CITY OF DOVER

DOVER PLANNING BOARD – AGENDA

REVISED

Meeting Type: Regular Meeting
Meeting Location: Council Chambers, City Hall, 288 Central Ave, Dover NH 03820
Meeting Date: **Tuesday, October 13, 2020**
Meeting Time: **7:00 pm**

1. **CITIZENS' FORUM**
2. **APPROVAL OF THE PRIOR MINUTES**
   - September 22, 2020 Regular Meeting Minutes
3. **OLD BUSINESS**
4. **NEW BUSINESS**

   A. Discussion and public hearing on the City's proposed Capital Improvements (CIP) FY 2023-2027. The CIP can be found on the City Web Site at www.dover.nh.gov and in the Library, City Clerk's office, and the Planning Department.*

   B. Consideration and acceptance of a Subdivision using TDR for Mike Robinson, Assessor's Map 10, Lot 32, zoned Heritage Residential, located at 239 Washington Street. (Proposal is to increase one unit using TDR.) *(P20-65)

   C. Consideration and acceptance of a Lot Line Adjustment for Richard A & Adele J Marone, (Owner: Richard A & Adele J Marone), Assessor's Map A, Lots 47-1 & 47-3, zoned R-40, located at 2 Reyner's Brook Drive and 503 Sixth Street. *(P20-63)

   D. Consideration and acceptance of a Site Review using TDR for Ernest J. Carrier & Irene R Carrier Revocable Trust of 1998, Assessor's Map 30, Lot 141-B, zoned Gateway District, and located at 4, 6 Ash Street. (Proposal is to construct 2 new 2-bedroom duplexes with 4 garage parking spaces and 2 surface parking spaces, looking to purchase the fourth unit using TDR). *(P20-64)

   E. Consideration and acceptance of a Lot Line Adjustment for Sebring Holdings, LLC., (Owners: Sebring Holdings, LLC. and Macs Convenience Stores, LLC.), Assessor's Map K , Lots 19A, 19C & 26, zoned R-12, C, IT, located at Dover Point Road. *(P20-62)

   F. Consideration and acceptance of a Conditional Use Permit for DBS Holdings LLC., Assessor's Map G, Lot 1-M, zoned CM, and located at Crosby Road. (Proposal is to construct two industrial buildings and associated driveway, pavement and drainage, with a wetland buffer impact of 16,438 sq. ft. and a temporary wetlands buffer impact of 13,697 sq. ft.). *(P20-34)

   G. Consideration and acceptance of a Site Review for DBS Holdings LLC., Assessor's Map G, Lot 1-M, zoned CM, and located at Crosby Road. (Proposal is to construct two (2) industrial/commercial buildings consisting of 16,100 sq. ft. for warehouse and office space). *(P20-33)

   H. Consideration and acceptance of an Amendment to a previous Subdivision using TDR for Robert Baldwin, Assessor's Map I, Lot 30, zoned R-40, located 144 Mast Road. (Proposal is to construct (1) additional single family home as part of the TDR development). *(P20-35B)

5. **STAFF COMMENT**
6. **MEMBER COMMENTS**
7. **ADJOURNMENT**

*Indicates that if the application is accepted for discussion, the public hearing will be held the same evening. Note that some hearings will be continued from one meeting to another and some may be postponed. Since this is only a partial description

of the proposal and may change, persons with questions or wishing to see the plans are invited to visit the Planning Office, Monday through Thursday from 8:30 am to 5:30 pm and Friday 8:30 am to 4:00 pm or email Dover-Planning@dover.nh.gov. You may also view materials at www.dover.nh.gov.

CITY OF DOVER

DOVER PLANNING BOARD – MINUTES

Meeting Type:	Regular Meeting, continued
Meeting Location:	City Council Chamber's 288 Central Avenue
Meeting Date:	**Tuesday, September 22, 2020**
Meeting Time:	**7:00 pm**

Members Present: Gina Cruikshank (Chair), Dennis Ciotti (Councilor), Jackson Kaspari, Ellen Ianello (Alternate), Frank Torr, Tom Clark, Hayley Harmon (Vice Chair), Erin Allgood (Alternate), Dave Landry, Lisa McGunnigle (Alternate), Matt Sullivan

Members Not Present (excused): Dave White

Members Not Present (un-excused): None

Staff Present: Christopher Parker, Assistant City Manager, Steve Bird, City Planner

Chair G. Cruikshank called the meeting to order at 7:01 p.m. and noted E. Ianello will sit in for D. White.

1. CITIZENS' FORUM

Citizens Forum Open. No one spoke. *Citizens Forum Closed.*

2. APPROVAL OF THE PRIOR MINUTES

- September 08, 2020 Regular Meeting Minutes

Motion: F. Torr moved to approve the minutes as presented. Seconded by D. Ciotti. Vote: U/A with M. Sullivan abstaining.

3. OLD BUSINESS

None

4. NEW BUSINESS

A. Consideration and acceptance of a Condition Use Permit for Kelliher Maureen Revocable Trust, Assessor's Map L, Lot 58-Y, zoned R-20, located at 27 Cote Drive. (Proposal is to expand a single family house with a garage addition of 355 s.f. and 179 s.f. of additional driveway, in the Conservation District adjacent to the tidal Piscataqua River, with 764 s.f. of tidal buffer zone impact.) *(P20-49)

C. Parker explained the applicant is requesting a Conditional Use Permit to add a 355 s.f. addition to the existing garage and additional pavement, resulting in 764 s.f. of impact to the City of Dover's Conservation District. A stone drip edge will be used for stormwater mitigation.

The Conservation Commission reviewed and endorsed the CUP application at its September 14th meeting. During that meeting, the Commission discussed the need to add additional native plantings within the shoreland area, understanding that adding trees should not impact the water views from the property.

Jase Gregoire, Civilworks New England, reviewed the plan and request. Shoreland and wetlands permits have been requested. The impact is 980 sq. ft. with an impact of 764 sq. ft. to Dover's conservation district.

T. Clark asked for clarification whether the gain to the applicant is worth the impact to the conservation district. It looks like there's already a garage for the house.

Mr. Gregoire replied the expansion is from a one-car to a two-car garage. There will be a drip edge for storm water mitigation which will decrease the flows offsite.

D. Landry asked C. Parker about consistency with the land use regulations and how much need is weighed vs avoidance, minimization and mitigation. Once need is established, (which is subjective) what the applicant is doing to mitigate impacts is weighed against the need to determine balance.

D. Ciotti asked if the board has any say in what type of native plantings go in. He thinks the number, type and size should be spelled out in the plans. C. Parker said there are state guidelines to follow and Civilworks will make decisions and come back with a plan.

D. Ciotti asked the applicant how far the shed is from the side property line. It's 5-10 feet.
D. Ciotti noted because of its size, the shed needs to be at least 10' from the line. It may need to be moved. The board could make it a condition of approval.

M. Sullivan suggested vegetation in the area of the silt sock behind the shed and garage.

Motion: F. Torr moved to accept the application. Seconded by E. Ianello. Vote: U/A

Public hearing opened. No one spoke. No emails or calls were received to the office for this item.
Public Hearing closed.

C. Parker noted the Conservation District ordinance provides for Conditional Use Permits to allow impacts to wetlands and wetland buffers if standards related to demonstration of need, avoidance, minimization, and mitigation are met. This proposal is consistent with those standards. Staff recommends approval of the Conditional Use Permit with the condition that the applicant update the plan to indicate no less than ten native plantings be installed in the 50 foot waterfront buffer, along with the silt sock, consistent with Shoreland regulations.

Motion: F. Torr made a motion that the Board approve the Conditional Use Permit with the staff recommended condition. Seconded by E. Ianello. Vote: U/A

B. Consideration and acceptance of a Major Subdivision for the City of Dover, Assessor's Map 22, Lot 1, zoned CWD, located at 31 River Street. (5 new lots) *(P20-14)

C. Parker explained that the subdivision is part of a larger development project to create a mixed use community on the Cochecho River. The applicant seeks to subdivide the parcel into 4 development lots, a waterfront park lot and a right of way.

The park lot, as well as lot 1 with the existing pump station on it will be retained by the applicant, while the remaining lots will be conveyed to the developer per the terms of the approved public private partnership.

Lot 1: 0.37 acres or 16,260 s.f.,
Lot 2: 4.07 acres or 177,105 s.f.
Lot 3: 5.32 acres or 231,541 s.f.
Lot 4: 8.16 acres or 355,658 s.f.
Lot 5: 4.30 acres or 189,130
ROW: 1.7 acres or 74,100 s.f.

The site is proposed to be serviced by municipal water and sewer and although it is a major subdivision, the plan did not appear before the TRC as all subsequent site plans will.

At its December 17, 2019 meeting CWDAC reviewed the subdivision of the property as part of its continuing review of the public private partnership.

The applicant is seeking a waiver from 157-27G to not show soils on the plan, as they will be part of any future site plan application and review.

Steve Bird, City of Dover City Planner, represented the application and discussed the plat. This is City-owned land which is part of a larger redevelopment plan. There are two goals: one is to create a separate parcel where the park will be located. It will be a waterfront park which will include a dock for boaters to use, a large plaza area and a lawn area to be used for festivals and fairs. There will also be concessions and restrooms and nature walking trails and a parking lot.
The second goal is to create a lot to sell to the developer, Cathartes.
The pump station will be on its own small lot.
Lot 4 will likely be subdivided in the future. It will contain the right of way for the extension of River St and one or two lots to be sold to Cathartes for future development.

They are requesting a soil waiver. These parcels have been used for different City uses over the years and the soil is disturbed. The existing soil information won't be much use to the board at this point.

They don't have any issues with the proposed conditions of approval.

D. Landry asked for clarification about where the walking trails will be. Mr. Bird described the route.

F. Torr asked who is responsible for the plantings at River St. Mr. Bird said the City will do that.

Motion: F. Torr moved to accept the application. Seconded by D. Landry. Vote: U/A

Public hearing opened. No one spoke. No calls or emails were received to the office for this item.
Public Hearing closed.

C. Parker noted the plan is consistent with Chapter 157-51 that a waiver may be granted if the Board finds that
"(1) Strict conformity would pose an unnecessary hardship to the applicant and the waiver would not be contrary to the spirit and intent of the regulations; or
(2) Specific circumstances relative to the subdivision, or conditions of the land in such subdivision, indicate that the waiver will properly carry out the spirit and intent of the regulations."

Staff believes that the criteria 1 has been met, as the soil will be documented as part of a site plan application.

Staff recommends approval of the waiver request with the condition a note shall be added to the subdivision plan that the waiver were granted for the reasons stated by the applicant and that the Board found the criteria of 157-51 have been met.
.

Motion: M. Sullivan made a motion that the Board approve the waiver application with the staff recommended condition. Seconded by H. Harmon. Vote: U/A

The plan is consistent with Chapter 157-15 of the City's Land Subdivision Regulations, which provides for subdivision of existing lots. Staff recommends approval of the subdivision plat with the following conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The applicant shall provide the Planning Department with a digital version of the final plat.
2. Provide a CAD file to the Asset Management Administrator's satisfaction.
3. The applicant shall revise the plat to:
    a. Add signature and stamp of LLS
    b. Add owners' signatures for recording at Strafford County Registry of Deeds.
    c. Ensure all uses of the word Cochecho use 2 "h" spelling
    d. Update reference to Zoning ordinance to 2019 version
    e. Update Note 9 to include all the info required of common subdivision note 10
    f. Add common subdivision notes 23

Motion: H. Harmon made a motion that the Board approve the application with the staff recommended conditions. Seconded by J. Kaspari. Vote: U/A

5. STAFF COMMENTS

- TRC for 35 Chestnut, 71 Glenwood, Leather's Lane, Broadview Animal Hospital, Central Avenue
- Community Trail work continues in the area of Fisher Street.
- The Community Facilities and Utilities Master Plan chapter is underway with an expanded scope.
- CIP joint workshop will be Oct 7, it will be on the Planning Board agenda Oct 13 for public hearing, and the board will make recommendations on Oct 27th.

6. MEMBER COMMENTS

- M. Sullivan has submitted his resignation from the Planning Board. He is starting a new job as Planning Manager for Nashua next week. He regrets not being on this board for very long and looks forward to future involvement.
- E. Ianello wondered if there had been a bidding process for the developer to be chosen for the waterfront redevelopment. C. Parker explained there had been a two-year process.

7. ADJOURNMENT

Motion: M. Sulllivan made a motion to adjourn at 7:47 p.m. Seconded by F. Torr. Vote: U/A

DRAFT

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-65

Application Type:	Transfer of Development Rights
Applicant(s):	Mike Robinson
Owner(s):	Mike Robinson
Location:	239 Washington St (Tax Map 10, Lot 32)
Meeting Date:	October 13, 2020

INTENT: To subdivide one lot into two through TDR. One lot would contain the existing house and would be 0.23 acres. The other lot (32-1) would contain 2.78 acres. The Board would first need to vote to grant the selling of 1 units via TDR.

LOTS/UNITS PROPOSED: TDR to buy 1 additional unit

AGENDA ITEM #: 4-B

ACREAGE: Parent lot is 3.01 +/- acres

ZONING DISTRICT: HR

EXISTING LAND USE: Duplex

PROPOSED LAND USE: Residential

SURROUNDING LAND USE: Residential

ZBA ACTION: None

ATTACHMENTS: Application materials and TDR Plan, staff memo regarding TDR review

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED: N/A

WAIVERS REQUESTED: None

Summary of Request and Background
Per Chapter 170-27.2.G(3)(a), the applicant is requesting that the Board vote on the plan indicating the additional lot can be created and one unit can be built.

The site plan shows the existing residential building on the parent lot with one new lot being subdivided for one new residential dwelling. The new lot would be served by a private road, which currently has three other homes off of it. Municipal water and sewer are available.

This project does not need a conditional use permit, as the steep slope area is under the 2,000 s.f threshold.

Consistency with Land Use Regulations
Chapter 170-27.2 of the Zoning Ordinance allows for developments to buy additional units through the process of Transfer of Development Rights. The process allows the applicant to come to the Board with a plan indicating the TDR subdivision.

The plan is consistent with Chapter 157-10 of the City's Land Subdivision Regulations, which provides for subdivision of existing lots.

STAFF RECOMMENDATION-TDR:
The Planning Department recommends that the Planning Board accept the application, open the public hearing, close the public hearing, and vote to approve the application of TDR to the Minor Subdivision with the following condition:

Condition to be Met Prior to Signing of the Plans:
1. Payment of the TDR fee

STAFF RECOMMENDATION-Subdivision:
The Planning Department recommends that the Planning Board vote to approve the subdivision with the following conditions:

Conditions to be Met Prior to Signing of the Plans:
1. The applicant shall provide the Planning Department a
    a. digital version of the plan.
    b. CAD file to the satisfaction of the Asset Management Administrator.
2. The Applicant shall revise the final plat to
    a. Add the owners' signatures
    b. Add the Licensed Land Surveyor, Professional Engineer, Certified Wetland Scientist stamps and signatures
    c. Add Planning file number P20-65 to the plan set

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-65

Application Type:	Transfer of Development Rights
Applicant(s):	Mike Robinson
Owner(s):	Mike Robinson
Location:	239 Washington St (Tax Map 10, Lot 32)
Meeting Date:	October 13, 2020

Conditions to be Met Prior to the Issuance of a Building Permit:

3. The new dwelling unit shall be assessed and pay the current water and sewer investment fees in place at the time of application for service.
4. The applicant shall provide a letter of credit or other form of security acceptable to the City for any unfinished work.

Conditions to be Met Prior to Occupancy:

5. Issuance of a Certificate of Occupancy.
6. Impact fees per unit shall be paid per the invoice attached to the Notice of Decision

239 Washington Street

Property Information

Property ID	10032-000000
Location	239 WASHINGTON ST
Owner	ROBINSON MICHAEL G
Land Use	104

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

Geometry updated 5/20/2020
Data updated Daily

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

October 8, 2020

City of Dover
Planning Office
Attn: Donna Benton, City Planner
288 Central Ave
Dover, NH 03820

RE: Proposed TDR Development
Mike Robinson
239 Washington Street
Tax Map 10, Lot 32

Mrs. Benton,

Enclosed please find the following required material in support of the TDR Subdivision Application off Washington Street.

- 1 Copies of the full size plans
- 4 Copies of the half scale plans
- 5 Copies of the subdivision application
- 5 Copies of the subdivision checklist
- 5 Copies of the TDR Application
- 5 Copies of a narrative

Thank you for your time and attention to this matter.

BERRY SURVEYING & ENGINEERING

Christopher R. Berry
Principal, President

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com
crberry@metrocast.net

September 21, 2020
Revised October 6, 2020

City of Dover
Attention: City Planner Donna Benton
288 Central Ave
Dover, NH 03820

Re: Proposed TDR Development
Mike Robinson
239 Washington Street
Tax Map 10, Lot 32

Dear Mrs. Benton,

On behalf of our client Mike Robinson, Berry Surveying & Engineering (BS&E) is submitting to discuss a proposed TDR minor subdivision off Washington Street.

Background and General Narrative:

Mike Robinson, owns the parcel known as 239 Washington Street in Dover, NH (Tax Map 10, Lot 32). Berry Surveying & Engineering has conducted an on-site survey of the parcel which includes a topographic analysis as well as a wetlands analysis. The lot contains an existing duplex that sits adjacent to Washington Street and the existing roadway known as Trask Drive. The area around Trask Drive is flat but steeply slopes down towards the Cocheco River at the rear of the site.

The Proposal:

The proposal is to subdivide Lot 32 into two residential lots, one existing and one proposed unit. The proposed single family home will be constructed on the flat area off Trask Drive. The house will be serviced by City water and sewer in Trask Drive. The applicant will work with the City engineering department to tie into the existing utilities.

A portion of the house construction will be constructed on steep slopes, however since the disturbance is less than 2,000 SF (1,900 SF proposed), a conditional use permit is not required. There is no disturbance within the shoreland zone, 50' of the wetland or 100' of the river.

Respectfully Submitted,
BERRY SURVEYING & ENGINEERING

James F. Hayden
Engineering Technician

Christopher R. Berry
Principal, President

BERRY SURVEYING & ENGINEERING
335 Second Crown Pt. Rd., Barrington, NH 03825
(603) 332-2863 / (603) 335-4623 FAX
www.BerrySurveying.Com

City of Dover, New Hampshire
MINOR SUBDIVISION APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Mike Robinson Telephone # 603-285-2793

Address of Applicant: 239 Washington Street, Dover NH

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

Address of Property Owner:

E-Mail Address: seavyc@msn.com

PROPERTY INFORMATION

Address of Property: 239 Washington Street

Assessor's Map # 10 Lot(s) # 32

Zoning District(s) Heritage Residential Overlay District(s) Conservation

Size of Parcel: 3.01 Ac. +/- Property Deed: Book 1923 Page: 534

Existing Use of Property: Duplex

SUBDIVISION INFORMATION

Existing Number of Lots: 1 Proposed Number of Lots: 2

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

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

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

Estimated Length of Proposed Roads: N/A feet Public or Private Road? N/A

WAIVER REQUESTS

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

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 805 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) Deidra Benjamin

Address 100, Leavitt road, Pittsfield NH 03263 Telephone #: 603-496-3307

Professional License #: 295 E-mail address: deidra.benjamin@gmail.com

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

SIGNATURES

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

Signature of Property Owner: _____ Date: 9-21-20

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

Signature of Property Owner: _____ Date: 9-2-20

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

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

Signature of Property Owner: _____ Date: 9-21-20

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

CERTIFICATION OF FEES

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

Signature of Property Owner: _____ Date: 9-21-20

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

City of Dover, New Hampshire
MINOR SUBDIVISION SUBMISSION CHECKLIST

[Revision Date: May 18, 2019]

This review checklist is intended to assist the applicant in the planning process of preparing a Subdivision application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

Plan Review Fees are due along with three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, 3 weeks prior to the Planning Board meeting. Abutter/Notice Fees will be invoiced and are due 28 hours prior to Planning Board.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision requirements. Please refer to the Subdivision Regulations for full details.

APPLICANT: Mike Robinson File Number: _____

PROJECT TITLE: _____

PROPERTY LOCATION: 239 Washington Street Tax Map: 10 Lot: 32

	Where/How Provided	Reviewed
1. Completed and signed Application form	X	
2. Plan Review Fees are provided	X	
3. Electronic copy of the surveyed plat layout	X	
4. Electronic copy of supplementary materials and application	X	
5. Waiver requests to the Subdivision Regulations, with written justification	N/A	
6. Conditional Use Permit applications	X	
7. Fifteen folded copies of subdivision plan w/scale of not less than 1"=50' or 1"=100' for larger subdivisions. Plans shall contain the following items as appropriate:	X	
Location map at appropriate scale	X	
Proposed subdivision name and title and Planning File #	X	
Date, north arrow and scale	X	
Names of all abutting property owners	X	
Name and address of owners and/or applicants	X	
Signature & stamp of NH licensed land surveyor and/or engineer	X	
Zoning District boundaries, including any special or overlay districts	X	
Location of Conservation District areas	X	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	X	
Location and widths of existing & proposed easements & right of ways	X	
Location and widths of existing and proposed sidewalks	X	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	X	
Existing and proposed lot areas in square feet	X	
Existing and proposed topographic information at two foot intervals	X	
Existing and proposed buildings and structure locations	X	
Minimum building setbacks or build to lines on all lots	X	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	X	

	Explain How Provided	Reviewed
Existing and proposed water lines and fire hydrants, including materials and capacity needed	X	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	X	
Existing and proposed septic system, including test pit locations and results and NHDES subdivision permit number	N/A	
Existing and proposed stormwater lines and facilities	X	
Location of Flood Hazard Zone	X	
Location of all bodies of water and watercourses	X	
Location of wetlands and buffers	X	
Existing natural features and/or significant vegetation on property	X	
Soil types	X	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	X	
Location of all land offered for dedication for public use or land to be held in common by property owners of the subdivision	N/A	
Location, material and size of existing and proposed permanent monuments	X	
Existing railroad lines	X	
Note regarding solid waste disposal	X	
All applicable Dover Common Subdivision notes	X	
8. Construction Detail Sheets shall contain the following information (if appropriate):	X	
Profiles showing existing & proposed elevations along the center lines of proposed streets & within 100' of intersections with existing streets	N/A	
Profiles showing the locations & a typical cross-section detail of streets	N/A	
Location of street trees, street lighting poles and street signs	N/A	
Location, size and invert elevations of existing and proposed sanitary sewers, stormwater drains and fire hydrants	X	
Location and size of all water, gas and other underground utilities	X	
9. Additional Information if appropriate		
Stormwater Management Plan depicting the existing and proposed storm drainage system and engineered drainage analysis	N/A	
Stormwater Management System Operation and Maintenance Plan	N/A	
Letter to Serve from Public and Private Utilities	N/A	
Erosion and Sedimentation Control Plan	N/A	
Proposed restrictive covenants or homeowners association documents	N/A	
Dates and permit numbers of all required state and federal permits	N/A	
If wetland buffer, indicate placards locations, as applicable	X	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	N/A	

REVIEWED BY: _____ DATE_____

City of Dover, New Hampshire
TRANSFER OF DEVELOPMENT RIGHTS APPLICATION

[Revision Date: August 16, 2018]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Mike Robinson Telephone # 603-285-2793

Address of Applicant: 239 Washington Street, Dover NH

E-Mail Address: seavyc@msn.com

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

Address of Property Owner:

PROPERTY INFORMATION

Assessor's Map # 10 Lot(s) # 32

Address of Property: 239 Washington Street

Zoning District(s) Heritage Residential Overlay District(s) Conservation

Existing Use of Property: Duplex

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

☒ Residential ☐ Residential (reduced size) ☐ Industrial | ☐ Purchase ☐ Land Preservation

Relief sought (Check All That Apply):

☐ Lot Size ☐ Frontage ☐ Setback ☒ Increase by 1 units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NONE

Name of Professional That Prepared TDR Plans: Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

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: [signature] Date: 9-2-20

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

Signature of Agent: [signature] Date: 9-11-2020

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: [signature] Date: 9-2-20

P20-65 **239 Washington Street**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
10002-A00000	53 PROSPECT ST	ROUSSE CHAD &	ROUSSE BRITNEY	53 PROSPECT ST	DOVER	NH	03820
10002-C00000	49 PROSPECT ST	GOODWIN TYLER D &	GOODWIN KATHRYN E	49 PROSPECT ST	DOVER	NH	03820
10003-002000	39 PROSPECT ST	TURCOTTE RANDY &	TURCOTTE ANGELA	39 PROSPECT ST	DOVER	NH	03820
10017-001000	27 HIGHLAND ST	PIPER STEPHEN R &	PIPER SUSAN M	27 HIGHLAND ST	DOVER	NH	03820-3302
10021-000000	ARCH ST	BOSTON & MAINE RR	IRON HORSE PARK	HIGH STREET	NORTH BILLERICA	MA	01862
10023-000000	277 WASHINGTON ST	PELLETIER DEA-SUE M &	PELLETIER LEE J	277 WASHINGTON ST	DOVER	NH	03820
10025-000000	265 WASHINGTON ST	HEARN MICHAEL L	HEARN JEAN O	265 WASHINGTON STREET	DOVER	NH	03820
10026-000000	261 WASHINGTON ST	THEODORAS CYNTHIA A TRUSTEE	THEODORAS SPERO REVOCABLE TRUST	261 WASHINGTON STREET	DOVER	NH	03820
10027-000000	7 TRASK DR	DODD DOUGLAS V E &	LAMONTAGNE JESSICA F	7 TRASK DR	DOVER	NH	03820-3670
10028-000000	255 WASHINGTON ST	RCD OF DOVER LLC		255 WASHINGTON ST	DOVER	NH	03820
10029-000000	249 WASHINGTON ST	PERRON JEFFREY S &	LAPORTE SUZANNE M	249 WASHINGTON ST	DOVER	NH	03820
10029-A00000	243 245 WASHINGTON ST	MITCHELL JONATHAN R		243 WASHINGTON ST	DOVER	NH	03820
10030-000000	5 TRASK DR	SCHNEIDER FREDERICK C &	CALTABIANO-SCHNEIDER ELAINE	5 TRASK DR	DOVER	NH	03820
10031-000000	241 WASHINGTON ST	ATKINSON EDWARD		241 WASHINGTON ST	DOVER	NH	03820
10033-000000	235 WASHINGTON ST	DRAKE MARJORIE A		235 WASHINGTON ST	DOVER	NH	03820
10034-000000	ALONG B & M RR	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
10035-000000	233 WASHINGTON ST	MEIKLE DAVID T & HOWARD JUDITH H TRUSTEE	MEIKLE DAVID AND HOWARD JUDITH REV TRUST	80 BURKITT ST	PORTSMOUTH	NH	03801
10035-A00000	227 229 WASHINGTON ST	227-229 WASHINGTON STREET LLC		230 WASHINGTON STREET	DOVER	NH	03820
10036-000000	225 WASHINGTON ST	ARBRO PROPERTY MANAGEMENT LLC		225 WASHINGTON STREET	DOVER	NH	03820
10037-000000	219 WASHINGTON ST	WALKER NORMAN W &	WALKER CARA J	315 NEWINGTON RD	NEWINGTON	NH	03801
10104-000000	230 WASHINGTON ST	DUNNINGTON THOMAS C JR & BARBARA M TRUST	DUNNINGTON FAMILY REVOCABLE TRUST	230 WASHINGTON STREET	DOVER	NH	03820
10105-000000	4 LEXINGTON ST	HAYDEN ROGER JR & LINDA L TRUSTEES	HAYDEN ROGER JR AND LINDA REV LIVING TRU	4 LEXINGTON ST	DOVER	NH	03820
10125-000000	250 WASHINGTON ST	CARTER ANNE MICHELE		250 WASHINGTON ST	DOVER	NH	03820
10126-000000	254 WASHINGTON ST	254 WASHINGTON STREET CORP		254 WASHINGTON ST	DOVER	NH	03820
10126-000001	254 1 WASHINGTON ST	STEVENS MELISSA J		254 WASHINGTON ST #1	DOVER	NH	03820
10126-000002	256 WASHINGTON ST	GILL DAVID L &	SUSA ROSEMARY T	256 WASHINGTON ST	DOVER	NH	03820
10126-000003	254 3 WASHINGTON ST	YORK CHRISTOPHER R		254 3 WASHINGTON ST	DOVER	NH	03820
10140-000000	5 LEXINGTON ST	ALLEN MICHAEL T &	ALLEN CHRISTINE A	5 LEXINGTON ST	DOVER	NH	03820
10032-000000	239 WASHINGTON ST	ROBINSON MICHAEL G		239 WASHINGTON STREET	DOVER	NH	03820
		BERRY SURVEYING & ENGINEERING	CHRISTOPHER R BERRY	335 SECOND CROWN POINT ROAD	BARRINGTON	NH	03825
			DEIDRA BENJAMIN	100 LEAVITT ROAD	PITTSFIELD	NH	03263

To: Berry Surveying and Engineering
From: Christopher Parker, AICP
Cc: Mike Robinson, Staff
Date: September 26, 2020
Re: TDR Mast Road

ISSUE:
In February of 2020 the Board recommended amendments to the Transfer of Development Rights (TDR) Ordinance. In June 2020 the Planning Board approved the amendments and on July 22, 2020, the City Council ratified them. One elements is the requirement for staff to draft a review statement on determine the need for a sketch plan.

INTENT:
This memo will serve as the staff report

GOALS:
Provide background of the current housing shortage, and describe the TDR applications in Dover.

Background

On September 22, 2020 on behalf of your client, Michael Robinson you submitted a plan for purchasing one unit on a lot on 239 Washington Street/ Trask Drive was submitted for concept review. The proposed 1 new unit may be reviewed as per section 170-27.2 G 3) of the city Code.

Staff performed this review based upon the information below, and is now providing the required staff report {170-27.2 E) 4) a}.

Project Information

Project:	Robinson/Trask Drive
Where:	239 Washington Street
What:	Private roadway with 4 single family dwellings, where 3 exist.
Acres:	3.01
Zone:	R-12
Public Water:	Yes
Public Sewer:	Yes
Units:	1 by right (existing), 1 purchased
CUP?	No

Staff Comment

When reviewing projects, staff visit the site, review the context, discuss options with the applicant and advises if it makes sense to request the purchase before or after designing a fully laid out plan. Furthermore, staff discuss the cost/benefit analyses on the proposal with the applicant.

In reviewing this project we note:

- Traffic
  - This area of Dover has sidewalks and the roadway is in good condition.
- Existing layout/topography
  - The existing house faces Washington Street and the rear is along Trask Drive. There is a mix of flat lawn area and trees.
  - A natural buffer to surrounding lots exists, and should be maintained.
- Environmental
  - There are steep slopes and wetlands and associated buffers noted on the plan, but those are contained to the area away from the proposed development.

The unit will be similar to the adjacent properties and will use the existing private road serving three existing houses.

Staff Recommendation

Staff recommends that this does not need a sketch plan submitted for review and the Planning Board can review this request as part of the minor subdivision process.

TABLE OF CONTENTS:

SHEET 1 ~ NEIGHBORHOOD PLAN
SHEET 2 ~ EXISTING CONDITIONS PLAN
SHEET 3 ~ TDR SUBDIVISION PLAN*
SHEET 4 ~ SUBDIVISION TOPO PLAN
SHEET 5 ~ DETAIL GRADING & SITE PLAN
SHEET 6 ~ C-101 CONSTRUCTION DETAILS

ASTERISKS FOR PLANS TO BE RECORDED

TDR SUBDIVISION
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

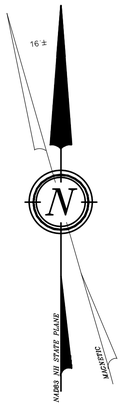
OWNER: MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, NH 03820

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

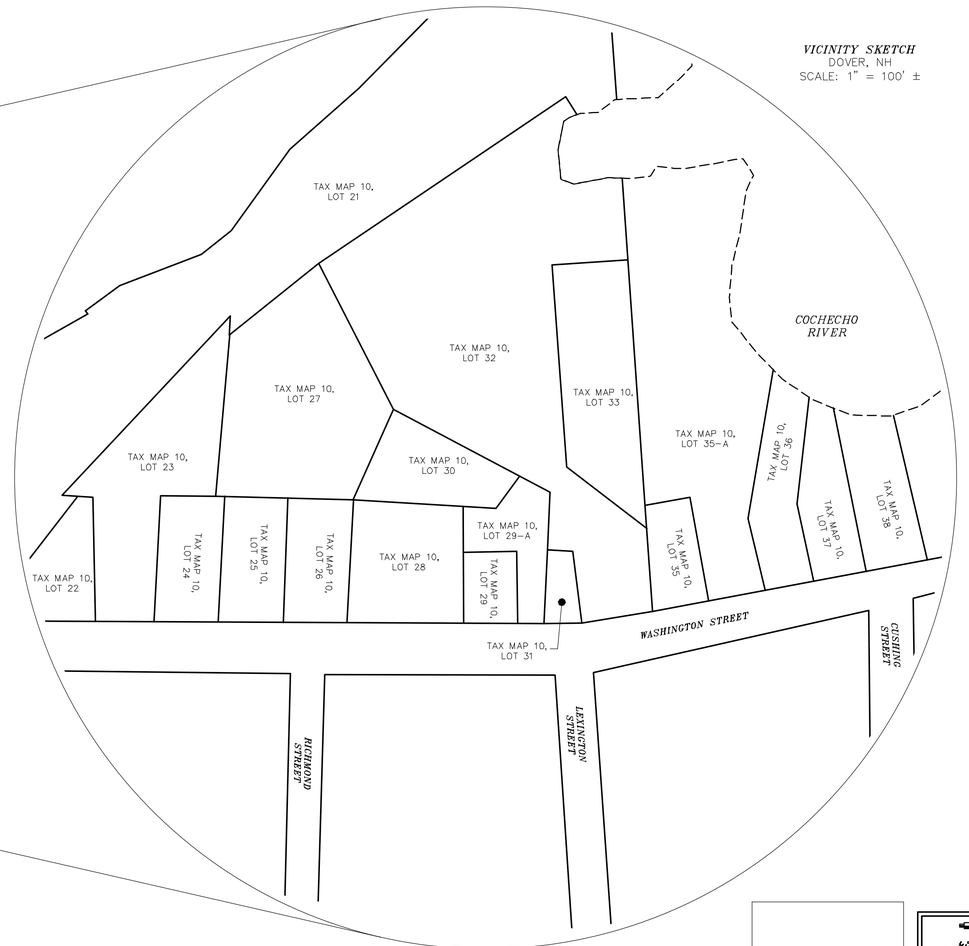
ENGINEER OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

WETLAND SCIENTIST: DEIDRA BENJAMIN, CWS
100 LEAVITT ROAD
PITTSFIELD, NH 03263

LOCATION PLAN
DOVER, NH
NOT TO SCALE



VICINITY SKETCH
DOVER, NH
SCALE: 1" = 100' ±



GENERAL PLAN SET NOTES:

1.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.

2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

APPROVED DOVER

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

REVISION	DATE	DESCRIPTION
#1	10-7-20	MINOR REVISIONS PER STAFF COMMENT

TDR SUBDIVISION
LAND OF
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

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

SCALE : AS SHOWN
DATE : SEPTEMBER 22, 2020
FILE NO. : DB 2020 - 071

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14143
LICENSED PROFESSIONAL ENGINEER

ABBREVIATION LEGEND:

V.G.C.	VERTICAL GRANITE CURB
E.O.P.	EDGE OF PAVEMENT
BITUM.	BITUMINOUS
TYP.	TYPICAL
U.G.E.	UNDER GROUND ELECTRIC / UTILITY
HDPE	HIGH DENSITY POLYETHYLENE
F.G.	FINISHED GRADE
E.G.	EXISTING GRADE
L.F.	LINEAR FOOT
F.D.	FINISHED FLOOR
FND	FOUND
T.B.R.	TO BE REMOVED
P.L.	PROPERTY LINE
E.L.	EASEMENT LINE
T.B.M.	TEMPORARY BENCHMARK
'/,	FOOT / FOOT

{ } 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)

LEGEND:

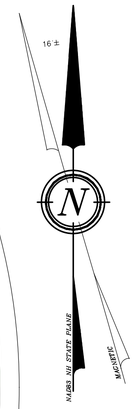
- IRON BOUND ~FND~
- IRON PIPE ~FND~
- STEEL STAKE ~FND~
- STONE BOUND ~FND~
- UTILITY POLE / GUY WIRE
- NRCS SOIL DELINEATION LINE
- BUILDING SETBACK LINE
- SURVEY TIE LINE
- OVERHEAD UTILITIES LINE
- WATER LINE
- CONTOUR LINE, MINOR
- CONTOUR LINE, MAJOR
- WETLAND LINE
- WETLAND BUFFER
- SEWER LINE
- DRAINAGE LINE
- FLOOD ZONE ELEVATION
- 100' LOCAL RIVER SETBACK
- 50' NHDES SETBACK
- 150' NHDES SETBACK
- 250' NHDES SETBACK
- STEEP SLOPES

Ru NRCS SOIL LABEL
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
TYP. TYPICAL
FND FOUND

PROPOSED LEGEND:

- IRON BOUND (FND)
- TEMPORARY BENCHMARK
- PARKING KIOSK
- CURB STOP
- GATE VALVE
- GAS VALVE
- CATCH BASIN
- SHEET DETAIL
- THRUST BLOCK
- LIGHTING
- PROPOSED SPOT ELEVATION
- PROPOSED GAS LINE
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR MINOR
- PROPOSED CONTOUR MAJOR
- PROPOSED UNDERGROUND UTILITY
- SILT FENCE / EROSION MIX BERM
- FILTREXX SILT SOXX (8" or 12" AS NOTED)
- ORANGE CONSTRUCTION PERIMETER FENCE

GIS SKETCH
DOVER, NH
SCALE: 1" = 100' ±



ABUTTERS WITHIN 200':

N/F MARJORIE A DRAKE
235 WASHINGTON ST
DOVER, NH 03820
TAX MAP 10, LOT 33
S.C.R.D. BOOK 2956, PAGE 947

N/F DAVID MEIKLE REV TST
JUDITH HOWARD REV TST
80 BURKITT ST
PORTSMOUTH, NH 03801
TAX MAP 10, LOT 35
S.C.R.D. BOOK 4696, PAGE 399

N/F 227-229 WASHINGTON ST LLC
230 WASHINGTON ST
DOVER, NH 03820
TAX MAP 10, LOT 35-A
S.C.R.D. BOOK 4559, PAGE 96

N/F CITY OF DOVER
288 CENTRAL AVE
DOVER, NH 03820
TAX MAP 10, LOT 34

N/F BOSTON & MAINE RR
IRON HORSE PARK
HIGH STREET
NORTH BILLERICA, MA 01862
TAX MAP 10, LOT 21

N/F DOUGLAS V E DODD
JESSICA F LAMONTAGNE
7 TRASK DR
DOVER, NH 03820
TAX MAP 10, LOT 30
S.C.R.D. BOOK 4046, PAGE 893

ABUTTERS WITHIN 200' CONT.:

N/F FREDERIC C SCHNEIDER
ELAINE CALTABIANO-SCHNEIDER
5 TRASK DR
DOVER, NH 03820
TAX MAP 10, LOT 30
S.C.R.D. BOOK 4698, PAGE 104

N/F JONATHAN R MITCHELL
243 WASHINGTON ST
DOVER, NH 03820
TAX MAP 10, LOT 29-A
S.C.R.D. BOOK 3684, PAGE 740

N/F JONATHAN & JESSICA NEWCOMB
ROBERT & KRISTINA NEWCOMB
241 WASHINGTON ST
DOVER, NH 03820
TAX MAP 10, LOT 31
S.C.R.D. BOOK 3772, PAGE 622

N/F ANNE MICHELE CARTER
250 WASHINGTON ST
DOVER, NH 03820
TAX MAP 10, LOT 125
S.C.R.D. BOOK 4203, PAGE 986

N/F DUNNINGTON FAMILY REV TST
BARBARA M & THOMAS C DUNNINGTON, JR
230 WASHINGTON ST
DOVER, NH 03820
TAX MAP 10, LOT 104
S.C.R.D. BOOK 4549, PAGE 449

REVISION	DATE	DESCRIPTION
#1	10-7-20	MINOR REVISIONS PER STAFF COMMENT

NEIGHBORHOOD PLAN
LAND OF
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

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

SCALE : AS SHOWN
DATE : SEPTEMBER 22, 2020
FILE NO. : DB 2020 - 071

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14345
LICENSED PROFESSIONAL ENGINEER

PLAN REFERENCES:

1.) "PLAN OF LOT ROBERT & THERESA PETERS, DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: SEPTEMBER, 1973
S.C.R.D PLAN 141-65
ON FILE AT THIS OFFICE

2.) "MAP OF LOT ROBERT B. AND LUCILLE A. YOUNG, DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: SEPTEMBER, 1971
S.C.R.D PLAN 129-53
ON FILE AT THIS OFFICE

3.) "CERTIFIED AS BUILT FOUNDATION PLAN, DOUGLAS V. DODD, TAX MAP 10, LOT 30, 5 TRASK DRIVE, DOVER NH 03820-4183"
BY: CIVILWORKS NEW ENGLAND
DATED: NOVEMBER 13, 2018
S.C.R.D. PLAN 1748

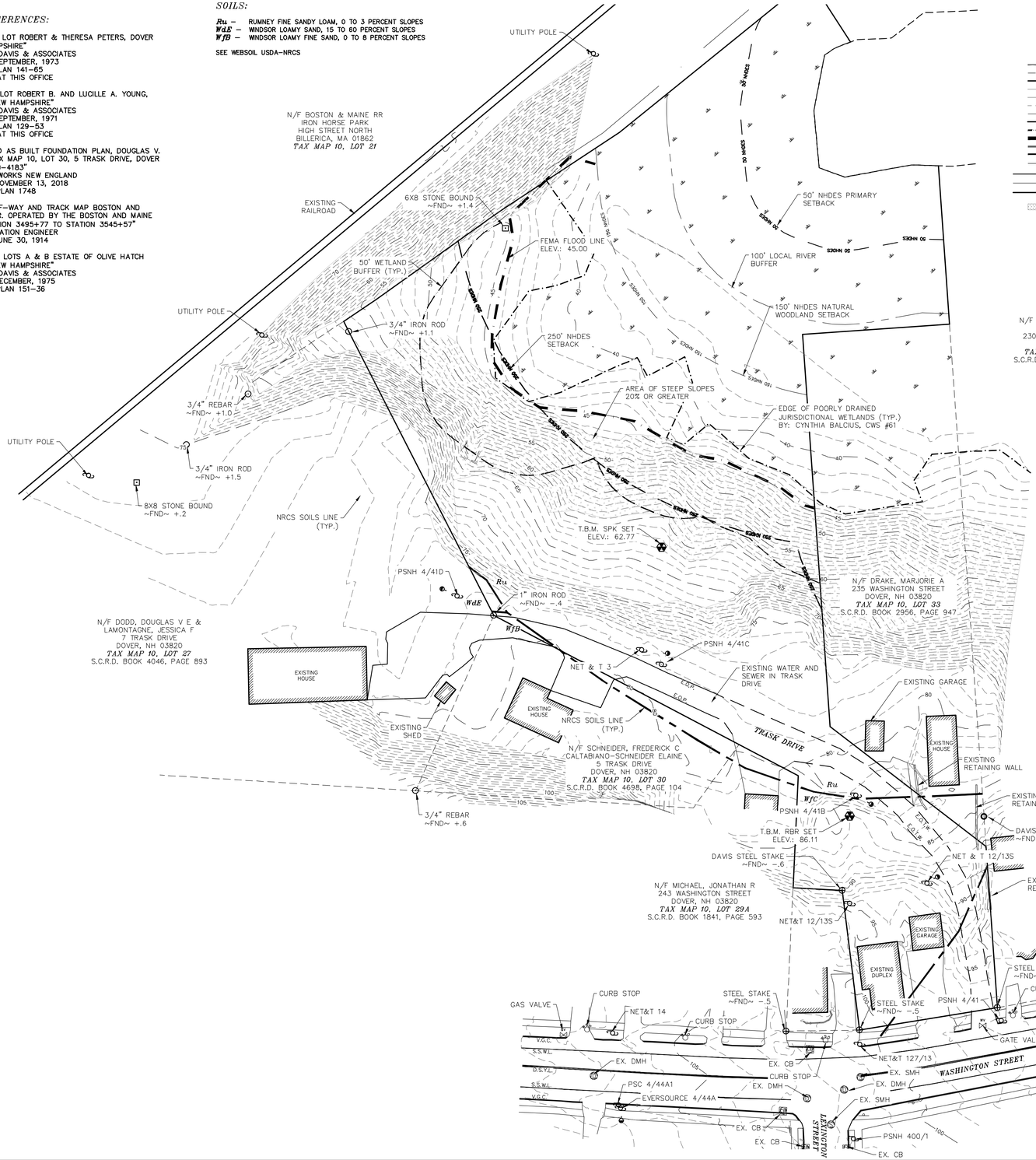
4.) "RIGHT-OF-WAY AND TRACK MAP BOSTON AND MAINE R.R. OPERATED BY THE BOSTON AND MAINE R.R. STATION 3495+77 TO STATION 3545+57"
BY: VALUATION ENGINEER
DATED: JUNE 30, 1914

5.) "PLAN OF LOTS A & B ESTATE OF OLIVE HATCH DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: DECEMBER, 1975
S.C.R.D. PLAN 151-36

SOILS:

Ru – RUMNEY FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
WdE – WINDSOR LOAMY SAND, 15 TO 60 PERCENT SLOPES
WfB – WINDSOR LOAMY FINE SAND, 0 TO 8 PERCENT SLOPES

SEE WEBSOIL USDA-NRCS



LEGEND:

- IRON BOUND ~FND~
- IRON PIPE ~FND~
- STEEL STAKE ~FND~
- GRANITE BOUND ~FND~
- UTILITY POLE / GUY WIRE
- NRCS SOIL DELINEATION LINE
- BUILDING SETBACK LINE
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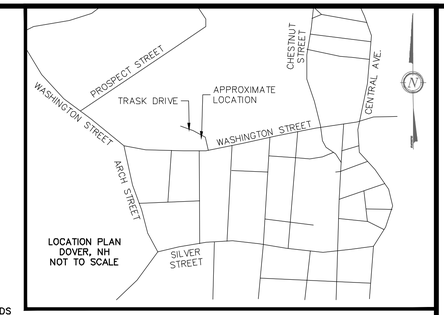
- FLOOD ZONE ELEVATION
- 100' LOCAL RIVER SETBACK
- 50' NHDES SETBACK
- 150' NHDES SETBACK
- 250' NHDES SETBACK
- STEEP SLOPES
- *Ru* NRCS SOIL LABEL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- TYP. TYPICAL
- FND FOUND



NOTES:

1.) OWNER: MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, NH 03820

2.) TAX MAP 10, LOT 32

3.) LOT AREA: 130,939 Sq. Ft., 3.01 Ac.±

4.) S.C.R.D. BOOK 1923, PAGE 534

5.) ZONING: (HR) HERITAGE RESIDENTIAL DISTRICT
MINIMUM FRONTAGE ~ 80'
MINIMUM LOT SIZE ~ 10,000 Sq. Ft.
FRONT BUILD-TO LINE ~ AVERAGE +/- 5'
REAR SETBACK ~ 15'
SIDE SETBACK ~ 30'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 24' - 40'
MAX. LOT COVERAGE: 40%

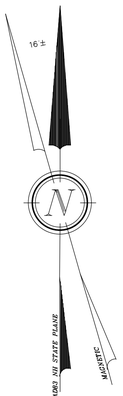
6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, A PORTION OF THIS PARCEL DOES FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD. FLOOD ELEVATION = 45.0' REF.: FEMA COMMUNITY #330145, MAP #33017C0320E, DATED: SEPTEMBER 30, 2015.

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN SUMMER OF 2020, WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON TAX MAP 10, LOT 32 AS OF THE DATE OF THE SURVEY.

10.) THE EXISTING USE FOR THE PROPERTY IS A DUPLEX.



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

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 –

10-7-2020
KENNETH A. BERRY LLS 805 DATE
SIGNATURE

REVISION	DATE	DESCRIPTION
#1	10-7-20	MINOR REVISIONS PER STAFF COMMENT

EXISTING CONDITIONS PLAN
LAND OF
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

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

SCALE : 1 IN. EQUALS 40 FT.
DATE : SEPTEMBER 22, 2020
FILE NO. : DB 2020 – 071

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

PLAN REFERENCES:

1.) "PLAN OF LOT ROBERT & THERESA PETERS, DOVER NEW HAMPSHIRE"
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DATED: SEPTEMBER, 1973
S.C.R.D PLAN 141-65
ON FILE AT THIS OFFICE

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S.C.R.D PLAN 129-53
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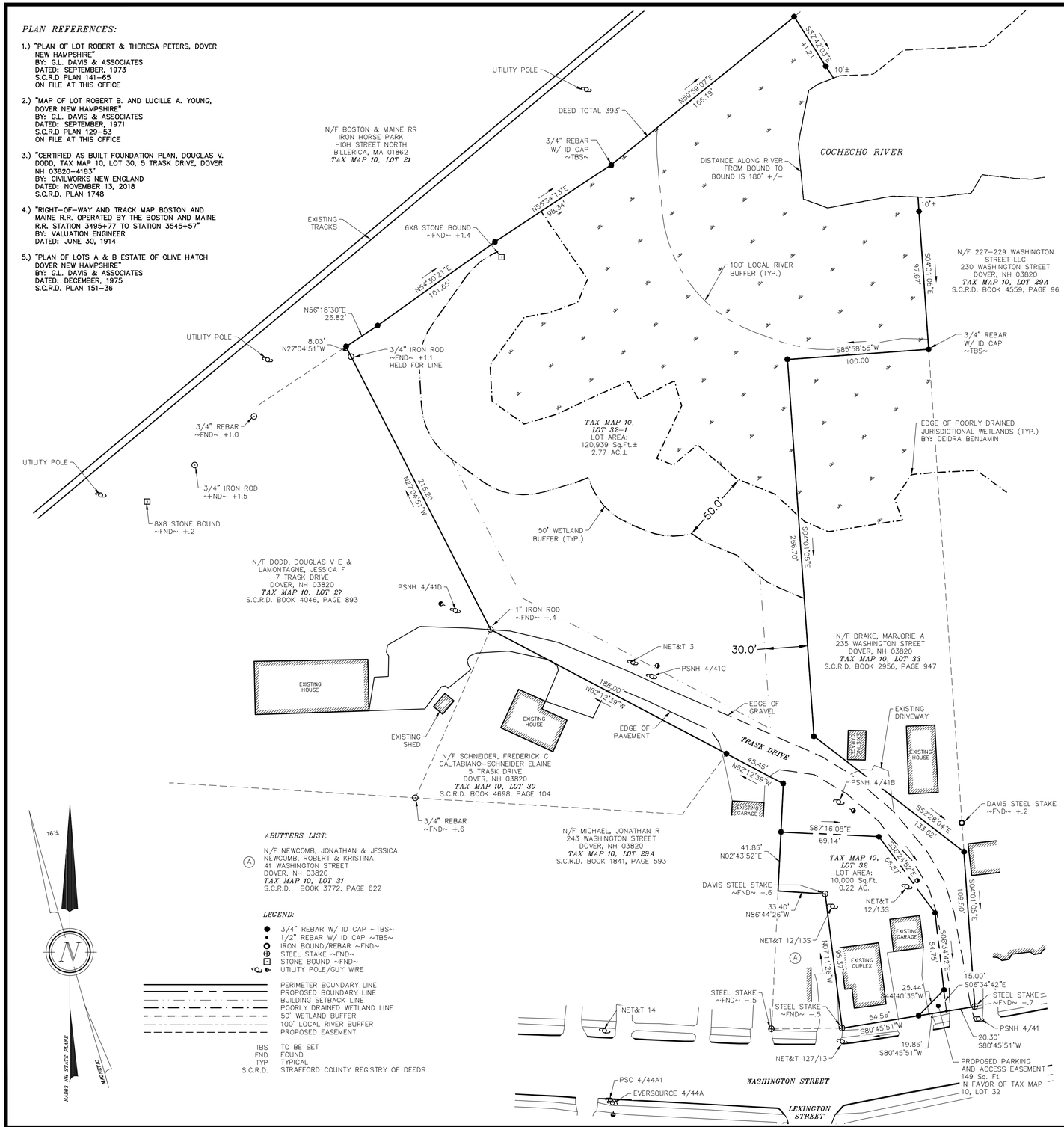
BY: CIVILWORKS NEW ENGLAND
DATED: NOVEMBER 13, 2018
S.C.R.D. PLAN 1748

4.) "RIGHT-OF-WAY AND TRACK MAP BOSTON AND MAINE R.R. OPERATED BY THE BOSTON AND MAINE R.R. STATION 3495+77 TO STATION 3545+57"
BY: VALUATION ENGINEER
DATED: JUNE 30, 1914

5.) "PLAN OF LOTS A & B ESTATE OF OLIVE HATCH DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: DECEMBER, 1975
S.C.R.D. PLAN 151-36



ABUTTERS LIST:

(A) N/F NEWCOMB, JONATHAN & JESSICA
NEWCOMB, ROBERT & KRISTINA
41 WASHINGTON STREET
DOVER, NH 03820
TAX MAP 10, LOT 31
S.C.R.D. BOOK 3772, PAGE 622

LEGEND:

- ● 3/4" REBAR W/ ID CAP ~TBS~
- • 1/2" REBAR W/ ID CAP ~TBS~
- ○ IRON BOUND/REBAR ~FND~
- ⊕ STEEL STAKE ~FND~
- □ STONE BOUND ~FND~
- UTILITY POLE/GUY WIRE

- PERIMETER BOUNDARY LINE
- PROPOSED BOUNDARY LINE
- BUILDING SETBACK LINE
- POORLY DRAINED WETLAND LINE
- 50' WETLAND BUFFER
- 100' LOCAL RIVER BUFFER
- PROPOSED EASEMENT

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

NOTES:

1.) OWNER: MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, NH 03820

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REAR SETBACK ~ 15'
SIDE SETBACK ~ 30'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 24' - 40'
MAX. LOT COVERAGE: 40%
TDR SETBACKS (PROVIDED)
ABUTTING A STREET ~ 20'
ABUTTING A SIDE LOT LINE ~ 10'
ABUTTING A REAR LOT LINE ~ 20'
MINIMUM FRONTAGE ~ 40'
EXTERNAL PERIMETER BUFFER ~ 30'

6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, A PORTION OF THIS PARCEL DOES FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD. FLOOD ELEVATION = 45.0' REF.: FEMA COMMUNITY #330145, MAP #33017C0320E, DATED: SEPTEMBER 30, 2015.

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN SUMMER OF 2020, WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) THE INTENT OF THIS PLAN IS TO SUBDIVIDE TAX MAP 10, LOT 32 INTO 2 INDIVIDUAL LOTS USING THE CITY OF DOVER TDR SUBDIVISION REGULATIONS. THIS IS A 6 SHEET PLAN SET. SHEET 3 IS A 40 SCALE SUBDIVISION SHEET, AND SHEET 4 SHOWS TOPOGRAPHY. SHEET 3 WILL BE RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS. SHEETS 1-2 & 4-6 WILL BE ON FILE AT THIS OFFICE AND THE CITY OF DOVER.

10.) WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, CERTIFIED WETLANDS SCIENTIST, CERTIFICATION NUMBER 295, IN ACCORDANCE WITH CHAPTER 170-27.1 OF THE ZONING ORDINANCE, IN SUMMER, 2020.

11.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED. SUBDIVISION PLANS SHALL SHOW ANY EASEMENTS FOR THESE SERVICES.

12.) THE SUBJECT PARCELS IS SERVED BY MUNICIPAL WATER AND SEWER. CONTRACTOR IT SO LOCATE SEWER AND WATER IN TRASK DRIVE PRIOR TO CONSTRUCTION.

13.) ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND WITH THE 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.

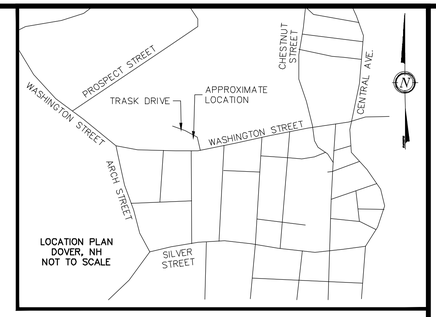
15.) THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR ANY EARTH DISTURBING ACTIVITY OCCURS. THERE IS NO PROPOSED WORK WITHIN THE 50' WETLAND BUFFER.

16.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

17.) THE PROPOSED USE FOR THE SUBDIVISION IS TO SUBDIVIDE THE EXISTING PARCEL INTO ONE ADDITIONAL SINGLE FAMILY LOT.

18.) THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY: NONE

N/F MEIKLE, DAVID T &
HOWARD, JUDITH H TRUSTEE
MEIKLE DAVID AND HOWARD,
JUDITH REV. TRUST
80 BURKITT STREET
PORTSMOUTH, NH 03801
TAX MAP 10, LOT 35
S.C.R.D. BOOK 4696, PAGE 399



LOCATION PLAN
DOVER, NH
NOT TO SCALE

NOTES CONTINUED:

19.) ANY RETAINING WALL TALLER THAN FOUR FEET REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

20.) ANY FENCE TALLER THAN SIX FEET REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

21.) THE PROPOSED HOUSE WILL BE REQUIRED TO BE SPRINKLED.

22.) DOVER STANDARD NOTES 9, 13, 19-22, 26, 29, 30-32 WERE NOT INCLUDED BECAUSE THEY DO NOT APPLY TO THIS PROJECT.

WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN. IN SUMMER 2020 UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).

DEIDRA BENJAMIN, CWS

APPROVED DOVER

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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–

10-7-20

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

REVISION	DATE	DESCRIPTION
#1	10-7-20	MINOR REVISIONS PER STAFF COMMENT

SUBDIVISION PLAN
LAND OF
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

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

SCALE : 1 IN. EQUALS 40 FT.
DATE : SEPTEMBER 22, 2020
FILE NO. : DB 2020 - 071

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

PLAN REFERENCES:

1.) "PLAN OF LOT ROBERT & THERESA PETERS, DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: SEPTEMBER, 1973
S.C.R.D PLAN 141-65
ON FILE AT THIS OFFICE

2.) "MAP OF LOT ROBERT B. AND LUCILLE A. YOUNG, DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: SEPTEMBER, 1971
S.C.R.D PLAN 129-53
ON FILE AT THIS OFFICE

3.) "CERTIFIED AS BUILT FOUNDATION PLAN, DOUGLAS V. DODD, TAX MAP 10, LOT 30, 5 TRASK DRIVE, DOVER NH 03820-4183"
BY: CIVILWORKS NEW ENGLAND
DATED: NOVEMBER 13, 2018
S.C.R.D. PLAN 1748

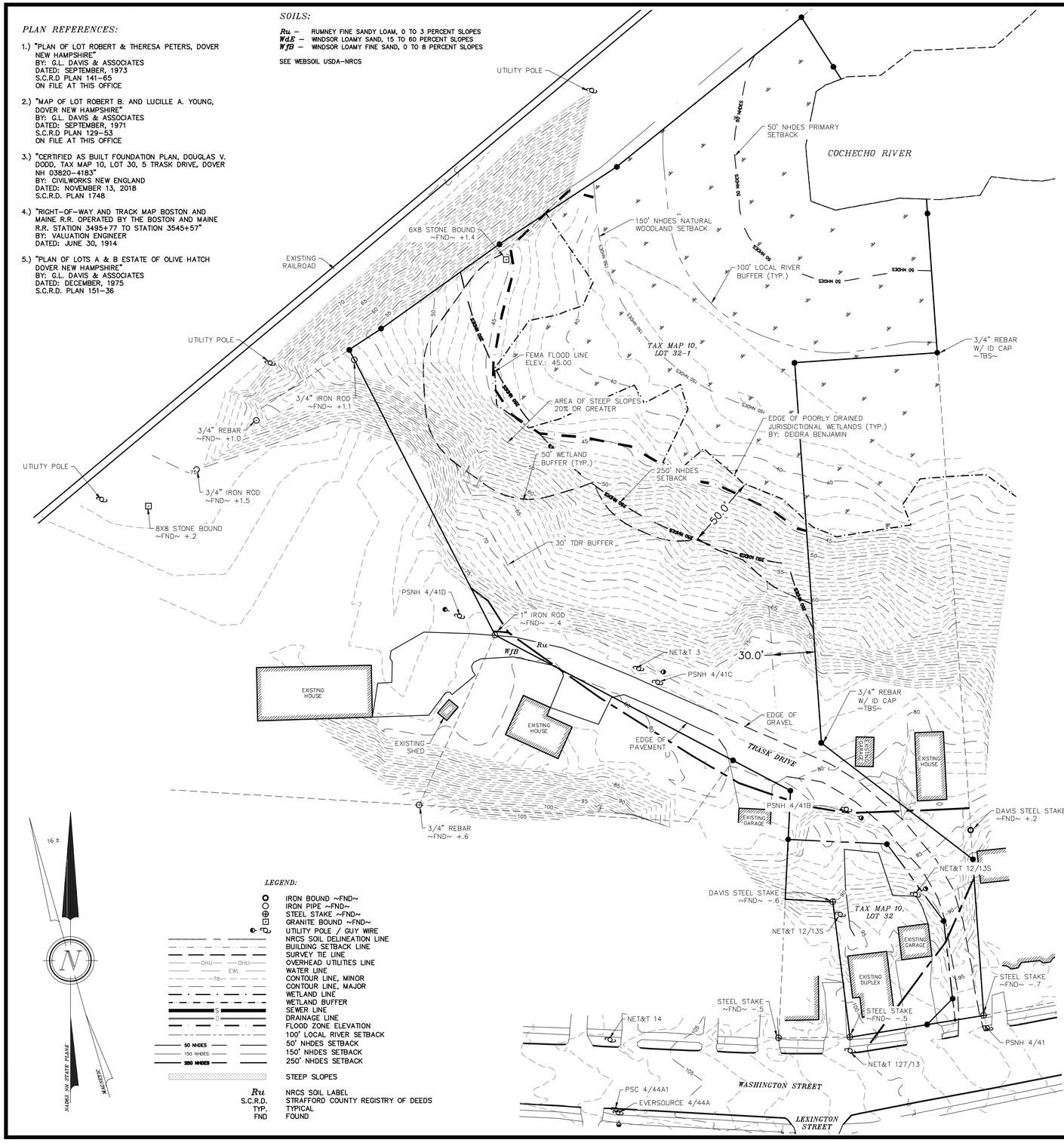
4.) "RIGHT-OF-WAY AND TRACK MAP BOSTON AND MAINE R.R. OPERATED BY THE BOSTON AND MAINE R.R. STATION 3495+77 TO STATION 3545+57"
BY: VALUATION ENGINEER
DATED: JUNE 30, 1914

5.) "PLAN OF LOTS A & B ESTATE OF OLIVE HATCH DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS & ASSOCIATES
DATED: DECEMBER, 1975
S.C.R.D. PLAN 151-36

SOILS:

Ru – RUMNEY FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
WdE – WINDSOR LOAMY SAND, 15 TO 60 PERCENT SLOPES
WfB – WINDSOR LOAMY FINE SAND, 0 TO 8 PERCENT SLOPES

SEE WEBSOIL USDA–NRCS



LEGEND:

	IRON BOUND ~FND~
	IRON PIPE ~FND~
	STEEL STAKE ~FND~
	GRANITE BOUND ~FND~
	UTILITY POLE / GUY WIRE
	NRCS SOIL DELINEATION LINE
	BUILDING SETBACK LINE
	SURVEY TIE LINE
OHU OHU	OVERHEAD UTILITIES LINE
EWL	WATER LINE
78	CONTOUR LINE, MINOR
	CONTOUR LINE, MAJOR
	WETLAND LINE
S	WETLAND BUFFER
D	SEWER LINE
	DRAINAGE LINE
	FLOOD ZONE ELEVATION
	100' LOCAL RIVER SETBACK
50 NHDES	50' NHDES SETBACK
150 NHDES	150' NHDES SETBACK
250 NHDES	250' NHDES SETBACK
	STEEP SLOPES
Rm	NRCS SOIL LABEL
S.C.R.D.	STRAFFORD COUNTY REGISTRY OF DEEDS
TYP.	TYPICAL
FND	FOUND

NAD83 NH STATE PLANE — MAGNETIC

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

NOTES:

1.) OWNER: MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, NH 03820

2.) TAX MAP 10, LOT 32

3.) LOT AREA: 130,939 Sq. Ft., 3.01 Ac.±

4.) S.C.R.D. BOOK 1923, PAGE 534

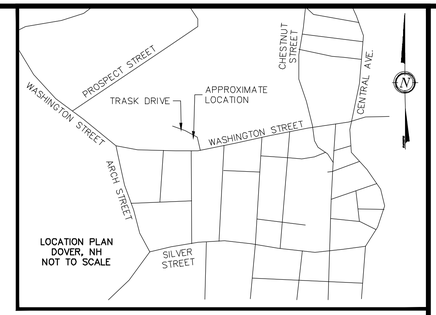
5.) ZONING: (HR) HERITAGE RESIDENTIAL DISTRICT
MINIMUM FRONTAGE ~ 80'
MINIMUM LOT SIZE ~ 10,000 Sq. Ft.
FRONT BUILD-TO LINE ~ AVERAGE +/- 5'
REAR SETBACK ~ 15'
SIDE SETBACK ~ 30'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 24' - 40'
MAX. LOT COVERAGE: 40%
TDR SETBACKS
ABUTTING A STREET ~ 20'
ABUTTING A SIDE LOT LINE ~ 10'
ABUTTING A REAR LOT LINE ~ 20'
MINIMUM FRONTAGE ~ 40'
EXTERNAL PERIMETER BUFFER ~ 30'

6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, A PORTION OF THIS PARCEL DOES FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD. FLOOD ELEVATION = 54.4' REF.: FEMA COMMUNITY #330145, MAP #33017C0320E, DATED: SEPTEMBER 30, 2015, ELEVATION 46 FEET, AS SHOWN.

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN SUMMER OF 2020, WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) THE INTENT OF THIS PLAN IS TO SUBDIVIDE TAX MAP 10, LOT 32 INTO 2 INDIVIDUAL LOTS USING THE CITY OF DOVER TDR SUBDIVISION REGULATIONS. THIS IS A 6 SHEET PLAN SET. SHEET 3 IS A 40 SCALE SUBDIVISION SHEET, AND SHEET 4 SHOWS TOPOGRAPHY. SHEET 3 WILL BE RECORDED AT THE STRAFFORD COUNTY REGISTRY OF DEEDS. SHEETS 1-2 & 4-6 WILL BE ON FILE AT THIS OFFICE AND THE CITY OF DOVER.



LOCATION PLAN
DOVER, NH
NOT TO SCALE

WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN. IN SUMMER 2020 UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).

DEIDRA BENJAMIN, CWS

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 10-7-20

REVISION	DATE	DESCRIPTION
#1	10-7-20	MINOR REVISIONS PER STAFF COMMENT

SUBDIVISION TOPO PLAN
LAND OF
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

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

SCALE : 1 IN. EQUALS 40 FT.
DATE : SEPTEMBER 22, 2020
FILE NO. : DB 2020 – 071

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

NOTES:

1.) OWNER: MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, NH 03820

2.) TAX MAP 10, LOT 32

3.) LOT AREA: 130,939 Sq. Ft., 3.01 Ac.±

4.) S.C.R.D. BOOK 1923, PAGE 534

5.) ZONING: (HR) HERITAGE RESIDENTIAL DISTRICT
MINIMUM FRONTAGE ~ 80'
MINIMUM LOT SIZE ~ 10,000 Sq. Ft.
FRONT BUILD-TO LINE ~ AVERAGE +/- 5'
REAR SETBACK ~ 15'
SIDE SETBACK ~ 30'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 24' - 40'
MAX. LOT COVERAGE: 40%
TDR SETBACKS (PROVIDED)
ABUTTING A STREET ~ 20'
ABUTTING A SIDE LOT LINE ~ 10'
ABUTTING A REAR LOT LINE ~ 20'
MINIMUM FRONTAGE ~ 40'
EXTERNAL PERIMETER BUFFER ~ 30'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED GRADING AND SITE PLAN DETAILS.

7.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE.

8.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2010. CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

9.) 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

10.) 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.

11.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

12.) 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.

13.) ALL UNPAVED, DISTURBED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED.

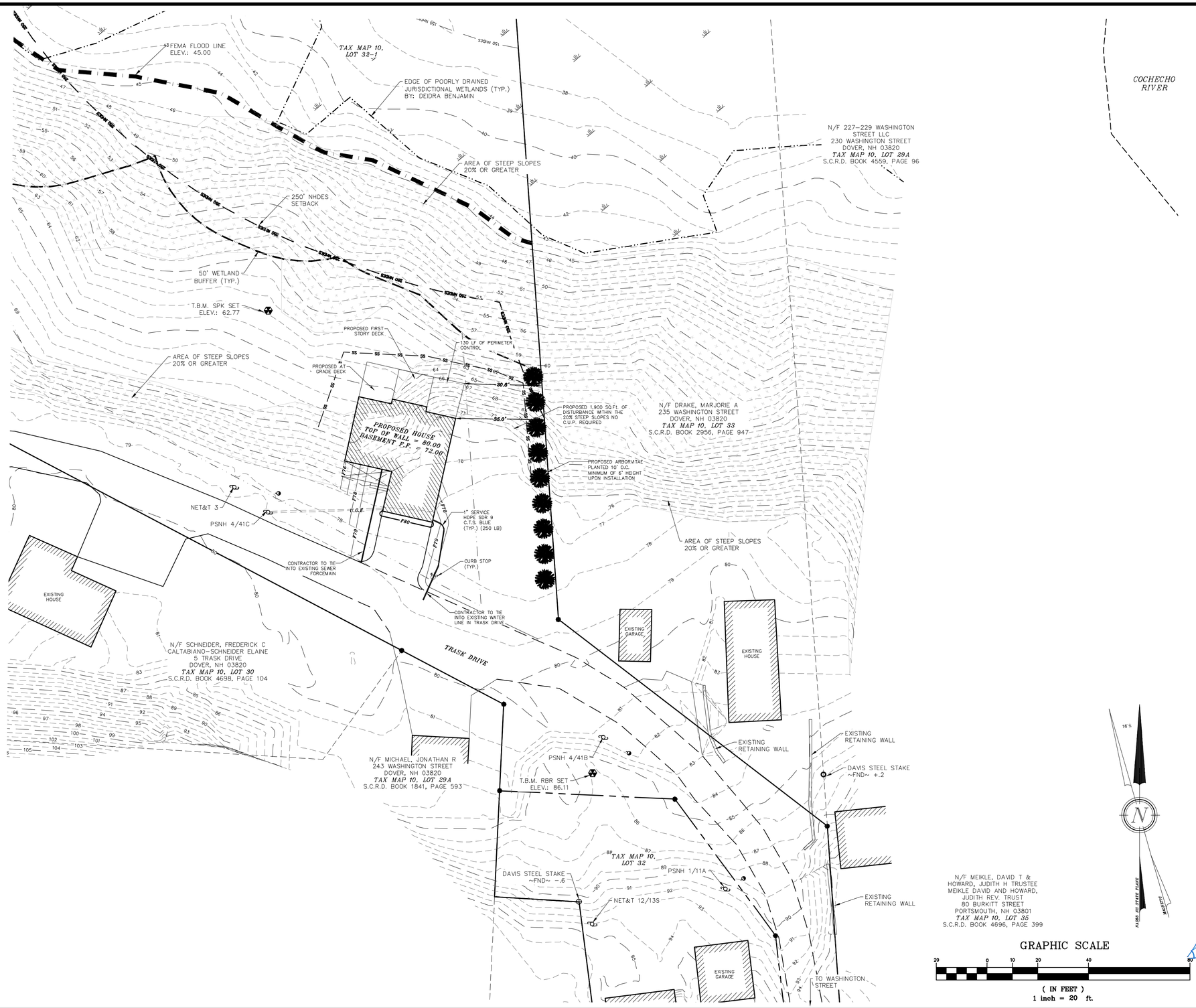
14.)BUILDING ADDRESSES SHALL BE DETERMINED BY THE BUILDING OFFICIAL.

15.)THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

16.)THIS PROJECT PROPOSES 1,900 SqFt. OF DISTURBANCE WITHIN THE STEEP SLOPES. NO CONDITIONAL USE PERMIT IS NEEDED.

17.)CONTRACTOR TO TIE INTO EXISTING WATER LINE AND SEWER LINE IN TRASK DRIVE. CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.

18.) THE PROPOSED HOUSE IS TO BE SPRINKLED.



REVISION	DATE	DESCRIPTION
#1	10-7-20	MINOR REVISIONS PER STAFF COMMENT

DETAIL GRADING & SITE PLAN
LAND OF
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : SEPTEMBER 22, 2020
FILE NO. : DB 2020 - 071

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 11243
LICENSED PROFESSIONAL ENGINEER

C1

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.

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.

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.

RECOMMENDED *

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	0.35
CROWN VETCH	15	0.35
OR		
FLAT PEA	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	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

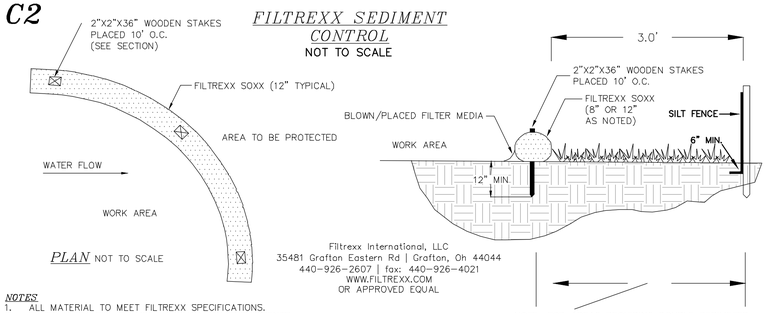
CONSERVATION MIX	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
TALL FESCUE (35%)	15	0.35
CREEPING RED FESCUE (25%)	15	0.35
ANNUAL RYEGRASS (12%)	5	0.12
PERENNIAL RYEGRASS (10%)	5	0.12
KENTUCKY BLUEGRASS (10%)	15	0.35
WHITE CLOVER (3%)	7	0.16

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED.
   WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A 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.

C2

FILTREXX SEDIMENT CONTROL
NOT TO SCALE



PLAN NOT TO SCALE

Filtrexx International, LLC
35481 Grafton Eastern Rd | Grafton, Oh 44044
440-926-2607 | fax: 440-926-4021
WWW.FILTREXX.COM
OR APPROVED EQUAL

NOTES
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
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 FILTREXXIN TERNATIONAL, 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

NOTE: FOR AREAS REQUIRING DOUBLE PERIMETER CONTROL WITHIN 50' OF JURISDICTIONAL WETLANDS AND NOT FOR ALL SILT SOXX APPLICATIONS. THIS DUPLICATION MAY BE SPECIFIED AS 12" SILT SOXX OR ORANGE CONSTRUCTION FENCE AS NOTED.

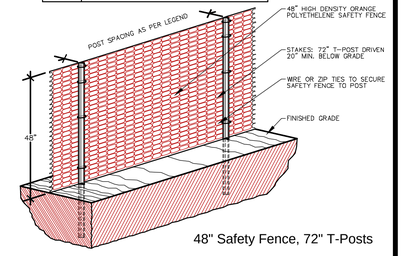
SECTION NOT TO SCALE

C3

CONSTRUCTION SAFETY FENCE
NOT TO SCALE

LEGEND

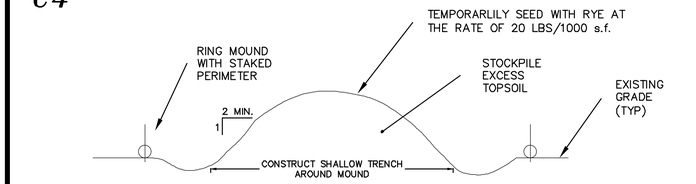
SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C.
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C.
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.



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.
5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

C4



TOPSOIL STOCKPILE MOUND
NOT TO SCALE

TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, SOIL STOCKPILE PRACTICES, PAGE 46.

C5 *DEFINITION OF STABLE:*

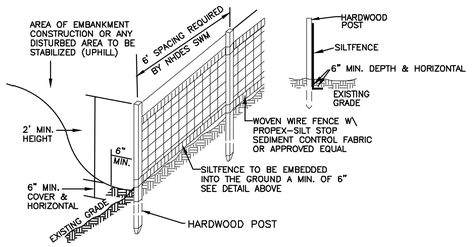
PER ENV-WQ 1500 ALTERATION OF TERRAIN

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.

C6



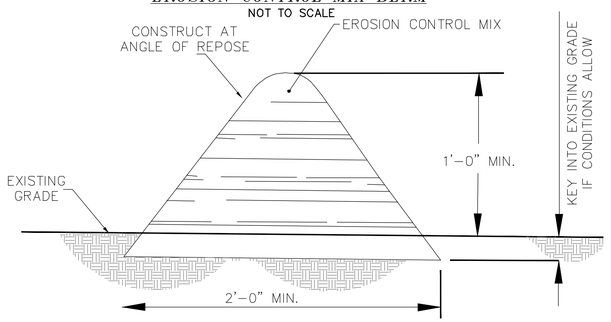
SILT FENCE CONSTRUCTION SPECIFICATIONS
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, 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 #3 4-2 SEDIMENT CONTROL PRACTICES, SILT FENCE, PAGE 90.

SILT FENCE MAINTENANCE
1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
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

C7

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 CLOSLY 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.
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 #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

C8

WINTER STABILIZATION NOTES

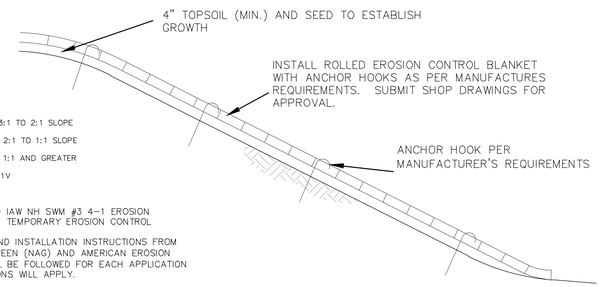
1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "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. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER OCTOBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.

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

C9



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 SC 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.

ROLLED EROSION CONTROL BLANKET (RECB)
SLOPE STABILIZATION DETAIL
NOT TO SCALE

C-101

REVISION	DATE	DESCRIPTION
#1	10-7-20	MINOR REVISIONS PER STAFF COMMENT

CONSTRUCTION DETAILS
LAND OF
MICHAEL ROBINSON
239 WASHINGTON STREET
DOVER, N.H.
TAX MAP 10, LOT 32

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

AS NOTED
DATE : SEPTEMBER 22, 2020
FILE NO. : DB 2020 - 071

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-63

Application Type:	Minor Lot Line Adjustment
Applicant(s):	Richard A & Adele J Marone
Owner(s):	Richard A & Adele J Marone
Location:	2 Reyner's Brook Drive and 503 Sixth Street (Map A, Lots 47-1 & 47-3)
Meeting Date:	October 13, 2020

INTENT: To adjust the lot lines between two lots. Two parcels each with 8,021 s.f. will be swapped between lots so no change in size for either lot.

LOTS/UNITS PROPOSED: N/A

AGENDA ITEM #: 4-C

ACREAGE:	**Existing:**	**Proposed:**
Lot 47-1:	0.93 ac	0.93 ac
Lot 47-3:	0.92 ac	0.92 ac

ZONING DISTRICT: R-40

EXISTING LAND USE: Residential

PROPOSED LAND USE: N/A

SURROUNDING LAND USE: Residential

ZBA ACTION: None

ATTACHMENTS: Application materials including LLA Plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED: None

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is proposing to adjust the lot line between the two lots, doing an equal land swap of 8,021 s.f. each.

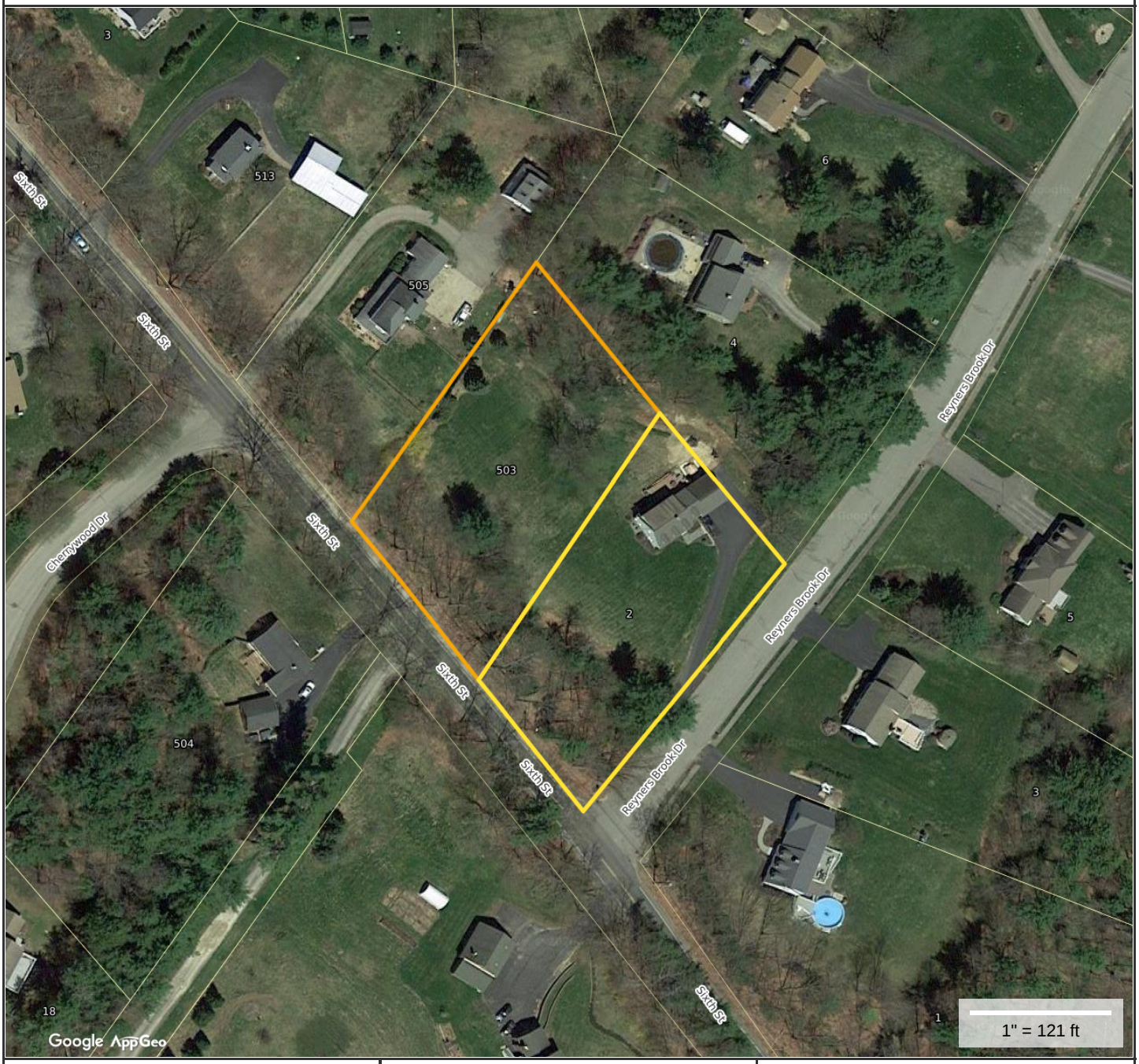
Consistency with Land Use Regulations
Chapter 157-18 of the Land Subdivision Regulations of the City Code provides for the adjustment of existing lot lines between two or more lots. This plan is consistent with those regulations.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application for review, open the public hearing, and vote to approve the minor lot line adjustment with the following conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The applicant shall provide the Planning Department a
   a. digital version of the plan.
   b. CAD file to the satisfaction of the Asset Management Administrator.
2. The applicant shall revise the plat to:
   a. Add Planning file number P20-63 to the title block
   b. Add signature and stamp of LLS
   c. Add owners' signatures

2 Reyners Brook Drive & 503 Sixth Street



Property Information

Property ID	A0047-001000
Location	2 REYNERS BROOK DR
Owner	MARONE RICHARD A
Land Use	101

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

Geometry updated 5/20/2020
Data updated Daily

City of Dover, New Hampshire
MINOR LOT LINE ADJUSTMENT APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT INFORMATION

Name of Applicant: Richard A. & Adele J. Marone Telephone # 603-817-2595

Address of Applicant: 2 Reyner's Brook Drive Dover, NH 03820

FIRST PROPERTY OWNER AND PARCEL INFORMATION

Name of 1st Property Owner (*if different from applicant*): SAME Telephone #_____

Address of 1st Property Owner: _____

Address of Property: 2 Reyner's Brook Drive

Assessor's Map # A Lot(s) # 47-1

Property Deed: Book 1590 Page: 13

Zoning District(s) R-40 Overlay District(s) N/A

Size of Existing Parcel (sq. ft.): 40,463 Size of Proposed Parcel (sq. ft.): 40,463

SECOND PROPERTY OWNER AND PARCEL INFORMATION

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

Address of 2nd Property Owner: _____

Address of Property: 503 Sixth Street

Assessor's Map # A Lot(s) # 47-3

Property Deed: Book 1823 Page: 445

Zoning District(s) R-40 Overlay District(s) N/A

Size of Existing Parcel (sq. ft.): 40,071 Size of Proposed Parcel (sq. ft.): 40,071

THIRD PROPERTY OWNER AND PARCEL INFORMATION N/A

Name of 3rd Property Owner (*if different from applicant*): _____ Telephone #_____

Address of 3rd Property Owner: _____

Address of Property: _____

Assessor's Map # _____ Lot(s) # _____

Property Deed: Book _____ Page: _____

Zoning District(s) _____ Overlay District(s) _____

Size of Existing Parcel (sq. ft.): _____ Size of Proposed Parcel (sq. ft.): _____

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin M. McEneaney, LLS
McEneaney Survey Associates

Address 24 Chestnut Street Dover, NH 03820 Telephone #: 603-742-0911

Professional License #: Kevin M. McEneaney
NH LLS #661 E-mail address: kevin@surveynh.com

CONSERVATION EASEMENT HOLDER (s) N/A

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

Name of 2nd Easement Holder: _____ Telephone #_____

Address 2nd Easement Holder: _____

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.

X Signature of First Property Owner: _____ Date: 9/17/2020

X Signature of Second Property Owner: _____ Date: 9/17/2020

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

X Signature of Property Owner: _____ Date: 9/17/2020

City of Dover, New Hampshire
LOT LINE ADJUSTMENT SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This review checklist is intended to assist the applicant in the planning process of preparing a Subdivision application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

Plan Review Fees are due along with three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, 3 weeks prior to the Planning Board meeting. Abutter/Notice Fees will be invoiced and are due 28 hours prior to Planning Board.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision requirements. Please refer to the Subdivision Regulations for full details.

APPLICANT: Richard A. & Adele J. Marone File Number: P20-_____

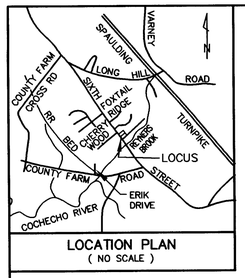
PROPERTY LOCATION: 2 Reyner's Brook Drive & 503 Sixth Street Tax Map: A Lot: 47-1 and Lot: 47-3

	Where/How Provided	Reviewed
1. Completed and signed Application form	X	
2. Plan Review Fees are provided	X	
3. Electronic copy of the surveyed plat layout	X	
4. Electronic copy of supplementary materials and application		
5. Fifteen copies of LLA plan w/scale of not less than 1"=50' or 1"=100' for larger adjustments. Plans shall contain the following items as appropriate:	X	
Location map at appropriate scale	X	
Planning File #	X	
Date, north arrow and scale	X	
Names of all abutting property owners	X	
Name and address of owners	X	
Signature & stamp of NH licensed land surveyor	X	
Zoning District boundaries, including any special or overlay districts	N/A	
Location of Conservation District areas	N/A	
Location, names and widths of existing and streets, including pavement widths, grades, curbs and crosswalks	X	
Location and widths of existing & proposed easements & right of ways	N/A	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	X	
Existing and proposed lot areas in square feet	X	
Existing and proposed buildings and structure locations	X	
Minimum building setbacks or build to lines on all lots	X	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	X	
Location, material and size of existing and proposed permanent monuments	X	
All applicable Dover Common Subdivision notes	X	

REVIEWED BY: _____ DATE_____

P20-63 **2 Reyner's Brook Drive & 503 Sixth Street**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
A0046-000000	513 SIXTH ST	RICHARD CODY M		513 SIXTH ST	DOVER	NH	03820
A0047-002000	1 REYNERS BROOK DR	KEANE MATTHEW F &	KEANE SHARON M	1 REYNERS BROOK DR	DOVER	NH	03820
A0047-004000	3 REYNERS BROOK DR	TAYLOR MARY ANN LIVING REVOCABLE TRUST	TAYLOR MARY ANN AND GUENTNER KENNETH TRU	3 REYNERS BROOK DR	DOVER	NH	03820
A0047-005000	4 REYNERS BROOK DR	SPOSATO JOHN J JR	SPOSATO NANCY F	4 REYNERS BROOK	DOVER	NH	03820
A0047-006000	5 REYNERS BROOK DR	BOLDUC MICHAEL & STEPHANIE REVOCABLE LIV	BOLDUC MICHAEL AND STEPHANIE TRUSTEES	5 REYNERS BROOK	DOVER	NH	03820
A0047-007000	6 REYNERS BROOK DR	BURNS TIMOTHY F &	BURNS CAROLYN A	6 REYNERS BROOK	DOVER	NH	03820
A0047-008000	9 REYNERS BROOK DR	MARTIN MICHAEL T & ANN ELIZABETH &	MARTIN MICHAEL AND ELIZABETH TRUSTEES 25	9 REYNERS BROOK	DOVER	NH	03820
A0047-A00001	505 SIXTH ST	CONROY FRED M		505 SIXTH ST	DOVER	NH	03820
A045A-002005	21 OLIVE MEADOW LN	NAQSHBANDI SYED MUDASSAR &	AFZAL ASRA	21 OLIVE MEADOW LN	DOVER	NH	03820
A045A-002006	15 OLIVE MEADOW LN	SINGH RAGHBIR SINGH &	KAUR PARMINDER	15 OLIVE MEADOW LN	DOVER	NH	03820-4718
A045A-002007	11 OLIVE MEADOW LN	GORMAN DANIEL A &	GORMAN MARY C	11 OLIVE MEADOW LN	DOVER	NH	03820-4718
B0001-A00000	480 SIXTH ST	STF DEVELOPMENT CORP		242 CENTRAL AVE	DOVER	NH	03820
B0001-D00000	500 SIXTH ST	SMART HERBERT C JR &	RAFTERY-SMART TARA	500 SIXTH ST	DOVER	NH	03820
B0002-B00000	504 SIXTH ST	WILLARD E BERCH &	WILLARD LINDA L	504 SIXTH STREET	DOVER	NH	03820-5904
B0002-C00000	508 SIXTH ST	DURELL KENETH C & DONNA M CO-TRUSTEES	DURELL FAMILY REVOCABLE TRUST OF 2018	508 SIXTH ST	DOVER	NH	03820
B0004-001000	18 CHERRYWOOD DR	MARCHUK VADIM V	MARCHUK MERCY REED	18 CHERRYWOOD DR	DOVER	NH	03820
B0004-069000	11 CHERRYWOOD DR	SUYDAM ROBERT L &	SUYDAM JO ANN	11 CHERRYWOOD DR	DOVER	NH	03820
A0047-001000	2 REYNERS BROOK DR	MARONE RICHARD A	MARONE ADELE J	2 REYNERS BROOK	DOVER	NH	03820
A0047-003000	503 SIXTH ST	MARONE RICHARD A &	MARONE ADELE J	2 REYNERS BROOK DRIVE	DOVER	NH	03820
		MCENEANEY SURVEY ASSOCIATES	KEVIN M MCENEANEY LLS	24 CHESTNUT STREET	DOVER	NH	03820



LOCATION PLAN
(NO SCALE)

LEGEND

I.P.(fnd) – IRON PIPE FOUND
I.R.(fnd) – IRON ROD FOUND
I.R.(tbs) – IRON ROD WITH ID CAP #661 TO BE SET
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
UP 55/14 – UTILITY POLE W/ I.D. No.

No.	Bearing	Distance
L1	S37°30'56"W	12.97'
L2	N39°24'03"W	7.26'

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	104°20'17"	30.00'	54.63'	47.39'	S89°41'04"W

NOTES:

1.) OWNER OF RECORD:
RICHARD A. MARONE
ADELE J. MARONE
2 REYNERS BROOK DRIVE
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 1590, PAGE 13
S.C.R.D. VOLUME 1823, PAGE 445
A / 47-1
A / 47-3

OWNER SIGNATURES

2.) A / 47-1 – DENOTES TAX MAP AND PARCEL NUMBER.

4.) THE INTENT OF THIS PLAN IS TO ADJUST THE COMMON LOT LINE BETWEEN THE SUBJECT PARCELS AS SHOWN. PARCEL A (8,021 S.F.) IS TO BE ADDED TO LOT A/47-3, PARCEL B (8,021 S.F.) IS TO BE ADDED TO LOT A/47-1. THIS IS AN EQUAL AREA ADJUSTMENT WITH NO CHANGE IN OVERALL LOT AREAS.

5.) ZONING DISTRICT:

DISTRICT RURAL RESIDENTIAL (R-40)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	=	40,000 S.F.
MAXIMUM LOT COVERAGE	=	10 PERCENT
MINIMUM FRONTAGE	=	150 FEET
BUILDING SETBACK REQUIREMENTS:		
FRONT SETBACK	=	40 FEET
SIDE SETBACK	=	25 FEET
REAR SETBACK	=	30 FEET
MAXIMUM BUILDING HEIGHT	=	35 FEET MAXIMUM
OUTBUILDING SETBACK REQUIREMENTS:		
FRONT SETBACK	=	40 FEET
SIDE SETBACK	=	10 FEET
REAR SETBACK	=	10 FEET

6.) THE SUBJECT PARCEL IS LOCATED OUTSIDE OF THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 33017C0310E; EFFECTIVE DATE 9/30/2015.

7.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 26, 2020.

8.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND ON AUGUST 26, 2020 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

9.) LOTS ARE SERVICED BY MUNICIPAL WATER AND ONSITE SEWAGE DISPOSAL.

B / 2B
E. BERCH WILLARD
LINDA L. WILLARD
504 SIXTH STREET
DOVER, NH 03820
1760 / 368

A/47A-1
FRED M. CONROY
505 SIXTH STREET
DOVER, NH 03820
4595 / 84

B / 1D
RICHARD A. MARONE
ADELE J. MARONE
2 REYNERS BROOK DRIVE
DOVER, NH 03820
4795 / 314

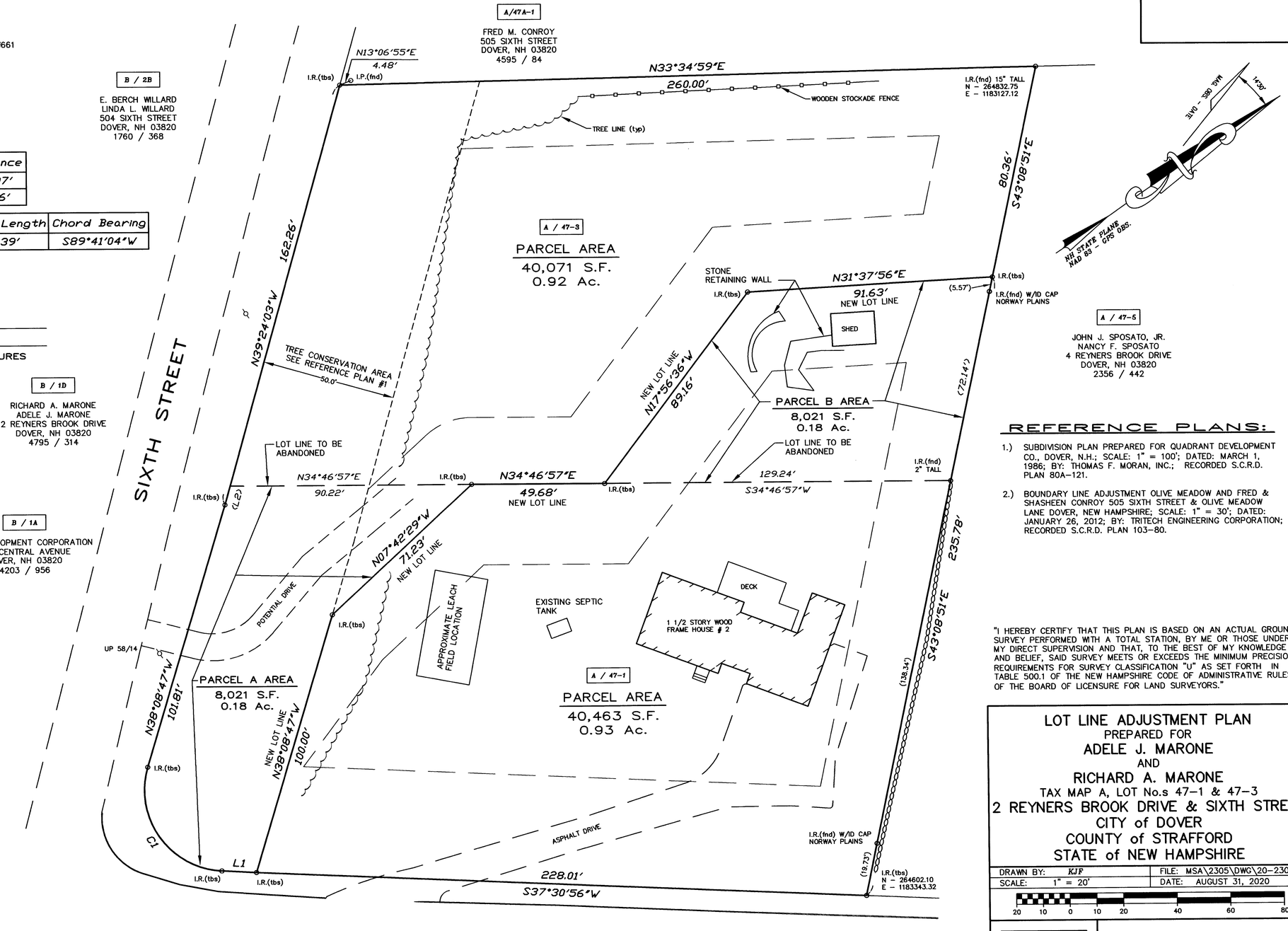
B / 1A
STF DEVELOPMENT CORPORATION
242 CENTRAL AVENUE
DOVER, NH 03820
4203 / 956

A / 47-2
MATTHEW F. KEANE
SHARON M. KEANE
1 REYNERS BROOK DRIVE
DOVER, NH 03820
3926 / 808

A / 47-4
MARY ANN TAYLOR REVOCABLE LIVING TRUST
MARY ANN TAYLOR, TRUSTEE
KENNETH GUENTER, TRUSTEE
3 REYNERS BROOK DRIVE
DOVER, NH 03820

A / 47-5
MICHAEL J. BOLDUC AND STEPAHIE A. BOLDUC
REVOCABLE LIVING TRUST
5 REYNERS BROOK DRIVE
DOVER, NH 03820
3133 / 221

A / 47-5
JOHN J. SPOSATO, JR.
NANCY F. SPOSATO
4 REYNERS BROOK DRIVE
DOVER, NH 03820
2356 / 442



REFERENCE PLANS:

1.) SUBDIVISION PLAN PREPARED FOR QUADRANT DEVELOPMENT CO., DOVER, N.H.; SCALE: 1" = 100'; DATED: MARCH 1, 1986; BY: THOMAS F. MORAN, INC.; RECORDED S.C.R.D. PLAN 80A-121.

2.) BOUNDARY LINE ADJUSTMENT OLIVE MEADOW AND FRED & SHASHEEN CONROY 505 SIXTH STREET & OLIVE MEADOW LANE DOVER, NEW HAMPSHIRE; SCALE: 1" = 30'; DATED: JANUARY 26, 2012; BY: TRITECH ENGINEERING CORPORATION; RECORDED S.C.R.D. PLAN 103-80.

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

LOT LINE ADJUSTMENT PLAN
PREPARED FOR
ADELE J. MARONE
AND
RICHARD A. MARONE
TAX MAP A, LOT No.s 47-1 & 47-3
2 REYNERS BROOK DRIVE & SIXTH STREET
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DRAWN BY: KJF	FILE: MSA\2305\DWG\20-2305
SCALE: 1" = 20'	DATE: AUGUST 31, 2020

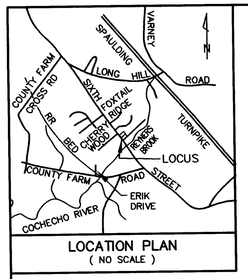
20 10 0 10 20 40 60 80

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

McEneaney Survey Associates of NEW ENGLAND
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911
SURVEYING – PLANNING – CONSULTING

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

20-2305	LLADJ	20-09	34-41
PROJECT NO	TYPE	FIELDBOOK & PAGES	



LOCATION PLAN
(NO SCALE)

LEGEND

I.P.(fnd) – IRON PIPE FOUND
I.R.(fnd) – IRON ROD FOUND
I.R.(tbs) – IRON ROD WITH ID CAP #661 TO BE SET
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
UP 55/14 – UTILITY POLE W/ I.D. No.
----180 ---- – CONTOUR LINE (2 FOOT INTERVAL)

No.	Bearing	Distance
L1	S37°30'56"W	12.97'
L2	N39°24'03"W	7.26'

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	104°20'17"	30.00'	54.63'	47.39'	S89°41'04"W

NOTES:

1.) OWNER OF RECORD:
RICHARD A. MARONE
ADELE J. MARONE
2 REYNERS BROOK DRIVE
DOVER, NEW HAMPSHIRE 03820
A / 47–1, A / 47–3
S.C.R.D. VOLUME 1590, PAGE 13
S.C.R.D. VOLUME 1823, PAGE 445

OWNER SIGNATURES

2.) A / 47–1 – DENOTES TAX MAP AND PARCEL NUMBER.

4.) THE INTENT OF THIS PLAN IS TO ADJUST THE COMMON LOT LINE BETWEEN THE SUBJECT PARCELS AS SHOWN. PARCEL A (8,021 S.F.) IS TO BE ADDED TO LOT A/47–3, PARCEL B (8,021 S.F.) IS TO BE ADDED TO LOT A/47–1. THIS IS AN EQUAL AREA ADJUSTMENT WITH NO CHANGE IN OVERALL LOT AREAS.

5.) ZONING DISTRICT:

DISTRICT RURAL RESIDENTIAL (R–40)
DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= 40,000 S.F.
MAXIMUM LOT COVERAGE	= 10 PERCENT
MINIMUM FRONTAGE	= 150 FEET
BUILDING SETBACK REQUIREMENTS:	
FRONT SETBACK	= 40 FEET
SIDE SETBACK	= 25 FEET
REAR SETBACK	= 30 FEET
MAXIMUM BUILDING HEIGHT	= 35 FEET
OUTBUILDING SETBACK REQUIREMENTS:	
FRONT SETBACK	= 40 FEET
SIDE SETBACK	= 10 FEET
REAR SETBACK	= 10 FEET

6.) THE SUBJECT PARCEL IS LOCATED OUTSIDE OF THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 33017C0310E; EFFECTIVE DATE 9/30/2015.

7.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 26, 2020.
VERTICAL DATUM IS NH STATE PLANE (NAVD88) BASED ON GPS OBSERVATION DATED AUGUST 26, 2020. CONTOUR INTERVAL IS TWO (2) FEET.

8.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND ON AUGUST 26, 2020 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

9.) LOTS ARE SERVICED BY MUNICIPAL WATER AND ONSITE SEWAGE DISPOSAL.

10.) THE SOIL TYPES ON THE SITE ARE:
WfB WINDSOR LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 0 TO 8 PERCENT SLOPES. THE SOURCE FOR THE SOIL TYPE DATA IS USDA NRCS WEB SOIL SURVEY https: //websoilsurvey.sc.egov.usda.gov

B / 1D
RICHARD A. MARONE
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JOHN J. SPOSATO, JR.
NANCY F. SPOSATO
4 REYNERS BROOK DRIVE
DOVER, NH 03820
2356 / 442

A / 47–1
PARCEL AREA
40,071 S.F.
0.92 Ac.
INCLUDES 25,185 S.F. OF GROUP 3 SOIL OUTSIDE OF CONSERVATION AREA

A / 47–1
PARCEL AREA
40,463 S.F.
0.93 Ac.

PARCEL A AREA
8,021 S.F.
0.18 Ac.

PARCEL B AREA
8,021 S.F.
0.18 Ac.

A / 47–2
MATTHEW F. KEANE
SHARON M. KEANE
1 REYNERS BROOK DRIVE
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3926 / 808

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5 REYNERS BROOK DRIVE
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3133 / 221

SIXTH STREET
REYNERS BROOK DRIVE
N13°06'55"E 4.48'
N33°34'59"E 260.00'
WOODEN STOCKADE FENCE
TREE LINE (typ)
I.R.(fnd) 15" TALL N – 264832.75 E – 1183127.12
S43°08'51"E 80.36'
WH STATE PLANE NAD 83 – GPS OBS.
N39°24'03"W 162.26'
TREE CONSERVATION AREA SEE REFERENCE PLAN #1
50.0'
TEST PIT #1
4K
STONE RETAINING WALL
N31°37'56"E 91.63' NEW LOT LINE
(5.57')
I.R.(fnd) W/ID CAP NORWAY PLAINS
SHED
NEW LOT LINE N17°56'36"W 89.16'
(72.14')
LOT LINE TO BE ABANDONED
N34°46'57"E 90.22'
N34°46'57"E 49.68' NEW LOT LINE
129.24'
S34°46'57"W
I.R.(fnd) 2" TALL
N07°42'29"W 71.23' NEW LOT LINE
235.78'
S43°08'51"E
POTENTIAL DRIVE
APPROXIMATE LEACH FIELD LOCATION
EXISTING SEPTIC TANK
DECK
1 1/2 STORY WOOD FRAME HOUSE # 2
(138.34')
UP 58/14
N38°08'47"W 101.81'
NEW LOT LINE N38°08'47"W 100.00'
ASPHALT DRIVE
I.R.(fnd) W/ID CAP NORWAY PLAINS
(42.16')
I.R.(tbs) N – 264602.10 E – 1183343.32
C1
L1
228.01'
S37°30'56"W

REFERENCE PLANS:

1.) SUBDIVISION PLAN PREPARED FOR QUADRANT DEVELOPMENT CO., DOVER, N.H.; SCALE: 1" = 100'; DATED: MARCH 1, 1986; BY: THOMAS F. MORAN, INC.; RECORDED S.C.R.D. PLAN 80A–121.

2.) BOUNDARY LINE ADJUSTMENT OLIVE MEADOW AND FRED & SHASHEEN CONROY 505 SIXTH STREET & OLIVE MEADOW LANE DOVER, NEW HAMPSHIRE; SCALE: 1" = 30'; DATED: JANUARY 26, 2012; BY: TRITECH ENGINEERING CORPORATION; RECORDED S.C.R.D. PLAN 103–80.

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

TOPOGRAPHIC PLAN

LOT LINE ADJUSTMENT PLAN
PREPARED FOR
ADELE J. MARONE
AND
RICHARD A. MARONE
TAX MAP A, LOT No.s 47–1 & 47–3
2 REYNERS BROOK DRIVE & SIXTH STREET
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DRAWN BY: KJF	FILE: MSA\2305\DWG\20–2305
SCALE: 1" = 20'	DATE: AUGUST 31, 2020

20 10 0 10 20 40 60 80

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

20–2305	LLADJ	20–09	34–41
PROJECT NO	TYPE	FIELDBOOK & PAGES	

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

McENEANEY SURVEY ASSOCIATES of NEW ENGLAND
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911
SURVEYING – PLANNING – CONSULTING

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-64

Application Type:	Transfer of Development Rights
Applicant(s):	Ernest J. Carrier & Irene R Carrier Revocable Trust of 1998
Owner(s):	Ernest J. Carrier & Irene R Carrier Revocable Trust of 1998
Location:	4 & 6 Ash St (Tax Map 30, Lot 141B)
Meeting Date:	October 13, 2020

INTENT: To purchase one TDR unit in order to build two duplexes with 4 garage spaces and 2 surface spaces.

LOTS/UNITS PROPOSED: TDR to buy 1 additional unit

AGENDA ITEM #: 4-D

ACREAGE: 0.28 acres

ZONING DISTRICT: Gateway

EXISTING LAND USE: Residential

PROPOSED LAND USE: Residential

SURROUNDING LAND USE: Residential and commercial

ZBA ACTION: None

ATTACHMENTS: Application materials and TDR Plan, staff memo regarding TDR review

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED: N/A

WAIVERS REQUESTED: None

Summary of Request and Background
Per Chapter 170-27.2.G(3)(b), the applicant is requesting that the Board vote on the plan indicating the additional unit can be purchased to total four units via two duplexes. The duplexes would each have garage spaces and there would be 2 surface spaces on site as well.

Consistency with Land Use Regulations
Chapter 170-27.2 of the Zoning Ordinance allows for developments to buy additional units through the process of Transfer of Development Rights. The process allows the applicant to come to the Board with a plan indicating the TDR but does not trigger the need of full site plan review.

STAFF RECOMMENDATION-TDR:
The Planning Department recommends that the Planning Board accept the application, open the public hearing, close the public hearing, and vote to approve the application of TDR to the Minor Subdivision with the following condition:

Condition to be Met Prior to Granting the TDR:

1. Payment of the TDR fee

Conditions to be Met Prior to Signing of the Plans:

2. The applicant shall provide a digital version of the plan to the Planning Department.
3. Submit a CAD file to the satisfaction of the Asset Management Administrator.
4. The Applicant shall revise the final plat to
    a. Add the owners' signatures
    b. Add Planning file number P20-64 to the plan set
    c. Revise zoning information to Gateway (ie maximum lot coverage)
    d. Add parking calculation
    e. Add notes about solid waste collection
    f. Signature and stamp of LLS
    g. Add Common Site Plan notes 10, 14, 15, and 23

Conditions to be Met Prior to the Issuance of a Building Permit:

5. The new dwelling units shall be assessed and pay the current water and sewer investment fees in place at the time of application for service.
6. The applicant shall provide a letter of credit or other form of security acceptable to the City for any unfinished work.

Conditions to be Met Prior to Occupancy:

7. Issuance of a Certificate of Occupancy.
8. Impact fees per unit shall be paid per the invoice attached to the Notice of Decision.

4 6 Ash Street

Property Information

Property ID	30141-B00000
Location	4 6 ASH ST
Owner	CARRIER ERNEST J TRUSTEE
Land Use	101

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

Geometry updated 5/20/2020
Data updated Daily

FRANCIS X. BRUTON, III
CATHERINE A. BERUBE
JOSHUA P. LANZETTA

OF COUNSEL
JAMES H. SCHULTE

Bruton & Berube, PLLC

ATTORNEYS AT LAW

601 Central Avenue
Dover, NH 03820

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

www.brutonlaw.com

September 22, 2020

VIA HAND DELIVERED

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

RE: Ernest J. Carrier Revocable Trust 1998 & Irene R. Carrier Revocable Trust of 1998
4 & 6 Ash Street, Dover, NH
Map 30, Lot 141-B

Dear Mr. Parker:

Enclosed please find five (5) copies of a Transfer of Development Rights Application for the above referenced matter with an 8½" x 11" plan copy, along with the associated filing fee of $254.00. Please note that we have enclosed copies of the plans in size 11" x 17" with each application, as well as one (1) full size set of the plans.

By making this submission today, we understand that we will be separately billed for abutter notice fees, and that this application will be placed on the Board's Agenda for the meeting on October 13, 2020.

Should there be any questions regarding the enclosed application, please do not hesitate to contact me.

Sincerely,

Francis X. Bruton, III
E-mail: fx@brutonlaw.com

FXB/mas
Enclosures

cc: Ernest J. Carrier Revocable Trust 1998
Irene R. Carrier Revocable Trust of 1998
Kevin M. McEneaney, LLS, McEneaney Survey Associates, Inc.

City of Dover, New Hampshire
TRANSFER OF DEVELOPMENT RIGHTS APPLICATION

[Revision Date: August 16, 2018]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Ernest J. Carrier Revocable Trust 1998 & Irene R. Carrier Revocable Trust of 1998 Telephone # (603) 431-3475

Address of Applicant: 50 F W Hartford Drive, Portsmouth, NH 03801

E-Mail Address: ejcarrier@comcast.net

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

Address of Property Owner: _____

PROPERTY INFORMATION

Assessor's Map # 30 Lot(s) # 141-B

Address of Property: 4, 6 Ash Street (f/k/a 2 Ash Street), Dover, NH

Zoning District(s) Gateway District (formerly RM-U) Overlay District(s) _____

Existing Use of Property: Single family house

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

☐ Residential ☐ Residential (reduced size) ☐ Industrial | ☐ Purchase ☐ Land Preservation

Relief sought (Check All That Apply):

☐ Lot Size ☐ Frontage ☐ Setback ☐ Increase by _____ units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

See attached.

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

_____

Name of Professional That Prepared TDR Plans: Kevin M. McEneaney, LLS

McEneaney Survey Assocociates, Inc.

Address 24 Chestnut Street, Dover, NH 03820 Telephone #: (603) 742-0911

Professional License #: 661 E-mail address: Kevin@surveynh.com

SIGNATURES

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

Ernest J. Carrier Revocable Trust 1998 & The Irene R. Carrier Revocable Trust of 1998

Signature of Property Owner: _____ Date: 9/22/20

By: Ernest J. Carrier, Trustee

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

Ernest J. Carrier Revocable Trust 1998 & The Irene R. Carrier Revocable Trust of 1998

Signature of Property Owner: _____ Date: 9/22/20

By: Ernest J. Carrier, Trustee

CITY OF DOVER TRANSFER OF DEVELOPMENT RIGHTS
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
30	141-B	Ernest J. Carrier Revocable Trust 1998 & The Irene R. Carrier Revocable Trust of 1998	50 F W Hartford Dr, Portsmouth, NH 03801

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
SAME		

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Kevin M. McEneaney, LLS	McEneaney Survey Associates, Inc.	24 Chestnut Street, Dover, NH 03820
Francis X. Bruton, III, Esq.	Bruton & Berube, PLLC	601 Central Avenue, Dover, NH 03820

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

PLANNING BOARD
ESTIMATED FEE SCHEDULE

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

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

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

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

1. Applicant & Owner, engineer, architect, land surveyor or soil scientist
   Certified letters fee # 3 of x $8.00 = $24.00
2. Certified letters fee: # of abutters TBD X $8.00 = $_____ $ 24.00
3. First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00 = $ _____
4. Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00 = $ _____

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

(Revised October 2, 2018)

TOTAL FEE $ 254.00

Project Narrative

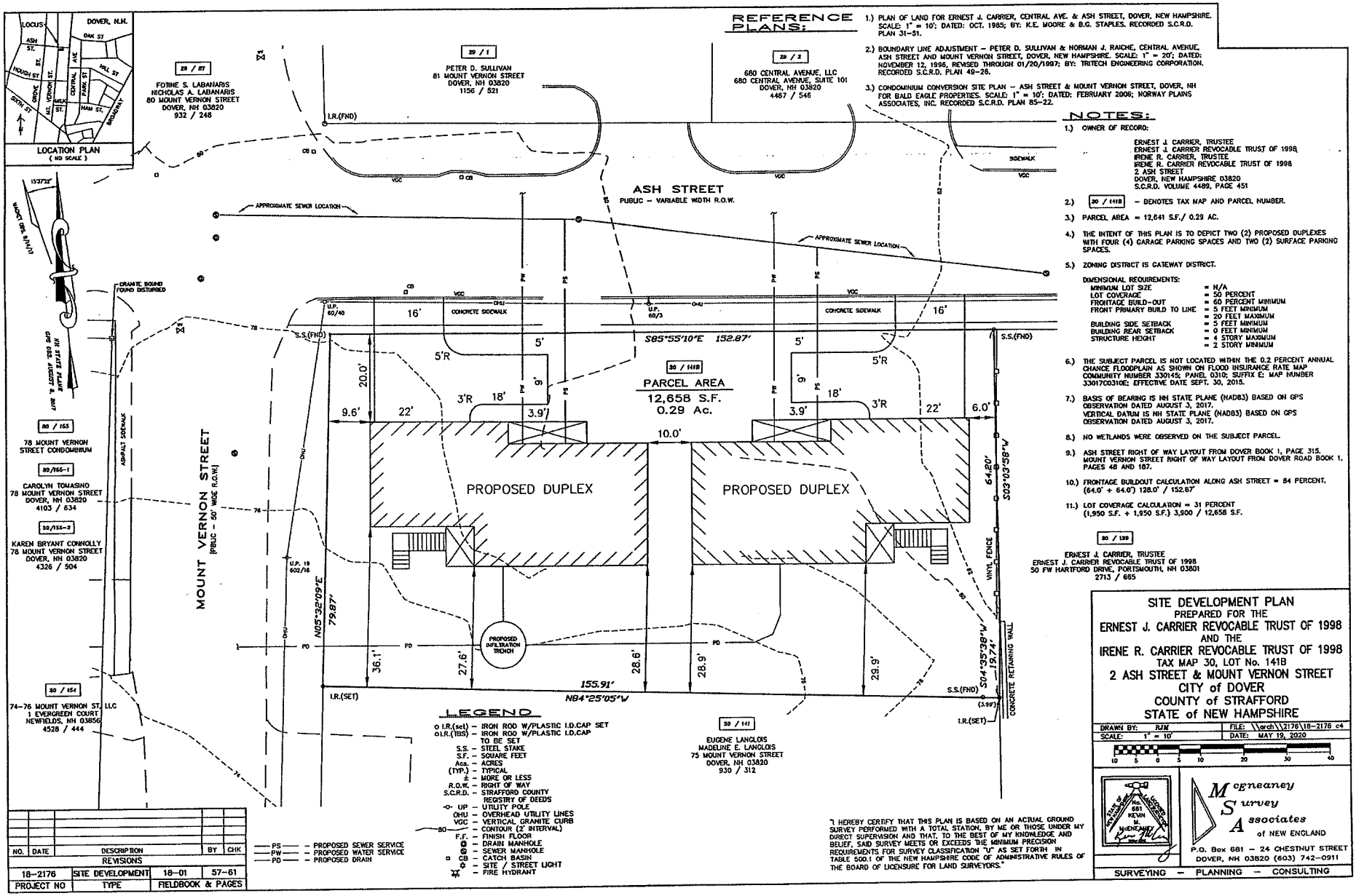
The property subject to this application is located at 4 & 6 Ash Street, at the corner of Ash Street and Mount Vernon Street, and is depicted on the City's Tax Maps at Map 30, Lot 141B. The property is now located in the Gateway District. The applicant proposes two (2) new duplexes with four (4) garage parking spaces and two (2) surface parking spaces. Each duplex unit will have two (2) bedrooms. The Gateway Zone permits multiple units, with each unit requiring 4,000 sq. ft. of lot area per unit. The property contains 12,641 sq. ft. The property is serviced by City water and sewer. In order to construct the fourth unit, the Applicant seeks the approval and purchase of one (1) additional unit pursuant to the City Transfer of Development Rights regulations ("TDR").

The property is surrounded by either commercial units or multi-unit residential structures with many units containing four (4) or more units per lot. Specifically, abutting properties contain the following units per lot: 81 Ash Street – 4 Units; 680 Central Avenue – 8 office units; 672 Central Avenue – 7 units; 75 Mount Vernon Street – 5 Units.

It is respectfully submitted that the plan attached sets forth a plan of development that is reasonable given the layout of the proposed structurers and that the features of the lot itself, and that of the project, once completed, will be entirely consistent with the surrounding uses, and will enhance this area of Ash Street and Mount Vernon Street. The grant of the one (1) TDR unit is consistent with the purposes of the Gateway District, which serves a "...more formal and densely developed urban core." Given the surrounding neighborhood, and the lack of any wetland or conservation features on the property that would require protection, it is respectfully submitted that the grant of the additional TDR unit is consistent with the neighborhood and the intent of the general and TDR zoning requirements.

P20-64 **4 6 Ash Street**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
27219-000000	679 CENTRAL AV	BARRETT RICHARD & BARBARA TRUSTEES	C/O RITE AID CORPORATION	PO BOX 3165	HARRISBURG	PA	17105
27222-000000	667 CENTRAL AV	ANDERSON CHRISTOPHER J		552 ROLLINS RD	ROLLINSFORD	NH	03869
27223-000000	665 CENTRAL AV	665 CENTRAL AVENUE LLC		230 WASHINGTON STREET	DOVER	NH	03820
29001-000000	81 MOUNT VERNON ST	SULLIVAN PETER D		81 MOUNT VERNON STREET	DOVER	NH	03820
29002-000000	680 CENTRAL AV	680 CENTRAL AVE LLC		680 CENTRAL AV STE 101	DOVER	NH	03820
29003-000000	686 CENTRAL AV	ABK REALTY MANAGEMENT LLC		35 THIRD ST	DOVER	NH	03820-3316
29005-000000	2 RESERVOIR ST	SCOTT HUGH C IV		160 GLENDALE RD	HAMPDEN	MA	01036
29006-000000	4 RESERVOIR ST	SCOTT HUGH C IV &	SCOTT NICOLE ROBIN	4 RESERVOIR ST	DOVER	NH	03820
29007-000000	87 MOUNT VERNON ST	MOURGENOS GEORGE	MOURGENOS SHARON G	87 MOUNT VERNON STREET	DOVER	NH	03820
29087-000000	80 MOUNT VERNON ST	LABANARIS FOTINE S	LABANARIS NICHOLAS A	80 MOUNT VERNON STREET	DOVER	NH	03820
29088-000000	82 MOUNT VERNON ST	KAHN AARON J &	KAHN GINA Z	82 MOUNT VERNON ST	DOVER	NH	03820-2726
30136-000000	660 CENTRAL AV	660 CENTRAL AVENUE CONDOMINIUM		660 CENTRAL AV	DOVER	NH	03820
30137-000000	662 664 CENTRAL AV	HIRD JULIA M	HIRD, CAROLINE M	662 664 CENTRAL AV	DOVER	NH	03820
30138-000000	668 CENTRAL AV	WENTWORTH DOUGLASS HOSPITAL		789 CENTRAL AVENUE	DOVER	NH	03820
30139-000000	672 CENTRAL AV	CARRIER ERNEST J REV TRUST	CARRIER ERNEST REV TRUST 98	50 FW HARTFORD DR	PORTSMOUTH	NH	03801
30141-000000	75 MOUNT VERNON ST	LANGLOIS EUGENE & MADELINE TRUSTEES	LANGLOIS FAMILY REVOCABLE TRUST	75 MOUNT VERNON STREET	DOVER	NH	03820
30141-A00000	69 MOUNT VERNON ST	ARNOLD DANNY	ARNOLD BARBARA	69 MT. VERNON ST	DOVER	NH	03820
30142-000000	67 MOUNT VERNON ST	EATON GUY J &	EATON JOANNE G	67 MOUNT VERNON STREET	DOVER	NH	03820
30153-D00000	20 ASH ST	TEAGAN ROBERT & LINDA	C/O ARTHUR THOMAS PROPERTIES	10 DURHAM RD	DOVER	NH	03820-4382
30153-E00000	72 MOUNT VERNON ST	GILLIS PAUL & WALDA TRUSTEES	GILLIS PAUL AND WALDA REVOCABLE TRUS	26 TEMPLE DR	ROCHESTER	NH	03868-7110
30153-F00000	70 MOUNT VERNON ST	RULISON MARY E		70 MOUNT VERNON ST	DOVER	NH	03820
30154-000000	74 76 MOUNT VERNON ST	74-76 MOUNT VERNON ST LLC		1 EVERGREEN COURT	NEWFIELDS	NH	03856
30155-000000	78 MOUNT VERNON ST	78 MOUNT VERNON ST CONDOMINIUM	C/O LACASSE SCOTT AND TRACEY	78 MOUNT VERNON ST	DOVER	NH	03820
30155-000001	78 MOUNT VERNON ST	TOMASINO CAROLYN		78 MOUNT VERNON ST	DOVER	NH	03820
30155-000002	10 ASH ST	LONG MARISSA A		10 ASH ST	DOVER	NH	03820
30156-000000	12 14 ASH ST	BUCK STEPHEN M TRUSTEE	STONEGATE LANE TRUST	20 STONEGATE LN	WOLFEBORO	NH	03894
30141-B00000	4 6 ASH ST	CARRIER ERNEST J TRUSTEE	CARRIER ERNEST J REVOCABLE TRUST 199	50 F W HARTFORD DR	PORTSMOUTH	NH	03801
		MCENEANEY SURVEY ASSOCIATES, INC	KEVIN M MCENEANEY, LLS	24 CHESTNUT STREET	DOVER	NH	03820
		BRUTON & BERUBE, PLLC	FRANCIS X BRUTON, III, ESQ.	601 CENTRAL AVENUE	DOVER	NH	03820


LOCUS
DOVER, N.H.
LOCATION PLAN
(NO SCALE)
REFERENCE PLANS:
1.) PLAN OF LAND FOR ERNEST J. CARRIER, CENTRAL AVE. & ASH STREET, DOVER, NEW HAMPSHIRE. SCALE: 1" = 10'; DATED: OCT. 1985; BY: K.E. MOORE & B.G. STAPLES. RECORDED S.C.R.D. PLAN 31-51.
2.) BOUNDARY LINE ADJUSTMENT - PETER D. SULLIVAN & NORMAN J. RAICHE, CENTRAL AVENUE, ASH STREET AND MOUNT VERNON STREET, DOVER, NEW HAMPSHIRE. SCALE: 1" = 20'; DATED: NOVEMBER 12, 1996, REVISED THROUGH 01/20/1997; BY: TRITECH ENGINEERING CORPORATION. RECORDED S.C.R.D. PLAN 49-26.
3.) CONDOMINIUM CONVERSION SITE PLAN - ASH STREET & MOUNT VERNON STREET, DOVER, NH FOR BALD EAGLE PROPERTIES. SCALE: 1" = 10'; DATED: FEBRUARY 2006; NORWAY PLAINS ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 85-22.
NOTES:
1.) OWNER OF RECORD:
ERNEST J. CARRIER, TRUSTEE
ERNEST J. CARRIER REVOCABLE TRUST OF 1998
IRENE R. CARRIER, TRUSTEE
IRENE R. CARRIER REVOCABLE TRUST OF 1998
2 ASH STREET
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 4489, PAGE 451
2.) 30 / 141B - DENOTES TAX MAP AND PARCEL NUMBER.
3.) PARCEL AREA = 12,641 S.F./ 0.29 AC.
4.) THE INTENT OF THIS PLAN IS TO DEPICT TWO (2) PROPOSED DUPLEXES WITH FOUR (4) GARAGE PARKING SPACES AND TWO (2) SURFACE PARKING SPACES.
5.) ZONING DISTRICT IS GATEWAY DISTRICT.
DIMENSIONAL REQUIREMENTS:
MINIMUM LOT SIZE = N/A
LOT COVERAGE = 50 PERCENT
FRONTAGE BUILD-OUT = 60 PERCENT MINIMUM
FRONT PRIMARY BUILD TO LINE = 5 FEET MINIMUM
= 20 FEET MAXIMUM
BUILDING SIDE SETBACK = 5 FEET MINIMUM
BUILDING REAR SETBACK = 0 FEET MINIMUM
STRUCTURE HEIGHT = 4 STORY MAXIMUM
= 2 STORY MINIMUM
6.) THE SUBJECT PARCEL IS NOT LOCATED WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0310; SUFFIX E; MAP NUMBER 33017C0310E; EFFECTIVE DATE SEPT. 30, 2015.
7.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 3, 2017. VERTICAL DATUM IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 3, 2017.
8.) NO WETLANDS WERE OBSERVED ON THE SUBJECT PARCEL.
9.) ASH STREET RIGHT OF WAY LAYOUT FROM DOVER BOOK 1, PAGE 315. MOUNT VERNON STREET RIGHT OF WAY LAYOUT FROM DOVER ROAD BOOK 1, PAGES 48 AND 187.
10.) FRONTAGE BUILDOUT CALCULATION ALONG ASH STREET = 84 PERCENT. (64.0' + 64.0') 128.0' / 152.87'
11.) LOT COVERAGE CALCULATION = 31 PERCENT (1,950 S.F. + 1,950 S.F.) 3,900 / 12,658 S.F.
30 / 139
ERNEST J. CARRIER, TRUSTEE
ERNEST J. CARRIER REVOCABLE TRUST OF 1998
50 FW HARTFORD DRIVE, PORTSMOUTH, NH 03801
2713 / 665
29 / 87
FOTINE S. LABANARIS
NICHOLAS A. LABANARIS
80 MOUNT VERNON STREET
DOVER, NH 03820
932 / 248
29 / 1
PETER D. SULLIVAN
81 MOUNT VERNON STREET
DOVER, NH 03820
1156 / 521
29 / 2
680 CENTRAL AVENUE, LLC
680 CENTRAL AVENUE, SUITE 101
DOVER, NH 03820
4467 / 546
ASH STREET
PUBLIC - VARIABLE WIDTH R.O.W.
MOUNT VERNON STREET
(PUBLIC - 50' WIDE R.O.W.)
PROPOSED DUPLEX
PROPOSED DUPLEX
PARCEL AREA
12,658 S.F.
0.29 Ac.
S85°55'10"E 152.87'
N05°32'09"E 79.87'
N84°25'05"W 155.91'
S03°03'58"W 64.20'
S04°35'36"W 19.74'
PROPOSED INFILTRATION TRENCH
CONCRETE SIDEWALK
ASPHALT SIDEWALK
VINYL FENCE
CONCRETE RETAINING WALL
GRANITE BOUND FOUND DISTURBED
I.R.(FND)
I.R.(SET)
S.S.(FND)
APPROXIMATE SEWER LOCATION
30 / 155
78 MOUNT VERNON STREET CONDOMINIUM
30/155-1
CAROLYN TOMASINO
78 MOUNT VERNON STREET
DOVER, NH 03820
4103 / 634
30/155-2
KAREN BRYANT CONNOLLY
78 MOUNT VERNON STREET
DOVER, NH 03820
4326 / 504
30 / 154
74-76 MOUNT VERNON ST, LLC
1 EVERGREEN COURT
NEWFIELDS, NH 03856
4528 / 444
30 / 141
EUGENE LANGLOIS
MADELINE E. LANGLOIS
75 MOUNT VERNON STREET
DOVER, NH 03820
930 / 312
LEGEND
o I.R.(set) - IRON ROD W/PLASTIC I.D.CAP SET
o I.R.(TBS) - IRON ROD W/PLASTIC I.D.CAP TO BE SET
S.S. - STEEL STAKE
S.F. - SQUARE FEET
Acs. - ACRES
(TYP.) - TYPICAL
± - MORE OR LESS
R.O.W. - RIGHT OF WAY
S.C.R.D. - STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP - UTILITY POLE
OHU - OVERHEAD UTILITY LINES
VGC - VERTICAL GRANITE CURB
80 - CONTOUR (2' INTERVAL)
F.F. - FINISH FLOOR
D - DRAIN MANHOLE
S - SEWER MANHOLE
CB - CATCH BASIN
☼ - SITE / STREET LIGHT
- FIRE HYDRANT
PS - PROPOSED SEWER SERVICE
PW - PROPOSED WATER SERVICE
PD - PROPOSED DRAIN
"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."
NO. DATE DESCRIPTION BY CHK
REVISIONS
18-2176 SITE DEVELOPMENT 18-01 57-61
PROJECT NO TYPE FIELDBOOK & PAGES
SITE DEVELOPMENT PLAN
PREPARED FOR THE
ERNEST J. CARRIER REVOCABLE TRUST OF 1998
AND THE
IRENE R. CARRIER REVOCABLE TRUST OF 1998
TAX MAP 30, LOT No. 141B
2 ASH STREET & MOUNT VERNON STREET
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE
DRAWN BY: RJM
FILE: \\arch\2176\18-2176 c4
SCALE: 1" = 10'
DATE: MAY 19, 2020
10 5 0 5 10 20 30 40
McEneaney Survey Associates of NEW ENGLAND
P.O. Box 681 - 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911
SURVEYING - PLANNING - CONSULTING

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-62

Application Type:	Minor Lot Line Adjustment
Applicant(s):	Sebring Holdings, LLC
Owner(s):	Sebring Holdings, LLC. and Macs Convenience Stores, LLC.
Location:	Dover Point Road (Map K, Lots 19A, 19C, and 26)
Meeting Date:	October 13, 2020

INTENT: To adjust the lot lines between three lots and eliminating lot K/19A. K/19A which is 26,323 s.f. will be split between Lots 19C and 26.

LOTS/UNITS PROPOSED: N/A

AGENDA ITEM #: 4-E

ACREAGE:	**Existing:**	**Proposed:**
Lot 19A:	0.60 ac	Eliminated
Lot 19C:	1.78 ac	2.10 ac
Lot 26:	0.47 ac	0.76 ac

ZONING DISTRICT: R-12, C, IT

EXISTING LAND USE: Vacant and Residential

PROPOSED LAND USE: N/A

SURROUNDING LAND USE: Residential, Commercial, Mixed-use

ZBA ACTION: None

ATTACHMENTS: Application materials including LLA Plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED: None

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is proposing to adjust the lot line between the three lots which would eliminate lot 19A by splitting it between lots 19C and 26. 12,586 s.f. would be transferred to lot 26 and 13,737 s.f. would be transferred to lot 19C thus eliminating 26,323 s.f. of lot 19A.

Consistency with Land Use Regulations
Chapter 157-18 of the Land Subdivision Regulations of the City Code provides for the adjustment of existing lot lines between two or more lots. This plan is consistent with those regulations.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application for review, open the public hearing, and vote to approve the minor lot line adjustment with the following conditions:

Conditions to Be Met Prior to Signing of Plans:

1. The applicant shall provide the Planning Department with
   a. a digital version of the final plat
   b. CAD file to the satisfaction of the Asset Management Administrator.
2. The applicant shall revise the plat to:
   a. Add Planning file number P20-62 to the title block
   b. Add signature and stamp of LLS
   c. Add owners' signatures

Dover Point Road

Property Information

Property ID	K0026-000000
Location	DOVER POINT RD
Owner	SEBRING HOLDINGS LLC
Land Use	130

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

Geometry updated 5/20/2020
Data updated Daily

City of Dover, New Hampshire
MINOR LOT LINE ADJUSTMENT APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT INFORMATION

Name of Applicant: Sebring Holdings, LLC Telephone # 603-749-2800

Address of Applicant: 340 Central Avenue, Suite 202 Dover, NH 03820

FIRST PROPERTY OWNER AND PARCEL INFORMATION

Name of 1st Property Owner (*if different from applicant*): Sebring Holdings, LLC Telephone # 603-749-2800

Address of 1st Property Owner: 340 Central Avenue, Suite 202 Dover, NH 03820

Address of Property: Dover Point Road

Assessor's Map # K Lot(s) # 19A

Property Deed: Book 4056 Page: 18

Zoning District(s) R-12 Overlay District(s) N/A

Size of Existing Parcel (sq. ft.): 26,323 Size of Proposed Parcel (sq. ft.): 0

SECOND PROPERTY OWNER AND PARCEL INFORMATION

Name of 2nd Property Owner (*if different from applicant*): Macs Convenience Stores, LLC Telephone #

Address of 2nd Property Owner: 935 East Tallmadge Avenue Akron, OH 44310

Address of Property: Dover Point Road

Assessor's Map # K Lot(s) # 19C

Property Deed: Book 4114 Page: 608

Zoning District(s) R-12 (C, IT) Overlay District(s) N/A

Size of Existing Parcel (sq. ft.): 77,707 Size of Proposed Parcel (sq. ft.): 91,443

THIRD PROPERTY OWNER AND PARCEL INFORMATION

Name of 3rd Property Owner (*if different from applicant*): Sebring Holdings, LLC Telephone # 603-749-2800

Address of 3rd Property Owner: 340 Central Avenue, Suite 202 Dover, NH 03820

Address of Property: Dover Point Road

Assessor's Map # K Lot(s) # 26

Property Deed: Book 4056 Page: 18

Zoning District(s) R-12 Overlay District(s) N/A

Size of Existing Parcel (sq. ft.): 20,378 Size of Proposed Parcel (sq. ft.): 32,964

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin M. McEneaney, LLS
McEneaney Survey Associates

Address 24 Chestnut Street Dover, NH 03820 Telephone #: 603-742-0911

Professional License #: Kevin M. McEneaney
NH LLS #661 E-mail address: kevin@surveynh.com

CONSERVATION EASEMENT HOLDER (s)

Name of Easement Holder: N/A Telephone #

Address Easement Holder:

Name of 2nd Easement Holder: Telephone #

Address 2nd Easement Holder:

SIGNATURES

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

Signature of First Property Owner: Date: 9/15/20

Signature of Second Property Owner: Date: 9-15-2020

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

Signature of Agent: Date:

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

Signature of Property Owner: Date: 9/15/20

Scanned with CamScanner

City of Dover, New Hampshire
LOT LINE ADJUSTMENT SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This review checklist is intended to assist the applicant in the planning process of preparing a Subdivision application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

Plan Review Fees are due along with three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, 3 weeks prior to the Planning Board meeting. Abutter/Notice Fees will be invoiced and are due 28 hours prior to Planning Board.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision requirements. Please refer to the Subdivision Regulations for full details.

APPLICANT: Sebring Holdings, LLC File Number: P20-

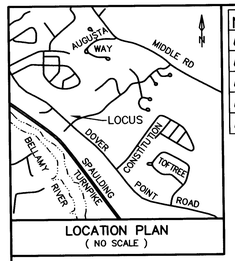
PROPERTY LOCATION: Dover Point Road Tax Map: K Lot: 19A and Lot: 19C & 26

	Where/How Provided	Reviewed
1. Completed and signed Application form	X	
2. Plan Review Fees are provided	X	
3. Electronic copy of the surveyed plat layout	X	
4. Electronic copy of supplementary materials and application	X	
5. Fifteen copies of LLA plan w/scale of not less than 1"=50' or 1"=100' for larger adjustments. Plans shall contain the following items as appropriate:	X	
Location map at appropriate scale	X	
Planning File #	X	
Date, north arrow and scale	X	
Names of all abutting property owners	X	
Name and address of owners	X	
Signature & stamp of NH licensed land surveyor	X	
Zoning District boundaries, including any special or overlay districts	X	
Location of Conservation District areas	N/A	
Location, names and widths of existing and streets, including pavement widths, grades, curbs and crosswalks	X	
Location and widths of existing & proposed easements & right of ways	X	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	X	
Existing and proposed lot areas in square feet	X	
Existing and proposed buildings and structure locations	N/A	
Minimum building setbacks or build to lines on all lots	X	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	X	
Location, material and size of existing and proposed permanent monuments	X	
All applicable Dover Common Subdivision notes	X	

REVIEWED BY: _____ DATE_____

P20-62 **Dover Point Road**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
K0018-A00010	APPLEVALE DR	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
K0019-000000	DOVER POINT RD	POINTE WEST LLC &	CITY OF DOVER	340 CENTRAL AVE STE 202	DOVER	NH	03820
K0019-A00000	28 DOVER POINT RD	SEBRING HOLDINGS LLC		340 CENTRAL AVE STE 202	DOVER	NH	03820
K0019-B00000	34 DOVER POINT RD	JBACK REALTY LLC		34 DOVER POINT RD	DOVER	NH	03820
K0026-001000	26 DOVER POINT RD	WAYNE CHRISTOPHER M &	WONG CHRISTINA	26 DOVER POINT RD	DOVER	NH	03820
K0027-000000	24 DOVER POINT RD	MORIN JOHN K &	MORIN MELISSA D	48 HALL RD	BARRINGTON	NH	03825
K0028-000000	22 DOVER POINT RD	FORTUNA DAVIN M &	ASSELTA-FORTUNA CAROLYN	16 CEDAR ST	STONY BROOK	NY	11790
K0035-000000	25 DOVER POINT RD	FOLLANSBEE HERBERT E	FOLLANSBEE MARILYN	25 DOVER POINT ROAD	DOVER	NH	03820
K0036-000000	31 33 DOVER POINT RD	31 33 DOVER POINT RD CONDOMINIUM	PAOLINI ROBERT TRUSTEE AND WILKINSON STE	15 BRIARWOOD LN	DOVER	NH	03820
K0036-000031	31 DOVER POINT RD	PAOLINI ROBERT V TRUSTEE	JNM REALTY TRUST	242 CENTRAL AVE	DOVER	NH	03820
K0036-000033	33 DOVER POINT RD	WILKINS KENNETH &	WILKINS HEIDI G	58 TEMPERANCE HILL DR	NORTHWOOD	NH	03261
K0037-000000	50 SHEFFIELD DR	STF DEVELOPMENT CORP		242 CENTRAL AVE	DOVER	NH	03820
K0038-000000	1 16 SHEFFIELD DR	STF DEVELOPMENT CORP		242 CENTRAL AVE	DOVER	NH	03820
K0039-000000	DOVER POINT RD	ROMAN CATHOLIC BISHOP		153 ASH ST	MANCHESTER	NH	03104
K0019-C00000	DOVER POINT RD	MACS CONVENIENCE STORES LLC		935 EAST TALLMADGE AVE	AKRON	OH	44310
K0026-000000	DOVER POINT RD	SEBRING HOLDINGS LLC		340 CENTRAL AVE STE 202	DOVER	NH	03820
		MCENEANSY SURVEY ASSOCIATES	KEVIN MCENEANEY LLS	24 CHESTNUT STREET	DOVER	NH	03802



LOCATION PLAN
(NO SCALE)

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	137°56'13"	65.00	156.48	121.34	S70°15'47"W
C2	66°49'33"	31.63	36.89	34.84	S34°42'27"W
C3	26°38'00"	175.00	81.35	80.62	S54°48'14"W
C4	90°39'01"	30.00	47.46	42.67	S86°48'44"W
C5	01°06'45"	5696.65	110.60	110.60	N47°18'23"W

No.	Bearing	Distance
L1	N46°29'57"W	50.00'
L2	N46°29'57"W	50.00'
L3	S73°26'36"E	29.44'
L4	N46°45'01"W	9.82'
L5	N46°29'57"W	24.79'

REFERENCE PLANS:

1.) BOUNDARY LINE ADJUSTMENT & SUBDIVISION PLAN – ELLIOTT ROSE COMPANY OF DOVER, INC., DOVER POINT ROAD, DOVER, NEW HAMPSHIRE. SCALE: 1" = 40'; DATED: JUNE 28, 2002, REVISED TO 8/25/03; BY: TRITECH ENGINEERING CORP. RECORDED S.C.R.D. PLAN 72–49.

2.) SUBDIVISION PLAN 26 DOVER POINT, LLC, 26 DOVER POINT ROAD, DOVER, NEW HAMPSHIRE. SCALE: 1" = 50'; DATED: MAY 8, 2006, REV. TO 9/25/06; BY: TRITECH ENGINEERING CORP. RECORDED S.C.R.D. PLAN 88–27.

3.) BOUNDARY LINE ADJUSTMENT PLAN – ELLIOTT ROSE COMPANY OF DOVER INC. & THORNWOOD HOLDINGS, LLC. DOVER POINT ROAD AND MIDDLE ROAD, DOVER, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: OCTOBER 2, 2006, REVISED THROUGH 3/6/07; BY: TRITECH ENGINEERING CORP. RECORDED S.C.R.D. PLAN 89–99.

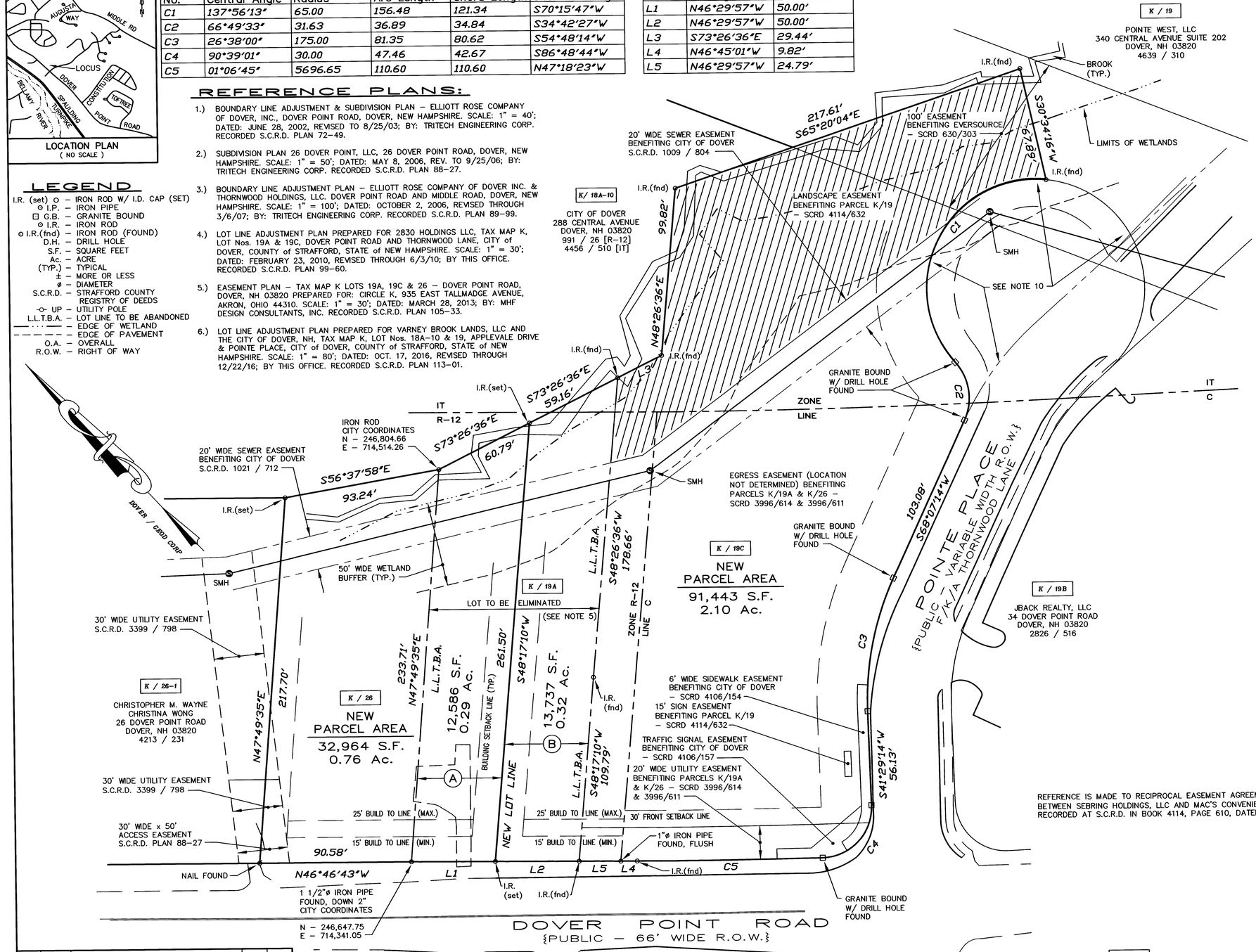
4.) LOT LINE ADJUSTMENT PLAN PREPARED FOR 2830 HOLDINGS LLC, TAX MAP K, LOT Nos. 19A & 19C, DOVER POINT ROAD AND THORNWOOD LANE, CITY of DOVER, COUNTY of STRAFFORD, STATE of NEW HAMPSHIRE. SCALE: 1" = 30'; DATED: FEBRUARY 23, 2010, REVISED THROUGH 6/3/10; BY THIS OFFICE. RECORDED S.C.R.D. PLAN 99–60.

5.) EASEMENT PLAN – TAX MAP K LOTS 19A, 19C & 26 – DOVER POINT ROAD, DOVER, NH 03820 PREPARED FOR: CIRCLE K, 935 EAST TALLMADGE AVENUE, AKRON, OHIO 44310. SCALE: 1" = 30'; DATED: MARCH 28, 2013; BY: MHF DESIGN CONSULTANTS, INC. RECORDED S.C.R.D. PLAN 105–33.

6.) LOT LINE ADJUSTMENT PLAN PREPARED FOR VARNEY BROOK LANDS, LLC AND THE CITY OF DOVER, NH, TAX MAP K, LOT Nos. 18A–10 & 19, APPLEVALE DRIVE & POINTE PLACE, CITY of DOVER, COUNTY of STRAFFORD, STATE of NEW HAMPSHIRE. SCALE: 1" = 80'; DATED: OCT. 17, 2016, REVISED THROUGH 12/22/16; BY THIS OFFICE. RECORDED S.C.R.D. PLAN 113–01.

LEGEND

I.R. (set) o – IRON ROD W/ I.D. CAP (SET)
o I.P. – IRON PIPE
□ G.B. – GRANITE BOUND
o I.R. – IRON ROD
o I.R.(fnd) – IRON ROD (FOUND)
D.H. – DRILL HOLE
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP – UTILITY POLE
L.L.T.B.A. – LOT LINE TO BE ABANDONED
— · · · — – EDGE OF WETLAND
– – – – – – EDGE OF PAVEMENT
O.A. – OVERALL
R.O.W. – RIGHT OF WAY



NOTES:

1.) OWNERS OF RECORD:

K / 19A — SEBRING HOLDINGS, LLC, 340 CENTRAL AVENUE, SUITE 202, DOVER, NEW HAMPSHIRE 03820, S.C.R.D. VOL. 4056, PAGE 18 — OWNERS SIGNATURE

K / 19C — MACS CONVENIENCE STORES, LLC, 935 EAST TALLMADGE AVENUE, AKRON, OHIO 44310, S.C.R.D. VOL. 4114, PAGE 608 — OWNERS SIGNATURE

K / 26 — SEBRING HOLDINGS, LLC, 340 CENTRAL AVENUE, SUITE 202, DOVER, NEW HAMPSHIRE 03820, S.C.R.D. VOL. 4056, PAGE 18 — OWNERS SIGNATURE

2.) K / 19C – DENOTES TAX MAP AND PARCEL NUMBER.

3.) ZONING DISTRICT IS R–12 (MEDIUM DENSITY RESIDENTIAL) AND PORTIONS OF PARCEL K / 19C ARE ALSO LOCATED WITHIN THE C (COMMERCIAL DISTRICT) AND IT (INNOVATIVE TECHNOLOGY DISTRICT).

4.) DIMENSIONAL REGULATIONS:

ZONE:	R–12 – MEDIUM DENSITY RESIDENTIAL
MINIMUM LOT SIZE	= 12,000 S.F.
MAXIMUM LOT COVERAGE	= 30 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING REQUIREMENTS:	
FRONT BUILD TO	= 15 FEET MIN.
	= 25 FEET MAX.
SIDE SETBACK	= 15 FEET
REAR SETBACK	= 30 FEET
ZONE:	C – COMMERCIAL
MINIMUM LOT SIZE	= 20,000 S.F.
MAXIMUM LOT COVERAGE	= 50 PERCENT
MINIMUM FRONTAGE	= 125 FEET
BUILDING REQUIREMENTS:	
FRONT	= 30 FEET
SIDE SETBACK	= 12 FEET
REAR SETBACK	= 15 FEET
ZONE:	IT – INNOVATIVE TECHNOLOGY
MINIMUM LOT SIZE	= 2 ACRES
MAXIMUM LOT COVERAGE	= 33 PERCENT
MINIMUM FRONTAGE	= 200 FEET
BUILDING REQUIREMENTS:	
FRONT BUILD TO	= 50 FEET
SIDE SETBACK	= 50 FEET
REAR SETBACK	= 50 FEET

5.) PLAN INTENT: PARCEL K/19A IS BEING ELIMINATED AND TO ADJUST THE LOT LINES AS SHOWN. (FORMER) PARCEL K/19A IS TO BE DIVIDED AS SHOWN.
TRACT A 12,586 S.F. / 0.29 Ac. IS TO BE ADDED TO PARCEL K / 26
TRACT B 13,737 S.F. / 0.32 Ac. IS TO BE ADDED TO PARCEL K / 19C

6.) PARCEL AREAS:

PARCEL	ORIGINAL AREA	NEW AREA
K / 19A	26,323 S.F. / 0.60 Ac.	ELIMINATED
K / 19C	77,707 S.F. / 1.78 Ac.	91,443 S.F. / 2.10 Ac.
K / 26	20,378 S.F. / 0.47 Ac.	32,964 S.F. / 0.76 Ac.

7.) THE SUBJECT PARCELS ARE LOCATED WITHIN AREAS DETERMINED TO BE OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0340; SUFFIX E; MAP NUMBER 33017C0340E; EFFECTIVE DATE SEPTEMBER 30, 2015.

8.) BASIS OF BEARING IS THE CITY OF DOVER G.I.S. SYSTEM STATIONS TR 112 AND TR 113 WHICH WERE USED TO DETERMINE LOCATION, ORIENTATION. VERTICAL DATUM – NAVD 88.

9.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING SEPTEMBER 2018 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

10.) THIS PORTION OF THE CUL–DE–SAC IS TO BECOME PART OF PARCEL K / 19C WHEN THE (FKA THORNWOOD LANE), (NOW POINTE PLACE) RIGHT OF WAY IS CONTINUED. SEE REFERENCE PLAN #1.

REFERENCE IS MADE TO RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES LLC RECORDED AT S.C.R.D. IN BOOK 4114, PAGE 610, DATED APRIL 4, 2013.

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

18–1720	LL ADJ	18–06	22–27
PROJECT NO	TYPE	FIELDBOOK & PAGES	

LOT ELIMINATION AND LOT LINE ADJUSTMENT PLAN

PREPARED FOR
SEBRING HOLDINGS, LLC
AND
MACS CONVENIENCE STORES, LLC
TAX MAP K, LOT Nos. 19A, 19C, & 26
DOVER POINT ROAD & POINTE PLACE
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 20–__

DRAWN BY: RJM | FILE: \1720\20–1720 LLADJ
SCALE: 1" = 30' | DATE: SEPTEMBER 10, 2020

30 15 0 15 30 60 90 120

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

McENEANEY SURVEY ASSOCIATES of NEW ENGLAND
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-34

Application Type:	Conditional Use Permit Review
Applicant(s):	DBS Holdings LLC
Owner(s):	DBS Holdings LLC
Location:	Crosby Road (Tax Map G, Lot 1-M)
Meeting Date:	October 13, 2020

INTENT: To obtain a CUP to allow a wetland buffer impact of 28,910 s.f.

LOTS/UNITS PROPOSED: N/A

AGENDA ITEM #: 4-F

ACREAGE: 3.83 acres

ZONING DISTRICT: CM

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Industrial

SURROUNDING LAND USE: Industrial, Commercial, Madbury boundary

ZBA ACTION: None

ATTACHMENTS: Application materials, 9/14/2020 Conservation Commission minutes, and Site Plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED:
Conditional Use Permit (Wetland Buffer)

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is requesting site plan approval to construct 2 buildings in the Crosby Road Industrial Park on a vacant lot. The applicant explains there will be approximately 28,910 s.f. of wetland buffer impact for all construction disturbance including grading, drainage, and utility work with a building impact area of 7,058 s.f. for the buildings, associated paved areas, and concrete pads.

This application was reviewed by the Technical Review Committee on June 4 and September 10, 2020 (minutes attached). The Conservation Commission reviewed and endorsed the CUP application at its September 14th meeting.

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

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

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

1. The site plan (P20-33) shall be approved.

Crosby Road

Property Information

Property ID	G0001-M00000
Location	CROSBY RD
Owner	DBS HOLDING LLC
Land Use	440

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

Geometry updated 5/20/2020
Data updated Daily

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-33

Application Type:	Site Plan Review
Applicant(s):	DBS Holdings LLC
Owner(s):	DBS Holdings LLC
Location:	Crosby Road (Tax Map G, Lot 1-M)
Meeting Date:	October 13, 2020

INTENT: To construct 2 industrial/commercial buildings consisting of 16,100 s.f. for warehouse and office space for 8 units and a parking area with eight (8) internal and fifteen (15) parking spaces

LOTS/UNITS PROPOSED: N/A

AGENDA ITEM #: 4-G

ACREAGE: 3.83 acres

ZONING DISTRICT: CM

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Industrial

SURROUNDING LAND USE: Industrial, Commercial, Madbury boundary

ZBA ACTION: None

ATTACHMENTS: Application materials, TRC minutes, and Site Plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED: Conditional Use Permit (Wetland Buffer)

WAIVERS REQUESTED: None

Summary of Request and Background
The applicant is requesting site plan approval to construct 2 buildings in the Crosby Road Industrial Park on a vacant lot. The buildings will be for industrial/commercial use with 8 internal parking spaces and 15 external. There is a related CUP request for temporary and permanent wetland buffer impact (P20-34).

This application was reviewed by the Technical Review Committee on June 4 and September 10, 2020 (minutes attached). The Conservation Commission endorsed the CUP application at its September 14th meeting.

Consistency with Land Use Regulations – Site Plan
Chapter 153-4 of the Site Review Regulations of the City Code provides for site review by the Planning Board of new construction of various types. This plan is consistent with those regulations.

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

Conditions to Be Met Prior to the Signing of Plans:

1. The conditional use permit (P20-34) shall be approved.
2. The applicant shall provide the Planning Department a
    a. digital version of the plan
    b. CAD file to the satisfaction of the Asset Management Administrator
3. The applicant must revise final plan set to:
    a. Add the owner's signatures to the final plan submitted for signature
    b. Add LLS, PE, Landscape Architect, and Architect signatures and stamps to final plan
    c. Revise the table on landscape plan so all trees are min 3.5 – 4" caliper
    d. Address Engineering TRC comments

Conditions to Be Met Prior to any Construction Activity:

4. A site construction sign with the contact information for the general contractor must be located and approved by the City Engineer or Assistant City Manager.

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

5. The wetlands buffer placards shall be installed.
6. Water and Sewer investment fees shall be paid at time of application for service.

Conditions to Be Met Prior to Occupancy:

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

Crosby Road

Property Information

Property ID	G0001-M00000
Location	CROSBY RD
Owner	DBS HOLDING LLC
Land Use	440

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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Geometry updated 5/20/2020
Data updated Daily

CIVILWORKS NEW ENGLAND

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

September 22, 2020

City of Dover
288 Central Ave
Dover, NH 03820

Attn: Christopher G. Parker, Assistant City Manager/Director of Planning

Re: Site Review & Conditional Use Permit Applications
Crosby Road - Tax Map G, Lot 1-M
Civilworks New England Reference No. 19034

Dear Mr. Parker:

On behalf of our clients, DBS Holdings, LLC, we are pleased to submit the following Site Plan and Conditional Use application(s) and supplemental materials revised based on our meeting with planning staff. All plans and supplemental materials listed below will be delivered to the Planning Department electronically (PDF), via email. One set of all other application materials and (1) Full Size plan set and (4) 11"x17" plan sets will be delivered to the office of the Planning Dept.

On September 14th, 2020, we met with the City of Dover Conservation Commission and received a favorable endorsement of the Conditional Use Permit to work within the 50' wetland buffer. The response to the September 10, 2020, Technical Review Committee Notes are as follows; (**Responses in Bold)**

Planning Comments:

- Impact fees will be assessed $2,044. **Noted**
- W/S investment fees applicable. **Noted**
- Stamp and signature of PE, LLS, and architect needed on each plan submission. **Noted**

- Revise Plans:
- Revise landscape plan so all trees are min. 3.5"– 4" caliper and meet requirements of site regs... **See Sheet L1, Planting Table. We have noted changes on plan and confirmed that this is acceptable with Landscape Architect.**
- Update zoning to indicate new "Commercial Manufacturing" zone. **Existing Conditions Plan, Note Sheet #4 and Site Plan #5 have been revised.**
- Add project file number to title block (P20-33) on all sheet. **Project # added to plans.**

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

Fire/Inspection Comments:

- Revise Accessible parking in front of Unit 3. **Accessible parking painted Island has been widened from 5' wide to 8' wide on plan set.**

Police Department Comments:

- Provide a narrative of how parking will be monitored and applicant will work with PD if needed? **Note 12 Sheet 5 has been added stating "If overflow parking on Crosby Road causes complaint, the owner shall coordinate with the City of Dover Police E\Department to address concerns"**

Engineering Comments:

- Follow our trench details.12 inch of stone over the sewer. **The detail has been updated on sheet 12.**
- Change Detail on Sheet 12. **Detail on Sheet 12 has been revised.**
- Remove the note for an 8 x 6 reducer. **The note on for an 8"x6" reducer has been removed from Sheet 7.**
- Add a note calling out an 8x6 T. **A note has been added on Sheet 7 calling out an 8x6 T.**

Economic Development Comments:

- Happy to have some smaller start up/ accelerator spaces being built. **We concur.**
- Need better landscaping on the side of the building. Some architectural amenities to break up the flat large walls would be appreciated. **Due to the limited nature of the lot and parking and driveway configuration there is limited space for landscaping. Additional trees have been placed along the northern property line, perpendicular to Crosby Road to break large flat walls.**

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

We are transmitting one copy of the following except as noted:

1) Cover Letter
2) Site Review Application and Checklist - Revised
3) Conditional Use Permit Application - Revised
4) Project Narrative - Revised
5) Wetland Report
6) Utilities to Serve Letters/Requests
7) Traffic Impact Analysis - Revised
8) Landscaping Operation and Maintenance Plan
9) Sullivan Commercial Landscape O&M Manual
10) Stormwater Inspection and Maintenance Plan
11) Drainage Report & Plans
12) PTAPP
13) Site Plans – Revised (4) 11x17 (1) Full size

We look forward to discussing this application at the October 13th, 2020 Planning Board Meeting. Please call with any questions or comments.

Sincerely,

Douglas J. LaRosa, Project Manager
CIVILWORKS NEW ENGLAND
DJL

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: DBS Holdings, LLC Telephone # 603-817-1206

Address of Applicant: 71 Danielle Lane Dover, NH 03820

E-Mail Address: dbsholdingsllc@gmail.com

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

Address of Property Owner: SAME

PROPERTY INFORMATION

Address of Property: Crosby Road

Assessor's Map # G Lot(s) # 1 - M

Zoning District(s) CM Overlay District(s) Wetland Protection District

Size of Parcel: 166,633 sq. ft. 3.83 ac. Property Deed: Book 4658 Page: 36

Existing Use of Property: Vacant - Commercial Manufacturing

SITE PLAN INFORMATION

Describe Proposed Use: Commercial Building for Warehouse & Office Spaces

Area of Parcel to be Developed: 53,241 sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed: N/A

Number of Parking Spaces: Existing 0 Proposed 15

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

Number of Employees Total: 3 In Maximum Shift: 1

Disposition of Parcel:

Building Footprint Building 1 - 14,000 sq. ft.
Building 2 - 2,100

Total Building Area 16,100 sq. ft.

Paved Area 21,056 sq. ft.

Building Setbacks:

Front Yard 35 ft.

Rear Yard 10 ft.

Side Yard: Right 10 ft. Left 10 ft.

City Water? ✓ Yes ___ No How far is city water from the property? ON PROPERTY

City Sewer? ✓ Yes ___ No How far is city sewer from the property? ON PROPERTY

BUILDING INFORMATION

Type of Building to be Built: Metal & Wood Construction

Height of Building: 18' & 22' (refer to Architect Plans) Finished Floor Elevation: 98.55

Number of Seats (where applicable) N/A

Estimated value of construction: $285,000 Refuse removal: Public/Private (circle one)

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: NONE

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin M. McEneaney, LLS
McEneaney Survey Associates of New England

Address 24 Chestnut Street Dover, NH 03820 Telephone #: 603-742-0911

Professional License #: Kevin M. McEneaney, LLS NH 661 E-mail address: kevin@surveynh.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Stephen J. Haight, P.E.
CIVILWORKS NEW ENGLAND

Address P.O. Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, P.E. #7978 E-mail address: shaight@civilworksne.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) JSN Associates, LLC

Address One Autumn Street Portsmouth, NH 03801 Telephone #: 603-433-8639

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Jennifer Martel, LLA NH#00155
Ironwood Landscape Architecture

Address 55 Main Street, Suite 129 Newmarket, NH 03857 Telephone #: 603-772-0590

Professional License #: Jennifer Martel, LLA NH#00155 E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) Joseph W. Noel

Address P.O. Box 174 South Berwick, ME 03908 Telephone #: 207-384-5587

Professional License #: NH CWS #86 E-mail address: jwnoel@aol.com

CONSERVATION EASEMENT HOLDER N/A

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

SIGNATURES

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

Signature of Property Owner: _____ Date: 5/7/2020

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

Signature of Property Owner: _____ Date: 5/7/2020

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

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

Signature of Property Owner: _____ Date: 5/7/2020

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

CERTIFICATION OF FEES

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

Signature of Property Owner: _____ Date: 5/7/2020

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

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.

APPLICANT: DBS Holdings, LLC File Number: P20-_____

PROJECT TITLE: Sullivan Commercial Buildings Site Development

PROPERTY LOCATION: Crosby Road Tax Map: G Lot: 1-M

	Where/How Provided	Reviewed
1. Completed and signed Application form	X	
2. Plan Review Fees are provided	X	
3. Electronic copy of the engineered/surveyed plan layout	X	
4. Electronic copy of supplementary materials and application	X	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	X (Standard)	
6. Waiver requests to the Site Plan Review Regulations, with written justification	N/A	
7. Conditional Use Permit applications	X	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	X	
9. A colored architectural plan showing all sides of buildings	X	
10. Folded copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:	All materials provided in PDF format only per City	
Location map at appropriate scale	Sheet 3, 5	
Proposed Project name and title and Planning File #	All Sheets	
Date, north arrow and scale	Sheets 3, 5, 6, 7	
Names of all abutting property owners	Sheets 3, 5, 6, 7	
Name and address of owners and/or applicants	Sheets 1, 3, 5	
Signature & stamp of NH licensed land surveyor and/or engineer	Upon approvals	
Zoning District boundaries, including any special or overlay districts	N/A	
Location of Conservation District areas	N/A	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	Sheets 3, 5	
Location and widths of existing & proposed easements & right of ways	N/A	
Location and width of existing and proposed access/egress ways	Sheets 3, 5	

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access	N/A	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	Sheet 3	
Existing and proposed topographic information at two foot intervals	Sheet 3, 6	
Existing and proposed buildings and structure locations	Sheets 3, 5, 6, 7	
Minimum building setbacks or build to lines on all lots	Sheets 3, 5	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	Sheets 3, 5, 6, 7	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	Sheets 3, 5, 7	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	Sheet 4, Utilities Note #10	
Existing and proposed stormwater lines and facilities	Sheet 3, 5	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	Sheet 13, 14	
Location of Flood Hazard Zone	N/A	
Location of all bodies of water and watercourses	N/A	
Location of wetlands and buffers	Sheet 3, 5, 6, 7	
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set	Sheet 2	
Existing natural features and/or significant vegetation on property	N/A	
Depict existing contours up to 100 ft. beyond project limits	Sheet 3, 6	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	Sheet 17	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	Sheet 5 Site Plan & Sheet 4 Site Notes, Parking Calculations	
Location, material and size of existing and proposed pavement area	Sheet 5, 10	
Location of proposed fire lanes	N/A	
Specify finished floor elevations of buildings	Sheet 6	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	Sheet 5	
Depict all service, storage, loading bays and utility areas	Sheet 5	
All applicable Dover Common Site Plan notes	Sheet 4	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	Provided with Application	
Stormwater Management System Operation and Maintenance Plan	Provided with Application	
Letter to Serve from Public and Private Utilities	Provided with Application	
Erosion and Sedimentation Control Plan	Provided with Application	
Landscape Operation and Maintenance Plan	Sheet 17	
Proposed restrictive covenants or homeowners association documents	N/A	
Dates and permit numbers of all required state and federal permits	N/A	
If wetland buffer, indicate placards locations, as applicable	N/A	
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs	N/A	
Location of proposed drive-in facilities	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	Upon Request	

REVIEWED BY: _____ DATE_____ TRC DATE_____

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: May 18, 2017]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: DBS Holdings, LLC Telephone # 603-817-1206

Address of Applicant: 71 Danielle Lane Dover, NH 03820

E-Mail Address: dbsholdingsllc@gmail.com

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

Address of Property Owner: SAME

PROPERTY INFORMATION

Assessor's Map # G Lot(s) # 1 M

Address of Property: Crosby Road

Zoning District(s) CM Overlay District(s) Wetland Protection District

Existing Use of Property: Vacant (Commercial Manufacturing)

CONDITIONAL USE PERMIT INFORMATION

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

☐ Conservation District	☐ RCM Use Overlay District	☐ I-1 District Uses
☐ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☒ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

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

Construction of two (2) commercial buildings with associated parking/pavement will impact the wetland buffer by approximately 28,910 s.f., for all construction disturbance including grading, drainage and utility work, with a building impact area of 7,058 s.f. for the buildings, associated paved areas and concrete pads.

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: CIVILWORKS NEW ENGLAND

Address P.O. Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, P.E. #7978 E-mail address: shaight@civilworksne.com

SIGNATURES

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

Signature of Property Owner: _____ Date: 5/7/2020

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

Signature of Property Owner: _____ Date: 5/7/2020

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
G	1 M	DBS Holdings, LLC	71 Danielle Lane Dover, NH 03820

Applicant (if different from owner): SAME

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Stephen J. Haight, P.E.	Civilworks New England	P.O. Box 1166 Dover, NH 03821
Kevin M. McEneaney, LLS	McEneaney Survey Associates	24 Chestnut Street Dover, NH 03820

Conservation Easement Holder: N/A

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

PROJECT NARRATIVE

For
DBS Holdings, LLC
Commercial Buildings
Crosby Road, Dover, NH
Tax Map G, Lot 1-M
Civilworks Job #19034
Rev. 8/26/20

PROJECT OVERVIEW

The project owner, DBS Holdings, LLC, is proposing two (2) commercial buildings on an undeveloped lot on Tax Map G, Lot 3A-1. The proposed 14,000 square foot building proposed has 7 units. The 2,100 sq. ft. building (Unit 8) is a single unit. Each unit will have a small office with the remainder of the use being categorized as Commercial/Manufacturing/Warehouse. Three (3) employees are anticipated per unit.

The project consists of the following general construction:

- Install perimeter Erosion Control
- Clear & Grub the site for construction;
- Construct treatment swale and level spreader
- Construct Driveways and Culverts, remove existing gravel drive.
- Construction of (2) new commercial buildings;
- Construction grading, and other drainage requirements;
- Site utility construction;
- Construct access ways to parking lot with 24' wide drive aisle;
- Stabilize remaining areas with loam and seed.
- Pave Parking and Drives

PROJECT LOCATION AND SITE CHARACTERISTICS

The project site is located within the Commercial Manufacturing District. The project parcel is a currently undeveloped lot containing +/- 3.83 acres. The project is accessed from Crosby Road and is shown on Tax Map G, 1-M on the west side of Crosby Road.

DRIVEWAY AND PARKING LOT

The two (2) proposed driveways will be 24' wide each. Each entrance will be accessed from Crosby Road and used for delivery and employee access and egress. Lighting for the proposed parking lot and driveway will be per the lighting plan. For the proposed development, the City of Dover parking maximums allow for the following:

- Warehouse/Industrial/Manufacturing (15,200 SF) = 19 Spaces
- Office (900 SF) = 3 Spaces

Total 22 Spaces Max

Proposed Surface Spaces = **15 Spaces**

CONDITIONAL USE REQUIRE FOR WETLAND BUFFER IMPACT

The proposed project requires a Conditional Use Permit to allow construction within the 50' wetland buffer on this 166,835 sq. ft. lot. The 50' wetland buffer area will be impacted by approximately 28,910 sq. ft., including grading, drainage, buildings and utility work. The building impact area within the wetland buffer for the building, parking, and concrete pads will be 5,849 sq. ft. We have moved units 1-7 closer to the road to reduce wetlands buffer impacts from buildings by 29%. No work is proposed in the wetland.

DRAINAGE

The proposed development of the site includes stormwater management for two (2) commercial buildings, access drives, parking, and concrete pads for dumpster and transformer.

The storm water quality system includes a treatment swale, a level spreader, culverts, detention and roadside ditches. The onsite drainage improvements have been designed to provide mitigation of both stormwater quantity and quality. Runoff from the proposed impervious roofs will be shed to the treatment swale behind the building to a level spreader to minimize the impact from the off-site flow. Run-off from the driveway and parking adjacent to Crosby Road will flow into the existing drainage swale along Crosby Road. The analysis indicates that with the mitigation measures proposed and implemented there will be no measurable impact and no increase in the peak rate of run-off to the watershed as a result of the proposed development of the site.

TRAFFIC

A traffic study was completed for the project and is attached as a report to this submittal. Overall and as expected for a small office/warehouse development, there is minimal increase in traffic due to this proposed project.

UTILITIES

The proposed project will connect to City of Dover water and sewer (already on-site), and to Unitil and Eversource for natural gas and electricity, respectively. All utilities, except sewer, are located within the Crosby Road right-of-way. Internal water services will be 8" mains with a 1" connection to the building. The building will be sprinkled and connections made per the City's Community Services Utility Division and Fire Department requirements and standards. The proposed project will connect to the gravity sewer line in the existing sewer easement. Electricity for the site will be provided from the existing electric lines under Crosby Road. Directional drilling under Crosby Road is proposed. Utilities from the existing pole shall be underground.

JOSEPH W. NOEL
P.O. BOX 174
SOUTH BERWICK, MAINE 03908
(207) 384-5587

*CERTIFIED SOIL SCIENTIST * WETLAND SCIENTIST * LICENSED SITE EVALUATOR*

May 3, 2020

Mr. Daniel Sullivan
DBS Holdings, LLC
71 Daniel Lane
Dover, New Hampshire 03820

RE: Wetland Delineation, Tax Map G, Lot 1-M, Crosby Road, Dover, NH, JWN #17-59

Dear Mr. Sullivan:

On May 1, 2020, Mr. Doug LaRosa of Civilworks New England requested a letter/report regarding the wetland delineation for your project. Initial fieldwork was conducted on August 30, 2017 and September 7, 2017 (working for others). Recently, working for Civilworks New England, on July 26, 2019, I visited the site to verify the wetland boundaries.

To determine the wetland boundary, the methodologies in the U.S. Army Corps of Engineers document *Corps of Engineers Wetlands Delineation Manual* (1987) along with the required *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, (Version 2.0) were used. The wetland boundary was field delineated with sequentially numbered pink and black striped flagging. Flagged sequences were differentiated by the placement of a letter before the numbers (e.g., A1, A2, etc.).

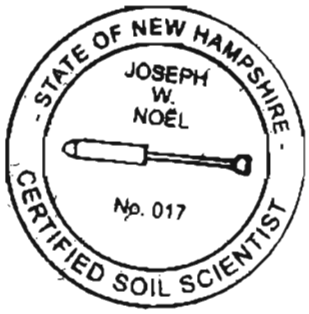
The majority of the site is open, nearly level, and has a seasonal high watertable at or very close to the ground surface. There has also been past disturbance from regrading and smoothing of a thin layer of sandy loam to loamy sand fill material over the natural subsoil. The native soils formed in fine textured marine deposits. These soils have slow surface runoff and are restrictive in nature with permeability that ranges from moderate to very slow from the soil surface to the substratum.

Despite the past clearing and regrading activities there was vegetative indicators remaining and soil morphological evidence in the disturbed soil material to delineate the wetland boundary with reasonable accuracy. Due to the atypical situation of the delineated wetland, the methodology in the "Regional Supplement" Chapter 5 (Difficult Wetland Situations in Northcentral and Northeast Region) was required. Professional judgment was used to mark the wetland-upland boundary.

Please feel free to call with any questions or if you need additional information.

Sincerely,

Joseph W. Noel
NH Certified Wetland Scientist #086
NH Certified Soil Scientist #017



DAVE WHITE, P.E.
City Engineer
d.white@dover.nh.gov

288 Central Avenue
Dover, New Hampshire 03820-4169
(603) 516-6450
www.dover.nh.gov

City of Dover, New Hampshire

COMMUNITY SERVICES DEPARTMENT

May 1, 2020

Civilworks New England
PO Box 1166, 181 Watson Rd
Dover NH 03820

RE: Tax Map G Lot 1-M Crosby Rd

To Whom It May Concern:

This letter is written confirmation that the City of Dover is able to serve the above referenced development with water and sanitary sewer. It appears that water and sewer was extended onto this lot as part of the adjoining lot development. Water and sanitary sewer work shall conform to the City's Water and Sewer Ordinances, as well as the requirements of Dover's Community Services Utilities Division. There is also adequate supply and capacity in the water and sewer system. If you have any questions, please feel free to call me at 516-6450.

Sincerely,

Dave White

Dave White, PE
City Engineer

Unitil

4/29/20

DBS Holdings, LLC
71 Danielle Lane
Dover, NH 03820

RE: Natural gas service to Crosby Road, Dover NH
(Lot is next to Forum Court Commercial Condominiums, 113 Crosby Road)

Unitil's natural gas division has reviewed the requested site for natural gas service.

Unitil hereby confirms natural gas is available from Crosby Road to supply the proposed Development.

Please contact me with any questions at 603-294-5144.

Sincerely,

David Beaulieu
Business Development Executive
Unitil
325 West Road
Portsmouth, NH 03801

EVERSOURCE ENERGY

April 29, 2020

1700 Lafayette Road
Portsmouth, NH 03801

Michael J Busby
603-436-7708 x555-5678
michael.busby@eversource.com

Mr. Douglas LaRosa
Civilworks New England
181 Watson Road, P.O. Box 1166
Dover, NH 03801-1166

Dear Mr. LaRosa:

I am responding to your request to confirm the availability of electric service for the proposed Tax Map G Lot 1-M project being constructed for/by DBS Holdings, LLC.

The proposed project consists of two single-story building with 8 commercial units and parking at grade. The proposed development will be constructed along Crosby.

The developer will be responsible for the installation of all underground facilities and infrastructure required to service the new building. The service will be as shown on attached marked up Utility Plan #7. The proposed building service will be fed from Utility Pole 13/364a/10 overhead across Crosby Road to a proposed pole on subject lot as depicted on utility plan #7. The developer will work with Eversource to obtain all necessary easements and licenses for the proposed overhead/underground facilities listed above.

This letter serves as confirmation that Eversource has sufficient capacity in the area to provide service to this proposed development. The cost of extending service to the aforementioned location and any associated infrastructure improvements necessary to provide service will be borne by the developer unless otherwise agreed upon.

The attached drawing titled "Utility Plan" dated 03/27/2020, shows a single transformer locations to service your proposed project.

Eversource approves the locations shown; assuming the final installed locations meet all clearances, physical protection, and access requirements as outlined in Eversource's "Information & Requirements For Electric Supply" (https://www.eversource.com/content/docs/default-source/pdfs/requirements-for-electric-service-connections.pdf?sfvrsn=2).

If you require additional information or I can be of further assistance please do not hesitate to contact me at our Portsmouth Office, 603-436-7708 Ext. 555-5678

Respectfully.

Michael J. Busby, PE
NH Eastern Regional Engineering and Design Manager, Eversource

cc: (via e-mail)
Michael Lee, Eastern Region Operations Manager, Eversource
Mary Jo Hanson, Field Supervisor, Electric Design, Eversource

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749-7348

To: City of Dover
Cc: DBS Holdings, LLC
From: Douglas J. LaRosa, P.M.
Date: April 27, 2020

Re: Standard Traffic Impact Analysis
Commercial Development Proposal
Crosby Road - Dover, NH
Civilworks Reference No. 19034

1. Description of Site

The subject project site consists of a currently vacant 3.83 Acre lot zoned as Commercial Manufacturing with street frontage and access on Crosby Road. The current proposal is to construct two (2) commercial buildings; a seven (7) unit 14,000 sq. ft. warehouse with 100 square feet of office per unit and a 2,100 sq. ft. warehouse with 200 sq. ft. of office.

2. Description of Roadways and Access

The portion of Crosby Road directly fronting the site is a two-way, one way in, one way out, City Street. The site is located on the westerly side of Crosby Road.

Crosby Road has a double yellow centerline. The posted speed limit is 30 mph.

Access is from the north, via the Littleworth Road, an arterial highway.

3. Sight Distance

Sight distance in both directions for both driveways is in excess of 500 ft. This meets or exceeds the guidelines set forth in the AASHTO "Green Book" for a posted speed of 30 mph.

4. & 5. Trip Generation and Distribution

The following is pertinent relative to trip generation and distribution associated with the subject project:

Data Source:
ITE Trip Generation, 10th Edition
Land Use Code (L.U.C.) 150, Warehouse
Land Use Code (L.U.C.) 710, General Office

Current Use:
Vacant Land

Proposed Use:
8 Warehouse/Office Units

CIVILWORKS NEW ENGLAND
181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749-7348

Trip Generation Rates & Distribution for the Project:

Proposed Use – Warehouse (L.U.C.150)

			Distribution	
Parameter	**Avg. Rate**	**Total Trip Ends**	**Entering**	**Exiting**
Average Weekday	1.74	26	13	13
A.M. Peak Hour	0.17	4	3	1
P.M. Peak Hour	0.19	5	1	4

Proposed Use – General Office (L.U.C. 710)

			Distribution	
Parameter	**Avg. Rate**	**Total Trip Ends**	**Entering**	**Exiting**
Average Weekday	9.74	9.74	5	5
A.M. Peak Hour	1.16	1.16	1	0
P.M. Peak Hour	1.15	1.15	0	1

Attachments: Land Use Code 150, Warehouse data sheets
Land Use Code 710, General Office data sheets

The increase in the trips generated by the proposed use is reasonable. Given the volumes of traffic generated by the proposed use, the project will have little or no measurable impact on either the existing or proposed traffic circulation.

6. Public Transit

There are no bus stops local to the site.

CIVILWORKS NEW ENGLAND
181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749-7348

ATTACHMENTS

ITE Data Sheets

Land Use Code 150: Warehouse
Land Use Code 712: Small Office Building

ITE Trip Generation, 10th Edition

ITE No.	Land Use Description	unit	Daily Rate	Peak Hour of Adjacent Street Rate					
				AM (7-9)			PM (4-6)		
				Total	In	Out	Total	In	Out
	Industrial/Agricultural								
110	General Light Industrial	ksf	4.96	0.70	88%	12%	0.63	13%	87%
		emp.	3.05	0.52	83%	17%	0.49	22%	78%
130	Industrial Park	ksf	3.37	0.40	81%	19%	0.40	21%	79%
		emp.	2.91	0.44	86%	14%	0.42	20%	80%
140	Manufacturing	ksf	3.93	0.62	77%	23%	0.67	31%	69%
		ac.	35.02	4.62	90%	10%	4.54	43%	57%
150	Warehousing	ksf	1.74	0.17	77%	23%	0.19	27%	73%
		emp.	5.05	0.61	72%	28%	0.66	36%	64%
151	Mini-Warehouse	ksf	1.51	0.10	60%	40%	0.17	47%	53%
160	Data Center	ksf	0.99	0.11	55%	45%	0.09	30%	70%
	Residential								
210	Single-Family Detached Housing	DU	9.44	0.74	25%	75%	0.99	63%	37%
220	Multifamily Housing (Low-Rise)	DU	7.32	0.46	23%	77%	0.56	63%	37%
231	Mid-Rise Residential w/ 1st-Floor Commerci	DU	3.44	0.30	28%	72%	0.36	70%	30%
240	Mobile Home Park	DU	5.00	0.26	31%	69%	0.46	62%	38%
251	Senior Adult Housing - Detached	DU	4.27	0.24	33%	67%	0.30	61%	39%
252	Senior Adult Housing - Attached	DU	3.70	0.20	35%	65%	0.26	55%	45%
253	Congregate Care Facility	DU	2.02	0.07	60%	40%	0.18	53%	47%
254	Assisted Living	beds	4.24	0.39	78%	22%	0.49	30%	70%
255	Continuing Care Retirement Community	units	2.40	0.14	65%	35%	0.16	39%	61%
270	Residential Planned Unit Development	DU	7.38	0.57	22%	78%	0.69	75%	25%
	Lodging								
310	Hotel	rooms	8.36	0.47	59%	41%	0.60	51%	49%
311	All Suites Hotel	rooms	4.46	0.34	53%	47%	0.36	48%	52%
312	Business Hotel	rooms	4.02	0.39	42%	58%	0.32	55%	45%
320	Motel	rooms	3.35	0.38	37%	63%	0.38	54%	46%
330	Resort Hotel	rooms	n/a	0.32	72%	28%	0.41	43%	57%
	Recreational								
411	Public Park	ac.	0.78	0.02	59%	41%	0.11	55%	45%
416	Campground/Recreational Vehicle Park	occ. sites	n/a	0.21	36%	64%	0.27	65%	35%
444	Movie Theatre	screens	220.00	n/a	n/a	n/a	14.60	44%	56%
445	Multiplex Movie Theatre	screens	292.50	n/a	n/a	n/a	13.73	51%	49%
488	Soccer Complex	fields	71.33	0.99	61%	39%	16.43	66%	34%
490	Tennis Courts	courts	30.32	n/a	n/a	n/a	4.21	n/a	n/a
491	Racquet/Tennis Club	courts	27.71	n/a	n/a	n/a	3.82	n/a	n/a
492	Health/Fitness Club	ksf	n/a	1.31	51%	49%	3.45	57%	43%
495	Recreational Community Center	ksf	28.82	1.76	66%	34%	2.31	47%	53%

ITE Trip Generation, 10th Edition

ITE No.	Land Use Description	unit	Daily Rate	Peak Hour of Adjacent Street Rate					
				AM (7-9)			PM (4-6)		
				Total	In	Out	Total	In	Out
	Institutional								
520	Elementary School	ksf	19.52	6.97	55%	45%	1.37	45%	55%
		students	1.89	0.67	54%	46%	0.17	48%	52%
522	Middle School/Junior High School	ksf	20.17	n/a	n/a	n/a	1.19	52%	48%
		students	2.13	0.58	54%	46%	0.17	49%	51%
530	High School	ksf	14.07	3.38	71%	29%	0.97	54%	46%
		students	2.03	0.52	67%	33%	0.14	48%	52%
534	Private School (K-8)	students	4.11	0.91	55%	45%	0.26	46%	54%
536	Private School (K-12)	students	2.48	0.80	61%	39%	0.17	43%	57%
540	Junior/Community College	ksf	20.25	2.07	77%	23%	1.86	50%	50%
		students	1.15	0.11	81%	19%	0.11	56%	44%
560	Church (Weekday)	ksf	6.95	0.33	60%	40%	0.49	45%	55%
		seats	0.44	0.01	50%	50%	0.03	40%	60%
	Church (Sunday/Sunday peak)	ksf	27.63	9.99	48%	52%	n/a	n/a	n/a
		seats	1.21	0.54	49%	51%	n/a	n/a	n/a
565	Daycare Center	ksf	47.62	11.00	53%	47%	11.12	47%	53%
		students	4.09	0.78	53%	47%	0.79	47%	53%
590	Library	ksf	72.05	1.00	71%	29%	8.16	48%	52%
	Medical								
610	Hospital	ksf	10.72	0.89	68%	32%	0.97	32%	68%
		beds	22.32	1.84	72%	28%	1.89	28%	72%
620	Nursing Home	ksf	6.24	0.55	78%	22%	0.59	41%	59%
		beds	3.06	0.17	72%	28%	0.22	33%	67%
630	Clinic	ksf	38.16	3.69	78%	22%	3.28	29%	71%
	Office								
710	General Office Building	ksf	9.74	1.16	86%	14%	1.15	16%	84%
		emp.	3.28	0.37	83%	17%	0.40	20%	80%
715	Single Tenant Office Building	ksf	11.25	1.78	89%	11%	1.71	15%	85%
		emp.	3.77	0.53	89%	11%	0.51	15%	85%
720	Medical-Dental Office Building	ksf	34.80	2.78	78%	22%	3.46	28%	72%
		emp.	8.70	0.68	78%	22%	0.97	34%	66%
730	Government Office Building	ksf	22.59	3.34	75%	25%	1.71	25%	75%
		emp.	7.45	1.10	75%	25%	0.71	20%	80%
732	United States Post Office	ksf	103.94	8.28	52%	48%	11.21	51%	49%
750	Office Park	ksf	11.07	1.44	89%	11%	1.07	7%	93%
760	Research and Development Center	ksf	11.26	0.42	75%	25%	0.49	15%	85%
770	Business Park	ksf	12.44	0.40	61%	39%	0.42	46%	54%

Stormwater Management System Inspection & Maintenance Plan

For

SULLIVAN COMMERCIAL BUILDINGS
MAP G, LOT 1-M

Crosby Road
Dover, New Hampshire
Strafford County

APRIL 2020

Prepared For:

DBS HOLDINGS, LLC
71 Danielle Lane
Dover, New Hampshire 03820

Prepared By:

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

Introduction

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

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

This plan also provides the Owner/Operator to implement a salt minimization plan to reduce salt usage on-site and ultimately within the watershed. This plan will allow the owner/operator to monitor and modify how much salt is needed, when it should be applied, where it needs to be applied, with the ultimate goal of reducing salt-use without compromising safety. It is expected that salt-use reduction will lead to long-term cost-savings as a result of purchasing less salt and reduced impacts on vegetation (e.g., landscaping) and corrosion of infrastructure .

The salt minimization plan should include the retention of a contractor who has completed the Green SnowPro Training course and obtained NH DES Salt Application Certification.

It is anticipated that this be a living document that will be updated at regular intervals. Annual updating is recommended in advance of the winter season in order to facilitate adjustments.

Owner

DBS Holdings, LLC
71 Danielle Lane
Dover, New Hampshire 03820

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

Contact / Responsible Party

DBS Holdings, LLC
71 Danielle Lane
Dover, New Hampshire 03820

Phone: (603) 817-1206
Email: dbsholdingsllc@gmail.com

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

Management Company

DBS Holdings, LLC
71 Danielle Lane
Dover, New Hampshire 03820

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

Inspection Schedule / Record Retention

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

Stormwater Management System Components

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

- Culverts
- Level Spreader
- Energy Dissipation Structures (Rip Rap)
- Treatment Swales
- Pavement
- Outlet Structures
- Litter / Trash Removal

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

Control of Invasive Species

During maintenance activities, check for the presence of invasive plants and remove in a safe manner. Invasive plants shall be controlled to prevent them from reproducing, spreading, or re-growing. See the University of New Hampshire – Cooperative Extension's "Method for Disposing Non-Native Invasive Plants", included at the end of this manual, for guidance on the removal and disposal of invasive species.

Inspection and Maintenance Plan

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

CULVERTS:

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

LEVL SPREADER:

- Inspection, by a **qualified professional**, of the level spreader annually, and following any rainfall event exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection.
- Embankments and spillways should be inspected by a **qualified professional** for settlement, erosion, seepage, animal burrows, woody vegetation, and other conditions that could degrade the embankment and reduce its stability for impounding water. Immediate corrective action should be implemented if any such conditions are found.
- Inlet and outlet, inlet and outlet structures, energy dissipation structures or practices, and other structural appurtenances should be inspected by a **qualified professional**, and corrective action implemented (e.g., maintenance, repairs, or replacement) as indicated by such inspection.
- The bottoms, interior and exterior side slopes, and crest of earthen detention basins should be mowed, and the vegetation maintained in healthy condition, as appropriate to the function of the facility and type of vegetation.
- Vegetated embankments that serve as "berms" or "dams" that impound water should be mowed at least once annually to prevent the establishment of woody vegetation.
- Trash and debris should be removed from the pond and any inlet or outlet structures whenever observed.
- Accumulated sediment should be removed when it significantly affects pond capacity.

ENERGY DISSIPATION STRUCTURES (RIP RAP): As Applicable

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

TREATMENT SWALES:

- Inspect once per year.
- Inspect for erosion, sediment accumulation, vegetation loss, and presence of invasive species.
- Remove debris and accumulated sediment, based on inspection.
- Repair eroded areas as needed; remove invasive species and dead vegetation.
- Perform periodic mowing of swales (at least twice annually), maintain a 4" stand of vegetative growth.

OUTLET STRUCTURE(S):

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

PAVEMENT:

- Minimize sanding.
- Minimize application of salt for ice control.
- Clean periodically (1-2 times per year) using a sweeper or vacuum sweeper. Vacuum sweeping is the preferred method.

LITTER / TRASH REMOVAL:

- Routinely patrol site for litter pick up.

DE-ICING AGENTS

- To address the concerns associated with the application of chlorides and other deicing materials, NHDES recommends that the Owner/Operator develop a Road Salt and Deicing Minimization Plan for the parking lots and roadways. The plan should develop the policies that the development will keep in place to minimize salt and other deicer use after the project has been completed. The plan should include tracking the use of salt and other deicers for each storm event and compiling salt use data annually. (See Anti-icing Data Form in the appendix).
- Use sand as primary agent for driveway and access way safety during ice and snow conditions
- Minimize the use of salt during the winter
- Use de-icing or anti-caking agents, added to enhance performance and application characteristics of sand mixtures, only as necessary and at minimum application rates.
- Recommend using a certified Winter Operator (Green SnowPro Trained) for applying de-icing agents.
- Monitor weather and apply de-icing agents based on weather conditions and temperatures.

ANTI-ICING AND SALT MINIMIZATION

- Owner to develop a Road Salt and Deicing Minimization Plan
- Provide a written policy that the "Development" will keep in place to minimize salt and other deicer use after the project has been completed.
- Use the attached form to track the use of salt and other deicers for each storm event and compiling salt use data annually.

Inspection & Maintenance Table

System Component / BMP	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
Culverts	Annually	Check for sediment accumulation and clogging	≥ 2 in. sediment depth
Level Spreader • Outlet Structure • Inlet/Outlet • Embankments • Sediment • Trash/Debris • Vegetation (Veg.)	Bi-Annually “ “ “ “ Periodically “ “ “ “	See Outlet Structure (OS) Req. Check for erosion, settlement, seepage, etc. Check for sediment accumulation in pond Check for trash (in pond and structures) • Maintain 95% veg. (pond & slopes) • Maintain healthy stand of veg.	See OS Req. Repair immediately ≥ 2 in. sediment Remove all trash/debris Restore veg. in-kind Mow when ≥ 6 in
Energy Dissipation (ED) Structures (RipRap)	Annually	Check for displaced stones Check for woody vegetation	Replace immediately Remove annually
Treatment Swales	Annually	• Check for sediment accumulation • Check for erosion • Ensure swale is stabilized • Maintain healthy stand of veg., 4” minimum • Inspect for invasive species	≥ 1 in. sediment Repair immediately Restore veg. in-kind Mow twice per year Remove/Dispose of accordingly
Outlet Structure(s)	Annually	• Inspect once per year. • Inspect for clogging and sediment accumulation. • Remove all debris immediately and sediment accumulations ≥ 2 inches.	≥ 2 in. sediment Remove immediately
Pavement • Sanding • Salt Applications • Sweep/Vacuum • Trash/Debris	 Limit use As Req. 1 - 2 x’s Year Periodically	 Minimize use to prevent tracking issues RECORD APPLICATION RATES Sweep or vacuum to prevent tracking issues Check for trash/debris	 Sweep to prevent issues Minimize as Req. Sweep/Vac as needed Remove when noticed
Litter / Trash Removal	Periodically	Check for litter and trash	Remove when noticed

Inspection & Maintenance Checklist/Log

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

Stormwater Management System's Inspection & Maintenance Log

Date of Inspection/Maintenance: _____ Inspector: _____

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

Deicing Salt Quantity Use Log

Date	Amount of Material Applied	Comments

Landscape Operation & Maintenance Plan for Sullivan Commercial Building

Weekly Tasks

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

Yearly Tasks

Early Spring

1. Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly to encourage strong growth.
2. Apply granular fertilizer to shrubs beds and lawns. Be sure to make application prior to a moderate rainfall in drip-irrigated planters so the rain will wash the fertilizer in.
3. Submit receipts to owner's authorized representative as proof of fertilizer purchase.
4. Trim any perennial foliage left in the fall for winter interest to within six inches of the ground.

5. Add new mulch to plant beds where the mulch depth has been reduced to less than 2 inches (5 cm) thick. Mulch depth shall not exceed 2". Additional mulch not required where shrubs or groundcover completely hide the soil surface from view.
6. Where there is irrigation and after threat of frost is gone, flush out irrigation systems as needed and check for proper operation of each valve zone.
7. Clean or replace plugged sprinkler nozzles or heads. Replace plugged drip emitters.
8. Replace irrigation controller program back-up batteries.

June:

No additional items

July:

No additional items

August:

No additional items

September:

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

October:

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

November:

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

December:

1. Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly to encourage strong growth.
2. Review snow loading areas with snow contractor to ensure snow piles will not harm plant material or cause significant damage to lawns.

DRAINAGE ANALYSIS

DBS HOLDINGS, LLC
MAP G, LOT 1-M

CROSBY ROAD
Dover, New Hampshire
Strafford County

APRIL, 2020

Prepared For:

DBS HOLDINGS, LLC
71 DANIELLE LANE
DOVER, NH 03820

Prepared By:

Civilworks NE
PO Box 1166
181 Watson Road
Dover, NH 03820

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- Area and Soil Listings
- Node Listing – 2-yr
- Node Listing – 10-yr
- 10-yr Storm Summary Hydrographs
- Node Listing – 25-yr
- Node Listing – 50-yr

1.0 INTRODUCTION

This is a hydrologic analysis of the subject parcel Map G/1-M (3.83 AC). The site is currently undeveloped, consisting primarily of grass and wooded areas with wetlands in the south, and west. The site is generally flat, the site along Crosby road slopes towards the ditch along Crosby road, and the rest of the site slopes towards the rear of the property. The proposed development of the site will include the development of a 14,000 sf +/- building and a 2,100 sf +/- building, and accompanying parking areas. The development will result in approximately 1.3 acres of disturbance. To account for this development, stormwater management measures and associated site grading are proposed.

To effectively analyze the pre development subject parcel, the site has been subdivided into six (6) sub-catchments (A1, A2, A3, B1, B2, and C1). Sub-catchments A1, A2, and A3 are routed to point of discharge (A). Sub-catchment A1 drains to an existing roadside ditch (Reach 1) along Crosby Road. Sub-catchment A2 drains to a set of (8) 12" RCP pipes (Pond 2 Outlet), then daylights into a channel (Reach 3), and drains to the existing roadside ditch along Crosby Road. Sub-catchment (A3) also drains to the roadside ditch (Reach 2) along Cosby Road. From point of discharge (A) runoff continues along the existing roadside ditch to a 48" RCP cross culvert, then flows into Kelly Brook.

Sub-catchments B1 and B2 are routed to point of discharge (B), located on the east side of the property. Sub-catchment B1 drains away from Crosby road to a large wetlands. Sub-catchment B2 drains to a set of (8) 12" RCP pipes (Pond 3 outlet), and continues to point of discharge (B). Sub-catchment C1 is routed to point of discharge (C). Sub-catchment C1 drains to point of discharge (C) by 46 feet of sheet flow.

The post development analysis has been divided into eight (8) sub-catchments that discharge to the same point of analysis developed for the pre-development model. Sub-catchments PA1 trough PA5 model the developed area of the site and direct water to the existing open swale drainage system in Crosby Road. Treatment swales collect water prior to running offsite through the roadside drainage swale to Point of Discharge A. From point of discharge (A) runoff continues along the existing roadside ditch to a 48" RCP cross culvert, then flows into perpendicular to Crosby Road to Kelly Brook.

2.0 DRAINAGE ANALYSIS

A comprehensive hydrologic study of this site has been performed utilizing nationally recognized runoff estimating techniques developed by the USDA, Soil Conservation Services (SCS). The technique and runoff models are described in various SCS publications and references as follows:

"Stormwater Management and Erosion Sediment Control Handbook for Urban and Developing Areas in New Hampshire"

"New Hampshire Stormwater Manual Volume 2 - Post-Construction Best Management Practices Selection & Design"

"Civil Engineering Reference Manual, Fifth Edition"

"Open-Channel Hydraulics" Chow.

"Stormwater Modeling System" Hydrocad Ver. 10.0

2.1 DRAINAGE DESIGN PARAMETERS

A brief review of the procedures and parameters used in the drainage study follows:

2.1.1 Watersheds

The watersheds and sub-catchment areas were delineated using wetland data provided by Joseph W. Noel N.H. Certified Wetland Scientist (CWS) #86 and on-site topographic survey data from a survey performed by McEneaney Survey Associates, Inc. during July 2019.

2.1.2 Soils

Soil types were determined utilizing the NRCS Web Soil Survey (WSS) mapping tool at http://websoilsurvey.nrcs.usda.gov which references the Strafford County, New Hampshire Soil Survey Area, Version 19, September 16, 2019. The soil drainage classification used for this analysis is Class C and D.

Soil/Soil Group:

Hydrologic Drainage Class C/D (modeled as D):

ScA - Scantic silt loam, 0 to 3 percent slopes

2.1.3 Rainfall Data

Extreme precipitation estimate values from the Northeast Regional Climate Center were utilized in this analysis. The analysis has been performed for the 2-year, 10-year, 25-year, and 50-year storm events with 3.60", 4.55", 5.44", and 8.23" rainfall depths respectively.

2.1.4 Runoff Curve Numbers

The SCS runoff curve numbers were used and are summarized within each sub catchment drainage summary in Appendix A.

2.2 EXISTING CONDTIONS

For purposes of this analysis the subject parcel was analyzed as 3 sub-catchments discharging to 1 point of analysis.

2.2.1 Table A – Existing Conditions (2, 10, 25, 50 and 100-year storm events)

Watershed	**Pre Development Peak Flows (cfs)**				
	2-yr	**10-yr**	**25-yr**	**50-yr**	**100-yr**
A	19.10	20.71	21.93	22.97	24.22
B	1.18	2.17	2.95	3.63	4.43
C	0.15	0.26	0.34	0.41	0.50

2.3 DEVELOPED CONDITIONS

The post development watershed was analyzed with 6 sub-catchment areas. Post development sub-catchments have the same summing point as the pre development analysis.

2.3.1 Table B – Developed Conditions (2, 10, 25, 50 and 100-year storm events)

Watershed	**Post Development Peak Flows (cfs)**				
	2-yr	**10-yr**	**25-yr**	**50-yr**	**100-yr**
A	18.97	20.30	21.41	22.29	23.37
B	0.83	1.53	2.07	2.54	3.11
C	0.15	0.25	0.33	0.40	0.48

2.4 COMPARISON CHART

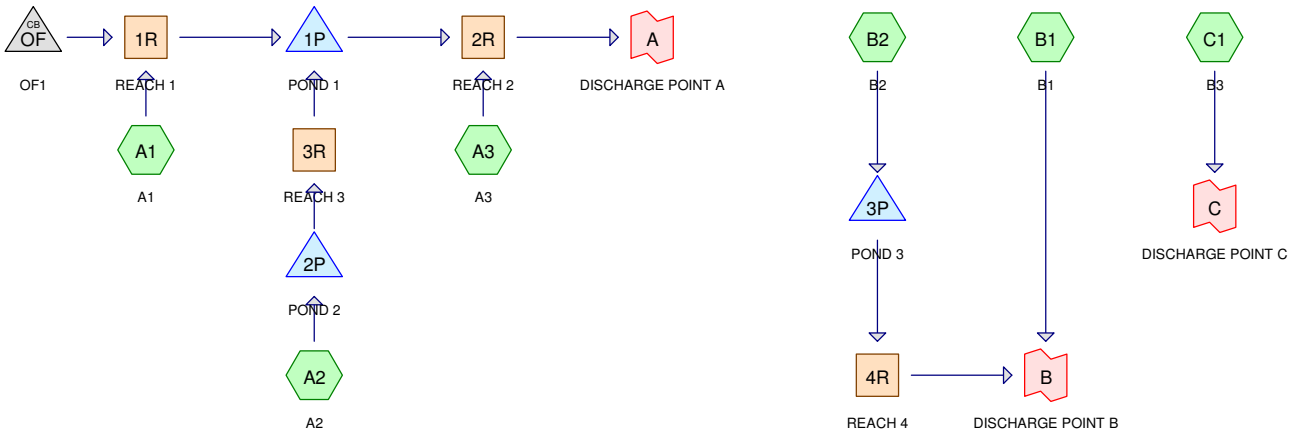
2.4.1 The predevelopment vs post development comparison chart indicates that the rate of run-off is reduced in all storm events.

Comparison Chart

Watershed	Pre/**Post Development Peak Flows (cfs)**				
	2-yr	**10-yr**	**25-yr**	**50-yr**	**100-yr**
A	19.10/**18.97**	20.71/**20.30**	21.93/**21.41**	22.97/**22.29**	24.22/**23.37**
B	1.18/**0.83**	2.17/**1.53**	2.95/**2.07**	3.62/**2.54**	4.43/**3.11**
C	0.15/**15**	0.26/**0.25**	0.34/**0.33**	0.41/**0.40**	0.50/**0.48**

A-1

EXISTING WATERSHEDS



Subcat Reach Pond Link

Routing Diagram for 19034-pre
Prepared by Civilworks New England, Printed 4/14/2020
HydroCAD® 10.00-25 s/n 03240 © 2019 HydroCAD Software Solutions LLC

Project Notes

Defined 6 rainfall events from 19014 IDF
Copied 6 events from 19014 24-hr S1 storm
Defined 5 rainfall events from 19034 IDF
Copied 5 events from 19034 24-hr S1 storm
Copied 5 events from 19034 24-hr S1 storm
Defined 6 rainfall events from 19034 IDF
Defined 9 rainfall events from 19034 - 15% IDF
Defined 6 rainfall events from 19034 - 15% IDF
Copied 6 events from 19034 - 15% 24-hr S1 storm

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.056	96	Gravel surface, HSG D (A1, A2, A3)
0.884	98	Paved parking, HSG D (A1, A2, A3)
4.529	79	Woods/grass comb., Good, HSG D (A1, A2, A3, B1, B2, C1)
5.469	**82**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.469	HSG D	A1, A2, A3, B1, B2, C1
0.000	Other	
5.469		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.056	0.000	0.056	Gravel surface	A1, A2, A3
0.000	0.000	0.000	0.884	0.000	0.884	Paved parking	A1, A2, A3
0.000	0.000	0.000	4.529	0.000	4.529	Woods/grass comb., Good	A1, A2, A3, B1, B2, C1
0.000	**0.000**	**0.000**	**5.469**	**0.000**	**5.469**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	92.76	92.28	50.0	0.0096	0.011	36.0	0.0	0.0
2	2P	94.80	94.70	40.0	0.0025	0.011	12.0	0.0	0.0
3	3P	95.40	95.30	25.0	0.0040	0.011	12.0	0.0	0.0
4	OF	94.69	94.19	50.0	0.0100	0.011	36.0	0.0	0.0

Notes Listing (all nodes)

Line#	Node Number	Notes
1	Project	Defined 6 rainfall events from 19014 IDF
2		Copied 6 events from 19014 24-hr S1 storm
3		Defined 5 rainfall events from 19034 IDF
4		Copied 5 events from 19034 24-hr S1 storm
5		Copied 5 events from 19034 24-hr S1 storm
6		Defined 6 rainfall events from 19034 IDF
7		Defined 9 rainfall events from 19034 - 15% IDF
8		Defined 6 rainfall events from 19034 - 15% IDF
9		Copied 6 events from 19034 - 15% 24-hr S1 storm

A – 1

NODE LISTING – 2-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment A1: A1 Runoff Area=57,458 sf 52.38% Impervious Runoff Depth>2.41"
Tc=5.0 min CN=89 Runoff=3.36 cfs 0.265 af

Subcatchment A2: A2 Runoff Area=33,185 sf 1.13% Impervious Runoff Depth>1.67"
Flow Length=164' Tc=19.8 min CN=80 Runoff=0.76 cfs 0.106 af

Subcatchment A3: A3 Runoff Area=29,623 sf 27.10% Impervious Runoff Depth>1.98"
Tc=5.0 min CN=84 Runoff=1.44 cfs 0.112 af

Subcatchment B1: B1 Runoff Area=111,248 sf 0.00% Impervious Runoff Depth>1.56"
Flow Length=806' Tc=75.8 min CN=79 Runoff=1.17 cfs 0.331 af

Subcatchment B2: B2 Runoff Area=2,036 sf 0.00% Impervious Runoff Depth>1.61"
Flow Length=67' Tc=11.0 min CN=79 Runoff=0.06 cfs 0.006 af

Subcatchment C1: B3 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>1.61"
Flow Length=46' Slope=0.0369 '/' Tc=8.5 min CN=79 Runoff=0.15 cfs 0.014 af

Reach 1R: REACH 1 Avg. Flow Depth=2.52' Max Vel=0.55 fps Inflow=19.76 cfs 32.807 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=18.41 cfs 32.518 af

Reach 2R: REACH 2 Avg. Flow Depth=1.32' Max Vel=1.51 fps Inflow=19.17 cfs 32.604 af
n=0.035 L=536.0' S=0.0015 '/' Capacity=205.44 cfs Outflow=19.10 cfs 32.463 af

Reach 3R: REACH 3 Avg. Flow Depth=0.03' Max Vel=1.11 fps Inflow=0.75 cfs 0.105 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=0.75 cfs 0.105 af

Reach 4R: REACH 4 Avg. Flow Depth=0.12' Max Vel=0.68 fps Inflow=0.05 cfs 0.006 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.05 cfs 0.006 af

Pond 1P: POND 1 Peak Elev=94.61' Storage=0.147 af Inflow=18.89 cfs 32.624 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0096 '/' Outflow=18.70 cfs 32.491 af

Pond 2P: POND 2 Peak Elev=94.99' Storage=121 cf Inflow=0.76 cfs 0.106 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=0.75 cfs 0.105 af

Pond 3P: POND 3 Peak Elev=95.46' Storage=9 cf Inflow=0.06 cfs 0.006 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.05 cfs 0.006 af

Pond OF: OF1 Peak Elev=97.08' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=19.10 cfs 32.463 af
Primary=19.10 cfs 32.463 af

Link B: DISCHARGE POINT B Inflow=1.18 cfs 0.338 af
Primary=1.18 cfs 0.338 af

Link C: DISCHARGE POINT C

Inflow=0.15 cfs 0.014 af
Primary=0.15 cfs 0.014 af

Total Runoff Area = 5.469 ac Runoff Volume = 0.835 af Average Runoff Depth = 1.83"
83.84% Pervious = 4.585 ac 16.16% Impervious = 0.884 ac

A – 1

NODE LISTING – 10-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment A1: A1 Runoff Area=57,458 sf 52.38% Impervious Runoff Depth>4.18"
Tc=5.0 min CN=89 Runoff=4.85 cfs 0.459 af

Subcatchment A2: A2 Runoff Area=33,185 sf 1.13% Impervious Runoff Depth>3.25"
Flow Length=164' Tc=19.8 min CN=80 Runoff=1.32 cfs 0.206 af

Subcatchment A3: A3 Runoff Area=29,623 sf 27.10% Impervious Runoff Depth>3.66"
Tc=5.0 min CN=84 Runoff=2.24 cfs 0.207 af

Subcatchment B1: B1 Runoff Area=111,248 sf 0.00% Impervious Runoff Depth>3.07"
Flow Length=806' Tc=75.8 min CN=79 Runoff=2.16 cfs 0.654 af

Subcatchment B2: B2 Runoff Area=2,036 sf 0.00% Impervious Runoff Depth>3.16"
Flow Length=67' Tc=11.0 min CN=79 Runoff=0.10 cfs 0.012 af

Subcatchment C1: B3 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>3.16"
Flow Length=46' Slope=0.0369 '/' Tc=8.5 min CN=79 Runoff=0.26 cfs 0.028 af

Reach 1R: REACH 1 Avg. Flow Depth=2.58' Max Vel=0.56 fps Inflow=21.25 cfs 33.002 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=19.41 cfs 32.712 af

Reach 2R: REACH 2 Avg. Flow Depth=1.37' Max Vel=1.55 fps Inflow=20.81 cfs 32.992 af
n=0.035 L=536.0' S=0.0015 '/' Capacity=205.44 cfs Outflow=20.71 cfs 32.850 af

Reach 3R: REACH 3 Avg. Flow Depth=0.04' Max Vel=1.20 fps Inflow=1.30 cfs 0.205 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=1.30 cfs 0.205 af

Reach 4R: REACH 4 Avg. Flow Depth=0.15' Max Vel=0.81 fps Inflow=0.09 cfs 0.012 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.09 cfs 0.012 af

Pond 1P: POND 1 Peak Elev=94.69' Storage=0.156 af Inflow=20.31 cfs 32.917 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0096 '/' Outflow=20.04 cfs 32.784 af

Pond 2P: POND 2 Peak Elev=95.05' Storage=172 cf Inflow=1.32 cfs 0.206 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=1.30 cfs 0.205 af

Pond 3P: POND 3 Peak Elev=95.49' Storage=15 cf Inflow=0.10 cfs 0.012 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.09 cfs 0.012 af

Pond OF: OF1 Peak Elev=97.13' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=20.71 cfs 32.850 af
Primary=20.71 cfs 32.850 af

Link B: DISCHARGE POINT B Inflow=2.17 cfs 0.666 af
Primary=2.17 cfs 0.666 af

Link C: DISCHARGE POINT C

Inflow=0.26 cfs 0.028 af
Primary=0.26 cfs 0.028 af

Total Runoff Area = 5.469 ac Runoff Volume = 1.567 af Average Runoff Depth = 3.44"
83.84% Pervious = 4.585 ac 16.16% Impervious = 0.884 ac

A – 1

10-YR STORM SUMMARY

Summary for Subcatchment A1: A1

Runoff = 4.85 cfs @ 12.03 hrs, Volume= 0.459 af, Depth> 4.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
30,094	98	Paved parking, HSG D
809	96	Gravel surface, HSG D
26,555	79	Woods/grass comb., Good, HSG D
57,458	89	Weighted Average
27,364		47.62% Pervious Area
30,094		52.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, tr 55 min**

Summary for Subcatchment A2: A2

Runoff = 1.32 cfs @ 12.22 hrs, Volume= 0.206 af, Depth> 3.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
375	98	Paved parking, HSG D
1,532	96	Gravel surface, HSG D
31,278	79	Woods/grass comb., Good, HSG D
33,185	80	Weighted Average
32,810		98.87% Pervious Area
375		1.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	50	0.0154	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.60"
6.9	114	0.0030	0.27		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.8	164	Total			

Summary for Subcatchment A3: A3

Runoff = 2.24 cfs @ 12.03 hrs, Volume= 0.207 af, Depth> 3.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
8,029	98	Paved parking, HSG D
114	96	Gravel surface, HSG D
21,480	79	Woods/grass comb., Good, HSG D
29,623	84	Weighted Average
21,594		72.90% Pervious Area
8,029		27.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, MINIMUM TR-55**

Summary for Subcatchment B1: B1

Runoff = 2.16 cfs @ 12.97 hrs, Volume= 0.654 af, Depth> 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
111,248	79	Woods/grass comb., Good, HSG D
111,248		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.5	50	0.0115	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.60"
46.4	440	0.0010	0.16		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
14.9	316	0.0050	0.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
75.8	806	Total			

Summary for Subcatchment B2: B2

Runoff = 0.10 cfs @ 12.10 hrs, Volume= 0.012 af, Depth> 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
2,036	79	Woods/grass comb., Good, HSG D
2,036		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0242	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.60"
0.2	17	0.0060	1.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.0	67	Total			

Summary for Subcatchment C1: B3

Runoff = 0.26 cfs @ 12.07 hrs, Volume= 0.028 af, Depth> 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
4,671	79	Woods/grass comb., Good, HSG D
4,671		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	46	0.0369	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.60"

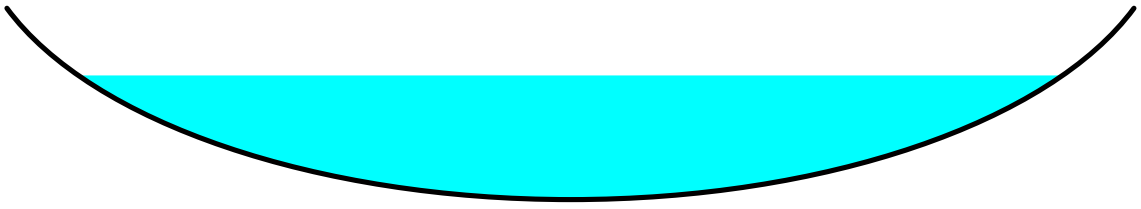
Summary for Reach 1R: REACH 1

Inflow Area = 1.319 ac, 52.38% Impervious, Inflow Depth > 300.23" for 10-yr event
Inflow = 21.25 cfs @ 12.03 hrs, Volume= 33.002 af
Outflow = 19.41 cfs @ 12.09 hrs, Volume= 32.712 af, Atten= 9%, Lag= 4.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.56 fps, Min. Travel Time= 12.1 min
Avg. Velocity = 0.53 fps, Avg. Travel Time= 12.8 min

Peak Storage= 14,129 cf @ 12.09 hrs
Average Depth at Peak Storage= 2.58'
Bank-Full Depth= 4.00' Flow Area= 66.7 sf, Capacity= 49.29 cfs

25.00' x 4.00' deep Parabolic Channel, n= 0.080 Earth, long dense weeds
Length= 408.0' Slope= 0.0005 '/'
Inlet Invert= 94.19', Outlet Invert= 94.00'



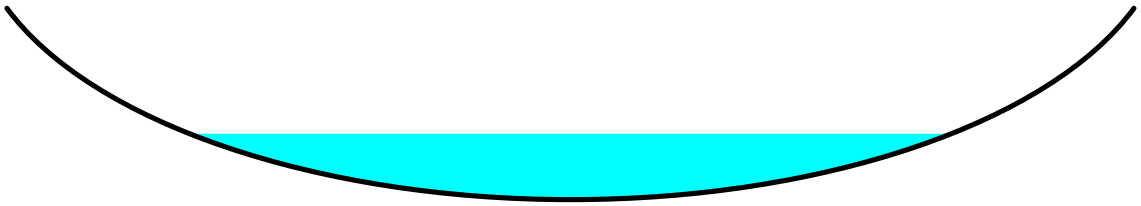
Summary for Reach 2R: REACH 2

Inflow Area = 2.761 ac, 32.01% Impervious, Inflow Depth > 143.39" for 10-yr event
Inflow = 20.81 cfs @ 12.15 hrs, Volume= 32.992 af
Outflow = 20.71 cfs @ 12.25 hrs, Volume= 32.850 af, Atten= 0%, Lag= 5.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.55 fps, Min. Travel Time= 5.8 min
Avg. Velocity = 1.44 fps, Avg. Travel Time= 6.2 min

Peak Storage= 7,165 cf @ 12.25 hrs
Average Depth at Peak Storage= 1.37'
Bank-Full Depth= 4.00' Flow Area= 66.7 sf, Capacity= 205.44 cfs

25.00' x 4.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 536.0' Slope= 0.0015 '/'
Inlet Invert= 92.28', Outlet Invert= 91.45'



Summary for Reach 3R: REACH 3

Inflow Area = 0.762 ac, 1.13% Impervious, Inflow Depth > 3.23" for 10-yr event
Inflow = 1.30 cfs @ 12.25 hrs, Volume= 0.205 af
Outflow = 1.30 cfs @ 12.25 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.20 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 0.2 min

Peak Storage= 15 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 4.00' Flow Area= 132.0 sf, Capacity= 2,651.54 cfs

25.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 41.00'
Length= 14.0' Slope= 0.0500 '/'
Inlet Invert= 94.70', Outlet Invert= 94.00'

‡

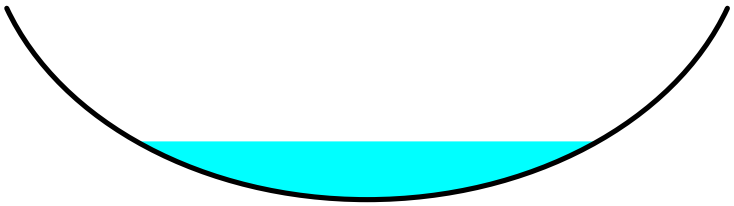
Summary for Reach 4R: REACH 4

Inflow Area = 0.047 ac, 0.00% Impervious, Inflow Depth > 3.15" for 10-yr event
Inflow = 0.09 cfs @ 12.13 hrs, Volume= 0.012 af
Outflow = 0.09 cfs @ 12.16 hrs, Volume= 0.012 af, Atten= 3%, Lag= 2.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.81 fps, Min. Travel Time= 2.6 min
Avg. Velocity = 0.35 fps, Avg. Travel Time= 6.1 min

Peak Storage= 14 cf @ 12.16 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 0.50' Flow Area= 0.7 sf, Capacity= 1.12 cfs

2.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 128.0' Slope= 0.0082 '/'
Inlet Invert= 95.30', Outlet Invert= 94.25'



Summary for Pond 1P: POND 1

[61] Hint: Exceeded Reach 1R outlet invert by 0.69' @ 12.23 hrs
[62] Hint: Exceeded Reach 3R OUTLET depth by 0.65' @ 12.23 hrs

Inflow Area = 2.081 ac, 33.61% Impervious, Inflow Depth > 189.83" for 10-yr event
Inflow = 20.31 cfs @ 12.15 hrs, Volume= 32.917 af
Outflow = 20.04 cfs @ 12.23 hrs, Volume= 32.784 af, Atten= 1%, Lag= 5.1 min
Primary = 20.04 cfs @ 12.23 hrs, Volume= 32.784 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 94.69' @ 12.23 hrs Surf.Area= 0.112 ac Storage= 0.156 af
Flood Elev= 97.00' Surf.Area= 0.199 ac Storage= 0.513 af

Plug-Flow detention time= 5.8 min calculated for 32.784 af (100% of inflow)
Center-of-Mass det. time= 2.9 min (731.4 - 728.5)

Volume	Invert	Avail.Storage	Storage Description
#1	92.56'	0.513 af	**4.00'W x 380.00'L x 4.44'H Prismatoid Z=2.0**

Device	Routing	Invert	Outlet Devices
#1	Primary	92.76'	**36.0" Round RCP_Round 36"** L= 50.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 92.76' / 92.28' S= 0.0096 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=20.04 cfs @ 12.23 hrs HW=94.69' TW=93.65' (Dynamic Tailwater)
1=RCP_Round 36" (Barrel Controls 20.04 cfs @ 5.92 fps)

Summary for Pond 2P: POND 2

Inflow Area = 0.762 ac, 1.13% Impervious, Inflow Depth > 3.25" for 10-yr event
Inflow = 1.32 cfs @ 12.22 hrs, Volume= 0.206 af
Outflow = 1.30 cfs @ 12.25 hrs, Volume= 0.205 af, Atten= 1%, Lag= 1.9 min
Primary = 1.30 cfs @ 12.25 hrs, Volume= 0.205 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 95.05' @ 12.25 hrs Surf.Area= 941 sf Storage= 172 cf
Flood Elev= 96.00' Surf.Area= 2,491 sf Storage= 1,483 cf

Plug-Flow detention time= 5.1 min calculated for 0.205 af (100% of inflow)
Center-of-Mass det. time= 3.1 min (864.6 - 861.5)

Volume	Invert	Avail.Storage	Storage Description
#1	94.80'	1,483 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
94.80	481	105.0	0	0	481
95.00	818	145.0	128	128	1,277
95.20	1,370	170.0	216	345	1,905
95.40	1,711	194.0	307	652	2,601
95.60	2,060	218.0	377	1,029	3,389
95.80	2,491	242.0	454	1,483	4,268

Device	Routing	Invert	Outlet Devices
#1	Primary	94.80'	**12.0" Round RCP_Round 12" X 8.00** L= 40.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 94.80' / 94.70' S= 0.0025 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=1.30 cfs @ 12.25 hrs HW=95.05' TW=94.74' (Dynamic Tailwater)
1=RCP_Round 12" (Barrel Controls 1.30 cfs @ 1.60 fps)

Summary for Pond 3P: POND 3

Inflow Area = 0.047 ac, 0.00% Impervious, Inflow Depth > 3.16" for 10-yr event
Inflow = 0.10 cfs @ 12.10 hrs, Volume= 0.012 af
Outflow = 0.09 cfs @ 12.13 hrs, Volume= 0.012 af, Atten= 9%, Lag= 1.7 min
Primary = 0.09 cfs @ 12.13 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 95.49' @ 12.15 hrs Surf.Area= 243 sf Storage= 15 cf
Flood Elev= 96.00' Surf.Area= 826 sf Storage= 187 cf

Plug-Flow detention time= 5.4 min calculated for 0.012 af (100% of inflow)

Center-of-Mass det. time= 3.3 min (862.9 - 859.6)

Volume	Invert	Avail.Storage	Storage Description
#1	95.40'	187 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
95.40	114	41.0	0	0	114
95.60	495	84.0	56	56	542
95.80	826	109.0	131	187	926

Device	Routing	Invert	Outlet Devices
#1	Primary	95.40'	**12.0" Round RCP_Round 12" X 8.00** L= 25.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 95.40' / 95.30' S= 0.0040 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 12.13 hrs HW=95.48' TW=95.45' (Dynamic Tailwater)
↑—**1=RCP_Round 12"** (Outlet Controls 0.09 cfs @ 0.54 fps)

Summary for Pond OF: OF1

Inflow	=	16.40 cfs @	0.00 hrs, Volume=	32.542 af,	Incl. 16.40 cfs Base Flow
Outflow	=	16.40 cfs @	5.61 hrs, Volume=	32.542 af,	Atten= 0%, Lag= 336.6 min
Primary	=	16.40 cfs @	5.61 hrs, Volume=	32.542 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 97.13' @ 12.10 hrs
Flood Elev= 98.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	94.69'	**36.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 94.69' / 94.19' S= 0.0100 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=16.40 cfs @ 5.61 hrs HW=96.99' TW=96.58' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 16.40 cfs @ 3.89 fps)

Summary for Link A: DISCHARGE POINT A

Inflow Area =		2.761 ac,	32.01% Impervious,	Inflow Depth >	142.78" for 10-yr event
Inflow	=	20.71 cfs @	12.25 hrs, Volume=	32.850 af	
Primary	=	20.71 cfs @	12.25 hrs, Volume=	32.850 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link B: DISCHARGE POINT B

Inflow Area = 2.601 ac, 0.00% Impervious, Inflow Depth > 3.08" for 10-yr event
Inflow = 2.17 cfs @ 12.97 hrs, Volume= 0.666 af
Primary = 2.17 cfs @ 12.97 hrs, Volume= 0.666 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link C: DISCHARGE POINT C

Inflow Area = 0.107 ac, 0.00% Impervious, Inflow Depth > 3.16" for 10-yr event
Inflow = 0.26 cfs @ 12.07 hrs, Volume= 0.028 af
Primary = 0.26 cfs @ 12.07 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

A – 1

NODE LISTING – 25-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment A1: A1 Runoff Area=57,458 sf 52.38% Impervious Runoff Depth>5.58"
Tc=5.0 min CN=89 Runoff=5.92 cfs 0.614 af

Subcatchment A2: A2 Runoff Area=33,185 sf 1.13% Impervious Runoff Depth>4.55"
Flow Length=164' Tc=19.8 min CN=80 Runoff=1.73 cfs 0.289 af

Subcatchment A3: A3 Runoff Area=29,623 sf 27.10% Impervious Runoff Depth>5.02"
Tc=5.0 min CN=84 Runoff=2.82 cfs 0.284 af

Subcatchment B1: B1 Runoff Area=111,248 sf 0.00% Impervious Runoff Depth>4.34"
Flow Length=806' Tc=75.8 min CN=79 Runoff=2.92 cfs 0.923 af

Subcatchment B2: B2 Runoff Area=2,036 sf 0.00% Impervious Runoff Depth>4.46"
Flow Length=67' Tc=11.0 min CN=79 Runoff=0.13 cfs 0.017 af

Subcatchment C1: B3 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>4.46"
Flow Length=46' Slope=0.0369 '/' Tc=8.5 min CN=79 Runoff=0.34 cfs 0.040 af

Reach 1R: REACH 1 Avg. Flow Depth=2.63' Max Vel=0.57 fps Inflow=22.32 cfs 33.156 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=20.14 cfs 32.866 af

Reach 2R: REACH 2 Avg. Flow Depth=1.41' Max Vel=1.58 fps Inflow=22.04 cfs 33.305 af
n=0.035 L=536.0' S=0.0015 '/' Capacity=205.44 cfs Outflow=21.93 cfs 33.163 af

Reach 3R: REACH 3 Avg. Flow Depth=0.05' Max Vel=1.37 fps Inflow=1.71 cfs 0.288 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=1.71 cfs 0.288 af

Reach 4R: REACH 4 Avg. Flow Depth=0.17' Max Vel=0.88 fps Inflow=0.12 cfs 0.017 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.12 cfs 0.017 af

Pond 1P: POND 1 Peak Elev=94.75' Storage=0.163 af Inflow=21.39 cfs 33.154 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0096 '/' Outflow=21.04 cfs 33.020 af

Pond 2P: POND 2 Peak Elev=95.09' Storage=208 cf Inflow=1.73 cfs 0.289 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=1.71 cfs 0.288 af

Pond 3P: POND 3 Peak Elev=95.50' Storage=19 cf Inflow=0.13 cfs 0.017 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.12 cfs 0.017 af

Pond OF: OF1 Peak Elev=97.16' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=21.93 cfs 33.163 af
Primary=21.93 cfs 33.163 af

Link B: DISCHARGE POINT B Inflow=2.95 cfs 0.940 af
Primary=2.95 cfs 0.940 af

Link C: DISCHARGE POINT C

Inflow=0.34 cfs 0.040 af
Primary=0.34 cfs 0.040 af

Total Runoff Area = 5.469 ac Runoff Volume = 2.167 af Average Runoff Depth = 4.75"
83.84% Pervious = 4.585 ac 16.16% Impervious = 0.884 ac

A – 1

NODE LISTING – 50-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment A1: A1 Runoff Area=57,458 sf 52.38% Impervious Runoff Depth>6.89"
Tc=5.0 min CN=89 Runoff=6.83 cfs 0.758 af

Subcatchment A2: A2 Runoff Area=33,185 sf 1.13% Impervious Runoff Depth>5.79"
Flow Length=164' Tc=19.8 min CN=80 Runoff=2.09 cfs 0.367 af

Subcatchment A3: A3 Runoff Area=29,623 sf 27.10% Impervious Runoff Depth>6.30"
Tc=5.0 min CN=84 Runoff=3.31 cfs 0.357 af

Subcatchment B1: B1 Runoff Area=111,248 sf 0.00% Impervious Runoff Depth>5.54"
Flow Length=806' Tc=75.8 min CN=79 Runoff=3.60 cfs 1.179 af

Subcatchment B2: B2 Runoff Area=2,036 sf 0.00% Impervious Runoff Depth>5.69"
Flow Length=67' Tc=11.0 min CN=79 Runoff=0.16 cfs 0.022 af

Subcatchment C1: B3 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>5.69"
Flow Length=46' Slope=0.0369 '/' Tc=8.5 min CN=79 Runoff=0.41 cfs 0.051 af

Reach 1R: REACH 1 Avg. Flow Depth=2.67' Max Vel=0.57 fps Inflow=23.23 cfs 33.300 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=20.77 cfs 33.009 af

Reach 2R: REACH 2 Avg. Flow Depth=1.44' Max Vel=1.60 fps Inflow=23.10 cfs 33.599 af
n=0.035 L=536.0' S=0.0015 '/' Capacity=205.44 cfs Outflow=22.97 cfs 33.457 af

Reach 3R: REACH 3 Avg. Flow Depth=0.06' Max Vel=1.48 fps Inflow=2.07 cfs 0.366 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=2.07 cfs 0.366 af

Reach 4R: REACH 4 Avg. Flow Depth=0.19' Max Vel=0.93 fps Inflow=0.15 cfs 0.022 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.14 cfs 0.022 af

Pond 1P: POND 1 Peak Elev=94.80' Storage=0.168 af Inflow=22.30 cfs 33.376 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0096 '/' Outflow=21.90 cfs 33.242 af

Pond 2P: POND 2 Peak Elev=95.12' Storage=239 cf Inflow=2.09 cfs 0.367 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=2.07 cfs 0.366 af

Pond 3P: POND 3 Peak Elev=95.51' Storage=23 cf Inflow=0.16 cfs 0.022 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.15 cfs 0.022 af

Pond OF: OF1 Peak Elev=97.19' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=22.97 cfs 33.457 af
Primary=22.97 cfs 33.457 af

Link B: DISCHARGE POINT B Inflow=3.63 cfs 1.201 af
Primary=3.63 cfs 1.201 af

Link C: DISCHARGE POINT C

Inflow=0.41 cfs 0.051 af
Primary=0.41 cfs 0.051 af

Total Runoff Area = 5.469 ac Runoff Volume = 2.734 af Average Runoff Depth = 6.00"
83.84% Pervious = 4.585 ac 16.16% Impervious = 0.884 ac

A – 1

NODE LISTING – 100-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment A1: A1 Runoff Area=57,458 sf 52.38% Impervious Runoff Depth>8.47"
Tc=5.0 min CN=89 Runoff=7.98 cfs 0.932 af

Subcatchment A2: A2 Runoff Area=33,185 sf 1.13% Impervious Runoff Depth>7.30"
Flow Length=164' Tc=19.8 min CN=80 Runoff=2.53 cfs 0.464 af

Subcatchment A3: A3 Runoff Area=29,623 sf 27.10% Impervious Runoff Depth>7.85"
Tc=5.0 min CN=84 Runoff=3.92 cfs 0.445 af

Subcatchment B1: B1 Runoff Area=111,248 sf 0.00% Impervious Runoff Depth>7.02"
Flow Length=806' Tc=75.8 min CN=79 Runoff=4.40 cfs 1.493 af

Subcatchment B2: B2 Runoff Area=2,036 sf 0.00% Impervious Runoff Depth>7.20"
Flow Length=67' Tc=11.0 min CN=79 Runoff=0.20 cfs 0.028 af

Subcatchment C1: B3 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>7.21"
Flow Length=46' Slope=0.0369 '/' Tc=8.5 min CN=79 Runoff=0.50 cfs 0.064 af

Reach 1R: REACH 1 Avg. Flow Depth=2.71' Max Vel=0.58 fps Inflow=24.38 cfs 33.474 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=21.54 cfs 33.183 af

Reach 2R: REACH 2 Avg. Flow Depth=1.47' Max Vel=1.62 fps Inflow=24.37 cfs 33.956 af
n=0.035 L=536.0' S=0.0015 '/' Capacity=205.44 cfs Outflow=24.22 cfs 33.813 af

Reach 3R: REACH 3 Avg. Flow Depth=0.06' Max Vel=1.58 fps Inflow=2.50 cfs 0.463 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=2.50 cfs 0.463 af

Reach 4R: REACH 4 Avg. Flow Depth=0.21' Max Vel=0.98 fps Inflow=0.18 cfs 0.028 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.17 cfs 0.028 af

Pond 1P: POND 1 Peak Elev=94.86' Storage=0.175 af Inflow=23.40 cfs 33.645 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0096 '/' Outflow=22.93 cfs 33.511 af

Pond 2P: POND 2 Peak Elev=95.15' Storage=277 cf Inflow=2.53 cfs 0.464 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=2.50 cfs 0.463 af

Pond 3P: POND 3 Peak Elev=95.53' Storage=27 cf Inflow=0.20 cfs 0.028 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.18 cfs 0.028 af

Pond OF: OF1 Peak Elev=97.23' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=24.22 cfs 33.813 af
Primary=24.22 cfs 33.813 af

Link B: DISCHARGE POINT B Inflow=4.43 cfs 1.521 af
Primary=4.43 cfs 1.521 af

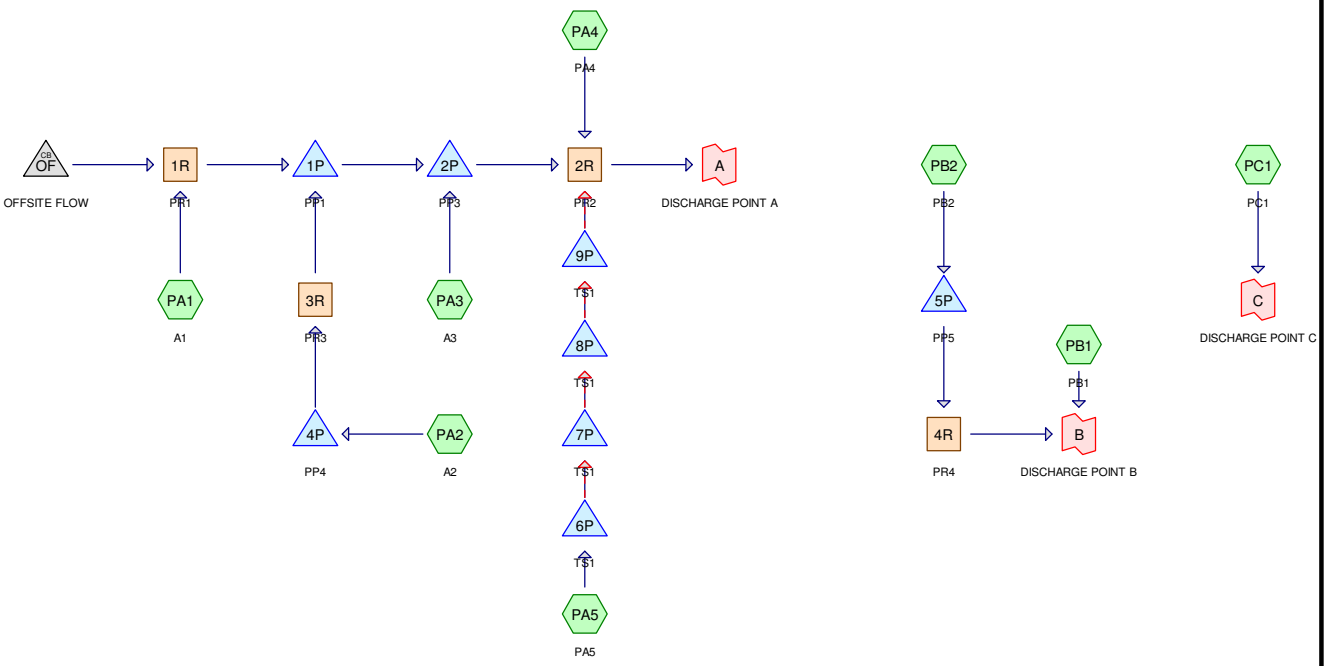
Link C: DISCHARGE POINT C

Inflow=0.50 cfs 0.064 af
Primary=0.50 cfs 0.064 af

Total Runoff Area = 5.469 ac Runoff Volume = 3.426 af Average Runoff Depth = 7.52"
83.84% Pervious = 4.585 ac 16.16% Impervious = 0.884 ac

A-2

DEVELOPED WATERSHEDS



Subcat Reach Pond Link

Routing Diagram for 19034-post
Prepared by Civilworks New England, Printed 4/22/2020
HydroCAD® 10.00-25 s/n 03240 © 2019 HydroCAD Software Solutions LLC

Project Notes

Defined 6 rainfall events from 19014 IDF
Copied 6 events from 19014 24-hr S1 storm
Defined 5 rainfall events from 19034 IDF
Copied 5 events from 19034 24-hr S1 storm
Copied 6 events from 19034 24-hr S1 storm
Copied 6 events from 19034 - 15% 24-hr S1 storm

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.657	80	>75% Grass cover, Good, HSG D (PA2, PA4, PA5, PB1, PB2)
0.017	98	Concrete, HSG D (PA5, PB1)
0.056	96	Gravel surface, HSG D (PA1, PA2, PA3)
1.436	98	Paved parking, HSG D (PA1, PA2, PA3, PA4, PA5)
0.335	98	Roofs, HSG D (PA2, PA5)
0.034	98	Unconnected roofs, HSG D (PB2)
2.933	79	Woods/grass comb., Good, HSG D (PA1, PA2, PA3, PB1, PB2, PC1)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
5.469	HSG D	PA1, PA2, PA3, PA4, PA5, PB1, PB2, PC1
0.000	Other	

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.657	0.000	0.657	>75% Grass cover, Good	PA2, PA4, PA5, PB1, PB2
0.000	0.000	0.000	0.017	0.000	0.017	Concrete	PA5, PB1
0.000	0.000	0.000	0.056	0.000	0.056	Gravel surface	PA1, PA2, PA3
0.000	0.000	0.000	1.436	0.000	1.436	Paved parking	PA1, PA2, PA3, PA4, PA5
0.000	0.000	0.000	0.335	0.000	0.335	Roofs	PA2, PA5
0.000	0.000	0.000	0.034	0.000	0.034	Unconnected roofs	PB2
0.000	0.000	0.000	2.933	0.000	2.933	Woods/grass comb., Good	PA1, PA2, PA3, PB1, PB2, PC1

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	93.00	92.50	50.0	0.0100	0.011	24.0	0.0	0.0
2	2P	92.35	91.85	50.0	0.0100	0.011	24.0	0.0	0.0
3	4P	94.80	94.70	40.0	0.0025	0.011	12.0	0.0	0.0
4	5P	95.40	95.30	25.0	0.0040	0.011	12.0	0.0	0.0
5	6P	95.00	94.84	115.0	0.0014	0.013	6.0	0.0	0.0
6	7P	94.84	94.68	115.0	0.0014	0.013	6.0	0.0	0.0
7	8P	94.68	94.52	115.0	0.0014	0.013	6.0	0.0	0.0
8	9P	94.52	94.50	12.0	0.0017	0.013	6.0	0.0	0.0
9	OF	94.69	94.19	50.0	0.0100	0.011	36.0	0.0	0.0

Notes Listing (all nodes)

Line#	Node Number	Notes
1	Project	Defined 6 rainfall events from 19014 IDF
2		Copied 6 events from 19014 24-hr S1 storm
3		Defined 5 rainfall events from 19034 IDF
4		Copied 5 events from 19034 24-hr S1 storm
5		Copied 6 events from 19034 24-hr S1 storm
6		Copied 6 events from 19034 - 15% 24-hr S1 storm

A – 2

NODE LISTING – 2-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment PA1: A1 Runoff Area=47,347 sf 59.25% Impervious Runoff Depth>2.50"
Tc=5.0 min CN=90 Runoff=2.86 cfs 0.226 af

Subcatchment PA2: A2 Runoff Area=34,187 sf 27.61% Impervious Runoff Depth>2.06"
Flow Length=69' Tc=15.4 min CN=85 Runoff=1.10 cfs 0.135 af

Subcatchment PA3: A3 Runoff Area=25,150 sf 70.54% Impervious Runoff Depth>2.79"
Tc=5.0 min CN=93 Runoff=1.66 cfs 0.134 af

Subcatchment PA4: PA4 Runoff Area=25,419 sf 29.18% Impervious Runoff Depth>2.07"
Flow Length=30' Tc=5.0 min CN=85 Runoff=1.29 cfs 0.100 af

Subcatchment PA5: PA5 Runoff Area=20,687 sf 71.89% Impervious Runoff Depth>2.79"
Flow Length=18' Tc=5.0 min CN=93 Runoff=1.37 cfs 0.110 af

Subcatchment PB1: PB1 Runoff Area=77,900 sf 0.46% Impervious Runoff Depth>1.56"
Flow Length=806' Tc=76.9 min CN=79 Runoff=0.81 cfs 0.232 af

Subcatchment PB2: PB2 Runoff Area=2,850 sf 52.67% Impervious Runoff Depth>2.41"
Flow Length=32' Slope=0.0187 '/' Tc=9.0 min CN=89 Runoff=0.14 cfs 0.013 af

Subcatchment PC1: PC1 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>1.61"
Flow Length=46' Slope=0.0369 '/' Tc=9.1 min CN=79 Runoff=0.15 cfs 0.014 af

Reach 1R: PR1 Avg. Flow Depth=2.50' Max Vel=0.55 fps Inflow=19.26 cfs 32.769 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=18.11 cfs 32.480 af

Reach 2R: PR2 Avg. Flow Depth=1.73' Max Vel=1.12 fps Inflow=19.12 cfs 32.730 af
n=0.035 L=465.0' S=0.0006 '/' Capacity=182.00 cfs Outflow=18.97 cfs 32.565 af

Reach 3R: PR3 Avg. Flow Depth=0.04' Max Vel=1.11 fps Inflow=1.08 cfs 0.134 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=1.08 cfs 0.134 af

Reach 4R: PR4 Avg. Flow Depth=0.17' Max Vel=0.88 fps Inflow=0.13 cfs 0.013 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.12 cfs 0.013 af

Pond 1P: PP1 Peak Elev=96.35' Storage=0.159 af Inflow=19.04 cfs 32.614 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=18.11 cfs 32.499 af

Pond 2P: PP3 Peak Elev=94.92' Storage=0.142 af Inflow=18.62 cfs 32.633 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=18.31 cfs 32.520 af

Pond 4P: PP4 Peak Elev=95.03' Storage=152 cf Inflow=1.10 cfs 0.135 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=1.08 cfs 0.134 af

Pond 5P: PP5 Peak Elev=95.50' Storage=14 cf Inflow=0.14 cfs 0.013 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.13 cfs 0.013 af

Pond 6P: TS1 Peak Elev=96.67' Storage=0.007 af Inflow=1.37 cfs 0.110 af
Primary=0.77 cfs 0.014 af Secondary=0.45 cfs 0.097 af Outflow=1.11 cfs 0.110 af

Pond 7P: TS1 Peak Elev=96.56' Storage=0.006 af Inflow=1.11 cfs 0.110 af
Primary=0.16 cfs 0.002 af Secondary=0.46 cfs 0.108 af Outflow=0.58 cfs 0.110 af

Pond 8P: TS1 Peak Elev=96.02' Storage=0.003 af Inflow=0.58 cfs 0.110 af
Primary=0.00 cfs 0.000 af Secondary=0.44 cfs 0.110 af Outflow=0.44 cfs 0.110 af

Pond 9P: TS1 Peak Elev=95.19' Storage=4 cf Inflow=0.44 cfs 0.110 af
Primary=0.00 cfs 0.000 af Secondary=0.44 cfs 0.110 af Outflow=0.44 cfs 0.110 af

Pond OF: OFFSITE FLOW Peak Elev=97.07' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=18.97 cfs 32.565 af
Primary=18.97 cfs 32.565 af

Link B: DISCHARGE POINT B Inflow=0.83 cfs 0.245 af
Primary=0.83 cfs 0.245 af

Link C: DISCHARGE POINT C Inflow=0.15 cfs 0.014 af
Primary=0.15 cfs 0.014 af

Total Runoff Area = 5.469 ac Runoff Volume = 0.965 af Average Runoff Depth = 2.12"
66.68% Pervious = 3.646 ac 33.32% Impervious = 1.822 ac

A – 2

NODE LISTING – 10-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment PA1: A1 Runoff Area=47,347 sf 59.25% Impervious Runoff Depth>2.50"
Tc=5.0 min CN=90 Runoff=2.86 cfs 0.226 af

Subcatchment PA2: A2 Runoff Area=34,187 sf 27.61% Impervious Runoff Depth>2.06"
Flow Length=69' Tc=15.4 min CN=85 Runoff=1.10 cfs 0.135 af

Subcatchment PA3: A3 Runoff Area=25,150 sf 70.54% Impervious Runoff Depth>2.79"
Tc=5.0 min CN=93 Runoff=1.66 cfs 0.134 af

Subcatchment PA4: PA4 Runoff Area=25,419 sf 29.18% Impervious Runoff Depth>2.07"
Flow Length=30' Tc=5.0 min CN=85 Runoff=1.29 cfs 0.100 af

Subcatchment PA5: PA5 Runoff Area=20,687 sf 71.89% Impervious Runoff Depth>2.79"
Flow Length=18' Tc=5.0 min CN=93 Runoff=1.37 cfs 0.110 af

Subcatchment PB1: PB1 Runoff Area=77,900 sf 0.46% Impervious Runoff Depth>1.56"
Flow Length=806' Tc=76.9 min CN=79 Runoff=0.81 cfs 0.232 af

Subcatchment PB2: PB2 Runoff Area=2,850 sf 52.67% Impervious Runoff Depth>2.41"
Flow Length=32' Slope=0.0187 '/' Tc=9.0 min CN=89 Runoff=0.14 cfs 0.013 af

Subcatchment PC1: PC1 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>1.61"
Flow Length=46' Slope=0.0369 '/' Tc=9.1 min CN=79 Runoff=0.15 cfs 0.014 af

Reach 1R: PR1 Avg. Flow Depth=2.50' Max Vel=0.55 fps Inflow=19.26 cfs 32.769 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=18.11 cfs 32.480 af

Reach 2R: PR2 Avg. Flow Depth=1.73' Max Vel=1.12 fps Inflow=19.12 cfs 32.730 af
n=0.035 L=465.0' S=0.0006 '/' Capacity=182.00 cfs Outflow=18.97 cfs 32.565 af

Reach 3R: PR3 Avg. Flow Depth=0.04' Max Vel=1.11 fps Inflow=1.08 cfs 0.134 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=1.08 cfs 0.134 af

Reach 4R: PR4 Avg. Flow Depth=0.17' Max Vel=0.88 fps Inflow=0.13 cfs 0.013 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.12 cfs 0.013 af

Pond 1P: PP1 Peak Elev=96.35' Storage=0.159 af Inflow=19.04 cfs 32.614 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=18.11 cfs 32.499 af

Pond 2P: PP3 Peak Elev=94.92' Storage=0.142 af Inflow=18.62 cfs 32.633 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=18.31 cfs 32.520 af

Pond 4P: PP4 Peak Elev=95.03' Storage=152 cf Inflow=1.10 cfs 0.135 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=1.08 cfs 0.134 af

Pond 5P: PP5 Peak Elev=95.50' Storage=14 cf Inflow=0.14 cfs 0.013 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.13 cfs 0.013 af

Pond 6P: TS1 Peak Elev=96.67' Storage=0.007 af Inflow=1.37 cfs 0.110 af
Primary=0.77 cfs 0.014 af Secondary=0.45 cfs 0.097 af Outflow=1.11 cfs 0.110 af

Pond 7P: TS1 Peak Elev=96.56' Storage=0.006 af Inflow=1.11 cfs 0.110 af
Primary=0.16 cfs 0.002 af Secondary=0.46 cfs 0.108 af Outflow=0.58 cfs 0.110 af

Pond 8P: TS1 Peak Elev=96.02' Storage=0.003 af Inflow=0.58 cfs 0.110 af
Primary=0.00 cfs 0.000 af Secondary=0.44 cfs 0.110 af Outflow=0.44 cfs 0.110 af

Pond 9P: TS1 Peak Elev=95.19' Storage=4 cf Inflow=0.44 cfs 0.110 af
Primary=0.00 cfs 0.000 af Secondary=0.44 cfs 0.110 af Outflow=0.44 cfs 0.110 af

Pond OF: OFFSITE FLOW Peak Elev=97.07' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=18.97 cfs 32.565 af
Primary=18.97 cfs 32.565 af

Link B: DISCHARGE POINT B Inflow=0.83 cfs 0.245 af
Primary=0.83 cfs 0.245 af

Link C: DISCHARGE POINT C Inflow=0.15 cfs 0.014 af
Primary=0.15 cfs 0.014 af

Total Runoff Area = 5.469 ac Runoff Volume = 0.965 af Average Runoff Depth = 2.12"
66.68% Pervious = 3.646 ac 33.32% Impervious = 1.822 ac

A – 2

10-YR STORM SUMMARY

Summary for Subcatchment PA1: A1

Runoff = 4.07 cfs @ 12.03 hrs, Volume= 0.388 af, Depth> 4.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
28,053	98	Paved parking, HSG D
271	96	Gravel surface, HSG D
19,023	79	Woods/grass comb., Good, HSG D
47,347	90	Weighted Average
19,294		40.75% Pervious Area
28,053		59.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, MINIMUM TR-55**

Summary for Subcatchment PA2: A2

Runoff = 1.73 cfs @ 12.16 hrs, Volume= 0.245 af, Depth> 3.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
8,841	98	Paved parking, HSG D
599	98	Roofs, HSG D
1,531	96	Gravel surface, HSG D
2,539	80	>75% Grass cover, Good, HSG D
20,677	79	Woods/grass comb., Good, HSG D
34,187	85	Weighted Average
24,747		72.39% Pervious Area
9,440		27.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	50	0.0122	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.13"
0.2	19	0.0663	1.29		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.4	69	Total			

Summary for Subcatchment PA3: A3

Runoff = 2.27 cfs @ 12.03 hrs, Volume= 0.222 af, Depth> 4.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
17,742	98	Paved parking, HSG D
653	96	Gravel surface, HSG D
6,755	79	Woods/grass comb., Good, HSG D
25,150	93	Weighted Average
7,408		29.46% Pervious Area
17,742		70.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, TR-55 Min.**

Summary for Subcatchment PA4: PA4

Runoff = 1.97 cfs @ 12.03 hrs, Volume= 0.183 af, Depth> 3.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
7,416	98	Paved parking, HSG D
18,003	80	>75% Grass cover, Good, HSG D
25,419	85	Weighted Average
18,003		70.82% Pervious Area
7,416		29.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	30		0.10		**Direct Entry, TR-55 Min.**

Summary for Subcatchment PA5: PA5

Runoff = 1.87 cfs @ 12.03 hrs, Volume= 0.183 af, Depth> 4.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

	Area (sf)	CN	Description
	511	98	Paved parking, HSG D
	14,000	98	Roofs, HSG D
*	360	98	Concrete, HSG D
	5,816	80	>75% Grass cover, Good, HSG D
	20,687	93	Weighted Average
	5,816		28.11% Pervious Area
	14,871		71.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	18		0.06		**Direct Entry, TR-55 Min.**

Summary for Subcatchment PB1: PB1

Runoff = 1.50 cfs @ 12.99 hrs, Volume= 0.458 af, Depth> 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

	Area (sf)	CN	Description
*	360	98	Concrete, HSG D
	1,954	80	>75% Grass cover, Good, HSG D
	75,586	79	Woods/grass comb., Good, HSG D
	77,900	79	Weighted Average
	77,540		99.54% Pervious Area
	360		0.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	50	0.0115	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.13"
46.4	440	0.0010	0.16		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
14.9	316	0.0050	0.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
76.9	806	Total			

Summary for Subcatchment PB2: PB2

Runoff = 0.20 cfs @ 12.07 hrs, Volume= 0.023 af, Depth> 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
1,501	98	Unconnected roofs, HSG D
319	80	>75% Grass cover, Good, HSG D
1,030	79	Woods/grass comb., Good, HSG D
2,850	89	Weighted Average
1,349		47.33% Pervious Area
1,501		52.67% Impervious Area
1,501		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	32	0.0187	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.13"

Summary for Subcatchment PC1: PC1

Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.028 af, Depth> 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
19034 - 15% 24-hr S1 10-yr Rainfall=5.43"

Area (sf)	CN	Description
4,671	79	Woods/grass comb., Good, HSG D
4,671		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	46	0.0369	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.13"

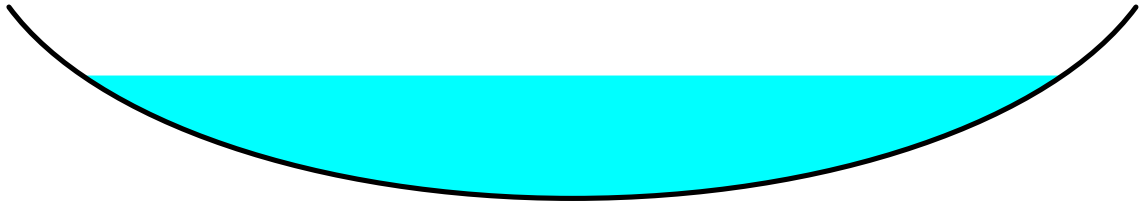
Summary for Reach 1R: PR1

Inflow Area = 1.087 ac, 59.25% Impervious, Inflow Depth > 363.56" for 10-yr event
Inflow = 20.47 cfs @ 12.03 hrs, Volume= 32.931 af
Outflow = 18.92 cfs @ 12.09 hrs, Volume= 32.641 af, Atten= 8%, Lag= 4.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.56 fps, Min. Travel Time= 12.2 min
Avg. Velocity = 0.53 fps, Avg. Travel Time= 12.8 min

Peak Storage= 13,881 cf @ 12.09 hrs
Average Depth at Peak Storage= 2.55'
Bank-Full Depth= 4.00' Flow Area= 66.7 sf, Capacity= 49.29 cfs

25.00' x 4.00' deep Parabolic Channel, n= 0.080 Earth, long dense weeds
Length= 408.0' Slope= 0.0005 '/'
Inlet Invert= 94.19', Outlet Invert= 94.00'



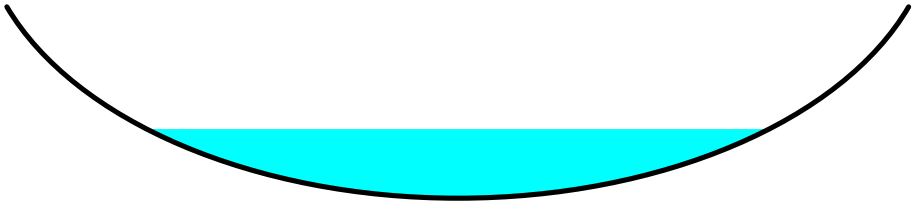
Summary for Reach 2R: PR2

Inflow Area = 3.508 ac, 50.74% Impervious, Inflow Depth > 113.72" for 10-yr event
Inflow = 20.54 cfs @ 12.04 hrs, Volume= 33.240 af
Outflow = 20.30 cfs @ 12.34 hrs, Volume= 33.075 af, Atten= 1%, Lag= 18.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.14 fps, Min. Travel Time= 6.8 min
Avg. Velocity = 1.07 fps, Avg. Travel Time= 7.2 min

Peak Storage= 8,265 cf @ 12.34 hrs
Average Depth at Peak Storage= 1.78'
Bank-Full Depth= 5.00' Flow Area= 83.3 sf, Capacity= 182.00 cfs

25.00' x 5.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 465.0' Slope= 0.0006 '/'
Inlet Invert= 91.73', Outlet Invert= 91.45'



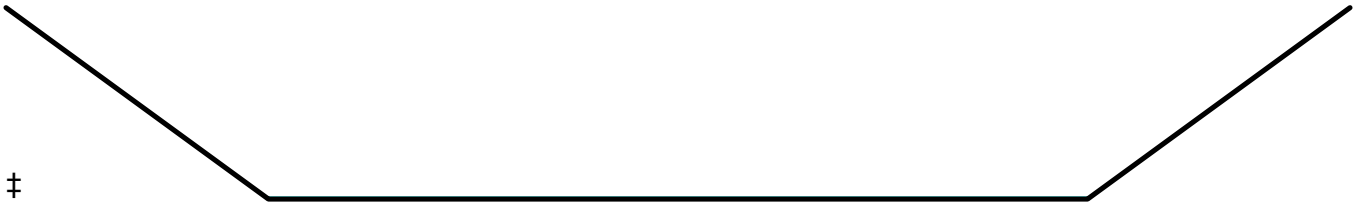
Summary for Reach 3R: PR3

Inflow Area = 0.785 ac, 27.61% Impervious, Inflow Depth > 3.73" for 10-yr event
Inflow = 1.71 cfs @ 12.18 hrs, Volume= 0.244 af
Outflow = 1.71 cfs @ 12.19 hrs, Volume= 0.244 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.36 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 0.2 min

Peak Storage= 18 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.05'
Bank-Full Depth= 4.00' Flow Area= 132.0 sf, Capacity= 2,651.54 cfs

25.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 41.00'
Length= 14.0' Slope= 0.0500 '/'
Inlet Invert= 94.70', Outlet Invert= 94.00'



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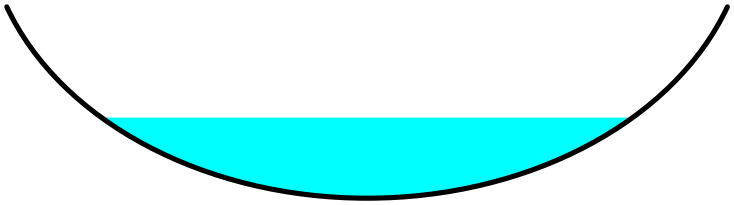
Summary for Reach 4R: PR4

Inflow Area = 0.065 ac, 52.67% Impervious, Inflow Depth > 4.16" for 10-yr event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.023 af
Outflow = 0.18 cfs @ 12.12 hrs, Volume= 0.023 af, Atten= 4%, Lag= 1.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.99 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 0.41 fps, Avg. Travel Time= 5.2 min

Peak Storage= 23 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 0.50' Flow Area= 0.7 sf, Capacity= 1.12 cfs

2.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 128.0' Slope= 0.0082 '/'
Inlet Invert= 95.30', Outlet Invert= 94.25'



Summary for Pond 1P: PP1

[63] Warning: Exceeded Reach 1R INLET depth by 0.03' @ 12.40 hrs
[63] Warning: Exceeded Reach 3R INLET depth by 1.96' @ 12.39 hrs

Inflow Area = 1.872 ac, 45.98% Impervious, Inflow Depth > 10.83" for 10-yr event
Inflow = 20.43 cfs @ 12.15 hrs, Volume= 32.885 af
Outflow = 18.97 cfs @ 12.30 hrs, Volume= 32.768 af, Atten= 7%, Lag= 9.4 min
Primary = 18.97 cfs @ 12.30 hrs, Volume= 32.768 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 96.70' @ 12.36 hrs Surf.Area= 0.087 ac Storage= 0.188 af
Flood Elev= 97.00' Surf.Area= 0.093 ac Storage= 0.216 af

Plug-Flow detention time= 5.2 min calculated for 32.768 af (100% of inflow)
Center-of-Mass det. time= 2.7 min (730.9 - 728.2)

Volume	Invert	Avail.Storage	Storage Description
#1	93.00'	0.265 af	**4.00'W x 186.00'L x 4.50'H Prismatoid Z=2.0**

Device	Routing	Invert	Outlet Devices
#1	Primary	93.00'	**24.0" Round Culvert** L= 50.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 93.00' / 92.50' S= 0.0100 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=18.94 cfs @ 12.30 hrs HW=96.69' TW=95.12' (Dynamic Tailwater)
1=Culvert (Inlet Controls 18.94 cfs @ 6.03 fps)

Summary for Pond 2P: PP3

Inflow Area = 2.449 ac, 51.77% Impervious, Inflow Depth > 161.64" for 10-yr event
Inflow = 19.69 cfs @ 12.03 hrs, Volume= 32.990 af
Outflow = 19.28 cfs @ 12.44 hrs, Volume= 32.876 af, Atten= 2%, Lag= 24.4 min
Primary = 19.28 cfs @ 12.44 hrs, Volume= 32.876 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 95.14' @ 12.43 hrs Surf.Area= 0.087 ac Storage= 0.161 af
Flood Elev= 97.00' Surf.Area= 0.132 ac Storage= 0.364 af

Plug-Flow detention time= 5.1 min calculated for 32.876 af (100% of inflow)
Center-of-Mass det. time= 2.6 min (733.9 - 731.3)

Volume	Invert	Avail.Storage	Storage Description
#1	92.13'	0.364 af	**4.00'W x 225.00'L x 4.87'H Prismatoid Z=2.0**

Device	Routing	Invert	Outlet Devices
#1	Primary	92.35'	**24.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 92.35' / 91.85' S= 0.0100 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=19.28 cfs @ 12.44 hrs HW=95.14' TW=93.51' (Dynamic Tailwater)
1=Culvert (Inlet Controls 19.28 cfs @ 6.14 fps)

Summary for Pond 4P: PP4

Inflow Area = 0.785 ac, 27.61% Impervious, Inflow Depth > 3.75" for 10-yr event
Inflow = 1.73 cfs @ 12.16 hrs, Volume= 0.245 af
Outflow = 1.71 cfs @ 12.18 hrs, Volume= 0.244 af, Atten= 2%, Lag= 1.4 min
Primary = 1.71 cfs @ 12.18 hrs, Volume= 0.244 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 95.09' @ 12.18 hrs Surf.Area= 1,018 sf Storage= 207 cf
Flood Elev= 96.00' Surf.Area= 2,157 sf Storage= 1,385 cf

Plug-Flow detention time= 4.9 min calculated for 0.244 af (100% of inflow)
Center-of-Mass det. time= 3.0 min (839.9 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1	94.80'	1,385 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
94.80	481	105.0	0	0	481
95.00	818	145.0	128	128	1,277
95.20	1,320	164.0	212	340	1,745
95.40	1,602	179.0	292	632	2,156
95.60	1,887	197.0	349	980	2,696
95.80	2,157	215.0	404	1,385	3,288

Device	Routing	Invert	Outlet Devices
#1	Primary	94.80'	**12.0" Round RCP_Round 12" X 8.00** L= 40.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 94.80' / 94.70' S= 0.0025 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=1.70 cfs @ 12.18 hrs HW=95.09' TW=94.75' (Dynamic Tailwater)
↑—**1=RCP_Round 12"** (Barrel Controls 1.70 cfs @ 1.73 fps)

Summary for Pond 5P: PP5

Inflow Area = 0.065 ac, 52.67% Impervious, Inflow Depth > 4.17" for 10-yr event
Inflow = 0.20 cfs @ 12.07 hrs, Volume= 0.023 af
Outflow = 0.18 cfs @ 12.09 hrs, Volume= 0.023 af, Atten= 8%, Lag= 0.9 min
Primary = 0.18 cfs @ 12.09 hrs, Volume= 0.023 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 95.53' @ 12.11 hrs Surf.Area= 181 sf Storage= 19 cf
Flood Elev= 96.00' Surf.Area= 408 sf Storage= 95 cf

Plug-Flow detention time= 4.0 min calculated for 0.023 af (100% of inflow)
Center-of-Mass det. time= 2.5 min (815.3 - 812.8)

Volume	Invert	Avail.Storage	Storage Description
#1	95.40'	95 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
95.40	112	40.0	0	0	112
95.60	223	43.0	33	33	133
95.80	408	78.0	62	95	471

Device	Routing	Invert	Outlet Devices
#1	Primary	95.40'	**12.0" Round RCP_Round 12" X 8.00** L= 25.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 95.40' / 95.30' S= 0.0040 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 0.79 sf

Primary OutFlow Max=0.17 cfs @ 12.09 hrs HW=95.53' TW=95.50' (Dynamic Tailwater)
1=RCP_Round 12" (Outlet Controls 0.17 cfs @ 0.55 fps)

Summary for Pond 6P: TS1

Inflow Area = 0.475 ac, 71.89% Impervious, Inflow Depth > 4.61" for 10-yr event
Inflow = 1.87 cfs @ 12.03 hrs, Volume= 0.183 af
Outflow = 1.68 cfs @ 12.03 hrs, Volume= 0.182 af, Atten= 10%, Lag= 0.4 min
Primary = 1.44 cfs @ 12.03 hrs, Volume= 0.035 af
Secondary = 0.41 cfs @ 11.97 hrs, Volume= 0.148 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 96.79' @ 12.07 hrs Surf.Area= 0.021 ac Storage= 0.009 af
Flood Elev= 98.00' Surf.Area= 0.024 ac Storage= 0.012 af

Plug-Flow detention time= 5.7 min calculated for 0.182 af (100% of inflow)
Center-of-Mass det. time= 4.7 min (791.4 - 786.7)

Volume	Invert	Avail.Storage	Storage Description
#1	96.00'	0.010 af	**1.00'W x 100.00'L x 1.00'H Prismatoid Z=3.0**
#2	95.00'	0.002 af	**1.00'W x 100.00'L x 1.00'H Prismatoid Z=1.0** 0.005 af Overall x 40.0% Voids
#3	95.00'	0.000 af	**6.0" Round Pipe Storage** L= 100.0' S= 0.0050 '/'
		0.012 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	96.50'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Secondary	95.00'	**6.0" Round Culvert** L= 115.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 95.00' / 94.84' S= 0.0014 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=1.32 cfs @ 12.03 hrs HW=96.76' TW=96.60' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Weir Controls 1.32 cfs @ 1.25 fps)

Secondary OutFlow Max=0.38 cfs @ 11.97 hrs HW=96.58' TW=95.95' (Dynamic Tailwater)
2=Culvert (Outlet Controls 0.38 cfs @ 1.95 fps)

Summary for Pond 7P: TS1

[44] Hint: Outlet device #2 is below defined storage

Inflow Area = 0.475 ac, 71.89% Impervious, Inflow Depth > 4.61" for 10-yr event
Inflow = 1.68 cfs @ 12.03 hrs, Volume= 0.182 af
Outflow = 1.31 cfs @ 12.08 hrs, Volume= 0.182 af, Atten= 22%, Lag= 2.6 min
Primary = 0.97 cfs @ 12.09 hrs, Volume= 0.023 af
Secondary = 0.48 cfs @ 12.03 hrs, Volume= 0.159 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 96.70' @ 12.09 hrs Surf.Area= 0.020 ac Storage= 0.008 af
Flood Elev= 98.00' Surf.Area= 0.024 ac Storage= 0.012 af

Plug-Flow detention time= 4.0 min calculated for 0.182 af (100% of inflow)
Center-of-Mass det. time= 3.6 min (794.9 - 791.4)

Volume	Invert	Avail.Storage	Storage Description
#1	95.95'	0.010 af	**1.00'W x 100.00'L x 1.00'H Prismatoid Z=3.0**
#2	94.95'	0.002 af	**1.00'W x 100.00'L x 1.00'H Prismatoid Z=1.0** 0.005 af Overall x 40.0% Voids
#3	94.95'	0.000 af	**6.0" Round Pipe Storage** L= 100.0' S= 0.0050 '/'
		0.012 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	96.50'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Secondary	94.84'	**6.0" Round Culvert** L= 115.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 94.84' / 94.68' S= 0.0014 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.97 cfs @ 12.09 hrs HW=96.70' TW=96.34' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Weir Controls 0.97 cfs @ 1.21 fps)

Secondary OutFlow Max=0.46 cfs @ 12.03 hrs HW=96.59' TW=95.69' (Dynamic Tailwater)
2=Culvert (Outlet Controls 0.46 cfs @ 2.33 fps)

Summary for Pond 8P: TS1

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 0.475 ac, 71.89% Impervious, Inflow Depth > 4.60" for 10-yr event
Inflow = 1.31 cfs @ 12.08 hrs, Volume= 0.182 af
Outflow = 0.83 cfs @ 12.17 hrs, Volume= 0.182 af, Atten= 37%, Lag= 5.7 min
Primary = 0.35 cfs @ 12.18 hrs, Volume= 0.004 af
Secondary = 0.54 cfs @ 12.13 hrs, Volume= 0.178 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 96.60' @ 12.18 hrs Surf.Area= 0.020 ac Storage= 0.008 af
Flood Elev= 98.00' Surf.Area= 0.024 ac Storage= 0.012 af

Plug-Flow detention time= 3.3 min calculated for 0.182 af (100% of inflow)
Center-of-Mass det. time= 2.8 min (797.7 - 794.9)

Volume	Invert	Avail.Storage	Storage Description
#1	95.85'	0.010 af	**1.00'W x 100.00'L x 1.00'H Prismatoid Z=3.0**
#2	94.85'	0.002 af	**1.00'W x 100.00'L x 1.00'H Prismatoid Z=1.0** 0.005 af Overall x 40.0% Voids
#3	94.68'	0.000 af	**6.0" Round Pipe Storage** L= 100.0' S= 0.0050 '/'
		0.012 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	96.50'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Secondary	94.68'	**6.0" Round Culvert** L= 115.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 94.68' / 94.52' S= 0.0014 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.35 cfs @ 12.18 hrs HW=96.60' TW=95.62' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Weir Controls 0.35 cfs @ 0.86 fps)

Secondary OutFlow Max=0.53 cfs @ 12.13 hrs HW=96.54' TW=95.34' (Dynamic Tailwater)
2=Culvert (Outlet Controls 0.53 cfs @ 2.70 fps)

Summary for Pond 9P: TS1

[42] Hint: Gap in defined storage above volume #2 at 96.80'
[42] Hint: Gap in defined storage above volume #3 at 95.60'
[44] Hint: Outlet device #2 is below defined storage
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)
[80] Warning: Exceeded Pond 8P by 0.17' @ 0.00 hrs (0.03 cfs 0.005 af)

Inflow Area = 0.475 ac, 71.89% Impervious, Inflow Depth > 4.60" for 10-yr event
Inflow = 0.83 cfs @ 12.17 hrs, Volume= 0.182 af
Outflow = 0.84 cfs @ 12.17 hrs, Volume= 0.182 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.84 cfs @ 12.17 hrs, Volume= 0.182 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 95.70' @ 12.17 hrs Surf.Area= 0 sf Storage= 10 cf
Flood Elev= 98.00' Surf.Area= 828 sf Storage= 426 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 0.0 min (797.8 - 797.7)

Volume	Invert	Avail.Storage	Storage Description
#1	97.00'	375 cf	**1.00'W x 90.00'L x 1.00'H Prismatoid Z=3.0**
#2	95.80'	41 cf	**1.00'W x 50.00'L x 1.00'H Prismatoid Z=1.0**
			102 cf Overall x 40.0% Voids
#3	94.85'	10 cf	**6.0" Round Pipe Storage**
			L= 50.0' S= 0.0050 '/'
		426 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	97.00'	**40.0' long x 0.5' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00
			Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Secondary	94.52'	**6.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 94.52' / 94.50' S= 0.0017 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=94.85' TW=91.73' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=0.84 cfs @ 12.17 hrs HW=95.70' TW=93.51' (Dynamic Tailwater)
2=Culvert (Barrel Controls 0.84 cfs @ 4.29 fps)

Summary for Pond OF: OFFSITE FLOW

Inflow	=	16.40 cfs @	0.00 hrs, Volume=	32.542 af,	Incl. 16.40 cfs Base Flow
Outflow	=	16.40 cfs @	2.73 hrs, Volume=	32.542 af,	Atten= 0%, Lag= 163.8 min
Primary	=	16.40 cfs @	2.73 hrs, Volume=	32.542 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 97.11' @ 12.10 hrs
Flood Elev= 98.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	94.69'	**36.0" Round Culvert** L= 50.0' Square-edged headwall, Ke= 0.500
			Inlet / Outlet Invert= 94.69' / 94.19' S= 0.0100 '/' Cc= 0.900
			n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=16.40 cfs @ 2.73 hrs HW=96.99' TW=96.58' (Dynamic Tailwater)
1=Culvert (Outlet Controls 16.40 cfs @ 3.90 fps)

Summary for Link A: DISCHARGE POINT A

Inflow Area =		3.508 ac,	50.74% Impervious,	Inflow Depth >	113.15" for 10-yr event
Inflow	=	20.30 cfs @	12.34 hrs, Volume=	33.075 af	
Primary	=	20.30 cfs @	12.34 hrs, Volume=	33.075 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link B: DISCHARGE POINT B

Inflow Area = 1.854 ac, 2.30% Impervious, Inflow Depth > 3.11" for 10-yr event
Inflow = 1.53 cfs @ 12.99 hrs, Volume= 0.481 af
Primary = 1.53 cfs @ 12.99 hrs, Volume= 0.481 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link C: DISCHARGE POINT C

Inflow Area = 0.107 ac, 0.00% Impervious, Inflow Depth > 3.16" for 10-yr event
Inflow = 0.25 cfs @ 12.08 hrs, Volume= 0.028 af
Primary = 0.25 cfs @ 12.08 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

A – 2

NODE LISTING – 25-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment PA1: A1 Runoff Area=47,347 sf 59.25% Impervious Runoff Depth>5.70"
Tc=5.0 min CN=90 Runoff=4.95 cfs 0.516 af

Subcatchment PA2: A2 Runoff Area=34,187 sf 27.61% Impervious Runoff Depth>5.11"
Flow Length=69' Tc=15.4 min CN=85 Runoff=2.20 cfs 0.334 af

Subcatchment PA3: A3 Runoff Area=25,150 sf 70.54% Impervious Runoff Depth>6.04"
Tc=5.0 min CN=93 Runoff=2.72 cfs 0.291 af

Subcatchment PA4: PA4 Runoff Area=25,419 sf 29.18% Impervious Runoff Depth>5.13"
Flow Length=30' Tc=5.0 min CN=85 Runoff=2.46 cfs 0.249 af

Subcatchment PA5: PA5 Runoff Area=20,687 sf 71.89% Impervious Runoff Depth>6.04"
Flow Length=18' Tc=5.0 min CN=93 Runoff=2.24 cfs 0.239 af

Subcatchment PB1: PB1 Runoff Area=77,900 sf 0.46% Impervious Runoff Depth>4.34"
Flow Length=806' Tc=76.9 min CN=79 Runoff=2.03 cfs 0.646 af

Subcatchment PB2: PB2 Runoff Area=2,850 sf 52.67% Impervious Runoff Depth>5.57"
Flow Length=32' Slope=0.0187 '/' Tc=9.0 min CN=89 Runoff=0.25 cfs 0.030 af

Subcatchment PC1: PC1 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>4.46"
Flow Length=46' Slope=0.0369 '/' Tc=9.1 min CN=79 Runoff=0.33 cfs 0.040 af

Reach 1R: PR1 Avg. Flow Depth=2.59' Max Vel=0.56 fps Inflow=21.35 cfs 33.058 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=19.52 cfs 32.769 af

Reach 2R: PR2 Avg. Flow Depth=1.83' Max Vel=1.16 fps Inflow=21.62 cfs 33.646 af
n=0.035 L=465.0' S=0.0006 '/' Capacity=182.00 cfs Outflow=21.41 cfs 33.479 af

Reach 3R: PR3 Avg. Flow Depth=0.06' Max Vel=1.50 fps Inflow=2.17 cfs 0.333 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=2.17 cfs 0.333 af

Reach 4R: PR4 Avg. Flow Depth=0.23' Max Vel=1.05 fps Inflow=0.23 cfs 0.030 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.22 cfs 0.030 af

Pond 1P: PP1 Peak Elev=96.95' Storage=0.212 af Inflow=21.45 cfs 33.102 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=19.57 cfs 32.983 af

Pond 2P: PP3 Peak Elev=95.30' Storage=0.175 af Inflow=20.49 cfs 33.274 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=19.98 cfs 33.158 af

Pond 4P: PP4 Peak Elev=95.12' Storage=246 cf Inflow=2.20 cfs 0.334 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=2.17 cfs 0.333 af

Pond 5P: PP5 Peak Elev=95.55' Storage=23 cf Inflow=0.25 cfs 0.030 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.23 cfs 0.030 af

Pond 6P: TS1 Peak Elev=96.87' Storage=0.010 af Inflow=2.24 cfs 0.239 af
Primary=1.78 cfs 0.053 af Secondary=0.38 cfs 0.186 af Outflow=1.95 cfs 0.239 af

Pond 7P: TS1 Peak Elev=96.78' Storage=0.009 af Inflow=1.95 cfs 0.239 af
Primary=1.53 cfs 0.039 af Secondary=0.46 cfs 0.199 af Outflow=1.79 cfs 0.239 af

Pond 8P: TS1 Peak Elev=96.70' Storage=0.009 af Inflow=1.79 cfs 0.239 af
Primary=0.98 cfs 0.018 af Secondary=0.56 cfs 0.220 af Outflow=1.26 cfs 0.238 af

Pond 9P: TS1 Peak Elev=96.46' Storage=32 cf Inflow=1.26 cfs 0.238 af
Primary=0.00 cfs 0.000 af Secondary=1.22 cfs 0.238 af Outflow=1.22 cfs 0.238 af

Pond OF: OFFSITE FLOW Peak Elev=97.13' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=21.41 cfs 33.479 af
Primary=21.41 cfs 33.479 af

Link B: DISCHARGE POINT B Inflow=2.07 cfs 0.676 af
Primary=2.07 cfs 0.676 af

Link C: DISCHARGE POINT C Inflow=0.33 cfs 0.040 af
Primary=0.33 cfs 0.040 af

Total Runoff Area = 5.469 ac Runoff Volume = 2.346 af Average Runoff Depth = 5.15"
66.68% Pervious = 3.646 ac 33.32% Impervious = 1.822 ac

A – 2

NODE LISTING – 50-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment PA1: A1 Runoff Area=47,347 sf 59.25% Impervious Runoff Depth>5.70"
Tc=5.0 min CN=90 Runoff=4.95 cfs 0.516 af

Subcatchment PA2: A2 Runoff Area=34,187 sf 27.61% Impervious Runoff Depth>5.11"
Flow Length=69' Tc=15.4 min CN=85 Runoff=2.20 cfs 0.334 af

Subcatchment PA3: A3 Runoff Area=25,150 sf 70.54% Impervious Runoff Depth>6.04"
Tc=5.0 min CN=93 Runoff=2.72 cfs 0.291 af

Subcatchment PA4: PA4 Runoff Area=25,419 sf 29.18% Impervious Runoff Depth>5.13"
Flow Length=30' Tc=5.0 min CN=85 Runoff=2.46 cfs 0.249 af

Subcatchment PA5: PA5 Runoff Area=20,687 sf 71.89% Impervious Runoff Depth>6.04"
Flow Length=18' Tc=5.0 min CN=93 Runoff=2.24 cfs 0.239 af

Subcatchment PB1: PB1 Runoff Area=77,900 sf 0.46% Impervious Runoff Depth>4.34"
Flow Length=806' Tc=76.9 min CN=79 Runoff=2.03 cfs 0.646 af

Subcatchment PB2: PB2 Runoff Area=2,850 sf 52.67% Impervious Runoff Depth>5.57"
Flow Length=32' Slope=0.0187 '/' Tc=9.0 min CN=89 Runoff=0.25 cfs 0.030 af

Subcatchment PC1: PC1 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>4.46"
Flow Length=46' Slope=0.0369 '/' Tc=9.1 min CN=79 Runoff=0.33 cfs 0.040 af

Reach 1R: PR1 Avg. Flow Depth=2.59' Max Vel=0.56 fps Inflow=21.35 cfs 33.058 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=19.52 cfs 32.769 af

Reach 2R: PR2 Avg. Flow Depth=1.83' Max Vel=1.16 fps Inflow=21.62 cfs 33.646 af
n=0.035 L=465.0' S=0.0006 '/' Capacity=182.00 cfs Outflow=21.41 cfs 33.479 af

Reach 3R: PR3 Avg. Flow Depth=0.06' Max Vel=1.50 fps Inflow=2.17 cfs 0.333 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=2.17 cfs 0.333 af

Reach 4R: PR4 Avg. Flow Depth=0.23' Max Vel=1.05 fps Inflow=0.23 cfs 0.030 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.22 cfs 0.030 af

Pond 1P: PP1 Peak Elev=96.95' Storage=0.212 af Inflow=21.45 cfs 33.102 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=19.57 cfs 32.983 af

Pond 2P: PP3 Peak Elev=95.30' Storage=0.175 af Inflow=20.49 cfs 33.274 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=19.98 cfs 33.158 af

Pond 4P: PP4 Peak Elev=95.12' Storage=246 cf Inflow=2.20 cfs 0.334 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=2.17 cfs 0.333 af

Pond 5P: PP5 Peak Elev=95.55' Storage=23 cf Inflow=0.25 cfs 0.030 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.23 cfs 0.030 af

Pond 6P: TS1 Peak Elev=96.87' Storage=0.010 af Inflow=2.24 cfs 0.239 af
Primary=1.78 cfs 0.053 af Secondary=0.38 cfs 0.186 af Outflow=1.95 cfs 0.239 af

Pond 7P: TS1 Peak Elev=96.78' Storage=0.009 af Inflow=1.95 cfs 0.239 af
Primary=1.53 cfs 0.039 af Secondary=0.46 cfs 0.199 af Outflow=1.79 cfs 0.239 af

Pond 8P: TS1 Peak Elev=96.70' Storage=0.009 af Inflow=1.79 cfs 0.239 af
Primary=0.98 cfs 0.018 af Secondary=0.56 cfs 0.220 af Outflow=1.26 cfs 0.238 af

Pond 9P: TS1 Peak Elev=96.46' Storage=32 cf Inflow=1.26 cfs 0.238 af
Primary=0.00 cfs 0.000 af Secondary=1.22 cfs 0.238 af Outflow=1.22 cfs 0.238 af

Pond OF: OFFSITE FLOW Peak Elev=97.13' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=21.41 cfs 33.479 af
Primary=21.41 cfs 33.479 af

Link B: DISCHARGE POINT B Inflow=2.07 cfs 0.676 af
Primary=2.07 cfs 0.676 af

Link C: DISCHARGE POINT C Inflow=0.33 cfs 0.040 af
Primary=0.33 cfs 0.040 af

Total Runoff Area = 5.469 ac Runoff Volume = 2.346 af Average Runoff Depth = 5.15"
66.68% Pervious = 3.646 ac 33.32% Impervious = 1.822 ac

A – 2

NODE LISTING – 100-YR

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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

Subcatchment PA1: A1 Runoff Area=47,347 sf 59.25% Impervious Runoff Depth>8.60"
Tc=5.0 min CN=90 Runoff=6.63 cfs 0.779 af

Subcatchment PA2: A2 Runoff Area=34,187 sf 27.61% Impervious Runoff Depth>7.95"
Flow Length=69' Tc=15.4 min CN=85 Runoff=3.08 cfs 0.520 af

Subcatchment PA3: A3 Runoff Area=25,150 sf 70.54% Impervious Runoff Depth>8.97"
Tc=5.0 min CN=93 Runoff=3.59 cfs 0.431 af

Subcatchment PA4: PA4 Runoff Area=25,419 sf 29.18% Impervious Runoff Depth>7.98"
Flow Length=30' Tc=5.0 min CN=85 Runoff=3.40 cfs 0.388 af

Subcatchment PA5: PA5 Runoff Area=20,687 sf 71.89% Impervious Runoff Depth>8.97"
Flow Length=18' Tc=5.0 min CN=93 Runoff=2.95 cfs 0.355 af

Subcatchment PB1: PB1 Runoff Area=77,900 sf 0.46% Impervious Runoff Depth>7.01"
Flow Length=806' Tc=76.9 min CN=79 Runoff=3.05 cfs 1.045 af

Subcatchment PB2: PB2 Runoff Area=2,850 sf 52.67% Impervious Runoff Depth>8.46"
Flow Length=32' Slope=0.0187 '/' Tc=9.0 min CN=89 Runoff=0.33 cfs 0.046 af

Subcatchment PC1: PC1 Runoff Area=4,671 sf 0.00% Impervious Runoff Depth>7.21"
Flow Length=46' Slope=0.0369 '/' Tc=9.1 min CN=79 Runoff=0.48 cfs 0.064 af

Reach 1R: PR1 Avg. Flow Depth=2.66' Max Vel=0.57 fps Inflow=23.03 cfs 33.321 af
n=0.080 L=408.0' S=0.0005 '/' Capacity=49.29 cfs Outflow=20.66 cfs 33.031 af

Reach 2R: PR2 Avg. Flow Depth=1.91' Max Vel=1.19 fps Inflow=24.55 cfs 34.482 af
n=0.035 L=465.0' S=0.0006 '/' Capacity=182.00 cfs Outflow=23.37 cfs 34.314 af

Reach 3R: PR3 Avg. Flow Depth=0.07' Max Vel=1.68 fps Inflow=3.04 cfs 0.519 af
n=0.035 L=14.0' S=0.0500 '/' Capacity=2,651.54 cfs Outflow=3.04 cfs 0.519 af

Reach 4R: PR4 Avg. Flow Depth=0.27' Max Vel=1.15 fps Inflow=0.31 cfs 0.046 af
n=0.035 L=128.0' S=0.0082 '/' Capacity=1.12 cfs Outflow=0.30 cfs 0.046 af

Pond 1P: PP1 Peak Elev=97.43' Storage=0.258 af Inflow=23.38 cfs 33.549 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=20.66 cfs 33.427 af

Pond 2P: PP3 Peak Elev=95.59' Storage=0.203 af Inflow=21.98 cfs 33.858 af
24.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=21.21 cfs 33.740 af

Pond 4P: PP4 Peak Elev=95.18' Storage=319 cf Inflow=3.08 cfs 0.520 af
12.0" Round Culvert x 8.00 n=0.011 L=40.0' S=0.0025 '/' Outflow=3.04 cfs 0.519 af

Pond 5P: PP5 Peak Elev=95.59' Storage=30 cf Inflow=0.33 cfs 0.046 af
12.0" Round Culvert x 8.00 n=0.011 L=25.0' S=0.0040 '/' Outflow=0.31 cfs 0.046 af

Pond 6P: TS1 Peak Elev=97.14' Storage=0.012 af Inflow=2.95 cfs 0.355 af
Primary=2.43 cfs 0.097 af Secondary=0.36 cfs 0.257 af Outflow=2.60 cfs 0.354 af

Pond 7P: TS1 Peak Elev=97.10' Storage=0.012 af Inflow=2.60 cfs 0.354 af
Primary=2.20 cfs 0.077 af Secondary=0.43 cfs 0.277 af Outflow=2.30 cfs 0.354 af

Pond 8P: TS1 Peak Elev=97.07' Storage=0.012 af Inflow=2.30 cfs 0.354 af
Primary=2.53 cfs 0.051 af Secondary=0.55 cfs 0.303 af Outflow=2.87 cfs 0.354 af

Pond 9P: TS1 Peak Elev=97.05' Storage=56 cf Inflow=2.87 cfs 0.354 af
Primary=0.93 cfs 0.005 af Secondary=1.43 cfs 0.349 af Outflow=2.36 cfs 0.354 af

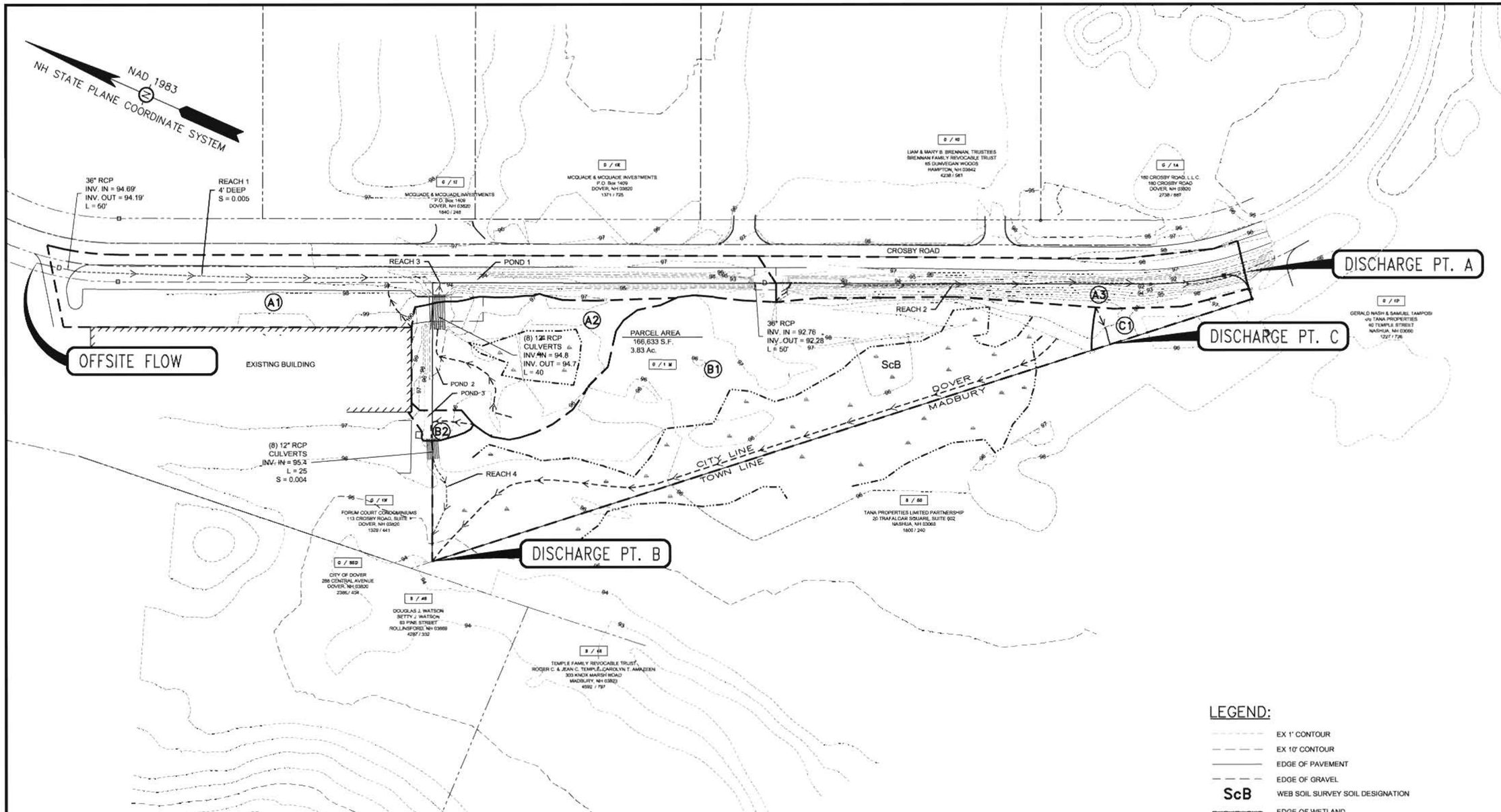
Pond OF: OFFSITE FLOW Peak Elev=97.19' Inflow=16.40 cfs 32.542 af
36.0" Round Culvert n=0.011 L=50.0' S=0.0100 '/' Outflow=16.40 cfs 32.542 af

Link A: DISCHARGE POINT A Inflow=23.37 cfs 34.314 af
Primary=23.37 cfs 34.314 af

Link B: DISCHARGE POINT B Inflow=3.11 cfs 1.091 af
Primary=3.11 cfs 1.091 af

Link C: DISCHARGE POINT C Inflow=0.48 cfs 0.064 af
Primary=0.48 cfs 0.064 af

Total Runoff Area = 5.469 ac Runoff Volume = 3.629 af Average Runoff Depth = 7.96"
66.68% Pervious = 3.646 ac 33.32% Impervious = 1.822 ac



SOILS DATA

Soil information provided from NRCS Web Soil Survey (WSS) mapping tool at http://websoilsurvey.nrcs.usda.gov and references the Strafford County, NH Soil Survey Area, Version 19, September 16, 2019.

Hydrologic Drainage Class C/D:
ScA — Scantic silt loam, 0 — 3 Percent Slopes

PRE-DEVELOPMENT WATERSHED CHARACTERISTICS

SUBCATCHMENT DESIGNATION	AREA (ACRES)	LONGEST FLOW PATH (FEET)	Tc (MIN)
A1	1.32	TR-55 MIN.	5.0
A2	0.76	164	19.8
A3	0.68T	R-55 MIN.	5.0
B1	2.55	806	75.8
B2	0.05	67	11.0
C1	0.11	46	8.5

LEGEND:

- EX 1' CONTOUR
- EX 10' CONTOUR
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- ScB — WEB SOIL SURVEY SOIL DESIGNATION
- EDGE OF WETLAND
- SUBCATCHMENT BOUNDARY
- LONGEST FLOW PATH WITH DIRECTION OF FLOW
- (B1) — SUBCATCHMENT DESIGNATION

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

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

NO.	REVISION	APPD	DATE

DATE: 4/27/20
SCALE: 1" = 60'
DRAWN BY: JRG
DESIGN BY: DJL
APPROVED BY: SJH
PROJECT NO: 19034
FILE: DRN DWG

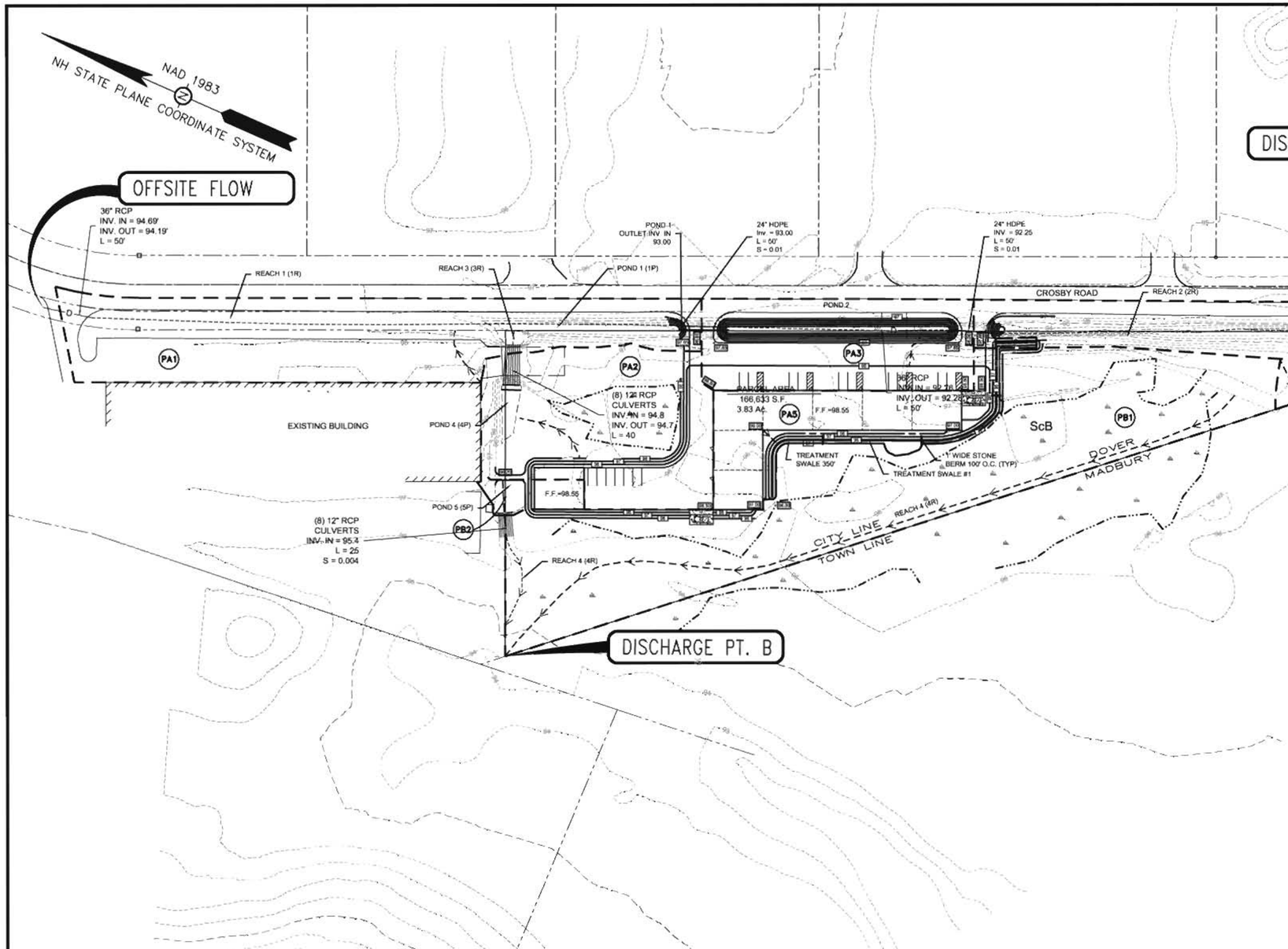
STATE OF NEW HAMPSHIRE
STEPHEN J HAIGHT
No. 7978
LICENSED PROFESSIONAL ENGINEER

PRE-DEVELOPMENT WATERSHED PLAN

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

W-1

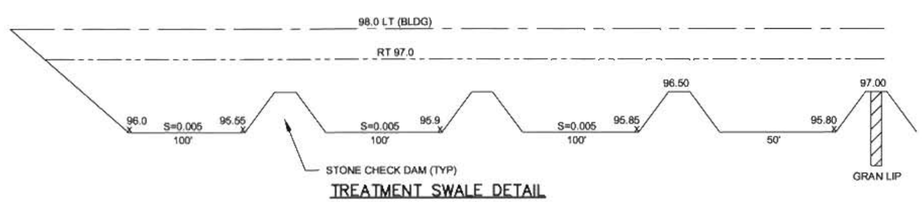


POST-DEVELOPMENT WATERSHED CHARACTERISTICS

SUBCATCHMENT DESIGNATION	AREA (ACRES)	LONGEST FLOW PATH (FEET)	Tc (MIN)
PA1	1.09	TR-55 MIN.	5.0
PA2	0.79	69	15.4
PA3	0.57	TR-55 MIN.	5.0
PA4	0.58	TR-55 MIN.	5.0
PA5	0.48	TR-55 MIN.	5.0
PB1	1.79	806	76.9
PB2	0.06	32	9.0
PC1	0.11	67	9.1

LEGEND:

- EX 1' CONTOUR
- EX 10' CONTOUR
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- PROPOSED CONTOUR (102)
- PROPOSED EDGE OF PAVEMENT
- ScB — WEB SOIL SURVEY SOIL DESIGNATION
- EDGE OF WETLAND
- SUBCATCHMENT BOUNDARY
- LONGEST FLOW PATH WITH DIRECTION OF FLOW
- (PA1) — SUBCATCHMENT DESIGNATION



TREATMENT SWALE DETAIL
NOT TO SCALE

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

SOILS DATA

Soil information provided from NRCS Web Soil Survey (WSS) mapping tool at http://websoilsurvey.nrcs.usda.gov and references the Strafford County, NH Soil Survey Area, Version 19, September 16, 2019:

Hydrologic Drainage Class C/D: ScA — Scantic silt loam, 0 – 3 Percent Slopes

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

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: 4-23-20
SCALE: 1" = 60'
DRAWN BY: JRG
DESIGN BY: DGL
APPROVED BY: SJH
PROJECT NO: 19034
FILE: DRN DWG

STATE OF NEW HAMPSHIRE
STEPHEN J. HAIGHT
No. 7978
LICENSED PROFESSIONAL ENGINEER

POST-DEVELOPMENT WATERSHED PLAN

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

W-2

19034 Crosby Road

Submission ID	124
Approval Status	New Submission
Map No.	G
Block No.	1
Lot No.	m
Property Owner	DBS Holdings LLC
Project Street Address	Crosby Road (adjacent to 113 Crosby Road)
This project is for a municipality	No
This project is inside MS-4 Permit Area	Yes
Project is within the 200 meter coastal zone or stream buffer zone	No
Discharges to an impaired waterbody	Yes
Offsite mitigation	No
Town	Dover
Development Type	Commercial / Institutional
Hydrologic Unit Code (HUC)-10	0106000309 – Great Bay Drainages
Last Updated By	jgriffin
Report Submitted By	jgriffin
Last Updated On	Mon, 06/01/2020 - 10:59
Report Submitted	Mon, 06/01/2020 - 10:12

Land Use Conversion Table

Soils		Existing Conditions			Future Conditions		
Hydrologic Group	**Acres**	**Land Use Type**	**Acres**	**Impervious and/or Paved Surfaces Acres**	**Land Use Type**	**Acres**	**Impervious and/or Paved Surfaces Acres**
C/D	3.83	Commercial/Institutional	3.83	0.56	Commercial/Institutional	3.83	0.99
Totals	**3.83**		**3.83**	**0.56**		**3.83**	**0.99**

Impervious Surface Management Table

Structural BMP	Impervious Surface Managed	Runoff Volume Storage at Design Capacity (ft^3)	Design Storm Depth (")	Infiltration Rate (in/hr)
Water Quality Grass Swale with Detention	0.34	3833.00	1.2	0.17
Total Impervious Cover (acres)	**0.00**			
Total Management (acres)	**0.34**			
Effective Impervious Cover (acres)	**-0.34**			

Impervious Surface Management Table - Non-Structural BMPs

Non-Structural BMP	Amount	Description
Street Sweeping (# street-miles)	0.16	0.55 acres Paved Surface

---

Wastewater Management Table

Existing Conditions			Future Conditions		
Management Option	**Discharge (GPD)**	**Description**	**Management Option**	**Discharge (GDP)**	**Description**
Sewered	0.00	Vacant	Sewered	285.00	Office/Warehouse/Employees
Totals	**0**			**285**	

P20-33 &P20-34

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
G0001-A00000	180 CROSBY RD	180 CROSBY ROAD LLC		180 CROSBY RD	DOVER	NH	03820
G0001-G00000	140 CROSBY RD	BRENNAN LIAM & MARY B TRUSTEES	BRENNAN FAMILY REVOCABLE TRUST	65 DUNVEGAN WOODS	HAMPTON	NH	03842
G0001-H00000	173 CROSBY RD	BAYHEAD REALTY LLC		173 CROSBY RD	DOVER	NH	03820
G0001-I00000	116 CROSBY RD	MCQUADE & MCQUADE INVESTMENTS		PO BOX 1409	DOVER	NH	03820
G0001-K00000	CROSBY RD	MCQUADE & MCQUADE INVESTMENTS		PO BOX 1409	DOVER	NH	03820
G0001-N00000	113 CROSBY RD	FORUM COURT CONDOMINIUMS		113 CROSBY RD STE 1	DOVER	NH	03820
G0001-N00004	113 4 CROSBY RD	DEVELOPMENTAL SERVICES OF STRA		113 CROSBY RD SUITE 4	DOVER	NH	03820
G0001-N00005	113 5 CROSBY RD	BEHAVIORAL HEALTH & DEVELOPMENTAL	SERVICES OF STRAFFORD COUNTY INC	113 CROSBY RD STE 1	DOVER	NH	03820
G0001-N00006	113 6 CROSBY RD	BEHAVIORAL HEALTH & DEVELOPMENTAL	SERVICES OF STRAFFORD COUNTY INC	113 CROSBY RD STE 1	DOVER	NH	03820
G0001-N00007	113 7 CROSBY RD	BEHAVIORAL HEALTH & DEVELOPMENTAL	SERVICES OF STRAFFORD COUNTY	113 CROSBY RD STE 1	DOVER	NH	03820
G0001-N00008	113 8 CROSBY RD	LEVERONE REALTY LLC		7 COLBY ST	HAMPTON	NH	03842
G0001-N00009	113 9 CROSBY RD	CROSBY ROAD REALTY LLC		113 CROSBY ROAD STE 9	DOVER	NH	03820
G0001-N00010	113 10 CROSBY RD	CITY POINT LLC		162 JENNESS POND RD	NORTHWOOD	NH	03261
G0001-N00011	113 11 CROSBY RD	CITY POINT LLC		162 JENNESS POND RD	NORTHWOOD	NH	03261
G0001-N00012	113 12 CROSBY RD	CITY POINT LLC		162 JENNESS RD	NORTHWOOD	NH	03261
G0001-N00013	113 13 CROSBY RD	CITY POINT LLC		162 JENNESS POND RD	NORTHWOOD	NH	03261
G0001-N00014	113 14 CROSBY RD	CANIS VINIFERA LLC		113 CROSBY RD UNIT 10	DOVER	NH	03820
G0001-N00015	113 15 CROSBY RD	CANIS VINIFERA LLC		113 CROSBY RD UNIT 10	DOVER	NH	03820
G0001-N0001A	113 1 3 CROSBY RD	DEVELOPMENTAL SERV OF STRAF CO		FORUM COURT 113 CROSBY ROAD	DOVER	NH	03820
G0001-P00000	CROSBY RD	NASH GERALD & TAMPOSI SAMUEL	C/O TANA PROPERTIES	40 TEMPLE STREET	NASHUA	NH	03060
G0035-D00000	LITTLEWORTH RD	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
G0001-M00000	CROSBY RD	DBS HOLDING LLC		71 DANIELLE LN	DOVER	NH	03820
		CIVILWORKS NEW ENGLAND	STEPHEN J HAIGHT, P.E.	P.O. BOX 1166	DOVER	NH	03821
		JSN ASSOCIATES, LLC	JEFFREY S. NAWROCKI PE	ONE AUTUMN STREET	PORTSMOUTH	NH	03801
		MCQUADE & MCQUADE INVESTMENTS		PO BOX 1409	DOVER	NH	3820
		MCENEANEY SURVEY ASSOCIATES OF NEW	KEVIN M MCENEANEY, LLS	24 CHESTNUT STREET	DOVER	NH	3820
		IRONWOOD LANDSCAPE ARCHITECTURE	JENNIFER MARTEL, LLA NH #00155	55 MAIN STREET, SUITE 129	NEWMARKET	NH	3857
			JOSEPH W. NOEL	P.O. BOX 174	SOUTH BERW	ME	3908

SULLIVAN COMMERCIAL BUILDINGS
SITE DEVELOPMENT

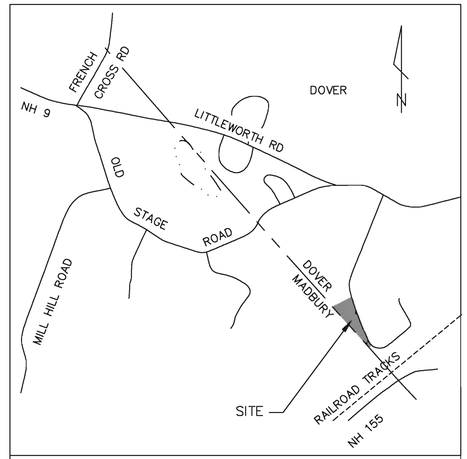
TAX MAP G, LOT 1-M

CROSBY ROAD

DOVER, NH

AUGUST 26, 2020

REVISED: SEPTEMBER 22, 2020



LOCATION PLAN
(NO SCALE)

OWNER/APPLICANT
DBS HOLDING LLC
71 DANIELLE LANE
DOVER, NH 03820

DBS HOLDING LLC: _____ DATE _____

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

LAND SURVEYOR
MCENEANEY SURVEY ASSOCIATES
P.O. BOX 681
24 CHESTNUT STREET
DOVER, NH 03820
(603) 742-0911

ARCHITECT
JSN ASSOCIATES
ONE AUTUMN STREET
PORTSMOUTH, NH 03801
(603) 433-8639

LANDSCAPE ARCHITECT
IRONWOOD LANDSCAPE ARCHITURE & PLANNING
55 MAIN STREET #129
NEWMARKET, NH 03857
(603) 772-0590

SHEET INDEX

	SHEET
COVER SHEET	1
NEIGHBORHOOD PLAN	2
EXISTING CONDITIONS PLAN (BY MCENEANEY SURVEY)	3
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SITE PLAN	5
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UTILITY PLAN	7
EROSION CONTROL NOTES	8
EROSION CONTROL DETAILS	9
DETAIL SHEET	10-12
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LIGHTING DETAILS	14
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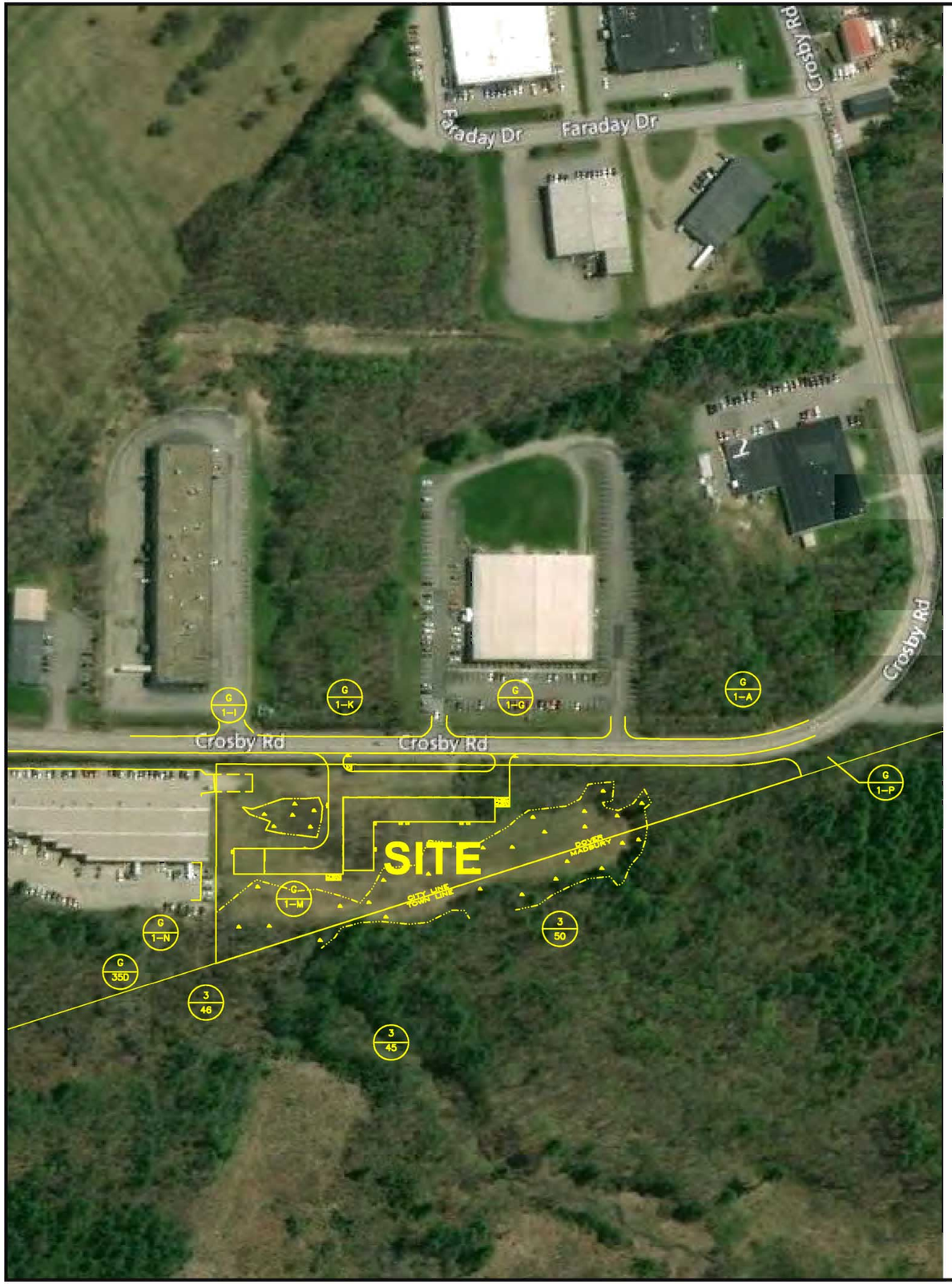
ARCHITECTURAL ELEVATIONS & FLOOR PLANS	A1-A2
LANDSCAPE PLAN	L1
STREET SCAPE PLAN	ST

PLANNING FILE NO.: P20-33



ABUTTERS LIST
(WITHIN 200 FT)

TAX MAP	LOT NO.	NAME & ADDRESS
G 1-N	G 1-N	FORUM COURT CONDOMINIUMS 113 CROSBY RAOD, SUITE 1 DOVER, NH 03820
G 1-P	G 1-P	NASH GERALD & TAMPOSI SAMUEL C/O TANA PROPERTIES 40 TEMPLE STREET NASHUA, NH 03060
G 1-A	G 1-A	180 CROSBY ROAD, LLC 180 CROSBY ROAD DOVER, NH 03820
G 1-G	G 1-G	BRENNAN LIAM & MARY B TRUSTEES BRENNAN FAMILY REVOCABLE TRUST 65 DUNVEGAN WOODS HAMPTON, NH 03842
G 1-K	G 1-K	MCQUADE & MCQUADE INVESTMENTS PO BOX 1409 DOVER, NH 03820
G 1-I	G 1-I	MCQUADE & MCQUADE INVESTMENTS PO BOX 1409 DOVER, NH 03820
G 35-D	35-D	CITY OF DOVER 288 CENTRAL AVE. DOVER, NH 03820
3 45	45	TEMPLE FAMILY REVOCABLE TRUST ROGER C. & JEAN C. TEMPLE, CAROLYN T. AMAZEEN 303 KNOX MARSH ROAD MADBURY, NH 03823
3 46	46	WATSON, DOUGLAS J WATSON, BETTY J 63 PINE STREET ROLLINSFORD, NH 03869
3 50	50	TANA PROPERTIES LMTD PARTNERSHIP 20 TRAFALGAR SQUARE, SUITE 602 NASHUA, NH 03060

SITE

TAX MAP	LOT NO.	NAME & ADDRESS
G 1-M	3 1-M	DBS HOLDINGS LLC 78 DANIELLE LANE DOVER, NH 03820

NAD 1983
NH STATE PLANE COORDINATE SYSTEM

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

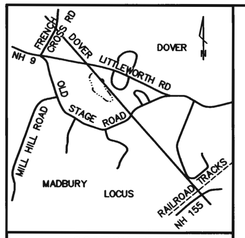
NO.	REVISION	APP'D	DATE
2	REVISED PER TRC	SJH	9-22-20
1	ADDED PROPOSED SITE	SJH	8/26/20

DATE: 4-27-20
SCALE: 1"=100'
DRAWN BY: CAD
DESIGN BY: DGL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

NEIGHBORHOOD PLAN

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820



LOCATION PLAN
(NO SCALE)

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	13°49'16"	360.00'	86.84'	86.63'	S30°45'06"E
C2	85°56'49"	25.00'	37.50'	34.08'	S305°18'41"W

No.	Bearing	Distance
L1	S48°17'06"W	11.57'

SANITARY SEWER
STRUCTURE SCHEDULE

SMH A
RIM = 98.8
INV. IN 8" PVC = 94.5
INV. IN 8" PVC = 92.6 OUTSIDE DROP
INV. OUT 8" PVC = 92.5
(NOTE PIPE AND BOTTOM NEED TO BE CLEANED)

REFERENCE PLANS:

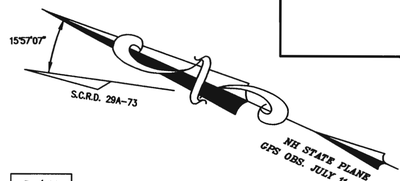
1.) SUBDIVISION PLAN OF LAND FOR FORUM DEVELOPMENT, LOT-1 CROSBY ROAD INDUSTRIAL PARK, DOVER, N.H., COUNTY OF STRAFFORD. SCALE: 1" = 60'; DATED: NOVEMBER 18, 1985, REVISED THROUGH 4/17/86; BY: RICHARD P. MILLETTE AND ASSOCIATES. RECORDED S.C.R.D. PLAN 29A-73.

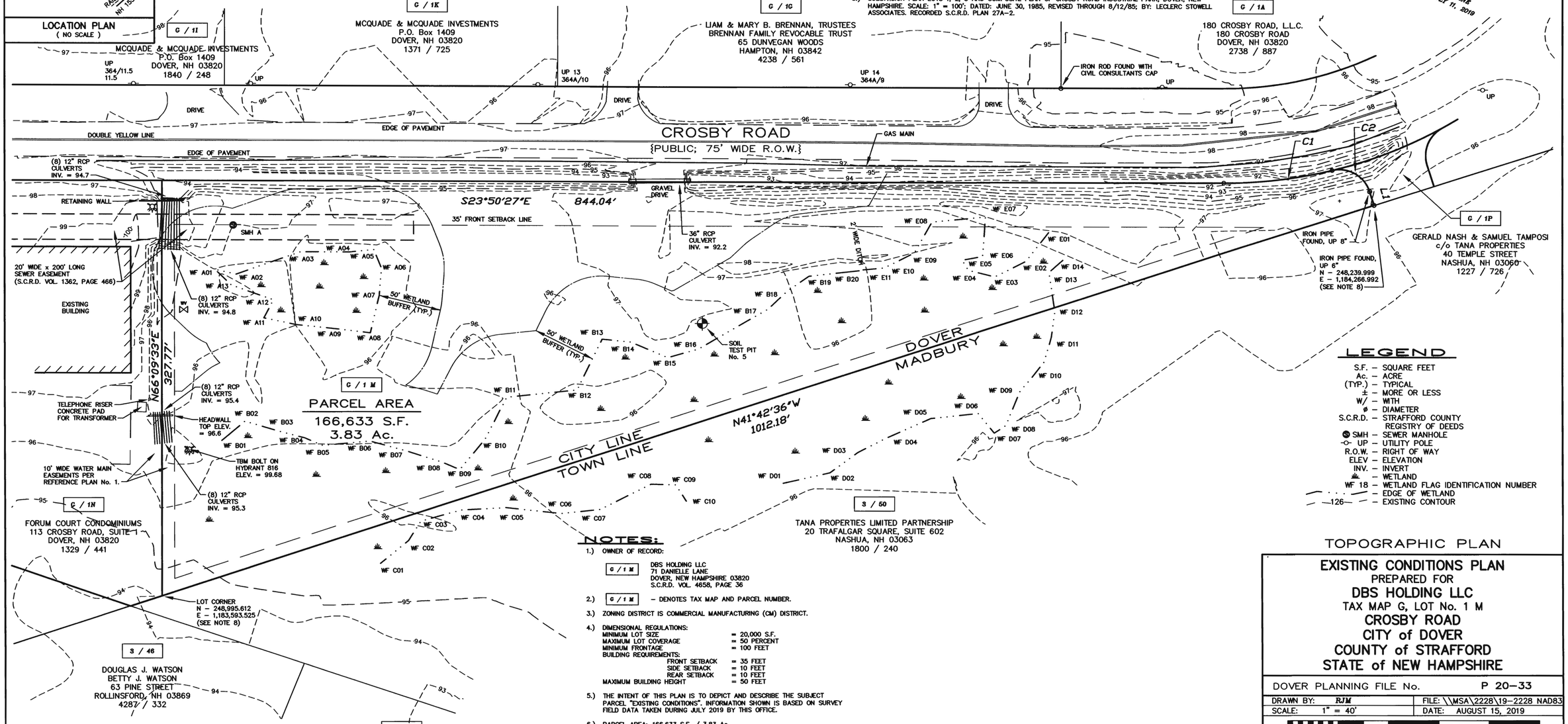
2.) CONDOMINIUM SITE PLAN FOR FORUM COURT, LOT-1B CROSBY ROAD INDUSTRIAL PARK, COUNTY OF STRAFFORD, DOVER, N.H., SCALE: 1" = 40'; DATED: JULY 23, 1987; BY: RICHARD P. MILLETTE AND ASSOCIATES. RECORDED S.C.R.D. PLAN 31-143.

3.) BOUNDARY PLAN FOR PETER THEODORE IN DOVER, N.H. SCALE: 1" = 100'; DATED: NOVEMBER 16, 1987; BY: SEACOAST ENGINEERING ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 33-69.

4.) WETLANDS LOCATION PLAN - CROSBY ROAD, DOVER, NEW HAMPSHIRE, ASSESSOR'S PARCEL G-1M FOR BLUESTONE PROPERTIES. SCALE: 1" = 50'; DATED: NOVEMBER 16, 2017; BY: JAMES VERRA AND ASSOCIATES, INC. NOT RECORDE

5.) SUBDIVISION PLAN LOTS 1, 2, 3 AND COMPOSITE PLAN OF CROSBY ROAD INDUSTRIAL PARK, DOVER, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: JUNE 30, 1985, REVISED THROUGH 8/12/85; BY: LECLERC STOWELL ASSOCIATES. RECORDED S.C.R.D. PLAN 27A-2.





LEGEND

S.F. - SQUARE FEET
Ac. - ACRE
(TYP.) - TYPICAL
± - MORE OR LESS
W/ - WITH
ø - DIAMETER
S.C.R.D. - STRAFFORD COUNTY REGISTRY OF DEEDS
SMH - SEWER MANHOLE
UP - UTILITY POLE
R.O.W. - RIGHT OF WAY
ELEV - ELEVATION
INV. - INVERT
WETLAND
WF 18 - WETLAND FLAG IDENTIFICATION NUMBER
- EDGE OF WETLAND
126 - EXISTING CONTOUR

NOTES:

1.) OWNER OF RECORD:
C / 1 M — DBS HOLDING LLC
71 DANIELLE LANE
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOL. 4658, PAGE 36

2.) C / 1 M - DENOTES TAX MAP AND PARCEL NUMBER.

3.) ZONING DISTRICT IS COMMERCIAL MANUFACTURING (CM) DISTRICT.

4.) DIMENSIONAL REGULATIONS:

MINIMUM LOT SIZE	= 20,000 S.F.
MAXIMUM LOT COVERAGE	= 50 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING REQUIREMENTS:	
FRONT SETBACK	= 35 FEET
SIDE SETBACK	= 10 FEET
REAR SETBACK	= 10 FEET
MAXIMUM BUILDING HEIGHT	= 50 FEET

5.) THE INTENT OF THIS PLAN IS TO DEPICT AND DESCRIBE THE SUBJECT PARCEL "EXISTING CONDITIONS". INFORMATION SHOWN IS BASED ON SURVEY FIELD DATA TAKEN DURING JULY 2019 BY THIS OFFICE.

6.) PARCEL AREA: 166,633 S.F. / 3.83 Ac.

7.) THE SUBJECT PARCEL IS LOCATED OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0320; SUFFIX E; MAP NUMBER 33017C0320E; EFFECTIVE DATE SEPTEMBER 30, 2015.

8.) BASIS OF BEARINGS IS NH STATE PLANE GRID FROM GPS OBSERVATION TAKEN ON JULY 11, 2019.

9.) VERTICAL DATUM IS NAVD88 FROM GPS OBSERVATION TAKEN ON JULY 11, 2019.

10.) JURISDICTIONAL WETLANDS IDENTIFIED AND FLAGGED BY JOSPEPH W. NOEL, N.H.C.W.S. #86. DURING SEPTEMBER 2017, RE-VERIFIED IN AUGUST 2019 AND FIELD LOCATED BY McENEANEY SURVEY ASSOCIATES OF NEW ENGLAND.

11.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND DURING JULY 2019 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

NO.	DATE	DESCRIPTION	BY	CHK
1	8/25/20	REVISE ZONING DISTRICT, ADD PLANNING #	RJM	KMM

REVISIONS

19-2228	EXIST. COND.	19-06
PROJECT NO	TYPE	FIELDBOOK & PAGES

ATTENTION:

HIGH PRESSURE GAS MAIN EXISTS WITHIN THE RIGHT OF WAY OF CROSBY ROAD; PRIOR TO ANY EARTH MOVING ACTIVITY CONTACT DIGSAFE AT "811" OR 1-888-344-7233 TO VERIFY LOCATION.

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

TOPOGRAPHIC PLAN

EXISTING CONDITIONS PLAN
PREPARED FOR
DBS HOLDING LLC
TAX MAP G, LOT No. 1 M
CROSBY ROAD
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 20-33

DRAWN BY: RJM	FILE: \\MSA\2228\19-2228 NAD83
SCALE: 1" = 40'	DATE: AUGUST 15, 2019

40 20 0 20 40 80 120 160

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

McENEANEY SURVEY ASSOCIATES
OF NEW ENGLAND
P.O. Box 681 - 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911

SURVEYING - PLANNING - CONSULTING

GENERAL NOTES

1. OWNERS OF RECORD:
   G/1–M — DBS HOLDING LLC, 71 DANIELLE LANE, DOVER, NEW HAMPSHIRE 03820, S.C.R.D. VOL. 4658, PAGE 36
2. G/1–M - DENOTES TAX MAP AND PARCEL NUMBER.
3. ZONING DISTRICT: COMMERCIAL MANUFACTURING (CM).

	EXIST
MINIMUM LOT SIZE	= 20,000 S.F.
MAXIMUM COVERAGE	= 50%
MINIMUM FRONTAGE	= 100 FEET
FRONT SETBACK	= 35 FEET
ABUT A STREET SETBACK	= 35 FEET
SIDE SETBACK	= 10 FEET
REAR SETBACK	= 10 FEET
MAXIMUM BUILDING HEIGHT	= 50 FEET

4. THE SUBJECT PARCEL IS LOCATED WITHIN AREAS DETERMINED TO BE OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0320; SUFFIX E; MAP NUMBER 33017C0320E; EFFECTIVE DATE SEPTEMBER 30, 2015.
5. BASIS OF BEARINGS IS NH STATE PLANE GRID FROM GPS OBSERVATION TAKEN ON JULY 11, 2019.
6. VERTICAL DATUM IS NAVD88 FROM GPS OBSERVATION TAKEN ON JULY 11, 2019
7. JURISDICTIONAL WETLANDS IDENTIFIED AND FLAGGED BYJOSPEPH W. NOEL, N.H.C.W.S. #86. DURING SEPTEMBER 2017 AND RE-VERIFIED IN AUGUST 2019 AND FIELD LOCATED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND.
8. PARCEL IS SUBJECT TO AND BENEFIT FROM EASEMENTS OF RECORD.
9. THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS THAT MAY ACQUIRE ANY PROPERTY SUBJECT TO THE REQUIREMENTS AND RESPONSIBILITIES DESCRIBED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE NOTICE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR RECORDING CONTAINED IN RSA 477 AND 478. THE NOTICE NEED NOT SET FORTH THE REQUIREMENTS AT LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.

DEMOLITION NOTES:

1. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
2. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY DEMOLITION/ CONSTRUCTION ACTIVITIES. (811)
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, UTILITIES AND PAVEMENT ON THE SITE TO THE LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT AND POLES.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
6. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS NOT ALREADY OBTAINED BY THE OWNER AND ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
8. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
9. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES, AND CODES.
10. EXISTING ("OLD") WATER SERVICES TO THE SUBJECT SITE SHALL BE DISCONNECTED AND SHUT-OFF AT THE WATER MAIN.
11. EXISTING SEWER SERVICES TO BE CUT AND PERMANENTLY CAPPED AT PROPERTY LINE.
12. 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.

SITE NOTES:

1. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A PLAN REFERENCED AND PREPARED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND. (SEE EXISTING CONDITIONS PLAN IN THIS PLAN SET)
2. THE INTENT OF THIS PLAN IS TO SHOW THE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF COMMERCIAL BUILDINGS, SITE ACCESS DRIVE, PARKING AREAS, UTILITY INSTALLATION, AND DRAINAGE IMPROVEMENTS.
3. EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
4. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.
5. ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
6. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
7. STRIPE PARKING AREAS AS SHOWN INCLUDING HANDICAP SYMBOLS AND PAINTED ISLANDS. ALL MARKINGS SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M-248-TYPE N.
8. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS, AND THE AMERICAN WITH DISABILITIES ACT, LATEST EDITIONS.
9. PAINTED ISLANDS SHALL BE 4 INCHES WIDE DIAGONAL LINES 3 FEET ON CENTER.
10. ON-SITE SNOW STORAGE SHALL OCCUR ALONG THE EDGES OF PROPOSED PAVEMENT.
11. ALL LAYOUT SHALL BE PERFORMED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR UNDER CONTRACT WITH THE CONTRACTOR. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS NH RSA 155-A:5. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS.
12. SEE DETAILS FOR SIGN LEGENDS.
13. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE CONSTRUCTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE OWNERS REPRESENTATIVE. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE-DOWNS. SUCH MATERIALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AT THE COMPLETION OF THE PROJECT.
14. METHODS OF DEMOLITION, CONSTRUCTION AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED. IT IS THE CONTRACTORS' RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO DUST CONTROL AND SILT BARRIERS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO STRUCTURES OR UTILITIES OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION PHASE CAUSED BY HIMSELF, HIS EMPLOYEES, HIS SUBCONTRACTORS OR EMPLOYEES OF SAME. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY FACILITIES FOR THE PROTECTION OF THE WORK, WORKERS AND PUBLIC SAFETY.
16. BUILDING ADDRESSES TO BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
17. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS NH RSA 155-A:5. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS.
18. THE SITE SHALL BE MAINTAINED TO PROVIDE ACCESSIBILITY IN ALL WEATHER CONDITIONS.
19. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
20. THE SUBJECT PARCEL(S) IS (ARE) SERVED BY MUNICIPAL WATER AND SEWER.
21. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTURBANCE ACTIVITY OCCURS.
22. AS-BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON PAPER AND IN A DIGITAL FORMAT IN PDF AND AUTOCAD DWG, AUTOCAD DXF OR AN ESRI FORMAT TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E. DIGITAL FILES SHALL BE GEO-REFERENCED TO NEW HAMPSHIRE STATE PLANE COORDINATES NAD83 AND SHALL BE EXPRESSED IN FEET.
23. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 58, ARTICLE I, SECTION 58-2 OF THE CODE OF THE CITY OF DOVER.
24. THE PURPOSE OF THE SITE STRUCTURES IS TO PROVIDE COMBINED COMMERCIAL/ OFFICE/WAREHOUSE SPACE.
25. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7 AM-6 PM, SATURDAY AND SUNDAY WORK HOURS 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.
26. 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.
27. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
27 THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY: N/A
28. LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD FOR THE PROPOSED USE OR STRUCTURE, INCLUDING THE CASE NUMBER AND DATE OF DECISION AND ANY CONDITIONS.
    CONDITIONAL USE PERMIT: PENDING
29. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
30. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
31. APPLICANT SHALL COMPLETE LAND USE TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL. COMPLETED 6/1/2020.
32. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLW DEVICE.
33. FIRE DEPARTMENT CONNECTION(S) 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.
34. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH THE APPILCABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH THE APPLICABLE ACCESSIBILITY REGULATIONS (I.E. IBC, ANSI 117.1) AND NH RSA 155-A:5.

GRADING NOTES:

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

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

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

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

UTILITY NOTES:

1. THE PROJECT SITE IS SERVED BY CITY WATER AND SEWER.
2. THE BEST AVAILABLE INFORMATION WAS USED TO DETERMINE THE LOCATION AND SIZE OF EXISTING UTILITIES. THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. THE EXACT SIZE AND LOCATION OF UTILITIES SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING WORK. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ANTICIPATE CONFLICTS AND REPAIR EXISTING UTILITIES AS NECESSARY TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
3. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATIONS WITH THE RESPECTIVE UTILITY OWNERS PRIOR TO WORK BEING PERFORMED. CALL DIGSAFE AT 1-888-388-7233 OR "811".
4. ALL PROPOSED UTILITY SERVICES SHALL BE UNDERGROUND WITHIN THE SITE.
5. UNDERGROUND ELECTRIC, TELEPHONE, AND CABLE TV CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH/PER EVERSOURCE, VERIZON, COMCAST, AND UNITIL STANDARDS.
6. PROPOSED INSTALLATION OF UNDERGROUND CONDUITS FOR TELEPHONE, ELECTRIC AND GAS SERVICE SHALL BE COORDINATED WITH THE RESPECTIVE CONTACTS ARE AS FOLLOWS:
   ELECTRIC: EVERSOURCE 1.800.362.7764
   CABLE: COMCAST 603.334.3615
   GAS: UNITIL 866.933.3821
7. SEE ELECTRICAL DRAWINGS AND DETAILS FOR OUTDOOR LIGHTING CONDUIT LOCATIONS.
8. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
10. SEWAGE LOADING (PER ENV. - Wq 1008.03 TABLE 1008-1)

OFFICE:	900 S.F. x 5 GPD/100 S.F.	= 45 GPD
WAREHOUSE:		
(DRY GOODS)	24 EMPLOYEES @ 10 GAL	= 240 GPD
TOTAL SEWAGE FLOW		= 285 GPD

11. THE PROPOSED STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 109-30 OF THE CODE OF THE CITY OF DOVER AND THE 2009 STATE BUILDING CODE.
12. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED.
13. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.
14. ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
15. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
16. APPROVED BACKFLOW PREVENTORS SHALL BE INSTALLED ON BOTH FIRE AND DOMESTIC WATER LINES.
17. ALL UNUSED WATER SERVICES SHALL BE REMOVED BACK TO THE CORPORATION AT THE MAIN.

LEGEND

S.F.	SQUARE FEET		PROPOSED SIGN
Ac.	ACRE	74	PROPOSED FINISH GRADE
±	MORE OR LESS	x 74.00	PROPOSED SPOT GRADE
(TYP.)	TYPICAL	PD	PROPOSED DRAIN LINE
S.C.R.D.	STRAFFORD COUNTY REGISTER OF DEEDS		PAVEMENT WITH CURB
TBR	TO BE REMOVED		SILT BARRIER
	EXISTING UTILITY POLE	PG	PROPOSED GAS
	EXISTING SIGN	PW	PROPOSED WATER
	EXISTING WATER SHUT-OFF		PROPOSED FENCE
	EXISTING WATER VALVE	PE	PROPOSED ELECTRIC
	EXISTING GAS VALVE	PD	PROPOSED DRAIN LINE
	EXISTING HYDRANT	RD	PROPOSED ROOF DRAIN
	EXISTING LIGHT/SIGNAL POLE	PUD	PROPOSED UNDERDRAIN LINE
S	EXISTING SEWER MANHOLE		PROPOSED CATCHBASIN
D	EXISTING DRAINAGE MANHOLE		INLET PROTECTION
	EXISTING CATCHBASIN		HANDICAP PARKING SYMBOL
5'R	PAVEMENT RADIUS		PROPOSED CONCRETE
SGC	SLOPE GRANITE CURB		
VGC	VERTICAL GRANITE CURB		
x 74.00	EXISTING SPOT GRADE		
94	EXISTING GRADE		
OHW	OVERHEAD WIRES		
E	EXISTING ELECTRIC		
W	EXISTING WATER LINE		
S	EXISTING SEWER LINE		
D	EXISTING DRAINAGE LINE		
G	EXISTING GAS LINE		

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

NO.	REVISION	APP'D	DATE
2	REVISED PER TRC	SJH	9-22-20
1	REV. PER TRC COMMENTS	SJH	8/26/20

DATE: 4-27-20
SCALE: AS SHOWN
DRAWN BY: CAD
DESIGN BY: DJL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

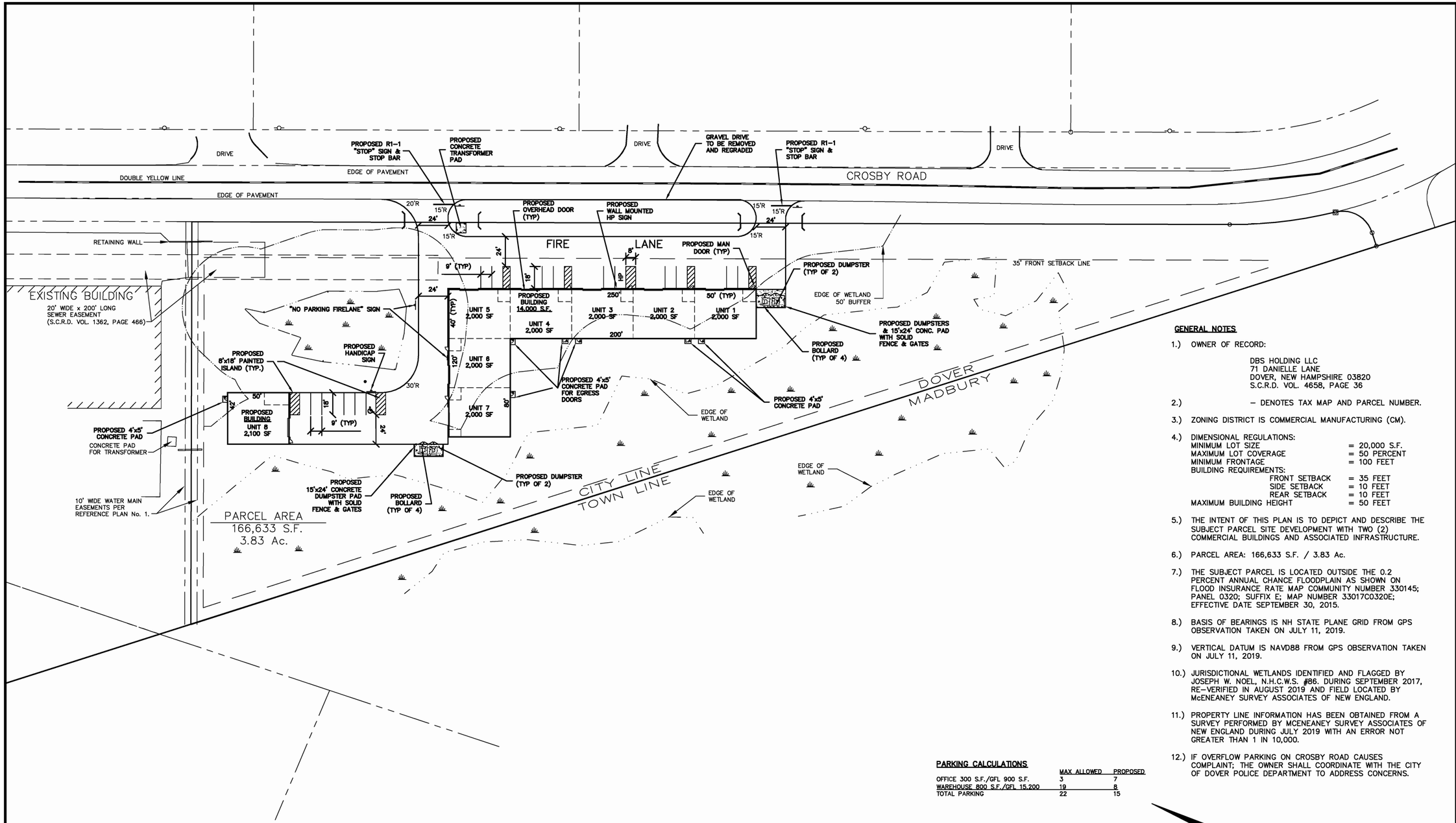
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1168
Dover, New Hampshire 03821
603.749.0443

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

NOTE SHEET

4



GENERAL NOTES

1.) OWNER OF RECORD:

DBS HOLDING LLC
71 DANIELLE LANE
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOL. 4658, PAGE 36

2.) – DENOTES TAX MAP AND PARCEL NUMBER.

3.) ZONING DISTRICT IS COMMERCIAL MANUFACTURING (CM).

4.) DIMENSIONAL REGULATIONS:

MINIMUM LOT SIZE	= 20,000 S.F.
MAXIMUM LOT COVERAGE	= 50 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING REQUIREMENTS:	
FRONT SETBACK	= 35 FEET
SIDE SETBACK	= 10 FEET
REAR SETBACK	= 10 FEET
MAXIMUM BUILDING HEIGHT	= 50 FEET

5.) THE INTENT OF THIS PLAN IS TO DEPICT AND DESCRIBE THE SUBJECT PARCEL SITE DEVELOPMENT WITH TWO (2) COMMERCIAL BUILDINGS AND ASSOCIATED INFRASTRUCTURE.

6.) PARCEL AREA: 166,633 S.F. / 3.83 Ac.

7.) THE SUBJECT PARCEL IS LOCATED OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0320; SUFFIX E; MAP NUMBER 33017C0320E; EFFECTIVE DATE SEPTEMBER 30, 2015.

8.) BASIS OF BEARINGS IS NH STATE PLANE GRID FROM GPS OBSERVATION TAKEN ON JULY 11, 2019.

9.) VERTICAL DATUM IS NAVD88 FROM GPS OBSERVATION TAKEN ON JULY 11, 2019.

10.) JURISDICTIONAL WETLANDS IDENTIFIED AND FLAGGED BY JOSEPH W. NOEL, N.H.C.W.S. #86. DURING SEPTEMBER 2017, RE-VERIFIED IN AUGUST 2019 AND FIELD LOCATED BY McENEANEY SURVEY ASSOCIATES OF NEW ENGLAND.

11.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND DURING JULY 2019 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

12.) IF OVERFLOW PARKING ON CROSBY ROAD CAUSES COMPLAINT; THE OWNER SHALL COORDINATE WITH THE CITY OF DOVER POLICE DEPARTMENT TO ADDRESS CONCERNS.

PARKING CALCULATIONS

	MAX ALLOWED	PROPOSED
OFFICE 300 S.F./GFL 900 S.F.	3	7
WAREHOUSE 800 S.F./GFL 15,200	19	8
TOTAL PARKING	22	15

NAD 1983
NH STATE PLANE COORDINATE SYSTEM

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1186
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
1	REVISED PER TRC COMMENTS	SJH	8/26/20
2	REVISED PER TRC	SJH	9-22-20

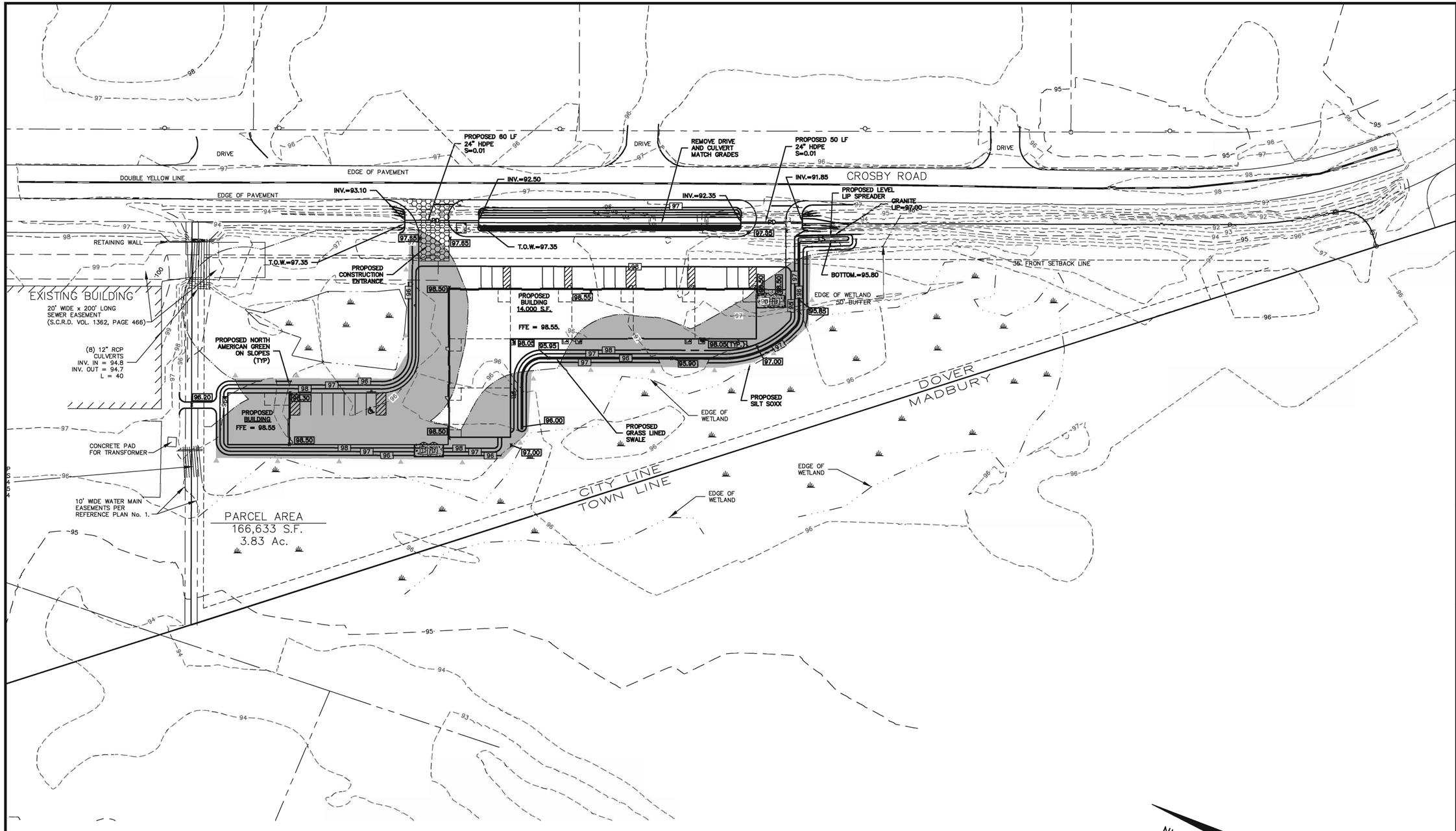
DATE: 4-27-20
SCALE: 1"=40'
DRAWN BY: CAD
DESIGN BY: DJL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

SITE PLAN

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

5



ATTENTION:

⚠ HIGH PRESSURE GAS MAIN EXISTS WITHIN THE RIGHT OF WAY OF CROSBY ROAD; PRIOR TO ANY EARTH MOVING ACTIVITY CONTACT DIGSAFE AT 1-888-344-7233 TO VERIFY LOCATION.

GENERAL NOTES

1. SEE NOTE SHEET #4 FOR ADDITIONAL GRADING, DRAINAGE NOTES.
2. WETLAND BUFFER IMPACT
3. SQUARE FEET OF IMPACT = 28,910 S.F.
4. INSTALL CITY OF DOVER, WETLAND BUFFER PLACARDS ,(▲SYMBOL) EVERY 50' ALONG THE LIMIT OF WETLAND BUFFER IMPACT/WETLAND BUFFER AS SHOWN.

NAD 1983
NH STATE PLANE COORDINATE SYSTEM

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

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GRADING & EROSION CONTROL PLAN

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

UP
364/11.5
11.5
UP
UP 13
364A/10
DRIVE
UP 14
364A/9
DRIVE
UP
DRIVE
PROPOSED
UNDERGROUND
ELECTRIC
(1DIRECTIONAL DRILLING)
DOUBLE YELLOW LINE
EDGE OF PAVEMENT
CROSBY ROAD
GAS MAIN
EDGE OF PAVEMENT
PROPOSED 2"
GAS SERVICE
PROPOSED 8" PVC
SEWER SERVICE
PROPOSED
6" CLDI WATER LINE
RETAINING WALL
PROPOSED
UNDERGROUND
ELECTRIC
PSMH1
PROPOSED
8" PVC
SEWER SERVICE
PROPOSED 6"
SEWER LINE
(TYP)
PSMH2
LS
PROPOSED
GAS SERVICE
SMH A
RIM = 98.84
35' FRONT SETBACK LINE
EXISTING BUILDING
20' WIDE x 200' LONG
SEWER EASEMENT
(S.C.R.D. VOL. 1362, PAGE 466)
PROPOSED
6" PVC
SEWER LINE
PROPOSED
6" CLDI
WATER LINE
PROPOSED
BUILDING
14,000 S.F.
EDGE OF WETLAND
50' BUFFER
PROPOSED
FDC
PROPOSED
6" GATE VALVE
AND HYDRANT
CONTRACTOR SHALL
FLOW TEST EXISTING WATER MAIN
AND HYDRANT TO VERIFY CONDITION
PROPOSED
GAS METER
PROPOSED
UNDERGROUND
ELECTRIC
PROPOSED
GAS METERS
PROPOSED
ELECTRIC
METERS
PROPOSED 1"
WATER SERVICE
PROPOSED
ELECTRIC METER
PROPOSED
6" D.I.
DOVER
MADBURY
PROPOSED
BUILDING
PROPOSED
1" WATER"
SERVICE(TYPICAL)
PROPOSED
SPRINKLER
ROOM
EDGE OF
WETLAND
TELEPHONE RISER
CONCRETE PAD
FOR TRANSFORMER
CONTRACTOR SHALL
FLOW TEST EXISTING
HYDRANT TO VERIFY CONDITION
PROPOSED
8"x8" TEE
EDGE OF
WETLAND
CITY LINE
TOWN LINE
10' WIDE WATER MAIN
EASEMENTS PER
REFERENCE PLAN No. 1.
PROPOSED 8"
CLDI WATER LINE
EDGE OF
WETLAND
PARCEL AREA
166,633 S.F.
3.83 Ac.

NAD 1983
NH STATE PLANE COORDINATE SYSTEM

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

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UTILITY PLAN

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL
BUILDINGS
CROSBY ROAD
DOVER, NH 03820

7

DESCRIPTION

THE INTENT OF THIS PLAN IS TO SHOW THE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF COMMERCIAL BUILDING, SITE ACCESS DRIVE, PARKING AREAS, UTILITY INSTALLATION, AND DRAINAGE IMPROVEMENTS.

PROJECT NAME AND LOCATION

SULLIVAN COMMERCIAL BUILDINGS — LATITUDE N43°07'18"
CROSBY ROAD — LONGITUDE W70°49'58"
DOVER, NH 03820

DISTURBED AREA

±53,484 square feet

SEQUENCE OF MAJOR ACTIVITIES

1. CONTRACTOR SHALL PREPARE THE SWPPP. FILE FOR AND OBTAIN THE NOI A MINIMUM OF 2 WEEKS PRIOR TO COMMENCEMENT OF SITE WORK.
2. PLACE TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S PRIOR TO EARTH MOVING ACTIVITIES.
3. ALL EROSION CONTROL AND PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO COMMENCING EARTH MOVING OPERATIONS.
4. SELECTIVE DEMOLITION.
5. REGRADE SITE TO SUBGRADE.
6. SWALES AND PONDS (AS APPLICABLE) SHALL BE CONSTRUCTED EARLY ON IN THE CONSTRUCTION SEQUENCE AND BEFORE ROUGH GRADING OF THE SITE AND ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
7. INSTALL DRAINAGE STRUCTURES AND CONTROLS, PROVIDE BYPASS FOR DITCH.
8. INSTALL UNDERGROUND UTILITIES AND FOUNDATIONS FOR STRUCTURES.
9. PLACE GRAVELS AND FINE GRADE.
10. STABILIZE, ROADWAYS & PARKING LOTS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
11. ALL CUT AND FILL SLOPES SHALL BE LOAMED AND SEEDED (AS APPLICABLE) WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
12. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.
13. IN ALL CASES THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION AND IN NO CASE SHALL EXCEED 3.5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
14. WHEN ALL SITE WORK IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND FILE THE EPA – N.O.T.

DEFINITIONS

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

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

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. GENERAL

1. Silt Fence

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

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

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

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

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

2. Sequence of Installation

Sediment barriers shall be installed prior to any soil disturbance of the contributing drainage area above them.

3. Maintenance

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

B. MULCHING

1. Timing

In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this.

a. Apply mulch prior to any storm event. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
b. Required Mulching within a specified time period. The time period can range from 14 to 21 days of inactivity on a area, the length of time varying with site conditions. Professional judgement shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

2. Application Rate

Mulch shall be applied at a rate of between 1.5 to 2 tons per acre, or 90 to 100 pounds per 1000 square feet.

3. Guidelines for Winter Mulch Application. When mulch is applied to provide protection over winter (past the growing season) it shall be at a rate of 6,000 pounds of hay or straw per acre. A tackifier may be added to the mulch.

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

5. Excelsior Matting Excelsior Matting shall be used in place of mulch on all slopes steeper than 3:1.

C. TEMPORARY GRASS COVER

1. Seedbed Preparation

Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.

2. Seeding

a. Utilize annual rye grass at a rate of 40 lbs/acre.
b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance

Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

D. PERMANENT SEEDING

1. Bedding – stones larger than 1 ½ ", trash, roots, and other debris interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 4" to prepare a seedbed and mix fertilizer into the soil.

2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:
Agricultural Limestone @ 100 lbs. per 1,000 s.f.
10–20–20 fertilizer @ 12 lbs. per 1,000 s.f.

3. Seed Mixture (recommended)
Rate:

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

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

Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt) etc.

5. Provide a minimum of 4 inches (5 inches loose) of topsoil to all areas to be seeded.

E. STORM DRAIN INLET PROTECTION

1. Straw/Hay Bale Inlet Structure

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

TIMING OF CONTROLS/MEASURES

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

WASTE DISPOSAL

A. WASTE MATERIALS

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

B. HAZARDOUS WASTE

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

C. SANITARY WASTE

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

SPILL PREVENTION

A. MATERIAL MANAGEMENT PRACTICES

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

Good Housekeeping:

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

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

Hazardous Products:

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

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

B. PRODUCT SPECIFICATION PRACTICES

The following product specific practices will be followed on site:

Petroleum Products:

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

Fertilizers:

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

Paints:

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

Concrete Trucks:

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

C. SPILL CONTROL PRACTICES

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

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

The project proponent is required to manage construction to meet the requirements and intent of RSA 430:53 and AGR 3800 relative to controlling invasive species and controlling fugitive dust in accordance with ENV–A 1002.
AGR 3800 Prohibited Invasive Plant Species Rules

The rule, Agr 3800, states : "No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1, New Hampshire prohibited invasive species list". A complete copy of the rules can be accessed on the internet at http://agriculture.nh.gov/topics/plants_insects.htm.

Env–A 1002 FUGITIVE DUST: Precautions to Prevent, Abate, and Control Fugitive Dust.
(a) Any person engaged in any activity within the state that emits fugitive dust, other than those listed in Env–A 1002.02(b), shall take precautions throughout the duration of the activity in order to prevent, abate, and control the emission of fugitive dust.

(b) Precautions required by (a), above, shall include but not be limited to the following:

(1) The use of water or hydrophilic material on operations or surfaces, or both;

(2) The application of asphalt, water or hydrophilic material, or tarps or other such covers to material stockpiles;

(3) The use of hoods, fans, fabric filters, or other devices to enclose and vent areas where materials prone to producing fugitive dust are handled;

(4) The use of containment methods for sandblasting or similar operations; and

(5) The use of vacuums or other suction devices to collect airborne particulate matter.

PER 153–10 F:
All site improvements which require blasting of land shall meet the following requirements prior to any blasting occurring.

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

MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES

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

CATCH BASINS & STORMWATER TREATMENT STRUCTURES

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

WINTER CONSTRUCTION NOTES

1. All proposed post–development vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting, elsewhere. The placement of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt.
2. All slopes which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th shall be stabilized with stone or erosion control blankets.
3. After October 15th, incomplete road surfaces shall be protected with a minimum of 3–inches of crushed gravel per NHDOT Item 403.3, or if construction is to continue through the winter season be cleared of any accumulated snow after each storm event.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20–33

NO.	REVISION	APP'D	DATE
2	REVISED PER TRC	SJH	9–22–20
1	REV. PER TRC COMMENTS	SJH	8/26/20

DATE: 4–27–20
SCALE: AS SHOWN
DRAWN BY: CAD
DESIGN BY: DGL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1168
Dover, New Hampshire 03821
603.749.0443

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

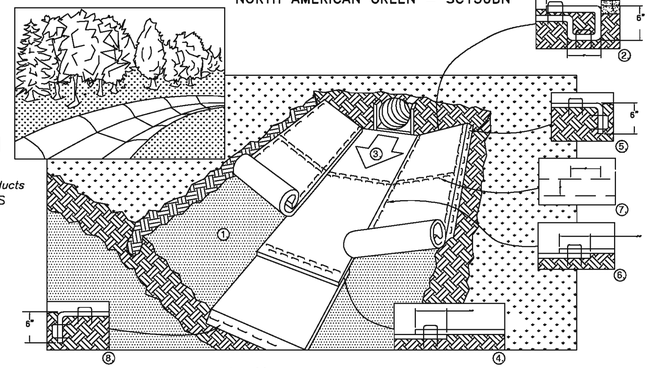
SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

EROSION CONTROL NOTES

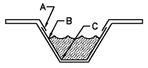
8

CHANNEL INSTALLATION
NORTH AMERICAN GREEN – SC150BN

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS



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



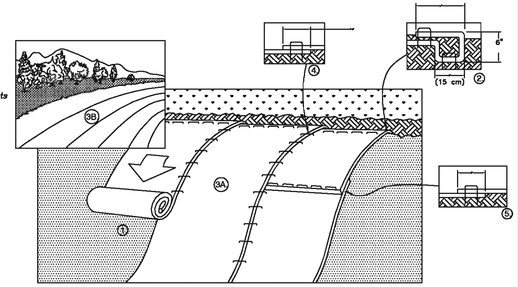
CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

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

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

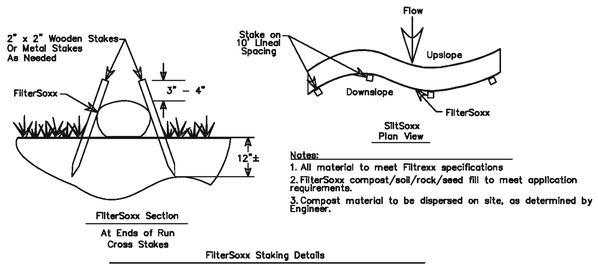
SLOPE INSTALLATION
NORTH AMERICAN GREEN – SC150BN

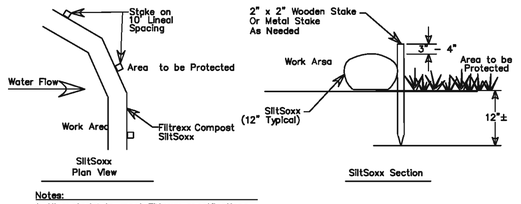
NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS



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

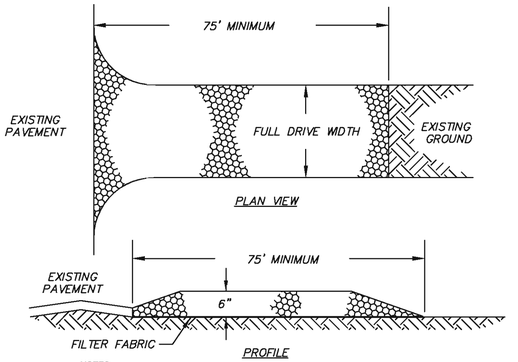
NOTE: THE USE OF WELDED PLASTIC OR BIODEGRADABLE PLASTIC NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED. THE USE OF WILDLIFE FRIENDLY ORGANIC MATERIALS IS RECOMMENDED.





Notes:
1. All material to meet Filtrexx specifications
2. SiltSoxx compost/soil/rock/seed fill to meet application requirements.
3. SiltSoxx depicted is for minimum slopes. Greater slopes may require larger socks per the Engineer.
4. Compost material to be dispersed on site, as determined by Engineer.

SiltSoxx Details
NOT TO SCALE



NOTES:
1. *SEE EROSION CONTROL NOTES BELOW FOR MATERIAL, INSTALLATION AND MAINTENANCE REQUIREMENTS.*
2. *TO BE INSTALLED AT EACH POINT OF EGRESS FROM THE WORK AREA.*

STABILIZED CONSTRUCTION ENTRANCE

1. SPECIFICATIONS
   A. AGGREGATE SIZE: USE THREE (3) INCHES STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
   B. AGGREGATE THICKNESS: NOT LESS THAN SIX (6) INCHES.
   C. WIDTH TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS.
   D. LENGTH: AS REQUIRED, BUT NOT LESS THAN SEVENTY-FIVE (75) FEET. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.
   E. GEOTEXTILE: TO BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE.
   F. CRITERIA FOR GEOTEXTILE: THE FABRICS SHALL BE TREVIA SPUNBOND 1135, MIRAFI 600X OR EQUAL.
2. MAINTENANCE
   THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

SEEKING REPORTS OF RARE TURTLES

The NH Fish & Game Department is collecting observations of four turtle species:

Blanding's turtle (state endangered)
- Large, dark/black domed shell with lighter speckles
- Distinct yellow throat/chin
- Aquatic but often moves on land

Wood turtle (special concern)
- Sculpted, pyramidal brownish shell
- Orange around neck and limbs
- River/stream turtle spending many months on land

Eastern box turtle (state endangered)
- Small terrestrial turtle with highly domed shell
- Irregular yellow or orange markings over brown/black base

Spotted turtle (state threatened)
- Small, mostly aquatic with black or dark brown with yellow spots.
- Fairly flat shell compared to Blanding's turtle

Report sightings to RAARP@wildlife.nh.gov or 603-271-2461 *Please report promptly, noting specific location and date – Photographs strongly encouraged*

ALL OUTSIDE CONSTRUCTION PERSONNEL SHALL RECEIVE TRAINING IN THE IDENTIFICATION OF RARE TURTLE SPECIES AND MADE AWARE OF THEIR PROTECTED STATUS.

THE USE OF WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED

THE USE OF EROSION CONTROL BERM, WHITE FILTREXX DEGRADABLE WOVEN SILT SOCK, OR 'WILDLIFE FRIENDLY' WOVEN ORGANIC MATERIAL (E.G. COCO OR JUTE MATTING SUCH AS NORTH AMERICAN GREEN SC150BN OR EQUIVALENT) ARE ACCEPTABLE FOR USE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
2	REVISED PER TRC	SJH	9-22-20
1	REV. PER TRC COMMENTS	SJH	8/28/20

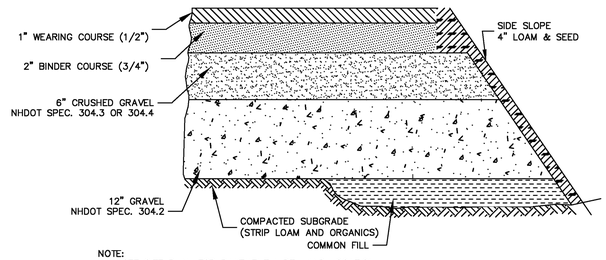
DATE: 4-27-20
SCALE: AS SHOWN
DRAWN BY: CAD
DESIGN BY: DGL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

DETAIL SHEET

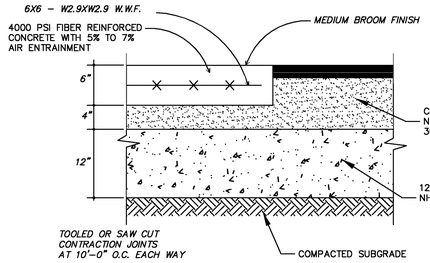
9



NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. GEOTEXTILE FABRIC MAYBE REQUIRED UNDER THE ROADWAY AND /OR THE PARKING AREAS AS REQUIRED BY THE ENGINEER BASED UPON SITE CONDITIONS.

TYPICAL PAVEMENT SECTION

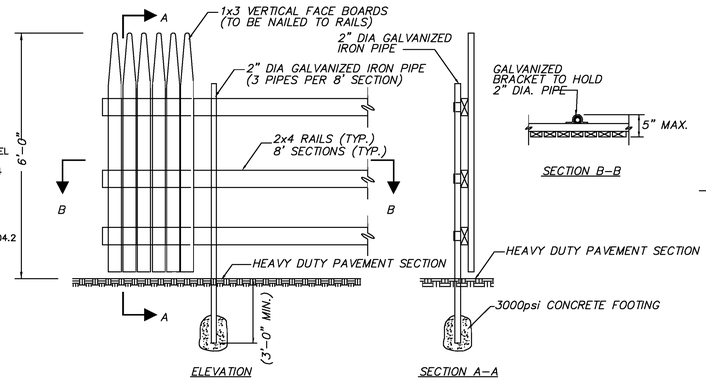
NOT TO SCALE



NOTE: PITCH CONCRETE PAD GRADING TO CENTER

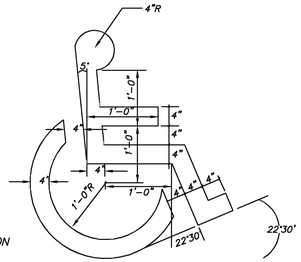
DUMPSTER DETAIL

NOT TO SCALE



SOLID FENCE DETAIL & DUMPSTER ENCLOSURE

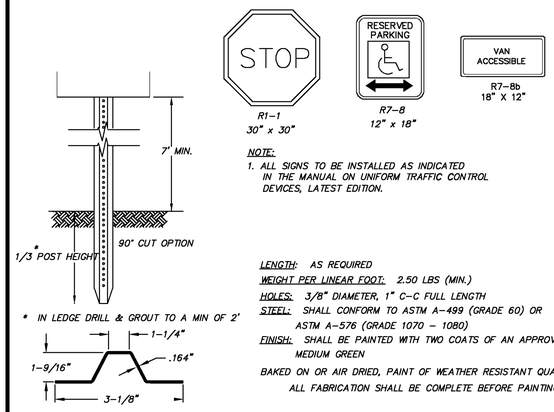
NOT TO SCALE



NOTE: SYMBOL TO BE PAINTED IN ALL HANDICAPPED SPACES

PAINTED HANDICAP SYMBOL

NOT TO SCALE

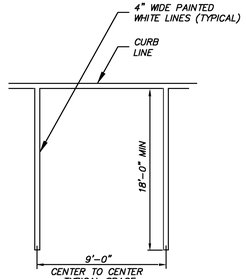


NOTE:
1. ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

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

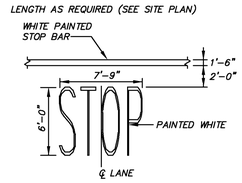
SIGN LEGEND & SIGN POST

NOT TO SCALE



STANDARD PARKING STALL

NOT TO SCALE

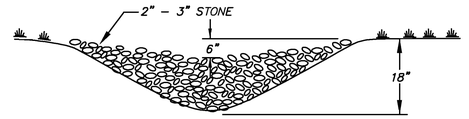


NOTE: PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS SHOWN ON THE PLANS. APPLY TWO COATS.

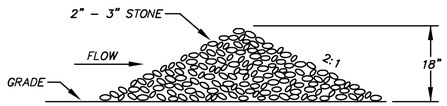
STOP BAR & LEGEND

PAVEMENT MARKINGS

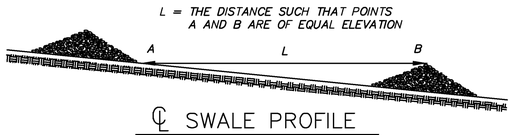
NOT TO SCALE



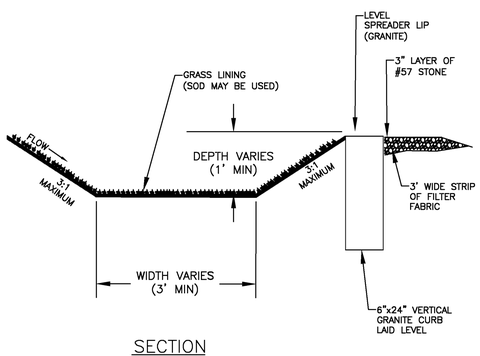
SWALE SECTION



SWALE PROFILE



℄ SWALE PROFILE



SECTION

LEVEL SPREADER

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:
1. LEVEL SPREADERS SHALL BE INSTALLED UNDER THE DIRECT SUPERVISION OF THE ENGINEER.
2. CONSTRUCT LEVEL GRANITE LIP ON ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF SEDIMENT-FREE RUNOFF (CONVERTING CHANNEL FLOW TO SHEET FLOW).
3. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL (NOT ON FILL).
4. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING TWO STRIPS OF JUTE OR EXCELSIOR PROTECTIVE MATERIAL. ALONG THE LIP, EACH STRIP SHALL OVERLAP THE EROSION STOP BY AT LEAST SIX INCHES.
5. THE ENTRANCE CHANNEL SHALL NOT EXCEED A 1% GRADE FOR AT LEAST 20 FEET BEFORE ENTERING SPREADER.
6. STORM RUNOFF CONVERTED TO SHEET FLOW SHALL OUTLET ONTO STABILIZED AREAS. WATER SHALL NOT BE RECONCENTRATED IMMEDIATELY BELOW THE POINT OF DISCHARGE.
7. THE LEVEL SPREADER SHALL BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND TO DETERMINE THAT THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHALL BE REMOVED. IF RILLING HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHALL BE REPAIRED AND RE-VEGATATED.
8. THE VEGETATION SHALL BE MOWED OCCASIONALLY TO CONTROL WEEDS AND THE ENCROACHMENT OF WOODY VEGETATION. CLIPPING SHALL BE REMOVED AND DISPOSED OF OUTSIDE THE SPREADER AND AWAY FROM THE OUTLET AREA.
9. FERTILIZATION SHALL BE DONE AS NECESSARY TO KEEP THE VEGETATION HEALTHY AND DENSE.

CONSTRUCTION SPECIFICATIONS
1. STRUCTURE SHALL BE INSTALLED ACCORDING TO THE DIMENSION SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. SEEDING, FERTILIZING AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATE VEGETATIVE BMP.
4. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

MAINTENANCE
1. TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREA PREPARED, SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

CHECK DAM DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

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DETAIL SHEET

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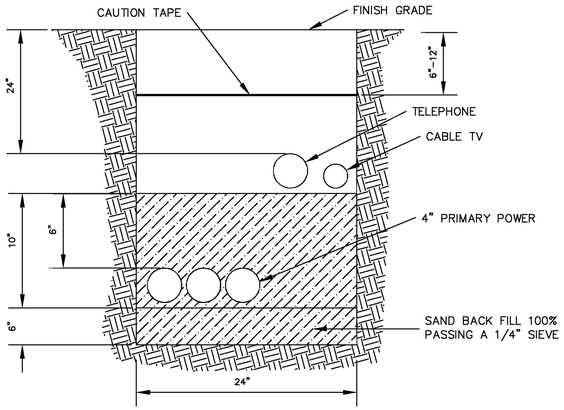
SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

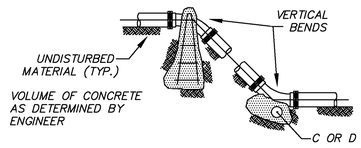
10

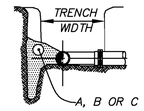


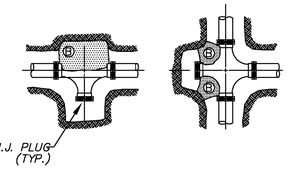
1. TELEPHONE CONDUIT SHALL BE 3" SCHEDULE 40 PVC, WITH STEEL SWEEPS AT RISER POLE, 90° BENDS AND AT BUILDING.
2. LEAVE PULL ROPE IN ALL CONDUITS FOR CABLE INSTALLATION.
3. FOR COMPLETE SPECIFICATIONS SEE "PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE CONSTRUCTION SPECIFICATIONS FOR UNDERGROUND CONDUIT SYSTEMS".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

UTILITY TRENCH

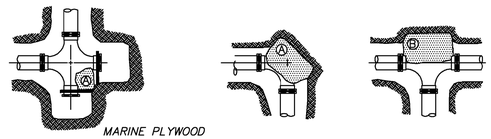
NOT TO SCALE



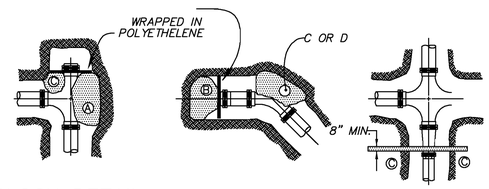




TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE		PIPE SIZE			
			4"	6"	8"	10"	12"
	A	90°	0.89	2.19	3.82	11.14	17.24
	B	180°	0.65	1.55	2.78	8.38	12.00
	C	45°	0.48	1.19	2.12	6.02	9.32
	D	22-1/2°	0.25	0.60	1.06	3.08	4.74
	E	11-1/4°	0.13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

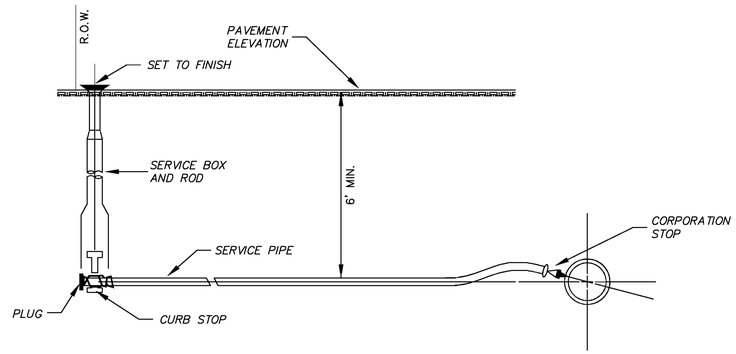


NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE BOARD IN FRONT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



THRUST BLOCK DETAIL

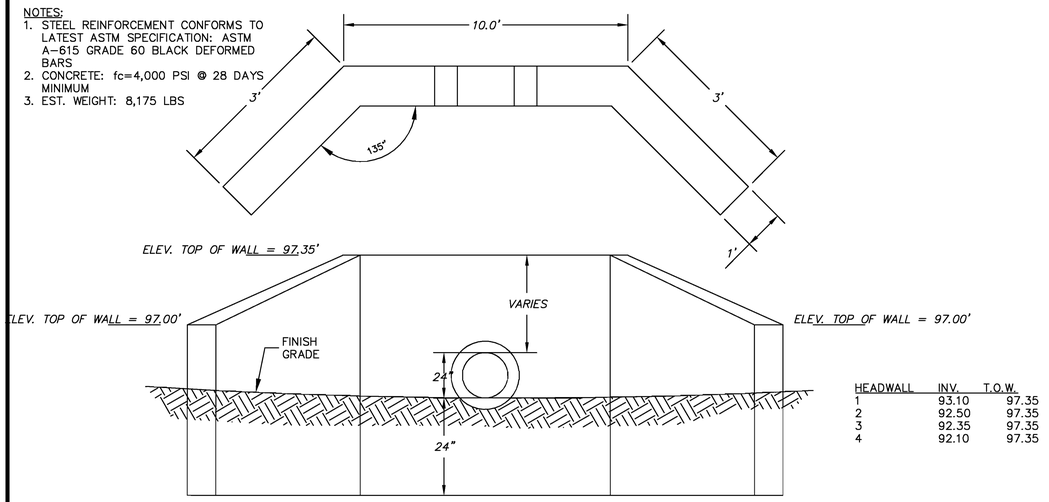
NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

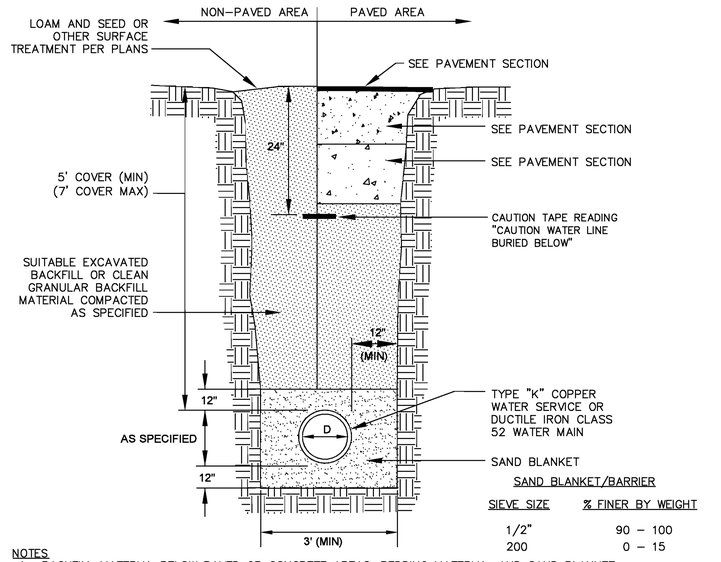
NOTES:
1. STEEL REINFORCEMENT CONFORMS TO LATEST ASTM SPECIFICATION: ASTM A-615 GRADE 60 BLACK DEFORMED BARS
2. CONCRETE: fc=4,000 PSI @ 28 DAYS MINIMUM
3. EST. WEIGHT: 8,175 LBS



HEADWALL	INV.	T.O.W.
1	93.10	97.35
2	92.50	97.35
3	92.35	97.35
4	92.10	97.35

HEADWALL DETAIL

NOT TO SCALE



SAND BLANKET/BARRIER

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

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

WATER MAIN TRENCH

NOT TO SCALE

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FILE: STEDWG

DETAIL SHEET

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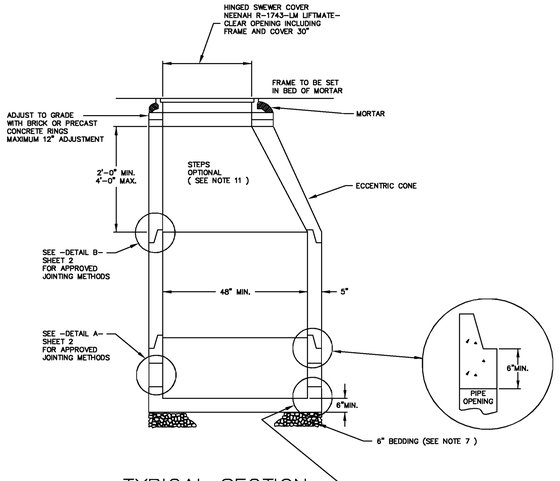
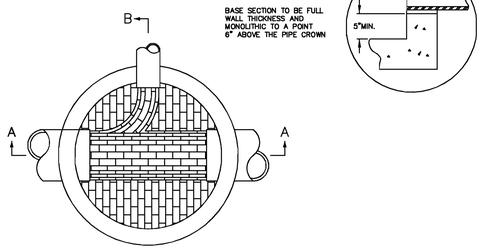
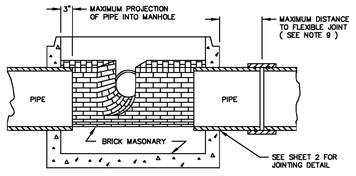


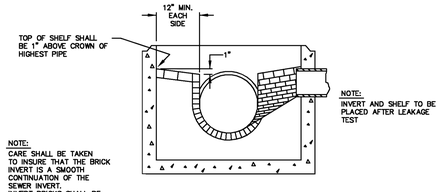
TYPICAL SECTION



PLAN



SECTION A–A



SECTION B–B

NOTES:

1.) IT IS THE INTENTION OF THE COMMISSION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT, IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H–20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.

2.) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED.

3.) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.

4.) LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.

5.) INVERTS AND SHELVES. MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.

6.) FRAMES AND COVERS. MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30–INCH CLEAR OPENING A 3–INCH (MINIMUM HEIGHT) LETTER "S" FOR SEWER OR "D" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.

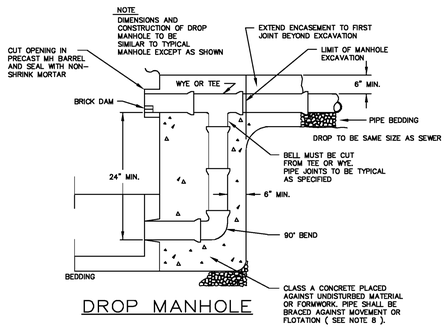
7.) BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33
100% PASSING 1 INCH SCREEN 0–10% PASSING # 4 SIEVE
90–100% PASSING 3/4 INCH SCREEN 0– 5% PASSING # 8 SIEVE
20–55% PASSING 3/8 INCH SCREEN
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1 1/2 INCH TO 1/2 INCH SHALL BE USED.

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

9.) FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
RCP & CI PIPE – ALL SIZES – 48"
AC & VC PIPE – UP THROUGH 12' DIA –18"
AC & VC PIPE – LARGER THAN 12" DIA – 36"
DI PIPE – NONE REQUIRED
PVC (ASTM 3034) – UP THROUGH 15" DIA. – NONE REQUIRED
PVC (ASTM F 679) – LARGER THAN 15" DIA. – 48" – 60"
PVC (ASTM F 789) – ALL SIZES – 48" – 60"
ABS (ASTM D 2680) – ALL SIZES – SAME AS VC ABOVE

– UNDER SEVERE CONDITIONS WHEN DIFFERENTIAL SETTING CANNOT BE CONTROLLED WITHIN NORMAL LIMITS, VARIATIONS IN THE STUB LENGTH MAY BE NECESSARY. OTHER PLASTIC PIPES SHALL BE REVIEWED ON A CASE BY CASE BASIS.

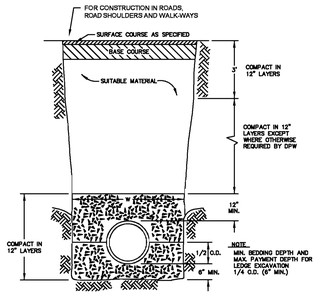
10.) SHALLOW MANHOLE. IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H–20 LOADS.



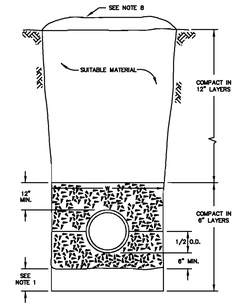
DROP MANHOLE

STANDARD MANHOLE SHEET 1

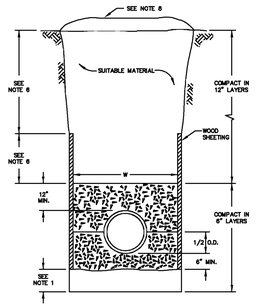
STANDARD TRENCH SECTION



LEDGE CONSTRUCTION



EARTH CONSTRUCTION



EARTH CONSTRUCTION WITH SHEETING

NOTES:

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

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

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

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

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

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

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

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

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

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

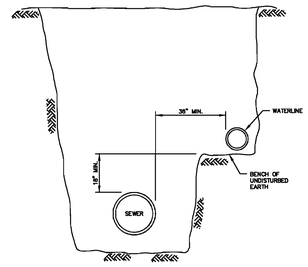
8.) FOR CROSS COUNTRY CONSTRUCTION , BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

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

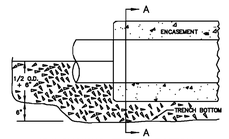
10.) NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION (NH DES) DESIGN STANDARDS REQUIRE 10 FT. SEPARATION. HOWEVER, SHOULD CONSTRUCTION OPERATIONS REVEAL OR EXPOSE A WATERLINE (MAIN OR SERVICE) RUNNING APPROXIMATELY PARALLEL AND LESS THAN 10 FT. HORIZONTAL FROM THE PROPOSED SEWER INSTALLATION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

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

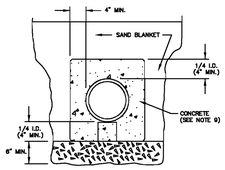
11.) IF FULL CASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MIN.) BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.



WATER AND SEWER IN SAME TRENCH

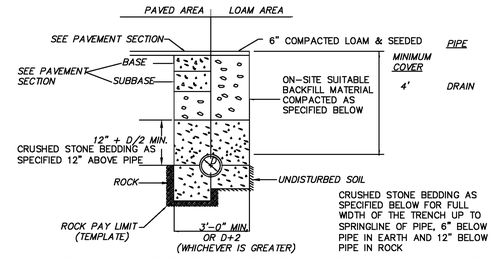


VIEW SHOWING TRENCH BOTTOM
CHANGE AT ENCASEMENT



SECTION A–A

CONCRETE FULL ENCASEMENT
(SEE NOTE 11)

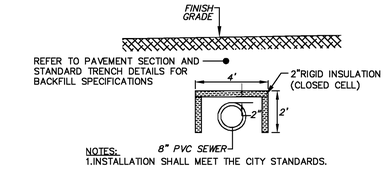


BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

SAND BLANKET & BEDDING		3/4" CRUSHED STONE BEDDING	
SIEVE SIZE	% FINER BY WEIGHT	SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100	1"	100
200	0 – 15	3/4"	90 – 100
(FOR WATER MAIN BEDDING)		1/2"	20 – 50
		3/8"	0 – 20
		# 4	0 – 5

DRAINAGE TRENCH

NOT TO SCALE



NOTES:
1.INSTALLATION SHALL MEET THE CITY STANDARDS.

SEWER INSULATION DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20–33

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1156
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	APP'D	DATE
2	REVISED PER TRC	SJH	9–22–20
1	REV. PER TRC COMMENTS	SJH	8/26/20

DATE: 4–27–20
SCALE: AS SHOWN
DRAWN BY: CAD
DESIGN BY: DGL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

DETAIL SHEET

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03835

12

DRIVE

DRIVE

DRIVE

DOUBLE YELLOW LINE

EDGE OF PAVEMENT

EDGE OF PAVEMENT

RETAINING WALL

35' FRONT SETBACK LINE

50' BUFFER

EDGE OF WETLAND

CONCRETE PAD FOR TRANSFORMER

EDGE OF WETLAND

EDGE OF WETLAND

StatArea_1
PAVED AREAS
Illuminance (Fc)
Average = 1.15

Minimum = 0.3
Uniformity Ratio = 3.83

StatArea_2
PAVED AREAS
Illuminance (Fc)
Average = 1.65

Minimum = 0.3
Uniformity Ratio = 5.50

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	1	S4	SINGLE	PRV-C15-D-UNV-T4-BZ/ SSS4A15SFN1 (15' AFG)
	8	W2	SINGLE	AXCS1A/ WALL MTD 10' AFG
	9	W3	SINGLE	AXCS3A/ WALL MTD 14' AFG

NAD 1983
NH STATE PLANE COORDINATE SYSTEM

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
2	REVISED PER TRC	SJH	9-22-20
1	REVISED PER TRC COMMENTS	SJH	8/26/20

DATE: 4-27-20
SCALE: 1"=40'
DRAWN BY: CAD
DESIGN BY: DJL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

LIGHTING PLAN

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

13

Lumark

DESCRIPTION

The Prevail LED area, site luminaire combines optical performance, energy efficiency and long term reliability in an advanced, patent pending modern design. Utilizing the latest LED technology, the Prevail luminaire delivers unparalleled uniformity resulting in greater pole spacing. A versatile mount standard arm facilitates ease of installation for both retrofit and new installations. With energy savings greater than 62%, the Prevail fixture replaces 150-450W metal halide fixtures in general area lighting applications such as parking lots, walkways, roadways and building areas.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Construction
Construction is comprised of a heavy-duty, single-piece die-cast aluminum housing. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. The die-cast aluminum door is tethered to provide easy access to the driver if replacement is required. A one-piece silicone gasket seals the door to the fixture housing. The optics is mounted on a versatile, aluminum plate that dissipates heat from the LEDs resulting in longer life of the fixture. The fixture is IP66 and 3G vibration rated (ANSI C136.31) to insure strength of construction and longevity in the selected application.

Optics
Precision molded, high efficiency optics are precisely designed to shape the distribution, maximizing efficiency and application spacing. Available in Type II, III, IV and V distributions with lumen packages ranging from 6,100 to 18,900 nominal lumens. Light engine configurations consist of 1 or 2 high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L92/60,000 hours at 25°C) per IESNA TM-21. For the ultimate level of spill light control, an optional house side shield accessory can be field or factory installed.

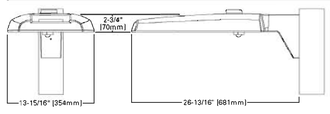
Electrical
LED drivers are mounted to the fixture for optimal heat sinking and ease of maintenance. Thermal management incorporates both conduction and convection to transfer heat rapidly away from the LED source for optimal efficiency and light output. Class 1 electronic drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Available in 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480 V Wye systems only. 10kV/10 kA surge protection standard. 0-10V dimming driver is standard with leads external to the fixture. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. Standard NEMA 3-PIN twistlock photocontrol receptacle and NEMA 7-PIN twistlock photocontrol receptacles are available as options.

Mounting
Standard pole mount arm is bolted directly to the pole and the fixture slides onto the arm and locks in place with a bolt facilitating quick and easy installation. The versatile, patented, standard mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the standard mounting arm enables wiring of the fixture without having to access the driver compartment. A knock-out on the standard mounting arm enables round pole mounting. Wall mount and mast arm mounting options are available. Mast arm adapter fits 2-3/8" O.D. tenon.

Finish
Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is bronze. Additional colors available in white, grey, black, dark platinum and graphite metallic.

Warranty
Five-year warranty.

DIMENSIONS



PRV PREVAIL

LED

AREA / SITE / ROADWAY LUMINAIRE

CERTIFICATION DATA
UL and cUL Wet Location Listed
IP66-Rated
3G Vibration Rated
ISO 9001
DesignLights Consortium® Qualified*
Dark Sky Approved (3000K CCT and warmer only)

ENERGY DATA
Electronic LED Driver
0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 and 60Hz,
347V/60Hz, 480V/60Hz
-40°C Minimum Temperature Rating
+40°C Ambient Temperature Rating

EPA
Effective Projected Area (Sq. Ft.): 0.75

SHIPPING DATA
Approximate Net Weight:
20 lbs. (9.09 kgs.)

EATON
Powering Business Worldwide

*www.designlights.org

TD500018EN
November 28, 2018 12:10 PM

Steel Poles

SSS SQUARE STRAIGHT STEEL

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

FEATURES
- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

DESIGN CONSIDERATIONS

Wind induced vibrations resulting from steady, unidirectional winds and other aerodynamic forces, as well as vibration and coefficient of height factors for non-grounded mounted installations (e.g., installations on bridges or buildings) are not included in this document. The information contained herein is for general guidance only and is not a replacement for professional judgement. Consult with a professional, and local and federal standards, before ordering to ensure product is appropriate for the intended purpose and installation location. Also, please review Eaton's Light Pole White Paper for risk factors and design considerations. Learn more.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

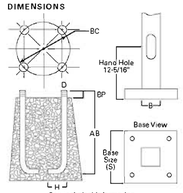
ORDERING INFORMATION

SAMPLE NUMBER: SSA6A20SFM1XG

Product Family	Shaft Size (Inches)[1]	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum R=Harrford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 9=2" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling N=Type N Drilling R=Type R Drilling S=Standard Upsweep Arm Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple[2] 4=4 at 90° 5=2 at 90° X=None	X=None 2=2' 3=2.5' 4=4' 6=6' 8=8'	A=1/2" Tapped Hub[3] B=3/4" Tapped Hub[3] C=Convenience Outlet[4] E=GFCI Convenience Outlet[4] G=Ground Lug H=Additional Hand Hole[5] V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3.Tapped Hub is located 5' below the pole top and on the same side of pole as hand hole, unless specified otherwise. 4. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 5. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



EATON
Powering Business Worldwide

TD513013EN
June 6, 2018 11:14 AM

Lumark

DESCRIPTION

The Lumark Axcent LED wall mount luminaire provides a flush-mounted, architectural design with high performing, energy-efficient illumination resulting in up to 95% energy and maintenance savings over traditional sources. The die-cast aluminum construction along with stainless steel hardware, gasketed housing, and sealed optical compartment make the Axcent impervious to contaminants. The Axcent replaces 70W to 450W metal halide equivalents making it ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways, loading docks and floodlighting applications.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Construction
Low-profile LED design with rugged die-cast aluminum housing. Matching housing styles incorporate both a full cutoff and refractive lens design. External fin design on the back of the fixture extracts heat from the surface resulting in a thermally optimize design for longer luminaire life. One-piece silicone gasket seals the fixture, keeping out moisture and dusts in compliance with IP66 rating. The fixture is 3G vibration rated (ANSI C136.31) and UL/cUL listed ensuring reliability and durability in wall mount applications.

Optical
Silicone-sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Optional glare free lens is available for visual comfort at reduced lumen values. Available in Type IV distribution with lumen packages ranging from 1,800 to 17,300 nominal lumens. Light engine configurations consist of high-efficiency, discrete LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life. Offered in standard 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 5000K CCT / 70CRI min and 3000K / 80CRI min are available.

Electrical
LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. Integral LED electronic driver incorporates 6kV and 3kA surge protection. Class 1 electronic drivers have a power factor >90% and THD<20%. 120-277V 50/60Hz standard operation with optional 347V 60Hz or 480V 60Hz options available. 480V is compatible for use with 480V Wye systems only. 0-10V dimming driver is standard with leads external to the fixture to accommodate controls capability such a dimming and occupancy. 10kV/10kA surge protection option is available.

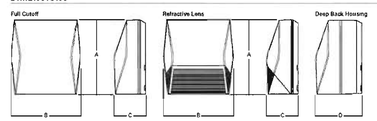
Mounting
Steel wedge mounting plate fits directly to 4" standard j-box or directly to wall with the "Hook-N-Lock" mechanism for quick installation. Secure with two captive, corrosion resistant, stainless steel set screws, which are concealed but accessible from bottom of fixture. Optional floodlight kits available in slipfitter, knuckle and trunnion mount configurations. Optional pole mount configuration provides a quick-mount solution to round and square poles. The easy installation arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8".

Emergency Egress
Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium, maintenance-free battery pack. The separate emergency lighting LEDs are wired to provided redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Finish
The Axcent is protected with five state super TGIC polyester powder coat paint in carbon bronze and five other color finishes. Super TGIC power coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.

DIMENSIONS



Dimensional Data

	AXCS Small	AXCL Large
A	8" [202mm]	11-1/2" [292mm]
B	7-1/2" [190mm]	10-3/4" [273mm]
C	3-5/8" [94mm]	4-7/8" [124mm]
D	6-1/8" [155mm]	7-1/8" [181mm]

AXCS / AXCL AXCENT

14-123W

LED

APPLICATIONS:
WALL / SURFACE / INVERTED
FLOODLIGHTING / PATHWAY / SITE LIGHTING

CERTIFICATION DATA
3G Vibration Rated
DesignLights Consortium® Qualified*
FCC Class A
IP66 Rated
ISO9001, UL/cUL Wet Location Listed
LM79/LM80 Compliant
ROHS Compliant
Title 24 Compliant
UL924 Listed (CBP Models)

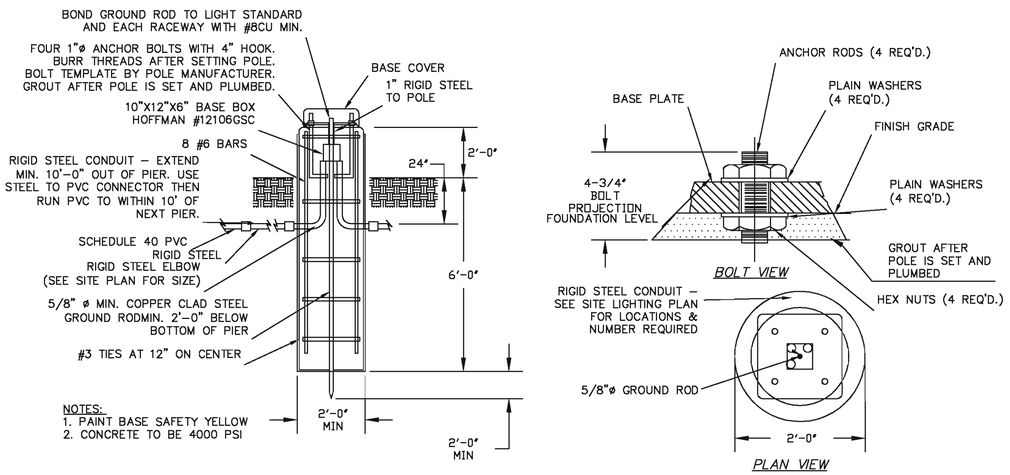
TECHNICAL DATA
-40°C Minimum Ambient Temperature
+40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

SHIPPING DATA:
Approximate Net Weight:
Small fixture=5 lbs. (2.26 kgs.)
Small with sensor or CBP=10 lbs. (4.40 kgs.)
Large fixture=12 lbs. (5.45 kgs.)
Large with sensor or CBP=17 lbs. (7.73 kgs.)
Large with sensor & CBP=21 lbs. (9.54 kgs.)

COOPER Lighting Solutions

*www.designlights.org

TD514036EN
March 4, 2020 3:46 PM



LIGHT POLE BASE

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

NO.	REVISION	APP'D	DATE
1	REVISED PER TRC 6/4/20 COMMENTS	SJH	8/28/20
2	REVISED PER TRC	SJH	9-22-20

DATE: 4-27-20
SCALE: AS SHOWN
DRAWN BY: CAD
DESIGN BY: DGL
APPROVED BY:SJH
PROJECT NO: 19034
FILE: SITE.DWG

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

DETAIL SHEET

DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03835

14

DRIVE

DRIVE

DRIVE

DOUBLE YELLOW LINE

EDGE OF PAVEMENT

EDGE OF PAVEMENT

RETAINING WALL

PROPOSED BUILDING 14,000 S.F.

35' FRONT SETBACK LINE

EDGE OF WETLAND 50' BUFFER

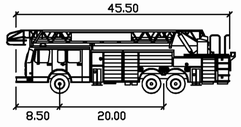
PROPOSED BUILDING

CONCRETE PAD FOR TRANSFORMER

EDGE OF WETLAND

EDGE OF WETLAND

EDGE OF WETLAND



Dover ldder feet

Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 44.0

NAD 1983
NH STATE PLANE COORDINATE SYSTEM

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P20-33

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
2	REVISED PER TRC	SJH	9-22-20
1	REVISED PER TRC COMMENTS	SJH	8/26/20

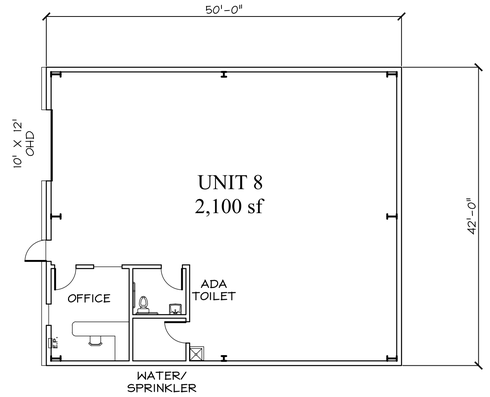
DATE: 4-27-20
SCALE: 1"=40'
DRAWN BY: CAD
DESIGN BY: DJL
APPROVED BY:SJH
PROJECT NO:19034
FILE: SITE.DWG

DOVER LADDER MOVEMENT PLAN

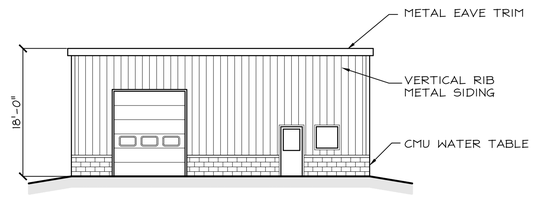
DBS HOLDINGS LLC
71 DANIELLE LANE
DOVER, NH 03820

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03820

15



1 A1.0 FLOOR PLAN - SMALL BUILDING
Scale: 3/32" = 1'

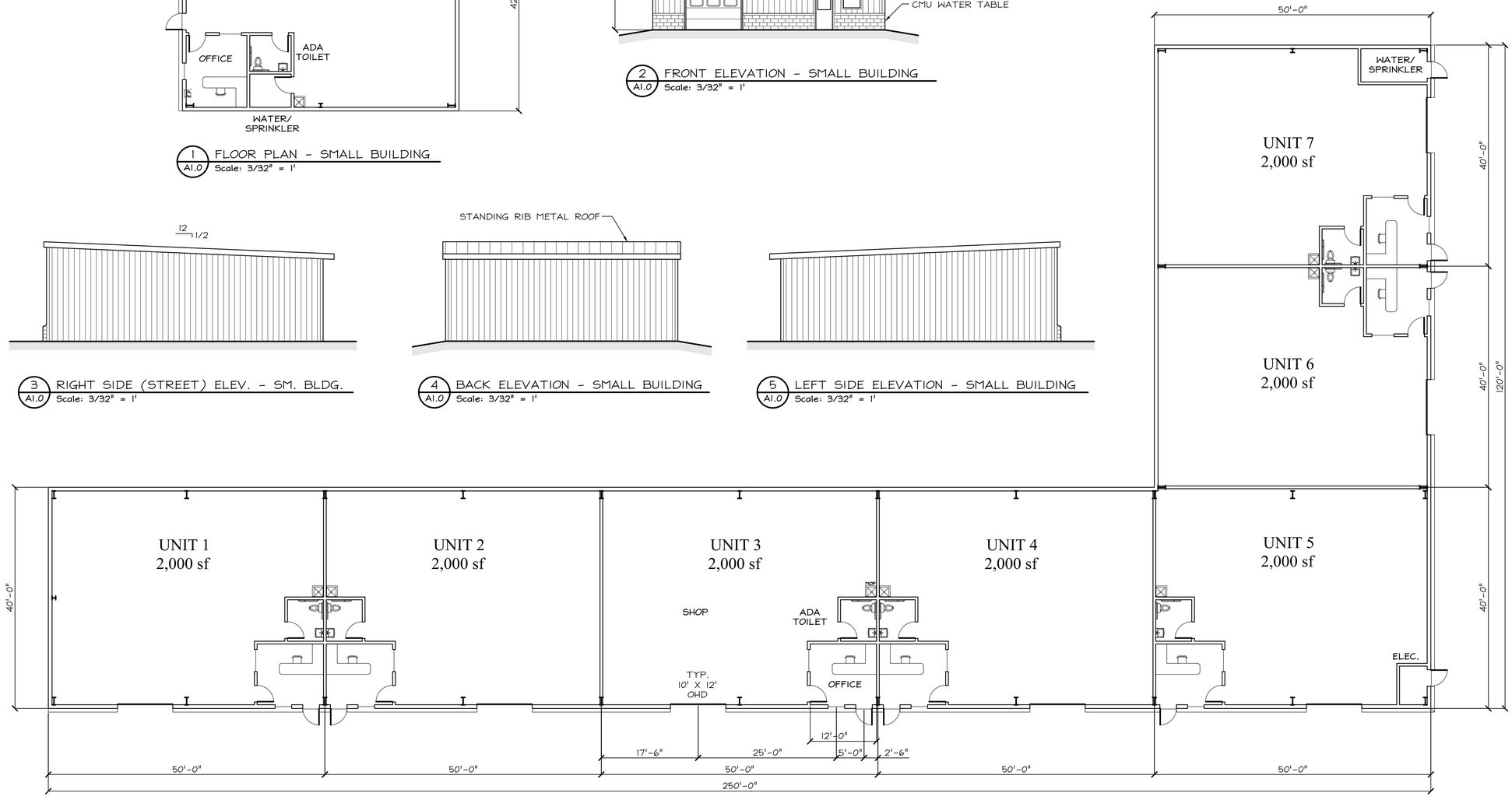


2 A1.0 FRONT ELEVATION - SMALL BUILDING
Scale: 3/32" = 1'

3 A1.0 RIGHT SIDE (STREET) ELEV. - SM. BLDG.
Scale: 3/32" = 1'

4 A1.0 BACK ELEVATION - SMALL BUILDING
Scale: 3/32" = 1'

5 A1.0 LEFT SIDE ELEVATION - SMALL BUILDING
Scale: 3/32" = 1'



6 A1.0 FLOOR PLAN - LARGE BUILDING
Scale: 3/32" = 1'

JSN Associates, LLC
Consulting Structural Engineers
One Autumn Street
Portsmouth, NH 03801
Phone: (603) 433 - 8639
www.jsneng.com

Client:
Civilworks
Dover, NH

Sullivan Commercial Buildings
Crosby Road
Dover, NH

For Approval
04-30-2020

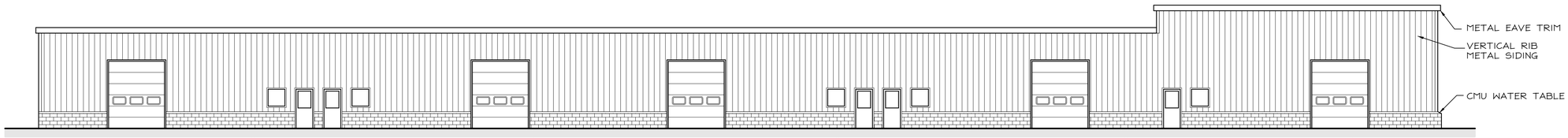
Date:	-
Scale:	As Noted
Design By:	RB
Approved By:	-

Revisions

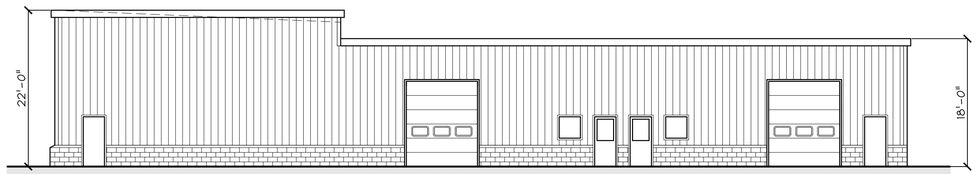
Floor Plans

A1.0

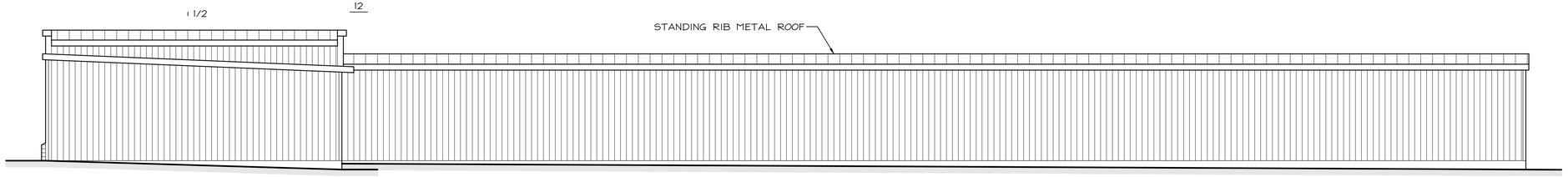
Project No: 200412



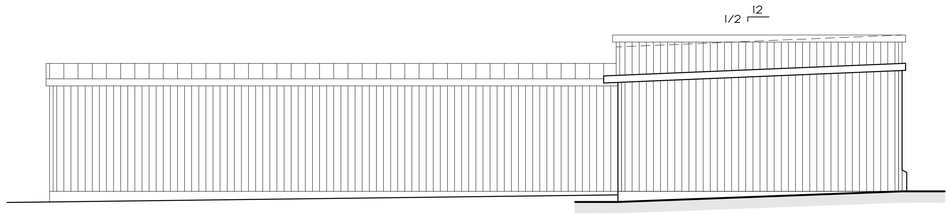
1 A2.0 FRONT (STREET) ELEVATION - LARGE BUILDING
Scale: 3/32" = 1'



2 A2.0 RIGHT SIDE ELEVATION - LARGE BUILDING
Scale: 3/32" = 1'



3 A2.0 BACK ELEVATION - LARGE BUILDING
Scale: 3/32" = 1'



4 A2.0 LEFT SIDE ELEVATION - LARGE BUILDING
Scale: 3/32" = 1'

JSN Associates, LLC
Consulting Structural Engineers
One Autumn Street
Portsmouth, NH 03801
Phone: (603) 433 - 8639
www.jsneng.com

Client:
Civilworks
Dover, NH

Sullivan Commercial Buildings
Crosby Road
Dover, NH

For Approval
04-30-2020

Date:	-
Scale:	As Noted
Design By:	RB
Approved By:	-

Revisions

Elevations

A2.0

Project No: 200412

DRIVE

DRIVE

EDGE OF PAVEMENT

CROSBY ROAD

DOUBLE YELLOW LINE

EDGE OF PAVEMENT

DRIVE

LOAM & SEED
DISTURBED AREAS

7 Ep
2 VdC
6 Ar
3 VdC
3 VdC
3 VdC
7 Ep
3 VdC
3 VdC
7 Ep
6 Ep
TRANSFORMER
6 PvH
7 Ep
10 PvH
7 Ep
10 PvH
7 Ep
10 PvH
7 Ep
10 PvH
7 Ep
10 PvH
10 PvH

ASPHALT PAVEMENT

DRIVE

LOAM & SEED
DISTURBED AREAS

8 Qa

LOAM & SEED
DISTURBED AREAS

2 Qa

DUMPSTER PAD

PROPOSED
BUILDING
14,000 S.F.
FFE = 98.55.

LOAM & SEED
DISTURBED AREAS

PROPOSED
BUILDING
2,100 S.F.

ASPHALT PAVEMENT

DUMPSTER PAD

PARCEL AREA
166,633 S.F.
3.83 Ac.

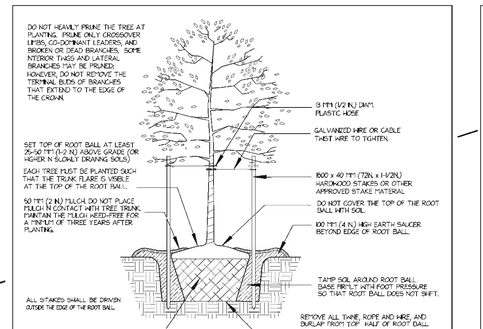
10 0 5 10 20 30 50 70

NOT TO SCALE

CITY LINE
TOWN LINE

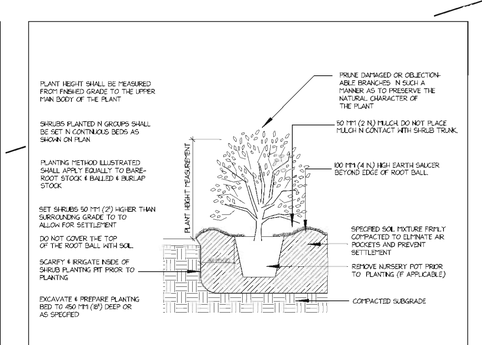
DOVER
MADBURY

Key	Qty	Botanical Name	Common Name	Size/Condition	Remarks
Trees					
Ar	6	Acer rubrum	RED MAPLE	3-3.5" B&B	
Qa	10	Quercus alba	WHITE OAK	3-3.5" B&B	
Shrubs					
VdC	17	Ilex glabra 'Shamrock'	SHAMROCK INKBERRY	#20 3-4'	Spaced 6' O.C.
Ornamental Grasses					
PvH	66	Panicum virgatum 'Heavy Metal'	HEAVY METAL SWITCH GRASS	#2	Spaced 3' O.C.
Perennials					
Ep	55	Echinacea purpurea	PURPLE CONEFLOWER	#1	Spaced 3' O.C.



DECIDUOUS TREE PLANTING DETAIL

TYPICAL INSTALLATION - 3" (75MM) CALIPER OR LESS



SHRUB PLANTING DETAIL

TYPICAL INSTALLATION

LANDSCAPE NOTES

-Contractor responsible for all final measurements.

-Design is for planning purposes only.

-All work to conform to the standards set by the City of Dover, NH

-The design is based on a plan provided by Civilworks NE and may require adjustment due to actual field conditions.

-The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.

-The contractor shall locate and verify the existence of all utilities prior to starting work. Contractor shall obtain a Dig-Safe Ticket prior to the start of work.

-Owner/Contractor responsible for verifying location of all property lines, easements, right of ways, restrictive covenants, zoning matters, or engineering issues such as land support, geology, and hydrology.

-The contractor shall verify layout and grades and inform the client of any discrepancies or changes in layout and/or grade relationships prior to construction.

-The client shall procure any required permits prior to construction.

-Contractor shall notify owner immediately is at any point during demolition or construction a site condition is discovered which may negatively impact the completed project.

This includes but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the site and the plan.

If a contractor is aware of a potential site issue and does not bring it to the attention of the owner immediately, they are responsible for the labor and material associated with correcting the problem.

-Substitutions and changes are not to be made without prior approval by the Owner or Designer.

-All material shall conform to the guidelines established by the current American Standard for Nursery Stock, published by the American Assoc. of Nurserymen.

-Landscaping beds shall have a minimum of 3" of shredded bark mulch applied, unless otherwise noted.

-All plants shall be installed as per details and the contract specified.

-All plants must be nursery grown.

-Plant material shall bear the same relationship to finished grade as to the original planting grade prior to digging.

-If a discrepancy exists between the number of plants on the supplied list and the number shown on the drawings, the greater number shall apply.

-All plants shall be watered thoroughly twice during the first 24 hour period after planting. All plants shall be watered weekly, or more often, if necessary during the first growing season.

-All daylilies and ornamental grasses shall be deadheaded and cut back every season.

-All disturbed areas will be dressed with a minimum of 4" of topsoil and planted as noted on the plans or seeded except plant beds.

-In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.

-Snow shall be stored a minimum of 5' from shrubs and trunks of trees.

-Landscape Architect not responsible for the means and methods of the contractor.

RYE BEACH LANDSCAPING

8 PERENNIAL PL
EXETER, NH
03833

603.964.6888
ryebeachlandscaping.com

SULLIVAN COMMERCIAL BUILDINGS
CROSBY ROAD
DOVER, NH 03835

DBS HOLDINGS LLC
77 DANIELLE LANE
DOVER, NH 03820

JEN MARTEL 00155 LICENSED LANDSCAPE ARCHITECT STATE OF NEW HAMPSHIRE

LANDSCAPE PLAN

SCALE N.T.S.

DATE 05/7/2020

L-1

Sullivan Commercial Buildings
Crosby Road, Dover, NH
May 2020

Ironwood
Landscape Architecture • Planning

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-35B

Application Type:	Major Subdivision
Applicant(s):	Robert Baldwin
Owner(s):	Robert Baldwin
Location:	144 Mast Rd. (Tax Map I, Lot 30)
Meeting Date:	October 13, 2020

INTENT: To amend the previously approved TDR subdivision by adding one additional unit bringing the total units to 5 (4 new). The applicant was previously approved to purchase two additional units, where the applicant previously was approved to purchase three units via TDR – 5 total

LOTS/UNITS PROPOSED: TDR to buy 1 additional units

AGENDA ITEM #: 4-H

ACREAGE: Parent lot is 2.50 acres

ZONING DISTRICT: R-40

EXISTING LAND USE: Residential

PROPOSED LAND USE: Additional residential

SURROUNDING LAND USE: Residential

ZBA ACTION: None

ATTACHMENTS: Application materials and revised subdivision plan

APPLICATION IS COMPLETE: Yes

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

PERMITS REQUIRED: N/A

WAIVERS REQUESTED: Allow the project to be considered a minor subdivision, 157-14 not 157-10.

Summary of Request and Background
The applicant received approval from the Board on June 23, 2020 to purchase 3 TDR units on a parcel. Per Chapter 170-27.2.G(3)(a). In August the Board agreed to sell the applicant an additional 2 lots, with 1 unit per lot. The applicant decided to add only one additional unit (total of 4 new units on site along the private Rupert Drive).

A Condition of the August approval was that the applicant come back with a revised subdivision plan, which he is now providing. Four new lots meets the threshold for a major subdivision. However the layout looks and acts as a minor subdivision, so the applicant seeks a waiver.

In lieu of a Home Owners' Association, the applicant will outline use and maintenance obligations for the private road through easements. There is a note on the plan indicating that this road cannot become public if there are any utility easements.

Consistency with Land Use Regulations
The plan is consistent with Chapter 157-10 of the City's Land Subdivision Regulations, which provides for subdivision of existing lots.

Chapter 157-51 states a waiver may be granted if the Board finds that
"(1) Strict conformity would pose an unnecessary hardship to the applicant and the waiver would not be contrary to the spirit and intent of the regulations; or
(2) Specific circumstances relative to the subdivision, or conditions of the land in such subdivision, indicate that the waiver will properly carry out the spirit and intent of the regulations."

Staff believes that the criteria 1 has been met, as the road and house layout would be the same under both scenarios.

STAFF RECOMMENDATION-Waivers:
The Planning Department recommends that the Planning Board accept the application, open the public hearing, and vote to grant the waivers per the reasoning provided by the applicant with the following conditions:

Conditions to Be Met Prior to Signing of Plans:

1. Add a note to the plat that the Board granted a waiver to Chapter 157-10 and that the Board found the criteria of Chapter 157-51.A have been met.

STAFF RECOMMENDATION-Plan:

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #P20-35B

Application Type:	Major Subdivision
Applicant(s):	Robert Baldwin
Owner(s):	Robert Baldwin
Location:	144 Mast Rd. (Tax Map I, Lot 30)
Meeting Date:	October 13, 2020

The Planning Department recommends that the Planning Board vote to approve amendment to the previously approved TDR subdivision with the following conditions:

Conditions to be Met Prior to Signing of the Plans:

1. The applicant shall provide a:
    a. Digital version of the plan to the Planning Department.
    b. CAD file to the satisfaction of the Asset Management Administrator.
    c. Revised legal documentation which includes the additional lot for maintenance and use of Rupert Drive.
2. Applicant shall revise the plan set to:
    a. Add the owners' signatures
    b. Add the Licensed Land Surveyor, Professional Engineer, Certified Wetland Scientist stamps and signatures
    c. Revise planning file number to P20-35B
    d. Add areas of each lot in acres and square feet
    e. Confirm lot numbers with Assessor
    f. Revise the plan to indicate one 3.5 – 4" caliper street tree per 35' of roadway

Conditions to Be Met Prior to Any Construction Activity:

3. As per the Notice of Decision for P20-35
4. Provide deed language to the Planning Department including regards to the specific restrictions set forth in 170-27.2.G.

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

5. As per the Notice of Decision for P20-35

Conditions to Be Met Prior to Occupancy:

6. As per the Notice of Decision for P20-35

144 Mast Road

Property Information

Property ID	I0030-000000
Location	144 MAST RD
Owner	BALDWIN ROBERT S
Land Use	101

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

Geometry updated 5/20/2020
Data updated Daily

City of Dover, New Hampshire
APPLICATION FOR EXTENSIONS OF/ AMENDMENTS TO/ WAIVERS FOR AN APPROVED PLAN

[Revised March 20, 2020]

Office Use Only	Amount Paid: _____	Date/Time Received: _____

APPLICANT INFORMATION

Name of Applicant: Robert Baldwin Telephone # 603-742-2121

Address of Applicant: 242 Central Ave, Dover, NH 03820 E-Mail _____

Project Name: Rupert Drive Project Location: 144 Mast Road

Planning File Number: 20-35 Date of Original Approval June 23, 2020

File Type: Conditional Use _____ Site Plan Review _____ Subdivision X

EXTENSION INFORMATION (*Note: notification of abutters required for first time extensions under Sec. 153-9.B and Sec. 155-24.B only)*

Extension type requested *(check one)*: ___Sec. 153-8.A ___Sec. 153-9.B ___Sec. 157-13.A ___Sec. 157-23.B

Current deadline date: _____ Number of Extensions Previously granted by Board _____

Reason(s) for extension/comments (*attach additional sheets as needed*):_____

_____

AMENDMENT INFORMATION

Condition(s) or portion of plan to be amended: Number of units to increase by 1

Reason(s) for amendment/comments (*attach additional sheets as needed*):Applicant is proposing to construct 1 additional single family homes as part of the TDR development.

_____

WAIVER INFORMATION

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

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

_____

_____

SIGNATURES

I/We hereby submit this application to the 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: 9-21-2020

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

Signature of Agent: _____ Date: 9/21/20

City of Dover, New Hampshire
TRANSFER OF DEVELOPMENT RIGHTS APPLICATION

[Revision Date: August 16, 2018]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Robert Baldwin Telephone # 603-742-2121

Address of Applicant: 242 Central Ave, Dover, NH 03820

E-Mail Address: robert@centralfallsrealty.com

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

Address of Property Owner:

PROPERTY INFORMATION

Assessor's Map # I Lot(s) # 30

Address of Property: 144 Mast Road

Zoning District(s) R-40 Rural Residential Overlay District(s) Wetlands

Existing Use of Property: Single family home

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

☒ Residential ☒ Residential (reduced size) ☐ Industrial | ☒ Purchase ☐ Land Preservation

Relief sought (Check All That Apply):

☐ Lot Size ☐ Frontage ☐ Setback ☒ Increase by 1 units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

The applicant is proposing to amend the approved TDR subdivision to add an additional unit at the end of the proposed private roadway, bringing the total number of units to 5, (4 new).

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 TDR Plans: Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

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: 9-21-2020

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

Signature of Agent: _____ Date: 9/21/2020

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: 9-21-2020

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com
crberry@metrocast.net

September 21, 2020

City of Dover
Attention: City Planner Donna Benton
288 Central Ave
Dover, NH 03820

Re: Proposed TDR Subdivision Amendment
Robert Baldwin
144 Mast Road
Tax Map I, Lot 30

Dear Mrs. Benton,

On behalf of our client Robert Baldwin Berry Surveying & Engineering (BS&E) is submitting a proposed TDR Subdivision Amendment at 144 Mast Road.

Background and General Narrative:

Robert Baldwin, owns the parcel known as 144 Mast Road in Dover, NH (Tax Map I, Lot 30). Berry Surveying & Engineering has conducted an on-site survey of the parcel which includes a topographic analysis as well as a wetlands analysis. Stoney Ridge Environmental was on site and delineated the wetlands. The lot has an existing house and driveway on the eastern side of the lot. The site is mostly open with trees along the east and west boundary lines.

The Proposal:

The applicant is requesting to utilizing the TDR regulations within the City of Dover zoning regulations to obtain an additional unit, bringing the total number of units to 5 (4 new and 1 existing).

Since the original TDR application was approved by the City, the applicant has met with planning to discuss the proposed amendment. As a result of the meeting, two units were originally proposed to be added to the development, however the applicant is only proposing one additional unit to be built of Rupert Drive (for a total of 4 new units). Additionally, the proposed private roadway will modified from a 15' wide traveled way to a 20' traveled way to better accommodate the additional unit.

The applicant has begun construction on the original approval and has installed the first three foundations along Rupert Drive. Additionally, the applicant has been working with the City of Dover Engineering department regarding utility design and layout.

Respectfully Submitted,
BERRY SURVEYING & ENGINEERING

James F. Hayden
Engineering Technician

Christopher R. Berry
Principal, President

BERRY SURVEYING & ENGINEERING
335 Second Crown Pt. Rd., Barrington, NH 03825
(603) 332-2863 / (603) 335-4623 FAX
www.BerrySurveying.Com

P20-35B **144 Mast Road**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
I0020-K00003	2 CORBIN DR	LU SHIWEI &	MO WEIWEI	2 CORBIN DR	DOVER	NH	03820-4488
I0020-K00004	4 CAILEYANNA LN	PAIVA TIMOTHY R	CRICENTI-PAVIA DOREEN A	4 CAILEY ANNA LN	DOVER	NH	03820
I0020-K00017	3 CORBIN DR	BENNETT MARK J &	BENNETT LORI J	3 CORBIN DR	DOVER	NH	03820
I0030-A00000	7 SPRUCE LN	WIGLEY ROCHELLE A		7 SPRUCE LANE	DOVER	NH	03820
I0030-B00000	SUNNYBROOKE DR	WHITE ENTERPRISES INC		ROUTE 108	DURHAM	NH	03824
I0030-B00001	3 SUNNYBROOKE DR	CHAMBERLAIN CRAIG		3 SUNNYBROOKE DRIVE	DOVER	NH	03820
I0030-B00002	5 SUNNYBROOKE DR	IOVANNE LINDSAY C	IOVANNE LINDA J	5 SUNNYBROOKE DRIVE	DOVER	NH	03820
I0030-B00003	7 SUNNYBROOKE DR	PERKINS DEBORAH A		7 SUNNYBROOKE DR	DOVER	NH	03820
I0030-B00004	9 SUNNYBROOKE DR	GRAY STACY R		18 MRSTON RD	HAMPTON FALLS	NH	03844-2041
I0030-B00021	10 MORGAN WY	ALLEN TIMOTHY P &	ALLEN VICKI	10 MORGAN WY	DOVER	NH	03820
I0030-B00022	8 MORGAN WY	RICHARDSON SUSAN J		8 MORGAN WY	DOVER	NH	03820
I0030-B00023	6 MORGAN WY	O SHAUGHNESSY HILERY JOSEPH &	PAGE NANCY D	6 MORGAN WY	DOVER	NH	03820
I0030-B00024	4 MORGAN WY	POLYCHRONIS THOMAS		PO BOX 576	NEWMARKET	NH	03857
I0030-B00025	2 MORGAN WY	TODARO CHARLES R &	TODARO GLORIA J	2 MORGAN WAY	DOVER	NH	03820
I0030-B00026	2 SUNNYBROOKE DR	MITCHELL DANA & TINA TRUSTEES	MITCHELL DANA AND TINA REVOCABLE LIVING	1 PATRIDGE LN	DOVER	NH	03820
I0030-B00028	1 MORGAN WY	WEBBER DANIEL JR & POLLY REVOCABLE TRUST	WEBBER DANNIELLE C	3 PEARL ST	DOVER	NH	03820-3147
I0030-B00029	3 MORGAN WY	TOLWOOD REALTY GROUP LLC		242 CENTRAL AVE	DOVER	NH	03820
I0030-B00030	5 MORGAN WY	TOLWOOD REALTY GROUP LLC		242 CENTRAL AVE	DOVER	NH	03820
I0030-B00031	7 MORGAN WY	TOLWOOD REALTY GROUP LLC		242 CENTRAL AVE	DOVER	NH	03820
I0030-B00038	1 SUNNYBROOKE DR	MAHAN ROBERT J &	MAHAN SANDRA L	1 SUNNYBROOKE DRIVE	DOVER	NH	03820
I0031-000000	2 SPRUCE LN	NASON PETER A &	NASON LORI A	2 SPRUCE LN	DOVER	NH	03820
I0032-A00000	135 MAST RD	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
I0033-000000	6 SPRUCE LN	MARSHALL JENNIE A &	LOUCKS FREDERICK S	140 SILVER ST	DOVER	NH	03820-3953
I0051-A00001	131 MAST RD	RELINSKI LAURIE J &	TURNER DONNA	131 MAST RD	DOVER	NH	03820
I0030-000000	144 MAST RD	BALDWIN ROBERT S		144 MAST RD	DOVER	NH	03820
			ROBERT BALDWIN	242 CENTRAL AVENUE	DOVER	NH	03820
			BERRY SURVEYING & ENGINEERING	335 SECOND CROWN POINT ROAD	BARRINGTON	NH	03825

TRANSFER OF DEVELOPMENT RIGHTS
RE-SUBDIVISION PLAN
FOR
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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SHEET 1 ~ NEIGHBORHOOD PLAN
SHEET 2 ~ EXISTING CONDITIONS PLAN
SHEET 3 ~ TDR RE-SUBDIVISION PLAN*
SHEET 4 ~ TDR TOPO PLAN
SHEET 5 ~ EASEMENT PLAN*
SHEET 6 ~ SITE PLAN
SHEET 7 ~ GRADING PLAN
SHEET 8 ~ PLAN & PROFILE SHARED DRIVEWAY
SHEET 9 ~ EROSION AND SEDIMENT CONTROL PLAN
SHEET 10 ~ C101 CONSTRUCTION DETAILS
SHEET 11 ~ C102 CONSTRUCTION DETAILS
SHEET 12 ~ C103 CONSTRUCTION DETAILS

ASTERISK INDICATES PLAN TO BE RECORDED

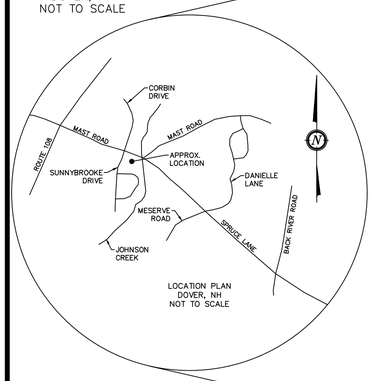
OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

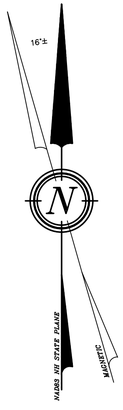
SURVEYOR OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

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

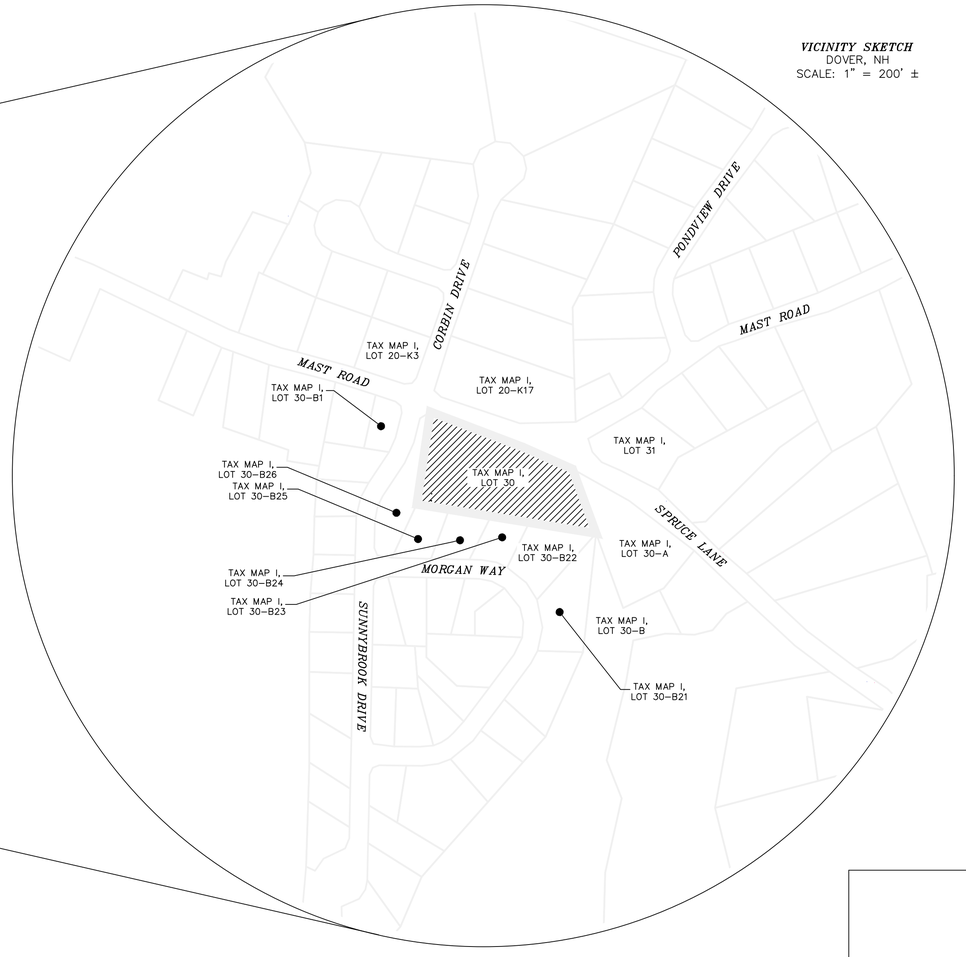
WETLAND SCIENTIST: STONEY RIDGE ENVIRONMENTAL
CYNTHIA M. BALCIUS, CSS, CWS, CPESC
229 PROSPECT MOUNTAIN ROAD
ALTON, NH 03809
(603) 776-5825

LOCATION PLAN
DOVER, NH
NOT TO SCALE





VICINITY SKETCH
DOVER, NH
SCALE: 1" = 200' ±



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.

GENERAL PLAN SET NOTES:

1.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.

2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

OWNER'S SIGNATURE DATE

APPROVED DOVER

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

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14743
LICENSED
PROFESSIONAL ENGINEER

DOVER FILE #P20-35

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

TDR RE-SUBDIVISION
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : AS NOTED
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

ABBREVIATION LEGEND:

V.G.C.	VERTICAL GRANITE CURB
E.O.P.	EDGE OF PAVEMENT
BITUM.	BITUMINOUS
E.S.H.W.T	ESTIMATED SEASONAL HIGH WATER TABLE
TYP.	TYPICAL
U.G.E.	UNDER GROUND ELECTRIC / UTILITY
HDPE	HIGH DENSITY POLYETHYLENE
ACP	ASBESTOS CLAY PIPE
F.G.	FINISHED GRADE
E.G.	EXISTING GRADE
L.F.	LINEAR FOOT
F.D.	FINISHED FLOOR
FND	FOUND
T.B.R.	TO BE REMOVED
P.L.	PROPERTY LINE
E.L.	EASEMENT LINE
T.B.M.	TEMPORARY BENCHMARK
T.D.R.	TRANSFER OF DEVELOPMENT RIGHTS
'/.	FOOT / FOOT

{ } 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:

- IRON BOUND (FND)
- REBAR (FND)
- RAILROAD SPIKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- CURB STOP
- GATE VALVE
- GAS VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- DRAIN MANHOLE
- TREE
- E113.83 EXISTING SPOT ELEVATION
- BUILDING SETBACK LINE
- GAS GAS GAS GAS EXISTING GAS LINE
- EWL EWL EXISTING WATER LINE
- S S EXISTING SEWER LINE
- D EXISTING DRAIN LINE
- OHU OHU OHU OHU OVERHEAD UTILITIES
- 116 EXISTING CONTOUR MINOR
- 115 EXISTING CONTOUR MAJOR

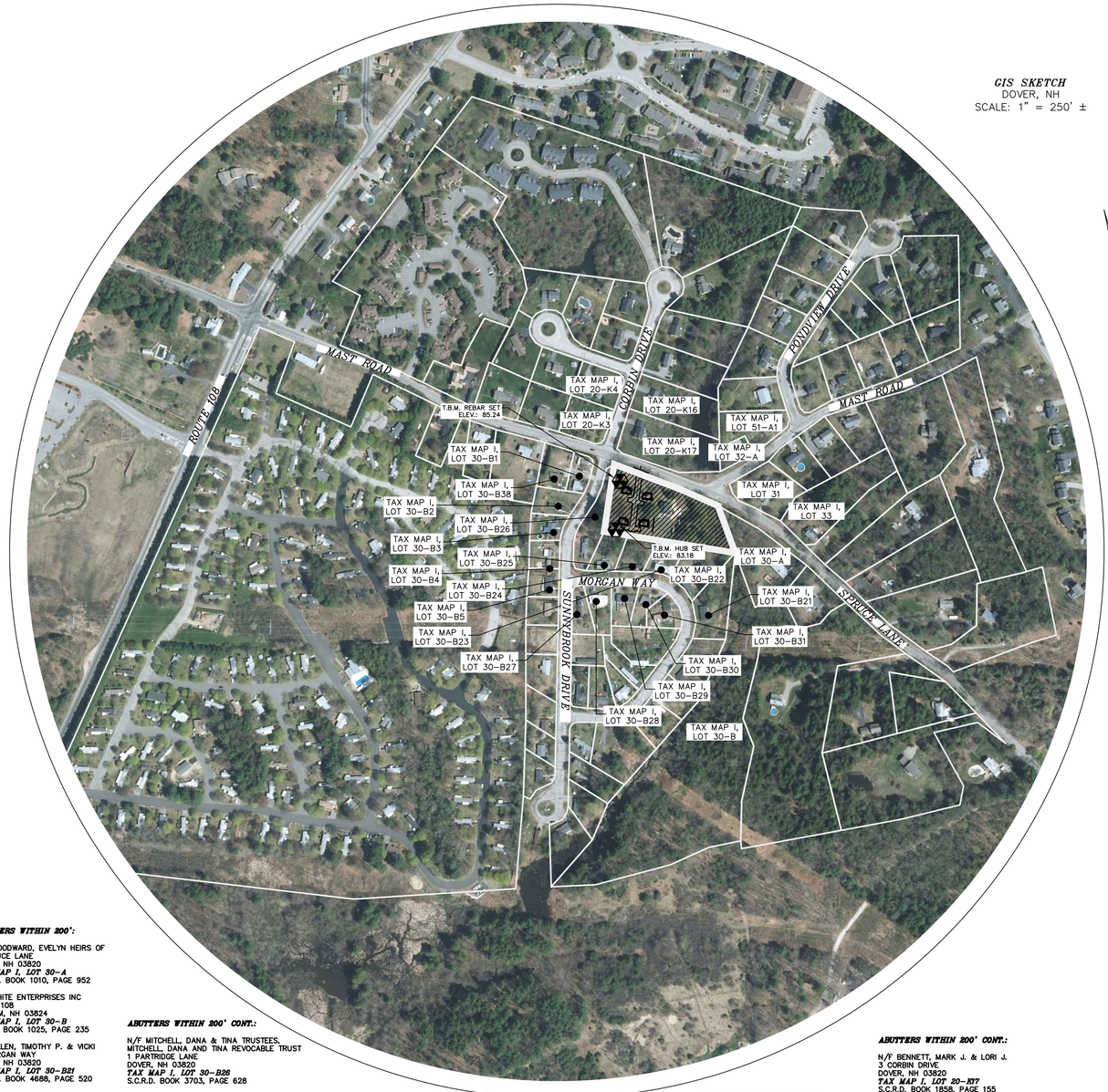
PROPOSED LEGEND:

- IRON BOUND ~TBS~
- TEMPORARY BENCHMARK
- F114.05 PROPOSED SPOT ELEVATION
- EASEMENT LINE
- GAS GAS GAS GAS PROPOSED GAS LINE
- W W PROPOSED WATER LINE
- S S PROPOSED SEWER LINE
- D PROPOSED DRAIN LINE
- U.D. U.D. PROPOSED UNDERDRAIN
- F41 PROPOSED CONTOUR MINOR
- F40 PROPOSED CONTOUR MAJOR
- SAW CUT LINE
- UGE UGE PROPOSED UNDERGROUND UTILITY
- SF SILT FENCE / EROSION MIX BERM
- SS SS SS FILTREXX SILT SOXX (8" or 12" AS NOTED)
- C C C ORANGE CONSTRUCTION PERIMETER FENCE

TEST PIT #1
0–12 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
12–36 " 10YR 5/6 FINE SAND, SUB GRANULAR, LOOSE
36–84" 10YR 6/2 FINE SAND, SUB GRANULAR, LOOSE
TERMINATED: 84+ "
E.S.H.W.T.: 84+ "
RESTRICTIVE LAYER: N/A
ROOTS TO 24"
GROUND WATER OBSERVED: N/A
P=2 MIN./IN.

TEST PIT #2
0–12 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
12–36 " 10YR 5/6 FINE SAND, SUB GRANULAR, LOOSE
36–84" 10YR 6/2 FINE SAND, SUB GRANULAR, LOOSE
TERMINATED: 84+ "
E.S.H.W.T.: 84+ "
RESTRICTIVE LAYER: N/A
ROOTS TO 24"
GROUND WATER OBSERVED: N/A
P=2 MIN./IN.

GIS SKETCH
DOVER, NH
SCALE: 1" = 250' ±



ABUTTERS WITHIN 200':

N/F WOODWARD, EVELYN HEIRS OF
7 SPRUCE LANE
DOVER, NH 03820
TAX MAP I, LOT 30–A
S.C.R.D. BOOK 1010, PAGE 952

N/F WHITE ENTERPRISES INC
ROUTE 108
DURHAM, NH 03824
TAX MAP I, LOT 30–B
S.C.R.D BOOK 1025, PAGE 235

N/F ALLEN, TIMOTHY P. & VICKI
10 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30–B21
S.C.R.D. BOOK 4688, PAGE 520

N/F RICHARDSON, SUSAN J
8 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30–B22
S.C.R.D. BOOK 4071, PAGE 283

N/F O'SHAUGHNESSY, HILERY JOSEPH & PAGE, NANCY D.
6 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30–B23
S.C.R.D. BOOK, 4413, PAGE 880

N/F POLYCHRONIS, THOMAS
P.O. BOX 576
NEWMARKET, NH 03857
TAX MAP I, LOT 30–B24
S.C.R.D. BOOK 2103, PAGE 670

N/F TODARO, CHARLES R. & GLORIA J.
2 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30–B25
S.C.R.D. BOOK 2595, PAGE 397

ABUTTERS WITHIN 200' CONT.:

N/F MITCHELL, DANA & TINA TRUSTEES,
MITCHELL, DANA AND TINA REVOCABLE TRUST
1 PARTRIDGE LANE
DOVER, NH 03820
TAX MAP I, LOT 30–B26
S.C.R.D. BOOK 3703, PAGE 628

N/F TOLWOOD REALTY GROUP LLC
242 CENTRAL AVENUE
DOVER, NH 03820
TAX MAP I, LOT 30–B31
S.C.R.D. BOOK 4173, PAGE 699

N/F TOLWOOD REALTY GROUP LLC
242 CENTRAL AVENUE
DOVER, NH 03820
TAX MAP I, LOT 30–B30
S.C.R.D. BOOK 4244, PAGE 551

N/F TOLWOOD REALTY GROUP LLC
242 CENTRAL AVENUE
DOVER, NH 03820
TAX MAP I, LOT 30–B29
S.C.R.D. BOOK 4492, PAGE 918

N/F WEBBER, DANIEL JR. & POLLY
REVOCABLE TRUST,
WEBBER, DANIELLE C.
3 PEARL STREET
DOVER, NH 03820–3147
TAX MAP I, LOT 30–B28
S.C.R.D. BOOK 4566, PAGE 821

ABUTTERS WITHIN 200' CONT.:

N/F SAI REAL ESTATE LLC
12 LEE ROAD
MADBURY, NH 03823
TAX MAP I, LOT 30–B27
S.C.R.D. BOOK 4366, PAGE 943

N/F DEBOIS, FRANCIS R. SR & LAURETTE S. TRUSTEE
DEBOIS FAMILY REVOCABLE TRUST
902 CELILIA COURT
LADY LAKE, FL 32159
TAX MAP I, LOT 30–B5
S.C.R.D. BOOK 4621, PAGE 34

N/F GRAY, STACY R.
P.O. BOX 247
RYE BEACH, NH 03871
TAX MAP I, LOT 30–B4
S.C.R.D. BOOK C3191PT19, PAGE ET205

ABUTTERS WITHIN 200' CONT.:

N/F PERKINS, DEBORAH A.
7 SUNNYBROOKE DRIVE
DOVER, NH 03820
TAX MAP I, LOT 30–B3
S.C.R.D. BOOK 4466, PAGE 753

N/F IOVANNE, LINDSAY C. & LINDA J.
5 SUNNYBROOKE DRIVE
DOVER, NH 03820
TAX MAP I, LOT 30–B2
S.C.R.D. BOOK 1571, PAGE 612

N/F CHAMBERLAIN, CRAIG
3 SUNNYBROOKE DRIVE
DOVER, NH 03820
TAX MAP I, LOT 30–B1
S.C.R.D. BOOK 1998, PAGE 64

ABUTTERS WITHIN 200' CONT.:

N/F MAHAN, ROBERT J. & SANDRA L.
1 SUNNYBROOKE DRIVE
DOVER, NH 03820
TAX MAP I, LOT 30–B38
S.C.R.D. BOOK 1772, PAGE 736

N/F LU, SHIWEI & MO, WEIWEI
2 CORBIN DRIVE
DOVER, NH 03820–4488
TAX MAP I, LOT 20–K3
S.C.R.D. BOOK 4332, PAGE 7

N/F PAIVA, TIMOTHY R. & CRICENTI–PAIVA, DOREEN A.
4 CAILEYANNA LANE
DOVER, NH 03820
TAX MAP I, LOT 20–K4
S.C.R.D. BOOK 2209, PAGE 209

N/F FOREST, JOHN A. JR & JULIE A.
7 CORBIN DRIVE
DOVER, NH 03820
TAX MAP I, LOT 20–K16
S.C.R.D. BOOK 4039, PAGE 702

ABUTTERS WITHIN 200' CONT.:

N/F BENNETT, MARK J. & LORI J.
3 CORBIN DRIVE
DOVER, NH 03820
TAX MAP I, LOT 20–K17
S.C.R.D. BOOK 1858, PAGE 155

N/F CITY OF DOVER
288 CENTRAL AVENUE
DOVER, NH 03820
TAX MAP I, LOT 32–A
S.C.R.D. BOOK 1406, PAGE 293

N/F RELINSKI, LAURIE J. & TURNER, DONNA
131 MAST ROAD
DOVER, NH 03820
TAX MAP I, LOT 51–A1
S.C.R.D. BOOK 2617, PAGE 183

N/F NASON, PETER A. & LORI A.
2 SPRUCE LANE
DOVER, NH 03820
TAX MAP I, LOT 31
S.C.R.D. BOOK 2738, PAGE 862

N/F MARSHALL, JENNIE A. & LOUCKS, FREDERICK S.
140 SILVER STREET
DOVER, NH 03820–3953
TAX MAP I, LOT 33
S.C.R.D. BOOK 1810, PAGE 486

DOVER FILE #P20–35

REVISION	DATE	DESCRIPTION
#1A	9–9–20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

NEIGHBORHOOD PLAN
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : AS SHOWN
DATE : AUGUST 4, 2020
FILE NO. : DB 2020–010

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

SOIL DATA:

WfB ~ WINDSOR LOAMY FINE SANDM CLAY SUBSOIL VARIANT, 0 TO 8% SLOPES

WdA ~ WINDSOR LOAMY SAND, 0 TO 3% SLOPES

SwB ~ SWANTON FINE SANDY LOAM, 3 TO 8% SLOPES

EaA ~ ELMWOOD FINE SANDY LOAM, 0 TO 3% SLOPES

SEE NRCS WEBSOIL
MODIFIED PER TEST HOLES

LEGEND:

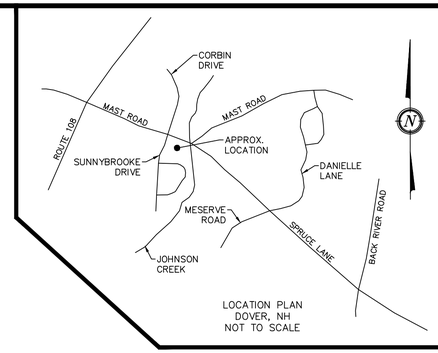
- IRON BOUND/REBAR ~FND~
- STEEL STAKE ~FND~
- GRANITE BOUND ~FND~
- UTILITY POLE/GUY WIRE
- SEWER MAN HOLE
- DRAIN MAN HOLE
- CB — CATCH BASIN
- PERIMETER BOUNDARY LINE
- BUILDING SETBACK LINE
- POORLY DRAINED WETLAND LINE
- 50' WETLAND BUFFER
- WdA — NRCS SOIL LINE/LABEL
- TREELINE
- EXISTING DRAIN LINE
- OHU — OVERHEAD UTILITIES
- EWL — WATER LINE
- ESL — SEWER LINE
- FND — FOUND
- TYP — TYPICAL
- S.C.R.D. — STRAFFORD COUNTY REGISTRY OF DEEDS

PLAN REFERENCES:

1.) "PLAN OF LAND, MARY SHAW, DOVER, NEW HAMPSHIRE" BY: G.L. DAVIS ASSOCIATES DATED: SEPTEMBER 1961 S.C.R.D. POCKET #4, FOLDER #2, PLAN #29

2.) "PLAN OF LOTS A & B FOR CHARLES I. WHITE, SPRUCE LANE, DOVER, NEW HAMPSHIRE" BY: G.L. DAVIS ASSOCIATES DATED: NOVEMBER 1977 S.C.R.D. PLAN #17C-48

3.) "SITE PLAN SUNNYBROOKE CONDOMINIUMS, MAST ROAD, DOVER, STRAFFORD COUNTY, N.H. FOR WHITE ENTERPRISES, INC." BY: THOMAS F. MORAN, INC. DATED: APRIL 22, 1987 S.C.R.D. PLAN #34A-131 & 132



LOCATION PLAN
DOVER, NH
NOT TO SCALE

N/F LU, SHIWEI & MO, WEIWEI
2 CORBIN DRIVE
DOVER, NH 03820
TAX MAP I, LOT 20-K-3
S.C.R.D. BOOK 4332, PAGE 7

N/F BENNETT, MARK J. & LORI J.
3 CORBIN DRIVE
DOVER, NH 03820
TAX MAP I, LOT 20-K-17
S.C.R.D. BOOK 1858, PAGE 155

N/F CITY OF DOVER
288 CENTRAL AVE.
DOVER, NH 03820
TAX MAP I, LOT 32-A
S.C.R.D. BOOK 1406, PAGE 293

N/F NASON, PETER A. & LORI A.
2 SPRUCE LANE
DOVER, NH 03820
TAX MAP I, LOT 31
S.C.R.D. BOOK 2738, PAGE 862

N/F THE DANA C. MITCHELL AND TINA M. MITCHELL REV. LIVING TRUST
MITCHELL, DANA & TINA, TRUSTEES
1 PATRIDGE LANE
DOVER, NH 03820
TAX MAP I, LOT 20-B-26
S.C.R.D. BOOK 3703, PAGE 628

N/F HEIRS OF EVELYN WOODWARD
7 SPRUCE LANE
DOVER, NH 03820
TAX MAP I, LOT 30-A
S.C.R.D. BOOK 1010, PAGE 952

N/F TODARO, CHARLES R. & GLORIA J.
2 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-25
S.C.R.D. BOOK 2595, PAGE 397

N/F POLYCHRONIS, THOMAS
P.O. BOX 576
NEW MARKET, NH 03857
TAX MAP I, LOT 30-B-24
S.C.R.D. BOOK 2103, PAGE 670

N/F O'SHAUGHNESSY, JOSEPH & PAGE, NANCY
6 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-23
S.C.R.D. BOOK 4413, PAGE 880

N/F RICHARDSON, SUSAN J.
8 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-22
S.C.R.D. BOOK 4071, PAGE 283

N/F ALLEN, TIMOTHY P. & VICKI
10 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-21
S.C.R.D. BOOK 4688, PAGE 520

N/F WHITE ENTERPRISES, INC.
ROUTE 108
DURHAM, NH 03824
TAX MAP I, LOT 30-B
S.C.R.D. BOOK 1025, PAGE 235

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 4759, PAGE 382

4.) LOT AREA: 93,968 Sq. Ft., 2.16 Ac.

5.) ZONING: R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
WETLAND BUFFER ~ 50'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING BOUNDARIES AND CONDITIONS OF TAX MAP I, LOT 30, LOCATED IN DOVER, N.H., AS OF FEBRUARY 21, 2020.

7.) 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 #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS.

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN FEBRUARY OF 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED FEBRUARY 2020.

11.) THIS SITE IS SERVICED BY MUNICIPAL SEWER AND WATER.

JURISDICTIONAL WETLANDS WERE DELINEATED BY CYNTHIA BALCIUS OF STONEY RIDGE ENVIRONMENTAL LLC IN FEBRUARY OF 2020 UTILIZING THE FOLLOWING STANDARDS:

1) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0. 2010. L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.). UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.
2) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. VERSION 3. APRIL 2004. NEIWPCC WETLANDS WORKGROUP. WILMINGTON, MA 01887.
3) NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.1.0 (HTTP://WETLAND_PLANTS.USACE.ARMY.MIL). U.S. ARMY CORPS OF ENGINEERS, ENGINEER RESEARCH AND DEVELOPMENT CENTER, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NH, AND BONAP, CHAPEN HILL.
4) STATE OF NEW HAMPSHIRE 2014 WETLAND PLANT LIST. LICHVAR, R.W., M. BUTTERWICH, N.C. MELVIN, AND W.N. KIRCHNER. 2014. THE NATIONAL WETLAND PLANT LIST: 2014 UPDATE OF WETLAND RATINGS. PHYTONEURON 2014-41:1-42.
5) CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. JANUARY 1987. WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1.
6) REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. JANUARY 2012, VERSION 2. U.S. ARMY CORPS OF ENGINEERS. ENVIRONMENTAL LABORATORY ERDC/EL TR-12-1.
7) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. DECEMBER 1979. L. COWARDIN, V. CARTER, F. GOLET, AND E. LAROE. US DEPARTMENT OF THE INTERIOR. FISH AND WILDLIFE SERVICE. FWS/OBS-79/31.

STONEY RIDGE ENVIROMENTAL, LLC.
CYNTHIA BALCIUS, CWS #61

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

DOVER FILE #P20-35

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

EXISTING CONDITIONS PLAN
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 30 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

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

LEGEND:

- ● REBAR W/ ID CAP ~TBS~
- ⊙ IRON BOUND/REBAR ~FND~
- ⊞ STEEL STAKE ~FND~
- □ GRANITE BOUND ~FND~
- UTILITY POLE/GUY WIRE
- PERIMETER BOUNDARY LINE
- PROPOSED BOUNDARY LINE
- BUILDING SETBACK LINE
- POORLY DRAINED WETLAND LINE
- 50' WETLAND BUFFER
- PROPOSED EASEMENT LINE
- TBS TO BE SET
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

STONEY RIDGE ENVIRONMENTAL, LLC.
CYNTHIA BALCIUS, CWS #61

JURISDICTIONAL WETLANDS WERE DELINEATED BY CYNTHIA BALCIUS OF STONEY RIDGE ENVIRONMENTAL LLC IN FEBRUARY OF 2020 UTILIZING THE FOLLOWING STANDARDS:

1) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0. 2010. L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.). UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.
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3) NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.1.0 (HTTP://WETLAND_PLANTS.USACE.ARMY.MIL). U.S. ARMY CORPS OF ENGINEERS, ENGINEER RESEARCH AND DEVELOPMENT CENTER, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NH, AND BONAP, CHAPEN HILL.
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1.) "PLAN OF LAND, MARY SHAW, DOVER, NEW HAMPSHIRE"
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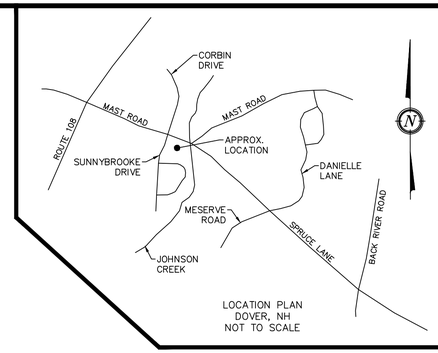
BY: G.L. DAVIS ASSOCIATES
DATED: NOVEMBER 1977
S.C.R.D. PLAN #17C-48

3.) "SITE PLAN SUNNYBROOKE CONDOMINIUMS, MAST ROAD, DOVER, STRAFFORD COUNTY, N.H. FOR WHITE ENTERPRISES, INC."
BY: THOMAS F. MORAN, INC.
DATED: APRIL 22, 1987
S.C.R.D. PLAN #34A-131 & 132

4.) "TDR SUBDIVISION PLAN"
BY: BERRY SURVEYING & ENGINEERING
DATED: JULY 6, 2020
ON FILE AT THIS OFFICE



LOCATION PLAN
DOVER, NH
NOT TO SCALE

N/F LU, SHIWEI & MO, WEIWEI
2 CORBIN DRIVE
DOVER, NH 03820
TAX MAP I, LOT 20-K-3
S.C.R.D. BOOK 4332, PAGE 7

N/F BENNETT, MARK J. & LORI J.
3 CORBIN DRIVE
DOVER, NH 03820
TAX MAP I, LOT 20-K-17
S.C.R.D. BOOK 1858, PAGE 155

N/F CITY OF DOVER
288 CENTRAL AVE.
DOVER, NH 03820
TAX MAP I, LOT 32-A
S.C.R.D. BOOK 1406, PAGE 293

N/F NASON, PETER A. & LORI A.
2 SPRUCE LANE
DOVER, NH 03820
TAX MAP I, LOT 31
S.C.R.D. BOOK 2738, PAGE 862

N/F THE DANA C. MITCHELL AND TINA M. MITCHELL REV. LIVING TRUST
MITCHELL, DANA & TINA, TRUSTEES
1 PATRIDGE LANE
DOVER, NH 03820
TAX MAP I, LOT 20-B-26
S.C.R.D. BOOK 3703, PAGE 628

N/F HEIRS OF EVELYN WOODWARD
7 SPRUCE LANE
DOVER, NH 03820
TAX MAP I, LOT 30-A
S.C.R.D. BOOK 1010, PAGE 952

N/F TODARO, CHARLES R. & GLORIA J.
2 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-25
S.C.R.D. BOOK 2595, PAGE 397

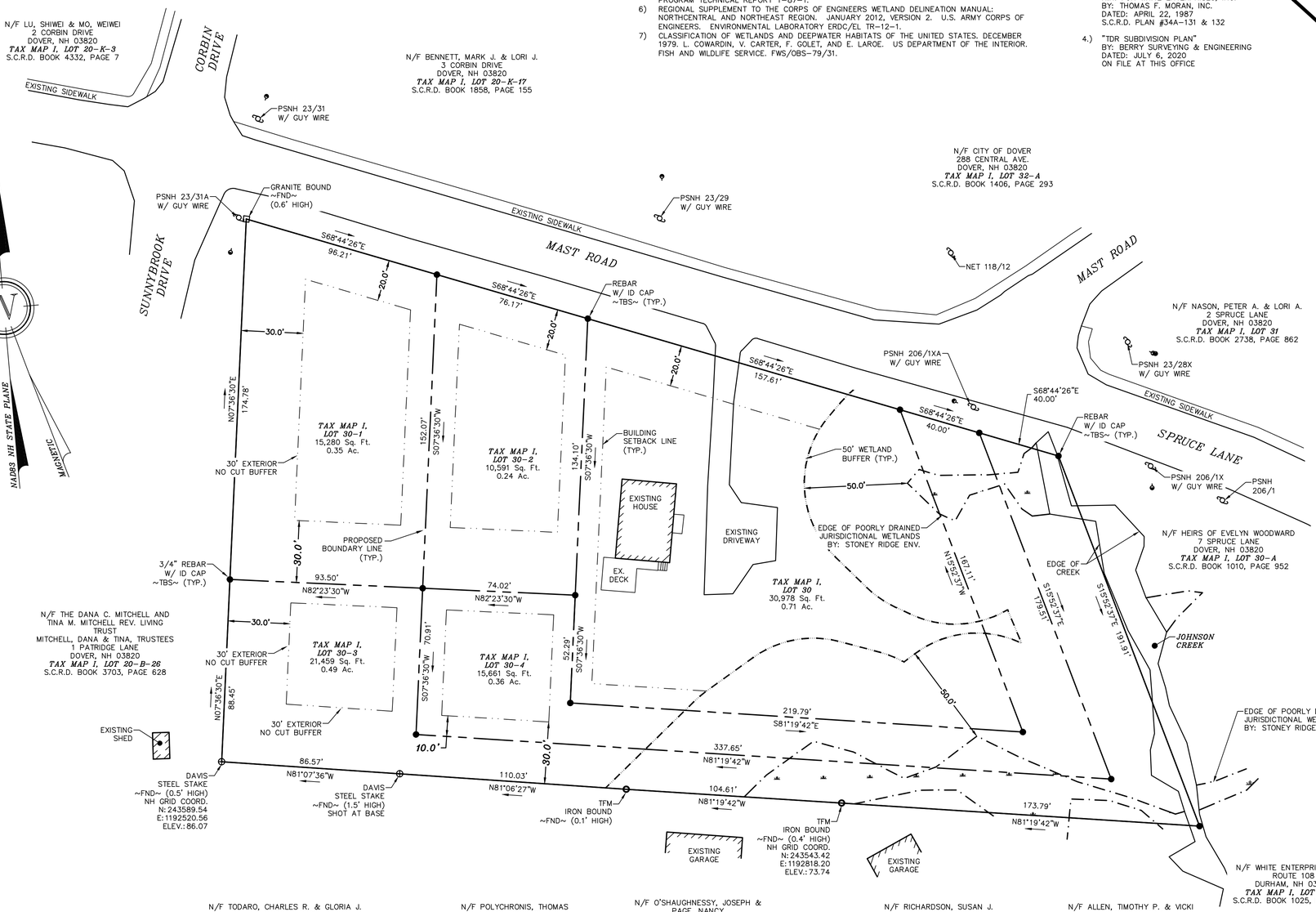
N/F POLYCHRONIS, THOMAS
P.O. BOX 576
NEW MARKET, NH 03857
TAX MAP I, LOT 30-B-24
S.C.R.D. BOOK 2103, PAGE 670

N/F O'SHAUGHNESSY, JOSEPH & PAGE, NANCY
6 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-23
S.C.R.D. BOOK 4413, PAGE 880

N/F RICHARDSON, SUSAN J.
8 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-22
S.C.R.D. BOOK 4071, PAGE 283

N/F ALLEN, TIMOTHY P. & VICKI
10 MORGAN WAY
DOVER, NH 03820
TAX MAP I, LOT 30-B-21
S.C.R.D. BOOK 4688, PAGE 520

N/F WHITE ENTERPRISES, INC.
ROUTE 108
DURHAM, NH 03824
TAX MAP I, LOT 30-B
S.C.R.D. BOOK 1025, PAGE 235



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 4759, PAGE 382

4.) LOT AREA: 93,968 Sq. Ft., 2.16 Ac.

5.) ZONING: R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
WETLAND BUFFER ~ 50'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

TRANSFER OF DEVELOPMENT RIGHTS REGULATIONS
ABUTTING A ROAD SETBACK ~ 20'
ABUTTING A LOT LINE SETBACK ~ 10'
STREET SIDES OF UNITS ~ 20.0'
ABUTTING STRUCTURES ~ 20.0'
NO CUT BUFFER FROM EXTERIOR PROPERTY LINE ~ 30.0'

6.) 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 #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN FEBRUARY OF 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED UNIT AS PART OF THE RE-SUBDIVISION.

10.) EASEMENT AREA #1 IS AN ACCESS & UTILITY EASEMENT BENEFITING TAX MAP I, LOT 30-2, 30-3 & 30-4. EASEMENT AREA #2 IS AN ACCESS & UTILITY EASEMENT BENEFITING TAX MAP I, LOT 30-1, 30-2 & 30-1. EASEMENT AREA #3 & 4 ARE ACCESS & UTILITY EASEMENTS BENEFITING TAX MAP I, LOTS 30-3 & 30-4. EASEMENT AREAS #5 & #6 ARE GRADING EASEMENTS BENEFITING TAX MAP I, LOT 30-2.

11.) SEE SHEET 6 FOR ALL OTHER STANDARD DOVER SUBDIVISION NOTES.

12.) EACH PROPOSED UNIT IS TO HAVE A CRUSHED STONE RESIDENTIAL DRIP EDGE FOR DRAINAGE.

TDR UNIT CALCULATIONS

1.) 93,698 SF - CONSERVATION = 60,111

2.) 63,390 * .85 = 51,094

3.) 53,881 * .85 = 43,430

4.) 43,430 SF /40,000 SF = 1.1 UNITS

5.) REMAINING 4 UNITS TO BE PURCHASED, THUS ALLOWING FOR 5 UNITS

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

DOVER FILE #P20-35

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

TDR RE-SUBDIVISION PLAN
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 30 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

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

LEGEND:

- IRON ROUND/REBAR ~FND~
- STEEL STAKE ~FND~
- GRANITE BOUND ~FND~
- UTILITY POLE/GUY WIRE
- SEWER MAN HOLE
- DRAIN MAN HOLE
- CATCH BASIN
- PERIMETER BOUNDARY LINE
- PROPOSED BOUNDARY LINE
- PROPOSED EASEMENT LINE
- BUILDING SETBACK LINE
- POORLY DRAINED WETLAND LINE
- 50' WETLAND BUFFER
- WdA NRCS SOIL LINE/LABEL
- TREELINE
- EXISTING DRAIN LINE
- OHU OVERHEAD UTILITIES
- EWL WATER LINE
- ESL SEWER LINE
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

JURISDICTIONAL WETLANDS WERE DELINEATED BY CYNTHIA BALCIUS OF STONEY RIDGE ENVIRONMENTAL LLC IN FEBRUARY OF 2020 UTILIZING THE FOLLOWING STANDARDS:

1) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0. 2010. L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.). UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.
2) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. VERSION 3. APRIL 2004. NEIWPCC WETLANDS WORKGROUP. WILMINGTON, MA 01887.
3) NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.1.0 (HTTP://WETLAND_PLANTS.USACE.ARMY.MIL). U.S. ARMY CORPS OF ENGINEERS, ENGINEER RESEARCH AND DEVELOPMENT CENTER, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NH, AND BONAP, CHAPEN HILL.
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DATED: NOVEMBER 1977
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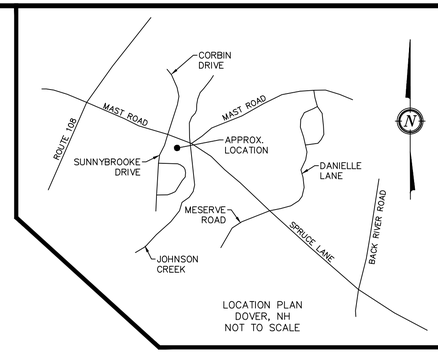
BY: THOMAS F. MORAN, INC.
DATED: APRIL 22, 1987
S.C.R.D. PLAN #34A–131 & 132

4.) "TDR SUBDIVISION PLAN"
BY: BERRY SURVEYING & ENGINEERING
DATED: JULY 6, 2020
ON FILE AT THIS OFFICE



LOCATION PLAN
DOVER, NH
NOT TO SCALE

SOIL DATA:

WfB ~ WINDSOR LOAMY FINE SANDM CLAY SUBSOIL VARIANT, 0 TO 8% SLOPES

WdA ~ WINDSOR LOAMY SAND, 0 TO 3% SLOPES

SwB ~ SWANTON FINE SANDY LOAM, 3 TO 8% SLOPES

EaA ~ ELMWOOD FINE SANDY LOAM, 0 TO 3% SLOPES

SEE NRCS WEBSOIL

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 4759, PAGE 382

4.) LOT AREA: 93,968 Sq. Ft., 2.16 Ac.

5.) ZONING: R–40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
WETLAND BUFFER ~ 50'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

TRANSFER OF DEVELOPMENT RIGHTS REGULATIONS
ABUTTING A ROAD SETBACK ~ 20'
ABUTTING A LOT LINE SETBACK ~ 10'
STREET SIDES OF UNITS ~ 20.0'
ABUTTING STRUCTURES ~ 20.0'
NO CUT BUFFER FROM EXTERIOR PROPERTY LINE ~ 30.0'

6.) 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 #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN FEBRUARY OF 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) THE INTENT OF THIS PLAN IS TO SHOW THE TOPOGRAPHY ON THE PROPOSED LOTS FOR A TDR SUBDIVISION.

10.) LOTS TO BE ACCESSED THROUGH ACCESS EASEMENTS. SEE EASEMENT PLAN FOR DETAILS.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

DOVER FILE #P20–35

REVISION	DATE	DESCRIPTION
#1A	9–9–20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

TDR TOPOGRAPHY PLAN
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 30 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020–010

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

LEGEND:

- ● REBAR W/ ID CAP ~TBS~
- ○ IRON BOUND/REBAR ~FND~
- ⊕ STEEL STAKE ~FND~
- □ GRANITE BOUND ~FND~
- UTILITY POLE/GUY WIRE

- PERIMETER BOUNDARY LINE
- PROPOSED BOUNDARY LINE
- BUILDING SETBACK LINE
- POORLY DRAINED WETLAND LINE
- 50' WETLAND BUFFER
- PROPOSED EASEMENT LINE

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

STONEY RIDGE ENVIRONMENTAL, LLC.
CYNTHIA BALCIUS, CWS #61

JURISDICTIONAL WETLANDS WERE DELINEATED BY CYNTHIA BALCIUS OF STONEY RIDGE ENVIRONMENTAL LLC IN FEBRUARY OF 2020 UTILIZING THE FOLLOWING STANDARDS:

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DATED: APRIL 22, 1987
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4.) "TDR SUBDIVISION PLAN"
BY: BERRY SURVEYING & ENGINEERING
DATED: JULY 6, 2020
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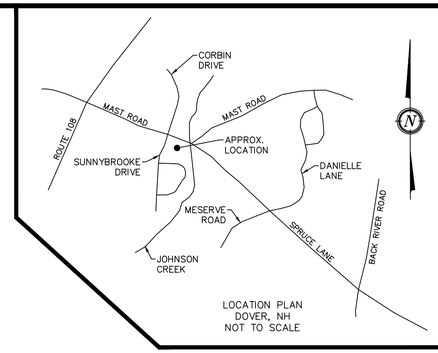
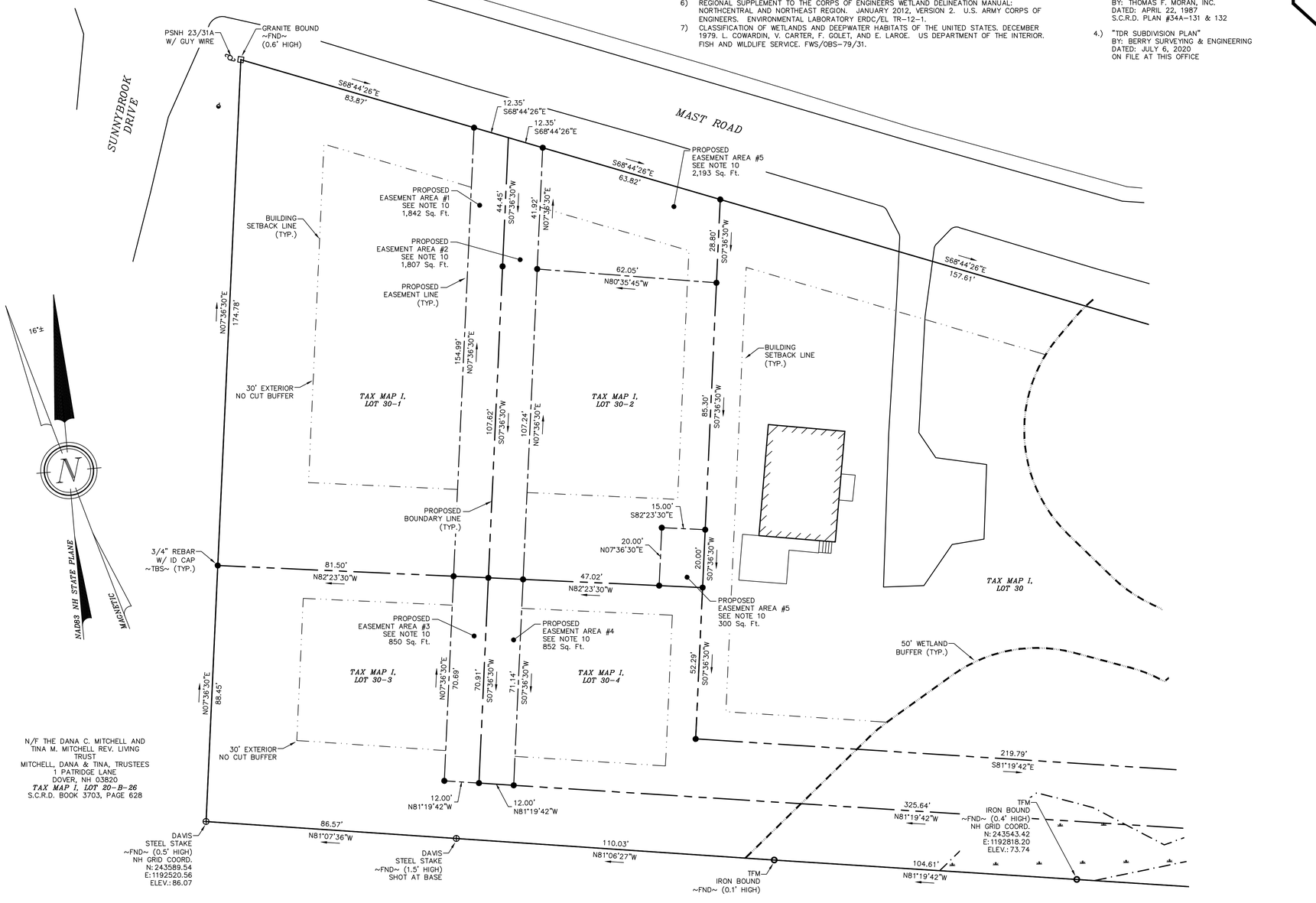


LOCATION PLAN
DOVER, NH
NOT TO SCALE



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MITCHELL, DANA & TINA, TRUSTEES
1 PATRIDGE LANE
DOVER, NH 03820
TAX MAP I, LOT 20–B–26
S.C.R.D. BOOK 3703, PAGE 628

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TAX MAP I, LOT 30–B–24
S.C.R.D. BOOK 2103, PAGE 670

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

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 4759, PAGE 382

4.) LOT AREA: 93,968 Sq. Ft., 2.16 Ac.

5.) ZONING: R–40 (RURAL RESIDENTIAL)
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SIDE ~ 25'
REAR ~ 30'
WETLAND BUFFER ~ 50'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

TRANSFER OF DEVELOPMENT RIGHTS REGULATIONS
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ABUTTING A LOT LINE SETBACK ~ 10'
STREET SIDES OF UNITS ~ 20.0'
ABUTTING STRUCTURES ~ 20.0'
NO CUT BUFFER FROM EXTERIOR PROPERTY LINE ~ 30.0'

6.) 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 #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN FEBRUARY OF 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED EASEMENTS AS PART OF THE SUBDIVISION.

10.) LOTS TO BE ACCESSED THROUGH ACCESS EASEMENTS. SEE EASEMENT PLAN FOR DETAILS.

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

DOVER FILE #P20–35

REVISION	DATE	DESCRIPTION
#1A	9–9–20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

EASEMENT PLAN
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020–010

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

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 4759, PAGE 382

4.) LOT AREA: 93,968 Sq. Ft., 2.16 Ac.

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ABUTTING A LOT LINE SETBACK ~ 10'
STREET SIDES OF UNITS ~ 20.0'
ABUTTING STRUCTURES ~ 20.0'
NO CUT BUFFER FROM EXTERIOR PROPERTY LINE ~ 30.0'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE SITE PLAN ELEMENTS FOR THE PROPOSED TDR SUBDIVISION.

7.) ALL ON–SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.

8.) THE SUBJECT PARCEL IS SERVICED BY MUNICIPAL WATER AND SEWER.

9.) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.

10.) APPROVED BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.

11.) 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.

12.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING INSPECTOR AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

13.) THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT
PROPERTY: NONE REQUIRED

14.) PROPOSED DISTURBANCE: 24,000 Sq. Ft.

15.) CALL DIG SAFE PRIOR TO BEGINNING WORK (1–888–344–7233)

16.) ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONSTRUCTION SHALL ALSO CONFORM TO THE CITY OF DOVER POLICIES AND PRACTICES.

17.) 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.

18.) LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF
ADJUSTMENT: NONE

19.) THE SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY–FRIDAY 7AM–6PM, WITH NO SATURDAY & SUNDAY 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.) FROM GROUND BREAKING THE SITE SHALL REMAIN ACCESSIBLE YEAR ROUND IN ALL WEATHER CONDITIONS.

21.) 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 IF 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.

22.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED. SUBDIVISION PLANS SHALL SHOW ANY EASEMENTS FOR THESE SERVICES.

23.) THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR ANY EARTH DISTURBING ACTIVITY OCCURS. PLEASE NOTE THAT NO WORK IS PROPOSED ADJACENT TOO OR WITHIN THE 50' WETLAND BUFFER.

24.) ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS. NOT APPLICABLE.

25.) 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 ACTIVITY OCCURS. NOT APPLICABLE.

26.) 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.

NOTES CONTINUED:

27.) THE PROPOSED USE FOR THE SITE IS FOUR NEW SINGLE FAMILY HOMES AND ONE EXISTING FOR A TOTAL OF 5 UNITS.

28.) COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

29.) ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

30.) ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

31.) APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.

32.) 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.

33.) 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.

34.) NO ROADWAY WITH PRIVATE UTILITY EASEMENTS SHALL BE ACCEPTED AS A PUBLIC ROAD BY THE CITY UNLESS THE EASEMENTS ARE EXPUNGED PRIOR TO THE TRANSFER OF LAND TO THE CITY. LICENSE AGREEMENTS FOR ANY AND ALL PRIVATE UTILITIES WITHIN THE RIGHT OF WAY MAY BE GRANTED BY THE CITY UPON ACCEPTANCE OF THE UNENCUMBERED ROADWAY CONSISTENT WITH APPLICABLE STATE LAW.

35.) THE CLOSEST HYDRANT IS LOCATED ACROSS FROM THE DRIVEWAY OF LOT 30, AS SHOWN ON SHEET 5.

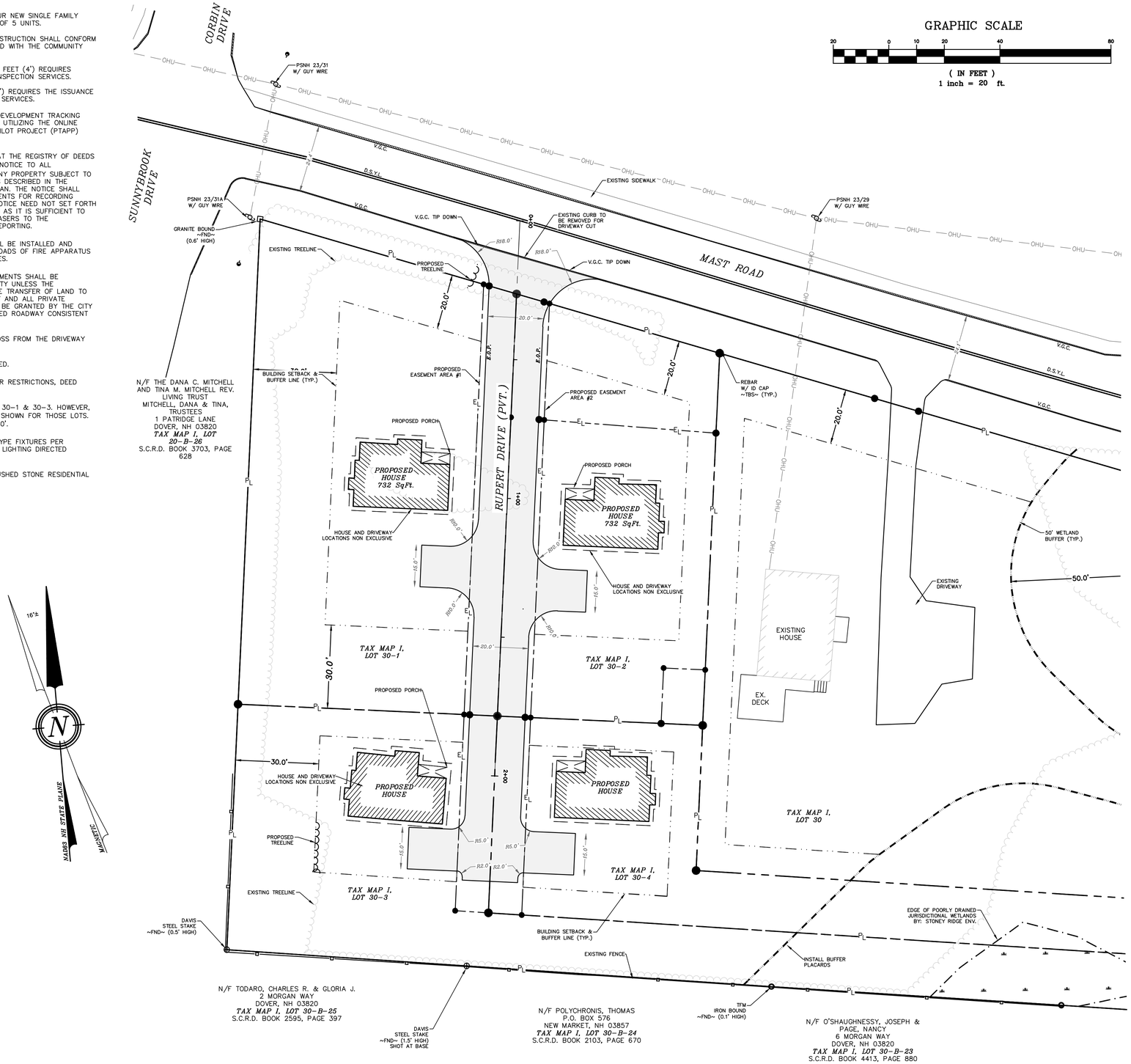
36.) LOTS 30–3 & 30–4 ARE TO BE SPRINKLED.

37.) SEE DOVER ZONING REGULATIONS FOR TDR RESTRICTIONS, DEED RESTRICTIONS REQUIRED.

38.) THERE IS A 10' SIDE SETBACK FOR LOTS 30–1 & 30–3. HOWEVER, A 30' NO CUT NO DISTURBED BUFFER IS SHOWN FOR THOSE LOTS. NO DEVELOPMENT CAN BE WITHIN THAT 30'.

39.) EXTERIOR LIGHTING SHALL BE CUT–OFF TYPE FIXTURES PER CHAPTER 153–14–E AND SHALL PROVIDE LIGHTING DIRECTED ON–SITE ONLY.

40.) EACH PROPOSED UNIT IS TO HAVE A CRUSHED STONE RESIDENTIAL DRIP EDGE FOR DRAINAGE.



DOVER FILE #P20–35

REVISION	DATE	DESCRIPTION
#1A	9–9–20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

SITE PLAN
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020–010

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7424
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 4759, PAGE 382

4.) LOT AREA: 93,968 Sq. Ft., 2.16 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED GRADING & UTILITY AND DRAINAGE DESIGN FOR THE PROPOSED TDR SUBDIVISION.

6.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE.

7.) 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.

8.) CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION

9.) 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

10.) 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.

11.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

12.) 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.

13.) 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).

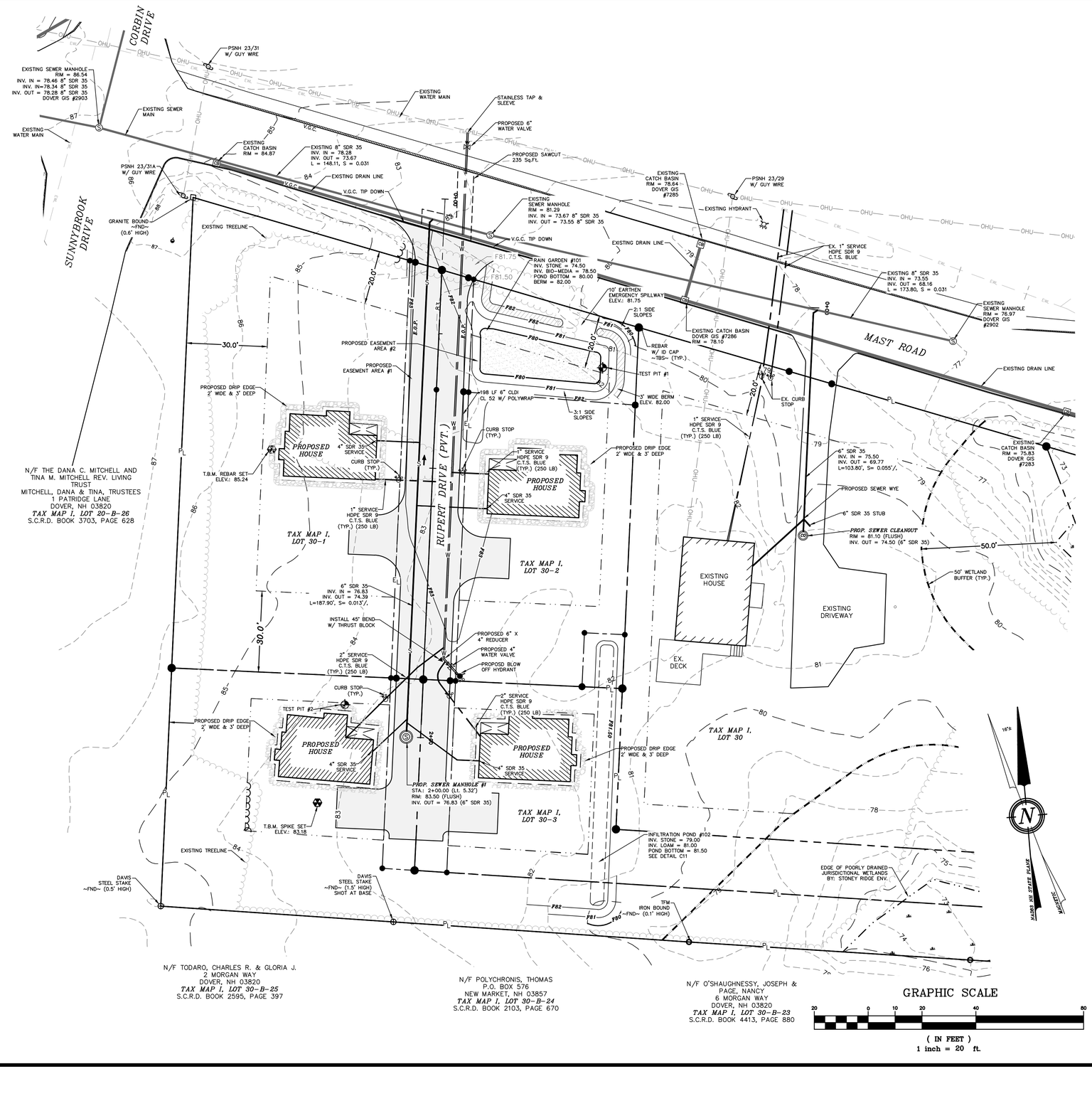
14.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

15.) 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.

16.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND DOVER CITY STAGF SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

17.) 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.

18.) DRIP EDGES ARE TO BE INSTALLED AROUND EACH UNIT AS PART OF THE DRAINAGE DESIGN.



DOVER FILE #P20-35

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

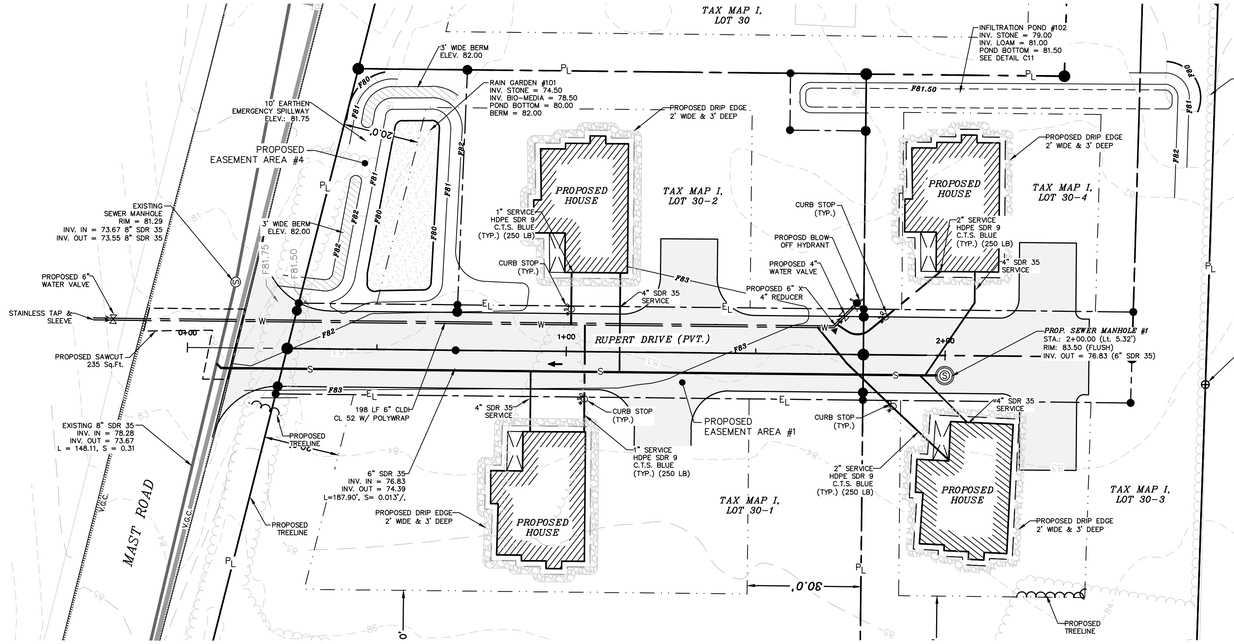
GRADING PLAN, UTILITY & EROSION AND SEDIMENT CONTROL PLAN

LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



PLAN VIEW DRIVEWAY SHARED DRIVEWAY 0+00 TO END

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 1043, PAGE 551

4.) LOT AREA: 94,977 Sq. Ft., 2.16 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE DRIVEWAY DESIGN PROFILE FOR THE PROPOSED DRIVEWAY, WITH VARIOUS CONSTRUCTION DETAILS.

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

DOVER FILE #P20-35

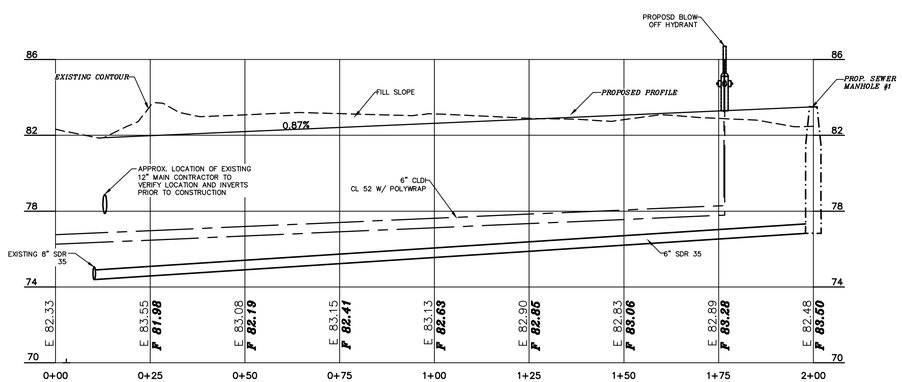
PROFILE VIEW DRIVEWAY SHARED DRIVEWAY 0+00 TO END

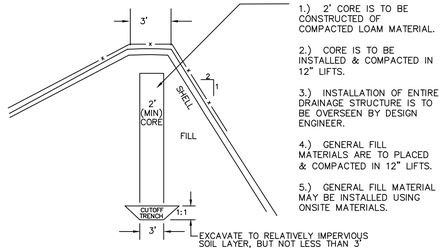
GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'





1.) 2' CORE IS TO BE CONSTRUCTED OF COMPACTED LOAM MATERIAL.

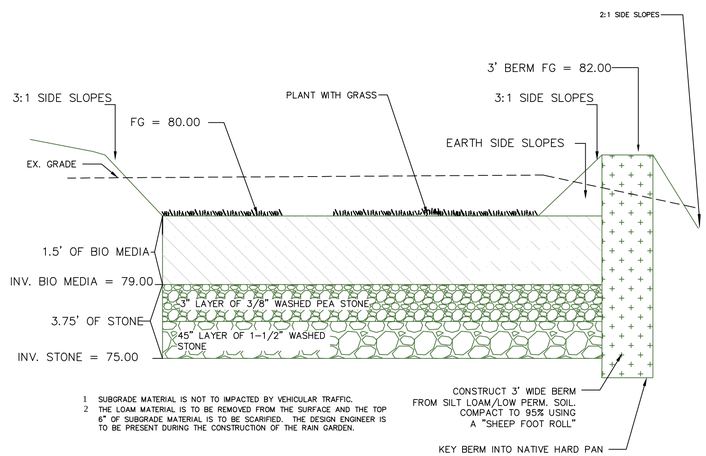
2.) CORE IS TO BE INSTALLED & COMPACTED IN 12" LIFTS.

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.

LOW PERMEABILITY MATERIAL GRADATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	95 – 100
#40	60 – 95
#100	40 – 60
#200	25 – 45



1 SUBGRADE MATERIAL IS NOT TO IMPACTED BY VEHICULAR TRAFFIC.
2 THE LOAM MATERIAL IS TO BE REMOVED FROM THE SURFACE AND THE TOP 6" OF SUBGRADE MATERIAL IS TO BE SCARIFIED. THE DESIGN ENGINEER IS TO BE PRESENT DURING THE CONSTRUCTION OF THE RAIN GARDEN.

TYPICAL RAIN GARDEN SECTION #101

NOTES

1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL FILTER MEDIA SHALL BE AS SHOWN ABOVE.
3. COMPACTION IS NOT TO OCCUR IN THE RAIN GARDEN AREAS PRIOR TO CONSTRUCTION. SCARIFICATION REQUIRED IN THE EVENT COMPACTION TAKES PLACE.
4. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
5. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
6. 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 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, VOLUME 2, DECEMBER 2008 AS AMENDED.

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.

FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5

CRUSHED STONE BEDDING *

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 –10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

CRUSHED STONE BEDDING *

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	90 – 100
#4"	20 – 55
# 8	5 –30
# 16	0 – 10
# 50	0 – 5

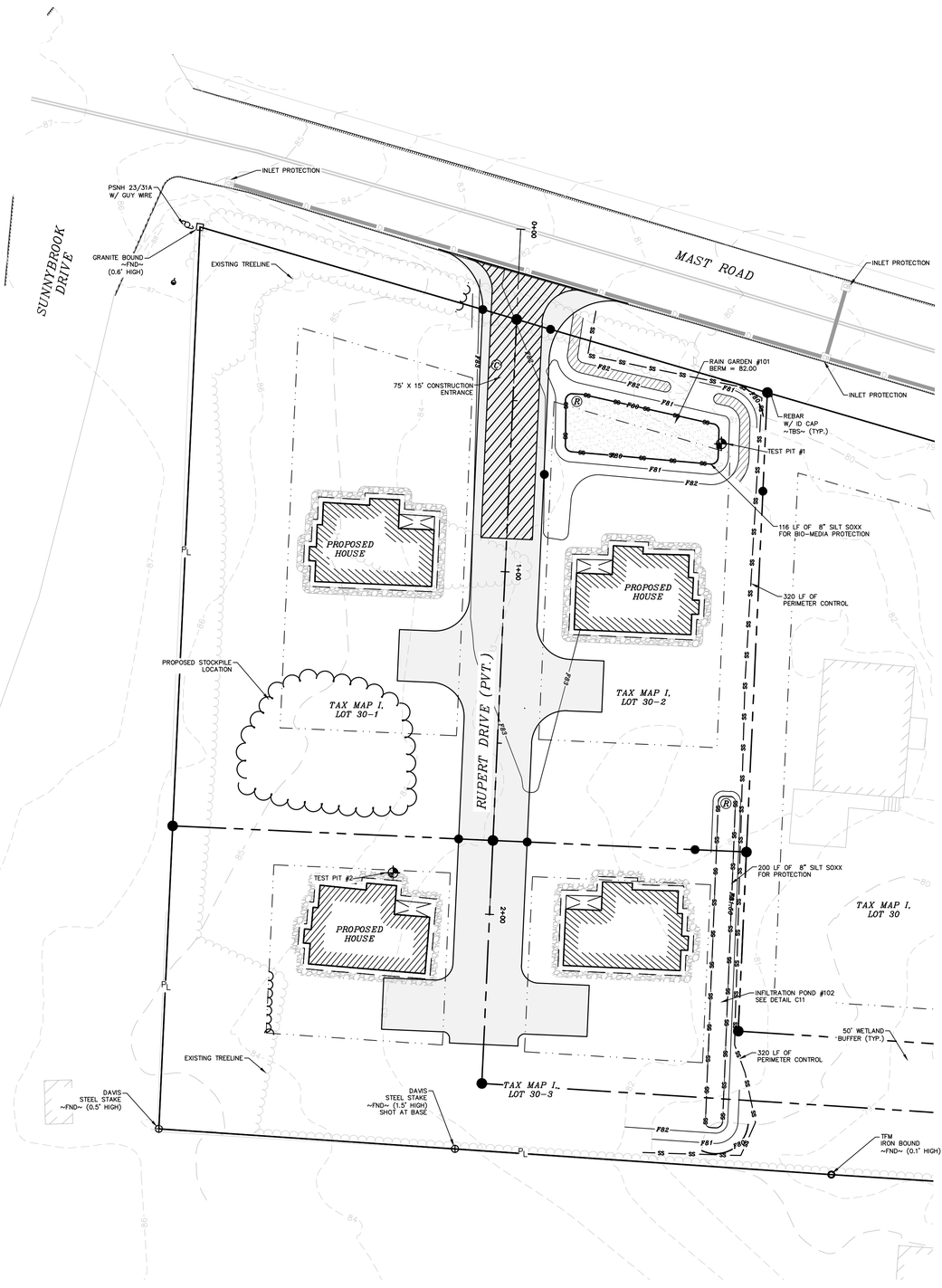
* EQUIVALENT TO STANDARD STONE SIZE #89 – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

PLAN AND PROFILE SHARED DRIVEWAY
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 7445 LICENSED PROFESSIONAL ENGINEER



SOILS & DEWATERING:

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 2012 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED MAY 3, 2012 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.

LEGEND:

- Ⓡ RAIN GARDEN BIO–MEDIA PROTECTION
- Ⓟ PERIMETER CONTROL
- Ⓒ RESIDENTIAL/ROADWAY CONSTRUCTION
- IRON PIPE (FND)
- IRON BOUND (FND)
- REBAR (FND)
- UTILITY POLE
- GUY WIRE
- BENCHMARK
- SF — SILT FENCE
- SS — FILTREXX SILTSOXX TREE LINE

NOTES:

1.) OWNER: ROBERT S. BALDWIN
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP I, LOT 30

3.) S.C.R.D. BOOK 4759, PAGE 382

4.) LOT AREA: 93,968 Sq. Ft., 2.16 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED EROSION AND SEDIMENT CONTROL DESIGN FOR THE PROPOSED DEVELOPMENT.

6.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE.

7.) CONTRACTOR MAY BE REQUIRED TO HAVE A CONSTRUCTION ENTRANCE DEPENDING ON SITE MANAGEMENT.

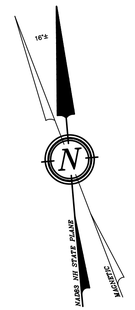
8.) CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE PARKING LOT, SIDEWALKS AND ANYTHING DISTURBED, TO ENSURE THAT NO SEDIMENT IS BEING TRACKED ONTO CHESTNUT STREET OR FOURTH STREET.

9.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLED.

10.) FUGITIVE DUST IS TO BE CONTROLLED THROUGHOUT THE CONSTRUCTION PROCESS IN ACCORDANCE WITH ENV–A 1000.

11.) CONTRACTOR IT TO MEET THE REQUIREMENTS SPECIFIED IN RSA 430:51–57 AND AGR 3800, RELATING TO INVASIVE SPECIES.

12.) 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.



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

DOVER FILE #P20–35

REVISION	DATE	DESCRIPTION
#1A	9–9–20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

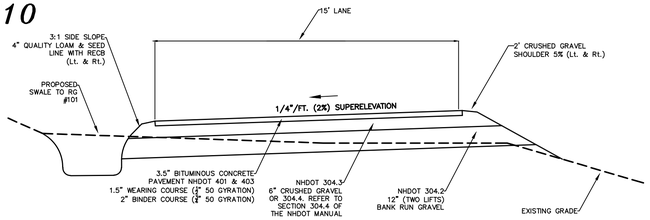
EROSION AND SEDIMENT CONTROL PLAN
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 4, 2020
FILE NO. : DB 2020–010

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

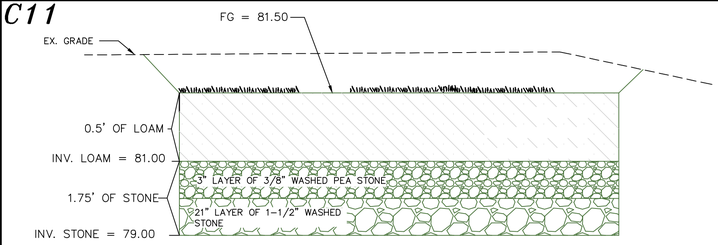
C10



TYPICAL SHARED DRIVEWAY SECTION

NOT TO SCALE

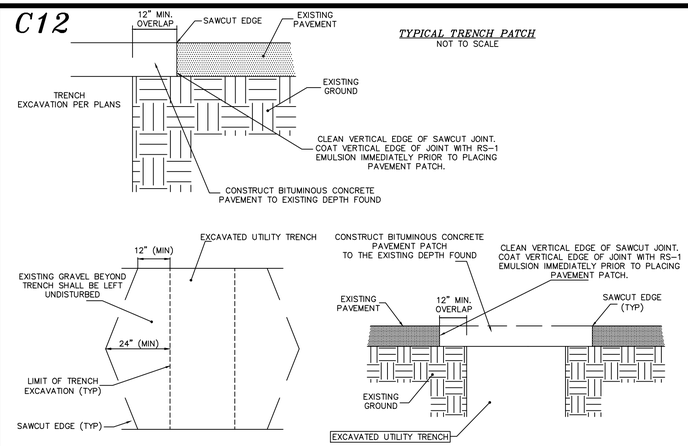
C11



1 SUBGRADE MATERIAL IS NOT TO IMPACTED BY VEHICULAR TRAFFIC.
2 THE LOAM MATERIAL IS TO BE REMOVED FROM THE SURFACE AND THE TOP 6" OF SUBGRADE MATERIAL IS TO BE SCARIFIED. THE DESIGN ENGINEER IS TO BE PRESENT DURING THE CONSTRUCTION OF THE RAIN GARDEN.

TYPICAL SECTION INFILTRATION POND #102

C12



NOTES
1. MACHINE CUT EXISTING PAVEMENT.
2. ALL TEMPORARY, DAMAGED, OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET NHDOT REQUIREMENTS.

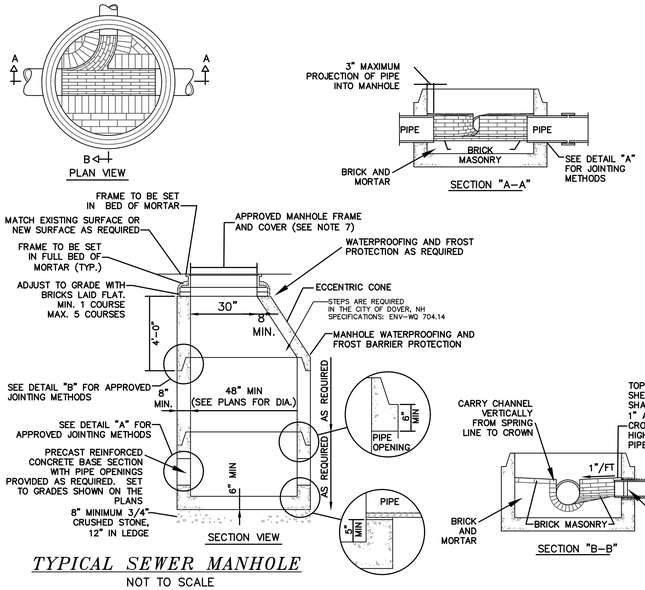
DOVER FILE #P20-35

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

C13

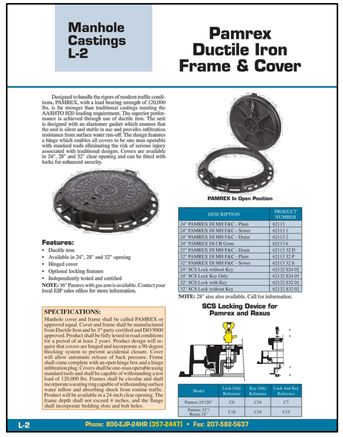
NOTES ON MANHOLE AND SEWER CONSTRUCTION:

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).
7) 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 PAMREX.
8) SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.
9) 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.
10) 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 SHEET D-102.
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.
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. SEE APPENDIX B, PAGE 14 FOR INTERNAL DROP DETAILS.



TYPICAL SEWER MANHOLE
NOT TO SCALE

C14

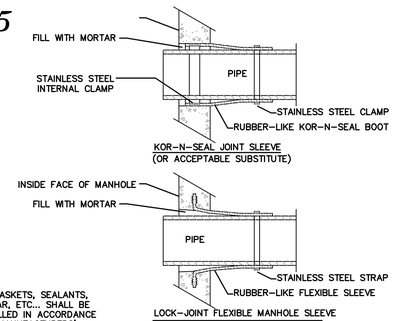


SEWER MANHOLE FRAME AND GRATE WILL BE PAMREX, OR APPROVED EQUAL, 24 INCH OPENING, DUCTILE IRON, H20 LOADING.

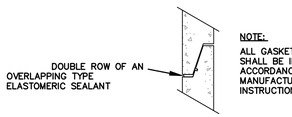
ALL FRAMES AND COVERS WILL BE NORTH AMERICAN MADE TO INCLUDE REQUIRED COVERS ON INDIVIDUAL RESIDENTIAL PUMP STATIONS.

SEWER MANHOLE COVER DETAIL
NOT TO SCALE

C15

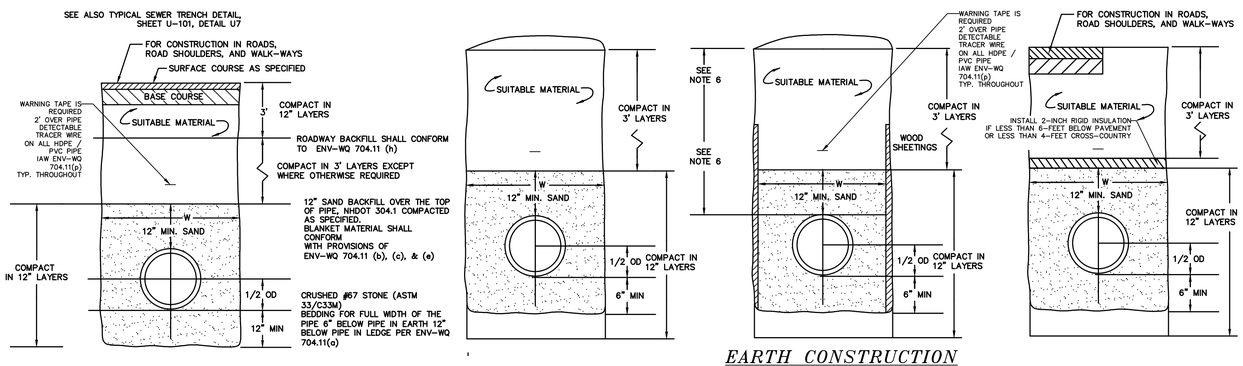


DETAIL "A" - PIPE TO MANHOLE JOINTS
NOT TO SCALE



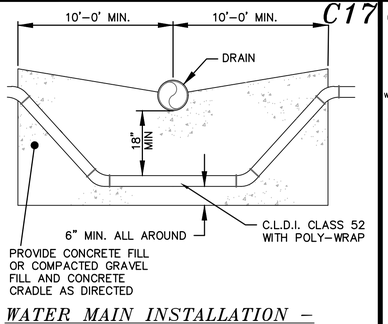
DETAIL "B" HORIZONTAL JOINTS
NOT TO SCALE

C16



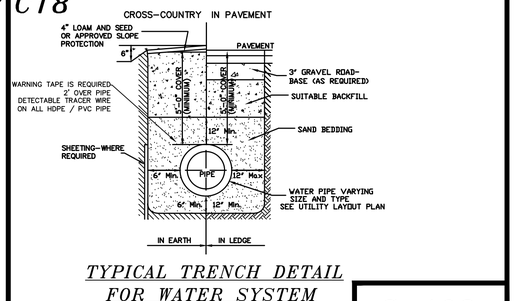
NOT TO SCALE

C17



WATER MAIN INSTALLATION - BELOW DRAIN & SEWER

C18



TYPICAL TRENCH DETAIL FOR WATER SYSTEM
NOT TO SCALE

C-102

CONSTRUCTION DETAILS
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

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

AS NOTED
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7043
LICENSED PROFESSIONAL ENGINEER

C19

TYPICAL THRUST BLOCKS

NOT TO SCALE

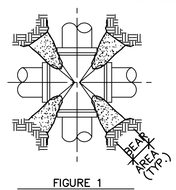


FIGURE 1
CROSS
(ONLY REQ'D IF ANY LEG IS LESS THAN 60 FT. LONG)

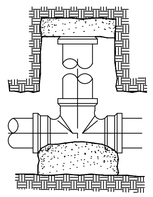


FIGURE 2
TEE, PLUG OR CAP

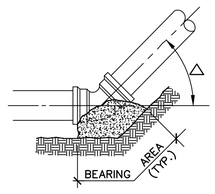


FIGURE 3
HORIZONTAL OR UPWARD VERTICAL BEND

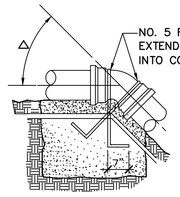


FIGURE 4
DOWNWARD VERTICAL BEND

PIPE I.D.	BEARING AREA, SQUARE FEET						VOLUME OF CONC. CU.YD		
	FIGURE 1	FIGURE 2	FIGURE 3 △				FIGURE 4 △		
			90°	45°	22-1/2°	11-1/4°	45°	22-1/2°	11-1/4°
4"	2	2	2	1	1	1	1.0	.5	.5
6"	2	3	3	2	1	1	1.5	1.0	.5
8"	2	5	6	3	2	1	2.0	1.0	.5
10"	3	7	10	5	3	1	4.0	2.0	1.0
12"	3	10	14	8	4	2			
14"	4	14	20	10	5	3			
16"	4	20	24	12	7	4			
18"	5	24	30	16	10	5			
20"	5	28	40	20	12	6			

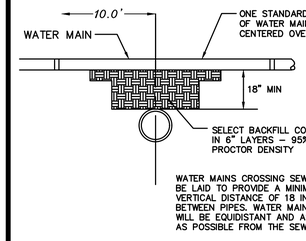
GENERAL NOTES:

1. ALL FITTINGS & EXPOSED REBAR TO BE RAPPED W/ TWO LAYERS OF 6 MIL. POLYETHYLENE WHERE COVERED WITH CONCRETE.
2. ALL CONCRETE SHALL BE CLASS C 3000 P.S.I. MINIMUM 28 DAYS COMPRESSIVE STRENGTH.
3. PLACE CONCRETE AGAINST UNDISTURBED EARTH.
4. TABLE DENOTES MINIMUM BEARING AREA OR VOLUME OF THRUST BLOCK. SPECIAL DESIGN FOR EACH INSTALLATION IS REQUIRED IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 P.S.F.
5. VERTICAL SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.
6. KEEP CONCRETE AWAY FROM FLANGE BOLTS AND FITTINGS.
7. MECHANICAL JOINTS AT ALL FITTINGS IE: BENDS,
8. TEES, CROSSES, AND VALVES SHALL BE THRUST RESTRAINT. (MEGA-LUG OR APPROVED EQUAL.

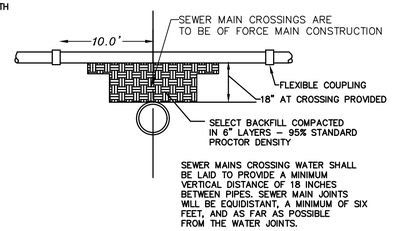
C20

SEPERATION NOTES:

1. WATER MAIN SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR WATER WORKS" SO-CALLED TEN STATE STANDARDS AND NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL DESIGN STANDARDS, ENV-WQ 700 ADOPTED OCTOBER 14, 2014.
2. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THEN THE PIPES SHALL BE INSTALLED IN A SEPARATE TRENCH AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
3. VERTICAL SEPARATION REQUIREMENTS APPLY TO WATER AND SEWER MAINS AND SERVICE LINES. WHERE SEWER CROSSES WATER MAIN AND WATER SERVICE CROSSES SEWER MAIN, 18 INCH VERTICAL CLEARANCE SHALL BE PROVIDED WITH WATER OVER SEWER.



WATER MAIN ABOVE SEWER

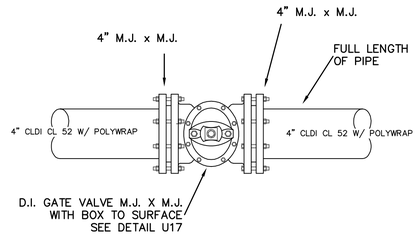


WATER MAIN BELOW SEWER

TYPICAL WATER/SEWER SEPERATION DETAILS

NOT TO SCALE

C21



SHUTOFF VALVE DETAIL

NOT TO SCALE

1.) ALL VALVES ARE TO OPEN RIGHT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

DOVER FILE #P20-35

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

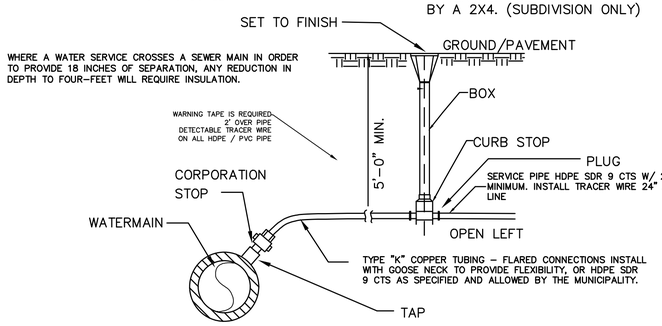
CONSTRUCTION DETAILS
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP 1, LOT 30

C22

TYPICAL WATER SERVICE CONNECTION

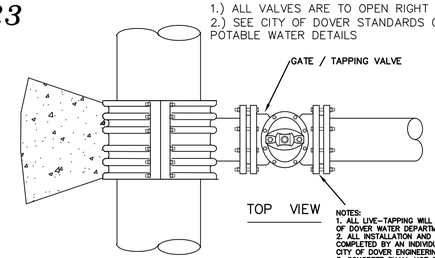
NOT TO SCALE

THE END OF THE INSTALLED WATER SERVICE TO BE MARKED BY A 2X4. (SUBDIVISION ONLY)



C23

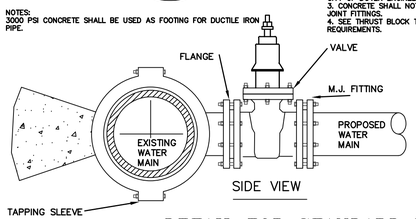
1.) ALL VALVES ARE TO OPEN RIGHT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS



TOP VIEW

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.

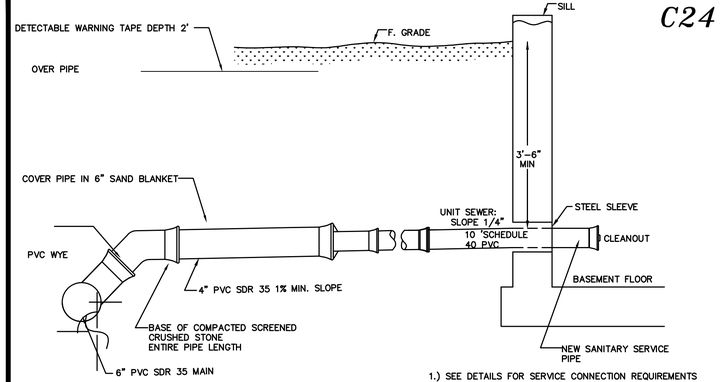


SIDE VIEW

DETAIL FOR STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

NOT TO SCALE

C24



DETAIL OF UNIT SEWER SERVICE

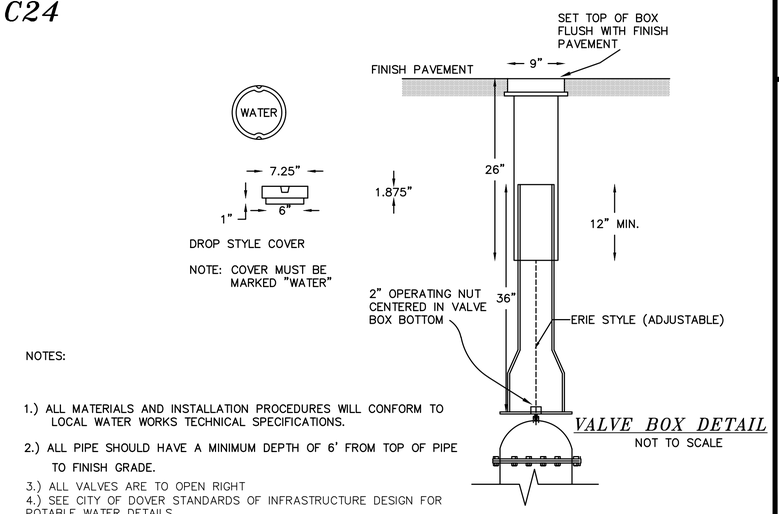
NOT TO SCALE

1.) SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS

2.) SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.

3.) CLEANOUTS SHALL BE INSTALLED INSIDE EACH BUILDING EXIT POINT

C24



NOTES:

1.) ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO LOCAL WATER WORKS TECHNICAL SPECIFICATIONS.

2.) ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 6' FROM TOP OF PIPE TO FINISH GRADE.

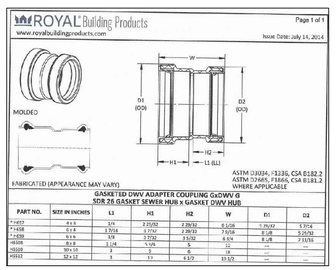
3.) ALL VALVES ARE TO OPEN RIGHT

4.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

VALVE BOX DETAIL

NOT TO SCALE

C25



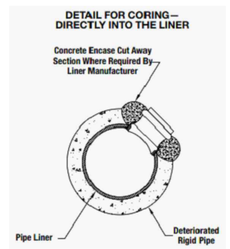
PART NO.	SIZE IN INCHES	L1	H1	H2	W	D1	D2
* H457	4 x 4	3/4	2.25/32	2.29/32	6.1/16	1.15/32	3.7/16
* H458	6 x 6	3.7/16	3.27/32	2.29/32	7.11/16	8.1/8	5.25/32
H4589	6 x 4	3/8	3.7/32	3.7/32	8.3/4	8.1/8	7.11/32
H4588	8 x 8	1.1/4	4.1/4	5	11	---	---
H4599	10 x 10	2	5	6	14	---	---
H4612	12 x 12	3	5.1	6.1/2	17.1/2	---	---

COUPLING DETAIL

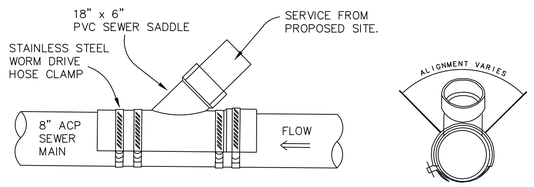
NOT TO SCALE

HOLE SAW SIZING CHART

INSERTA TEE Size	Hole Saw Size
2" (51 mm)	2⅝" (67 mm)
3" (75 mm)	3¾" (95 mm)
4" (100 mm)	4½" (114 mm)
6" (150 mm)	6½" (165 mm)
8" (200 mm)	8¾" (222 mm)
10" (250 mm)	10¾" (276 mm)
12" (300 mm)	12⅞" (327 mm)
15" (375 mm)	15⁹⁄₁₆" (402 mm)
18" (450 mm)	19¹⁄₁₆" (503 mm)
21" (525 mm)	22³⁄₁₆" (573 mm)
24" (600 mm)	25¼" (643 mm)
27" (675 mm)	28½" (724 mm)
30" (750 mm)	32¹⁵⁄₁₆" (826 mm)



C27



SEWER SADDLE DETAIL

NOT TO SCALE

C26

SPECIFICATIONS

Rubber Sleeve	ASTM F477
Band	301 SS
Screw	305 SS
Housing	301 SS
Gasket	ASTM F477

INSERTA TEE DETAIL

NOT TO SCALE

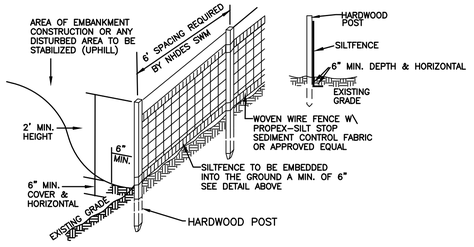
C-103

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

AS NOTED
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

C1



SILT FENCE CONSTRUCTION SPECIFICATIONS

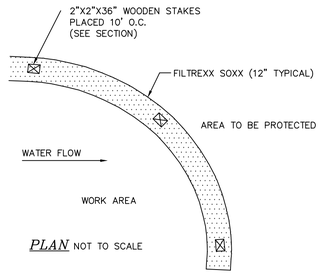
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 6' APART, AND DRIVEN 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 #3 4-2 SEDIMENT CONTROL PRACTICES, SILT FENCE, PAGE 90.

SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
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.

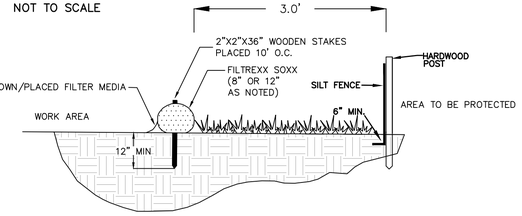
SILT FENCE DETAIL
NOT TO SCALE

C2



PLAN NOT TO SCALE

FILTREXX SEDIMENT CONTROL
NOT TO SCALE



NOTES

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
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 FILTREXXIN TERNATIONAL, 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

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. THIS DUPLICATION MAY BE SPECIFIED AS 12" SILT SOXX OR ORANGE CONSTRUCTION FENCE AS NOTED.

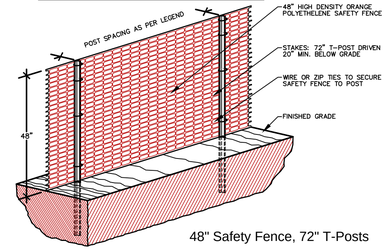
SECTION NOT TO SCALE

C3

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.

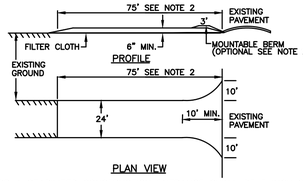
DOVER FILE #P20-35

REVISION	DATE	DESCRIPTION
#1A	9-9-20	REVISED UTILITY DESIGN PER CONTRACTOR REQ.

CONSTRUCTION DETAILS
LAND OF
ROBERT S. BALDWIN
144 MAST ROAD
DOVER, N.H.
TAX MAP I, LOT 30

C4

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

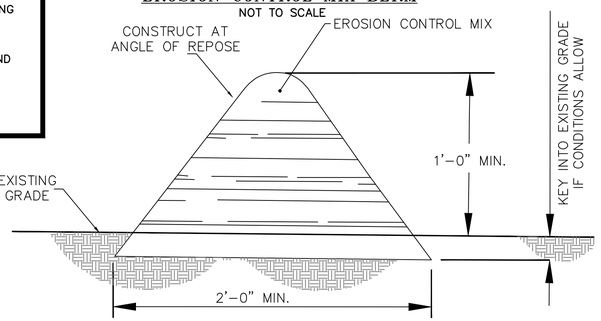


PLAN VIEW

1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 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 #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CONSTRUCTION EXIT, PAGE 124.

C5

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 CLOSLY 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.
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 #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

C6

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.

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.

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	
	B	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	RECOMMENDED *
	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 MOTURES AND RATES IN TABLE 7-36.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

SEEDING RATES

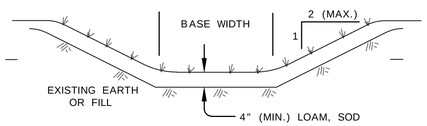
MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	24	0.55
CREEPING RED FESCUE	24	0.55
BIRDS FOOT TREFOIL	REMOVED	REMOVED
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

CONSERVATION MIX	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
TALL FESCUE (35%)	15	0.35
CREEPING RED FESCUE (25%)	15	0.35
ANNUAL RYEGRASS (12%)	5	0.12
PERENNIAL RYEGRASS (10%)	5	0.12
KENTUCKY BLUEGRASS (10%)	15	0.35
WHITE CLOVER (3%)	7	0.16

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED.
   WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A 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.

C7



GRASS TREATMENT SWALE
NOT TO SCALE

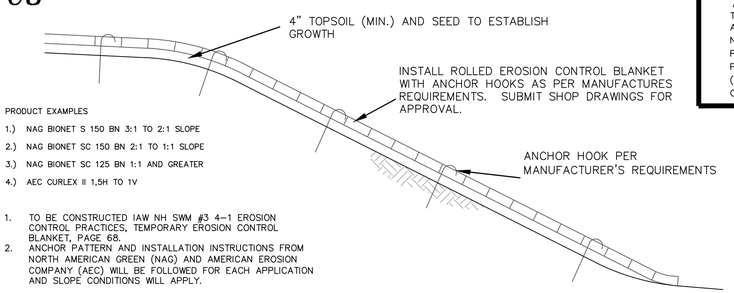
INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATIONS, VEGETATION LOSS, & INVASIVE SPECIES. REPAIR AS NECESSARY.

MOW GRASS ANNUALLY TO A DEPTH OF 4".

INSTALL STABILIZATION MATTING DURING CONSTRUCATION

TO BE CONSTRUCTED IAW NH SWM #2 CHAPTER 4, #5 TREATMENT SWALES, PAGE 123.

C8



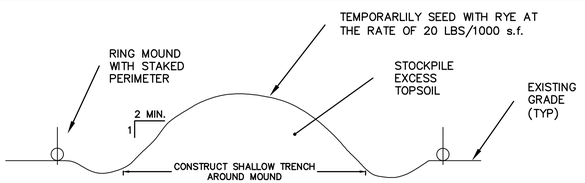
PRODUCT EXAMPLES

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 SC 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.

ROLLED EROSION CONTROL BLANKET (RECB)
SLOPE STABILIZATION DETAIL
NOT TO SCALE

C9



TOPSOIL STOCKPILE MOUND
NOT TO SCALE

TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, SOIL STOCKPILE PRACTICES, PAGE 46.

C-101

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

AS NOTED
DATE : AUGUST 4, 2020
FILE NO. : DB 2020-010

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 10243
LICENSED PROFESSIONAL ENGINEER