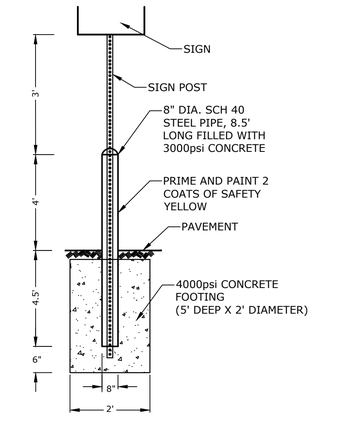
NOTES
1. SIGNS SHALL MEET THE FOLLOWING REQUIREMENT:
   LENGTH: AS REQUIRED
   WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN)
   HOLES: 7/16" DIA, 1" C-C FULL LENGTH
   STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)
   FINISH: STREET SIGNS - GALVANIZED STEEL ALL OTHER - SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN BAKED ON OR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.
2. IF SIGN BASE WITHIN LEDGE. LEDGE SHALL BE DRILLED TO ACCEPT POST TO A MINIMUM DEPTH OF 2' AND GROUTED IN PLACE.
3. ALL SIGNS TO BE CONSTRUCTED PER THE FHWA STANDARD HIGHWAY SIGNS MANUAL, CURRENT EDITION AND INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
4. ALL SIGNS SHALL MEET THE REQUIREMENTS OF SECTION 615-SIGNS OF THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.

SIGN LEGEND & SIGN POST
NO SCALE

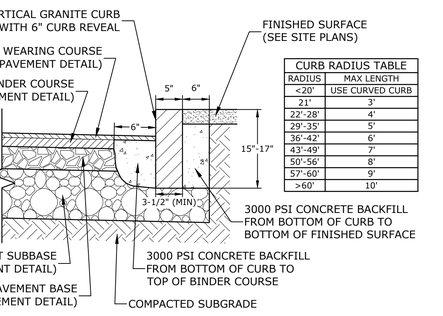


NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

ACCESSIBLE SYMBOL
NO SCALE



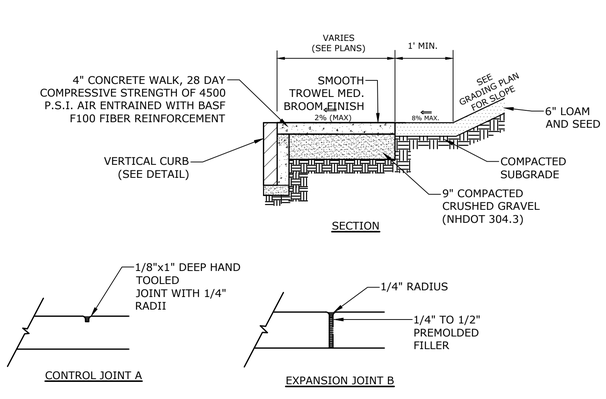
BOLLARD MOUNTED SIGN DETAIL
NO SCALE



CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<20'	USE CURVED CURB
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
>60'	10'

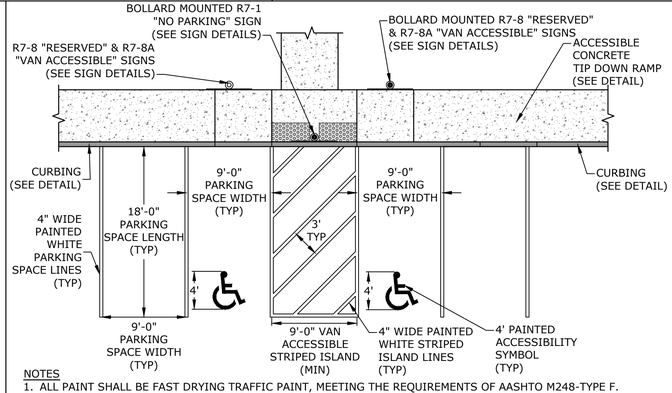
NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

VERTICAL GRANITE CURB
NO SCALE



NOTES:
1. SIDEWALK SHALL BE CONSTRUCTED TO CITY OF DOVER STANDARDS

CONCRETE SIDEWALK WITH GRANITE CURB
NO SCALE



NOTES
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED PER MANUFACTURER RECOMMENDATIONS.
2. SYMBOLS & PARKING STALLS SHALL BE INSTALLED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, AND ALL STATE AND LOCAL REQUIREMENTS.
3. FINISH PAVEMENT GRADES AT ALL HANDICAP ACCESSIBLE STALLS AND PAINTED ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION.

PARKING STALL/PAINTED ISLAND STRIPING
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – 8/1/25

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – 8/1/25

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

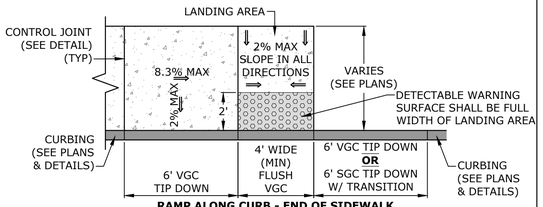
PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DTLS-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

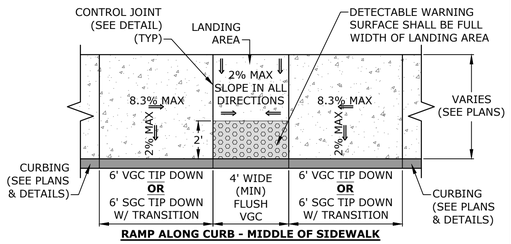
SCALE: AS SHOWN

C-502

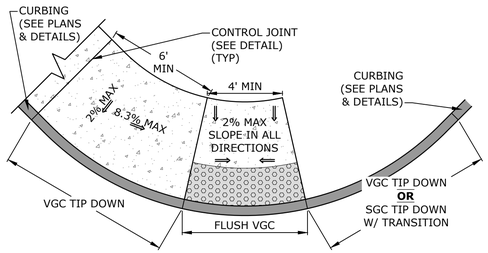
Last Save Date: July 25, 2025 12:42 AM By: CKRZCUIK
Plot Date: July 25, 2025 12:43 AM By: CKRZCUIK
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cochecho Waterfront\Drawings_Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DTLS-CD-P2.dwg Layout Tab: C-502



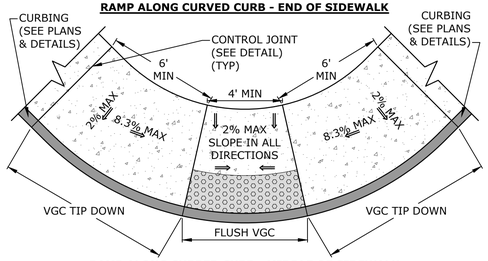
RAMP ALONG CURB - END OF SIDEWALK



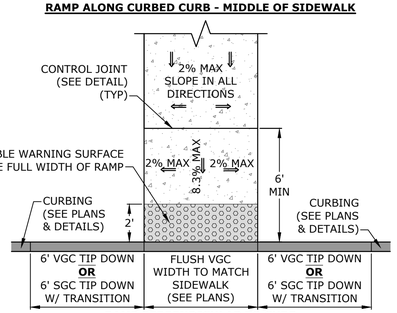
RAMP ALONG CURB - MIDDLE OF SIDEWALK



RAMP ALONG CURVED CURB - END OF SIDEWALK



RAMP ALONG CURBED CURB - MIDDLE OF SIDEWALK

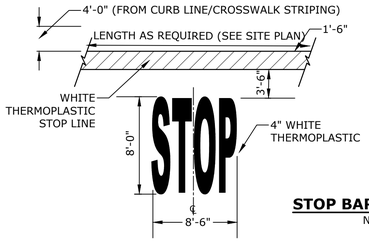


RAMP PERPENDICULAR TO CURB

NOTES
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, AND ALL STATE AND LOCAL REQUIREMENTS.
2. SEE CONCRETE SIDEWALK DETAIL(S) FOR CONCRETE AND BASE MATERIAL REQUIREMENTS.
3. DETECTABLE WARNING SURFACES:
   - DETECTABLE WARNING SURFACES WITHIN THE RIGHT OF WAY SHALL BE ADA SOLUTIONS - IRON DOME AND IRON DOME SECURE FLANGE, CAST IRON PLANTS WITH A BLACK PAINTED FINISH, OR EQUAL.
   - DETECTABLE WARNING SURFACES WITHIN THE SITE SHALL BE ADA SOLUTIONS - CAST-IN-PLACE DETECTABLE WARNING SURFACE PANELS, COLOR: FEDERAL YELLOW, OR EQUAL
4. DETECTABLE WARNING SURFACES SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

CONCRETE SIDEWALK TIP-DOWN RAMP WITH DETECTABLE WARNING SURFACE

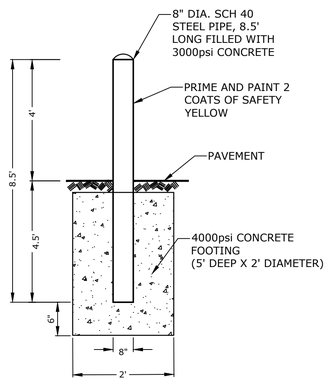
NO SCALE



NOTES:
1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

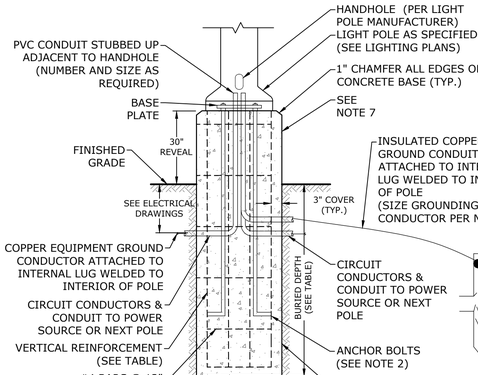
STOP BAR AND LEGEND

NO SCALE

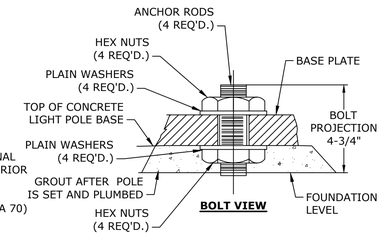


BOLLARD DETAIL

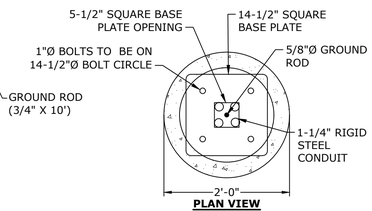
NO SCALE



POLE HEIGHT	DEPTH (BURIED)	BASE DIAMETER	VERTICAL REINFORCEMENT	VERTICAL REINFORCEMENT LENGTH
16'>	72"	18"	6 - #6	5'-9"
16'<	72" (MIN.)	24"	6 - #8	5'-9"



BOLT VIEW

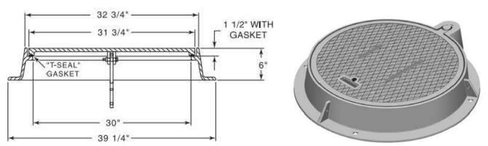


PLAN VIEW

NOTES:
1. ALL LIGHT POLES, LUMINARIES AND WIRE TO BE FURNISHED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED.
2. CONTRACTOR SHALL VERIFY BOLT TEMPLATE AND ANCHOR BOLT SIZE WITH POLE MANUFACTURER PRIOR TO CONSTRUCTION.
3. CONCRETE SHALL BE 4,000 PSI CLASS A, PRE-CAST CONCRETE.
4. REINFORCEMENT SHALL BE ASTM A615, GRADE 60.
5. FOR LIGHT POLES GREATER THAN 20' IN HEIGHT, THE LIGHT POLE BASE SHALL BE DESIGNED AND STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
6. EXTENDED LIGHT POLE BASE TO BE USED IN VEHICULAR AREAS. SEE LIGHTING PLAN.
7. PAINT LIGHT POLE BASE SAFETY YELLOW WHERE NOT PROTECTED BY CURB.
8. COORDINATE FINAL LIGHT POLE DESIGN WITH LIGHTING PLAN.

LIGHT POLE BASE DETAIL

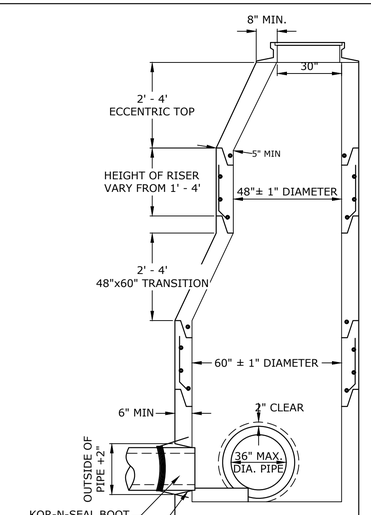
NO SCALE



NOTES:
1. FRAME AND COVER SHALL BE NEENAH FOUNDRIES MODEL NUMBER R-1743-LM OR APROVED EQUAL.
2. MANHOLE COVER SHALL HAVE WORD "DRAIN" OR "SEWER" CAST INTO TOP OF SURFACE.

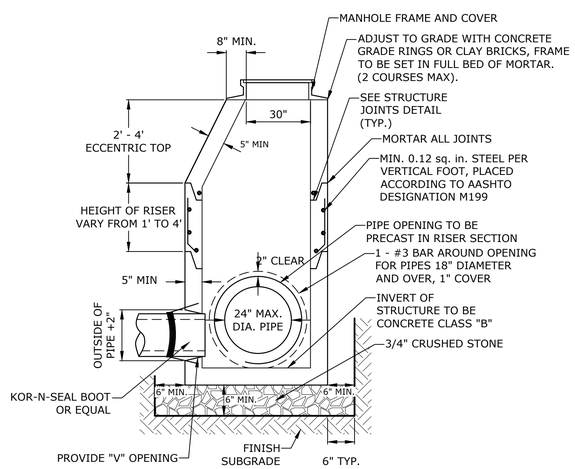
CITY OF DOVER MANHOLE FRAME & COVERS

NO SCALE



5' DIAMETER DRAIN MANHOLE

NO SCALE



4' DIAMETER DRAIN MANHOLE

NO SCALE

NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

CORE HOLE SIZE				
PIPE SIZE	RCP CORE HOLE DIA.		PLASTIC CORE HOLE DIA.	
INCHES	INCHES	FEET	INCHES	FEET
6			7	0.6
12	18	1.5	18	1.5
15	22	1.8	20	1.7
18	26	2.2	24	2.0
24	34	2.8	32	2.7
30	42	3.5	42	3.5

DIAMETER	WALL THICKNESS (MIN.)	FLOOR THICKNESS (MIN.)
4'	5"	6"
5'	6"	8"

Tighe&Bond

STATE OF NEW HAMPSHIRE – NEIL A. HANSEN No. 15227 – LICENSED PROFESSIONAL ENGINEER – 8/1/25

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 – LICENSED PROFESSIONAL ENGINEER – 8/1/25

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DTLS-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

SCALE: AS SHOWN

C-503

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Plot Date: July 31, 2025 7:05 AM By: CKRZCUIK
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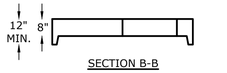
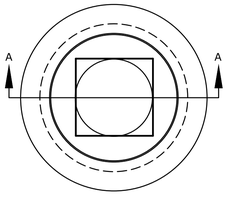
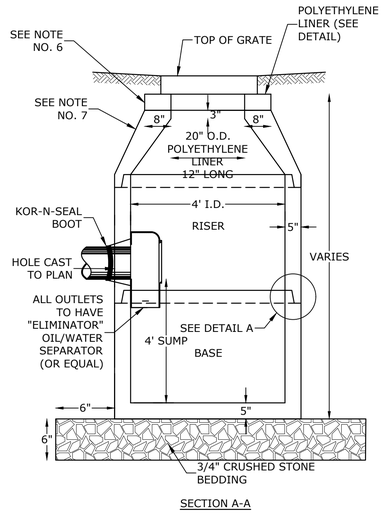


SECTION B-B

FLAT SLAB TOP

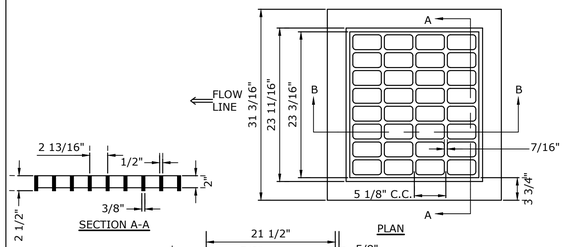




NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 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. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
7. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
11. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

4' DIAMETER CATCHBASIN

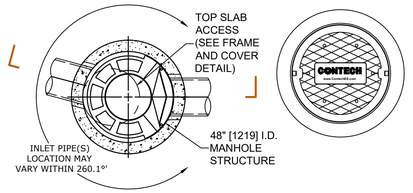
NO SCALE



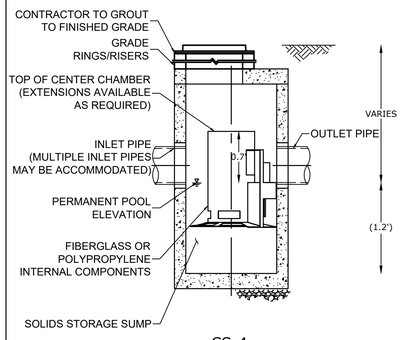
NOTES:
1. GRATE TO BE CAST IRON (NHDOT TYPE B ALTERNATE 1)
2. FRAME AND GRATE TO BE MANUFACTURED IN THE USA

CATCH BASIN FRAME & GRATE

NO SCALE



SITE SPECIFIC DATA REQUIREMENTS	
STRUCTURE ID	3
CASCADE MODEL	CS-4
WATER QUALITY FLOW RATE (cfs [L/s])	0.79
PEAK FLOW RATE (cfs [L/s])	7.98
RETURN PERIOD OF PEAK FLOW (yrs)	25 YR
RIM ELEVATION	18.30



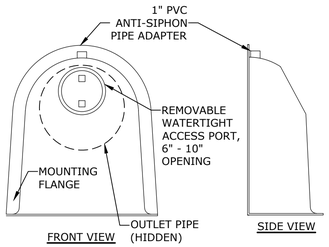
CS-4

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. 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.

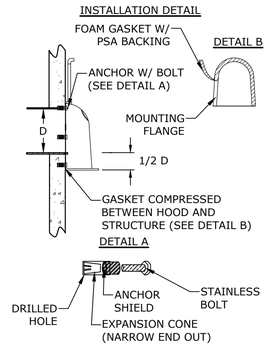
CONTECH CASCADE PRETREATMENT UNIT

NO SCALE



PIPE SIZE (I.D.)	SNOUT MODEL REQ'D
12"	18R

R=CIRCULAR STRUCTURE

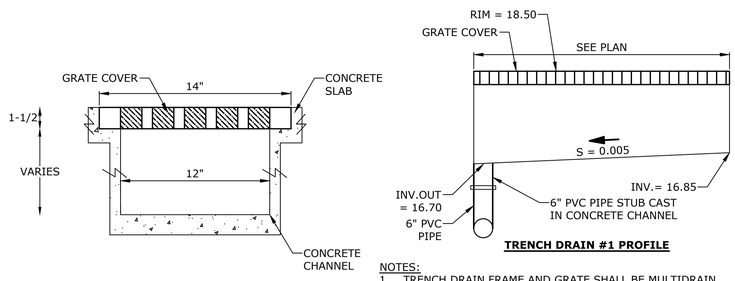


PIPE SIZE (I.D.)	SNOUT MODEL REQ'D
12"	18R
15"	18R
18"	24R
24"	30R
30"	54R

R=CIRCULAR STRUCTURE

SNOUT OIL-WATER-DEBRIS SEPARATOR

NO SCALE



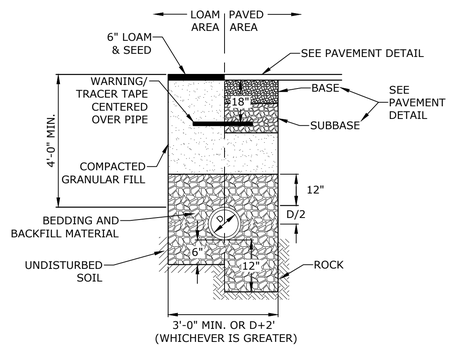
TYPICAL SECTION

TRENCH DRAIN #1 PROFILE

NOTES:
1. TRENCH DRAIN FRAME AND GRATE SHALL BE MULTIDRAIN ECONODRAIN SERIES #12 OR EQUAL.

TRENCH DRAIN DETAIL

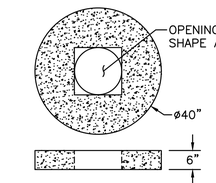
NO SCALE



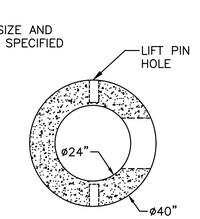
NOTES:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF DOVER.
3. DRAIN LINE SHALL BE INSULATED WHERE THERE IS LESS THAN 6' OF COVER IN PAVED AREAS AND LESS THAN 4' OF COVER IN NON-PAVED AREAS.

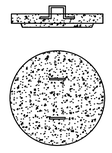
STORM DRAIN TRENCH

NO SCALE



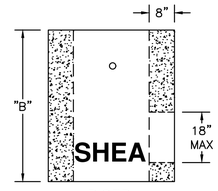
AVAILABLE TOP SLABS
EST WEIGHT: 640 LBS



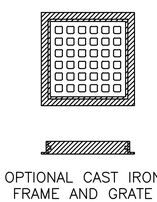


OPTIONAL CONCRETE PLUG

RISER WEIGHTS		
ITEM CODE	DIM "B"	EST. WEIGHT
40X12-24	12"	825#
DIR-24X18	18"	1,235#
DIR-24X24	24"	1,645#
DIR-24X30	30"	2,055#
DIR-24X36	36"	2,470#
DIR-24X42	42"	2,880#
DIR-24X48	48"	3,290#
DIR-24X54	54"	3,700#
DIR-24X60	60"	4,115#

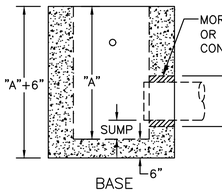


RISER

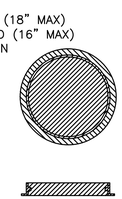


OPTIONAL CAST IRON FRAME AND GRATE

SUMP WEIGHTS		
ITEM CODE	DIM "A"	EST. WEIGHT
18SGI	18"	1,880#
24SGI	24"	2,290#
30SGI	30"	2,700#
36SGI	36"	3,110#
42SGI	42"	3,520#
48SGI	48"	3,930#
54SGI	54"	4,343#



BASE



OPTIONAL CAST IRON FRAME AND COVER

NOTES:
1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR LOCATION.

PROPOSED YARD DRAIN DETAIL

NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – NEIL A. HANSEN No. 15227 – LICENSED PROFESSIONAL ENGINEER – 8/1/25

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 – LICENSED PROFESSIONAL ENGINEER – 8/1/25

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

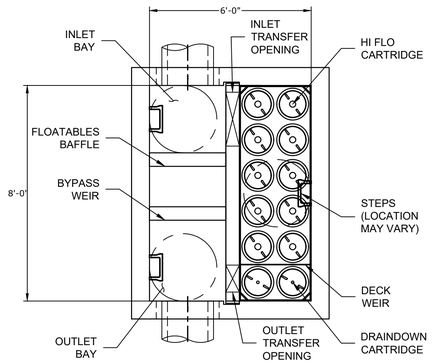
PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DTLS-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

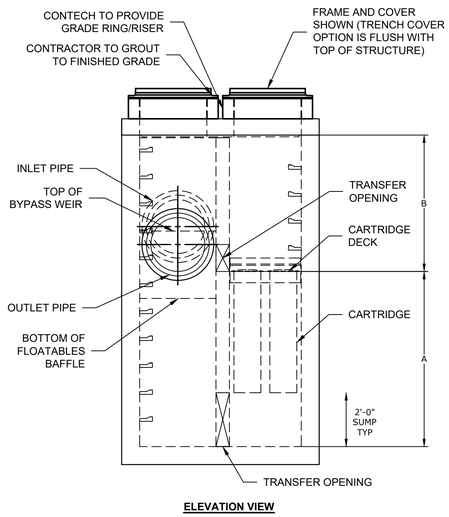
SCALE: AS SHOWN

C-504

Last Save Date: July 25, 2025 12:42 AM By: CKRZCIUK
Plotted: Jul 25, 2025 - 12:43pm Plotted By: CKRZCIUK
T&B File Location: J:\CIC\0960 Cathartes\C-0960-007 Cochecho Waterfront\Drawings Figures\AutoCAD\ Construction Drawings\Sheet\C0960-007-DTLS-CD-P2.dwg Layout Tab: C-504



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



ELEVATION VIEW

JELLYFISH JFPD0806 - DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION				
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	1.96	1.47	0.98	0.54
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	JF-3
MODEL SIZE	JFPD0806
WATER QUALITY FLOW RATE (cfs)	0.79
PEAK FLOW RATE (cfs)	7.98
RETURN PERIOD OF PEAK FLOW (yrs)	25
# OF CARTRIDGES REQUIRED (HF / DD)	4/1
CARTRIDGE SIZE	54"

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 3', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

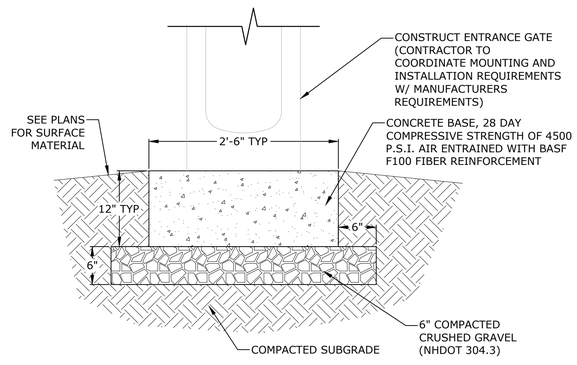
INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740-3318.

Jellyfish Filter

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENT NO. 8,287,726, 8,231,810 & US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

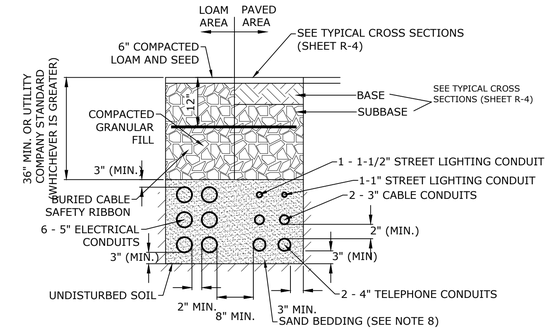
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH JELLYFISH STORMWATER FILTER
NO SCALE



NOTES:
1. ENTRANCE GATE SHALL BE AMANO MCGANN'S AMG-1750 SERIES PARKING BARRIER GATE OR APPROVED EQUAL.
2. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS.

ENTRANCE GATE BASE DETAIL
NO SCALE



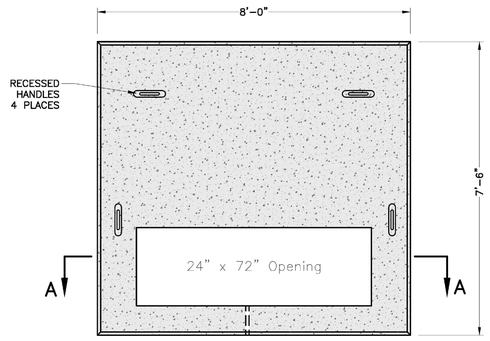
NOTES:
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY 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.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. 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.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE REQUIRED BY EVERSOURCE.

SAND BLANKET	
SIEVE SIZE	% PASSING
1/2"	100
#200	15 MAX

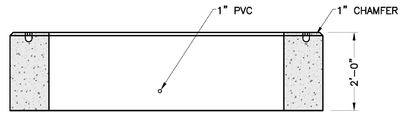
GRANULAR FILL (GRAVEL)	
SIEVE SIZE	% PASSING
3"	95-100
#4	25-70

AASHTO #67 STONE (#4 to 3/4")	
SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
3/8"	20-55
#4	0-10
#8	0-5

TYPICAL ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE



PLAN



SECTION A–A

NOTES:
1. DIMENSIONS SHOWN REPRESENT TYPICAL REQUIREMENTS. MANHOLE LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED WITH EVERSOURCE PRIOR TO CONSTRUCTION
2. CONCRETE MINIMUM STRENGTH - 4,000 PSI @ 28 DAYS
3. STEEL REINFORCEMENT - ASTM A615, GRADE 60
4. PAD MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS
5. TRANSFORMER PAD SHALL BE REVIEWED AND APPROVED BY EVERSOURCE PRIOR TO CONSTRUCTION.

TRANSFORMER PAD DETAIL
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – 8/1/25

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – 8/1/25

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

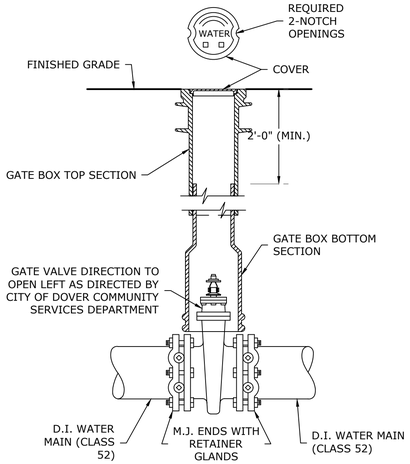
PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DTLS-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

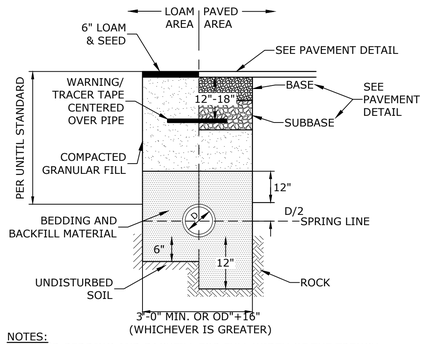
SCALE: AS SHOWN

C-505

Last Save Date: July 25, 2025 12:42 AM By: CKRZCUK
Plot Date: Thursday, July 31, 2025 Plotted By: CKRZCUK
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cochecho Waterfront\Drawings, Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DTLS-CD-P2.dwg Layout Tab: C-505

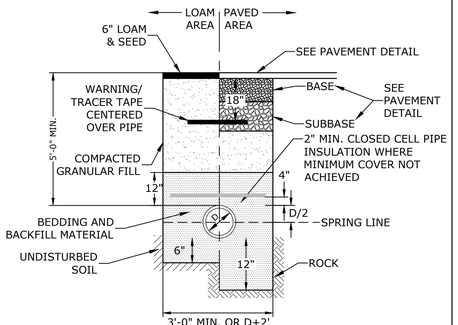


WATER GATE VALVE
NO SCALE



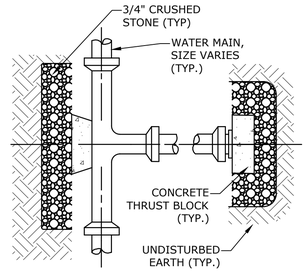
NOTES:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. GAS SHALL BE INSTALLED PER UNITIL STANDARDS. COORDINATE ALL INSTALLATIONS WITH UNITIL AND THE CITY OF DOVER.

GAS TRENCH
NO SCALE

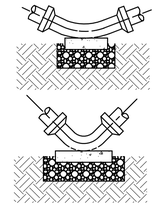


NOTES:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. WATER MAIN SHALL BE INSTALLED PER CITY OF DOVER STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF DOVER.

WATER TRENCH
NO SCALE

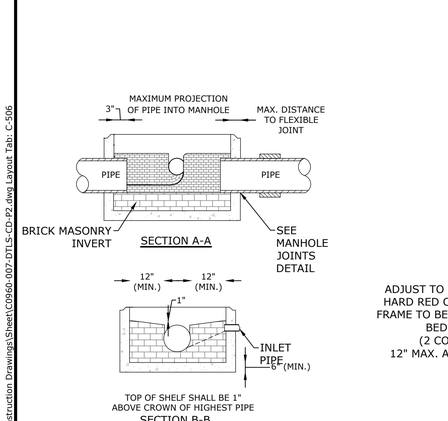


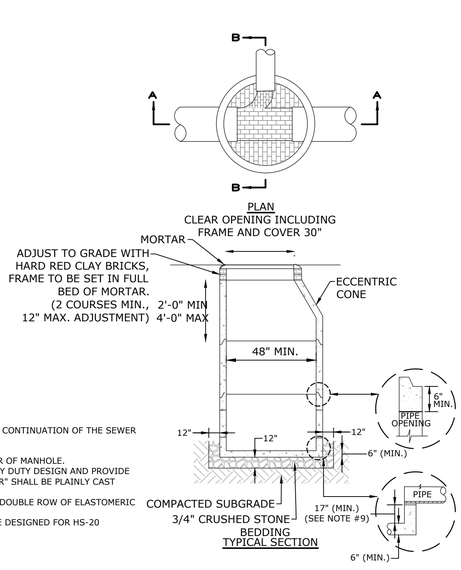
SQUARE FEET OF MINIMUM BEARING AREA						
NOMINAL DIA. (in)	PIPE SIZE					
	4"	6"	8"	10"	12"	16"
PIPE FITTINGS	*	*	5.18	7.96	11.43	20.29
A 90°	*	4.11	7.33	11.26	16.17	28.69
C 45°	*	*	*	6.10	8.75	15.53
D 22-1/2°	*	*	*	*	4.46	7.92
E 11-1/4°	*	*	*	*	*	*
*SEE NOTE 2	SYSTEM PRESSURE: 125 psi SAFETY FACTOR: 1.5 SOIL BEARING CAPACITY: 2,000 psf					



NOTES:
1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED.
3. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
4. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
5. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
6. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA.
7. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
8. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
9. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH CITY OF DOVER WATER DEPARTMENT STANDARDS.

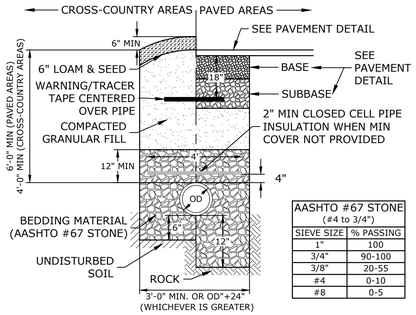
THRUST BLOCKING DETAIL
NO SCALE





NOTES:
1. INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST.
2. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
3. INVERT BRICKS SHALL BE LAID ON EDGE.
4. BITUMINOUS WATERPROOF COATING TO BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
5. FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
6. HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT.
7. BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR HS-20 LOADING, AND CONFORMING TO ASTM C478-06.
8. MANHOLES SHALL PROVIDE PLASTIC STEPS.

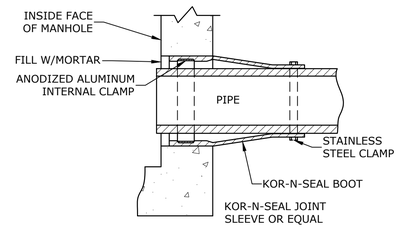
SEWER MANHOLE
NO SCALE



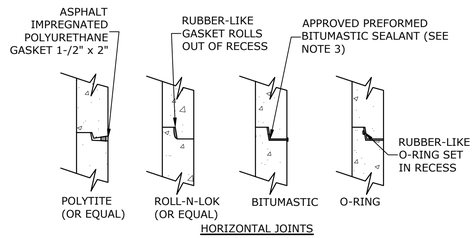
AASHTO #67 STONE (#4 to 3/4")	
SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
3/8"	20-55
#4	0-10
#8	0-5

NOTES:
1. BEDDING MATERIAL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP 12" ABOVE THE PIPE.
2. SANITARY SEWER SHALL BE INSTALLED PER THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF DOVER.

SEWER TRENCH
NO SCALE



PIPE TO MANHOLE JOINTS



HORIZONTAL JOINTS

NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF DOVER COMMUNITY DEVELOPMENT DEPARTMENT STANDARDS AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF DOVER STANDARDS.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

MANHOLE JOINTS
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – 8/1/25

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – 8/1/25

Cochecho Waterfront Development - Building F

Applicant:
Cochecho 1 Owner, LLC

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
F	8/1/2025	City of Dover Permits
E	7/25/2025	TRC Resubmission
D	6/4/2025	Updated Admin Approval Set
C	5/15/2025	Pricing Set
B	4/23/2025	Admin Approval Set
A	3/21/2025	50% Construction Drawings

PROJECT NO:	C-0960-007
DATE:	March 21, 2025
FILE:	C0960-007-DTLS-CD-P2.DWG
DRAWN BY:	CJK
CHECKED:	NAH
APPROVED:	PMC

DETAILS SHEET

SCALE: AS SHOWN

C-506

Last Save Date: July 25, 2025 12:42 AM By: CKRZCULIK
Plot Date: Thursday, July 31, 2025 2:20 PM By: CKRZCULIK
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cochecho Waterfront\Drawings_Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DTLS-CD-P2.dwg Layout Tab: C-506

PLANTING NOTES:

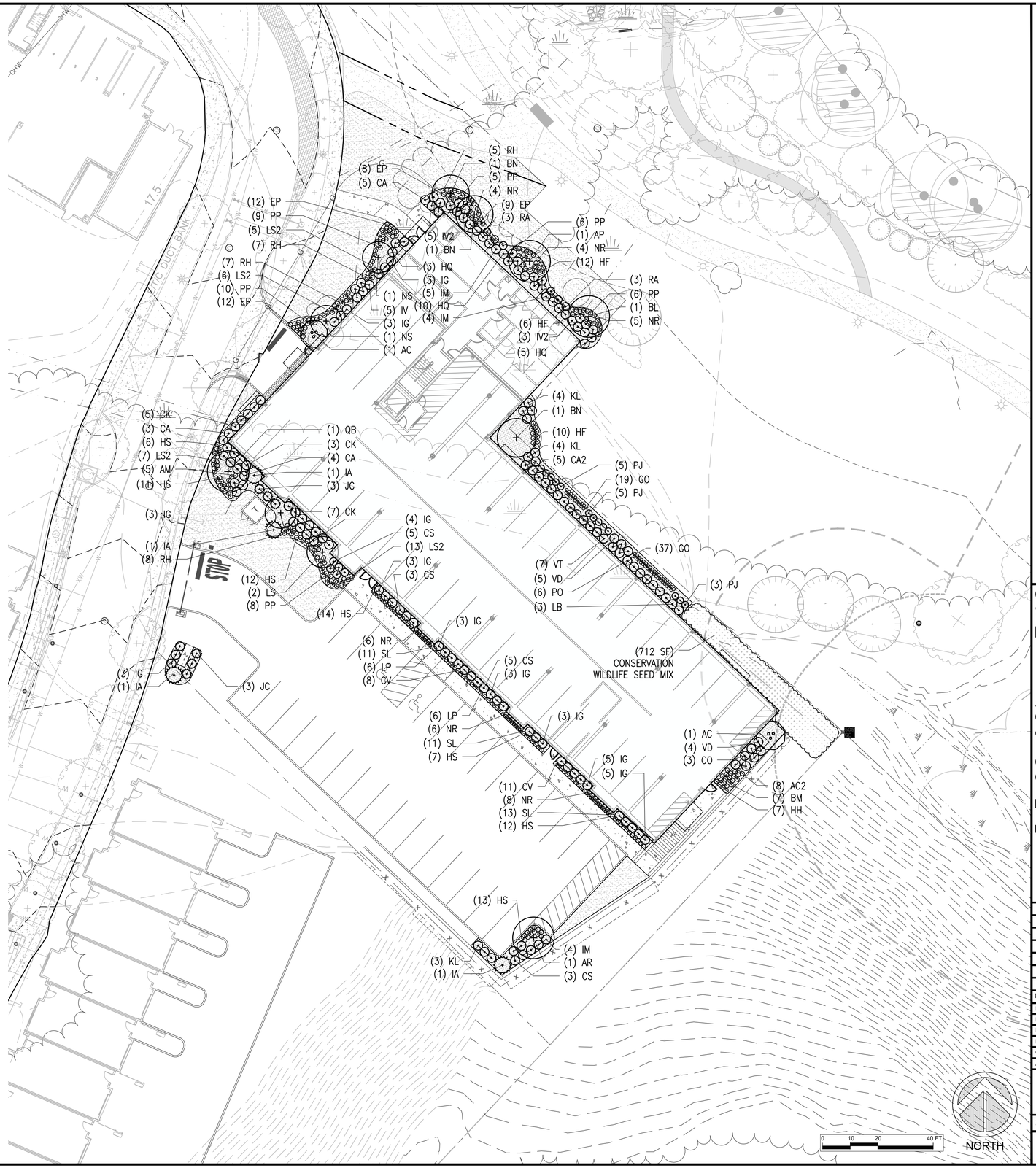
1. IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE PLANT SCHEDULE, THE PLANTING PLAN SHALL GOVERN.
2. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
3. ALL NEW PLANTS TO BE BALLED AND BURLAPPED OR CONTAINER-GROWN, UNLESS OTHERWISE NOTED ON THE PLANT SCHEDULE.
4. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
5. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND SHALL BE NATIVE PLANTS ON THE OLMSTED PLANTING LIST. ALL SUBSTITUTIONS SHALL REQUIRE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
6. ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO THE SITE.
7. CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
8. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
9. TREES SHALL BE SET 3" HIGHER THAN PREVIOUS GRADE. NO TREES SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING.
10. ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. PROTECTION TECHNIQUES SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT. THE PLACEMENT OF PROTECTION DEVICES ADDITIONAL TO THOSE NOTED SHALL, HOWEVER, BE AT THE CONTRACTOR'S DISCRETION.
11. CONTRACTOR SHALL PROVIDE FULL DEPTHS OF LOAM AS NOTED ON DETAILS AND AS SPECIFIED, FOR ALL PLANTING.
12. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (WALLS, FENCES, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONTINUING WORK.

LEGEND

- TREE (1 / LD1.0) (2 / LD1.0)
- SHRUB (3 / LD1.0)
- GRASS/PERENNIAL (4 / LD1.0) (6 / LD1.0)
- MULCH PLANTING BED
- LOAM AND SEED (5 / LD1.0)
- CONSERVATION WILDLIFE SEED MIX (5 / LD1.0)

MASTER PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
		TREES				
AP	1	ACER PENSYLVANICUM	STRIPED MAPLE	8'-10' HT.		FALL DIG HAZARD
AR	1	ACER RUBRUM	RED MAPLE	3" CAL.		FALL DIG HAZARD
AC	2	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	8'-10' HT.		
BL	1	BETULA LENTA	SWEET BIRCH	8'-10' HT.		FALL DIG HAZARD
BN	3	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	12'-14' HT.		FALL DIG HAZARD
LS	2	LIQUIDAMABRA STYRACIFLUA 'SLENDER SILLHOETTE'	SLENDER SILLHOETTE SWEETGUM	3" CAL.		FALL DIG HAZARD
NS	2	NYSSA SYLVATICA 'TUPELO TOWER'	TUPELO TOWER BLACK GUM	3" CAL.		FALL DIG HAZARD
QB	1	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL.		FALL DIG HAZARD
		SHRUBS				
CO	3	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	5 GAL	48" O.C.	
CA	12	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	3 GAL	36" O.C.	
CA2	5	CORNUS AMOMUM	SILKY DOGWOOD	5 GAL	36" O.C.	
CS	16	CORNUS SERICEA	RED TWIG DOGWOOD	5 GAL	36" O.C.	
HQ	18	HYDRANGEA QUERCIFOLIA	OAKLEAF HYDRANGEA	5 GAL	36" O.C.	
IG	38	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	3 GAL	36" O.C.	
IV	5	ILEX VERTICIALLATA	WINTERBERRY	5 GAL	36" O.C.	
IA	4	ILEX X AQUIPERNYI 'MESCHICK'	DRAGON LADY HOLLY	7 GAL	48" O.C.	
IM	13	ILEX X MESERVEA 'BLUE PRINCESS'	BLUE PRINCESS HOLLY	5 GAL	48" O.C.	
IV2	8	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	5 GAL	36" O.C.	
JC	6	JUNIPERUS CHINENSIS 'BLUE POINT'	BLUE POINT JUNIPER	7 GAL	48" O.C.	
KL	11	KALMIA LATIFOLIA 'ELF'	ELF MOUNTAIN LAUREL	5 GAL	36" O.C.	
LB	3	LINDERA BENZOIN	SPICEBUSH	5 GAL	36" O.C.	
PO	6	PHYSOCARPUS OPULIFOLIUS	NINEBARK	5 GAL	36" O.C.	
PJ	12	PIERIS JAPONICA 'CAVATINE'	CAVATINE 'JAPANESE ANDROMEDA	3 GAL	36" O.C.	
RA	6	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	5 GAL	48" O.C.	
VD	9	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	5 GAL	36" O.C.	
VT	7	VIBURNUM TRILOBUM	HIGHBUSH CRANBERRY	5 GAL	36" O.C.	
		GRASSES				
CK	15	CALAMOGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	3 GAL	36" O.C.	
		PERENNIALS				
AM	5	ACHILLEA MILLEFOLIUM 'PAPRIKA'	PAPRKIA YARROW	1 GAL	18" O.C.	
AC2	8	ASTILBE CHINENSIS 'VISIONS'	CHINESE ASTILBE	1 GAL	18" O.C.	
BM	7	BRUNNERA MACROPHYLLA 'JACK FROST'	JACK FROST HEARTLEAF BRUNNERA	1 GAL	18" O.C.	
CV	19	COREOPSIS VERTICILLATA 'MOONBEAM'	MOONBEAM TICKSEED	1 GAL	18" O.C.	
EP	41	ECHINACEA PURPUREUM	PURPLE CONEFLOWER	1 GAL	18" O.C.	
GO	56	GALIUM ODORATUM	SWEET WOODRUFF	1/2 GAL	12" O.C.	
HS	75	HEMEROCALLIS 'STELLA DE ORO'	DAYLILY	1 GAL	18" O.C.	
HF	28	HOSTA 'FIRST FROST'	FIRST FROST PLANTAIN LILLY	2 GAL	24" O.C.	
HH	7	HUECHERA	CORAL BELLS	1 GAL	18" O.C.	
LS2	31	LEUCANTHEMUM X SUPERBUM	SHASTA DAISY	1 GAL	18" O.C.	
LP	12	LUPINUS PERRENIS	SUNDIAL LUPIN	2 GAL	24" O.C.	
NR	33	NEPETA RACEMOSA 'WALKERS LOW'	WALKERS LOW CATMINT	2 GAL	24" O.C.	
PP	44	PHLOX PANICULATA	GARDEN PHLOX	1 GAL	18" O.C.	
RH	27	RUDBECKIA HIRTA	BLACK EYED SUSAN	1 GAL	18" O.C.	
		BULBS				
SL	35	STERNBERGIA LUTEA	WINTER DAFFODIL	BULB	12" O.C.	
		SEED MIX				
	712 SF	CONSERVATION WILDLIFE SEED MIX				



KYLE
R. ZICK
108
LICENSED LANDSCAPE ARCHITECT
STATE OF NEW HAMPSHIRE

COCHECO WATERFRONT DEVELOPMENT BUILDING F

Cochecho Waterfront Development

Applicant:
CPI Management, LLC
c/o Cathartes

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

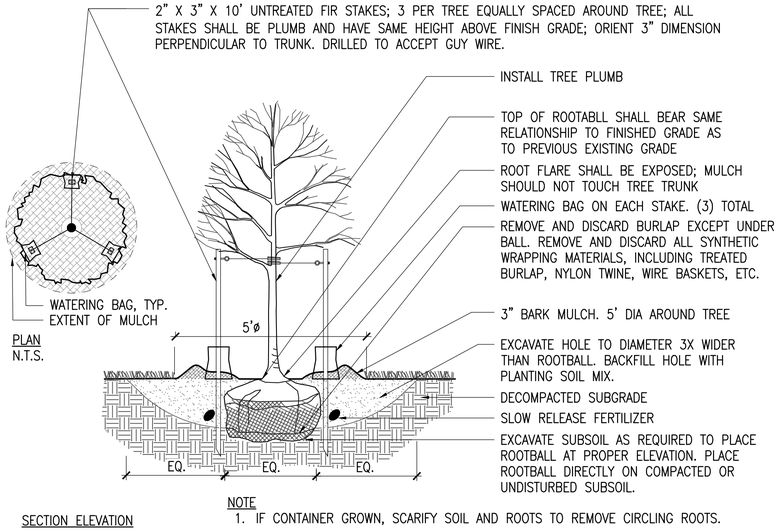
MARK	DATE	DESCRIPTION
C		
B		
A		

PROJECT NO:	
DATE:	July 25, 2025
FILE:	LP1.0 PLANTING PLAN.DWG
DRAWN BY:	JF
CHECKED:	RB
APPROVED:	KZ

PLANTING PLAN

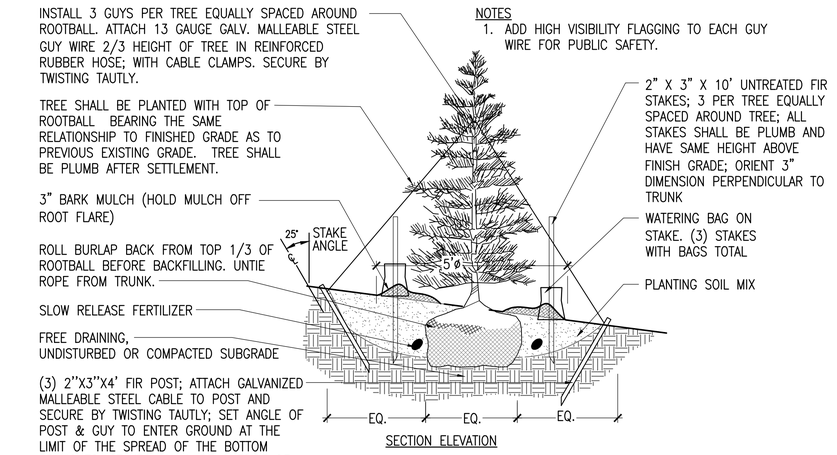
SCALE: AS SHOWN

LP1.0



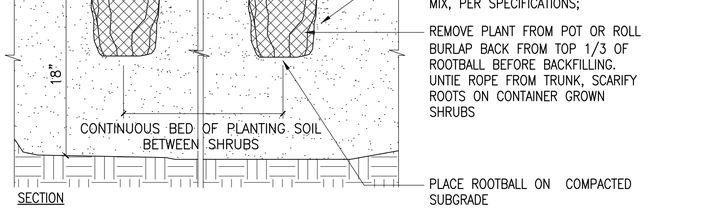
1 DECIDUOUS TREE PLANTING

SCALE: 3/4" = 1'-0"



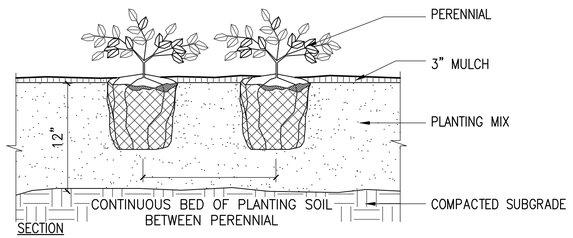
2 EVERGREEN TREE PLANTING

SCALE: 3/4" = 1'-0"



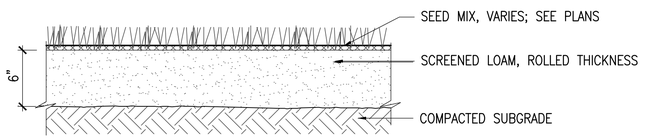
3 SHRUB PLANTING

SCALE: 1 1/2" = 1'-0"



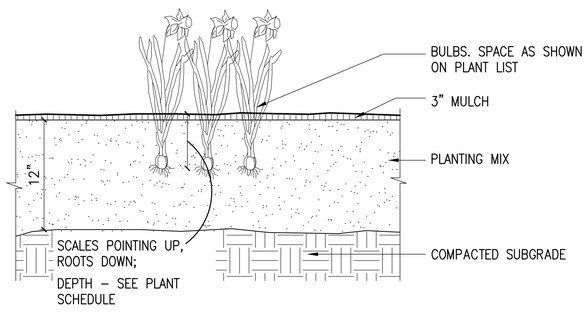
4 PERENNIAL PLANTING

SCALE: 1 1/2" = 1'-0"



5 LOAM AND SEED

SCALE: 1 1/2" = 1'-0"



6 BULB PLANTING

SCALE: 1 1/2" = 1'-0"

KYLE
R. ZICK
108
LICENSED LANDSCAPE ARCHITECT
STATE OF NEW HAMPSHIRE

COCHECO WATERFRONT DEVELOPMENT BUILDING F

Cochecho Waterfront Development

Applicant:
CPI Management, LLC
c/o Cathartes

Owner:
City of Dover

Dover File #: P21-69

Dover, New Hampshire

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
C		
B		
A		

PROJECT NO:	
DATE:	July 25, 2025
FILE:	LD1.0 DETAILS.DWG
DRAWN BY:	JF
CHECKED:	RB
APPROVED:	KZ

PLANTING DETAILS

SCALE: AS SHOWN

LD1.0

NOT FOR CONSTRUCTION

REVISIONS:

CATHARTES

74 RIVER STREET
DOVER, NEW HAMPSHIRE

LICENSED ARCHITECT
CARLA J GOODKNIGHT
No. 1998
STATE OF NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN STREET
SUITE 101
PORTSMOUTH, NH 03801
(603) 431-2808
www.cjarchitects.net

DATE:	6/3/2025
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/16" = 1'-0"
JOB NUMBER:	22406

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A1

WEST ELEVATION - FACING PARKING

NORTH ELEVATION - FACING STREET

EAST ELEVATION - FACING RIVER

SOUTH ELEVATION

NOT FOR CONSTRUCTION

REVISIONS:

CATHARTES
74 RIVER STREET
DOVER, NEW HAMPSHIRE

LICENSED ARCHITECT
CARLA J GOODKNIGHT
No. 1998
THE STATE OF NEW HAMPSHIRE

CJ ARCHITECTS
233 VAUGHAN STREET
SUITE 101
PORTSMOUTH, NH 03801
(603) 431-2808
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DATE:	6/3/2025
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/16" = 1'-0"
JOB NUMBER:	22406

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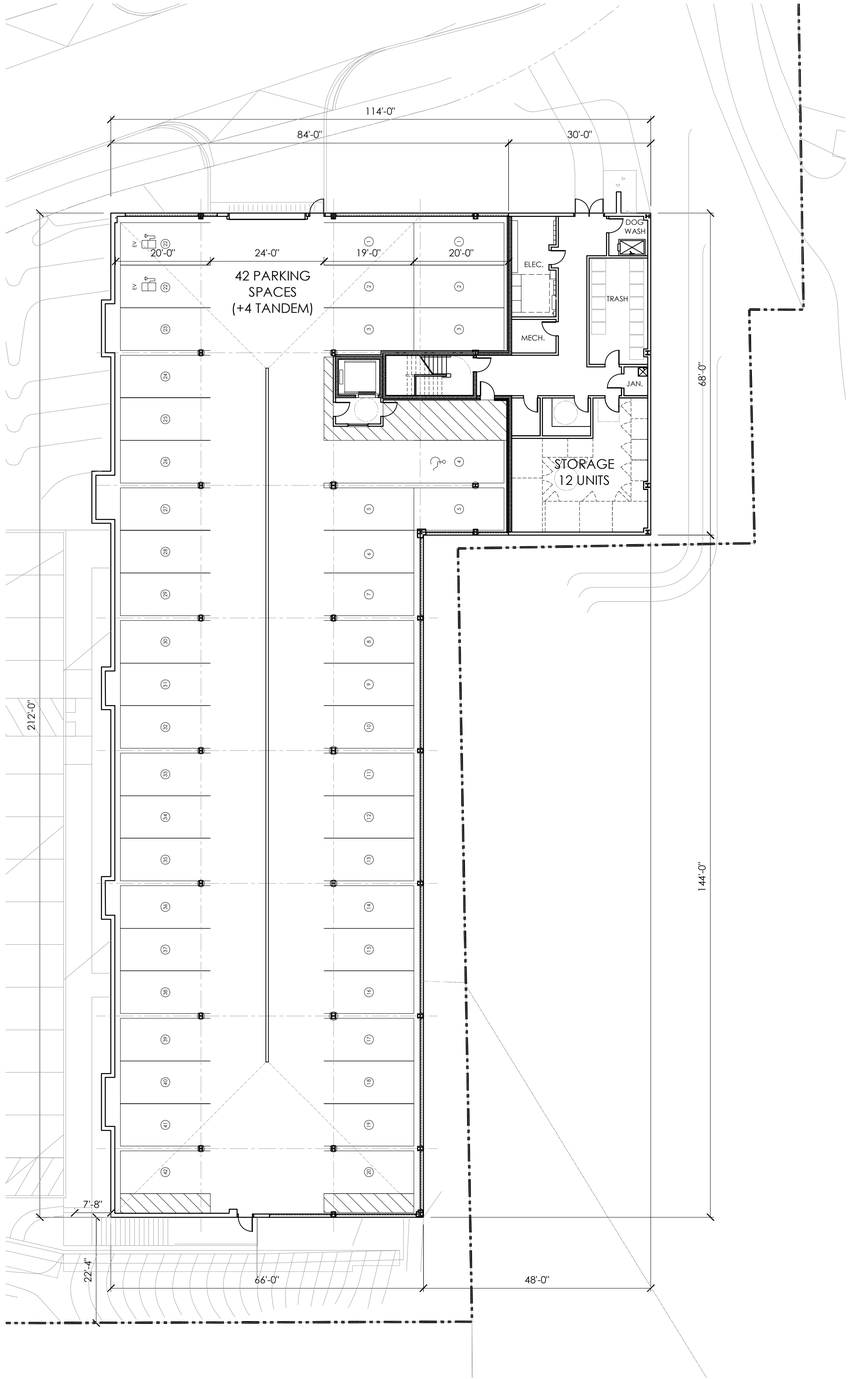
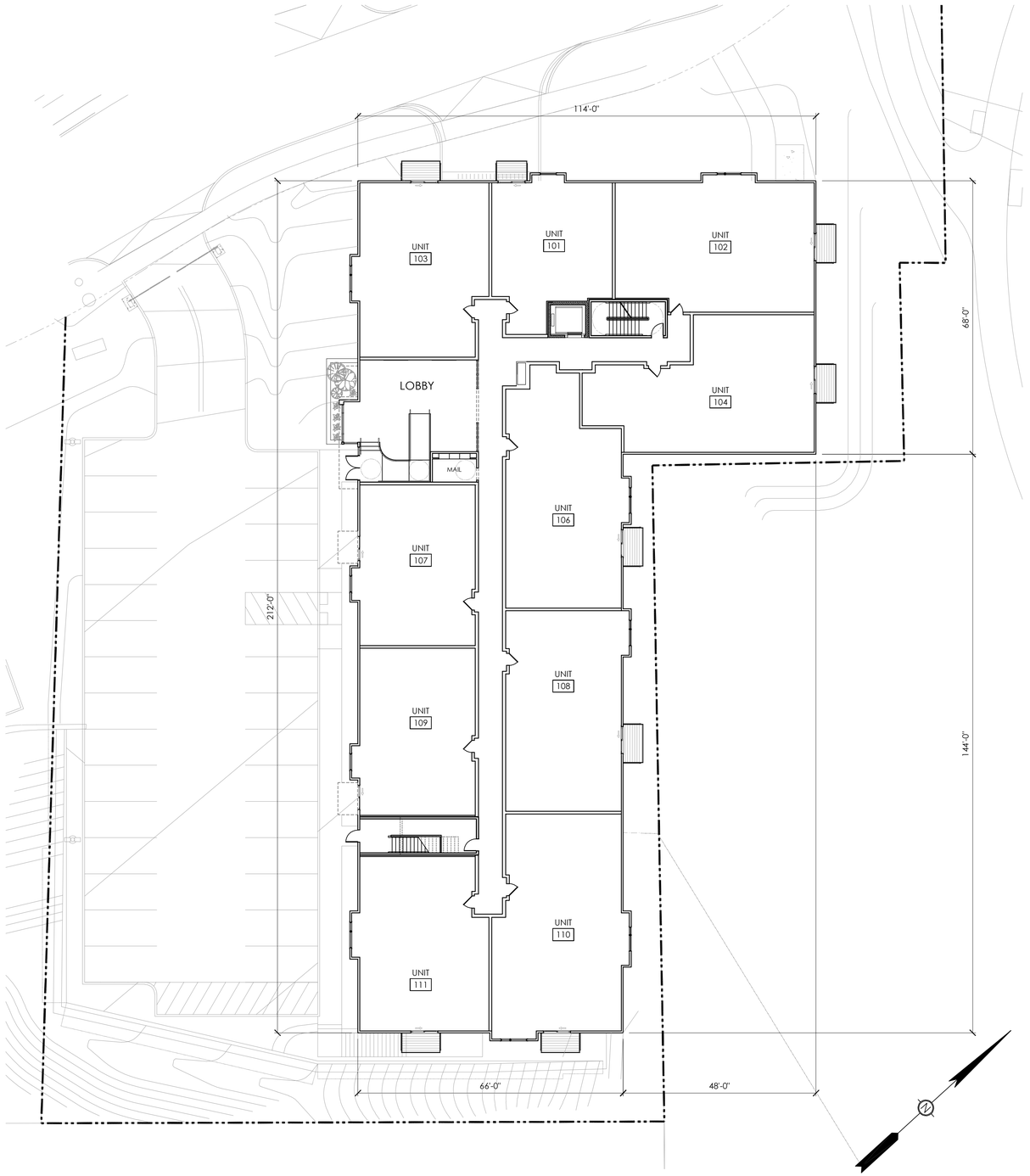
A2



1 LOWER LEVEL - PARKING LEVEL

1/16" = 1'-0"



2 FIRST FLOOR - ENTRY LEVEL

1/16" = 1'-0"

NOT FOR CONSTRUCTION

REVISIONS:
REV 1: 7/22/25

CATHARTES

74 RIVER STREET

DOVER, NEW HAMPSHIRE

LICENSED ARCHITECT
CARLA J GOODKNIGHT
No. 1868
THE STATE OF NEW HAMPSHIRE

CJ ARCHITECTS

233 VAUGHAN STREET
SUITE 101
PORTSMOUTH, NH 03801

(603) 431-2808
www.cjarchitects.net

FLOOR PLANS

DATE:	07/21/2025
DRAWN BY:	RLD
APPROVED BY:	CJG
SCALE:	1/16" = 1'-0"
JOB NUMBER:	22406

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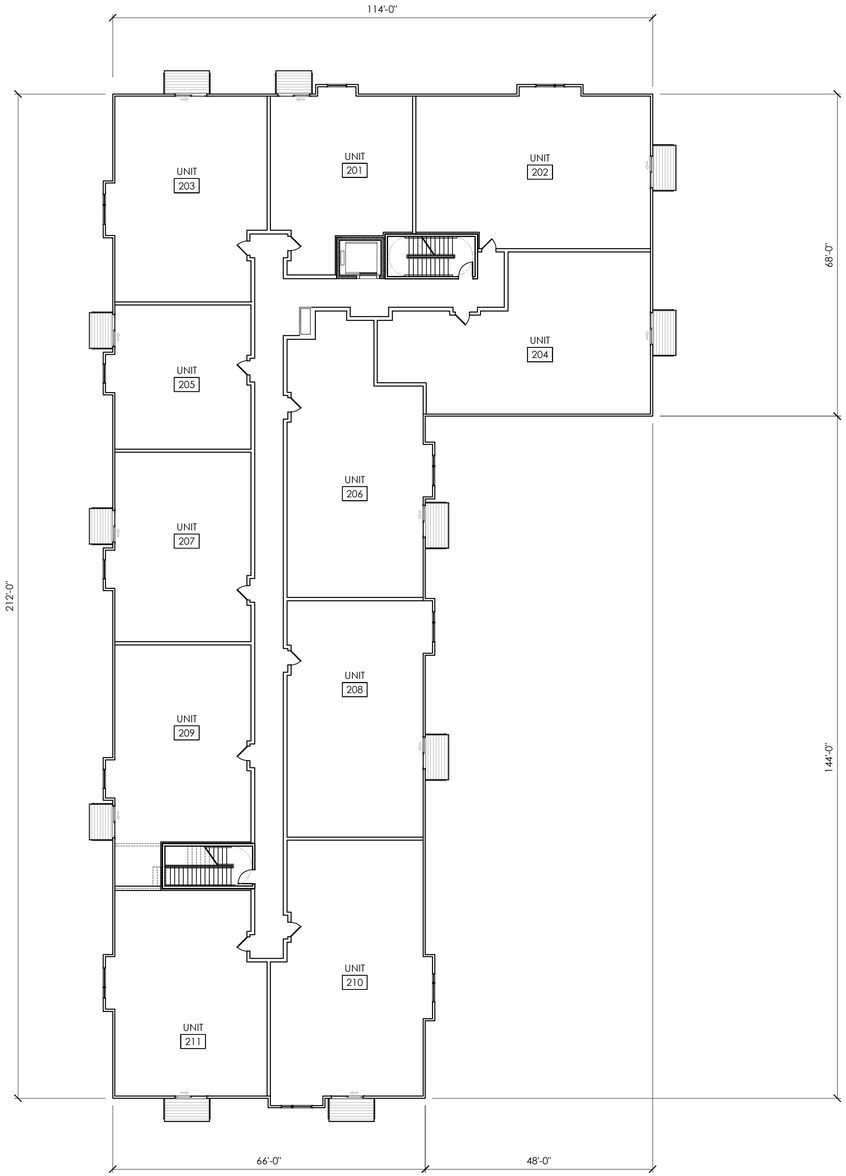
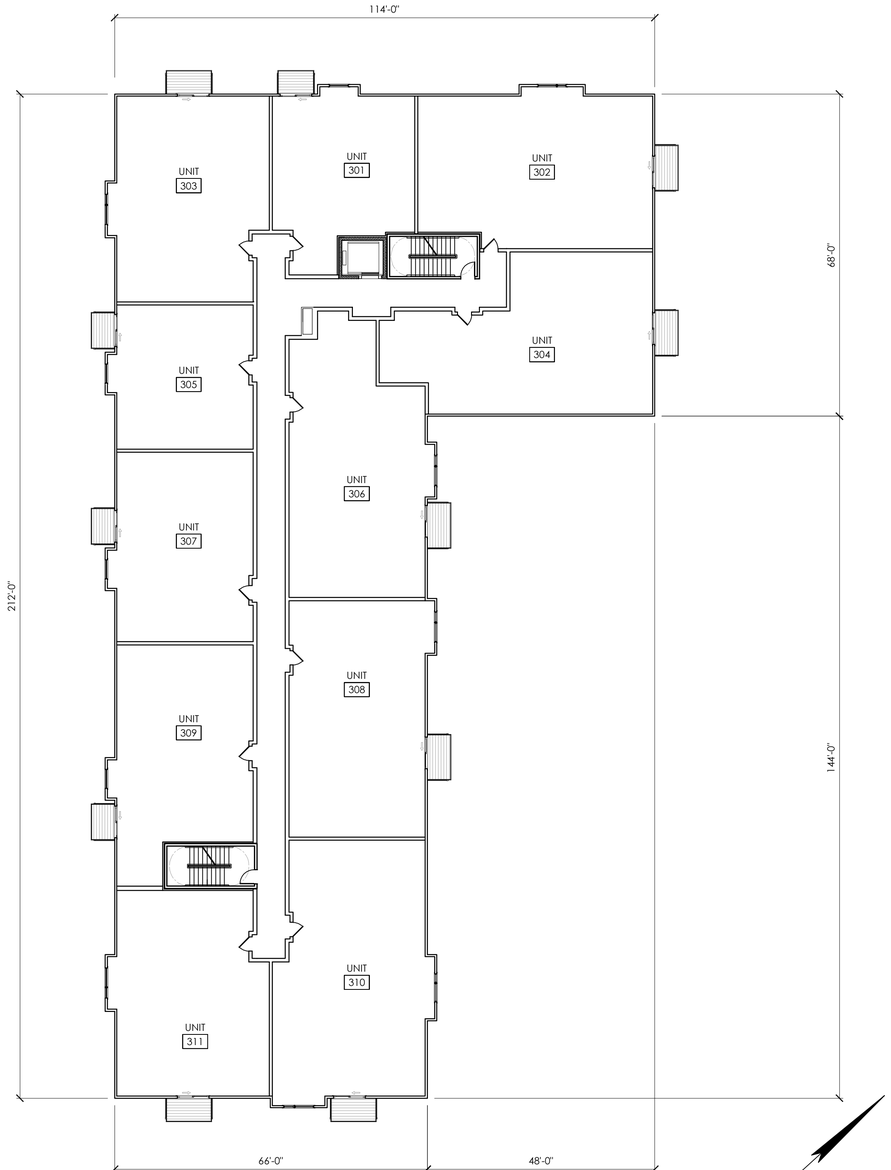
A3



1 SECOND FLOOR PLAN

1/16" = 1'-0"



2 THIRD FLOOR PLAN

1/16" = 1'-0"

NOT FOR CONSTRUCTION

REVISIONS:
REV 1: 7/21/25

CATHARTES

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SCALE:	1/16" = 1'-0"
JOB NUMBER:	22406

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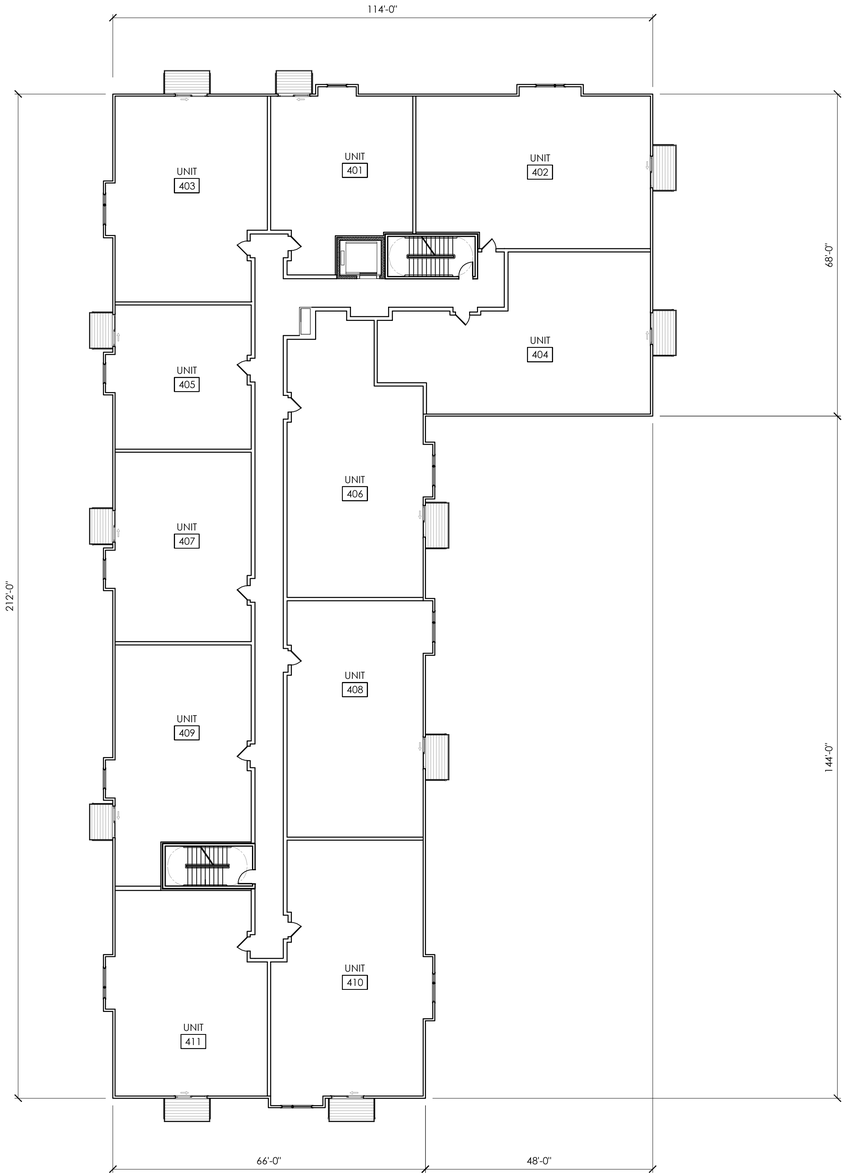
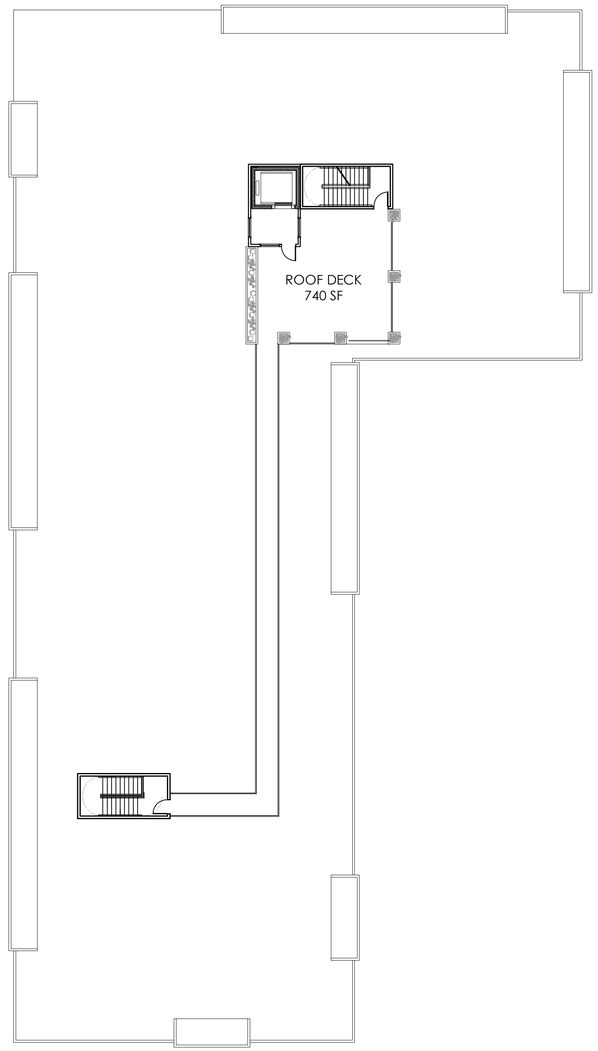
A4



1 FOURTH FLOOR
1/16" = 1'-0"



2 ROOF PLAN
1/16" = 1'-0"

NOT FOR CONSTRUCTION

REVISIONS:
REV 1: 7/21/25

CATHARTES
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A5

Docusign Envelope ID: F33107FD-9C3C-4DC7-BCCE-F1CCA8C3A34C

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Cochecho 1 Owner, LLC, Rob Simmons Telephone # 617-840-4778

Address of Applicant: 11 Portwalk Place, Portsmouth, NH 30801

E-Mail Address: robs@cathartes.com

Name of Property Owner (if different from applicant): City of Dover Telephone #

Address of Property Owner: 288 Central Ave, Dover, NH 03820

PROPERTY INFORMATION

Assessor's Map # 22 Lot(s) # 1-7

Address of Property: 40 River Street

Zoning District(s) CWD Overlay District(s)

Existing Use of Property: Vacant

CONDITIONAL USE PERMIT INFORMATION

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

☐ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☐ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☒ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

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

See enclosed Cover Letter

Docusign Envelope ID: F33107FD-9C3C-4DC7-BCCE-F1CCA8C3A34C

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES AoT, NHDES Sewer Connection, NPDES Construction General Permit, City of Dover Site Plan Review Permit, City of Dover CUP for Building Height and Unit Density

Name of Professional That Prepared Plans: Neil A Hansen, PE | Tighe & Bond

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

Professional License #: 15227 E-mail address: NAHansen@tighebond.com

SIGNATURES

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

Signature of Property Owner: _____ Date: _____

Signature of Applicant (if different from owner): DocuSigned by: Rob Simmons F303420CFE6043A... Date: 8/1/2025

Signature of Agent: _____ Date: 8/1/2025

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: _____

Docusign Envelope ID: F33107FD-9C3C-4DC7-BCCE-F1CCA8C3A34C

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
		City of Dover	288 Central Ave, Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
Rob Simmons	Cochecho 1 Owner, LLC	11 Portwalk Place, Portsmouth, NH 30801

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Neil Hansen	Tighe & Bond	177 Corporate Drive, Portsmouth, NH 03801

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

Docusign Envelope ID: F33107FD-9C3C-4DC7-BCCE-F1CCA8C3A34C

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 24, 2023)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☒ CONDITIONAL USE PERMIT Application fee $200.00 x # 1 per Application = $ 200.00
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____
- ☐ **TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # _____ sq. ft. = $_____

SUBTOTAL PLAN REVIEW FEE = $_____

AND

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 review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # 3 of x $10.00= $ 30.00
- ☐ Certified letters fee: # of abutters _____ X $10.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

C. Foster's newspaper public notice fee $120.00 x # _____ applications = $_____

SUBTOTAL = $_____

TOTAL INVOICE AMOUNT = $_____

PLAN REVIEW FEE COLLECTED/PAID = $ _____

BALANCE DUE = $ _____

The amount due must be paid 28 hours prior to the Planning Board Meeting, to be heard.

Cochecho Waterfront Development Project
Wetland and Jurisdictional Resource Area Assessment

TO: Mr. Rob Simmons, Director of Development, Cochecho I Owner, LLC

FROM: Jeremy Degler, CWS, Tighe Bond

Lucas Acaba, Tighe & Bond

DATE: August 1, 2025

Tighe & Bond has been contracted by Cochecho I Owner, LLC to assist with documentation and permitting related to Building F of the Cochecho Waterfront Development Project. This memorandum describes Tighe & Bond's delineation and characterization of the existing wetland resource area in the vicinity of the project as well as a functional assessment to support the submittal of a Conditional Use Permit Application to the City of Dover.

1 Project Background

The proposed development is a multi-family, mixed-use development located on a parcel of land along River Street and Payne Street. The proposed project is part of the City of Dover's larger Cochecho Waterfront Development Project. This project is being developed as part of a land development agreement between the applicant and City for the Cochecho Waterfront Development.

The private development portion of the project includes the construction of three (3) mixed use buildings, two (2) multi-family buildings, and three (3) clusters of townhouses. Due to the project's size, it is being constructed in multiple phases. Phase 1 consists of the construction of Buildings C, Building D, and the three (3) clusters of townhouses as well as their associated site improvements such as paving, stormwater management, utilities, lighting, and landscaping. Phase 1 of construction began in the Spring of 2024 and is actively under construction running concurrently with the City's roadway and waterfront park improvements.

Phase 2 of the private development project will consists of the construction of Building F on the 1.02-acre parcel of land identified as Map 22 Lot 1-7 on the City of Dover's tax maps. Building F is a 5-story multifamily building consisting of 43 residential units with ground-floor parking garage and amenity space. This phase of construction includes the associated site improvements such as paving, stormwater management, utilities, lighting, and landscaping.

2 Wetland Resource Area Investigation

2.1 Methodology of Resource Area Investigation

On July 10, 2025, a Tighe & Bond Wetland Scientist visited the project site to verify and update the wetland delineation previously completed by GZA GeoEnvironmental, Inc. on March 2, 2016. Jurisdictional wetland resource areas in the vicinity of the proposed work were verified and re-delineated in accordance with the United States Army Corps of Engineers' (USACE) *Wetlands Delineation Manual and Regional Supplement* (2012), Field Indicators for Identifying Hydric Soils in New England (Version 4, 2017), and the New Hampshire Code of

Administrative Rules: Delineation and Classification of Jurisdictional Areas (Chapter Env-Wt 400). The evaluation also included a review of publicly available resources such as LiDAR elevation data and historic aerial imagery.

Wetland resources were mapped using a hand-held Eos Aero GPS unit with sub-meter accuracy. A Site Map showing the wetland delineation boundary locations is provided as Figure 1 of Attachment 1. Representative photographs of the site are provided in Attachment 2.

2.2 Summary of Wetland Resource Areas

A freshwater wetland, defined by Flag Series 1A/1B, was located within the vicinity of the proposed location of Building F. Wetlands are defined at RSA 482-A:2(X) and the City of Dover Zoning Ordinance, §170-28(C)(1) as "…an area that is inundated or saturated by surface water or groundwater 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."

Wetland 1A/1B is classified as palustrine, emergent, persistent, and seasonally flooded/saturated (PEM1E)[1]. The wetland has a direct connection to the Cocheco River (beyond the extent of this delineation) to the north through a constricted outlet and is bounded by the Cochecho Waterfront Development site to the northwest and vegetated uplands to the south and northeast. Downgradient areas of Wetland 1A/1B are located within the 100-year floodplain of the Cocheco River and identified as Zone AE on the FEMA Flood Insurance Rate Map (FIRM) Community-Panel No. 33017C0330E (effective date September 30, 2015) provided in Attachment 1. However, the area of Wetland 1A/1B closest to the proposed Building F is located outside of the FEMA-mapped floodplain. A narrow depression in the southeast corner of wetland 1A/1B is within approximately 30 feet of the proposed location of Building F. Vegetation observed within this depression included jewelweed (*Impatiens capensis*; FACW) and dark-green bulrush (*Scirpus atrovirens*; OBL). The vegetative community then shifts to predominately common reed (*Phragmites australis*; FACW) in the northeastern portion of the wetland. Soil observed within the wetland consisted of mucky loam (10YR 4/1) that was saturated to the surface and exuded a hydrogen sulfide odor.

2.2.1 Wetland Functions and Values Assessment

Functions and values for this area were assessed based on field observations, site photographs, and available GIS data. Assessment criteria were adapted from RSA 482-A, the US Army Corps of Engineers, New England District, Highway Methodology Workbook Supplement - Wetland Functions and Values: A Descriptive Approach (NAEEP-360-1-30a; September 1999), and the Method for Inventorying and Evaluating Freshwater Wetlands in New Hampshire (the NH Method; University of New Hampshire, December 2015). Five principal functions were identified for Wetland 1A/1B including: Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, and Wildlife Habitat. Production Export was found to be suitable but not a principal function. For brevity, similar functions and values were combined (Sediment/Toxicant Retention and

[1] Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Online. http://www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm (Version 04DEC1998).

Nutrient Removal) and discussed in the following sections. A Wetland Function-Value Evaluation Form is provided in Attachment 3.

2.2.1.1 Groundwater Recharge

Groundwater Recharge/Discharge refers to the potential for an area to serve as a recharge and/or discharge area for groundwater. It refers to the fundamental interaction with groundwater and aquifers, regardless of their size or importance. Wetland 1A/1B consists of a local topographic depression that is directly connected to the Cocheco River. It provides storage capacity and recharge potential during periods of high water levels. The degree of saturation or inundation of these riparian wetlands is inherently influenced by the adjacent perennial watercourse and contact with the groundwater table.

2.2.1.2 Floodflow Alteration

Floodflow Alteration refers to the ability of a wetland to reduce flood damage via water retention and slow release. The position of Wetland 1A/1B as a local depression with a direct connection to the Cocheco River allows the area to retain increased runoff from the surrounding area as well as bank overtopping flow from the river during high flow storm events. As noted in Section 2.2, Wetland 1A/1B is located within the Zone AE 100-year floodplain of the Cocheco River per the FEMA Flood Insurance Rate Map (FIRM) Community-Panel No. 33017C0330E (effective date September 30, 2015) provided in Attachment 1. The portion of Wetland 1A/1B closest to the river is densely vegetated with emergent plants such as common reed (*P. australis*; FACW) which provides an effective environment to attenuate flow velocities prior to discharging to the Cocheco River.

2.2.1.3 Sediment/Toxicant Retention and Nutrient Removal

Sediment/Toxicant Retention and Nutrient Removal refers to the ability of the wetlands to act as a trap for sediment and nutrients in runoff from surrounding uplands or contiguous wetlands, and the ability to process these nutrients into other forms or trophic levels; thereby preventing degradation of water quality. Minimal channelized flow is present within Wetland 1A/1B and hydrology primarily consists of diffuse pathways through dense, emergent vegetation. This reduces flow velocity, allowing for sediment and nutrient retention.

2.2.1.4 Wildlife Habitat

Wildlife Habitat functions are based on the effectiveness of the wetlands to produce food and provide refuge, migratory passage, foraging, reproductive and nesting areas to support wildlife. Wetland 1A/1B is not an intact, natural community as signs of disturbance and a prevalence of nonnative vegetation were observed. However, the high density of emergent vegetation and areas of standing water provide adequate avian and amphibian habitat. The position of Wetland 1A/1B within forested uplands and adjacent to the Cocheco River creates beneficial habitat connectivity to documented populations of endangered plant species and exemplary natural communities (NHB 23-1536). Wetland 1A/1B itself does not provide suitable habitat for these endangered plant species or exemplary natural communities. Approximately a half mile upstream of the project site, the Cocheco River has been recognized as a Designated River with high quality habitat for wildlife including state-endangered species such as the upland sandpiper (*Bartramia longicauda*) and Blanding's turtle (*Emydoidea blandingii*).

Indicators of vernal pool habitat including wood frog (*Lithobates sylvaicus*) egg masses and tadpoles were observed during the initial wetland assessment conducted by GZA GeoEnvironmental, Inc. on March 2, 2016. The current wetland assessment was conducted

outside of the amphibian breeding season and no indicators of vernal pool habitat were observed.

2.2.1.5 Ecological Integrity

Ecological Integrity relates to the extent to which a wetland has retained its native biotic and abiotic features and how these may have been degraded by human influences. The Ecological Integrity of Wetland 1A/1B has been significantly impacted by human influences. Evidence of previous disturbance and prior-permitted fill was observed in the northwest portion of the wetland and the overall plant community is dominated by common reed (*P. australis*; FACW), a nonnative invasive species in New Hampshire. Due to the dominance of common reed (*P. australis*; FACW), the wetland does not support a high diversity of native vegetation. The buffer zone to the northeast has been eliminated and has the potential to further degrade Wetland 1A/1B through the direct discharge of untreated stormwater runoff. The wetland maintains a minimal degree of ecological function as described in the preceding sections of this assessment, but it does not represent a highly intact or unstressed system.

3 Summary

Wetland 1A/1B and its associated buffer zone is impaired and degraded. However, due to its position within the surrounding landscape, the wetland provides beneficial ecological functions including wildlife habitat connectivity, flood and groundwater retention, and the reduction of sediment, nutrient, and toxicant discharge to the Cocheco River. The existing condition of the impacted buffer zone has the potential to further degrade Wetland 1A/1B through the untreated discharge of stormwater sheet flow and lack of vegetated buffer.

The proposed Building F development includes measures to protect the wetland during construction and will result in an overall improvement to the buffer zone by restoring a vegetive buffer and eliminating the discharge of untreated stormwater. Impacts to Wetland 1A/1B have been avoided and minimized to the maximum extent practicable while maintaining the City of Dover's goals for the Cochecho Waterfront Development Project.

J:\C\C0960 Cathartes\C-0960-007 Cocheco Waterfront\Report_Evaluation\Applications\City of Dover\20250714 Conditional Use Permit\Wetland Memo\Draft\Cocheco CUP Wetland Memo.docx

Tighe&Bond

ATTACHMENT 1

FIGURE 1
WETLAND DELINEATION
July 2025

Cocheco Waterfront Development - Building F
River Street
Dover, New Hampshire

- Wetland Flag
- Wetland Boundary
- Limit of Work
- Doucet Survey Property Boundary
- 50-Foot Buffer Zone
- Wetland Boundary
- Approximate Parcel Boundary

N

1:1,200
0 50 100
Feet

Tighe&Bond

Based on latest Nearmap Imagery.
Parcel boundaries were provided by NH GRANIT and are approximate.

National Flood Hazard Layer FIRMette

FEMA

70°52'17"W 43°11'59"N

70°51'40"W 43°11'33"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/23/2025 at 7:38 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Tighe&Bond

ATTACHMENT 2

Photographic Log

Client: City of Dover, NH
Job Number: C0960-007
Site: Cocheco Waterfront—Building F Project

Photograph No.: 1	**Date:** 07/10/2025	**Direction Taken:** West
Description: View of Wetland 1A/1B, displaying a sparsely vegetated concave depression.		

Photograph No.: 2	**Date:** 07/10/2025	**Direction Taken:** East
Description: Alternate view of the sparsely vegetated depression, in the southernmost portion of Wetland 1A/1B.		

Photographic Log

Client: City of Dover, NH
Job Number: C0960-007
Site: Cocheco Waterfront—Building F Project

Photograph No.: 3	**Date:** 07/10/2025	**Direction Taken:** North
Description: View of disturbance and previously-permitted fill within Wetland 1A/1B.		

Photograph No.: 4	**Date:** 07/10/2025	**Direction Taken:** Northeast
Description: View of the disturbed buffer zone adjacent to Wetland 1A/1B (visible in the background).		

Photographic Log

Client: City of Dover, NH
Job Number: C0960-007
Site: Cocheco Waterfront—Building F Project

Photograph No.: 5	**Date:** 07/10/2025	**Direction Taken:** North
Description: View of the northeast portion of Wetland 1A/1B dominated by common reed (*Phragmites australis*) and current erosion control barrier installed to avoid and minimize disturbance to the wetland.		

Photograph No.: 6	**Date:** 07/10/2025	**Direction Taken:** South
Description: View of the vegetated portion of wetland 1A/1B, dominated by jewelweed (*Impatiens capensis* and dark-green bulrush (*Scirpus atrovirens)*.		

Tighe&Bond

ATTACHMENT 3

Wetland Function-Value Evaluation Form

Total area of wetland ~0.8 ac Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Forested uplands and residential development Distance to nearest roadway or other development 30 feet

Dominant wetland systems present PEM1E Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Cocheco River floodplain

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland 1A/1B

Latitude 43.196211 Longitude -70.866095

Prepared by: LAA Date 07/18/2025

Wetland Impact:
Type None Area 0

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	7, 8, 9, 13, 15	X	Densely vegetated depression directly connected to Cocheco River provides potential for groundwater recharge and discharge.
Floodflow Alteration	Y	4, 5, 6, 7, 8, 9, 10, 11, 13, 18	X	Densely vegetated depression within Cocheco River floodplain provides potential for floodflow retention.
Fish and Shellfish Habitat	N	4, 15		Minimal standing water, no observed signs of fish or shellfish activity or habitat.
Sediment/Toxicant Retention	Y	3, 4, 5, 7, 10, 12, 13, 16	X	Densely vegetated depression directly connected to Cocheco River provides potential for flow retention and sediment/toxicoant removal.
Nutrient Removal	Y	3, 5, 7, 8, 9, 10, 13, 14	X	Densely vegetated depression directly connected to Cocheco River provides potential for flow retention and nutrient removal
Production Export	Y	1, 7, 10		High density of emergent plants, minimal diversity and primarily nonnative species present.
Sediment/Shoreline Stabilization	N	3, 12, 13, 15		Wetland has constricted outlet to Cocheco River and does not stabilize a significant length of streambank.
Wildlife Habitat	Y	3, 5, 6, 8, 11, 13, 18, 19, 20, 21	X	Wetland primarily comprised of nonnative vegetation, potential for avian and amphibian habitat, direct connection to Cocheco River, previously documented vernal pool indicators.
Recreation	N	5, 9, 12		Relatively common wetland community type, minimal standing water, no existing access.
Educational/Scientific Value	N	5, 13		Disturbed wetland primarily comprised of nonnative vegetation.
Uniqueness/Heritage	N	2, 10, 13, 19, 22		Relatively common wetland community type primarily comprised of nonnative vegetation.
Visual Quality/Aesthetics	N	2, 8, 11		Disturbed wetland primarily comprised of nonnative vegetation.
ES Endangered Species Habitat	N			In the vicinity of documented endangered plant species and exemplary natural communities (NHB 23-1536), not suitable habitat within wetland.
Other				

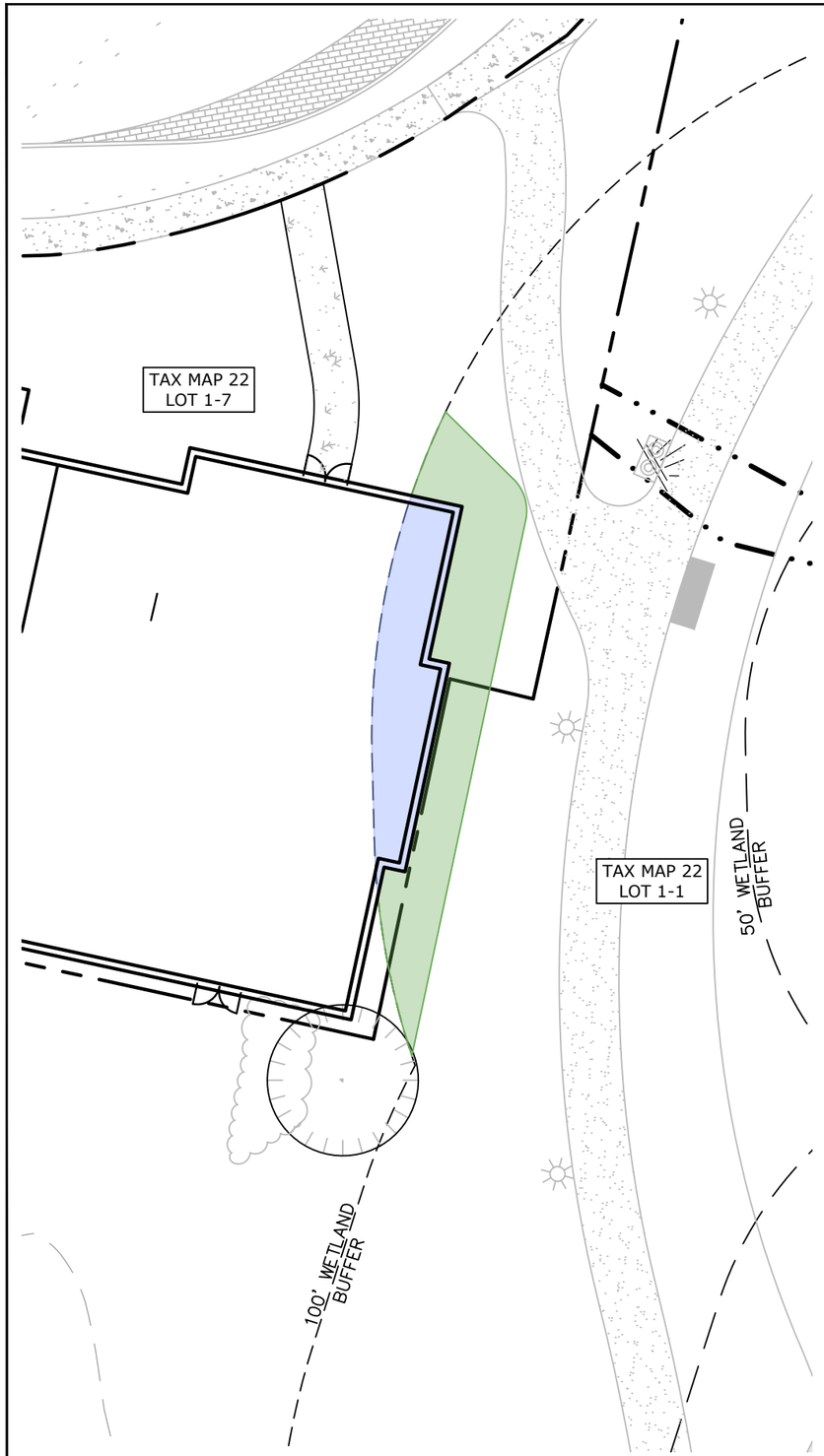
Notes:

* Refer to backup list of numbered considerations.

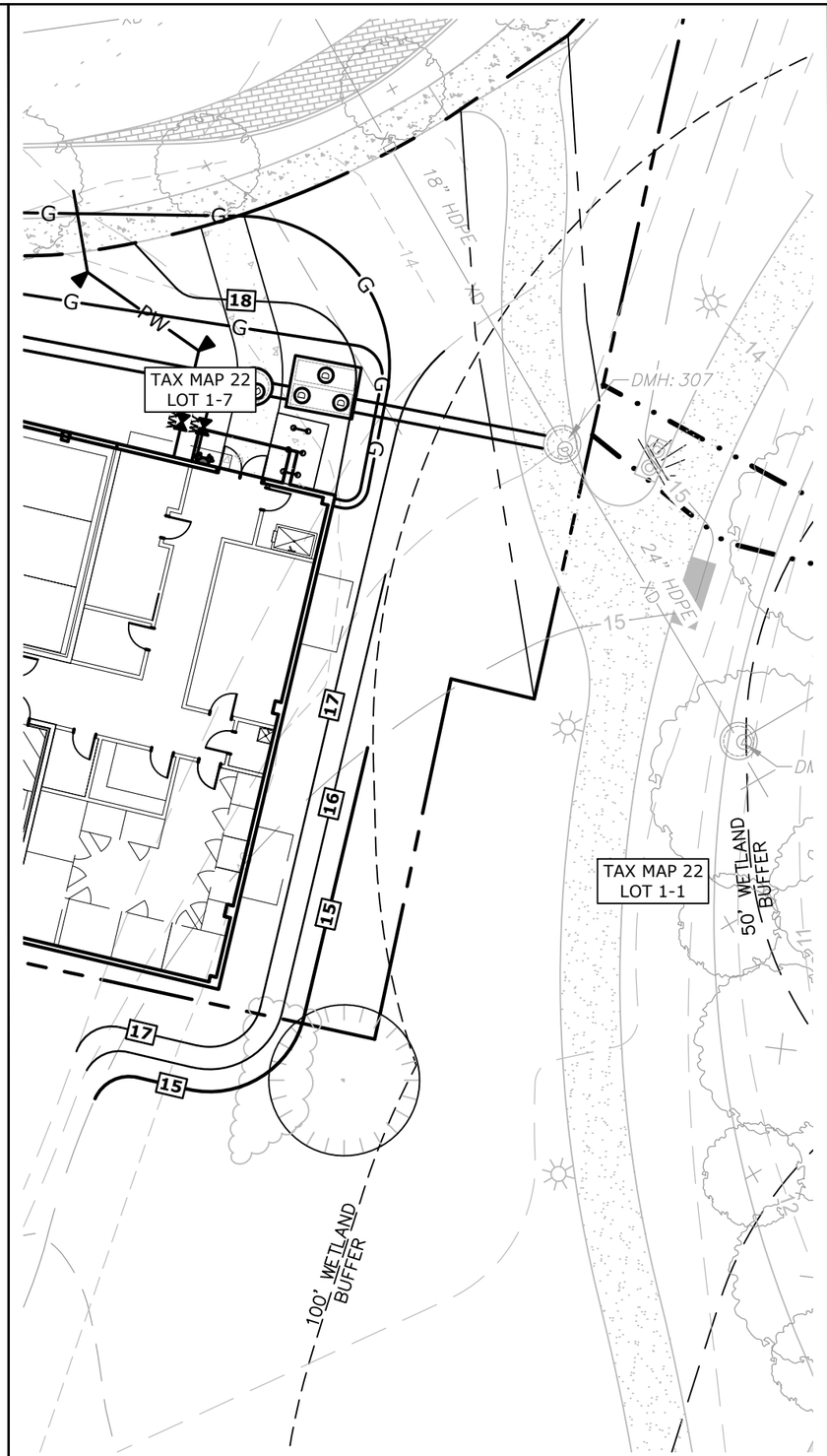
COCHECHO WATERFRONT DEVELOPMENT BUILDING F DOVER, NH

TIDAL BUFFER IMPACT EXHIBIT

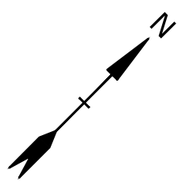
Tidal Buffer Impact Area		
100' Tidal Buffer Setback	**Impact Area**	
	2022 Proposed Development	**2025 Proposed Development**
Permanent (Impervious)	368 SF	0 SF
Permanent (Pervious)	602 SF	0 SF
Total Impact Area	**970 SF**	**0 SF**
Net Impact Area	**-970 SF**	



2022 PROPOSED BUFFER IMPACTS



2025 PROPOSED BUFFER IMPACTS



GRAPHIC SCALE

Tighe&Bond

August 1, 2025
C0960-007-DSGN-CD-P2.dwg

Last Save Date: July 25, 2025 11:16 AM By: CKRZCIUK
Plot Date: Thursday, July 31, 2025 Plotted By: Colter Krzciuk
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cocheco Waterfront\Drawings_Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: TIDAL

COCHECHO WATERFRONT DEVELOPMENT BUILDING F
DOVER, NH

WETLAND BUFFER IMPACT EXHIBIT

LEGEND

- 50' WETLAND BUFFER
- 50' VERNAL POOL BUFFER
- PROPOSED PERMANENT WETLAND BUFFER IMPACT (587 SF)
- PROPOSED TEMPORARY WETLAND BUFFER IMPACT (2,674 SF)
- PREVIOUSLY APPROVED NO DISTURBANCE AREA

TAX MAP 22
LOT 1-7

TAX MAP 22
LOT 1-1

TAX MAP 22
LOT 2

50' WETLAND BUFFER

100' WETLAND BUFFER

APPROXIMATE LIMIT OF CITY WORK DISTURBANCE

1 1/2" I.P.F. UP 8"

PUD

N

0 20' 40'

GRAPHIC SCALE

Tighe&Bond

August 1, 2025
C0960-007-DSGN-CD-P2.dwg

Last Save Date: July 25, 2025 11:16 AM By: CKRZCIEK
Plot Date: Thursday, July 31, 2025 Plotted By: Colter Krcsulk
T&B File Location: J:\C\C0960 Cathartes\C-0960-007 Cocheco Waterfront\Drawings_Figures\AutoCAD_Construction Drawings\Sheet\C0960-007-DSGN-CD-P2.dwg Layout Tab: WET

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

AMENDED WETLANDS AND NON-SITE SPECIFIC PERMIT 2019-03464

NOTE CONDITIONS

PERMITTEE:	**CITY OF DOVER** **288 CENTRAL AVE** **DOVER NH 03820**
PROJECT LOCATION:	**32 RIVER ST/TOWNE DR, DOVER** **Tax Map/Block/Lot(s): 22/no block/1&42**
WATERBODY:	**COCHECO RIVER**
AMENDMENT DATE:	**MAY 07, 2024**
ORIGINAL APPROVAL DATE: JUNE 16, 2022	**EXPIRATION DATE: JUNE 16, 2027**

Based upon review of permit application 2019-03464 in accordance with RSA 482-A and RSA 485-A:17, the New Hampshire Department of Environmental Services (NHDES) hereby issues this Wetlands and Non-Site Specific Permit. To validate this Permit, signatures of the Permittee and the Principal Contractor are required.

AMENDED PERMIT DESCRIPTION:

Dredge and fill 11,295 square feet within the bed and banks of the Cocheco River (impacting 1,470 linear feet along the shoreline), 19,972 square feet of palustrine wetland (emergent, forested and scrub-shrub) and 235,000 square feet within the previously-developed upland tidal buffer zone for the Cocheco Waterfront Development project. The project includes remediation from past industrial uses in conjunction with the creation of a public waterfront park and construction of internal roadways, with associated utility and stormwater management infrastructure, in preparation for future mixed-use development. In addition, the project will temporarily impact 26,619 square feet within the bed and banks of the Cocheco River and 901 square feet of palustrine emergent wetland during construction. Impacts above include construction of a tidal docking structure consisting of an 11 foot by 17 foot fixed platform connected to a 5 foot by 70 foot ramp connected to a 239 foot by 6 foot seasonal float system configured parallel to the shoreline. The overall structure extends 27 feet seaward of the highest observable tide line and provides eight boat slips on 2,872 feet of frontage along the Cocheco River. Compensatory mitigation is proposed as a combination of on-site permittee-responsible mitigation and a one-time payment of $158,586.72 into the Aquatic Resource Mitigation (ARM) Fund within the Salmon Falls / Piscataqua Rivers Watershed account.

THIS PERMIT IS SUBJECT TO THE FOLLOWING AMENDED PROJECT-SPECIFIC CONDITIONS:

1. All work shall be in accordance with plans by Cocheco Waterfront plans by Horsley Witten Group, Inc. dated October 24, 2019 and revised through May 27, 2022, Dover Waterfront Floating Dock System Design plans by GZA Environmental Inc. dated March 29, 2022 and the landscape plan set by Ironwood dated December 2019 and revised through May 27, 2022 and revised plans to eliminate kayak ramp dated February 15, 2024 and March 15, 2024.
2. This permit is not valid and effective until it has been recorded with the Strafford County Registry of Deeds. Prior to starting work under this permit, the permittee shall submit a copy of the recorded permit to the NHDES Wetlands Bureau by certified mail, return receipt requested.

3. This approval is not valid until NHDES receives a one-time payment of $158,586.72 to the DES Aquatic Resource Mitigation (ARM) Fund. The applicant shall remit payment to NHDES. If NHDES does not receive payment within 120 days of the date of this approval letter, NHDES will deny the application.
4. All development activities associated with this project shall be conducted in compliance with applicable requirements of RSA 483-B and N.H. Code Admin. Rules Env-Wq 1400 during and after construction.
5. This permit is not valid unless an Alteration of Terrain permit or other method of compliance with RSA 485-A:17 and Env-Wq 1500 is achieved.
6. No person undertaking any activity shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards in RSA 485-A and Env-Wq 1700.
7. Dredging shall not disturb contaminated material unless conducted in compliance with applicable requirements of the NHDES Waste Management Division.
8. The permittee shall schedule a pre-construction meeting on-site with NHDES Land Resources Management Program staff to occur at least 48 hours prior to the start of any work authorized by this permit to review the conditions of this wetlands permit and the Alteration of Terrain permit. The meeting shall be attended by the permittee, their professional engineer(s), wetlands scientist(s), and the contractor(s) responsible for performing the work.
9. Not less than 5 state business days prior to starting work authorized by this permit, the permittee shall notify the NHDES Wetlands Bureau and the local conservation commission in writing of the date on which work under this permit is expected to start.
10. Any further alteration of areas on this property that are subject to RSA 482-A jurisdiction will require review and approval by the NHDES Wetlands Bureau.
11. This permit shall not preclude NHDES from initiating appropriate action if NHDES later determines that any of the structures depicted as "existing" on the plans submitted by or on behalf of the permittee were not previously permitted or grandfathered.
12. Work within the river, inclusive of work associated with installation of a cofferdam, shall not be conducted between March 15 - July 1. Outside of that timeframe, work within the river shall be done in the dry, at low tide (unless within the dredge window, November 15 - March 15).
13. The permittee shall monitor local weather forecasts to avoid working during or following precipitation events.
14. Construction of the dock shall occur from land, or from a barge and crane if land-based construction is not feasible, to reduce potential impacts to the salt marsh and intertidal zone.
15. The height of the pier's decking over the surface of the tidal marsh at normal high tide shall equal the width of the decking. Decking shall have 3/4-inch spacing between the decking planks.
16. Each float shall be fitted with a float stop or similar structure so that the float will have minimal contact with the underlying intertidal area.
17. Seasonal structures, including but not limited to tidal dock ramp and floats, shall be removed during the non-boating season and stored on the pier or in an upland location.
18. No concrete is to be used anywhere in the construction of the shoreline stabilization. All stone shall be dry laid or placed stone underlain with filter fabric.
19. Work authorized shall be carried out such that there are no discharges in or to spawning or nursery areas during spawning seasons. Impacts to such areas shall be avoided or minimized to the maximum extent practicable during all other times of the year.
20. All dredged and excavated material and construction-related debris shall be placed outside of the areas subject to RSA 482-A. Any spoil material deposited within 250 feet of any surface water shall comply with RSA-483-B.
21. Dredged materials, whether to be stockpiled or disposed of, shall be dewatered in sedimentation basins lined with siltation and erosion controls, and located outside of areas subject to RSA 482-A jurisdiction.
22. Precautions shall be taken to prevent import or transport of soil or seed stock containing nuisance or invasive species such as Purple Loosestrife, Knotweed, or Phragmites. The contractor responsible for work shall appropriately address invasive species in accordance with the NHDOT Best Management Practices for Roadside Invasive Plants (2008).

23. To prevent the introduction of invasive plant species to the site, the permittee's contractor(s) shall clean all soils and vegetation from construction equipment and matting before such equipment is moved to the site.
24. The permittee shall control invasive plant species such as Purple loosestrife (Lythrum salicaria) and Common reed (Phragmites) by measures agreed upon by the DES Wetlands Program if any such species is found in the stabilization areas during construction or during the early stages of vegetative establishment.
25. Equipment initially entering surface waters shall be completely free of any aquatic plants and animals. Boat washing/rinsing shall not take place in areas in subject to RSA 482-A jurisdiction.
26. The contractor responsible for completion of the work shall use techniques described in the New Hampshire Stormwater Manual, Volume 3, Erosion and Sediment Controls During Construction (December 2008).
27. Appropriate siltation and erosion controls shall be in place prior to construction, shall be maintained during construction, and shall remain until the area is stabilized. Temporary controls shall be removed once the area has been stabilized.
28. Appropriate turbidity controls shall be installed prior to construction, shall be maintained during construction such that no turbidity escapes the immediate dredge area and shall remain until suspended particles have settled and water at the work site has returned to normal clarity.
29. Prior to commencing work on a substructure located within surface waters, the permittee or permittee's contractors shall construct a cofferdam to isolate the substructure work area from the surface waters.
30. Cofferdams shall not be installed during periods of high flow, whether due to seasonal runoff or precipitation. Once the cofferdam is fully effective, confined work can proceed without restriction.
31. Discharge from dewatering of work areas shall be to sediment basins that are: a) located in uplands; b) lined with hay bales or other acceptable sediment trapping liners; c) set back as far as possible from wetlands and surface waters, with a preferred undisturbed vegetated buffer of at least 50 feet and a minimum undisturbed vegetative buffer of 20 feet.
32. The temporary cofferdam shall be entirely removed within 2 days after work within the cofferdam is completed and water has returned to normal clarity.
33. Within three days of final grading or temporary suspension of work in an area that is in or adjacent to wetlands or surface waters, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tackifiers on slopes less than 3:1 or netting and pinning on slopes steeper than 3:1.
34. Where construction activities occur between November 30 and May 1, all exposed soil areas shall be stabilized within 1 day of establishing the grade that is final or that otherwise will exist for more than 5 days. Stabilization shall include placing 3-inches of base course gravels, or loaming and mulching with tack or netting and pinning on slopes steeper than 3:1.
35. The permittee/permittee's contractor shall regrade temporary impacts to pre-construction conditions and plant native species similar to those within the wetland prior to impact. The permittee shall implement corrective measure promptly if needed to ensure the plantings survive.
36. Restoration of temporary impact areas shall have at least 75% successful establishment of wetlands vegetation after two (2) growing seasons, or they shall be replanted and re-established until a functional wetland is replicated in a manner satisfactory to the DES Wetlands Program.
37. Restoration of temporary impact areas shall not be considered successful if sites are invaded by nuisance species such as common reed or purple loosestrife during the first full growing season following the completion of construction. The permittee shall submit a remediation plan to DES that proposes measures to be taken to eradicate nuisance species during this same period.
1. MONITORING:
38. A certified wetlands scientist or qualified professional, as applicable, shall monitor the project during construction to verify that all work is done in accordance with the approved plans and narratives, adequate siltation and erosion controls are properly implemented, and no water quality violations occur. A follow-up report including photographs of all stages of construction shall be submitted to the NHDES Wetlands Bureau within 60 days of final site stabilization.

39. Rare species transplantation and monitoring shall be conducted in coordination with the NH Natural Heritage Bureau and in accordance with the approved "Cocheco Waterfront Development Project 5-Year Monitoring Plan for Shoreline Restoration and Living Shoreline" provided by Horsley Witten Group, Inc., dated April 2022 and received by NHDES on April 08, 2022.
40. All post-construction monitoring shall be conducted in accordance with the approved "Cocheco Waterfront Development Project 5-Year Monitoring Plan for Shoreline Restoration and Living Shoreline" provided by Horsley Witten Group, Inc., dated April 2022 and received by NHDES on April 08, 2022.

THIS PERMIT IS SUBJECT TO THE FOLLOWING GENERAL CONDITIONS:

1. Pursuant to RSA 482-A:12, a copy of this permit shall be posted in a secure manner in a prominent place at the site of the approved project.
2. In accordance with Env-Wt 313.01(a)(5), and as required by RSA 482-A:11, II, work shall not infringe on the property rights or unreasonably affect the value or enjoyment of property of abutting owners.
3. In accordance with Env-Wt 314.01, a standard permit shall be signed by the permittee, and the principal contractor who will build or install the project prior to start of construction, and will not be valid until signed.
4. In accordance with Env-Wt 314.03(a), the permittee shall notify the department in writing at least one week prior to commencing any work under this permit.
5. In accordance with Env-Wt 314.08(a), the permittee shall file a completed notice of completion of work and certificate of compliance with the department within 10 working days of completing the work authorized by this permit.
6. In accordance with Env-Wt 314.06, transfer of this permit to a new owner shall require notification to, and approval of, the NHDES.
7. The permit holder shall ensure that work is done in a way that protects water quality per Env-Wt 307.03; protects fisheries and breeding areas per Env-Wt 307.04; protects against invasive species per Env-Wt 307.05; meets dredging activity conditions in Env-Wt 307.10; and meets filling activity conditions in Env-Wt 307.11.
8. This project has been screened for potential impact to known occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or only cursory surveys have been performed, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3.
9. In accordance with Env-Wt 307.06(a) through (c), no activity shall jeopardize the continued existence of a threatened or endangered species, a species proposed for listing as threatened or endangered, or a designated or proposed critical habitat under the Federal Endangered Species Act, 16 U.S.C. §1531 et seq.; State Endangered Species Conservation Act, RSA 212-A; or New Hampshire Native Plant Protection Act, RSA 217-A.
10. In accordance with Env-Wt 307.02, and in accordance with federal requirements, all work in areas under the jurisdiction of the U.S. Army Corps of Engineers (USACE) shall comply with all conditions of the applicable state general permit.

APPROVED:

David Price

David A. Price
East Region Supervisor, Wetlands Bureau
Land Resources Management, Water Division

THE SIGNATURES BELOW ARE REQUIRED TO VALIDATE THIS PERMIT (Env-Wt 314.01).

_____ _____

PERMITTEE SIGNATURE (required) PRINCIPAL CONTRACTOR SIGNATURE (required)

NEW HAMPSHIRE
DEPARTMENT OF STATE

I, David M. Scanlan, Secretary Of State, of the State of New Hampshire, do hereby certify that the Governor and Executive Council, at their meeting on June 26, 2024 approved **ITEM** #149, the City of Dover's request to amend a Wetland Bureau Permit for work on Cocheco River in Dover, NH (previously approved by G&C on 8/17/22, Item #55).

In Testimony Whereof, I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this twenty-sixth day of June, in the year of Our Lord, two thousand and twenty-four.

Secretary of State

Docusign Envelope ID: 6140943B-987B-4F1E-AF88-664A6BB3361D

CITY OF DOVER, NEW HAMPSHIRE
PLANNING APPLICATION OWNER AUTHORIZATION

OWNER AUTHORIZATION

I/We hereby submit this application to the City of Dover / 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.

Property Owner Name: Cochecho T Owner LLC City of Dover

Signature(s) of Property Owner(s): DocuSigned by: Rob Simmons F303420CFE6043A... Date: 4/30/2025

Signature of Applicant: Date:
if different from owner

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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..

Property Owner Name: City of Dover

Signature(s) of Property Owner(s): Date:

Signature of Applicant: Date:
if different from owner

IF SIGN PERMIT, SIGN PERMIT APPLICATION INFORMATION

If the sign permit applicant is not the property owner, this form must be completed and included as part of application submission.

I have read this application and state that, to the best of my knowledge, the information provided is true and that the proposed sign(s) will comply with all applicable regulations in Section 170-32 of the Zoning Ordinance of the City of Dover and shall conform to the submitted materials and designs. Furthermore, after 90 days, any application still waiting information will be denied.

Address of Sign Location:

Sign Permit Application Type:
(check one)

- ☐ Permanent Sign
- ☐ Temporary Sign
- ☐ Community Sign

PERMIT SNAPSHOT REPORT COND-2025-0018
FOR CITY OF DOVER, N.H.

Permit Type	Conditional Use	**Project:**		**App Date:**	08/01/2025
Work Class:	Environmental	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	In Review	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Glidden, Jean	**Approval Expire Date:**	

Description: For minimal temporary and permanent impacts within the 50' wetland buffer, as a result of the Dover High School Athletic Facility reconstruction project.

Parcel:	H0012-000000 Main	**Address:**	25 Alumni Dr Main Dover, NH	**Zone:**	R-20(Residential - Low Density)

Plan Preparer	Applicant	Owner	Owner Agent
Craig Langton	Craig Langton	City of Dover	Fergus Cullen
177 Corporate Drive	177 Corporate Drive		152 Boxwood Ln
Portsmouth, NH 03801	Portsmouth, NH 03801		Dover, NH 03820
Business: (603) 294-9231	Business: (603) 294-9231		Business: (603) 520-5450

Permit Custom Fields

Select Permit Type	Wetland Protection District	General Purpose	New Construction	Project Zone	Non-Residential
What is the parcel zoned?	R-20	New Change in Impervious/Paved Area (sq ft)	378	Work	Dover High School Athletic Facility reconstruction project.
permitstatefed	NHDES - AoT, Sewer Connection, Shoreland, & NPDES - CGP				

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Craig_Langton_8/1/2025.jpg	08/01/2025 10:46	Langton, Craig		Uploaded via CSS
Permit Snapshot Report.pdf	08/01/2025 10:47	Service, EnerGov		Attached by IO - ATTACH: Initial Permit Snapshot

Invoice No.	Fee	Fee Amount	Amount Paid
INV-2025013414	Planning Impervious Paved Area Fee	$26.46	$0.00
	Planning General Application Fee	$200.00	$0.00
	Total for Invoice INV-2025013414	$226.46	$0.00
	Grand Total for Permit	**$226.46**	**$0.00**

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Conditional Use Review v.1	In Review	08/01/2025	08/08/2025		No	No

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Bassegio, Erin	In Review	08/01/2025	08/29/2025	

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		08/01/2025 14:30	
Confirm application complete v.1	Generic Action		08/01/2025 14:30
Conditional Use Review v.1	Receive Submittal	08/01/2025 0:00	
Planning Board v.1			
Planning Board Agenda v.1	Task		
Invoice for Notices v.1	Task		
Send Notices v.1	Task		
Planner Creates Staff Recommendations v.1	Permit Activity		
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		

Planning Board Decision v.1	Permit Activity
NOD Sent to Applicant v.1	Create Report
Issue Permit v.1	
Verify Fees Prior to Permit v.1	Generic Action
Issue and Review Permit v.1	Generic Action
Print and Email Permit v.1	Generic Action
Plans uploaded to Treeno v.1	Generic Action
Internal Notification of Plan Completion v.1	Generic Action
Recording v.1	Task

D5085-001
August 1, 2025

Ms. Donna Benton, AICP
Director of Planning and Community Development
City of Dover Planning and Community Development
288 Central Avenue
Dover, New Hampshire 03820

Re: Wetland Conditional Use Permit Application
Dover High School Athletic Complex
25 Alumni Drive, Dover, NH

Dear Donna:

On behalf of the City of Dover (owner) and Dover School District, SAU #11 (applicant), we are pleased to submit electronic file (.pdf) of the following information to support a request for a Wetland Conditional Use Permit (CUP) for the above referenced project:

- Site Plan Set, last revised August 1, 2025;
- Wetland Conditional Use Permit Application, dated August 1, 2025;
- Wetland and Jurisdictional Resource Area Assessment, dated July 16, 2024;
- Wetland Buffer Impact Exhibit, dated August 1, 2025;

The applicant is pleased to provide the enclosed supplemental information which has been prepared to summarize how the Project complies with the standards for a conditional use permit allowed under section 170-28.F of the City of Dover Zoning Ordinance.

Project Background

The proposed project includes the renovation and replacement of Dunway Football Field, the existing rubberized asphalt running track, field event spaces (LJ, TJ, PV, HJ and throws), the existing baseball field, the home and away grandstands and the light towers. Several amenities are proposed, as well, including bathrooms, concessions, team rooms, a press box, storage, scoreboards, sound system, and equipment. There is additional parking proposed as well to provide accessible parking spaces and access for team busses. Lastly, landscape/site improvements including tree plantings in the stadium entry plaza area are proposed including special paving, fencing, and seating.

The site is a 78-acre parcel of land located at 25 Alumni Drive in Dover, New Hampshire. The site is currently developed with an approximately 178,000 square-foot (sf) high school and an approximately 9,000 sf Animal Sciences Building on the eastern portion of the site, and an approximately 2,000 sf maintenance building on the northeastern portion of the site. The western portion of the site is developed as athletic fields, including a football and baseball field, a rubberized running track surrounding the football field, batting cages, prefabricated metal storage buildings, scoreboards, bleachers, and associated parking areas. The area northwest of the existing athletic fields is an undeveloped woodland, surrounded by residential structures.

Conditional Use Permit

A portion of the proposed northern bleachers and retaining wall are located within 50 feet of the wetland. As such, the project is subject to jurisdiction of the City of Dover Zoning

Ordinance, §170-28 Wetlands Protection District. As outlined in the City of Dover Zoning Ordinance 170-28.F(1), the Planning Board may grant the construction of structures within the 50' wetland buffer provided the proposed construction complies with sections 170-28.F(1)(a) through 170-28.F(1)(f). The following addresses how the proposed project complies with the conditional use approval standards.

(a) Practicable alternative. There is no practicable alternative that would have a less adverse impact on the area.

The proposed Dover High School Athletic Complex aims to provide the high school with a centralized athletic complex that allows for the use of multiple sports. The existing track and field space is narrow and does not properly allow for the use of multiple sports. The proposed complex expands beyond the existing field limits into the wooded areas north of the existing facility. As a result, minimal impacts are proposed within the 50-foot wetland buffer. Most of the associated buffer impacts are temporary due to regrading and seeding. As a result, the proposed project represents the most practicable alternative to provide Dover High School's athletic teams with a centralized athletic complex with varying purposes.

(b) Avoidance. The potential impacts have been avoided to the maximum extent practicable. The applicant will demonstrate by plan and example that the proposed construction represents the least impacting alternative.

The proximity of the proposed track and field upgrades to the wetlands has been minimized to the maximum extent practicable within the site constraints. Several alternatives were considered to minimize potential impacts. The City of Dover's goal is to have a central athletic complex, providing a space for several sports. One alternative considered orienting the track along Bellamy Road. This alternative, though, is not ideal as it cuts out the baseball field from the overall "complex". Therefore, the alternative chosen provides minimized impacts to the nearby wetlands to the maximum extent practicable while also providing a centralized facility that can be shared.

(c) Minimization. Any unavoidable impacts have been minimized. No reasonable alternative to the proposed construction exists which does not impact a wetland or which has less detrimental impact on a wetland. Design, construction and maintenance methods will be prepared by a registered engineer to minimize detrimental impacts to the wetlands and will include restoration of the site as nearly as possible to its original grade.

The proposed design of the athletic complex includes a stormwater management system that will capture and treat runoff from the parking lot, walkways, and field. The remaining areas will be restored with loam and seeded with a conservation wildlife seed mix comprised of native species within the 50 foot wetland buffer. The proposed design minimizes disturbance and construction within the buffer zone and minimizes the discharge of untreated stormwater to the maximum extent practicable resulting in an improvement over the existing conditions of the buffer zone.

Erosion control barriers consisting of compost filter tubers or other similarly effective devices will be used to protect the wetlands throughout the duration of construction. These protective measures will be inspected after significant precipitation events and repaired or replaced as necessary. The proposed design includes a retaining wall along with a fence separating the field and bleachers from Wetland 1/2 to prevent access to the wetland and resultant disturbance.

(d) Mitigation. If the applicant is required by state rules to prepare a compensatory mitigation plan, the applicant shall provide the Conservation Commission and Planning Board with one copy each of said plan for their review.

The project is not required by state or federal regulations to include a compensatory mitigation plan.

(e) Approval for the wetlands impact has been received from the New Hampshire Department of Environmental Services Wetlands Bureau pursuant to Section G(3) below.

The proposed project does not result in any direct impacts to wetlands and therefore does not require a NHDES Wetland Permit.

(f) To assess and summarize the wetlands' functions and values as denoted in the NH Method and § 170-28B(2).

A wetland functions and values assessment was completed as part of the wetland delineation conducted on June 19 and July 2, 2024 and is further outlined in the Wetland and Jurisdictional Resource Area Assessment.

Conclusion

We trust the above-mentioned and enclosed materials address the criteria to grant a Conditional Use Permit for the proposed project. The applicant respectfully requests to be placed on the Conservation Commission regular meeting agenda for August 11, 2025. If you have any questions or need any additional information, please contact Neil Hansen by phone at (603) 294-9213 or by email at nahansen@tighebond.com.

Sincerely,
TIGHE & BOND, INC.

Neil A. Hansen, PE
Project Manager

Joseph Persechino, PE
Vice President

Copy: City of Dover, SAU 11
City of Dover

F:\Projects\D\D5085 Dover School District\0001 High School Athletic Complex\Reports\Applications\City of Dover\Wetland CUP App\Word Docs\20250801_D5085-001 Wetland CUP Letter.docx

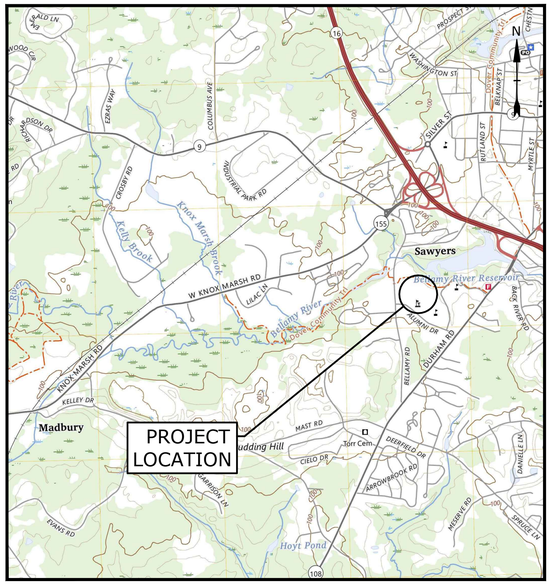
DOVER HIGH SCHOOL ATHLETICS FACILITY PROJECT

DOVER, NEW HAMPSHIRE

WETLAND CONDITIONAL USE PERMIT DRAWINGS

AUGUST 1, 2025

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
C-101	OVERALL EXISTING CONDITIONS / DEMOLITION PLAN	08/01/2025
C-102	OVERALL SITE PLAN	08/01/2025
C-103	OVERALL GRADING, DRAINAGE & EROSION CONTROL PLAN	08/01/2025
C-501	EROSION CONTROL NOTES & DETAILS SHEET	08/01/2025



LOCATION MAP
SCALE: 1" = 2,000'

PREPARED BY:

Tighe&Bond
177 Corporate Drive
Portsmouth, NH 03801
(603) 433-8818

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
8/1/2025

PREPARED FOR:

The Dover School District, SAU #11
61 Locust Street, Suite 409
Dover, NH 03820
(603) 516-6800

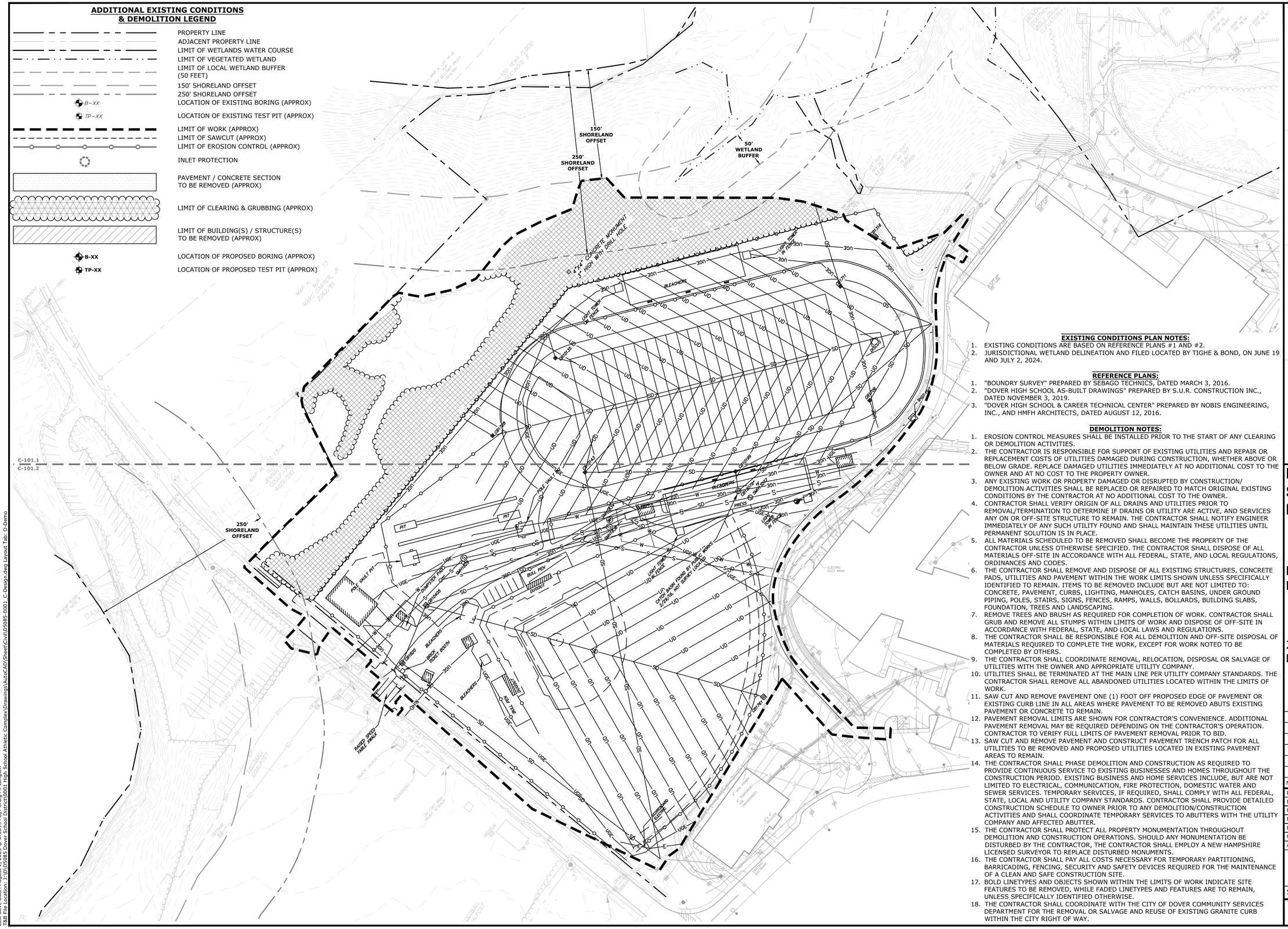
WETLANDS CUP SUBMISSION
COMPLETE SET 4 SHEETS

811 DigSafe MA-ME-NH-RI-VT

Last Save Date: August 1, 2025 8:20 AM By: CML
Plot Scale: Full Size Sheet (D) 22x34 Plotted By: Christine M. Langton
T&B File Location: J:\O\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_CS.dwg Layout Tab: CS-CUP

ADDITIONAL EXISTING CONDITIONS & DEMOLITION LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF WETLANDS WATER COURSE
- LIMIT OF VEGETATED WETLAND
- LIMIT OF LOCAL WETLAND BUFFER (50 FEET)
- 150' SHORELAND OFFSET
- 250' SHORELAND OFFSET
- B–XX — LOCATION OF EXISTING BORING (APPROX)
- TP–XX — LOCATION OF EXISTING TEST PIT (APPROX)
- LIMIT OF WORK (APPROX)
- LIMIT OF SAWCUT (APPROX)
- LIMIT OF EROSION CONTROL (APPROX)
- INLET PROTECTION
- PAVEMENT / CONCRETE SECTION TO BE REMOVED (APPROX)
- LIMIT OF CLEARING & GRUBBING (APPROX)
- LIMIT OF BUILDING(S) / STRUCTURE(S) TO BE REMOVED (APPROX)
- B-XX — LOCATION OF PROPOSED BORING (APPROX)
- TP-XX — LOCATION OF PROPOSED TEST PIT (APPROX)



EXISTING CONDITIONS PLAN NOTES:

1. EXISTING CONDITIONS ARE BASED ON REFERENCE PLANS #1 AND #2.
2. JURISDICTIONAL WETLAND DELINEATION AND FILED LOCATED BY TIGHE & BOND, ON JUNE 19 AND JULY 2, 2024.

REFERENCE PLANS:

1. "BOUNDRY SURVEY" PREPARED BY SEBAGO TECHNICS, DATED MARCH 3, 2016.
2. "DOVER HIGH SCHOOL AS-BUILT DRAWINGS" PREPARED BY S.U.R. CONSTRUCTION INC., DATED NOVEMBER 3, 2019.
3. "DOVER HIGH SCHOOL & CAREER TECHNICAL CENTER" PREPARED BY NOBIS ENGINEERING, INC., AND HMFH ARCHITECTS, DATED AUGUST 12, 2016.

DEMOLITION NOTES:

1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE. REPLACE DAMAGED UTILITIES IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER AND AT NO COST TO THE PROPERTY OWNER.
3. 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.
4. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY ARE ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
5. 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.
6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
7. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF-SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
8. 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.
9. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
11. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
13. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
14. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
15. THE CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
16. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
17. BOLD LINETYPES AND OBJECTS SHOWN WITHIN THE LIMITS OF WORK INDICATE SITE FEATURES TO BE REMOVED, WHILE FADED LINETYPES AND FEATURES ARE TO REMAIN, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE.
18. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT FOR THE REMOVAL OR SALVAGE AND REUSE OF EXISTING GRANITE CURB WITHIN THE CITY RIGHT OF WAY.

Tighe&Bond

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STATE OF NEW HAMPSHIRE — NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER
8/1/2025

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
A	8/1/2025	Wetland CUP Submission

PROJECT NO:	D5085-0001
DATE:	8/1/2025
FILE:	D5085-0001_C-DESIGN.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	P. CRIMMINS

OVERALL EXISTING CONDITIONS / DEMOLITION PLAN

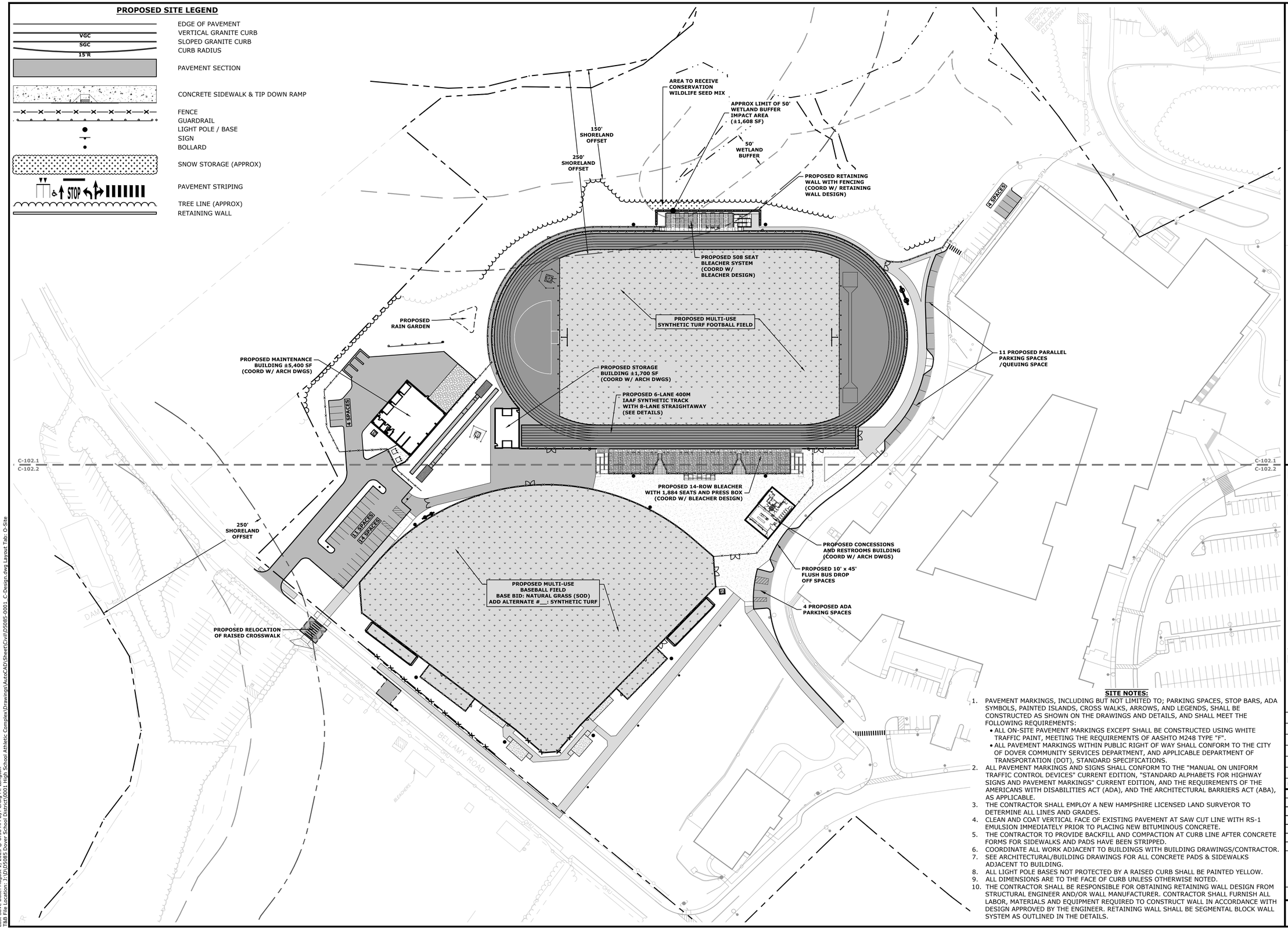
SCALE: AS SHOWN

C-101

Plot Date: Friday, August 01, 2025 Plotted By: Craig M. Langton
Last Saved: Friday, August 01, 2025 8:54 AM By: craig.langton
T&B File Location: J:\D\D5085 Dover School District\6001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Design.dwg Layout Tab: O-Demo

PROPOSED SITE LEGEND

- EDGE OF PAVEMENT
- VGC — VERTICAL GRANITE CURB
- SGC — SLOPED GRANITE CURB
- 15'R — CURB RADIUS
- PAVEMENT SECTION
- CONCRETE SIDEWALK & TIP DOWN RAMP
- FENCE
- GUARDRAIL
- LIGHT POLE / BASE
- SIGN
- BOLLARD
- SNOW STORAGE (APPROX)
- PAVEMENT STRIPING
- TREE LINE (APPROX)
- RETAINING WALL



SITE NOTES:

1. PAVEMENT MARKINGS, INCLUDING BUT NOT LIMITED TO; PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, AND LEGENDS, SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS AND DETAILS, AND SHALL MEET THE FOLLOWING REQUIREMENTS:
   - ALL ON-SITE PAVEMENT MARKINGS EXCEPT SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE "F".
   - ALL PAVEMENT MARKINGS WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT, AND APPLICABLE DEPARTMENT OF TRANSPORTATION (DOT), STANDARD SPECIFICATIONS.
2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION, "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" CURRENT EDITION, AND THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND THE ARCHITECTURAL BARRIERS ACT (ABA), AS APPLICABLE.
3. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
4. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
5. THE CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED.
6. COORDINATE ALL WORK ADJACENT TO BUILDINGS WITH BUILDING DRAWINGS/CONTRACTOR.
7. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
8. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
9. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTAL BLOCK WALL SYSTEM AS OUTLINED IN THE DETAILS.

Tighe&Bond

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STATE OF NEW HAMPSHIRE — NEIL A. HANSEN No. 18227 LICENSED PROFESSIONAL ENGINEER
8/1/2025

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
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A	8/1/2025	Wetland CUP Submission

PROJECT NO:	D5085-0001
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FILE:	D5085-0001_C-DESIGN.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	P. CRIMMINS

OVERALL SITE PLAN

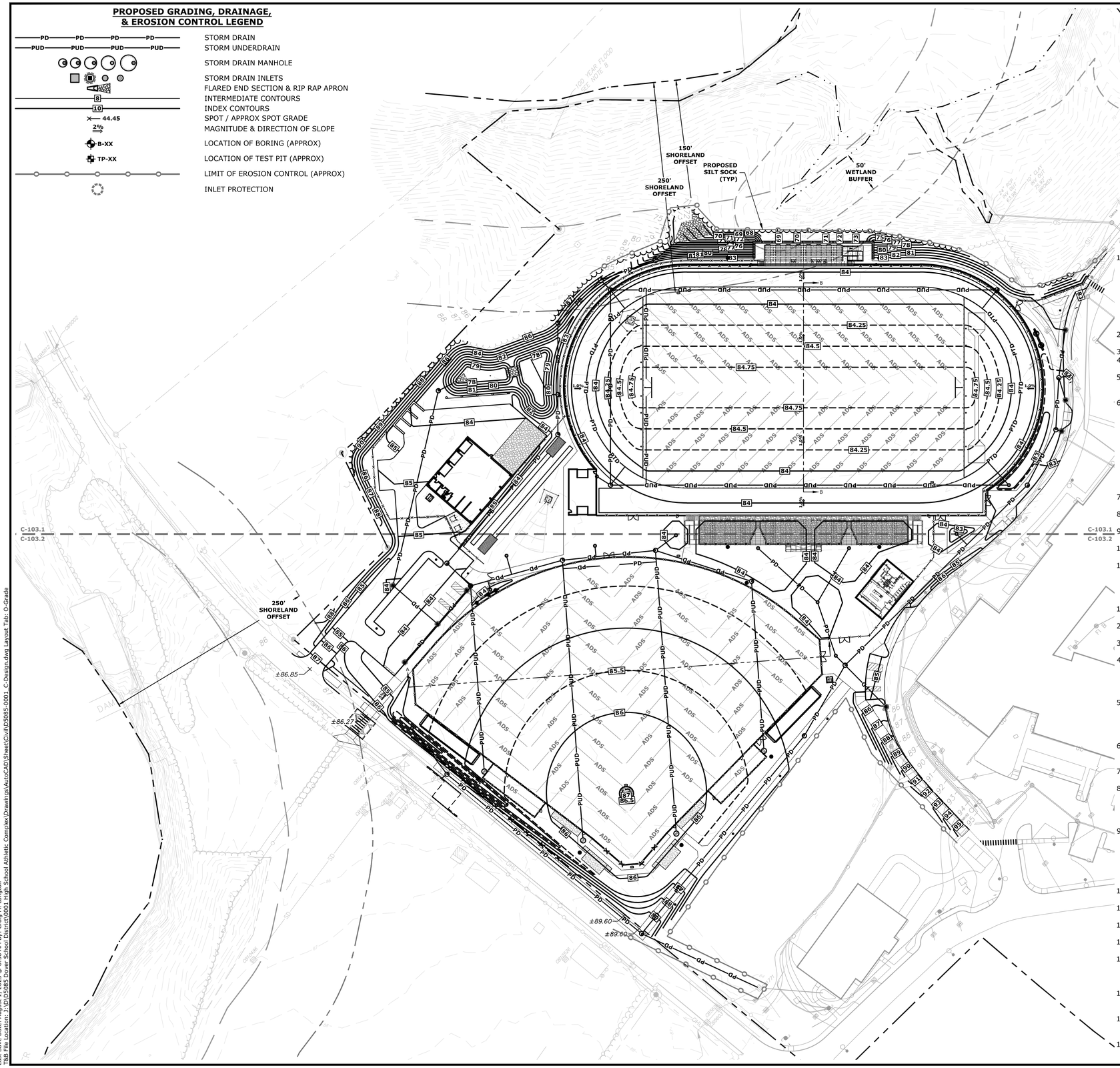
SCALE: AS SHOWN

C-102

Plot Date: Friday, August 01, 2025 Plotted By: Craig M. Langton
Last Saved: Friday, August 01, 2025 08:56 AM By: Craig M. Langton
T&B File Location: J:\D\D5085 Dover School District\6001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Design.dwg Layout Tab: O-Site

PROPOSED GRADING, DRAINAGE, & EROSION CONTROL LEGEND

- PD PD PD PD — STORM DRAIN
- PUD PUD PUD PUD — STORM UNDERDRAIN
- STORM DRAIN MANHOLE
- STORM DRAIN INLETS
- FLARED END SECTION & RIP RAP APRON
- 8 — INTERMEDIATE CONTOURS
- 10 — INDEX CONTOURS
- 44.45 — SPOT / APPROX SPOT GRADE
- 2% — MAGNITUDE & DIRECTION OF SLOPE
- B-XX — LOCATION OF BORING (APPROX)
- TP-XX — LOCATION OF TEST PIT (APPROX)
- LIMIT OF EROSION CONTROL (APPROX)
- INLET PROTECTION



GRADING AND DRAINAGE NOTES:

1. GENERAL COMPACTION REQUIREMENTS:
   - BELOW PAVED OR CONCRETE AREAS: 95%
   - TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL: 95%
   - BELOW LOAM AND SEED AREAS: 90%

   * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. PROVIDE SITE GRADING AT ACCESSIBLE SIDEWALK RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA), THE AMERICANS WITH DISABILITIES ACT (ADA). SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS. SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW:
   - ACCESSIBLE PARKING STALLS AND PASSENGER LOADING ZONES (IN ANY DIRECTION) SHALL BE < 2.0%
   - LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 5.0%
   - CROSS SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 2.0%
7. THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
9. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING DRAIN LINES AND STRUCTURES AT PROPOSED DRAINAGE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.

GENERAL EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL, LATEST EDITION.
2. SEE SHEET C-501 AND C-502 FOR ADDITIONAL EROSION CONTROL REQUIREMENTS AND DETAILS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL.
4. AS THE FIRST ORDER OF WORK, PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO; INLET PROTECTION BARRIERS, SILT SOCKS, SILT FENCES, MULCH BERMS, AND STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY ALL STATE AND LOCAL PERMITS AND APPROVALS.
5. INLET PROTECTION BARRIERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS/CURB INLETS AND YARD DRAINS WITHIN THE LIMITS OF WORK AS WELL AS ANY CATCH BASINS/CURB INLETS AND YARD DRAINS THAT RECEIVE RUNOFF FROM ANY CONSTRUCTION ACTIVITIES. THESE MEASURES SHALL BE FULLY MAINTAINED FOR THE DURATION OF THE PROJECT.
6. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL NON-PAVED AREAS HAVE BEEN STABILIZED.
7. THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS ON ALL STEEP SLOPE AREA (3:1 OR GREATER).
8. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES INCLUDE, BUT NOT LIMITED TO; MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, MECHANICAL SWEEPERS ON PAVED SURFACES, AND COVERING SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.
9. THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, PERIMETER SEDIMENT CONTROLS, AND STEEP SLOPE EROSION CONTROL BLANKETS INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED, REPAIRED, MODIFIED, OR ADDITIONAL MEASURES INSTALLED AS NECESSARY TO ADDRESS EVOLVING CONDITIONS DURING CONSTRUCTION.
10. SEDIMENT CONTROL FILTER MEASURES SHALL BE REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE FILTER.
11. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
12. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
13. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY STABILIZED.
14. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED WITH SEDIMENT CONTROLS AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS. STOCKPILES OVER 10 FEET SHALL HAVE SAFETY FENCING PROVIDED AROUND THE STOCKPILES.
15. IF NECESSARY CONCRETE TRUCKS WILL BE REQUIRED TO WASHOUT THE SHOOTS. THIS ACTIVITY SHALL ONLY BE DONE WITHIN A DESIGNATED CONCRETE WASHOUT FACILITY ON-SITE.
16. IF NECESSARY TEMPORARY SEDIMENT TRAPS SHALL BE PROVIDED FOR GENERAL EXCAVATION DEWATERING PRACTICES PRIOR TO DIRECTING FLOW TO ANY OTHER EROSION AND SEDIMENT CONTROL MEASURES.
17. THE CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

Tighe&Bond

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NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
8/1/2025

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

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A	8/1/2025	Wetland CUP Submission

PROJECT NO:	D5085-0001
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DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	P. CRIMMINS

OVERALL GRADING, DRAINAGE, & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103

Plot Date: Friday, August 01, 2025 Plotted By: Craig M. Langton
Last Saved: Friday, August 01, 2025 @ 09:54 AM By: Craig M. Langton
T&B File Location: J:\JD\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Design.dwg Layout Tab: O-Grade

GENERAL PROJECT INFORMATION

PROJECT OWNER: THE DOVER SCHOOL DISTRICT, SAU #11
25 ALUMNI DRIVE
DOVER, NEW HAMPSHIRE
PROJECT NAME: DOVER HIGH SCHOOL ATHLETICS FACILITY PROJECT
PROJECT ADDRESS: 25 ALUMNI DRIVE
DOVER, NEW HAMPSHIRE
PROJECT MAP / LOT: MAP H-2 / LOT 12
PROJECT LATITUDE: 43°10'40.3"N
PROJECT LONGITUDE: 70°53'18.9"W

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A TWO (2) NEW SPORTS FIELD FOR HIGH SCHOOL FOOTBALL, BASEBALL, SOCCER, WITH ASSOCIATED SITE IMPROVEMENTS. THE WORK IS ANTICIPATED TO START IN FALL OF 2026, AND BE COMPLETED BY WINTER OF 2027.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 12.4 ACRES.

SOIL CHARACTERISTICS

BASED ON THE NRCS WEB SOIL SURVEY FOR STRAFFORD COUNTY - NEW HAMPSHIRE, THE SOILS ON SITE CONSIST OF BUXTON SILT LOAM, HOLLIS-CHARLTON, SUFFIELD, AND WINDSOR SOILS WHICH ARE MODERATELY WELL, WELL, WELL, AND WELL DRAINED SOILS RESPECTIVELY WITH HYDROLOGIC SOIL GROUP RATINGS OF C, D, C, AND A RESPECTFULLY.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA OVERLAND FLOW, TO A CLOSED DRAINAGE SYSTEM, THEN TO AN UNNAMED WETLAND, AND ULTIMATELY FLOWS TO THE BELLAMY RIVER.
(STATE WATERBODY ID:NHRIV600030903-09).

CONSTRUCTION SEQUENCE PLAN OF MAJOR ACTIVITIES:

1. CONSTRUCT TEMPORARY AND PERMANENT PERIMETER EROSION CONTROLS, SEDIMENT CONTROLS AND DETENTION MEASURES, PRIOR TO ANY EARTH MOVING OPERATIONS THAT MAY AFFECT STORMWATER RUNOFF SUCH AS:
   - DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE
   - CONTROL OF DUST
   - CONSTRUCTION ROADWAYS, DRIVES, AND PARKING AREAS
   - INSTALLATION OF UTILITIES AND BUILDING CONSTRUCTION
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
2. CUT AND CLEAR TREES. GRUBBING SHALL NOT OCCUR UNTIL AFTER THE INSTALLATION OF PERIMETER CONTROLS.
3. CLEAR AND DISPOSE OF DEBRIS.
4. CONSTRUCT TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) AS NECESSARY UNTIL AREAS ARE STABILIZED.
5. CONSTRUCT PONDS AND SWALES BEFORE ROUGH GRADING THE SITE.
6. ALL PERMANENT SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
7. CONSTRUCT REQUIRED UTILITIES AND BUILDING(S)
8. GRADE IN ROADWAYS, DRIVES, AND PARKING AREAS.
9. BEGIN PERMANENT AND TEMPORARY SEEDING, LOAMING AND MULCHING.
10. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
11. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
12. FINISH PAVING ALL DRIVES AND PARKING LOTS.
13. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
14. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
15. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE. THE AREA OF DISTURBANCE SHALL ONLY EXCEED FIVE (5) ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED IF AN ENVIRONMENTAL MONITOR IS EMPLOYED DURING CONSTRUCTION IN ACCORDANCE WITH Env-Wq 1505.03 AND AS DESCRIBED UNDER THE "ENVIRONMENTAL MONITORING NOTES" SECTION ON THIS SHEET.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:51-57 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES. ANY INVASIVE OR NOXIOUS PLANT SPECIES ENCOUNTERED DURING CONSTRUCTION SHALL BE CONTROLLED IN ACCORDANCE WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "ENV 1, MANUAL 1 – BEST MANAGEMENT PRACTICES FOR CONTROL OF INVASIVE AND NOXIOUS PLANT SPECIES", CURRENT EDITION.

ENVIRONMENTAL MONITORING NOTES:

1. INSPECT THE PROJECT SITE AT LEAST ONCE EACH WEEK FROM THE START OF TERRAIN ALTERATION ACTIVITIES UNTIL ALL TERRAIN ALTERATION ACTIVITIES ARE COMPLETED AND THE SITE IS STABILIZED.
2. IN ADDITION TO REGULAR WEEKLY INSPECTIONS, INSPECT THE PROJECT SITE DURING ANY RAIN EVENT IN WHICH 0.25 INCH OF PRECIPITATION OR MORE FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT IF THE ENVIRONMENTAL MONITOR IS UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT.
3. SUBMIT A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, TO THE DEPARTMENT WITHIN 24 HOURS OF EACH INSPECTION THAT:
   A. DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET;
   B. IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE COMPLETED; AND
   C. INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT AND;
4. RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (3), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL, LATEST EDISTION.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL.
3. AS THE FIRST ORDER OF WORK, PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO; INLET PROTECTION BARRIERS, SILT SOCKS, SILT FENCES, MULCH BERMS, AND STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY ALL STATE AND LOCAL PERMITS AND APPROVALS.
4. INLET PROTECTION BARRIERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS/CURB INLETS AND YARD DRAINS WITHIN THE LIMITS OF WORK AS WELL AS ANY CATCH BASINS/CURB INLETS AND YARD DRAINS THAT RECEIVE RUNOFF FROM ANY CONSTRUCTION ACTIVITIES. THESE MEASURES SHALL BE FULLY MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS ON ALL STEEP SLOPE AREA (3:1 OR GREATER).
7. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES INCLUDE, BUT NOT LIMITED TO; MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, MECHANICAL SWEEPERS ON PAVED SURFACES, AND COVERING SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.
8. THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, PERIMETER SEDIMENT CONTROLS, AND STEEP SLOPE EROSION CONTROL BLANKETS INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED, REPAIRED, MODIFIED, OR ADDITIONAL MEASURES INSTALLED AS NECESSARY TO ADDRESS EVOLVING CONDITIONS DURING CONSTRUCTION.
9. SEDIMENT CONTROL FILTER MEASURES SHALL BE REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE FILTER.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

1. THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE PREPARED BY A QUALIFIED PERSON. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF A SWPPP:
   A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER;
   B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
   C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
   D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

STABILIZATION:

1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
      a. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, ITEM 304.2 HAVE BEEN INSTALLED.
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
2. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
3. ALL ROADS, DRIVES AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
4. WINTER STABILIZATION PRACTICES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKET'S APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
   C. AFTER OCTOBER 15, INCOMPLETE DRIVES 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, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
   D. FOR OVER-WINTER PROTECTION, A DOUBLE ROW OF SEDIMENT BARRIERS (SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX, ETC.) SHALL BE PLACED WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE AREA.
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   A. TEMPORARY SEEDING;
   B. MULCHING.
4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DYKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION EXIT(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

1. TEMPORARY GRASS COVER:
   A. SEEDBED PREPARATION:
      a. 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;
   B. 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;
   C. MAINTENANCE:
      a. TEMPORARY SEEDING 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.).
2. PERMANENT MEASURES AND PLANTINGS:
   A. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
   B. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
   C. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
   D. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
   E. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
   F. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
   G. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
   H. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

   IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.
3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

1. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
3. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
4. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

1. THE FOLLOWING ARE THE ONLY STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   A. FIRE-FIGHTING ACTIVITIES;
   B. FIRE HYDRANT FLUSHING;
   C. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
   D. WATER USED TO CONTROL DUST;
   E. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
   F. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
   G. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
   H. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
   I. UNCONTAMINATED GROUND WATER OR SPRING WATER;
   J. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
   K. UNCONTAMINATED EXCAVATION DEWATERING;
   L. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

SPILL PREVENTION:

1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY ALL LOCAL, STATE AND FEDERAL REGULATIONS. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
      a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
      b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
      d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
      e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
      f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
      g. 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.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
      a. PETROLEUM PRODUCTS:
         - ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
         - PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
         - SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
         - INSPECT FUEL STORAGE AREAS WEEKLY;
         - 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;
         - COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
         - 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.
         - 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;
           (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
         - FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES. 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.
         https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/dwgb-22-6.pdf
      b. FERTILIZERS:
         - FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
         - ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
         - STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
         - PAINTS:
         - ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
         - EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
         - EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
      b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL 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;
      c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
      d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
      e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
      f. THE SITE SUPERINTENDENT IS RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Dover School District, SAU 11 Telephone # (603) 516-6800

Address of Applicant: 61 Locust Street, Suite 409

E-Mail Address: _____

Name of Property Owner (if different from applicant): City of Dover Telephone # _____

Address of Property Owner: 288 Central Ave, Dover, NH 03820

PROPERTY INFORMATION

Assessor's Map # H-12 Lot(s) # 0

Address of Property: 25 Alumni Drive

Zoning District(s) R-20 Overlay District(s) _____

Existing Use of Property: High School

CONDITIONAL USE PERMIT INFORMATION

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

☐ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☐ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☒ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

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

See enclosed Cover Letter

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES AoT, NHDES Sewer Connection,NHDES Shoreland Permit, NPDES Construction General Permit, City of Dover Site Plan Review Permit

Name of Professional That Prepared Plans: Neil A Hansen, PE | Tighe & Bond

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

Professional License #: 15227 E-mail address: NAHansen@tighebond.com

SIGNATURES

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

Signature of Property Owner: _____ Date: _____

Signature of Applicant (if different from owner): _____ Date: 8/1/25

FERGUS CULLEN, CHAIR, DOVER ATHLETIC JOINT BUILDING COMMITTEE

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: _____

(PROPERTY IS OWNED BY CITY OF DOVER)

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
		City of Dover	288 Central Ave, Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
Dover School District	Dover School District, SAU 11	61 Locust Street, Suite 409, Dover, NH 03820

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Neil Hansen	Tighe & Bond	177 Corporate Drive, Portsmouth, NH 03801

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 24, 2023)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____
- ☐ **TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # _____ sq. ft. = $_____

SUBTOTAL PLAN REVIEW FEE = $_____

AND

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 review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

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

C. Foster's newspaper public notice fee $120.00 x # _____ applications = $_____

SUBTOTAL = $_____

TOTAL INVOICE AMOUNT = $_____

PLAN REVIEW FEE COLLECTED/PAID = $ _____

BALANCE DUE = $ _____

The amount due must be paid 28 hours prior to the Planning Board Meeting, to be heard.

Dover High School Athletic Complex Wetland Delineation

Tax Map H / Lot 12, Dover, NH

TO: Dover School District, City of Dover, NH

FROM: Jeremy Degler, PWS, CWS, Tighe and Bond; Rick Lipinski, Tighe and Bond

DATE: July 16, 2024

On June 19 and July 2, 2024, Tighe & Bond conducted a wetland delineation within the limits of the existing Dover High School Athletic Complex, located directly north of the Dover High School at 25 Alumni Drive in Dover, NH.

Methods

The wetland delineation was completed in accordance with the procedures outlined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1 (January 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0, January 2012), as well as followed the methodologies outlined in NH Administrative Rule Env-Wt 406. Wetlands were classified following *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee, Second Edition; 2013). Sequentially numbered flagging was used to demarcate wetland boundaries, which were located using an Arrow sub-meter GPS unit. Below is a description of the jurisdictional areas. A site map, photographic log, and supporting documentation are provided in Attachments A through D.

Jurisdictional Area Descriptions

Two wetlands and two streams were delineated within the limits of the project area (Photographs 3-7).

Wetland 1

Wetland 1 is a mapped National Wetlands Inventory (NWI) feature situated northeast of the existing running track within the floodplain of the Bellamy River (Photograph 3). The wetland boundary was marked in the field with wetland flags 4A-1 to 4A-22. This area contains moderately decomposed black organic soils (10YR 2/1) situated over a depleted matrix (10YR 4/2) with redoximorphic features (7.5 YR 5/6). The wetland hydrology indicators observed at the time of the site visit included standing surface water, soil saturation, water-stained leaves, and geomorphic position. The hydrophytic plant community was dominated by sensitive fern (*Onoclea sensibilis*; FACW), jewelweed (*Impatiens capensis*; FACW), cinnamon fern (*Osmunda cinnamomea*; FACW), skunk cabbage (*Symplocarpus foetidus*; OBL), alder buckthorn (*Frangula alnus*; FAC). This wetland is classified as a mix of palustrine emergent and persistent as well as palustrine scrub-shrub and broad-leaved deciduous, with a seasonally flooded/saturated hydroperiod (PEM1/SS1E).

Wetland 2

Wetland 2 is a small wet ditch that drains to the east, into Wetland 1 and eventually into the Bellamy River (Photograph 4). This feature is dominated by the same soils as Wetland 1 but with a thinner black organic layer. The wetland hydrology indicators observed at the time of the site visit included standing surface water, soil saturation, sediment deposits, water-stained leaves, drainage patterns, and geomorphic position. The hydrophytic plant community was dominated by jewelweed, several sedge species (*Carex* spp.), bittersweet nightshade (*Solanum dulcamara*; FAC), poison ivy (*Toxicodendron radicans*; FAC), brambles (*Rubus* spp.), multiflora rose (*Rosa multiflora*; FACU), and alder buckthorn. This wetland is classified as palustrine forested and broad-leaved deciduous, with a seasonally flooded/saturated hydroperiod (PFO1E).

Stream 1

Stream 1 is a small intermittent tributary to the Bellamy River, which is located northeast of the project area, outside of the existing athletic complex (Photograph 5). This stream flows to the north, into Wetland 1 and eventually into the Bellamy River. The limits of the stream channel were delineated by the Ordinary High Water Mark (OHWM) in accordance with Env-Wt 406.04, which was evidenced by physical characteristics such as a clear, natural line impressed on the immediate bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and the presence of litter and debris.

Stream 2 (The Bellamy River)

Stream 2 is the Bellamy River, which is located north of the project area and generally flows to the east (Photographs 6 and 7). This river is classified as perennial on the latest U.S. Geologic Survey (USGS) topographic maps. The floodplain of the Bellamy River is predominantly steep and forested. The southern bank was approximately 3-4 feet tall and comprised of fine sand, gravel, and woody debris. The stream bed was dominated by cobble and gravel, with a well-developed pool and riffle complex. The OHWM generally coincided with the upper limit of the bank (i.e., the "top of bank") and was evidenced by a defined break in slope, a change from fine sand and gravel on the bank to course mineral and organic (forest-floor) substrate, and persistent woody vegetation at the top of bank. The Bellamy River in the vicinity of the project site is not located within a Designated River Corridor, though it is a fourth order stream, and is therefore subject to RSA 483-B, the Shoreland Water Quality Protection Act, which establishes a protected shoreland area extending 250-feet from the OHWM (i.e., the reference line).

Wetland Functions and Values

Functions and values for this area were assessed based on our review of field observations, site photographs, and available GIS data. Assessment criteria were based on the *US Army Corps of Engineers, New England District, Highway Methodology Workbook Supplement - Wetland Functions and Values: A Descriptive Approach* (NAEEP-360-1-30a; September 1999).

Ten functions and values were identified as "suitable" for Wetland 1, including: Groundwater Recharge/ Discharge, Floodflow Alteration (principal function), Sediment/Toxicant Retention, Nutrient Removal, Production Export, Sediment/Shoreline Stabilization (principal function), Wildlife Habitat (principal function), Recreation, Educational Value, and Visual Quality/Aesthetics. Due to its small size, two functions were identified as "suitable" for Wetland 2 (Floodflow Alteration and Groundwater Recharge/Discharge). The data sheets for this functional assessment are included in the attachments to this report.

Rare, Threatened, and Endangered Species and Critical Habitat

The NH Wildlife Action Plan (WAP) ranks wildlife habitat by the highest ranked habitat in NH (Tier 1), highest ranked habitat in the biological region (Tier 2), and supporting landscapes (Tier 3). There are no areas of Tier 1 or Tier 2 highest ranked wildlife habitat within the project area; though the area surrounding the project is ranked as Tier 3, supporting landscape. The Bellamy River is identified by the NH WAP as Seacoast Anadromous Fish Habitat; including species of special concern: alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*). A datacheck report has been filed with the New Hampshire Natural Heritage Bureau (NHB; NHB24-2063) to determine any known occurrences of state listed rare, threatened, or endangered (RTE) plant and animal species or exemplary natural communities in the vicinity of the project. A response was received on July 12, 2024, resulting in the expectation that rare wildlife/plants will not be impacted by the proposed project.

Endangered Species Act (ESA) listed species and designated critical habitat(s) under the jurisdiction of the United States Fish and Wildlife Service (USFWS), as identified through the USFWS Information for Planning and Consultation (IPaC) website accessed on June 17, 2024, include the Northern Long-Eared Bat (*Myotis septentrionalis*, Endangered), Tricolored Bat (*Perimyotis subflavus*, Proposed Endangered), and the Monarch Butterfly (*Danaus plexippus*, Candidate). There are currently no ESA Section 7 requirements for candidate species and there is no critical habitat designated for the Monarch Butterfly or for the Tricolored Bat. Based on the June 17, 2024 IPaC determination key, a preliminary "No Effect" determination has been reached for the Northern Long-Eared Bat.

According to the National Oceanic and Atmospheric Administration (NOAA) Greater Atlantic Fisheries Office, Endangered Species Act Section 7 Consultation mapping application (ESA S7 Mapper), there are endangered Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*) and short-nose sturgeon (*Acipenser brevirostrum*) within one mile of the study area. The Bellamy River is not identified by NOAA National Marine Fisheries Service (NMFS) as Essential Fish Habitat (EFH).

The project should be designed to avoid jeopardizing the continued existence of state and federally-listed RTE plant and animal species, critical habitats, and exemplary natural communities; and the above-referenced reviews and determinations should be updated through the USFWS, NOAA NMFS, and the NH NHB as the full scope and timing of the project develops.

Vernal Pools

During the wetland delineation, the project area was assessed for characteristic vernal pool features (e.g., closed, depressional landform, direct observation of primary or secondary indicator species) in accordance with *"Identification and Documentation of Vernal Pools in New Hampshire"* (3rd Ed., 2016, published by the New Hampshire Fish and Game Department, Nongame and Endangered Wildlife Program) and the New Hampshire Department of Environmental Services' Administrative Rule Env-Wt 104.46.

Based on the survey conducted by Tighe and Bond Environmental Scientists on June 19 and July 2, 2024, no characteristic vernal pool features were observed, and it is unlikely that any vernal pools are present within the project area.

Priority Resource Areas

Wetland 1 is contiguous to the Bellamy River (a Tier 3 stream per New Hampshire Administrative Rule Chapter Env-Wt 904.05) and located within the FEMA-mapped 100-year floodplain. Additionally, preliminary results of the NHB Datacheck include the potential presence of RTE species or exemplary natural communities in the vicinity of the project area. Therefore, this feature is classified as a "*priority resource area*" (PRA) per New Hampshire Administrative Rule Chapter Env-Wt 103.68. An official Datacheck has been filed, and although there was an NHB record present in the project vicinity, it is expected that it will not be impacted by the proposed project.

Conclusion

In summary, two wetlands and two streams were delineated within the Dover High School Athletic Complex project area. These areas are subject to federal, state, and local jurisdiction. The site contains features classified by the New Hampshire Department of Environmental Services as "priority resource areas"; and the project should be designed to avoid and minimize impact to these features as much as possible. The Bellamy River is also considered a Public Water, and therefore subject to the Shoreland Water Quality Protection Act.

Tighe&Bond

ATTACHMENT 1

FIGURE 1
AERIAL SITE PLAN

LEGEND

- Wetland Flag
- Bank Flag
- Delineated Wetland Boundary
- Delineated Bank
- 250-Foot Protected Shoreland (RSA 483-B)
- Parcel
- 100-Year Flood Zone
- 500-Year Flood Zone

LOCUS MAP

N

0 125 250
Feet
1:3,000

NOTES

1. Aerial basemap courtesy of Nearmap (2024), set to 10% transparency.
2. 2023 parcel data (approximate) courtesy of NH GRANIT.

Dover High School
Athletic Complex
Dover, New Hampshire

July 2024

Tighe&Bond

G:\GIS\NH\SiteLocus\Dover\Wetlands_DoverHSAthleticComplex_Landscape.mxd [Exported By: MHarris, 7/9/2024, 10:26:53 AM]

D-5085

Tighe&Bond

ATTACHMENT 2

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 1	**Date:** 06/19/2024	**Direction Taken:** South

Description: Southern view of the forested area directly north of the existing athletic complex.

Photograph No.: 2	**Date:** 06/19/2024	**Direction Taken:** East

Description: View of a trail leading into the forested area north of the existing athletic complex, eventually leading to the Bellamy River.

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 3	**Date:** 07/02/2024	**Direction Taken:** East
Description: View of Wetland 1, to the northeast of the existing Dover High School athletic complex.		

Photograph No.: 4	**Date:** 06/19/2024	**Direction Taken:** Southeast
Description: View of Wetland 2, a ditch that drains into Wetland 1 and the Bellamy River.		

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 5	**Date:** 06/19/2024	**Direction Taken:** North

Description: View of Stream 1A, originating from a culvert and flowing to the north, towards the Bellamy River.

Photograph No.: 6	**Date:** 06/19/2024	**Direction Taken:** Northwest

Description: Upstream view of Stream 2A, showing the Bellamy River to the northeast of the project area.

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 7	**Date:** 06/19/2024	**Direction Taken:** West
Description: View of the Stream 2B, showing the Bellamy River to the northwest of the project area. Photo taken from a pedestrian bridge overlooking the river.		

Tighe&Bond

ATTACHMENT 3

Wetland Function-Value Evaluation Form

Total area of wetland >1,5 acres Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Forested/School Distance to nearest roadway or other development 175 feet

Dominant wetland systems present PEM, PSS Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Abutting Stream Floodplain

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland Area 1

Latitude 43.17899 Longitude -70.88572

Prepared by: Rick Lipinski Date 07/09/2024

Wetland Impact:
Type TBD Area TBD

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	7,12		The wetland is directly connected to the stream, within the floodplain; providing holding capacity and recharge potential, plus discharge potential to maintain baseflows in the stream.
Floodflow Alteration	Y	3,5,6,7,10,13,18	X	The wetland is directly connected to the Bellamy River, with ready access to the floodplain and holding potential flood water.
Fish and Shellfish Habitat	N			The wetland is not suitable for providing habitat for fish or shellfish
Sediment/Toxicant Retention	Y	3,6,9,10,13,14,16	X	The wetland is effective as a trap for sediments, toxicants, or pathogens in runoff to adjacent waterbodies due to its high density, contignuity to the Bellamy River, and diffuse water tflow
Nutrient Removal	Y	8,11,14		The wetland is effective as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands.
Production Export	Y	7,8,10		The wetland has a diverse vegetative community; detritus and food for living organisms are likely to be directly exported into the Bellamy River.
Sediment/Shoreline Stabilization	Y	6,7,9,12		The wetland is effective as to stabilize streambanks and shorelines against erosion due to its ability to diffuse flow between the wetland and the Bellamy River.
Wildlife Habitat	Y	6,9,13,14,15,19	X	The wetland is suitable for wildlife habitat as it contains dense vegetation and multiple classes.
Recreation	Y	5,9		The wetland is contiguous to the Bellamy River, which is a wildlife habitat and deep enough to be used recreationally.
Educational/Scientific Value	Y	3,9,11		The wetland is directly abutting a school and is contiguous to the Bellamy River.
Uniqueness/Heritage	N			Historical due dilligence review underway, although no observed cellar holes or archaelogical features
Visual Quality/Aesthetics	Y	1,3,5,7		This wetland has unique visual qualities of exhibiting multiple classes in one viewing area and a diverse vegetative community..
ES Endangered Species Habitat	N			Details TBD, NHB datacheck is underway for the project area.
Other	N			

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.02 acres Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Forested/School Distance to nearest roadway or other development 100 feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Floodplain

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland 2

Latitude 43.17884 Longitude -70.88678

Prepared by: Rick Lipinski Date 07/10/2024

Wetland Impact:
Type TBD Area TBD

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

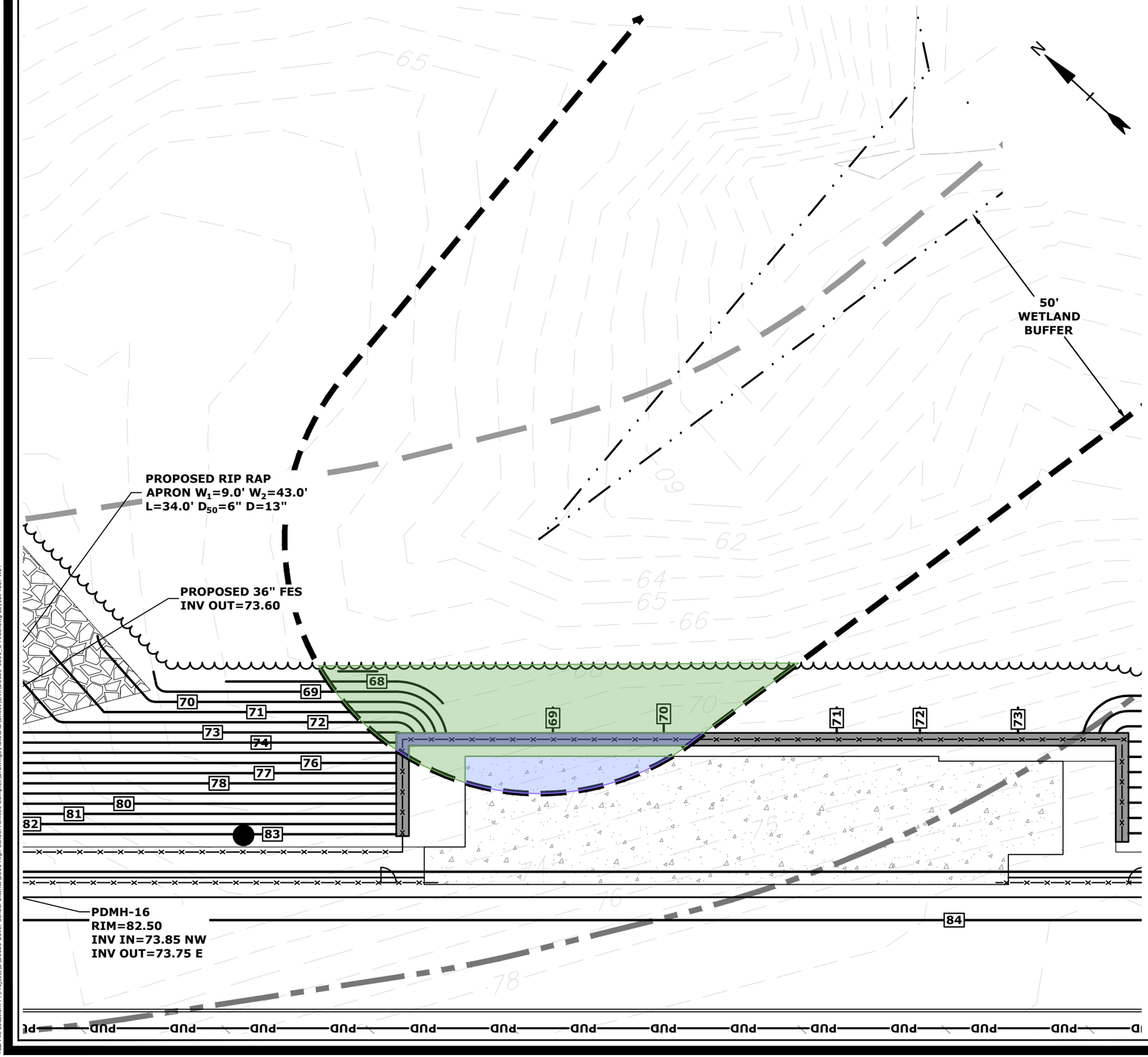
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	7,9	X	The wetland is directly connected to a stream, within the floodplain, providing holding capacity and recharge potential, plus discharge potential to maintain baseflow in the stream.
Floodflow Alteration	Y	3,9,13		The wetland is directly connected to a stream, with ready access to its floodplain.
Fish and Shellfish Habitat	N			The wetland is not suitable for providing habitat for fish or shellfish.
Sediment/Toxicant Retention	N			The wetland is not effectice as a trap for sediments, toxicants, or pathogens in runoff to adjacent waterbodies.
Nutrient Removal	N			The wetland is not effective as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands.
Production Export	N			The wetland is not effective as to produce food or usable products for humans or other living organisms.
Sediment/Shoreline Stabilization	N			The wetland is not effective as to stabilize streambanks and shorelines against erosion.
Wildlife Habitat	N			The wetland is not suitable for wildlife habitat as it is a degraded ditch.
Recreation	N			The wetland is not suitable for potential walking, hiking, fishing, or boating.
Educational/Scientific Value	N			The wetland has no signs of wildlife and is not a location for scientific research.
Uniqueness/Heritage	N			Historical due diligence review underway, although no observed cellar holes or archaeological features.
Visual Quality/Aesthetics	N			The wetland is densely forested and does not have any unique visual qualities.
ES Endangered Species Habitat	N			Details TBD, NHB Datacheck currently underway for the project site.
Other	N			

Notes:

* Refer to backup list of numbered considerations.

DOVER HIGH SCHOOL ATHLETIC COMPLEX
DOVER, NH

WETLAND BUFFER IMPACT EXHIBIT



LEGEND

- 50' WETLAND BUFFER
- PROPOSED PERMANENT WETLAND BUFFER IMPACT (378 SF)
- PROPOSED TEMPORARY WETLAND BUFFER IMPACT (1,230 SF)

0 20' 40'

GRAPHIC SCALE

Tighe&Bond

Engineers | Environmental Specialists

August 1, 2025
D5085-0001_C-FIGS.dwg

Last Save Date: July 28, 2025 10:32 AM By: JBOWMAN
Plot Date: Monday, July 28, 2025 Plotted By: Julia Bowman
Xref File Location: I:\Projects\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-FIGS.dwg Layout Tab: WET

Craig M. Langton

From: fergus ferguscullen.com <fergus@ferguscullen.com>
Sent: Tuesday, July 29, 2025 10:29 AM
To: Neil A. Hansen
Cc: Craig M. Langton
Subject: Re: Dover HS - Wetland CUP application

[Caution - External Sender]

List the school district as the applicant and yes fees will be waived. I think I can sign

Get Outlook for iOS

From: Neil A. Hansen <NAHansen@tighebond.com>
Sent: Monday, July 28, 2025 5:03:49 PM
To: fergus ferguscullen.com <fergus@ferguscullen.com>
Cc: Craig M. Langton <CMLangton@tigheBond.com>
Subject: Dover HS - Wetland CUP application

Fergus,

Have you had previous discussions with Planning on owner/applicant for the City permits? The City is the listed landowner, will they also be the applicant, or would that be the school district? Who would the signatories be? Am I safe in assuming that we application fees will also be waived?

Thanks, Neil

Neil Hansen, PE
Project Manager

Tighe&Bond

d.603.294.9213 | m.603.769.9471

177 Corporate Drive, Portsmouth, NH, 03801
w: tighebond.com | halvorsondesign.com

D5085-001
August 5, 2025

Ms. Donna Benton, AICP
Director of Planning and Community Development
City of Dover Planning and Community Development
288 Central Avenue
Dover, New Hampshire 03820

Re: Wetland Conditional Use Permit Application
Dover High School Athletic Complex
25 Alumni Drive, Dover, NH

Dear Donna:

On behalf of the City of Dover (owner) and Dover School District, SAU #11 (applicant), we are pleased to submit electronic file (.pdf) of the following supplemental information to support a request for a Wetland Conditional Use Permit (CUP) for the above referenced project:

- CUP Site Plan Set, last revised August 5, 2025; ***(revised)***
- Wetland & Groundwater Protection Conditional Use Permit Application, last revised August 5, 2025; ***(revised)***
- Wetland and Jurisdictional Resource Area Assessment, dated July 16, 2024;
- Wetland Buffer Impact Exhibit, dated August 1, 2025;
- CUP Drainage Analysis, dated August 5, 2025 ***(supplemental)***

The applicant is pleased to provide the enclosed information which has been prepared to summarize how the Project complies with the standards for a conditional use permit allowed under Section 170-28.F of the City of Dover Zoning Ordinance.

Additionally, as the proposed project is within the Secondary Groundwater Protection District supplemental materials relative to the proposed stormwater management system are being provided to demonstrate that the drainage design for the proposed project meets the requirements of Section 170-33 of the City of Dover Zoning Ordinance.

Project Background

The proposed project includes the renovation and replacement of Dunaway Football Field, the existing rubberized asphalt running track, field event spaces (LJ, TJ, PV, HJ and throws), the existing baseball field, the home and away grandstands and the light towers. Several amenities are proposed, as well, including bathrooms, concessions, a press box, storage, scoreboards, sound system, and equipment. There is additional parking proposed as well to provide accessible parking spaces and access for team busses. Lastly, landscape/site improvements including tree plantings in the stadium entry plaza area are proposed including special paving, fencing, and seating.

The site is a 78-acre parcel of land located at 25 Alumni Drive in Dover, New Hampshire. The site is currently developed with an approximately 178,000 square-foot (sf) high school and an approximately 9,000 sf Animal Sciences Building on the eastern portion of the site, and an approximately 2,000 sf maintenance building on the northeastern portion of the site. The western portion of the site is developed as athletic fields, including a football and baseball field, a rubberized running track surrounding the football field, batting cages, prefabricated

metal storage buildings, scoreboards, bleachers, and associated parking areas. The area northwest of the existing athletic fields is an undeveloped woodland, surrounded by residential structures.

Wetlands Protection District – Conditional Use Permit

A portion of the proposed northern bleachers and retaining wall are located within 50 feet of the wetland. As such, the project is subject to jurisdiction of the City of Dover Zoning Ordinance, §170-28 Wetlands Protection District. As outlined in the City of Dover Zoning Ordinance 170-28.F(1), the Planning Board may grant the construction of structures within the 50' wetland buffer provided the proposed construction complies with sections 170-28.F(1)(a) through 170-28.F(1)(f). The following addresses how the proposed project complies with the conditional use approval standards.

(a) Practicable alternative. There is no practicable alternative that would have a less adverse impact on the area.

The proposed Dover High School Athletic Complex aims to provide the high school with a centralized athletic complex that allows for the use of multiple sports. The existing track and field space is narrow and does not properly allow for the use of multiple sports. The proposed complex expands beyond the existing field limits into the wooded areas north of the existing facility. As a result, minimal impacts are proposed within the 50-foot wetland buffer. Most of the associated buffer impacts are temporary due to regrading and seeding. As a result, the proposed project represents the most practicable alternative to provide Dover High School's athletic teams with a centralized athletic complex with varying purposes.

(b) Avoidance. The potential impacts have been avoided to the maximum extent practicable. The applicant will demonstrate by plan and example that the proposed construction represents the least impacting alternative.

The proximity of the proposed track and field upgrades to the wetlands has been minimized to the maximum extent practicable within the site constraints. Several alternatives were considered to minimize potential impacts. The City of Dover's goal is to have a central athletic complex, providing a space for several sports. One alternative considered orienting the track along Bellamy Road. This alternative, though, is not ideal as it cuts out the baseball field from the overall "complex". Therefore, the alternative chosen provides minimized impacts to the nearby wetlands to the maximum extent practicable while also providing a centralized facility that can be shared.

(c) Minimization. Any unavoidable impacts have been minimized. No reasonable alternative to the proposed construction exists which does not impact a wetland or which has less detrimental impact on a wetland. Design, construction and maintenance methods will be prepared by a registered engineer to minimize detrimental impacts to the wetlands and will include restoration of the site as nearly as possible to its original grade.

The proposed design of the athletic complex includes a stormwater management system that will capture and treat runoff from the parking lot, walkways, and field. The remaining areas will be restored with loam and seeded with a conservation wildlife seed mix comprised of native species within the 50 foot wetland buffer. The proposed design minimizes disturbance and construction within the buffer

zone and minimizes the discharge of untreated stormwater to the maximum extent practicable resulting in an improvement over the existing conditions of the buffer zone.

Erosion control barriers consisting of compost filter tubers or other similarly effective devices will be used to protect the wetlands throughout the duration of construction. These protective measures will be inspected after significant precipitation events and repaired or replaced as necessary. The proposed design includes a retaining wall along with a fence separating the field and bleachers from Wetland 1/2 to prevent access to the wetland and resultant disturbance.

(d) Mitigation. If the applicant is required by state rules to prepare a compensatory mitigation plan, the applicant shall provide the Conservation Commission and Planning Board with one copy each of said plan for their review.

The project is not required by state or federal regulations to include a compensatory mitigation plan.

(e) Approval for the wetlands impact has been received from the New Hampshire Department of Environmental Services Wetlands Bureau pursuant to Section G(3) below.

The proposed project does not result in any direct impacts to wetlands and therefore does not require a NHDES Wetland Permit.

(f) To assess and summarize the wetlands' functions and values as denoted in the NH Method and § 170-28B(2).

A wetland functions and values assessment was completed as part of the wetland delineation conducted on June 19 and July 2, 2024 and is further outlined in the Wetland and Jurisdictional Resource Area Assessment.

Secondary Groundwater Protection District – Conditional Use Permit

As the western portion of the site lies within the Secondary Groundwater Protection District, the project requires a Conditional Use Permit in accordance with Section 170-33 of the City of Dover Zoning Ordinance. As demonstrated in the supplemental CUP Drainage Analysis, the proposed stormwater management design aligns with the intent of the district for the protection of groundwater resources. This is achieved through the use of a Bioretention System (Rain Garden) for the treatment and infiltration of stormwater runoff.

Additionally, the project has been designed in compliance with the New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain (AoT) regulations (Env-Wq 1500), which complement the City's groundwater protection standards. We believe the project is consistent with the goals of the ordinance and respectfully submit it for your review and recommendation.

Conclusion

We trust the above-mentioned and enclosed materials and additional supplemental materials address the criteria to grant a Conditional Use Permit for the proposed project for work withing the Wetlands Protection District and Secondary Groundwater Protection District. The applicant respectfully requests to be placed on the Conservation Commission regular meeting agenda for August 11, 2025. If you have any questions or need any additional information, please contact Neil Hansen by phone at (603) 294-9213 or by email at nahansen@tighebond.com.

Sincerely,
TIGHE & BOND, INC.

Neil A. Hansen, PE
Project Manager

Joseph Persechino, PE
Vice President

Copy: City of Dover, SAU 11
City of Dover

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City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Dover School District, SAU 11 Telephone # (603) 516-6800

Address of Applicant: 61 Locust Street, Suite 409

E-Mail Address: _____

Name of Property Owner (if different from applicant): City of Dover Telephone #_____

Address of Property Owner: 288 Central Ave, Dover, NH 03820

PROPERTY INFORMATION

Assessor's Map # H-12 Lot(s) # 0

Address of Property: 25 Alumni Drive

Zoning District(s) R-20 Overlay District(s) _____

Existing Use of Property: High School

CONDITIONAL USE PERMIT INFORMATION

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

☐ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☒ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☒ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

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

See enclosed Cover Letter

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES AoT, NHDES Sewer Connection,NHDES Shoreland Permit, NPDES Construction General Permit, City of Dover Site Plan Review Permit

Name of Professional That Prepared Plans: Neil A Hansen, PE | Tighe & Bond

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

Professional License #: 15227 E-mail address: NAHansen@tighebond.com

SIGNATURES

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

Signature of Property Owner: _____ Date: _____

Signature of Applicant (if different from owner): _____ Date: 8/1/25

FERGUS CULLEN, CHAIR, DOVER ATHLETIC JOINT BUILDING COMMITTEE

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: _____

(PROPERTY IS OWNED BY CITY OF DOVER)

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
		City of Dover	288 Central Ave, Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
Fergus Cullen	Dover School District, SAU 11	61 Locust Street, Suite 409, Dover, NH 03820

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Neil Hansen	Tighe & Bond	177 Corporate Drive, Portsmouth, NH 03801

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 24, 2023)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____
- ☐ **TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # _____ sq. ft. = $_____

SUBTOTAL PLAN REVIEW FEE = $_____

AND

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 review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

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

C. Foster's newspaper public notice fee $120.00 x # _____ applications = $_____

SUBTOTAL = $_____

TOTAL INVOICE AMOUNT = $_____

PLAN REVIEW FEE COLLECTED/PAID = $ _____

BALANCE DUE = $ _____

The amount due must be paid 28 hours prior to the Planning Board Meeting, to be heard.

DOVER HIGH SCHOOL ATHLETICS FACILITY PROJECT

DOVER, NEW HAMPSHIRE

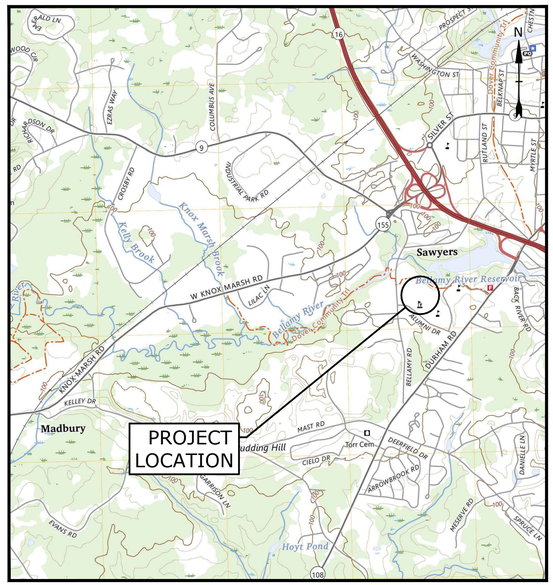
WETLAND & GROUNDWATER PROTECTION

CONDITIONAL USE PERMIT DRAWINGS

AUGUST 1, 2025

LAST REVISED: AUGUST 5, 2025

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	08/05/2025
C-101	OVERALL EXISTING CONDITIONS / DEMOLITION PLAN	08/05/2025
C-102	OVERALL SITE PLAN	08/05/2025
C-103	OVERALL GRADING, DRAINAGE & EROSION CONTROL PLAN	08/05/2025
C-103.1	GRADING, DRAINAGE & EROSION CONTROL PLAN	08/05/2025
C-103.2	GRADING, DRAINAGE & EROSION CONTROL PLAN	08/05/2025
C-501	EROSION CONTROL NOTES & DETAILS SHEET	08/05/2025
C-502	DETAILS SHEET	08/05/2025
C-503	DETAILS SHEET	08/05/2025



LOCATION MAP
SCALE: 1" = 2,000'

PREPARED BY:

Tighe&Bond
177 Corporate Drive
Portsmouth, NH 03801
(603) 433-8818

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15227
LICENSED PROFESSIONAL ENGINEER
8/5/2025

PREPARED FOR:

The Dover School District, SAU #11
61 Locust Street, Suite 409
Dover, NH 03820
(603) 516-6800

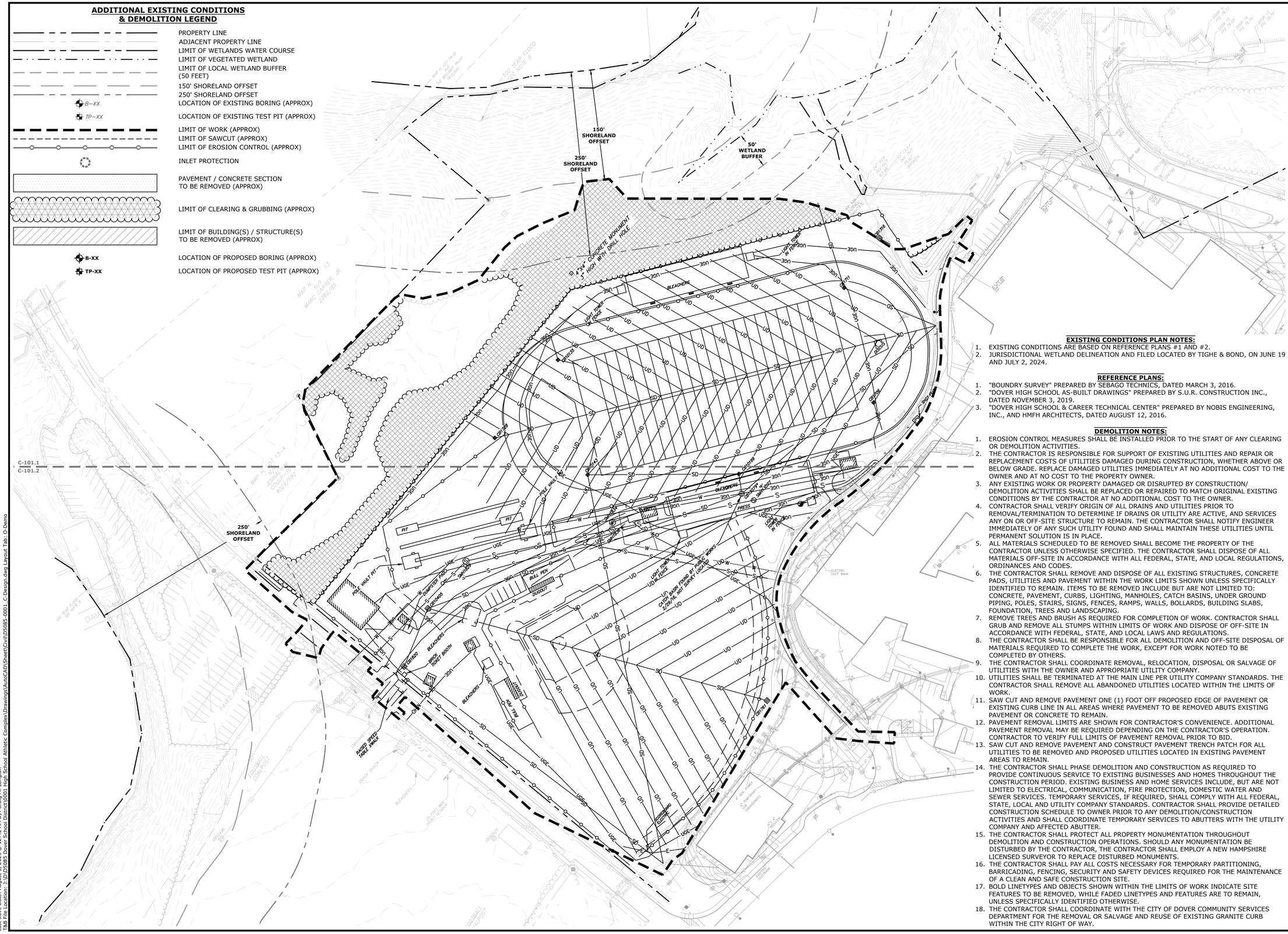
SUPPLEMENTAL CUP SUBMISSION

COMPLETE SET 9 SHEETS

Last Save Date: August 5, 2025 12:56 AM By: CML
Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
T&B File Location: J:\D\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_CS.dwg Layout Tab: CS-CUP

ADDITIONAL EXISTING CONDITIONS & DEMOLITION LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF WETLANDS WATER COURSE
- LIMIT OF VEGETATED WETLAND
- LIMIT OF LOCAL WETLAND BUFFER (50 FEET)
- 150' SHORELAND OFFSET
- 250' SHORELAND OFFSET
- B-XX — LOCATION OF EXISTING BORING (APPROX)
- TP-XX — LOCATION OF EXISTING TEST PIT (APPROX)
- LIMIT OF WORK (APPROX)
- LIMIT OF SAWCUT (APPROX)
- LIMIT OF EROSION CONTROL (APPROX)
- INLET PROTECTION
- PAVEMENT / CONCRETE SECTION TO BE REMOVED (APPROX)
- LIMIT OF CLEARING & GRUBBING (APPROX)
- LIMIT OF BUILDING(S) / STRUCTURE(S) TO BE REMOVED (APPROX)
- B-XX — LOCATION OF PROPOSED BORING (APPROX)
- TP-XX — LOCATION OF PROPOSED TEST PIT (APPROX)



EXISTING CONDITIONS PLAN NOTES:

1. EXISTING CONDITIONS ARE BASED ON REFERENCE PLANS #1 AND #2.
2. JURISDICTIONAL WETLAND DELINEATION AND FILED LOCATED BY TIGHE & BOND, ON JUNE 19 AND JULY 2, 2024.

REFERENCE PLANS:

1. "BOUNDRY SURVEY" PREPARED BY SEBAGO TECHNICS, DATED MARCH 3, 2016.
2. "DOVER HIGH SCHOOL AS-BUILT DRAWINGS" PREPARED BY S.U.R. CONSTRUCTION INC., DATED NOVEMBER 3, 2019.
3. "DOVER HIGH SCHOOL & CAREER TECHNICAL CENTER" PREPARED BY NOBIS ENGINEERING, INC., AND HMFH ARCHITECTS, DATED AUGUST 12, 2016.

DEMOLITION NOTES:

1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE. REPLACE DAMAGED UTILITIES IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER AND AT NO COST TO THE PROPERTY OWNER.
3. 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.
4. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY ARE ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
5. 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.
6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
7. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF-SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
8. 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.
9. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
11. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
13. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
14. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
15. THE CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
16. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
17. BOLD LINETYPES AND OBJECTS SHOWN WITHIN THE LIMITS OF WORK INDICATE SITE FEATURES TO BE REMOVED, WHILE FADED LINETYPES AND FEATURES ARE TO REMAIN, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE.
18. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT FOR THE REMOVAL OR SALVAGE AND REUSE OF EXISTING GRANITE CURB WITHIN THE CITY RIGHT OF WAY.

Tighe&Bond

N

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER
8/5/2025

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
B	8/5/2025	Supplemental CUP
A	8/1/2025	Wetland CUP Submission

PROJECT NO:	D5085-0001
DATE:	8/1/2025
FILE:	D5085-0001_C-DESIGN.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	J. PERSECHINO

OVERALL EXISTING CONDITIONS / DEMOLITION PLAN

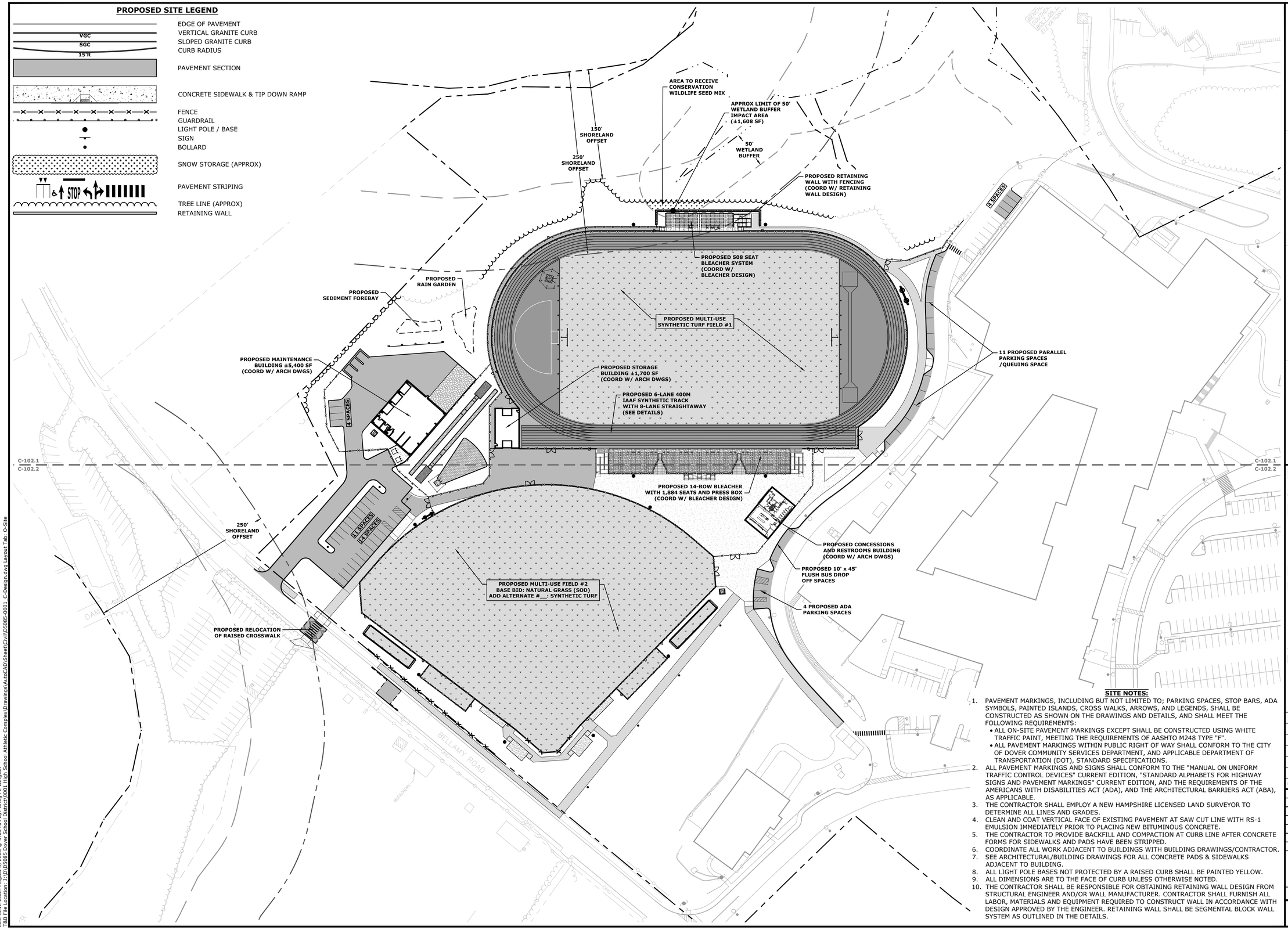
SCALE: AS SHOWN

C-101

Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig M. Langton on 8/5/2025 @ 2:22 PM By: clangton
T&B File Location: J:\D\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Design.dwg Layout Tab: O-Demo

PROPOSED SITE LEGEND

- EDGE OF PAVEMENT
- VGC — VERTICAL GRANITE CURB
- SGC — SLOPED GRANITE CURB
- 15'R — CURB RADIUS
- PAVEMENT SECTION
- CONCRETE SIDEWALK & TIP DOWN RAMP
- FENCE
- GUARDRAIL
- LIGHT POLE / BASE
- SIGN
- BOLLARD
- SNOW STORAGE (APPROX)
- PAVEMENT STRIPING
- TREE LINE (APPROX)
- RETAINING WALL



SITE NOTES:

1. PAVEMENT MARKINGS, INCLUDING BUT NOT LIMITED TO; PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, AND LEGENDS, SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS AND DETAILS, AND SHALL MEET THE FOLLOWING REQUIREMENTS:
   - ALL ON-SITE PAVEMENT MARKINGS EXCEPT SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE "F".
   - ALL PAVEMENT MARKINGS WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT, AND APPLICABLE DEPARTMENT OF TRANSPORTATION (DOT), STANDARD SPECIFICATIONS.
2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION, "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" CURRENT EDITION, AND THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND THE ARCHITECTURAL BARRIERS ACT (ABA), AS APPLICABLE.
3. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
4. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
5. THE CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED.
6. COORDINATE ALL WORK ADJACENT TO BUILDINGS WITH BUILDING DRAWINGS/CONTRACTOR.
7. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
8. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
9. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTAL BLOCK WALL SYSTEM AS OUTLINED IN THE DETAILS.

Tighe&Bond

N

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15227
LICENSED PROFESSIONAL ENGINEER
8/5/2025

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
B	8/5/2025	Supplemental CUP
A	8/1/2025	Wetland CUP Submission

PROJECT NO:	D5085-0001
DATE:	8/1/2025
FILE:	D5085-0001_C-DESIGN.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	J. PERSECHINO

OVERALL SITE PLAN

SCALE: AS SHOWN

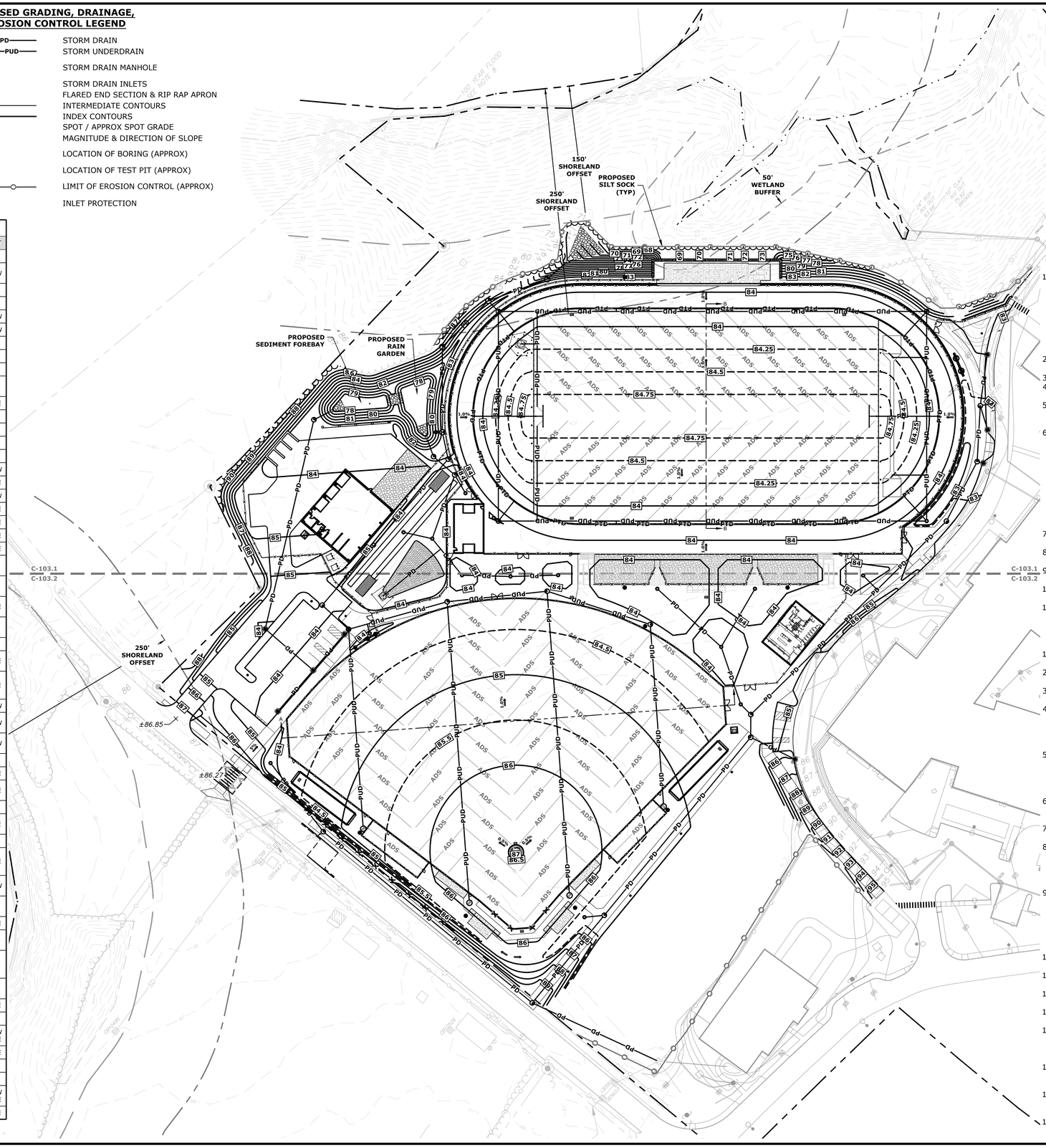
C-102

Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig M. Langton on 8/5/2025 2:04 PM By: Craig M. Langton
T&B File Location: J:\D\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheets\Civil\D5085-0001_C-Design.dwg Layout Tab: O-Site

PROPOSED GRADING, DRAINAGE, & EROSION CONTROL LEGEND

PD PD PD PD — STORM DRAIN
PUD PUD PUD PUD — STORM UNDERDRAIN
STORM DRAIN MANHOLE
STORM DRAIN INLETS
FLARED END SECTION & RIP RAP APRON
8 — INTERMEDIATE CONTOURS
10 — INDEX CONTOURS
× 44.45 — SPOT / APPROX SPOT GRADE
2% — MAGNITUDE & DIRECTION OF SLOPE
B-XX — LOCATION OF BORING (APPROX)
TP-XX — LOCATION OF TEST PIT (APPROX)
LIMIT OF EROSION CONTROL (APPROX)
INLET PROTECTION

STRUCTURE TABLE			
STRUCTURE	RIM	INV. IN	INV. OUT
PAD-01	84.00	77.55 NE	77.45 S
PAD-02	83.60	78.00 N 78.00 E	77.90 SW
PAD-03	83.50		78.50 S
PAD-04	83.50		78.50 W
PAD-05	83.75		81.75 NW
PAD-06	83.80	81.50 SE	81.40 NW
PAD-07	83.75	81.15 SE	81.05 N
PAD-08	83.90		80.90 N
PAD-09	83.95		80.95 S
PCB-01	83.45	79.75 W 79.75 E	79.65 N
PCB-02	83.85	79.35 S	79.25 NE
PCB-04	83.85	78.20 SW	78.10 E
PCB-05	83.40		80.05 E
PCB-06	83.45		80.05 W
PCB-07	85.65		80.65 N
PCB-08	82.75		72.65 NW
PCB-09	82.75		77.75 NE
PCB-10	82.50		77.60 SW
PCO-01	84.75		78.50 NE
PCO-02	86.05		78.50 NE
PCO-03	86.05		78.50 NE
PCO-04	84.75		78.50 NE
PDMH-01	86.35	80.20 W 77.65 N	77.70 S
PDMH-02	89.60	76.30 N 78.80 S	74.20 E
PDMH-03	85.20	72.40 W 80.40 S	72.30 NE
PDMH-04	84.25	77.35 N 72.20 SW	72.10 E
PDMH-05	83.70	70.70 W	70.60 E
PDMH-06	83.30	70.25 W 72.60 SE	70.15 NE
PDMH-07	83.60	77.60 SW 69.85 SW 77.30 NE	69.75 SE
PDMH-08	84.55	78.50 SW	78.50 NW
PDMH-09	84.95	78.50 SE 78.50 SW	78.50 NW
PDMH-10	84.95	78.50 SE 78.50 SW	78.50 NW
PDMH-11	84.25	78.30 S	78.20 E
PDMH-12	84.05	77.25 W	77.15 NE
PDMH-13	83.50	77.00 SW 75.20 NW	75.10 NE
PDMH-14	85.00	74.65 SW	74.55 E
PDMH-15	85.00	74.20 W 76.90 S	74.10 SE
PDMH-16	82.00	73.75 NW	73.65 E
PDMH-17	83.25	80.90 N 77.00 SE 80.65 E	77.00 NE
PDMH-18	83.55	80.05 SW 80.20 W	77.00 NW
PDMH-19	85.35	73.65 W 80.05 NW	73.55 E
PDMH-20	83.90	80.05 S	78.85 NE
PDMH-21	83.90	80.80 S 80.35 SW	80.25 N
POS-01	83.00	77.00 SE 80.65 S 77.00 SW	77.00 N
POS-02	84.50	78.50 SW 78.50 SE	78.50 N
POS-03	81.00		75.25 SE
PYD-01	83.50		78.50 S
PYD-02	82.50	80.15 N	77.00 NW 80.05 NE
PYD-03	83.75		79.00 NE
PYD-04	83.65		72.30 S
PYD-05	83.85	80.45 SE	
PYD-06	83.75	80.80 S	80.60 NW 80.70 NE
PYD-07	85.15		80.15 SE



GRADING AND DRAINAGE NOTES:

1. GENERAL COMPACTION REQUIREMENTS:
   - BELOW PAVED OR CONCRETE AREAS: 95%
   - TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL: 95%
   - BELOW LOAM AND SEED AREAS: 90%
   - * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. PROVIDE SITE GRADING AT ACCESSIBLE SIDEWALK RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA), THE AMERICANS WITH DISABILITIES ACT (ADA). SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS. SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW:
   - ACCESSIBLE PARKING STALLS AND PASSENGER LOADING ZONES (IN ANY DIRECTION) SHALL BE < 2.0%
   - LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 5.0%
   - CROSS SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 2.0%
7. THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
9. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING DRAIN LINES AND STRUCTURES AT PROPOSED DRAINAGE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.

GENERAL EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL, LATEST EDITION.
2. SEE SHEET C-501 AND C-502 FOR ADDITIONAL EROSION CONTROL REQUIREMENTS AND DETAILS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL.
4. AS THE FIRST ORDER OF WORK, PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO; INLET PROTECTION BARRIERS, SILT SOCKS, SILT FENCES, MULCH BERMS, AND STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY ALL STATE AND LOCAL PERMITS AND APPROVALS.
5. INLET PROTECTION BARRIERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS/CURB INLETS AND YARD DRAINS WITHIN THE LIMITS OF WORK AS WELL AS ANY CATCH BASINS/CURB INLETS AND YARD DRAINS THAT RECEIVE RUNOFF FROM ANY CONSTRUCTION ACTIVITIES. THESE MEASURES SHALL BE FULLY MAINTAINED FOR THE DURATION OF THE PROJECT.
6. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL NON-PAVED AREAS HAVE BEEN STABILIZED.
7. THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS ON ALL STEEP SLOPE AREA (3:1 OR GREATER).
8. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES INCLUDE, BUT NOT LIMITED TO; MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, MECHANICAL SWEEPERS ON PAVED SURFACES, AND COVERING SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.
9. THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, PERIMETER SEDIMENT CONTROLS, AND STEEP SLOPE EROSION CONTROL BLANKETS INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED, REPAIRED, MODIFIED, OR ADDITIONAL MEASURES INSTALLED AS NECESSARY TO ADDRESS EVOLVING CONDITIONS DURING CONSTRUCTION.
10. SEDIMENT CONTROL FILTER MEASURES SHALL BE REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE FILTER.
11. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
12. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
13. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY STABILIZED.
14. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED WITH SEDIMENT CONTROLS AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS. STOCKPILES OVER 10 FEET SHALL HAVE SAFETY FENCING PROVIDED AROUND THE STOCKPILES.
15. IF NECESSARY CONCRETE TRUCKS WILL BE REQUIRED TO WASHOUT THE SHOOTS. THIS ACTIVITY SHALL ONLY BE DONE WITHIN A DESIGNATED CONCRETE WASHOUT FACILITY ON-SITE.
16. IF NECESSARY TEMPORARY SEDIMENT TRAPS SHALL BE PROVIDED FOR GENERAL EXCAVATION DEWATERING PRACTICES PRIOR TO DIRECTING FLOW TO ANY OTHER EROSION AND SEDIMENT CONTROL MEASURES.
17. THE CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

Tighe&Bond

STATE OF NEW HAMPSHIRE
NEIL A. HANSEN
No. 15227
LICENSED PROFESSIONAL ENGINEER
8/5/2025

SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
B	8/5/2025	Supplemental CUP
A	8/1/2025	Wetland CUP Submission

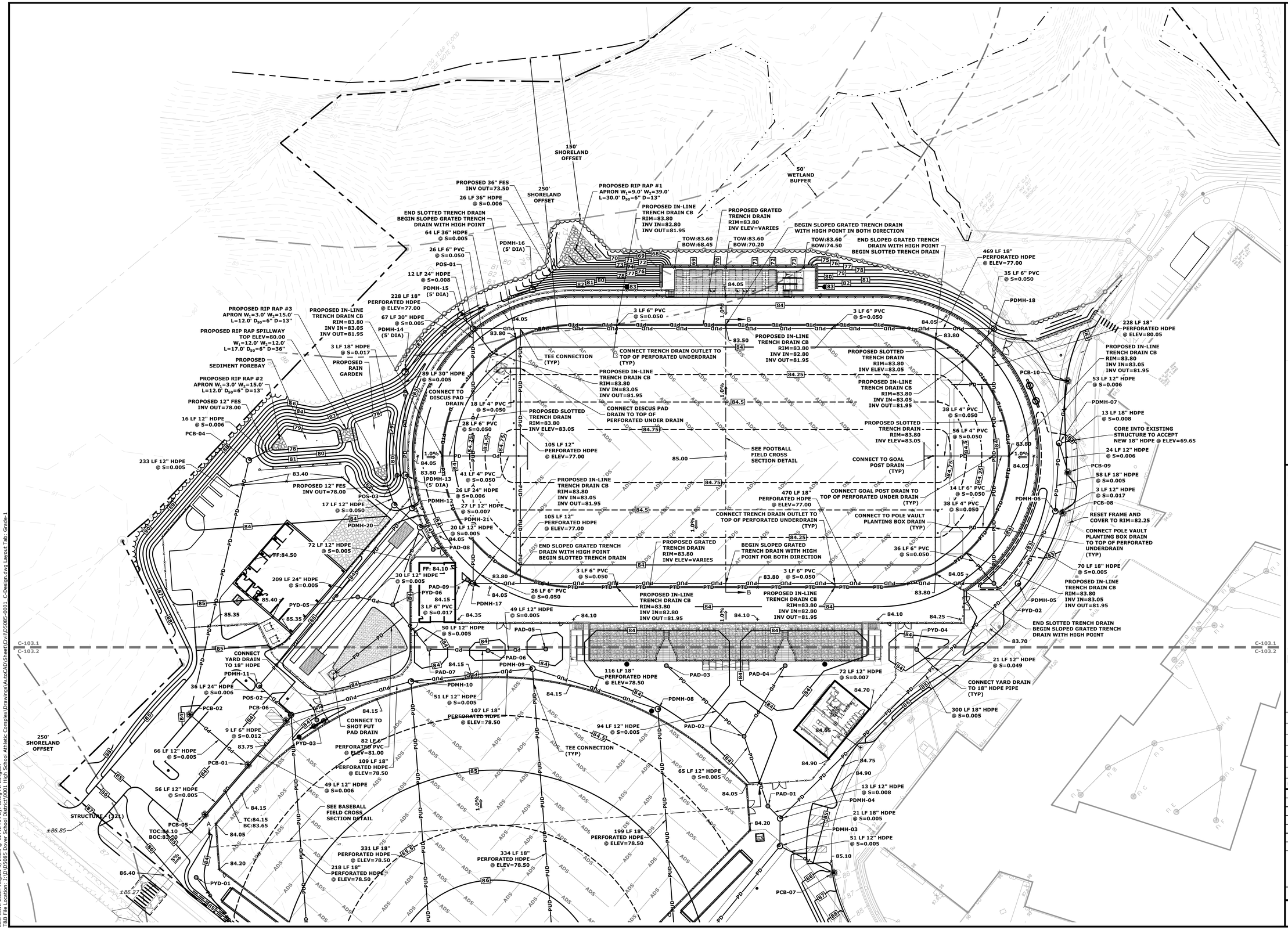
PROJECT NO:	D5085-0001
DATE:	8/1/2025
FILE:	D5085-0001_C-DESIGN.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	J. PERSECHINO

OVERALL GRADING, DRAINAGE, & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103

Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig M. Langton on 8/5/2025 7:22 AM By: Craig M. Langton
T&B File Location: J:\D\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Design.dwg Layout Tab: O-Grade



Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig M. Langton on Tuesday, August 05, 2025 at 2:24 PM
T&B File Location: J:\D\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Design.dwg Layout Tab: Grade-1

Tighe&Bond

STATE OF NEW HAMPSHIRE
NEIL K. HANSEN
No. 15227
LICENSED PROFESSIONAL ENGINEER
8/5/2025

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
A	8/5/2025	Supplemental CUP

PROJECT NO:	D5085-0001
DATE:	8/5/2025
FILE:	D5085-0001_C-DESIGN.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	J. PERSECHINO

GRADING, DRAINAGE, & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.1

PROPOSED RIP RAP #2
APRON W_1=3.0' W_2=15.0'
L=12.0' D_{50}=6" D=13"

PROPOSED 12" FES
INV OUT=78.00

16 LF 12" HDPE
@ S=0.006

PCB-04

233 LF 12" HDPE
@ S=0.005

83.40

PROPOSED 12" FES
INV OUT=78.00

POS-03

17 LF 12" HDPE
@ S=0.050

PDMH-20

72 LF 12" HDPE
@ S=0.005

FF:84.50

209 LF 24" HDPE
@ S=0.005

85.40

PYD-05

85.35

85.35

36 LF 24" HDPE
@ S=0.006

POS-02

PCB-02

PCB-06

9 LF 6" HDPE
@ S=0.012

83.75

66 LF 12" HDPE
@ S=0.005

PCB-01

56 LF 12" HDPE
@ S=0.005

84.15

PCB-05

TOC:84.10
BOC:83.60

84.05

84.20

86.40

±86.27

92 LF 12" HDPE
@ S=0.009

PYD-01

PDMH-01

4 LF 12" HDPE
@ S=0.050

CONNECT NEW 12" HDPE
INTO EXISTING STRUCTURE
@ ELEV=80.40

295 LF 12" HDPE
@ S=0.005

PCO-01

PCO-02

HOME
PLATE:86.50

86.10

PCO-03

86.10

86.35

PDMH-19

19 LF 12" HDPE
@ S=0.005

PYD-07

85.75

121 LF 18" HDPE
@ S=0.005

PDMH-02

CONNECT NEW 12" HDPE
INTO EXISTING STRUCTURE
@ ELEV=79.59

149 LF 12" HDPE
@ S=0.005

PCO-04

251 LF 18" HDPE
@ S=0.005

PCB-07

85.10

51 LF 12" HDPE
@ S=0.005

PDMH-03

21 LF 18" HDPE
@ S=0.005

PDMH-04

13 LF 12" HDPE
@ S=0.008

84.90

84.75

84.90

PAD-01

84.05

84.20

65 LF 12" HDPE
@ S=0.005

84.65

PAD-02

84.70

72 LF 12" HDPE
@ S=0.007

PAD-03

PAD-04

116 LF 18"
PERFORATED HDPE
@ ELEV=78.50

84.15

PDMH-08

94 LF 12" HDPE
@ S=0.005

84.5

TEE CONNECTION
(TYP)

107 LF 18"
PERFORATED HDPE
@ ELEV=78.50

82 LF 6"
PERFORATED PVC
@ ELEV=81.00

109 LF 18"
PERFORATED HDPE
@ ELEV=78.50

49 LF 12" HDPE
@ S=0.006

199 LF 18"
PERFORATED HDPE
@ ELEV=78.50

331 LF 18"
PERFORATED HDPE
@ ELEV=78.50

218 LF 18"
PERFORATED HDPE
@ ELEV=78.50

334 LF 18"
PERFORATED HDPE
@ ELEV=78.50

TOP OF
MOUND:87.33

0.5%

0.5%

87

86.5

SEE BASEBALL
FIELD CROSS
SECTION DETAIL

STRUCTURE (321)

TC:84.15
BC:83.65

250'
SHORELAND
OFFSET

CONNECT
YARD DRAIN
TO 18" HDPE

PDMH-11

PDMH-10

51 LF 12" HDPE
@ S=0.005

CONNECT TO
SHOT PUT
PAD DRAIN

PDMH-09

PAD-07

PAD-06

50 LF 12" HDPE
@ S=0.005

PAD-05

84.10

49 LF 12" HDPE
@ S=0.005

84.35

PDMH-17

26 LF 6" PVC
@ S=0.050

84.05

3 LF 6" PVC
@ S=0.017

84.15

PYD-06

PAD-09

30 LF 12" HDPE
@ S=0.005

FF: 84.10

PAD-08

20 LF 12" HDPE
@ S=0.005

84.05

PDMH-12

26 LF 24" HDPE
@ S=0.006

27 LF 12" HDPE
@ S=0.007

PDMH-21

PDMH-13
(5' DIA)

83.80

41 LF 4" PVC
@ S=0.050

84.05

1.0%

105 LF 12"
PERFORATED HDPE
@ ELEV=77.00

84.75

84.25

89 LF 30" HDPE
@ S=0.005

CONNECT TO
DISCUS PAD
DRAIN

18 LF 4" PVC
@ S=0.050

28 LF 6" PVC
@ S=0.050

PROPOSED SLOTTED
TRENCH DRAIN
RIM=83.80
INV ELEV=83.05

CONNECT DISCUS PAD
DRAIN TO TOP OF
PERFORATED UNDER DRAIN

84.5

84.75

85.00

SEE FOOTBALL
FIELD CROSS
SECTION DETAIL

PROPOSED IN-LINE
TRENCH DRAIN CB
RIM=83.80
INV IN=83.05
INV OUT=81.95

PROPOSED IN-LINE
TRENCH DRAIN CB
RIM=83.80
INV IN=83.05
INV OUT=81.95

PROPOSED SLOTTED
TRENCH DRAIN
RIM=83.80
INV ELEV=83.05

CONNECT TO GOAL
POST DRAIN
(TYP)

38 LF 4" PVC
@ S=0.050

56 LF 4" PVC
@ S=0.050

84.25

84.75

CONNECT GOAL POST DRAIN TO
TOP OF PERFORATED UNDER DRAIN
(TYP)

470 LF 18"
PERFORATED HDPE
@ ELEV=77.00

14 LF 6" PVC
@ S=0.050

38 LF 4" PVC
@ S=0.050

CONNECT TRENCH DRAIN OUTLET TO
TOP OF PERFORATED UNDERDRAIN
(TYP)

CONNECT TO POLE VAULT
PLANTING BOX DRAIN
(TYP)

END SLOPED GRATED TRENCH
DRAIN WITH HIGH POINT
BEGIN SLOTTED TRENCH DRAIN

PROPOSED GRATED
TRENCH DRAIN
RIM=83.80
INV ELEV=VARIES

BEGIN SLOPED GRATED
TRENCH DRAIN WITH HIGH
POINT FOR BOTH DIRECTION

36 LF 6" PVC
@ S=0.050

3 LF 6" PVC
@ S=0.050

3 LF 6" PVC
@ S=0.050

105 LF 12"
PERFORATED HDPE
@ ELEV=77.00

PROPOSED IN-LINE
TRENCH DRAIN CB
RIM=83.80
INV IN=82.80
INV OUT=81.95

PROPOSED IN-LINE
TRENCH DRAIN CB
RIM=83.80
INV IN=82.80
INV OUT=81.95

84.10

84.10

84.10

84.25

PYD-04

83.70

END SLOTTED TRENCH DRAIN
BEGIN SLOPED GRATED TRENCH
DRAIN WITH HIGH POINT

PDMH-05

PYD-02

PROPOSED IN-LINE
TRENCH DRAIN CB
RIM=83.80
INV IN=83.05
INV OUT=81.95

70 LF 18" HDPE
@ S=0.005

84.05

83.80

83.80

36 LF 6" PVC
@ S=0.050

PDMH-06

RESET FRAME AND
COVER TO RIM=82.25

CONNECT POLE VAULT
PLANTING BOX DRAIN
TO TOP OF PERFORATED
UNDERDRAIN
(TYP)

3 LF 12" HDPE
@ S=0.017

PCB-08

58 LF 18" HDPE
@ S=0.005

PCB-09

24 LF 12" HDPE
@ S=0.006

83.80

84.05

CORE INTO EXISTING
STRUCTURE TO ACCEPT
NEW 18" HDPE @ ELEV=69.65

13 LF 18" HDPE
@ S=0.008

PDMH-07

53 LF 12" HDPE
@ S=0.006

21 LF 12" HDPE
@ S=0.049

CONNECT YARD DRAIN
TO 18" HDPE PIPE
(TYP)

300 LF 18" HDPE
@ S=0.005

C-103.1
C-103.2

C-103.1
C-103.2

GARDEN

Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE -
8/5/2025

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
A	8/5/2025	Supplemental CUP

PROJECT NO:	D5085-0001
DATE:	8/5/2025
FILE:	D5085-0001_C-DESIGN.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	J. PERSECHINO

GRADING, DRAINAGE, & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.2

Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
Last Save: Tuesday, August 5, 2025 7:22 AM By: Craig M. Langton
T&B File Location: J:\D\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Design.dwg Layout Tab: Grade-2

GENERAL PROJECT INFORMATION

PROJECT OWNER: THE DOVER SCHOOL DISTRICT, SAU #11
25 ALUMNI DRIVE
DOVER, NEW HAMPSHIRE
PROJECT NAME: DOVER HIGH SCHOOL ATHLETICS FACILITY PROJECT
PROJECT ADDRESS: 25 ALUMNI DRIVE
DOVER, NEW HAMPSHIRE
PROJECT MAP / LOT: MAP H-2 / LOT 12
PROJECT LATITUDE: 43°10'40.3"N
PROJECT LONGITUDE: 70°53'18.9"W

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A TWO (2) NEW SPORTS FIELD FOR HIGH SCHOOL FOOTBALL, BASEBALL, SOCCER, WITH ASSOCIATED SITE IMPROVEMENTS. THE WORK IS ANTICIPATED TO START IN FALL OF 2026, AND BE COMPLETED BY WINTER OF 2027.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 12.4 ACRES.

SOIL CHARACTERISTICS

BASED ON THE NRCS WEB SOIL SURVEY FOR STRAFFORD COUNTY - NEW HAMPSHIRE, THE SOILS ON SITE CONSIST OF BUXTON SILT LOAM, HOLLIS-CHARLTON, SUFFIELD, AND WINDSOR SOILS WHICH ARE MODERATELY WELL, WELL, WELL, AND WELL DRAINED SOILS RESPECTIVELY WITH HYDROLOGIC SOIL GROUP RATINGS OF C, D, C, AND A RESPECTFULLY.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA OVERLAND FLOW, TO A CLOSED DRAINAGE SYSTEM, THEN TO AN UNNAMED WETLAND, AND ULTIMATELY FLOWS TO THE BELLAMY RIVER.
(STATE WATERBODY ID:NHRIV600030903-09).

CONSTRUCTION SEQUENCE PLAN OF MAJOR ACTIVITIES:

1. CONSTRUCT TEMPORARY AND PERMANENT PERIMETER EROSION CONTROLS, SEDIMENT CONTROLS AND DETENTION MEASURES, PRIOR TO ANY EARTH MOVING OPERATIONS THAT MAY AFFECT STORMWATER RUNOFF SUCH AS:
   - DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE
   - CONTROL OF DUST
   - CONSTRUCTION ROADWAYS, DRIVES, AND PARKING AREAS
   - INSTALLATION OF UTILITIES AND BUILDING CONSTRUCTION
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
2. CUT AND CLEAR TREES. GRUBBING SHALL NOT OCCUR UNTIL AFTER THE INSTALLATION OF PERIMETER CONTROLS.
3. CLEAR AND DISPOSE OF DEBRIS.
4. CONSTRUCT TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) AS NECESSARY UNTIL AREAS ARE STABILIZED.
5. CONSTRUCT PONDS AND SWALES BEFORE ROUGH GRADING THE SITE.
6. ALL PERMANENT SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
7. CONSTRUCT REQUIRED UTILITIES AND BUILDING(S)
8. GRADE IN ROADWAYS, DRIVES, AND PARKING AREAS.
9. BEGIN PERMANENT AND TEMPORARY SEEDING, LOAMING AND MULCHING.
10. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
11. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
12. FINISH PAVING ALL DRIVES AND PARKING LOTS.
13. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
14. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
15. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE. THE AREA OF DISTURBANCE SHALL ONLY EXCEED FIVE (5) ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED IF AN ENVIRONMENTAL MONITOR IS EMPLOYED DURING CONSTRUCTION IN ACCORDANCE WITH Env-Wq 1505.03 AND AS DESCRIBED UNDER THE "ENVIRONMENTAL MONITORING NOTES" SECTION ON THIS SHEET.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:51-57 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES. ANY INVASIVE OR NOXIOUS PLANT SPECIES ENCOUNTERED DURING CONSTRUCTION SHALL BE CONTROLLED IN ACCORDANCE WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "ENV 1, MANUAL 1 - BEST MANAGEMENT PRACTICES FOR CONTROL OF INVASIVE AND NOXIOUS PLANT SPECIES", CURRENT EDITION.

ENVIRONMENTAL MONITORING NOTES:

1. INSPECT THE PROJECT SITE AT LEAST ONCE EACH WEEK FROM THE START OF TERRAIN ALTERATION ACTIVITIES UNTIL ALL TERRAIN ALTERATION ACTIVITIES ARE COMPLETED AND THE SITE IS STABILIZED.
2. IN ADDITION TO REGULAR WEEKLY INSPECTIONS, INSPECT THE PROJECT SITE DURING ANY RAIN EVENT IN WHICH 0.25 INCH OF PRECIPITATION OR MORE FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT IF THE ENVIRONMENTAL MONITOR IS UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT.
3. SUBMIT A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, TO THE DEPARTMENT WITHIN 24 HOURS OF EACH INSPECTION THAT:
   A. DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET;
   B. IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE COMPLETED; AND
   C. INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT AND;
4. RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (3), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL, LATEST EDISTION.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL.
3. AS THE FIRST ORDER OF WORK, PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO; INLET PROTECTION BARRIERS, SILT SOCKS, SILT FENCES, MULCH BERMS, AND STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY ALL STATE AND LOCAL PERMITS AND APPROVALS.
4. INLET PROTECTION BARRIERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS/CURB INLETS AND YARD DRAINS WITHIN THE LIMITS OF WORK AS WELL AS ANY CATCH BASINS/CURB INLETS AND YARD DRAINS THAT RECEIVE RUNOFF FROM ANY CONSTRUCTION ACTIVITIES. THESE MEASURES SHALL BE FULLY MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS ON ALL STEEP SLOPE AREA (3:1 OR GREATER).
7. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES INCLUDE, BUT NOT LIMITED TO; MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, MECHANICAL SWEEPERS ON PAVED SURFACES, AND COVERING SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.
8. THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, PERIMETER SEDIMENT CONTROLS, AND STEEP SLOPE EROSION CONTROL BLANKETS INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED, REPAIRED, MODIFIED, OR ADDITIONAL MEASURES INSTALLED AS NECESSARY TO ADDRESS EVOLVING CONDITIONS DURING CONSTRUCTION.
9. SEDIMENT CONTROL FILTER MEASURES SHALL BE REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE FILTER.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

1. THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE PREPARED BY A QUALIFIED PERSON. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF A SWPPP:
   A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER;
   B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
   C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
   D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

STABILIZATION:

1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
      a. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, ITEM 304.2 HAVE BEEN INSTALLED.
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
2. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
3. ALL ROADS, DRIVES AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
4. WINTER STABILIZATION PRACTICES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
   C. AFTER OCTOBER 15, INCOMPLETE DRIVES 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, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
   D. FOR OVER-WINTER PROTECTION, A DOUBLE ROW OF SEDIMENT BARRIERS (SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX, ETC.) SHALL BE PLACED WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE AREA.
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   A. TEMPORARY SEEDING;
   B. MULCHING.
4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION EXIT(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

1. TEMPORARY GRASS COVER:
   A. SEEDBED PREPARATION:
      a. 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;
   B. 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;
   C. MAINTENANCE:
      a. TEMPORARY SEEDING 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.).
2. PERMANENT MEASURES AND PLANTINGS:
   A. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
   B. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
   C. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
   D. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
   E. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
   F. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
   G. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
   H. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

   IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.
3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

1. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
3. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
4. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

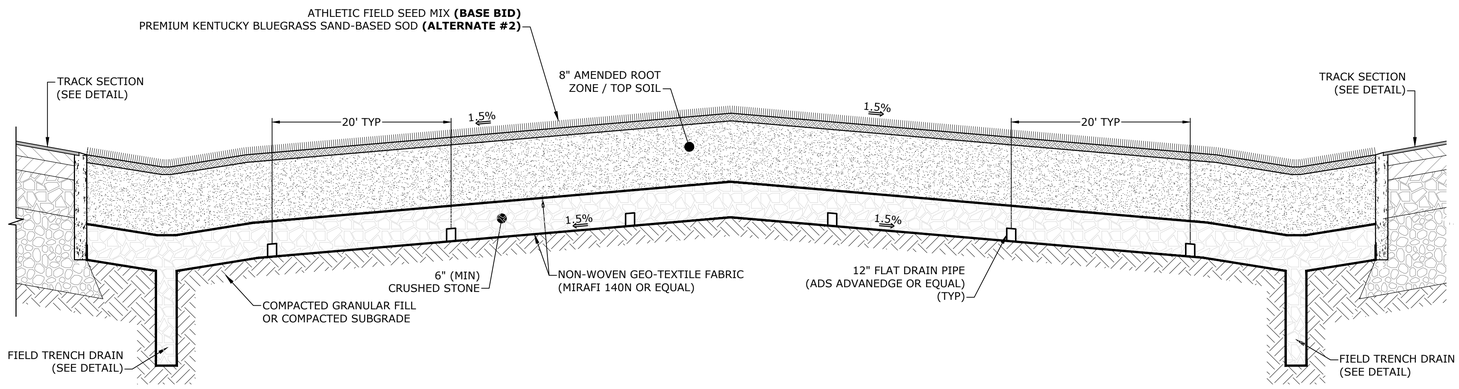
1. THE FOLLOWING ARE THE ONLY STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   A. FIRE-FIGHTING ACTIVITIES;
   B. FIRE HYDRANT FLUSHING;
   C. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
   D. WATER USED TO CONTROL DUST;
   E. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
   F. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
   G. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
   H. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
   I. UNCONTAMINATED GROUND WATER OR SPRING WATER;
   J. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
   K. UNCONTAMINATED EXCAVATION DEWATERING;
   L. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

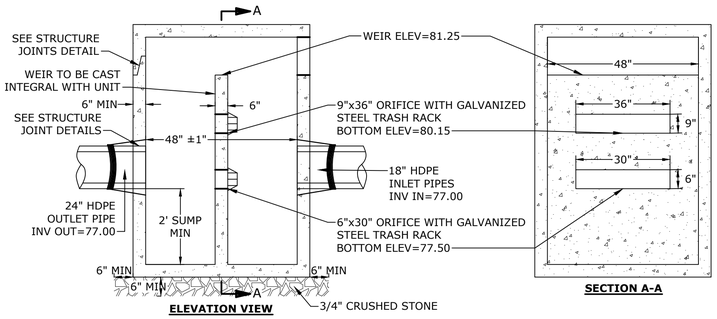
SPILL PREVENTION:

1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY ALL LOCAL, STATE AND FEDERAL REGULATIONS. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
      a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
      b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
      d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
      e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
      f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
      g. 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.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
      a. PETROLEUM PRODUCTS:
         - ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
         - PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
         - SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
         - INSPECT FUEL STORAGE AREAS WEEKLY;
         - 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;
         - COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
         - 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.
         - 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;
           (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
         - FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES 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.
         https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/dwgb-22-6.pdf
      b. FERTILIZERS:
         - FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
         - ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
         - STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
         - PAINTS:
         - ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
         - EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
         - EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
      b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL 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;
      c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
      d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
      e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
      f. THE SITE SUPERINTENDENT IS RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE



NOTES
1. AMENDED ROOT ZONE / TOP SOIL SHALL BE A HOMOGENEOUS MIXTURE COMPRISED WITH A MINIMUM OF 30% SAND.

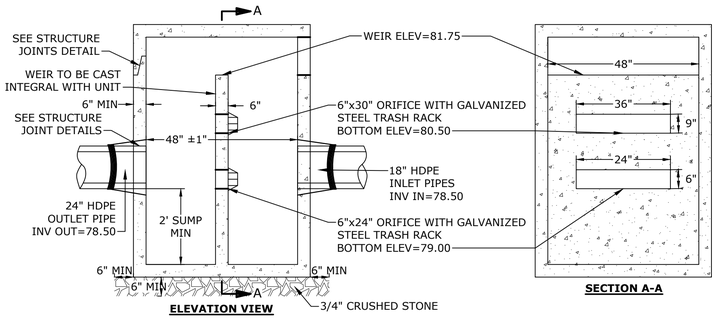
TYPICAL NATURAL SOD MULTI-USE FIELD #2 SECTION
BASE BID
NO SCALE



ELEVATION VIEW **SECTION A-A**

NOTES
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT

PROPOSED OUTLET STRUCTURE-01 (POS-01)
NO SCALE

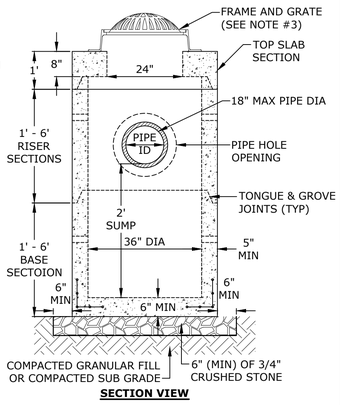


ELEVATION VIEW **SECTION A-A**

NOTES
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT

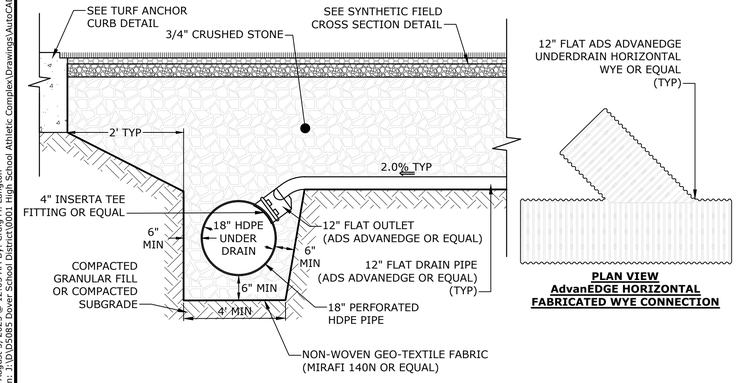
PROPOSED OUTLET STRUCTURE-02 (POS-02)
NO SCALE

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12-IN^2/LF AND 0.12-IN^2 (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. YARD / AREA DRAIN FRAME AND GRATES SHALL BE AS FOLLOWS:
   - NEENAH FOUNDRY R-2561 FRAME, WITH BEEHIVE GRATE (±1.2 SF OPEN AREA OR EQUAL), FOR DRAINS LOCATED IN GRASSED AREAS;
   - NEENAH FOUNDRY R-2569 FRAME & GRATE TYPE Q, (±0.6 SF OPEN AREA OR EQUAL), FOR DRAINS LOCATED IN AREAS THAT REQUIRE ADA ACCESSIBILITY;
   - NEENAH FOUNDRY R-2556 FRAME & GRATE TYPE G (±1.5 SF OPEN AREA OR EQUAL), FOR STRUCTURES USED AS OVERFLOW DEVICES.
6. ADJUSTING FRAMES AND COVERS TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
7. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   - JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL)
8. PIPE TO MANHOLE CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923.
   - FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
9. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE. PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS
10. PRECAST CONCRETE YARD / AREA DRAINS SHALL BE PHOENIX PRECAST PRODUCTS - 3' DIA CATCH BASIN (OR EQUAL).



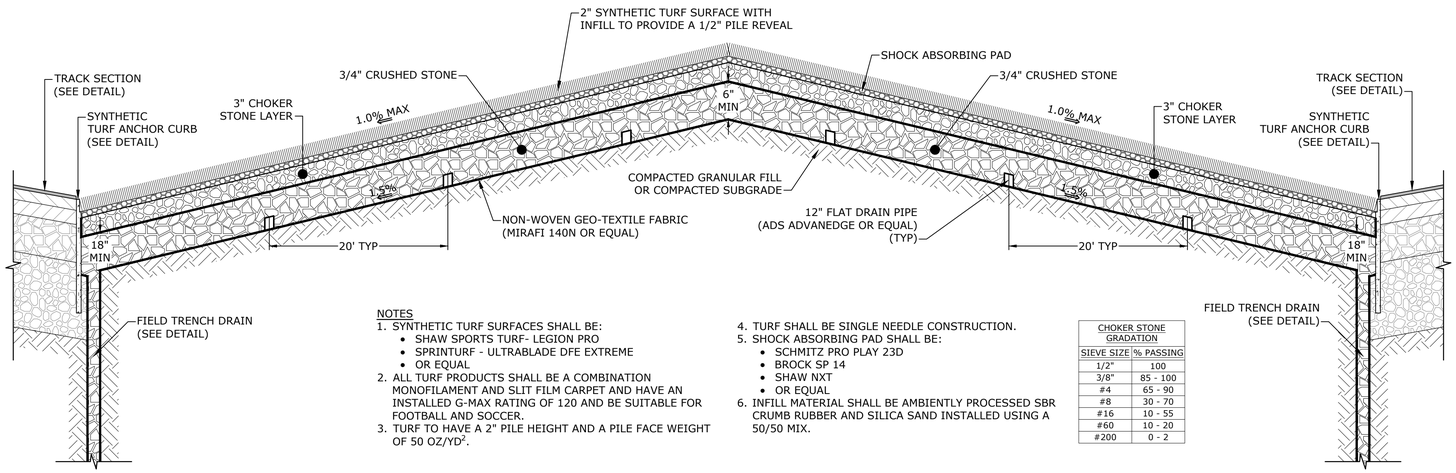
SECTION VIEW

TYPICAL PRECAST CONCRETE YARD / AREA DRAIN
NO SCALE



PLAN VIEW
AdvanEDGE HORIZONTAL FABRICATED WYE CONNECTION

TYPICAL FIELD TRENCH DRAIN
NO SCALE



NOTES
1. SYNTHETIC TURF SURFACES SHALL BE:
   - SHAW SPORTS TURF- LEGION PRO
   - SPRINTURF - ULTRABLADE DFE EXTREME
   - OR EQUAL
2. ALL TURF PRODUCTS SHALL BE A COMBINATION MONOFILAMENT AND SLIT FILM CARPET AND HAVE AN INSTALLED G-MAX RATING OF 120 AND BE SUITABLE FOR FOOTBALL AND SOCCER.
3. TURF TO HAVE A 2" PILE HEIGHT AND A PILE FACE WEIGHT OF 50 OZ/YD^2.
4. TURF SHALL BE SINGLE NEEDLE CONSTRUCTION.
5. SHOCK ABSORBING PAD SHALL BE:
   - SCHMITZ PRO PLAY 23D
   - BROCK SP 14
   - SHAW NXT
   - OR EQUAL
6. INFILL MATERIAL SHALL BE AMBIENTLY PROCESSED SBR CRUMB RUBBER AND SILICA SAND INSTALLED USING A 50/50 MIX.

CHOKER STONE GRADATION	
SIEVE SIZE	% PASSING
1/2"	100
3/8"	85 - 100
#4	65 - 90
#8	30 - 70
#16	10 - 55
#60	10 - 20
#200	0 - 2

TYPICAL SYNTHETIC MULTI-USE FIELD #1 SECTION
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE - NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER
8/5/2025

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
A	8/5/2025	Supplemental CUP

PROJECT NO:	D5085-0001
DATE:	8/5/2025
FILE:	D5085-0001_C-DETAILS.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	J. PERSECHINO

DETAILS SHEET

SCALE: AS SHOWN

C-502

Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig.Langton Last Saved: 8/5/2025 7:57 AM
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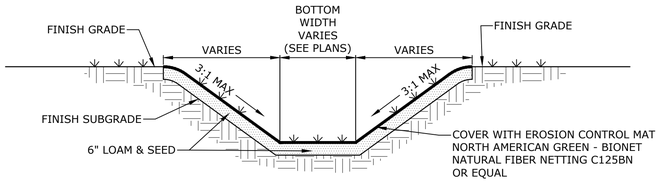
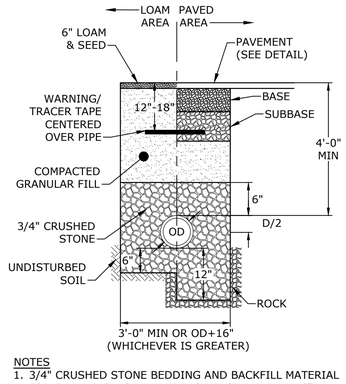


NOTES
1. THE FOUNDATION AREA OF THE WATERWAY SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. MATERIALS REMOVED SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OR PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA. THE WATERWAY SHALL BE FREE OF IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
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 WATERWAY. EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH FOR INSTALLATION.
5. VEGETATION SHALL BE ESTABLISHED IN THE SWALE PRIOR TO ALLOWING STORMWATER RUNOFF TO FLOW THROUGH THE SWALE.
6. MAINTENANCE OF THE VEGETATION IN THE GRASSED WATERWAY IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE WATERWAY. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP THE GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE WATERWAY.
7. THE WATERWAY SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE WATERWAY. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

GRASSED LINED SWALE
NO SCALE

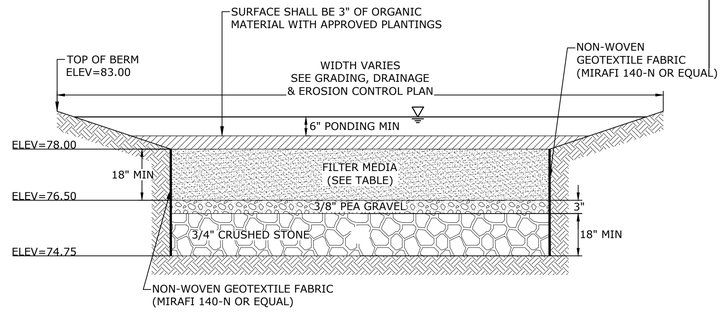


NOTES
1. 3/4" CRUSHED STONE BEDDING AND BACKFILL MATERIAL FOR FULL WIDTH OF THE TRENCH FROM MINIMUM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO MINIMUM OF 6" OVER THE TOP OF THE PIPE.
2. STORM DRAINS SHALL BE INSTALLED PER THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT. COORDINATE ALL INSTALLATIONS WITH THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT.

STORM DRAIN TRENCH
NO SCALE

RAIN GARDEN INSPECTION/MAINTENANCE REQUIREMENTS

INSPECTION / MAINTENANCE	FREQUENCY	ACTION
MONITOR TO ENSURE THAT RAIN GARDENS FUNCTION EFFECTIVELY AFTER STORMS	TWO (2) TIMES ANNUALLY AND AFTER ANY RAINFALL EVENT EXCEEDING 2.5" IN A 24-HR PERIOD	• TRASH AND DEBRIS TO BE REMOVED • ANY REQUIRED MAINTENANCE SHALL BE ADDRESSED
INSPECT VEGETATION	ANNUALLY	• INSPECT THE CONDITION OF ALL RAIN GARDEN VEGETATION • PRUNE BACK OVERGROWTH • REPLACE DEAD VEGETATION • REMOVE ANY INVASIVE SPECIES
INSPECT DRAWDOWN TIME: • THE SYSTEM SHALL DRAWDOWN WITHIN 48-HOURS FOLLOWING A RAINFALL EVENT.	ANNUALLY	• ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE THE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER



SECTION VIEW

FILTER MEDIA COMPOSITION:

COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL SIEVE #	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH	20-30	200	5 MAX

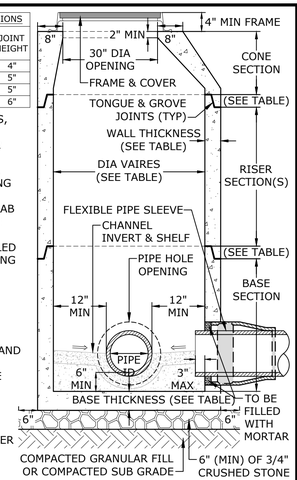
NOTES
1. BARK MULCH SHALL BE AGED A MINIMUM OF 12 MONTHS AND SHALL NOT FLOAT.
2. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND ELEVATIONS.
5. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33):

SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

RAIN GARDEN SECTION
NO SCALE

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12-IN^2/LF AND 0.12-IN^2 (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. FRAMES AND COVERS SHALL BE AS FOLLOWS:
   - PER THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT STANDARDS, FOR ALL MANHOLES WITHIN PUBLIC RIGHT OF WAYS OR EASEMENTS.
   - CAST IRON, DESIGNED FOR AASHTO H-20 LOADING, HAVING A 30" CLEAR OPENING, WITH THE WORD "DRAIN" IN A 3" LETTERING CAST INTO THE CENTER OF EACH COVER, FOR ALL MANHOLES WITHIN THE PROJECT SITE.
4. ADJUSTING FRAMES AND COVERS TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
5. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC (TYP). FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE.
6. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   - JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL).
5. PIPE TO MANHOLE CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923.
   - FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
6. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE. PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS.
7. MANHOLES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES WITHIN 3" OF HORIZONTAL SECTION JOINTS.
8. CHANNEL INVERT SHALL BE A SMOOTH CONTINUATION OF THE DRAIN LINE INVERT(S). ALL CHANNEL INVERTS AND SHELVES SHALL BE CONSTRUCTED PER THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT STANDARDS.

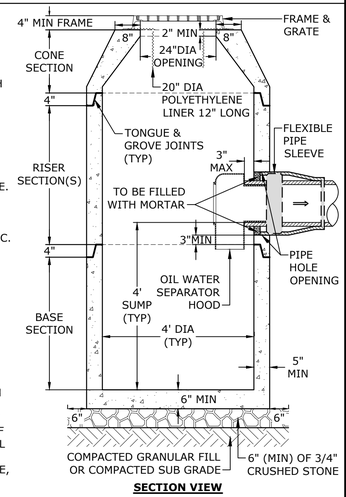
MANHOLE DIMENSIONS			
DIA	WALL & BASE THICKNESS		JOINT HEIGHT
	WALL	BASE	
4'	5"	6"	4"
5'	6"	8"	5"
6'	7"	8"	5"
8'	9"	10"	6"



SECTION VIEW

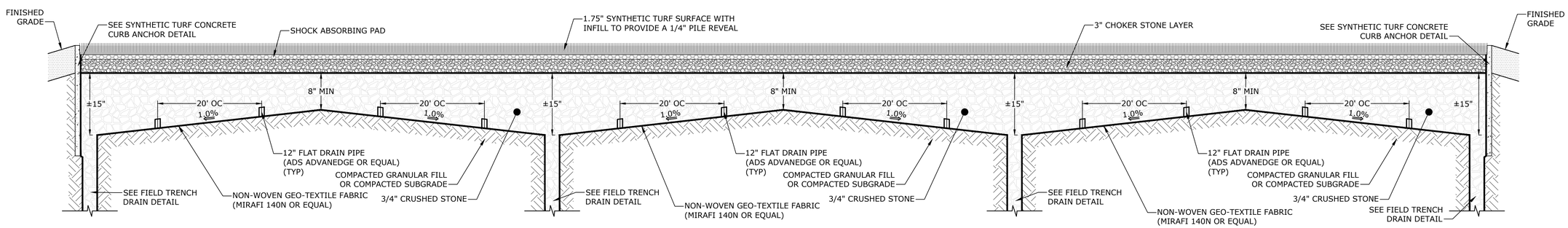
TYPICAL DRAIN MANHOLE
NO SCALE

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12-IN^2/LF AND 0.12-IN^2 (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. FRAME AND GRATES SHALL BE AS FOLLOWS:
   - PER THE TOWN/CITY OF _____, DEPARTMENT OF PUBLIC WORKS STANDARDS, FOR ALL CATCH BASINS WITHIN PUBLIC RIGHT OF WAYS OR EASEMENTS.
   - NHDOT TYPE "B" FRAME AND GRATE (NHDOT ITEM No. 604.72) (OR EQUAL), FOR ALL CATCH BASINS WITHIN THE PROJECT SITE.
4. ADJUSTING FRAMES AND GRATES TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
5. CONE SECTIONS MAY BE EITHER CONCENTRIC (TYP) OR ECCENTRIC. FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE.
6. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   - JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL).
7. PIPE TO CATCH BASIN CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923.
   - FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
8. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE (MAX 24" DIA PIPE FOR 4' DIA STRUCTURE). PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS.
9. CATCH BASINS WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES WITHIN 3" OF HORIZONTAL SECTION JOINTS.
10. OIL WATER SEPARATOR HOODS SHALL BE GROUND WATER RESCUE, INC. "THE ELIMINATOR" (OR EQUAL).



SECTION VIEW

TYPICAL DEEP SUMP CATCH BASIN
NO SCALE



NOTES
1. SYNTHETIC TURF SURFACES SHALL BE:
   - SHAW SPORTS TURF - B1K TRUHUP
   - OR EQUAL
2. ALL TURF PRODUCTS SHALL BE A COMBINATION MONOFILAMENT AND SLIT FILM CARPET AND HAVE AN INSTALLED G-MAX RATING OF 120 AND BE SUITABLE FOR SOCCER AND BASEBALL.
3. TURF TO HAVE A 1.75" PILE HEIGHT AND A PILE FACE WEIGHT OF 52 OZ/YD^2.
4. TURF SHALL BE SINGLE NEEDLE CONSTRUCTION.
5. SHOCK ABSORBING PAD SHALL BE:
   - SCHMITZ PRO PLAY 23D
   - BROCK SP 14
   - SHAW NXT
   - OR EQUAL
6. INFILL MATERIAL SHALL BE AMBIENTLY PROCESSED SBR CRUMB RUBBER AND SILICA SAND INSTALLED USING A 50/50 MIX.

CHOKER STONE GRADATION	
SIEVE SIZE	% PASSING
1/2"	100
3/8"	85 - 100
#4	65 - 90
#8	30 - 70
#16	10 - 55
#60	10 - 20
#200	0 - 2

TYPICAL SYNTHETIC MULTI-USE FIELD #2 SECTION ALLTERNATE
NO SCALE

Tighe&Bond

NEIL A. HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
8/5/2025

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
A	8/5/2025	Supplemental CUP

PROJECT NO:	D5085-0001
DATE:	8/5/2025
FILE:	D5085-0001_C-DETAILS.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	J. PERSECHINO

DETAILS SHEET

SCALE: AS SHOWN

C-503

Plot Date: Tuesday, August 05, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig M. Langton Save Time: 8/5/2025 2:03 PM By: Craig M. Langton
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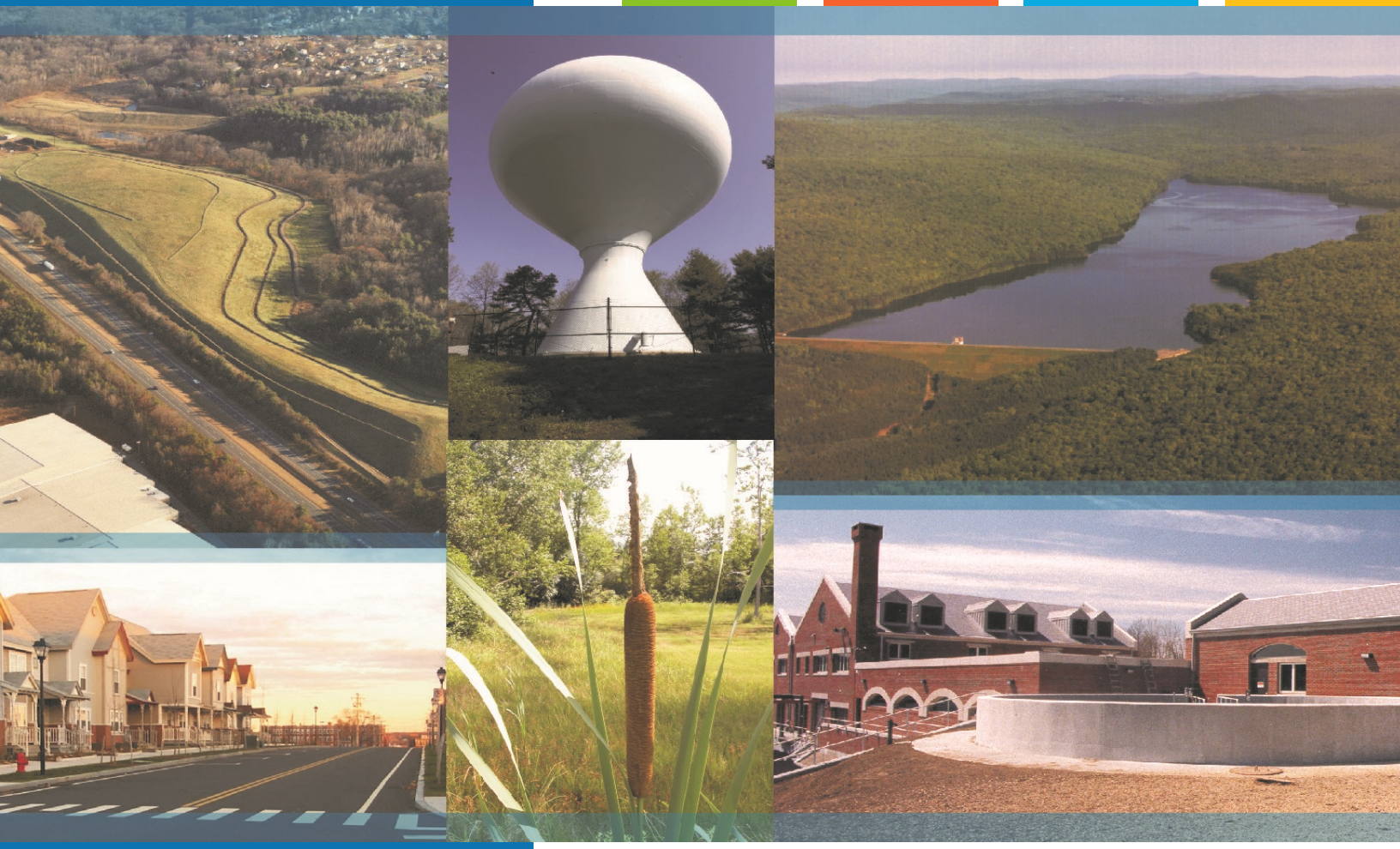
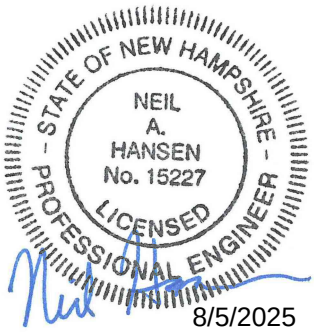


Dover High School Athletics Facility Project
25 Alumni Drive Dover, New Hampshire

CUP DRAINAGE ANALYSIS

Dover School District, SAU #11

August 5, 2025



8/5/2025

Tighe&Bond

100% Recyclable

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1.5.3 Treatment Methods for Protecting Water Quality.....1-7

Appendices

A Extreme Precipitation Tables
B Site Specific Soil Survey Reports (from prior AoT permit for the site)
C Infiltration Rate for Native Materials (from prior AoT permit for the site)
D Historic Boring Data (from prior AoT permit for the site)
E NRCS Web Soil Survey Report
F NHDES – BMP Worksheets
G Rip Rap Sizing Calculations

J:\D\D5085 Dover School District\0001 High School Athletic Complex\Reports\Applications\City of Dover\CUP App\Supplemental Docs\CUP Drainage Analysis.docx

Section 1 Drainage Analysis

The proposed project includes the renovation and replacement of Dunway Football Field, the existing rubberized asphalt running track, field event spaces (LJ, TJ, PV, HJ and throws), the existing baseball field, the home and away grandstands and the light towers. Several amenities are proposed, as well, including bathrooms, concessions, team rooms, a press box, storage, scoreboards, sound system, and equipment. There is additional parking proposed as well to provide accessible parking spaces and access for team busses. Lastly, landscape/site improvements including tree plantings in the stadium entry plaza area are proposed including special paving, fencing, and seating.

The site is a 78-acre parcel of land located at 25 Alumni Drive in Dover, New Hampshire. The site is currently developed with an approximately 178,000 square-foot (sf) high school and an approximately 9,000 sf Animal Sciences Building on the eastern portion of the site, and an approximately 2,000 sf maintenance building on the northeastern portion of the site. The western portion of the site is developed as athletic fields, including a football and baseball field, a rubberized running track surrounding the football field, batting cages, prefabricated metal storage buildings, scoreboards, bleachers, and associated parking areas. The area northwest of the existing athletic fields is an undeveloped woodland, surrounded by residential structures.

The proposed Stormwater Management System has been designed in accordance with the requirements of the New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain (AoT) rules and regulations (Env-Wq 1500). The system includes deep sump catch basins equipped with oil separator hoods and a sediment forebay to provide pretreatment of stormwater runoff. In addition, a Low Impact Development (LID) Bioretention System (Rain Garden) is incorporated into the design to provide treatment and infiltration. This system has been sized to meet both the Water Quality Volume (WQV) and Groundwater Recharge Volume (GRV) requirements set forth under the AoT regulations.

1.1 Calculation Methods

The design storms analyzed in this study are the 2-year, 10-year, 25-year, and 50-year, 24-hour Type III duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. A Type III storm pattern was used in the model. The rainfall data for these storm events was obtained from the data published by the Northeast Regional Climate Center (NRCC) at Cornell University, with an additional 15% added factor of safety as required by Env-Wq 1503.08(l) and shown in Table 1.1.

TABLE 1.1 – EXTREME PRECIPITATION ESTIMATES (NRCC)

YEAR	24-hr Estimate (inches)	+ 15% (inches)
2	3.15	3.62
10	4.75	5.46
25	6.01	6.91
50	7.18	8.26

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow, and channel flow. Runoff curve numbers were calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.

2. New Hampshire Stormwater Management Manual, current edition.

3. "Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

1.2 Pre-Development Conditions

To analyze the Pre-Development condition, the site has been modeled a single catchment area (PRE-1) with a distinct point of analysis, which is an unnamed wetland adjacent to the Bellamy River. A visual representation of the pre-development watershed routing model is depicted on the enclosed plan entitled "Pre-Development Watershed Plan", Sheet C-801.

1.2.1 Pre-Development Watershed Plan

LEGEND

PRE-DEVELOPMENT WATERSHED BOUNDARY

SITE SPECIFIC SOIL SURVEY BOUNDARIES

LONGEST FLOW PATH

PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION

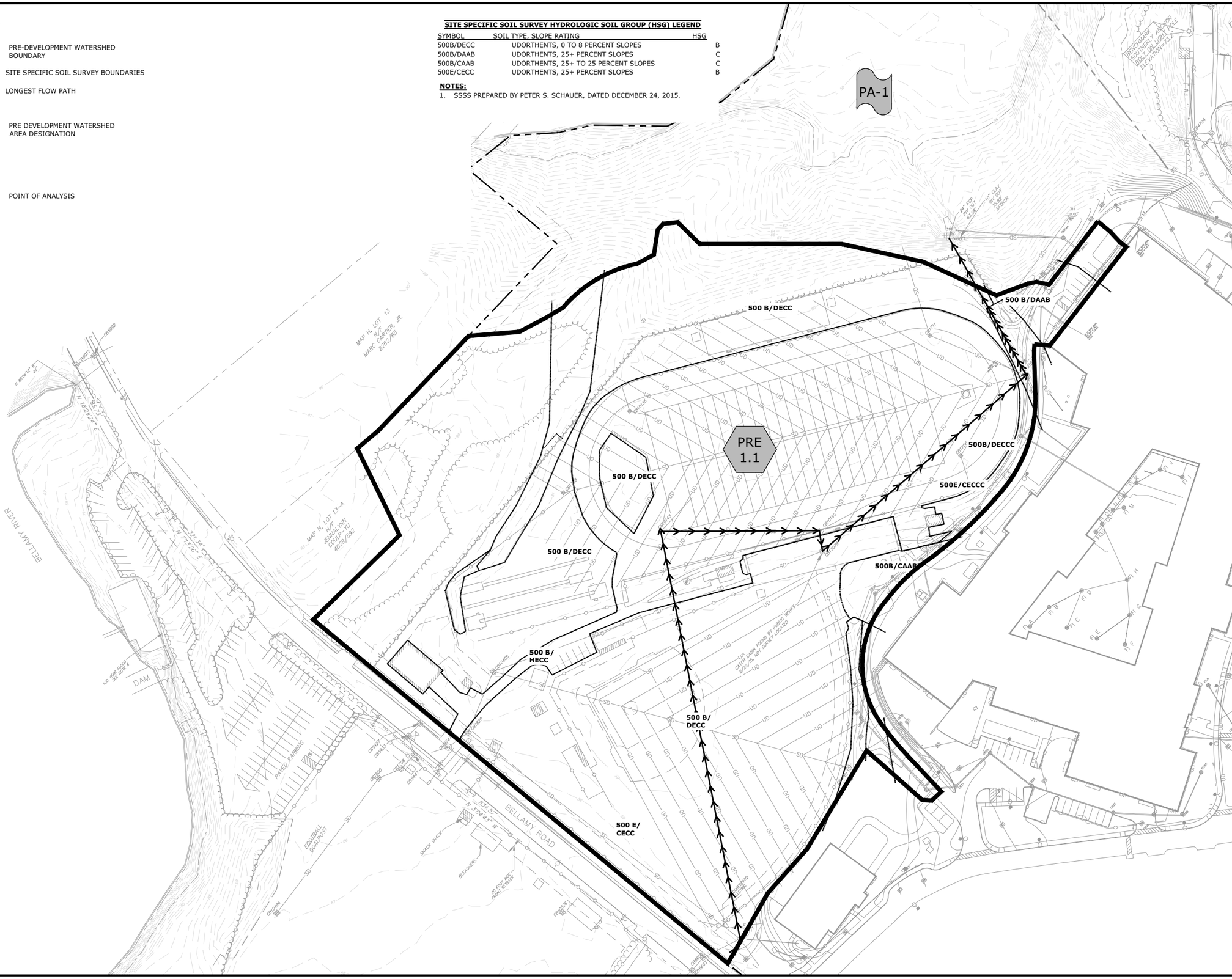
PA-1 — POINT OF ANALYSIS

SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
500B/DECC	UDORTHENTS, 0 TO 8 PERCENT SLOPES	B
500B/DAAB	UDORTHENTS, 25+ PERCENT SLOPES	C
500B/CAAB	UDORTHENTS, 25+ TO 25 PERCENT SLOPES	C
500E/CECC	UDORTHENTS, 25+ PERCENT SLOPES	B

NOTES:

1. SSSS PREPARED BY PETER S. SCHAUER, DATED DECEMBER 24, 2015.



Tighe&Bond

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
A	8/5/2025	Supplemental CUP

PROJECT NO:	D5085-0001
DATE:	8/5/2025
FILE:	D5085-0001_C-HYDRO.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	P. CRIMMINS

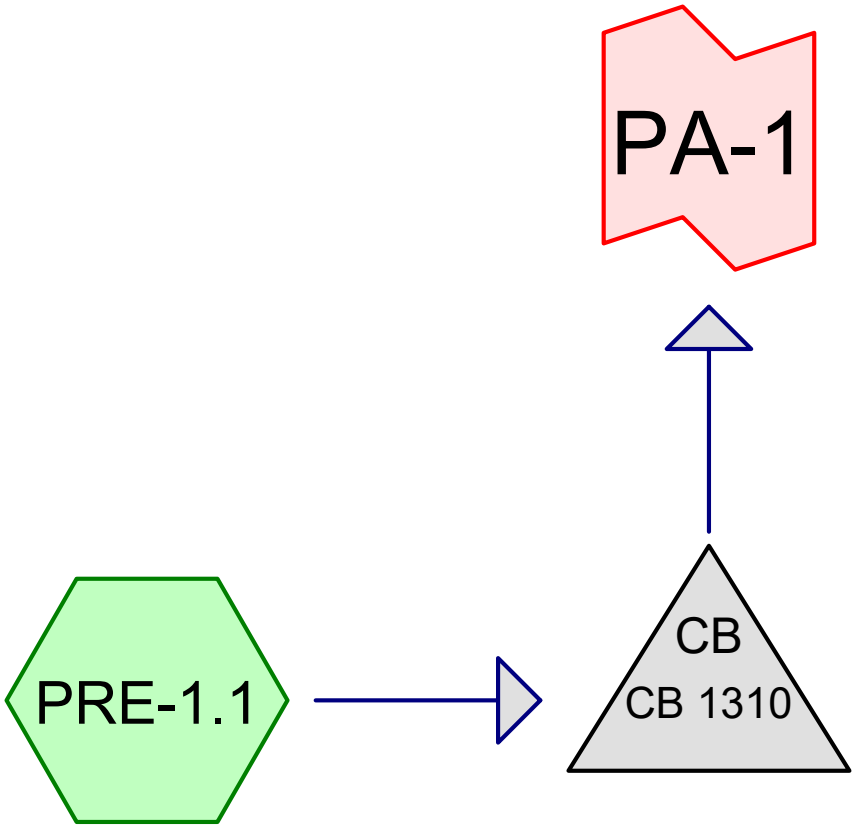
PRE-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

Plot Date: Monday, August 04, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig M. Langton Last Saved: 8/4/2025 3:21 PM By: Craig M. Langton
T&B File Location: J:\D\D5085 Dover School District\D001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Hydro.dwg Layout Tab: PRE WSHED

1.2.2 Pre-Development Calculation



Subcat Reach Pond Link

Routing Diagram for D5085-0001_PRE
Prepared by Tighe & Bond, Printed 8/5/2025
HydroCAD® 10.20-4c s/n 03437 © 2024 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.208	61	>75% Grass cover, Good, HSG B (PRE-1.1)
4.533	74	>75% Grass cover, Good, HSG C (PRE-1.1)
4.249	74	>75% Grass cover, Good, HSG C (Field Area) (PRE-1.1)
1.728	98	Paved parking, HSG C (PRE-1.1)
1.547	70	Woods, Good, HSG C (PRE-1.1)
12.265	**77**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.208	HSG B	PRE-1.1
12.057	HSG C	PRE-1.1
0.000	HSG D	
0.000	Other	
12.265		**TOTAL AREA**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.1: Runoff Area=534,276 sf 14.09% Impervious Runoff Depth>1.39"
Flow Length=1,274' Tc=5.1 min CN=77 Runoff=33.45 cfs 1.420 af

Pond CB 1310: Peak Elev=73.58' Inflow=33.45 cfs 1.420 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=33.45 cfs 1.420 af

Link PA-1: Inflow=33.45 cfs 1.420 af
Primary=33.45 cfs 1.420 af

Total Runoff Area = 12.265 ac Runoff Volume = 1.420 af Average Runoff Depth = 1.39"
85.91% Pervious = 10.537 ac 14.09% Impervious = 1.728 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.1: Runoff Area=534,276 sf 14.09% Impervious Runoff Depth>2.79"
Flow Length=1,274' Tc=5.1 min CN=77 Runoff=65.76 cfs 2.848 af

Pond CB 1310: Peak Elev=90.78' Inflow=65.76 cfs 2.848 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=65.76 cfs 2.848 af

Link PA-1: Inflow=65.76 cfs 2.848 af
Primary=65.76 cfs 2.848 af

Total Runoff Area = 12.265 ac Runoff Volume = 2.848 af Average Runoff Depth = 2.79"
85.91% Pervious = 10.537 ac 14.09% Impervious = 1.728 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.1: Runoff Area=534,276 sf 14.09% Impervious Runoff Depth>3.98"
Flow Length=1,274' Tc=5.1 min CN=77 Runoff=92.40 cfs 4.073 af

Pond CB 1310: Peak Elev=115.00' Inflow=92.40 cfs 4.073 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=92.40 cfs 4.073 af

Link PA-1: Inflow=92.40 cfs 4.073 af
Primary=92.40 cfs 4.073 af

Total Runoff Area = 12.265 ac Runoff Volume = 4.073 af Average Runoff Depth = 3.98"
85.91% Pervious = 10.537 ac 14.09% Impervious = 1.728 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.1: Runoff Area=534,276 sf 14.09% Impervious Runoff Depth>5.14"
Flow Length=1,274' Tc=5.1 min CN=77 Runoff=117.51 cfs 5.258 af

Pond CB 1310: Peak Elev=145.31' Inflow=117.51 cfs 5.258 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=117.51 cfs 5.258 af

Link PA-1: Inflow=117.51 cfs 5.258 af
Primary=117.51 cfs 5.258 af

Total Runoff Area = 12.265 ac Runoff Volume = 5.258 af Average Runoff Depth = 5.14"
85.91% Pervious = 10.537 ac 14.09% Impervious = 1.728 ac

1.3 Post-Development Conditions

To analyze the Post-Development condition, the site has been modeled using the same point of analysis as the pre-development condition. However, in order to properly size and design the proposed BMPs and outlet structures need for the required retention, treatment, and infiltration of stormwater runoff, the site was divided into seven (sub-catchment areas. A visual representation of the post-development watershed routing model is depicted on the plan entitled "Post-Development Watershed Plan", Sheet C-802.

1.3.1 Post-Development Watershed Plan

LEGEND

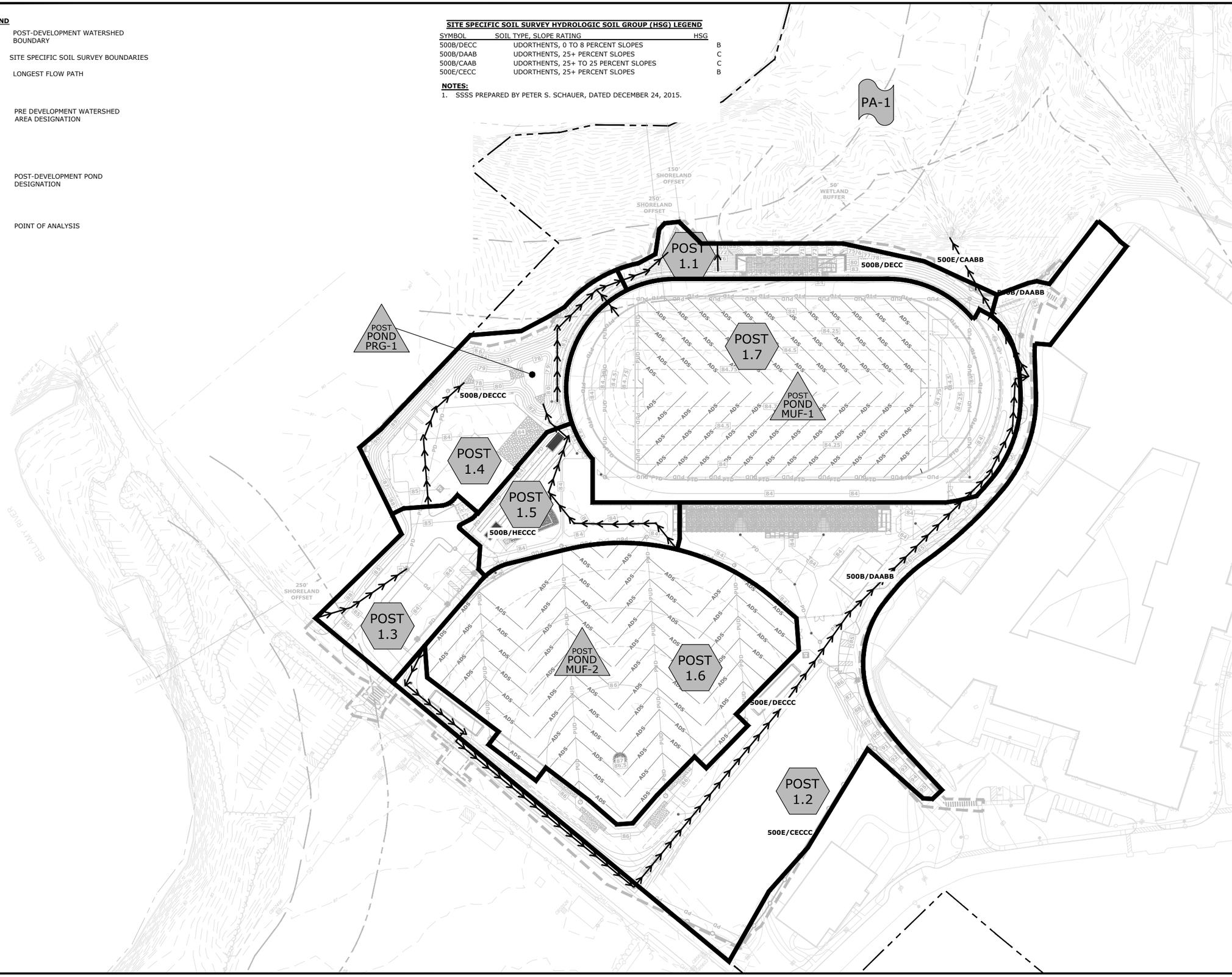
- POST-DEVELOPMENT WATERSHED BOUNDARY
- SITE SPECIFIC SOIL SURVEY BOUNDARIES
- LONGEST FLOW PATH
- POST 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS

SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
500B/DECC	UDORTHENTS, 0 TO 8 PERCENT SLOPES	B
500B/DAAB	UDORTHENTS, 25+ PERCENT SLOPES	C
500B/CAAB	UDORTHENTS, 25+ TO 25 PERCENT SLOPES	C
500E/CECC	UDORTHENTS, 25+ PERCENT SLOPES	B

NOTES:

1. SSSS PREPARED BY PETER S. SCHAUER, DATED DECEMBER 24, 2015.



SCALE IN FEET
0 60' 120'
GRAPHIC SCALE

Tighe&Bond

Dover High School Athletic Facility Project

Dover School District, SAU #11

25 Alumni Drive
Dover, New Hampshire

MARK	DATE	DESCRIPTION
A	8/5/2025	Supplemental CUP

PROJECT NO:	D5085-0001
DATE:	8/5/2025
FILE:	D5085-0001_C-HYDRO.DWG
DRAWN BY:	C. LANGTON
DESIGNED BY:	C. LANGTON
CHECKED BY:	N. HANSEN
APPROVED BY:	P. CRIMMINS

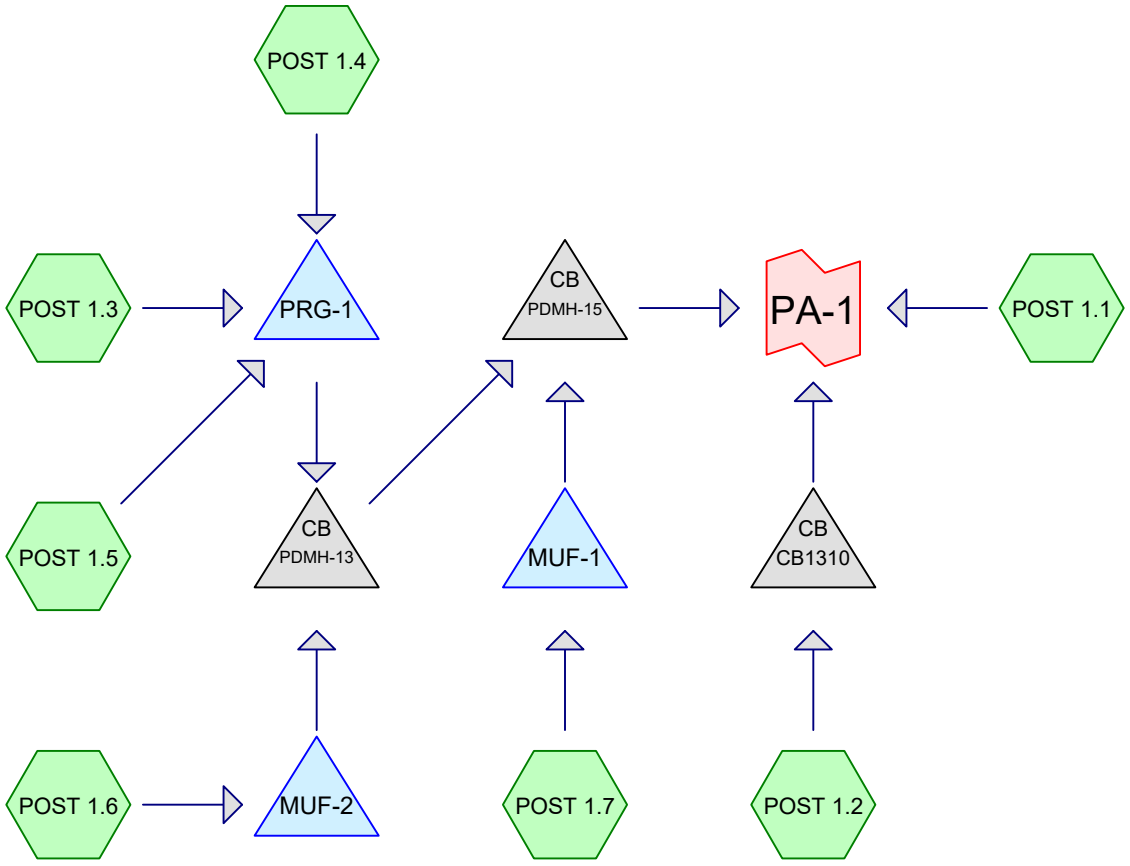
POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-802

Plot Date: Monday, August 04, 2025 Plotted By: Craig M. Langton
Last Saved By: Craig M. Langton Last Saved: 8/4/2025 1:21 PM By: Craig M. Langton
T&B File Location: J:\D\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-Hydro.dwg Layout Tab: POST WSHED

1.3.2 Post-Development Calculation



Subcat Reach Pond Link

Routing Diagram for D5085-0001_POST
Prepared by Tighe & Bond, Printed 8/5/2025
HydroCAD® 10.20-4c s/n 03437 © 2024 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.091	61	>75% Grass cover, Good, HSG B (POST 1.2)
3.185	74	>75% Grass cover, Good, HSG C (POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7)
4.668	98	Field Surface (POST 1.6, POST 1.7)
4.322	98	Paved parking, HSG C (POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.7)
12.265	**91**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.091	HSG B	POST 1.2
7.507	HSG C	POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7
0.000	HSG D	
4.668	Other	POST 1.6, POST 1.7
12.265		**TOTAL AREA**

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.1: Runoff Area=20,444 sf 35.57% Impervious Runoff Depth=1.96"
Flow Length=36' Slope=0.5000 '/' Tc=4.0 min CN=83 Runoff=1.13 cfs 0.077 af

SubcatchmentPOST 1.2: Runoff Area=145,187 sf 46.76% Impervious Runoff Depth=2.12"
Flow Length=1,517' Tc=11.4 min CN=85 Runoff=6.89 cfs 0.589 af

SubcatchmentPOST 1.3: Runoff Area=26,853 sf 67.90% Impervious Runoff Depth=2.56"
Flow Length=443' Tc=4.7 min CN=90 Runoff=1.85 cfs 0.132 af

SubcatchmentPOST 1.4: Runoff Area=46,025 sf 39.45% Impervious Runoff Depth=1.96"
Flow Length=150' Tc=4.0 min CN=83 Runoff=2.55 cfs 0.173 af

SubcatchmentPOST 1.5: Runoff Area=25,949 sf 57.29% Impervious Runoff Depth=2.38"
Flow Length=195' Tc=4.0 min CN=88 Runoff=1.73 cfs 0.118 af

SubcatchmentPOST 1.6: Runoff Area=114,435 sf 99.20% Impervious Runoff Depth=3.39"
Tc=4.0 min CN=98 Runoff=9.72 cfs 0.741 af

SubcatchmentPOST 1.7: Runoff Area=155,388 sf 97.60% Impervious Runoff Depth=3.27"
Tc=4.0 min CN=97 Runoff=13.03 cfs 0.973 af

Pond CB1310: Peak Elev=68.87' Inflow=6.89 cfs 0.589 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=6.89 cfs 0.589 af

Pond MUF-1: Peak Elev=79.44' Storage=6,170 cf Inflow=13.03 cfs 0.973 af
Discarded=0.98 cfs 0.554 af Primary=7.82 cfs 0.419 af Outflow=8.79 cfs 0.973 af

Pond MUF-2: Peak Elev=80.58' Storage=5,523 cf Inflow=9.72 cfs 0.741 af
Discarded=0.81 cfs 0.456 af Primary=5.71 cfs 0.285 af Outflow=6.51 cfs 0.741 af

Pond PDMH-13: Peak Elev=76.26' Inflow=5.71 cfs 0.285 af
30.0" Round Culvert n=0.013 L=172.0' S=0.0055 '/' Outflow=5.71 cfs 0.285 af

Pond PDMH-15: Peak Elev=75.57' Inflow=13.52 cfs 0.704 af
36.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=13.52 cfs 0.704 af

Pond PRG-1: Peak Elev=80.19' Storage=8,315 cf Inflow=6.13 cfs 0.422 af
Discarded=0.77 cfs 0.405 af Primary=0.00 cfs 0.000 af Outflow=0.77 cfs 0.405 af

Link PA-1: Inflow=21.08 cfs 1.370 af
Primary=21.08 cfs 1.370 af

Total Runoff Area = 12.265 ac Runoff Volume = 2.802 af Average Runoff Depth = 2.74"
26.71% Pervious = 3.276 ac 73.29% Impervious = 8.990 ac

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.1: Runoff Area=20,444 sf 35.57% Impervious Runoff Depth=3.59"
Flow Length=36' Slope=0.5000 '/' Tc=4.0 min CN=83 Runoff=2.06 cfs 0.141 af

SubcatchmentPOST 1.2: Runoff Area=145,187 sf 46.76% Impervious Runoff Depth=3.80"
Flow Length=1,517' Tc=11.4 min CN=85 Runoff=12.18 cfs 1.054 af

SubcatchmentPOST 1.3: Runoff Area=26,853 sf 67.90% Impervious Runoff Depth=4.32"
Flow Length=443' Tc=4.7 min CN=90 Runoff=3.05 cfs 0.222 af

SubcatchmentPOST 1.4: Runoff Area=46,025 sf 39.45% Impervious Runoff Depth=3.59"
Flow Length=150' Tc=4.0 min CN=83 Runoff=4.64 cfs 0.316 af

SubcatchmentPOST 1.5: Runoff Area=25,949 sf 57.29% Impervious Runoff Depth=4.11"
Flow Length=195' Tc=4.0 min CN=88 Runoff=2.93 cfs 0.204 af

SubcatchmentPOST 1.6: Runoff Area=114,435 sf 99.20% Impervious Runoff Depth=5.22"
Tc=4.0 min CN=98 Runoff=14.74 cfs 1.143 af

SubcatchmentPOST 1.7: Runoff Area=155,388 sf 97.60% Impervious Runoff Depth=5.11"
Tc=4.0 min CN=97 Runoff=19.90 cfs 1.518 af

Pond CB1310: Peak Elev=69.36' Inflow=12.18 cfs 1.054 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=12.18 cfs 1.054 af

Pond MUF-1: Peak Elev=80.70' Storage=8,498 cf Inflow=19.90 cfs 1.518 af
Discarded=1.26 cfs 0.722 af Primary=13.95 cfs 0.795 af Outflow=15.21 cfs 1.518 af

Pond MUF-2: Peak Elev=81.31' Storage=6,628 cf Inflow=14.74 cfs 1.143 af
Discarded=0.96 cfs 0.594 af Primary=11.37 cfs 0.549 af Outflow=12.33 cfs 1.143 af

Pond PDMH-13: Peak Elev=76.91' Inflow=11.37 cfs 0.549 af
30.0" Round Culvert n=0.013 L=172.0' S=0.0055 '/' Outflow=11.37 cfs 0.549 af

Pond PDMH-15: Peak Elev=76.30' Inflow=25.27 cfs 1.344 af
36.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=25.27 cfs 1.344 af

Pond PRG-1: Peak Elev=81.56' Storage=15,643 cf Inflow=10.61 cfs 0.742 af
Discarded=0.89 cfs 0.725 af Primary=0.00 cfs 0.000 af Outflow=0.89 cfs 0.725 af

Link PA-1: Inflow=38.40 cfs 2.539 af
Primary=38.40 cfs 2.539 af

Total Runoff Area = 12.265 ac Runoff Volume = 4.598 af Average Runoff Depth = 4.50"
26.71% Pervious = 3.276 ac 73.29% Impervious = 8.990 ac

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.1: Runoff Area=20,444 sf 35.57% Impervious Runoff Depth=4.94"
Flow Length=36' Slope=0.5000 '/' Tc=4.0 min CN=83 Runoff=2.80 cfs 0.193 af

SubcatchmentPOST 1.2: Runoff Area=145,187 sf 46.76% Impervious Runoff Depth=5.17"
Flow Length=1,517' Tc=11.4 min CN=85 Runoff=16.37 cfs 1.435 af

SubcatchmentPOST 1.3: Runoff Area=26,853 sf 67.90% Impervious Runoff Depth=5.73"
Flow Length=443' Tc=4.7 min CN=90 Runoff=3.99 cfs 0.295 af

SubcatchmentPOST 1.4: Runoff Area=46,025 sf 39.45% Impervious Runoff Depth=4.94"
Flow Length=150' Tc=4.0 min CN=83 Runoff=6.31 cfs 0.435 af

SubcatchmentPOST 1.5: Runoff Area=25,949 sf 57.29% Impervious Runoff Depth=5.51"
Flow Length=195' Tc=4.0 min CN=88 Runoff=3.86 cfs 0.273 af

SubcatchmentPOST 1.6: Runoff Area=114,435 sf 99.20% Impervious Runoff Depth=6.67"
Tc=4.0 min CN=98 Runoff=18.69 cfs 1.460 af

SubcatchmentPOST 1.7: Runoff Area=155,388 sf 97.60% Impervious Runoff Depth=6.55"
Tc=4.0 min CN=97 Runoff=25.28 cfs 1.948 af

Pond CB1310: Peak Elev=69.88' Inflow=16.37 cfs 1.435 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=16.37 cfs 1.435 af

Pond MUF-1: Peak Elev=81.23' Storage=9,467 cf Inflow=25.28 cfs 1.948 af
Discarded=1.38 cfs 0.827 af Primary=20.26 cfs 1.121 af Outflow=21.64 cfs 1.948 af

Pond MUF-2: Peak Elev=81.85' Storage=7,460 cf Inflow=18.69 cfs 1.460 af
Discarded=1.08 cfs 0.682 af Primary=14.57 cfs 0.778 af Outflow=15.65 cfs 1.460 af

Pond PDMH-13: Peak Elev=77.40' Inflow=14.57 cfs 0.864 af
30.0" Round Culvert n=0.013 L=172.0' S=0.0055 '/' Outflow=14.57 cfs 0.864 af

Pond PDMH-15: Peak Elev=76.85' Inflow=34.83 cfs 1.985 af
36.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=34.83 cfs 1.985 af

Pond PRG-1: Peak Elev=82.21' Storage=20,024 cf Inflow=14.15 cfs 1.003 af
Discarded=0.96 cfs 0.901 af Primary=2.02 cfs 0.085 af Outflow=2.98 cfs 0.986 af

Link PA-1: Inflow=52.31 cfs 3.613 af
Primary=52.31 cfs 3.613 af

Total Runoff Area = 12.265 ac Runoff Volume = 6.040 af Average Runoff Depth = 5.91"
26.71% Pervious = 3.276 ac 73.29% Impervious = 8.990 ac

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST 1.1: Runoff Area=20,444 sf 35.57% Impervious Runoff Depth=6.23"
Flow Length=36' Slope=0.5000 '/' Tc=4.0 min CN=83 Runoff=3.49 cfs 0.244 af

SubcatchmentPOST 1.2: Runoff Area=145,187 sf 46.76% Impervious Runoff Depth=6.46"
Flow Length=1,517' Tc=11.4 min CN=85 Runoff=20.27 cfs 1.795 af

SubcatchmentPOST 1.3: Runoff Area=26,853 sf 67.90% Impervious Runoff Depth=7.06"
Flow Length=443' Tc=4.7 min CN=90 Runoff=4.85 cfs 0.363 af

SubcatchmentPOST 1.4: Runoff Area=46,025 sf 39.45% Impervious Runoff Depth=6.23"
Flow Length=150' Tc=4.0 min CN=83 Runoff=7.86 cfs 0.548 af

SubcatchmentPOST 1.5: Runoff Area=25,949 sf 57.29% Impervious Runoff Depth=6.82"
Flow Length=195' Tc=4.0 min CN=88 Runoff=4.73 cfs 0.339 af

SubcatchmentPOST 1.6: Runoff Area=114,435 sf 99.20% Impervious Runoff Depth=8.02"
Tc=4.0 min CN=98 Runoff=22.36 cfs 1.756 af

SubcatchmentPOST 1.7: Runoff Area=155,388 sf 97.60% Impervious Runoff Depth=7.90"
Tc=4.0 min CN=97 Runoff=30.28 cfs 2.348 af

Pond CB1310: Peak Elev=70.50' Inflow=20.27 cfs 1.795 af
24.0" Round Culvert n=0.012 L=203.0' S=0.0185 '/' Outflow=20.27 cfs 1.795 af

Pond MUF-1: Peak Elev=81.63' Storage=10,198 cf Inflow=30.28 cfs 2.348 af
Discarded=1.47 cfs 0.910 af Primary=26.12 cfs 1.439 af Outflow=27.58 cfs 2.349 af

Pond MUF-2: Peak Elev=82.16' Storage=7,931 cf Inflow=22.36 cfs 1.756 af
Discarded=1.14 cfs 0.752 af Primary=19.66 cfs 1.004 af Outflow=20.80 cfs 1.756 af

Pond PDMH-13: Peak Elev=78.16' Inflow=19.79 cfs 1.252 af
30.0" Round Culvert n=0.013 L=172.0' S=0.0055 '/' Outflow=19.79 cfs 1.252 af

Pond PDMH-15: Peak Elev=77.55' Inflow=45.81 cfs 2.691 af
36.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=45.81 cfs 2.691 af

Pond PRG-1: Peak Elev=82.42' Storage=21,529 cf Inflow=17.43 cfs 1.250 af
Discarded=0.98 cfs 0.985 af Primary=5.57 cfs 0.248 af Outflow=6.55 cfs 1.233 af

Link PA-1: Inflow=67.29 cfs 4.730 af
Primary=67.29 cfs 4.730 af

Total Runoff Area = 12.265 ac Runoff Volume = 7.393 af Average Runoff Depth = 7.23"
26.71% Pervious = 3.276 ac 73.29% Impervious = 8.990 ac

1.4 Peak Rate Comparisons

The following table summarizes and compares the pre- and post-development peak runoff rates from the 2-year, 10-year, 25-year, and 50-year storm events at the analysis.

Table 1.4.1 – Comparison of Pre- and Post-Development Flows (CFS)

Point of Analysis	2-Year Storm	10-Year Storm	25-Year Storm	50-Year Storm
Pre-Development Watershed (PA-1)	33.45	65.76	92.40	117.51
Post-Development Watershed (PA-1)	21.08	38.40	52.31	67.29

Table 1.4.2 – Comparison of Pre- and Post-Development Volumes (acre-feet)

Point of Analysis	2-Year Storm	10-Year Storm	25-Year Storm	50-Year Storm
Pre-Development Watershed (PA-1)	1.420	2.848	4.073	5.258
Post-Development Watershed (PA-1)	1.370	2.539	3.613	4.730

As shown in Table 1.4.1 and 1.4.2 the Post-Development flows and volumes do not increase from the Pre-Development conditions.

1.5 Mitigation Description

1.5.1 Mitigation Calculations

The proposed project area has been evaluated to treat the required water quality volume (WQV) per the requirements of Env-Wq 1500. These calculations have been provided in appendices of this analysis.

1.5.2 Pre-Treatment Methods for Protecting Water Quality

Pre-treatment methods for protecting water quality on this site include deep sump catch basins equipped with oil separator hoods and a sediment forebay.

Table 1.5 – Pollutant Removal Efficiencies

BMP	Total Suspended Solids	Total Phosphorus	Total Nitrogen
Deep Sump Catch Basin w/Hood[1]	15%	5%	5%
Sedimentation Forebay[2]	25%	N/A	N/A

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix B.

2. Massachusetts Stormwater Handbook Vol 2, Ch 2, Stormwater Best Management Practices.

1.5.3 Treatment Methods for Protecting Water Quality

Stormwater runoff on-site that requires treatment is directed to the proposed Bioretention System (Rain Garden)

Table 1.5.1 below, shows design pollutant removal efficiency for the proposed Rain Garden.

Table 1.5.1 – Pollutant Removal Efficiencies

BMP	Total Suspended Solids	Total Phosphorus	Total Nitrogen
Rain Garden[1]	90%	65%	60%

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix B.

APPENDIX A

Extreme Precipitation Tables

Northeast Regional Climate Center

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

Metadata for Point	
Smoothing	Yes
State	New Hampshire
Location	New Hampshire, United States
Latitude	43.178 degrees North
Longitude	70.888 degrees West
Elevation	20 feet
Date/Time	Tue Jul 15 2025 10:42:32 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.03	**1yr**	0.70	0.98	1.20	1.54	2.00	2.60	2.86	**1yr**	2.30	2.75	3.15	3.88	4.45	**1yr**
2yr	0.32	0.49	0.61	0.81	1.01	1.29	**2yr**	0.88	1.17	1.50	1.91	2.45	3.15	3.50	**2yr**	2.78	3.36	3.86	4.59	5.22	**2yr**
5yr	0.37	0.57	0.72	0.96	1.23	1.58	**5yr**	1.06	1.44	1.85	2.38	3.07	3.98	4.48	**5yr**	3.52	4.31	4.93	5.80	6.56	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.85	**10yr**	1.22	1.69	2.18	2.82	3.66	4.75	5.41	**10yr**	4.20	5.20	5.93	6.93	7.79	**10yr**
25yr	0.46	0.74	0.94	1.29	1.72	2.27	**25yr**	1.48	2.09	2.69	3.52	4.61	6.01	6.93	**25yr**	5.32	6.67	7.59	8.76	9.79	**25yr**
50yr	0.52	0.83	1.06	1.48	2.00	2.66	**50yr**	1.72	2.46	3.18	4.18	5.49	7.18	8.38	**50yr**	6.35	8.06	9.14	10.47	11.65	**50yr**
100yr	0.58	0.94	1.20	1.70	2.32	3.12	**100yr**	2.00	2.89	3.74	4.95	6.53	8.59	10.12	**100yr**	7.60	9.73	11.02	12.52	13.86	**100yr**
200yr	0.64	1.05	1.36	1.95	2.69	3.67	**200yr**	2.32	3.40	4.42	5.89	7.79	10.27	12.24	**200yr**	9.09	11.77	13.28	14.98	16.50	**200yr**
500yr	0.75	1.24	1.62	2.35	3.29	4.53	**500yr**	2.84	4.21	5.49	7.37	9.82	13.02	15.73	**500yr**	11.53	15.12	17.02	18.99	20.79	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.60	0.74	0.90	**1yr**	0.64	0.88	0.91	1.26	1.57	2.10	2.47	**1yr**	1.86	2.37	2.89	3.33	4.02	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.18	**2yr**	0.86	1.16	1.36	1.83	2.36	3.04	3.39	**2yr**	2.69	3.26	3.74	4.46	5.05	**2yr**
5yr	0.35	0.54	0.67	0.91	1.16	1.40	**5yr**	1.00	1.37	1.61	2.15	2.78	3.71	4.12	**5yr**	3.28	3.96	4.60	5.41	6.11	**5yr**
10yr	0.38	0.59	0.73	1.02	1.31	1.60	**10yr**	1.13	1.56	1.81	2.44	3.13	4.27	4.78	**10yr**	3.78	4.60	5.32	6.25	7.02	**10yr**
25yr	0.44	0.66	0.82	1.18	1.55	1.91	**25yr**	1.34	1.87	2.11	2.84	3.65	4.96	5.79	**25yr**	4.39	5.57	6.48	7.56	8.44	**25yr**
50yr	0.48	0.73	0.91	1.31	1.76	2.19	**50yr**	1.52	2.14	2.35	3.20	4.10	5.67	6.69	**50yr**	5.01	6.43	7.53	8.74	9.68	**50yr**
100yr	0.54	0.81	1.01	1.47	2.01	2.50	**100yr**	1.73	2.45	2.63	3.58	4.58	6.46	7.71	**100yr**	5.72	7.42	8.75	10.09	11.10	**100yr**
200yr	0.59	0.89	1.13	1.64	2.29	2.86	**200yr**	1.97	2.80	2.93	4.00	5.11	7.36	8.90	**200yr**	6.51	8.56	10.16	11.66	12.74	**200yr**
500yr	0.69	1.03	1.33	1.93	2.74	3.45	**500yr**	2.36	3.37	3.40	4.64	5.94	8.72	10.73	**500yr**	7.71	10.32	12.37	14.13	15.24	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.08	**1yr**	0.75	1.05	1.24	1.74	2.21	2.87	3.07	**1yr**	2.54	2.95	3.42	4.21	4.80	**1yr**
2yr	0.33	0.51	0.62	0.85	1.04	1.25	**2yr**	0.90	1.22	1.48	1.95	2.51	3.28	3.61	**2yr**	2.90	3.47	3.99	4.74	5.43	**2yr**
5yr	0.39	0.60	0.75	1.03	1.31	1.58	**5yr**	1.13	1.55	1.86	2.50	3.20	4.24	4.83	**5yr**	3.75	4.65	5.26	6.21	6.98	**5yr**
10yr	0.46	0.70	0.87	1.21	1.57	1.92	**10yr**	1.35	1.88	2.23	3.05	3.86	5.21	6.03	**10yr**	4.61	5.80	6.62	7.63	8.51	**10yr**
25yr	0.55	0.84	1.05	1.50	1.97	2.48	**25yr**	1.70	2.42	2.88	3.97	4.96	7.06	8.10	**25yr**	6.25	7.79	8.84	10.04	11.09	**25yr**
50yr	0.64	0.97	1.21	1.74	2.35	2.99	**50yr**	2.03	2.92	3.49	4.83	6.02	8.72	10.14	**50yr**	7.72	9.75	11.03	12.34	13.56	**50yr**
100yr	0.75	1.13	1.41	2.04	2.80	3.61	**100yr**	2.41	3.53	4.24	5.92	7.32	10.78	12.70	**100yr**	9.54	12.21	13.75	15.20	16.59	**100yr**
200yr	0.86	1.30	1.65	2.38	3.33	4.38	**200yr**	2.87	4.28	5.15	7.24	8.88	13.37	15.92	**200yr**	11.83	15.31	17.15	18.71	20.33	**200yr**
500yr	1.06	1.57	2.02	2.94	4.18	5.63	**500yr**	3.60	5.50	6.65	9.47	11.51	17.78	21.47	**500yr**	15.74	20.65	23.00	24.65	26.61	**500yr**

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APPENDIX B

TES ENVIRONMENTAL CONSULTANTS, L.L.C.

Environmental Planning and Permitting
Soil and Wetlands Investigation

SITE-SPECIFIC
SOIL SURVEY REPORT

performed at

Dover High School
Bellamy Road
Dover, New Hampshire

prepared for

Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301

TES Project # 15-0127

1494 Route 3A, Unit 1
Bow, NH 03304
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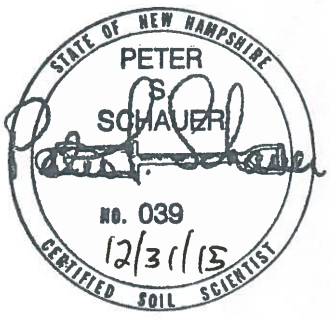


December 31, 2015

Ms. Erin Lambert, P.E.
Nobis Engineering, Inc.
18 Chenell Drive
Concord, NH 03301

RE: Site Specific Soil Map
Dover High School, Bellamy Road, Dover, NH

Dear Ms. Lambert:

On December 24, 2015 I performed field work on a portion of the above-referenced site located in Dover, New Hampshire for a Site Specific Soil Survey as you requested. The soil survey was limited to the portion of the site depicted on a site plan provided by your office, consisting of approximately 35 acres of land, most of which consists of previously-developed surfaces including buildings, parking lots and athletic fields.

This Site Specific Soil Survey was completed utilizing SSSNNE Special Publication No. 3; Site Specific Soil Mapping Standards for New Hampshire and Vermont, Version 4.0, February 2011. The soil legend used for this soil map conforms to the New Hampshire State-Wide Numerical Soils Legend, Issue #10, January 2011 established and maintained by the Natural Resources Conservation Service.

Field work for this survey included the examination of numerous soil profiles using a spade and soil auger to examine soil profiles around the investigation area. Test boring data prepared within a portion of the site by McPhail Associates, LLC were examined to provide information on the site soils and geological deposits, and the USDA-NRCS soil mapping of Strafford County, New Hampshire was examined for similar purposes. Boundaries of New Hampshire Wetlands Bureau-jurisdictional wetlands within the mapping area were previously identified and delineated by others, and together with site development features were utilized as control points for this soil survey.

The following report includes a Site Specific Soil Map Key and attached soil map unit descriptions. The general surface conditions on the site consist of nearly-level to gently sloping developed land, with adjacent areas having natural or disturbed soil surfaces with varying slopes. Site soils mostly have a mantle of artificial fill over silty clay marine deposits, although small portions of the site have dense, loamy glacial till deposits beneath shallow fill or fill over 5 feet deep. A small area of exposed bedrock near the school administration building indicates that bedrock may be found at shallow depths in the immediate vicinity.

If you have any questions regarding the soils on this site and the accompanying report please contact our office.

Very truly yours,

Peter S. Schauer

Peter S. Schauer
Certified Soil Scientist #39

STATE OF NEW HAMPSHIRE
PETER
S.
SCHAUER
NO. 039
12/31/15
CERTIFIED SOIL SCIENTIST

SITE SPECIFIC SOIL MAP UNIT KEY

Symbol*	Map Unit	Slope Class	Drainage Class	HISS Symbol	Hydrologic Soil Group
32B	Boxford silt loam	0-8%	Moderately well	343BH	C
32C	Boxford silt loam	0-15%	Moderately well	343CH	C
32D	Boxford silt loam	15-25%	Moderately well	343DH	C
32E	Boxford silt loam	25% +	Moderately well	343EH	C
33B	Scitico silt loam	0-8%	Poorly	543BH	C
500B/caabb	Udorthents, loamy	0-8%	Well	261BH	B
500D/caabb	Udorthents, loamy	15-25%	Well	261DH	B
500E/caabb	Udorthents, loamy	25% +	Well	261EH	B
500B/ccccc	Udorthents, loamy	0-8%	Well	263BH	C
500C/ccccc	Udorthents, loamy	8-15%	Well	263CH	C
500B/ceccc	Udorthents, loamy	0-8%	Well	263BH	C
500C/ceccc	Udorthents, loamy	8-15%	Well	263CH	C
500D/ceccc	Udorthents, loamy	15-25%	Well	263DH	C
500E/ceccc	Udorthents, loamy	25% +	Well	263EH	C
500B/daabb	Udorthents, loamy	0-8%	Moderately well	361BH	B
500E/daabb	Udorthents, loamy	25% +	Moderately well	361EH	B
500B/deccc	Udorthents, loamy	0-8%	Moderately well	363BH	C
500C/deccc	Udorthents, loamy	8-15%	Moderately well	363CH	C
500D/deccc	Udorthents, loamy	15-25%	Moderately well	363DH	C
500E/deccc	Udorthents, loamy	25% +	Moderately well	363EH	C
500B/eeccc	Udorthents, loamy	0-8%	Somewhat poorly	463BH	C
500B/fdccc	Udorthents, loamy	0-8%	Poorly	563BH	C
500B/heccc	Udorthents, loamy	0-8%	Well**	763BH	C**
536B	Suffield silt loam	0-8%	Well	243BH	C
536C	Suffield silt loam	8-15%	Well	243CH	C
536D	Suffield silt loam	15-25%	Well	243DH	C
536E	Suffield silt loam	25% +	Well	243EH	C

* Refer to accompanying report for 5-unit supplemental symbol explanation.

** Assumed to be similar to surrounding soils without impervious surfaces.

This detailed Site-Specific Soil Map, performed on 12/24/2015 by Peter S. Schauer, Certified Soil Scientist #039 of Schauer Environmental Consultants, L.L.C. in Loudon, New Hampshire, conforms to the standards of SSSNNE Publication No. 3, as amended, "Site-Specific Soil Mapping Standards for New Hampshire and Vermont". This map has been prepared to comply with soil mapping requirements of RSA 485 A: 17 and NHDES Env-Wq 1500, Alteration of Terrain.

Supplemental Symbols

The five components of the Disturbed Soil Mapping Unit Supplement are as follows:

Symbol 1: Drainage Class
a-Excessively Well Drained
b-Somewhat Excessively Drained
c-Well Drained
d-Moderately Well Drained
e-Somewhat Poorly Drained
f-Poorly Drained
g-Very Poorly Drained
h-Not Determined

Symbol 2 -: Parent Material (of naturally formed soil only, if present)
a-No natural soil within 60"
b-Glaciofluvial Deposits (outwash/terraces of sand or sand and gravel)
c-Glacial Till Material (active ice)
d-Glaciolacustrine very fine sand and silt deposits (glacial lakes)
e-Loamy/sandy over silt/clay deposits
f-Marine Silt and clay deposits (ocean waters)
g-Alluvial Deposits (floodplains)
h-Organic Materials-Fresh water Bogs, etc
i- Organic Materials-Tidal Marsh

Symbol 3: Restrictive/Impervious Layers
a-None
b-Bouldery surface with more than 15% of the surface covered with boulders
c-Mineral restrictive layer(s) are present in the soil profile less than 40 inches below the soil surface such as hardpan, platy structure or clayey texture with consistence of at least firm, i.e. more than 20 newtons. For other examples of soil characteristics that qualify for restrictive layer, see "Soil Manual for Site evaluations in NH" 2nd Ed., page 3-17, figure 2-14
d-Bedrock in the soil profile 0-20 inches
e-Bedrock in the soil profile 20-60 inches
f-Areas where depth to bedrock is so variable that a single soil type cannot be applied, will be mapped as a complex of soil types
g-Subject to Flooding
h –man-made impervious surface including pavement, concrete, or built-up surfaces (i.e. buildings) with no morphological restrictive layer within control section

Symbol 4 Estimated Ksat* (most restrictive layer excluding symbol 3h above).
a- High
b-Moderate
c-Low
d-Not determined
*See "Guidelines for Ksat Class Placement" in Chapter 3 of the Soil Survey Manual, USDA

Symbol 5: Hydrologic Soil Group*
a-Group A
b-Group B
c-Group C
d-Group D
e-Not determined

*excluding man-made impervious/restrictive layers

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 32

Map Unit Name: Boxford silt loam

Landscape Settings: Lower slopes of forested or cleared settings in coastal region

Surface Features: None

Drainage Class: Moderately well

Parent Material: Glacio-marine silt and clay deposits

Complex: Yes ( ) No (X)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 33

Map Unit Name: Scitico silt loam

Landscape Settings: Low-lying areas in forested or cleared settings in coastal region

Surface Features: None

Drainage Class: Poorly

Parent Material: Glacio-marine silt and clay deposits

Complex: Yes ( ) No (X)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B-E/caabb

Map Unit Name: Udorthents, loamy

Landscape Settings: Excavated, regraded or filled land surfaces

Surface Features: Fill material

Drainage Class: Well

Parent Material: Deep (over 60") artificial fill

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B-C/ccccc

Map Unit Name: Udorthents, loamy

Landscape Settings: Excavated, regraded or filled land surfaces

Surface Features: Fill material

Drainage Class: Well

Parent Material: Artificial fill over dense glacial till deposits

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B-E/ceccc

Map Unit Name: Udorthents, loamy

Landscape Settings: Excavated, regraded or filled land surfaces

Surface Features: Fill material

Drainage Class: Well

Parent Material: Artificial fill over glacio-marine silt and clay deposits

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B-E/daabb

Map Unit Name: Udorthents, loamy

Landscape Settings: Excavated, regraded or filled land surfaces

Surface Features: Fill material

Drainage Class: Moderately well

Parent Material: Deep (over 60") artificial fill

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B-E/deccc

Map Unit Name: Udorthents, loamy

Landscape Settings: Excavated, regraded or filled land surfaces

Surface Features: Fill material

Drainage Class: Moderately well

Parent Material: Artificial fill over glacio-marine silt and clay deposits

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B/eeccc

Map Unit Name: Udorthents, loamy

Landscape Settings: Excavated, regraded or filled land surfaces

Surface Features: Fill material

Drainage Class: Somewhat poorly

Parent Material: Artificial fill over glacio-marine silt and clay deposits

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B/fdccc

Map Unit Name: Udorthents, loamy

Landscape Settings: Excavated, regraded or filled land surfaces

Surface Features: Fill material

Drainage Class: Poorly

Parent Material: Artificial fill over glacio-marine silt and clay deposits

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 500B/heccc

Map Unit Name: Udorthents, loamy

Landscape Settings: Developed land

Surface Features: Buildings, pavement, other impervious surfaces

Drainage Class: Well (assumed similar to adjacent soils)

Parent Material: Artificial fill over glacio-marine silt and clay deposits

Complex: Yes ( ) No (**X**)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:

SITE SPECIFIC SOIL MAP UNIT DESCRIPTIONS

Map Unit Symbol: 536

Map Unit Name: Suffield silt loam

Landscape Settings: Higher or steeper forested or cleared slopes in coastal region

Surface Features: None

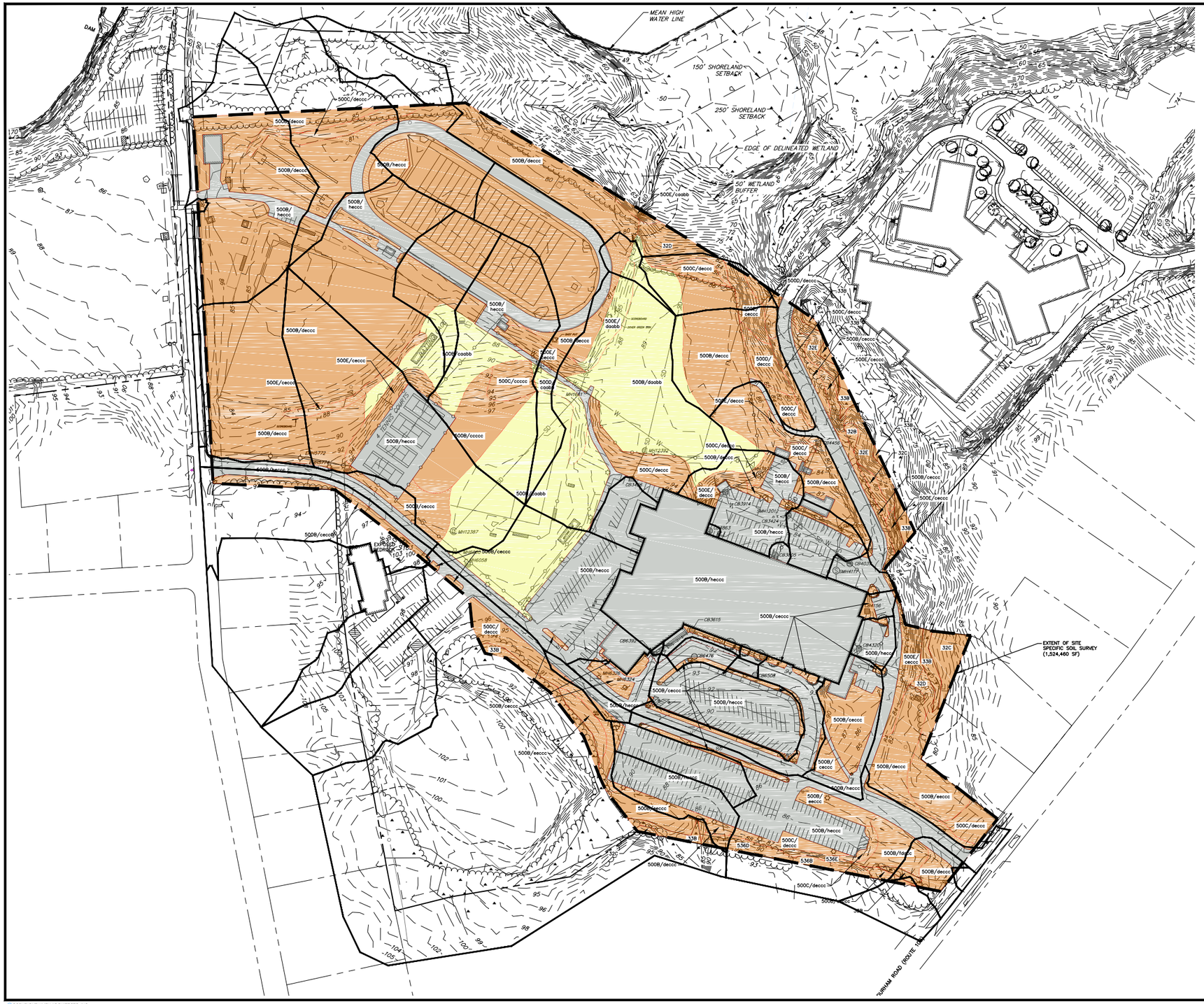
Drainage Class: Well

Parent Material: Glacio-marine silt and clay deposits, usually with a sandy loam mantle

Complex: Yes ( ) No (X)

Nature of Dissimilar Inclusions, Locations and Estimated Percent:

Additional Notes:



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SSSNNE SOIL MAP LEGEND

- HYDROLOGIC SOIL GROUP - B
- HYDROLOGIC SOIL GROUP - C
- IMPERVIOUS COVER

SOIL SERIES LEGEND:

SYMBOL	DESCRIPTION
32B	BOXFORD SILT LOAM, 0-8 PERCENT SLOPES, MODERATELY WELL DRAINED
32C	BOXFORD SILT LOAM, 0-15 PERCENT SLOPES, MODERATELY WELL DRAINED
32D	BOXFORD SILT LOAM, 15-25 PERCENT SLOPES, MODERATELY WELL DRAINED
32E	BOXFORD SILT LOAM, 25+ PERCENT SLOPES, MODERATELY WELL DRAINED
33B	SCITICO SILT LOAM, 0-8 PERCENT SLOPES, POORLY DRAINED
500B/CAABB	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, WELL DRAINED
500D/CAABB	UDORTHENTS, LOAMY, 15-25 PERCENT SLOPES, WELL DRAINED
500E/CAABB	UDORTHENTS, LOAMY, 25+ PERCENT SLOPES, WELL DRAINED
500B/CCCCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, WELL DRAINED
500C/CCCCC	UDORTHENTS, LOAMY, 8-15 PERCENT SLOPES, WELL DRAINED
500B/CECCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, WELL DRAINED
500C/CECCC	UDORTHENTS, LOAMY, 8-15 PERCENT SLOPES, WELL DRAINED
500D/CECCC	UDORTHENTS, LOAMY, 15-25 PERCENT SLOPES, WELL DRAINED
500E/CECCC	UDORTHENTS, LOAMY, 25+ PERCENT SLOPES, WELL DRAINED
500B/DAABB	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, MODERATELY WELL DRAINED
500E/DAABB	UDORTHENTS, LOAMY, 25+ PERCENT SLOPES, MODERATELY WELL DRAINED
500B/DECCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, MODERATELY WELL DRAINED
500C/DECCC	UDORTHENTS, LOAMY, 8-15 PERCENT SLOPES, MODERATELY WELL DRAINED
500D/DECCC	UDORTHENTS, LOAMY, 15-25 PERCENT SLOPES, MODERATELY WELL DRAINED
500E/DECCC	UDORTHENTS, LOAMY, 25+ PERCENT SLOPES, MODERATELY WELL DRAINED
500B/EECCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, SOMEWHAT POORLY DRAINED
500B/FDCCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, POORLY DRAINED
500B/HECCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, WELL DRAINED
536B	SUFFIELD SILT LOAM, 0-8 PERCENT SLOPES, WELL DRAINED
536C	SUFFIELD SILT LOAM, 8-15 PERCENT SLOPES, WELL DRAINED
536D	SUFFIELD SILT LOAM, 15-25 PERCENT SLOPES, WELL DRAINED
536E	SUFFIELD SILT LOAM, 25+ PERCENT SLOPES, WELL DRAINED

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Dover, NH
SSSNNE SOIL MAP
PRE-DEVELOPMENT
SCALE: 1" = 100'
DRAWN BY: EC
CHECKED BY: ERL

DESIGN DEVELOPMENT
03/15/2016
CAD DRAWING FILE: 89120.01-C-000-SOIL MAP.dwg

PLAN NORTH
TRUE NORTH

REVISIONS NO.	DATE	REMARKS	BY

DRAWING NUMBER
FIG. 3
JOB NUMBER 89120.01

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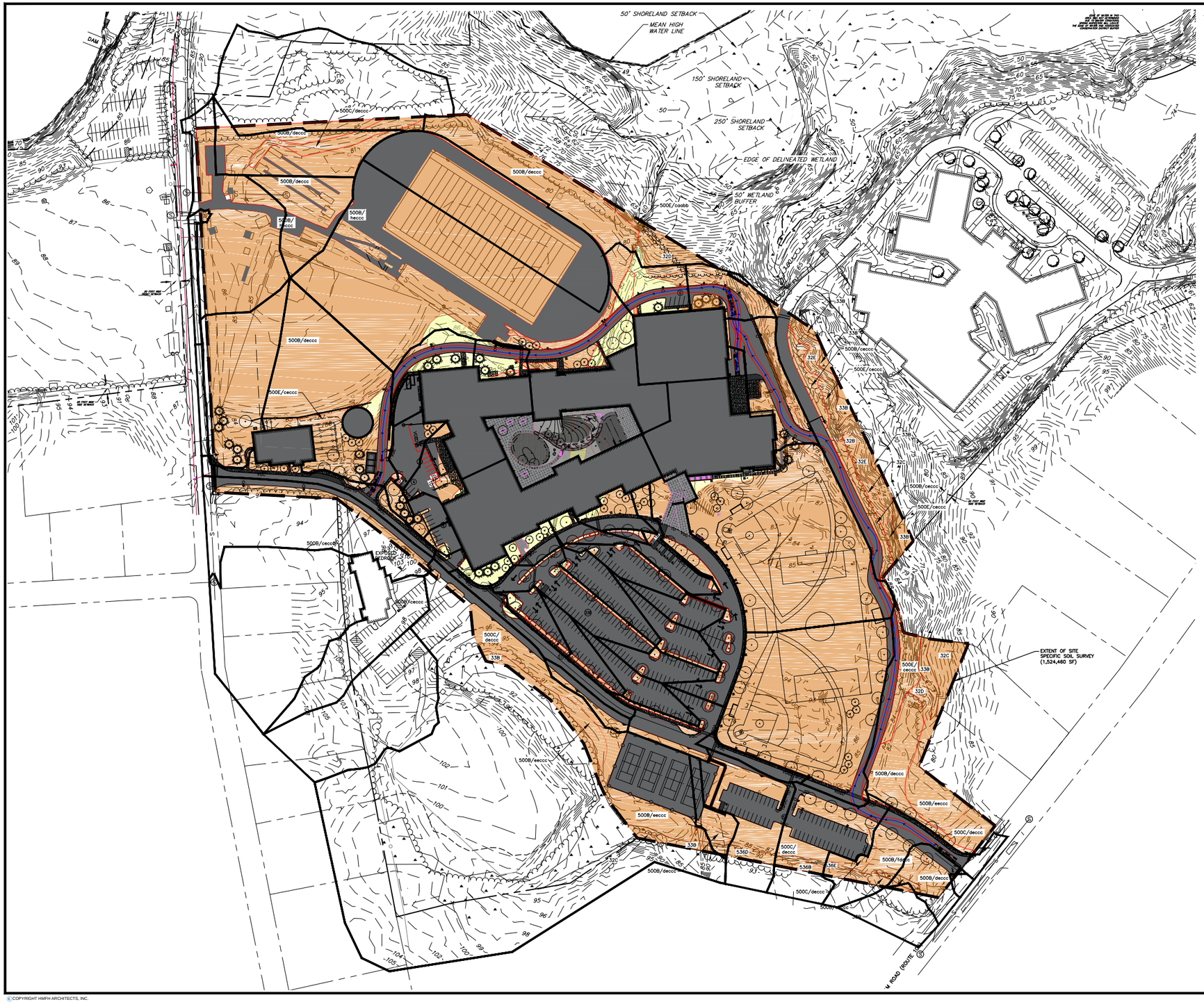

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- HYDROLOGIC SOIL GROUP - B
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SOIL SERIES LEGEND:

SYMBOL	DESCRIPTION
32B	BOXFORD SILT LOAM, 0-8 PERCENT SLOPES, MODERATELY WELL DRAINED
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500D/CAABB	UDORTHENTS, LOAMY, 15-25 PERCENT SLOPES, WELL DRAINED
500E/CAABB	UDORTHENTS, LOAMY, 25+ PERCENT SLOPES, WELL DRAINED
500B/CCCCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, WELL DRAINED
500C/CCCCC	UDORTHENTS, LOAMY, 8-15 PERCENT SLOPES, WELL DRAINED
500B/CECCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, WELL DRAINED
500C/CECCC	UDORTHENTS, LOAMY, 8-15 PERCENT SLOPES, WELL DRAINED
500D/CECCC	UDORTHENTS, LOAMY, 15-25 PERCENT SLOPES, WELL DRAINED
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500E/DAABB	UDORTHENTS, LOAMY, 25+ PERCENT SLOPES, MODERATELY WELL DRAINED
500B/DECCC	UDORTHENTS, LOAMY, 0-8 PERCENT SLOPES, MODERATELY WELL DRAINED
500C/DECCC	UDORTHENTS, LOAMY, 8-15 PERCENT SLOPES, MODERATELY WELL DRAINED
500D/DECCC	UDORTHENTS, LOAMY, 15-25 PERCENT SLOPES, MODERATELY WELL DRAINED
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PLAN NORTH / GRID NORTH

Dover HS / CTC
Dover, NH

SSSNNE SOIL MAP
POST-DEVELOPMENT

SCALE: 1" = 100'
DRAWN BY: EC
CHECKED BY: ERL

REVISIONS NO.	DATE	REMARKS	BY

DRAWING NUMBER
FIG. 4

DOVER PLAN NO. P16-12
JOB NUMBER 89120.01

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APPENDIX C

Report—Physical Soil Properties

Physical Soil Properties–Strafford County, New Hampshire														
Map symbol and soil name	**Depth**	**Sand**	**Silt**	**Clay**	**Moist bulk density**	**Saturated hydraulic conductivity**	**Available water capacity**	**Linear extensibility**	**Organic matter**	**Erosion factors**			**Wind erodibility group**	**Wind erodibility index**
										Kw	**Kf**	**T**		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
BzB—Buxton silt loam, 3 to 8 percent slopes														
Buxton	0-10	-15-	-60-	20-25- 40	1.05-1.15 -1.25	1.41-2.82-4.23	0.16-0.20-0. 24	0.0- 1.5- 2.9	2.0- 4.0- 6.0	.32	.32	5		
	10-28	-15-	-48-	25-38- 50	1.20-1.33 -1.45	0.42-0.92-1.41	0.15-0.19-0. 22	0.0- 1.5- 2.9	—					
	28-43	-15-	-43-	35-43- 50	1.40-1.50 -1.60	0.42-0.92-1.41	0.13-0.14-0. 15	3.0- 4.5- 5.9	—					
DeB—Deerfield loamy sand, 3 to 8 percent slopes														
Deerfield	0-16	-80-	-16-	2- 5- 7	1.00-1.10 -1.20	42.33-91.72-14 1.11	0.07-0.10-0. 13	0.0- 1.5- 2.9	1.0- 2.5- 4.0	.15	.15	5		
	16-29	-80-	-16-	1- 4- 7	1.20-1.33 -1.45	42.33-91.72-14 1.11	0.01-0.07-0. 13	0.0- 1.5- 2.9	—					
	29-40	-90-	- 8-	0- 3- 5	1.40-1.45 -1.50	141.11-141.11- 705.00	0.01-0.05-0. 08	0.0- 1.5- 2.9	—					

Physical Soil Properties–Strafford County, New Hampshire														
Map symbol and soil name	**Depth**	**Sand**	**Silt**	**Clay**	**Moist bulk density**	**Saturated hydraulic conductivity**	**Available water capacity**	**Linear extensibility**	**Organic matter**	**Erosion factors**			**Wind erodibility group**	**Wind erodibility index**
										Kw	**Kf**	**T**		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
HcB—Hollis-Charlton fine sandy loams, 3 to 8 percent slopes														
Hollis	0-14	-65-	-29-	3- 7- 10	1.10-1.25 -1.40	4.23-23.28-42.33	0.12-0.16-0.20	0.0- 1.5- 2.9	2.0- 3.5- 5.0	.24	.24	1		
	14-18	—	—	—	—	—	—	—	—					
Charlton	0-13	-65-	-31-	1- 5- 8	0.90-1.05 -1.20	14.11-28.22-42.33	0.11-0.15-0.19	0.0- 1.5- 2.9	1.0- 3.5- 6.0	.24	.24	5		
	13-36	-65-	-31-	1- 5- 8	1.20-1.35 -1.50	14.11-28.22-42.33	0.09-0.13-0.17	0.0- 1.5- 2.9	—					
	36-40	-80-	-18-	0- 3- 5	1.30-1.40 -1.50	42.33-91.72-141.11	0.04-0.06-0.08	0.0- 1.5- 2.9	—					
HcD—Hollis-Charlton fine sandy loams, 15 to 25 percent slopes														
Hollis	0-14	-65-	-29-	3- 7- 10	1.10-1.25 -1.40	4.23-23.28-42.33	0.12-0.16-0.20	0.0- 1.5- 2.9	2.0- 3.5- 5.0	.24	.24	1		
	14-18	—	—	—	—	—	—	—	—					
Charlton	0-13	-65-	-31-	1- 5- 8	0.90-1.05 -1.20	14.11-28.22-42.33	0.11-0.15-0.19	0.0- 1.5- 2.9	1.0- 3.5- 6.0	.24	.24	5		
	13-36	-65-	-31-	1- 5- 8	1.20-1.35 -1.50	14.11-28.22-42.33	0.09-0.13-0.17	0.0- 1.5- 2.9	—					
	36-40	-80-	-18-	0- 3- 5	1.30-1.40 -1.50	42.33-91.72-141.11	0.04-0.06-0.08	0.0- 1.5- 2.9	—					

Physical Soil Properties–Strafford County, New Hampshire														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
Sb—Saugatuck loamy sand														
Saugatuck	0-4	-80-	-13-	2- 7- 12	1.20-1.35 -1.50	42.33-91.72-14 1.11	0.10-0.11-0. 12	0.0- 1.5- 2.9	2.0- 6.0-10. 0	.10	.10	5		
	4-7	-90-	- 7-	2- 3- 12	1.30-1.43 -1.55	42.33-91.72-14 1.11	0.06-0.07-0. 08	0.0- 1.5- 2.9	0.0- 0.3- 0.5	.15	.15			
	7-26	-80-	-16-	2- 4- 12	1.75-1.88 -2.00	4.23-9.17-14.11	0.06-0.07-0. 08	0.0- 1.5- 2.9	0.5- 1.8- 3.0	.20	.20			
	26-42	-90-	- 7-	2- 3- 12	1.50-1.58 -1.65	42.33-91.72-14 1.11	0.04-0.05-0. 06	0.0- 1.5- 2.9	0.0- 0.3- 0.5	.10	.15			
ScA—Scantic silt loam, 0 to 3 percent slopes														
Scantic	0-13	-15-	-60-	10-25- 40	1.05-1.15 -1.25	1.41-7.76-14.11	0.15-0.20-0. 25	0.0- 1.5- 2.9	2.0- 4.5- 7.0	.32	.32	5		
	13-23	-15-	-48-	20-38- 55	1.40-1.55 -1.70	0.42-2.33-4.23	0.12-0.17-0. 22	3.0- 4.5- 5.9	—					
	23-40	-10-	-43-	35-48- 60	1.50-1.63 -1.75	0.00-0.71-1.41	0.09-0.12-0. 15	3.0- 4.5- 5.9	—					
SfE—Suffield silt loam, 15 to 35 percent slopes														
Suffield	0-19	-15-	-75-	2-10- 18	1.00-1.13 -1.25	4.23-9.17-14.11	0.16-0.20-0. 24	0.0- 1.5- 2.9	1.0- 4.5- 8.0	.37	.37	4		
	19-28	-15-	-71-	2-15- 27	1.30-1.45 -1.60	4.23-9.17-14.11	0.14-0.18-0. 22	0.0- 1.5- 2.9	—					
	28-41	-15-	-45-	35-45- 55	1.40-1.55 -1.70	0.00-0.71-1.41	0.11-0.15-0. 18	3.0- 4.5- 5.9	—					

Physical Soil Properties–Strafford County, New Hampshire														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
WfB—Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes														
Windsor variant	0-26	-80-	-18-	1- 2- 3	1.00-1.10 -1.20	42.33-91.72-14 1.11	0.08-0.10-0. 12	0.0- 1.5- 2.9	2.0- 3.0- 4.0	.20	.20	5		
	26-30	-80-	-19-	0- 2- 3	1.30-1.43 -1.55	42.33-91.72-14 1.11	0.02-0.07-0. 12	0.0- 1.5- 2.9	—					
	30-42	-20-	-60-	5-20- 35	1.30-1.45 -1.60	1.41-2.82-4.23	0.15-0.18-0. 20	0.0- 1.5- 2.9	—					
WfC—Windsor loamy fine sand, clay subsoil variant, 8 to 15 percent slopes														
Windsor variant	0-26	-80-	-18-	1- 2- 3	1.00-1.10 -1.20	42.33-91.72-14 1.11	0.08-0.10-0. 12	0.0- 1.5- 2.9	2.0- 3.0- 4.0	.20	.20	5		
	26-30	-80-	-19-	0- 2- 3	1.30-1.43 -1.55	42.33-91.72-14 1.11	0.02-0.07-0. 12	0.0- 1.5- 2.9	—					
	30-42	-20-	-60-	5-20- 35	1.30-1.45 -1.60	1.41-2.82-4.23	0.15-0.18-0. 20	0.0- 1.5- 2.9	—					

Data Source Information

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 15, Sep 18, 2015

APPENDIX D

The proposed site improvements incorporate one area of infiltration – an underground chamber gallery within the northwest corner of the existing school building footprint. Due to the nature of the on-site soils and perched groundwater, infiltration is not feasible on the majority of the site. Therefore, the proposed bioretention areas will be installed with underdrain.

I. Boring Locations

Subsurface exploration (for the purposes of building foundation design) consisting of a total of twenty-one borings was performed at the site in May, September, and October 2015 by McPhail Associates, LLC. The borings are identified as B-1 through B-8 and B-101 through B-113. Refer to the attached Subsurface Exploration Plan.

II. Groundwater and Bedrock Elevations

B-1: Existing Surface Elevation = 89.8
GW = 78.8
Bedrock = 75.3
Deepest Elevation of Boring = 69.4

B-2: Existing Surface Elevation = 89.7
GW = 85.7
Bedrock = 75.8
Deepest Elevation of Boring = 75.8

B-3: Existing Surface Elevation = 92.1
GW = 77.1
Bedrock = 76.7
Deepest Elevation of Boring = 76.7

B-4: Existing Surface Elevation = 97.4
GW = 88.9
Bedrock = 83.1
Deepest Elevation of Boring = 83.1

B-5: Existing Surface Elevation = 98.5
GW = not found
Bedrock = 89.3
Deepest Elevation of Boring = 89.3

B-6: Existing Surface Elevation = 95.1
GW = 69.1
Bedrock = not found
Deepest Elevation of Boring = 45.1

B-7: Existing Surface Elevation = 97.2
GW = not found
Bedrock = 93.0
Deepest Elevation of Boring = 93.0

B-8: Existing Surface Elevation = 97.4
GW = not found
Bedrock = 89.2
Deepest Elevation of Boring = 89.2

B-101: Existing Surface Elevation = 98.9
GW = not found
Bedrock = 87.4
Deepest Elevation of Boring = 87.4

B-102: Existing Surface Elevation = 93.1
GW = 74.0
Bedrock = 74.0
Deepest Elevation of Boring = 74.0

B-103: Existing Surface Elevation = 89.4
GW = 77.4
Bedrock = 76.4
Deepest Elevation of Boring = 76.4

B-104: Existing Surface Elevation = 90.8
GW = 82.8
Bedrock = 66.3
Deepest Elevation of Boring = 66.3

B-105: Existing Surface Elevation = 95.4
GW = not found
Bedrock = 87.8
Deepest Elevation of Boring = 87.8

B-106: Existing Surface Elevation = 89.5
GW = 81.5
Bedrock = 81.0
Deepest Elevation of Boring = 81.0

B-107: Existing Surface Elevation = 88.3
GW = 78.3
Bedrock = 62.2
Deepest Elevation of Boring = 62.2

B-108: Existing Surface Elevation = 88.9
GW = 73.9
Bedrock = 73.3
Deepest Elevation of Boring = 73.3

B-109: Existing Surface Elevation = 88.7
GW = 84.7
Bedrock = 71.2
Deepest Elevation of Boring = 71.2

B-110: Existing Surface Elevation = 88.6
GW = 83.6
Bedrock = 79.1
Deepest Elevation of Boring = 79.1

B-111: Existing Surface Elevation = 86.2
GW = 78.2
Bedrock = 52.7
Deepest Elevation of Boring = 52.7

B-112: Existing Surface Elevation = 82.3
GW = 67.3
Bedrock = 64.7
Deepest Elevation of Boring = 64.7

B-113: Existing Surface Elevation = 81.9
GW = 71.9
Bedrock = 70.7
Deepest Elevation of Boring = 70.7

III. Profile Descriptions

See attached boring logs (B-1 through B-8 and B-101 through B-113) for soil profile descriptions.

IV. Soils

Refer to the “Site Specific Soil Survey Report” for detailed soil information.

V. Summary of Data Used to Determine the Infiltration Rate

The location of the proposed infiltration gallery was identified as a viable infiltration site due to the depth of the existing building foundation (to be removed) and footing drains. Based on the existing finish floor elevation of 84 in this area of the building, footing drains (and therefore SHWT) are

assumed to be at elevation 80. The bottom of the stone under the proposed chambers is at elevation 83, providing 3 feet of separation to SHWT. Removal of the existing building foundation (to elevation 80) will require that fill be imported under the gallery. This material will be well-drained structural fill or crushed stone with a minimum infiltration rate of 3 inches per hour (to be verified prior to placement). Due to the likelihood of restrictive soils surrounding the gallery subgrade, underdrain is proposed at the bottom of the imported stone section to facilitate drainage of any stormwater that does not infiltrate.

NORTH

B-113
EL.+78.9
EL.+74.4

B-112
EL.+77.8
EL.+68.3

B-110
NE
EL.+83.6

APPROXIMATE LIMITS OF PROPOSED BUILDING

B-109
EL.+84.7
EL.+78.7

NE
EL.+84.4
B-108

APPROXIMATE LIMITS OF PROPOSED BUILDING LOWEST LEVEL SLAB EL.+84 (LIGHT SHADED)

NE
EL.+79.8
B-1

APPROXIMATE LIMITS OF PROPOSED BUILDING LOWEST LEVEL SLAB EL.+98 (DARK SHADED)

B-106
EL.+84.5
EL.+82.5

B-2
EL.+86.7
EL.+79.7

B-107
EL.+84.8
EL.+64.8

B-105
NE
EL.+91.4

B-103
EL.+84.4
EL.+77.9

LOWER COURTYARD

ENTRY LEVEL COURTYARD

B-8
NE
EL.+94.3

B-7
NE
EL.+93.8

B-102
EL.+89.1
EL.+76.6

B-104
EL.+86.8
EL.+67.8

B-3
EL.+83.1
EL.+78.6

B-4
EL.+95.4
EL.+88.9

B-101
EL.+93.9
EL.+90.4

B-111
EL.+82.2
EL.+54.2

B-5
EL.+93.5
EL.+89.5

ALUMNI DRIVE

APPROXIMATE LIMITS OF EXISTING SCHOOL BUILDING

B-6
EL.+90.1
EL.+46.9

LEGEND

- — APPROXIMATE LOCATION OF BORING PERFORMED BY NEW ENGLAND BORING ON MAY 4 AND 5, 2015 FOR McPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING SEPTEMBER 23 THROUGH OCTOBER 1, 2015 FOR McPHAIL ASSOCIATES, LLC

EL.+82.2	— ELEVATION OF MARINE DEPOSIT AT EXPLORATION LOCATION
EL.+56.2	— ELEVATION OF GLACIAL TILL AT EXPLORATION LOCATION
NE	— NOT ENCOUNTERED

REFERENCE: THIS PLAN WAS PREPARED FROM A 40-SCALE DRAWING ENTITLED "BOUNDARY SURVEY" DATED FEBRUARY 23, 2015 BY SEBAGO TECHNICS

GRAPHIC SCALE
50 0 50 100 200

McPHAIL ASSOCIATES, LLC
Geotechnical and Geoenvironmental Engineers
2269 Massachusetts Avenue
Cambridge, MA 02140
617/868-1420
617/868-1423 (Fax)
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DOVER HIGH SCHOOL

DOVER NEW HAMPSHIRE

SUBSURFACE EXPLORATION PLAN

FOR
HMFH ARCHITECTS, INC.
BY
McPHAIL ASSOCIATES, LLC

Date: OCTOBER 2015	Dwn: F.G.P.	Chkd: J.S.H.	Scale: 1" = 50'
Project No: 5883			FIGURE 2

FILE NAME: H:\Acad\JOBS\5883\FER\5883-F02Cw\3D.dwg

Project:	Dover High School	**Job #:**	5883.2.00
Location:	25 Alumni Drive	**Date Started:**	9-29-15
City/State:	Dover, New Hampshire	**Date Finished:**	9-29-15

Boring No. B-112

Contractor: Carr-Dee
Driller/Helper: Steve and Frank
Logged By/Reviewed By: M. Sachs
Surface Elevation (ft): 82.3

Casing Type/Depth (ft): 2.25" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 1 3/8 in Split Spoon
Sampler Hammer (lbs)/Drop (in): 140 lb/30 in

Groundwater Observations

Date	Depth	Elev.	Notes
9-29-15	15	67.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows Per 6"	Sample Description and Boring Notes
0	82									
1	81				16	S1	24/18	0.0-2.0	6 8 8 11	S1: Compact, brown, coarse SAND and GRAVEL, some silt, trace clay, trace, roots. (FILL)
2	80			FILL						
3	79									
4	78		4.5 / 77.8							
5	77				23	S2	24/20	5.0-7.0	10 9 14 20	S2: Very stiff, brown-gray, silty CLAY. (MARINE DEPOSIT)
6	76									
7	75									
8	74									
9	73			MARINE DEPOSIT						
10	72				28	S3	24/24	10.0-12.0	8 12 16 16	S3: Very stiff, brown-gray, silty CLAY. (MARINE DEPOSIT)
11	71									
12	70									
13	69									
14	68		14.0 / 68.3							
15	67				70	S4	24/10	15.0-17.0	32 36 34 28	S4: Very dense, brown, silty SAND and GRAVEL, some cobbles, trace clay. (GLACIAL TILL)
16	66			GLACIAL TILL						
17	65		17.6 / 64.7							
18	64			Bottom of borehole at 17.6 feet. Auger refusal at 17.6 feet. Possible bedrock.						
19	63									
20	62									
21	61									
22	60									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project:	Dover High School	**Job #:**	5883.2.00
Location:	25 Alumni Drive	**Date Started:**	9-29-15
City/State:	Dover, New Hampshire	**Date Finished:**	9-29-15

Boring No.

B-113

Contractor: Carr-Dee
Driller/Helper: Steve and Frank
Logged By/Reviewed By: M. Sachs
Surface Elevation (ft): 81.9

Casing Type/Depth (ft): 2.25" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 1 3/8 in Split Spoon
Sampler Hammer (lbs)/Drop (in): 140 lb/30 in

Groundwater Observations

Date	Depth	Elev.	Notes
9-29-15	10	71.9	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows Per 6"	Sample Description and Boring Notes
1	81			FILL	14	S1	24/23	0.0-2.0	7 6 8 12	S1: Compact, silty SAND and CLAY, trace roots. (FILL)
2	80									
3	79		3.0 / 78.9							
4	78			MARINE DEPOSIT						
5	77									
6	76				8	S2	24/24	5.0-7.0	3 4 4 7	S2: Firm to stiff, yellow-brown, silty CLAY, sand lenses. (MARINE DEPOSIT)
7	75		7.5 / 74.4							
8	74			GLACIAL TILL						
9	73									
10	72									
11	71		11.2 / 70.7		33	S3	14/12	10.0-11.2	11 22 100/2"	S3: Compact, brown, silty SAND, some clay, some gravel and cobbles. (GLACIAL TILL)
12	70			Bottom of borehole at 11.2 feet. Auger and spoon refusal at 11.2 feet. Possible bedrock.						
13	69									
14	68									
15	67									
16	66									
17	65									
18	64									
19	63									
20	62									
21	61									
22	60									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Cloudy

McPHAIL ASSOCIATES, LLC
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FAX: 617-868-1423

APPENDIX E

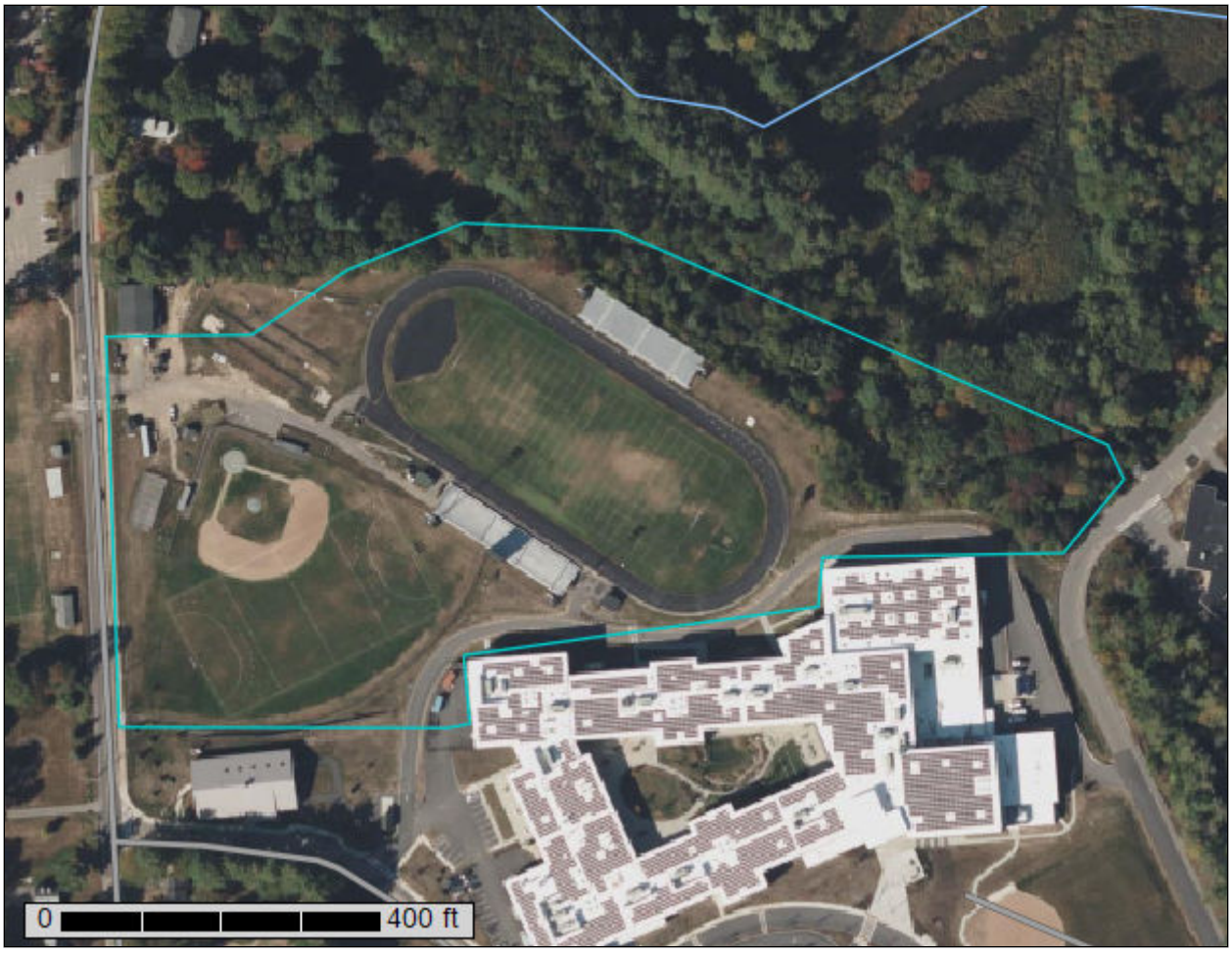
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Strafford County, New Hampshire



July 8, 2025

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

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

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,140 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 25, Sep 3, 2024

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

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BzB	Buxton silt loam, 3 to 8 percent slopes	6.8	56.1%
HcB	Hollis-Charlton fine sandy loams, 3 to 8 percent slopes	0.0	0.0%
HcD	Hollis-Charlton fine sandy loams, 15 to 25 percent slopes	2.2	17.9%
SfE	Suffield silt loam, 15 to 35 percent slopes	1.3	11.0%
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	1.7	14.4%
WfC	Windsor loamy fine sand, clay subsoil variant, 8 to 15 percent slopes	0.1	0.6%
Totals for Area of Interest		**12.0**	**100.0%**

Map Unit Descriptions

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

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

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

Strafford County, New Hampshire

BzB—Buxton silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d6p
Elevation: 0 to 260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Buxton

Setting

Parent material: Glaciomarine

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 28 inches: silty clay loam
H3 - 28 to 43 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F145XY006CT - Semi-Rich Moist Lake Plain
Hydric soil rating: No

Minor Components

Elmwood

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

Not named

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

HcB—Hollis-Charlton fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d7j
Elevation: 0 to 1,020 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Hollis and similar soils: 55 percent
Charlton and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: fine sandy loam

H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Not named

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

Buxton

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

HcD—Hollis-Charlton fine sandy loams, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9d7l
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 55 percent
Charlton and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Not named

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

SfE—Suffield silt loam, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9d8w
Elevation: 0 to 210 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Suffield

Typical profile

H1 - 0 to 19 inches: silt loam
H2 - 19 to 28 inches: silt loam
H3 - 28 to 41 inches: silty clay

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F144AY017NH - Well Drained Lake Plain
Hydric soil rating: No

Minor Components

Not named
Percent of map unit: 14 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 1 percent
Hydric soil rating: No

WfB—Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d9b
Elevation: 0 to 280 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

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

Description of Windsor Variant

Typical profile
H1 - 0 to 26 inches: loamy fine sand
H2 - 26 to 30 inches: loamy sand
H3 - 30 to 42 inches: silt loam

Properties and qualities
Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 15 percent
Hydric soil rating: No

WfC—Windsor loamy fine sand, clay subsoil variant, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d9c
Elevation: 0 to 230 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Windsor Variant

Typical profile

H1 - 0 to 26 inches: loamy fine sand
H2 - 26 to 30 inches: loamy sand
H3 - 30 to 42 inches: silt loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 15 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Map Scale: 1:2,140 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 25, Sep 3, 2024

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

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BzB	Buxton silt loam, 3 to 8 percent slopes	C/D	6.8	56.1%
HcB	Hollis-Charlton fine sandy loams, 3 to 8 percent slopes	D	0.0	0.0%
HcD	Hollis-Charlton fine sandy loams, 15 to 25 percent slopes	D	2.2	17.9%
SfE	Suffield silt loam, 15 to 35 percent slopes	C	1.3	11.0%
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	A	1.7	14.4%
WfC	Windsor loamy fine sand, clay subsoil variant, 8 to 15 percent slopes	A	0.1	0.6%
Totals for Area of Interest			**12.0**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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Tighe&Bond

APPENDIX F

GROUNDWATER RECHARGE VOLUME (GRV)
(Env-Wq 1504.12)

-	ac	Area of HSG A soil that was replaced by impervious cover	0.40"
0.12	ac	Area of HSG B soil that was replaced by impervious cover	0.25"
7.14	ac	Area of HSG C soil that was replaced by impervious cover	0.10"
-	ac	Area of HSG D soil or impervious cover that was replaced by impervious cover	0.0"
0.10	inches	Rd = Weighted groundwater recharge depth	
0.7437	ac-in	GRV = AI * Rd	
2,699	cf	GRV conversion (ac-in x 43,560 sf/ac x 1ft/12”)	
	← Y/N	Is a stage-storage table attached showing that the GRV can be stored below the lowest invert of the outlet structure (if applicable)? Multiple stormwater control measures may be used to meet the GRV requirements.	

Provide calculations/discussion below showing that the project meets the groundwater recharge requirements (Env-Wq 1507.04):

Stage-Area-Storage for Pond PRG-1: (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
78.91	6,703	3,663
78.92	6,713	3,693
78.93	6,722	3,722
78.94	6,732	3,752
78.95	6,742	3,782
78.96	6,751	3,812
78.97	6,761	3,842
78.98	6,771	3,872
78.99	6,780	3,903
79.00	6,790	3,933
79.01	6,801	3,963
79.02	6,812	3,994
79.03	6,822	4,025
79.04	6,833	4,055
79.05	6,844	4,086
79.06	6,855	4,117
79.07	6,866	4,149
79.08	6,876	4,180
79.09	6,887	4,211
79.10	6,898	4,243
79.11	6,909	4,274
79.12	6,920	4,306
79.13	6,930	4,338
79.14	6,941	4,370
79.15	6,952	4,402
79.16	6,963	4,434
79.17	6,974	4,466
79.18	6,984	4,498
79.19	6,995	4,531
79.20	7,006	4,563
79.21	7,017	4,596
79.22	7,028	4,628
79.23	7,038	4,661
79.24	7,049	4,694
79.25	7,060	4,727
79.26	7,071	4,761
79.27	7,082	4,794
79.28	7,092	4,827
79.29	7,103	4,861
79.30	7,114	4,894
79.31	7,125	4,928
79.32	7,136	4,962
79.33	7,146	4,996
79.34	7,157	5,030
79.35	7,168	5,064
79.36	7,179	5,098
79.37	7,190	5,133
79.38	7,200	5,167
79.39	7,211	5,202
79.40	7,222	5,237
79.41	7,233	5,271
79.42	7,244	5,306
79.43	7,254	5,341
79.44	7,265	5,376
79.45	7,276	5,412
79.46	7,287	5,447
79.47	7,298	5,482
79.48	7,308	5,518
79.49	7,319	5,554
79.50	7,330	5,589
79.51	7,341	5,625
79.52	7,352	5,661
79.53	7,362	5,697
79.54	7,373	5,734
79.55	7,384	5,770
79.56	7,395	5,806
79.57	7,406	5,843
79.58	7,416	5,879
79.59	7,427	5,916
79.60	7,438	5,953
79.61	7,449	5,990
79.62	7,460	6,027
79.63	7,470	6,064
79.64	7,481	6,102
79.65	7,492	6,139
79.66	7,503	6,177
79.67	7,514	6,214
79.68	7,524	6,252
79.69	7,535	6,290
79.70	7,546	6,328
79.71	7,557	6,366
79.72	7,568	6,404
79.73	7,578	6,442
79.74	7,589	6,480
79.75	7,600	6,519
79.76	7,611	6,557
79.77	7,622	6,596
79.78	7,632	6,635
79.79	7,643	6,674
79.80	7,654	6,713
79.81	7,665	6,752
79.82	7,676	6,791
79.83	7,686	6,831
79.84	7,697	6,870
79.85	7,708	6,910
79.86	7,719	6,949
79.87	7,730	6,989
79.88	7,740	7,029
79.89	7,751	7,069
79.90	7,762	7,109
79.91	7,773	7,149
79.92	7,784	7,190
79.93	7,794	7,230
79.94	7,805	7,270

FILTRATION PRACTICE DESIGN CRITERIA
(Env-Wq 1508.08)

Type/Node Name: **PROPOSED RAIN GARDEN - 01**

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

X		Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.08(a).	
2.27	ac	A = Area draining to the practice	
1.18	ac	A_I = Impervious area draining to the practice	
0.52	decimal	I = Percent impervious area draining to the practice, in decimal form	
0.52	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
1.17	ac-in	WQV= 1" x Rv x A	
4,256	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
1,064	cf	25% x WQV (check calc for sediment forebay volume)	
3,192	cf	75% x WQV (check calc for surface sand filter volume)	
FOREBAY		Method of Pretreatment? (not required for clean or roof runoff)	
2,594	cf	V_{SED} = Sediment forebay volume, if used for pretreatment	**≥ 25%WQV**
Calculate time to drain if system IS NOT underdrained:			
1,249	sf	A_{SA} = Surface area of the practice	
3.00	iph	$Ksat_{DESIGN}$ = Design infiltration rate[1]	
		If Ksat (prior to factor of safety) is < 0.50 iph, has an underdrain been provided?	
NO	Yes/No	(Use the calculations below)	
13.6	hours	T_{DRAIN} = Drain time = V / (A_{SA} * I_{DESIGN})	**≤ 72-hrs**
Calculate time to drain if system IS underdrained:			
79.11	ft	E_{WQV} = Elevation of WQV (attach stage-storage table)	
0.39	cfs	Q_{WQV} = Discharge at the E_{WQV} (attach stage-discharge table)	
6.06	hours	T_{DRAIN} = Drain time = 2WQV/Q_{WQV}	**≤ 72-hrs**
74.75	feet	E_{FC} = Elevation of the bottom of the filter course material[2]	
	feet	E_{UD} = Invert elevation of the underdrain (UD), if applicable	
71.90	feet	E_{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
70.70	feet	E_{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
74.75	feet	$D_{FC\ to\ UD}$ = Depth to UD from the bottom of the filter course	**≥ 1'**
4.05	feet	$D_{FC\ to\ ROCK}$ = Depth to bedrock from the bottom of the filter course	**≥ 1'**
2.85	feet	$D_{FC\ to\ SHWT}$ = Depth to SHWT from the bottom of the filter course	**≥ 1'**
82.42	ft	Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
83.00	ft	Elevation of the top of the practice	
YES		50 peak elevation ≤ Elevation of the top of the practice	**← yes**
If a surface sand filter or underground sand filter is proposed:			
YES	ac	Drainage Area check.	**< 10 ac**
N/A	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ 75%WQV**
N/A	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet		Note what sheet in the plan set contains the filter course specification.	
N/A	Yes/No	Access grate provided?	**← yes**

If a bioretention area is proposed:			
YES	ac	Drainage Area no larger than 5 ac?	**← yes**
24,782	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ WQV**
18.0	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet		Note what sheet in the plan set contains the filter course specification	
3.0	:1	Pond side slopes	**≥ 3:1**
Sheet		Note what sheet in the plan set contains the planting plans and surface cover	
If porous pavement is proposed:			
N/A		Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.)	
N/A	acres	A_{SA} = Surface area of the pervious pavement	
#VALUE!	:1	Ratio of the contributing area to the pervious surface area	**≤ 5:1**
N/A	inches	D_{FC} = Filter course thickness	**12", or 18" if within GPA mod. 304.1 (see spec)**
Sheet	N/A	Note what sheet in the plan set contains the filter course spec.	

1. Rate of the limiting layer (either the filter course or the underlying soil). $Ksat_{design}$ includes factor of safey. See Env-Wq 1504.14 for guidance on determining the infiltration rate.

2. See lines 34, 40 and 48 for required depths of filter media.

3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet stucture, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

Summary for Pond PRG-1:

Inflow Area = 2.269 ac, 51.86% Impervious, Inflow Depth = 8.19" for 100-yr event
Inflow = 21.35 cfs @ 12.06 hrs, Volume= 1.548 af
Outflow = 12.49 cfs @ 12.17 hrs, Volume= 1.531 af, Atten= 41%, Lag= 6.6 min
Discarded = 1.01 cfs @ 12.17 hrs, Volume= 1.075 af
Primary = 11.49 cfs @ 12.17 hrs, Volume= 0.456 af
Routed to Pond PDMH-13 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 82.68' @ 12.17 hrs Surf.Area= 15,783 sf Storage= 23,533 cf
Flood Elev= 83.00' Surf.Area= 16,311 sf Storage= 26,155 cf

Plug-Flow detention time= 174.9 min calculated for 1.531 af (99% of inflow)
Center-of-Mass det. time= 167.6 min (945.7 - 778.0)

Volume	Invert	Avail.Storage	Storage Description
#1	78.00'	2,594 cf	**Forebay (Prismatic)** Listed below (Recalc)
#2	78.00'	3,548 cf	**Rain Garden (Prismatic)** Listed below (Recalc)
#3	80.00'	18,640 cf	**Additional Ponding Area (Prismatic)** Listed below (Recalc)
#4	76.50'	562 cf	**Filter Media (Prismatic)** Listed below (Recalc) 1,874 cf Overall x 30.0% Voids
#5	76.25'	62 cf	**Pea Stone (Prismatic)** Listed below (Recalc) 312 cf Overall x 20.0% Voids
#6	74.75'	749 cf	**Reservoir Course (Prismatic)** Listed below (Recalc) 1,874 cf Overall x 40.0% Voids
		26,155 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
78.00	826	0	0
79.00	1,283	1,055	1,055
80.00	1,796	1,540	2,594

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
78.00	1,249	0	0
79.00	1,760	1,505	1,505
80.00	2,327	2,044	3,548

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
80.00	4,186	0	0
81.00	5,531	4,859	4,859
82.00	6,795	6,163	11,022
83.00	8,441	7,618	18,640

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
76.50	1,249	0	0
78.00	1,249	1,874	1,874

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
76.25	1,249	0	0
76.50	1,249	312	312

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
74.75	1,249	0	0
76.25	1,249	1,874	1,874

Device	Routing	Invert	Outlet Devices
#1	Primary	75.25'	**18.0" Round Culvert** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 75.25' / 75.15' S= 0.0091 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Discarded	74.75'	**3.000 in/hr Exfiltration over Surface area above 74.75'** Excluded Surface area = 1,249 sf
#3	Device 1	82.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=1.01 cfs @ 12.17 hrs HW=82.66' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 1.01 cfs)

Primary OutFlow Max=11.10 cfs @ 12.17 hrs HW=82.66' TW=80.08' (Dynamic Tailwater)
└**1=Culvert** (Passes 11.10 cfs of 13.68 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 11.10 cfs @ 2.66 fps)

APPENDIX G

Tighe&Bond

Engineers | Environmental Specialists

Project: Dover High School Athletic Facility
Location: Dover, NH
T&B #: D5085-001
Calculations By: CML
Checked By: NAH
Date: 8/4/2025

APRON DESIGN

Terms: FES 1

length of apron (ft.)	L_a	
discharge from pipe (cfs)	Q	(10 YR STORM EVENT)
pipe dia. or channel width (ft.)	Do	
tailwater depth (ft.)	T_w	
width of apron (at outlet)(ft)	W1	
width of apron (downstream)(ft)	W2	
median stone diameter (ft.)	d_{50}	

Equations Used:

Length of Apron (L_a)

when Tw < .5*Do $L_a = \frac{1.8(Q)}{Do^{(3/2)}} + 7Do$

when Tw >= .5*Do $L_a = \frac{3(Q)}{Do^{(3/2)}} + 7Do$

Width of Apron (W1)

$W1 = 3Do$

Width of Apron (W2)

when Tw < .5*Do $W2 = 3Do + La$

when Tw >= .5*Do $W2 = 3Do + 0.4La$

Median Diameter $d_{50} = \frac{0.02 * Q^{(1.3)}}{(Tw * Do)}$

Input:		
Q (cfs)	25.58	cfs
Do (ft.)	3.00	ft
T_w (ft.)	1.20	ft

Output:		
Width of Apron (W1)	9	ft.
Width of Apron (W2)	39	ft.
Length of Apron (L_a)	30	ft.
Median Diameter	0.50	ft.
Riprap min. depth	1.13	ft.

Tighe&Bond

Engineers | Environmental Specialists

Project: Dover High School Athletic Facility
Location: Dover, NH
T&B #: D5085-001
Calculations By: CML
Checked By: NAH
Date: 8/4/2025

APRON DESIGN

Terms: FES 2

length of apron (ft.)	L_a	
discharge from pipe (cfs)	Q	(10 YR STORM EVENT)
pipe dia. or channel width (ft.)	Do	
tailwater depth (ft.)	T_w	
width of apron (at outlet)(ft)	W1	
width of apron (downstream)(ft)	W2	
median stone diameter (ft.)	d_{50}	

Equations Used:

Length of Apron (L_a)

when Tw < .5*Do $L_a = \frac{1.8(Q)}{Do^{(3/2)}} + 7Do$

when Tw >= .5*Do $L_a = \frac{3(Q)}{Do^{(3/2)}} + 7Do$

Width of Apron (W1)

$W1 = 3Do$

Width of Apron (W2)

when Tw < .5*Do $W2 = 3Do + La$

when Tw >= .5*Do $W2 = 3Do + 0.4La$

Median Diameter $d_{50} = \frac{0.02 * Q^{(1.3)}}{(Tw * Do)}$

Input:		
Q (cfs)	3.05	cfs
Do (ft.)	1.00	ft
T_w (ft.)	0.40	ft

Output:		
Width of Apron (W1)	3	ft.
Width of Apron (W2)	15	ft.
Length of Apron (L_a)	12	ft.
Median Diameter	0.50	ft.
Riprap min. depth	1.13	ft.

Tighe&Bond

Engineers | Environmental Specialists

Project: Dover High School Athletic Facility
Location: Dover, NH
T&B #: D5085-001
Calculations By: CML
Checked By: NAH
Date: 8/4/2025

APRON DESIGN

Terms: FES 2

length of apron (ft.)	L_a	
discharge from pipe (cfs)	Q	(10 YR STORM EVENT)
pipe dia. or channel width (ft.)	Do	
tailwater depth (ft.)	T_w	
width of apron (at outlet)(ft)	W1	
width of apron (downstream)(ft)	W2	
median stone diameter (ft.)	d_{50}	

Equations Used:

Length of Apron (L_a)

when Tw < .5*Do $L_a = \frac{1.8(Q)}{Do^{(3/2)}} + 7Do$

when Tw >= .5*Do $L_a = \frac{3(Q)}{Do^{(3/2)}} + 7Do$

Width of Apron (W1)

$W1 = 3Do$

Width of Apron (W2)

when Tw < .5*Do $W2 = 3Do + La$

when Tw >= .5*Do $W2 = 3Do + 0.4La$

Median Diameter $d_{50} = \frac{0.02 * Q^{(1.3)}}{(Tw * Do)}$

Input:

Q (cfs)	2.93	cfs
Do (ft.)	1.00	ft
T_w (ft.)	0.40	ft

Output:

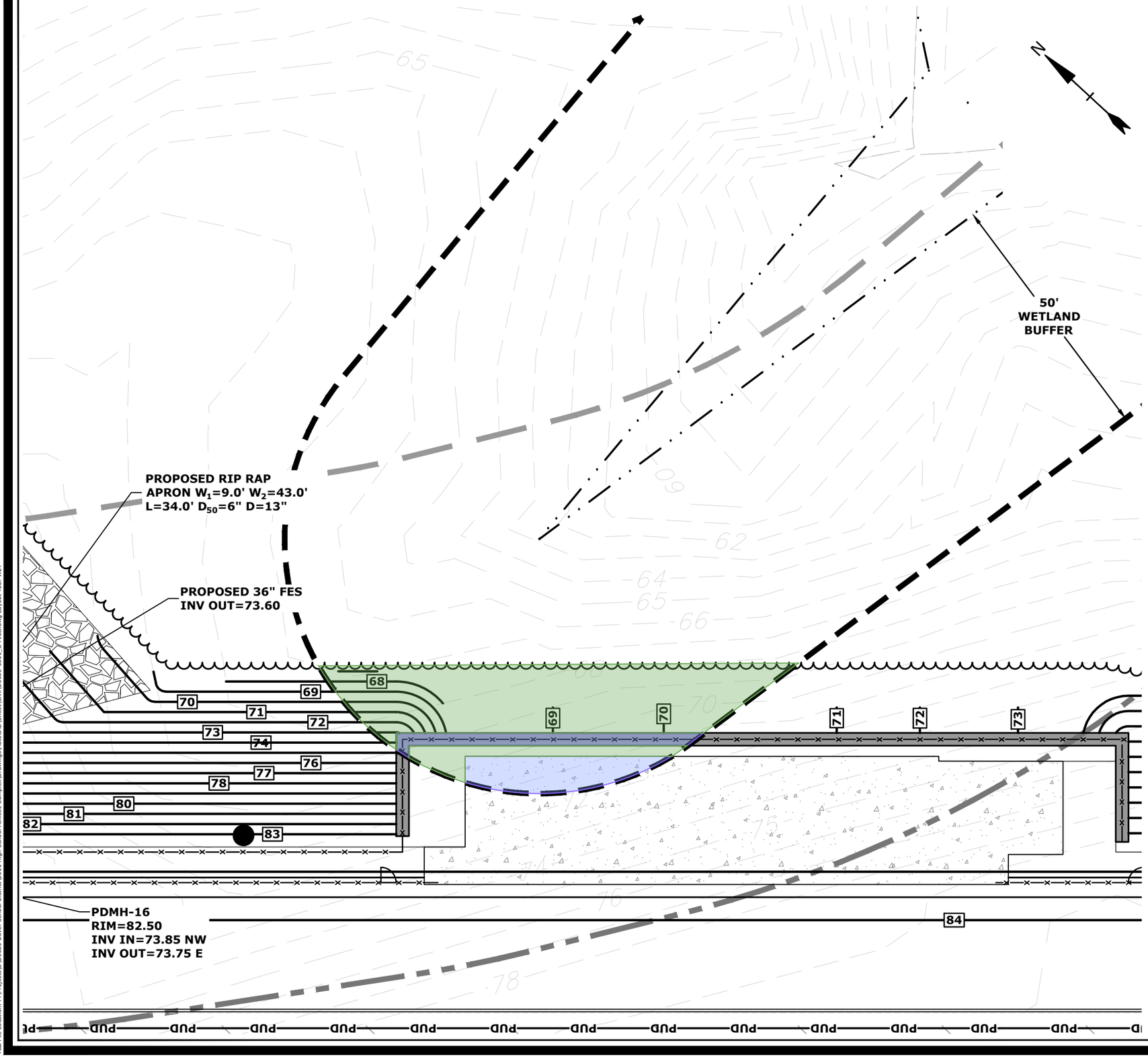
Width of Apron (W1)	3	ft.
Width of Apron (W2)	15	ft.
Length of Apron (L_a)	12	ft.
Median Diameter	0.50	ft.
Riprap min. depth	1.13	ft.

www.tighebond.com

100% Recyclable

DOVER HIGH SCHOOL ATHLETIC COMPLEX
DOVER, NH

WETLAND BUFFER IMPACT EXHIBIT



LEGEND

- 50' WETLAND BUFFER
- PROPOSED PERMANENT WETLAND BUFFER IMPACT (378 SF)
- PROPOSED TEMPORARY WETLAND BUFFER IMPACT (1,230 SF)

0 20' 40'

GRAPHIC SCALE

Tighe&Bond

Engineers | Environmental Specialists

August 1, 2025
D5085-0001_C-FIGS.dwg

Last Save Date: July 28, 2025 10:32 AM By: JBOWMAN
Plot Date: Monday, July 28, 2025 Plotted By: Julia Bowman
Xref File Location: I:\Projects\D5085 Dover School District\0001 High School Athletic Complex\Drawings\AutoCAD\Sheet\Civil\D5085-0001_C-FIGS.dwg Layout Tab: WET

Dover High School Athletic Complex Wetland Delineation

Tax Map H / Lot 12, Dover, NH

TO: Dover School District, City of Dover, NH

FROM: Jeremy Degler, PWS, CWS, Tighe and Bond; Rick Lipinski, Tighe and Bond

DATE: July 16, 2024

On June 19 and July 2, 2024, Tighe & Bond conducted a wetland delineation within the limits of the existing Dover High School Athletic Complex, located directly north of the Dover High School at 25 Alumni Drive in Dover, NH.

Methods

The wetland delineation was completed in accordance with the procedures outlined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1 (January 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0, January 2012), as well as followed the methodologies outlined in NH Administrative Rule Env-Wt 406. Wetlands were classified following *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee, Second Edition; 2013). Sequentially numbered flagging was used to demarcate wetland boundaries, which were located using an Arrow sub-meter GPS unit. Below is a description of the jurisdictional areas. A site map, photographic log, and supporting documentation are provided in Attachments A through D.

Jurisdictional Area Descriptions

Two wetlands and two streams were delineated within the limits of the project area (Photographs 3-7).

Wetland 1

Wetland 1 is a mapped National Wetlands Inventory (NWI) feature situated northeast of the existing running track within the floodplain of the Bellamy River (Photograph 3). The wetland boundary was marked in the field with wetland flags 4A-1 to 4A-22. This area contains moderately decomposed black organic soils (10YR 2/1) situated over a depleted matrix (10YR 4/2) with redoximorphic features (7.5 YR 5/6). The wetland hydrology indicators observed at the time of the site visit included standing surface water, soil saturation, water-stained leaves, and geomorphic position. The hydrophytic plant community was dominated by sensitive fern (*Onoclea sensibilis*; FACW), jewelweed (*Impatiens capensis*; FACW), cinnamon fern (*Osmunda cinnamomea*; FACW), skunk cabbage (*Symplocarpus foetidus*; OBL), alder buckthorn (*Frangula alnus*; FAC). This wetland is classified as a mix of palustrine emergent and persistent as well as palustrine scrub-shrub and broad-leaved deciduous, with a seasonally flooded/saturated hydroperiod (PEM1/SS1E).

Wetland 2

Wetland 2 is a small wet ditch that drains to the east, into Wetland 1 and eventually into the Bellamy River (Photograph 4). This feature is dominated by the same soils as Wetland 1 but with a thinner black organic layer. The wetland hydrology indicators observed at the time of the site visit included standing surface water, soil saturation, sediment deposits, water-stained leaves, drainage patterns, and geomorphic position. The hydrophytic plant community was dominated by jewelweed, several sedge species (*Carex* spp.), bittersweet nightshade (*Solanum dulcamara*; FAC), poison ivy (*Toxicodendron radicans*; FAC), brambles (*Rubus* spp.), multiflora rose (*Rosa multiflora*; FACU), and alder buckthorn. This wetland is classified as palustrine forested and broad-leaved deciduous, with a seasonally flooded/saturated hydroperiod (PFO1E).

Stream 1

Stream 1 is a small intermittent tributary to the Bellamy River, which is located northeast of the project area, outside of the existing athletic complex (Photograph 5). This stream flows to the north, into Wetland 1 and eventually into the Bellamy River. The limits of the stream channel were delineated by the Ordinary High Water Mark (OHWM) in accordance with Env-Wt 406.04, which was evidenced by physical characteristics such as a clear, natural line impressed on the immediate bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and the presence of litter and debris.

Stream 2 (The Bellamy River)

Stream 2 is the Bellamy River, which is located north of the project area and generally flows to the east (Photographs 6 and 7). This river is classified as perennial on the latest U.S. Geologic Survey (USGS) topographic maps. The floodplain of the Bellamy River is predominantly steep and forested. The southern bank was approximately 3-4 feet tall and comprised of fine sand, gravel, and woody debris. The stream bed was dominated by cobble and gravel, with a well-developed pool and riffle complex. The OHWM generally coincided with the upper limit of the bank (i.e., the "top of bank") and was evidenced by a defined break in slope, a change from fine sand and gravel on the bank to course mineral and organic (forest-floor) substrate, and persistent woody vegetation at the top of bank. The Bellamy River in the vicinity of the project site is not located within a Designated River Corridor, though it is a fourth order stream, and is therefore subject to RSA 483-B, the Shoreland Water Quality Protection Act, which establishes a protected shoreland area extending 250-feet from the OHWM (i.e., the reference line).

Wetland Functions and Values

Functions and values for this area were assessed based on our review of field observations, site photographs, and available GIS data. Assessment criteria were based on the *US Army Corps of Engineers, New England District, Highway Methodology Workbook Supplement - Wetland Functions and Values: A Descriptive Approach* (NAEEP-360-1-30a; September 1999).

Ten functions and values were identified as "suitable" for Wetland 1, including: Groundwater Recharge/ Discharge, Floodflow Alteration (principal function), Sediment/Toxicant Retention, Nutrient Removal, Production Export, Sediment/Shoreline Stabilization (principal function), Wildlife Habitat (principal function), Recreation, Educational Value, and Visual Quality/Aesthetics. Due to its small size, two functions were identified as "suitable" for Wetland 2 (Floodflow Alteration and Groundwater Recharge/Discharge). The data sheets for this functional assessment are included in the attachments to this report.

Rare, Threatened, and Endangered Species and Critical Habitat

The NH Wildlife Action Plan (WAP) ranks wildlife habitat by the highest ranked habitat in NH (Tier 1), highest ranked habitat in the biological region (Tier 2), and supporting landscapes (Tier 3). There are no areas of Tier 1 or Tier 2 highest ranked wildlife habitat within the project area; though the area surrounding the project is ranked as Tier 3, supporting landscape. The Bellamy River is identified by the NH WAP as Seacoast Anadromous Fish Habitat; including species of special concern: alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*). A datacheck report has been filed with the New Hampshire Natural Heritage Bureau (NHB; NHB24-2063) to determine any known occurrences of state listed rare, threatened, or endangered (RTE) plant and animal species or exemplary natural communities in the vicinity of the project. A response was received on July 12, 2024, resulting in the expectation that rare wildlife/plants will not be impacted by the proposed project.

Endangered Species Act (ESA) listed species and designated critical habitat(s) under the jurisdiction of the United States Fish and Wildlife Service (USFWS), as identified through the USFWS Information for Planning and Consultation (IPaC) website accessed on June 17, 2024, include the Northern Long-Eared Bat (*Myotis septentrionalis*, Endangered), Tricolored Bat (*Perimyotis subflavus*, Proposed Endangered), and the Monarch Butterfly (*Danaus plexippus*, Candidate). There are currently no ESA Section 7 requirements for candidate species and there is no critical habitat designated for the Monarch Butterfly or for the Tricolored Bat. Based on the June 17, 2024 IPaC determination key, a preliminary "No Effect" determination has been reached for the Northern Long-Eared Bat.

According to the National Oceanic and Atmospheric Administration (NOAA) Greater Atlantic Fisheries Office, Endangered Species Act Section 7 Consultation mapping application (ESA S7 Mapper), there are endangered Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*) and short-nose sturgeon (*Acipenser brevirostrum*) within one mile of the study area. The Bellamy River is not identified by NOAA National Marine Fisheries Service (NMFS) as Essential Fish Habitat (EFH).

The project should be designed to avoid jeopardizing the continued existence of state and federally-listed RTE plant and animal species, critical habitats, and exemplary natural communities; and the above-referenced reviews and determinations should be updated through the USFWS, NOAA NMFS, and the NH NHB as the full scope and timing of the project develops.

Vernal Pools

During the wetland delineation, the project area was assessed for characteristic vernal pool features (e.g., closed, depressional landform, direct observation of primary or secondary indicator species) in accordance with *"Identification and Documentation of Vernal Pools in New Hampshire"* (3rd Ed., 2016, published by the New Hampshire Fish and Game Department, Nongame and Endangered Wildlife Program) and the New Hampshire Department of Environmental Services' Administrative Rule Env-Wt 104.46.

Based on the survey conducted by Tighe and Bond Environmental Scientists on June 19 and July 2, 2024, no characteristic vernal pool features were observed, and it is unlikely that any vernal pools are present within the project area.

Priority Resource Areas

Wetland 1 is contiguous to the Bellamy River (a Tier 3 stream per New Hampshire Administrative Rule Chapter Env-Wt 904.05) and located within the FEMA-mapped 100-year floodplain. Additionally, preliminary results of the NHB Datacheck include the potential presence of RTE species or exemplary natural communities in the vicinity of the project area. Therefore, this feature is classified as a "*priority resource area*" (PRA) per New Hampshire Administrative Rule Chapter Env-Wt 103.68. An official Datacheck has been filed, and although there was an NHB record present in the project vicinity, it is expected that it will not be impacted by the proposed project.

Conclusion

In summary, two wetlands and two streams were delineated within the Dover High School Athletic Complex project area. These areas are subject to federal, state, and local jurisdiction. The site contains features classified by the New Hampshire Department of Environmental Services as "priority resource areas"; and the project should be designed to avoid and minimize impact to these features as much as possible. The Bellamy River is also considered a Public Water, and therefore subject to the Shoreland Water Quality Protection Act.

FIGURE 1
AERIAL SITE PLAN

LEGEND

- Wetland Flag
- Bank Flag
- Delineated Wetland Boundary
- Delineated Bank
- 250-Foot Protected Shoreland (RSA 483-B)
- Parcel
- 100-Year Flood Zone
- 500-Year Flood Zone

LOCUS MAP

N

0 125 250
Feet
1:3,000

NOTES

1. Aerial basemap courtesy of Nearmap (2024), set to 10% transparency.
2. 2023 parcel data (approximate) courtesy of NH GRANIT.

Dover High School
Athletic Complex
Dover, New Hampshire

July 2024

Tighe&Bond

G:\GIS\NH\SiteLocus\Dover\Wetlands_DoverHSAthleticComplex_Landscape.mxd [Exported By: MHarris, 7/9/2024, 10:26:53 AM]

D-5085

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 1	**Date:** 06/19/2024	**Direction Taken:** South

Description: Southern view of the forested area directly north of the existing athletic complex.

Photograph No.: 2	**Date:** 06/19/2024	**Direction Taken:** East

Description: View of a trail leading into the forested area north of the existing athletic complex, eventually leading to the Bellamy River.

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 3	**Date:** 07/02/2024	**Direction Taken:** East
Description: View of Wetland 1, to the northeast of the existing Dover High School athletic complex.		

Photograph No.: 4	**Date:** 06/19/2024	**Direction Taken:** Southeast
Description: View of Wetland 2, a ditch that drains into Wetland 1 and the Bellamy River.		

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 5	**Date:** 06/19/2024	**Direction Taken:** North

Description: View of Stream 1A, originating from a culvert and flowing to the north, towards the Bellamy River.

Photograph No.: 6	**Date:** 06/19/2024	**Direction Taken:** Northwest

Description: Upstream view of Stream 2A, showing the Bellamy River to the northeast of the project area.

Wetland Delineation - Photographic Log

Client: Dover School District, City of Dover, NH **Job Number:** D-5085-001

Site: Dover High School Athletic Complex

Photograph No.: 7	**Date:** 06/19/2024	**Direction Taken:** West
Description: View of the Stream 2B, showing the Bellamy River to the northwest of the project area. Photo taken from a pedestrian bridge overlooking the river.		

Wetland Function-Value Evaluation Form

Total area of wetland >1,5 acres Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Forested/School Distance to nearest roadway or other development 175 feet

Dominant wetland systems present PEM, PSS Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Abutting Stream Floodplain

How many tributaries contribute to the wetland? 2 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland Area 1

Latitude 43.17899 Longitude -70.88572

Prepared by: Rick Lipinski Date 07/09/2024

Wetland Impact:
Type TBD Area TBD

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	7,12		The wetland is directly connected to the stream, within the floodplain; providing holding capacity and recharge potential, plus discharge potential to maintain baseflows in the stream.
Floodflow Alteration	Y	3,5,6,7,10,13,18	X	The wetland is directly connected to the Bellamy River, with ready access to the floodplain and holding potential flood water.
Fish and Shellfish Habitat	N			The wetland is not suitable for providing habitat for fish or shellfish
Sediment/Toxicant Retention	Y	3,6,9,10,13,14,16	X	The wetland is effective as a trap for sediments, toxicants, or pathogens in runoff to adjacent waterbodies due to its high density, contignuity to the Bellamy River, and diffuse water tflow
Nutrient Removal	Y	8,11,14		The wetland is effective as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands.
Production Export	Y	7,8,10		The wetland has a diverse vegetative community; detritus and food for living organisms are likely to be directly exported into the Bellamy River.
Sediment/Shoreline Stabilization	Y	6,7,9,12		The wetland is effective as to stabilize streambanks and shorelines against erosion due to its ability to diffuse flow between the wetland and the Bellamy River.
Wildlife Habitat	Y	6,9,13,14,15,19	X	The wetland is suitable for wildlife habitat as it contains dense vegetation and multiple classes.
Recreation	Y	5,9		The wetland is contiguous to the Bellamy River, which is a wildlife habitat and deep enough to be used recreationally.
Educational/Scientific Value	Y	3,9,11		The wetland is directly abutting a school and is contiguous to the Bellamy River.
Uniqueness/Heritage	N			Historical due dilligence review underway, although no observed cellar holes or archaelogical features
Visual Quality/Aesthetics	Y	1,3,5,7		This wetland has unique visual qualities of exhibiting multiple classes in one viewing area and a diverse vegetative community..
ES Endangered Species Habitat	N			Details TBD, NHB datacheck is underway for the project area.
Other	N			

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 0.02 acres Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Forested/School Distance to nearest roadway or other development 100 feet

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Floodplain

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland 2

Latitude 43.17884 Longitude -70.88678

Prepared by: Rick Lipinski Date 07/10/2024

Wetland Impact:
Type TBD Area TBD

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	7,9	X	The wetland is directly connected to a stream, within the floodplain, providing holding capacity and recharge potential, plus discharge potential to maintain baseflow in the stream.
Floodflow Alteration	Y	3,9,13		The wetland is directly connected to a stream, with ready access to its floodplain.
Fish and Shellfish Habitat	N			The wetland is not suitable for providing habitat for fish or shellfish.
Sediment/Toxicant Retention	N			The wetland is not effectice as a trap for sediments, toxicants, or pathogens in runoff to adjacent waterbodies.
Nutrient Removal	N			The wetland is not effective as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands.
Production Export	N			The wetland is not effective as to produce food or usable products for humans or other living organisms.
Sediment/Shoreline Stabilization	N			The wetland is not effective as to stabilize streambanks and shorelines against erosion.
Wildlife Habitat	N			The wetland is not suitable for wildlife habitat as it is a degraded ditch.
Recreation	N			The wetland is not suitable for potential walking, hiking, fishing, or boating.
Educational/Scientific Value	N			The wetland has no signs of wildlife and is not a location for scientific research.
Uniqueness/Heritage	N			Historical due diligence review underway, although no observed cellar holes or archaeological features.
Visual Quality/Aesthetics	N			The wetland is densely forested and does not have any unique visual qualities.
ES Endangered Species Habitat	N			Details TBD, NHB Datacheck currently underway for the project site.
Other	N			

Notes:

* Refer to backup list of numbered considerations.

NH Review Pending - 07/09/2024

NH DIVISION OF
FORESTS AND LANDS

Request for NHB Review of Potential Impacts from the NHB DataCheck Tool

NHB ID # NHB24-2063

Date Submitted: 07/01/2024

Applicant: Rick Lipinski
177 Corporate Drive
Portsmouth NH 03801

Landowner: Dover School District
25 Alumni Drive
Dover NH 03801

Project Location: Tax Map: 900
Tax Lot#: R20
Address: 25 Alumni Drive
Town: Dover

Payment Information. These fields MUST be filled out.

Check, Money Order or Voucher Number: _____

(Make out to "Treasurer - State of NH")

Account Name: _____

(As printed on the check, money order or voucher)

Enclose this completed form with a check, money order or voucher for $25.00, made out to "Treasurer, State of NH".

Send the check, money order or voucher and the completed form to the following address:

Dept. of Natural and Cultural Resources
Attn: NHB Reviews
172 Pembroke Road
Concord, NH 03301

NHB reviews will be completed 5-20 working days from payment, depending on permit type.

IMPORTANT: your submission is considered complete if all of the following is included/filled out:

1. This completed form;
2. A $25 check that is completely filled out (including a signature, date, payable to Treasurer of NH, and the NHB ID # in the memo); and
3. The envelope is addressed Attn: NHB Reviews.

NHB is unable to process incomplete submissions.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: 06/17/2024 03:18:46 UTC
Project Code: 2024-0104544
Project Name: Dover High School athletic Center Renovation

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (**Updated 4/12/2023**) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2024-0104544

Project Name: Dover High School athletic Center Renovation

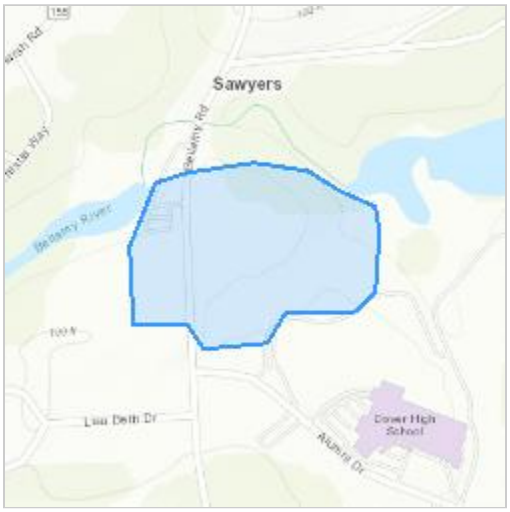
Project Type: Recreation - New Construction

Project Description: The following is our understanding of the proposed project:

- Renovation and/or replacement of Dunaway Football Field. The resulting field is expected to be used by six varsity teams: boys' and girls' soccer; boys and girls lacrosse; football; and field hockey.
- Renovation and/or replacement of the existing rubberized asphalt running track, and field event spaces (LJ, TJ, PV, HJ, and throws).
- Renovation and possible replacement of the existing baseball field.
- Review and analysis of multiple field surfaces including natural grass and synthetic turf.
- Replacement of the home and away grandstands.
- Replacement of the light towers.
- Amenities including bathrooms, concessions, locker rooms, a press box, storage, scoreboards, sound system, equipment, and other items to be identified.
- Parking considerations, including handicapped access and team buses.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.178273149999995,-70.88860779372014,14z



Counties: Strafford County, New Hampshire

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Tighe and Bond
Name: Rick Lipinski
Address: 177 Corporate Drive
City: Portsmouth
State: NH
Zip: 03801
Email rlipinski@tighebond.com
Phone: 5856268329

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: 06/17/2024 03:22:04 UTC
Project code: 2024-0104544
Project Name: Dover High School athletic Center Renovation

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Dover High School athletic Center Renovation'

Dear Rick Lipinski:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on June 17, 2024, for 'Dover High School athletic Center Renovation' (here forward, Project). This project has been assigned Project Code 2024-0104544 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2024-0104544 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

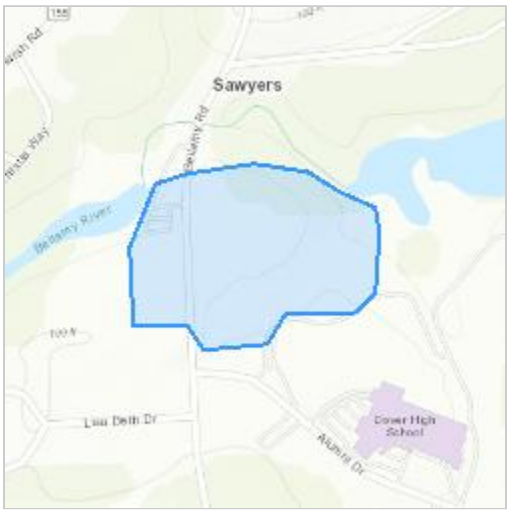
Dover High School athletic Center Renovation

2. Description

The following description was provided for the project 'Dover High School athletic Center Renovation':

> The following is our understanding of the proposed project:
> • Renovation and/or replacement of Dunaway Football Field. The resulting field is expected to be used by six varsity teams: boys' and girls' soccer; boys and girls lacrosse; football; and field hockey.
> • Renovation and/or replacement of the existing rubberized asphalt running track, and field event spaces (LJ, TJ, PV, HJ, and throws).
> • Renovation and possible replacement of the existing baseball field.
> • Review and analysis of multiple field surfaces including natural grass and synthetic turf.
> • Replacement of the home and away grandstands.
> • Replacement of the light towers.
> • Amenities including bathrooms, concessions, locker rooms, a press box, storage, scoreboards, sound system, equipment, and other items to be identified.
> • Parking considerations, including handicapped access and team buses.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.178273149999995,-70.88860779372014,14z



DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   No

3. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

4. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

    If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

    Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by November 30, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Tighe and Bond
Name: Rick Lipinski
Address: 177 Corporate Drive
City: Portsmouth
State: NH
Zip: 03801
Email rlipinski@tighebond.com
Phone: 5856268329

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 2,665.94 acres

Jul 10 2024 9:50:07 Eastern Daylight Time

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	2	24.84	N/A
Shortnose Sturgeon	1	12.42	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

Atlantic Sturgeon

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	ANS_PIS_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	Piscataqua River	01/01	12/31	N/A	N/A	12.42
2	ANS_PIS_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	Piscataqua River	01/01	12/31	N/A	N/A	12.42

Shortnose Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	SNS_PIS_ADU_MAF	Shortnose sturgeon	Adult	Migrating & Foraging	Piscataqua River	04/01	11/30	N/A	N/A	12.42

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 43° 10' 43" N, Longitude = 71° 6' 42" W
Decimal Degrees: Latitude = 43.179, Longitude = -70.888

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

No additional Essential Fish Habitats (EFH) were identified at the report location.

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data. ****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**
All EFH species have been mapped for the Greater Atlantic region, **Atlantic Highly Migratory Species EFH**, Bigeye Sand Tiger Shark, Bigeye Sixgill Shark, Caribbean Sharpnose Shark,

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data. **For links to all EFH text descriptions see the complete data inventory: open data inventory -->
Galapagos Shark, Narrowtooth Shark, Sevengill Shark, Sixgill Shark, Smooth Hammerhead Shark, Smalltail Shark

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: Rick Lipinski, Tighe and Bond
177 Corporate Drive

Portsmouth, NH 03801

From: NH Natural Heritage Bureau
Date: 7/10/2024 (valid until 7/10/2025)
Re: Review by NH Natural Heritage Bureau of request submitted 7/1/2024
Permits: NHDES - Alteration of Terrain Permit, NHDES - Standard Dredge & Fill - Major, NHDES - Wetland Permit by Notification (PBN), USACE - General Permit

NHB ID: **NHB24-2063** **Applicant:** Rick Lipinski

Location: Dover
25 Alumni Drive

Project Description: The following is our understanding of the proposed project: (approx. 21 acres, spring 2025)
- Renovation and/or replacement of Dunaway Football Field. The resulting field is
expected to be used by six varsity teams: boys' and girls' soccer; boys and girls
lacrosse; football; and field hockey.
- Renovation and/or replacement of the existing rubberized asphalt running track, and
field event spaces (LJ, TJ, PV, HJ, and throws).
- Renovation and possible replacement of the existing baseball field.
- Review and analysis of multiple field surfaces including natural grass and synthetic turf.
- Replacement of the home and away grandstands.
- Replacement of the light towers.
- Amenities including bathrooms, concessions, locker rooms, a press box, storage, scoreboards, sound system

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.

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

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

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 7/1/2024 3:13:14 PM, and cannot be used for any other project.

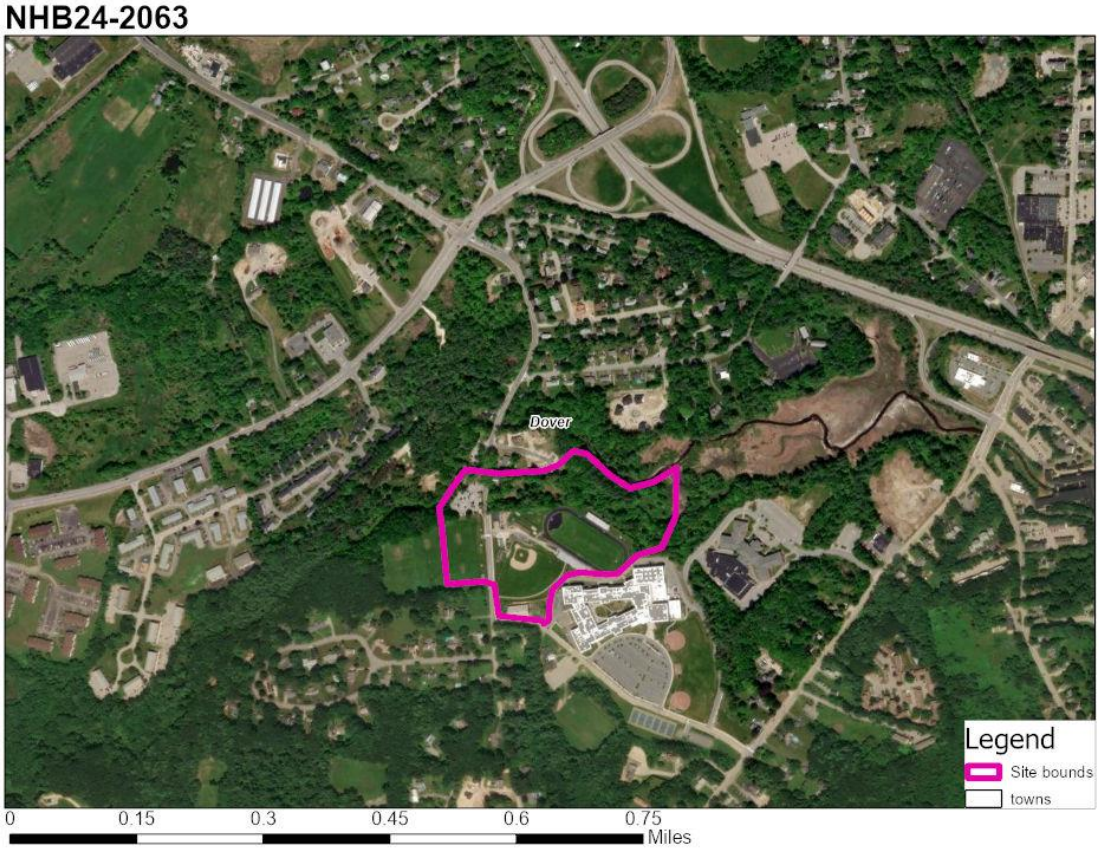
Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

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

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: **NHB24-2063**



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

PERMIT SNAPSHOT REPORT COND-2025-0019
FOR CITY OF DOVER, N.H.

Permit Type	Conditional Use	**Project:**		**App Date:**	08/04/2025
Work Class:	Environmental	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	In Review	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Edgecomb, Makayla	**Approval Expire Date:**	

Description: 'Conceptual' Environmental CUP for proposed Yield Plan impacts to the Conservation District and Wetland Protection District and its buffers

Parcel:	E0024-000000	Main	**Address:** 100 Liberty Wy Dover, NH	Main	**Zone:** IT(Non-Residential - Innovative Technolo

Applicant
Chris Lewis
Business: (603) 622-6223

Owner
Liberty Mutual Insurance Company
Business: (857) 224-1561

Applicant
Francis X Bruton
601 Central Ave
Dover, NH 03820
Business: (603) 749-4529

Plan Preparer
Tom Zajac
3 Congress Street
Nashua, NH 03062
Business: (603) 883-2057
Mobile: (603) 721-2034

Applicant
Tom Zajac
3 Congress Street
Nashua, NH 03062
Business: (603) 883-2057
Mobile: (603) 721-2034

Permit Custom Fields

Select Permit Type	Wetland Protection District
What is the parcel zoned?	IT
permitstatefed	None - conceptual impacts only

General Purpose	Alteration / Addition
New Change in Impervious/Paved Area (sq ft)	0

Project Zone	Mixed Use
Work	The RCM Overlay District regulations required a Yield Plan be prepared to establish the maximum density for a parcel. The attached Yield Plan shows 264 lots along with associated public road infrastructure. Proposed impacts to the Conservation District and Wetland Protection District and its buffers are needed to provide access to the upland portions of the site. These impacts are conceptual in nature and only apply to the Yield Plan.

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Tom_Zajac_8/4/2025.jpg	08/04/2025 3:06	Zajac, Tom		Uploaded via CSS
Permit Snapshot Report.pdf	08/04/2025 3:07	Service, EnerGov		Attached by IO - ATTACH: Initial Permit Snapshot

Invoice No.	Fee	Fee Amount	Amount Paid
INV-2025013432	Planning General Application Fee	$200.00	$0.00
	Total for Invoice INV-2025013432	$200.00	$0.00
	Grand Total for Permit	**$200.00**	**$0.00**

PERMIT SNAPSHOT REPORT (COND-2025-0019)

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Conditional Use Review v.1	In Review	08/04/2025	09/01/2025		No	No

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Edgecomb, Makayla	In Review	08/04/2025	09/01/2025	

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		08/04/2025 9:56	
Confirm application complete v.1	Generic Action		08/04/2025 9:56
Conditional Use Review v.1	Receive Submittal	08/04/2025 0:00	
Planning Board v.1			
Planning Board Agenda v.1	Task		
Invoice for Notices v.1	Task		
Send Notices v.1	Task		
Planner Creates Staff Recommendations v.1	Permit Activity		
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Permit Activity		
NOD Sent to Applicant v.1	Create Report		
Issue Permit v.1			
Verify Fees Prior to Permit v.1	Generic Action		
Issue and Review Permit v.1	Generic Action		
Print and Email Permit v.1	Generic Action		
Plans uploaded to Treeno v.1	Generic Action		
Internal Notification of Plan Completion v.1	Generic Action		
Recording v.1	Task		

August 1, 2025
Job #6003

Ms. Donna Benton, AICP, Director of Planning and Community Development
City of Dover
288 Central Avenue
Dover, NH 03820-4169

RE: Environmental CUP Conservation Commission Submission
Tax Map 'E', Lot 24
50, 100 & 150 Liberty Way
Dover, NH

Dear Ms. Benton,

Pursuant to the above-referenced property and on behalf of our client, Brady Sullivan Properties LLC, please find enclosed a 'conceptual' Environmental Conditional Use Permit (CUP) application, plans and support materials for proposed Wetland Protection District and buffer impacts and Conservation District impacts associated with a Yield Plan as required by the Residential-Commercial Mixed-Use (RCM) Overlay District regulations. These impacts are conceptual in nature and only apply to the Yield Plan.

This application is being submitted as part of an intended multi-phase reactivation and redevelopment of the existing Liberty Way campus, with the first phase being the adaptive re-use of the existing 150 Liberty Way building into 248 residential units, 38,000 SF commercial space and associated site improvements.

The following plans are being submitted as part of the application package:

- Conceptual Wetland/Buffer Impact Plan
- Yield Plan (as required by RCM Overlay District)
- Master Site Plan (proposed 150 Liberty Way change of use)

Please do not hesitate to contact our office if you have any questions or comments.

Respectfully,

Thomas Zajac, Jr

Thomas E. Zajac, Jr., P.E.
Principal/Project Executive
Hayner/Swanson, Inc., now IMEG

cc: FX Bruton, Esq., Bruton & Berube, PLLC
Chris Lewis, Brady Sullivan Properties, LLC

August 1, 2025
Revised: August 6, 2025
Job #6003

Ms. Donna Benton, AICP, Director of Planning and Community Development
City of Dover
288 Central Avenue
Dover, NH 03820-4169

RE: Environmental CUP Conservation Commission Submission
Tax Map 'E', Lot 24
50, 100 & 150 Liberty Way
Dover, NH

Dear Ms. Benton,

On behalf of Brady Sullivan Properties, LLC, we are pleased to submit this conceptual Environmental Conditional Use Permit (CUP) application in support of a proposed redevelopment of the Liberty Way campus. This submission includes the CUP application form, a Conceptual Wetland/Buffer Impact Plan, the required Yield Plan, and a Master Site Plan for the first phase of redevelopment at 150 Liberty Way.

The conceptual CUP specifically addresses potential impacts to the Wetland Protection District, its associated buffers, and Conservation District areas as part of the Yield Plan. These impacts are not proposed for immediate construction but are required to establish the site's allowable development density under the Residential-Commercial Mixed-Use (RCM) Overlay District.

Project Phasing and Use:

The Yield Plan and this CUP application are part of a multi-phase redevelopment strategy for the site. Phase 1 includes the adaptive reuse of the existing building at 150 Liberty Way, converting it into 248 residential units, 38,000 square feet of commercial space, an outdoor amenities area, public parking and trailhead improvements and associated site improvements. The yield plan will result in 264 units of density.

Notably, no wetland or conservation impacts are proposed in this initial phase. All additional phases will be subject to specific site plan review as each phase is proposed and permitting. These future efforts will involve further review by the Conservation Commission should there be any environmental impact proposed at that time.

The conceptual CUP pertains only to the roadway layout shown on the Yield Plan, which serves as the regulatory mechanism to determine density as required by the RCM Overlay District.

Yield Plan Development and Environmental Considerations:

Preparation of the Yield Plan involved an extensive planning process beginning in March, including:

- Multiple rounds of review and feedback from City staff
- Consideration of alternatives to avoid and reduce impacts
- Iterative plan revisions to mitigate environmental effects

Key environmental and engineering considerations included:

- Avoidance of Sensitive Areas:
  Wetlands, buffers, and other natural features were carefully mapped and respected. No buildings or parking areas are located within the Wetland Protection District.
- Lot Configuration:
  Many lots on the Yield Plan exceed the minimum 10,000 square foot requirement, ensuring viable development areas while preserving open space.
- Roadway Layout:
  Road crossings were sited at narrow wetland points with gentler slopes, minimizing impact and allowing culvert installation. The roadway design also utilizes existing infrastructure, such as Liberty Way and parking aisles, to further reduce disturbance.
- Wetland Delineation:
  Wetland boundaries across the 220+ acre site were re-delineated by Gove Environmental Services, Inc., a certified wetland scientist. This involved approximately 5 miles of wetland mapping over several months and forms the basis for impact analysis.
- City Staff Comments on Lot Design:
  After submission of this application, staff provided additional comments on 19 lots. These lots have since been reviewed, and potential modifications include combining or eliminating approximately half of them to further avoid impacts.

Although the roads and lots shown on the Yield Plan are not proposed for construction, the layout reflects sound planning and engineering practices that minimize environmental disruption and preserve site functionality.

Compliance with the Wetlands Protection District Criteria (Section 170-28)

The Wetlands Protection District includes regulated wetlands and 50-foot buffer zones located throughout the site. This application has been reviewed for consistency with the Goals (170-28B) and CUP Criteria (170-28F) of the zoning ordinance.

Goals Addressed Include:

1. Preventing pollution of surface and groundwater
2. Protecting wetlands that support flood storage, water quality, and wildlife habitat
3. Avoiding and minimizing wetland and buffer impacts
4. Preserving ecological integrity, groundwater recharge, and habitat
5. Encouraging low-intensity, harmonious land uses

CUP Criteria Met Include:

- (a) Practicable Alternatives: No less impactful alternative exists to achieve the conceptual layout of the yield plan.

- (b) Avoidance: Impact areas were minimized through careful siting, with consideration based upon Planning staff feedback, of crossings and infrastructure alignment.
- (c) Minimization: Impacts are limited to areas with narrow wetlands and flatter grades.
- (d) Mitigation: Compensatory mitigation (if required by NHDES) will be provided.
- (e) State Approval: Future impacts would be subject to NHDES Wetlands Bureau review and approval.
- (f) Wetland Functions and Values: A functions and values assessment is included based on updated delineation.

Compliance with the Conservation District Compliance (Section 170-27)

The site includes Conservation District areas such as:

- 100-foot buffer from the Cocheco River
- 50-foot buffer from Indian Brook
- Steep slopes (20% grade over 2,000 SF)

The proposed roadway alignments are consistent with Section 170-27(C)(1), which allows for roadway development necessary for the 'productive use of land'. It is our opinion that the proposal meets the intent and goals of Section 170-27(A).

Conclusion:

This conceptual CUP application has been prepared in accordance with the City of Dover's Wetland Protection and Conservation District ordinances. The proposed impacts are limited in scope and serve solely to establish maximum site density under the RCM Overlay District Yield Plan requirement.

Importantly, the forthcoming Phase 1 site plan proposes no impacts to regulated wetlands or conservation areas, underscoring the applicant's commitment to environmental protection and responsible redevelopment.

We believe the application meets all applicable CUP standards and respectfully request favorable consideration by City staff and the Conservation Commission.

Should you have any questions or require additional information, please do not hesitate to contact our office.

Respectfully,

Thomas Zajac, Jr

Thomas E. Zajac, Jr., P.E.
Principal/Project Executive
Hayner/Swanson, Inc., now IMEG

cc: FX Bruton, Esq., Bruton & Berube, PLLC
Chris Lewis, Brady Sullivan Properties, LLC

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Brady Sullivan Properties, LLC Telephone # 603-622-6223

Address of Applicant: 670 N. Commercial Street, Manchester, NH 03101

E-Mail Address: clewis@bradysullivan.com

Name of Property Owner (if different from applicant): Liberty Mutual Insurance Company Telephone #

Address of Property Owner: 175 Berkeley Street, Boston, MA 02116

PROPERTY INFORMATION

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

Address of Property: 50, 100 & 150 Liberty Way

Zoning District(s) IT Overlay District(s) RCM

Existing Use of Property: Office complex

CONDITIONAL USE PERMIT INFORMATION

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

☒ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☐ 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:

A Yield Plan is required by the RCM Overlay District regulations to establish the maximum allowable density.

The attached Yield Plan depicts a total of 264 lots along with public road infrastructure upon the subject site.

Proposed impacts to the Conservation District and the Wetland Protection District and its buffers are needed to provide access to upland portions of the site.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: None - conceptual discussion only

Name of Professional That Prepared Plans: Tom Zajac HSI/IMEG

Address 3 Congress Street, Nashua, NH 03062 Telephone #: 603-883-2057

Professional License #: _____ E-mail address: thomas.e.zajac@imegcorp.com

SIGNATURES

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

Signature of Property Owner: _____ Date: _____

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

Signature of Agent: Thomas Zajac, Jr Date: 8-1-25

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: _____

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS

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

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 24, 2023)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____
- ☐ **TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # _____ sq. ft. = $_____

SUBTOTAL PLAN REVIEW FEE = $_____

AND

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 review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # _____ of x $10.00= $_____
- ☐ Certified letters fee: # of abutters _____ X $10.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

C. Foster's newspaper public notice fee $120.00 x # _____ applications = $_____

SUBTOTAL = $_____

TOTAL INVOICE AMOUNT = $_____

PLAN REVIEW FEE COLLECTED/PAID = $ _____

BALANCE DUE = $ _____

The amount due must be paid 28 hours prior to the Planning Board Meeting, to be heard.

▶ ZONING NOTE ◀

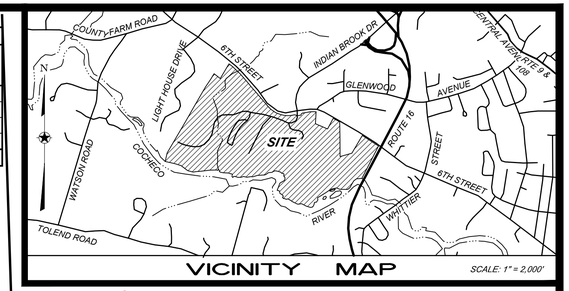
THE ZONING/BUILDING SETBACKS DEPICTED ON THIS PLAN ARE THOSE WE HAVE INTERPRETED FROM THE LATEST ZONING ORDINANCE OF THE MUNICIPALITY AND, AS SUCH, ARE ONLY OPINIONS EXPRESSED BY HAYNER/SWANSON, INC. THE FINAL INTERPRETATION OF THE ORDINANCE CAN ONLY BE MADE BY THE APPROPRIATE ZONING AUTHORITY. SINCE BUILDING ORIENTATION, PROPOSED USES, AND OTHER FACTORS CAN AFFECT THE SETBACKS, PRIOR TO ANY DEVELOPMENT OF THIS PROPERTY, THE BUILDER/OWNER MUST CONSULT WITH THE TOWN/CITY TO INSURE THE CORRECT APPLICATION OF THE ZONING ORDINANCE.

NOTE

SEE SHEET 2 OF 8 FOR NOTES, LEGEND AND ABUTTERS LIST

150 LIBERTY WAY - PROPOSED CHANGE OF USE TABLE

FLOOR	GROSS BUILDING AREA (SF)	TOTAL UNITS	ONE-BEDROOM UNITS	TWO-BEDROOM UNITS	THREE-BEDROOM UNITS	COMMERCIAL SPACE (SF)
1ST	87,500	32	4	28	0	37,025
2ND	87,500	72	9	55	8	-
3RD	87,500	72	9	55	8	-
4TH	87,500	72	9	55	8	0
TOTALS	350,000	248	31	193	24	37,025



VICINITY MAP SCALE: 1" = 2,000'

MAP 'D' LOT 16-G
MAP 'D' LOT 16
MAP 'D' LOT 16-F
BROOK
MAP 'D' LOT 16-A
MAP 'D' LOT 16-B
MAP 'D' LOT 17-D
MAP 'D' LOT 17-F
MAP 'D' LOT 17-F-1
SIXTH STREET
INDIAN BROOK DRIVE
MAP 'D' LOT 18-4
MAP 'D' LOT 18-P
MAP 'D' LOT 18-A
GLENWOOD AVENUE
MAP 'E' LOT 20-E
MAP 'E' LOT 20
MAP 'E' LOT 20-D
MAP 'E' LOT 19
MAP 'E' LOT 73
MAP 'E' LOT 73-001
MAP 'E' LOT 73-002
MAP 'E' LOT 73-A
MAP 'E' LOT 72-F3
MAP 'E' LOT 24-001
MAP 'E' LOT 70-B
MAP 'E' LOT 70-A
SPAULDING TURNPIKE (RTE 16)
MAP 'E' LOT 67
MAP 'E' LOT 67-B
MAP 'E' LOT 65-C
MAP 'E' LOT 65-001
MAP 'E' LOT 26-B
MAP 'E' LOT 27-A
12" RCP DRAIN LINE FLOWS ONTO LOT 24
APPROXIMATE LIMIT OF WETLANDS (TYP)
MAP 'E' LOT 27-F
INDIAN WAY (PRIVATE)
LIBERTY
-24-
219.5± ACRES
(9,561,220± SF)
MAP 'E' LOT 27-G
MAP 'E' LOT 27-B1
PROPOSED OUTDOOR AMENITIES SPACE
SEE SHEETS 2-5 FOR EXISTING CONDITIONS AND SHEETS 6-8 FOR PROPOSED MINOR SITE IMPROVEMENTS WITHIN THIS AREA
EXISTING 231,000 SF 3-STORY BUILDING
EXISTING 20,000 SF 1-STORY BUILDING
EXISTING 350,000 SF 4-STORY BUILDING
EXISTING PARKING DECK
PROPOSED PUBLIC PARKING AND TRAIL CONNECTION
EXISTING PUBLIC TRAIL (TYP)
ZONE A
RIVER
COCHECO
MAP 'E' LOT 49-A
MAP 'E' LOT 47-001
MAP 'E' LOT 45-005
HORN BROOK
MAP 'E' LOT 50-006
UPPER FACTORY ROAD
NYE LANE
MAP 'E' LOT 50
MAP 'E' LOT 49-001
MAP 'E' LOT 49-002
MAP 'E' LOT 49-003
MAP 'E' LOT 49-004
MAP 'E' LOT 49-005
MAP 'E' LOT 49-006
N

811 DigSafe
MA.ME.NH.RI.VT
CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION
digsafe.com
DIAL 811 or
1-888-DIG SAFE
1-888-344-7233

FOR LIBERTY MUTUAL INSURANCE CO. _____ DATE

STATE OF NEW HAMPSHIRE — JAMES N. PETROPULOS No. 10274 LICENSED PROFESSIONAL ENGINEER

No.	DATE	REVISION	BY
1	06/25/25	ADDRESS TRC COMMENTS	TEZ

MASTER SITE PLAN
(MAP 'E', LOT 24)

PROPOSED MIXED-USE DEVELOPMENT

150 LIBERTY WAY
DOVER, NEW HAMPSHIRE

PREPARED FOR:
BRADY SULLIVAN PROPERTIES
670 NORTH COMMERCIAL STREET MANCHESTER, NH 03101

RECORD OWNER:
LIBERTY MUTUAL INSURANCE CO.
175 BERKELEY STREET BOSTON, MASSACHUSETTS 02116

200 0 200 400 600 800 FEET
100 0 100 200 METERS
SCALE: 1"=200 Feet
1"=60.960 Meters

28 MAY 2025

HSI Hayner/Swanson, Inc. | now IMEG
Civil Engineers/Land Surveyors
3 Congress Street, Nashua, NH 03062, (603) 883-2057
131 Middlesex Turnpike, Burlington, MA 01803, (781) 203-1501

FIELD BOOK: 1300 | DRAWING NAME: 6003CU-FQ81
DRAWING LOC: J:\6000\6003\DWG\6003 CU
6003-CU (File Number) | 1 OF 10 (Sheet)

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N

MAGNETIC

LEGEND

- WETLAND FLAGGING LIMIT
- 50 FT WETLAND/NO DISTURB BUFFER/ CONSERVATION OVERLAY DISTRICT
- WETLAND IMPACT AREA
- BUFFER IMPACT AREA

NOTES:

1. LOT AREA: 218.0± ACRES (9,494,868± SF)
2. PRESENT ZONING: **IT** – INNOVATIVE TECHNOLOGY
   RCM – RESIDENTIAL COMMERCIAL MIXED USE OVERLAY
3. PURPOSE OF PLAN:
   TO SHOW THE PROPOSED 'CONCEPTUAL' WETLAND AND WETLAND BUFFER IMPACTS ASSOCIATED WITH A 264-LOT YIELD PLAN IN ACCORDANCE WITH THE RCM OVERLAY DISTRICT REQUIREMENTS.
4. PROPOSED LOTS AS SHOWN CONTAIN A MINIMUM 10,000 SF LOT AREA AND 100 FT OF FRONTAGE ON A PUBLIC ROAD (50 FT RIGHT OF WAY).
5. THE SUBJECT SITE IS CURRENTLY SERVICED BY MUNICIPAL SEWER AND WATER.
6. EXISTING CONDITIONS PLANIMETRICS AND TOPOGRAPHY ARE SHOWN BASED ON AN AERIAL MAPPING EFFORT PERFORMED IN DECEMBER 2024. EXISTING PROPERTY LINES, EASEMENTS, AND WETLANDS ARE SHOWN AS APPROXIMATE PER GIS MAPS AND/OR RECORD PLANS BY OTHERS.
7. NO LOTS USE CONSERVATION EASEMENT AREAS TO MEET THE MINIMUM 10,000 SF LOT AREA.
8. RECORD OWNER:

MAP 'E' LOT 24
LIBERTY MUTUAL INSURANCE CO.
ATTN: TYLER MUNGER
175 BERKELEY STREET
BOSTON, MA 02116
BK. 1365, PG. 453

WETLAND/BUFFER IMPACT AREAS

AREA	WETLAND IMPACT (SF±)	BUFFER IMPACT (SF±)
A	17,598	4,375
B	18,181	30,116
C	0	8,195
D	0	2,142
E	2,066	5,292
F	1,540	12,290
G	3,185	6,838
H	517	14,874
I	447	5,429
J	1,513	5,546
K	5,812	19,496
L	5,283	13,084
TOTALS	**56,142**	**127,677**

PREPARED FOR:
BRADY SULLIVAN PROPERTIES
670 NORTH COMMERCIAL STREET MANCHESTER, NH 03101
RECORD OWNER:
LIBERTY MUTUAL INSURANCE CO.
ATTN: TYLER MUNGER 175 BERKELEY STREET BOSTON, MASSACHSETTS 02116

NO. | DATE | REVISION | BY

CONCEPTUAL
WETLAND/BUFFER IMPACT PLAN
(MAP 'E', LOT 24)

50, 100, & 150 LIBERTY WAY

DOVER, NEW HAMPSHIRE

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
3 Congress Street Nashua, NH 03062 (603) 883-2057
now IMEG
IMEG
11 Wellness Way Burlington, MA 01803 (781) 203-1501

FIELD BOOK: CONCEPT.fbk | DWG. USED: V:\6000\6003\DWG\6003 CONCEPT | Scale 1" = 200'
DWG. NO. | 1 OF 1 | Sheet | 6003 CONCEPT | File Number | Date 3 JULY 2025

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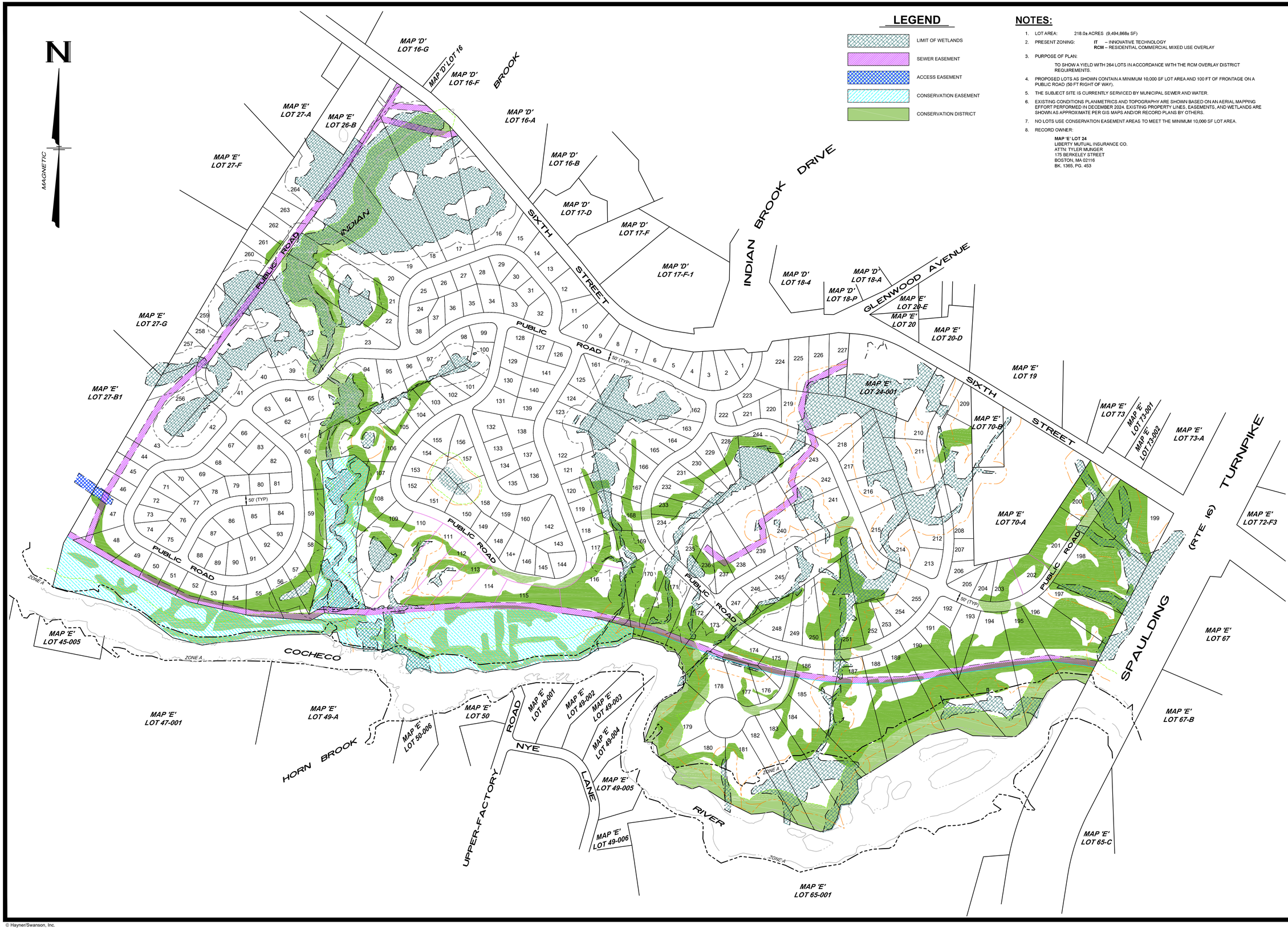

NOTES:

1. LOT AREA: 218.0± ACRES (9,494,868± SF)
2. PRESENT ZONING: **IT** – INNOVATIVE TECHNOLOGY
   RCM – RESIDENTIAL COMMERCIAL MIXED USE OVERLAY
3. PURPOSE OF PLAN:
   TO SHOW A YIELD WITH 264 LOTS IN ACCORDANCE WITH THE RCM OVERLAY DISTRICT REQUIREMENTS.
4. PROPOSED LOTS AS SHOWN CONTAIN A MINIMUM 10,000 SF LOT AREA AND 100 FT OF FRONTAGE ON A PUBLIC ROAD (50 FT RIGHT OF WAY).
5. THE SUBJECT SITE IS CURRENTLY SERVICED BY MUNICIPAL SEWER AND WATER.
6. EXISTING CONDITIONS PLANIMETRICS AND TOPOGRAPHY ARE SHOWN BASED ON AN AERIAL MAPPING EFFORT PERFORMED IN DECEMBER 2024. EXISTING PROPERTY LINES, EASEMENTS, AND WETLANDS ARE SHOWN AS APPROXIMATE PER GIS MAPS AND/OR RECORD PLANS BY OTHERS.
7. NO LOTS USE CONSERVATION EASEMENT AREAS TO MEET THE MINIMUM 10,000 SF LOT AREA.
8. RECORD OWNER:
   MAP 'E' LOT 24
   LIBERTY MUTUAL INSURANCE CO.
   ATTN: TYLER MUNGER
   175 BERKELEY STREET
   BOSTON, MA 02116
   BK. 1365, PG. 453

NO.	DATE	REVISION	BY
4	7/31/25	ADDRESS STAFF COMMENTS	TEZ
3	5/29/25	ADDRESS STAFF COMMENTS	TEZ
2	4/11/25	ADDRESS STAFF COMMENTS	TEZ
1	3/26/25	ADDRESS STAFF COMMENTS	TEZ

200 0 200 400 600 800 FEET

PREPARED FOR:
BRADY SULLIVAN PROPERTIES
670 NORTH COMMERCIAL STREET MANCHESTER, NH 03101
RECORD OWNER:
LIBERTY MUTUAL INSURANCE CO.
ATTN: TYLER MUNGER 175 BERKELEY STREET BOSTON, MASSACHUSETTS 02116

YIELD PLAN
(MAP 'E', LOT 24)

50, 100, & 150 LIBERTY WAY

DOVER, NEW HAMPSHIRE

HSI
Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
3 Congress Street
Nashua, NH 03062
(603) 883-2057

DOT IMEG
111 Middlesex Turnpike
Burlington, MA 01803
(781) 203-1501

FIELD BOOK:	
DWG. 6003 CONCEPT BASE - YIELD	DWG LOC: J:\6000\6003\DWG\6003 CONCEPT
1 OF 2 Sheet	6003 CONCEPT File Number
	Scale 1" = 200'
	Date 25 FEBRUARY 2025

© Hayner/Swanson, Inc.

50, 100, 150 LIBERTY WAY

YIELD PLAN LOT TABLE

7/31/2025 HSI#6003

LOT No.	TOTAL LOT AREA (SF)	TOTAL CONTIGUOUS LOT AREA (EXCLUDING WETLANDS) (SF)	TOTAL LOT FRONTAGE (FT)	TOTAL WETLAND BUFFER AREA (SF)	WETLAND BUFFER % OF MIN. CONTIG.	TOTAL CONSERVATION DISTRICT AREA (SF)	TOTAL LOT AREA (EXCLUDING CONSERVATION DISTRICT) (SF)
1	11,590	11,590	148	0	0%	0	11,590
2	14,795	14,795	110	0	0%	0	14,795
3	15,231	15,231	111	0	0%	0	15,231
4	11,353	11,353	100	0	0%	0	11,353
5	13,379	13,379	100	0	0%	0	13,379
6	11,744	11,744	101	0	0%	0	11,744
7	12,324	12,324	100	0	0%	0	12,324
8	11,630	11,630	100	0	0%	0	11,630
9	13,805	13,805	100	0	0%	0	13,805
10	20,956	20,956	137	0	0%	0	20,956
11	15,870	15,870	143	0	0%	0	15,870
12	17,899	17,899	106	0	0%	0	17,899
13	12,348	12,348	100	0	0%	0	12,348
14	14,414	14,414	101	0	0%	0	14,414
15	16,364	16,364	100	0	0%	0	16,364
16	94,264	32,253	100	15,776	0%	91	94,173
17	189,971	17,869	100	9,044	12%	30,537	159,434
18	121,811	13,221	100	6,550	33%	27,014	94,797
19	119,115	19,809	100	9,734	0%	38,265	80,850
20	55,940	33,281	100	11,217	0%	15,704	40,236
21	63,582	45,351	100	25,777	0%	25,372	38,210
22	66,275	20,868	151	6,369	0%	26,509	39,766
23	108,534	31,496	414	14,572	0%	55,369	53,165
24	10,439	10,439	100	0	0%	0	10,439
25	11,004	11,004	184	0	0%	0	11,004
26	10,500	10,500	100	0	0%	0	10,500
27	10,500	10,500	100	0	0%	0	10,500
28	12,750	12,750	100	0	0%	0	12,750
29	11,609	11,609	155	0	0%	0	11,609
30	11,187	11,187	122	0	0%	0	11,187
31	10,500	10,500	100	0	0%	0	10,500
32	14,972	14,972	301	0	0%	0	14,972
33	14,273	14,273	100	0	0%	0	14,273
34	14,216	14,216	100	0	0%	0	14,216
35	12,338	12,338	100	0	0%	0	12,338
36	11,899	11,899	100	0	0%	0	11,899
37	11,244	11,244	100	0	0%	0	11,244
38	10,422	10,422	186	0	0%	0	10,422
39	90,743	24,836	221	15,105	3%	5,933	84,810
40	62,579	23,064	150	11,597	0%	0	62,579
41	32,954	15,438	472	7,597	22%	0	32,954
42	41,720	34,127	429	16,189	0%	0	41,720
43	74,728	53,945	250	850	0%	0	74,728
44	16,942	16,942	100	0	0%	0	16,942
45	17,699	17,699	100	0	0%	0	17,699
46	17,608	17,608	100	0	0%	0	17,608
47	40,843	40,843	100	0	0%	6,404	34,439
48	27,341	27,341	100	0	0%	6,373	20,968
49	17,917	17,917	100	0	0%	2,761	15,156
50	13,796	13,796	100	0	0%	3,058	10,738
51	13,429	13,429	100	0	0%	3,046	10,383
52	13,823	13,823	100	0	0%	3,654	10,169
53	13,140	13,140	100	0	0%	3,107	10,033
54	14,205	14,205	100	0	0%	4,200	10,005
55	24,527	24,527	100	2,349	0%	14,437	10,090
56	30,596	27,672	100	15,193	0%	17,764	12,832
57	22,263	18,547	100	10,083	15%	9,465	12,798
58	20,480	20,533	100	7,972	0%	9,856	10,624
59	26,187	26,187	203	2,224	0%	12,719	13,468
60	31,187	28,940	197	12,131	0%	16,215	14,972
61	17,912	16,405	100	5,074	0%	2,608	15,304
62	15,039	16,015	100	0	0%	0	15,039
63	13,291	34,155	221	0	0%	0	13,291
64	12,221	20,842	125	0	0%	0	12,221
65	23,531	36,371	175	10,437	0%	2,369	21,162
66	10,807	10,807	197	0	0%	0	10,807
67	10,849	10,849	100	0	0%	0	10,849
68	14,344	14,344	100	0	0%	0	14,344
69	12,746	12,746	101	0	0%	0	12,746
70	11,058	11,058	100	0	0%	0	11,058
71	14,133	14,133	100	0	0%	0	14,133
72	13,030	13,030	100	0	0%	0	13,030
73	11,772	11,772	100	0	0%	0	11,772
74	11,207	11,207	144	0	0%	0	11,207
75	11,565	11,565	203	0	0%	0	11,565
76	11,572	11,572	100	0	0%	0	11,572
77	11,153	11,153	100	0	0%	0	11,153
78	11,647	11,647	100	0	0%	0	11,647
79	11,124	11,124	100	0	0%	0	11,124
80	10,000	10,000	100	0	0%	0	10,000
81	10,807	10,807	197	0	0%	0	10,807
82	16,086	16,086	158	0	0%	0	16,086
83	19,100	19,100	100	0	0%	0	19,100
84	11,944	11,944	212	0	0%	0	11,944
85	14,908	14,908	133	0	0%	0	14,908
86	17,277	17,277	159	0	0%	0	17,277
87	13,133	13,133	121	0	0%	0	13,133
88	11,807	11,807	207	0	0%	0	11,807
89	11,736	11,736	110	0	0%	0	11,736
90	14,598	14,598	110	0	0%	0	14,598
91	14,318	14,318	110	0	0%	0	14,318
92	14,526	14,526	110	0	0%	0	14,526
93	11,184	11,184	133	0	0%	0	11,184
94	63,524	33,395	245	21,951	0%	40,450	23,074
95	21,468	21,157	100	7,684	0%	3	21,465

50, 100, 150 LIBERTY WAY

YIELD PLAN LOT TABLE

7/31/2025 HSI#6003

LOT No.	TOTAL LOT AREA (SF)	TOTAL CONTIGUOUS LOT AREA (EXCLUDING WETLANDS) (SF)	TOTAL LOT FRONTAGE (FT)	TOTAL WETLAND BUFFER AREA (SF)	WETLAND BUFFER % OF MIN. CONTIG.	TOTAL CONSERVATION DISTRICT AREA (SF)	TOTAL LOT AREA (EXCLUDING CONSERVATION DISTRICT) (SF)
96	15,167	14,406	100	5,469	11%	1,713	13,454
97	20,495	16,248	100	8,179	19%	34	20,461
98	20,820	16,824	100	6,869	0%	0	20,820
99	11,146	11,146	225	0	0%	0	11,146
100	15,493	14,044	126	7,676	36%	0	15,493
101	18,741	16,024	174	7,578	16%	0	18,741
102	13,088	13,027	100	3,923	9%	160	12,928
103	14,602	14,578	100	4,231	0%	2,955	11,647
104	17,029	15,123	100	6,214	11%	3,943	13,086
105	25,805	21,070	100	7,172	0%	2,571	23,234
106	66,496	58,997	100	38,839	0%	31,147	35,349
107	14,917	14,917	100	1,228	0%	4,772	10,145
108	25,124	25,124	100	0	0%	5,564	19,560
109	51,278	42,516	100	19,191	0%	10,392	40,886
110	69,409	54,226	150	31,560	0%	9,116	60,293
111	60,365	43,569	120	29,753	0%	5,348	55,017
112	44,821	39,710	100	25,925	0%	12,927	31,894
113	34,652	34,652	100	1,272	0%	11,527	23,125
114	27,298	27,298	100	0	0%	8,506	18,792
115	37,471	37,471	277	0	0%	23,415	14,056
116	75,095	64,334	100	18,065	0%	51,106	23,989
117	23,812	22997	100	13,122	1%	8,131	15,681
118	16,798	15,501	100	5,341	0%	2,088	14,710
119	17,901	15,277	100	5,341	1%	2,627	15,274
120	19,004	14,758	100	5,276	5%	4,714	14,290
121	20,107	19,065	100	6,121	0%	711	19,396
122	36,479	35,603	242	9,634	0%	0	36,479
123	17,853	13,468	100	6,656	32%	0	17,853
124	17,716	14,526	100	4,826	3%	0	17,716
125	16,652	16,104	166	2,354	0%	0	16,652
126	10,109	10,109	189	0	0%	0	10,109
127	11,331	11,331	106	0	0%	0	11,331
128	14,258	14,258	225	0	0%	0	14,258
129	12,243	12,243	100	0	0%	0	12,243
130	12,060	12,060	100	0	0%	0	12,060
131	18,442	18,442	156	0	0%	0	18,442
132	17,296	17,296	174	0	0%	0	17,296
133	12,557	12,557	100	0	0%	0	12,557
134	11,253	11,253	100	0	0%	0	11,253
135	11,793	11,793	184	0	0%	0	11,793
136	12,980	12,980	217	0	0%	0	12,980
137	11,134	11,134	100	0	0%	0	11,134
138	17,728	17,728	100	0	0%	0	17,728
139	12,049	12,049	100	0	0%	0	12,049
140	14,886	14,886	100	0	0%	0	14,886
141	17,508	17,508	100	0	0%	0	17,508
142	23,224	23,224	193	0	0%	0	23,224
143	12,744	12,744	106	0	0%	0	12,744
144	13,827	13,827	198	0	0%	0	13,827
145	10,009	10,009	100	0	0%	0	10,009
146	12,374	12,374	100	0	0%	0	12,374
147	13,463	13,463	102	0	0%	0	13,463
148	11,834	11,834	101	0	0%	0	11,834
149	11,111	11,111	102	0	0%	0	11,111
150	18,969	17,633	150	4,596	0%	0	18,969
151	21,629	16,014	150	6,275	3%	0	21,629
152	12,612	12,612	166	478	0%	0	12,612
153	13,400	13,243	100	3,328	1%	0	13,400
154	13,735	13,706	100	2,979	0%	0	13,735
155	17,163	17,163	229	0	0%	0	17,163
156	14,282	14,282	170	219	0%	0	14,282
157	22,124	18,531	150	7,367	0%	0	22,124
158	20,599	18,457	150	5,718	0%	0	20,599
159	13,005	13,005	102	0	0%	0	13,005
160	19,026	19,026	167	0	0%	0	19,026
161	23,806	18,228	221	8,628	4%	0	23,806
162	79,192	45,466	275	30,177	0%	0	79,192
163	15,295	14,490	101	4,893	4%	0	15,295
164	21,606	17,683	100	5,080	0%	0	21,606
165	34,428	23,934	106	5,439	0%	868	33,560
166	33,519	23,225	105	6,394	0%	2,807	30,712
167	42,209	25,909	106	9,097	0%	6,428	35,781
168	25,992	21,249	137	9,642	0%	10,884	15,108
169	23,415	18,699	106	8,258	0%	11,336	12,079
170	53,939	52,702	100	22,900	0%	30,170	23,769
171	47,247	42,011	151	32,244	2%	33,850	13,397
172	34,068	34,068	150	6,270	0%	20,814	13,254
173	37,368	35,654	152	19,797	0%	23,438	13,930
174	27,778	27,091	193	14,802	0%	11,910	15,868
175	17,371	17,371	269	3,101	0%	7,242	10,129
176	14,894	14,464	124	4,765	3%	4,405	10,489
177	25,168	22,243	133	6,582	0%	7,388	17,780
178	37,911	33,138	100	12,149	0%	15,302	22,609
179	67,089	64,552	100	26,279	0%	49,715	17,374
180	66,023	57,061	100	27,053	0%	45,778	20,245
181	79,369	65,085	100	37,315	0%	33,509	45,860
182	44,136	24,108	100	3,798	0%	12,366	31,770
183	82,893	33,205	100	9,560	0%	29,120	53,773
184	86,223	36,078	100	7,895	0%	46,136	40,087
185	30,556	28,103	100	11,044	0%	2,382	28,174
186	28,080	25,807	393	11,821	0%	4,176	23,904
187	103,070	36,150	103	14,127	0%	68,655	34,415
188	63,421	42,289	100	19,617	0%	44,482	18,939
189	64,632	55,680	100	14,601	0%	45,762	18,870
190	97,608	87,596	100	26,606	0%	76,126	21,482

50, 100, 150 LIBERTY WAY

YIELD PLAN LOT TABLE

7/31/2025 HSI#6003

LOT No.	TOTAL LOT AREA (SF)	TOTAL CONTIGUOUS LOT AREA (EXCLUDING WETLANDS) (SF)	TOTAL LOT FRONTAGE (FT)	TOTAL WETLAND BUFFER AREA (SF)	WETLAND BUFFER % OF MIN. CONTIG.	TOTAL CONSERVATION DISTRICT AREA (SF)	TOTAL LOT AREA (EXCLUDING CONSERVATION DISTRICT) (SF)
191	27,901	27,901	100	0	0%	15,456	12,445
192	13,838	13,838	100	0	0%	0	13,838
193	26,835	26,835	100	0	0%	7,352	19,483
194	118,804	90,955	100	17,939	0%	62,944	55,860
195	79,276	71,734	100	12,815	0%	57,808	21,468
196	85,752	83,977	100	17,257	0%	63,060	22,692
197	51,422	49,992	100	21,646	0%	32,252	19,170
198	110,589	67,041	261	36,421	0%	82,790	27,799
199	86,467	57,585	550	31,064	0%	57,952	28,515
200	34,306	18,983	278	8,353	0%	19,446	14,860
201	34,637	34,577	100	4,400	0%	23,676	10,961
202	22,100	22,100	114	0	0%	9,974	12,126
203	22,401	22,401	100	0	0%	6,450	15,951
204	14,154	14,154	100	0	0%	1,421	12,733
205	12,895	12,895	133	0	0%	0	12,895
206	10,063	10,063	114	0	0%	0	10,063
207	10,991	10,991	115	0	0%	0	10,991
208	79,401	32,015	631	21,095	0%	15,446	63,955
209	15,340	15,340	214	3,175	0%	0	15,340
210	52,012	24,065	440	12,703	0%	0	52,012
211	47,587	31,199	231	16,259	0%	0	47,587
212	43,281	17,121	314	8,055	9%	0	43,281
213	17,495	17,495	282	29	0%	0	17,495
214	28,861	22,500	174	13,790	13%	0	28,861
215	33,186	20,638	211	12,569	19%	0	33,186
216	33,705	21,524	169	10,859	0%	0	33,705
217	42,039	16,459	100	8,931	25%	0	42,039
218	22,541	16,695	106	4,948	0%	0	22,541
219	73,342	19,346	249	9,943	6%	0	73,342
220	13,295	13,295	106	0	0%	0	13,295
221	10,282	10,282	121	0	0%	0	10,282
222	13,559	13,559	306	0	0%	0	13,559
223	13,761	13,761	117	0	0%	0	13,761
224	29,162	16,489	303	0	0%	0	29,162
225	25,600	25,386	100	4,104	0%	0	25,600
226	28,581	21,719	100	5,247	0%	0	28,581
227	27,919	19,422	100	4,496	0%	0	27,919
228	17,663	15,979	134	9,631	37%	5,367	12,296
229	21,209	21,057	121	3,190	0%	2,857	18,352
230	18,934	18,429	100	3,371	0%	2,663	16,271
231	20,636	19,096	100	3,065	0%	5,235	15,401
232	18,940	17,718	100	2,618	0%	4,424	14,516
233	20,208	17,372	100	4,729	0%	9,342	10,866
234	22,660	16,769	201	8,913	21%	1,788	20,872
235	25,477	20,845	148	13,435	26%	3,461	22,016
236	19,084	15,637	172	8,788	32%	5,746	13,338
237	15,577	15,577	119	50	0%	4,008	11,569
238	37,921	37,747	132	4,630	0%	1,190	36,731
239	62,428	55,408	100	23,260	0%	0	62,428
240	52,602	51,527	196	28,754	0%	0	52,602
241	37,357	22,082	371	8,561	0%	455	36,902
242	26,026	20,884	134	9,611	0%	0	26,026
243	31,562	31,125	235	14,710	0%	267	31,295
244	55,076	21,976	210	15,650	37%	10,787	44,289
245	67,813	23,473	616	12,237	0%	8,835	58,978
246	15,204	11,814	100	5,448	36%	1,605	13,599
247	15,166	13,565	235	5,218	17%	2,650	12,516
248	26,651	26,520	210	10,549	0%	7,167	19,484
249	20,308	19,495	100	4,176	0%	2,017	18,291
250	24,597	24,597	100	3,644	0%	6,390	18,207
251	76,945	35,558	206	23,949	0%	52,455	24,490
252	17,202	17,202	100	5,847	0%	10,359	6,843
253	11,903	11,903	100	1,700	0%	479	11,424
254	14,555	14,555	100	2,463	0%	443	14,112
255	62,332	21,199	539	6,694	0%	14,239	48,093
256	73,229	48,749	193	31,591	0%	0	73,229
257	18,841	14,642	116	8,574	39%	0	18,841
258	11,308	11,308	100	1,246	0%	0	11,308
259	24,698	17,598	167	11,552	40%	0	24,698
260	39,732	24,181	264	12,907	0%	339	39,393
261	17,259	17,259	100	0	0%	2,529	14,730
262	17,854	17,854	100	321	0%	336	17,518
263	16,468	16,468	100	220	0%	0	16,468
264	67,800	32,650	100	19,740	0%	0	67,800

NO	DATE	REVISION	BY
4	7/31/25	ADDRESS STAFF COMMENTS	TEZ
3	5/29/25	ADDRESS STAFF COMMENTS	TEZ
2	4/11/25	ADDRESS STAFF COMMENTS	TEZ
1	3/26/25	ADDRESS STAFF COMMENTS	TEZ

200 0 200 400 600 800 FEET

PREPARED FOR:
BRADY SULLIVAN PROPERTIES
670 NORTH COMMERCIAL STREET MANCHESTER, NH 03101
RECORD OWNER:
LIBERTY MUTUAL INSURANCE CO.
ATTN: TYLER MUNGER 175 BERKELEY STREET BOSTON, MASSACHSETTS 02116

YIELD LOT TABLE
(MAP 'E', LOT 24)

50, 100, & 150 LIBERTY WAY

DOVER, NEW HAMPSHIRE

HSI Hayner/Swanson, Inc.
Civil Engineers/Land Surveyors
3 Congress Street Nashua, NH 03062 (603) 883-2057
now IMEG
IMEG Corp.
Ed Wallace, Turnpike
Burlington, MA 01803
(781) 203-1501

FIELD BOOK: | DWG LOC: J:\6000\6003\DWG\6003 CONCEPT
DWG: 6003 CONCEPT BASE - YIELD | Scale 1" = 200'
2 OF 2 | 6003 CONCEPT | Date 25 FEBRUARY 2025
Sheet | File Number

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PERMIT SNAPSHOT REPORT COND-2025-0015
FOR CITY OF DOVER, N.H.

Permit Type	Conditional Use	**Project:**		**App Date:**	07/03/2025
Work Class:	Environmental	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	Submitted - Online	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Glidden, Jean	**Approval Expire Date:**	

Description: Proposing 35.13% impervious where 20% max is allowed within the Secondary Groundwater Recharge Overlay. Please find attached narrative for justification.

Parcel:	**Address:**	**Zone:**
35064-000000 Main	141 Sixth St Main Dover, NH	

Plan Preparer
Kenneth Berry
Home: (603) 332-2863
Business: (603) 332-2863
Mobile: (603) 332-2863

Engineer
Kenneth Berry
Home: (603) 332-2863
Business: (603) 332-2863
Mobile: (603) 332-2863

Surveyor
Kenneth Berry
Home: (603) 332-2863
Business: (603) 332-2863
Mobile: (603) 332-2863

Soil Scientist
John Hayes III
Home: (603) 205-2396
Business: (603) 205-2396
Mobile: (603) 205-2396

Applicant
Eric Jackson
Mobile: (603) 898-0318

Owner
Dewayne Watson
Home: (603) 905-9004

Owner
Lisa & Mohamed Hamcha
Mobile: (603) 603-5243

Wetlands Scientist
Deidra Benjamin
Home: (603) 332-2863

Applicant
Berry Surveying & Engineering
335 Second Crown Point Road
Barrington, NH 03825
Business: (603) 332-2863
Mobile: (603) 781-3403

Permit Custom Fields

Select Permit Type	Groundwater Protection
What is the parcel zoned?	R-12
permitstatefed	NHDES Alteration of Terrain, NHDES Sewer Discharge, EPA NOI/SWPPP - Not applied for at this time

General Purpose	New Construction
New Change in Impervious/Paved Area (sq ft)	54685

Project Zone	Residential
Work	Proposing 35.13% impervious where 20% max is allowed within the Secondary Groundwater Recharge Overlay. Please find attached narrative for justification.

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Chris_Berry_7/3/2025.jpg	07/03/2025 11:44	Berry, Chris		Uploaded via CSS

Invoice No.	Fee	Fee Amount	Amount Paid
INV-2025013138	Planning Impervious Paved Area Fee	$3,827.95	$0.00
	Planning General Application Fee	$200.00	$0.00
	Total for Invoice INV-2025013138	**$4,027.95**	**$0.00**
	Grand Total for Permit	**$4,027.95**	**$0.00**

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1			
Confirm application complete v.1	Generic Action		
Conditional Use Review v.1	Receive Submittal		
Planning Board v.1			
Planning Board Agenda v.1	Task		

Invoice for Notices v.1	Task
Send Notices v.1	Task
Planner Creates Staff Recommendations v.1	Permit Activity
Distribute Planning Board Materials v.1	Task
Planning Board Hearing v.1	Hold Hearing
Planning Board Decision v.1	Permit Activity
NOD Sent to Applicant v.1	Create Report
Issue Permit v.1	
Verify Fees Prior to Permit v.1	Generic Action
Issue and Review Permit v.1	Generic Action
Print and Email Permit v.1	Generic Action
Plans uploaded to Treeno v.1	Generic Action
Internal Notification of Plan Completion v.1	Generic Action
Recording v.1	Task

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: The Stabile Companies Telephone # 603-898-0318

Address of Applicant: 20 Cotton Road, Suite 200, Nashua, NH 03063

E-Mail Address: Ejackson@stabilecompanies.com

Richardson Estates of Dover LLC (Lot 64) Lisa & Mohamed Hamcha (Lot 72)

Name of Property Owner (if different from applicant): Telephone # 603-905-9004 603-609-5243

Address of Property Owner: 688 Calef Highway, Barrington, NH 03825

5 Dowaliby Court, Dover, NH 03820

PROPERTY INFORMATION

Assessor's Map # 35 Lot(s) # 64,72

Address of Property: 141 Sixth Street

Zoning District(s) R-12 Overlay District(s) Secondary Groundwater Recharge

Existing Use of Property: Single family home

CONDITIONAL USE PERMIT INFORMATION

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

☐ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☒ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☐ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

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

Please find attached narrative. Proposing greater than 20% impervious in the Secondary Groundwater Recharge Overlay.

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

NHDES Sewer Discharge, EPA NOI & SWPPP, NHDES AoT - All not submitted

Name of Professional That Prepared Plans: Kenneth A. Berry, PE, LLS

Address 335 Second Crown Point Road Telephone #: 603-332-2863

Professional License #: PE 14243, LLS 805 E-mail address: K.berry@berrysurveying.com
Crberry@metrocast.net (PM)

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: 6-24-25

Signature of Applicant (if different from owner): Date: 6-24-25

Signature of Agent: Date: 6-24-25

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: 6-24-25

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS

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

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 24, 2023)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____
- ☐ **TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # _____ sq. ft. = $_____

SUBTOTAL PLAN REVIEW FEE = $_____

AND

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 review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # _____ of x $10.00= $_____
- ☐ Certified letters fee: # of abutters _____ X $10.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

C. Foster's newspaper public notice fee $120.00 x # _____ applications = $_____

SUBTOTAL = $_____

TOTAL INVOICE AMOUNT = $_____

PLAN REVIEW FEE COLLECTED/PAID = $ _____

BALANCE DUE = $ _____

The amount due must be paid 28 hours prior to the Planning Board Meeting, to be heard.

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

City of Dover Planning Board
288 Central Ave
Dover, NH 03820

June 24, 2025/Rev: July 30, 2025

Re: Residential Transfer of Development (TDR) Site Plan
Richardson Estates (Fawn Drive)
Environmental Conditional Use Permit Narrative
Richardson Estates of Dover, LLC (Owner)
Lisa & Mohamed Hamcha (Owner)
The Stabile Companies (Applicant)
141 Sixth Street, Tax Map 35, Lot 64

Mr. Hunt and the Dover Conservation Commission,

Berry Surveying & Engineering (BS&E,) on behalf of The Stabile Companies, respectfully requests the City of Dover Conservation Commission to accept the following Conditional Use Permit:

- More than 20% impervious (34.85%) (56,948 Sq. Ft.) within the Secondary Groundwater Protection Zone (SGPZ) overlay of the Medium Density Residential Zone (R-12). It has been demonstrated during the TDR Application process (TRAN-2025-0003) that a conceptual single family lot subdivision with the R-12 zone on the parcel would yield ten (10) lots. This yield with conventional zoning would produce an impervious coverage of 34.3% (56,000 Sq. Ft. +/-). The applicant is proposing ten (10) 2-family dwelling units for a total of 20 units on site. Of the proposed impervious percentage, 8,333 Sq. Ft. of roof area is disconnected from the surface water runoff treatment devices by routing the roof runoff directly to infiltration trenches, that infiltrate the 50 year storm event.

1. Identification of Conditional Use Permit

Regulations in the zoning ordinance do not allow for more than 20% impervious cover in the secondary groundwater recharge zone. However, Section 170-33 states that a conditional use permit may be granted by the planning board, given the following standards, as shown below, are met.

Below we show the project's compliance with the standards required to grant a Conditional Use Permit, and we provide justification for its approval.

2. Compliance with the following standards

a) The proposed development plan incorporates a stormwater drainage plan, approved by the Planning Board and prepared by a professional engineer certified to practice in the State of New Hampshire

- **A full drainage analysis was conducted as part of the application. The drainage analysis was designed to be not only compliant with the City of Dover regulations but also with Alteration of Terrain (AoT) regulations. A Site-Specific Soils Survey has been completed along with the application.**

b) The plan shall provide for the retention and percolation within the secondary groundwater protection zone of all development-generated stormwater runoff from a ten-year storm. Furthermore, the stormwater drainage plan shall provide for the removal of oil and gasoline from parking lot runoff by use of treatment swales, oil/gas separators or other device, prior to retention and percolation of the runoff.

- **A sediment forebay, conveyance swales, and a proprietary structural measure known as a Rain Guardian Turret are proposed as pretreatment methods on site. These items are designed to remove debris, sediment, and hydrocarbons before the treatment stormwater control measures. The rain garden is proposed with 24" of bio media and porous pavement sidewalks with 18" filter course (as opposed to 18" or 12" typically required) as a consideration of the SGPZ and Alteration of Terrain Requirements. A subsurface gravel wetland is proposed as the primary stormwater treatment device for the development, which provides high values of TP & TN removal for larger scale subcatchment areas.**

3.) Section F Dover Performance Standards

a) Post-development Infiltrations Volumes shall be no greater than predevelopment volumes as determined by use of the Development Review Model as described in Subsection G below.

Infiltration within the stormwater model that is counted towards the required Ground Water Recharge Volume (GRV) (Required by NHDES Alteration of Terrain) occurs in isolated sandy, well-drained locations

around the site in four locations with the required separations from the ESHWT: Three stone infiltration trenches infiltrating exclusively roof and grassed runoff and a raised porous pavement sidewalk along the eastern side Fawn Drive. These locations are not exposed to the type of parking lot or roadway pollutants that would be generated by the locations implied by the standard. Additional incremental low-impact-development infiltration devices in the form of porous pavers and patios are proposed. These are not counted towards the GRV, as the under lying silt loam soil infiltration rate does not meet Env-Wq 1500 (Alteration of Terrain) standards on 0.5inches/hour, but still provide some underlying infiltration value.

Demonstrated in the following screenshot from the NHDES GRV sheet, a total of 987 CF would be required to be infiltrated and 2,569 is proposed to be infiltrated at the 2YR-24HR storm event.

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

GROUNDWATER RECHARGE VOLULME (GRV) CALCULATION
(Env-Wq 1507.04)

0.43	ac	Area of HSG A soil that was replaced by impervious cover	0.40"
-	ac	Area of HSG B soil that was replaced by impervious cover	0.25"
0.98	ac	Area of HSG C soil that was replaced by impervious cover	0.10"
-	ac	Area of HSG D soil or impervious cover that was replaced by impervious cover	0.0"
0.19	inches	Rd = Weighted groundwater recharge depth	
0.272	ac-in	GRV = AI * Rd	
987	cf	GRV conversion (ac-in x 43,560 sf/ac x 1ft/12")	

Provide calculations below showing that the project meets the groundwater recharge requirements (Env-Wq 1507.04):

P201 2 YR Infiltration Volume: 0.020 AF = 871 CF
P202 2 YR Infiltration Volume: 0.018 AF = 784 CF
P203 2 YR Infiltration Volume: 0.016 AF = 697 CF
P31 2 YR Infiltration Volume: 0.001 AF = 44 CF
P32 2 YR Infiltration Volume: 0.001 AF = 44 CF
P34 2 YR Infiltration Volume: 0.001 AF = 44 CF
P35 2 YR Infiltration Volume: 0.003 AF = 131 CF
P36 2 YR Infiltration Volume: 0.001 AF = 44 CF
Total GRV provided in model = 2,659 CF

To account for the infiltration volume provided that would be provided by the pavers, the following table provided indicated the porous pavers would provide an additional 2,338 CF of infiltrated (0.054 AF). It is of note that areas shown under the GRV calculation, as the porous pavement sidewalks are considered as part of the GRV calculation, but not part of the impervious surface calculation.

Additional Porous Paver and Patio Infiltration Volumes					
LCA #	Area Pavers (Sq. Ft.)	Stone Depth (Ft.)	Stone Storage Volume (40%) Voids (CF)	1" Runoff Volume Generated (CF)	Volume Infiltrated 2YR-24Hr Event 3.62" (CF)
64-1	809	1	324	67	244
64-2	815	1	326	68	246
64-3	855	1	342	71	258
64-4	825	1	330	69	249
64-5	780	1	312	65	235
64-6	591	1	236	49	178
64-7	716	1	286	60	216
64-8	794	1	318	66	240
64-9	793	1	317	66	239
64-10	773	1	309	64	233
TOTAL	7751			646	2338
Does not assume any adjacent grassed areas running onto the pavers, direct surface area only.					
Paver systems have capacity to infiltrate greater than the 2YR-24HR Storm event in a time span of greater than 24 hours					

The majority of stormwater runoff treated by the proposed gravel wetland or rain garden leaves the site as surface water or discharged into the closed municipal drainage system. It is the opinion of BS&E that the treatment level provided in the stormwater BMPs and incremental infiltration distributed across the site would meet the intent of this performance standard.

b) Stormwater shall be treated by the use of a stormwater treatment system designed to remove no less than 80% of the annual load of total suspended solids. The removal rate shall be accomplished using best management practices installed in advance of the final infiltration system.
Utilizing the UNH Stormwater Center 2023 published performance curve information, the following TSS performance can be expected from the respective stormwater control measures (SCMs):

Subsurface Gravel Wetland:
- *Total Suspended Solids (TSS) reduction of 97%*

Infiltration Trench (2.41in/hr data, 3.0in/hr proposed:
- *Total Suspended Solids (TSS) reduction of 100%*

Porous (Permeable) Pavement (18" Filter):
- *Total Suspended Solids (TSS) reduction of 94%*

Biofiltration:

- *Total Suspended Solids (TSS) reduction of 99%*

c) No stormwater infiltration system shall be located within the 200-day travel time of an existing or proposed municipal well as depicted on the map referenced in Subsection B above. In absence of a defined 200-day-travel-time radius, the applicant shall submit a technical evaluation from a professional engineer, hydrologist or geologist that documents that the proposed discharge is consistent with the stated purposed and intent of this requirement.

As shown on the 1987 Dover Groundwater Protection Zone Map, the secondary zone was considered as a 180-day radius. It is important to consider the differences in stormwater treatment technology today versus when this zone was created. Stormwater treatment was not required in the 1980's for developed impervious areas. Since this time, with the implementation of stormwater treatment devices and the requirements of Dover Chapter 153-14, untreated stormwater discharges are no longer allowed in a development of this scale.

As discussed in item a, infiltration occurs in incremental, isolated locations that are not exposed to the type of pollutants of concern that would be observed in a parking lot or larger roadway and contribute in a positive manner towards the groundwater recharge volume (GRV). It is the opinion of BS&E that the infiltration opportunities provided are consistent the purpose and intent of this requirement.

BERRY SURVEYING & ENGINEERING

Kevin R. Poulin, PE
Project Engineer

Christopher R. Berry, LLS
Principal, President

BERRY SURVEYING & ENGINEERING
335 Second Crown Pt. Rd., Barrington, NH 03825
(603) 332-2863 / (603) 335-4623 FAX
www.BerrySurveying.Com

20 UNIT, 2-FAMILY DWELLING
TRANSFER OF DEVELOPMENT RIGHTS (TDR) SITE PLAN
FOR
THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER, LLC
141 SIXTH STREET &
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, N.H.
TAX MAP 35, LOT 64 & 72

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SHEET 2 ~ PROJECT NOTES
SHEET 3 ~ EXISTING CONDITIONS PLAN
SHEET 4 ~ SITE SPECIFIC SOILS MAP
SHEET 5 ~ 20 UNIT, 2-FAMILY DWELLING TDR CONDOMINIUM PLAN*
SHEET 6 ~ OVERVIEW SITE PLAN
SHEETS 7&8 ~ DETAIL SITE PLANS
SHEET 9 ~ OVERVIEW GRADING & DRAINAGE PLAN
SHEETS 10-12 ~ GRADING PLAN & PROFILE SHEETS
SHEET 13 ~ P-101A GRAVEL WETLAND #101 PLAN
SHEET 14 ~ P-101B GRAVEL WETLAND #101 DETAILS
SHEET 15 ~ P-102A RAIN GARDEN W/ STORMTECH STORAGE #102 PLAN
SHEET 16 ~ P-102B RAIN GARDEN W/ STORMTECH STORAGE #102 DETAILS
SHEET 17 ~ P-201-P-203 INFILTRATION TRENCH PLAN
SHEET 18 ~ EROSION & SEDIMENT CONTROL PLAN
SHEET 19 ~ CROSS SECTIONS FAWN DRIVE 0+00-END & POROUS PRODUCT SPECIFICATIONS (P-103 & P-104)
SHEET 20 ~ OVERVIEW UTILITY PLAN
SHEETS 21&22 ~ FAWN DRIVE UTILITY PLAN & PROFILE SHEETS
SHEET 23 ~ LANDSCAPING PLAN
SHEET 24 ~ LIGHTING PLAN
SHEETS 25&26 ~ SIGHT DISTANCE PLANS
SHEET 27 ~ E101-EROSION & SEDIMENT CONTROL DETAILS
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SHEET 34 ~ U101-UTILITY DETAILS
SHEET 35 ~ U102-UTILITY DETAILS
SHEET 36 ~ L101-LANDSCAPING DETAILS
SHEET 37 ~ W101-WILDLIFE IDENTIFICATION PLAN
SHEET 38 ~ DOVER FIRE TRUCK ENTRANCE & EXIT MOVEMENTS
SHEET 39 ~ DOVER FIRE TRUCK TURNAROUND MOVEMENT

*DENOTES A PLAN IS TO BE RECORDED AT THE S.C.R.D.

OWNER: *"A"* RICHARDSON ESTATES OF DOVER, LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

"B" MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

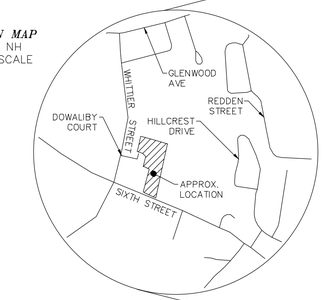
SURVEYOR OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

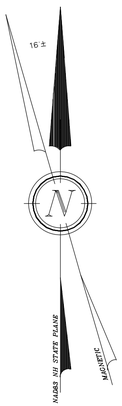
ENGINEER OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

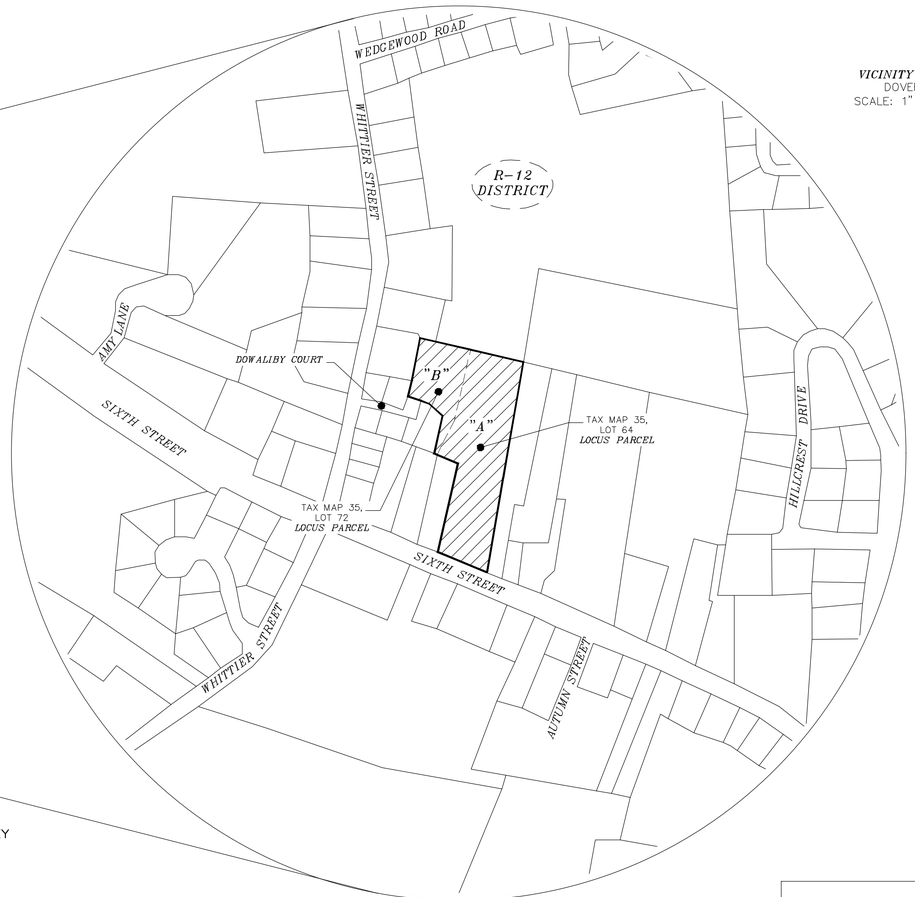
SOIL SCIENTIST: JOHN P. HAYES, III, CSS, CWS
7 LIMESTONE WAY
NORTH HAMPTON, NH 03862

WETLAND SCIENTIST: DEIDRA L. BENJAMIN, CWS
100 LEAVITT ROAD
PITTSFIELD, NH 03263

LOCATION MAP
DOVER, NH
NOT TO SCALE







VICINITY SKETCH
DOVER, NH
SCALE: 1" = 250' ±

REQUIRED PERMITS:

~ NHDES SEWER DISCHARGE PERMIT	(PENDING)
~ NHDES ALTERATION OF TERRAIN PERMIT	(PENDING)
~ US EPA NOI & SWPPP	(PENDING)
~ NATURAL HERITAGE BUREAU	NHB25-1040
~ NH DIVISION OF HISTORICAL RESOURCES	DHR #10630

WILDLIFE PROTECTION NOTES (ENV-WQ 1504.17(a)):

1.) ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, EMAIL SUBJECT LINE: NHB24-0747, 141 SIXTH STREET, WILDLIFE SPECIES OBSERVATION.

2.) PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHF&G IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION AS FEASIBLE.

3.) IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHF&G AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHF&G, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04

4.) THE NHF&G, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

GENERAL PLAN SET NOTES:

1.) 11x17" PLANS ARE TWICE THE PUBLISHED SCALE.

2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

NOTE:

BERRY SURVEYING & ENGINEERING HAS PREPARED AN INSPECTION & MAINTENANCE MANUAL, DRAINAGE NARRATIVE, AND EROSION AND SEDIMENT CONTROL PLAN AS PART OF THIS PROJECTS DOCUMENTATION. THE DRAINAGE NARRATIVE AND SEDIMENT CONTROL PLAN PROVIDES NEW HAMPSHIRE STORMWATER MANUAL INFORMATION AND REQUIREMENTS FOR MEASURES TO BE INSTALLED ON SITE.

ALL USERS ARE BOUND TO THESE DOCUMENT AS PART OF THE APPROVAL OF THE PLANNING BOARD. COPIES OF THE YEARLY INSPECTIONS ARE TO BE DELIVERED TO THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT.

WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SITE PLAN, THE SITE PLAN APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS AND SPECIFICATIONS OF THE CITY OF DOVER LAND SITE PLAN REGULATIONS AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL, UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED, IN ANY PARTICULAR, BELOW. NON - ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FOR SITE PLAN APPROVAL.

APPROVED DOVER

STATE OF NEW HAMPSHIRE
JOHN P. HAYES III
No. 087
CERTIFIED SOIL SCIENTIST

STATE OF NEW HAMPSHIRE
DEIDRA L BENJAMIN
No. 295
CERTIFIED WETLAND SCIENTIST

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

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED
PROFESSIONAL ENGINEER

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

TRANSFER OF DEVELOPMENT RIGHTS SITE PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

NOT FOR CONSTRUCTION

ABBREVIATION LEGEND:

E.O.P.	EDGE OF PAVEMENT
V.G.C.	VERTICAL GRANITE CURB
S.G.C.	SLOPED GRANITE CURB
BITUM.	BITUMINOUS
E.S.H.W.T.	ESTIMATED SEASONAL HIGH WATER TABLE
TYP.	TYPICAL
U.G.E	UNDER GROUND ELECTRIC / UTILITY
CLDI	CONCRETE LINED DUCTILE IRON
DI	DUCTILE IRON
U.D.	UNDER DRAIN
C.O.	CLEAN OUT
INV.	INVERT
ELEV.	ELEVATION
HDPE	HIGH DENSITY POLYETHYLENE
RCP	REINFORCED CONCRETE PIPE
RECB	ROLLED EROSION CONTROL BLANKET
F.P.	FINISHED GRADE
E.G.	EXISTING GRADE
E.T.W.	EDGE OF TRAVELED WAY
T.B.R.	TO BE REMOVED
PL	PROPERTY LINE
EL	EASEMENT LINE
CL	CENTER LINE
CF	CUBIC FEET
P.C.	POINT OF CURVATURE
P.T.	POINT OF TANGENCY
P.V.C.	POINT OF VERTICAL CURVE
P.V.I.	POINT OF VERTICAL INTERSECTION
P.V.T.	POINT OF VERTICAL TANGENCY
EX.	EXISTING
PROP.	PROPOSED
STA.	STATION
BMP	BEST MANAGEMENT PRACTICE
'/,	FEET / FEET
TP	TEST PIT
LCA	LIMITED COMMON AREA

SSL ( ) ~ {SIZE} SINGLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
DSL ( ) ~ {SIZE} DOUBLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
SSB ( ) ~ {SIZE} SINGLE SOLID W/ BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
SBL ( ) ~ {SIZE} SINGLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
DBL ( ) ~ {SIZE} DOUBLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)

EXISTING LEGEND:

- 3/4" REBAR W/ID CAP (SET)
- IRON BOUND/IRON ROD (FND)
- IRON PIPE (FND)
- STONE/GRANITE BOUND (FND)
- T-BAR, STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- TEMPORARY BENCHMARK (TBM)
- TEST PIT
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- BzB NRCS SOIL LABEL
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING DRAIN LINE
- OVERHEAD UTILITIES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING TREELINE
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- E175.31 EXISTING SPOT GRADE

LANDSCAPE LEGEND:

TREES:
- AR – 'OCTOBER GLORY' MAPLE
- PE – EXCLAMATION PLANETREE
- PM – DOUGLAS FIR

BUSHES:
- BW – BOXWOOD

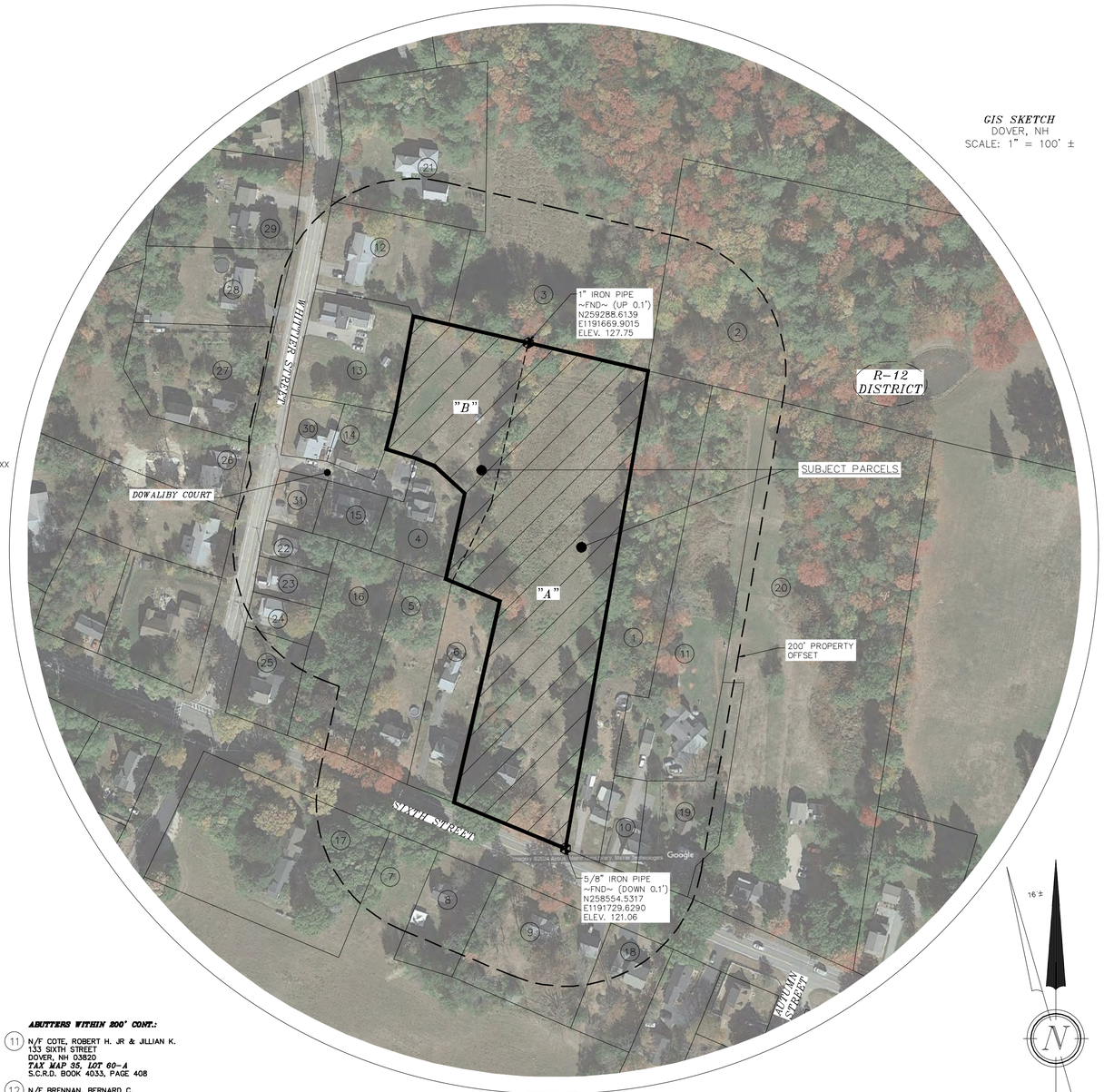
PLANTS:
- HM – HYDRANGERA

GRASS:
- KF – FEATHER REED GRASS

PROPOSED LEGEND:

- 3/4" REBAR W/ID CAP (TBS)
- 1/2" REBAR W/EASEMENT CAP (TBS)
- SEWER MANHOLE W/ STRUCTURE
- DRAIN MANHOLE W/ STRUCTURE
- CATCH BASIN W/ STRUCTURE
- E101 / E6 DETAIL SHEET / DETAIL
- GATE VALVE
- CURB STOP
- FIRE HYDRANT
- THRUST BLOCKS
- LIGHT TYPE "A" MOUNTED ON POLE
- LIGHT TYPE "B" MOUNTED ON POLE
- F175.31 PROPOSED SPOT GRADE
- FLOW ARROW
- FY76 CONTOUR MINOR, PROPOSED
- FY75 CONTOUR MAJOR, PROPOSED
- CENTER LINE
- GRAVEL SHOULDER
- PROPOSED LCA LINE
- PROPOSED EASEMENT
- PROPOSED TREELINE
- STOCKADE FENCE
- SPLIT RAIL FENCE
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED SEWER LINE
- PROPOSED SEWER SERVICE
- PROPOSED DRAINAGE LINE
- PROPOSED UNDERDRAIN
- PROPOSED UNDERGROUND UTILITY
- SOIL LINE
- LIMIT OF SOIL SURVEY
- 448A SOIL SERIES
- LIMIT OF PROJECT DISTURBANCE
- SILT FENCE / EROSION MIX BERM
- FILTREXX 8" – 12" SILT SOXX AS SPECIFIED
- ORANGE CONSTRUCTION PERIMETER FENCE
- PERIMETER CONTROL – MULCH BERM & SILT SOXX
- SCM PROTECTION / PERIMETER CONTROL / RESIDENTIAL/ROADWAY CONSTRUCTION
- SNOW STORAGE
- TRANSFORMER/CONCRETE PAD
- STORMWATER CONTROL MEASURE (SCM)
- BITUMINOUS CONCRETE
- POROUS PAVERS
- POROUS PAVEMENT SIDEWALK
- STORMTECH CHAMBERS
- SCM OUTLET STRUCTURE
- RIP RAP
- BERM

SIGN ID NUMBER	SIGN SIZE (WIDTH x HEIGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	BACKGROUND	LEGEND	BORDER	POST SIZE & QUANTITY
R1-1	30"x30"	STOP	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	RED	WHITE	WHITE	SQUARE (1)
W14-2	12"X6"	NO OUTLET	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	YELLOW	BLACK	BLACK	U-CHANNEL (0)
R8-31	12"x18"	NO PARKING FIRE LANE	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	WHITE	RED	RED	SQUARE (1)
R2-1	24"x30"	SPEED LIMIT 25	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	WHITE	GREEN	GREEN	U-CHANNEL (1)
R7-3	12"x18"	NO PARKING THIS SIDE OF STREET	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	WHITE	RED	RED	U-CHANNEL (2)
	24"x12"	FAWN DRIVE PVT.	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	GREEN	WHITE	WHITE	U-CHANNEL (0)
	24"x24"	TURN AROUND AHEAD NO TURN IN PRIVATE DRIVEWAY	CUSTOM	1	WHITE	WHITE	BLACK	U-CHANNEL (1)



ABUTTERS WITHIN 200':

1. N/F RUEL FAMILY REV. TRUST RUEL, GEORGE A. & JACQUELINE L. TRUSTEES 137 SIXTH STREET DOVER, NH 03820 *TAX MAP 35, LOT 63* S.C.R.D. BOOK 2545, PAGE 750
2. N/F SNIPER HOLDINGS, LLC 35 BROADWAY DOVER, NH 03820 *TAX MAP 36, LOT 23* S.C.R.D. BOOK 4903, PAGE 386
3. N/F SNIPER HOLDINGS, LLC 35 BROADWAY DOVER, NH 03820 *TAX MAP 36, LOT 24* S.C.R.D. BOOK 4903, PAGE 386
4. N/F HAMCHA, MOHAMED & LISA K. 5 DOWALIBY CT. DOVER, NH 03820 *TAX MAP 35, LOT 72* S.C.R.D. BOOK 2717, PAGE 789
5. N/F FORD, DAVID & STRACUZZI, NENA 143 SIXTH ST DOVER, NH 03820 *TAX MAP 35, LOT 66* S.C.R.D. BOOK, 3058, PAGE 253
6. N/F TOMFORDE, CHAD G. & COLBY, CARRIE L. 141 1/2 SIXTH STREET DOVER, NH 03820-2644 *TAX MAP 35, LOT 65* S.C.R.D. BOOK 3783, PAGE 165
7. N/F LALIBERTE, JOAN M. TRUSTEE & EGAN, CORNELIA, EGAN, MICHAEL 150 SIXTH STREET DOVER, NH 03820 *TAX MAP 34, LOT 20* S.C.R.D. BOOK 4787, PAGE 683
8. N/F ROY, ADAM T. & KELSEY R. 142 SIXTH STREET DOVER, NH 03820 *TAX MAP 34, LOT 19-A* S.C.R.D. BOOK 4693, PAGE 263
9. N/F RINEHART, JACKSON 138 SIXTH STREET DOVER, NH 03820 *TAX MAP 34, LOT 19* S.C.R.D. BOOK, 5106, PAGE 997
10. N/F COTE, ROBERT H. JR & JILLIAN K. 133 SIXTH STREET DOVER, NH 03820 *TAX MAP 35, LOT 62* S.C.R.D. BOOK 4817, PAGE 905

ABUTTERS WITHIN 200' CONT.:

11. N/F COTE, ROBERT H. JR & JILLIAN K. 133 SIXTH STREET DOVER, NH 03820 *TAX MAP 35, LOT 60-A* S.C.R.D. BOOK 4033, PAGE 408
12. N/F BRENNAN, BERNARD C. 18 WHITTIER STREET DOVER, NH 03820 *TAX MAP 36, LOT 22-E* S.C.R.D. BOOK 5126, PAGE 25
13. N/F FIELD, KEIRSTAN & ENTRIKAN, ANDREW 20 WHITTIER STREET DOVER, NH 03820 *TAX MAP 35, LOT 73* S.C.R.D. BOOK 5123, PAGE 723
14. N/F NAWISH, SEAN & CHRISTIN 4 DOWALIBY CT. DOVER, NH 03820 *TAX MAP 35, LOT 72-D* S.C.R.D. BOOK 4603, PAGE 752
15. N/F GAULIN, ROBERT MARK TRUSTEE THE ROBERT MARK GAULIN REV LIV TRUST 3 DOWALIBY CT. DOVER, NH 03820 *TAX MAP 35, LOT 72-C* S.C.R.D. BOOK 5079, PAGE 858
16. N/F WONG, ANDREW & GOLIA, JENNIFER A. 143 1/2 SIXTH STREET DOVER, NH 03820 *TAX MAP 35, LOT 67* S.C.R.D. BOOK 4799, PAGE 625

ABUTTERS WITHIN 200' CONT.:

17. N/F EGAN, CORNELIA M. TRUSTEE EGAN FAMILY REVOCABLE TRUST 150 SIXTH STREET DOVER, NH 03820 *TAX MAP 34, LOT 20-A* S.C.R.D. BOOK 4853, PAGE 610
18. N/F O'CONNOR, JEFFERY M. & RENEA A. 132 SIXTH STREET DOVER, NH 03820 *TAX MAP 34, LOT 19-1* S.C.R.D. BOOK 3648, PAGE 558
19. N/F LAROCHELLE, SHARON 131 SIXTH STREET DOVER, NH 03820 *TAX MAP 35, LOT 60* S.C.R.D. BOOK 1157, PAGE 720
20. N/F GRAY, PAMELA & WALLACE 129 SIXTH STREET DOVER, NH 03820 *TAX MAP 35, LOT 61* S.C.R.D. BOOK 1058, PAGE 743

ABUTTERS WITHIN 200' CONT.:

21. N/F LEWIS, DOROTHY TRUSTEE LEWIS, ROBERT & DOROTHY REV. LIV. TRUST 16 WHITTIER STREET DOVER, NH 03820 *TAX MAP 36, LOT 22* S.C.R.D. BOOK 3374, PAGE 979
22. N/F DANOWSKI, JOHN D. 14243 N 25TH AVE. PHOENIX, AZ 85023-5908 *TAX MAP 35, LOT 71* S.C.R.D. BOOK 2220, PAGE 27
23. N/F FRYE, SHANNA 30 WHITTIER STREET DOVER, NH 03820 *TAX MAP 35, LOT 70* S.C.R.D. BOOK 4552, PAGE 621
24. N/F COLGAN, CAROL M. 32 WHITTIER STREET DOVER, NH 03820 *TAX MAP 35, LOT 69* S.C.R.D. BOOK 3833, PAGE 874

ABUTTERS WITHIN 200' CONT.:

25. N/F GOLICK, ALAN L. & THOMPSON, LISA K. 136 OLDFIELDS ROAD SOUTH BERWICK, ME 03908 *TAX MAP 35, LOT 68* S.C.R.D. BOOK 2007, PAGE 43
26. N/F ST. PETER, SARAH & JONES, RUSSELL 23 WHITTIER STREET DOVER, NH 03820 *TAX MAP E, LOT 72-1* S.C.R.D. BOOK 4744, PAGE 779
27. N/F WARNOCK, RUSSELL D. & AMY E. 21 WHITTIER STREET DOVER, NH 03820 *TAX MAP E, LOT 72* S.C.R.D. BOOK 4846, PAGE 659
28. N/F COUTURE, NANCY C. & ALAN P. 19 WHITTIER STREET DOVER, NH 03820 *TAX MAP E, LOT 72-C* S.C.R.D. BOOK 1808, PAGE 395

ABUTTERS WITHIN 200' CONT.:

29. N/F HASTINGS, NATHANIEL M. & JENNIFER K. 17 WHITTIER STREET DOVER, NH 03820 *TAX MAP E, LOT 72-A* S.C.R.D. BOOK 4152, PAGE 933
30. N/F HIBSCHWEILER RITA A TRUSTEE HIBSCHWEILER RITA A REV. LIVING TRUST 24 WHITTIER STREET DOVER, NH 03820 *TAX MAP 35, LOT 72-A* S.C.R.D. BOOK 4618, PAGE 567
31. N/F MA, AMY & ALLEN, GAHEIN & MA, HENRY GAHGATE 26 WHITTIER STREET DOVER, NH 03820 *TAX MAP 35, LOT 72-B* S.C.R.D. BOOK 4444, PAGE 52

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

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

NEIGHBORHOOD PLAN
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE KENNETH A. BERRY No. 14543 PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825
DEWAYNE WATSON, MANAGING MEMBER

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820
MOHAMED HAMCHA
LISA K. HAMCHA

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063
ERIC L. JACKSON, MANAGING MEMBER

3.) ZONING: MEDIUM DENSITY RESIDENTIAL (R12)
WITH MUNICIPAL WATER AND SEWER
SETBACKS:
SECONDARY GROUNDWATER RECHARGE OVERLAY (SGRO)
FRONT BUILD TO – 15' TO 25'
SIDE – 15'
REAR – 30'
MIN. LOT SIZE: 12,000 Sq.Ft.
MIN. FRONTAGE: 100'
MIN. LOT COVERAGE: 30% (20% MAX. COVERAGE DUE TO SGRO)

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)

LOT SIZE: N/A Sq. Ft.	
MIN. LOT COVERAGE: N/A	
MINIMUM FRONTAGE: 40'	174.81' PROVIDED
ABUT A STREET SETBACK: 20'	24' PROVIDED
ABUT A SIDE LOT LINE: 10'	10' PROVIDED
ABUT A REAR LOT LINE: 30'	30' PROVIDED

4.) THE INTENT OF THIS PLAN IS TO SHOW A TRANSFER OF DEVELOPMENT RIGHTS (TDR) SITE PLAN ON TAX MAP 35, LOT 64 AND TAX MAP 35, LOT 72 LOCATED IN DOVER, N.H.

5.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN.
FLOOD HAZARD REF: FEMA, COMMUNITY #330146,
MAP #33017C0310E, DATED: SEPTEMBER 30, 2015.

6.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

7.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN AUGUST, 2024 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

8.) ON-SITE TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN MAY AND JUNE, 2024. OFF-SITE TOPOGRAPHY IS SHOWN USING NH COASTAL 2019 DEM.

9.) THIS SITE IS SERVICED BY MUNICIPAL SEWER AND WATER.

10.) WETLANDS WERE DELINEATED BY DIEDRA BENJAMIN, CERTIFIED WETLANDS SCIENTIST, IN ACCORDANCE WITH CHAPTER 170-27.1 OF THE ZONING ORDINANCE, IN JUNE, 2024.
NO WETLANDS WERE FOUND ON SITE.

11.) AS-BUILT PLANS OF THE SUBDIVISION SHALL BE SUBMITTED ON PAPER AND IN DIGITAL FORMAT AUTOCAD DWG, AUTOCAD DXF OR 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.

12.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE PROPOSED.

13.) ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2016" AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.

14.) 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.

15.) 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 ANY EARTH DISTURBING ACTIVITY OCCURS: NO 50' BUFFERS ON SITE SO NOT APPLICABLE FOR THIS PROJECT.

16.) ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS. (NOT APPLICABLE)

17.) A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS. THE PROPOSED PROJECT WILL CONSIST OF ONE PHASE AND WILL DISTURB 167,400 Sq. Ft., 3.84 Ac. (SEE NOTE #39)

18.) 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.

19.) THE SITE CONSTRUCTION HOURS SHALL BE LIMITED TO SATURDAY 8AM-4PM, NO MONDAY-FRIDAY & NO SUNDAY, OR FEDERAL HOLIDAY HOURS. HOURS OF CONSTRUCTION SHALL BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. THE PROJECT SIGN SHALL INDICATE THE ROAD IS PROPOSED TO BE PRIVATE AND SHALL RECEIVE NO CITY SERVICES.

20.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

21.) THE PROPOSED USE FOR THIS SITE WILL CONSIST OF THE CONSTRUCTION OF TEN (10) NEW 2-FAMILY DWELLINGS. THERE IS A TOTAL OF 60 BEDROOMS PROPOSED FOR THIS DEVELOPMENT.

22.) THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:

NHDES SEWER DISCHARGE PERMIT:	(PENDING)
US EPA NOTICE OF INTENT/SWPPP (NOI):	(PENDING)
NATURAL HERITAGE BUREAU:	(NHB25-1040)
NH DIVISION OF HISTORICAL RESOURCES:	(DHR #10830)

23.) COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

24.) ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

25.) ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

26.) THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES 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 LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.

27.) FIRE DEPARTMENT ACCESS ROADS SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.

28.) EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

29.) APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR DOMESTIC WATER LINES.

30.) SITE IS TO COMPLY WITH NFPA 1 CHAPTER 18 "AS APPLIABLE".

31.) FAWN DRIVE IS PROPOSED TO BE PRIVATE. REFER TO THE DEVELOPMENT AGREEMENT FOR ROAD & DRAINAGE RESPONSIBILITIES. FAWN DRIVE PROPOSES POROUS PAVEMENT SIDEWALKS. FAWN DRIVE WILL ALWAYS BE PRIVATE AND WILL NEVER BE ACCEPTED BY THE CITY OF DOVER.

32.) 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

33.) THE STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS APPLICABLE TO DOVER CHAPTER 81-30 AND THE NH BUILDING AND FIRE CODES (NOT APPLICABLE).

NOTES CONTINUED:

34.) 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 AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLOW DEVICE, NOT APPLICABLE

35.) FIRE DEPARTMENT CONNECTION(S), IF REQUIRED BY THE SPECIFIC SYSTEM, SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES. NOT APPLICABLE

36.) THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS (I.E. IBC, ANSI-117.1) AND NH RSA 155-A:5.

37.) PRIVATE TRASH PICKUP WILL BE DONE THROUGH TOTERS STORED IN GARAGES AND WILL BE COLLECTED THROUGH A PRIVATE WASTE PICK UP COMPANY.

38.) THE BUILDINGS ARE DESIGNED AS FULL FOUNDATION WITH 8' WALLS. A FOUNDATION DRAIN TRUNK LINE IS PROPOSED FOR THE DEVELOPMENT.

39.) PROJECT DISTURBANCE: TOTAL 167,400 Sq. Ft. (3.84 Ac.) NOTE THAT THE PROJECT IS SUBJECT TO THE EPA NPDES PHASE II. THE NOTICE OF INTENT (NOI) MUST BE FILED ALONG WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). EROSION AND SEDIMENT CONTROL INSPECTIONS TO BE CONDUCTED ONCE PER EVERY SEVEN DAYS AND AT AN INCREASED FREQUENCY INCLUDING WITHIN 24-HOURS OF A 0.25 INCH RAIN EVENT. INSPECTIONS TO BE CONDUCTED BY A "QUALIFIED PERSON" AS DEFINED BY EPA CGP 4.1.1 AND INSPECTION REPORTS SUBMITTED TO THE CITY OF DOVER, NH, ENGINEERING DEPARTMENT WITHIN 24 HOURS IN ACCORDANCE WITH CGP 4.1.7 AND MAINTAINED BY THE OWNER FOR A PERIOD OF THREE YEARS AFTER THE PROJECT IS COMPLETED. SEE ALSO CITY OF DOVER ADDITIONAL INSPECTION REQUIREMENTS BELOW.

40.) THE OWNERS AND THEIR SUCCESSORS ARE RESPONSIBLE FOR THE LIFETIME MAINTENANCE OF ALL BUFFERING AND INTERNAL LANDSCAPING THROUGH THE HOA.

41.) THE PERIMETER BOUNDARY WILL BE STAKED OUT BY BERRY SURVEYING & ENGINEERING PRIOR TO THE START OF CONSTRUCTION.

42.) THE APPLICANT IS TO PROVIDE SURETY WITHIN THE CONFINES OF NH RSA 674:36.

43.) DURING PERIODS OF HEAVY SNOW AND WHEN TEMPORARY PILES ARE USED ON SITE, SNOW IS TO BE LOADED INTO TRUCKS AND REMOVED FROM THE SITE. SNOW IS TO BE DISPOSED OF ON AN APPROVED SNOW DUMP.

POROUS PAVEMENT SHALL BE MAINTAINED IN ACCORDANCE WITH THE SITE'S APPROVED O&M MANUAL IN PERPETUITY. FAILURE TO DO SO COULD RESULT IN A FAILURE TO COMPLY WITH THE PLANNING BOARD APPROVALS.

GRADING NOTES:

1.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2016. CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

2.) CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION

3.) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION

4.) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

5.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

6.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. LIMIT OF GRADING SHOULD NOT BE EXPANDED WITHOUT CONSULTING THE DESIGN ENGINEER. SEE ALSO E&SC PLAN.

7.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R).

8.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH [T] SHALL BE THERMOPLASTIC.

9.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

10.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

11.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

12.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY, AND SEDIMENT AND EROSION CONTROLS.

13.) DESIGN ENGINEER OF RECORD SHALL PROVIDE SIGNED LETTER TO CITY ENGINEER CERTIFYING THAT THE STORMWATER MANAGEMENT SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH APPROVED PLANS. DESIGN ENGINEER OR DESIGN ENGINEERS REPRESENTATIVE IS TO BE PERIODICALLY ON SITE AND INSPECT DURING CONSTRUCTION PROCESS. CONTRACTOR IS TO PROVIDE 24-48 HOURS NOTICES PRIOR TO INSPECTION REQUESTS.

14.) UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASINS. SEE SHEET E102, DETAIL E18 FOR DEFINITION OF STABLE. ALSO TO BE DONE ONCE A YEAR DURING THE CONSTRUCTION PROCESS.

15.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED, RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE.

16.) BASINS ARE TO HAVE NH STANDARD FRAMES AND GRATES MADE IN NORTH AMERICA. GRATES ARE TO BE INSTALLED BINDER FLUSH PRIOR TO BASE PAVE. UPON PROJECT COMPLETION FRAMES AND GRATES ARE TO BE CUT AND RIM RAISED TO FINAL PAVEMENT SURFACE. THIS IS TO ENSURE STORMWATER ENTERS THE SYSTEM AS DESIGN DURING THE INTERIM CONSTRUCTION PERIOD. CATCH BASINS AREA TO BE WITH OUT SUMPS. MANUFACTURERS BASES ARE TO BE FILLED WITH WASHED CRUSHED STONE ON SITE AS NEEDED.

EROSION & EROSION CONTROL NOTES:

1.) CONTRACTOR IS TO INSTALL A CONSTRUCTION ENTRANCE PRIOR TO EARTH DISTURBING ACTIVITIES, UTILIZING 3" ANGULAR STONE UNDERLAID WITH ENGINEER FABRIC.

2.) CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE PARKING LOT, SIDEWALKS AND ROADWAY, TO ENSURE THAT NO SEDIMENT IS BEING TRACKED ONTO SIXTH STREET OR THE SURROUNDING ROADWAYS.

3.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLED.

4.) FUGITIVE DUST IS TO BE CONTROLLED THROUGHOUT THE CONSTRUCTION PROCESS IN ACCORDANCE WITH ENV-A 1000. CALCIUM CHLORIDE SHALL NOT BE USED FOR DUST CONTROL AS THIS IS IN THE SECONDARY GROUNDWATER PROTECTION ZONE,

5.) CONTRACTOR IS TO MEET THE REQUIREMENTS SPECIFIED IN RSA 430:51-57 AND AGR 3800, RELATING TO INVASIVE SPECIES.

6.) CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE WATER QUALITY FROM ANY RUN OFF DURING THE CONSTRUCTION PROCESS, IN ACCORDANCE WITH ENV-WQ 1507, IN ORDER TO PREVENT VIOLATIONS OF THE STORM WATER QUALITY STANDARDS.

7.) CONTRACTOR MAY USE SILT FENCE, SILT SOXX OR MULCH BERM FOR PERIMETER CONTROL. SPECIFIC PRACTICES MAY BE SPECIFIED, SEE PLAN. THE CONTRACTOR IS NOT THE EXPAND CONSTRUCTION BEYOND THE STAKED OUT LIMITS.

8.) ALL STORAGE FACILITIES FOR FUEL, CHEMICALS, CHEMICAL OR INDUSTRIAL WASTES, AND BIODEGRADABLE RAW MATERIALS SHALL MEET THE REGULATIONS OF THE NHDES, INCLUDING BUT NOT LIMITED TO THOSE INVOLVING UNDERGROUND STORAGE TANKS, ABOVE GROUND STORAGE TANKS, HAZARDOUS WASTE AND BEST MANAGEMENT PRACTICES FOR GROUND WATER PROTECTION (PART ENV-WQ 401).

9.) ALL DEVELOPMENT MUST COMPLY WITH THE EPA PHASE II STORMWATER RULES AND THE CITY'S MS4 PERMIT, AS AMENDED.

10.) CITY OF DOVER: IN ACCORDANCE WITH SITE PLAN REVIEW REGULATIONS (153-14) THE FOLLOWING STORMWATER MEASURES ARE REQUIRED.

A.) ALL PROPOSED SCMs WILL CONFORM TO THE NH STORMWATER MANUAL (FEBRUARY 2025).

B.) EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY COMMUNITY SERVICE.

C.) TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN CALENDAR DAYS FOR EXPOSED SOILS AREAS THAT ARE WITHIN ONE HUNDRED FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.

D.) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL STABILIZATION IS ACCOMPLISHED. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 CALENDAR DAYS UNLESS CONDITIONS DICTATE OTHERWISE.

E.) COMMUNITY SERVICES DEPARTMENT OR THEIR DESIGNATED AGENT SHALL HAVE ACCESS TO THE SITE TO COMPLETE ROUTINE INSPECTIONS AND SHALL BE NOTIFIED 24-HOURS PRIOR TO INSTALLATION OF A STORMWATER BMP IN ORDER TO SCHEDULE AN INSPECTION, DURING NORMAL WORKING HOURS.

F.) THE PLANNING BOARD OR COMMUNITY SERVICES MAY REQUIRE THE DESIGN ENGINEER AND/OR AN INDEPENDENT, THIRD-PARTY INSPECTION AND OVERSIGHT OF THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES AND EROSION AND SEDIMENT CONTROL AT THEIR DISCRETION. THE OWNER / APPLICANT IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH INSPECTIONS.

G.) ALL SWPPP/SWMP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORMWATER INSPECTOR (CESSWI), OR A CERTIFIED PROFESSIONAL IN STORMWATER QUALITY (CPSWQ). INSPECTION REPORTS WILL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT.

H.) THE OWNER IS ULTIMATELY RESPONSIBLE FOR THE INSTALLATION, CONSTRUCTION, INSPECTION, AND DISPOSITION OF ALL STORMWATER MANAGEMENT AND EROSION CONTROL MEASURES REQUIRED BY THE PROVISIONS OF THESE REGULATIONS.

I.) STORMWATER MANAGEMENT PLAN (SWMP) SUBMITTAL REQUIREMENTS. AT THE DISCRETION OF THE PLANNING BOARD OR COMMUNITY SERVICES DEPARTMENT, A TECHNICAL REVIEW BY AN INDEPENDENT THIRD PARTY MAY BE REQUIRED OF ANY SWMP PREPARED UNDER THESE REGULATIONS. SUCH A REVIEW SHALL BE PERFORMED BY A QUALIFIED PROFESSIONAL CONSULTANT AND THE EXPENSE OF WHICH SHALL BE THE FULL RESPONSIBILITY OF THE OWNER/APPLICANT.

UTILITY NOTES:

1.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

2.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

3.) PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, 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 MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.

4.) IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), 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 FREEZING.

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.) FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE DOVER DPW.

7.) CONTRACTOR TO CONTACT DOVER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.

8.) ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF DOVER STANDARDS. ALL HIGHWAY CONSTRUCTION WILL MEET THE CITY OF DOVER STANDARDS.

9.) CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (800) 662-7764. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.

10.) CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH FAIRPOINT COMMUNICATIONS AT (603) 427-5525.

11.) CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST.

12.) ALL SEWER MANHOLE RIMS & COVERS ARE TO BE LIFTMATE R-1743-LM.

13.) ALL WATER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED BLUE. ALL SEWER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED YELLOW, IS STUBBED PRIOR TO BUILDING CONSTRUCTION. DETECTABLE METALLIC UNDERGROUND TAPE SHALL BE LABELED APPROPRIATELY.

14.) CURB BOXES SHOULD BE PLACED IN THE LAWN AREA, OR IF PLACED IN PAVEMENT, A ROAD BOX IS REQUIRED.

15.) SEE EXISTING CONDITIONS PLAN FOR DATUM. VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE COORDINATES GATHERED USING TOPCON CARLSON BRX7 SURVEY GRADE GPS.

16.) MINIMUM SLOPE FOR ALL SEWER SERVICE CONNECTIONS IS TO BE NO LESS THAN 0.02 FT/FT. MINIMUM SLOPE FOR ALL 6" SEWER SERVICES IS TO BE NO LESS THAN 0.01 FT/FT.

17.) ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & DOVER DPW SEWER DIVISION STANDARDS. ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.05 (C)-(E) FOR SDR 35 GRAVITY SEWER PIPE,

18.) CONTRACTOR TO TRANSFER TEMPORARY BENCHMARK TO A SUITABLE BENCHMARK TO CONTROL CONSTRUCTION. ANY ELEVATION DISCREPANCIES ARE TO BE REPORTED TO THE THE DESIGN ENGINEER IMMEDIATELY.

19.) ALL SEWER AND WATER CROSSINGS ARE TO MAINTAIN A 1.5' OF SEPARATION.

20.) C900 WATERLINE MAY BE SUBSTITUTED FOR C.L.D.I. WATERLINE WITH THE APPROVAL OF THE CITY ENGINEER.

21.) THE PROPOSED 2 FAMILY DWELLINGS WILL CONSIST OF 10 STRUCTURES PROVIDING 20 UNITS, EACH WITH 3 BEDROOMS PER UNIT. THERE AREA A TOTAL OF 60 BEDROOMS PROPOSED. TOTAL DESIGN FLOW : 9,000 GPD

LOT & IMPERVIOUS COVEREAGE:

EXISTING:
HOUSE, COVERED PORCH & OVERHANGS: 877 Sq.Ft.
STEPS: 28 Sq.Ft.
DECK: 150 Sq.Ft.
SHED: 125 Sq.Ft.
TOTAL: 1,180 Sq.Ft. (0.72%)

DRIVEWAY: 1,537 Sq.Ft.
TOTAL: 1,537 Sq.Ft. (0.94%)
TOTAL IMPERVIOUS: 2,717 Sq.Ft. (1.66%)

PROPOSED:
INCLUDES BUILDING, OVERHANG, PORCH, DECK & STEPS
UNITS #1 & #2, #3 & #4, #5 & #6, #7 & #8, #9 & #10, #19 & #20 = 2,847 Sq.Ft. EACH
TOTAL: 17,082 Sq.Ft.
UNIT #15 & #16, #17 & #18 = 3,000 Sq.Ft. EACH
TOTAL: 6,000 Sq.Ft.
UNITS #11 & #12, #13 & #14 = 2,723 Sq.Ft. EACH
TOTAL: 5,446 Sq.Ft.
TOTAL: 28,528 Sq.Ft. (17.46%)

PAVEMENT: 27,744 Sq.Ft.
CURB: 561 Sq.Ft.
CONCRETE PADS: 115 Sq.Ft.
TOTAL: 28,420 Sq.Ft. (17.39%)
TOTAL PROPOSED IMPERVIOUS COVERAGE: 56,948 Sq.Ft. (34.85%)
(CUP REQUIRED)

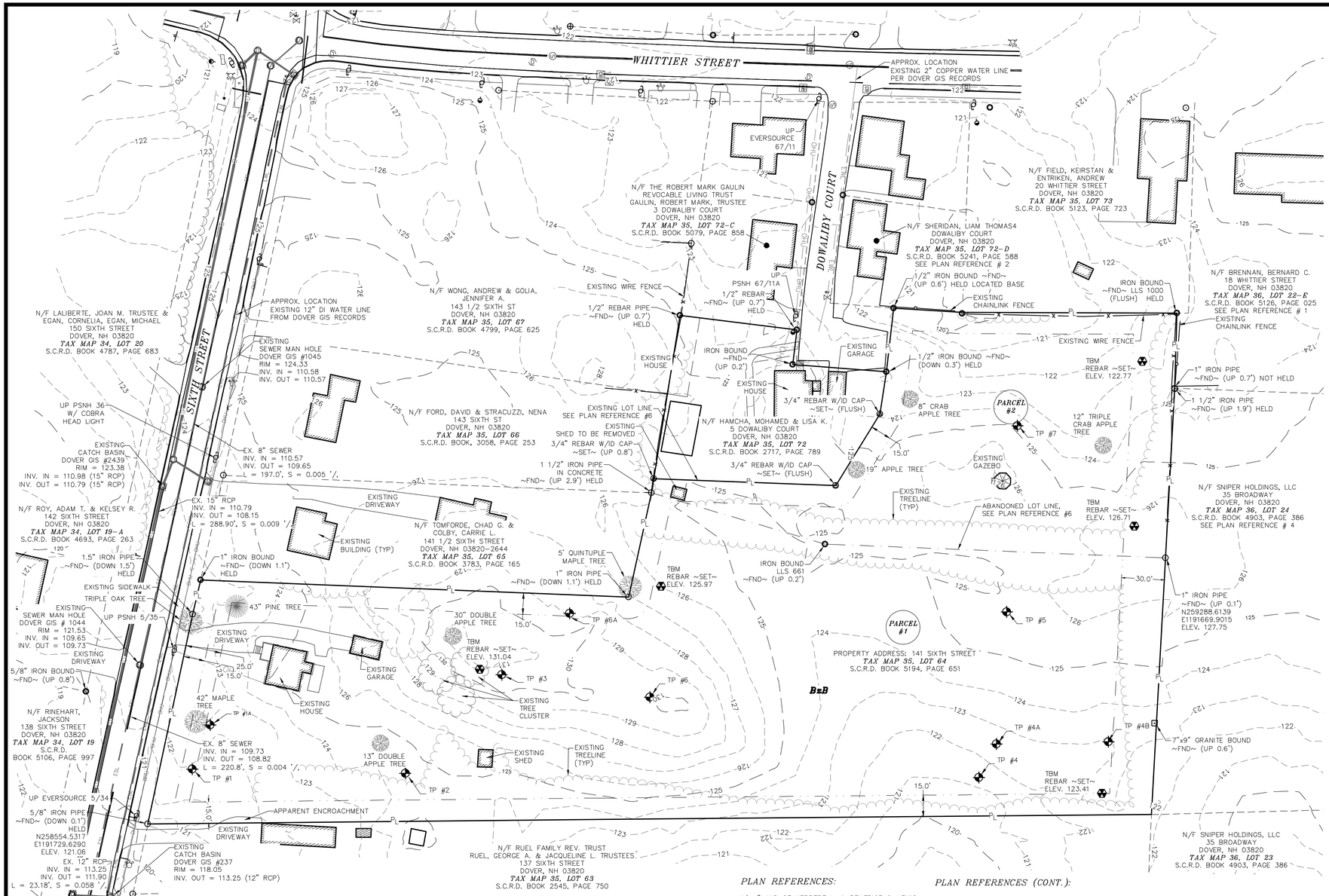
NDITIONAL USE PERMITS:

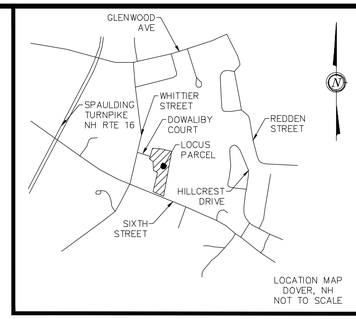
-33 GROUNDWATER PROTECTION: GREATER THAN 20% IMPERVIOUS IN THE SECONDARY GROUNDWATER RECHARGE ZONE.

VER REQUESTS:
ORMWATER RUNOFF VOLUME (153-14-(3)(B)(4)): PENDING

SNOW STORAGE CALCULATION:

- STORAGE CALCULATION (6:1 RATIO USED)
  - PLOWABLE AREA = 32,974 Sq.Ft. / 6 = 5,496 Sq.Ft.
  - >7,695 Sq.Ft. PROVIDED
  - SNOW SHALL BE REMOV





NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) ZONING: MEDIUM DENSITY RESIDENTIAL (R12)
WITH MUNICIPAL WATER AND SEWER
SECONDARY GROUNDWATER RECHARGE OVERLAY
SETBACKS:
FRONT BUILD TO – 15' TO 25'
SIDE – 15'
REAR – 30'
MIN. LOT SIZE: 12,000 Sq.Ft.
MIN. FRONTAGE: 100'
MAX. LOT COVERAGE: 30% (20% MAX. COVERAGE DUE TO SGRO)

4.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN. FLOOD HAZARD REF.: FEMA, COMMUNITY #330145, MAP #33017C0310E, DATED: SEPTEMBER 30, 2015.

5.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING, IN MAY & JUNE OF 2024 WITH AN ERROR OF CLOSURE BETTER THAN 1 IN 10,000. HORIZONTAL COORDINATES BASED ON GPS DATA COLLECTED BY CARLSON BRX7 RECEIVERS AND ON NAD83 DATUM. VERTICAL DATUM IS NAVD88.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF TAX MAP 35, LOT 64 & TAX MAP 35 LOT 72 AS OF THE DATE OF THIS PLAN.

7.) BOTH LOTS ARE SERVED BY MUNICIPAL WATER AND SEWER.

8.) SEE EASEMENTS AS NOTED.

9.) TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN MAY & JUNE OF 2024.

10.) SEE SITE SPECIFIC SOIL MAP FOR TEST PIT DATA.

LEGEND:

- 3/4" REBAR W/ID CAP (SET)
- IRON BOUND/IRON ROD (FND)
- IRON PIPE (FND)
- STONE/GRANITE BOUND (FND)
- T-BAR, STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- TEMPORARY BENCHMARK (TBM)
- TEST PIT
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CB CATCH BASIN
- DRAIN MANHOLE
- S SEWER MANHOLE
- B&B NRCS SOIL LABEL
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING DRAIN LINE
- OVERHEAD UTILITIES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING TREELINE
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

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

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

SOILS:

B&B – BUXTON SILT LOAM, 3 TO 8 PERCENT SLOPES

SEE: USDA/NRCS WEBSOIL

WETLAND NOTE:

WETLANDS WERE DELINEATED BY DEIDRA L. BENJAMIN, CWS, IN JUNE OF 2024 USING THE FOLLOWING CRITERIA: (NO WETLANDS WERE FOUND ON SITE)

1. USACE. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0. U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER. 2012. VICKSBURG, MS.

2. USACE. CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. ENVIRONMENTAL LABORATORY. 1987. VICKSBURG, MS.

3. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE. 2018. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2. L.M. VASILAS, G.W. HURT, AND J.F. BERKOWITZ (EDS.). USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.

4. NEW ENGLAND HYDRIC SOIL TECHNICAL COMMITTEE. FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. VERSION 4. NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION. 2019. LOWELL, MA.

5. U.S. ARMY CORPS OF ENGINEERS 2019. NATIONAL WETLAND PLANT LIST, VERSION 3.3. HTTP://WETLAND-PLANTS.USACE.ARMY.MIL/

DEIDRA BENJAMIN, CWS #295

STATE OF NEW HAMPSHIRE DEIDRA L. BENJAMIN No. 295 CERTIFIED WETLAND SCIENTIST

LOT & IMPERVIOUS COVEREAGE:

EXISTING:
HOUSE, COVERED PORCH & OVERHANGS: 877 Sq.Ft.
STEPS: 28 Sq.Ft.
DECK: 150 Sq.Ft.
SHED: 125 Sq.Ft.
TOTAL: 1,180 Sq.Ft. (0.72%)

DRIVEWAY: 1,537 Sq.Ft.
TOTAL: 1,537 Sq.Ft. (0.94%)
TOTAL IMPERVIOUS: 2,717 Sq.Ft. (1.66%)

UTILITY NOTE:

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

PLAN REFERENCES:

1.) "LAND OF HERBERT L. & BEATRICE C. LEWIS, 16 WHITTIER STREET, DOVER, N.H." BY: THE BERRY CONST. CO., INC. DATED: DECEMBER 16, 1963 NOT RECORDED, ON FILE AT THIS OFFICE

2.) "DOWALIBY COURT SUBDIVISION" BY: NORMAN G. LECLERC APPROVED: JUNE 18, 1974 S.C.R.D. PLAN #51, POCKET #9, FOLDER #1

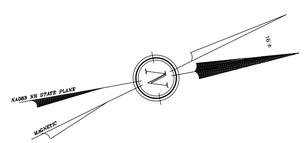
3.) "ROW PLAN" BY: NHDOT DATED: JUNE 1998 SIXTH STREET & WHITTIER STREET S.C.R.D. PLAN #55-70

4.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR ROBERT AND RUTH MURRAY WEDGEWOOD ROAD & BARTLETT STREET" BY: KEVIN M. MCENEANEY DATED: NOVEMBER 30, 2004 S.C.R.D. PLAN #78-22

5.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR PATRICK MURRAY TAX MAP 35 LOT NO'S 59 & 59A 125 SIXTH STREET" BY: KEVIN M. MCENEANEY DATED: OCTOBER 24, 2013 S.C.R.D. PLAN #106-81

PLAN REFERENCES (CONT.):

6.) "LOT LINE REVISION, LAND OF RICHARDSON ESTATES OF DOVER LLC, 141 SIXTH STREET STREET, DOVER, N.H. TAX MAP 35, LOT 64 AND MOHAMED & LISA K. HAMCHA, 5 DOWALIBY COURT, DOVER, N.H., TAX MAP 35 LOT 72" BY: BERRY SURVEYING & ENGINEERING DATED: SEPTEMBER 3, 2024 S.C.R.D. PLAN # 13394



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

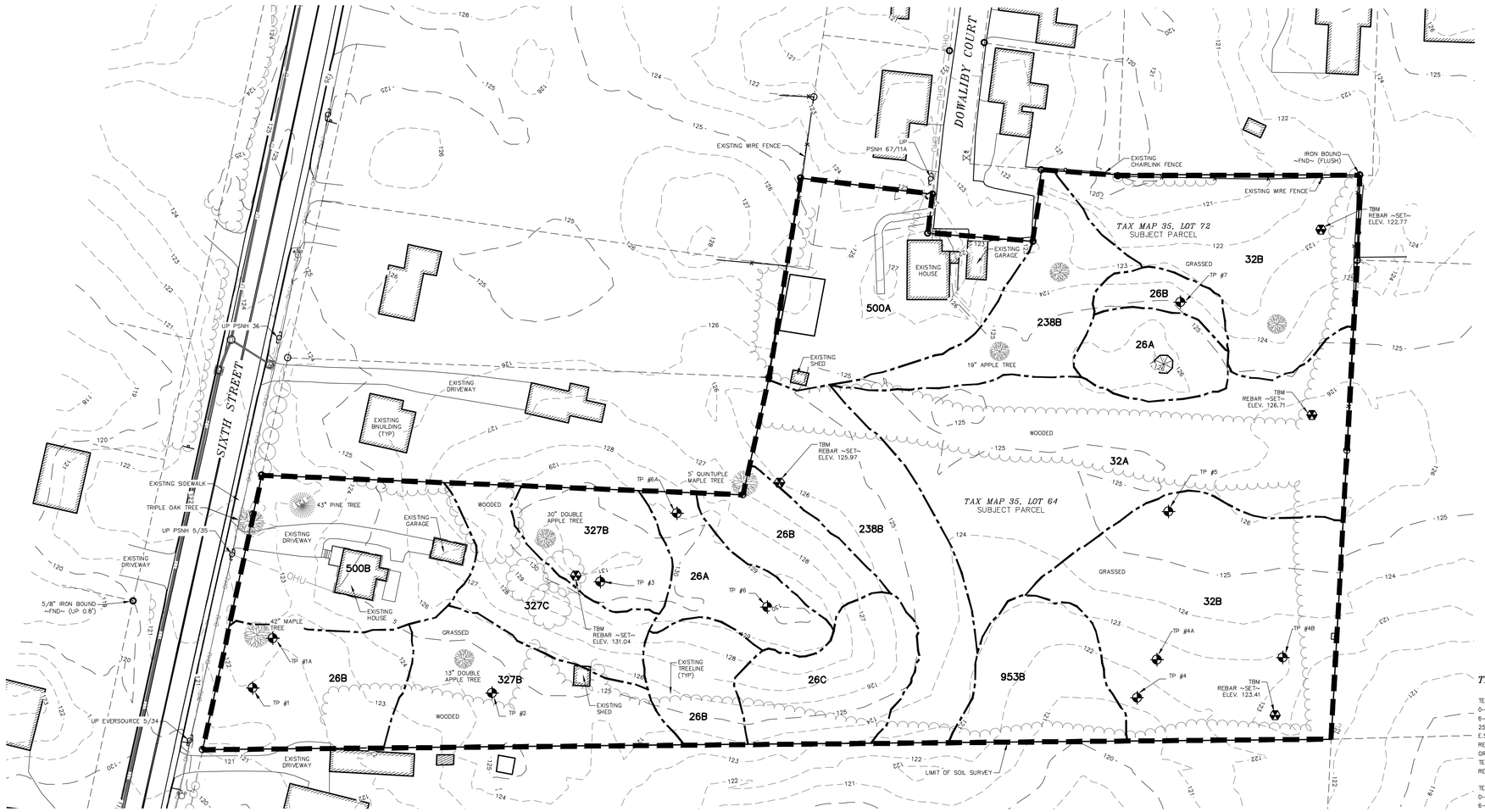
EXISTING CONDITIONS PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

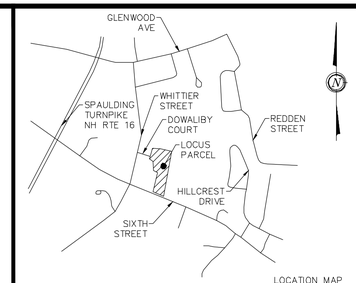
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 40 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

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

NOT FOR CONSTRUCTION





NOTES:

1.) OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651

OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN.
FLOOD HAZARD REF.: FEMA, COMMUNITY #330145, MAP #33017C0310E, DATED: SEPTEMBER 30, 2015.

4.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING, IN MAY & JUNE OF 2024 WITH AN ERROR OF CLOSURE BETTER THAN 1 IN 10,000. HORIZONTAL COORDINATES BASED ON GPS DATA COLLECTED BY CARLSON BRX7 RECEIVERS AND ON NAD83 DATUM. VERTICAL DATUM IS NAVD88.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE SITE SPECIFIC SOIL BOUNDARIES OF TAX MAP 35, LOT 64.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

TEST PIT DATA (CONT.):

TEST PIT #5
0–6" 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
6–25" 10YR 5/8 SILT LOAM, GRANULAR, FRIABLE
25–60" 2.5Y 6/4 SILT LOAM, BLOCKY, FRIABLE IN HAND–BLOCKY IN PLACE
E.S.H.W.T. @ N/A
RESTRICTIVE LAYER @ 50" (FIRM)
GROUND WATER @ N/A
TERMINATED @ 60"
REFUSAL @ N/A

TEST PIT #6
0–6" 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
6–36" 10YR 5/8 LOAMY SAND, GRANULAR, FRIABLE
36"–60" 10YR 6/4 LOAMY SAND, GRANULAR, FRIABLE
E.S.H.W.T. @ N/A
RESTRICTIVE LAYER @ N/A
GROUND WATER @ N/A
TERMINATED @ 60"
REFUSAL @ N/A

TEST HOLES PERFORMED ON JULY 18, 2025

TEST PIT #1A
0–4" 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
4–24" 10YR 5/6 FINE SANDY LOAM, GRANULAR, FRIABLE
24–43" 10YR 6/4 FINE LOAMY SAND, GRANULAR, FRIABLE
43–80" 2.5Y 6/4 VERY FINE SAND & SILT, MEDIUM BLOCKY, FRIABLE IN HAND – MEDIUM FIRM
E.S.H.W.T. @ 50"
RESTRICTIVE LAYER @ 60" (FIRM)
GROUND WATER @ N/A
TERMINATED @ 80"
REFUSAL @ N/A

TEST PIT #6A
0–6" 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
6–36" 10YR 5/8 LOAMY SAND, GRANULAR, FRIABLE
36"–60" 10YR 6/4 LOAMY SAND, GRANULAR, FRIABLE
E.S.H.W.T. @ N/A
RESTRICTIVE LAYER @ N/A
GROUND WATER @ N/A
TERMINATED @ 60"
REFUSAL @ N/A

TEST PIT #4A, &4B
0–12" 10YR 2/2 SILT LOAM, GRANULAR, FRIABLE
12–18" 2.5Y 6/4 SILT LOAM, GRANULAR, FRIABLE
18–60" 2.5Y 6/2 SILT LOAM, BLOCKY, FIRM
E.S.H.W.T. @ 18"
RESTRICTIVE LAYER @ 18" (FIRM)
GROUND WATER @ N/A
TERMINATED @ 60"
REFUSAL @ N/A

TEST PIT #7
0–6" 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
6–36" 10YR 5/8 LOAMY SAND, GRANULAR, FRIABLE
36"–60" 10YR 6/4 LOAMY SAND, GRANULAR, FRIABLE
E.S.H.W.T. @ N/A
RESTRICTIVE LAYER @ N/A
GROUND WATER @ N/A
TERMINATED @ 60"
REFUSAL @ N/A

TEST PIT DATA:

TEST HOLES PERFORMED ON SEPTEMBER 14, 2024

TEST PIT #1
0–4" 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
4–24" 10YR 5/6 FINE SANDY LOAM, GRANULAR, FRIABLE
24–43" 10YR 6/4 FINE LOAMY SAND, GRANULAR, FRIABLE
43–80" 2.5Y 6/4 VERY FINE SAND & SILT, MEDIUM BLOCKY, FRIABLE IN HAND – MEDIUM FIRM
E.S.H.W.T. @ 50"
RESTRICTIVE LAYER @ 60" (FIRM)
GROUND WATER @ N/A
TERMINATED @ 80"
REFUSAL @ N/A

TEST PIT #2
0–12" 10YR 2/2 FINE SANDY LOAM, GRANULAR, FRIABLE
12–25" 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
25–80" 2.5Y 6/4 SILT LOAM. BLOCKY, FIRM, REDOX @36"
E.S.H.W.T. @ 36"
RESTRICTIVE LAYER @ 25" (FIRM)
GROUND WATER @ N/A
TERMINATED @ 80"
REFUSAL @ N/A

TEST PIT #3
0–6" 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
6–36" 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
36"–60" 2.5Y 6/4 SILT LOAM, BLOCKY, FIRM (TIGHT ROCK IN BOTTOM OF HOLE)
E.S.H.W.T. @ N/A
RESTRICTIVE LAYER @ 36" (FIRM)
GROUND WATER @ N/A
TERMINATED @ 60"
REFUSAL @ N/A

TEST PIT #4
0–12" 10YR 2/2 SILT LOAM, GRANULAR, FRIABLE
12–18" 2.5Y 6/4 SILT LOAM, GRANULAR, FRIABLE
18–60" 2.5Y 6/2 SILT LOAM, BLOCKY, FIRM
E.S.H.W.T. @ 18"
RESTRICTIVE LAYER @ 18" (FIRM)
GROUND WATER @ N/A
TERMINATED @ 60"
REFUSAL @ N/A

LEGEND:

- IRON BOUND/REBAR ~FND~
- IRON PIPE ~FND~
- CONCRETE/GRANITE BOUND ~FND~
- UTILITY POLE/GUY WIRE
- OHU — OVERHEAD UTILITIES LINE
- 129 — EXISTING CONTOUR MINOR
- 130 — EXISTING CONTOUR MAJOR
- SOIL LINE
- LIMIT OF SOIL SURVEY
- 448A — SOIL SERIES
- TEST HOLE
- BENCHMARK
- S.C.R.D. — STRAFFORD COUNTY REGISTRY OF DEEDS
- TYP. — TYPICAL
- FND — FOUND

HARN NH STATE PLANE
NAD(1983)

STATE OF NEW HAMPSHIRE
DEIDRA L. BENJAMIN
No. 295
CERTIFIED WETLAND SCIENTIST

DEIDRA BENJAMIN, CWS #295

STATE OF NEW HAMPSHIRE
JOHN P. HAYES III
CERTIFIED SOIL SCIENTIST

JOHN P. HAYES III, CSS #87

WETLAND NOTE:

WETLANDS WERE DELINEATED BY DEIDRA L. BENJAMIN, CWS, IN JUNE OF 2024 USING THE FOLLOWING CRITERIA: (NO WETLANDS WERE FOUND ON SITE)

1. USACE. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. VERSION 2.0. U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER. 2012. VICKSBURG, MS.

2. USACE. CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. ENVIRONMENTAL LABORATORY. 1987. VICKSBURG, MS.

3. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE. 2018. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2. L.M. VASILAS, G.W. HURT, AND J.F. BERKOWITZ (EDS.). USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.

4. NEW ENGLAND HYDRIC SOIL TECHNICAL COMMITTEE. FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. VERSION 4. NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION. 2019. LOWELL, MA.

5. U.S. ARMY CORPS OF ENGINEERS 2019. NATIONAL WETLAND PLANT LIST, VERSION 3.3. HTTP://WETLAND-PLANTS.USACE.ARMY.MIL/

SOILS LEGEND

Site Specific Soils

Symbol	Slopes	Taxonomic Soil Name	Hydrologic Soil Group
26	A,B,C	Windsor	A
32	A,B	Boxford	C
238	B	Elmridge	C
327	B,C	Windsor Variant (Clay Subsoil)	C
500	A, B	Udorthents (Loamy)	C
953	B	Boxford (Somewhat Poorly Drained)	C

Slopes: A = 0-3% B = 3-8% C = 8-15% D = 15-25% E = 25- 50% F = 50%+
Denominators: /ED = Excessively Drained /MWD = Moderately Well Drained
/SPD = Somewhat Poorly Drained /P = Poorly Drained
/VP = Very Poorly Drained /Rk = Rocky

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

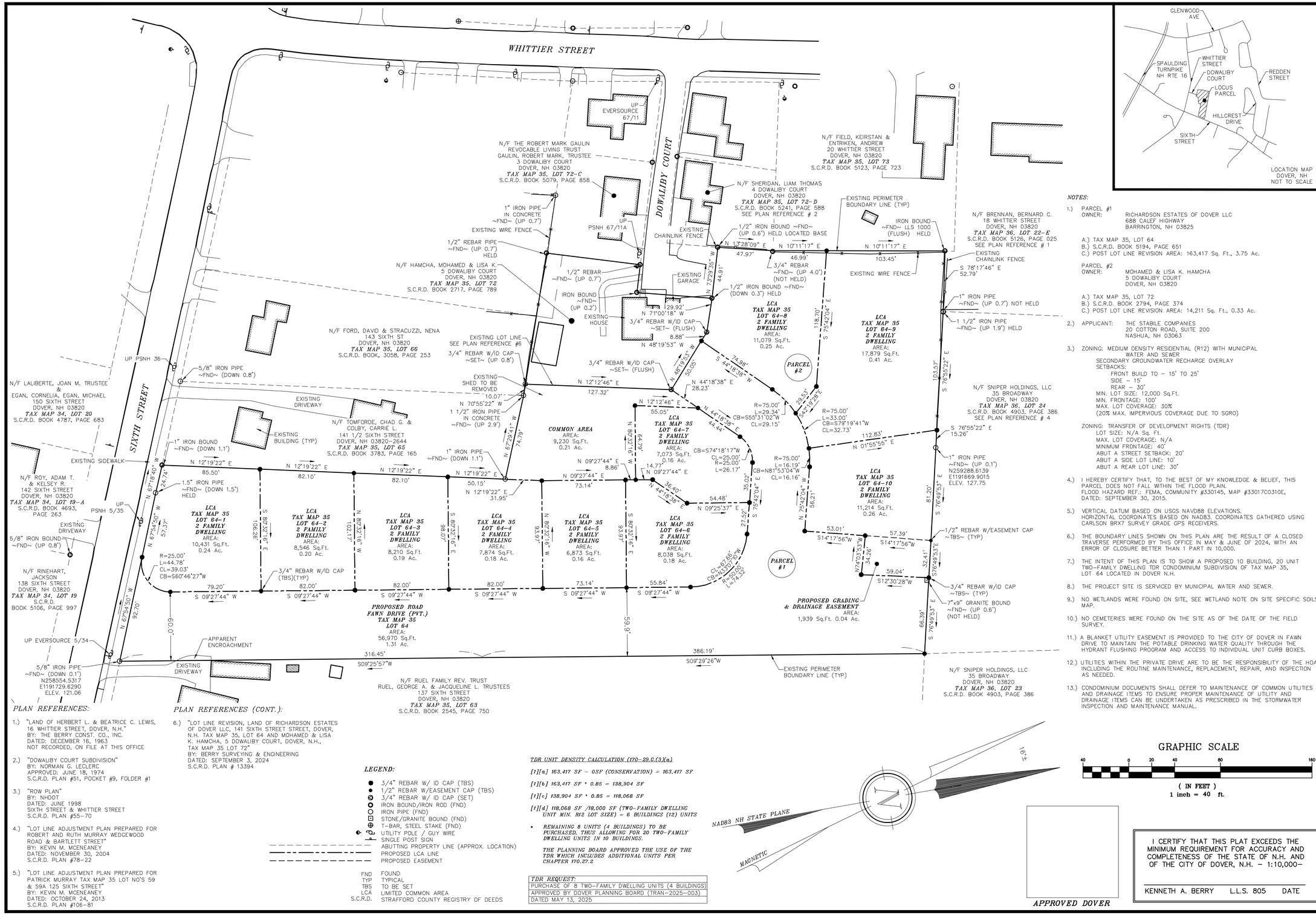
SITE SPECIFIC SOILS MAP
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 40 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

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

NOT FOR CONSTRUCTION



NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) ZONING: MEDIUM DENSITY RESIDENTIAL (R12) WITH MUNICIPAL WATER AND SEWER
SECONDARY GROUNDWATER RECHARGE OVERLAY
SETBACKS:
FRONT BUILD TO – 15' TO 25'
SIDE – 15'
REAR – 30'
MIN. LOT SIZE: 12,000 Sq.Ft.
MIN. FRONTAGE: 100'
MAX. LOT COVERAGE: 30%
(20% MAX. IMPERVIOUS COVERAGE DUE TO SGRO)

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'

4.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN. FLOOD HAZARD REF.: FEMA, COMMUNITY #330145, MAP #33017C0310E, DATED: SEPTEMBER 30, 2015.

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

6.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN MAY & JUNE OF 2024, WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

7.) THE INTENT OF THIS PLAN IS TO SHOW A PROPOSED 10 BUILDING, 20 UNIT TWO-FAMILY DWELLING TDR CONDOMINIUM SUBDIVISION OF TAX MAP 35, LOT 64 LOCATED IN DOVER N.H.

8.) THE PROJECT SITE IS SERVICED BY MUNICIPAL WATER AND SEWER.

9.) NO WETLANDS WERE FOUND ON SITE, SEE WETLAND NOTE ON SITE SPECIFIC SOILS MAP.

10.) NO CEMETERIES WERE FOUND ON THE SITE AS OF THE DATE OF THE FIELD SURVEY.

11.) A BLANKET UTILITY EASEMENT IS PROVIDED TO THE CITY OF DOVER IN FAWN DRIVE TO MAINTAIN THE POTABLE DRINKING WATER QUALITY THROUGH THE HYDRANT FLUSHING PROGRAM AND ACCESS TO INDIVIDUAL UNIT CURB BOXES.

12.) UTILITIES WITHIN THE PRIVATE DRIVE ARE TO BE THE RESPONSIBILITY OF THE HOA INCLUDING THE ROUTINE MAINTENANCE, REPLACEMENT, REPAIR, AND INSPECTION AS NEEDED.

13.) CONDOMINIUM DOCUMENTS SHALL DEFER TO MAINTENANCE OF COMMON UTILITIES AND DRAINAGE ITEMS TO ENSURE PROPER MAINTENANCE OF UTILITY AND DRAINAGE ITEMS CAN BE UNDERTAKEN AS PRESCRIBED IN THE STORMWATER INSPECTION AND MAINTENANCE MANUAL.

PLAN REFERENCES:

1.) "LAND OF HERBERT L. & BEATRICE C. LEWIS, 16 WHITTIER STREET, DOVER, N.H." BY: THE BERRY CONST. CO., INC. DATED: DECEMBER 16, 1963 NOT RECORDED, ON FILE AT THIS OFFICE

2.) "DOWALIBY COURT SUBDIVISION" BY: NORMAN G. LECLERC APPROVED: JUNE 18, 1974 S.C.R.D. PLAN #51, POCKET #9, FOLDER #1

3.) "ROW PLAN" BY: NHDOT DATED: JUNE 1998 SIXTH STREET & WHITTIER STREET S.C.R.D. PLAN #55-70

4.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR ROBERT AND RUTH MURRAY WEDGEWOOD ROAD & BARTLETT STREET" BY: KEVIN M. MCENEANEY DATED: NOVEMBER 30, 2004 S.C.R.D. PLAN #78-22

5.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR PATRICK MURRAY TAX MAP 35 LOT NO'S 59 & 59A 125 SIXTH STREET" BY: KEVIN M. MCENEANEY DATED: OCTOBER 24, 2013 S.C.R.D. PLAN #106-81

PLAN REFERENCES (CONT.):

6.) "LOT LINE REVISION, LAND OF RICHARDSON ESTATES OF DOVER LLC, 141 SIXTH STREET STREET, DOVER, N.H. TAX MAP 35, LOT 64 AND MOHAMED & LISA K. HAMCHA, 5 DOWALIBY COURT, DOVER, N.H., TAX MAP 35 LOT 72" BY: BERRY SURVEYING & ENGINEERING DATED: SEPTEMBER 3, 2024 S.C.R.D. PLAN # 13394

LEGEND:

- ● 3/4" REBAR W/ ID CAP (TBS)
- • 1/2" REBAR W/EASEMENT CAP (TBS)
- ⊗ 3/4" REBAR W/ ID CAP (SET)
- ○ IRON BOUND/IRON ROD (FND)
- ○ IRON PIPE (FND)
- ⊡ STONE/GRANITE BOUND (FND)
- ⊕ T-BAR, STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- ABUTTING PROPERTY LINE (APPROX. LOCATION)
- PROPOSED LCA LINE
- PROPOSED EASEMENT

FND	FOUND
TYP	TYPICAL
TBS	TO BE SET
LCA	LIMITED COMMON AREA
S.C.R.D.	STRAFFORD COUNTY REGISTRY OF DEEDS

TDR UNIT DENSITY CALCULATION (170-28.C.(3)(a)

[1][a] 163,417 SF – 0SF (CONSERVATION) = 163,417 SF

*[1][b] 163,417 SF * 0.85 = 138,904 SF*

*[1][c] 138,904 SF * 0.85 = 118,068 SF*

[1][d] 118,068 SF /18,000 SF (TWO-FAMILY DWELLING UNIT MIN. R12 LOT SIZE) = 6 BUILDINGS (12) UNITS

- *REMAINING 8 UNITS (4 BUILDINGS) TO BE PURCHASED, THUS ALLOWING FOR 20 TWO-FAMILY DWELLING UNITS IN 10 BUILDINGS.*

THE PLANNING BOARD APPROVED THE USE OF THE TDR WHICH INCLUDES ADDITIONAL UNITS PER CHAPTER 170.27.2

TDR REQUEST:
PURCHASE OF 8 TWO-FAMILY DWELLING UNITS (4 BUILDINGS)
APPROVED BY DOVER PLANNING BOARD (TRAN-2025-003)
DATED MAY 13, 2025

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

APPROVED DOVER

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

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

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

20 UNIT, 2-FAMILY DWELLING TDR CONDOMINIUM PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

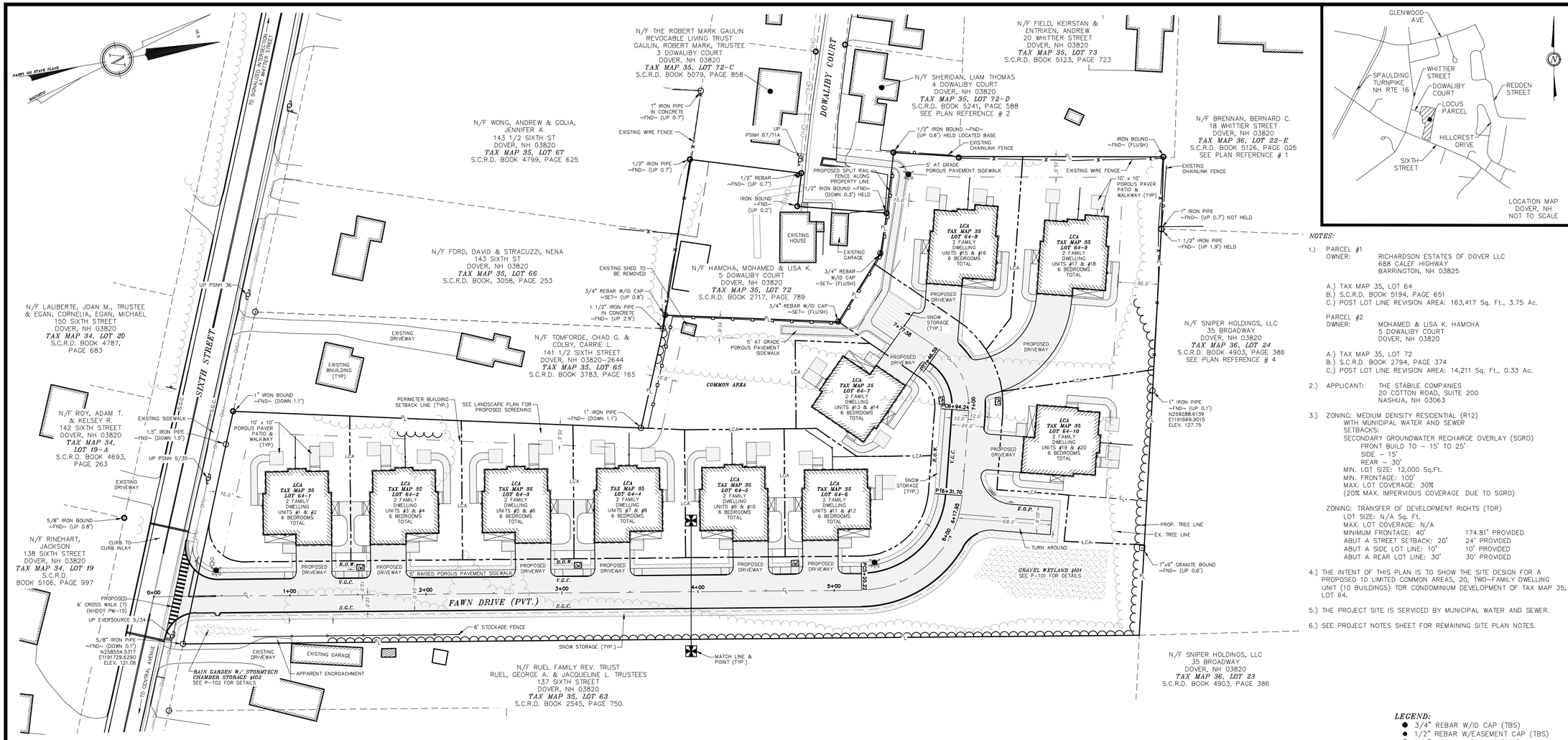
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 40 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

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

SHEET 5 OF 39

NOT FOR CONSTRUCTION



NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) ZONING: MEDIUM DENSITY RESIDENTIAL (R12)
WITH MUNICIPAL WATER AND SEWER
SETBACKS:
SECONDARY GROUNDWATER RECHARGE OVERLAY (SGRO)
FRONT BUILD TO – 15' TO 25'
SIDE – 15'
REAR – 30'
MIN. LOT SIZE: 12,000 Sq.Ft.
MIN. FRONTAGE: 100'
MAX. LOT COVERAGE: 30%
(20% MAX. IMPERVIOUS COVERAGE DUE TO SGRO)

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40' 174.81' PROVIDED
ABUT A STREET SETBACK: 20' 24' PROVIDED
ABUT A SIDE LOT LINE: 10' 10' PROVIDED
ABUT A REAR LOT LINE: 30' 30' PROVIDED

4.) THE INTENT OF THIS PLAN IS TO SHOW THE SITE DESIGN FOR A PROPOSED 10 LIMITED COMMON AREAS, 20, TWO-FAMILY DWELLING UNIT (10 BUILDINGS) TDR CONDOMINIUM DEVELOPMENT OF TAX MAP 35, LOT 64.

5.) THE PROJECT SITE IS SERVICED BY MUNICIPAL WATER AND SEWER.

6.) SEE PROJECT NOTES SHEET FOR REMAINING SITE PLAN NOTES.

SNOW STORAGE CALCULATION:

- STORAGE CALCULATION (6:1 RATIO USED)
  - •• PLOWABLE AREA = 32,974 Sq.Ft. / 6 = 5,496 Sq.Ft.
  - •• >7,695 Sq.Ft. PROVIDED
  - ••• SNOW SHALL BE REMOVED FROM THE PROPERTY AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS ONCE IDENTIFIED AREAS ARE FULL.

LOT & IMPERVIOUS COVEREAGE:

EXISTING:
HOUSE, COVERED PORCH & OVERHANGS: 877 Sq.Ft.
STEPS: 28 Sq.Ft.
DECK: 150 Sq.Ft.
SHED: 125 Sq.Ft.
TOTAL: 1,180 Sq.Ft. (0.72%)

DRIVEWAY: 1,537 Sq.Ft.
TOTAL: 1,537 Sq.Ft. (0.94%)
TOTAL IMPERVIOUS: 2,717 Sq.Ft. (1.66%)

PROPOSED:
INCLUDES BUILDING, OVERHANG, PORCH, DECK & STEPS
UNITS #1 & #2, #3 & #4, #5 & #6, #7 & #8, #9 & #10, #19 & #20 = 2,847 Sq.Ft. EACH
TOTAL: 17,082 Sq.Ft.
UNIT #15 & #16, #17 & #18 = 3,000 Sq.Ft. EACH
TOTAL: 6,000 Sq.Ft.
UNITS #11 & #12, #13 & #14 = 2,723 Sq.Ft. EACH
TOTAL: 5,446 Sq.Ft.
TOTAL: 28,528 Sq.Ft. (17.46%)

PAVEMENT: 27,744 Sq.Ft.
CURB: 561 Sq.Ft.
CONCRETE PADS: 115 Sq.Ft.
TOTAL: 28,420 Sq.Ft. (17.39%)
TOTAL PROPOSED IMPERVIOUS COVERAGE: 56,948 Sq.Ft. (34.85%)
(CUP REQUIRED)

CONDITIONAL USE PERMITS:

170-33 GROUNDWATER PROTECTION: GREATER THAN 20% IMPERVIOUS IN THE SECONDARY GROUNDWATER RECHARGE ZONE.

WAIVER REQUESTS:
STORMWATER RUNOFF VOLUME (153-14-(3)(B)(4)): PENDING

PARKING REQUIREMENTS:

CHAPTER 153-14D PARKING TABLE
- RESIDENTIAL
  - ••• EACH UNIT IS PROVIDED WITH A MINIMUM OF SINGLE GARAGE SPACE AND SINGLE DRIVEWAY SPACE.

TDR UNIT DENSITY CALCULATION (170-29.G.(3)(a)

[1][a] 163,417 SF – GSF (CONSERVATION) = 163,417 SF

*[1][b] 163,417 SF * 0.85 = 138,904 SF*

*[1][c] 138,904 SF * 0.85 = 118,068 SF*

[1][d] 118,068 SF /18,000 SF (TWO-FAMILY DWELLING UNIT MIN. R12 LOT SIZE) = 6 BUILDINGS (12) UNITS

- *REMAINING 8 UNITS (4 BUILDINGS) TO BE PURCHASED, THUS ALLOWING FOR 20 TWO-FAMILY DWELLING UNITS IN 10 BUILDINGS.*

THE PLANNING BOARD APPROVED THE USE OF THE TDR WHICH INCLUDES ADDITIONAL UNITS PER CHAPTER 170.27.2

TDR REQUEST:
PURCHASE OF 8 TWO-FAMILY DWELLING UNITS (4 BUILDINGS)
APPROVED BY DOVER PLANNING BOARD (TRAN-2025-003)
DATED MAY 13, 2025

LEGEND:

- 3/4" REBAR W/ID CAP (TBS)
- 1/2" REBAR W/EASEMENT CAP (TBS)
- 3/4" REBAR W/ID CAP (SET)
- IRON BOUND/IRON ROD (FND)
- IRON PIPE (FND)
- STONE/GRANITE BOUND (FND)
- T-BAR, STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- OVERHEAD UTILITIES
- PROPOSED LOA LINE
- CENTER LINE
- TREE LINE (EX. OR PROP.)
- SPLIT RAIL FENCE
- STOCKADE FENCE
- PROPOSED EASEMENT
- GRAVEL SHOULDER
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- E.O.P. EDGE OF PAVEMENT
- V.G.C. VERTICAL GRANITE CURB
- S.G.C. SLOPED GRANITE CURB
- LCA LIMITED COMMON AREA
- P_L PROPERTY LINE
- E_L EASEMENT LINE
- LIGHT TYPE "A" POLE MOUNTED
- LIGHT TYPE "B" BUILDING MOUNTED
- FIRE HYDRANT
- SNOW STORAGE
- TRANSFORMER/CONCRETE PAD
- STORMWATER SCM
- BITUMINOUS CONCRETE
- POROUS PAVERS
- POROUS PAVEMENT SIDEWALK

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

OVERVIEW SITE PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

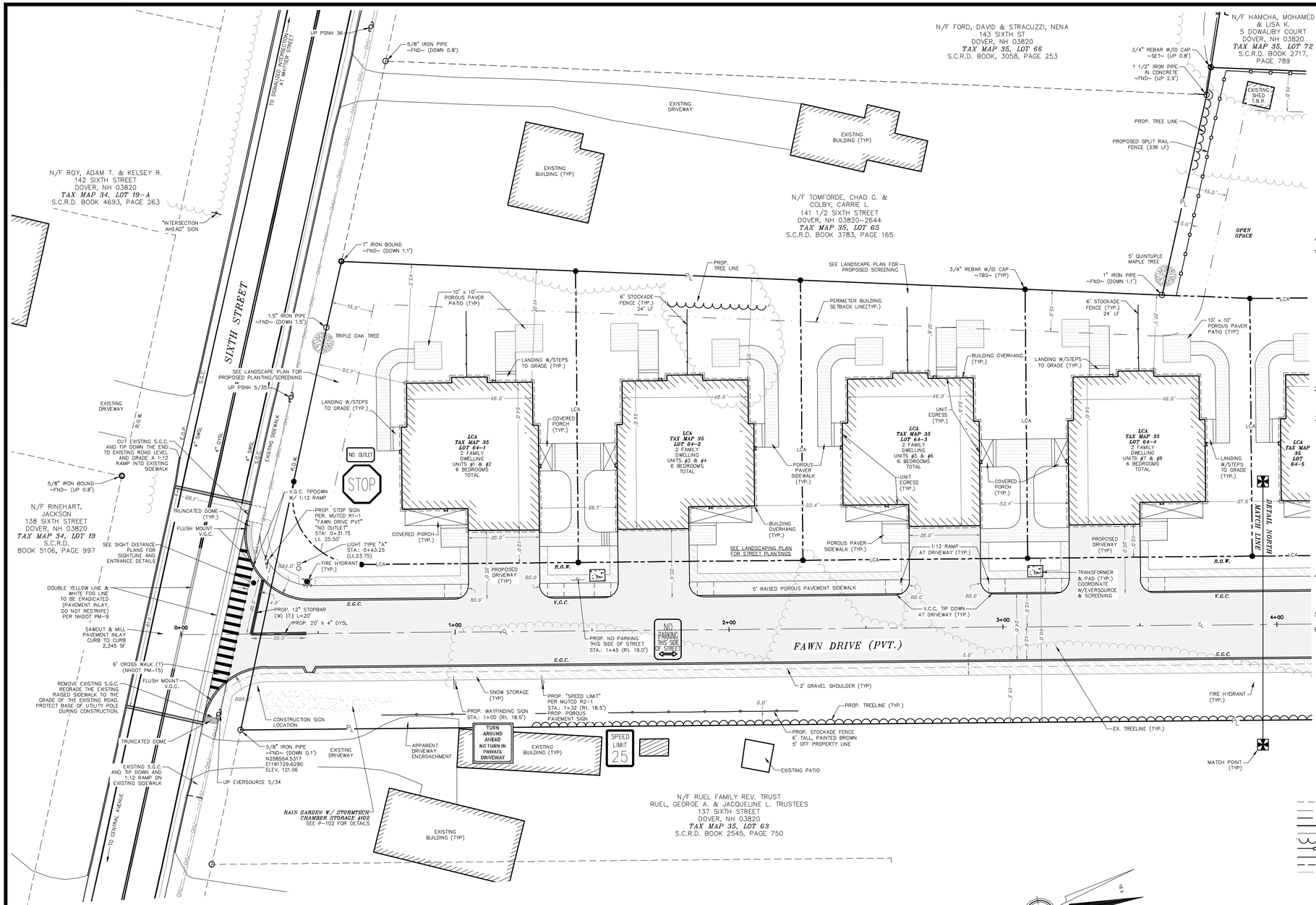
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 40 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 6 OF 39

NOT FOR CONSTRUCTION



NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) ZONING: MEDIUM DENSITY RESIDENTIAL (R12)
WITH MUNICIPAL WATER AND SEWER
SECONDARY GROUNDWATER RECHARGE OVERLAY
SETBACKS:
FRONT BUILD TO – 15' TO 25'
SIDE – 15'
REAR – 30'
MIN. LOT SIZE: 12,000 Sq.Ft.
MIN. FRONTAGE: 100'
MAX. LOT COVERAGE: 30%
(20% MAX. IMPERVIOUS COVERAGE DUE TO SGRO)

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)

LOT SIZE: N/A Sq. Ft.	
MAX. LOT COVERAGE: N/A	
MINIMUM FRONTAGE: 40'	174.81' PROVIDED
ABUT A STREET SETBACK: 20'	24' PROVIDED
ABUT A SIDE LOT LINE: 10'	10' PROVIDED
ABUT A REAR LOT LINE: 30'	30' PROVIDED

4.) THE INTENT OF THIS PLAN IS TO SHOW A DETAIL VIEW OF THE SITE DESIGN FOR A PROPOSED 10 LIMITED COMMON AREAS, 20 TWO-FAMILY DWELLING UNIT (10 BUILDINGS) TDR CONDOMINIUM DEVELOPMENT OF TAX MAP 35, LOT 64.

5.) THE PROJECT SITE IS SERVICED BY MUNICIPAL WATER AND SEWER.

6.) SEE PROJECT NOTES SHEET FOR REMAINING SITE PLAN NOTES.

LEGEND:

- 3/4" REBAR W/ID CAP (TBS)
- 1/2" REBAR W/EASEMENT CAP (TBS)
- 3/4" REBAR W/ID CAP (SET)
- IRON BOUND/IRON ROD (FND)
- IRON PIPE (FND)
- STONE/GRANITE BOUND (FND)
- T-BAR, STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN

- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- OHU OHU OHU OVERHEAD UTILITIES
- PROPOSED LCA LINE
- CENTER LINE
- TREE LINE (EX. OR PROP.)
- SPLIT RAIL FENCE
- STOCKADE FENCE
- PROPOSED EASEMENT
- GRAVEL SHOULDER

FND FOUND
TYP TYPICAL
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
E.O.P. EDGE OF PAVEMENT
V.G.C. VERTICAL GRANITE CURB
S.G.C. SLOPED GRANITE CURB
LCA LIMITED COMMON AREA
PL PROPERTY LINE
EL EASEMENT LINE

- LIGHT TYPE "A" POLE MOUNTED
- LIGHT TYPE "B" BUILDING MOUNTED
- FIRE HYDRANT
- SNOW STORAGE
- TRANSFORMER/CONCRETE PAD
- STORMWATER SCM
- BITUMINOUS CONCRETE
- POROUS PAVERS
- POROUS PAVEMENT SIDEWALK

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

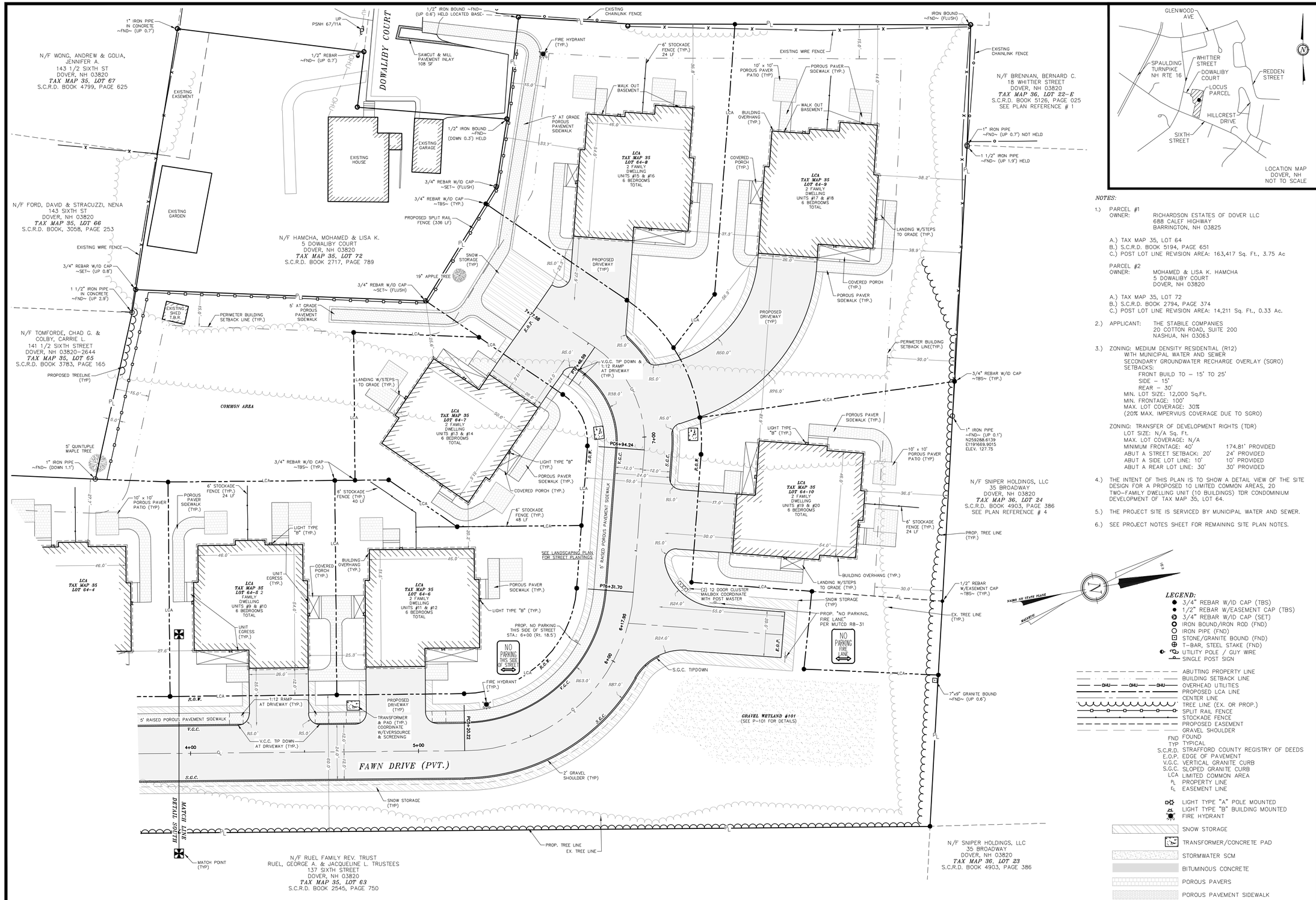
SITE PLAN – DETAIL SOUTH
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION



NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) ZONING: MEDIUM DENSITY RESIDENTIAL (R12)
WITH MUNICIPAL WATER AND SEWER
SECONDARY GROUNDWATER RECHARGE OVERLAY (SGRO)
SETBACKS:
FRONT BUILD TO – 15' TO 25'
SIDE – 15'
REAR – 30'
MIN. LOT SIZE: 12,000 Sq.Ft.
MIN. FRONTAGE: 100'
MAX. LOT COVERAGE: 30%
(20% MAX. IMPERVIUS COVERAGE DUE TO SGRO)

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)

LOT SIZE: N/A Sq. Ft.	
MAX. LOT COVERAGE: N/A	
MINIMUM FRONTAGE: 40'	174.81' PROVIDED
ABUT A STREET SETBACK: 20'	24' PROVIDED
ABUT A SIDE LOT LINE: 10'	10' PROVIDED
ABUT A REAR LOT LINE: 30'	30' PROVIDED

4.) THE INTENT OF THIS PLAN IS TO SHOW A DETAIL VIEW OF THE SITE DESIGN FOR A PROPOSED 10 LIMITED COMMON AREAS, 20 TWO-FAMILY DWELLING UNIT (10 BUILDINGS) TDR CONDOMINIUM DEVELOPMENT OF TAX MAP 35, LOT 64.

5.) THE PROJECT SITE IS SERVICED BY MUNICIPAL WATER AND SEWER.

6.) SEE PROJECT NOTES SHEET FOR REMAINING SITE PLAN NOTES.

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

SITE PLAN – DETAIL NORTH
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H. *LOT 64*
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H. *LOT 72*
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

PROJECT NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO PROVIDE AN OVERVIEW OF GRADING & ENGINEERING DETAILS FOR THE PROPOSED SITE PLAN.

4.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).

5.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

6.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

7.) SEE PROJECT NOTES SHEET FOR REMAINING GRADING NOTES. SEE EROSION & SEDIMENT CONTROL PLAN FOR LIMIT OF PROJECT DISTURBANCE.

8.) BASINS ARE TO HAVE NH STANDARD FRAMES AND GRATES MADE IN NORTH AMERICA. GRATES ARE TO BE INSTALLED BINDER FLUSH PRIOR TO BASE PAVE. UPON PROJECT COMPLETION FRAMES AND GRATES ARE TO BE CUT AND RIM RAISED TO FINAL PAVEMENT SURFACE. THIS IS TO ENSURE STORMWATER ENTERS THE SYSTEM AS DESIGN DURING THE INTERIM CONSTRUCTION PERIOD. CATCH BASINS AREA TO BE WITH OUT SUMPS. MANUFACTURERS BASES ARE TO BE FILLED WITH WASHED CRUSHED STONE ON SITE AS NEEDED.

9.) SEE P201-203 FOR THE ROOF AREAS THAT ARE REQUIRED TO BE GUTTERED AND ROUTED TO THE THREE INFILTRATION TRENCH LOCATIONS FOR GROUNDWATER RECHARGE.

LEGEND:

- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED STORMWATER BMP OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 — DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- BUILDING SETBACK LINE
- CONTOUR MINOR, EXISTING
- CONTOUR MAJOR, EXISTING
- CONTOUR MINOR, PROPOSED
- CONTOUR MAJOR, PROPOSED
- CENTER LINE
- EXISTING WATER MAIN
- EXISTING SEWER LINE
- EXISTING DRAINAGE LINE
- EXISTING OVERHEAD UTILITY
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED UNDERDRAIN
- UNDERGROUND UTILITY
- E175.31 — EXISTING SPOT GRADE
- F175.31 — PROPOSED SPOT GRADE
- FLOW ARROW
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- PROPOSED STORMTECH CHAMBERS

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

GRADING PLANS TABLE OF CONTENTS:

SHEET #9: OVERVIEW GRADING & DRAINAGE PLAN
SHEET #10: P&P FAWN DRIVE 0+00-4+00
SHEET #11: P&P FAWN DRIVE 4+00-END
SHEET #12: COMMON AREA AND PIPE PROFILES
SHEET #13-#17: STORMWATER BMPs #101-#102, #201-203
SHEET #18: EROSION & SEDIMENT CONTROL PLAN
SHEET #19: CROSS SECTIONS FAWN DRIVE 0+00 - END & POROUS PRODUCT SPECIFICATIONS (P-103 & P-104)
SHEETS #27-#28: EROSION & SEDIMENT CONTROL DETAILS E-101-E102
SHEETS #29-#31: CONSTRUCTION DETAILS C-101-C103
SHEETS #32-#33: DRAINAGE CONSTRUCTION DETAILS D-101-D102

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

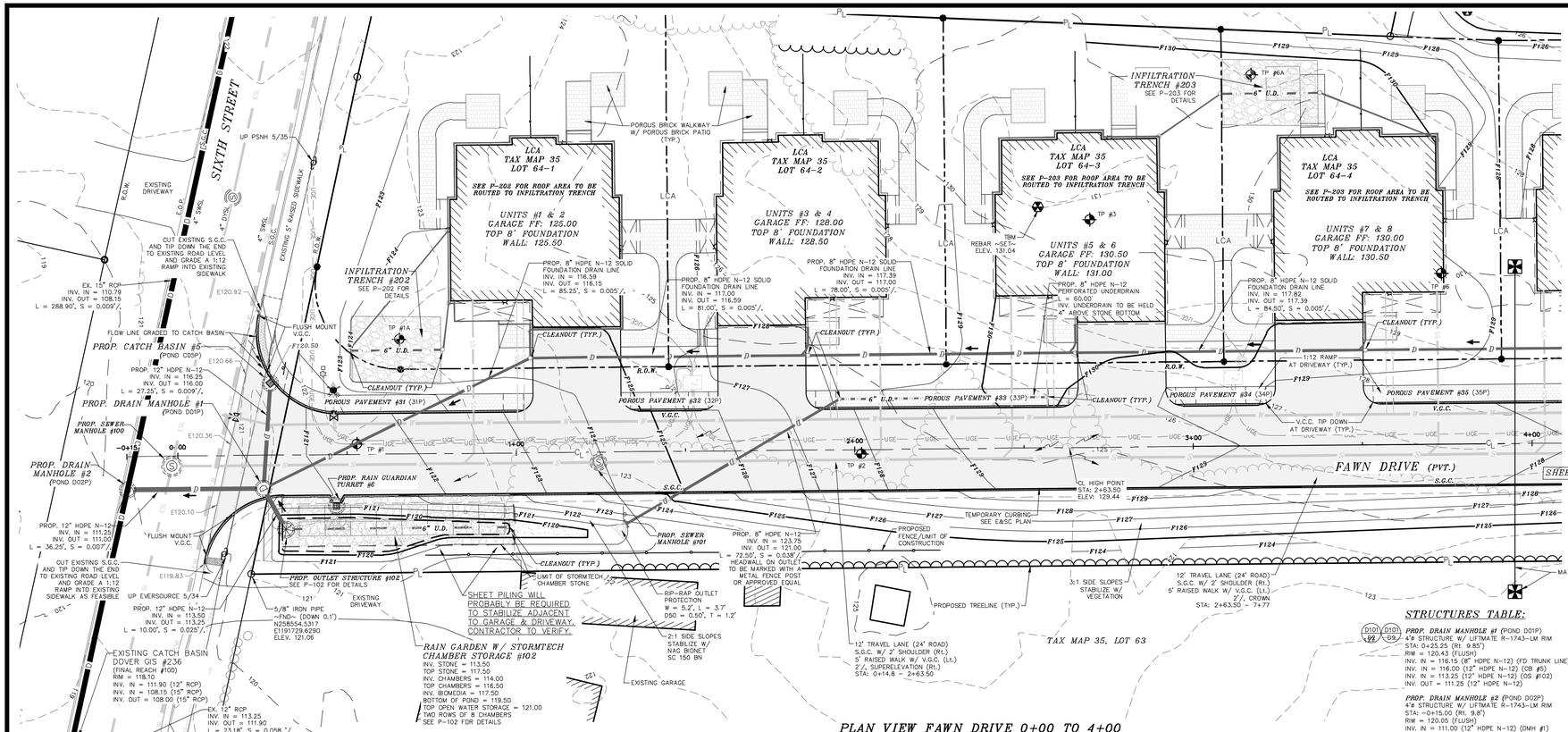
OVERVIEW GRADING & DRAINAGE PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 40 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14241
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

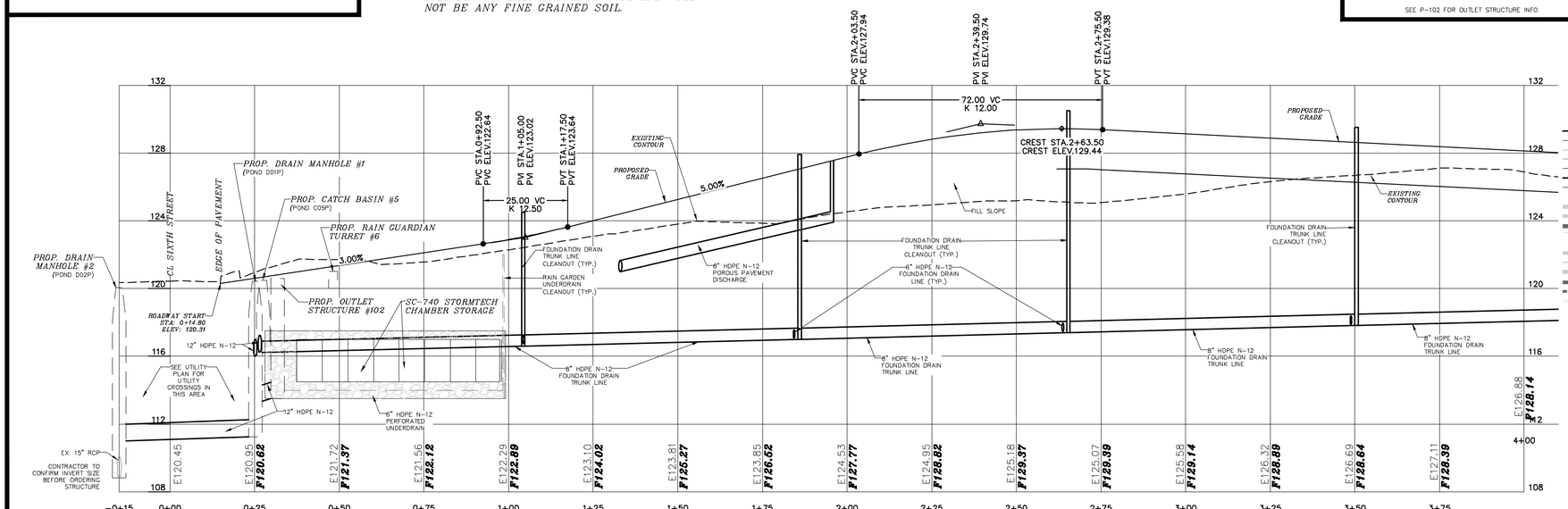


PLAN VIEW FAWN DRIVE 0+00 TO 4+00

ROAD NOTE:

GRANULAR FILL REQUIRED WITHIN 12" OF SELECT MATERIALS. COMPACT ALL ROAD FILL MATERIALS IN 6" LIFTS. UNDER THE UNIFIED SOIL CLASSIFICATION SYSTEM, THE GRANULAR FILL BE GRAVELLY OR SANDY SOIL AND WILL NOT BE ANY FINE GRAINED SOIL.

PROFILE VIEW FAWN DRIVE 0+00 TO 4+00



PROJECT NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO PROVIDE GRADING & ENGINEERING DETAILS FOR THE PROPOSED SITE PLAN.

4.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).

5.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

6.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

7.) SEE PROJECT NOTES SHEET FOR REMAINING GRADING NOTES. SEE EROSION & SEDIMENT CONTROL PLAN FOR LIMIT OF PROJECT DISTURBANCE.

8.) BASINS ARE TO HAVE NH STANDARD FRAMES AND GRATES MADE IN NORTH AMERICA. GRATES ARE TO BE INSTALLED BINDER FLUSH PRIOR TO BASE PAVE. UPON PROJECT COMPLETION FRAMES AND GRATES ARE TO BE CUT AND RIM RAISED TO FINAL PAVEMENT SURFACE. THIS IS TO ENSURE STORMWATER ENTERS THE SYSTEM AS DESIGN DURING THE INTERIM CONSTRUCTION PERIOD. CATCH BASINS AREA TO BE WITH OUT SUMPS. MANUFACTURERS BASES ARE TO BE FILLED WITH WASHED CRUSHED STONE ON SITE AS NEEDED.

9.) SEE P201–203 FOR THE ROOF AREAS THAT ARE REQUIRED TO BE GUTTERED AND ROUTED TO THE THREE INFILTRATION TRENCH LOCATIONS FOR GROUNDWATER RECHARGE.

STRUCTURES TABLE:

D101 / D01 — *PROP. DRAIN MANHOLE #1* (POND D01P)
4'ø STRUCTURE W/ LIFTMATE R-1743–LM RIM
STA: 0+25.25 (Rt. 9.85')
RIM = 120.43 (FLUSH)
INV. IN = 116.15 (8" HDPE N-12) (FD TRUNK LINE)
INV. IN = 116.00 (12" HDPE N-12) (C8 #5)
INV. IN = 113.25 (12" HDPE N-12) (OS #102)
INV. OUT = 111.25 (12" HDPE N-12)

D101 / D02 — *PROP. DRAIN MANHOLE #2* (POND D02P)
4'ø STRUCTURE W/ LIFTMATE R-1743–LM RIM
STA: -0+15.00 (Rt. 9.8')
RIM = 120.05 (FLUSH)
INV. IN = 111.00 (12" HDPE N-12) (DMH #1)
INV. IN = 108.85 (EX. 15" RCP)
INV. OUT = 108.81 (EX. 15" RCP)

D101 / D03 — *PROP. CATCH BASIN #5*
STA: 0+27.50 (Lt. 21.25')
4'ø STRUCTURE W/ TYPE "B" GRATE
RIM = 120.50 (FLUSH)
INV. OUT = 116.25 (12" HDPE N-12) (DMH #1)

D102 / D15 — *PROP. RAIN GUARDIAN TURRET #6*
STA: 0+46.25 (Rt. 15.25')
GUTTER LINE = 121.08 (FLUSH)
INV. OUT = 120.00 (P-102)

SEE P-102 FOR OUTLET STRUCTURE INFO

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

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

LEGEND:

- PROPOSED SEWER MANHOLE W/ STRUCTURE
- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED STORMWATER BMP OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 — DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- BUILDING SETBACK LINE
- CONTOUR MINOR, EXISTING
- CONTOUR MAJOR, EXISTING
- CONTOUR MINOR, PROPOSED
- CONTOUR MAJOR, PROPOSED
- CENTER LINE
- EXISTING WATER MAIN
- EXISTING SEWER LINE
- EXISTING DRAINAGE LINE
- EXISTING OVERHEAD UTILITY
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
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- PROPOSED DRAINAGE LINE
- PROPOSED UNDERDRAIN
- UNDERGROUND UTILITY
- E175.31 — EXISTING SPOT GRADE
- F175.31 — PROPOSED SPOT GRADE
- FLOW ARROW
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- PROPOSED STORMTECH CHAMBERS

CITY OF DOVER PLANNING FILE #SITE–2025–0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

PLAN & PROFILE FAWN DRIVE 0+00 TO 4+00
FOR: THE STABILE COMPANIES
RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14943 LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

STRUCTURES TABLE:

PROP. CATCH BASIN #1
STA: 5+50.00 (Lt. 11.0')
4'ø STRUCTURE W/ TYPE "B" GRATE
RIM = 128.44 (FLUSH)
INV. OUT = 121.94 (15" HDPE N-12) (CB #2)

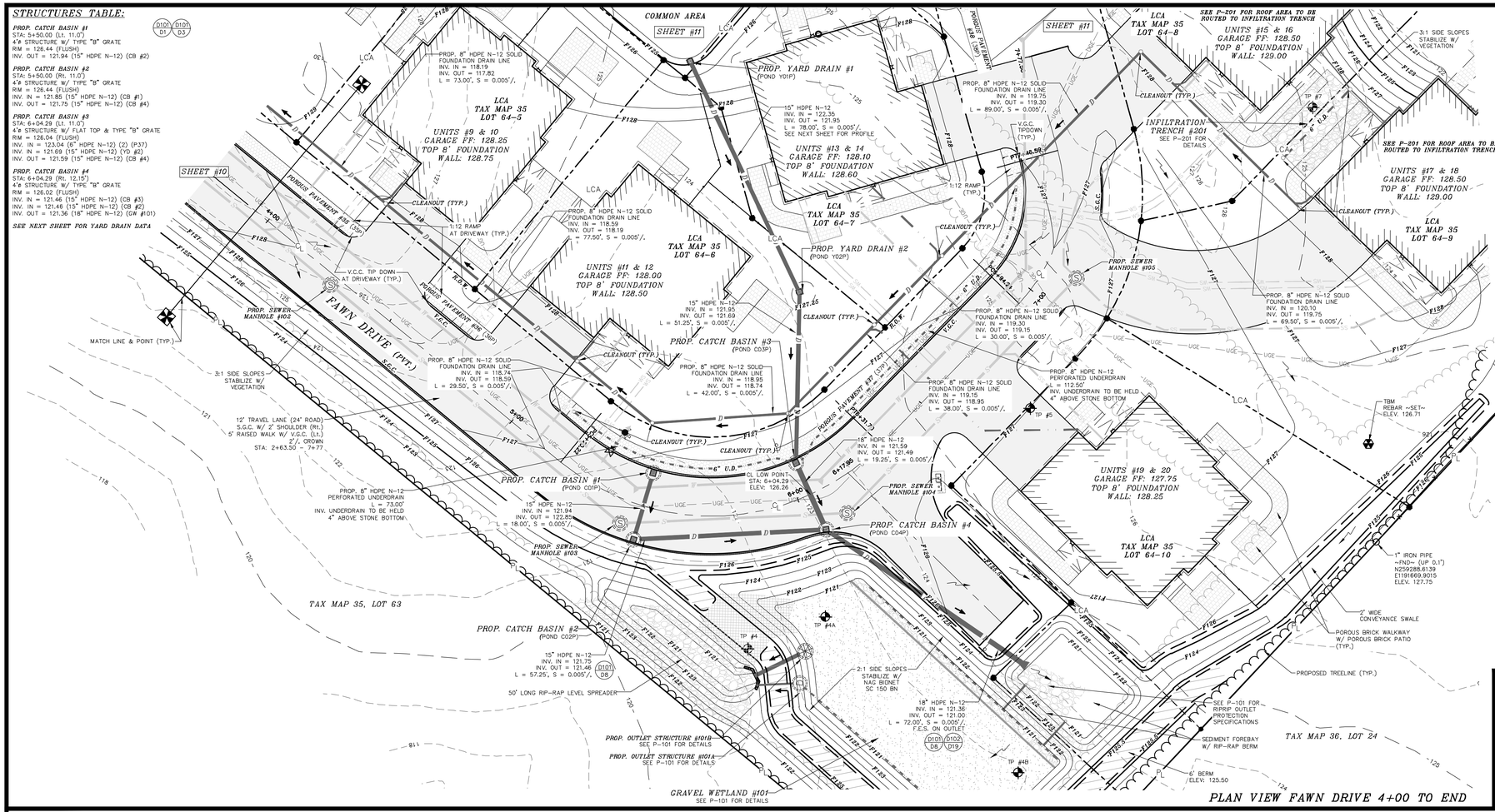
PROP. CATCH BASIN #2
STA: 5+50.00 (Rt. 11.0')
4'ø STRUCTURE W/ TYPE "B" GRATE
RIM = 126.44 (FLUSH)
INV. IN = 121.85 (15" HDPE N-12) (CB #1)
INV. OUT = 121.75 (15" HDPE N-12) (CB #4)

PROP. CATCH BASIN #3
STA: 6+04.29 (Lt. 11.0')
4'ø STRUCTURE W/ FLAT TOP & TYPE "B" GRATE
RIM = 126.04 (FLUSH)
INV. IN = 123.04 (6" HDPE N-12) (2) (P37)
INV. IN = 121.69 (15" HDPE N-12) (YD #2)
INV. OUT = 121.59 (15" HDPE N-12) (CB #4)

PROP. CATCH BASIN #4
STA: 6+04.29 (Rt. 12.15')
4'ø STRUCTURE W/ TYPE "B" GRATE
RIM = 126.02 (FLUSH)
INV. IN = 121.46 (15" HDPE N-12) (CB #3)
INV. IN = 121.46 (15" HDPE N-12) (CB #2)
INV. OUT = 121.36 (18" HDPE N-12) (GW #101)

SEE NEXT SHEET FOR YARD DRAIN DATA

D101/D1 D101/D3

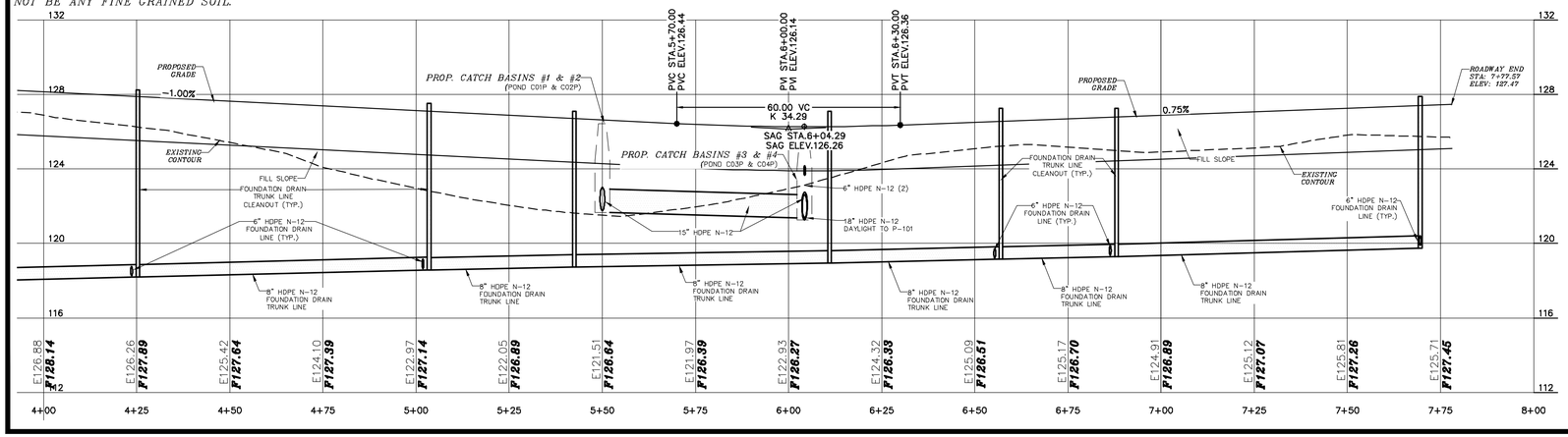


PLAN VIEW FAWN DRIVE 4+00 TO END

PROFILE VIEW FAWN DRIVE 4+00 TO END

ROAD NOTE:

GRANULAR FILL REQUIRED WITHIN 12" OF SELECT MATERIALS. COMPACT ALL ROAD FILL MATERIALS IN 6" LIFTS. UNDER THE UNIFIED SOIL CLASSIFICATION SYSTEM, THE GRANULAR FILL BE GRAVELLY OR SANDY SOIL AND WILL NOT BE ANY FINE GRAINED SOIL.



PROJECT NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825
A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820
A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO PROVIDE GRADING & ENGINEERING DETAILS FOR THE PROPOSED SITE PLAN.

4.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).

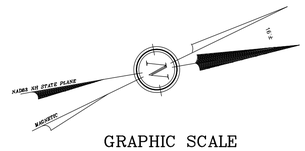
5.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

6.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

7.) SEE PROJECT NOTES SHEET FOR REMAINING GRADING NOTES. SEE EROSION & SEDIMENT CONTROL PLAN FOR LIMIT OF PROJECT DISTURBANCE.

8.) BASINS ARE TO HAVE NH STANDARD FRAMES AND GRATES MADE IN NORTH AMERICA. GRATES ARE TO BE INSTALLED BINDER FLUSH PRIOR TO BASE PAVE. UPON PROJECT COMPLETION FRAMES AND GRATES ARE TO BE CUT AND RIM RAISED TO FINAL PAVEMENT SURFACE. THIS IS TO ENSURE STORMWATER ENTERS THE SYSTEM AS DESIGN DURING THE INTERIM CONSTRUCTION PERIOD. CATCH BASINS AREA TO BE WITH OUT SUMPS. MANUFACTURERS BASES ARE TO BE FILLED WITH WASHED CRUSHED STONE ON SITE AS NEEDED.

9.) SEE P201-203 FOR THE ROOF AREAS THAT ARE REQUIRED TO BE GUTTERED AND ROUTED TO THE THREE INFILTRATION TRENCH LOCATIONS FOR GROUNDWATER RECHARGE.



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

LEGEND:

- PROPOSED SEWER MANHOLE W/ STRUCTURE
- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED STORMWATER BMP OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- BUILDING SETBACK LINE
- 176 CONTOUR MINOR, EXISTING
- 175 CONTOUR MAJOR, EXISTING
- F176 CONTOUR MINOR, PROPOSED
- F175 CONTOUR MAJOR, PROPOSED
- CENTER LINE
- EXISTING WATER MAIN
- EXISTING SEWER LINE
- EXISTING DRAINAGE LINE
- EXISTING OVERHEAD UTILITY
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED UNDERDRAIN
- UNDERGROUND UTILITY
- E175.31 EXISTING SPOT GRADE
- F175.31 PROPOSED SPOT GRADE
- FLOW ARROW
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- PROPOSED STORMTECH CHAMBERS

#	DATE	DESCRIPTION
1	7-30-25	REVISED PER TRC #1 COMMENTS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

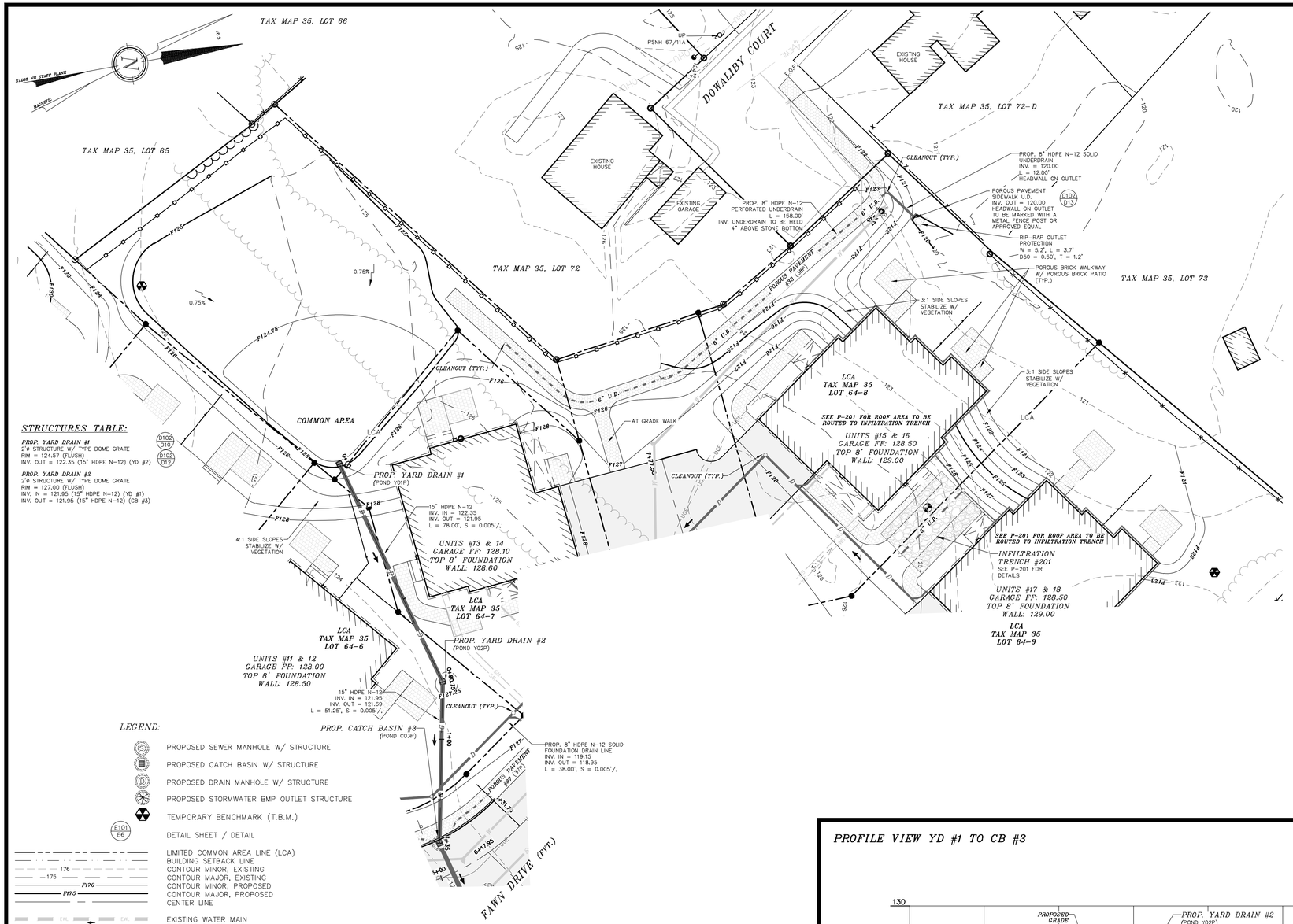
PLAN & PROFILE FAWN DRIVE 4+00 TO END
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE — KENNETH A. BERRY No. 14243 — LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION



PROJECT NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO PROVIDE GRADING & ENGINEERING DETAILS FOR THE PROPOSED SITE PLAN.

4.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).

5.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

6.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

7.) SEE PROJECT NOTES SHEET FOR REMAINING GRADING NOTES. SEE EROSION & SEDIMENT CONTROL PLAN FOR LIMIT OF PROJECT DISTURBANCE.

8.) BASINS ARE TO HAVE NH STANDARD FRAMES AND GRATES MADE IN NORTH AMERICA. GRATES ARE TO BE INSTALLED BINDER FLUSH PRIOR TO BASE PAVE. UPON PROJECT COMPLETION FRAMES AND GRATES ARE TO BE CUT AND RIM RAISED TO FINAL PAVEMENT SURFACE. THIS IS TO ENSURE STORMWATER ENTERS THE SYSTEM AS DESIGN DURING THE INTERIM CONSTRUCTION PERIOD. CATCH BASINS AREA TO BE WITH OUT SUMPS. MANUFACTURERS BASES ARE TO BE FILLED WITH WASHED CRUSHED STONE ON SITE AS NEEDED.

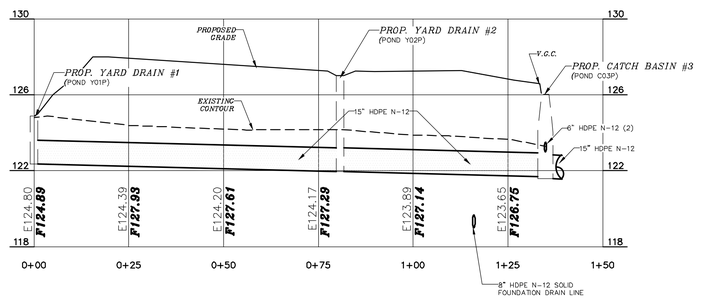
9.) SEE P201-203 FOR THE ROOF AREAS THAT ARE REQUIRED TO BE GUTTERED AND ROUTED TO THE THREE INFILTRATION TRENCH LOCATIONS FOR GROUNDWATER RECHARGE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PROFILE VIEW YD #1 TO CB #3



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

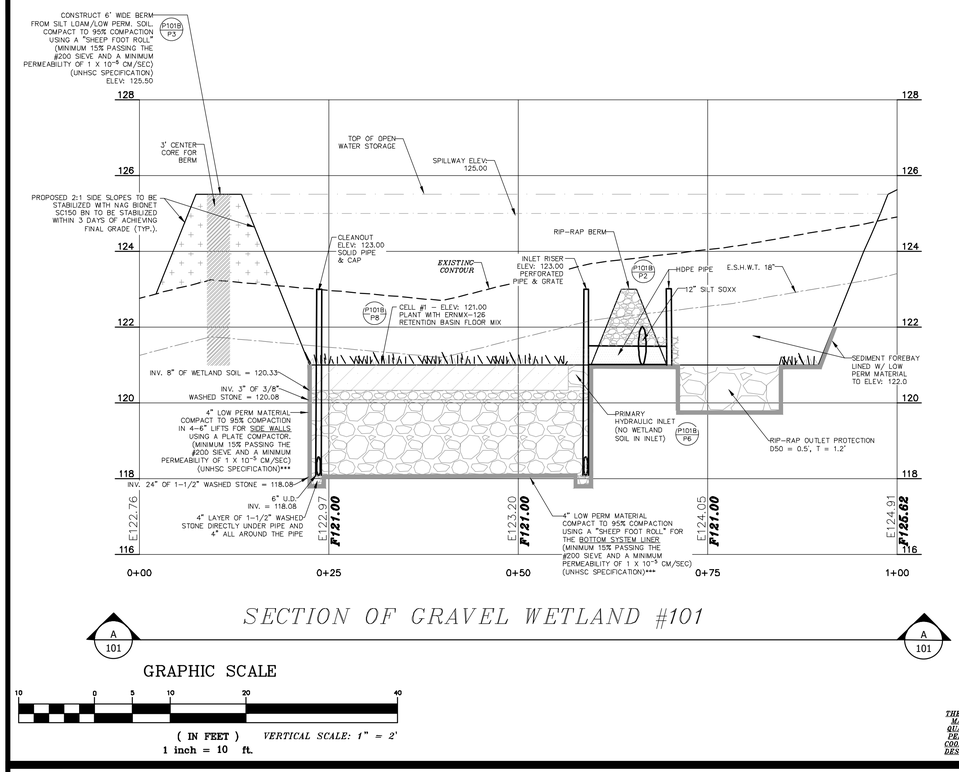
COMMON AREA AND PIPE PROFILE
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION



SECTION OF GRAVEL WETLAND #101

A 101 — A 101

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET) VERTICAL SCALE: 1" = 2'
1 inch = 10 ft.

*** NOTE: THE UNDERLYING MATERIAL MAY QUALIFY AS LOW PERM. MATERIAL. COORDINATE WITH DESIGN ENGINEER

CONSTRUCTION SEQUENCE NOTE:

EROSION, SEDIMENT AND DETENTION CONTROL FACILITIES SHALL BE INSTALLED & STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM. TEMPORARY DIVERSIONS MAY BE REQUIRED. POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES MUST BE INITIATED AND STABILIZED EARLY IN THE PROCESS. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL SCMs ARE STABILIZED. SWALES CONVEYING RUNOFF TO SCMs WILL BE CONSTRUCTED AND PUT INTO SERVICE ONCE THE RECEIVING SCM IS STABILIZED. SEE DETAIL E17, SHEET E-101 FOR FULL CONSTRUCTION SEQUENCE.

WETLAND SOIL SURFACE PROTECTION NOTE:

SEE EROSION AND SEDIMENT CONTROL PLAN
IT IS RECOMMENDED THAT THE CONTRACTOR TAKE MEASURES TO PROTECT THE WETLAND SOIL SURFACE FROM SEDIMENTATION CAUSED BY EROSION ON THE SIDE SLOPES.

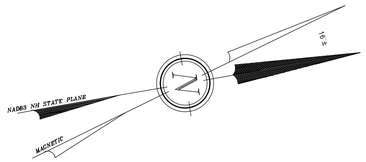
PLAN VIEW GRAVEL WETLAND #101 SEE P-101B FOR DETAILS

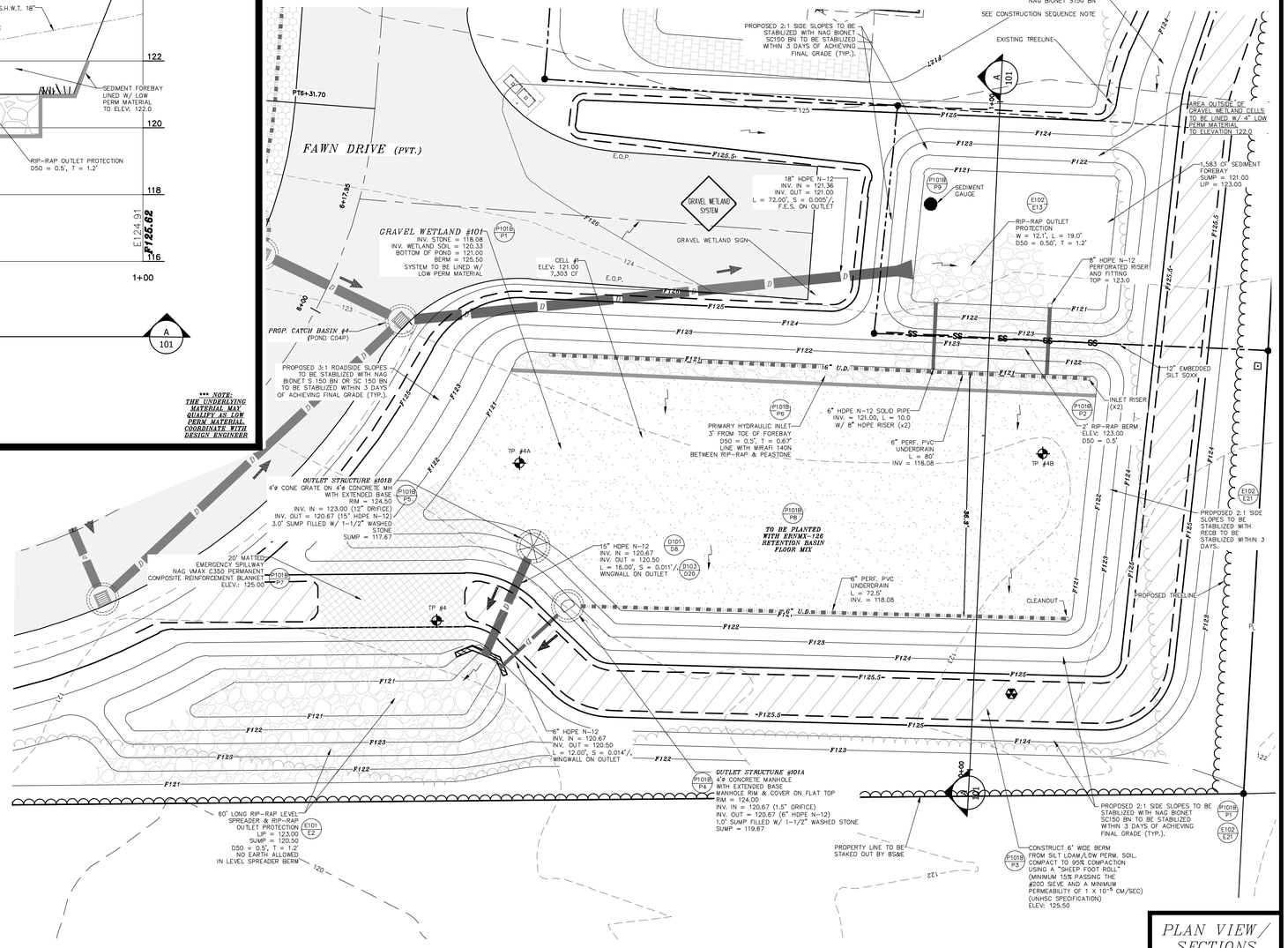
GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	FEET	6 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3





LEGEND:

- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED SCM OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 E6 — DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- 176 — CONTOUR MINOR, EXISTING
- 175 — CONTOUR MAJOR, EXISTING
- F176 — CONTOUR MINOR, PROPOSED
- F175 — CONTOUR MAJOR, PROPOSED
- CENTER LINE
- D — PROPOSED DRAINAGE LINE
- U.D. — PROPOSED UNDERDRAIN
- FLOW ARROW
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVEMENT

PLAN VIEW / SECTIONS

P-101A

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

SUBSURFACE GRAVEL WETLAND #101 PLAN VIEW & PROFILES
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE — KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

SHEET 13 OF 39

NOT FOR CONSTRUCTION

MAINTENANCE REQUIREMENTS

ACTIVITY	CLOGGING AND SYSTEM PERFORMANCE	FREQUENCY
INSPECT INLETS AND OUTLETS TO ENSURE GOOD CONDITION AND NO EVIDENCE OF DETERIORATION. CHECK TO SEE IF HIGH-FLOW BYPASS IS FUNCTIONING.		ANNUALLY, MORE FREQUENTLY IN THE FIRST YEAR OF OPERATION
REMEDY: REPAIR OR REPLACE ANY DAMAGED STRUCTUAL PARTS, INLETS AND OUTLETS. CLEAR OR REMOVE DEBRIS OR RESTRICTIONS.		
CHECK FOR INTERNAL EROSION, EVIDENCE OF SHORT-CIRCUITING, AND ANIMAL BURROWS.		
REMEDY: SOIL EROSION FROM SHORT-CIRCUITING OR ANIMAL BOROUGHS SHOULD BE REPAIRED WHEN THEY OCCUR.		
CHECK THAT THE SYSTEM IS FULLY DRAINING WITHIN A 24-48 HOUR PERIOD AFTER RAIN EVENTS.		
REMEDY: REPAIR OR RESTORE HYDRAULIC INLET OR OUTLET CONFIGURATION.		

VEGETATION

CHECK FOR ROBUST VEGETATION COVERAGE THROUGHOUT THE SYSTEM AND DEAD OR DYING PLANTS	ANNUALLY, OR AS NEEDED
REMEDY: VEGETATION SHOULD COVER > 75% OF THE SYSTEM AND SHOULD BE RESEEDED AND CARED FOR AS NEEDED	
CUT AND REMOVE VEGETATION FROM GRAVEL WETLAND SYSTEM AND FOREBAY IN ORDER TO MAINTAIN NITROGEN REMOVAL PERFORMANCE	ONCE EVERY 3 YEARS
REMEDY: THE VEGETATION SHOULD BE CUT AND REMOVED FROM THE SYSTEM TO PREVENT NITROGEN FROM CYCLING BACK INTO THE SYSTEM	

3/8" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

1-1/2" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1-1/2"	90 – 100
1"	20 – 55
1-1/2"	0 –15
3/8"	0 –5

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

WETLAND SOIL

SIEVE SIZE	% PASSING BY WEIGHT
0.5	100
#10"	90 – 75
#100	40 – 50
#200	25 –50
SIEVE SIZE	% PASSING TOLERANCES
0.5	±10.0
#10	±5.0
#100	±5.0
#200	±5.0

CONSTRUCTION NOTE: THE DESIGN ENGINEER IS TO BE ON SITE PRIOR TO AND DURING THE PLACEMENT OF THE RESERVOIR STONE, AND TO WITNESS THE INSTALLATION OF THE UNDER-DRAIN AND INTER-CHAMBER PIPES. PLEASE PROVIDE 24 HOURS NOTICE PRIOR TO REQUESTED INSPECTION.

DESIGN REFERENCES

1 UNH STORMWATER CENTER

STABILIZATION NOTE:
SEE NOTE #6, SHEET E-102, DETAIL E-18
SIDE SLOPES ARE TO BE STABILIZED WITHIN THREE WORKING DAY UPON COMPLETION OF FINAL GRADE.

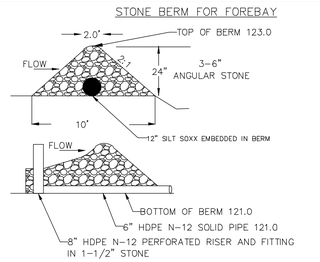
WETLAND SOIL PLANTING:
THE FLOOR OF THE SUBSURFACE GRAVEL WETLAND CELLS AT TO BE PLANTED WITH NEW ENGLAND WETLAND PLANT, INC. (N.E.W.P.) NEW ENGLAND WETMIX, OR APPROVED EQUAL. SEE DETAIL P8.

GRAVEL WETLAND CONSTRUCTION & MAINTENANCE SPECIFICATIONS

P1

P2

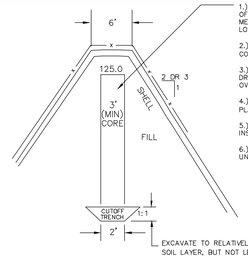
STONE BERM FOR FOREBAY



GRAVEL WETLAND SEDIMENT FOREBAY
NOT TO SCALE

P3

LOW PERMEABILITY MATERIAL GRADATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	95 – 100
#40	60 – 95
#100	40 – 60
#200	25 – 45



1.) 3" CORE IS TO BE CONSTRUCTED OF COMPACTED LOAM MATERIAL MEETING THE REQUIREMENT OF THE LOW PERM SPECIFICATION

2.) CORE IS TO BE INSTALLED & COMPACTED IN 12" LIFTS.

3.) INSTALLATION OF ENTIRE DRAINAGE STRUCTURE IS TO BE OVERSEEN BY DESIGN ENGINEER.

4.) GENERAL FILL MATERIALS ARE TO PLACED & COMPACTED IN 12" LIFTS.

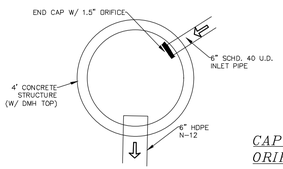
5.) GENERAL FILL MATERIAL MAY BE INSTALLED USING ONSITE MATERIALS.

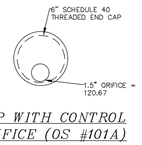
6.) CORE IS TO BE CONSTRUCTED UNDERNEATH THE PROPOSED SPILLWAY.

GRAVEL WETLAND BERM CONSTRUCTION
NOT TO SCALE

P4

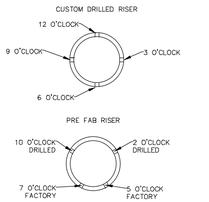
TOP VIEW (OS #101A)
NOT TO SCALE





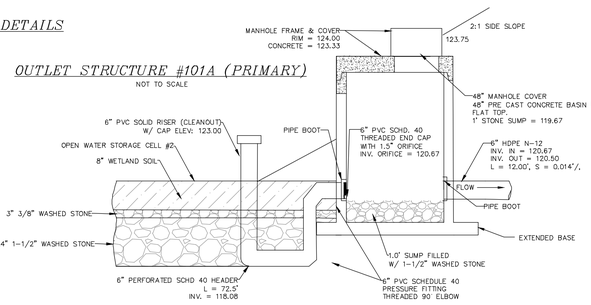
CAP WITH CONTROL ORIFICE (OS #101A)
NOT TO SCALE

GRAVEL WETLAND STRUCTURES & DETAILS
NOT TO SCALE



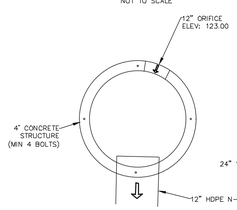
PERFORATED RISER DETAIL
NOT TO SCALE

OUTLET STRUCTURE #101A (PRIMARY)
NOT TO SCALE

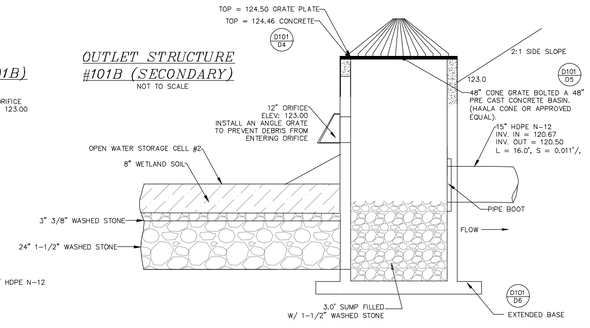


P5

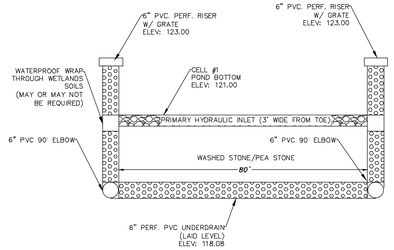
TOP VIEW (OS #101B)
NOT TO SCALE



OUTLET STRUCTURE #101B (SECONDARY)
NOT TO SCALE



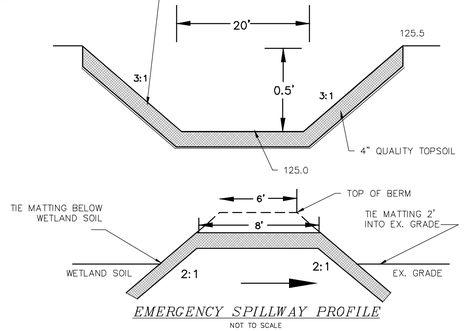
P6



GRAVEL WETLAND INLET SYSTEM
NOT TO SCALE

NOTE: THERE IS NO WETLAND SOIL IN THE GRAVEL WETLAND INLET SYSTEM

P7



EMERGENCY SPILLWAY PROFILE
NOT TO SCALE

P8

Retention Basin Floor Mix - Low Maintenance - ERNMX-126

	Botanical Name	Common Name	Price/Lb
20.00 %	*Acetum clandestinum, Tioga*	Deertongue, Tioga	22.08
20.00 %	*Panicwilla dictans, Pubs*	Alkaligrass, Pubs	4.36
18.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	9.96
15.00 %	*Agrostis stolonifera, 'Pennycross'*	Creeping Bentgrass, 'Pennycross'	14.40
15.00 %	*Poa palustris*	Fowl Bluegrass	16.80
10.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	28.80
1.00 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	81.60
1.00 %	*Juncus effusus*	Soft Rush	48.00
100.00 %		**Mix Price/Lb Bulk**	**$15.98**

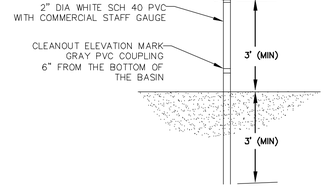
Seeding Rate: 20-40 lbs per acre, or 0.5-1 lb/1,000 sq ft with a cover crop. For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japenese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

BUTTERFLY MILK WEED IS A REQUIRED ADDITION TO ANY SEEDING DONE ON SITE.

Grasses & Grass-like Species - Herbaceous Perennial; Stormwater Management

The hardy inexpensive grass and grass-like species are ideal for retention basins that may have high salt inflows and where mowing may be required. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

P9



NOTES:
1. STAFF GAUGE TO BE TWO-INCH WHITE SCHEDULE 40 PVC PIPE DRIVEN INTO THE GROUND A MINIMUM OF 3-FEET.
2. A CLEANOUT MARK ON THE STAFF TO BE GRAY PVC COUPLING SET SIX-INCHES FROM THE BOTTOM OF THE BASIN.
3. A COMMERCIAL STAFF GAUGE WILL BE ATTACHED TO THE 2-INCH PVC PIPE WITH STAINLESS STEEL SCREWS.
4. SEDIMENT FOREBAY INSPECTION REQUIREMENTS: AT LEAST ANNUALLY OR MORE IF THE SEDIMENT LOAD EXCEEDS THE CLEANOUT MARK, CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS SEMI-ANNUALLY, REMOVE DEBRIS FROM THE OUTLET BERM AND DRAINS ANNUALLY, REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION ACCUMULATING NO MORE THAN SIX-INCHES IN DEPTH.

DEPTH GAUGE – SEDIMENT FOREBAY
NOT TO SCALE

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

SUBSURFACE GRAVEL WETLAND #101 DETAILS

FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : NONE
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

DETAILS

P–102B

NOT FOR CONSTRUCTION

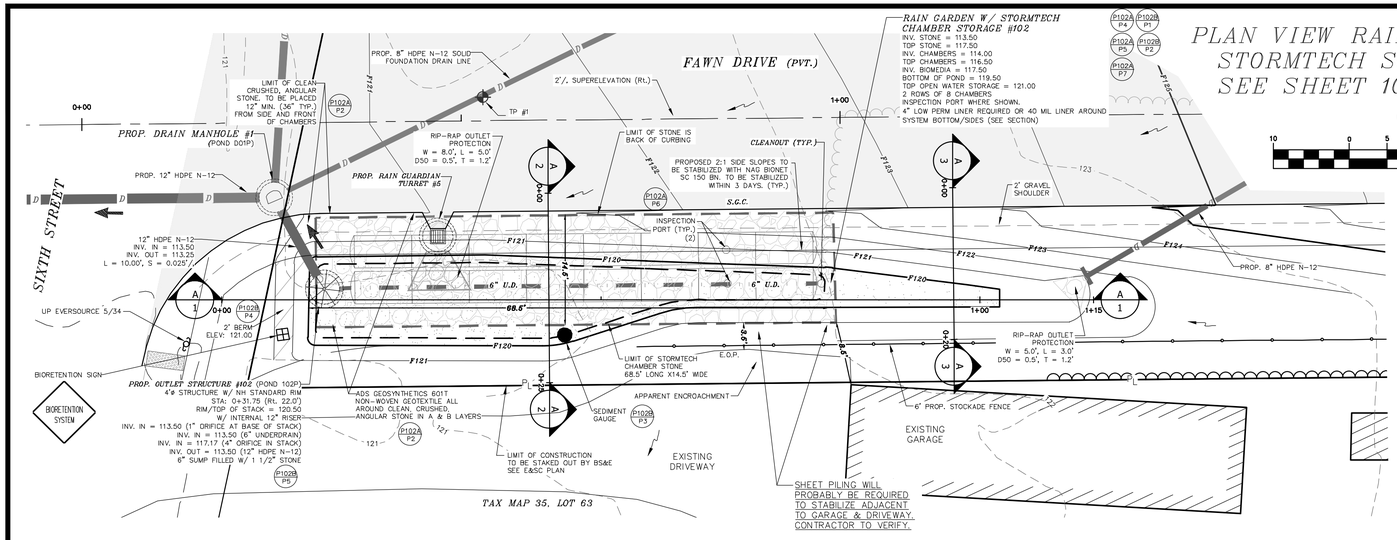


TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	FEET 6	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE		SIZE OF STONE (INCHES) FROM	TO
100%		9	12
85%		8	11
50%		6	9
15%		2	3

CONSTRUCTION SEQUENCE NOTE:
EROSION, SEDIMENT AND DETENTION CONTROL FACILITIES SHALL BE INSTALLED & STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM. TEMPORARY DIVERSIONS MAY BE REQUIRED. POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES MUST BE INITIATED AND STABILIZED EARLY IN THE PROCESS. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL SCMs ARE STABILIZED. SWALES CONVEYING RUNOFF TO SCMs WILL BE CONSTRUCTED AND PUT INTO SERVICE ONCE THE RECEIVING SCM IS STABILIZED. SEE DETAIL E17, SHEET E-101 FOR FULL CONSTRUCTION SEQUENCE.

BIOMEDIA SURFACE PROTECTION NOTE:
SEE EROSION AND SEDIMENT CONTROL PLAN
IT IS RECOMMENDED THAT THE CONTRACTOR TAKE MEASURES TO PROTECT THE BIOMEDIA SURFACE FROM SEDIMENTATION CAUSED BY EROSION ON THE SIDE SLOPES.

CONSTRUCTION NOTE:
THE DESIGN ENGINEER IS TO BE ON SITE PRIOR TO AND DURING THE PLACEMENT OF THE RESERVOIR STONE, AND TO WITNESS THE INSTALLATION OF THE UNDER-DRAIN AND CHAMBERS. PLEASE PROVIDE 24-48 HOURS NOTICE PRIOR TO REQUESTED INSPECTION.
A LETTER CERTIFYING AS TO THE CONSTRUCTION BY THE OWNER AND DESIGN ENGINEER IS REQUIRED AS A CONDITION OF THE ALTERATION OF TERRAIN PERMIT AND THE CITY OF DOVER.

LEGEND:

- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED SCM OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 — DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- 176 CONTOUR MINOR, EXISTING
- 175 CONTOUR MAJOR, EXISTING
- F176 CONTOUR MINOR, PROPOSED
- F175 CONTOUR MAJOR, PROPOSED
- CENTER LINE
- D D PROPOSED DRAINAGE LINE
- 12" U.D. PROPOSED UNDERDRAIN
- LIMIT OF CRUSHED STONE
- LIMIT OF BIOMEDIA
- FLOW ARROW
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE

#	DATE	DESCRIPTION
1	7-30-25	REVISED PER TRC #1 COMMENTS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

STORMTECH SC740 CHAMBER DETENTION POND #102
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

P1

1. ALL DESIGN SPECIFICATIONS FOR STORMTECH SC-740 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL, ADVANCED DRAINAGE SYSTEM, INC (ADS STORMTECH)
2. THE INSTALLATION OF STORMTECH SC-740 CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLTION. CALL **1-888-892-2694** OR VISIT **WWW.STORMTECH.COM** TO RECIEVE A COPY OF THE LATEST STORMTECH INSTALLATION INSTRUCTIONS
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

SC-740 NOTES

P2

1-1/2" WASHED CRUSHED STONE * (AASHTO NO. 4)	
SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1-1/2"	90 - 100
1"	20 - 55
1/2"	0 -15
3/8"	0 -5

* EQUIVALENT TO STANDARD WASHED STONE - SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION[1]	COMPACTION/DENSITY REQUIREMENT
D	FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THIS LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 18" (457 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 12" [305 mm] OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" [152 mm] LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs [53 kN]. DYNAMIC FORCE NOT TO EXCEED 20,000 lbs [89 kN]
B	EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm]	3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm]	3, 35, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY[2].

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE.

2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9in [229 mm] (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.

STORMTECH ACCEPTABLE FILL MATERIALS

P3

INSPECTION AND MAINTENANCE:

DUE TO THE CRITICAL NATURE OF INSPECTION AND MAINTENANCE STORMTECH SYSTEM AS DETAILED IN THE DESIGN MANUAL, ADVANCED DRAINAGE SYSTEM, INC (ADS STORMTECH) THE FOLLOWING THREE FIRMS ARE RECOMMENDED FOR THIS TASK. IT IS HIGHLY RECOMMENDED THAT THE OPERATOR OF THE PROPERTY HAVE A LONG TERM INSPECTION AND MAINTENANCE CONTACT WITH A FIRM THAT CAN COMPLETE THESE VITAL SERVICES.

AS FOR ISOLATOR ROW MAINTENANCE, CB MAINTENANCE, ETC., REGIONAL ADS REPRESENTATIVES RECOMMEND USING ANY OF THE FOLLOWING CONTACTS:

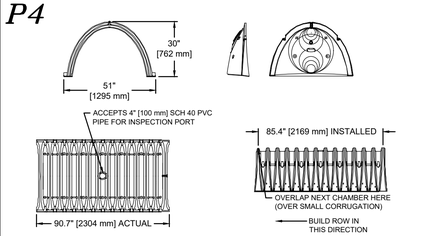
STORMWATER COMPLIANCE, LLC;
ATTN: NATHAN MARLES, 1-877-271-9055; NMARLES@LIDTECH.COM
163 THADEUS STREET, PORTLAND, ME 04106
INFO@STORMWATERCOMP.COM

TED BERRY COMPANY;
ATTN: DAVE BEAUCHAMP, 207-897-3348; DAVID.BEAUCHAMP@TEDBERRYCOMPANY.COM
521 FEDERAL ROAD, LIVERMORE, ME 04253
INFL@TEDBERRYCOMPANY.COM

BELLEMORE SEPTIC, SEWER, & DRAIN;
ATTN: RAY BELLEMORE, 603-641-6640; RAYMOND@BELLEMORE.COM
PO BOX 10369, BEDFORD, NH 03110

CONTACT AARON CHEEVER, P.E., ADVANCE DRAINAGE SYSTEMS, INC.
AARON.CHEEVER@ADS-PIPE.COM 1-978-302-0650
FOR PRODUCT AND PRICING

P4



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W x H x INSTALLED LENGTH)	51.0" x 30.0" x 85.4" [1295 mm x 762 mm x 2169 mm]
CHAMBER STORAGE	45.9 CUBIC FEET [1.30 m3]
MINIMUM INSTALLED STORAGE	74.9 CUBIC FEET [2.12 m3]
WEIGHT	75 lbs. [33.6 kg]

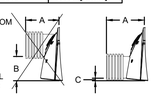
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART#	STUB	A	B	C
SC740EPE06T	6" [150 mm]	10.90" [277 mm]	18.50" [470 mm]	N/A
SC740EPE06B	6" [150 mm]	10.90" [277 mm]	N/A	0.50" [13 mm]
SC740EPE08T	8" [200 mm]	12.20" [310 mm]	16.50" [419 mm]	N/A
SC740EPE08B	8" [200 mm]	12.20" [310 mm]	N/A	0.60" [15 mm]
SC740EPE10T	10" [250 mm]	13.40" [340 mm]	14.50" [368 mm]	N/A
SC740EPE10B	10" [250 mm]	13.40" [340 mm]	N/A	0.70" [18 mm]
SC740EPE12T	12" [300 mm]	14.70" [373 mm]	12.50" [318 mm]	N/A
SC740EPE12B	12" [300 mm]	14.70" [373 mm]	N/A	1.20" [30 mm]
SC740EPE15T	12" [375 mm]	18.40" [467 mm]	9.00" [229 mm]	N/A
SC740EPE15B	12" [375 mm]	18.40" [467 mm]	N/A	1.30" [33 mm]
SC740EPE18T	18" [450 mm]	19.70" [500 mm]	5.00" [127 mm]	N/A
SC740EPE18B	18" [450 mm]	19.70" [500 mm]	N/A	1.60" [41 mm]
*SC740EPE24B	24" [600 mm]	18.50" [470 mm]	N/A	0.10" [3 mm]

NOTE: ALL DIMENSIONS ARE NOMINAL

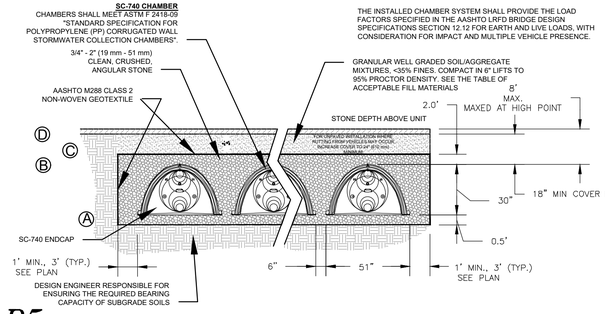
ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

*FOR THE SC740EPE24B THE 24" [600 mm] STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" [44 mm]. BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.



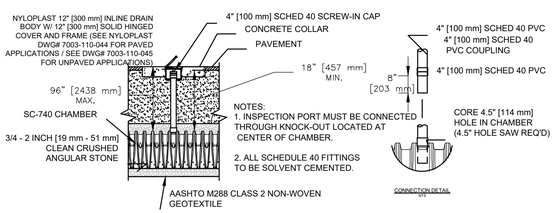
SC-740 TECHNICAL SPEC.

P5



SC-740 STANDARD CROSS SECTION

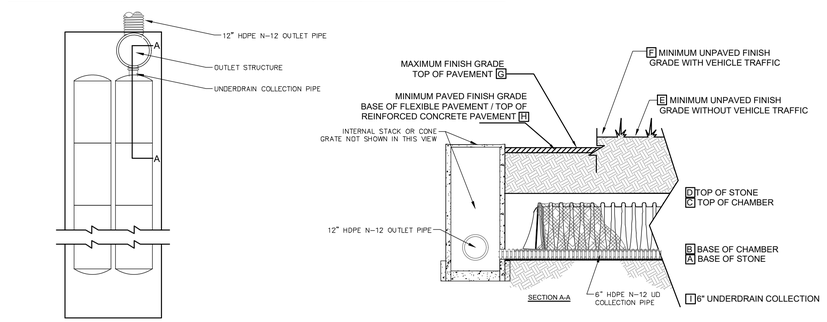
P6



SC-740 INSPECTION PORT DETAIL

P7

	A	B	C	D	E	F	G	H	I
BED 1/ONLY	113.50	114.00	116.50	117.50	119.50	N/A	N/A	N/A	113.50



SC-740 ELEVATIONS

PLAN & STORMTECH DETAIL

P-102A

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
SCALE : 1 IN. EQUALS 10 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 15 OF 39

NOT FOR CONSTRUCTION

P1

BIORETENTION FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Bioretention 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

3/8" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

1-1/2" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1-1/2"	90 – 100
1"	20 – 55
1/2"	0 –15
3/8"	0 –5

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

NOTES

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.

1. SOIL BIORETENTION FILTER MEDIA SHALL BE AS SHOWN ABOVE. "BIO MEDIA" MEANS BIORETENTION FILTER MEDIA.
2. COMPACTION IS NOT TO OCCUR IN THE RAIN GARDEN AREAS PRIOR TO CONSTRUCTION. SCARIFICATION REQUIRED IN THE EVENT COMPACTION TAKES PLACE.
3. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
4. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
5. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

MAINTENANCE REQUIREMENTS

1 SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 0.25 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.

2 PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.

3 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.

4 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

1 UNH STORMWATER CENTER

2 NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, FEBRUARY 2025 AS AMENDED.

CONSTRUCTION SEQUENCE NOTE:

EROSION, SEDIMENT AND DETENTION CONTROL FACILITIES SHALL BE INSTALLED & STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM. TEMPORARY DIVERSIONS MAY BE REQUIRED. POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES MUST BE INITIATED AND STABILIZED EARLY IN THE PROCESS. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL SCMs ARE STABILIZED. SWALES CONVEYING RUNOFF TO SCMs WILL BE CONSTRUCTED AND PUT INTO SERVICE ONCE THE RECEIVING SCM IS STABILIZED. SEE DETAIL E17, SHEET E-102 FOR FULL CONSTRUCTION SEQUENCE.

P2

Rain Garden Grass Mix - ERNMX-180-1

	Botanical Name	Common Name	Price/Lb
40.40 %	*Schizachyrium scoparium, Fort Indiantown Gap-PA Ecotype*	Little Bluestem, Fort Indiantown Gap-PA Ecotype	14.65
20.00 %	*Carex tuckermanii, PA Ecotype*	Fox Sedge, PA Ecotype	31.20
20.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	10.46
9.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	22.27
5.50 %	*Panicum rigidulum, PA Ecotype*	Redtop Panicgrass, PA Ecotype	72.00
4.00 %	*Chasmanthium latifolium, WI Ecotype*	River Oats, WV Ecotype	96.00
0.50 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	95.00
0.30 %	*Juncus effusus*	Soft Rush	48.00
0.30 %	*Juncus tenuis, PA Ecotype*	Path Rush, PA Ecotype	48.00
100.00 %		**Mix Price/Lb Bulk:**	**$24.82**

Seeding Rate: 15 lb per acre with a cover crop. For sites that drain within 24 hours of a rain event use one of the following cover crops: Oats (1 Jan to 31 Jul; 30 lbs/acre), Japanese Millet (1 May to 31 Aug; 30 lbs/acre), or grain rye (1 Aug to 31 Dec; 30 lbs/acre).

Grasses & Grass-like Species - Herbaceous Perennial; Stormwater Management

Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

BUTTERFLY MILK WEED IS A REQUIRED ADDITION TO ANY SEEDING DONE ON SITE.

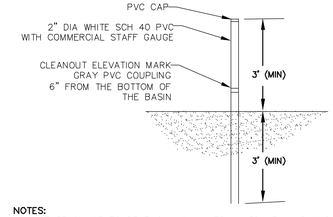
RAIN GARDEN MIX

THE GRASS THAT IS PLANTED WITHIN A RAIN GARDEN BIO-FILTRATION SYSTEM WITHIN THE BIO-MEDIA MUST CONSIST OF A COMBINATION OF WARM SEASON GRASS SEED AND COLD SEASON GRASS SEED IN ORDER FOR THE GRASS TO START GROWING FOR STABILIZATION AND CONTINUE GROWING IN THE SANDY WELL-DRAINED ENVIRONMENT. PLANTING SPECIFICATION WILL MEET THE REQUIREMENTS AS OUTLINED IN "VEGETATION NEW HAMPSHIRE SAND AND GRAVEL PITS" MIX 1 (WARM SEASON GRASSES) (15 LBS/AC) AND INCLUDE ANNUAL AND PERENNIAL RYE GRASS SEED (15 LBS/AC); THE NEW ENGLAND NATIVE WARM SEASON GRASS MIX (23 LBS/AC) BY NEW ENGLAND WETLAND PLANTS, INC.; RAIN GARDEN MIX 180 (15 LBS/AC & 15 LBS/AC OF RYE) / RAIN GARDEN GRASS MIX 180-1 (20 LBS/AC & 10 LBS/AC OF RYE) BY ERNST CONSERVATION SEEDS; OR APPROVED EQUAL.

STABILIZATION NOTE:

SEE NOTE #6, SHEET E-102, DETAIL E-18
SIDE SLOPES ARE TO BE STABILIZED WITHIN THREE WORKING DAY UPON COMPLETION OF FINAL GRADE.

P3



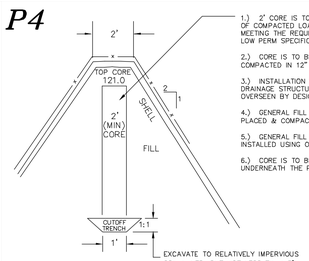
NOTES:

1. STAFF GAUGE TO BE TWO-INCH WHITE SCHEDULE 40 PVC PIPE DRIVEN INTO THE GROUND A MINIMUM OF 3-FEET.
2. A CLEANOUT MARK ON THE STAFF TO BE GRAY PVC COUPLING SET SIX-INCHES FROM THE BOTTOM OF THE BASIN.
3. A COMMERCIAL STAFF GAUGE WILL BE ATTACHED TO THE 2-INCH PVC PIPE WITH STAINLESS STEEL SCREWS.
4. SEDIMENT FOREBAY INSPECTION REQUIREMENTS: AT LEAST ANNUALLY OR MORE IF THE SEDIMENT LOAD EXCEEDS THE CLEANOUT MARK, CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS SEMI-ANNUALLY, REMOVE DEBRIS FROM THE OUTLET BERM AND DRAINS ANNUALLY, REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION ACCUMULATING NO MORE THAN SIX-INCHES IN DEPTH.

SEDIMENT DEPTH GAUGE

NOT TO SCALE

P4



1.) 2' CORE IS TO BE CONSTRUCTED OF COMPACTED LOAM MATERIAL MEETING THE REQUIREMENT OF THE LOW PERM SPECIFICATION.

2.) CORE IS TO BE INSTALLED & COMPACTED IN 12" LIFTS.

3.) INSTALLATION OF ENTIRE DRAINAGE STRUCTURE IS TO BE OVERSEEN BY DESIGN ENGINEER.

4.) GENERAL FILL MATERIALS ARE TO PLACED & COMPACTED IN 12" LIFTS.

5.) GENERAL FILL MATERIAL MAY BE INSTALLED USING ONSITE MATERIALS.

6.) CORE IS TO BE CONSTRUCTED UNDERNEATH THE PROPOSED SPILLWAY.

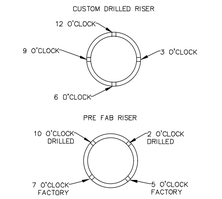
LOW PERMEABILITY MATERIAL GRADATION

SIEVE SIZE	% PASSING BY WEIGHT
#4	95 – 100
#40	60 – 95
#100	40 – 60
#200	25 – 45

BERM & LINER CONSTRUCTION

NOT TO SCALE

P5

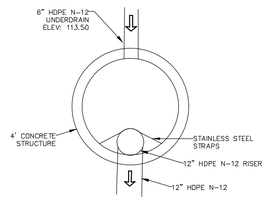


PERFORATED RISER DETAIL

NOT TO SCALE

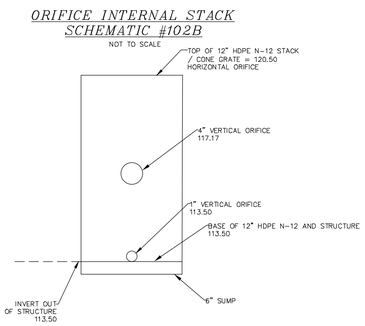
TOP VIEW

NOT TO SCALE (NO HDPE FLAT STOCK AND GRATE IN THIS VIEW)



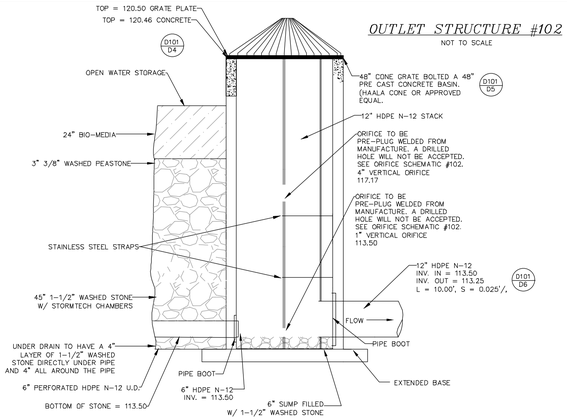
ORIFICE INTERNAL STACK SCHEMATIC #102B

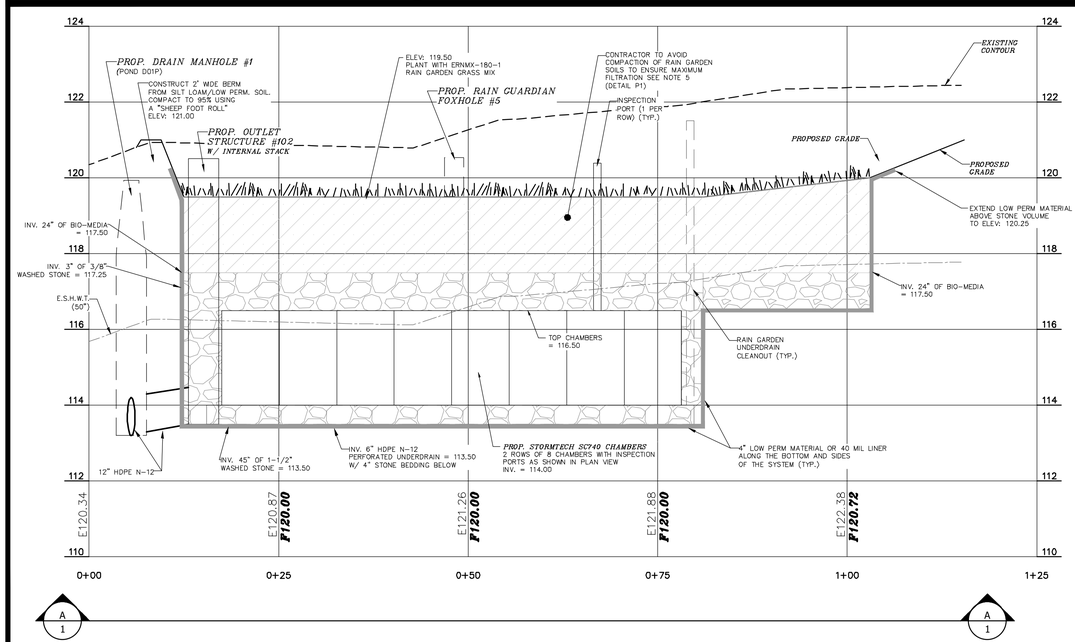
NOT TO SCALE

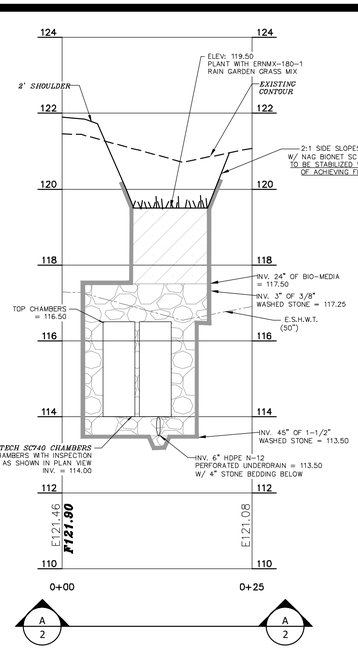


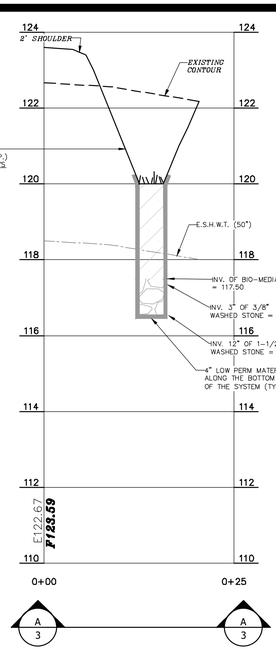
OUTLET STRUCTURE #102

NOT TO SCALE









SECTIONS OF RAIN GARDEN #102 W/ STORMTECH SC740 CHAMBERS

SECTIONS & RAIN GARDEN DETAIL

P-102B

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	DATE	DESCRIPTION
1	7-30-25	REVISED PER TRC #1 COMMENTS

RAIN GARDEN #102 W/ STORMTECH SC740 CHAMBER DETAILS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

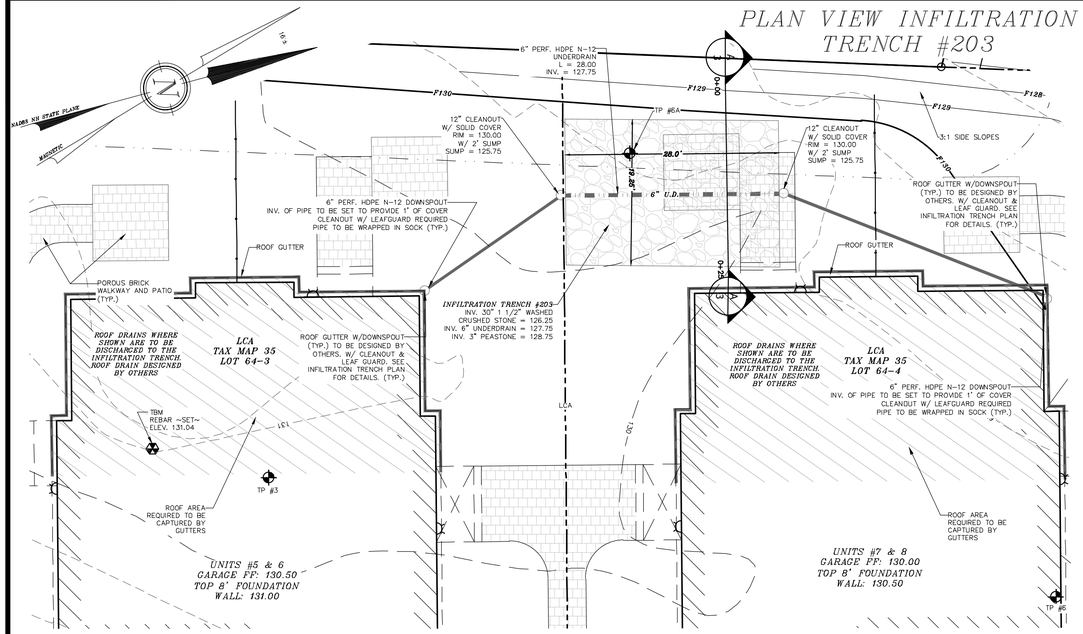
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 10 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

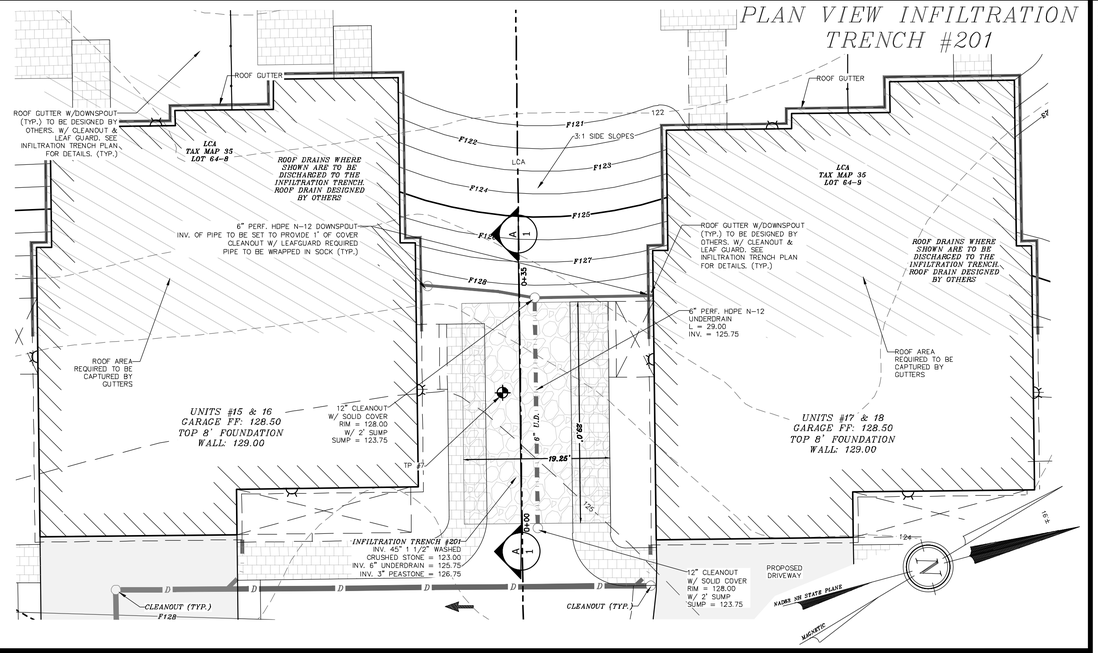
STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

PLAN VIEW INFILTRATION TRENCH #203



PLAN VIEW INFILTRATION TRENCH #201



GRAPHIC SCALE

10 0 5 10 20 40

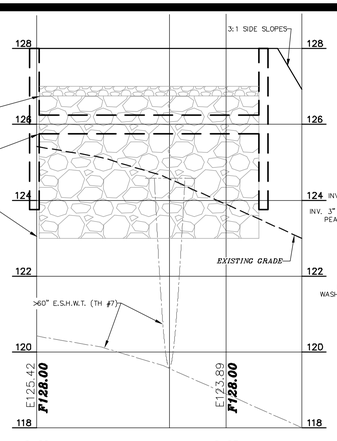
VERTICAL SCALE: 1" = 2' (IN FEET)
1 inch = 10 ft.

GRAPHIC SCALE

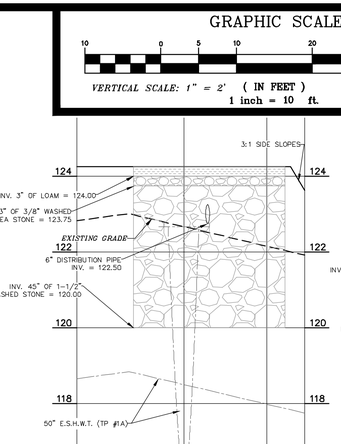
10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

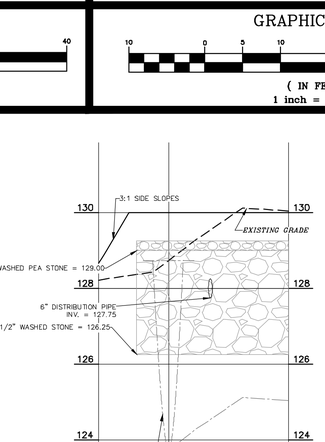
SECTION OF P-201



SECTION OF P-202



SECTION OF P-203



LEGEND:

- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED SCM OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 — DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- 176 — CONTOUR MINOR, EXISTING
- 175 — CONTOUR MAJOR, EXISTING
- F176 — CONTOUR MINOR, PROPOSED
- F175 — CONTOUR MAJOR, PROPOSED
- CENTER LINE
- D — D — PROPOSED DRAINAGE LINE
- U.D. — U.D. — PROPOSED UNDERDRAIN
- FLOW ARROW
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- PROPOSED STORMTECH CHAMBERS
- ROOF AREA TO BE GUTTERED TO INFILTRATION TRENCH

NOTES

1. WHEN CONTRACTOR EXCAVATES INFILTRATION AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL. COMPACTION IS NOT TO OCCUR IN THE INFILTRATION AREAS PRIOR TO CONSTRUCTION. SCARIFICATION REQUIRED IN THE EVENT COMPACTION TAKES PLACE.
2. DO NOT PLACE THE INFILTRATION SYSTEM SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN STABILIZED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
3. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF WATER FROM EXCAVATIONS) TO THE INFILTRATION AREA DURING ANY STAGE OF CONSTRUCTION.
4. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

MAINTENANCE REQUIREMENTS

1 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.

2 PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.

3/8" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

1-1/2" WASHED CRUSHED STONE*

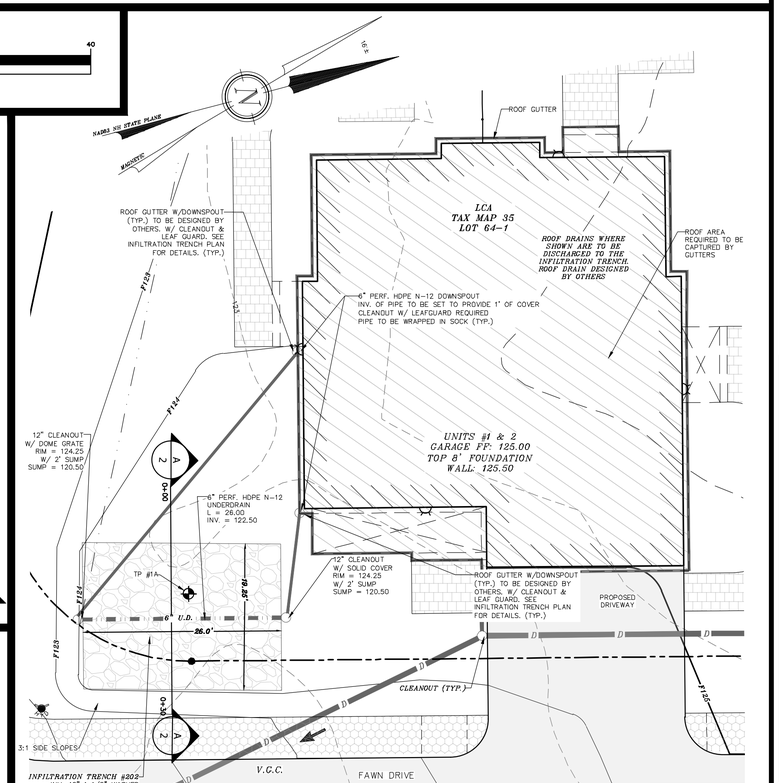
SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1-1/2"	90 – 100
1"	20 – 55
1-1/2"	0 –15
3/8"	0 –5

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

NHDES AoT REQUIREMENTS

A LETTER SIGNED BY A QUALIFIED ENGINEER MUST BE PROVIDED TO DES STATING THAT THE INDIVIDUAL OBSERVED ANY UNDERGROUND DETENTION, INFILTRATION, OR FILTERING SYSTEMS PRIOR TO BACKFILLING, AND WHETHER, IN HIS OR HER PROFESSIONAL OPINION, THE SYSTEMS CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS

PLAN VIEW INFILTRATION TRENCH #202



P-201 – P203

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

INFILTRATION TRENCHES #201, #202, #203
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 10 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS SHOW THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.

10.) CITY OF DOVER: IN ACCORDANCE WITH SITE PLAN REVIEW REGULATIONS (153-14) THE FOLLOWING STORMWATER MEASURES ARE REQUIRED.

A.) ALL PROPOSED SCMs WILL CONFORM TO THE NH STORMWATER MANUAL (FEBRUARY 2025).

B.) EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY COMMUNITY SERVICE.

C.) TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN CALENDAR DAYS FOR EXPOSED SOILS AREAS THAT ARE WITHIN ONE HUNDRED FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.

D.) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL STABILIZATION IS ACCOMPLISHED. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 CALENDAR DAYS UNLESS CONDITIONS DICTATE OTHERWISE.

E.) COMMUNITY SERVICES DEPARTMENT OR THEIR DESIGNATED AGENT SHALL HAVE ACCESS TO THE SITE TO COMPLETE ROUTINE INSPECTIONS AND SHALL BE NOTIFIED 24-HOURS PRIOR TO INSTALLATION OF A STORMWATER BMP IN ORDER TO SCHEDULE AN INSPECTION, DURING NORMAL WORKING HOURS.

F.) THE PLANNING BOARD OR COMMUNITY SERVICES MAY REQUIRE THE DESIGN ENGINEER AND/OR AN INDEPENDENT, THIRD-PARTY INSPECTION AND OVERSIGHT OF THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES AND EROSION AND SEDIMENT CONTROL AT THEIR DISCRETION. THE OWNER / APPLICANT IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH INSPECTIONS.

G.) ALL SWPPP/SWMP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORMWATER INSPECTOR (CESSW), OR A CERTIFIED PROFESSIONAL IN STORMWATER QUALITY (CPSWQ). INSPECTION REPORTS WILL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT.

H.) THE OWNER IS ULTIMATELY RESPONSIBLE FOR THE INSTALLATION, CONSTRUCTION, INSPECTION, AND DISPOSITION OF ALL STORMWATER MANAGEMENT AND EROSION CONTROL MEASURES REQUIRED BY THE PROVISIONS OF THESE REGULATIONS.

I.) STORMWATER MANAGEMENT PLAN (SWMP) SUBMITTAL REQUIREMENTS. AT THE DISCRETION OF THE PLANNING BOARD OR COMMUNITY SERVICES DEPARTMENT, A TECHNICAL REVIEW BY AN INDEPENDENT THIRD PARTY MAY BE REQUIRED OF ANY SWMP PREPARED UNDER THESE REGULATIONS. SUCH A REVIEW SHALL BE PERFORMED BY A QUALIFIED PROFESSIONAL CONSULTANT AND THE EXPENSE OF WHICH SHALL BE THE FULL RESPONSIBILITY OF THE OWNER/APPLICANT.

EROSION & EROSION CONTROL NOTES:

1.) CONTRACTOR IS TO INSTALL A CONSTRUCTION ENTRANCE PRIOR TO EARTH DISTURBING ACTIVITIES, UTILIZING 3" ANGULAR STONE UNDERLAID WITH ENGINEER FABRIC.

2.) CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE PARKING LOT, SIDEWALKS AND ROADWAY, TO ENSURE THAT NO SEDIMENT IS BEING TRACKED ONTO SIXTH STREET OR THE SURROUNDING ROADWAYS.

3.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLED.

4.) FUGITIVE DUST IS TO BE CONTROLLED THROUGHOUT THE CONSTRUCTION PROCESS IN ACCORDANCE WITH ENV-A 1000. CALCIUM CHLORIDE SHALL NOT BE USED FOR DUST CONTROL AS THIS IS IN THE SECONDARY GROUNDWATER PROTECTION ZONE.

5.) CONTRACTOR IS TO MEET THE REQUIREMENTS SPECIFIED IN RSA 430:51-57 AND AGR 3800, RELATING TO INVASIVE SPECIES.

6.) CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE WATER QUALITY FROM ANY RUN OFF DURING THE CONSTRUCTION PROCESS, IN ACCORDANCE WITH ENV-WQ 1507, IN ORDER TO PREVENT VIOLATIONS OF THE STORM WATER QUALITY STANDARDS.

7.) CONTRACTOR MAY USE SILT FENCE, SILT SOXX OR MULCH BERM FOR PERIMETER CONTROL. SPECIFIC PRACTICES MAY BE SPECIFIED, SEE PLAN. THE CONTRACTOR IS NOT THE EXPAND CONSTRUCTION BEYOND THE STAKED OUT LIMITS.

8.) ALL STORAGE FACILITIES FOR FUEL, CHEMICALS, CHEMICAL OR INDUSTRIAL WASTES, AND BIODEGRADABLE RAW MATERIALS SHALL MEET THE REGULATIONS OF THE NHDES, INCLUDING BUT NOT LIMITED TO THOSE INVOLVING UNDERGROUND STORAGE TANKS, ABOVE GROUND STORAGE TANKS, HAZARDOUS WASTE AND BEST MANAGEMENT PRACTICES FOR GROUND WATER PROTECTION (PART ENV-WQ 401).

9.) ALL DEVELOPMENT MUST COMPLY WITH THE EPA PHASE II STORMWATER RULES AND THE CITY'S MS4 PERMIT, AS AMENDED.

SOILS & DEWATERING:

26	*WINDSOR*	*FINE SANDY LOAM*	*K= 0.17*
32	*BOXFORD*	*SILT LOAM*	*K= 0.49*
238	*ELMRIDGE*	*FINE SANDY LOAM*	*K= 0.48*
327	*WINDSOR (CLAY SUBSOIL)*	*LOAMY SAND*	*K= 0.48*
S00	*UDORTHENTS (LOAMY)*	*SANDY LOAM*	*K= 0.48*
953	*BOXFORD (SOMEWHAT POORLY DRAINED)*	*SILT LOAM*	*K= 0.49*

SEE SITE SPECIFIC SOILS MAP (SSSM)
SEE WEBSOIL USDA-NRCS
ERODIBILITY FACTOR – K, CPESC MANUAL, ENVIROCERT INTERNATIONAL INC. & ROCKINGHAM COUNTTY SOIL SURVEY, ROCKWEB SOIL ATTRIBUTES.

CONTRACTOR TO BE AWARE OF THE SOIL PROFILES AND ENSURE THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TAKEN AT ALL TIMES. ANY DEWATERING REQUIREMENTS IN NEW HAMPSHIRE REQUIRE SPECIAL PROVISIONS IN ACCORDANCE WITH THE "CLARIFICATION OF SECTION 9.1.2 (STATE OF NEW HAMPSHIRE CONDITIONS) AND OTHER NH SPECIFIC INFORMATION FOR THE U.S. EPA 2022 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED FEBRUARY 17, 2022 INCLUDED IN THE SWPPP.

COVER MANAGEMENT DURING CONSTRUCTION FOR EXPOSED SOIL WILL INCLUDE HAY / STRAW APPLIED AT A RATE OF 2.0 TONS PER ACRE, TEMPORARY SEEDING OF ANNUAL RYE GRASS, AND PERMANENT SEEDING AT THE EARLIES OPPORTUNITY. SEE ADDITIONAL REQUIREMENT FOR STABILIZATION ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS, E-101 AND E-102.

THE CONSTRUCTION SCHEDULE WILL BE MANAGED SO THAT ALL STORMWATER STRUCTURES WILL BE BUILT AND STABILIZED PRIOR TO RECEIVING SURFACE WATER RUNOFF. CONTRACTOR TO BE RESPONSIBLE FOR ALL DIVERSIONS DURING CONSTRUCTION AND FOR INTERIM SEDIMENT AND EROSION CONTROL MEASURES. SEE E&SC NOTES SHEET E-102

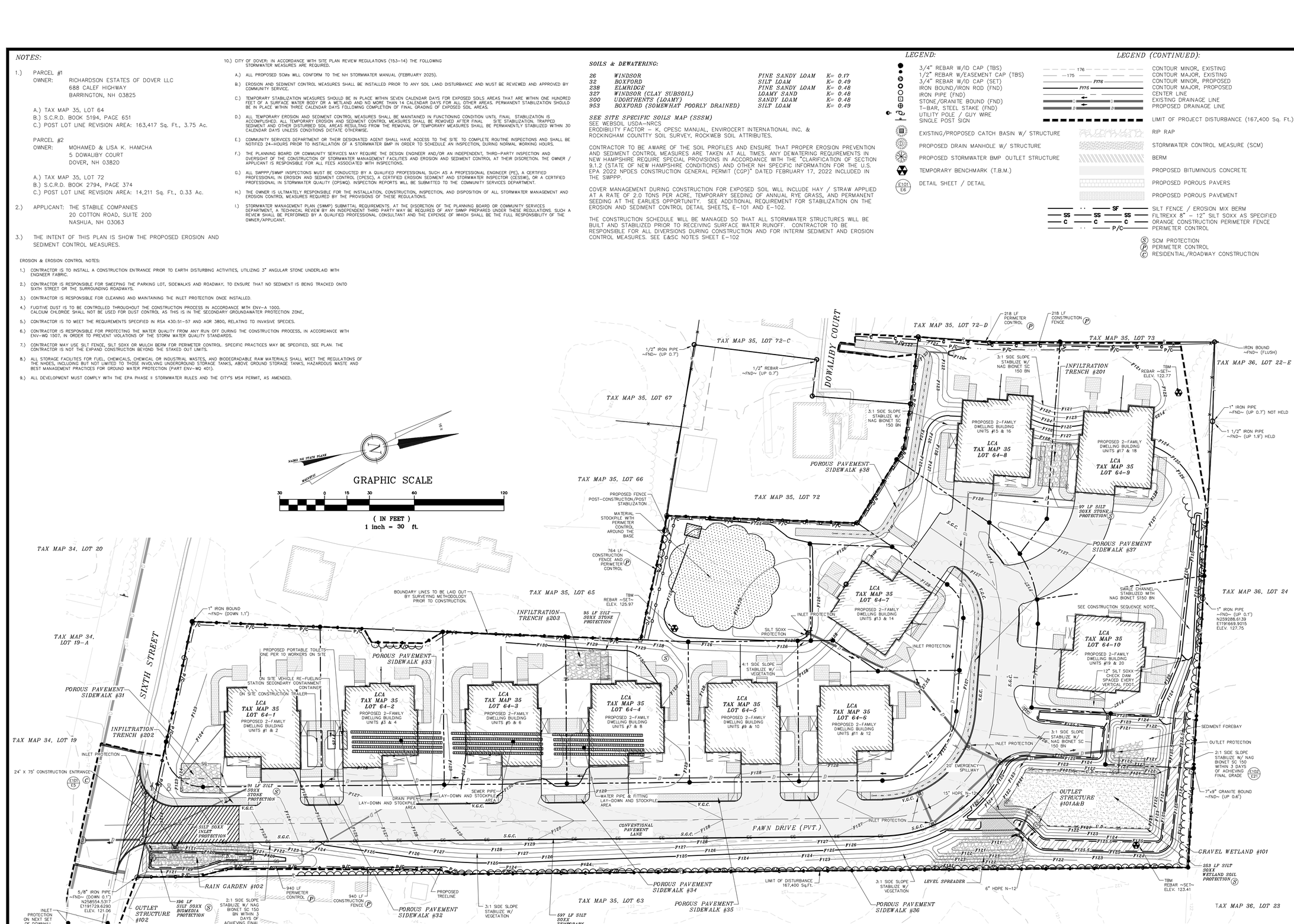
LEGEND:

- 3/4" REBAR W/ID CAP (TBS)
- 1/2" REBAR W/EASEMENT CAP (TBS)
- 3/4" REBAR W/ID CAP (SET)
- IRON BOUND/IRON ROD (FND)
- IRON PIPE (FND)
- STONE/GRANITE BOUND (FND)
- T-BAR, STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- EXISTING/PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED STORMWATER BMP OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- DETAIL SHEET / DETAIL (E101 E6)

LEGEND (CONTINUED):

- CONTOUR MINOR, EXISTING
- CONTOUR MAJOR, EXISTING
- CONTOUR MINOR, PROPOSED
- CONTOUR MAJOR, PROPOSED
- CENTER LINE
- EXISTING DRAINAGE LINE
- PROPOSED DRAINAGE LINE
- LIMIT OF PROJECT DISTURBANCE (167,400 Sq. Ft.)
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- SILT FENCE / EROSION MIX BERM
- FILTREXX 8" – 12" SILT SOXX AS SPECIFIED
- ORANGE CONSTRUCTION PERIMETER FENCE
- PERIMETER CONTROL
- (S) SCM PROTECTION
- (P) PERIMETER CONTROL
- (C) RESIDENTIAL/ROADWAY CONSTRUCTION

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.



#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC #1 COMMENTS	7-30-25	

CITY OF DOVER PLANNING FILE #SITE-2025-0010

EROSION AND SEDIMENT CONTROL PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 30 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243
PROFESSIONAL ENGINEER
LICENSED

NOT FOR CONSTRUCTION

DESIGN NOTES:

1.) POROUS ASPHALT PAVEMENT WILL CONFORM TO UNHSC (2007b) SPECIFICATIONS AS UPDATED BY UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS (DATED: SEPTEMBER 2016).

2.) THE FILTER COURSE WILL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES AND CONSIST OF NHDOT (2016) SAND, ITEM 304.1 PER THE NH STORMWATER MANUAL.

3.) SEE CROSS SECTIONS FOR DETAILS.

4.) SEE STORMWATER SYSTEM MANAGEMENT: INSPECTION AND MAINTENANCE MANUAL AND PLAN, DATED JUNE 24, 2024 FOR MAINTENANCE REQUIREMENTS.

REFERENCE:

1.) NH STORMWATER MANUAL (FEBRUARY 2025): APPENDIX A (A60–A64).

2.) UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS, FEBRUARY 2014, REVISED SEPTEMBER 2016, UNIVERSITY OF NEW HAMPSHIRE STORWATER CENTER, DURHAM, NH 03824–3534.

3.) POROUS ASPHALT PAVEMENT FOR STORMWATER MANAGEMENT, THE UNH STORMWATER CENTER.

POROUS PAVEMENT
TOTAL SECTION DEPTH = 36"
TOTAL SECTION REQUIRED = 31.2"
(65% OF FROST DEPTH)
FROST DEPTH = 48" (UNHSC)
18" FILTER MEDIA PROVIDED

SEE GRADING PLANS & PROFILES FOR SPOT ELEVATIONS

CHOKER COURSE *

SIEVE SIZE	% PASSING BY WEIGHT
1 1/2"	100
1"	95 – 100
1/2"	25 – 60
# 4	0 – 10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #57 – AASHTO

FILTER COURSE *

SIEVE SIZE	% PASSING BY WEIGHT
6"	100
# 4	70 – 100
# 200	0 – 6**

* EQUIVALENT TO MODIFIED NHDOT 304.1 – SECTION 304 OF NHDOT NHDOT STANDARD SPECIFICATIONS

** LESS THAN 4% FINES

POROUS ASPHALT MIX DESIGN CRITERIA

SIEVE SIZE	% PASSING BY WEIGHT
3/4"	100
1/2"	85 – 100
3/8"	55 – 75
# 4	10 – 25
# 8	5 – 12
# 200	2 – 4
BINDER CONTENT (AASHTO T164)	5.8 – 6.5%
AIR VOID CONTENT (AASHTO D6752)	16 – 22%
DRAINDOWN (AASHTO D6390)	≤ 0.3%
RETAINED TENSILE STRENGTH (AASHTO D6390)	≥ 80%
CANTABRO ABRASION TEST (UNAGED)	≤ 20%
CANTABRO ABRASION TEST (7 DAYS)	≤ 30%

FILTER BLANKET COURSE *

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

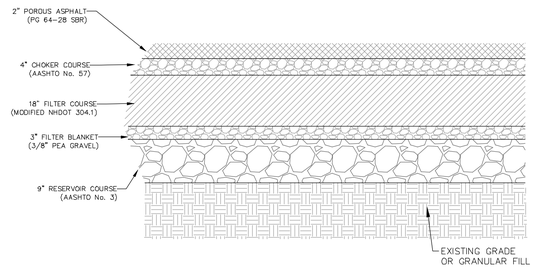
* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

RESERVOIR COURSE *

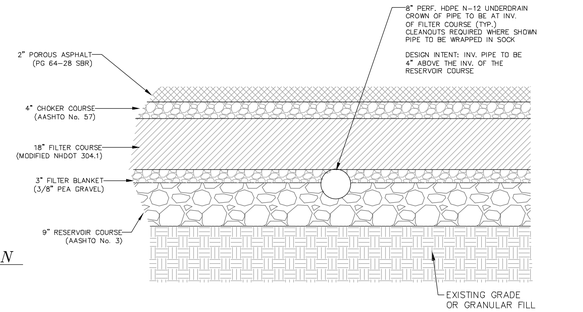
SIEVE SIZE	% PASSING BY WEIGHT
2 1/2"	100
2"	90 – 100
1 1/2"	35 – 70
1"	0 – 15
1/2"	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #3 – AASHTO

POROUS ASPHALT PAVEMENT
NOT TO SCALE

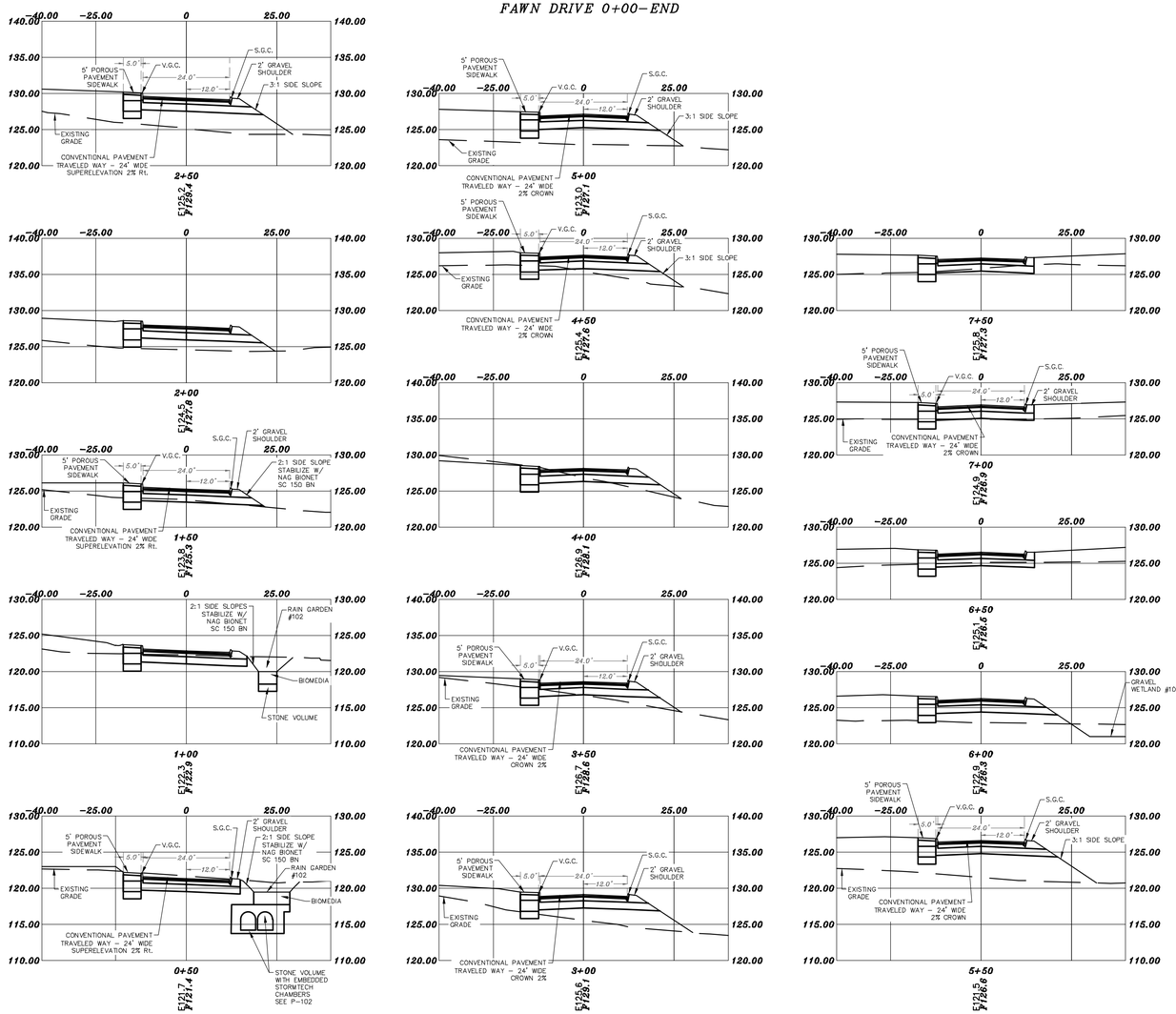


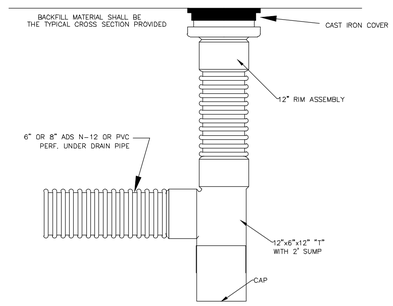
INFILTRATION POROUS ASPHALT SIDEWALK SECTION
NOT TO SCALE (P31, P32, P34, P35, P36)



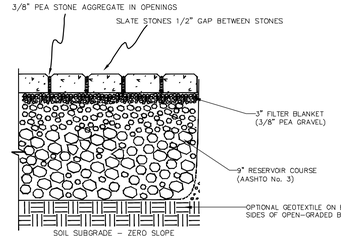
UNDERDRAINED POROUS ASPHALT SIDEWALK SECTION
NOT TO SCALE (P33, P37, P38)

FAWN DRIVE 0+00–END





ADS N–12, INLINE DRAIN/CLEANOUT
NOT TO SCALE USED FOR ALL CLEANOUT LOCATIONS SHOWN. PIPE SIZE OUT VARIES



NOTES:
1.) SEE GRADING PLANS FOR LOCATIONS. POROUS PATIO AND WALKWAY PROPOSED FOR EACH UNIT.

POROUS PAVEMENT / POROUS PATIO DETAIL
NOT TO SCALE

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

P–31 – P–38

CITY OF DOVER PLANNING FILE #SITE–2025–0010

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC #1 COMMENTS	7–30–25	

CROSS SECTIONS FAWN DRIVE 0+00 – END
& POROUS PRODUCT SPECIFICATIONS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

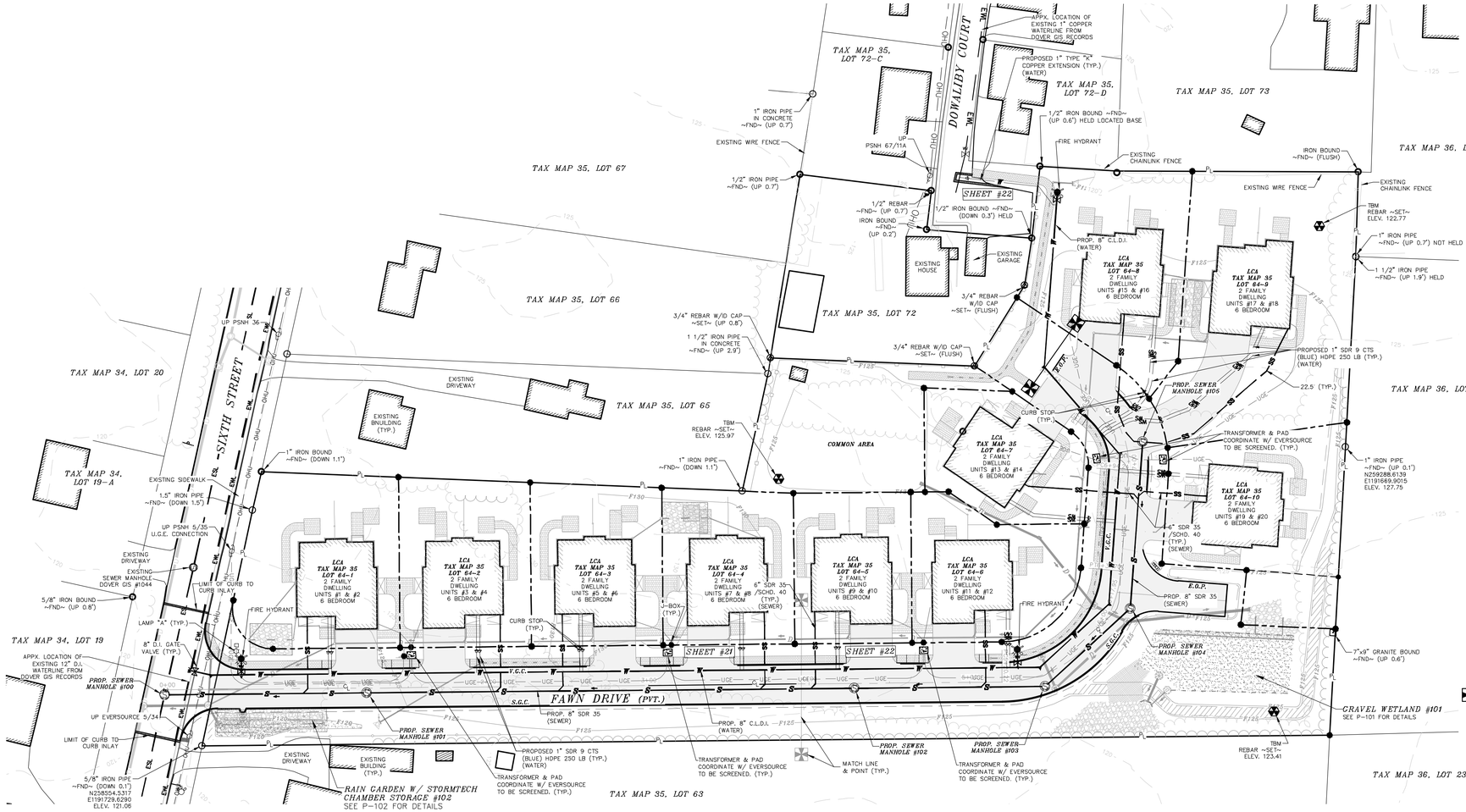
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE

SHEET 19 OF 39

NOT FOR CONSTRUCTION



NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO PROVIDE AN OVERVIEW OF UTILITY & ENGINEERING OF FAWN DRIVE AND TAX MAP 35, LOT 64.

4.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

5.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

6.) 22.5° OR 45° ELBOWS FOR SEWER CLEAN OUTS NOT ALLOWED IN DOVER

LEGEND:

- PROPOSED SEWER MANHOLE W/ STRUCTURE
- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED STORMWATER BMP OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 — DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- 176 — CONTOUR MINOR, EXISTING
- 175 — CONTOUR MAJOR, EXISTING
- P176 — CONTOUR MINOR, PROPOSED
- P175 — CONTOUR MAJOR, PROPOSED
- CENTER LINE
- EWL — EXISTING WATER MAIN
- ESL — EXISTING SEWER LINE
- OHU — EXISTING DRAINAGE LINE
- EXISTING OVERHEAD UTILITY
- W — PROPOSED WATER MAIN
- WS — PROPOSED WATER SERVICE
- S — PROPOSED SEWER LINE
- SS — PROPOSED SEWER SERVICE
- D — PROPOSED DRAINAGE LINE
- UGE — PROPOSED UNDER GROUND UTILITY
- U.D. — PROPOSED UNDERDRAIN
- MATCH LINE / MATCH POINT
- WV — TRANSFORMER / J.BOX
- GATE VALVE
- CURB STOP
- FIRE HYDRANT
- THRUST BLOCKS
- LIGHT TYPE "A" MOUNTED ON POLE
- LIGHT TYPE "B" MOUNTED ON BUILDING
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- PROPOSED STORMTECH CHAMBERS

UTILITY NOTES:

1.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

2.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

3.) PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, 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 RUNOOF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAGFIC IN SENSITIVE AREAS, AND MAINTAINING AN EOFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.

4.) IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), 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 FREEZING.

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.) FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE DOVER DPW.

7.) CONTRACTOR TO CONTACT DOVER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.

8.) ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF DOVER STANDARDS. ALL HIGHWAY CONSTRUCTION WILL MEET THE CITY OF DOVER STANDARDS.

9.) CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (800) 662-7764. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.

10.) CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH CONSOLIDATED COMMUNICATIONS AT (603) 222-4500.

11.) CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST.

12.) ALL SEWER MANHOLE RIMS & COVERS ARE TO BE LIFTMATE R-1743-LM.

13.) ALL WATER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED BLUE. ALL SEWER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED YELLOW, IS STUBBED PRIOR TO BUILDING CONSTRUCTION. DETECTABLE METALLIC UNDERGROUND TAPE SHALL BE LABELED APPROPRIATELY.

14.) CURB BOXES SHOULD BE PLACED IN THE LAWN AREA, OR IF PLACED IN PAVEMENT, A ROAD BOX IS REQUIRED.

15.) SEE EXISTING CONDTIONS PLAN FOR DATUM. VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE COORDINATES GATHERED USING TOPCON CARLSON BRX7 SURVEY GRADE GPS.

16.) MINIMUM SLOPE FOR ALL 6" SEWER SERVICES IS TO BE NO LESS THAN 0.01 FT/FT.

17.) ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & DOVER DPW SEWER DIVISION STANDARDS. ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.05 (c)-(e) FOR SDR 35 GRAVITY SEWER PIPE.

18.) CONTRACTOR TO TRANSFER TEMPORARY BENCHMARK TO A SUITABLE BENCHMARK TO CONTROL CONSTRUCTION. ANY ELEVATION DISCREPANCIES ARE TO BE REPORTED TO THE THE DESIGN ENGINEER IMMEDIATELY.

19.) ALL SEWER AND WATER CROSSINGS ARE TO MAINTAIN A 1.5' OF SEPARATION.

20.) C900 WATERLINE MAY BE SUBSTITUTED FOR C.L.D.I. WATERLINE WITH THE APPROVAL OF THE CITY ENGINEER.

21.) THE PROPOSED 2 FAMILY DWELLINGS WILL CONSIST OF 10 STRUCTURES PROVIDING 20 UNITS. EACH WITH 3 BEDROOMS PER UNIT. THERE AREA A TOTAL OF 60 BEDROOMS PROPOSED. TOTAL DESIGN FLOW: 9,000 GPD

NADB3 NH STATE PLANE
MAGNETIC

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

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

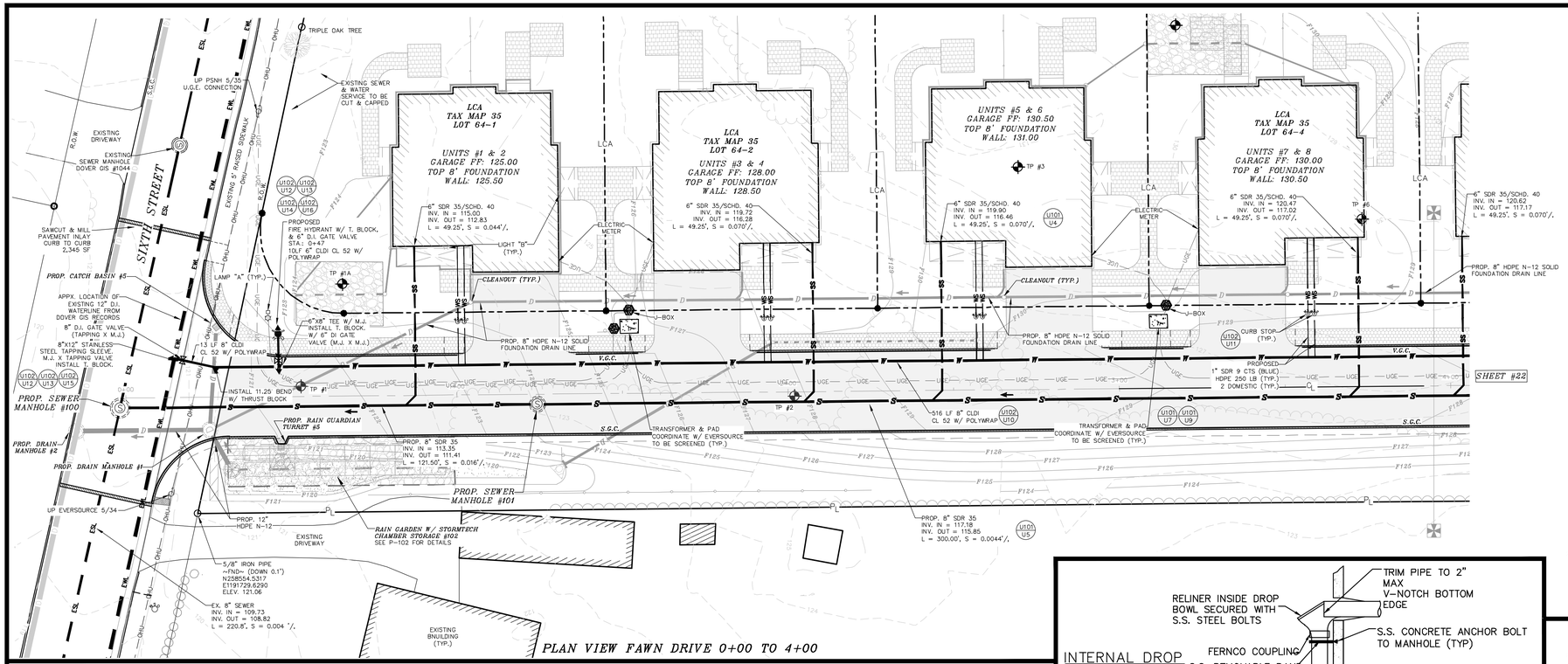
OVERVIEW UTILITY PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 40 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14241
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION



PLAN VIEW FAWN DRIVE 0+00 TO 4+00

NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651

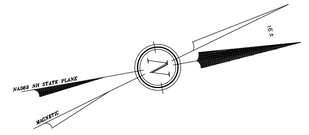
PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO PROVIDE A DETAIL VIEW OF UTILITY & ENGINEERING OF FAWN DRIVE AND TAX MAP 35, LOT 64.

4.) 22.5° OR 45° ELBOWS FOR SEWER CLEAN OUTS NOT ALLOWED IN DOVER



STRUCTURES TABLE:

U1A U1B
PROP. SEWER MANHOLE #100
5'ø STRUCTURE W/ LIFTMATE R-1743-LM RIM
STA.: ~0+01.75 (Rt. 3.50')
RIM = 120.39 (FLUSH)
INV. IN = 111.41 (PROP. 8" SDR 35) (INTERNAL DROP)
INV. IN = 109.41 (EX. 8" SEWER)
INV. OUT = 109.39 (EX. 8" SEWER)

U1 U2 U3
PROP. SEWER MANHOLE #101
4'ø STRUCTURE W/ LIFTMATE R-1743-LM RIM
STA.: 1+24.25 (Rt. 3.00')
RIM = 123.92 (FLUSH)
INV. IN = 115.85 (8" SDR 35) (INTERNAL DROP)
INV. OUT = 113.35 (8" SDR 35)

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

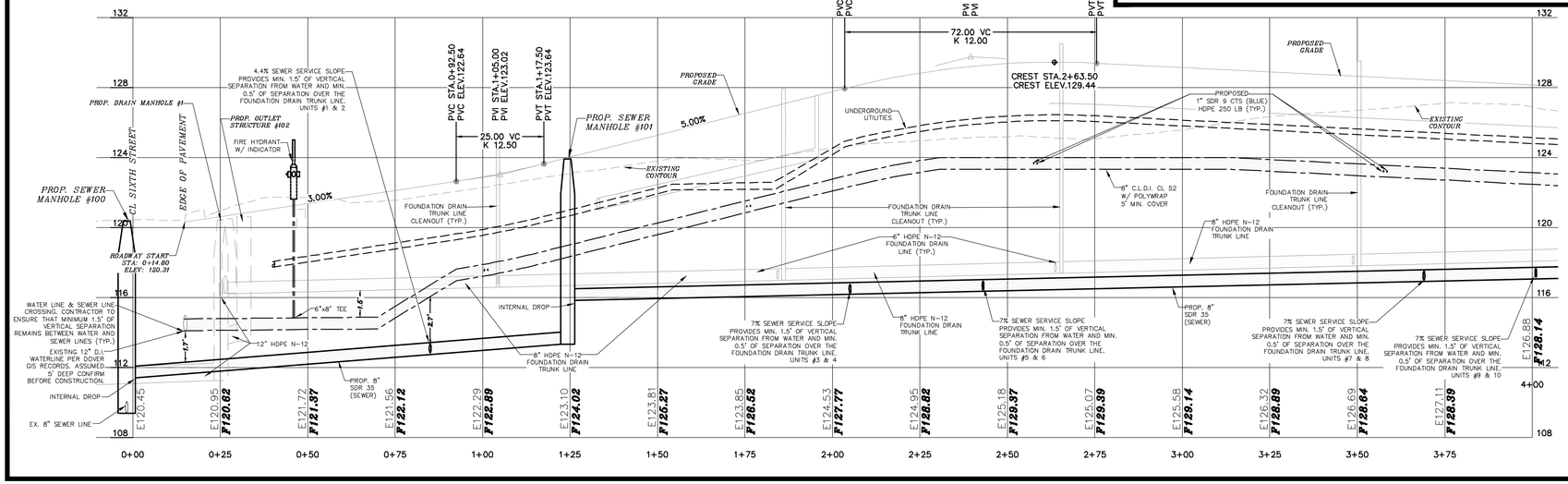
UTILITY NOTE:

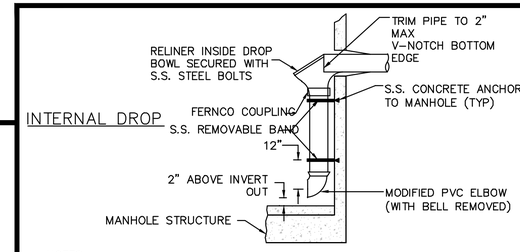
CONTRACTOR IS TO PROVIDE A MINIMUM OF 1.5' OF VERTICAL SEPARATION BETWEEN WATER, SEWER, AND DRAIN UTILITIES.

A MINIMUM OF 10' HORIZONTAL IS REQUIRED FOR SEPARATION OF WATER & SEWER LINES.

WATERLINE CONSTRUCTION INTENT:
WATERLINE ELEVATION SET AS TO AVOID ABRUPT CREST AND SAGS WITHIN THE PROFILE

PROFILE VIEW FAWN DRIVE 0+00 TO 4+00





NOTES:
1. INTERNAL DROPS ARE PROHIBITED UNLESS APPROVED BY THE CITY ENGINEER.
2. IF DROP IS FOR AN EXISTING MANHOLE, REWORK SHELF TO FORM NEW CHANNEL FOR NEW DROP CONNECTIONS.
3. BRICK INVERT NOT SHOWN ON DETAIL.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

LEGEND:

- PROPOSED SEWER MANHOLE W/ STRUCTURE
- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED STORMWATER BMP OUTLET STRUCTURE
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 — DETAIL SHEET / DETAIL
- LIMITED COMMON AREA LINE (LCA)
- 176 — CONTOUR MINOR, EXISTING
- 175 — CONTOUR MAJOR, EXISTING
- F176 — CONTOUR MINOR, PROPOSED
- F175 — CONTOUR MAJOR, PROPOSED
- CENTER LINE
- EXISTING WATER MAIN
- EXISTING SEWER LINE
- EXISTING DRAINAGE LINE
- EXISTING OVERHEAD UTILITY
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED SEWER LINE
- PROPOSED SEWER SERVICE
- PROPOSED DRAINAGE LINE
- PROPOSED UNDER GROUND UTILITY
- PROPOSED UNDERDRAIN
- MATCH LINE / MATCH POINT
- TRANSFORMER / J.BOX
- GATE VALVE
- CURB STOP
- FIRE HYDRANT
- THRUST BLOCKS
- LIGHT TYPE "A" MOUNTED ON POLE
- LIGHT TYPE "B" MOUNTED ON BUILDING
- RIP RAP
- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- PROPOSED STORMTECH CHAMBERS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

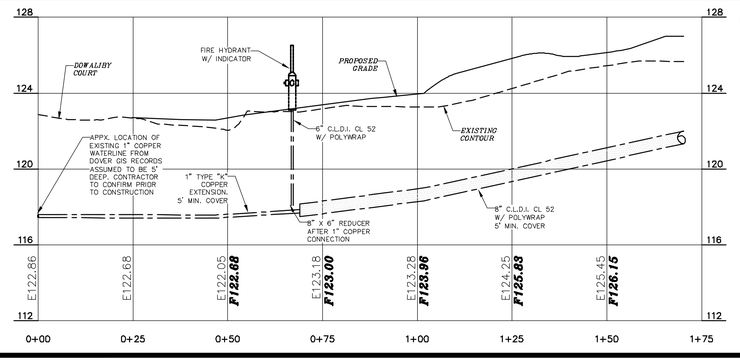
UTILITY PLAN & PROFILE FAWN DRIVE 0+00 TO 4+00
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

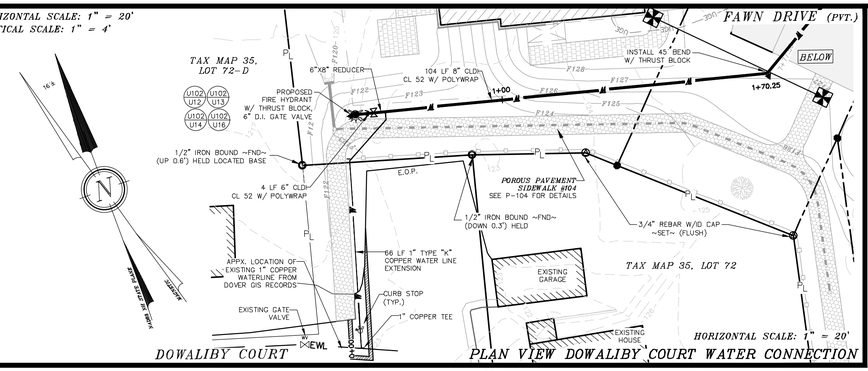
SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE KENNETH A. BERRY No. 14643 LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION



HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'



PLAN VIEW DOWALIBY COURT WATER CONNECTION

NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO PROVIDE A DETAIL VIEW OF UTILITY & ENGINEERING OF FAWN DRIVE AND TAX MAP 35, LOT 64.

4.) 22.5° OR 45° ELBOWS FOR SEWER CLEAN OUTS NOT ALLOWED IN DOVER

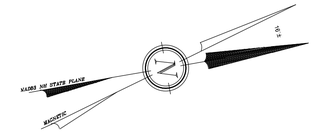
STRUCTURES TABLE:

PROP. SEWER MANHOLE #102
4'ø STRUCTURE W/ LIFTMATE R-1743-LM RIM
STA.: 4+28.25 (Rt. 3.00')
RIM = 127.78 (FLUSH)
INV. IN = 117.28 (8" SDR 35)
INV. OUT = 117.18 (8" SDR 35)

PROP. SEWER MANHOLE #103
4'ø STRUCTURE W/ LIFTMATE R-1743-LM RIM
STA.: 5+45.10 (Rt. 7.50')
RIM = 126.55 (FLUSH)
INV. IN = 117.90 (8" SDR 35)
INV. OUT = 117.80 (8" SDR 35)

PROP. SEWER MANHOLE #104
4'ø STRUCTURE W/ LIFTMATE R-1743-LM RIM
STA.: 6+11.35 (Rt. 10.60')
RIM = 126.05 (FLUSH)
INV. IN = 118.30 (8" SDR 35)
INV. OUT = 118.20 (8" SDR 35)

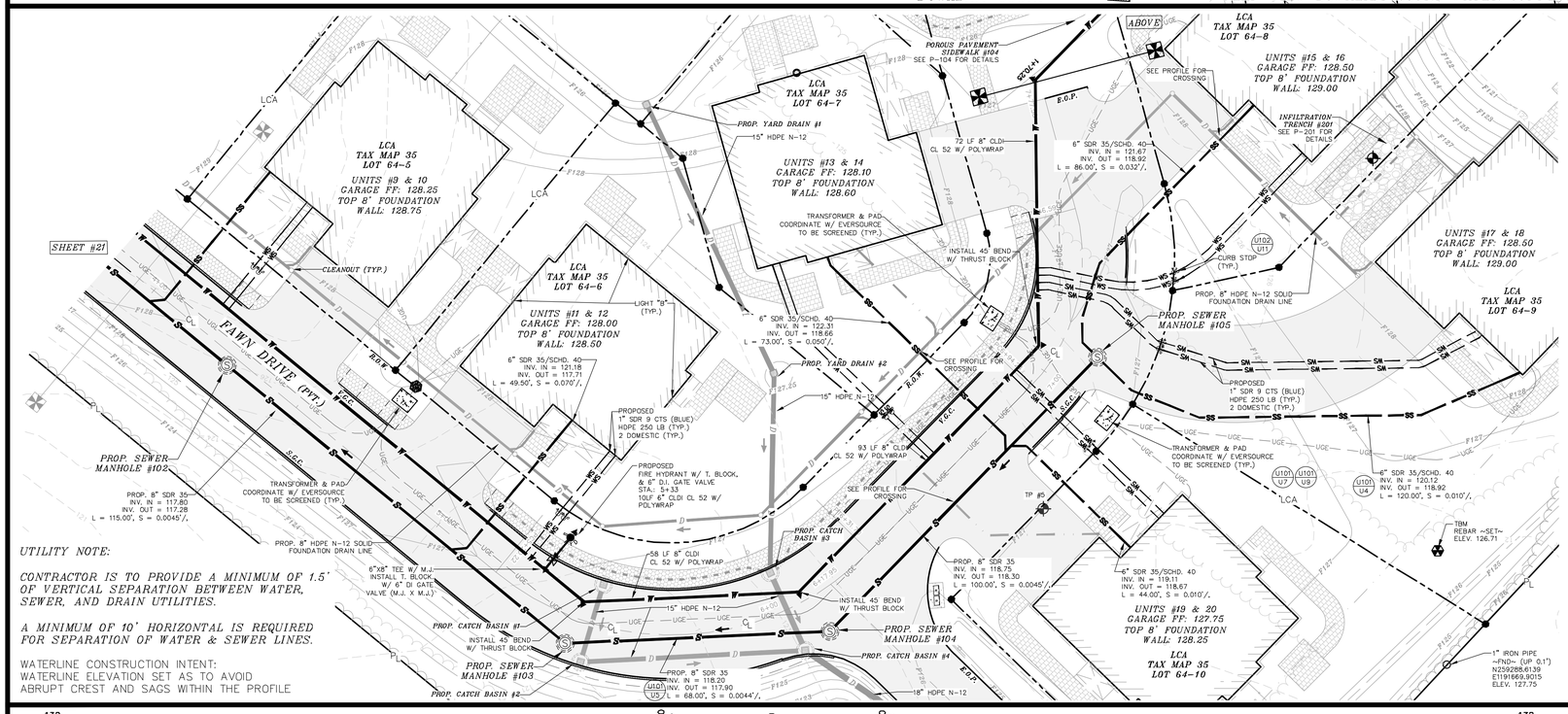
PROP. SEWER MANHOLE #105
4'ø STRUCTURE W/ LIFTMATE R-1743-LM RIM
STA.: 7+09.85 (Rt. 10.40')
RIM = 126.75 (FLUSH)
INV. IN = 118.92 (6" SDR 35) (2)
INV. OUT = 118.75 (8" SDR 35)



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

PLAN VIEW FAWN DRIVE 4+00 TO END

PROFILE VIEW FAWN DRIVE 4+00 TO END
GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



UTILITY NOTE:

CONTRACTOR IS TO PROVIDE A MINIMUM OF 1.5' OF VERTICAL SEPARATION BETWEEN WATER, SEWER, AND DRAIN UTILITIES.

A MINIMUM OF 10' HORIZONTAL IS REQUIRED FOR SEPARATION OF WATER & SEWER LINES.

WATERLINE CONSTRUCTION INTENT:
WATERLINE ELEVATION SET AS TO AVOID ABRUPT CREST AND SAGS WITHIN THE PROFILE

LEGEND:

- PROPOSED SEWER MANHOLE W/ STRUCTURE
- PROPOSED CATCH BASIN W/ STRUCTURE
- PROPOSED DRAIN MANHOLE W/ STRUCTURE
- PROPOSED STORMWATER BMP OUTLET STRUCTURE
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- STORMWATER CONTROL MEASURE (SCM)
- BERM
- TEST PIT
- PROPOSED BITUMINOUS CONCRETE
- PROPOSED POROUS PAVERS
- PROPOSED POROUS PAVEMENT
- PROPOSED STORMTECH CHAMBERS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

UTILITY PLAN & PROFILE FAWN DRIVE 4+00 TO END
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

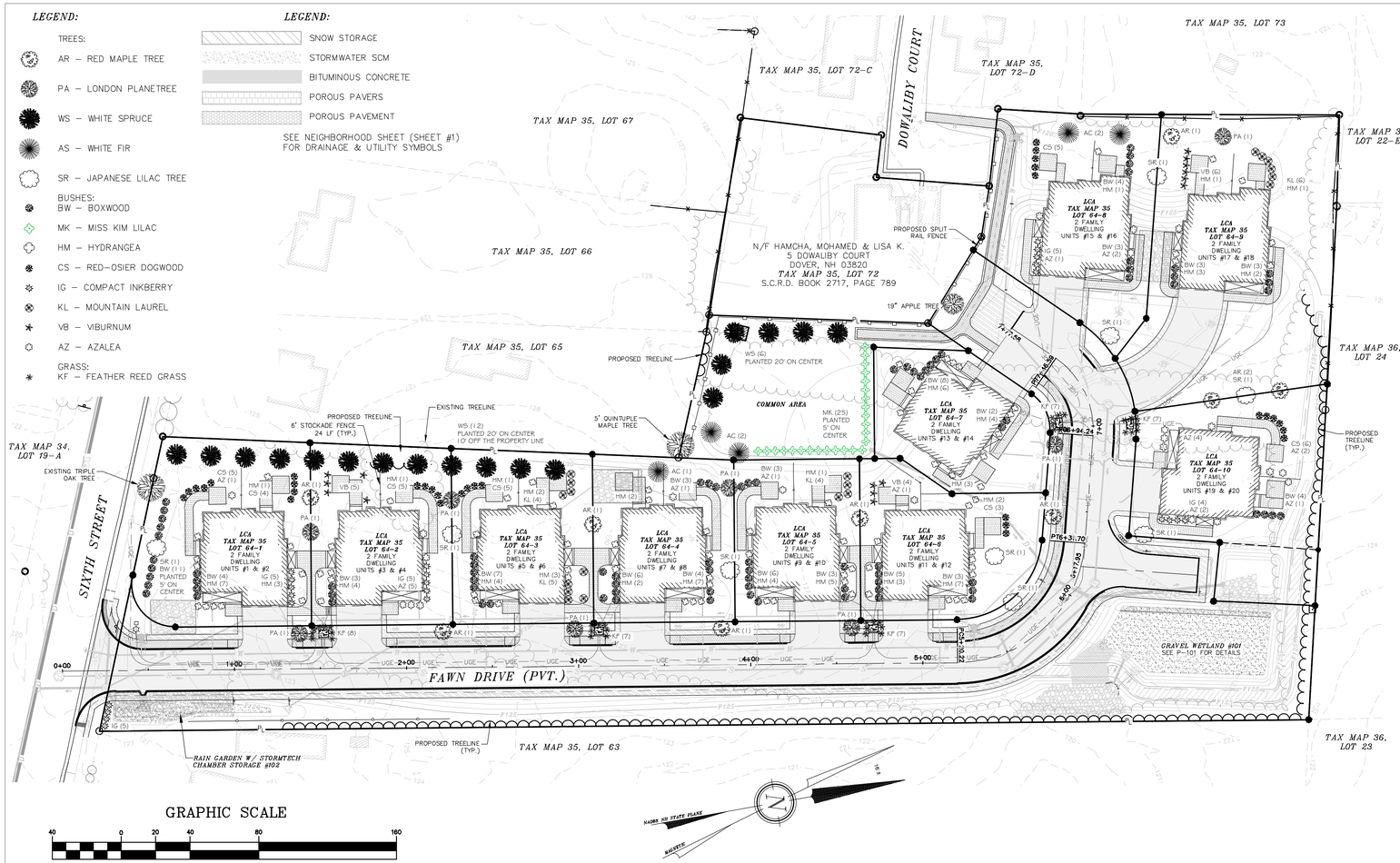
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE — KENNETH A. BERRY No. 14243 — LICENSED PROFESSIONAL ENGINEER

SHEET 22 OF 39

NOT FOR CONSTRUCTION



NOTES:

1. CALL DIG SAFE PRIOR TO BEGINNING WORK. (1–888–344–7233). THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF THE SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER OR GENERAL CONTRACTOR.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS. VARIATIONS IN QUANTITIES ARE TO BE APPROVED BY THE DESIGN ENGINEER.
4. PROVIDED SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN
6. ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS AND DISEASE.
7. ALL PLANTINGS SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM OWNER.
8. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND NEWLY PLANTED TREES AND SHRUBS DURING THE CONSTRUCTION PROCESS. WHERE REQUIRED, THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING (SNOW OR EQUAL) AROUND EXISTING TREES AND SHRUBS THAT COULD BE IMPACTED BY THE CONSTRUCTION PROCESS. STORAGE OF CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS, SNOW STORAGE AND OR VEHICLE PARKING SHALL NOT BE PERMITTED WITHIN THE DRIP LINE OF TREES OR TWENTY FEET WHICH EVER IS GREATER.
10. NEW PLANTINGS SHALL BE INSTALLED PER PROJECT DRAWINGS AND SPECIFICATION THAT INCLUDE FERTILIZATION AND MULCHING AS REQUIRED.
11. ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL–ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. MAINTENANCE OF NEW PLANTINGS AND LAWNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND OR LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE OWNER. RESPONSIBILITIES SHALL INCLUDE WATERING WEEDING AND MOWING AS NECESSARY. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, REPLACEMENT MATERIAL SHALL BE GUARANTEED FOR AND ADDITIONAL YEAR FROM TIME OF INSTALLATION.
14. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL MEASURES DURING THE CONSTRUCTION PHASE AND UNTIL ALL AREAS HAVE BEEN STABILIZED AND ACCEPTED BY THE OWNER. THE GENERAL CONTRACTOR SHALL PROVIDE WEEKLY INSPECTIONS OF EROSION MEASURE AND IMMEDIATELY AFTER STORM EVENTS AND REPAIR AS NECESSARY.
15. THE GENERAL CONTRACTOR AND OR THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL THREE GUYING MATERIAL ONCE PLANT MATERIAL HAS BEEN ESTABLISHED. (MINIMUM OF ONE GROWING SEASON). ALL TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE STABILIZATION OF DISTURBANCE HAS BEEN ACCEPTED BY OWNER.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF TWO MOWINGS FOR ALL TURF AREAS OR UNTIL ACCEPTANCE BY THE OWNER. A MINIMUM UNIFORM 75% CATCH OF TURF IS REQUIRED FOR ACCEPTANCE.
17. ALL PLANTINGS SHALL BE WATERED REGULARLY DURING THEIR FIRST YEAR AND MAINTAINED PERMANENTLY IN GOOD GROWING CONDITION AS AN EFFECTIVE VISUAL SCREEN.
18. SHRUBS OR TREES WHICH DIE SHALL BE REPLACED WITHIN ONE GROWING SEASON WITH NEW SHRUBS OR TREES TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE LANDSCAPING REQUIREMENTS.
19. ALL REQUIRED LANDSCAPING SHALL BE INSTALLED BEFORE OCCUPANCY, OR WITHIN SIX MONTHS IF OCCUPANCY OCCURS DURING WINTER CONDITIONS.
20. TREES ARE TO BE 6' TALL AT PLANTING.
21. ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITIONS (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)
22. 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY–PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUND COVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.
23. PLANT–PIT BACK–FILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PARTS OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON–SITE TOPSOIL AS PART OF BACK FILL WHEN AVAILABLE.
24. ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.
25. TOPSOIL WILL BE TESTED FOR FERTILIZATION REQUIREMENTS, AND SLOW RELEASE ENVIRONMENTALLY FRIENDLY FERTILIZER WILL BE APPLIED AT THE RECOMMENDED RATES.
26. ALL DISTURBED WETLAND BUFFER AREAS, EXCEPT FOR AREAS THAT ARE PART OF THE DRAINAGE SYSTEM, ARE TO BE RESEEDED WITH A CONSERVATION SEED MIX AND ONLY MOWED TWICE PER YEAR.
27. ALL PLANT SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.
28. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY OR AT THE JOB SITE WHILE WORK IS ONGOING TO CONFORMITY TO SPECIFIED QUALITY, SIZE AND VARIETY.
29. PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT–BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT MAY BE DEEMED UNACCEPTABLE.
30. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NO LESS THAN ONE FULL YEAR FROM THE TIME OF INSTALLATION. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE. IF THE CONTRACTOR IS DISSATISFIED WITH THE CARE GIVEN, HE SHALL IMMEDIATELY, AND IN SUFFICIENT TIME TO PERMIT THE CONDITION TO BE RECTIFIED, NOTIFY THE OWNER IN WRITING OR OTHERWISE FORFEIT HIS CLAIM.
31. BY THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAS DIED, THAT HAS LOST NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESS PRUNING OR INADEQUATE OR IMPROPER CARE, OR IS, IN THE OPINION OF THE OWNER, IN UNHEALTHY OR UNSIGHTLY CONDITION.
32. THE CONTRACTOR IS TO USE TEMPORARY MEASURES FOR WATERING PLANTS DURING THE ESTABLISHMENT PERIOD. INCLUDING CONNECTING TEMPORARY HOSES TO THE STRUCTURE WATER SUPPLY LINE AND UTILIZING SPRINKLERS UNTIL 85% GROWTH OCCURS.

PLANTING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM L.A. PRIOR TO PURCHASING &/OR INSTALLING SUBSTITUTE PLANT MATERIAL PRIOR TO PURCHASE OF ANY SUBSTITUTE MATERIALS.
2. CONSTRUCTION ACCESS WILL BE AS DIRECTED BY L.A. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ACCESS ROUTE AND ALL AREAS DISTURBED BY PLANTING OPERATIONS UPON COMPLETION OF CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.
3. LAYOUT OF ALL PLANTING BEDS AND LOCATION OF PLANTS TO BE APPROVED BY L.A. ON SITE PRIOR TO CONSTRUCTION AND INSTALLATION.
4. CONTRACTOR TO REMOVE ALL DEBRIS GENERATED BY PLANT INSTALLATION. DEBRIS TO BE DISPOSED OF IN A LEGAL MANNER.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN GOOD, HEALTHY & FLOURISHING CONDITION FOR ONE YEAR FROM THE DATE OF FINAL INSTALLATION APPROVAL BY L.A. CONTRACTOR SHALL REPLACE, WITHOUT COST TO OWNER, AND AS SOON AS WEATHER CONDITIONS PERMIT, ALL DEAD AND NON–FLOURISHING PLANTS AS DETERMINED BY THE L.A. REPLACEMENT PLANTS SHALL BE GUARANTEED IDENTICALLY TO ORIGINAL PLANTS, TIME PERIOD COMMENCING FROM DATE OF REPLACEMENT PLANTING APPROVAL BY L.A.
6. ALL BEDS TO BE MULCHED WITH 3" DEPTH SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO PROVIDE NECESSARY TEMPORARY IRRIGATION IF NEEDED BASED ON TIME OF YEAR THE PROJECT IS IMPLEMENTED.

TEMPORARY WATERING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR MAKING SURE ALL PLANT MATERIAL HAS ADEQUATE WATER DURING THE ESTABLISHMENT PERIOD.
2. THE USE OF GATOR BAGS, SOAKER HOSE, HAND WATERING AND OTHER TECHNIQUES SHOULD BE USED TO ASSURE PROPER HYDRATION OF THE PLANTINGS IS MAINTAINED.
3. TEMPORARY IRRIGATION SYSTEMS CAN BE SET UP TO ASSIST IN WATERING ACTIVITIES.

PLANTING SCHEDULE
2024-018 Fawn Drive
Botanical Name/ Common Name

	Size	Qty	Label
Trees			
Acer rubrum / Red Maple	4" Cal.	9	AR
Platanus x acerifolia / London Planetree	4" Cal.	8	PA
Syringa reticulata / Japanese Lilac Tree	5' tall	9	SR
Picea glauca / White Spruce	6' tall	18	WS
Abies concolor / White Fir	3 Gal.	5	AC
Shrubs			
Buxus / Boxwood	3 Gal.	96	BW
Syringa pubescens patula 'Miss Kim' / Miss Kim Lilac	3 Gal.	25	MK
Hydrangea macrophylla / Hydrangea	#1	85	HM
Cornus sericea / Red Osier Dogwood	2-3'	33	CS
Ilex glabra 'Compacta' / *Compact Inkberry*	2 Gal.	24	IG
Kalmia latifolia / Mountain Laurel	2 Gal.	36	KL
Viburnum / Viburnum	5 Gal.	15	VB
Rhododendron / Azalea	1 Gal.	16	AZ
Grasses			
Calamagrostis acutifolia 'Karl Foerster' / Feather Reed Grass	#2	36	KF

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General Plant Maintenance Guide

General Plant Bed Maintenance:

- All plant maintenance should be performed by a qualified horticulturalist or licensed arborist. Cleaning the dead material out of the planting bed in the fall helps keep litter from building up around the plants and in some cases killing the plants. Watering the first year during dry periods will help get the plants established. Mulching every year is not necessary. Raking the old mulch and turning it over is all that is needed. When necessary only install one inch of mulch and do not place the mulch closer than 3" to the trunks or stems of woody plants.

Trees

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the trunk.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after trees have dropped their leaves for the year.
- Prune dead wood once a year.
- Depending on the amount of compaction the bed area receives, deep root aeration may be needed over time

Woody Shrubs

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the stems.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after shrubs have dropped their leaves or gone dormant for the year.
- Prune dead wood once a year.

Grasses

- Grasses only need to be clipped back at the end of the growing season and all the clippings removed from the area.
- Do not over mulch. Too much mulch will prohibit the grass from developing into a strong clump.

Perennials

- All perennials need to be pruned back after the first or second hard frost. A two-step method; first dead head all the flower heads and let drop to the ground for re-seeding. Second cut the stems back to 3" above the ground and remove the stem and leaf litter and place in compost. Do not over mulch. Too much mulch will prohibit the growth and development
- Fertilizing perennials once in the spring with a low phosphate fertilizer will help the plants to get started in the spring.

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311 kast hill road
hopkinton, nh 03229
603. 491. 2322
terrainplanning.com

141 SIXTH STREET

Site Location:
141 Sixth Street
Dover, NH
Tax Map 35, Lot 64

Prepared For:
Berry Surveying & Engineering
335 Second Crown Point Rd
Barrington, NH 03825

LANDSCAPING PLAN

DATE: June 24, 2025

SCALE: 1" = 40'

PROJECT #: DB 2024-018

Drawn By: JDB

Checked By: ERB

REVISIONS:
DATE: July 30, 2025

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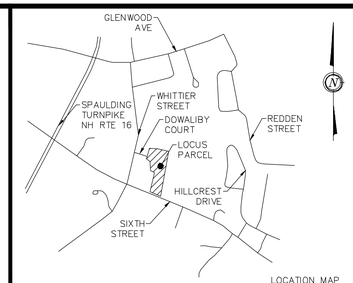
L - 01

LICENSED LANDSCAPE ARCHITECT ERIC R BUCK 078 STATE OF NEW HAMPSHIRE

NOT FOR CONSTRUCTION



NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & USA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO SHOW THE LIGHTING FOR THE SITE DESIGN FOR A PROPOSED 10 LIMITED COMMON AREAS, 20, TWO-FAMILY DWELLING UNIT (10 BUILDINGS) TDR CONDOMINIUM DEVELOPMENT OF TAX MAP 35, LOT 64.

Schedule									
Symbol	Label	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power
A	A	1	Lithonia Lighting	DSX0 LED P1 30K 70CRI BLC3	D-Series Size 0 Area Luminaire P1 Performance Package 3000K CCT 70 CRI Type 3 Extreme Backlight Control	1	3344	1	33.21
B	B	40	Lithonia Lighting	ODSL10 SRC	CRAFTSTON WALL MOUNTED SMALL DECORATIVE LANTERN, ONE LAMP 13W SPIRAL COMPACT FLUORESCENT, WHITE GLASS DIFFUSER 4.25" DIA. X 6.65" HIGH, ELECTRONIC BALLAST	1	900	1	12.6

LEGEND:

- 3/4" REBAR W/ID CAP (TBS)
- 1/2" REBAR W/EASEMENT CAP (TBS)
- 3/4" REBAR W/ID CAP (SET)
- IRON BOUND/IRON ROD (FND)
- IRON PIPE (FND)
- STONE/GRANITE BOUND (FND)
- T-BAR, STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- OHU OHU OHU OVERHEAD UTILITIES
- PROPOSED LCA LINE
- CENTER LINE
- TREE LINE (EX. OR PROP.)
- SPLIT RAIL FENCE
- STOCKADE FENCE
- PROPOSED EASEMENT
- GRAVEL SHOULDER
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- E.O.P. EDGE OF PAVEMENT
- V.G.C. VERTICAL GRANITE CURB
- S.G.C. SLOPED GRANITE CURB
- LCA LIMITED COMMON AREA
- P_L PROPERTY LINE
- E_L EASEMENT LINE
- LIGHT TYPE "A" POLE MOUNTED
- LIGHT TYPE "B" BUILDING MOUNTED
- FIRE HYDRANT
- SNOW STORAGE
- TRANSFORMER/CONCRETE PAD
- STORMWATER SCM
- BITUMINOUS CONCRETE
- POROUS PAVERS
- POROUS PAVEMENT SIDEWALK

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

LIGHTING PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & USA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 40 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

PLAN VIEW SIXTH STREET LOOKING EAST

NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

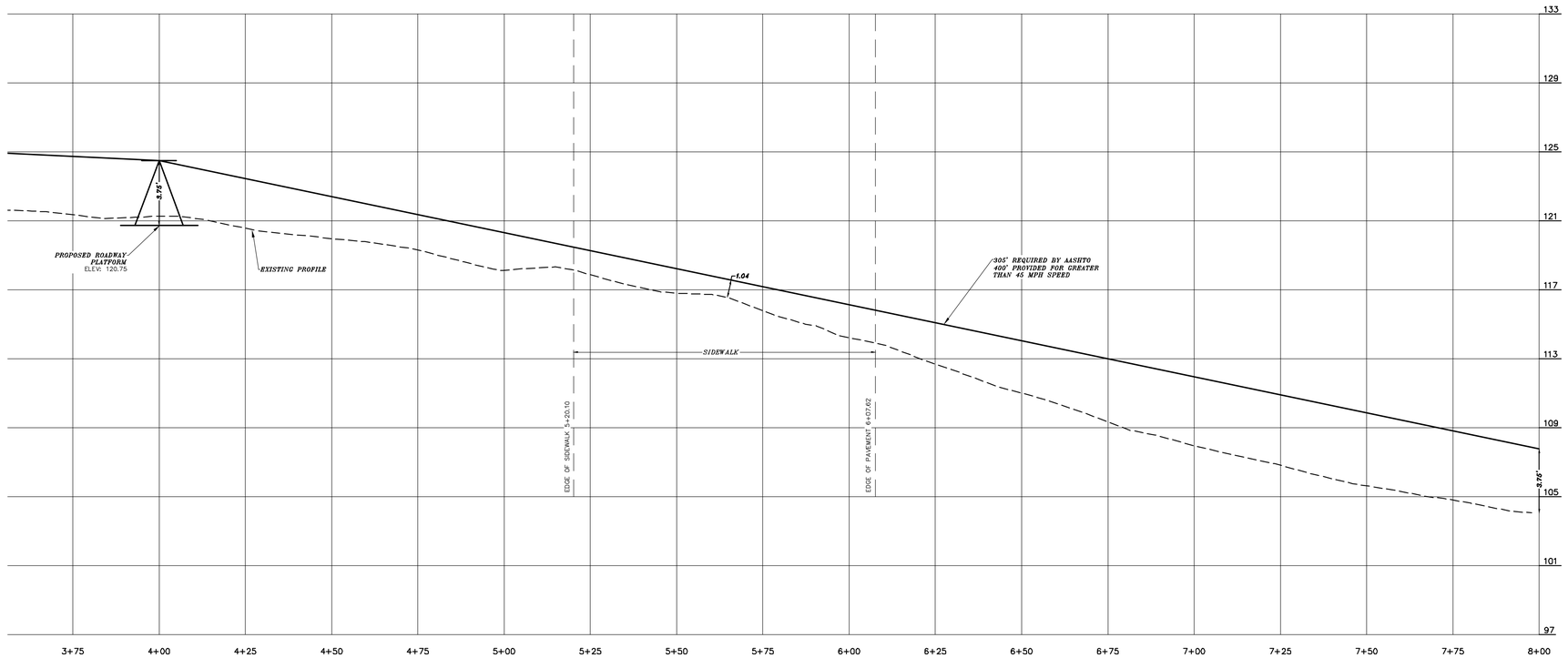
3.) THIS IS A RESIDENTIAL SITE PLAN.

4.) THE INTENT OF THIS PLAN IS TO DEMONSTRATE THE AVAILABLE SIGHT DISTANCE FROM THE PROPOSED ROADWAY TO BE KNOWN AS FAWN DRIVE.

5.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE. EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

6.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2016. CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

PROFILE VIEW SIGHT LINE



GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

SIGHT DISTANCE CALCULATION:

DESIGN SPEED: 30 MPH / 85TH ASSUMED 40 MPH

305' REQUIRED AT 40 MPH AASHTO, 85TH PERCENTILE ASSUMED
400' PROVIDED

LEGEND:

- DRILL HOLE ~FND~
- IRON PIPE ~FND~
- IRON BOUND/REBAR ~FND~
- T-BAR STEEL STAKE ~FND~
- GRANITE/STONE BOUND ~FND~
- SIGNAGE
- UTILITY POLE
- GUY WIRE
- OVERHEAD UTILITIES LINE
- SHOULDER
- BUILDING SETBACK LINE
- CENTER LINE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- TYP. TYPICAL
- FND FOUND
- PL PROPERTY LINE
- CL CENTER LINE
- R.O.W. RIGHT OF WAY
- E.O.P. EDGE OF PAVEMENT
- S.G.C. SLOPED GRANITE CURB
- SSL (W/Y) SINGLE SOLID LINE (WHITE/YELLOW)
- DSL (Y) DOUBLE SOLID LINE (YELLOW)
- EXISTING TREE
- BITUMINOUS CONCRETE
- POROUS PAVERS
- POROUS PAVEMENT SIDEWALK

SD-2

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

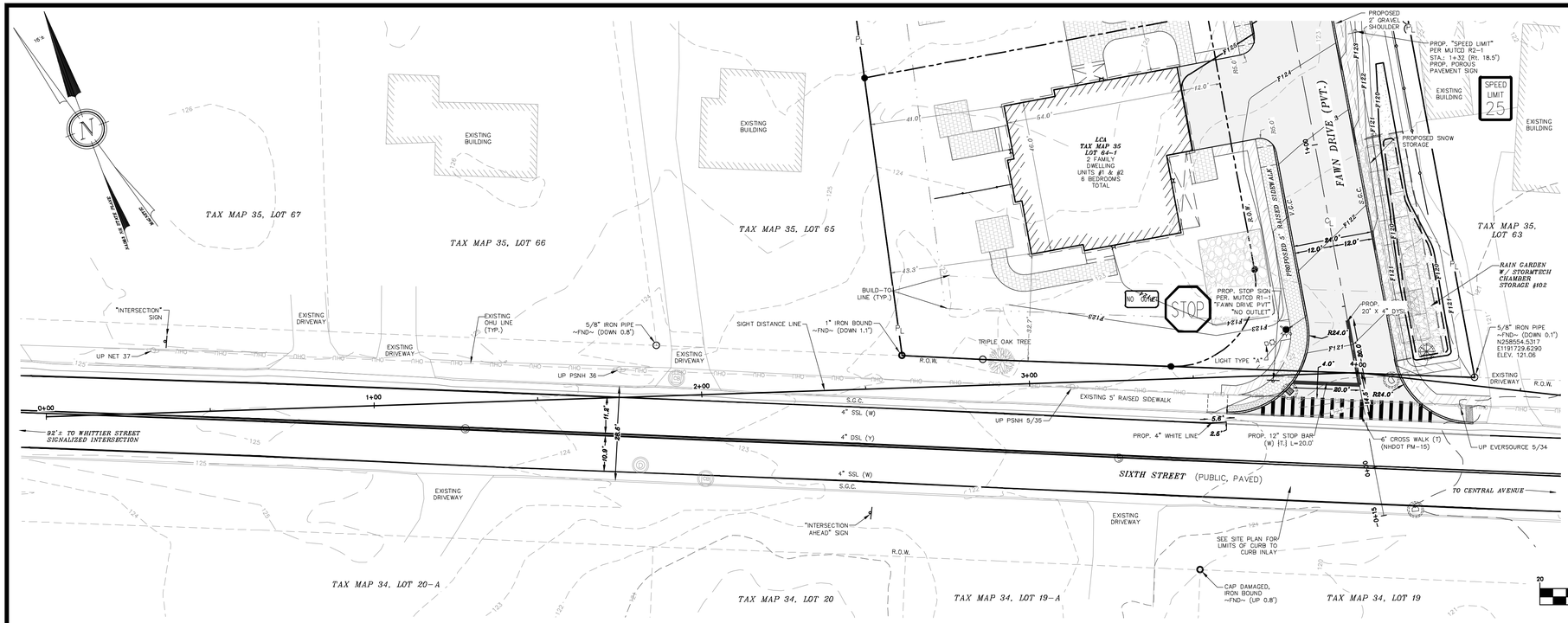
SIGHT DISTANCE PLAN FAWN DRIVE EASTBOUND
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION



PLAN VIEW SIXTH STREET LOOKING WEST

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTES:

1.) PARCEL #1
OWNER: RICHARDSON ESTATES OF DOVER LLC
688 CALEF HIGHWAY
BARRINGTON, NH 03825

A.) TAX MAP 35, LOT 64
B.) S.C.R.D. BOOK 5194, PAGE 651
C.) POST LOT LINE REVISION AREA: 163,417 Sq. Ft., 3.75 Ac.

PARCEL #2
OWNER: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT
DOVER, NH 03820

A.) TAX MAP 35, LOT 72
B.) S.C.R.D. BOOK 2794, PAGE 374
C.) POST LOT LINE REVISION AREA: 14,211 Sq. Ft., 0.33 Ac.

2.) APPLICANT: THE STABILE COMPANIES
20 COTTON ROAD, SUITE 200
NASHUA, NH 03063

3.) THE INTENT OF THIS PLAN IS TO DEMONSTRATE THE AVAILABLE SIGHT DISTANCE FROM THE PROPOSED ROADWAY TO BE KNOWN AS FAWN DRIVE.

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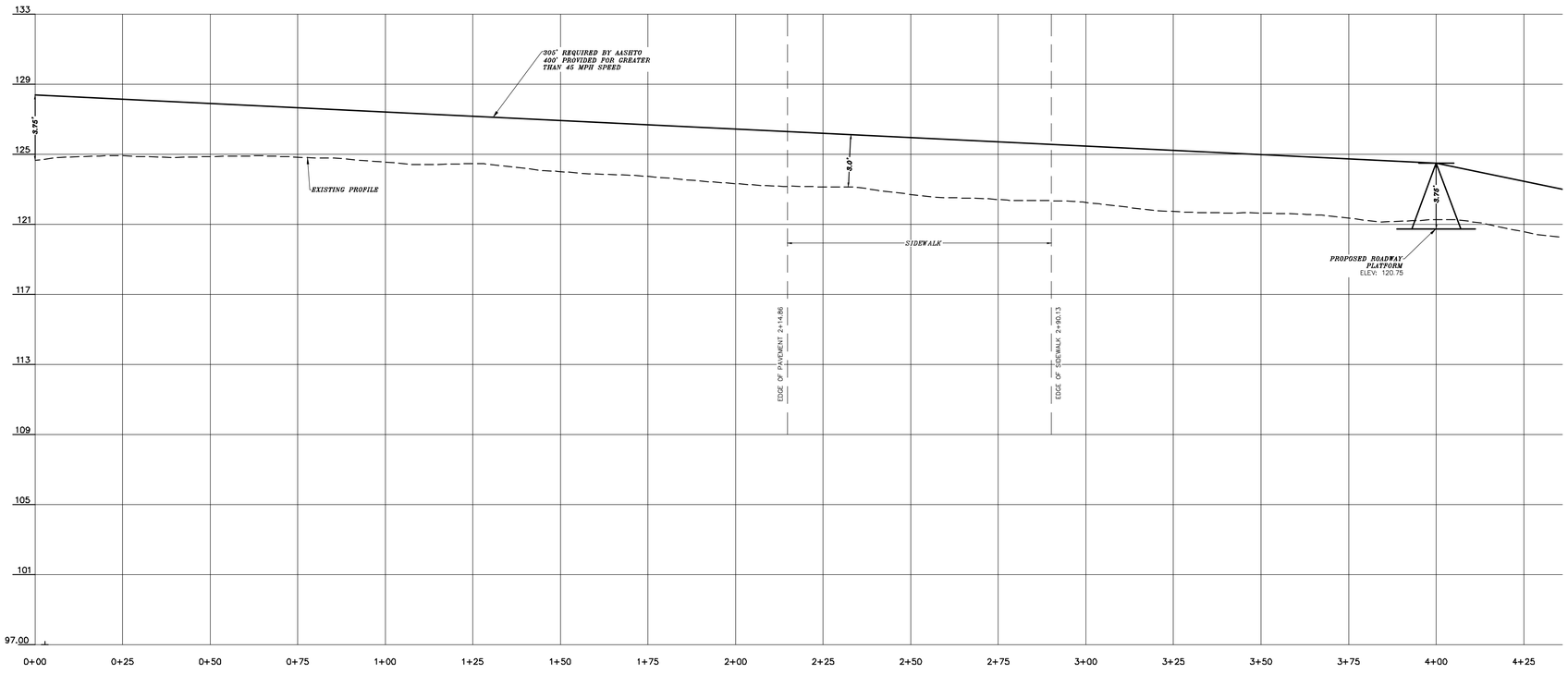
PROFILE VIEW SIGHT LINE



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

NOTES CONT.:

6.) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION

7.) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

8.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

9.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

10.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R).

11.) ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.

12.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH (T) SHALL BE THERMOPLASTIC.

13.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

14.) ALL PAVEMENT MARKINGS TO BE PAINTED TO NHDOT STANDARD NO. PM-9.

15.) THE SPEED LIMIT ON SIXTH STREET IS 30 MPH.

PM-9 GENERAL NOTES

1.) EDGELINE DETAILS ARE SHOWN FOR MAINLINE ROADWAYS WITHOUT TURN LANE. THE PRESENCE OF TURN LANES MAY REQUIRE DIFFERENT EDGELINE TREATMENTS,

2.) EDGELINES ON THE SIDE ROADS, WHEN CALLED FOR, SHALL FOLLOW THE ABOVE MAINLINE TYPICALS. EDGELINES SHALL NOT BE CONTINUOUS AROUND THE MAINLINE/SIDE ROAD RADIUS. EDGELINES SHALL END AT STOP BARS.

3.) CENTERLINE AND EDGELINE SHALL BE CONTINUOUS PAST RESIDENTIAL DRIVEWAYS. CENTERLINE AND EDGELINE SHALL BREAK FOR COMMERCIAL DRIVES W/TRAFFIC CONTROLS, MINOR SIDE ROADS, OR PRIVATE INTERSECTIONS.

4.) LOCATION OF THE STOP LINE MAY VARY DUE TO INTERSECTION SIGHT DISTANCE AND VEHICLE TURNING RADIUS AND MAY NOT ALWAYS COINCIDE WITH THE LOCATION OF THE STOP SIGN.

5.) IF THERE IS NO EDGELINE, END STOP BAR 12" FROM EDGE OF PAVEMENT.

6.) STOP BARS, WORDS, LANE LINES, SYMBOLS AND ARROWS SHALL BE THERMOPLASTIC (T).

SD-1

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

SIGHT DISTANCE PLAN FAWN DRIVE WESTBOUND
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

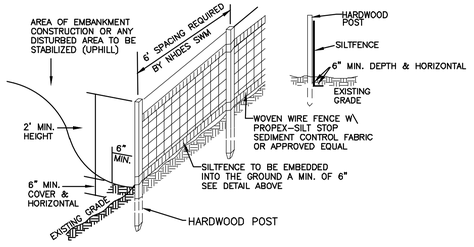
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

E1



SILT FENCE CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 6' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF. SEE MAINTENANCE NOTE BELOW, REMOVAL OF SEDIMENT REQUIRED AT A DEPTH OF 6-INCHES.
4. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
5. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER.
6. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED.
7. TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, SILT FENCE, B-58 - B-64. SEE ALSO EROSION AND SEDIMENT CONTROL PLAN.

SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT EXCEEDING 1/4-INCH IN A 24-HOUR PERIOD, OR AS STIPULATED BY THE APPLICABLE PERMITS. REPAIRS SHOULD BE MADE AS NECESSARY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH SIX-INCHES IN DEPTH.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

SILT FENCE DETAIL
NOT TO SCALE

E2

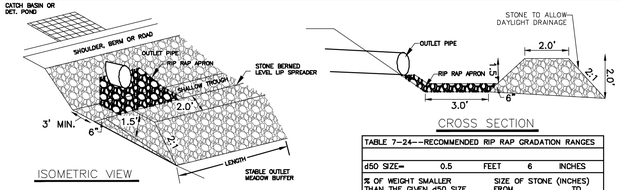
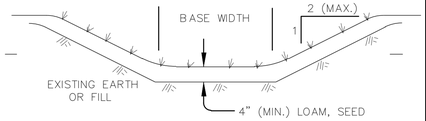


TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5 FEET	6	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3

1. CONSTRUCT THE LEVEL SPREADER LIP ON A 0% GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING EXCELSIOR ENFORCER MATTING BENEATH THE STONE. EACH STRIP SHALL OVERLAP BY AT LEAST SIX INCHES.
4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
5. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF STONE REMOVAL HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED.
6. TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX A, STRUCTURAL CONVEYANCE, STONE BERM LEVEL SPREADER, A-132 - A-134.

STONE BERM LEVEL SPREADER
NOT TO SCALE

E3



GRASS SWALE
NOT TO SCALE

INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATIONS, VEGETATION LOSS, & INVASIVE SPECIES. REPAIR AS NECESSARY.

MOW GRASS ANNUALLY TO A DEPTH OF 4".

INSTALL STABILIZATION MATTING DURING CONSTRUCATION

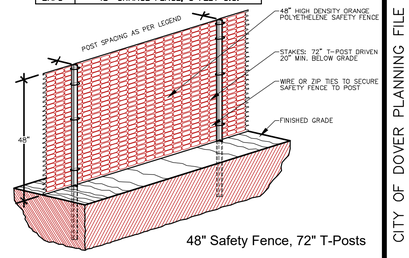
TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX A, STRUCTURAL CONVEYANCE, CONVEYANCE SWALE, A-115 - A-117.

E4

CONSTRUCTION SAFETY FENCE
NOT TO SCALE

LEGEND

SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C.
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C..
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.

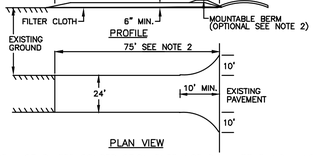


48" Safety Fence, 72" T-Posts

1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE AS PER PLAN.
3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET OUTSIDE OF THE DRIP LINE OF THE TREE.
4. SAFETY FENCE SHOULD BE FASTENED SECURELY TO THE T-POSTS.
5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

E5

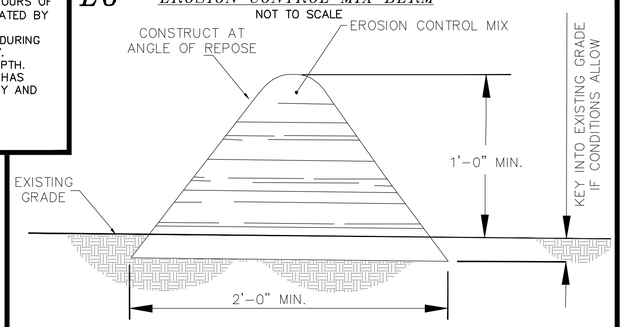
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH ANGULAR STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT WITH ENGINEERED FABRIC.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, TEMPORARY CONSTRUCTION EXIT, B-73 - B-75.

E6

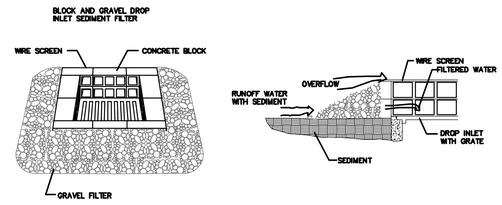
EROSION CONTROL MIX BERM
NOT TO SCALE



EROSION CONTROL MIX BERMS SHALL BE USED ONLY AS FOLLOWS:

1. BERMS SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE BERM.
2. THE BERMS SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE.
3. THE BERMS SHALL BE INSTALLED ON SLOPES LESS THAN 5%
4. SUBJECT TO (E), BELOW, THE MIX SHALL HAVE AN ORGANIC PORTION BETWEEN 80 AND 100%, DRY WEIGHT BASIS, AND BE FIBROUS AND ELONGATED SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS.
5. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS SHALL NOT BE USED AS ORGANIC MATERIAL,ORGANIC MATERIAL TO BE FIBROUS AND ELONGATED.
6. THE MIX SHALL NOT CONTAIN SILTS, CLAY, OR FINE SANDS.
7. THE MIX SHALL HAVE A PARTICLE SIZE BY WEIGHT OF 70 TO 85% PASSING A 6-INCH SCREEN AND A MAXIMUM OF 85% PASSING THE 0.75-INCH SCREEN.
8. THE MIX PH SHALL BE BETWEEN 5.0 AND 8.0.
9. THE BERM SHALL BE AT LEAST 12 INCHES HIGH AND AT LEAST 2 FEET WIDE.
10. TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, EROSION CONTROL MIX BERM, B-46 - B-50.

E7



MAINTENANCE

ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

BLOCK & GRAVEL DROP INLET SEDIMENT FILTER
NOT TO SCALE

TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, TEMPORARY STORM DRAIN INLET PROTECTION, B-89 - B-93.

TO BE USED IN ALL AREAS WHERE THERE WILL BE NO TRAFFIC.

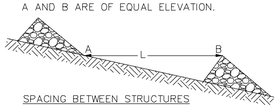
E8

TEMPORARY EROSION CONTROL MEASURES

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. (SEE SEED SPECIFICATIONS THIS SHEET)
4. ALL DISTURBED AREAS WILL BE RESTABILIZED WITHIN 45 DAYS. AT ANY ONE TIME, NO MORE THAN 5 ACRES, (217,800 Sq. Ft.) WILL BE DISTURBED.
5. SILT FENCES AND PERIMETER BARRIERS SHALL BE INSPECTED PERIODICALLY AND AFTER EVERY RAIN DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF. ALL E&SC MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EVERY RAIN EVENT OF 0.5-INCHES OR MORE AS REQUIRED BY ENV-WQ 1505.02 AND PER THE EPA CGP.
6. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
7. PER THE EPA CGP REQUIREMENTS THERE WILL BE REPORTS OF THE EROSION CONTROL INSPECTIONS IAW SWPPP PREPARED BY BS&E. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OR GREATER RAIN EVENT, BY A QUALIFIED PERSON.
8. DITCHES, SWALES, AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
10. DRIVEWAYS AND CUT AND FILL SPLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINAL GRADE.
11. STABILIZATION MEANS:
    - 11.1. A MINIMUM OF 85% OF VEGETATIVE COVER HAS BEEN ESTABLISHED.
    - 11.2. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED, OR
    - 11.3. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
12. THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
13. THE NHDES STORMWATER MANUAL, DATED FEBRUARY 2025, IS A PART OF THIS PLAN SET AND THE MORE RESTRICTIVE WILL GOVERN. (NH SWM)

E9

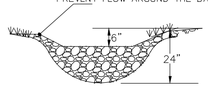
STONE CHECK DAM
NOT TO SCALE

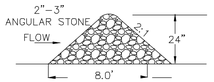


SPACING BETWEEN STRUCTURES

1.) CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
2.) THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHOULD BE LESS THEN ONE ACRE.
3.) THE MAXIMUM HEIGHT OF THE DAM SHOULD BE TWO FEET.
4.) THE CENTER OF THE DAM SHOULD BE AT LEAST SIX INCHES LOWER THAN THE OUTER EDGES.
5.) THE MAXIMUM SPACING IS AS SHOWN ON THE PROJECT SITE PLANS.
6.) CHECK DAMS WILL NOT BE USED IN A FLOWING STREAM.
7.) TEMPORARY CHECK DAMS WILL BE REMOVED ONCE THE SWALE OR DITCH IS DETERMINED STABLE.
8.) TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, TEMPORARY CHECK DAM, B-69 - B-72.

NOTE: KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIUM OF 18" TO PREVENT FLOW AROUND THE DAM.

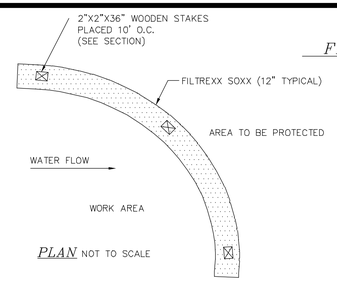




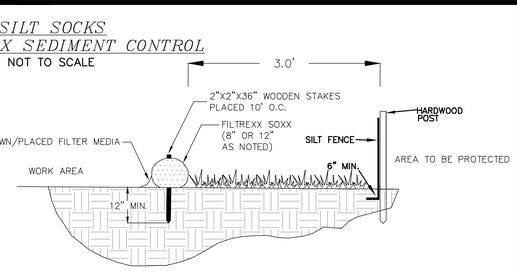
STONE GRADE STABILIZATION STRUCTURE

E10

SILT SOCKS
FILTREXX SEDIMENT CONTROL
NOT TO SCALE



PLAN NOT TO SCALE



NOTES

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS, OR APPROVED EQUAL.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIRMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
5. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIRMENTS OF THE SPECIFIC APPLICATION.
6. FILTREXX SOXX IS A REGISTERED TRADEMARK OF FILTREXX INTERNATIONAL, LLC.
7. SILT FENCE IS NOT A SUBSTITUTION FOR SILT SOXX AND ANY EQUAL SUBSTITUTION TO BE APPROVED.
8. TO BE CONSTRUCTED IAW FILTREXX, SECTION 1:EROSION & SEDIMENT CONTROL (PAGE 323) - CONSTRUCTION ACTIVITIES, SWPPP CUT SHEET: FILTREXX SEDIMENT CONTROL IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, FILTER SOCK, B-51 - B-55.

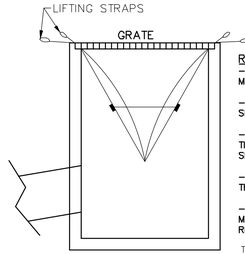
Filtrexx International, LLC
35481 Grafton Eastern Rd | Grafton, Oh 44044
440-926-2607 | fax 440-926-4021
WWW.FILTREXX.COM
OR APPROVED EQUAL

NOTE: FOR AREAS REQUIRING DOUBLE PERIMETER CONTROL WITHIN 50' OF JURISDICTIONAL WETLANDS AND NOT FOR ALL SILT SOXX APPLICATIONS.

DOUBLE PERIMETER PROTECTION CAN BE ANY COMBINATION OF THE PRACTICES OF SILT FENCE, SILT SOXX, OR EROSION CONTROL MULCH BERM.

SECTION NOT TO SCALE

E11



RECOMMENDED MAINTENANCE SCHEDULE
-EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT, AND MUST BE MAINTAINED.

-IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACK SHOULD BE INSPECTED EVERY 2-3 WEEKS.

-THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

-TO BE USED IN ALL AREAS WHERE THERE WILL BE TRAFFIC.

- ARE SUBJECT TO DAMAGE BY SNOW PLOWS, AND MUST BE INSPECTED AFTER ANY SNOW EVENT AND REPLACED AS REQUIRED.

TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, TEMPORARY STORM DRAIN INLET PROTECTION, B-89 - B-93.

SILTSACK DETAIL
NOT TO SCALE

E-101

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#1	7-30-25	REVISED PER TRC #1 COMMENTS
REVISION	DATE	DESCRIPTION

EROSION & SEDIMENT CONTROL DETAILS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 36, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

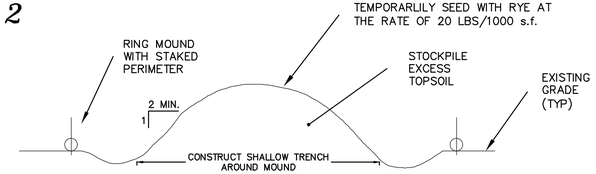
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

NOT FOR CONSTRUCTION

E12



TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, SOIL STOCKPILE PROTECTION PRACTICES, B-18 – B-19.

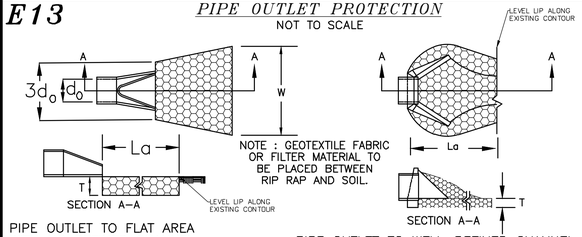
TOPSOIL STOCKPILE MOUND

NOT TO SCALE

E13

PIPE OUTLET PROTECTION

NOT TO SCALE



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

PIPE OUTLET TO WELL-DEFINED CHANNEL

PIPE OUTLET PROTECTION CONSTRUCTION SPECIFICATIONS

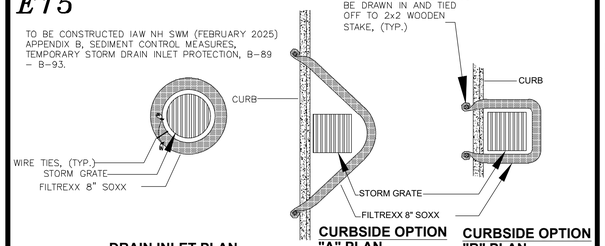
1. THE SUB GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS. SPECIFIED GRADATION.
2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO NHDOT SECTION 583.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE 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.
5. TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX A, STRUCTURAL CONVEYANCE, PERMANENT OUTLET PROTECTION, A-127 – A-131.

E14

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	FEET	6 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3

E15

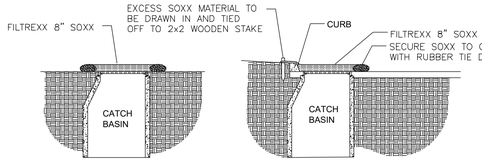
TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, TEMPORARY STORM DRAIN INLET PROTECTION, B-89 – B-93.



DRAIN INLET PLAN

CURBSIDE OPTION "A" PLAN

CURBSIDE OPTION "B" PLAN



DRAIN INLET SECTION

CURBSIDE SECTION

NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX INLET PROTECTION

NOT TO SCALE

NOTE: Temporary seed mix for stabilization of turf shall be winter rye or oats at a rate of 2.5 lbs. per 1000 s.f. and shall be placed prior to OCT. 15, if permanent seeding not yet complete.

NOTE: THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

SEEDING GUIDE

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	FAIR	GOOD	EXCELLENT
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	FAIR	GOOD	GOOD	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	F	FAIR	EXCELLENT	EXCELLENT	2/
	G	FAIR	EXCELLENT	EXCELLENT	2/

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

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE 7-36.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

SEEDING RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH OR FLAT PEA	15	0.35
	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	24	0.55
CREEPING RED FESCUE	24	0.55
BIRDS FOOT TREFOIL	REMOVED	REMOVED
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.70
TOTAL	50	1.15
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

RECOMMENDED

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED.
   WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEED BED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING
   AND INCORPORATED INTO THE SOIL KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE,
   THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
   AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100LBS. PER 1,000 SQ.FT.
   NITROGEN(N), 50LBS. PER ACRE OR 1.1LBS. PER 1,000 SQ.FT.
   PHOSPHATE(P2O5), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   POTASH(K2O), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   (NOTE: THIS IS THE EQUIVALENT OF 500LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000LBS. PER ACRE OF 5-10-10.)
   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT TREFOIL, AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.
6. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, PERMANENT VEGETATION, PAGE 60.

E16

SEEDING SPECIFICATIONS

1. BUTTERFLY MILK WEED IS A REQUIRED ADDITION TO ANY SEEDING DONE ON SITE.

Rain Garden Grass Mix - ERNMX-180-1

	Botanical Name	Common Name	Price/Lb
40.40 %	*Schizachyrium scoparium, Fort Indiantown Gap-PA Ecotype*	Little Bluestem, Fort Indiantown Gap-PA Ecotype	14.65
20.20 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	31.20
20.20 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	10.46
9.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	22.27
5.50 %	*Panicum rigidulum, PA Ecotype*	Redtop Panicgrass, PA Ecotype	72.00
4.00 %	*Chasmanthium latifolium, WV Ecotype*	River Oats, WV Ecotype	96.00
0.50 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	96.00
0.30 %	*Juncus effusus*	Soft Rush	48.00
0.30 %	*Juncus tenuis, PA Ecotype*	Path Rush, PA Ecotype	48.00
100.00 %		**Mix Price/Lb Bulk:**	**$24.82**

Seeding Rate: 15 lb per acre with a cover crop. For sites that drain within 24 hours of a rain event use one of the following cover crops:Oats (1 Jan to 31 Jul; 30 lbs/acre), Japanese Millet (1 May to 31 Aug; 10 lbs/acre), or grain rye (1 Aug to 31 Dec; 90 lbs/acre).

NOTE: TO BE USED FOR RAIN GARDEN

Grasses & Grass-like Species - Herbaceous Perennial; Stormwater Management

Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Retention Basin Floor Mix - Low Maintenance - ERNMX-126

	Botanical Name	Common Name	Price/Lb
20.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	22.08
20.00 %	*Puccinellia distans, Flats*	Alkaligrass, Flats	4.56
18.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	9.95
15.00 %	*Agrostis stolonifera, 'Penncross'*	Creeping Bentgrass, 'Penncross'	14.40
15.00 %	*Poa palustris*	Fowl Bluegrass	16.80
10.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	28.80
1.00 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	81.60
1.00 %	*Juncus effusus*	Soft Rush	48.00
100.00 %		**Mix Price/Lb Bulk:**	**$15.98**

Seeding Rate: 20-40 lbs per acre, or 0.5-1 lb/1,000 sq ft with a cover crop. For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

NOTE: TO BE USED FOR GRAVEL WETLAND

Grasses & Grass-like Species - Herbaceous Perennial; Stormwater Management

The hardy inexpensive grass and grass-like species are ideal for retention basins that may have high salt inflows and where mowing may be required. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

New England Conservation/Wildlife Mix		
Botanical Name	Common Name	Indicator
Elymus virginicus	Virgina Wild Rye	FACW-
Schizachyrium scoparium	Little Bluestem	FACU
Andropogon gerardii	Big Bluestem	FAC
Festuca rubra	Red Fescue	FACU
Sorghastrum nutans	Indian Grass	UPL
Panicum virgatum	Switch Grass	FAC
Chamaecrista fasciculata	Partridge Pea	FACU
Desmodium canadense	Shown Tick Trefoil	FAC
Asclepias tuberosa	Butterfly Milkweed	NI
Bidens frondosa	Beggas Ticks	FACW
Eupatorium purpureum (Eutrochium maculatum)	Purple Joe Pye Weed	FAC
Recbeckia hirta	Black Eyed Susan	FACU-
Aster pilosus (Symphyotrichum pilosum)	Heath (or Hairy) Aster	UPL
Solidago juncea	Early Goldenrod	

CONSERVATION MIX TO BE PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL

E17

CONSTRUCTION SEQUENCE:

1.) CUT AND REMOVE TREES IN CONSTRUCTION AREA ONLY AS REQUIRED, RELOCATE ANY PROJECT T.B.M.

2.) CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS SPECIFIED. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY THE COMMUNITY SERVICES DEPARTMENT.

3.) EROSION, SEDIMENT AND DETENTION CONTROL FACILITY SHALL BE INSTALLED & STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM. TEMPORARY DIVERSIONS MAY BE REQUIRED. POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES MUST BE INITIATED AND STABILIZED EARLY IN THE PROCESS.

4.) CLEAR, CUT AND DISPOSE OF DEBRIS IN APPROVED FACILITY

5.) CONSTRUCT TEMPORARY CULVERTS AS REQUIRED, OR DIRECTED

6.) CONSTRUCT ROADWAYS FOR ACCESS TO DESIRED CONSTRUCTION AREAS. ALL ROADS SHALL BE STABILIZED IMMEDIATELY. CONSTRUCT STORMWATER CONTROL MEASURES.

7.) START BUILDING CONSTRUCTION AND INSTALL PERIMETER FENCE WHERE SHOWN.

8.) INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING.

9.) BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED. NO AREA IS ALLOWED TO BE DISTURBED FOR A LENGTH OF TIME THAT EXCEEDS 45 DAYS BEFORE BEING STABILIZED. DAILY, OR AS REQUIRED. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES.

10.) CONSTRUCT TEMPORARY BERMS, DRAINS DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.

11.) INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. ALL SWPPP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORM WATER INSPECTOR (CESSW), OR A CERTIFIED PROFESSIONAL IN STORM WATER QUALITY (CPSWQ). INSPECTION REPORTS SHALL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT.

12.) COMPLETE PERMANENT SEEDING AND LANDSCAPING.

13.) REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE COMPLETE.

14.) SMOOTH AND REVEGETATE ALL DISTURBED AREAS.

15.) FINISH PAVING ALL ROADWAYS.

E18 *DEFINITION OF STABLE:*

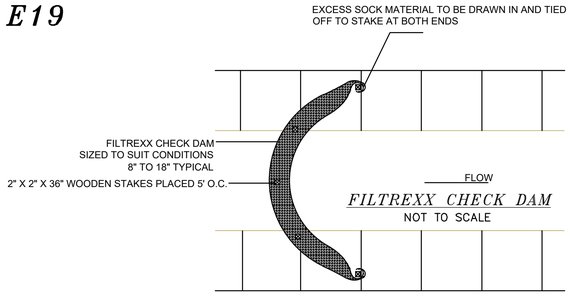
PER ENV-WQ 1500 ALTERATION OF TERRAIN

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

ADDITION STABILIZATION NOTES:

5. HAY MULCH OR OTHER APPROVED METHODS SHALL BE USED TO CONTROL EROSION OF NEWLY GRADED AREAS. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS AFTER THEIR CONSTRUCTION.
6. DISTURBED SOIL AREAS SHALL BE EITHER TEMPORARILY OR PERMANENTLY STABILIZED. IN AREAS WHERE FINAL GRADING HAS NOT OCCURRED, TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN (7) CALENDAR DAYS FOR EXPOSED SOIL AREAS THAT ARE WITHIN ONE HUNDRED (100) FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE (3) CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.

E19



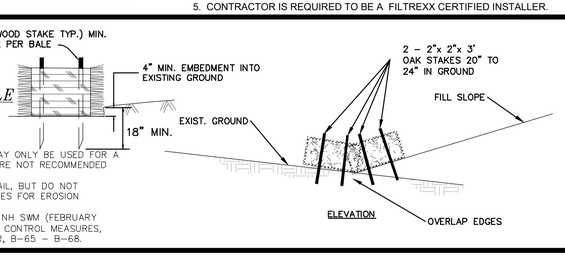
FILTREXX CHECK DAM

NOT TO SCALE

NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. CHECK DAM SHOULD BE USED IN AREAS THAT DRAIN 1 ACRE OR LESS.
3. SEDIMENT SHOULD BE REMOVED FROM BEHIND CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED ½ THE HEIGHT OF THE CHECK DAM.
4. CHECK DAM CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
5. CONTRACTOR IS REQUIRED TO BE A FILTREXX CERTIFIED INSTALLER.

TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, TEMPORARY CHECK DAM, B-69 – B-72.

E20

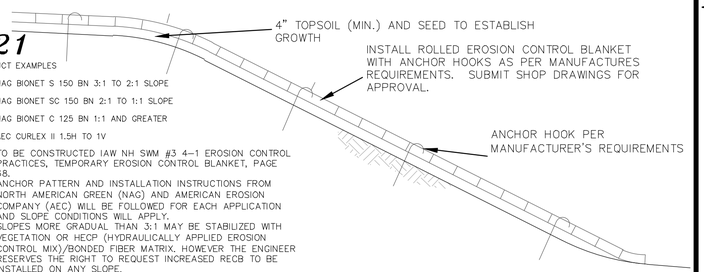


STAKED HAYBALE DETAIL

NOT TO SCALE

1.) HAY BALES BARRIERS MAY ONLY BE USED FOR A MAXIMUM OF 60 DAYS AND ARE NOT RECOMMENDED FOR PERIMETER CONTROL.
2.) REQUIRED TO SHOW DETAIL, BUT DO NOT RECOMMEND USE OF HAY BALES FOR EROSION CONTROL.
3.) TO BE CONSTRUCTED IAW NH SWM (FEBRUARY 2025) APPENDIX B, SEDIMENT CONTROL MEASURES, STRAW OR HAY BALE BARRIER, B-65 – B-68.

E21



PRODUCT EXAMPLES

1.) NAG BIONET S 150 BN 3:1 TO 2:1 SLOPE
2.) NAG BIONET SC 150 BN 2:1 TO 1:1 SLOPE
3.) NAG BIONET C 125 BN 1:1 AND GREATER
4.) AEC CURLEX II 1.5H TO 1V

1. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, TEMPORARY EROSION CONTROL BLANKET, PAGE 68.
2. ANCHOR PATTERN AND INSTALLATION INSTRUCTIONS FROM NORTH AMERICAN GREEN (NAG) AND AMERICAN EROSION COMPANY (AEC) WILL BE FOLLOWED FOR EACH APPLICATION AND SLOPE CONDITIONS WILL APPLY.
3. SLOPES MORE GRADUAL THAN 3:1 MAY BE STABILIZED WITH VEGETATION OR HECP (HYDRAULICALLY APPLIED EROSION CONTROL MIX)/BONDED FIBER MATRIX. HOWEVER THE ENGINEER RESERVES THE RIGHT TO REQUEST INCREASED RECB TO BE INSTALLED ON ANY SLOPE.
4. UNDER SOME CONDITIONS, E.G. WINTER CONSTRUCTION OR RAIN EVENT SATURATION, AREA INTENDED FOR VEGETATION STABILIZATION MAY REQUIRE HAY MULCH OR R.E.C.B. STABILIZATION

ROLLED EROSION CONTROL BLANKET (RECB) SLOPE STABILIZATION DETAIL

NOT TO SCALE

E22 *WINTER STABILIZATION NOTES*

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

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

3. PRIOR TO OCT. 1st ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER OCTOBER 1st, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.

4. AFTER OCTOBER 1st, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEEDED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

E-102

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

EROSION & SEDIMENT CONTROL DETAILS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

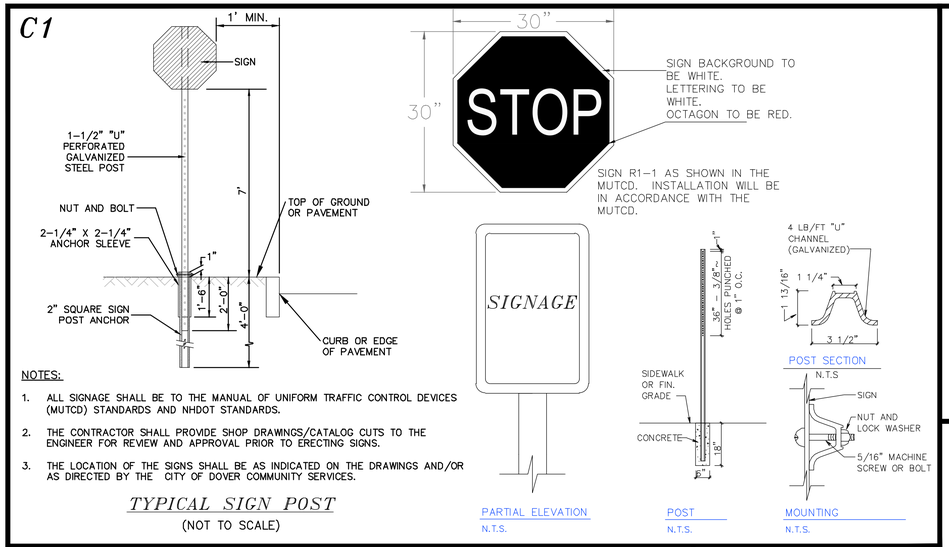
SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

STATE OF NEW HAMPSHIRE — KENNETH A. BERRY No. 14243 — LICENSED PROFESSIONAL ENGINEER

SHEET 28 OF 39

NOT FOR CONSTRUCTION

C1

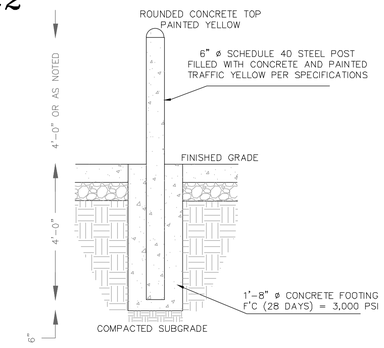


NOTES:

1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.
3. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE CITY OF DOVER COMMUNITY SERVICES.

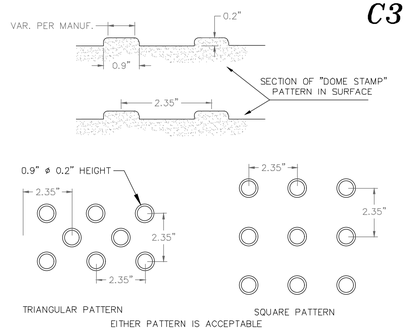
TYPICAL SIGN POST
(NOT TO SCALE)

C2



BOLLARD DETAIL
NOT TO SCALE

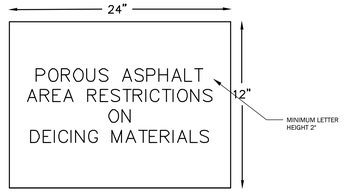
C3



DETECTABLE WARNING SURFACE
NOT TO SCALE

C4

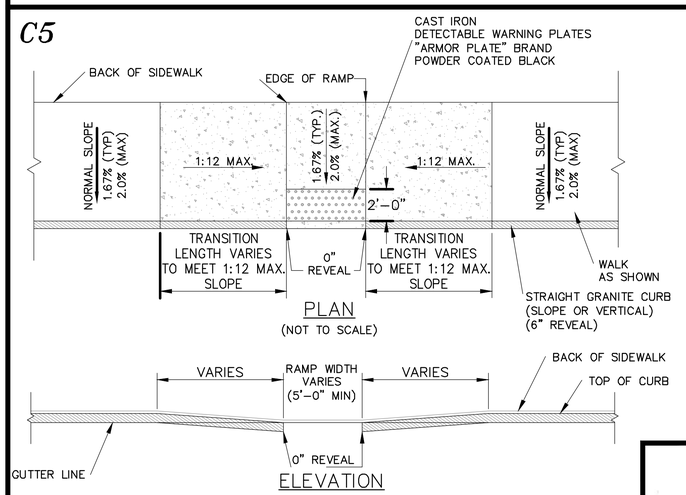
POROUS PAVEMENT SIGN
NOT TO SCALE



NOTES:

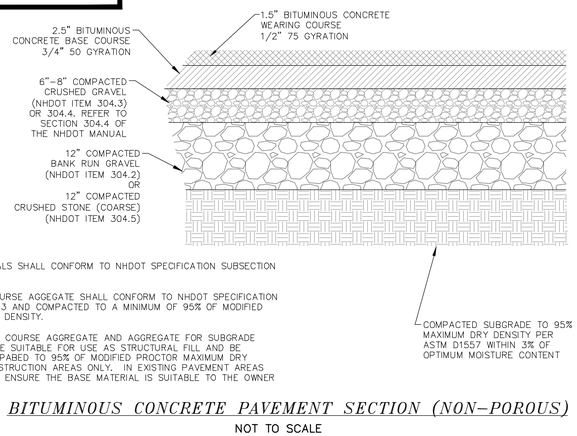
1. SIGN SHALL HAVE BLACK LETTERS ON A WHITE BACKGROUND
2. SIGN SHALL BE WEATHER RESISTANT AND SECURED TO THE GROUND
3. TO BE MOUNTED AT A HEIGHT OF 3'

C5



TYPICAL DETAIL FOR WHEELCHAIR RAMP
NOT TO SCALE

C6



NOTES:

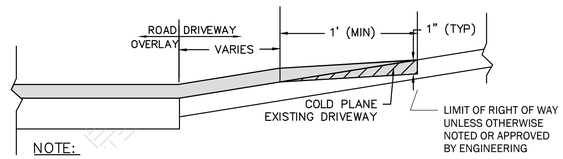
1.) BITUMINOUS MATERIALS SHALL CONFORM TO NHDOT SPECIFICATION SUBSECTION 401.3.6.

2.) PAVEMENT BASE COURSE AGGEGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.

3.) PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOFROLLED AND COMPABED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY. FOR NEW CONSTRUCTION AREAS ONLY. IN EXISTING PAVEMENT AREAS THE CONTRACTOR IS TO ENSURE THE BASE MATERIAL IS SUITABLE TO THE OWNER FOR RE-PAVING

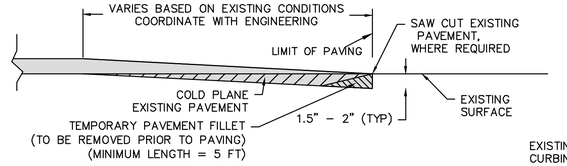
BITUMINOUS CONCRETE PAVEMENT SECTION (NON-POROUS)
NOT TO SCALE

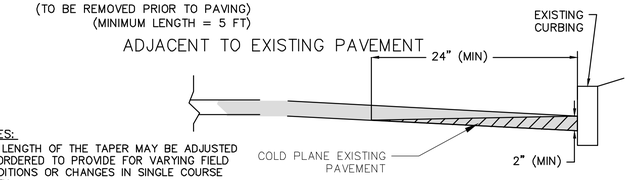
C7



NOTE:
CONTRACTOR MAY SAWCUT DRIVEWAY TRANSITION AT HIS OPTION. PAVEMENT SHALL BE REMOVED AND REPLACED TO MATCH EXISTING.

ADJACENT TO EXISTING DRIVEWAY



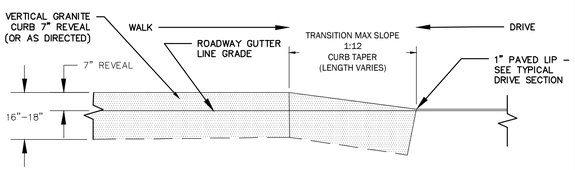


NOTES:

1. THE LENGTH OF THE TAPER MAY BE ADJUSTED AS ORDERED TO PROVIDE FOR VARYING FIELD CONDITIONS OR CHANGES IN SINGLE COURSE DEPTH.

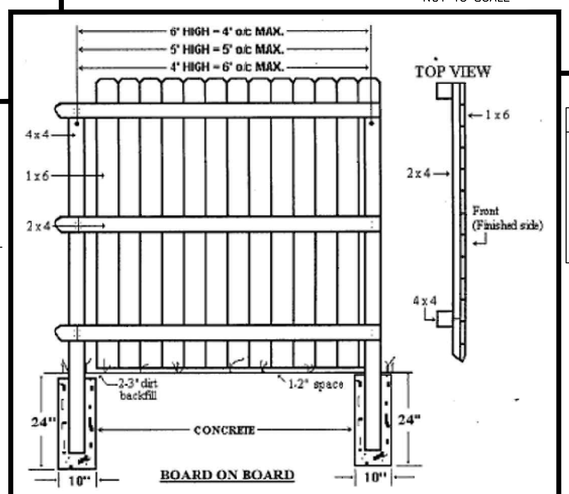
PAVEMENT OVERLAY
NOT TO SCALE

C8



GRANITE CURB TRANSITION AT TIP DOWN DETAIL
NOT TO SCALE
TO BE USED FOR TRANSITION FROM GRANITE CURB TO EDGE OF PAVEMENT

C9



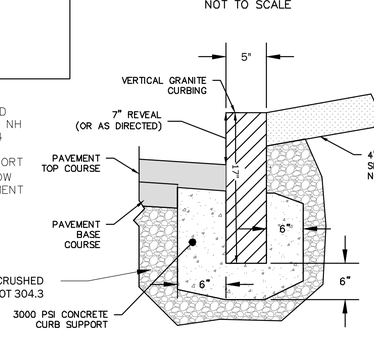
STOCKADE FENCE DETAIL
NOT TO SCALE

C10A

RADIUS	MAX LENGTH
< 21'	USE CURVED CURB
12'	3'
22' - 28'	4'
29' - 35'	5'
36' - 42'	6'
43' - 49'	7'
50' - 56'	8'
57' - 60'	9'
OVER 60'	10'

NOTES:
1.LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.
2. CONCRETE CURB SUPPORT SHOULD BE SET ½" BELOW THE TOP OF THE PAVEMENT BASE COURSE.

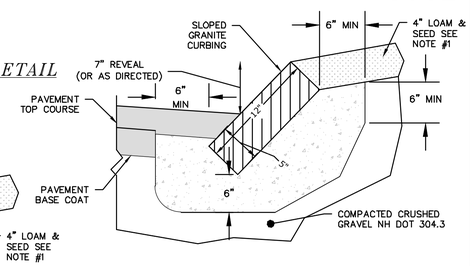
VERTICAL GRANITE CURB DETAIL
NOT TO SCALE



NOTES:
1.LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.
2. CONCRETE CURB SUPPORT SHOULD BE SET ½" BELOW THE TOP OF THE PAVEMENT BASE COURSE.

SLOPE GRANITE CURBDETAIL
NOT TO SCALE

C10B



C-101

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

CONSTRUCTION DETAILS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

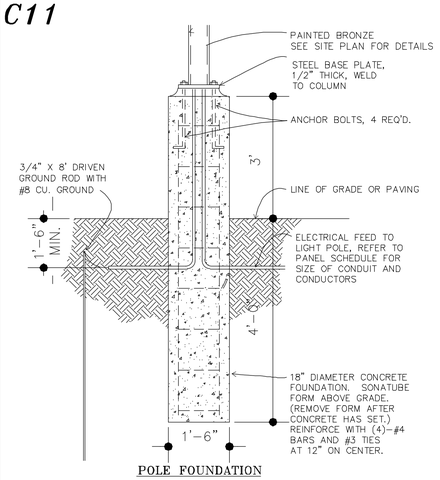
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

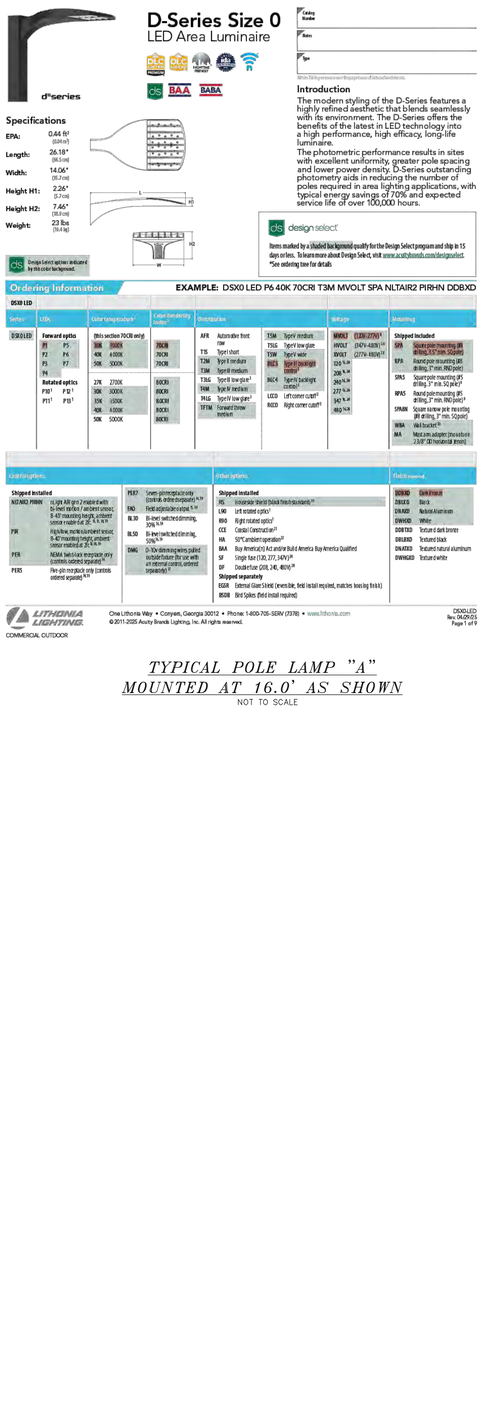
NOT FOR CONSTRUCTION

C11



LIGHT BASE DETAIL
NOT TO SCALE

C12

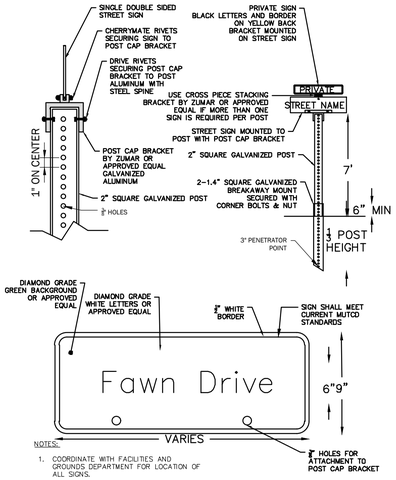


TYPICAL POLE LAMP "A"
MOUNTED AT 16.0' AS SHOWN
NOT TO SCALE

C13

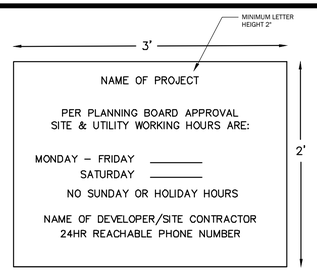
TYPICAL RESIDENTIAL LAMP "B"
MOUNTED AT 8' +/- AS SHOWN
NOT TO SCALE

C14



STREET SIGN
NOT TO SCALE

C15



NOTES:
1. SIGN SHALL HAVE BLACK LETTERS ON A WHITE BACKGROUND
2. SIGN SHALL BE WEATHER RESISTANT AND SECURED TO THE GROUND
3. HOURS ON THE SIGN SHALL COMPLY WITH ALL PLANNING BOARD CONDITIONS OF APPROVAL.
4. TO BE PLACED AT THE INTERSECTION OF OLD ROCHESTER ROAD/MILLWRIGHT DRIVE.

REQUIRED PROJECT INFORMATION SIGN
NOT TO SCALE

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

CONSTRUCTION DETAILS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

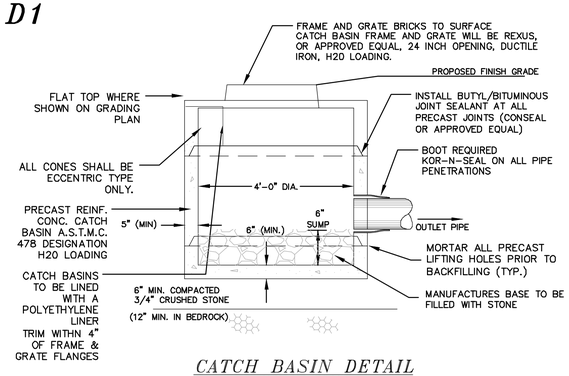
SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 14241 LICENSED PROFESSIONAL ENGINEER

C-102

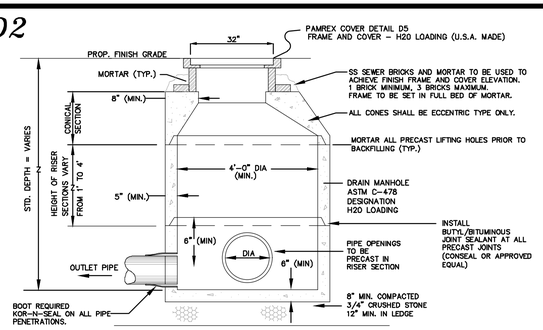
NOT FOR CONSTRUCTION

D1



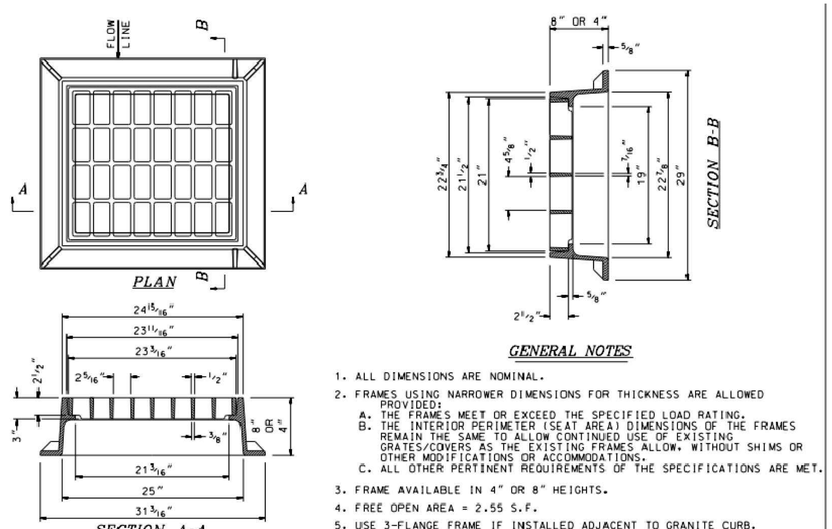
CATCH BASIN DETAIL
NOT TO SCALE

D2



PRECAST DRAIN MANHOLE DETAIL
NOT TO SCALE

D3



GENERAL NOTES

1. ALL DIMENSIONS ARE NOMINAL.
2. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
   A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
   B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW. WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
   C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
3. FRAME AVAILABLE IN 4" OR 8" HEIGHTS.
4. FREE OPEN AREA = 2.55 S.F.
5. USE 3-FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.

NHDOT STANDARD PLANS	REV. DATE		PLATE
TYPE "B" GRATE & FRAME	06-16-2010		2
	08-14-2015		STANDARD
			DR-1

CATCH BASIN GRATE (TYPE "B")
NOT TO SCALE

D4

CONE GRATE
NOT TO SCALE

NOTE:
MUST BE HAALA INDUSTRIES INC. OR EQUAL.

Cone Grates Top Mount

CG12TM
Part No. CG12TM

Save Trees

Top Mount Cone Grates are designed to mount on the top of round manhole inlet or outlet structures to keep debris from entering the storm water system. Top mount cone grates are easy to install and allow for at grade manhole installations but can be used in a variety of applications. Grates 96" and larger are made as a two piece, bolt together design.

- Plate and bar hybrid design is both clean and cost effective
- Made from 1/2" plate with 3/4" or 1" round bars depending on grate size
- Anti vortex plate can be added upon request
- Hinged and lockable access doors can be added upon request
- Galvanized steel construction. Can be made from aluminum or stainless steel.

D5

ANGLE GRATE
NOT TO SCALE

MUST BE HAALA INDUSTRIES INC. OR EQUAL.

Angle Grates For Manholes

AG0808-58
Part No. AG0808-58

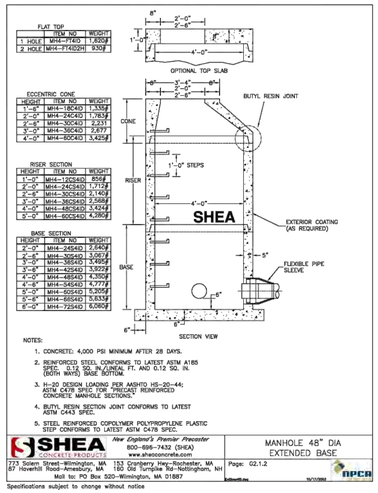
Save Trees

Angle Grates are designed to cover inlet orifices and prevent small to medium debris from passing through. The top angled design helps to minimize the amount of debris that settles on top after the water receeds. All grates are made from plate for a clean and smooth contact surface.

- Plate design for a clean appearance
- Standard 2" openings (other sizes can be made)
- Angled top/front plate to maximize debris deflection
- Mounting flanges on 3 sides allows grate to be mounted at floor level inverts
- Galvanized steel construction. Can be made from aluminum or stainless steel.

D6

48" MANHOLE ROUND EXTENDED BASE
NOT TO SCALE



D7

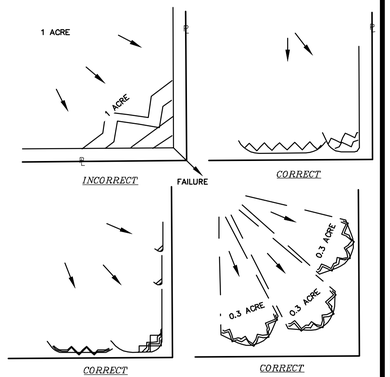
PERIMETER CONTROL
NOT TO SCALE

DESIGN CONSITERATIONS:

1. THE MAXIMUM LENGTH OF SLOPE ABOVE PERIMETER CONTROL IS 100 FEET.
2. SILT FENCE OR SILT SOXX REQUIRED WHEN UPGRADIENT DISTURBED SOIL IS GREATER THAN 5% (50% SLOPE MAX). MULCH BERM CAN BE USED WHEN THE UPGRADIENT DISTURBED SOIL IS 5% OR LESS.
3. THE MAXIMUM CONTRIBUTING DRAINAGE AREA OF ONE-QUARTER ACRE PER 100-FEET OF PRACTICE LENGTH.
4. PERIMETER CONTROL IS TO BE INSTALLED PRIOR TO EARTH MOVING ACTIVITIES, INCLUDING GRUBBING AND CLEARING.

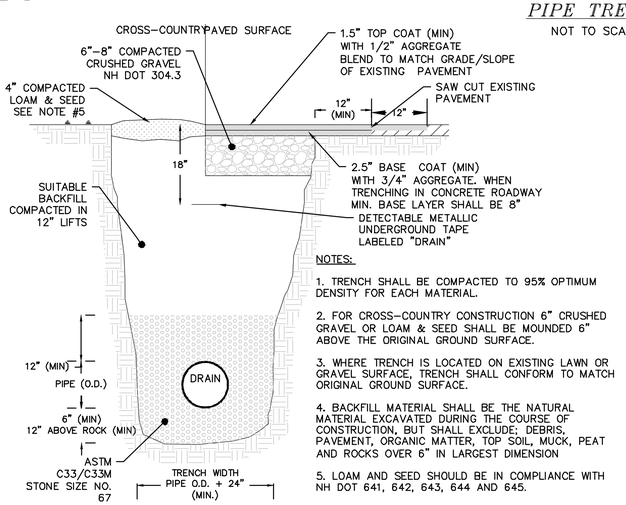
NOTES

1. DO NOT LAYOUT PERIMETER CONTROL ALONG SLOPING PROPERTY PERIMETER WITHOUT INSTALLING "J HOOKS" AT HIGH CONCENTRATION AREAS. RUNOFF WILL CONCENTRATE AND CAUSE FAILURES ALONG THE PERIMETER.
2. "J HOOKS" CAN BE USED TO HELP LIMIT THE CONCENTRATION OF RUNOFF AND PROVIDE MORE STABILITY TO THE PERIMETER.
3. SILT FENCE AND EROSION CONTROL MULCH BERM MAY BE USED INTERCHANGEABLY. IN SPECIFIED AREA, SILT FENCE MAY NOT BE SUBSTITUTED FOR FILTREXX SILT SOXX OR APPROVED ALTERNATIVE.
4. SEE HAMPSHIRE STORM WATER MANUAL: VOLUME 3, PAGE 99 FOR FURTHER DETAILS AND SPECIFICATIONS



D8

TYPICAL DRAIN PIPE TRENCH
NOT TO SCALE



NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT AND ROCKS OVER 6" IN LARGEST DIMENSION
5. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

D9

DRAIN MANHOLE COVER DETAIL
NOT TO SCALE

DRAIN MANHOLE FRAME AND GRATE WILL BE LIFTMATE R-1743-LM, OR APPROVED EQUAL, 32 INCH OPENING, CAST IRON, H20 LOADING.

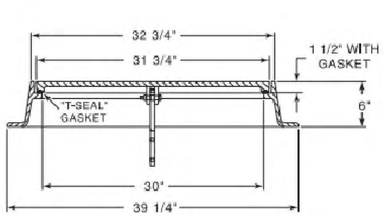
R-1743-LM
LiftMate Frame, Solid Gasketed Lid

Heavy Duty

Furnished with four 1" anchor holes on 36-7/8" diameter bolt circle.

Hinge plug available for self-seal application.

See p. 13 for LiftMate information.



REFERENCE IS MADE TO A LONG TERM MAINTENANCE MANUAL PREPARED BY BERRY SURVEYING & ENGINEERING, WHICH IS ON FILE AT THE CITY OF DOVER PLANNING DEPARTMENT, AND CAN BE FOUND AT THE OFFICE OF BERRY SURVEYING & ENGINEERING. (603) 332-2863

D-101

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

CITY OF DOVER PLANNING FILE #SITE-2025-0010

DRAINAGE CONSTRUCTION DETAILS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 36, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 36, LOT 72

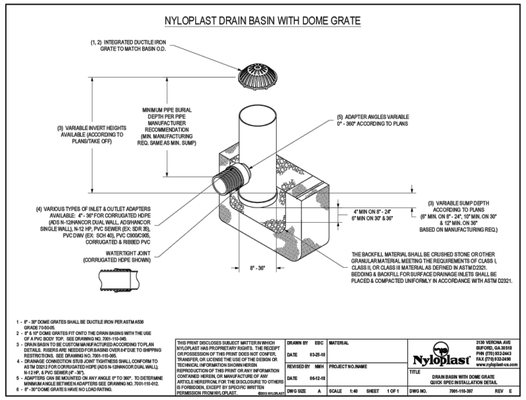
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 10613 LICENSED PROFESSIONAL ENGINEER

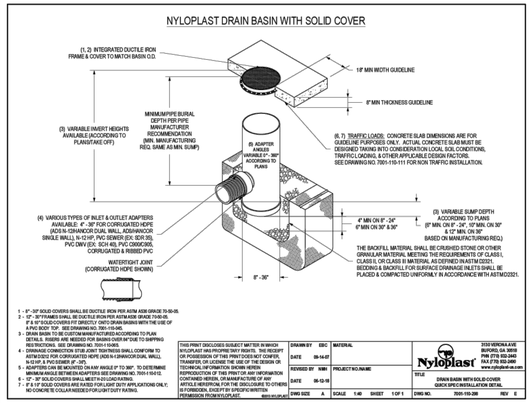
NOT FOR CONSTRUCTION

D10



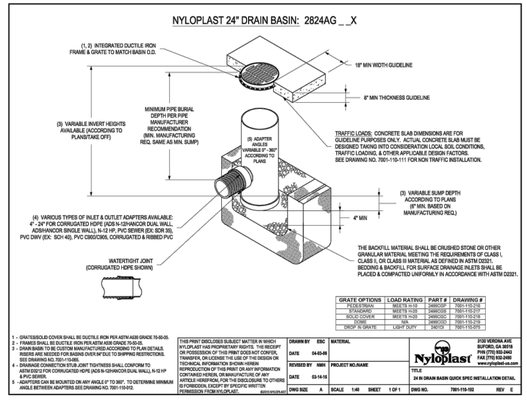
NYLOPLAST DOME GRATE
NOT TO SCALE

D11



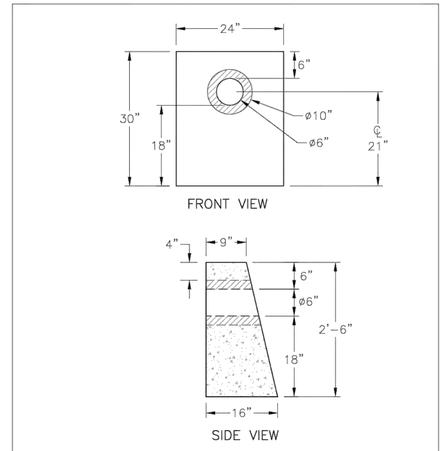
NYLOPLAST SOLID COVER
NOT TO SCALE

D12



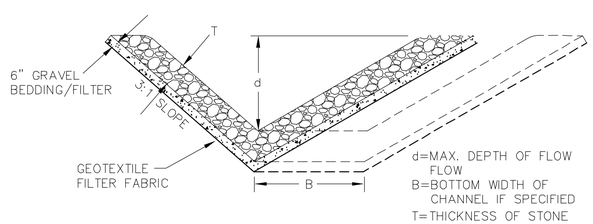
24" NYLOPLAST DRAIN BASIN
NOT TO SCALE

D13



UNDERDRAIN HEADWALL
NOT TO SCALE

D14

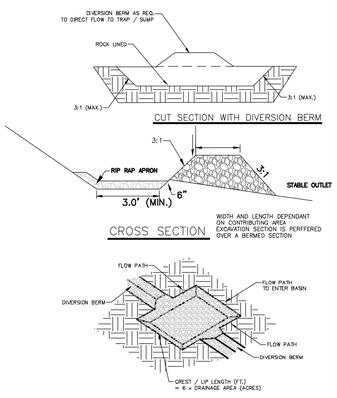


TYPICAL SECTION FOR A RIPRAP LINED CHANNEL
NOT TO SCALE

D16

1. TRAP TO BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
5. THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
6. THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

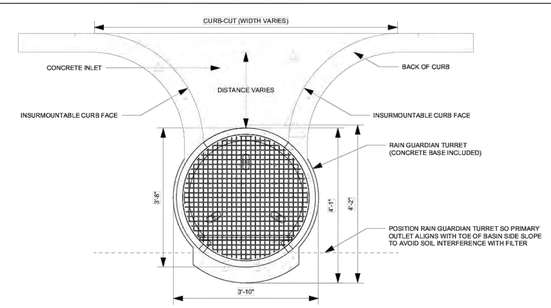
SIEVE DESIGNATION	SIZE OF STONE (INCHES)
100%	12
84-100%	6
68-83%	3
42-55%	1
8-12%	NO. 4



STONE LINED SEDIMENT TRAP
NOT TO SCALE

D15

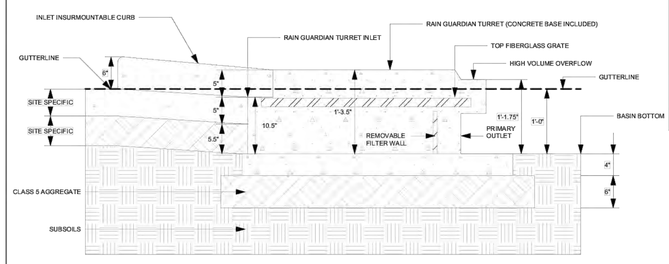
PLAN VIEW



PLAN VIEW NOTES
1. INLET WIDTH AND DISTANCE BETWEEN BACK OF CURB AND RAIN GUARDIAN TURRET MAY VARY WITH SITE CONDITIONS.
2. CONCRETE BASE EXTENDS BEYOND THE FILTER WALL OF THE RAIN GUARDIAN TURRET TO SERVE AS A SPLASH DISSIPATOR.

3D VIEWS

ELEVATION VIEW



ELEVATION VIEW NOTES
1. THE TOP OF THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR) IS PRECISELY 1'-4" BELOW THE GUTTERLINE ELEVATION.

SPECIFICATIONS

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (1,030 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (5% TO 8.5% BY VOLUME). MANUFACTURED AND DESIGNED TO ASTM C858.

2. THREE-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.

3. FIBERGLASS TOP GRATE (32 LBS, 1-1/2" THICK) - 1,760 LB CONCENTRATED LOAD OR 409 LB/SQ-FT UNIFORM LOAD.

INSTALLATION NOTES

1. INSTALL THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN TURRET. POSITION RAIN GUARDIAN TURRET SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. EXCAVATE 1' 10" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 1' PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN TURRET BASE (INCLUDED). THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1' 4" BELOW THE GUTTERLINE ELEVATION. THE INLET TO THE RAIN GUARDIAN TURRET WILL BE 10-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN TURRET.

2. SET RAIN GUARDIAN TURRET ON THE PREPARED CLASS 5 BASE.

3. INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN TURRET AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN TURRET ON THE BIORETENTION SIDE.

4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN TURRET AND CONCRETE INLET BEFORE POURING INLET.

5. SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.

6. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC ON THE INTERIOR SIDE OF THE RAIN GUARDIAN TURRET.

RAIN GUARDIAN
U.S. PATENT NOS. 8,501,016 AND 8,858,804
PRETREATMENT FOR BIORETENTION
Rain Gardens • Swales • Filtration Basins • Infiltration Basins
www.RainGuardian.biz

RAIN GUARDIAN TURRET
PRETREATMENT CHAMBER
BIORETENTION PONDING DEPTH: 1'
TYPICAL DETAIL

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
A	MDH	11/16/2022	TURRET - 1'
SCALE		VARIABLE	
U.S. PATENT NOS.		8,501,016 AND 8,858,804	

DEVELOPED BY: ANOKA CONSERVATION DISTRICT
MANUFACTURED BY: Stoneworks ARCHITECTURAL PRECAST / CAST STONE
NATIONAL PRECAST CONCRETE ASSOCIATION CERTIFIED PLANT

RAIN GUARDIAN TURRET DETAIL
NOT TO SCALE

REFERENCE IS MADE TO AN INSPECTION & MAINTENANCE MANUAL PREPARED BY BERRY SURVEYING & ENGINEERING, WHICH IS ON FILE AT THE CITY OF DOVER PLANNING DEPARTMENT, AND CAN BE FOUND AT THE OFFICE OF BERRY SURVEYING & ENGINEERING. (603) 332-2863

D-102

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
1		7-30-25	REVISED PER TRC #1 COMMENTS

DRAINAGE CONSTRUCTION DETAILS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES
141 SIXTH STREET, DOVE
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVE
TAX MAP 35, LOT 72

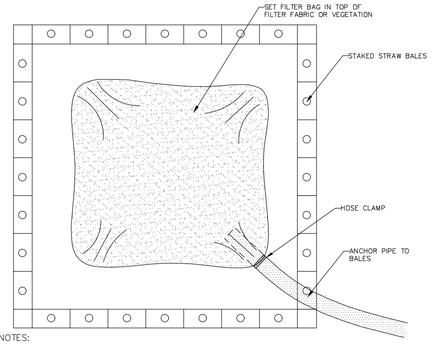
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863
SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

KENNETH A. BERRY No. 14043 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

SHEET 32 OF 39

NOT FOR CONSTRUCTION

D17



NOTES:

1.) ENSURE DISCHARGE POINT IS STABILIZED WITH VEGETATION OR PROPER EROSION AND SEDIMENT CONTROL PRACTICES.

2.) USE DIFFUSER NOZZLE OR LOW DISCHARGE RATE TO PREVENT SCOURING.

3.) TO BE PLACED AT AN UPLAND LOCATION THAT WILL ALLOW WATER TO DRAIN INTO THE GROUND.

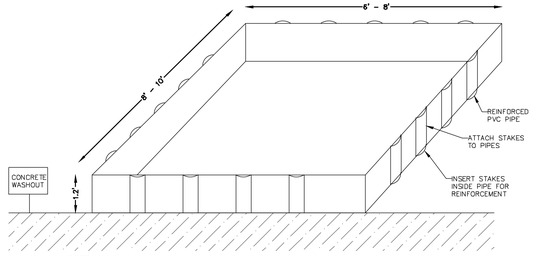
4.) SIZE OF DE-WATERING AREA TO BE 10' X 10', ADJUST SIZE DEPENDING ON VOLUME AND USE.

5.) ADDITIONAL BALES MAY BE USED TO INCREASE RETENTION AND FILTERING.

DE-WATERING BASIN

NOT TO SCALE

D18



NOTES:

1.) CONCRETE WASHOUT SHALL BE INSTALLED PRIOR TO ANY CONCRETE POURS.

2.) SIGNS SHALL BE INSTILLED TO CLEARLY INDICATE WHERE THE LOCATION OF THE WASHOUT AREA IS.

3.) CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND REPLACE WASHOUT AREA AS NEEDED.

4.) RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

5.) DO NOT WASH CONCRETE TRUCKS OUT INTO DRAINAGE AREAS, SWALES, STREETS OR UNDISTURBED AREAS.

6.) WASHOUT AREA SHALL BE PLACED AWAY FROM DRAINAGE FEATURES AND OUTSIDE AND WETLAND BUFFERS.

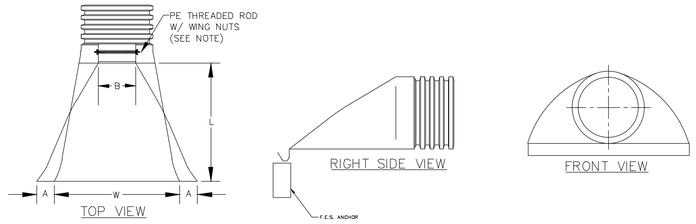
CONCRETE WASHOUT

NOT TO SCALE

D19

PART No.	PIPE SIZE	A	B(MAX)	H	L	W
1510-NP	15" 375 mm	6.5" 165 mm	10" 254 mm	6.5" 165 mm	25" 635 mm	29" 735 mm
1810-NP	18" 450 mm	7.5" 190 mm	15" 380 mm	6.5" 165 mm	32" 812 mm	35" 890 mm
2410-NP	24" 600 mm	7.5" 190 mm	18" 450 mm	6.5" 165 mm	36" 900 mm	45" 1140 mm
3010-NP	30" 750 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm
3610-NP	36" 900 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm

NOTE: PE THREADED ROD W/ WING NUTS PROVIDED FOR END SECTIONS 15"-24". 30" & 36" END SECTIONS TO BE WELDED PER MANUFACTURER'S RECOMMENDATIONS.



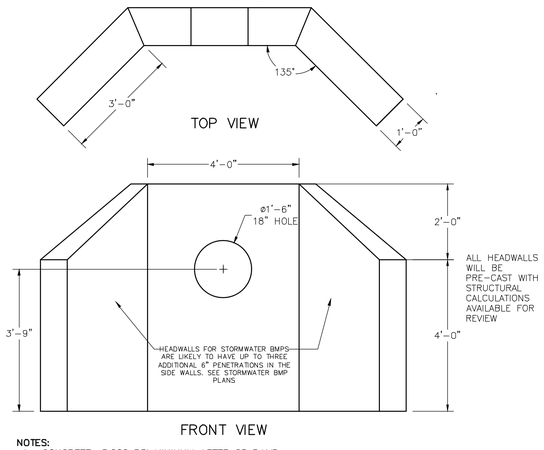
ADS N-12 FLARED END SECTIONS

NOT TO SCALE (ALL DIMENSIONS ARE NOMINAL)

D20

HEADWALL (CONCRETE)

NOT TO SCALE



NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

DRAINAGE CONSTRUCTION DETAILS
FOR: THE STABLE COMPANIES
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BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

REFERENCE IS MADE TO AN INSPECTION & MAINTENANCE MANUAL PREPARED BY BERRY SURVEYING & ENGINEERING, WHICH IS ON FILE AT THE CITY OF DOVER PLANNING DEPARTMENT, AND CAN BE FOUND AT THE OFFICE OF BERRY SURVEYING & ENGINEERING. (603) 332-2863

STATE OF NEW HAMPSHIRE — KENNETH A. BERRY No. 14241 LICENSED PROFESSIONAL ENGINEER

D-103

NOT FOR CONSTRUCTION

U1a

NOTES ON MANHOLE AND SEWER CONSTRUCTION:

1) IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY 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 AND ADEQUATE JOINTING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND HS-20-44 LOADING, INCLUDING THE COVER. ALL SMH CONSTRUCTION AND MATERIALS WILL BE IAW ENV.-WQ 704.13 ADOPTED OCTOBER 15, 2014

2) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE. (IAW ENV.-WQ 704.12 (d))

3) SEWER MANHOLE DIAMETER SHALL BE AS INDICATED ON THE PLANS.

4) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.

5) GRAVITY SEWER PIPE TESTING WILL BE IN ACCORDANCE WITH ENV.-WQ 704.06 AND MAN HOLE TESTING IAW ENV.-WQ 704.17 DATED OCTOBER 15, 2014.

6) INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. INVERT BRICKS SHALL BE LAID ON EDGE AND THE BASE SECTION SHALL BE FULL. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. CARE SHALL BE TAKEN TO ENSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. 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. (IAW ENV.-WQ 704.13 (a) (9)), MORTAR SHALL CONFORM WITH REQUIREMENTS OF IAW ENV.-WQ 704.13 (c). SEE ALSO DETAIL U6 SPECIFICATIONS AND TESTING.

FRAMES AND COVERS: MANHOLES FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. 3-INCH (MINIMUM HEIGHT) LETTERS WITH THE WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH MANHOLE COVER. (IAW ENV.-WQ 704.13 (a) (4-6)) SEWER MAN HOLE COVERS ARE TO BE LIFTMATE R-1743-LM.

7) PER ENV-WQ 704.12(M), MANHOLES MUST BE CAPABLE OF SUPPORTING HS-20 LOADS.

8) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE DOVER DPW, WHICH TYPE SHALL IN GENERAL DEPEND FOR WATERTIGHTNESS UPON A DOUBLE ROW OF AN OVERLAPPING TYPE ELASTOMERIC OR MASTIC-LIKE GASKET. APPROVED ELASTOMERIC SEALANTS ARE: RAM-NEK, KENT SEAL NO. 2, EZ, OR EQUAL.

9) IN CROSS COUNTRY AREAS OUTSIDE OF THE PAVED ROADWAY SURFACE, THE MANHOLE FRAME ELEVATION SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE. GRADE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE MANHOLE. SEE TYPICAL TRENCH DETAIL ON U10S.

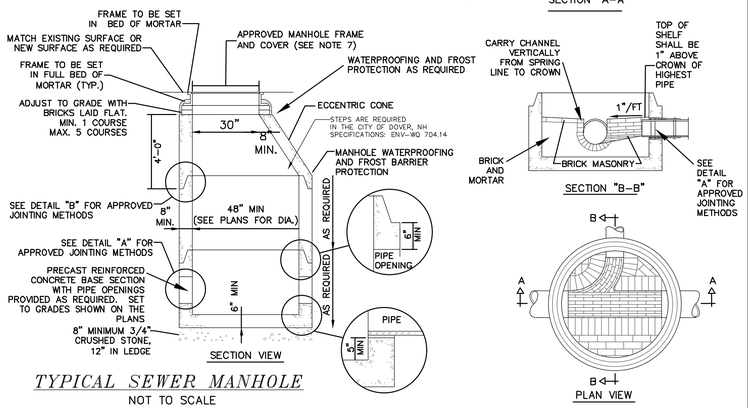
11.) ALL FRAMES AND GRATES ARE TO BE U.S.A. MADE. MANHOLE STEPS ARE REQUIRED IN THIS MUNICIPALITY AND MUST CONFORM TO THE REQUIREMENTS OF ENV-WQ 704.14. STEPS ARE TO BE PLASTIC.

12.) THE CONTRACTOR TO WORK WITH CITY OF DOVER REVIEW ENGINEER AND SEWER DEPARTMENT ON THE MEANS AND METHODS USED TO INSTALL ALL SEWER STRUCTURES.

13.) ANY WORK INVOLVING THE CUTTING INTO THE EXISTING A.C. PIPE SHALL MEET THE REQUIREMENTS OF ENV-A 1800.

14.) THE "CITY OF DOVER, NEW HAMPSHIRE, DEPARTMENT OF COMMUNITY SERVICES, CONSTRUCTION GUIDELINES, PERMITS, RULES, AND REGULATIONS" (DATED MARCH 13, 2018) ARE A PART OF THE CONSTRUCTION DETAILS AND TO BE FOLLOWED.

15.) MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST IN ACCORDANCE WITH THE ASTM C1244 STANDARD AND ENV-WQ 704.17. SEE ALSO DETAIL U6 SPECIFICATIONS AND TESTING.

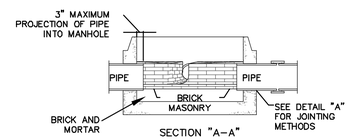


TYPICAL SEWER MANHOLE

NOT TO SCALE

BRICK MAXONRY SHELF DETAIL U1b

NOT TO SCALE



SECTION "A-A"

SECTION "B-B"

PLAN VIEW

U2

R-1743-LM

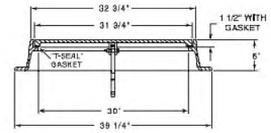
LiftMate Frame, Solid Gasketed Lid

Heavy Duty

Furnished with four 1" anchor holes on 36-7/8" diameter bolt circle.

Hinge plug available for self-seal application.

See p. 13 for LiftMate information.

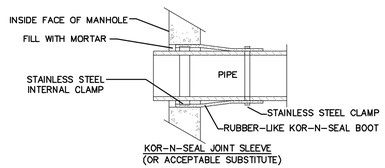


SEWER MANHOLE FRAME AND GRATE WILL BE LIFTMATE R-1743-LM, OR APPROVED EQUAL, 32 INCH OPENING, CAST IRON, H20 LOADING.

SEWER MANHOLE COVER DETAIL

NOT TO SCALE

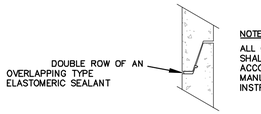
U3



ALL GASKETS, SEALANTS, MORTAR, ETC... SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS

DETAIL "A" - PIPE TO MANHOLE JOINTS

NOT TO SCALE

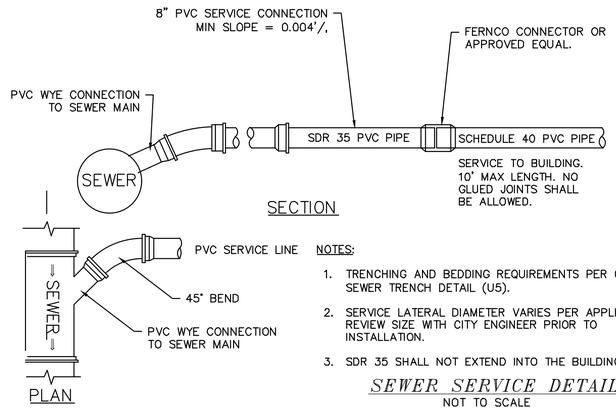


NOTE:
ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

DETAIL "B" HORIZONTAL JOINTS

NOT TO SCALE

U4



SECTION

PLAN

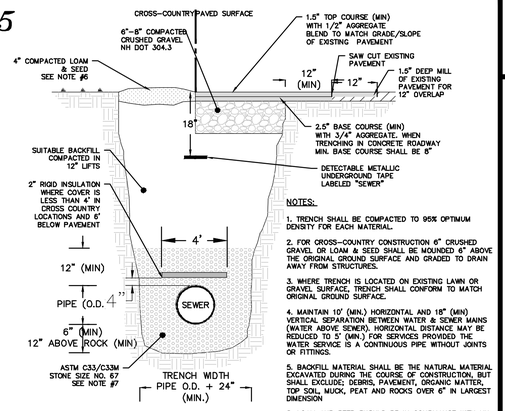
NOTES:

1. TRENCHING AND BEDDING REQUIREMENTS PER CITY SEWER TRENCH DETAIL (U5).
2. SERVICE LATERAL DIAMETER VARIES PER APPLICATION. REVIEW SIZE WITH CITY ENGINEER PRIOR TO INSTALLATION.
3. SDR 35 SHALL NOT EXTEND INTO THE BUILDING

SEWER SERVICE DETAIL

NOT TO SCALE

U5



NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE AND GRADED TO DRAIN AWAY FROM STRUCTURES.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT AND ROCKS OVER 6" IN LARGEST DIMENSION
6. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.
7. SEWER TRENCH CONSTRUCTION SHALL CONFORM WITH ENV-WQ 704.11. THE PIPE SAND SAND BLANKET MATERIAL SHALL BE GRADED SAND FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100 PERCENT PASSES A 1/2-INCH SIEVE AND MAXIMUM OF 15 PERCENT PASSES A #200 SIEVE.

TYPICAL SEWER PIPE TRENCH

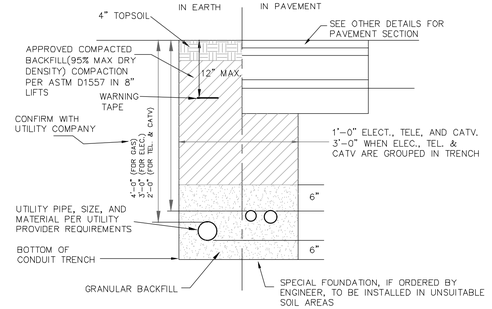
NOT TO SCALE

U6

NOTES:

1. BRICK SHELF CONSTRUCTION DETAIL.
   BRICK MASONRY FOR SHELF, INVERT, AND GRADE ADJUSTMENTS SHALL BE CERTIFIED BY ITS MANUFACTURER AS COMPLYING WITH THE ASTM C32 STANDARD IN EFFECT AT THE TIME THE BRICK IS MANUFACTURED FOR GRADE SS HARD BRICK.
2. MANHOLE DETAIL:
   A. BASE SECTIONS SHALL BE MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE CROWN OF THE INCOMING PIPE.
   B. ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING PER ENV-WQ 704.12(J).
3. GRAVITY SEWER PIPE MATERIAL SPECIFICATIONS:
   A. PLASTIC GRAVITY SEWER PIPE AND FITTINGS SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH ASTM D3034 FOR 8-INCH THROUGH 15-INCH SDR 35 PVC PIPE. PLASTIC SEWER PIPE SHALL HAVE A PIPE STIFFNESS RATING OF AT LEAST 46 POUNDS PER SQUARE INCH AT 5 PERCENT PIPE DIAMETER DEFLECTION, AS MEASURED BY THE MANUFACTURER IN ACCORDANCE WITH THE ASTM D2412 STANDARD IN EFFECT WHEN PIPE WAS MANUFACTURED. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM D3212 STANDARD IN EFFECT WHEN THE JOINT SEALS WERE MANUFACTURED, AND SHALL BE PUSH-ON, BELL-AND-SPIGOT TYPE.
4. GRAVITY SEWER PIPE TESTING REQUIREMENTS PER ENV WQ 704.06:
   A. ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTS.
   B. LOW-PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH THE FOLLOWING TESTING STANDARDS IN EFFECT AT THE TIME THE TEST IS CONDUCTED:
      ASTM F1417 'STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR'; AVAILABLE AS NOTED IN APPENDIX D; OR
      UNI-BELL PVC PIPE ASSOCIATION UNI-B-6, 'LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE', AVAILABLE AS NOTED IN APPENDIX D.
   C. ALL NEW GRAVITY SEWERS SHALL BE:
      CLEANED AND VISUALLY INSPECTED USING A LAMP TEST AND BY INTRODUCING WATER TO DETERMINE THAT THERE IS NO STANDING WATER IN THE SEWER; AND
      TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
   D. ALL PLASTIC SEWER PIPE SHALL BE VISUALLY INSPECTED, AND DEFLECTION TESTED NOT LESS THAN 30 DAYS NOR MORE THAN 90 DAYS FOLLOWING INSTALLATION.
   E. THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% PERCENT OF AVERAGE INSIDE DIAMETER. A ROD BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95% OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.
5. MANHOLE TESTING REQUIREMENTS PER ENV-WQ 704.17:
   A. MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST IN ACCORDANCE WITH ASTM C1244. THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
      THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES HG; AND
      THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1-INCH HG PRESSURE DROP TO 9 INCHES HG SHALL BE:
      NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
      NOT LESS THAN 2.5 MINUTES FOR MANHOLES TO 10 TO 15 FEET DEEP; AND
      NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP;
   B. THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED.

U7



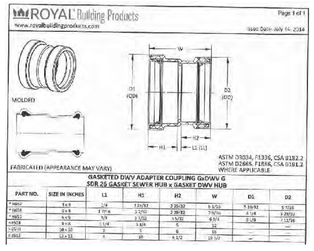
CONTRACTOR IS REQUIRED TO INSTALL ALL CONDUIT PER THE UTILITY COMPANY SPECIFICATIONS INCLUDING METAL SWEEPS, SERVICES AND BLANKS

CONTRACTOR TO COORDINATE WITH UTILITY COMPANY AND PROVIDE EXCAVATION AND BACKFILL FOR PIPE INSTALLATION

ELECTRICAL, TELEPHONE, CATV & GAS TRENCH

NOT TO SCALE

U8

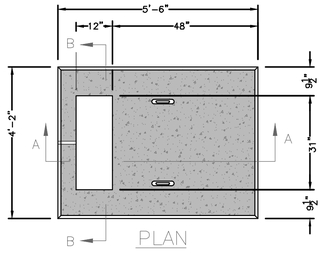


PART NO.	SIZE IN INCHES	L1	H1	H2	W	D1	D2
* 4800	4 x 4	3/4	1 13/32	2 29/32	5 13/32	4 19/32	5 1/32
* 4850	5 x 5	3 7/16	2 1/32	2 29/32	7 9/16	5 1/8	6 29/32
* 4860	6 x 6	3/4	2 3/32	3 5/32	8 3/4	6 1/8	7 13/16
* 4880	8 x 8	1 1/4	3 3/4	5	11	—	—
* 48100	10 x 10	1	5	6 1/2	13	—	—
* 48112	12 x 12	1	6	8 1/2	15 1/2	—	—

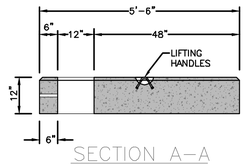
COUPLING DETAIL

NOT TO SCALE

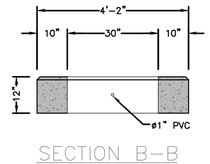
U9



PLAN



SECTION A-A



SECTION B-B

NOTES:

1. CONCRETE MINIMUM STRENGTH 4,000 PSI AFTER 28 DAYS
2. REINFORCEMENT STEEL CONFORMS TO ASTM A615 GRADE 60 #6 REBAR.
3. MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS.
4. MUST BE A SHEA CONCRETE PRODUCT OR EQUAL.

TRANSFORMER AND PAD DETAIL

NOT TO SCALE

U-101

CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
#1		7-30-25	REVISED PER TRC #1 COMMENTS

UTILITY CONSTRUCTION DETAILS

FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

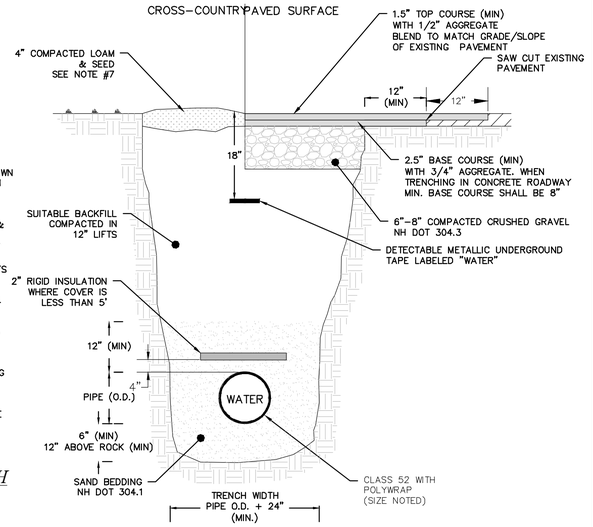
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE — KENNETH A. BERRY No. 14241 — LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

U10



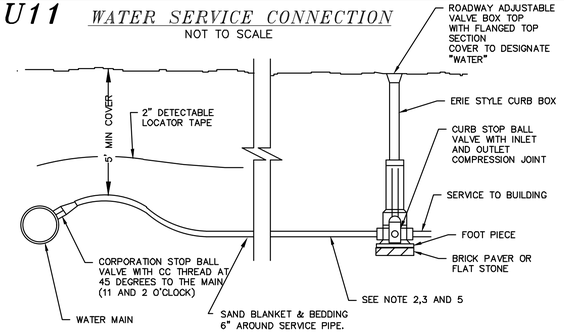
NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE AND GRADED TO DRAIN AWAY FROM STRUCTURES.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT, AND ROCKS OVER 6" IN LARGEST DIMENSION
6. PROVIDE MINIMUM 5' OF COVER. ENGINEERING APPROVAL REQUIRED FOR LESS THAN 5' OF COVER.
7. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

WATER PIPE TRENCH
NOT TO SCALE

U11 *WATER SERVICE CONNECTION*

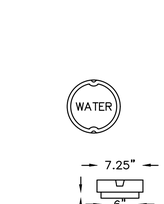
NOT TO SCALE



NOTES:

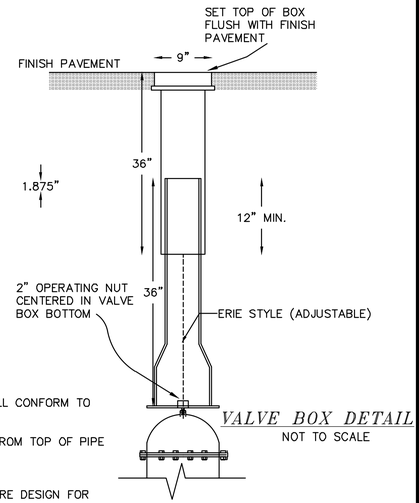
1. ALL WATER LINES 4" OR GREATER SHALL BE DUCTILE IRON WITH A ZINC COATED 8 MIL POLYETHYLENE WRAP, INCLUDING TEE AND OTHER CONNECTIONS.
2. WATER SERVICE LINES SHALL BE COPPER TUBING (TYPE K) BETWEEN MAIN AND CURB STOP.
3. SERVICE BETWEEN CURB STOP AND BUILDING MAY BE (BLUE OR BLACK) CTS SDR 9 PLASTIC POLYETHYLENE RATED FOR 250 psi.
4. CAM-LOCK REQUIRED FOR CTS OR IPS, MJ ADAPTER REQUIRED FOR HDPE
5. ALL SERVICES SHALL BE 1". PROVIDE 1" TO 3/4" REDUCER COUPLING WHERE EXISTING SERVICES ARE 3/4", SUBSIDIARY.
6. APPROVED WATER SERVICE MATERIALS INCLUDE:
   1"- COPPER, CTS
   2"- CTS, HDPE, IPS
7. ALL SADDLES USED AS SPECIFIED SHALL HAVE DOUBLE STAINLESS STEEL STRAPS.
8. TAPS TO BE MADE AT APPROX. 2:00 AND 10:00.

U12



DROP STYLE COVER

NOTE: COVER MUST BE MARKED "WATER"

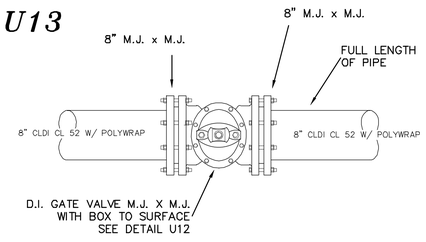


VALVE BOX DETAIL
NOT TO SCALE

NOTES:

1.) ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO LOCAL WATER WORKS TECHNICAL SPECIFICATIONS.
2.) ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3.) ALL VALVES ARE TO OPEN LEFT
4.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

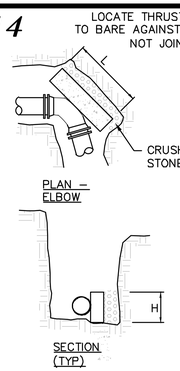
U13

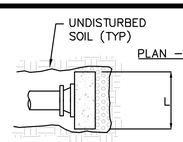


SHUTOFF VALVE DETAIL
NOT TO SCALE

1.) ALL VALVES ARE TO OPEN LEFT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

U14





PLAN - CAP

THRUST BLOCK SCHEDULE
MINIMUM BEARING AREA (SQUARE FEET)

Nominal Dia. (in)	PIPE SIZE 4	6	8	10	12	16
Pipe Fittings	*	*	5.18	7.96	11.43	20.29
90 Degree Bends	*	4.11	7.33	11.26	16.17	28.69
45 Degree Bends	*	*	*	6.10	8.75	15.53
22-1/2 Degree Bends	*	*	*	*	4.46	7.92
11-1/4 Degree Bends	*	*	*	*	*	*

*SEE NOTE 2

SYSTEM PRESSURE: 125 PSI
SAFETY FACTOR: 1.5
SOIL BEARING CAPACITY: 2,000 PSF

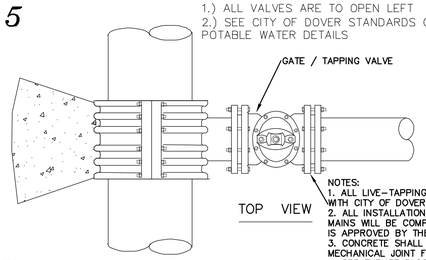
NOTES:

1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED, ANY BEARING AREA OVER 4SF REQUIRES THRUST BLOCKS, RESTRAINED JOINTS AND CALCULATIONS ASSOCIATED WITH THE JOINT.
3. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
4. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
5. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
6. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA.
7. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
8. USE OF THRUST BLOCKS DOES NOT ELIMINATE THE REQUIREMENT OF OTHER RESTRAINTS OR VICE VERSA.

THRUST BLOCKS

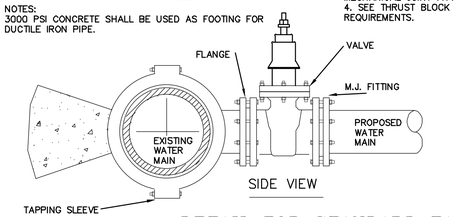
U15

1.) ALL VALVES ARE TO OPEN LEFT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS



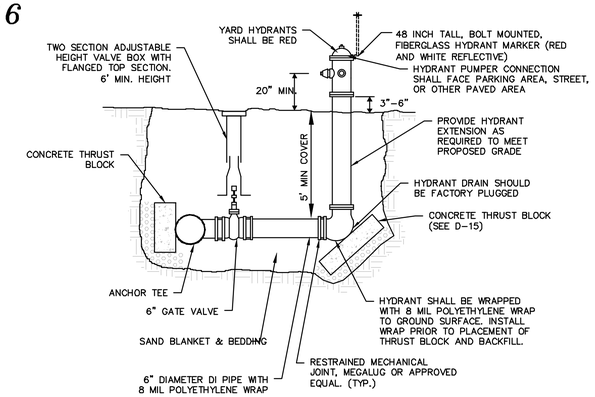
NOTES:
1. ALL LIVE-TAPPING WILL BE COMPLETED IN ACCORDANCE WITH CITY OF DOVER WATER DEPARTMENT REGULATIONS.
2. ALL INSTALLATION AND TAPPING OF EXISTING WATER MAINS WILL BE COMPLETED BY AN INDIVIDUAL OR FIRM THAT IS APPROVED BY THE CITY OF DOVER ENGINEERING
3. CONCRETE SHALL NOT CONTACT BOLTS OR END OF MECHANICAL JOINT FITTINGS.
4. SEE THRUST BLOCK TABLES FOR AREA OF CONCRETE REQUIREMENTS.

NOTES:
3000 PSI CONCRETE SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE.



DETAIL FOR STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY
NOT TO SCALE

U16



NOTES:

1. FIRE HYDRANTS SHALL BE FACTORY SEALED EDDY STYLE 2641.
2. HYDRANT SHALL BE PAINTED RED WITH EPOXY PAINT AS RECOMMENDED BY THE HYDRANT MANUFACTURER.
3. HYDRANT SHALL OPEN LEFT.
4. HYDRANT MARKER TO BE 3/8" FIBERGLASS RODS BY E-ZGUIDE PRODUCTS OR APPROVED EQUAL.
5. PIPE BEDDING AND BLANKET SHALL MEET THE STANDARD WATER TRENCH DETAIL D-4.

FIRE HYDRANT
NOT TO SCALE

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

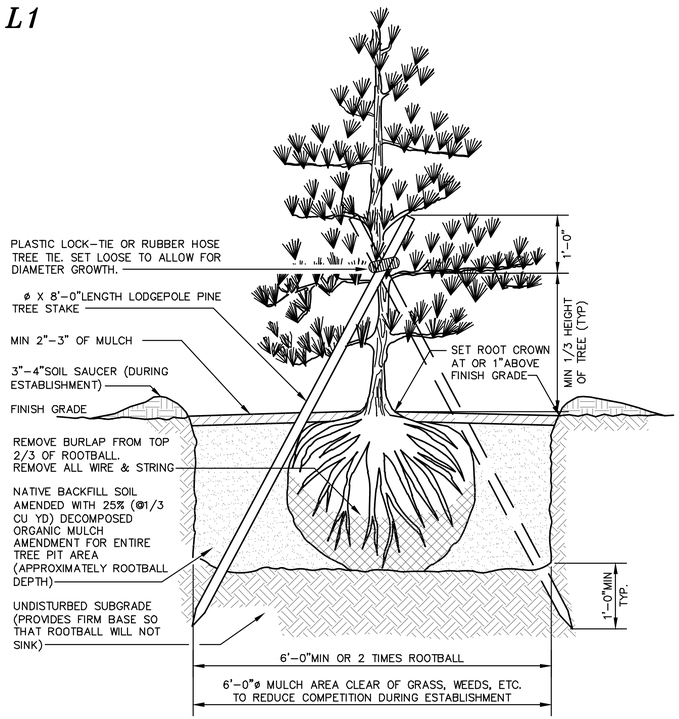
SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 10613 LICENSED PROFESSIONAL ENGINEER

U-102

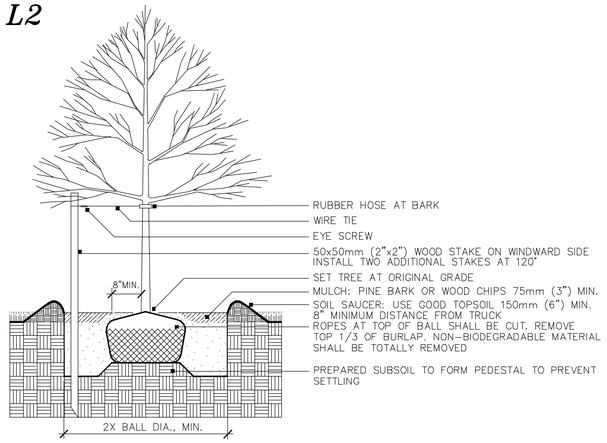
NOT FOR CONSTRUCTION

L1



CONIFEROUS TREE PLANTING

L2



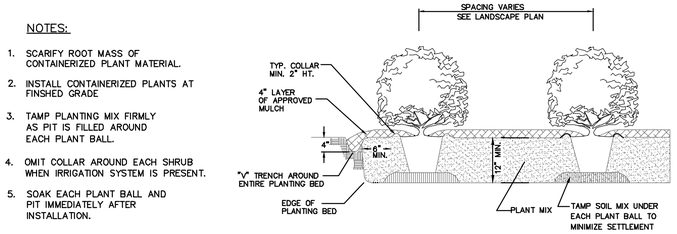
DECIDUOUS TREE PLANTING

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

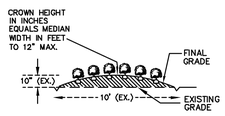
L3

NOTES:

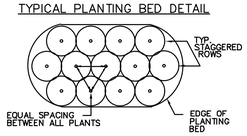
1. SCARIFY ROOT MASS OF CONTAINERIZED PLANT MATERIAL.
2. INSTALL CONTAINERIZED PLANTS AT FINSHED GRADE
3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
4. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
5. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



TYPICAL PLANTING BED DETAIL



TYPICAL BED CROWNING

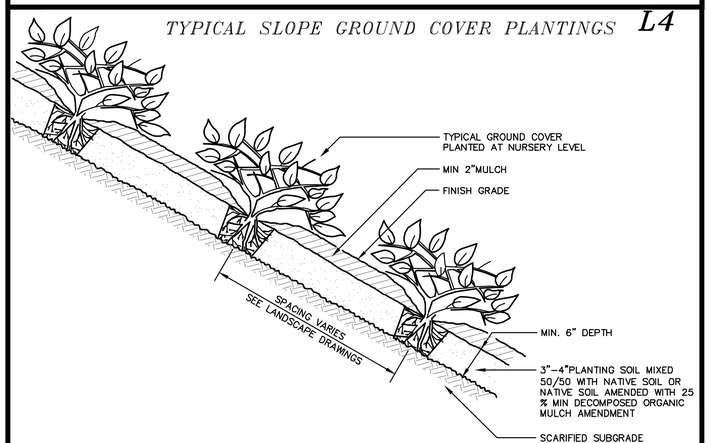


TYPICAL PLANTING BED PLAN

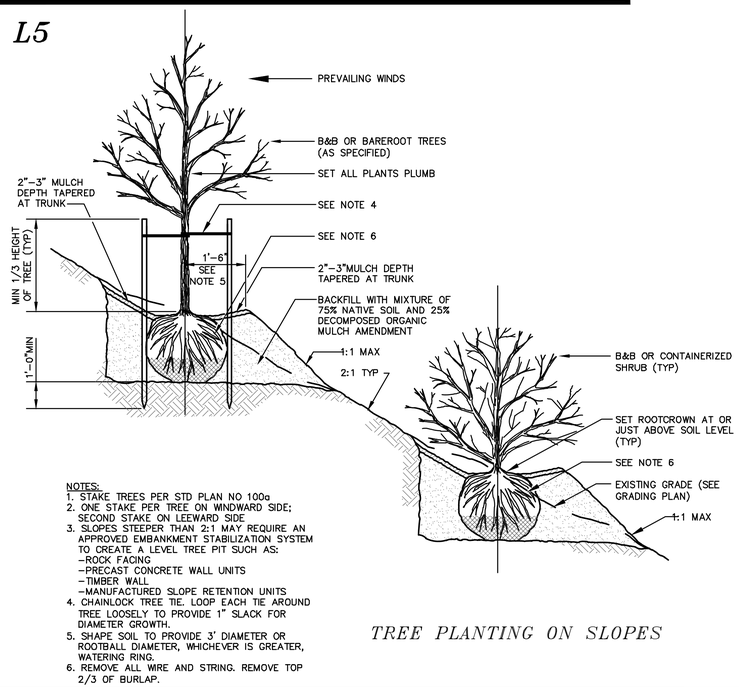
SHRUB & HEDGE PLANTING

L4

TYPICAL SLOPE GROUND COVER PLANTINGS



L5



NOTES:
1. STAKE TREES PER STD PLAN NO 100a
2. ONE STAKE PER TREE ON WINDWARD SIDE; SECOND STAKE ON LEEWARD SIDE
3. SLOPES STEEPER THAN 2:1 MAY REQUIRE AN APPROVED EMBANKMENT STABILIZATION SYSTEM TO CREATE A LEVEL TREE PIT SUCH AS:
   - -ROCK FACING
   - -PRECAST CONCRETE WALL UNITS
   - -TIMBER WALL
   - -MANUFACTURED SLOPE RETENTION UNITS
4. CHAINLOCK TREE TIE. LOOP EACH TIE AROUND TREE LOOSELY TO PROVIDE 1" SLACK FOR DIAMETER GROWTH.
5. SHAPE SOIL TO PROVIDE 3' DIAMETER OR ROOTBALL DIAMETER, WHICHEVER IS GREATER, WATERING RING.
6. REMOVE ALL WIRE AND STRING. REMOVE TOP 2/3 OF BURLAP.

TREE PLANTING ON SLOPES

L6

NOTES:

1.) CALL DIG SAFE PRIOR TO BEGINNING WORK. (1-888-344-7233). THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF THE SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER OR GENERAL CONTRACTOR.

2.) CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.

3.) PROVIDED SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.

4.) ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

5.) ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS AND DISEASE.

6.) ALL PLANTINGS SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM OWNER.

7.) ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.

8.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND NEWLY PLANTED TREES AND SHRUBS DURING THE CONSTRUCTION PROCESS. WHERE REQUIRED, THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING (SNOW OR EQUAL) AROUND EXISTING TREES AND SHRUBS THAT COULD BE IMPACTED BY THE CONSTRUCTION PROCESS. STORAGE OF CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS, SNOW STORAGE AND OR VEHICLE PARKING SHALL NOT BE PERMITTED WITHIN THE DRIP LINE OF TREES OR TWENTY FEET WHICH EVER IS GREATER.

9.) NEW PLANTINGS SHALL BE INSTALLED PER PROJECT DRAWINGS AND SPECIFICATION THAT INCLUDE FERTILIZATION AND MULCHING AS REQUIRED.

10.) ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH.

11.) WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.

12.) MAINTENANCE OF NEW PLANTINGS AND LAWNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND OR LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE OWNER. RESPONSIBILITIES SHALL INCLUDE WATERING WEEDING AND MOWNG AS NECESSARY. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, REPLACEMENT MATERIAL SHALL BE GUARANTEED FOR AND ADDITIONAL YEAR FROM TIME OF INSTALLATION.

13.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL MEASURES DURING THE CONSTRUCTION PHASE AND UNTIL ALL AREAS HAVE BEEN STABILIZED AND ACCEPTED BY THE OWNER. THE GENERAL CONTRACTOR SHALL PROVIDE WEEKLY INSPECTIONS OF EROSION MEASURE AND IMMEDIATELY AFTER STORM EVENTS AND REPAIR AS NECESSARY.

14.) THE GENERAL CONTRACTOR AND OR THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL THREE GUYING MATERIAL ONCE PLANT MATERIAL HAS BEEN ESTABLISHED. (MINIMUM OF ONE GROWNG SEASON). ALL TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE STABILIZATION OF DISTURBANCE HAS BEEN ACCEPTED BY OWNER.

15.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF TWO MOWINGS FOR ALL TURF AREAS OR UNTIL ACCEPTANCE BY THE OWNER. A MINIMUM UNIFORM 75% CATCH OF TURF IS REQUIRED FOR ACCEPTANCE.

16.) ALL PLANTINGS SHALL BE WATERED REGULARLY DURING THEIR FIRST YEAR AND MAINTAINED PERMANENTLY IN GOOD GROWING CONDITION AS AN EFFECTIVE VISUAL SCREEN.

17.) SHRUBS OR TREES WHICH DIE SHALL BE REPLACED WITHIN ONE GROWING SEASON WITH NEW SHRUBS OR TREES TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE LANDSCAPING REQUIREMENTS.

18.) ALL REQUIRED LANDSCAPING SHALL BE INSTALLED BEFORE OCCUPANCY, OR WITHIN SIX MONTHS IF OCCUPANCY OCCURS DURING WINTER CONDITIONS.

19.) TREES ARE TO BE 3.5" CALIPER 6" OFF THE ROOT BALL.

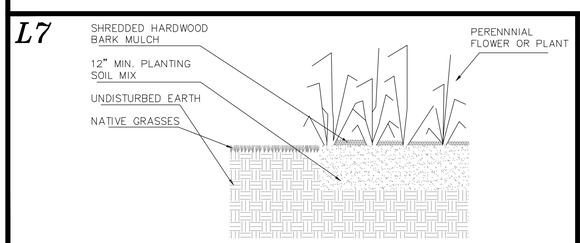
20.) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITIONS (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)

21.) 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUND COVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.

22.) PLANT-PIT BACK-FILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PARTS OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON-SITE TOPSOIL AS PART OF BACK FILL WHEN AVAILABLE.

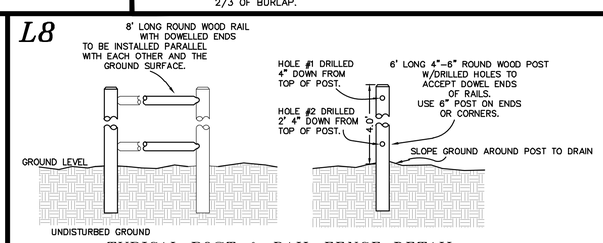
23.) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.

L7



PERENNIAL PLANTING DETAIL

L8



TYPICAL POST & RAIL FENCE DETAIL

NOT TO SCALE

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

LANDSCAPING CONSTRUCTION DETAILS

FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

SCALE : AS SHOWN
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

L-101

NOT FOR CONSTRUCTION

AMERICAN BUMBLE BEE

IDENTIFICATION/DESCRIPTION:

BOMBUS PENSYLVANICUS IS A LARGE BUMBLE BEE WITH THE QUEEN MEASURING 1 IN, THE WORKER FROM 0.5 IN, AND THE MALE FROM 0.75 IN IN LENGTH. THE QUEEN IS MOSTLY BLACK, INCLUDING THE LEGS, SPURS AND TEGULAE (BASE OF WING). TERGITE 1, OR THE MOST ANTERIOR BACK PORTION OF THE QUEEN IS OFTEN YELLOW ESPECIALLY IN THE MIDDLE. WORKER BEES' MIDDLE TERGITES ARE YELLOW, THE TAIL BLACK, AND FACE LONG. THEIR CHEEKS ARE SLIGHTLY LONGER THAN BROAD, AND THE CLYPEUS (NOSE) HAS LARGE PUNCTURES EXCEPT ON THE MID LINE. THE HAIR ON THE TOP OF THE HEAD IS BLACK, SHORT AND EVEN. MALES HAVE A YELLOW ABDOMEN WITH A BLACK HEAD AND BLACK STRIPING IN THE LOWER THORAX.

NORTHERN LONG-EARED BAT

IDENTIFICATION/DESCRIPTION:

THE NORTHERN LONG-EARED BAT IS A MEDIUM-SIZED BAT WITH A BODY LENGTH OF 3 TO 3.7 INCHES BUT A WINGSPAN OF 9 TO 10 INCHES. THEIR FUR COLOR CAN BE MEDIUM TO DARK BROWN ON THE BACK AND TAWNY TO PALE-BROWN ON THE UNDERSIDE. AS ITS NAME SUGGESTS, THIS BAT IS DISTINGUISHED BY ITS LONG EARS, PARTICULARLY AS COMPARED TO OTHER BATS IN ITS GENUS, MYOTIS

NORTHERN BLACK RACER

IDENTIFICATION/DESCRIPTION:

A SLENDER BLACK SNAKE MEASURING 36-60 INCHES. BLACK RACERS ARE GLOSSY BLACK ON THE TOP AND BOTTOM WITH A WHITE THROAT AND CHIN. YOUNG RACERS ARE PATTERNED WITH BROWN OR REDDISH PATCHES ON A LIGHTER BASE OF GRAY.

SMOOTH GREEN SNAKE

IDENTIFICATION/DESCRIPTION:

A THIN, SLENDER BRIGHT-GREEN SNAKE MEASURING 10-20 INCHES. THE UNDERSIDE IS WHITE OR A PALE YELLOW.

LITTLE BROWN BAT

IDENTIFICATION/DESCRIPTION:

THE LITTLE BROWN BAT IS A SMALL MAMMAL WITH A BODY LENGTH OF 2 1/2 – 4" AND WEIGHING APPROXIMATELY 1/8 TO 1/2 AN OUNCE. THE WINGSPAN OF LITTLE BROWN BATS RANGE FROM 9 – 11". BATS ARE THE ONLY MAMMALS THAT ENGAGE IN TRULY ACTIVE FLIGHT, AS THEIR NAME SUGGESTS THEY ARE GLOSSY BROWN ABOVE WITH A LIGHTER GRAY COLOR BELOW. THESE BATS CAN LIVE 20 TO 30 YEARS.

TRI-COLORED BAT

IDENTIFICATION/DESCRIPTION:

THE TRICOLORED BAT, FORMERLY KNOWN AS THE EASTERN PIPISTRELLE (PIPISTRELLUS SUBFLAVUS), IS A SMALL BAT WEIGHING 0.2 TO 0.3 OUNCES (5 TO 8 GR) AND HAS A WINGSPAN OF 8 TO 10 INCHES. THE TERM "TRICOLORED" REFERS TO THE BAT'S YELLOWISHBROWN COAT THAT IS DARK AT THE BASE, YELLOWISH-BROWN IN THE MIDDLE, AND DARK AT THE TIPS. THE WING MEMBRANES ARE BLACKISH, BUT THE FACE AND EARS HAVE A PINKISH COLOR. AN OBVIOUS IDENTIFYING CHARACTERISTIC OF THIS SPECIES IS THE PINK COLOR OF THE SKIN ON THE RADIUS BONE. THE FEET ARE ALSO RELATIVELY LARGE COMPARED TO ITS BODY SIZE.

EASTERN SMALL-FOOTED BAT

IDENTIFICATION/DESCRIPTION:

THE EASTERN SMALL-FOOTED BAT HAS BROWNISH FUR, OFTEN WITH A GOLDEN SHEEN, THAT CONTRASTS WITH ITS BLACKISH FACE AND EARS, AND BLACKISH-BROWN WINGS AND TAIL MEMBRANE. IT CAN BE DISTINGUISHED FROM OTHER MYOTIS SPECIES BY ITS BLACK MASK AND SMALL SIZE. THE BODY IS LITTLE MORE THAN 3½ INCHES LONG, INCLUDING A 1½-INCH TAIL. ITS SMALL FEET, WHICH PROVIDE THE COMMON NAME, ARE LESS THAN A HALF-INCH AND ITS WINGSPAN RANGES FROM 8¼ TO 9¾ INCHES. THIS SPECIES FLIES SLOWLY AND ERRATICALLY, USUALLY ABOUT ONE TO THREE YARDS ABOVE THE GROUND.

SILVER HAIRED BAT

IDENTIFICATION/DESCRIPTION:

THE SILVER-HAIRED BAT IS A MEDIUM-SIZED BAT WITH VERY DARK FUR TIPPED WITH SILVER OR WHITE. THE WINGS AND TAIL MEMBRANE ARE BLACK. EARS ARE SHORT AND ROUND WITH A SHORT, BLUNT-TIPPED TRAGUS. THE DORSAL SURFACE OF THE TAIL MEMBRANE IS PARTIALLY FURRED AND THE CALCAR LACKS A KEEL

Wood Turtle

New Hampshire State Species of Special Concern

Contact NHFG Wildlife Biologists (grout text preferred) if observed within your project site:
Melissa Winters 603-479-1129 and Josh Megyesy 978-578-0802

- Turtles may be attracted to disturbed ground during nesting season (May 15th – June 30th)
- Turtles are most active from April 15th - October 15th

Identifying traits

- Neck and forelimbs are orange.
- Characterized by its highly sculpted shell with each large scute taking on an irregular pyramidal shape.
- Adults can be 5-8 inches long.

Habitat Use

- wooded areas near streams
- uplands surrounding streams

NOTE: It is illegal to remove a wood turtle from the wild.

Immediately report nesting turtles, suspected nesting turtles or suspected nest sites to NHFG Wildlife Biologists.

All other observations of this species shall be reported to NH Fish & Game via email at NHFGReview@wildlife.nh.gov. Include in the email subject line: NHBxx-xxxx, Project name, Wildlife Observation". *Photo documentation, location and date/time of observation is helpful.*

State laws pertaining to this species RSA 207:1, FIS 804.02, Fis 1401.03 (a)

WATCH FOR RARE TURTLES

NHFG Wildlife Biologist Contacts:
Melissa Winters 603-479-1129 and Josh Megyesy 978-578-0802

- Turtles may be attracted to disturbed ground during nesting season (May 15th – June 30th).
- Turtles are most active from April 15th - October 15th.

Blanding's turtle (State Endangered)
Large, dark/black domed shell with lighter speckles.

Distinct yellow throat/chin.

Semi-aquatic- uses both wetland and terrestrial habitats.

Spotted turtle (State Threatened)

Small, mostly aquatic with black or dark brown with yellow spots.

Fairly flat shell compared to Blanding's turtle.

Spots vary in color and number.

Semi-aquatic - uses both wetland and terrestrial habitats.

Blanding's and spotted turtles are protected by state laws. It is illegal to capture, harass or harm these species, including their nests. Handle ONLY if necessary to move out of harms way. Move to the nearest location in the direction they were moving and contact NHFG. Do not disturb nests.

Report sightings in accordance with NHFG permit conditions. Contact NHFG Wildlife Biologist Melissa Winters 603-479-1129 (cell) and Josh Megyesy 978-578-0802 (group text preferred) if a turtle is observed nesting or a nest site is suspected within the project area. Please report promptly, noting specific location, project site and date – Photographs strongly encouraged to be included with report.

W-101

CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

WILDLIFE IDENTIFICATION PLAN
FOR: THE STABILE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

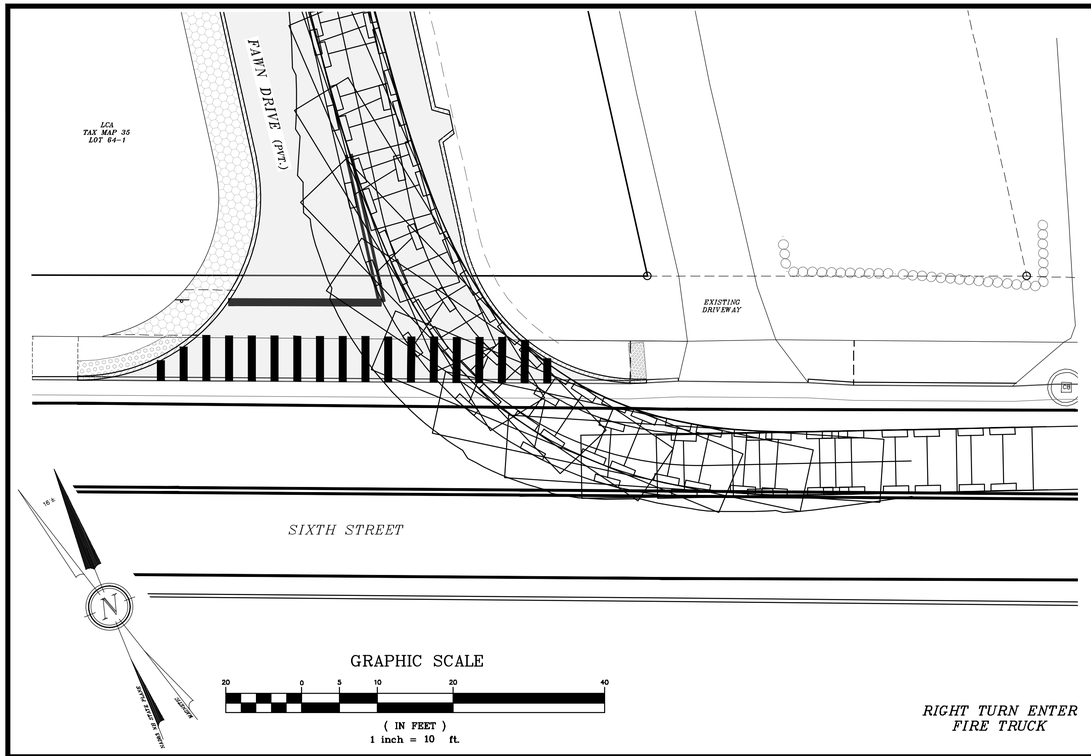
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : NONE
DATE : JUNE 24, 2025
FILE NO. : DB 2024 – 018

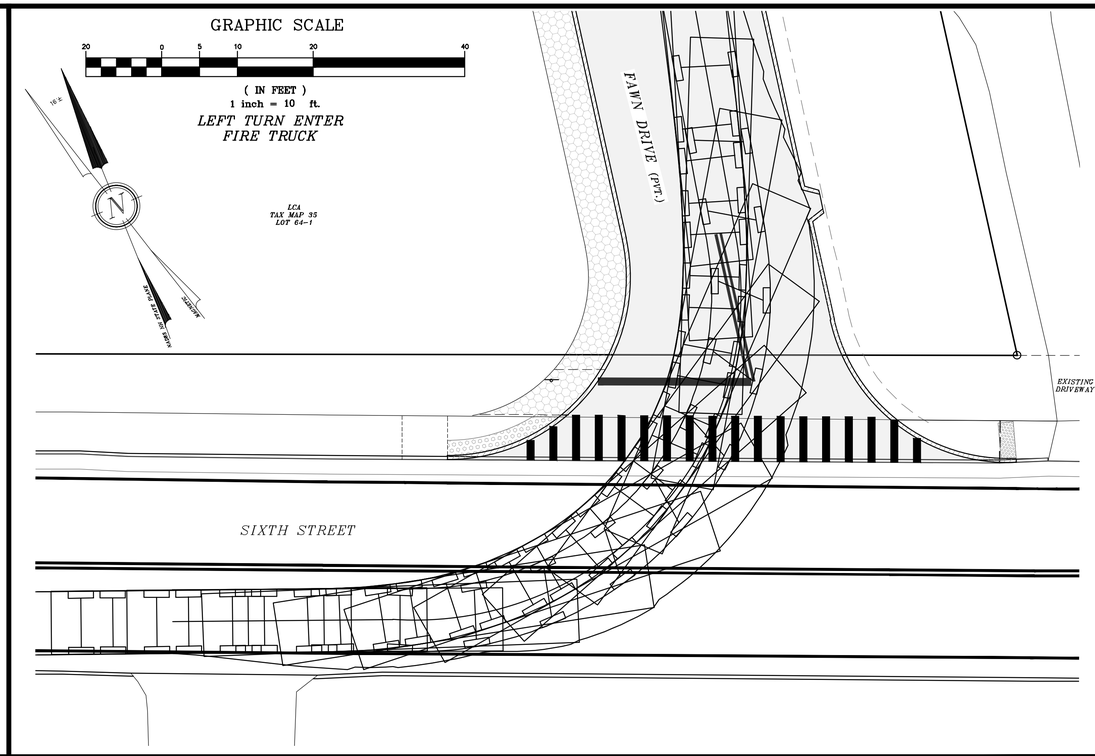
STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 – PROFESSIONAL ENGINEER – LICENSED

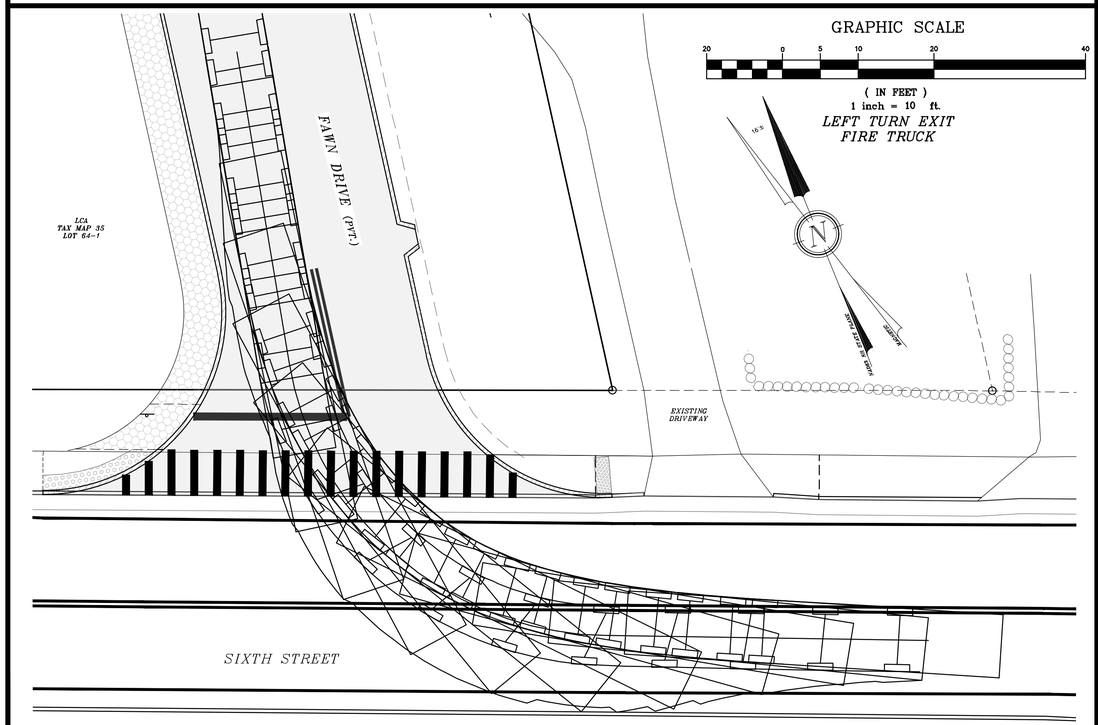
SHEET 37 OF 39

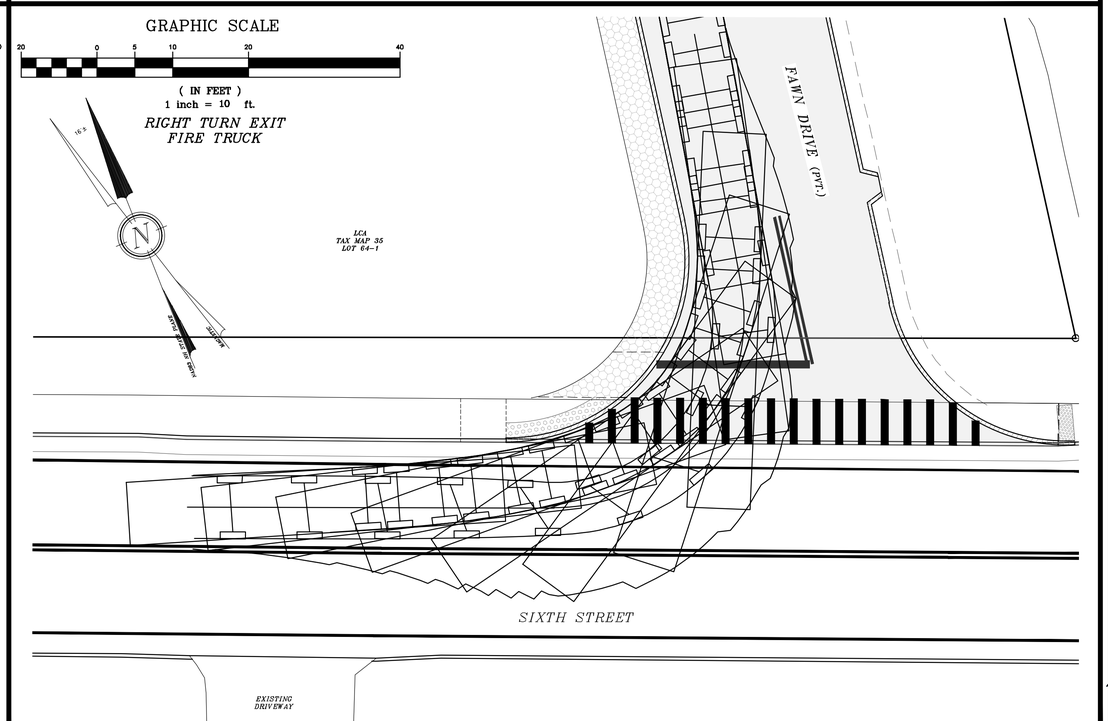
NOT FOR CONSTRUCTION



RIGHT TURN ENTER
FIRE TRUCK







CITY OF DOVER PLANNING FILE #SITE-2025-0010

REVISION	DATE	DESCRIPTION
#1	7-30-25	REVISED PER TRC #1 COMMENTS

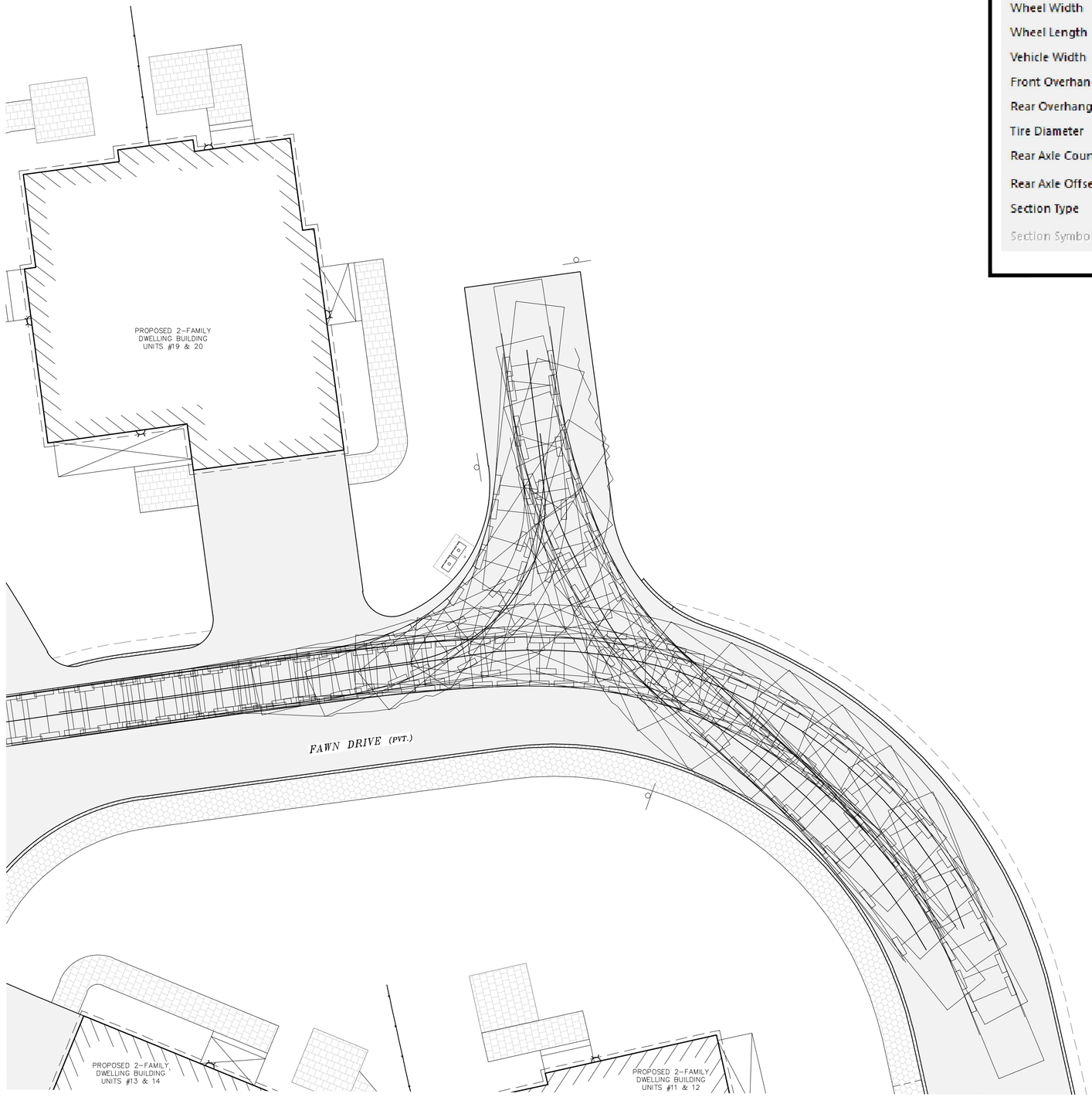
DOVER FIRE TRUCK ENTRANCE & EXIT MOVEMENTS
FOR: THE STABLE COMPANIES
LAND OF: RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 35, LOT 64
LAND OF: MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 35, LOT 72

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

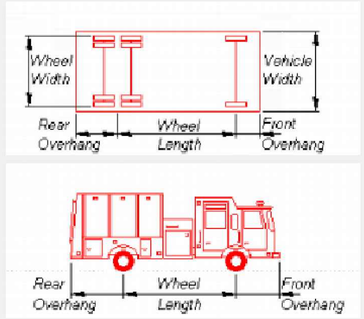
SCALE : 1 IN. EQUALS 10 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION



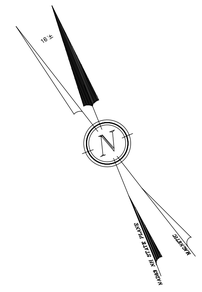
Description	Dover Fire Engine
Wheel Width	8.330
Wheel Length	20.000
Vehicle Width	8.330
Front Overhang	13.580
Rear Overhang	16.000
Tire Diameter	3.330
Rear Axle Count	2
Rear Axle Offset	4.200
Section Type	Fire Truck
Section Symbol	Set



GRAPHIC SCALE

20 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.



CITY OF DOVER PLANNING FILE #SITE-2025-0010

#	REVISION	DATE	DESCRIPTION
#1		7-30-25	REVISED PER TRC #1 COMMENTS

DOVER FIRE TRUCK TURNAROUND MOVEMENT
FOR: THE STABILE COMPANIES
LAND OF; RICHARDSON ESTATES OF DOVER LLC
141 SIXTH STREET, DOVER, N.H.
TAX MAP 36, LOT 64
LAND OF; MOHAMED & LISA K. HAMCHA
5 DOWALIBY COURT, DOVER, N.H.
TAX MAP 36, LOT 72

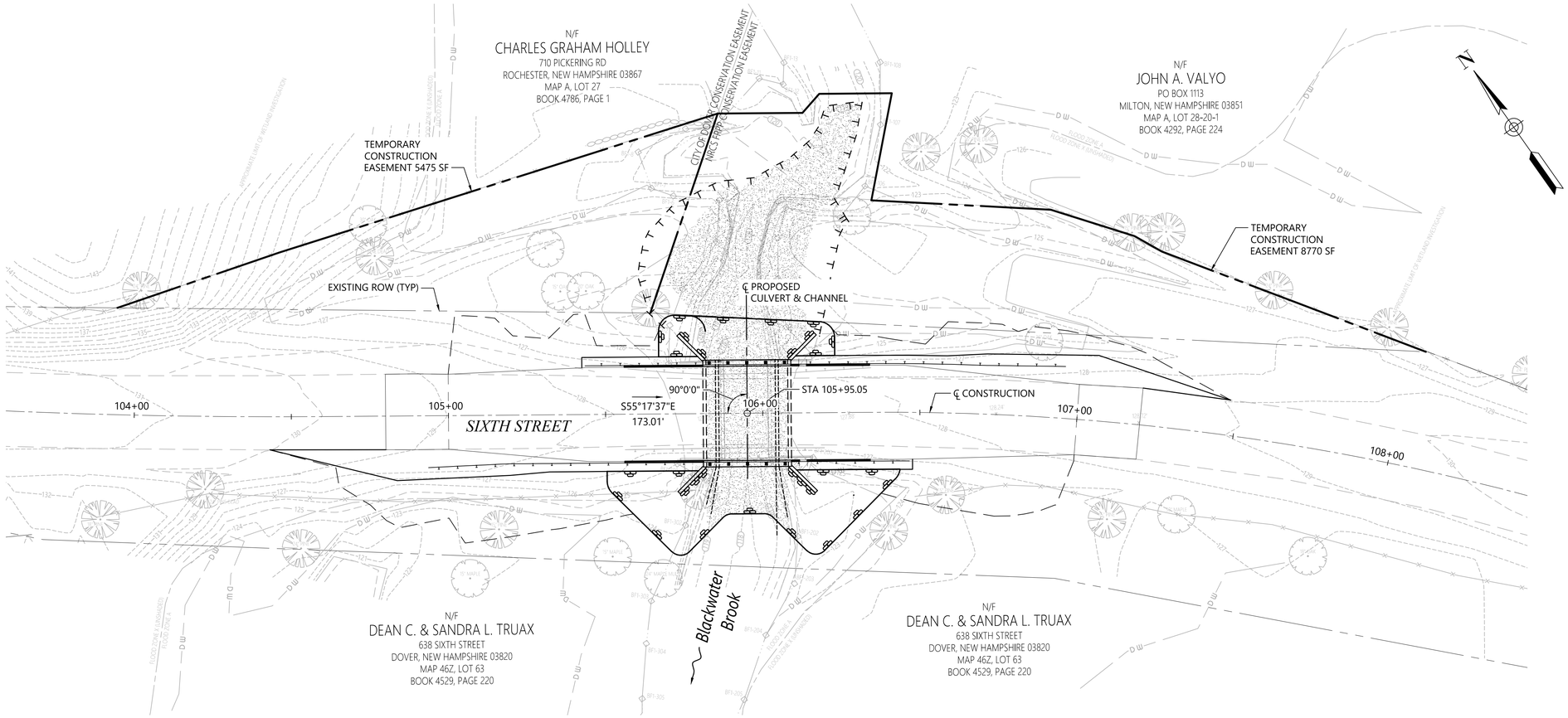
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 10 FT.
DATE : JUNE 24, 2025
FILE NO. : DB 2024 - 018

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 39 OF 39

NOT FOR CONSTRUCTION



GENERAL NOTES

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE TOPOGRAPHIC EXISTING CONDITIONS OF THE SIXTH STREET CULVERT AT BLACKWATER BROOK FOR THE DESIGN OF A REPLACEMENT TO THE EXISTING CULVERT.
2. THE TOPOGRAPHY AND EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON AN INSTRUMENT FIELD SURVEY AND HDS TERRESTRIAL SCAN PERFORMED BY VHB, INC. IN DECEMBER, 2024.
3. HORIZONTAL DATUM IS BASED ON THE NH GRID SYSTEM, NAD83/11 AND VERTICAL DATUM IS NAVD88/18 PER STATIC GPS OBSERVATIONS OF CONTROL POINTS ON 12/02/24, POST PROCESSED USING TRIMBLE RTX-PP.
4. THE INTENT OF THIS PLAN IS TO DEPICT THE TEMPORARY CONSTRUCTION EASEMENTS OVER TAX MAP A, LOT 27 AND TAX MAP A, LOT 28-20-1 TO RESTORE THE IMMEDIATE UPSTREAM SECTION OF BLACKWATER BROOK TO THE BENEFIT OF THE CITY.

PRELIMINARY
5/7/2025
FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION

REVISIONS AFTER PROPOSAL

NUMBER	DESCRIPTION	STATION	STATION	DATE

PROJECT MANAGER: J. WHITMORE — DATE: APRIL 2025
DESIGNED BY: XXXXXXXXXX — DATE: APRIL, 2025
DRAWN BY: B. MASSE — DATE: APRIL, 2025
AS BUILT DETAILS — DATE:

vhb Engineers | Scientists | Planners | Designers

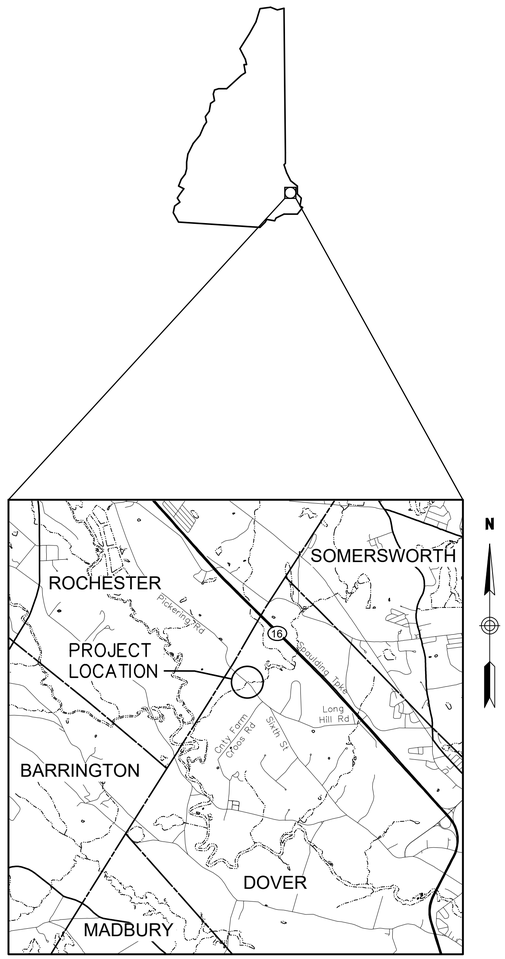
CITY OF DOVER, NEW HAMPSHIRE
SIXTH STREET BRIDGE REPLACEMENT

EASEMENT PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
5/6/2025	53161.00	53161_EASEMENT	-	1	1

\\VHB.COM\GBL\PROJ\BEDFORD\53161.00_SIXTH_STREET_BRIDGE\05_WORK\CAD\ST\PLANSET\53161_COV

REVISIONS AFTER PROPOSAL			
NUMBER	DATE	DESCRIPTION	STATION
1	JUNE 19, 2023	UPDATED INDEX, STAMP SHEET NUMBERS, AND ADDED SHEET 31A	



LOCATION MAP

2000 0 2000 4000

GRAPHIC SCALE: 1" = 2000'

CITY OF DOVER, N.H.
COUNTY OF STRAFFORD

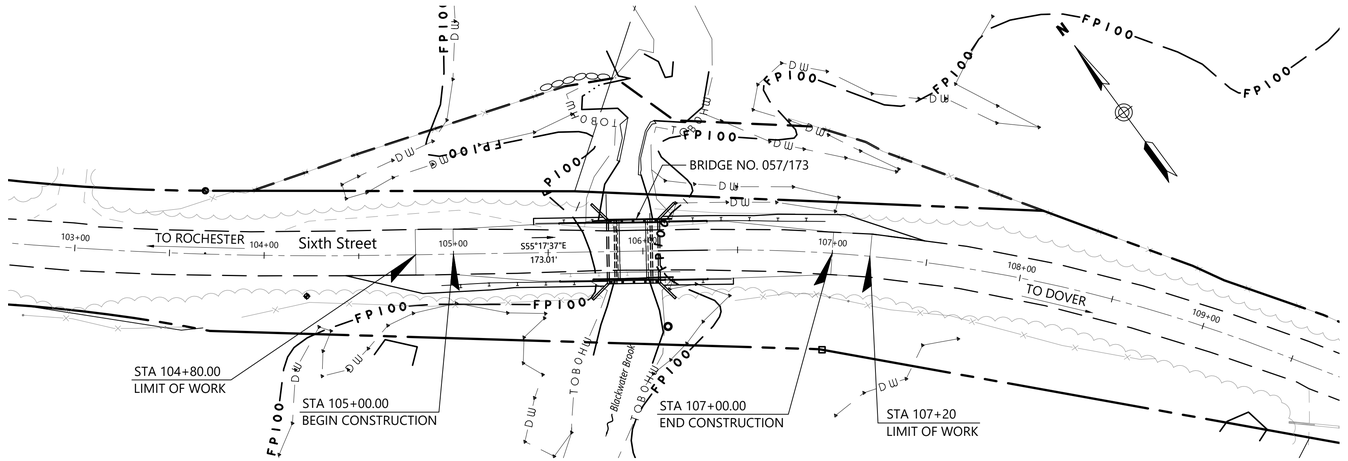
CONSTRUCTION PLANS
057/173 BRIDGE REPLACEMENT

DESIGN DATA

SIXTH STREET	
AVERAGE DAILY TRAFFIC 2022	3021
AVERAGE DAILY TRAFFIC 2042	4471
PERCENT OF TRUCKS	4%
DESIGN SPEED	30 MPH
LENGTH OF PROJECT	240 FT

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	PROJECT NOTES
3	GENERAL PLAN AND TYPICAL SECTION
4	PROFILE
5	BRIDGE PLAN AND ELEVATION
6	SITE PLAN
7	BOX CULVERT DETAILS
8	DETOUR PLAN
9	TRAFFIC SIGN SUMMARY
10	CROSS SECTIONS (1 OF 2)
11	CROSS SECTIONS (2 OF 2)



CITY OF DOVER, N.H.
COUNTY OF STRAFFORD

LAYOUT

40 0 40 80

GRAPHIC SCALE: 1" = 40'

PRELIMINARY
4/11/2025
SUBJECT TO CHANGE

PROJECT MANAGER: J. WHITMORE	DATE: APRIL 2025
DESIGNED BY: XXXXXXXXX	DATE: APRIL 2025
DRAWN BY: B. MASSE	DATE: APRIL 2025
AS BUILT DETAILS	DATE:

vhb Engineers | Scientists | Planners | Designers

CITY OF DOVER, NEW HAMPSHIRE

SIXTH STREET BRIDGE REPLACEMENT

COVER SHEET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	**53161_cov**	-	**1**	11

DESIGN LOADS, MATERIALS AND SPECIFICATIONS

(1) DESIGN LOADING: HL-93

(2) DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)

(3) SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH ED., 2017 AS AMENDED
NHDOT 2016 STANDARD SPECIFICATIONS AS AMENDED

(4) FOUNDATION DATA: BOX CULVERT AND WINGWALLS ON STRUCTURAL FILL

(5) REINFORCING STEEL: AASHTO M31 (ASTM A615) GRADE 60

(6) CONCRETE: PRECAST CONCRETE BOX CULVERT = 5,000 PSI (AT 28 DAYS)
ITEM 529.012, PRECAST CONCRETE BOX CULVERT (BRIDGE) (INSTALLATION ONLY)

GENERAL NOTES

(1) EXISTING PLANS (FILE NO. 1-15-3-2) ARE AVAILABLE, ON-LINE IN THE BID PACKAGE ON THE INVITATION TO BID WEBPAGE DURING THE BIDDING PERIOD. AFTER THE CONTRACT HAS BEEN AWARDED, A COMPLETE SET OF EXISTING PLANS WILL BE FORWARDED TO THE CONTRACTOR UPON REQUEST.

(2) THE CONTRACTOR SHALL CONTACT DIG SAFE TO SURVEY AND TAG ALL BRIDGE COPING AND UNDERGROUND LOCATIONS NEAR THE BRIDGE, FOR POSSIBLE UTILITIES.

(3) THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT DEBRIS DOES NOT FALL INTO THE WATERWAY BELOW THE EXISTING STRUCTURE. ALL COSTS INCLUDING ERECTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER SUCH APPROVED METHODS, SHALL BE SUBSIDIARY TO THE APPROPRIATE ITEMS OF WORK BEING PREFORMED.

(4) ITEM 583.3, RIPRAP CLASS III SHALL BE 2'-0" THICK, ADJACENT TO WINGWALLS AND 4'-0" THICK BELOW SIMULATED STREAMBED MATERIAL AT INLET AND OUTLET.

(5) ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED ¾", UNLESS OTHERWISE NOTED.

(6) ALL EXISTING BRONZE DISCS REPRESENTING STATE BENCHMARKS OR SURVEY TRIANGULATION POINTS MUST NOT BE DISTURBED. WHEN THE WORK CALLED FOR INVOLVES DISTURBING A BRONZE DISC THE CONTRACTOR SHALL NOTIFY THE ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT THE STATE TO TEMPORALLY RELOCATE THE AFFECTED MARKER.

(7) APPLY ITEM 403.16, PAVEMENT JOINT ADHESIVE ALONG ALL LONGITUDINAL JOINTS BETWEEN PAVEMENT PASSES AND ALONG BRIDGE AND APPROACH CURB LINES, PRIOR TO PLACING ALL PAVEMENT COURSES.

(8) FOR BORING NOTES SEE BRIDGE SHEET XX.

BRIDGE REMOVAL NOTES

(1) ALL COSTS FOR REMOVAL OF THE ENTIRE EXISTING 14'-0"x 7'-0" CONCRETE BOX CULVERT SHALL BE SUBSIDIARY TO ITEM 502.101. NO PAYMENT SHALL BE MADE FOR THE VOLUME DISPLACED BY THE EXISTING FRAME.

FOUNDATION NOTES

(1) THE BOX CULVERT AND WINGWALL FOOTINGS SHALL BE FOUNDED ON A 1'-0" THICK LAYER OF STRUCTURAL FILL PLACED OVER UNDISTURBED SOIL.

(2) UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE EXCAVATION LIMITS OF THE NATURAL MATERIAL DEPOSITS OR AS DIRECTED BY THE RESIDENT. EXCAVATED MATERIALS BELOW THE MINIMUM 1'-0" THICK LAYER OF STRUCTURAL FILL SHALL BE REPLACED WITH STONE FILL MEETING THE REQUIREMENTS OF 508.2.1.1 OR 508.2.1.3.

(3) PROTRUDING BOULDERS OR COBBLES ENCOUNTERED AT THE FINAL EXCAVATION DEPTH SHALL BE REMOVED OR SPLIT TO PROVIDE A LEVEL BEARING SURFACE.

COFFERDAMS

(1) ALL ITEMS COVERED UNDER SECTION 503 OF THE SPECIFICATIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF N.H. THE CONTRACTOR SHALL SUBMIT STAMPED WORKING DRAWINGS AND CALCULATIONS FOR REVIEW AND DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02.

(2) COFFERDAMS ARE REQUIRED AT THE INLET AND OUTLET TO CONTROL THE INFLOW AND ADEQUATELY DEWATER THE EXCAVATION AND TO INSTALL THE CULVERT. STEEL SHEETING MAY BE REQUIRED DEPENDING ON THE AVERAGE WATER LEVELS AT THE TIME OF CONSTRUCTION AND THE CONTRACTOR'S METHOD OF DEWATERING. ALL COSTS FOR MATERIALS, INSTALLATION, MAINTENANCE AND REMOVAL SHALL BE INCLUDED IN ITEM 503.201, COFFERDAMS. ALL WORK REQUIRED TO MAINTAIN A DEWATERED CONDITION SHALL BE INCLUDED IN ITEM 503.201.

(3) CONTROL OF WATER WITHIN THE COFFERDAMS SHALL BE CONDUCTED IN SUCH A MANNER AS TO PREVENT DISTURBANCE OF THE BEARING SOIL. PUMPING AREAS SHALL BE LOCATED OUTSIDE THE CULVERT AND WINGWALLS SUPPORT LIMITS AND PROPERLY FILTERED TO PREVENT THE PUMPING OF FINES.

(4) ANY FOUNDATION SOIL WEAKENED AS A RESULT OF INSUFFICIENT CARE TAKEN IN MAINTAINING A DEWATERED CONDITION SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL AT THE EXPENSE OF THE CONTRACTOR.

(5) DEWATERING SHALL BE CONTINUOUS AND DISCHARGED OUTSIDE WETLANDS AND SURFACE WATERS UNTIL STRUCTURE IS BACKFILLED TO THE ELEVATIONS OF THE SURROUNDING WATER TABLE, UNLESS OTHERWISE DIRECTED.

(6) ALL MEANS AND METHODS ASSOCIATED WITH HANDLING WATER DURING CONSTRUCTION OF CULVERT SHALL BE LOCATED WITHIN THE LIMITS OF WORK SHOWN ON THE WETLANDS PERMIT APPROVED FOR THE PROJECT.

(7) IT SHOULD BE NOTED THAT IN SOME LOCATIONS PRE-EXCAVATION OF COBBLES AND BOULDERS MAY BE REQUIRED PRIOR TO PLACING STEEL SHEETING. DURING EXCAVATION THE CONTRACTOR SHALL DISTURB THE AREA AS LITTLE AS POSSIBLE AND USE NECESSARY PRECAUTIONS TO MINIMIZE THE IMPACTS TO THE POND. ALL COSTS INCLUDED IN ITEM 503.201.

(8) THE CONTRACTOR SHOULD BE PREPARED TO PERFORM ANY SUBSURFACE INVESTIGATIONS NEEDED FOR THE COFFERDAM DESIGN. ALL COSTS ASSOCIATED WITH THE COMPLETION OF SUBSURFACE INVESTIGATIONS, THE REDESIGN, OR THE REINSTALLATION OF COFFERDAMS DUE TO SUBSURFACE CONDITIONS ENCOUNTERED DURING THE COFFERDAM INSTALLATION THAT ARE DIFFERENT FROM WHAT THE COFFERDAM DESIGNER ASSUMED AND/OR INTERPRETED FROM THE AVAILABLE SUBSURFACE INFORMATION, SHALL BE SUBSIDIARY TO THE ASSOCIATED COFFERDAM ITEM. SECTION 102.05 SHALL BE REFERENCED REGARDING THE SUBSURFACE INFORMATION PROVIDED IN THE CONTRACT.

WATER DIVERSION NOTES

(1) THE WATER DIVERSION STRUCTURE ITEM IS INCLUDED IN THE CONTRACT FOR THE PURPOSE OF DIVERTING ANY SURFACE WATER ABOVE NORMAL HIGH WATER AWAY FROM THE CULVERT AND WINGWALL EXCAVATIONS. ALL COSTS ASSOCIATED WITH THE DESIGN, INSTALLATION, DEWATERING, MAINTENANCE, AND REMOVAL OF THE WATER DIVERSION WILL BE PAID FOR UNDER WATER DIVERSION STRUCTURE ITEM 503.101. THE CONTRACTOR SHALL SUBMIT A WATER DIVERSION PLAN IN ACCORDANCE WITH 503.1.2

(2) THE WATER DIVERSION STRUCTURE SHALL BE CONSTRUCTED AND MAINTAINED IN A MANNER THAT MEETS THE REQUIREMENTS OF SECTION 503, 504, THE FOUNDATION NOTES, AND ALL APPLICABLE CONTRACT AND ENVIRONMENTAL REQUIREMENTS. THE ITEM 503.101 WORK SHALL INCLUDE THE COST OF TEMPORARY PIPES, SANDBAGS AND ALL OTHER MEASURES SELECTED BY THE CONTRACTOR TO COMPLETE THE WORK.

PRECAST BOX CULVERT, WINGWALL & FOUNDATION NOTES

(1) INSTALLATION OF THE PRECAST BOX CULVERT SHALL CONSIST OF MULTIPLE UNITS TOTALING AN OUT-TO-OUT DIMENSION OF 34'-0" ALONG THE CENTERLINE OF THE CULVERT.

(2) ALL COSTS FOR INSTALLATION OF THE BOX CULVERT AS WELL AS THE PRECAST HEADWALLS, WINGWALL FOOTINGS, AND WINGWALLS SHALL BE INCLUDED IN ITEM 529.001, PRECAST BOX CULVERT.

(3) THE DIMENSIONS AND GEOMETRIC LAYOUT OF THE STRUCTURE (LAYOUT DIMENSIONS AND ELEVATIONS) WERE DEVELOPED BASED ON THE PRECAST CONCRETE BOX CULVERT AND WINGWALL DIMENSIONS SHOWN IN THESE PLANS.

(4) JOINTS BETWEEN BOX CULVERT SECTIONS SHALL BE WATERTIGHT.

(5) ITEM 538.1, BARRIER MEMBRANE, PEEL AND STICK (F) SHALL BE INSTALLED OVER THE ENTIRE TOP SURFACE OF THE BOX CULVERT AND SHALL EXTEND 1'-0" DOWN THE SIDES. PROTECTION BOARD SHALL BE USED TO PROTECT THE MEMBRANE FROM DAMAGE IN ACCORDANCE WITH 538.3.3.

(6) ITEM 538.2, BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F) SHALL BE PLACED IN A 1'-0" WIDE STRIP CENTERED BETWEEN JOINTS IN THE BOX CULVERT AND THE HEADWALLS. PROTECTION BOARD SHALL BE USED TO PROTECT THE MEMBRANE FROM DAMAGE IN ACCORDANCE WITH 538.3.3.

(7) GALVANIZED STEEL ANGLES AND BOLTS SHALL BE UTILIZED TO DRAW CULVERT SECTIONS TOGETHER. THESE HARDWARE ASSEMBLIES SHALL BE ATTACHED TO THE OUTSIDE SURFACES OF THE CULVERT SECTIONS AND SHALL BE LEFT IN PLACE. FERRULE LOOP INSERTS FOR ATTACHMENT SHALL BE PROVIDED IN THE CULVERT SECTIONS. ALL COST FOR ASSEMBLY SHALL BE INCLUDED IN ITEM 529.012.

(8) ALL EXPOSED CONCRETE SURFACES OF THE PRECAST BOX CULVERT, HEADWALLS AND WINGWALLS, EXCEPT INSIDE SURFACES OF THE BOX CULVERT SECTIONS, SHALL BE COATED WITH ITEM 534.3, WATER REPELLENT (SILANE-SILOXANE) TO 1'-0" BELOW FILL LINES.

(9) THE CONTRACTOR SHALL BE REQUIRED TO PREPARE AND SUBMIT AN ERECTION PLAN FOR DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02 OF THE NHDOT STANDARD SPECIFICATIONS. ERECTION PLAN SUBMITTALS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF NEW HAMPSHIRE.

(10) THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER FIT OF ALL PRECAST AND CAST-IN-PLACE ELEMENTS, PER FABRICATOR'S RECOMMENDATIONS AND APPROVED SHOP/ENGINEERING DRAWINGS, TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.

(11) CONCRETE COVER REQUIREMENTS IN THE PRECAST UNITS SHALL BE AS DEFINED IN THE SPECIAL PROVISION.

(12) ITEM 585.3401, SIMULATED STREAMBED MATERIAL, SHALL BE PLACED WITHIN THE BOX CULVERT AS SHOWN ON THE PLANS. INSTALL THE SIMULATED STREAMBED MATERIAL TO ACHIEVE A DENSE MASS THROUGHOUT THE DEPTH REQUIRED.

(13) ALL EXCAVATION FOR THE PROPOSED BOX CULVERT WILL BE PAID FOR UNDER THE PROVISIONS OF SECTION 504, BRIDGE EXCAVATION.

(14) CONSTRUCT THE BOX CULVERT AND WING FOOTINGS ON STRUCTURAL FILL, ITEM 508. (MINIMUM 1'-0" BELOW BOX CULVERT AND WING FOOTINGS).

(15) EXCAVATION FOR THE BOX CULVERT, TOE WALLS, AND WING FOOTINGS SHALL BE COMPLETED IN THE DRY.

(16) CONTROL OF WATER WITHIN CULVERT AND WINGWALL EXCAVATION SHALL BE CONDUCTED IN ACCORDANCE WITH 503 AND PAID UNDER ITEM 503.201. PUMPING AREAS SHALL BE LOCATED OUTSIDE THE FOOTING SUPPORT LIMITS AND PROPERLY FILTERED TO PREVENT THE PUMPING OF FINES.

(17) PLACEMENT OF GRANULAR BACKFILL (BRIDGE) (F) (209.201) AND STRUCTURAL FILL (508.) SHALL BE COMPLETED IN THE DRY.

PRELIMINARY
4/11/2025
SUBJECT TO CHANGE

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

PROJECT MANAGER: J. WHITMORE DATE: APRIL 2025
DESIGNED BY: XXXXXXXXXX DATE: APRIL 2025
DRAWN BY: B. MASSE DATE: APRIL 2025
AS BUILT DETAILS DATE:

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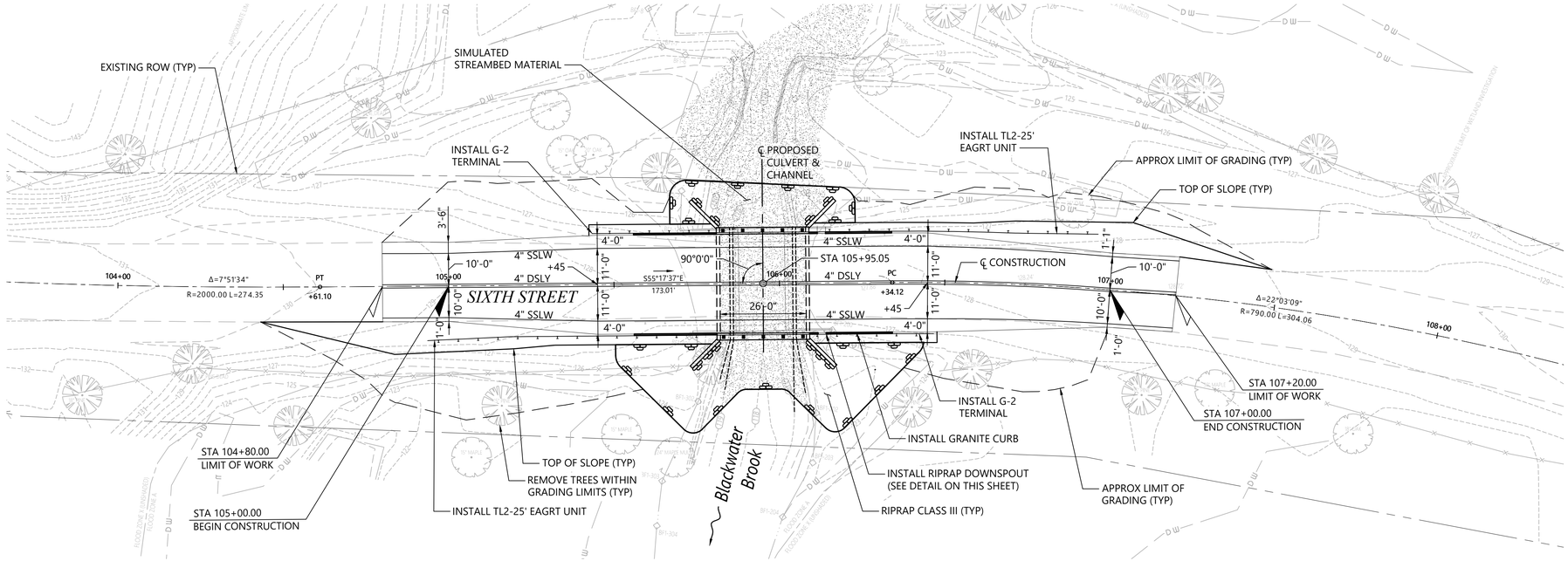
CITY OF DOVER, NEW HAMPSHIRE
SIXTH STREET BRIDGE REPLACEMENT
PROJECT NOTES

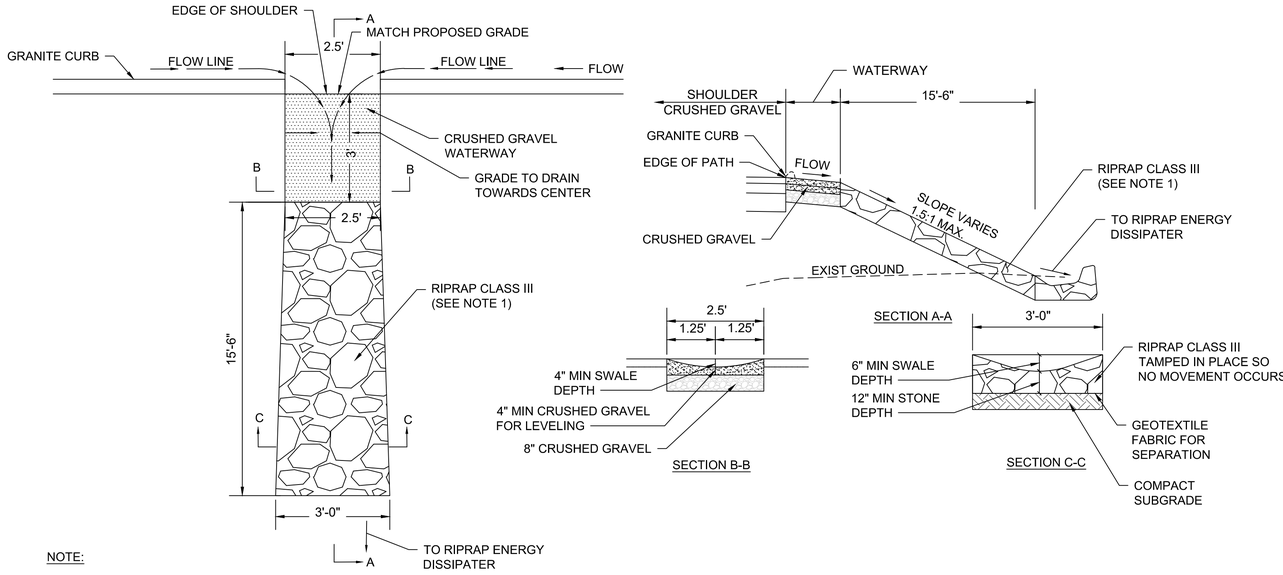
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_NOTES	-	2	11



GENERAL PLAN

20 0 20 40

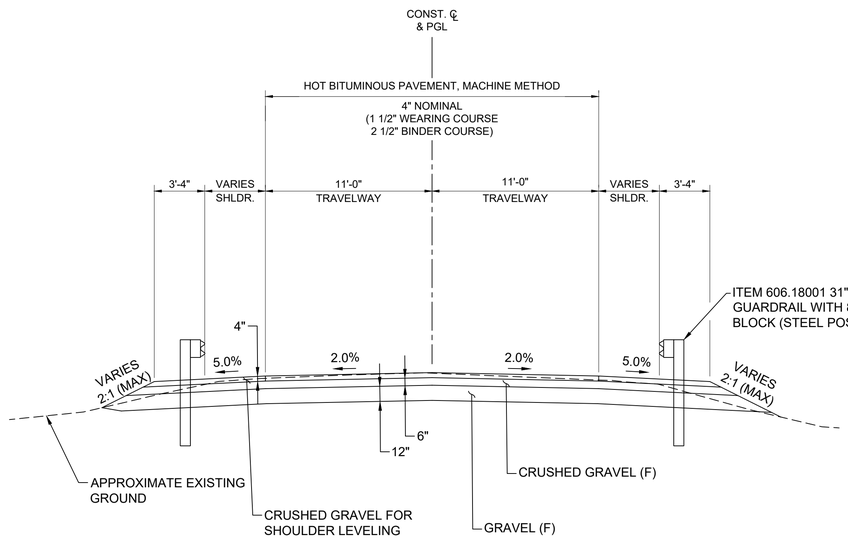
SCALE IN FEET



NOTE:

1. EACH LARGE STONE SHALL BE CAREFULLY PLACED BY HAND, NORMAL TO THE SLOPE AND FIRMLY BEDDED THEREON. THE SMALLER STONES SHALL BE SO GRADED THAT WHEN PLACED WITH THE LARGER STONES, THE ENTIRE MASS WILL BE COMPACT WITH A MINIMUM PERCENTAGE OF VOIDS AND MINIMUM THICKNESS OF 12".

RIPRAP DOWNSPOUT DETAIL
STA. 106+13 RT&LT



TYPICAL SECTION
NOT TO SCALE

PRELIMINARY
4/11/2025
SUBJECT TO CHANGE

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION	STATION

PROJECT MANAGER: J. WHITMORE DATE: APRIL, 2025
DESIGNED BY: XXXXXXXXXX DATE: APRIL, 2025
DRAWN BY: B. MASSE DATE: APRIL, 2025
AS BUILT DETAILS DATE:

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CITY OF DOVER, NEW HAMPSHIRE

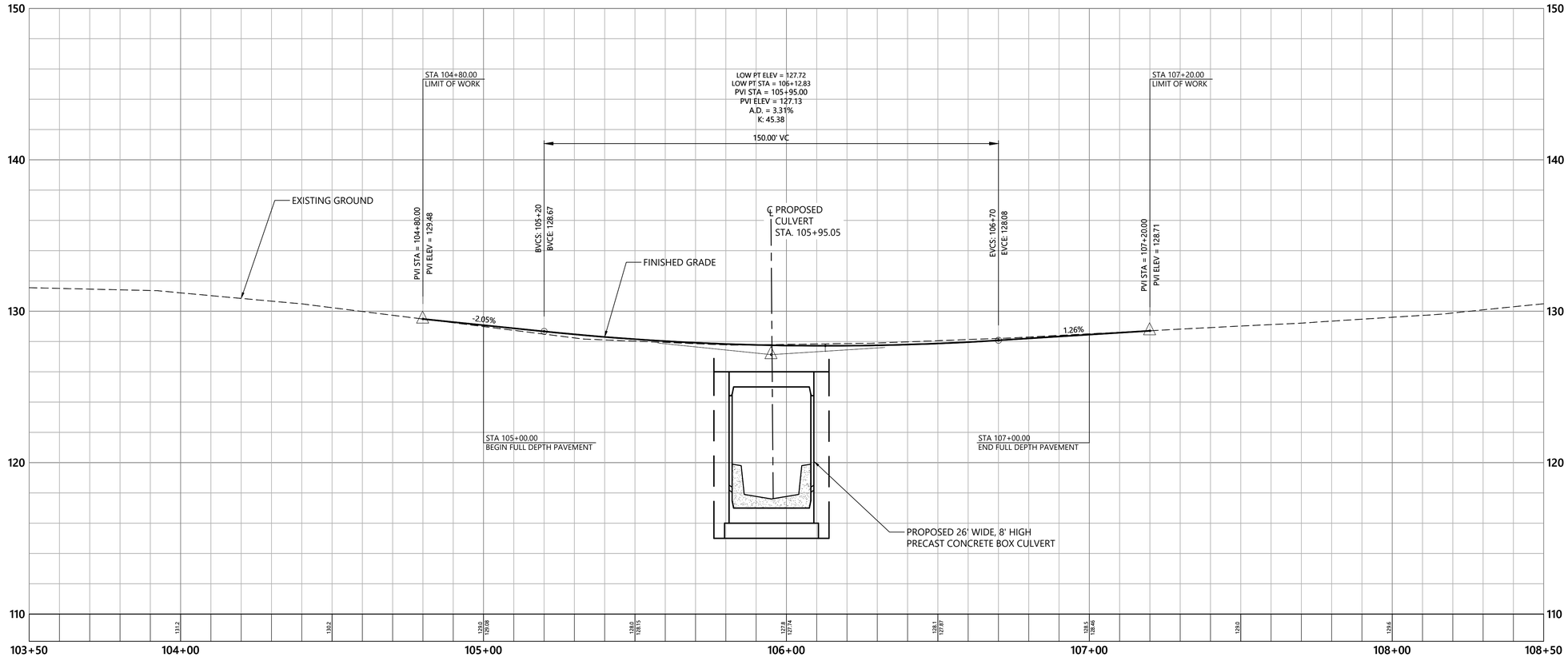
SIXTH STREET BRIDGE REPLACEMENT

GENERAL PLAN AND TYPICAL SECTION

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_GEN_PLAN	-	3	11

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION



PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

PRELIMINARY
4/11/2025
SUBJECT TO CHANGE

PROJECT MANAGER: J. WHITMORE — DATE: APRIL 2025
DESIGNED BY: XXXXXXXXXX — DATE: APRIL 2025
DRAWN BY: B. MASSE — DATE: APRIL 2025
AS BUILT DETAILS — DATE:

CITY OF DOVER, NEW HAMPSHIRE
SIXTH STREET BRIDGE REPLACEMENT
PROFILE

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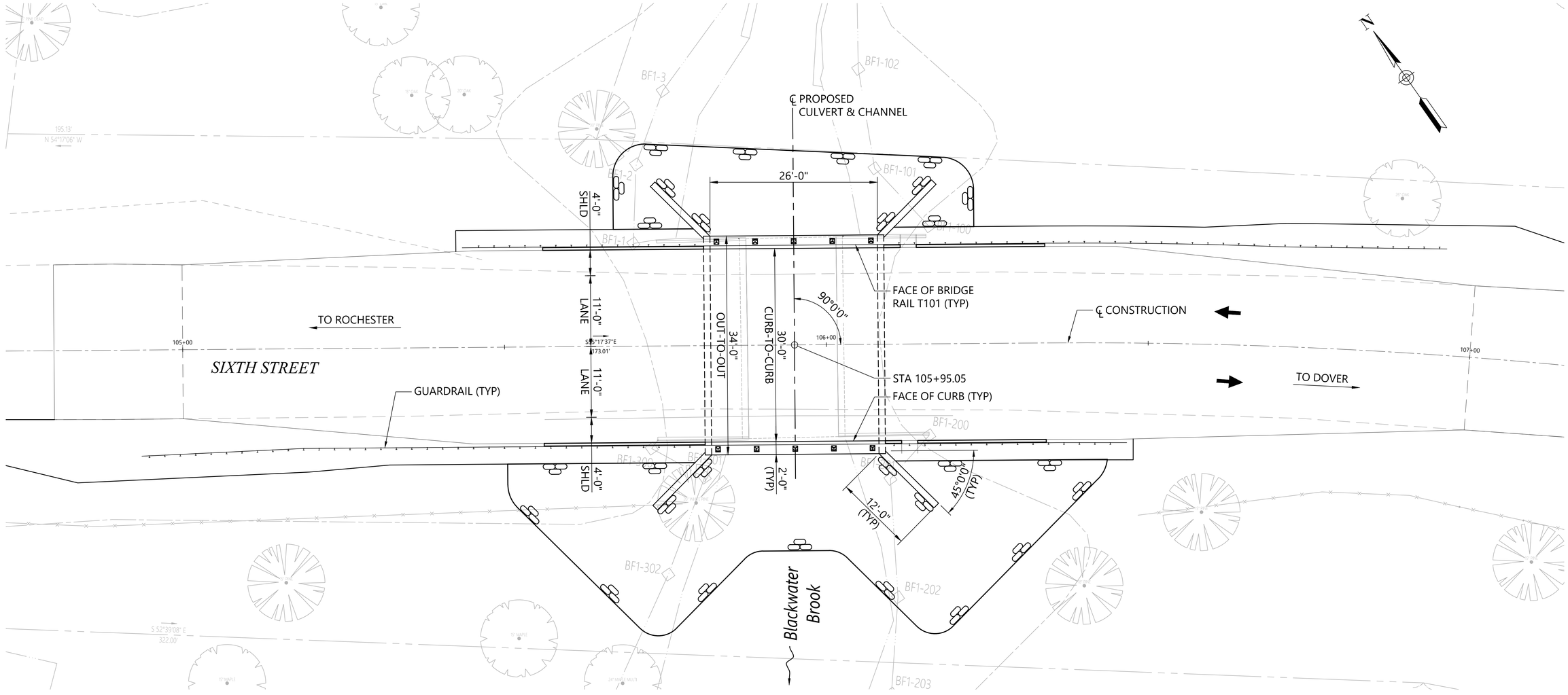
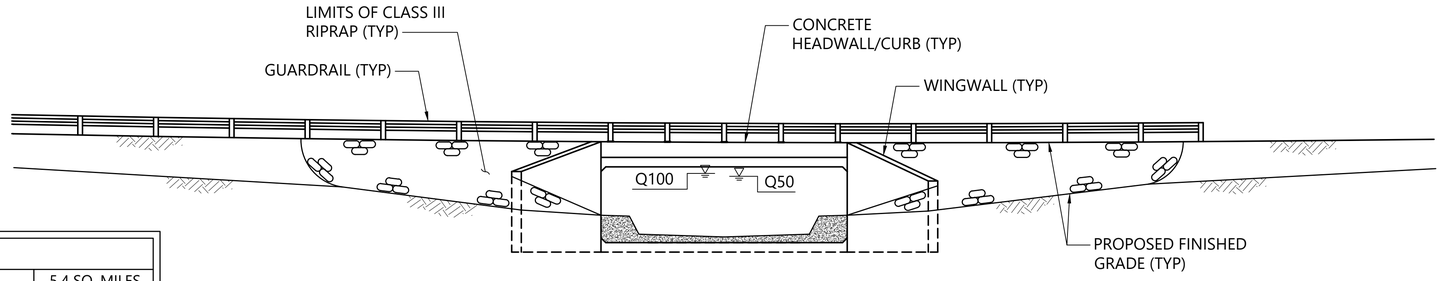
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_PROF_PLAN	-	4	11



BRIDGE PLAN
SCALE: ⅛" = 1'-0"



ELEVATION
SCALE: ⅛" = 1'-0"

HYDRAULIC DATA	
DRAINAGE AREA	5.4 SQ. MILES
DESIGN FLOOD DISCHARGE (100 YR)	657 CFS
DESIGN FLOOD ELEVATION (100 YR)	124.3 FEET
DESIGN FLOOD VELOCITY (100 YR)	2.2 FPS
SCOUR CHECK DISCHARGE (500 YR)	940 CFS
ANTICIPATED DEPTH OF SCOUR (100 YR)	1.7 FT
BRIDGE FULL WATERWAY OPENING TO ⊥ RIVER	173.8 SQ. FEET

PRELIMINARY
4/11/2025
SUBJECT TO CHANGE

REVISIONS AFTER PROPOSAL

NUMBER	DATE	DESCRIPTION	STATION	STATION

PROJECT MANAGER: J. WHITMORE DATE: APRIL 2025
DESIGNED BY: XXXXXXXXXX DATE: APRIL 2025
DRAWN BY: B. MASSE DATE: APRIL 2025
AS BUILT DETAILS DATE:

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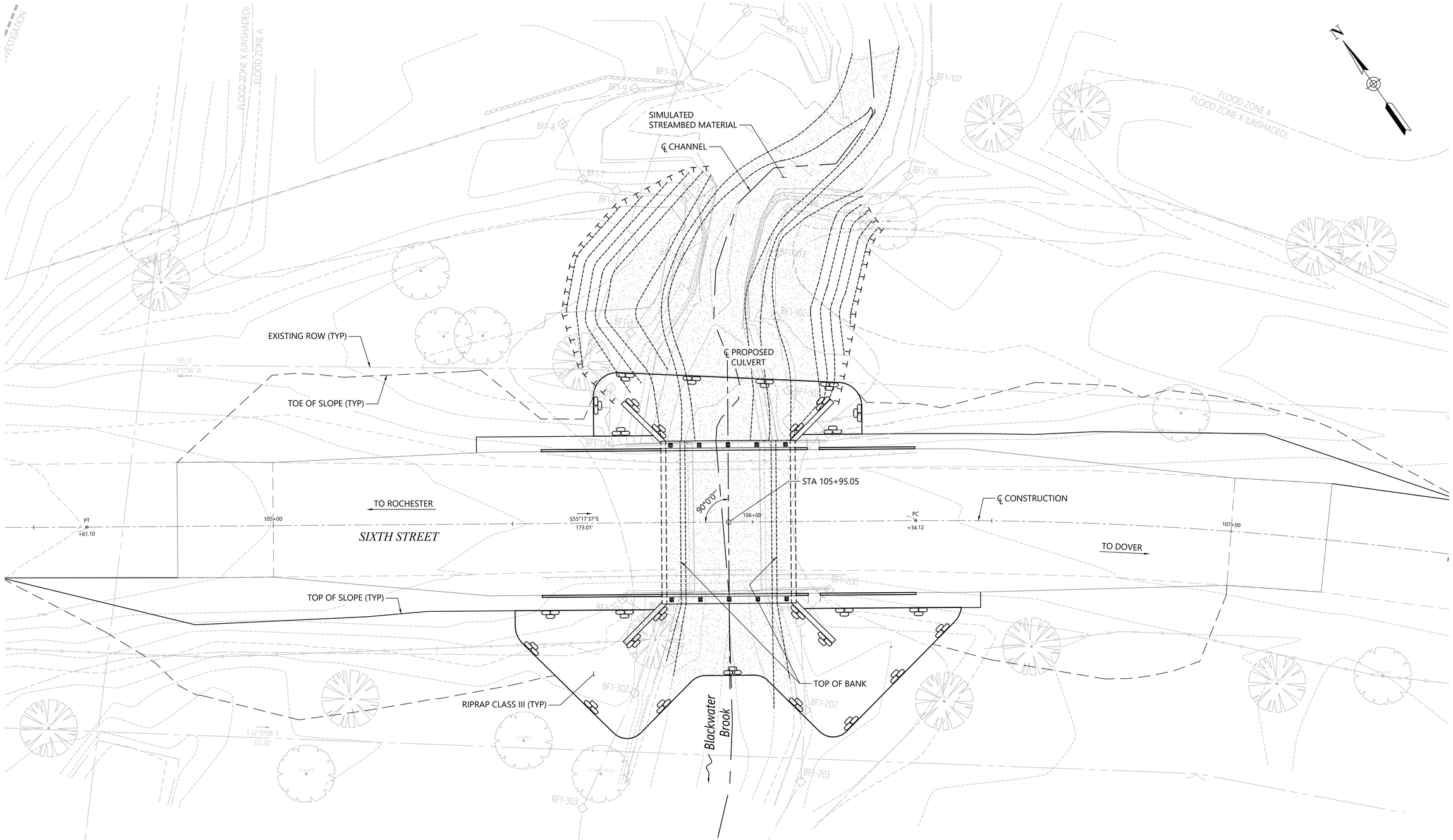
CITY OF DOVER, NEW HAMPSHIRE
SIXTH STREET BRIDGE REPLACEMENT
BRIDGE PLAN AND ELEVATION

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_PE	-	5	11



SITE PLAN

10 0 10 20

SCALE IN FEET

PRELIMINARY
4/11/2025
SUBJECT TO CHANGE

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION	STATION

PROJECT MANAGER: J. WHITMORE — DATE: APRIL, 2025
DESIGNED BY: XXXXXXXXXX — DATE: APRIL, 2025
DRAWN BY: B. MASSE — DATE: APRIL, 2025
AS BUILT DETAILS — DATE:

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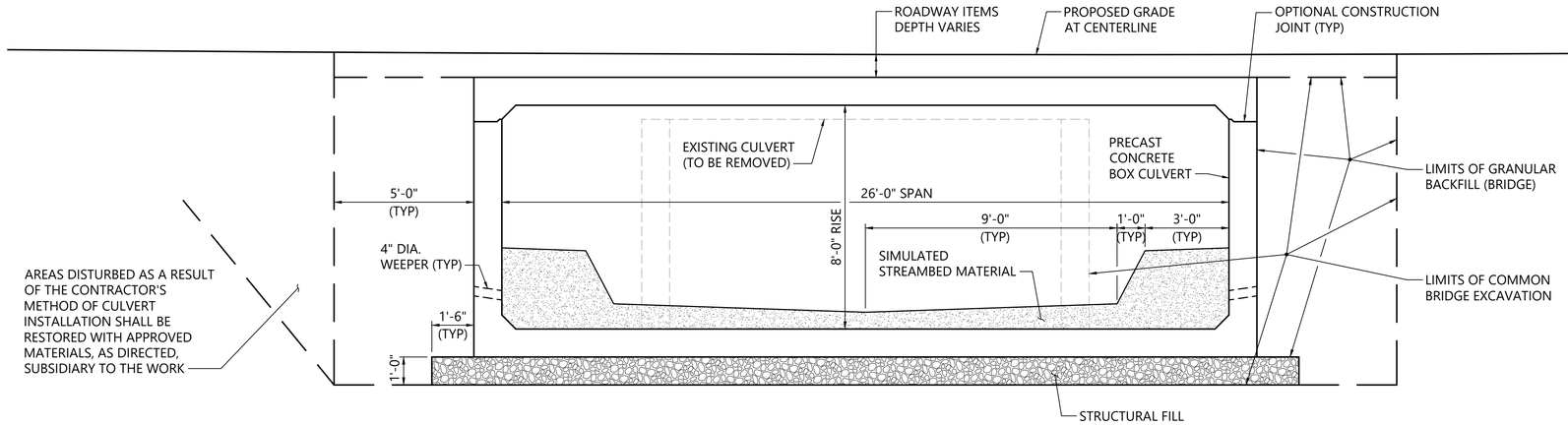
CITY OF DOVER, NEW HAMPSHIRE

SIXTH STREET BRIDGE REPLACEMENT

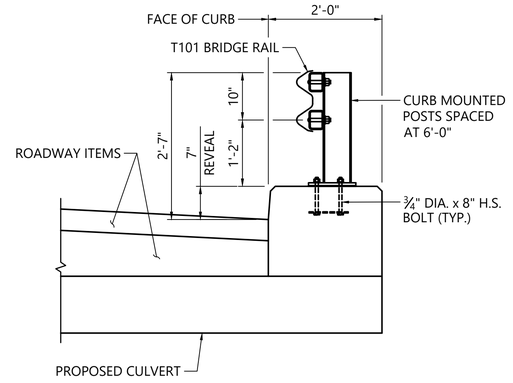
SITE PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_SITE	-	6	11



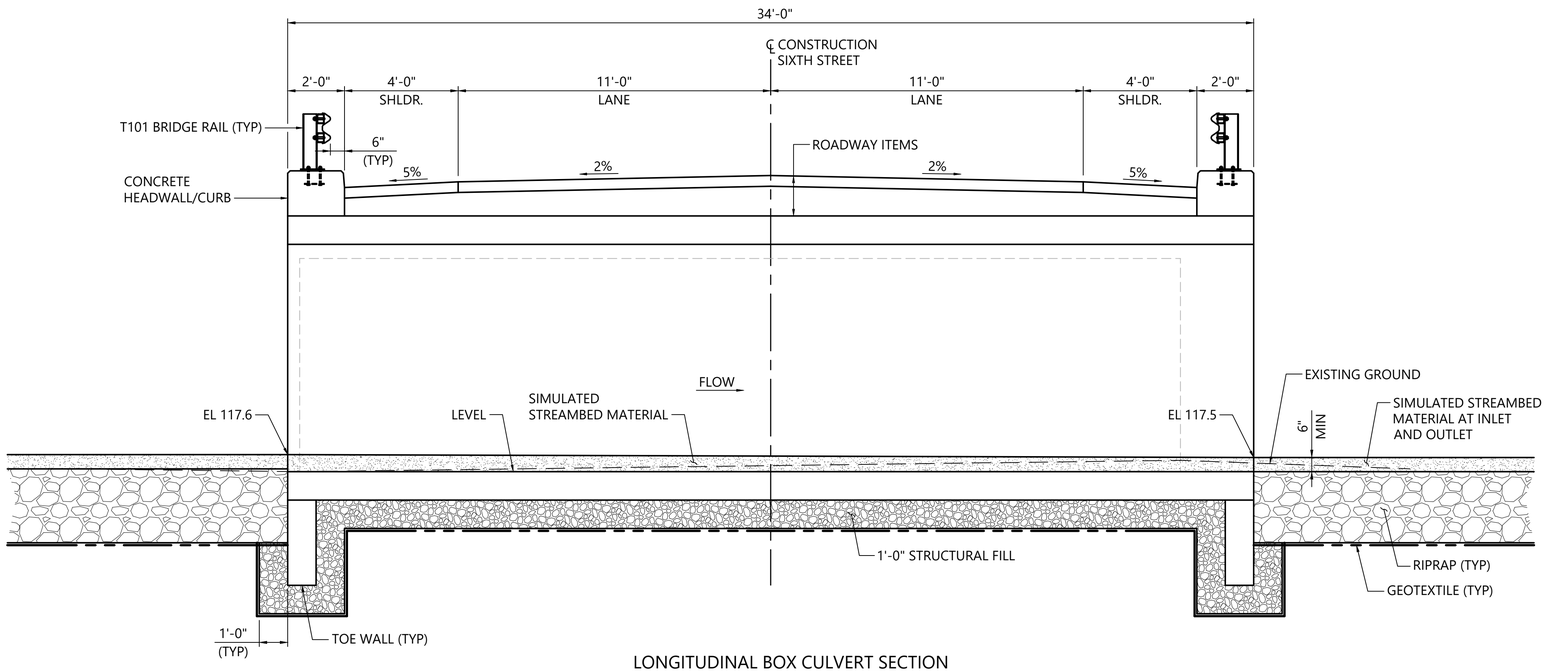
TRANSVERSE BOX CULVERT SECTION

SCALE: 3/8" = 1'-0"



CURB MOUNTED RAIL DETAIL

SCALE: 3/4" = 1'-0"



LONGITUDINAL BOX CULVERT SECTION

(LOOKING UPSTATION)
SCALE: 3/8" = 1'-0"

PRELIMINARY
4/11/2025
SUBJECT TO CHANGE

REVISIONS AFTER PROPOSAL

NUMBER	DESCRIPTION	STATION	STATION	DATE

PROJECT MANAGER: J. WHITMORE — DATE: APRIL, 2025
DESIGNED BY: XXXXXXXXXX — DATE: APRIL, 2025
DRAWN BY: B. MASSE — DATE: APRIL, 2025
AS BUILT DETAILS — DATE:

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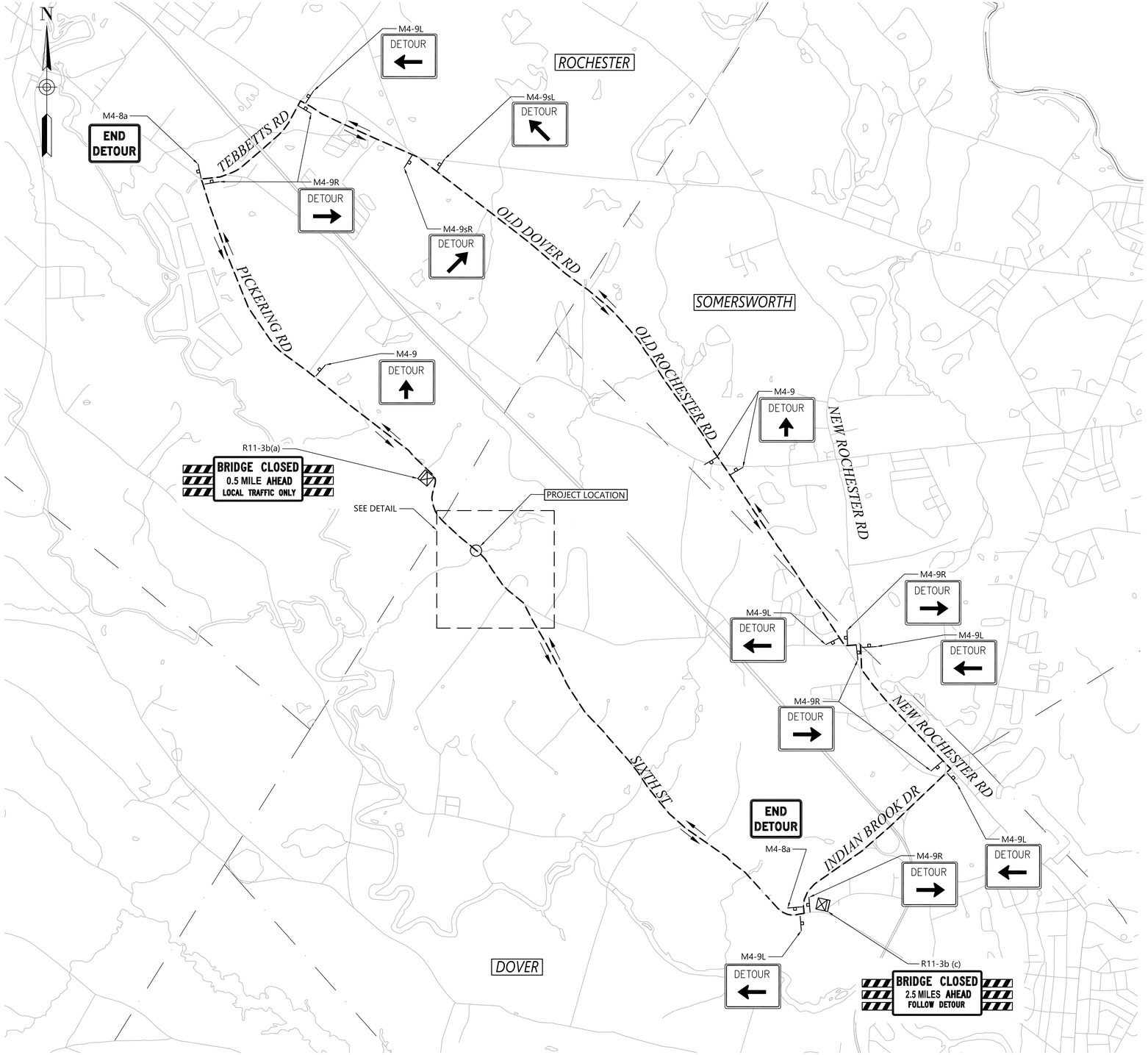
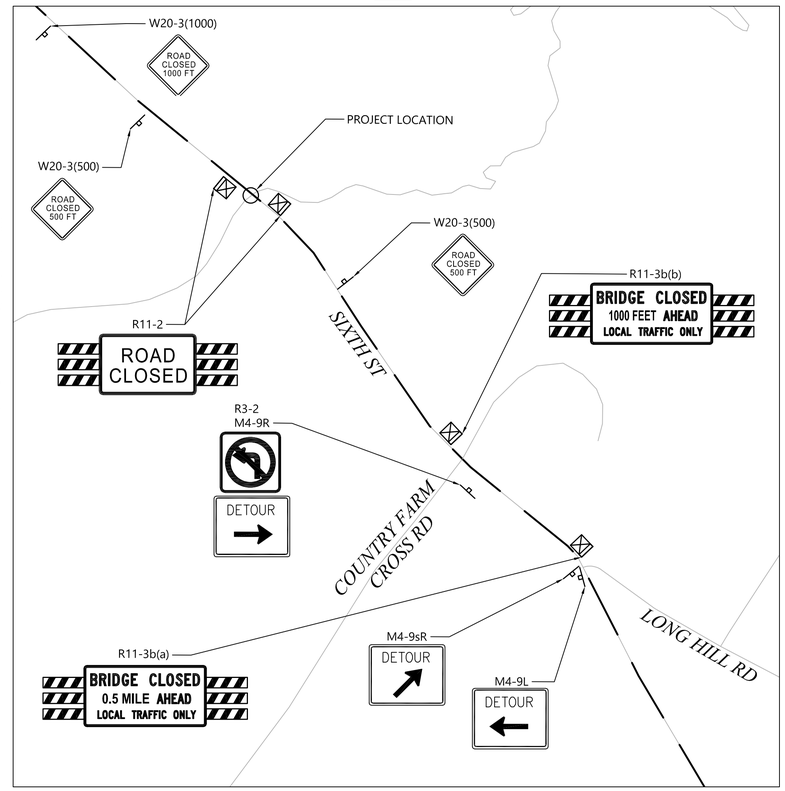
SIXTH STREET BRIDGE REPLACEMENT

BOX CULVERT DETAILS

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_CULVERT_DT	-	7	11



DETAIL



LEGEND

- DETOUR SIGN ON POST SUPPORT
- DETOUR ROUTE
- TYPE 3 BARRICADE WITH DETOUR SIGN

NUMBER	DESCRIPTION	STATION	STATION	DATE
	REVISIONS AFTER PROPOSAL			

PROJECT MANAGER: J. WHITMORE — DATE: APRIL, 2025
DESIGNED BY: XXXXXXXXXX — DATE: APRIL, 2025
DRAWN BY: B. MASSE — DATE: APRIL, 2025
AS BUILT DETAILS — DATE:

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SIXTH STREET BRIDGE REPLACEMENT

DETOUR PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_DETOUR	-	8	11

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# OF SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAMS	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
SUBSID. TO 619.1	R3-2	24	24								1	4.00	4.00					BLACK / RED / WHITE MOUNT ABOVE M4-9R
SUBSID. TO 619.1	R11-2	48	30	ROAD CLOSED			8D 8D				2	10.00	20.00					BLACK / WHITE MOUNT TO TYPE III BARRICADE
SUBSID. TO 619.1	R11-3	60	30	BRIDGE CLOSED 2.5 MILES AHEAD FOLLOW DETOUR			6C 5C 4C				1	12.50	12.50					BLACK / WHITE MOUNT TO TYPE III BARRICADE
SUBSID. TO 619.1	R11-3b(a)	60	30	BRIDGE CLOSED 0.5 MILE AHEAD LOCAL TRAFFIC ONLY			6C 5C 4C				2	12.50	25.00					BLACK / WHITE MOUNT TO TYPE III BARRICADE
SUBSID. TO 619.1	R11-3b(b)	60	30	BRIDGE CLOSED 1000 FEET AHEAD LOCAL TRAFFIC ONLY			6C 5C 4C				1	12.50	12.50					BLACK / WHITE MOUNT TO TYPE III BARRICADE
SUBSID. TO 619.1	M4-8a	24	18	END DETOUR			4D 4D				2	3.00	6.00				1	BLACK / ORANGE
SUBSID. TO 619.1	M4-9	30	24	DETOUR			5D		4.5"x6"		3	5.00	15.00				1	BLACK / ORANGE
SUBSID. TO 619.1	M4-9L	30	24	DETOUR			5D		4.5"x18"		6	5.00	30.00				1	BLACK / ORANGE
SUBSID. TO 619.1	M4-9R	30	24	DETOUR			5D		4.5"x18"		7	5.00	35.00				1	BLACK / ORANGE
SUBSID. TO 619.1	M4-9sL	30	24	DETOUR			5D		4.5"x18"		1	5.00	5.00				1	BLACK / ORANGE
SUBSID. TO 619.1	M4-9sR	30	24	DETOUR			5D		4.5"x18"		2	5.00	10.00				1	BLACK / ORANGE

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# OF SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAMS	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
SUBSID. TO 619.1	W20-3 (500)	36	36	ROAD CLOSED 500 FT			5D 5D 5D				2	9.00	18.00				1	BLACK / ORANGE
SUBSID. TO 619.1	W20-3 (1000)	36	36	ROAD CLOSED 1000 FT			5D 5D 5D				1	9.00	9.00				1	BLACK / ORANGE

GENERAL NOTES

1. REFER TO THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PUBLISHED BY THE NHDOT.
2. NOTE NEW REFLECTIVITY REQUIREMENTS IN THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 718 PUBLISHED BY THE NHDOT.
3. REFER TO THE 2010 STANDARD PLANS FOR ROAD CONSTRUCTION AS PUBLISHED BY THE NHDOT FOR EXACT DETAILS OF PERMANENT SIGNING STANDARDS AND NHDOT SPECIFIC SIGNS.
4. REFER TO THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL AS PUBLISHED BY THE USDOT-FHWA FOR EXACT DETAILS OF BORDERS, ETC.
5. THE ALUMINUM OR U-CHANNEL POST SHALL BE FLUSH WITH THE TOP OF THE SIGN ON ALL SINGLE POST ASSEMBLIES.
6. REFER TO 'ROUTE MARKER POST ASSEMBLY DETAIL' LOCATED IN THE PROPOSAL FOR SIDE BY SIDE ROUTE MARKER SIGN INSTALLATIONS.
7. DIGITALLY PRINTED SIGNS SHALL NOT BE PERMITTED.

TRAFFIC CONTROL NOTES:

1. THE FOLLOWING TRAFFIC CONTROL PLANS ARE INTENDED FOR THE REPLACEMENT OF THE SIXTH STREET BRIDGE OVER BLACKWATER BROOK ON SIXTH STREET IN THE TOWN OF DOVER, NEW HAMPSHIRE.
2. ALL TRAFFIC CONTROL EQUIPMENT AND LAYOUTS SHALL CONFORM TO THE 2009 EDITION OF THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CHAPTER 6.
3. ALL TRAFFIC CONTROL SIGNS, SIGN SUPPORT STRUCTURES, TEMPORARY SIGNAL EQUIPMENT, CHANNELIZING DEVICES, FLASHING ARROW PANELS (FAP), AND OTHER TRAFFIC CONTROL EQUIPMENT ALONG THE ROADSIDE SHALL MEET OR EXCEED NCHRP 350 TEST LEVEL 3 (TL-3) REQUIREMENTS REGARDLESS OF WHERE IMPLEMENTED IN THE PROJECT. IF EQUIPMENT HAS BEEN MANUFACTURED WINCE 1999, THE EQUIPMENT SHALL MEET MANUAL ON SAFETY HARDWARE (MASH) REQUIREMENTS.
4. ALL TRAFFIC CONTROL SIGNS SHALL BE MAINTAINED IN LIKE-NEW CONDITION. PLACEMENT OF SIGNS SHALL BE ADJUSTED TO AVOID OBSTRUCTING EXISTING SIGNS AND TO ENSURE PROPER SIGHT LINES TO THE TRAFFIC CONTROL SIGNS.
5. ANY SIGNS, EQUIPMENT, OR DEVICES FOUND TO BE DAMAGED OR UNSERVICEABLE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. WHEN WORK IS NOT ACTIVE THE CONTRACTOR SHALL INSTALL AND MAINTAIN POSTIVE BARRIERS TO PREVENT VEHICLES FROM THE DROP-OFF.
7. THE CONTRACTOR SHALL PLACE PORTABLE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE BRIDGE TWO WEEKS IN ADVANCE OF THE BRIDGE CLOSURE. THE CONTRACTOR SHALL PLACE ONE PORTABLE CHANGEABLE MESSAGE SIGN APPROXIMATELY 1000 FEET EAST OF THE BRIDGE, AND ONE PORTABLE CHANGEABLE MESSAGE SIGN APPROXIMATELY 1000 FEET WEST OF THE BRIDGE.
8. THE PORTABLE CHANGEABLE MESSAGE SIGN SCREEN MESSAGES SHOULD BE THE FOLLOWING:

SCREEN 1

SCREEN 2

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

PROJECT MANAGER: J. WHITMORE DATE: APRIL, 2025
DESIGNED BY: XXXXXXXXXX DATE: APRIL, 2025
DRAWN BY: B. MASSE DATE: APRIL, 2025
AS BUILT DETAILS DATE:

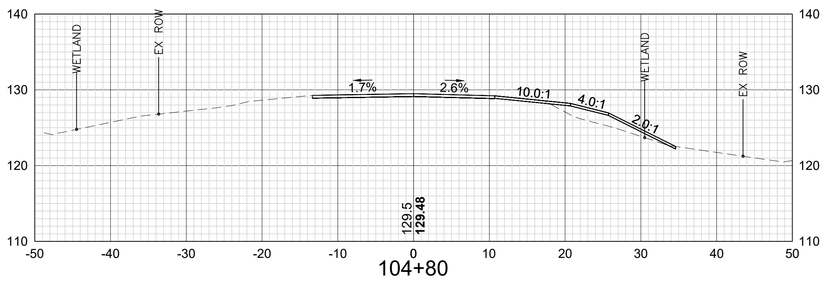
CITY OF DOVER, NEW HAMPSHIRE

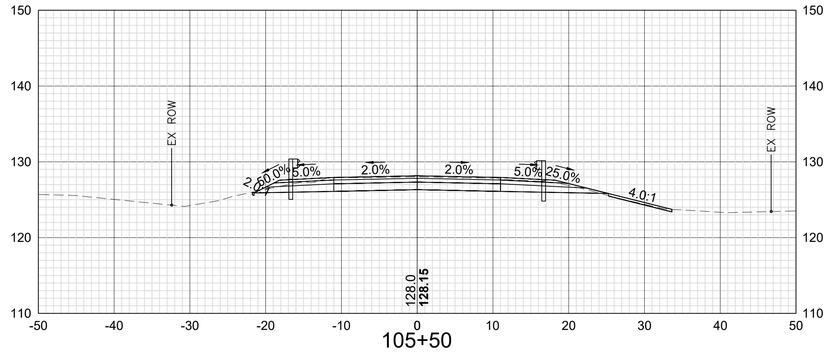
SIXTH STREET BRIDGE REPLACEMENT

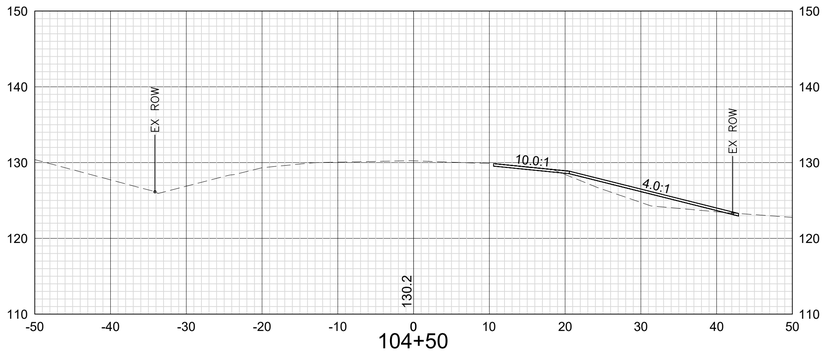
vhb Engineers | Scientists | Planners | Designers

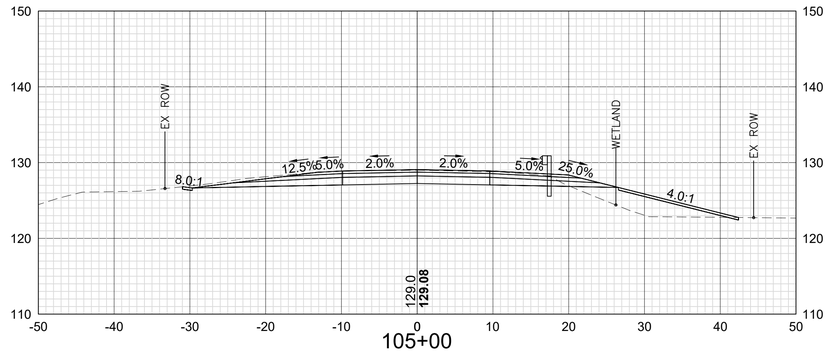
TRAFFIC SIGN SUMMARY

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_TSSS	-	9	11









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SCALE IN FEET

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

PROJECT MANAGER: J. WHITMORE DATE: APRIL, 2025
DESIGNED BY: XXXXXXXXXX DATE: APRIL, 2025
DRAWN BY: B. MASSE DATE: APRIL, 2025

AS BUILT DETAILS DATE:

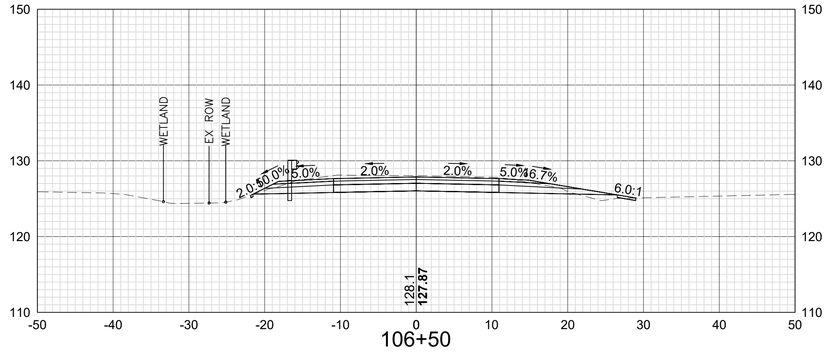
vhb Engineers | Scientists | Planners | Designers

CITY OF DOVER, NEW HAMPSHIRE

SIXTH STREET BRIDGE REPLACEMENT

CROSS SECTIONS (1 OF 2)

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_XS	-	10	11



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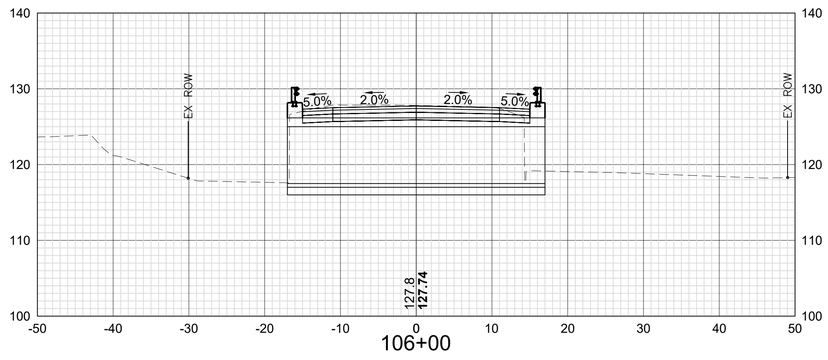

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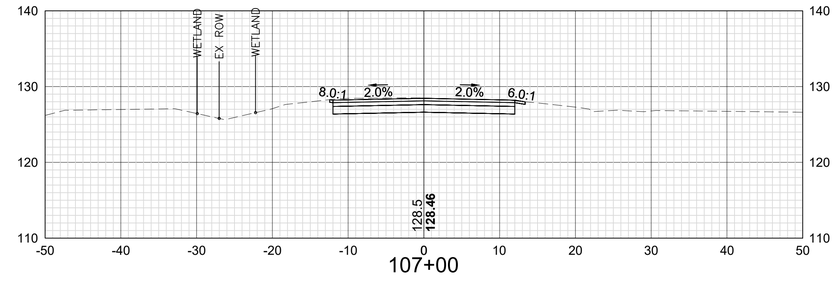

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SCALE IN FEET

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

PROJECT MANAGER: J. WHITMORE — DATE: APRIL, 2025
DESIGNED BY: XXXXXXXXXX — DATE: APRIL, 2025
DRAWN BY: B. MASSE — DATE: APRIL, 2025
AS BUILT DETAILS — DATE:

CITY OF DOVER, NEW HAMPSHIRE

SIXTH STREET BRIDGE REPLACEMENT

CROSS SECTIONS (2 OF 2)

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DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4/7/2025	53161.00	53161_XS	-	11	11