

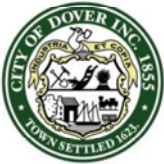
CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

REVISED

Meeting Type: Regular Meeting
Meeting Location: Council Conference Room, City Hall, 288 Central Ave, Dover NH 03820
Meeting Date: **Thursday, June 22, 2023**
Meeting Time: **10:30 AM**

1. 10:30 AM – 11:00 AM: Site Review Amendment for John Kniphfer (Owner: Kniphfer, LLC) Assessor's Map L, Lot 55-A, zoned R-12, located at 43 Back River Road. (Proposal is for a daycare use and to install a second driveway to help with traffic flow at drop off and pick up with associated parking.) (WAIV-2023-0004).
2. 11:00 AM – 11:45 AM: Site Review for Cooperative Alliance for Seacoast Transportation (COAST), (Assessor's Map H, Lot 35-C-4, located at 42 Sumner Drive. (Proposal is to build a 28,700 s.f vehicle storage building and 17,000 s.f. administration, operations and maintenance building.) (SITE-2023-0002). [*This item was previously heard on 04/06/2023*]
3. Immediately Following: Discussion on Industrial Pretreatment Compliance Inspections as part of Technical Review Committee Review



City of Dover, New Hampshire SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

Office Use Only

Project #: _____

Date Received: _____

Amount Paid: _____

Time Received: _____

APPLICANT AND OWNER INFORMATION

Name of Applicant: Kniphfer LLC Telephone # (603) 557-7489

Address of Applicant: 30 Quarry Drive Rochester, NH 03867

E-Mail Address: kniphfer@gmail.com

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

Address of Property Owner: _____

PROPERTY INFORMATION

Address of Property: 43 Back River Road

Assessor's Map # 1 Lot(s) # 55-4

Zoning District(s) R-12 Overlay District(s) _____

Size of Parcel: 60,000 sq. ft. 1.38 ac. Property Deed: Book 5051 Page: 545

Existing Use of Property: Child care facility

SITE PLAN INFORMATION

Describe Proposed Use: Child care facility

Area of Parcel to be Developed: 800 +/- sq. ft.

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

If lodging: Number of Units N/A & number of Buildings N/A

Number of Parking Spaces: Existing 17 Proposed 16

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

Number of Employees Total: 15 In Maximum Shift: 9

Disposition of Parcel:

Building Setbacks:

Building Footprint 6,444 sq. ft.

Front Yard 69.7 ft.

Total Building Area 6,444 sq. ft.

Rear Yard 128+/- ft.

Paved Area 12,852+/- (Exist) sq. ft.

Side Yard: Right 15.6 ft. Left 76.7 ft.

12,358+/- (Prop)

City Water? ☒ Yes ☐ No How far is city water from the property? _____

City Sewer? ☒ Yes ☐ No How far is city sewer from the property? _____

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 ☐ 30' Buffer ☐ Increase by _____ units

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

BUILDING INFORMATION

Type of Building to be Built: N/A

Height of Building: Existing Finished Floor Elevation: Existing

Number of Seats (where applicable) N/A

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

WAIVER REQUESTS

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

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) James Smith, LLS
Address Allen & Major Assoc. Inc. - 400 Harvey Rd. - Manchester, NH Telephone #: 603-627-5500
Professional License #: 908 E-mail address: jsmith@allenmajor.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Michael Malynowski, PE
Address Allen & Major Assoc. Inc. - 400 Harvey Rd. - Manchester, NH Telephone #: 603-627-5500
Professional License #: 12205 E-mail address: mmalynowski@allenmajor.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) N/A
Address _____ Telephone #: _____
Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) N/A
Address _____ Telephone #: _____
Professional License #: _____ E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) N/A
Address _____ Telephone #: _____
Professional License #: _____ E-mail address: _____

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: N/A 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: [Signature] Date: 05-16-23

Signature of Applicant (if different from owner): [Signature] Date: 05-16-23

Signature of Agent: Michael Malynowski Date: 05-16-23

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: 05-16-23

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: [Signature] Date: 05-16-23

Signature of Applicant (if different from owner): [Signature] Date: 05-16-23

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: [Signature] Date: 05-16-23

Signature of Applicant (if different from owner): [Signature] Date: 05-16-23

***CITY OF DOVER SITE REVIEW
LIST OF ABUTTERS***

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
I	55-4	Kniphfer LLC	30 Quarry Drive Rochester, NH 03867

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Surveyor & Engineer	Allen & Major Assoc. Inc.	400 Harvey Road - Manchester NH 03103

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

May 18, 2023

To: Donna Benton, AICP
Director of Planning and Community
Development
City of Dover, NH
288 Central Avenue
Dover, NH 03820-4169

A&M Project #: 3188-01
Re: Site Plan Amendment for Childcare Center
Tax Map I, Lot 55-A
43 Back River Road

Copy:

Dear Ms. Benton:

On behalf of Kniphfer LLC, Allen & Major Associates, Inc. (A&M) is pleased to submit the enclosed Site Review application and supporting materials for the expansion of an existing 4,524 sf child care center located at 43 Back River Road.

1. INTRODUCTION

The proposed project will memorialize the recently constructed & approved building addition along with parking lot improvements. This letter is intended to summarize the project in order to facilitate the review process.

2. EXISTING CONDITIONS

The Applicant is the current owner of the parcel of land located at 43 Back River Road and identified as Tax Map I, Lot 55-A on the City of Dover Tax Assessor Map. The 1.38+/- acre parcel is located in the Medium Density Residential (R-12) zone. The lot has 233.65 feet of frontage on Back River Road. Of the 1.38+/- acre parcel, approximately 11% of the lot is either buildings or bituminous concrete pavement. The site is serviced by municipal water and sewer.

The building is pre-existing, non-conforming for one zoning dimensional standards, which includes front yard setback that has changed to a variable requirement with a minimum and maximum. Based upon review of historical information it appears that the front yard set was once a minimum of 50 feet for which the existing building conforms.

3. PROJECT DESCRIPTION

The proposed redevelopment area will disturb approximately 800 square feet. This disturbance includes rehabilitation of the associated paved driveway and parking area along the front of the site. The building additions have already been constructed and inspected by the building department.

The proposed facility will utilize the existing electric, cable and telephone service. It will also utilize the existing domestic water service. Trash is provided by a private hauling company and a screened dumpster is shown on the provided site plans.

4. COMPLIANCE WITH ZONING STANDARDS

The structure is pre-existing, non-conforming for several dimensional requirements as follows:

- The front setback is 69.7 where 15 feet min. & 25 feet maximum is required,

The pre-existing, non-conforming front yard setback will remain. All other zoning standards will be met.

The proposed use and development are allowed by right. Also, the application meets all zoning and planning board requirements, therefore isn't seeking any variances or waivers.

There are currently no prevalent demarcated existing parking spaces. It is proposed to provide 15 standard spaces and 1 handicap spaces. (16 parking spaces are required.)

5. COMPLIANCE WITH SITE PLAN REVIEW STANDARDS

Section 149.14 of the Dover Code ordinance presents standards that must be met in order to obtain Site Plan Review approval. These are detailed in the following subsections:

5.A. Stormwater Management, Erosion Control, and Flood Hazards

Although some upgrades to the existing parking lot are being proposed, these activities which include paint striping, removal of existing pavement and expansion of some areas does not constitute a substantial earth moving activity which would cause erosion control issues. As part of the most recent site plan amendment, the project proposes to remove some impervious surfaces. All of which is along the perimeter of the site and will increase the vegetative buffer. The site plan amendment illustrates that there is a net decrease of approximately 494 square feet in pavement surface which will be converted to green space and this reduction of impervious area will continue to lessen stormwater flows to the existing system.

5.B. Utilities

The existing facility is serviced by municipal water and municipal sewer. Although the existing childcare facility is anticipated to increase from 75 students plus 6 staff to 101 students plus 9 staff (largest shift). Per NHDES Subsurface Regulations flow data a childcare facility has a flow of 10GPD per person which for this project would be 1,100GPD which is an increase of 290 GPD. Per NHDES Env-Wq 704.04 a 6-inch-diameter sewer service would have a maximum capacity of 2,000 gpd which is greater than the total capacity anticipated for the project.

5.C. Driveways, Accessways and Internal Roads

The existing facility is serviced from Back River Road by an existing approximately 25ft driveway along the northern frontage and historical plans indicate that a second driveway to the south also existed. The proposed modifications to the facility contemplate the re-installation of this second access way along with the conversion of the vehicle travel path to single direction along the front of the facility. A small portion of the parking area would remain bi-directional to the southwest of the facility to accommodate handicap parking and utility access. Although there were improvements proposed in 1999 specifically to the parking lot and circulation as per a plan obtained from the Dover Planning office, these improvements were not fully implemented as evident from the recent on-ground survey conducted by this office. Based on field observations, it is evident that ledge is present at or near the surface which may have precluded the full expansion of parking lot from the 1999 plans. Subsequently, these obstacles will also hinder any further expansion of the existing parking lot today.

The new single directional vehicle path would enter the site at the southern driveway and circulate through the site to the north exiting the site. This approach will allow for greater sight distance for oncoming traffic from the south along Back River Road. The proposed southern driveway would be constructed to a width of 16 feet and the existing northern driveway would be reduced to 18 feet, both of which meet current site plan requirements. The submitted plans better illustrate the sight distance parameters for this proposed configuration. To further aid in the circulation of vehicles through the site, way-finding signage will also be added to assist drivers with the new movements. To further bolster this approach a truck turning plan has been prepared to illustrate that a full-size school bus and maneuver through the new circulation path.

As the proposed facility is a childcare center, it is anticipated to have short duration vehicle movements during the pick-up and drop-off times. During this process, facility staff will be situated in the parking lot to assist parents and direct traffic. This current process typically sees staggered drop-offs throughout the morning between 7 and 9:30am with minimal stacking of vehicles.

The pick-up process is a bit unique whereas parents are assigned a number which is to be made visible from their vehicle. Upon arrival, the staff member located outside in the parking lot radios to the teacher inside and the student is escorted to the awaiting parent vehicle. This process typically takes approximately 2-3 minutes and may produce a queue length of approximately 4-5 cars, which can be easily accommodated within the site without causing interactions with vehicles on Back River Road. Should a parent need to disembark from their vehicle and enter the facility, they would be instructed to park in a designated parking spot outside of the pick-up queuing area. Facility staff are well versed in these procedures as they are applied at their three other locations and appear to operate without issue.

Although there is anticipated to be a slight increase in vehicle traffic associated with the expansion of the childcare operations, a separate vehicle trip generation summary has been provided to illustrate that the level of impact would not result in an increase in motorist delays or vehicle queuing over existing conditions.

5.D. Parking

The site currently provides parking along the front of the parcel setback from the property line more than 15 feet. Although there are some existing demarcated spaces, the proposed site plan calls for the slight re-configuration of the parking spaces to aid in the updated circulation patterns on site. Based upon the current licensing of the childcare facility, there is a maximum of 101 students allowed and 9 staff per the largest shift. Per the current Dover Site Plan Regulations, the maximum number of parking spaces afforded to the site is 40 whereas 16 are provided. Although there is an increase in students and staff from what previously existed at the property, the number of parking spaces is adequate for the facility's needs and there have not been any reported shortfalls.

5.E. Outdoor Lighting

The existing parking lot is lit by several pole mounted fixtures which appear to be cutoff type per observation and supplemented by several wall mounted fixtures at the building entrances. No additional lighting is proposed as part of this project.

5.F. Fire Hazards

As this facility is an active childcare center and will continue to operate as such, no contaminants are proposed to be stored or used at the facility.

5.G. Landscaping

Existing landscaping is provided along the frontage to separate parking areas from abutting streets, and to provide areas for snow disposal. Additionally, the perimeter of the parcel is naturally wooded and will remain.

5.H. Driveway Location and Spacing Standards for Non-Residential USES in the B-3, B-4, B-5, I-2, and I-4 Districts.

Not applicable as the project is not located within one of these designated districts.

5.J. Interconnections Between Parcels

In an email dated April 19, 2023, to the director of planning and community development Donna Benton, the proponent indicated that discussions had taken place with the General Manager at Maple Suites, the owner of Holiday Drive. When asked if we could connect to Holiday Drive, the abutting property, the response was "absolutely not".

5.K. Location of Parking Lots

The location of the building and the relationship of parking is existing and pre-dates the current site plan regulations. Although the parking is located along the front of the building, its relationship to the building is better suited to the operations of the childcare center as it minimizes the conflict between vehicles and outdoor recreational areas.

5.L. Architectural Design Standards

The existing building is to remain which was originally a residential dwelling when first constructed. The recently constructed building addition is located behind the existing structure and not in view of the public street. A full set of architectural plans were submitted to the building department for approval and building permits were issued for the construction.

CONCLUSION

In conclusion, the granting of the site plan amendment to allow for the added access and memorializing the recently constructed building addition will improve the operations of the existing childcare facility will be a welcomed improvement to the parents.

We thank you in advance for your anticipated cooperation regarding this project and look forward to meeting to discuss the plans.

Very Truly Yours,

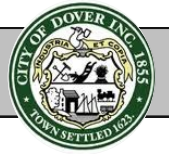
ALLEN & MAJOR ASSOCIATES, INC.



Michael A. Malynowski, PE
Senior Project Manager

Medium Density Residential (R-12) District

Amended: 11-28-2012 by Ord. No. 2012-11.14-24, 08-19-2015 by Ord. No. O-2015.07.22-017, Amended:10-13-21 by O – 2021.09.08 - 006



Permitted Uses

- ACCESSORY DWELLING UNIT
- ASSEMBLY HALL
- BED and BREAKFAST
- CHILD CARE FACILITY
- CONSERVATION LOT
- CHILD CARE HOME
- Conversion of Existing Dwelling to Accommodate not more than 2 units [6]
- Dwelling, 2 Family [7]
- DWELLING, SINGLE FAMILY
- EDUCATIONAL INSTITUTION, K-12
- EDUCATIONAL INSTITUTION, POST SECONDARY
- FARM [8]
- FARM ANIMALS FOR FAMILY USE, for non-commercial purposes, on lots containing a one or two family dwelling [9]
- OFFICE [10]
- PUBLIC RECREATION
- Public Utility [11]
- ROADSIDE FARM STAND [12]

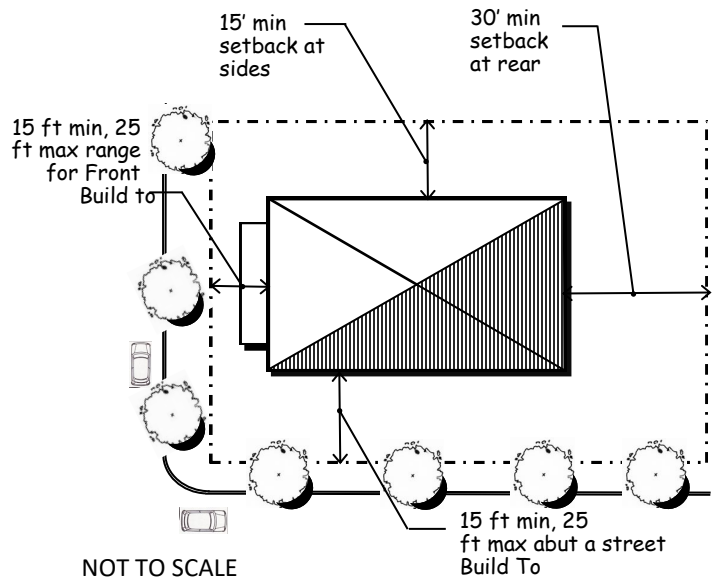
Dimensional Regulations [1] [2]

LOT	
Minimum LOT Size [3] [4]	12,000 sf
Maximum LOT COVERAGE	30%
Minimum FRONTAGE	100 ft
PRINCIPAL BUILDING	
Front BUILD TO LINE	15 ft min, 25 ft max [5]
Abut a Street BUILD TO LINE	15 ft min, 25 ft max [5]
Side SETBACK	15 ft
Rear SETBACK	30 ft
OUTBUILDING/ACCESSORY USE	
Front SETBACK	No closer than the principal BUILDING
Abut a Street SETBACK	No closer than the principal BUILDING
Side SETBACK	10 ft
Rear SETBACK	10 ft
HEIGHT OF BUILDING	
PRINCIPAL BUILDING	35 ft max
OUTBUILDING	35 ft max

Uses Permitted by Special Exception

- ELDERLY ASSISTED CARE HOME

Principal Building Placement



Sign Regulations

Size	R-12 District
Total SIGNS permitted	1
Total area permitted	16 sf (CUSTOMARY HOME OCCUPATION SIGN max 2 sf, development identification sign 20 sf max)
Type	
FREESTANDING	permitted (10 ft setback required)
PROJECTING	permitted
WALL/ Awning	not permitted
Temporary	not permitted



Footnotes

- [1] In the case of an Open Space Subdivision, in accordance with Article IV of Chapter 157 of the Code of Dover, the dimensional requirements shall be as specified in 157-21 of the Code of the City of Dover, 1983.
- [2] Refer to 170-13, 170-14 and 170-27D for exceptions to lot size, frontage and setback requirements.
- [3] All land containing wetlands shall not be counted in determining the gross land area of a lot for the purposes of minimum lot size or minimum density requirements for residential uses. The minimum non-wetland portion of any newly created lot shall be contiguous. For the purposes of this calculation, wetlands shall include areas that meet the definition of wetland in the NH Code of Administrative Rules – Wt. 101.87 and the 1987 Federal Manual For Identifying Jurisdictional Wetlands. Wetland buffers shall only be allowed to count for 40 percent of the minimum lot size required.
- [4] Refer to Chapter 157, Subdivision of Land, Article IV for the minimum lot size for a major Subdivision. Any major subdivision in an R-12 district, must follow the procedures for an OSS if the original lot meets the minimum lot size required.
- [5] Expansions to, or renovations of, STRUCTURES on existing lots have a five (5) foot SETBACK.
- [6] Any dwelling unit may be converted, not replaced, provided that the lot shall contain at least four thousand (4,000) square feet per dwelling unit and a minimum floor area of five hundred (500) square feet per dwelling unit.

2 family dwellings shall be designed to look like single family dwellings (i.e. the 2 family dwelling should not look like it was designed to occupy more than one family). At a minimum, this shall mean that only one entrance shall be visible from a public street, and only one driveway shall exist with no on street parking required for residents.
- [7] Two family dwellings are permitted on lots with a density of nine thousand (9,000) square feet per dwelling unit. The structures shall be designed to look like single family dwellings (i.e. the 2 family dwelling should not look like it was designed to occupy more than one family). At a minimum, this shall mean that only one entrance shall be visible from a public street, and only one driveway shall exist with no on street parking required for residents. Single family density shall be used for TDR. If two family density is used, a two family unit shall be built.
- [8] Shall not include the raising and sale of FARM ANIMALS; the breeding, boarding, and training of equines, and equine riding instruction; the commercial raising, harvesting, and sale of fresh water fish or other aquaculture products; and/or the breeding of poultry or game birds.
- [9] Use is allowed on the portion of the lot that is behind the principal structure, provided the following standards are met: Chickens: No more than six (6) chickens and no roosters, with three (3) square feet of chicken coop and twenty (20) square feet of a fenced enclosure yard per chicken; all coops and enclosures shall be

twenty (20) feet from any property line. Sheep or goats: one animal per 10,000 square feet of lot area, with a maximum of six (6) animals; ten (10) square feet of shelter and thirty (30) square feet of a fenced enclosure yard per animal; all shelters and enclosures shall be thirty (30) feet from any property line.

- [10] Permitted only if operated as a CUSTOMARY HOME OCCUPATION (Refer to definition in 170-6B).
- [11] The Utility Facility shall be appropriately fenced to protect the public. Landscaping materials shall be required to provide a visual screen from any structures and storage within.
- [12] ROADSIDE FARM STANDS shall be set back a minimum of twenty (20) feet from all abutting vehicular rights-of-way. The area of any BUILDING associated with the ROADSIDE FARM STAND shall not be greater than two hundred (200) square feet in area, and shall be considered an accessory structure if a residence is also located on the property. The total of the display area, including the building, shall not exceed four hundred (400) sq. ft. Off-street parking shall be provided in the amount of one (1) off-street parking space per 250 sq. ft. of display and building area, and all required parking spaces shall have safe access to and from a public street. A certificate of use issued by the Zoning Administrator and a driveway permit shall be required in all cases."

Special Exception Criteria (see 170-52(C)(3) for additional regulations)

ELDERLY ASSISTED CARE HOME:

ELDERLY ASSISTED CARE HOME is allowed by Special Exception in accordance with the densities and provisions stated below:

- A. ELDERLY ASSISTED CARE HOME is larger than 6 bedrooms shall meet the following density requirements: In the R-12 District at a density of one bedroom per 3,000 sq. ft.
- B. Provided that parking and service areas are screened from abutting residential uses.
- C. Notwithstanding the above requirements, the maximum number of bedrooms and residents allowed in a facility may be increased provided the increase is found not to be detrimental to the surrounding properties and conforms with parking standards in Chapter 170-44 (Off Street Parking). Furthermore, any increase to an existing structure must be contained within or contiguous to the original structure.



Kid's Culture

Childcare & Learning Center

Signature Petition

We support the addition of the second driveway on 43 Back River Road, Dover, NH 03820.

The undersign shows support for the second driveway at 43 Back River Road, Dover, NH 03820.

Full Name	Signature	Email/Phone
Danielle Holmes		832-614-8073
Jonathan Landry		Landry466@gmail.com
Nadia Hayes		603-605-5232
Chris Lopes		603-534-6137
Allison Perreault		207-376-5558
Bridgette Johns		603 505 7497
Autumn Rouleau		603 817 9952
Edith Shimele		423-718-3432
Anna Adams		315-235-9060
Hanna Brown		603-748-6569
JUAN Holmes		832-909-1931
Tammy Serriva		207-475-8526
Danielle Kennedy		603-395-0513
Elizabeth Quigley		603-819-3048
Colleen Casey		860-573-9687



Kid's Culture

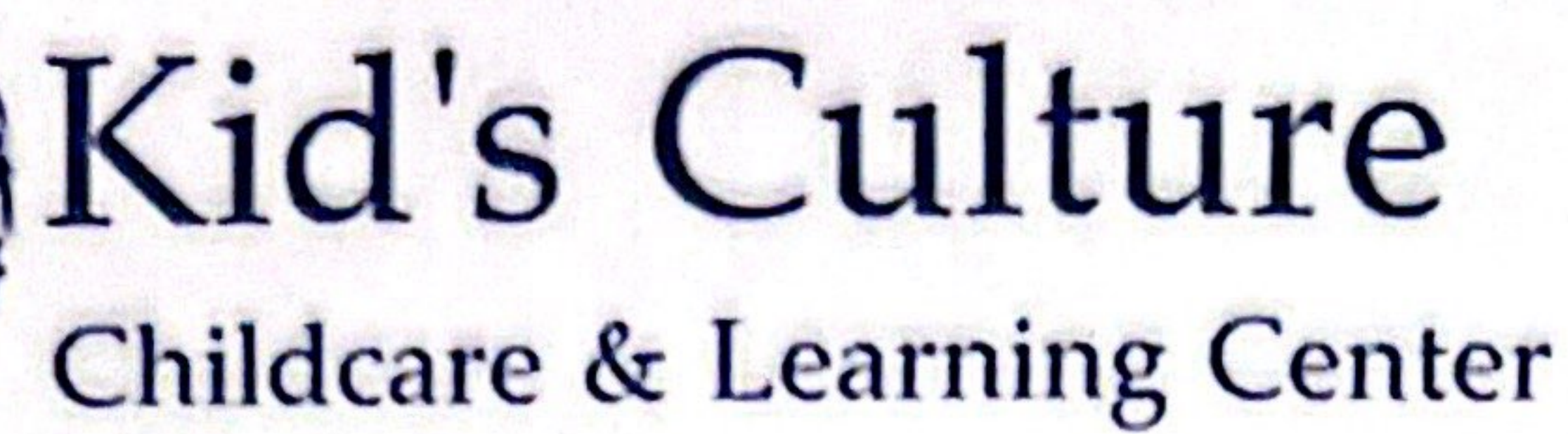
Childcare & Learning Center

Signature Petition

We support the addition of the second driveway on 43 Back River Road, Dover, NH 03820.

The undersign shows support for the second driveway at 43 Back River Road, Dover, NH 03820.

Full Name	Signature	Email/Phone
Bria Carbone	Bria Carbone	603-550-9900
Kyra Strong	Kyra Strong	603-812-8433
Asia DiBartolomeo	Asia DiBartolomeo	603-812-7138
Jasmine Couture	Jasmine Couture	207-806-7536
Jenna Ludwig	Jenna Ludwig	603-988-2655
Rebecca Wheeler	Rebecca Wheeler	603-793-4980
Jessica Galarneau	Jessica Galarneau	207-592-6241
Paris Pollaccia	Paris Pollaccia	949-874-2888
Wendy Cormier	Wendy Cormier	603-866-463
Emma Weston	Emma Weston	978-559-1483
Amber Ure	Amber Ure	603-403-2745
Chris Comille	Chris Comille	207-446-8811
Patrick Mackey	Patrick Mackey	603-937-8695
Nicholle Hale	Nicholle Hale	603-999-1909
Tucker Berube	Tucker Berube	603-770-3661



Signature Petition

We support the addition of the second driveway on 43 Back River Road, Dover, NH 03820.

The undersign shows support for the second driveway at 43 Back River Road, Dover, NH 03820.

[illegible]

May 10, 2023

To: Donna Benton, AICP
Director of Planning and Community Development
City of Dover, NH
288 Central Avenue
Dover, NH 03820-4169

A&M Project #: 3188-01
Re: Traffic Memorandum
Expanded Day Care Center
43 Back River Road
Dover, NH

Copy:

Dear Ms. Benton,

Allen & Major Associates, Inc. has prepared this memorandum to outline the anticipated traffic impacts generated by the proposed expanded daycare use located at 43 Back River Road and to compare that to what was existing. The proposed expansion consists of an approximately 1,780 square foot addition to the current child day care facility.

Trip Generation

In order to determine the traffic characteristics of the proposed Project, the trip-generation methodologies established by the ITE were used for the proposed uses at the site. ITE Land Use Code (LUC) 565, Dare Care Center, was used to develop the traffic characteristics of the Project, the results of which are summarized in Table 1

The estimated existing vehicle trips are shown in the following Table 1:

Time Period	Total	Incoming	Outgoing
<i>Average Weekday:</i>	309	155	155
<i>Weekday Morning Peak-Hour:</i>	71	38	33
<i>Weekday Evening Peak-Hour:</i>	72	34	38

The proposed expanded day care operations are expected to generate approximately 309 vehicle trips on an average weekday with 71 vehicle trips (38 entering and 33 exiting) expected during the weekday morning peak-hour and, 72 vehicle trips (34 entering and 38 exiting) expected during the weekday evening peak-hour. As the facility is not in operation on Saturday, no comparison was generated for that time.

To provide a comparison, the proposed expansion was compared to the existing child day care facility on the property to aid in the evaluation of the potential impacts of the project on the existing network.

A summary of the data is in the table below.

Existing Day Care Center				Proposed Expanded Daycare Center				Net Difference			
	Weekday				Weekday				Weekday		
	Total	IN	OUT		Total	IN	OUT		Total	IN	OUT
Daily	225	113	113	Daily	309	155	155	Daily	84	42	42
AM Peak	50	27	24	AM Peak	71	38	33	AM Peak	21	11	9
PM Peak	52	24	28	PM Peak	72	34	38	PM Peak	20	10	10

Although there is an anticipated increase in the estimated daily trips for the project, with an approximate 21 trips during the peak hour or one additional vehicle every 6 to 7 minutes, a level of impact that would not result in an increase in motorist delays or vehicle queuing over existing conditions.

We trust that this explanation illustrates that the proposed use changes are minor in nature as related to traffic impacts.

Very Truly Yours,

ALLEN & MAJOR ASSOCIATES, INC.



Michael A. Malynowski, PE
 Senior Project Manager

Day Care Center (565)

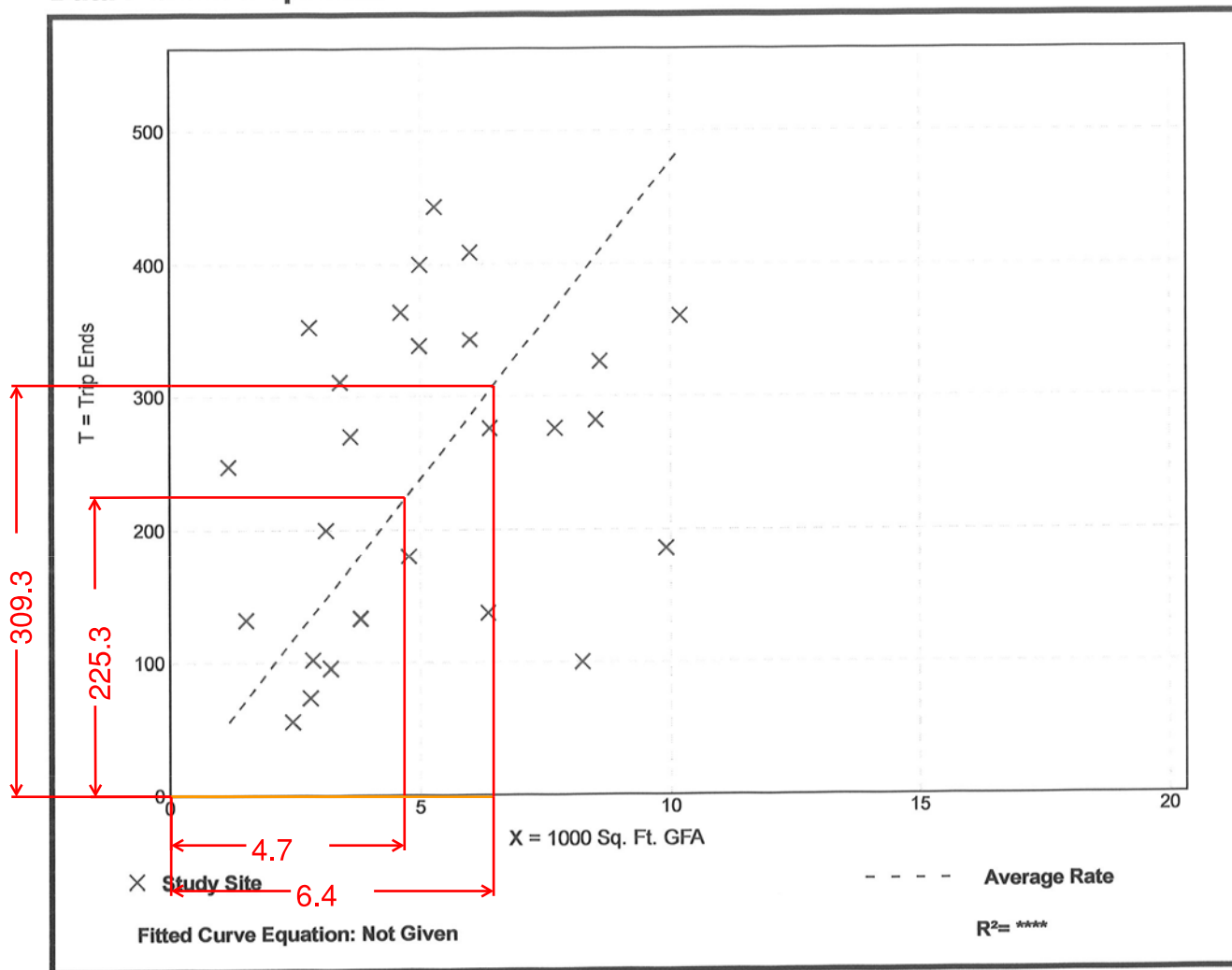
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
47.62	12.12 - 211.06	29.78

Data Plot and Equation



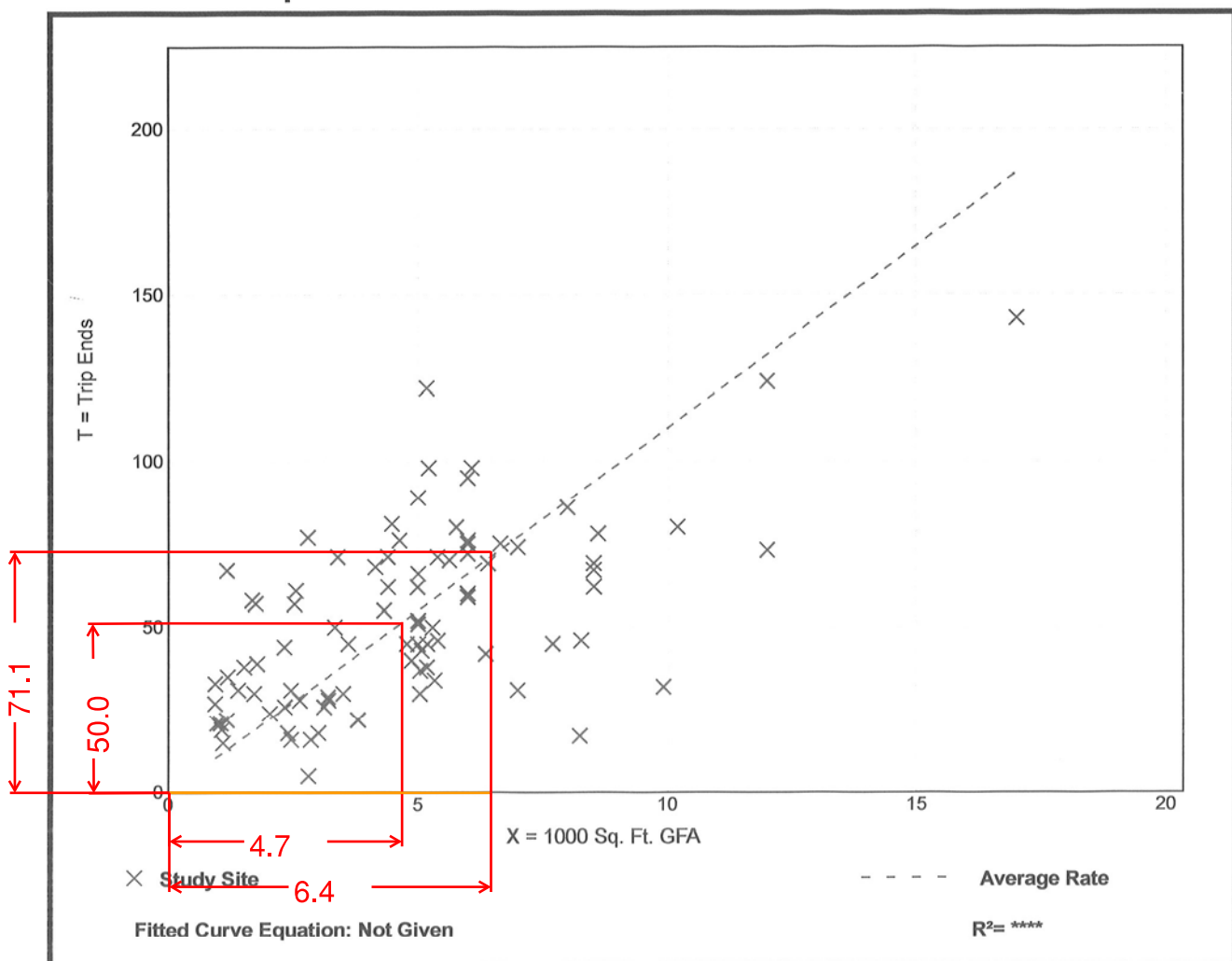
Day Care Center (565)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 89
 1000 Sq. Ft. GFA: 5
 Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.00	1.79 - 57.02	6.08

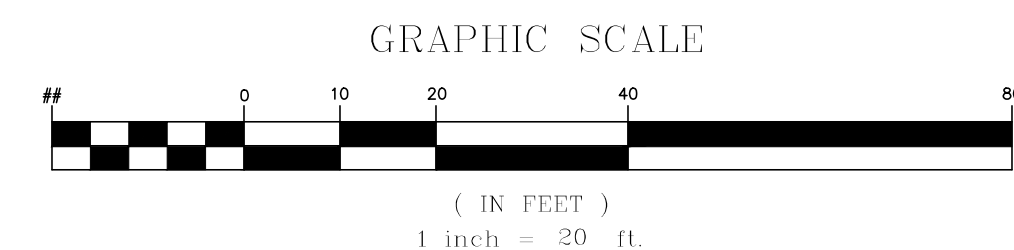
Data Plot and Equation



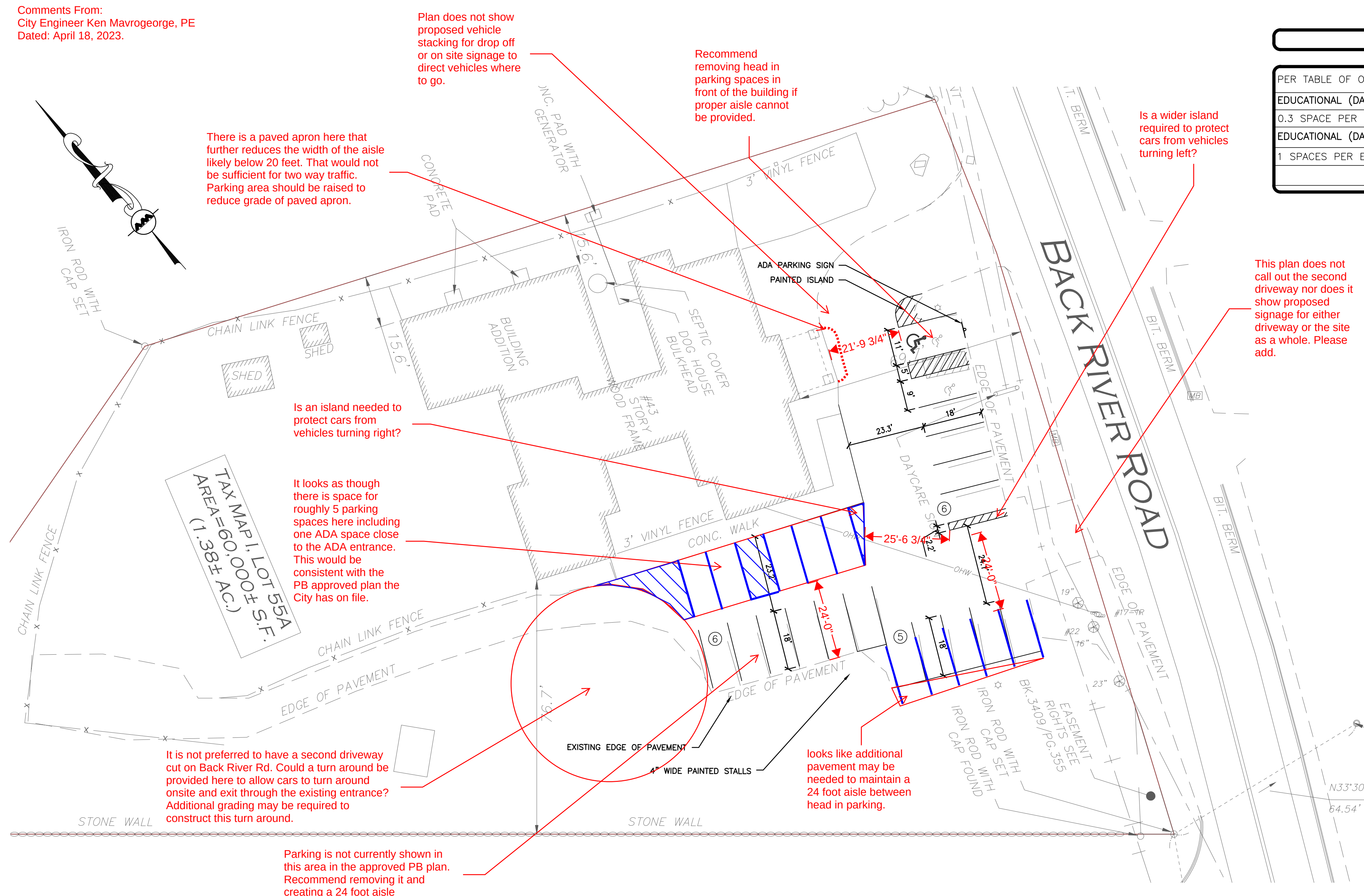


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4. THE DESIGN ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND/OR THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE GUIDANCE OF THE DESIGN ENGINEER WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS WHICH ARE DISCOVERED OR ALLEGED.
5. ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTIES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
6. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING LOCAL, MADOT, MADEP, MUTCD, AND AASHTO.
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R:\PROJECTS\3188-01\CIVIL\DRAWINGS\CURRENT\C-3188-01_LAYOUT & MATERIALS.DWG



	04-14-23	UPDATE TO PARKING LAYOUT
REV	DATE	DESCRIPTION

APPLICANT\OWNER:
KNIPHFER, LLC
30 QUARRY DRIVE
ROCHESTER, NH 03867

PROJECT:

TAX MAP I, LOT 55A
43 BACK RIVER ROAD
DOVER, NH

PROJECT NO.	3188-01	DATE:	03/27/2018
SCALE:	1" = 8'-0"	DWG. NAME:	S-3188-01-1
DRAFTED BY:	MM	CHECKED BY:	MA



ALLEN & MAJOR
ASSOCIATES, INC.

civil engineering ♦ land surveying
environmental consulting ♦ landscape architecture
www.allenmajor.com

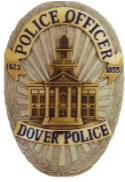
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501

WOBURN, MA ♦ LAKEVILLE, MA ♦ MANCHESTER, NH

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DRAWING TITLE:	SHEET No.
PARKING LAYOUT PLAN	C-1

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DOVER POLICE DEPARTMENT

Dover, New Hampshire

Memorandum

TO: Donna Benton, Director of Planning

FROM: Lt. Marn Speidel

RE: Site Review, 43 Back River Road secondary driveway

DATE: APRIL 26, 2023

I reviewed the plan sketch entitled "Existing Sight Distance Figure" provided by Allen & Major Associates related to the proposed driveway expansion at 43 Back River Road. The plan notes that there is 400' in each direction.

Assisted by another police patrol supervisor, I performed a field study to verify these measurements, at the position and height of a driver exiting the proposed new driveway.

I determined that the available sight distance to the north (looking to the left for traffic approaching southbound) is **495'**. Below is a photo of this view.



Police cruiser in view, 495' to the north

I determined that the available sight distance to the south (looking to the right for traffic approaching northbound) is only **375'**. Below is a photo of this view.



Police cruiser in view, 375' to the south

It is noted that this view cannot be improved with roadside vegetation trimming, due to the curvilinear horizontal alignment of Back River Road.

The Police Department is concerned about the minimal sight distance to the south, particularly since our historical traffic count data shows the 85th percentile speed at 40 mph in the northerly direction at a point just south of this site (posted limit is 30 mph).

cc: Ken Mavrogeorge, Dover City Engineer

Dover Police Department Traffic Bureau

46 Locust Street
Dover, New Hampshire 03820
(603) 742-4646

Page 1

BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound

Start Time	0 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 9999	Total	Pace Speed	Number in Pace
04/27/06	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	0	1	2	6	10	53	89	38	1	0	0	0	0	0	200	36-45	142
14:00	0	2	2	6	9	37	81	39	5	3	0	0	0	0	184	39-48	121
15:00	0	2	0	3	6	44	113	34	9	3	0	0	0	0	214	36-45	157
16:00	0	1	0	0	11	50	127	36	10	1	0	0	0	0	236	36-45	177
17:00	0	1	2	1	11	83	170	50	4	0	0	0	0	0	322	36-45	253
18:00	0	2	0	1	13	52	97	35	8	1	0	0	0	0	209	36-45	149
19:00	1	0	1	6	10	57	84	28	3	2	0	0	0	0	192	36-45	141
20:00	0	0	0	0	6	40	54	5	1	0	0	0	0	0	106	36-45	94
21:00	0	0	0	1	8	46	28	6	1	0	0	0	0	0	90	36-45	74
22:00	0	1	0	0	2	19	24	3	0	1	0	0	0	0	50	36-45	43
23:00	1	0	0	1	0	11	12	5	2	0	0	0	0	0	32	36-45	23
Total	2	10	7	25	86	492	879	279	44	11	0	0	0	0	1835		
Percent	0.1%	0.5%	0.4%	1.4%	4.7%	26.8%	47.9%	15.2%	2.4%	0.6%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	19:00	14:00	13:00	13:00	18:00	17:00	17:00	17:00	16:00	14:00					17:00		
	1	2	2	6	13	83	170	50	10	3					322		

Dover Police Department Traffic Bureau

46 Locust Street
Dover, New Hampshire 03820
(603) 742-4646

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound

Start Time	015	016	021	026	031	036	041	046	051	056	061	066	071	076	9999	Total	Pace Speed	Number in Pace
04/28/06	1	0	0	0	1	5	11	3	1	0	0	0	0	0	0	22	36-45	16
01:00	0	0	0	1	0	4	4	0	0	0	0	0	0	0	0	9	35-44	8
02:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	32-41	1
03:00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	34-43	3
04:00	0	0	0	0	3	4	4	0	0	1	0	0	0	0	0	12	33-42	9
05:00	1	0	0	1	3	5	9	4	1	1	0	0	0	0	0	25	35-44	14
06:00	0	1	0	0	1	10	37	19	4	1	0	0	0	0	0	73	41-50	56
07:00	0	1	1	2	16	26	62	24	4	1	0	0	0	0	0	137	36-45	88
08:00	0	2	1	2	6	31	77	30	4	1	0	0	0	0	0	154	36-45	108
09:00	1	0	1	1	5	35	72	27	1	1	0	0	0	0	0	144	36-45	107
10:00	0	4	3	0	10	34	85	35	6	0	0	0	0	0	0	177	37-46	120
11:00	0	1	2	3	7	40	76	34	3	2	0	0	0	0	0	168	36-45	116
12 PM	0	1	1	3	3	67	96	42	3	2	0	0	0	0	0	218	36-45	163
13:00	0	2	1	3	6	28	102	44	5	2	0	0	0	0	0	193	41-50	146
14:00	0	3	1	0	7	58	105	33	4	1	0	0	0	0	0	212	36-45	163
15:00	0	3	0	2	13	43	113	39	4	2	0	0	0	0	0	219	36-45	156
16:00	0	2	0	2	13	78	123	42	3	1	0	0	0	0	0	264	36-45	201
17:00	0	6	1	3	2	56	151	54	4	2	0	0	0	0	0	279	36-45	207
18:00	0	2	0	2	11	42	142	39	4	2	0	0	0	0	0	244	36-45	184
19:00	0	0	0	2	8	50	76	18	5	1	0	0	0	0	0	160	36-45	126
20:00	0	0	0	1	11	56	71	7	0	2	0	0	0	0	0	148	36-45	127
21:00	0	1	0	0	9	40	44	15	1	1	0	0	0	0	0	111	36-45	84
22:00	1	0	0	2	4	31	28	2	0	0	0	0	0	0	0	68	36-45	59
23:00	0	0	0	1	3	14	15	1	0	0	0	0	0	0	0	34	36-45	29
Total	4	29	12	31	142	757	1507	512	57	24	0	0	0	0	0	3075		
Percent	0.1%	0.9%	0.4%	1.0%	4.6%	24.6%	49.0%	16.7%	1.9%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	00:00	10:00	10:00	11:00	07:00	11:00	10:00	10:00	10:00	11:00						10:00		
Vol.	1	4	3	3	16	40	85	35	6	2						177		
PM Peak	22:00	17:00	12:00	12:00	15:00	16:00	17:00	17:00	13:00	12:00						17:00		
Vol.	1	6	1	3	13	78	151	54	5	2						279		

Dover Police Department Traffic Bureau

46 Locust Street
Dover, New Hampshire 03820
(603) 742-4646

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound

Start Time	015	016	021	026	031	036	041	046	051	056	061	066	071	076	9999	Total	Pace Speed	Number in Pace
04/29/06	1	0	0	0	1	12	20	3	0	1	0	0	0	0	0	38	36-45	32
01:00	1	0	0	0	1	6	5	1	0	1	0	0	0	0	0	15	35-44	11
02:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	33-42	2
03:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4	36-45	3
04:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4	36-45	3
05:00	1	1	0	0	2	0	6	4	0	2	0	0	0	0	0	16	40-49	10
06:00	0	0	0	2	1	5	10	9	1	0	0	0	0	0	0	28	40-49	19
07:00	0	0	1	0	8	24	47	30	3	1	0	0	0	0	0	114	41-50	77
08:00	0	2	0	3	10	31	79	41	8	2	0	0	0	0	0	176	41-50	120
09:00	0	1	0	1	7	40	119	67	6	0	0	0	0	0	0	241	41-50	186
10:00	0	0	0	4	3	44	122	55	8	2	0	0	0	0	0	238	41-50	177
11:00	0	4	2	2	12	56	108	41	3	1	0	0	0	0	0	229	36-45	164
12 PM	0	1	1	4	6	49	142	50	4	2	0	0	0	0	0	259	37-46	192
13:00	0	4	1	2	6	50	111	36	4	4	0	0	0	0	0	218	36-45	161
14:00	0	3	1	3	9	38	80	49	11	4	0	0	0	0	0	198	41-50	129
15:00	0	2	0	3	12	48	117	43	2	2	0	0	0	0	0	229	36-45	165
16:00	0	0	1	3	9	55	113	31	6	1	0	0	0	0	0	219	36-45	168
17:00	0	5	0	1	10	49	108	24	4	3	0	0	0	0	0	204	36-45	157
18:00	0	1	1	0	8	45	111	33	3	2	0	0	0	0	0	204	36-45	156
19:00	0	1	0	2	8	51	82	25	1	1	0	0	0	0	0	171	36-45	133
20:00	0	0	0	0	6	54	38	19	1	3	0	0	0	0	0	121	36-45	92
21:00	0	0	0	0	9	34	30	8	0	0	0	0	0	0	0	81	36-45	64
22:00	0	0	0	0	4	27	31	7	0	1	0	0	0	0	0	70	36-45	58
23:00	1	0	0	1	2	23	15	2	1	0	0	0	0	0	0	45	36-45	38
Total	4	25	8	31	134	745	1498	580	66	33	0	0	0	0	0	3124		
Percent	0.1%	0.8%	0.3%	1.0%	4.3%	23.8%	48.0%	18.6%	2.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	00:00	11:00	11:00	10:00	11:00	11:00	10:00	09:00	08:00	05:00						09:00		
Vol.	1	4	2	4	12	56	122	67	8	2						241		
PM Peak	23:00	17:00	12:00	12:00	15:00	16:00	12:00	12:00	14:00	13:00						12:00		
Vol.	1	5	1	4	12	55	142	50	11	4						259		

Dover Police Department Traffic Bureau

46 Locust Street
Dover, New Hampshire 03820
(603) 742-4646

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound

Start Time	0 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 9999	Total	Pace Speed	Number in Pace
04/30/06	0	0	0	0	1	7	8	3	1	0	0	0	0	0	20	35-44	15
01:00	0	0	0	0	0	2	6	1	0	0	0	0	0	0	9	37-46	9
02:00	0	0	0	0	1	1	1	1	0	1	0	0	0	0	5	37-46	3
03:00	0	0	0	0	0	2	1	2	0	0	0	0	0	0	5	36-45	3
04:00	1	0	0	0	0	1	1	1	0	0	0	0	0	0	4	37-46	3
05:00	0	0	0	0	0	2	1	0	1	0	0	0	0	0	4	32-41	3
06:00	0	0	0	0	0	9	12	4	0	1	0	0	0	0	26	36-45	21
07:00	0	1	0	0	1	8	26	9	1	2	0	0	0	0	48	38-47	36
08:00	0	0	0	0	2	18	31	16	2	0	0	0	0	0	69	37-46	50
09:00	2	2	0	1	8	28	66	16	2	2	0	0	0	0	127	36-45	94
10:00	1	0	0	1	5	41	99	33	4	2	0	0	0	0	186	36-45	140
11:00	0	4	1	3	6	44	121	43	10	3	0	0	0	0	235	37-46	166
12 PM	0	5	0	3	17	54	126	41	6	3	0	0	0	0	255	36-45	180
13:00	0	2	0	3	10	59	106	49	4	3	0	0	0	0	236	36-45	165
14:00	0	4	1	0	8	60	110	54	3	3	0	0	0	0	243	36-45	170
15:00	0	7	0	0	6	38	112	49	2	2	0	0	0	0	216	41-50	161
16:00	0	3	2	2	12	69	93	35	1	2	0	0	0	0	219	36-45	162
17:00	1	4	0	5	3	45	81	38	6	1	0	0	0	0	184	36-45	126
18:00	0	2	1	2	5	58	107	23	7	2	0	0	0	0	207	36-45	165
19:00	0	0	0	0	8	40	60	18	3	3	0	0	0	0	132	36-45	100
20:00	1	2	0	1	10	40	38	6	1	1	0	0	0	0	100	36-45	78
21:00	0	1	0	0	7	16	28	9	1	1	0	0	0	0	63	36-45	44
22:00	2	0	0	0	2	9	16	2	0	0	0	0	0	0	31	36-45	25
23:00	2	0	0	0	2	7	8	2	0	1	0	0	0	0	22	34-43	15
Total	10	37	5	21	114	658	1258	455	55	33	0	0	0	0	2646		
Percent	0.4%	1.4%	0.2%	0.8%	4.3%	24.9%	47.5%	17.2%	2.1%	1.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	11:00	11:00	11:00	09:00	11:00	11:00	11:00	11:00	11:00					11:00		
Vol.	2	4	1	3	8	44	121	43	10	3					235		
PM Peak	22:00	15:00	16:00	17:00	12:00	16:00	12:00	14:00	18:00	12:00					12:00		
Vol.	2	7	2	5	17	69	126	54	7	3					255		

Dover Police Department Traffic Bureau

46 Locust Street
Dover, New Hampshire 03820
(603) 742-4646

Page 5

BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound

Start Time	0 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 9999	Total	Pace Speed	Number in Pace
05/01/06	0	0	0	0	0	1	3	2	0	0	0	0	0	0	6	38-47	6
01:00	1	0	0	0	0	1	2	1	1	0	0	0	0	0	6	33-42	3
02:00	0	0	0	0	0	1	3	0	0	1	0	0	0	0	5	34-43	4
03:00	0	0	0	0	0	1	0	1	1	0	0	0	0	0	3	42-51	2
04:00	0	0	0	0	1	3	2	1	0	0	0	0	0	0	7	33-42	6
05:00	1	0	0	1	4	4	10	5	3	0	0	0	0	0	28	37-46	15
06:00	0	2	0	2	2	17	47	33	1	1	0	0	0	0	105	41-50	80
07:00	0	6	1	3	17	91	130	42	3	1	0	0	0	0	294	36-45	221
08:00	1	6	3	8	14	63	98	46	5	1	0	0	0	0	245	36-45	161
09:00	2	4	0	3	9	37	78	32	1	0	0	0	0	0	166	36-45	115
10:00	0	3	2	2	9	36	77	33	7	0	0	0	0	0	169	36-45	113
11:00	2	5	0	4	14	49	87	28	5	0	0	0	0	0	194	36-45	136
12 PM	1	5	1	2	11	48	87	42	4	0	0	0	0	0	201	36-45	135
13:00	1	2	1	1	12	18	91	42	11	3	0	0	0	0	182	41-50	133
14:00	2	1	1	6	14	60	116	42	7	3	0	0	0	0	252	36-45	176
15:00	0	6	1	8	8	45	121	40	10	5	0	0	0	0	244	36-45	166
16:00	0	3	1	4	11	61	158	62	5	4	0	0	0	0	309	38-47	221
17:00	0	7	2	3	10	97	192	46	6	3	0	0	0	0	366	36-45	289
18:00	0	1	1	5	4	33	107	30	3	2	0	0	0	0	186	36-45	140
19:00	2	3	0	1	6	75	77	32	2	0	0	0	0	0	198	36-45	152
20:00	0	1	0	0	9	37	42	12	0	0	0	0	0	0	101	36-45	79
21:00	0	1	0	1	2	27	27	9	1	1	0	0	0	0	69	36-45	54
22:00	1	0	0	0	2	15	11	3	0	0	0	0	0	0	32	36-45	26
23:00	1	0	0	0	0	9	11	4	1	0	0	0	0	0	26	36-45	20
Total	15	56	14	54	159	829	1577	588	77	25	0	0	0	0	3394		
Percent	0.4%	1.6%	0.4%	1.6%	4.7%	24.4%	46.5%	17.3%	2.3%	0.7%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	07:00	08:00	08:00	07:00	07:00	07:00	08:00	10:00	02:00					07:00		
Vol.	2	6	3	8	17	91	130	46	7	1					294		
PM Peak	14:00	17:00	17:00	15:00	14:00	17:00	17:00	16:00	13:00	15:00					17:00		
Vol.	2	7	2	8	14	97	192	62	11	5					366		

Dover Police Department Traffic Bureau

46 Locust Street
Dover, New Hampshire 03820
(603) 742-4646

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound

Start Time	015	016	021	026	031	036	041	046	051	056	061	066	071	076	9999	Total	Pace Speed	Number in Pace
05/02/06	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	5	33-42	4
01:00	1	0	0	0	2	0	3	0	0	0	0	0	0	0	0	6	34-43	3
02:00	0	0	0	0	2	0	1	2	0	0	0	0	0	0	0	5	38-47	3
03:00	0	0	0	1	0	1	2	0	0	1	0	0	0	0	0	5	33-42	3
04:00	1	0	0	0	2	1	3	0	0	0	0	0	0	0	0	7	34-43	4
05:00	2	2	0	2	3	14	12	3	1	0	0	0	0	0	0	39	36-45	26
06:00	1	1	1	3	7	28	42	19	4	0	0	0	0	0	0	106	36-45	70
07:00	3	3	1	2	16	127	121	23	1	1	0	0	0	0	0	298	36-45	248
08:00	2	6	4	9	33	76	105	33	5	4	0	0	0	0	0	277	36-45	181
09:00	0	0	0	0	5	45	53	18	6	1	0	0	0	0	0	128	36-45	98
10:00	2	0	0	0	8	32	61	21	3	3	0	0	0	0	0	130	36-45	93
11:00	2	5	2	1	4	25	78	46	6	3	0	0	0	0	0	172	41-50	124
12 PM	2	2	1	1	9	49	72	36	6	1	0	0	0	0	0	179	36-45	121
13:00	3	0	1	0	8	37	69	29	3	2	0	0	0	0	0	152	36-45	106
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	19	19	10	19	100	436	624	231	35	16	0	0	0	0	0	1509		
Percent	1.3%	1.3%	0.7%	1.3%	6.6%	28.9%	41.4%	15.3%	2.3%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	08:00	08:00	07:00	07:00	11:00	09:00	08:00						07:00		
Vol.	3	6	4	9	33	127	121	46	6	4						298		
PM Peak	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	13:00						12:00		
Vol.	3	2	1	1	9	49	72	36	6	2						179		
Total	54	176	56	181	735	3917	7343	2645	334	142	0	0	0	0	0	15583		
Percent	0.3%	1.1%	0.4%	1.2%	4.7%	25.1%	47.1%	17.0%	2.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 37 MPH
50th Percentile : 42 MPH
85th Percentile : 47 MPH
95th Percentile : 50 MPH

Stats 10 MPH Pace Speed : 36-45 MPH
Number in Pace : 11260
Percent in Pace : 72.3%
Number of Vehicles > 30 MPH : 15116
Percent of Vehicles > 30 MPH : 97.0%
Mean Speed(Average) : 42 MPH

Dover Police Department Traffic Bureau

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Northbound

Start Time	0 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 9999	Total	Pace Speed	Number in Pace
04/27/06	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	1	1	2	17	31	25	11	0	0	0	0	0	0	0	88	31-40	56
14:00	1	0	2	12	23	25	5	0	0	0	0	0	0	0	68	31-40	48
15:00	1	0	1	14	26	28	12	2	0	0	0	0	0	0	84	31-40	54
16:00	1	1	1	15	31	37	18	2	0	0	0	0	0	0	106	31-40	68
17:00	1	0	2	9	24	62	9	0	0	0	0	0	0	0	107	31-40	86
18:00	2	1	3	11	51	48	15	0	0	0	0	0	0	0	131	31-40	99
19:00	1	1	3	11	50	46	8	0	0	0	0	0	0	0	120	31-40	96
20:00	0	0	0	7	21	34	7	1	0	0	0	0	0	0	70	31-40	55
21:00	2	0	0	7	19	15	2	0	0	0	0	0	0	0	45	31-40	34
22:00	0	0	0	4	12	11	4	0	1	0	0	0	0	0	32	31-40	23
23:00	0	0	0	6	7	10	2	0	0	0	0	0	0	0	25	30-39	17
Total	10	4	14	113	295	341	93	5	1	0	0	0	0	0	876		
Percent	1.1%	0.5%	1.6%	12.9%	33.7%	38.9%	10.6%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	18:00	13:00	18:00	13:00	18:00	17:00	16:00	15:00	22:00						18:00		
	2	1	3	17	51	62	18	2	1						131		

(603) 742-4646

BACK RIVER ROAD

near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Northbound

Start Time	015	1620	2125	2630	3135	3640	4145	4650	5155	5660	6165	6670	7175	769999	Total	Pace Speed	Number in Pace
04/29/06	0	0	0	4	7	5	2	0	0	0	0	0	0	0	18	27-36	12
01:00	0	0	0	2	0	2	2	0	0	0	0	0	0	0	6	33-42	4
02:00	0	0	0	2	3	0	1	0	0	0	0	0	0	0	6	24-33	5
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	22-31	1
04:00	0	0	0	0	6	0	0	0	0	0	0	0	0	0	6	26-35	6
05:00	0	1	0	2	6	7	6	1	0	0	0	0	0	0	23	32-41	14
06:00	0	0	1	1	12	17	6	1	0	0	0	0	0	0	38	31-40	29
07:00	1	0	2	12	31	28	9	1	0	0	0	0	0	0	84	31-40	59
08:00	0	0	0	5	46	60	15	0	0	0	0	0	0	0	126	31-40	106
09:00	1	1	3	10	83	64	10	2	0	0	0	0	0	0	174	31-40	147
10:00	0	2	2	8	53	51	12	0	0	0	0	0	0	0	128	31-40	104
11:00	0	0	1	8	62	49	8	1	0	0	0	0	0	0	129	31-40	111
12 PM	0	0	0	13	22	13	3	1	2	0	0	0	0	0	54	28-37	37
13:00	1	0	1	13	21	14	5	1	0	0	0	0	0	0	56	28-37	36
14:00	1	1	1	18	19	17	10	0	0	0	0	0	0	0	67	28-37	39
15:00	1	2	0	21	19	23	7	2	0	0	0	0	0	0	75	29-38	42
16:00	0	0	0	27	25	32	5	2	0	0	0	0	0	0	91	31-40	57
17:00	0	0	2	23	19	29	7	0	0	0	0	0	0	0	80	31-40	48
18:00	1	0	1	10	20	34	11	1	0	0	0	0	0	0	78	31-40	54
19:00	1	0	0	3	35	27	12	0	0	0	0	0	0	0	78	31-40	62
20:00	0	0	0	13	23	29	2	0	0	0	0	0	0	0	67	31-40	52
21:00	0	1	1	9	18	11	3	2	0	0	0	0	0	0	45	27-36	29
22:00	1	0	1	0	14	17	6	1	0	0	0	0	0	0	40	31-40	31
23:00	0	0	0	3	13	14	3	0	0	0	0	0	0	0	33	31-40	27
Total	8	8	16	207	558	543	145	16	2	0	0	0	0	0	1503		
Percent	0.5%	0.5%	1.1%	13.8%	37.1%	36.1%	9.6%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	10:00	09:00	07:00	09:00	09:00	08:00	09:00							09:00		
Vol.	1	2	3	12	83	64	15	2							174		
PM Peak	13:00	15:00	17:00	16:00	19:00	18:00	19:00	15:00	12:00						16:00		
Vol.	1	2	2	27	35	34	12	2	2						91		

(603) 742-4646

BACK RIVER ROAD

near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Northbound

Start Time	015	1620	2125	2630	3135	3640	4145	4650	5155	5660	6165	6670	7175	769999	Total	Pace Speed	Number in Pace
05/01/06	0	0	0	1	4	3	2	0	0	0	0	0	0	0	10	29-38	8
01:00	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4	28-37	4
02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	27-36	1
03:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	23-32	2
04:00	0	0	0	0	6	3	0	0	0	0	0	0	0	0	9	29-38	9
05:00	1	1	0	3	12	5	2	1	0	0	0	0	0	0	25	28-37	17
06:00	0	0	2	3	28	41	4	1	0	0	0	0	0	0	79	31-40	69
07:00	1	2	1	13	56	43	3	1	1	0	0	0	0	0	121	31-40	99
08:00	0	1	0	21	64	53	2	1	0	0	0	0	0	0	142	31-40	117
09:00	1	0	6	12	30	25	6	1	0	0	0	0	0	0	81	31-40	55
10:00	0	0	3	7	34	17	2	0	0	0	0	0	0	0	63	31-40	51
11:00	1	0	5	16	18	28	8	0	0	0	0	0	0	0	76	31-40	46
12 PM	1	0	2	19	15	11	6	0	0	0	0	0	0	0	54	26-35	34
13:00	2	2	1	22	12	11	2	0	0	0	0	0	0	0	52	26-35	34
14:00	1	0	0	32	22	22	6	1	0	0	0	0	0	0	84	26-35	54
15:00	1	0	6	48	35	37	3	0	0	0	0	0	0	0	130	26-35	83
16:00	2	1	3	14	19	23	5	0	0	0	0	0	0	0	67	31-40	42
17:00	2	1	0	18	45	15	8	1	0	0	0	0	0	0	90	26-35	63
18:00	0	0	4	17	37	37	10	1	0	0	0	0	0	0	106	31-40	74
19:00	0	0	1	10	43	23	6	0	1	0	0	0	0	0	84	31-40	66
20:00	0	0	1	2	20	21	2	0	0	0	0	0	0	0	46	31-40	41
21:00	1	0	0	3	8	13	1	1	0	0	0	0	0	0	27	31-40	21
22:00	0	1	0	0	10	10	0	0	0	0	0	0	0	0	21	31-40	20
23:00	0	0	0	2	4	6	1	0	0	0	0	0	0	0	13	32-41	11
Total	14	9	35	263	526	450	79	9	2	0	0	0	0	0	1387		
Percent	1.0%	0.6%	2.5%	19.0%	37.9%	32.4%	5.7%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.	05:00	07:00	09:00	08:00	08:00	08:00	11:00	05:00	07:00						08:00		
PM Peak Vol.	13:00	13:00	15:00	15:00	17:00	15:00	18:00	14:00	19:00						15:00		
	2	2	6	48	45	37	10	1	1						130		

Dover Police Department Traffic Bureau

46 Locust Street
Dover, New Hampshire 03820
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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Northbound

Start Time	015	016	021	026	031	036	041	046	051	056	061	066	071	076	9999	Total	Pace Speed	Number in Pace
05/02/06	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3	28-37	3
01:00	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	4	18-27	2
02:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	32-41	1
03:00	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4	28-37	4
04:00	0	0	0	1	10	4	1	0	0	0	0	0	0	0	0	16	30-39	15
05:00	0	0	0	4	8	15	2	0	0	0	0	0	0	0	0	29	31-40	23
06:00	0	0	0	12	37	39	5	1	0	0	0	0	0	0	0	94	31-40	76
07:00	1	0	1	12	82	66	11	2	0	0	0	0	0	0	0	175	31-40	148
08:00	1	1	3	21	106	68	8	0	0	0	0	0	0	0	0	208	31-40	174
09:00	0	1	2	15	25	39	4	0	0	0	0	0	0	0	0	86	31-40	64
10:00	0	1	2	13	31	30	8	1	0	0	0	0	0	0	0	86	31-40	61
11:00	0	1	1	11	43	27	10	1	0	0	0	0	0	0	0	94	31-40	70
12 PM	0	0	1	10	30	25	7	0	0	0	0	0	0	0	0	73	31-40	55
13:00	0	0	1	8	23	35	10	0	0	0	0	0	0	0	0	77	31-40	58
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	2	4	11	109	398	354	67	5	0	0	0	0	0	0	0	950		
Percent	0.2%	0.4%	1.2%	11.5%	41.9%	37.3%	7.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	08:00	08:00	08:00	07:00	07:00								08:00		
Vol.	1	1	3	21	106	68	11	2								208		
PM Peak			12:00	12:00	12:00	13:00	13:00									13:00		
Vol.			1	10	30	35	10									77		
Total	48	43	102	1126	2704	2738	680	69	6	0	0	0	0	0	0	7516		
Percent	0.6%	0.6%	1.4%	15.0%	36.0%	36.4%	9.0%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 30 MPH
50th Percentile : 35 MPH
85th Percentile : 40 MPH
95th Percentile : 43 MPH

Stats
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 5442
Percent in Pace : 72.4%
Number of Vehicles > 30 MPH : 6197
Percent of Vehicles > 30 MPH : 82.5%
Mean Speed(Average) : 35 MPH

Dover Police Department Traffic Bureau

46 Locust Street
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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound, Northbound

Start Time	0 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 9999	Total	Pace Speed	Number in Pace
04/27/06	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	1	2	4	23	41	78	100	38	1	0	0	0	0	0	288	36-45	178
14:00	1	2	4	18	32	62	86	39	5	3	0	0	0	0	252	36-45	148
15:00	1	2	1	17	32	72	125	36	9	3	0	0	0	0	298	36-45	197
16:00	1	2	1	15	42	87	145	38	10	1	0	0	0	0	342	36-45	232
17:00	1	1	4	10	35	145	179	50	4	0	0	0	0	0	429	36-45	324
18:00	2	3	3	12	64	100	112	35	8	1	0	0	0	0	340	36-45	212
19:00	2	1	4	17	60	103	92	28	3	2	0	0	0	0	312	36-45	195
20:00	0	0	0	7	27	74	61	6	1	0	0	0	0	0	176	36-45	135
21:00	2	0	0	8	27	61	30	6	1	0	0	0	0	0	135	34-43	91
22:00	0	1	0	4	14	30	28	3	1	1	0	0	0	0	82	36-45	58
23:00	1	0	0	7	7	21	14	5	2	0	0	0	0	0	57	35-44	35
Total	12	14	21	138	381	833	972	284	45	11	0	0	0	0	2711		
Percent	0.4%	0.5%	0.8%	5.1%	14.1%	30.7%	35.9%	10.5%	1.7%	0.4%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.																	
PM Peak Vol.	18:00	18:00	13:00	13:00	18:00	17:00	17:00	17:00	16:00	14:00					17:00		
	2	3	4	23	64	145	179	50	10	3					429		

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound, Northbound

Start	0	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	9999	Total	Speed	in Pace
04/28/06	1	0	0	1	5	13	15	3	1	0	0	0	0	0	39	36-45	28
01:00	0	0	1	2	2	6	5	0	0	0	0	0	0	0	16	34-43	11
02:00	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3	33-42	3
03:00	0	0	0	0	1	1	3	0	0	0	0	0	0	0	5	34-43	5
04:00	0	0	0	0	12	8	4	1	0	1	0	0	0	0	26	31-40	20
05:00	1	0	0	3	10	17	10	5	1	1	0	0	0	0	48	31-40	27
06:00	0	1	2	8	37	37	50	20	4	1	0	0	0	0	160	36-45	87
07:00	1	3	3	24	64	91	87	24	4	1	0	0	0	0	302	36-45	178
08:00	1	3	1	12	45	99	101	30	4	1	0	0	0	0	297	36-45	200
09:00	1	2	4	9	33	83	85	28	1	1	0	0	0	0	247	36-45	168
10:00	0	5	5	13	40	73	104	36	6	0	0	0	0	0	282	36-45	177
11:00	0	3	3	19	46	90	87	35	3	2	0	0	0	0	288	36-45	177
12 PM	1	1	2	11	19	89	103	43	3	2	0	0	0	0	274	36-45	192
13:00	0	3	1	10	23	44	105	45	5	2	0	0	0	0	238	37-46	150
14:00	0	4	3	21	16	78	108	33	4	1	0	0	0	0	268	36-45	186
15:00	0	3	0	28	36	65	122	39	4	2	0	0	0	0	299	36-45	187
16:00	1	3	0	27	44	109	133	45	3	1	0	0	0	0	366	36-45	242
17:00	0	6	3	30	33	96	168	56	4	2	0	0	0	0	398	36-45	264
18:00	0	2	1	12	29	84	157	39	4	2	0	0	0	0	330	36-45	241
19:00	0	1	1	11	53	93	87	21	5	1	0	0	0	0	273	36-45	180
20:00	0	0	0	8	34	86	76	8	0	2	0	0	0	0	214	36-45	162
21:00	1	1	0	3	35	65	50	15	1	1	0	0	0	0	172	36-45	115
22:00	1	1	0	7	19	52	30	3	0	0	0	0	0	0	113	36-45	82
23:00	0	0	0	4	22	25	19	2	0	0	0	0	0	0	72	31-40	47
Total	9	42	30	263	658	1405	1711	531	57	24	0	0	0	0	4730		
Percent	0.2%	0.9%	0.6%	5.6%	13.9%	29.7%	36.2%	11.2%	1.2%	0.5%	0.0%	0.0%	0.0%	0.0%			
AM Peak	00:00	10:00	10:00	07:00	07:00	08:00	10:00	10:00	10:00	11:00					07:00		
Vol.	1	5	5	24	64	99	104	36	6	2					302		
PM Peak	12:00	17:00	14:00	17:00	19:00	16:00	17:00	17:00	13:00	12:00					17:00		
Vol.	1	6	3	30	53	109	168	56	5	2					398		

Dover Police Department Traffic Bureau

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound, Northbound

Start	0	16	21	26	31	36	41	46	51	56	61	66	71	76	Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	9999	Total	Speed
04/29/06	1	0	0	4	8	17	22	3	0	1	0	0	0	0	56	36-45
01:00	1	0	0	2	1	8	7	1	0	1	0	0	0	0	21	35-44
02:00	0	0	0	2	3	0	3	0	0	0	0	0	0	0	8	24-33
03:00	0	0	0	0	1	2	1	1	0	0	0	0	0	0	5	28-37
04:00	0	0	0	0	6	2	1	1	0	0	0	0	0	0	10	28-37
05:00	1	2	0	2	8	7	12	5	0	2	0	0	0	0	39	36-45
06:00	0	0	1	3	13	22	16	10	1	0	0	0	0	0	66	33-42
07:00	1	0	3	12	39	52	56	31	3	1	0	0	0	0	198	36-45
08:00	0	2	0	8	56	91	94	41	8	2	0	0	0	0	302	36-45
09:00	1	2	3	11	90	104	129	69	6	0	0	0	0	0	415	36-45
10:00	0	2	2	12	56	95	134	55	8	2	0	0	0	0	366	36-45
11:00	0	4	3	10	74	105	116	42	3	1	0	0	0	0	358	36-45
12 PM	0	1	1	17	28	62	145	51	6	2	0	0	0	0	313	36-45
13:00	1	4	2	15	27	64	116	37	4	4	0	0	0	0	274	36-45
14:00	1	4	2	21	28	55	90	49	11	4	0	0	0	0	265	36-45
15:00	1	4	0	24	31	71	124	45	2	2	0	0	0	0	304	36-45
16:00	0	0	1	30	34	87	118	33	6	1	0	0	0	0	310	36-45
17:00	0	5	2	24	29	78	115	24	4	3	0	0	0	0	284	36-45
18:00	1	1	2	10	28	79	122	34	3	2	0	0	0	0	282	36-45
19:00	1	1	0	5	43	78	94	25	1	1	0	0	0	0	249	36-45
20:00	0	0	0	13	29	83	40	19	1	3	0	0	0	0	188	36-45
21:00	0	1	1	9	27	45	33	10	0	0	0	0	0	0	126	34-43
22:00	1	0	1	0	18	44	37	8	0	1	0	0	0	0	110	36-45
23:00	1	0	0	4	15	37	18	2	1	0	0	0	0	0	78	34-43
Total	12	33	24	238	692	1288	1643	596	68	33	0	0	0	0	4627	
Percent	0.3%	0.7%	0.5%	5.1%	15.0%	27.8%	35.5%	12.9%	1.5%	0.7%	0.0%	0.0%	0.0%	0.0%		
AM Peak	00:00	11:00	07:00	07:00	09:00	11:00	10:00	09:00	08:00	05:00					09:00	
Vol.	1	4	3	12	90	105	134	69	8	2					415	
PM Peak	13:00	17:00	13:00	16:00	19:00	16:00	12:00	12:00	14:00	13:00					12:00	
Vol.	1	5	2	30	43	87	145	51	11	4					313	

Dover Police Department Traffic Bureau

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound, Northbound

Start	0	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	9999	Total	Speed	in Pace
04/30/06	0	0	0	2	4	13	8	3	1	0	0	0	0	0	31	34-43	21
01:00	0	0	0	3	2	7	6	1	0	0	0	0	0	0	19	34-43	13
02:00	0	0	0	1	1	2	1	1	0	1	0	0	0	0	7	28-37	4
03:00	0	0	0	0	0	2	1	2	0	0	0	0	0	0	5	36-45	3
04:00	1	0	0	0	3	1	1	1	0	0	0	0	0	0	7	31-40	4
05:00	0	0	0	0	3	10	2	0	1	0	0	0	0	0	16	33-42	15
06:00	0	0	1	1	10	26	16	5	1	1	0	0	0	0	61	36-45	42
07:00	0	1	1	0	28	37	34	9	1	2	0	0	0	0	113	35-44	71
08:00	0	2	1	6	46	54	39	16	2	0	0	0	0	0	166	31-40	100
09:00	2	3	0	7	49	64	78	16	2	2	0	0	0	0	223	36-45	142
10:00	2	0	0	14	37	75	103	33	4	2	0	0	0	0	270	36-45	178
11:00	0	4	1	14	39	69	128	46	10	3	0	0	0	0	314	36-45	197
12 PM	0	5	0	11	38	66	127	42	6	3	0	0	0	0	298	36-45	193
13:00	3	2	0	27	33	78	109	52	4	3	0	0	0	0	311	36-45	187
14:00	1	4	3	19	14	70	115	55	3	3	0	0	0	0	287	36-45	185
15:00	1	8	1	26	30	57	117	50	2	2	0	0	0	0	294	36-45	174
16:00	2	3	3	25	26	100	100	38	1	2	0	0	0	0	300	36-45	200
17:00	2	4	1	30	28	82	90	39	6	1	0	0	0	0	283	36-45	172
18:00	0	2	1	15	24	78	113	24	7	2	0	0	0	0	266	36-45	191
19:00	0	0	0	7	41	60	67	18	3	3	0	0	0	0	199	36-45	127
20:00	1	2	0	7	34	54	39	6	1	1	0	0	0	0	145	35-44	93
21:00	0	1	0	3	20	27	30	9	1	1	0	0	0	0	92	36-45	57
22:00	2	1	0	0	9	14	17	2	0	0	0	0	0	0	45	36-45	31
23:00	2	0	0	5	6	14	9	2	0	1	0	0	0	0	39	35-44	24
Total	19	42	13	223	525	1060	1350	470	56	33	0	0	0	0	3791		
Percent	0.5%	1.1%	0.3%	5.9%	13.8%	28.0%	35.6%	12.4%	1.5%	0.9%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	11:00	06:00	10:00	09:00	10:00	11:00	11:00	11:00	11:00					11:00		
Vol.	2	4	1	14	49	75	128	46	10	3					314		
PM Peak	13:00	15:00	14:00	17:00	19:00	16:00	12:00	14:00	18:00	12:00					13:00		
Vol.	3	8	3	30	41	100	127	55	7	3					311		

Dover Police Department Traffic Bureau

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound, Northbound

Start	0	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	9999	Total	Speed	in Pace
05/01/06	0	0	0	1	4	4	5	2	0	0	0	0	0	0	16	37-46	10
01:00	1	0	0	0	2	3	2	1	1	0	0	0	0	0	10	33-42	7
02:00	0	0	0	0	0	2	3	0	0	1	0	0	0	0	6	34-43	5
03:00	0	0	0	0	2	1	0	1	1	0	0	0	0	0	5	27-36	3
04:00	0	0	0	0	7	6	2	1	0	0	0	0	0	0	16	31-40	13
05:00	2	1	0	4	16	9	12	6	3	0	0	0	0	0	53	31-40	25
06:00	0	2	2	5	30	58	51	34	1	1	0	0	0	0	184	36-45	109
07:00	1	8	2	16	73	134	133	43	4	1	0	0	0	0	415	36-45	267
08:00	1	7	3	29	78	116	100	47	5	1	0	0	0	0	387	36-45	216
09:00	3	4	6	15	39	62	84	33	1	0	0	0	0	0	247	36-45	146
10:00	0	3	5	9	43	53	79	33	7	0	0	0	0	0	232	36-45	132
11:00	3	5	5	20	32	77	95	28	5	0	0	0	0	0	270	36-45	172
12 PM	2	5	3	21	26	59	93	42	4	0	0	0	0	0	255	36-45	152
13:00	3	4	2	23	24	29	93	42	11	3	0	0	0	0	234	41-50	135
14:00	3	1	1	38	36	82	122	43	7	3	0	0	0	0	336	36-45	204
15:00	1	6	7	56	43	82	124	40	10	5	0	0	0	0	374	36-45	206
16:00	2	4	4	18	30	84	163	62	5	4	0	0	0	0	376	36-45	247
17:00	2	8	2	21	55	112	200	47	6	3	0	0	0	0	456	36-45	312
18:00	0	1	5	22	41	70	117	31	3	2	0	0	0	0	292	36-45	187
19:00	2	3	1	11	49	98	83	32	3	0	0	0	0	0	282	36-45	181
20:00	0	1	1	2	29	58	44	12	0	0	0	0	0	0	147	36-45	102
21:00	1	1	0	4	10	40	28	10	1	1	0	0	0	0	96	36-45	68
22:00	1	1	0	0	12	25	11	3	0	0	0	0	0	0	53	32-41	38
23:00	1	0	0	2	4	15	12	4	1	0	0	0	0	0	39	36-45	27
Total	29	65	49	317	685	1279	1656	597	79	25	0	0	0	0	4781		
Percent	0.6%	1.4%	1.0%	6.6%	14.3%	26.8%	34.6%	12.5%	1.7%	0.5%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	07:00	09:00	08:00	08:00	07:00	07:00	08:00	10:00	02:00					07:00		
Vol.	3	8	6	29	78	134	133	47	7	1					415		
PM Peak	13:00	17:00	15:00	15:00	17:00	17:00	17:00	16:00	13:00	15:00					17:00		
Vol.	3	8	7	56	55	112	200	62	11	5					456		

Dover Police Department Traffic Bureau

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BACK RIVER ROAD
near #78 (between Wingate and Mast)

Date Start: 27-Apr-06

Date End: 02-May-06

Southbound, Northbound

Start Time	0 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 9999	Total	Pace Speed	Number in Pace
05/02/06	0	0	0	0	2	3	2	1	0	0	0	0	0	0	8	33-42	7
01:00	1	0	0	2	2	2	3	0	0	0	0	0	0	0	10	34-43	7
02:00	0	0	0	0	2	0	2	2	0	0	0	0	0	0	6	38-47	4
03:00	0	0	0	1	2	3	2	0	0	1	0	0	0	0	9	33-42	7
04:00	1	0	0	1	12	5	4	0	0	0	0	0	0	0	23	30-39	17
05:00	2	2	0	6	11	29	14	3	1	0	0	0	0	0	68	35-44	44
06:00	1	1	1	15	44	67	47	20	4	0	0	0	0	0	200	33-42	114
07:00	4	3	2	14	98	193	132	25	1	1	0	0	0	0	473	36-45	325
08:00	3	7	7	30	139	144	113	33	5	4	0	0	0	0	485	31-40	283
09:00	0	1	2	15	30	84	57	18	6	1	0	0	0	0	214	36-45	141
10:00	2	1	2	13	39	62	69	22	3	3	0	0	0	0	216	36-45	131
11:00	2	6	3	12	47	52	88	47	6	3	0	0	0	0	266	36-45	140
12 PM	2	2	2	11	39	74	79	36	6	1	0	0	0	0	252	36-45	153
13:00	3	0	2	8	31	72	79	29	3	2	0	0	0	0	229	36-45	151
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	21	23	21	128	498	790	691	236	35	16	0	0	0	0	2459		
Percent	0.9%	0.9%	0.9%	5.2%	20.3%	32.1%	28.1%	9.6%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	08:00	08:00	07:00	07:00	11:00	09:00	08:00					08:00		
Vol.	4	7	7	30	139	193	132	47	6	4					485		
PM Peak	13:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	13:00					12:00		
Vol.	3	2	2	11	39	74	79	36	6	2					252		
Total	102	219	158	1307	3439	6655	8023	2714	340	142	0	0	0	0	23099		
Percent	0.4%	0.9%	0.7%	5.7%	14.9%	28.8%	34.7%	11.7%	1.5%	0.6%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 33 MPH
50th Percentile : 40 MPH
85th Percentile : 45 MPH
95th Percentile : 49 MPH

Stats 10 MPH Pace Speed : 36-45 MPH
Number in Pace : 14678
Percent in Pace : 63.5%
Number of Vehicles > 30 MPH : 21313
Percent of Vehicles > 30 MPH : 92.3%
Mean Speed(Average) : 40 MPH

Day Care Center (565)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 90

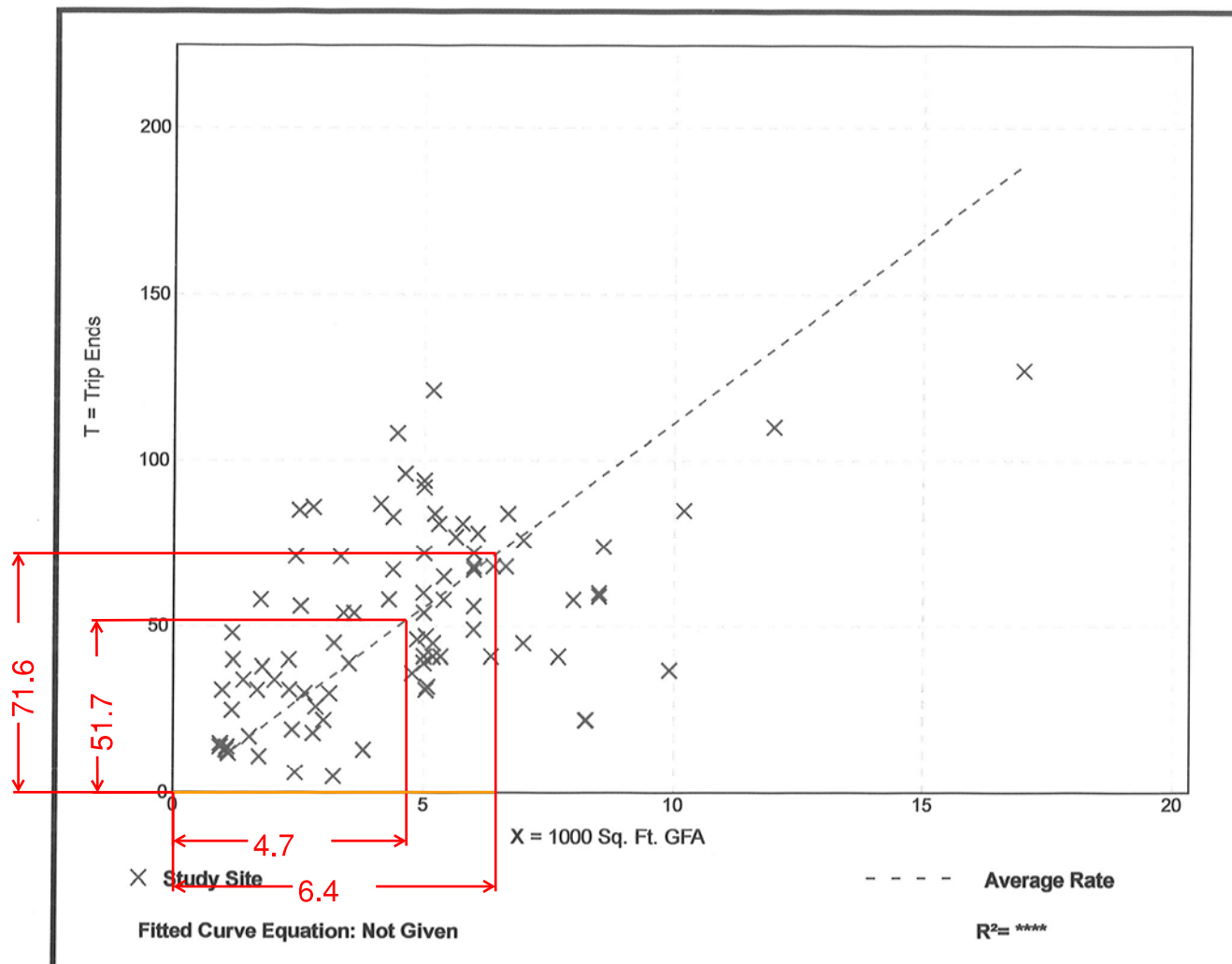
1000 Sq. Ft. GFA: 5

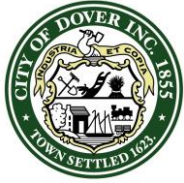
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.12	1.56 - 40.85	6.28

Data Plot and Equation





CITY OF DOVER

TRC CONCEPT REVIEW NOTES # WAIV-2023-0004

Application Type: Concept Site Review
Applicant(s): Kniphfer LLC
Owner(s): Kniphfer LLC
Location: 43 Back River Road (Tax Map I, Lot 55-A)
Date: May 4, 2023

INTENT: Proposal is to install a second driveway to help with traffic flow at drop-off and pick-up times at Kid's Culture location.

UNITS PROPOSED: n/a

AGENDA ITEM #: 1

ACREAGE: 1.06± acres

ZONING DISTRICT: R-12

EXISTING LAND USE: Childcare

PROPOSED LAND USE: Childcare (No change)

SURROUNDING LAND USE: Commercial, Residential

ZBA ACTION: None

RELIEF/PERMITS REQUIRED:
None

RELIEF/WAIVERS REQUESTED:
24' wide requirement

ATTENDANCE:

Members:

Donna Benton, Planning
Natasha Kypfer, Zoning
Marn Speidel, Police
Jim Maxfield, Fire & Inspection Services
Ken Mavrogeorge, Engineering
Christopher Parker, Business Development

Other:

John Knipfer, Kid's Culture
Erin Knipfer, Kid's Culture
David Choate, Colliers
Michael Malynowski, Allen & Major (By Phone)

CONCEPT REVIEW NOTES:

Planning:

- Full TRC needed based on expanding a daycare use. Utilize site plan check list.
- Plan should also include proposed traffic signage location, stacking, and general information for operation of traffic onsite on your lot, parking areas, one-way traffic flow, curb cut widths, dates the sight distance was measured and by whom, etc.
- An engineered stamped sight distance explanation for both driveways and traffic study would be needed as staff emailed in May 2022.
- Narrative about number of children, employees, parking areas, drop off, and pick up, etc. to provide necessary information for traffic flow and occupancy.
- Potentially a left turn lane in to the site would be needed on Back River Road which was discussed at the previous unofficial TRC this past fall.
- What was the size of the addition built?
- Provide existing conditions plan and compare to your proposal

Engineering:

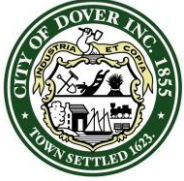
- See attached marked up plan dated April 18, 2023

Fire & Inspections Services:

- Overlay concept plan on approved plan
- Reference RSA 155-A:5 in plan note
- Holds comments on turn lane and overall queue until full plans are submitted

Police Department:

- I reviewed the plan sketch entitled "Existing Sight Distance Figure" provided by Allen & Major Associates related to the proposed driveway expansion at 43 Back River Road. The plan notes that there is 400' in each direction.
- Assisted by another police patrol supervisor, I performed a field study to verify these measurements, at the position and height of a driver exiting the proposed new driveway.
- I determined that the available sight distance to the north (looking to the left for traffic approaching southbound) is **495'**.
- I determined that the available sight distance to the south (looking to the right for traffic approaching northbound) is only **375'**.



CITY OF DOVER

TRC CONCEPT REVIEW NOTES # WAIV-2023-0004

Application Type: Concept Site Review
Applicant(s): Kniphfer LLC
Owner(s): Kniphfer LLC
Location: 43 Back River Road (Tax Map I, Lot 55-A)
Date: May 4, 2023

- It is noted that this view cannot be improved with roadside vegetation trimming, due to the curvilinear horizontal alignment of Back River Road.
- The Police Department is concerned about the minimal sight distance to the south, particularly since our historical traffic count data shows the 85th percentile speed at 40 mph in the northerly direction at a point just south of this site (posted limit is 30 mph)

Business Development:

- Second curb cut not a good idea
- See July 2022 email from Christopher Parker
- Reduce curb cut to 24'
- Possibly need waivers from Planning Board
- Sight distance is an issue
- This scenario was contemplated in ~2004 and did not make sense
- Prioritizing parking out back
- Provide a turnaround out back
- Use existing curb cut for in & out
- Yes, we need childcare but this site has restrictions

Planning Board: N/A

Next steps:

Revise plans and materials to address concerns above for an official TRC.

Attachments:

- Engineering plan mark-ups, April 18, 2023
- Police memo, April 26, 2023
- Back River Road Traffic Data, 2006

May 18, 2023

To: Donna Benton, AICP
Director of Planning and Community
Development
City of Dover, NH
288 Central Avenue
Dover, NH 03820-4169

A&M Project #: 3188-01
Re: TRC Response
Tax Map I, Lot 55-A
43 Back River Road

Copy:

Dear Ms. Benton:

On behalf of Kniphfer LLC, Allen & Major Associates, Inc. (A&M) is pleased to provide the following responses to the Technical Review Committee comments dated May 4, 2023. A&M's responses are indicated in bold italic below the Committee's comments.

Planning:

- *Full TRC is needed based on expanding a daycare use. Utilize site plan check list.*

A&M Response: We respectfully disagree with the need for an additional full TRC as our review of the City of Dover NH Site Plan Regulations Section 149-4.B defines when Technical Review is required for an expansion and/or addition.

- B. Expansions and/or additions. Technical Review Committee review will be required for the following expansion and/or additions to existing development:
- (1) Any increase of NONRESIDENTIAL development resulting in an expansion of gross floor area exceeding twenty-five hundred (2,500) square feet.
 - (2) Any addition to a residential structure resulting in the creation of five (5) or more additional units.
 - (3) Any accessory structures with floor areas exceeding fifteen hundred (1,500) square feet.
 - (4) Any expansion of an IMPREVIOUS surface/parking area larger than one thousand (1,000) square feet. A single family home, two or three to four family dwelling unit shall not be regulated by this provision.
 - (5) Any construction activities that result in a CONTIGUOUS LAND DISTURBANCE of greater than or equal to twenty thousand (20,000) square feet.
 - (6) Any construction activities that result in a CONTIGUOUS LAND DISTURBANCE of greater than or equal to one thousand (1,000) square feet if the activity is located in or within fifty (50) feet of a wetland or Conservation District.

The current proposal has an expansion of the existing use not exceeding 2,500 sf, does not increase the impervious parking area where in fact there is a decrease in impervious parking and the contiguous land disturbance is far below the 20,000 sf maximum. Items 2, 3, & 6 are not applicable to this project.

- C. Change of USE of Existing Structures. Site review will be required for a change in conforming USE with a new USE allowed in the zoning district in which the tract or structure is located. For the purposes of this subsection, the definition of a new USE shall not include any USES which have previously existed on the site since the adoption of the Dover Zoning Ordinance (July, 1948). The following criteria constitutes a CHANGE IN USE:

Not applicable as there is no proposed change of use. The existing site is a childcare facility and will continue to be operated as a childcare facility.

- D. Any proposal which, in the judgment of the Director of Planning and Community Development, has the potential for having a significant impact on the health, safety and welfare of the community shall be reviewed by the Technical Review Committee.

The submitted supplement materials which include a project narrative, trip generation memo, sight distance plan stamped by a NH Professional Engineer and parent petition will illustrate that there is not an impact to health, safety and welfare of the community.

- *Plan should also include proposed traffic signage location, stacking, and general information for operation of traffic onsite on your lot, parking areas, one-way traffic flow, curb cut widths, dates the sight distance was measured and by whom, etc.*

A&M Response: Please refer to Sheet C-1 for general site plan information including typical City of Dover site plan notes.

- *An engineered stamped sight distance explanation for both driveways and traffic study would be needed as staff emailed in May 2022.*

A&M Response: Please refer to Sheet C-3 for sight distance summary. Additionally a trip generation memo has been provided.

- *Narrative about number of children, employees, parking areas, drop off, and pick up, etc. to provide necessary information for traffic flow and occupancy.*

A&M Response: Please refer to project narrative letter dated 05-18-23 for supplemental information.

- *Potentially a left turn lane in to the site would be needed on Back River Road which was discussed at the previous unofficial TRC this past fall.*

A&M Response: Based upon the review of the traffic volumes provided by the police department and the prepared trip generations for the expanded use do not justify a dedicated turn lane within the public road.

- *What was the size of the addition built?*

A&M Response: The recently completed building addition at the rear is approximately 1,780 sf and the recently completed building addition at the front of the building is approximately 188 sf which equal 1,968 sf of expanded area.

- *Provide existing conditions plan and compare to your proposal*

A&M Response: An existing condition plan is provided in the most recent submittal.

Engineering:

- *See attached marked up plan dated April 18, 2023*

A&M Response: The plan mark-up has been reviewed and incorporated into the updated plans to the maximum extent possible.

Fire & Inspections Services:

- *Overlay concept plan on approved plan*

A&M Response: Please refer to Sheet C-4 for comparison of plan of file at City vs existing conditions vs proposed upgrades.

- *Reference RSA 155-A:5 in plan note*

A&M Response: Please refer to Sheet C-4, City Notes #18.

- *Holds comments on turn lane and overall queue until full plans are submitted*

A&M Response: Understood, no additional response needed.

Police Department:

- *I reviewed the plan sketch entitled "Existing Sight Distance Figure" provided by Allen & Major Associates related to the proposed driveway expansion at 43 Back River Road. The plan notes that there is 400' in each direction.*
- *Assisted by another police patrol supervisor, I performed a field study to verify these measurements, at the position and height of a driver exiting the proposed new driveway.*
- *I determined that the available sight distance to the north (looking to the left for traffic approaching southbound) is 495'.*
- *I determined that the available sight distance to the south (looking to the right for traffic approaching northbound) is only 375'.*
- *It is noted that this view cannot be improved with roadside vegetation trimming, due to the curvilinear horizontal alignment of Back River Road.*
- *The Police Department is concerned about the minimal sight distance to the south, particularly since our historical traffic count data shows the 85th percentile speed at 40 mph in the northerly direction at a point just south of this site (posted limit is 30 mph)*

A&M Response: The proposed modifications to the facility contemplate the re-installation of this second access way along with the conversion of the vehicle travel path to single direction along the front of the facility. The new single directional vehicle path would enter the site at the southern driveway and circulate through the site to the north exiting the site. Based on the 85th percentile speed data provided by the Dover Police department, the stopping sight distance for south bound traffic is 344 feet and 315 feet for north bound traffic per the American Association of State Highway and Transportation Officials (AASHTO) guidelines. The update Sheet C-3 illustrates that these sight distances can be achieved for both vehicles stopped at the project egress point and vehicle traveling on Back River Road

Business Development:

- *Second curb cut not a good idea*

A&M Response: Historically a second curb cut existed at the property. The update Sheet C-1 illustrates that a second curb cut can be achieved.

- *See July 2022 email from Christopher Parker*

A&M Response: We believe that the concerns raised in the email have been addressed by the updated site plans and additional supporting information.

- *Reduce curb cut to 24'*

A&M Response: The proposed southern driveway would be constructed to a width of 16 feet and the existing northern driveway would be reduced to 18 feet, both of which meet current site plan requirements.

- *Possibly need waivers from Planning Board*

A&M Response: Based upon our review of the regulations and the proposed work, no waivers are anticipated.

- *Sight distance is an issue*

A&M Response: Please refer to Sheet C-3 for sight distance summary. Refer to response to police department comments above for additional information.

- *This scenario was contemplated in ~2004 and did not make sense*

A&M Response: The proposed modifications to the facility contemplate the re-installation of this second access way along with the conversion of the vehicle travel path to single direction along the front of the facility. The new single directional vehicle path would enter the site at the southern driveway and circulate through the site to the north exiting the site.

- *Prioritizing parking out back*

A&M Response: Parking to the side of the building is to be reserved for parent drop off.

- *Provide a turnaround out back*

A&M Response: Although there were improvements proposed in 1999 specifically to the parking lot and circulation as per a plan obtained from the Dover Planning office, these improvements were not fully implemented as evident from the recent on-ground survey conducted by this office. Based on field observations, it is evident that ledge is present at or near the surface which may have precluded the full expansion of parking lot from the 1999 plans. Subsequently, these obstacles will also hinder any further expansion of the existing parking lot today.

- *Use existing curb cut for in & out*

A&M Response: The proposed plan contemplates converting the existing curb cut to egress only. To further bolster this approach a truck turning plan has been prepared to illustrate that a full-size school bus and maneuver through the new circulation path.

- *Yes, we need childcare but this site has restrictions*

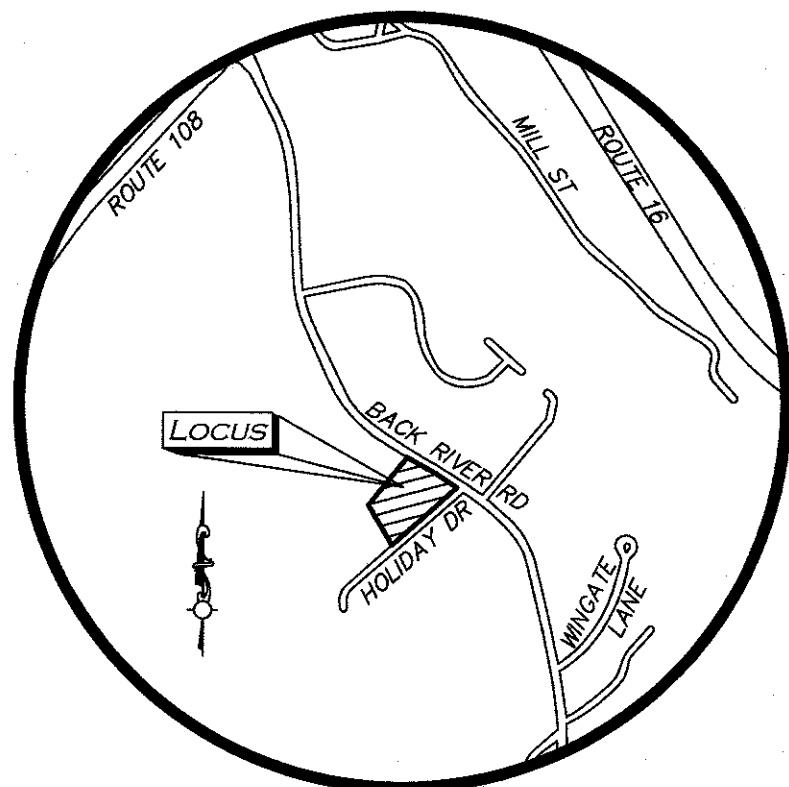
A&M Response: Agreed

We thank you in advance for your anticipated cooperation regarding this project and look forward to meeting to discuss the plans.

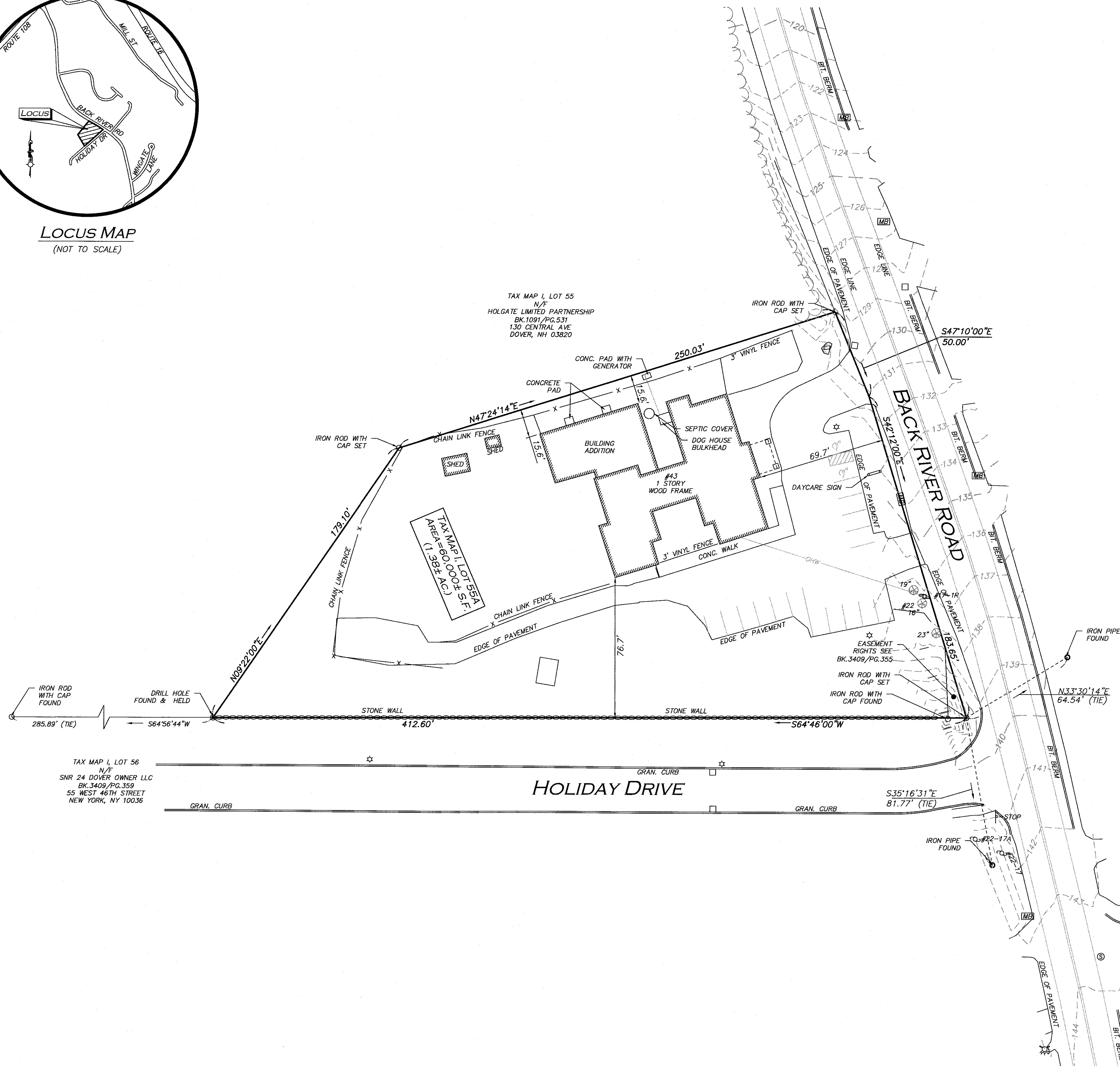
Very Truly Yours,
ALLEN & MAJOR ASSOCIATES, INC.



Michael A. Malynowski, PE
Senior Project Manager



LOCUS MAP
(NOT TO SCALE)



LEGEND

DRILL HOLE (DH)	⊙
IRON PIPE (IP)	○
IRON ROD (IR)	⊙
SEWER MANHOLE (SMH)	⊙
CATCH BASIN (CB)	⊙
UTILITY POLE	⊙
SIGN	⊙
MAILBOX	⊙
LIGHT	⊙
WATER GATE	⊙
PROPERTY LINE	---
ABUTTERS LINE	---
STONE WALL	---
EDGE OF PAVEMENT	---
CURB	---
CHAIN LINK FENCE	x
VINYL FENCE	n
GAS LINE	-G-
ELECTRIC LINE	-E-
OVERHEAD WIRES	-OHW-
BITUMINOUS	BIT.
CONCRETE	CONC.
GRANITE	GRAN.
NOW OR FORMERLY	N/F
BOOK	BK.
PAGE	PG.

LOCUS REFERENCES

- TOWN OF DOVER TAX MAP I, LOT 55A
- S.C.R.D. BOOK 5051, PAGE 545
- PLAN ENTITLED, "PLAN OF LAND HERBERT E. MEADER DOVER, N.H.", SCALE 1"=100', DATED DECEMBER, 1949, PREPARED BY GRANT DAVIS, AND ON FILE AT THE S.C.R.D. AS PLAN 15, POCKET 3, FOLDER 1

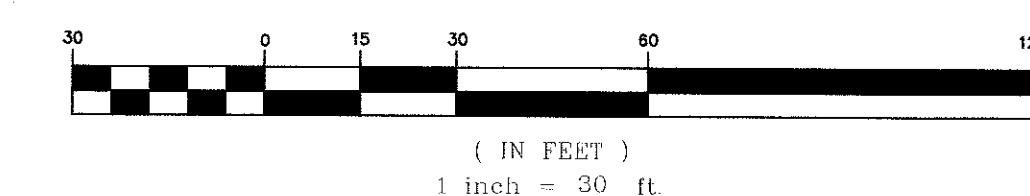
PLAN REFERENCES

- PLAN ENTITLED, "CONDOMINIUM SITE PLAN BACK RIVER ROAD CONDOMINIUM BACK RIVER ROAD DOVER, NEW HAMPSHIRE", SCALE 1"=100', DATED DECEMBER 27, 2006, PREPARED BY TRITECH ENGINEERING CORP., AND ON FILE AT THE S.C.R.D. AS PLAN NO. 89-2.

NOTES

1. NORTH ARROW IS BASED ON S.C.R.D. PLAN 15, POCKET 3, FOLDER 1.
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM THE STRAFFORD COUNTY REGISTRY OF DEEDS IN DOVER, NH
3. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH CURRENT LEGAL DESCRIPTIONS. IT IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP OR DEFINE THE LIMITS OF TITLE.

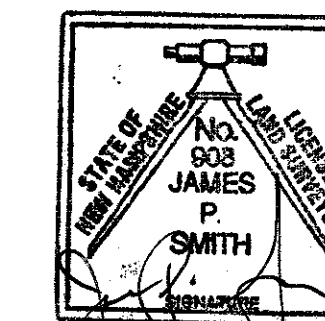
GRAPHIC SCALE



R:\PROJECTS\3188-01\CIVIL\DRAWINGS\CURRENT\G-3188-01-PL-SIGHT-DIST.DWG

THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED BETWEEN SEPTEMBER 29, 2022 THROUGH APRIL 23, 2023 AND HAS AN ERROR OF CLOSURE OF NO GREATER THAN 1/10,000.

ALLEN & MAJOR ASSOCIATES, INC.



JAMES P. SMITH NH LLS #908

5-22-2023
DATE

REV	DATE	DESCRIPTION

APPLICANT/OWNER:

KNIPFHER, LLC
30 QUARRY DRIVE
ROCHESTER, NH 03867

PROJECT:

TAX MAP I, LOT 55A
43 BACK RIVER ROAD
DOVER, NH

PROJECT NO. 3188-01 DATE: 05/22/23

SCALE: 1"=30' DWG. NAME: S-3188-01-PL

DRAFTED BY: AJR CHECKED BY: JPS

PREPARED BY:



ALLEN & MAJOR
ASSOCIATES, INC.

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environmental consulting • landscape architecture
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WOBURN, MA • LAKEVILLE, MA • MANCHESTER, NH

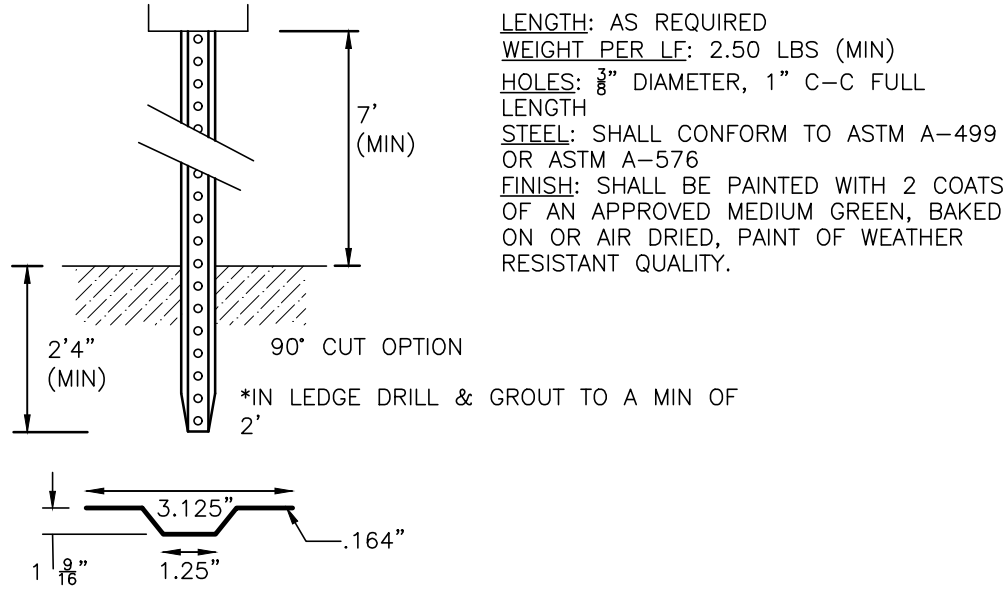
THIS DRAWING HAS BEEN PREPARED IN DIGITAL FORMAT. CLIENT/CLIENTS REPRESENTATIVE OR CONSULTANTS MAY BE PROVIDED COPIES OF DRAWINGS AND SPECIFICATIONS FOR HIS/HER INFORMATION AND/OR SPECIFIC USE ON THIS PROJECT. DUE TO THE POTENTIAL THAT THE PROVIDED INFORMATION MAY BE MODIFIED UNINTENTIONALLY OR OTHERWISE, ALLEN & MAJOR ASSOCIATES, INC. MAY REMOVE ALL INDICATION OF THE DOCUMENT'S OR PORTABLE DOCUMENT FORMAT OF THE DRAWINGS AND SPECIFICATIONS ISSUED SHALL BE THE ONLY RECORD COPIES OF ALLEN & MAJOR ASSOCIATES, INC.'S WORK PRODUCT.

DRAWING TITLE: SHEET No.

PLAN OF LAND

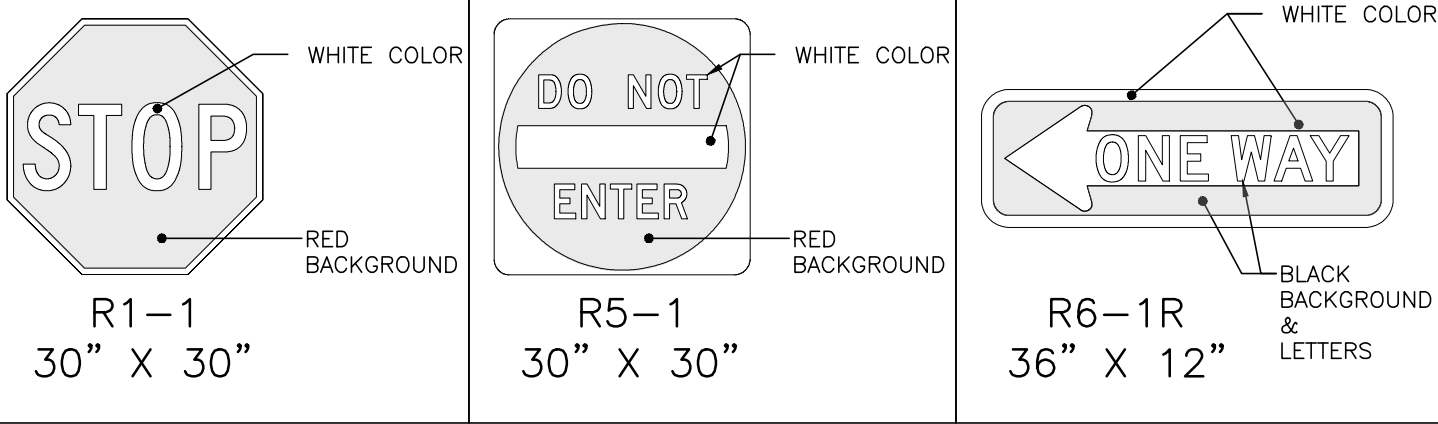
1

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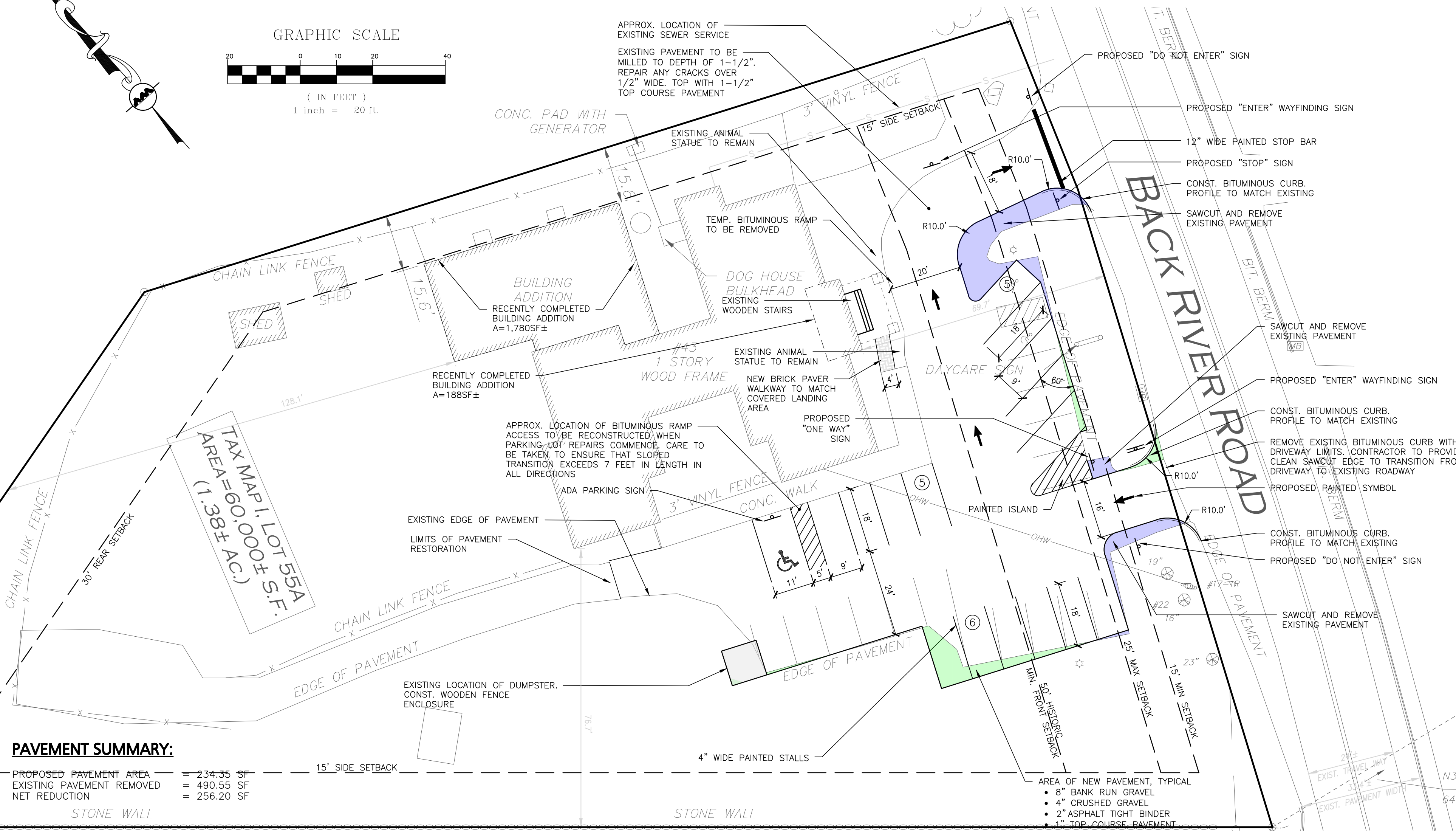
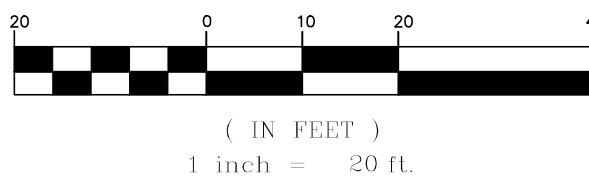


SIGN POST DETAIL & SIGNAGE TABLE
NOT TO SCALE

SIGN SUMMARY



GRAPHIC SCALE



PAVEMENT SUMMARY:

PROPOSED PAVEMENT AREA	234.35 SF
EXISTING PAVEMENT REMOVED	490.55 SF
NET REDUCTION	256.20 SF

ZONING SUMMARY TABLE
MEDIUM DENSITY RESIDENTIAL (R-12) DISTRICT

ITEM	REQUIRED/ALLOWED	PROPOSED
MINIMUM LOT AREA	12,000 SF	60,000± SF
MINIMUM LOT FRONTAGE	100 FEET	233.65± LF
MINIMUM FRONT SETBACK	15' MIN 25' MAX	69.7 FT*
MAXIMUM LOT COVERAGE	30%	10.7%
MINIMUM SIDE SETBACK	15 FT	15.6 FT
MINIMUM REAR SETBACK	30 FT	128± FT
MAXIMUM BUILDING HEIGHT	35 FEET	< 35 FEET

* EXISTING NON-CONFORMING

PARKING SUMMARY TABLE

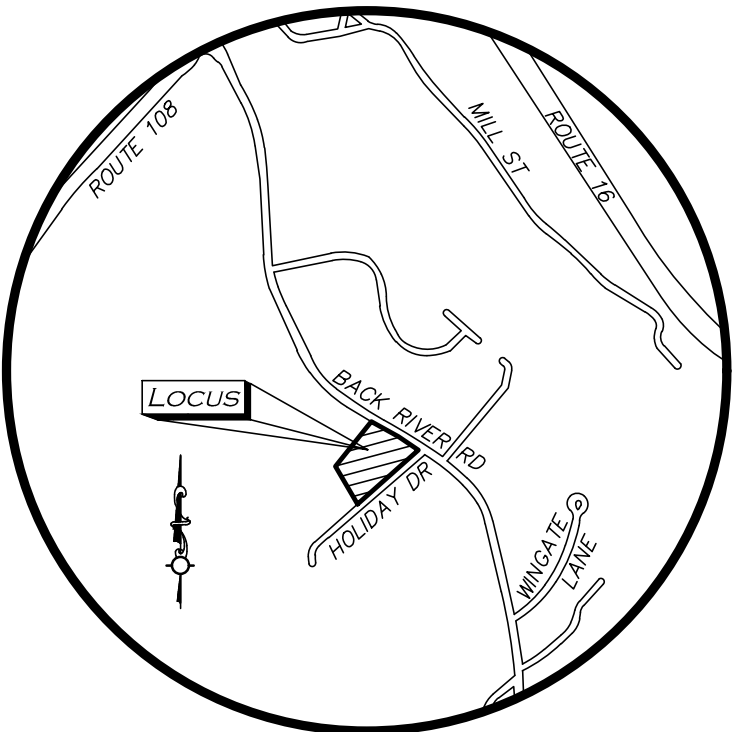
PER TABLE OF OFF-STREET PARKING REQUIREMENTS	MAXIMUM PARKING	PROPOSED PARKING
EDUCATIONAL (DAYCARE): 101 STUDENTS	31	7
0.3 SPACE PER STUDENT = 31 SPACES		
EDUCATIONAL (DAYCARE): 9 STAFF PER SHIFT	9	9
1 SPACES PER EMPLOYEE		
TOTAL PARKING PROVIDED:		16

GENERAL NOTES:

- THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION, ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE START OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DRAWINGS, SPECIFICATIONS, OR RELATIVE CODES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT PRIOR TO START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AND/OR DESIGN INTENT OF THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
- THE DESIGN ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND/OR THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE GUIDANCE OF THE DESIGN ENGINEER WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS WHICH ARE DISCOVERED OR ALLEGED.
- ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTIES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
- ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING LOCAL, MADOT, MADEP, MUTCD, AND AASHTO.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY ALLEN & MAJOR ASSOCIATES, INC. DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK, OR THE OWNER'S EMPLOYEES, CUSTOMERS, OR THE GENERAL PUBLIC. THE SEAL OF THE ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PROVIDE THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), STATE, AND LOCAL REGULATIONS.

RESOURCE NOTES:

- NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA (COMMUNITY PANEL NUMBER 3301700320E, EFFECTIVE DATE: SEPTEMBER 30, 2015).
- THE PROPERTY IS SHOWN AS LOT 55A, ON MAP 1 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.
- THE SUBJECT PARCEL CONTAINS 1.38 ACRES OR 60,000 SQUARE FEET AREA OF LAND.
- TITLE REFERENCE FOR THE PROJECT PARCEL IS THE STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK NO. 5051 PAGE 545.
- THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER, SEWER AND ELECTRIC.
- 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.
- 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.
- SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7 AM-6 PM. NO WORK SHALL BE PERMITTED ON SATURDAY, SUNDAY, AND FEDERALLY RECOGNIZED HOLIDAYS. 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.
- THE EXISTING USE FOR THE SITE IS CHILD CARE FACILITY.
- NO FEDERAL OR STATE PERMITS ARE REQUIRED FOR THE SUBJECT PROPERTY AT THIS TIME.
- COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
- ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
- 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.
- THE MAXIMUM PARKING SPACE CALCULATION IS 40 AND 16 SPACES ARE PROVIDED. SEE PARKING TABLE ON THIS SHEET FOR A BREAK DOWN.
- ANY NEW EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
- TOPOGRAPHIC SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES ON OR BETWEEN SEPTEMBER 29, 2022 AND APRIL 11, 2023
- THE EXISTING STRUCTURE IS SERVED BY A SPRINKLER SYSTEM AS REQUIRED BY CHAPTER 81- 30 OF THE CODE OF THE CITY OF DOVER AND THE ADOPTED STATE OF NH BUILDING AND FIRE CODES.
- THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. (I.E. IBC, ANSI-117.1) AND NH RSA 155-A:5.
- AS-BUILT PLANS 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 A PROJECT. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A LICENSED PROFESSIONAL ENGINEER. FILES SHALL BE GEO-REFERENCED TO NEW HAMPSHIRE STATE PLANE COORDINATES NAD83 AND SHALL BE EXPRESSED IN FEET.
- ELEVATIONS ARE BASED ON U.S.G.S NVD 1988 DATUM.



LOCUS MAP
(NOT TO SCALE)



Digitally signed by Michael A. Malyowksi
DN: cn=Michael A. Malyowksi, o=Allen & Major Associates, Inc., email=malyowksi@allenmajor.com, c=US
Date: 2023.05.18 15:31:17 -0400
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
2	05-18-23	MISC. UPDATES PER TOWN COMMENTS
1	04-14-23	UPDATE TO PARKING LAYOUT

APPLICANT/OWNER:

KNIPFFER, LLC
30 QUARRY DRIVE
ROCHESTER, NH 03867

PROJECT:

TAX MAP I, LOT 55A
43 BACK RIVER ROAD
DOVER, NH

PROJECT NO.	3188-01	DATE:	03/27/23
SCALE:	AS SHOWN	DWG.:	C:318801_Layout & Materials
DRAFTED BY:	MM	CHECKED BY:	MAM

PREPARED BY:



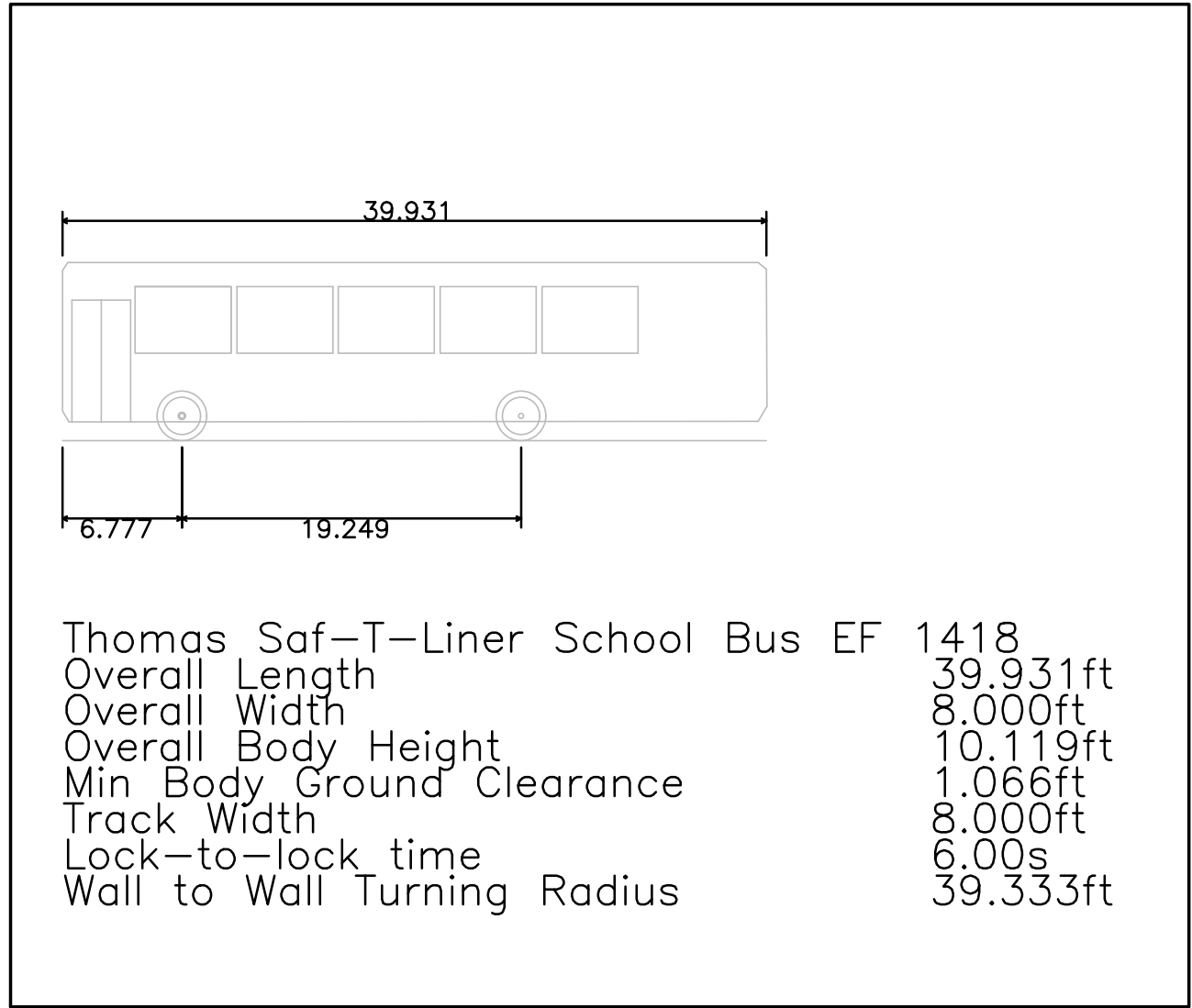
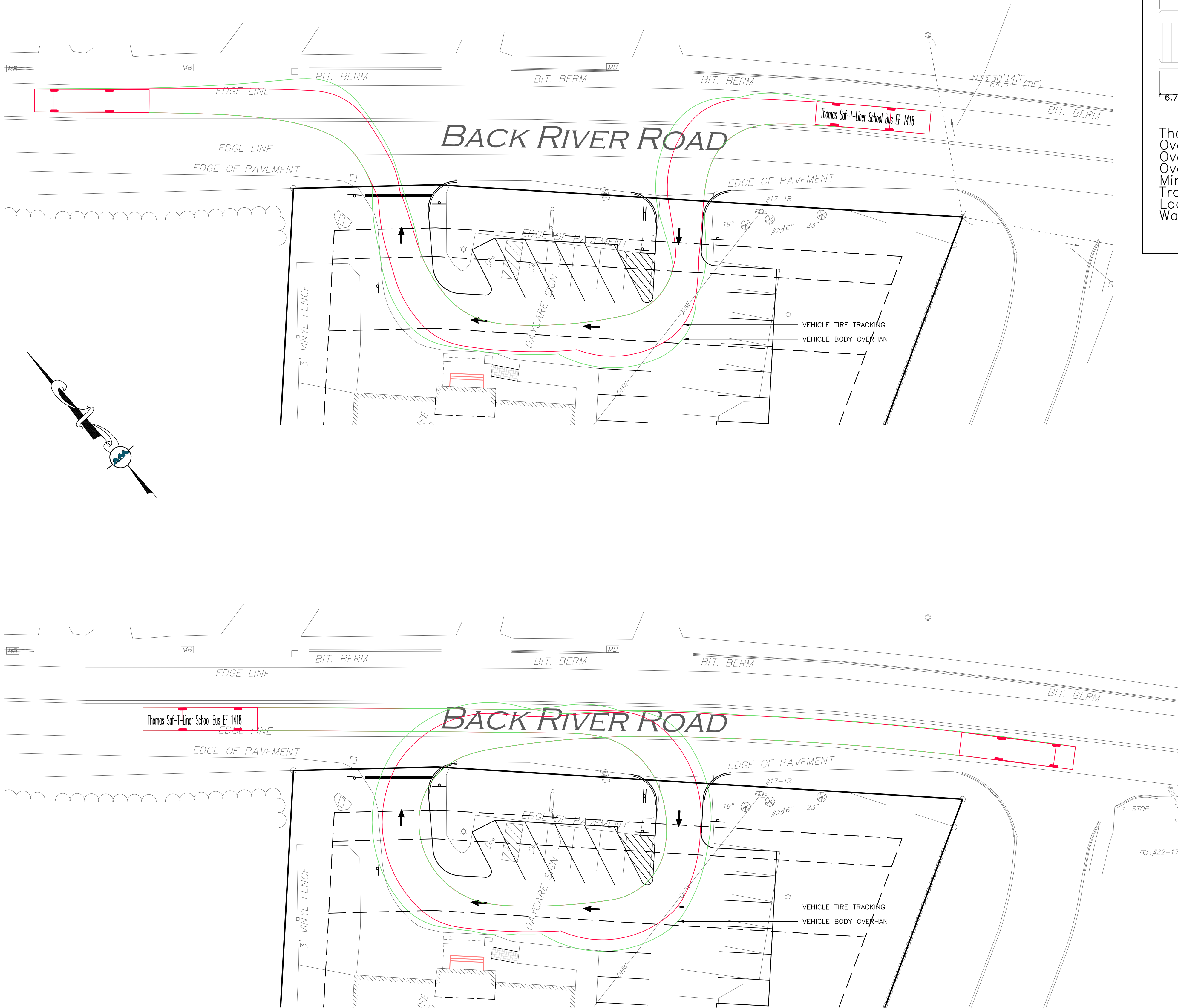
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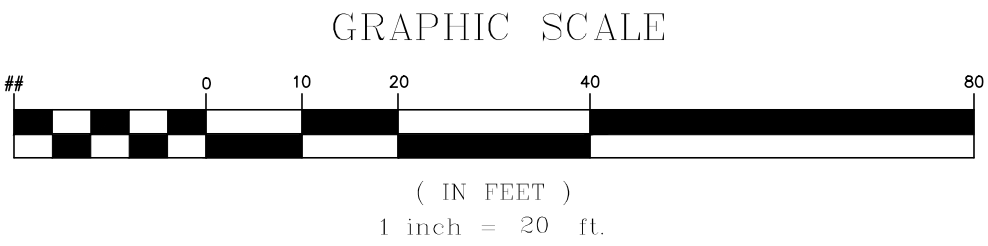
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DRAWING TITLE:	SHEET No.
PARKING LAYOUT PLAN	C-1

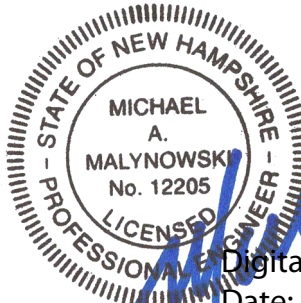


GENERAL NOTES:

1. PROPERTY LINE INFORMATION WAS REFERENCED FROM AVAILABLE TAX MAPS AND AERIAL IMAGERY.
2. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE START OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DRAWINGS, SPECIFICATIONS, OR RELATIVE CODES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT PRIOR TO START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AND/OR DESIGN INTENT OF THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
4. THE DESIGN ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND/OR THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE GUIDANCE OF THE DESIGN ENGINEER WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS WHICH ARE DISCOVERED OR ALLEGED.
5. ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTIES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
6. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING LOCAL, MADOT, MADEP, MUTCD, AND AASHTO.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY ALLEN & MAJOR ASSOCIATES DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK, OR THE OWNER'S EMPLOYEES, CUSTOMERS, OR THE GENERAL PUBLIC. THE SEAL OF THE ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PROVIDE THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), STATE, AND LOCAL REGULATIONS.



R:\PROJECTS\3188-01\CIVIL\DRAWINGS\CURRENT\C-3188-01_LAYOUT & MATERIALS.DWG



Digitally signed by Michael Malynowski
Date: 2023.05.18 15:30:25 -04'00'
PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

APPLICANT/OWNER:

KNIPFFER, LLC
30 QUARRY DRIVE
ROCHESTER, NH 03867

PROJECT:

TAX MAP I, LOT 55A
43 BACK RIVER ROAD
DOVER, NH

PROJECT NO. 3188-01 DATE: 05/09/23

SCALE: AS SHOWN DWG.: C318801_Layout & Materials

DRAFTED BY: MM CHECKED BY: MAM

PREPARED BY:



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DRAWING TITLE:

VEHICLE CIRCULATION PLAN

SHEET No.

C-2

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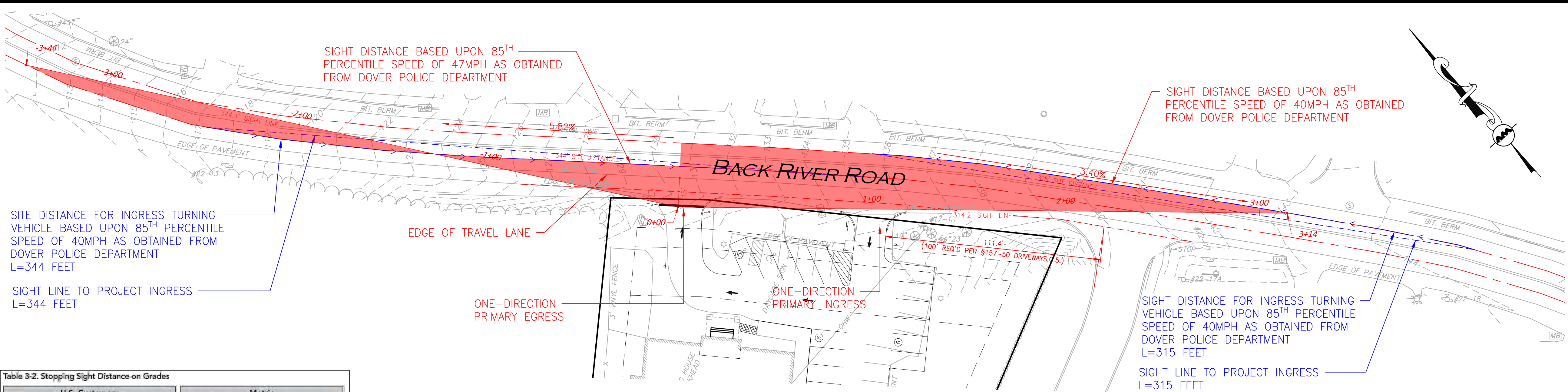
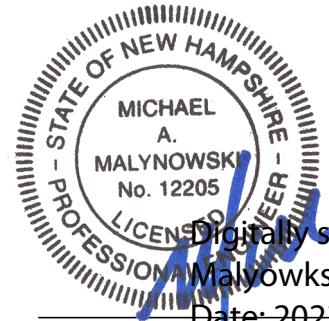
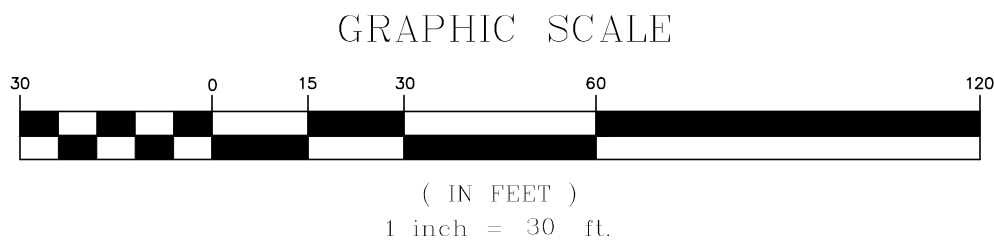


Table 3-2. Stopping Sight Distance on Grades

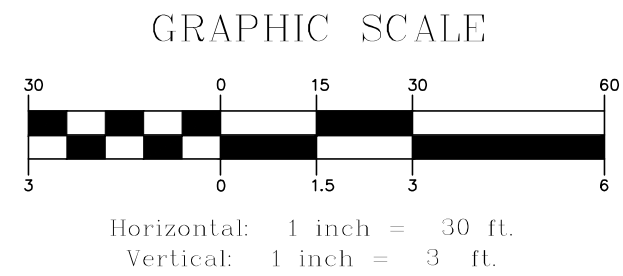
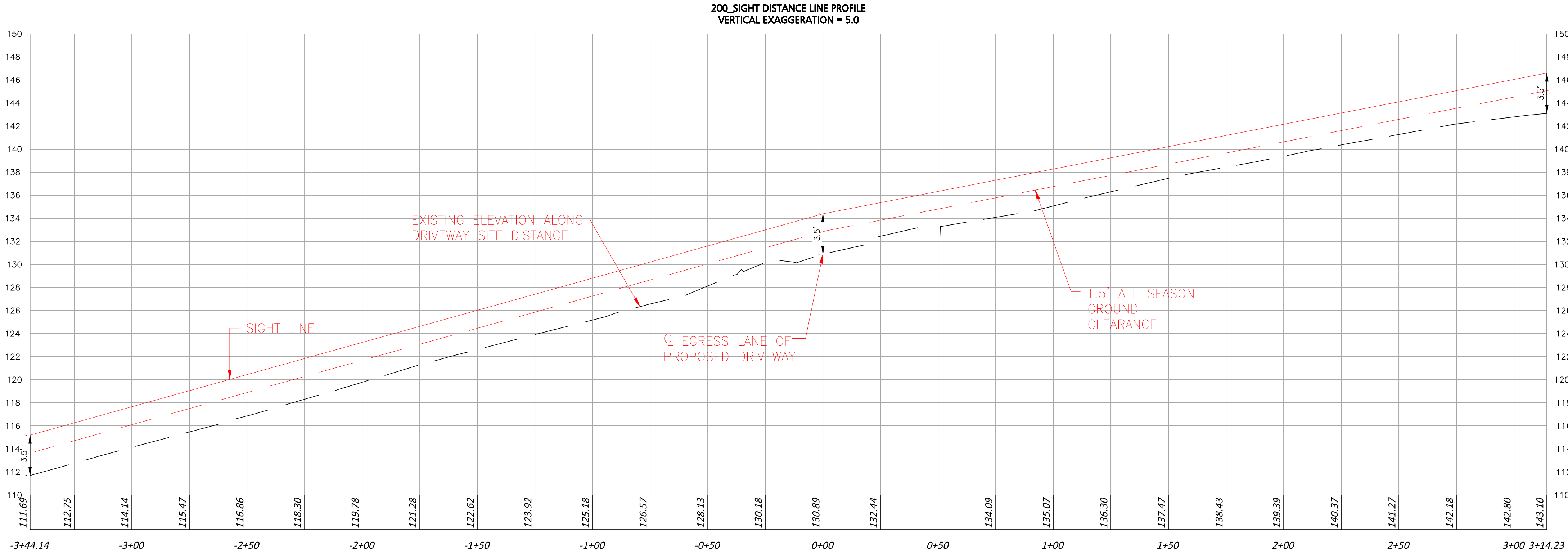
Design Speed (mph)	U.S. Customary						Design Speed (km/h)	Metric					
	Stopping Sight Distance (ft)							Stopping Sight Distance (m)					
	Downgrades			Upgrades				Downgrades			Upgrades		
15	80	82	85	75	74	73	20	20	20	20	19	18	18
20	116	120	126	109	107	104	30	32	35	35	31	30	29
25	158	165	173	147	143	140	40	50	50	53	45	44	43
30	205	215	227	200	184	179	50	66	70	74	61	59	58
35	257	271	287	237	229	222	60	87	92	97	80	77	75
40	315	333	354	289	278	269	70	110	116	124	100	97	93
45	378	400	427	344	331	320	80	136	144	154	123	118	114
50	446	474	507	405	388	375	90	164	174	187	148	141	136
55	520	553	593	469	450	433	100	194	207	223	174	167	160
60	598	638	686	538	515	495	110	227	243	262	203	194	186
65	682	728	785	612	584	561	120	263	281	304	234	223	214
70	771	825	891	690	658	631	130	302	323	350	267	254	243
75	866	927	1003	772	736	704	140	341	367	398	302	287	274
80	965	1035	1121	859	817	782							
85	1070	1149	1246	949	902	862							

SIGHT LINE NOTES

- SIGHT DISTANCE BASED UPON AASHTO DESIGN GUIDELINES UTILIZING 85TH PERCENTILE SPEEDS AS OBTAINED BY DOVER NH POLICE DEPARTMENT
- TOPOGRAPHIC INFORMATION BASED UPON ACTUAL ON THE GROUND SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES, INC. BETWEEN FEBRUARY 24 AND 27, 2023.



Designed by Michael A. Malynowski
Date: 2023.05.18 15:30:49 -04'00'
PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.



R:\PROJECTS\3188-01\CIVIL\DRAWINGS\CURRENT\C-3188-01-PL-SIGHT-DIST.DWG

REV	DATE	DESCRIPTION
1	05-09-23	MISC. UPDATES PER TOWN COMMENTS

APPLICANT/OWNER:

KNIPHFER, LLC
30 QUARRY DRIVE
ROCHESTER, NH 03867

PROJECT:

TAX MAP I, LOT 55A
43 BACK RIVER ROAD
DOVER, NH

PROJECT NO.	3188-01	DATE:	03/27/23
SCALE:	1" = 30'	DWG.:	C:3188-01-PL-SIGHT-DIST
DRAFTED BY:	MM	CHECKED BY:	MAM

PREPARED BY:



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DRAWING TITLE:	SHEET No.
SIGHT DISTANCE FIGURE	C-3

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PLAN NOTES:



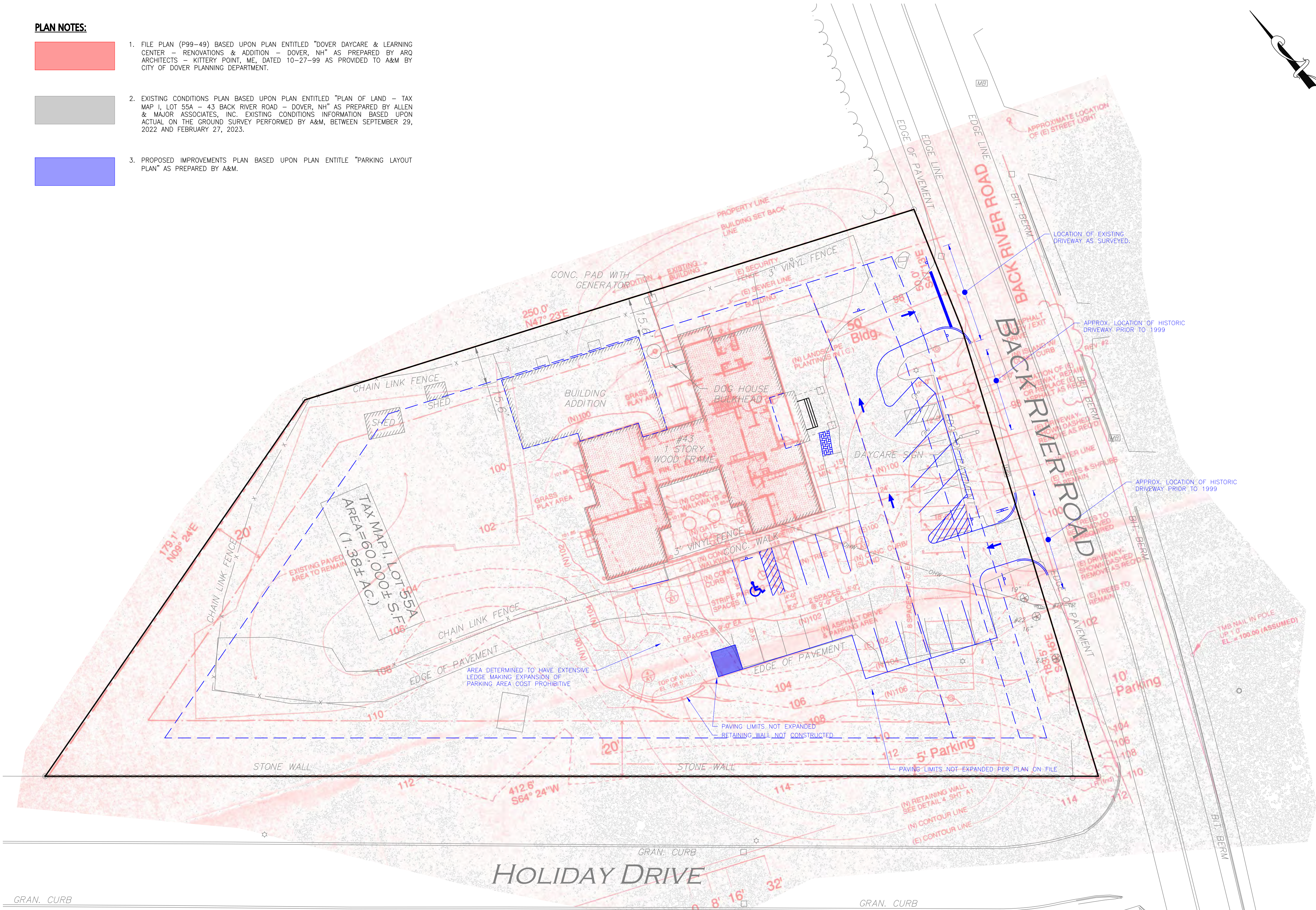
1. FILE PLAN (P99-49) BASED UPON PLAN ENTITLED "DOVER DAYCARE & LEARNING CENTER - RENOVATIONS & ADDITION - DOVER, NH" AS PREPARED BY ARQ ARCHITECTS - KITTERY POINT, ME, DATED 10-27-99 AS PROVIDED TO A&M BY CITY OF DOVER PLANNING DEPARTMENT.



2. EXISTING CONDITIONS PLAN BASED UPON PLAN ENTITLED "PLAN OF LAND - TAX MAP I, LOT 55A - 43 BACK RIVER ROAD - DOVER, NH" AS PREPARED BY ALLEN & MAJOR ASSOCIATES, INC. EXISTING CONDITIONS INFORMATION BASED UPON ACTUAL ON THE GROUND SURVEY PERFORMED BY A&M, BETWEEN SEPTEMBER 29, 2022 AND FEBRUARY 27, 2023.

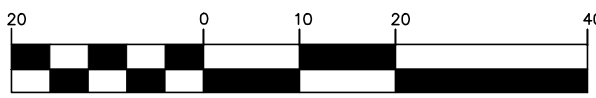


3. PROPOSED IMPROVEMENTS PLAN BASED UPON PLAN ENTITLED "PARKING LAYOUT PLAN" AS PREPARED BY A&M.



GRAN. CURB

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

R:\PROJECTS\3188-01\CIVIL\DRAWINGS\CURRENT\C-3188-01_COMPARISON.DWG

REV	DATE	DESCRIPTION
-----	------	-------------

APPLICANT/OWNER:
KNIPFHER, LLC
30 QUARRY DRIVE
ROCHESTER, NH 03867

PROJECT:
TAX MAP I, LOT 55A
43 BACK RIVER ROAD
DOVER, NH

PROJECT NO.	3188-01	DATE:	05/09/23
SCALE:	AS SHOWN	DWG.:	C-3188-01_Comparison
DRAFTED BY:	MM	CHECKED BY:	MAM

PREPARED BY:

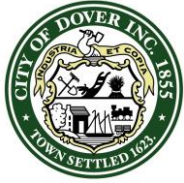
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DRAWING TITLE:	SHEET No.
COMPARISON PLAN	C-4

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CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – SITE-2023-0002

Application Type: Site Review
Applicant(s): Rad Nichols, Cooperative Alliance for Seacoast Transportation (COAST)
Owner(s): Rad Nichols, Cooperative Alliance for Seacoast Transportation (COAST)
Location: 42 Sumner Drive (Assessor's Map H, Lot 35-C-4)
Date: April 6, 2023

INTENT: To build a 28,700 sq. ft. vehicle storage building and 17,000 sq. ft. administration, operations, and maintenance building.

UNITS PROPOSED: 2 structures

AGENDA ITEM #: 1

ACREAGE: 6.39± ac

ZONING DISTRICT: CM

EXISTING LAND USE: Commercial
Manufacturing

PROPOSED LAND USE: Additional vehicle storage, Office space

SURROUNDING LAND USE: Commercial
Manufacturing, Residential

ZBA ACTION: None

PERMITS REQUIRED:

- NHDES AoT

RELIEF/WAIVERS REQUESTED:

- CUP, §170-27.1, G.d.iv

ATTENDANCE:

Members: Donna Benton, Planning
Natasha Kypfer, Zoning
Jim Maxfield, Fire & Inspection Services
Reid Amy, Business Development
Ken Mavrogeorge, Engineering
Marn Speidel, Police
Tom Clark, Planning Board

Others:

Ben Clark, CMA
Chris Chiamonte, CMA
Rad Nichols, COAST

Approval of minutes from March 23, 2023:

M. Spiedel moved to approve the March 23, 2023 minutes. Seconded by K. Mavrogeorge. Vote: U/A.

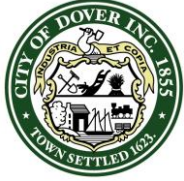
PLAN REVIEW:

Planning:

- Reminder: Impact fees and Water and sewer investment fees if applicable
- Will proposed vehicle gate have lock? Yes
- Were wetlands delineated on site?
- Traffic memo:
 - Revise site generation traffic
 - Revise conclusion assuming reuse of existing leased facility
 - Have PE stamp and sign
- Revise plans:
 - Planning file number SITE-2023-0002
 - Owner's signatures on the final plans
 - Need rest of owner's signatures on application
 - Landscape plan needs signature & stamp on LA-101 with interior landscaping or waiver
 - Consecutive sheet numbering for plan set
 - Remove building signage from Elevations, A-301
 - Confirm all common notes are added
 - Provide streetscape
 - Provide colored renderings for second building
 - Enough snow storage?
 - Impact plan or show CUP areas? A narrative will need to address criteria
 - Lighting plan needed
 - Solar or green roof? – clarify note
 - Provide more info on EV
 - Need that much parking? Yes
 - Add bike rack and detail

Engineering:

- General: Please review and modify details to comply with City of Dover Standard Details. Engineering can provide Standard Details to include in the plan.
- Sheet N-1: Revise Water Note 10 to state that all valves and hydrants shall open left (counterclockwise)
- Sheet N-1: Revise Sanitary Sewer Note 1 to reflect that sanitary sewer is to be SDR 35 PVC.
- Sheet N-2: Remove references to Mass Highway from plans
- Sheet N-2: Dover is Strafford County not Rockingham. Check Abbreviations list.
- Survey 1 of 2: Zone is listed as I-2 while on Sheet C-2 it says CM.
- Sheet C-1: Wetland buffers are shown incorrectly. Provide radii on buffer offsets. This should reduce buffer impact numbers.

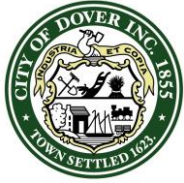


CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – SITE-2023-0002

Application Type: Site Review
Applicant(s): Rad Nichols, Cooperative Alliance for Seacoast Transportation (COAST)
Owner(s): Rad Nichols, Cooperative Alliance for Seacoast Transportation (COAST)
Location: 42 Sumner Drive (Assessor's Map H, Lot 35-C-4)
Date: April 6, 2023

- Sheet C-1: Show perimeter controls (silt fence or other) on the plan.
- Sheet C-1: Would it be easier to add a note to identify that everything within the limit of work is to be removed unless otherwise noted then list out what is to remain. What is being saved is unclear.
- Sheet C-1: Engineering requests that the existing concrete sewer structures that are called out to remain be tested and test results be provided to the City. If the structures do not pass the tests then the structures would need to be replaced.
- Sheet C-1: Will the site demolition be phased? Will the site be accessible during construction or will COAST temporarily relocate services? The narrative is unclear.
- Sheet C-2: List of permits does not list NHDES Wastewater Connection Permit. Applicant to review requirements of Env-Wq 703.07 and comment on applicability.
- Sheet C-2: Provide additional detail on the Fuel Storage including the type of fuel, spill prevention/containment, and pumping facilities.
- Sheet C-2: The detail for the gates appears to show that they swing open. It is unclear if they swing into the property or out. If they swing outward, there is concern that it would block the cul-de-sac.
- Sheet C-2: There are two drives entering the site but it is unclear if these are full access drives. How are the public/emergency vehicles supposed to access the facility? Applicant to clarify traffic flow and how vehicles will be controlled by signage and markings.
- Sheet C-2: Stripe ADA aisles and provide ADA accessibility to the charging stations.
- Sheet C-2: The stormwater basin appears to be on the southern property line. How will this be maintained and how will it be constructed. Will easements be required?
- Sheet C-2: Identify single doors versus overhead on building.
- Sheet C-2: Call out bollards.
- Sheet C-2: Confirm if easement to construct the retaining wall is required and if so, are discussions in the works? Confirm setbacks with Planning/Zoning
- Sheet C-3: Provide gate valve at water main connection.
- Sheet C-3: Verify if the pipes entering SMH-102 aren't conflicting and whether the MH needs to be larger. Engineering Recommends adding a structure just after the oil-water separator and having a perpendicular tie in.
- Sheet C-3: Recommend moving oil-water separators closer to the buildings and away from the stormwater treatment systems. It is also recommended to add one for the floor drain at the rear of the site.
- Sheet C-3: Add gate to isolate domestic service from fire line for both proposed buildings.
- Sheet C-3: Please show the existing hydrant in the cul-de-sac.
- Sheet C-4: Clarify how long narrow sediment forebay will flow towards the two treatment bays on the northern side of the site. It appears that there is room to shift the treatment bays to the south and create a more traditional sized forebay.
- Sheet C-4: ADA spaces have less than 1% cross slopes.
- Sheet C-4: How will stormwater flow out of the paved pedestrian area between the buildings. Add spot grades to show positive drainage.
- Sheet C-4: There is a 6 ft curb break near FES 10. Recommend either adding rip rap to protect the slope from washing out or CB with pipe.
- Sheet C-4: All FES shall have a rip rap apron sized according to DES standards. Provide calcs as required by DES AOT.
- Sheet C-4: Retaining wall is shown at nearly 7 feet. Provide detail for wall and clarify with geotextile is required.
- Sheet C-5: Revise perimeter barrier to stay within the limits of the Limit of Work.
- Sheet LA-101: Revise numbering of general notes.
- Sheet LA-101: Call out the pavers and clarify how this area is to drain.
- Sheet D-1: Revised Stabilized Construction Entrance to match NHDES standard detail (include note about alternate berm for entrances less than 75 feet).
- Sheet D-2: General Bituminous Pavement Section: Is this pavement section recommendation based on a site specific conditions assessment?
- Sheet D-3: Is a 4-inch slab sufficient for dumpster loading?



CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – SITE-2023-0002

Application Type: Site Review
Applicant(s): Rad Nichols, Cooperative Alliance for Seacoast Transportation (COAST)
Owner(s): Rad Nichols, Cooperative Alliance for Seacoast Transportation (COAST)
Location: 42 Sumner Drive (Assessor's Map H, Lot 35-C-4)
Date: April 6, 2023

- Sheet D-3: change “handicap” references to “accessible” where applicable.
- Sheet D-3: Identify the locations of the signs on the site plans.
- Sheet D-5: Typical Sanitary Drain Trench: Revise trench detail to meet City standard. Stone backfill must be placed above pipe.
- Sheet D-5: Drain Manhole: Brick invert not required.
- Sheet D-5: Drainage Pipe: Revise trench detail to meet City standard. Stone backfill must be placed above pipe.
- Sheet D-5: Applicant shall send Utilities Plan and Oil-Water Separator details to the Industrial Pretreatment Coordinator, Jimmy Casey at the WWTP.
- Sheet D-8: What types of plantings are proposed in the gravel wetland. There appears to be hatching on the detail but nothing noted but wetland restoration mix.
- Sheet Drain-2: Check area boundaries for NE-1 and SW-7. Ensure the boundaries follow high points.
- Drainage Report:
 - The report states that the stormwater design complies with Dover standards. Applicant shall review the section 153-14 of the Dover Code and clarify how the design meets the City's requirements.
- General Comment: Provide Lighting plan and details.

Police:

- Sheet C-2 shows EV charging station in the same spot that Sheet 3 shows a water shut-off valve
- Sheet C-2, note 20: site construction hours ok for Sundays?
- How many vehicles does proposed EV charging station serve?
- Any proposed bike rack, or can these be stored inside?
- Label all gates

Fire/Inspection Services:

- Provide nearest hydrant location to structures
- How will first responders access the site.
- Indicate if the building will be used in a utility power outage
- Indicate if generator is a life safety generator and fuel type
- Indicate the location of the FDC for each structure
- Sheet C-2 Clarify electric vehicle charging station location- conflicts with sheet C-3
- Indicate accessible route to EV charges
- Provide a detail for EV chargers (i.e. quantity , access, mounting height etc.)
- Plans shall include design compliance with applicable accessibility regulations and NH RSA 155-A:5
- Indicate size, volume, and type of fuel along access road.
- Provide location of vehicle fuel dispensing
- Indicate the type of fueled vehicles which will be serviced.
- Clarify the enclosure for the fuel storage.
- Clarify waste vehicle has adequate area to service dumpster pad near island, etc.
- Provide a guardrail detail for the top of retaining wall

Business Development:

- Impact to service? No during Phase I, during Phase II fleet service off site

Planning Board: None

Next Steps: Resubmit for a second TRC and address comments in a narrative.

Paused TRC at: 11:16 am



June 2, 2023

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

**RE: COAST Bus Facility
Response to Technical Review Committee Comments
Site -2023-0002
CMA #1250**

Dear Donna:

On behalf of the Cooperative Alliance for Seacoast Transportation (COAST), CMA Engineers has prepared this letter to provide a response to comments made by the **City Planning board**, the **City Engineer Division**, the **City Police Department**, the **Business Development Authority**, and **Fire/Inspection Services** during the Technical Review Committee Meeting dated April 6, 2023.

Our responses to the comments are presented in *italicized type* following the corresponding party's comment in **bold type**.

Planning Review: Donna Benton

1. **Reminder: Impact fees and Water and sewer investment fees if applicable**
Acknowledged, they will be paid at the appropriate time.
2. **Will proposed vehicle gate have lock? Yes**
All vehicle gates will have locks. All gates will have a card reader or access code to enter, and the main entrance gate will remain open during business hours for visitors.
3. **Were wetlands delineated on site?**
Wetlands were delineated by West Environmental, Inc. during June of 2020 (Note 14 on Site Layout Plan).
4. **Traffic memo:**
 - **Revise site generation traffic / Revise conclusion assuming reuse of existing leased facility / PE stamp**
The traffic memorandum has been revised to account for the additional trips generated from relocating COAST's administrative employees and having a new tenant move in at 6 Sumner Drive. The report has been stamped as part of this resubmittal.
5. **Revise Plans**
 - **Planning file number SITE-2023-0002**
Understood.
 - **Owner's signature on the final plans**

The COAST Executive Director has signed the site plan. COAST by-laws allow the Executive Director to sign for the organization.

- **Need rest of owner's signatures on application**
The COAST Executive Director has signed the application. COAST by-laws allow the Executive Director to sign for the organization.
- **Landscape plan needs signature & stamp on LA-101 with interior landscaping or waiver**
A licensed landscape architect will stamp and signed the Landscaping Plan. A waiver has been requested regarding the interior landscaping.
- **Consecutive Sheet number for plan set**
Sheet numbers have been revised to be in numerical order.
- **Remove building signage from Elevations, A-301**
Building signage has been removed from the elevations.
- **Confirm all common notes are added**
All applicable notes have been added to the plans. Notes are either located on the General Notes or Site Layout Plan sheets. If there are any additional notes that need to be added, please let us know.
- **Provide streetscape**
A streetscape has been provided as part of this resubmittal.
- **Provide colored renderings for a second building**
Colored renderings have been included as part of this resubmittal.
- **Enough snow storage?**
Retaining wall limits have been revised to allow for additional snow storage in the north east corner of the site.
- **Impact plan or show CUP areas? A narrative will need to address criteria**
Callouts have been added to the Site Layout Plan (C-2) to show the buffer impact area. A Conditional Use Permit application with narrative is forthcoming.
- **Lighting plan needed**
The Lighting Plan has been included as part of this resubmittal.
- **Solar or green roof? – clarify note**
Solar panels are proposed on the vehicle storage building. A callout has been added to the Site Layout Plan (Sheet C-2).
- **Provide more info on EV**
The EV charging stations will not be installed as part of this project. The underground conduit will be run for future EV infrastructure installation.
- **Need that much parking?**
The amount of parking is desired to accommodate visitors, board members, etc. during larger meetings held on site.
- **Add bike rack and detail**
A bike rack detail has been added to the plan set, Sheet D-2.

Engineering Review: Ken Mavrogeorge

6. **General: Please review and modify details to comply with City of Dover Standard Details.**
Engineering can provide Standard Details to include in the plan
All applicable details have been modified to comply with the City of Dover Standard Details.
7. **Sheet N-1: Revise Water Note 10 to state that all valves and hydrants shall open left (counterclockwise)**
The note has been revised to say open left.

- 8. Sheet N-1: Revise Sanitary Sewer Note 1 to reflect that sanitary sewer is to be SDR 35 PVC.**
The note has been revised to say SDR 35 PVC.
- 9. Sheet N-2: Remove references to Mass Highway from plans**
All references to Mass Highway have been removed.
- 10. Sheet N-2: Dover is Strafford County not Rockingham. Check Abbreviations list.**
The abbreviations list has been changed to say Stafford County.
- 11. Survey 1 of 2: Zone is listed as I-2 while on Sheet C-2 it says CM.**
Survey Sheet 1 of 2 has been changed to say CM.
- 12. Sheet C-1: Wetlands buffers are shown incorrectly . Provide radii on buffer offsets. This should reduce buffer impacts numbers.**
Wetland buffers have been changed to provide radii on the offset.
- 13. Sheet C-1: Show perimeter controls (silt fence or other) on the plan.**
Perimeter controls have been added to Sheet C-1.
- 14. Sheet C-1: Would it be easier to add a note to identify that everything within the limit of work is to be removed otherwise noted then list out what is to remain. What is being saved is unclear.**
The plan has been modified to highlight what is to remain with a general callout for everything to be removed within the limits of work.
- 15. Sheet C-1: Engineering requests that the existing concrete sewer structures that are called out to remain be tested and test results be provided to the City. If the structures do not pass the tests then the structures would need to be replaced.**
A note has been added to Sheet C-1 requiring testing before reuse, coordinate the test with the city, and provide results to the city.
- 16. Sheet C-1: Will the site demolition be phased? Will the site be accessible during construction or will COAST temporarily relocate services? The narrative is unclear.**
The site demolition will be phased. Phase 1 would include the demolition of the existing building and southeastern paved areas, and the construction of the proposed AOM building. The fleet would remain on site and be stored in the northern paved area of the site. Phase 2 would consist of the remaining site demolition and construction of the vehicle storage building. During phase 2, the fleet would be relocated off site.
- 17. Sheet C-2: List of permits does not list NHDES Wastewater Connection Permit. Applicant to review requirements of Env-Wq 703.07 and comment on applicability.**
NHDES Sewer Connection Permit has been added to the list. The permit is required based on section 703.07(a)(1).
- 18. Sheet C-2: Provide additional detail on the Fuel Storage including the type of fuel, spill prevention/containment and pump facilities.**
The 10,000-gallon aboveground fuel storage tank will hold diesel fuel. Dispensing pumps will be located internal to the building. Additional information on the fuel system has been uploaded to the Dover online permitting site.
- 19. Sheet C-2: The detail for the gates appears to show that they swing open. It is unclear if they swing into the property or out. If they swing outward, there is concern that it would block the cul-de-sac.**
The plans have been revised to better show the swing direction, but the gates would swing internal to the site.
- 20. Sheet C-2: There are two drives entering the site but it is unclear if these are full access drives. How are the public/emergency vehicles supposed to access the facility? Applicant to clarify traffic flow and how vehicles will be controlled by signage and markings.**
The main entrance gate will be open during business hours for the public to access the administrative office. The opposite gate will be for exiting vehicles only and will have a loop detector system.

- 21. Sheet C-2: Stripe ADA aisles and provide ADA accessibility to the charging stations.**
The future charging stations will be located adjacent to the motorcycle parking and ADA spaces, which has less than a 2% cross slope.
- 22. Sheet C-2: The stormwater basin appears to be on the southern property line. How will this be maintained and how will it be constructed. Will easements be required?**
There is a minimum of 2' between the limits of work and the property line. The stormwater management system hatch has been revised to better depict this.
- 23. Sheet C-2: Identify single door versus overhead on building/**
Callouts have been added to Sheet C-2 to depict the different doors.
- 24. Sheet C-2: Call out bollards.**
Additional callouts have been added for the bollards.
- 25. Sheet C-2: Confirm if easement to construct the retaining wall is required and if so, are discussions in the works? Confirm setbacks with Planning/Zoning**
The retaining wall has been adjusted to not require an easement during construction.
- 26. Sheet C-3: Provide gate valve at water main connection.**
An additional gate valve has been added.
- 27. Sheet C-3: Verify if the pipes entering SMH-102 aren't conflicting and whether the MH needs to be larger. Engineering Recommends adding a structure just after the oil-water separator and having a perpendicular tie in.**
An additional structure has been added to accommodate a perpendicular tie in.
- 28. Sheet C-3: Recommend moving oil-water separators closer to the buildings and away from the stormwater treatment systems. It is also recommended to add one for the floor drain at the rear of the site.**
The oil-water separator has been moved closer to the building. The International Plumbing code (IPC) does not require buildings where there is no vehicle maintenance, washing, and areas only for storage to have an oil-water separator.
- 29. Sheet C-3: Add gate to isolate domestic service from fire line for both proposed buildings.**
Gate valves have been added near the building to isolate the domestic service and fire service.
- 30. Sheet C-3: Please show the existing hydrant in the cul-de-sac.**
The existing hydrant has been added to the plan set.
- 31. Sheet C-4: Clarify how long narrow sediment forebay will flow towards the two treatment bays on the northern side of the site. It appears that there is room to shift the treatment bays to the south and create a more traditional sized forebay.**
The forebay itself can be reconfigured to be smaller, as it is currently oversized. We have opted to leave the configuration as is for this submittal to accommodate the proposed roof drain. We are open to discussing a shallower roof drain, thereby allowing a smaller forebay that will be more traditionally sized.
- 32. Sheet C-4: ADA spaces have less than 1% cross slopes.**
The grading has been revised to have a minimum cross slope of 1%.
- 33. Sheet C-4: How will stormwater flow out of the paved pedestrian area between the buildings. Add spot grades to show positive drainage.**
Additional spot grades have been added to show drainage direction.
- 34. Sheet C-4: There is a 6 ft curb break near FES 10. Recommend either adding rip rap to protect the slope from washing out or CB with pipe.**
Riprap / outlet protection has been added to all curb breaks and flared end sections.
- 35. Sheet C-4: All FES shall have a rip rap apron sized according to DES standards. Provide calcs at required by DES AOT.**
Riprap calculations have been provided as part of this resubmittal.

- 36. Sheet C-4: Retaining wall is shown at nearly 7 feet. Provide detail for wall and clarify with geotextile is required.**
A retaining wall detail has been added to the last detail sheet of the plan set.
- 37. Sheet C-5: Revise perimeter to barrier to stay within the limits of the Limit of Work.**
Perimeter barrier has been revised to stay within the limits of work.
- 38. Sheet LA-101: Revise numbering of general notes.**
The general notes numbers have been revised.
- 39. Sheet LA-101: Call out the pavers and clarify how this area is to drain.**
Callouts and spot grades have been added the Grading and Drainage plan, Sheet C-4.
- 40. Sheet D-1:: Revised Stablized Construction Entrance to match NHDES standard detail (include note about alternate berm for entrances less than 75 feet).**
The stabilized construction entrance has been revised accordingly.
- 41. Sheet D-2: General Bituminous Pavement Section: Is this pavement section recommendation based on a site specific conditions assessment?**
The detail conforms to the City of Dover standard detail. It is not believed that the cross section would need to differ based on the subsurface findings in the geotechnical report.
- 42. Sheet D-3: Is a 4-inch slab sufficient for dumpster loading?**
The slab has been revised to 6-inches to allow for the required cover for reinforcing steel per ACI.
- 43. Sheet D-3: change "handicap" references to "accessible" where applicable.**
Handicap has been changed to accessible.
- 44. Sheet D-5: Typical Sanitary Drain Trench: Revise trench detail to meet City standard. Stone backfill must be placed above pipe.**
The detail has been modified to match the City standard detail.
- 45. Sheet D-5: Drain Manhole: Brick invert not required.**
The brick invert has been removed from the drain manhole detail.
- 46. Sheet D-5: Drainage Pipe: Revise trench detail to meet City standard. Stone backfill must be placed above pipe.**
The detail has been modified to match the City standard detail.
- 47. Sheet D-5: Applicant shall send Utilities Plan and Oil-Water Separator details to the Industrial Pretreatment Coordinator, Jimmy Casey at the WWTP.**
The utility plan and oil-water separator details have been sent to Jimmy Casey.
- 48. Sheet D-8: What types of plantings are proposed in the gravel wetland. There appears to be hatching on the detail but nothing noted but wetland restoration mix.**
There are no plantings associated with the gravel wetland. The wetland restoration mix has been specified by the UNH Stormwater center to mimic a natural wetland.
- 49. Sheet Drain-2: Check area boundaries for NE-1 and SW-7. Ensure the boundaries follow high points.**
Additional spot grades have been added to better depict flow direction, and boundaries have been adjusted to follow high points.
- 50. Drainage Report: The report states that the stormwater design complies with Dover standards. Applicant shall review the section 153-14 of the Dover Code and clarify how the design meets the City's requirements.**
Additional clarification regarding meeting City standards has been added to the drainage report.
- 51. General Comment: Provide Lighting Plan and details.**
Lighting Plan and details have been provided as part of this resubmittal.

Police Review: Marn Speidel

- 52. Sheet C-2 shows EV charging station in the same spot that Sheet 3 shows a water shut-off valve**

EV charging station layout will not be finalized at this time, but they will likely be adjacent to the motorcycle and ADA parking.

53. Sheet C-2, note 20: site construction hours ok for Sundays?

The construction hours note (now #21) was taken from the List of Common Site Plan Notes (revised November 28, 2022).

54. How many vehicles does proposed EV charging station serve?

Final EV charging station layout and design will be completed in the future.

55. Any proposed bike rack, or can these be stored inside?

There will be a bike rack on the eastern side of the patio. A bike rack detail has been added to Sheet D-10.

56. Label all gates

Callouts have been added to all gates on Sheet C-2.

Fire/Inspection Services Review: Jim Maxfield

57. Provide nearest hydrant location to structures

The existing fire hydrant on the Sumner Drive cul-de-sac has been added to the plans.

58. How will first responders access the site?

First responders will have a code to access the site if it is outside of typical business hours.

59. Indicate if the building will be used in a utility power outage

Yes, the building will be used in a utility power outage using the proposed generator.

60. Indicate if generator is a life safety generator and fuel type

The generator is sized to handle a full load for both proposed buildings.

61. Indicate the location of the FDC for each structure

FDC callouts have been added to the utility plan.

62. Sheet C-2 Clarify electric vehicle charging station location conflicts with sheet C-3

EV charging station layout will not be finalized at this time, but they will likely be adjacent to the motorcycle and ADA parking.

63. Indicate accessible route to EV chargers

The future EV charging stations will be located adjacent to the motorcycle parking and ADA spaces, which have less than a 2% cross slope.

64. Provide a detail for EV chargers (i.e. quantity, access, mounting height etc.)

The EV charging stations would be a future installation, these details are not known at this time. This project will consist of running conduit to the site for future construction.

65. Plans shall include design compliance with applicable accessibility regulations and NH RSA 155-A:5

ADA parking spaces have been located in close proximity to the building, have less than a 2% cross slope, and have an ADA accessible route to the building entrance.

66. Indicate size, volume, and type of fuel along access road.

There is a proposed 10,000 gallon diesel fuel tank. System details have been provided.

67. Provide location of vehicle fuel dispensing

The fuel dispensing will be located internally to the Administrative, Operations, and Maintenance building.

68. Indicate the type of fueled vehicles which will be serviced.

All vehicles in the COAST fleet will be serviced in the maintenance garage.

69. Clarify the enclosure for the fuel storage.

The fuel tank is proposed to be behind the closed vehicle gate and is protected by bollards. The tank is a protected level, 2-hour rated, double walled tank. Containment is within the tank itself and includes a leak detection system. Fuel system details have been provided.

70. Clarify waste vehicle has adequate area to service dumpster pad near island, etc.

The dumpster has been realigned to allow a garbage truck to reverse or pull forward into the dumpster.

71. Provide guardrail detail for the top of retaining wall

The abutting property is located on the uphill side of the retaining wall.

Business Development Review: Reid Amy

72. Impact of service?

No, during Phase I, during Phase II fleet service off site.

If you have any additional questions or comments, please do not hesitate to contact me at (603) 431-6196 or bclark@cmaengineers.com

Very truly yours,

CMA ENGINEERS, INC

A handwritten signature in black ink, appearing to read "B. Clark", written in a cursive style.

Benjamin Clark, PE
Project Manager

MEMORANDUM

TO: City of Dover, Planning Department

FROM: Chris Chiaramonte, EIT, CMA Engineers, Inc.
Ben Clark, PE, CMA Engineers, Inc.

RE: COAST, Proposed Operation and Maintenance Facility
Traffic Memorandum
CMA #1250

DATE: March 16, 2023
Revised: May 31, 2023

Introduction

The Cooperative Alliance for Seacoast Transportation (COAST) is proposing to redevelop the existing site to construct a new facility for administration, operations, maintenance, and vehicle storage on the property located at 42 Sumner Drive. The proposed design consists of two different structures, a vehicle storage building that is 28,700 ft² and a separate administration, operations, and maintenance building that is 18,000 ft². Currently COAST's administrative operations are located at 6 Sumner Drive and will be moved to 42 Sumner Drive, approximately 4-6 employees. In addition to moving the administrative staff, the existing bus stop at 6 Sumner Drive will move to 42 Sumner Drive. This report supplements the Site Plan Application and summarizes traffic issues including adjacent land uses, traffic circulation, sight distances, potential traffic impacts, area roadway facilities and pedestrian facilities.

Site Description

The proposed redevelopment project primarily consists of the previously disturbed area of parcel H-35-C-4 and continued to be accessed from the existing driveway location on Sumner Drive. The driveway is located off the cul-de-sac at the end of Sumner Drive. The proposed access driveway consists of a 66' wide curb cut, which has a two-way 24' wide aisle for entering buses and passenger vehicles and exiting passenger vehicles, and another 24' wide one-way aisle for exiting busses.

The 73 proposed parking spaces would accommodate the existing staff at 42 Sumner Drive and the additional staff migrating from 6 Sumner Drive. COAST's bus fleet will be parked inside the vehicle storage building and not stored in the open paved parking area. The proposed number of parking spaces meets Dover's requirements for maximum allowed off-street parking spaces.

The existing bus stop at 6 Sumner Drive is primarily utilized by COAST and abutting business staff, and pedestrians visiting COAST's administrative building to purchase bus passes. The relocation of this bus stop will not change the current bus schedule.

Sumner Drive is a local road with two 15-foot travel lanes separated by a striped double yellow line and 3-foot gravel shoulders with no speed limit sign posted near the site. Sumner Drive intersects Route 153/Knox Marsh Road approximately 900 feet from the site driveway. The intersection is unsignalized and has left turning lanes coming from the eastbound and westbound directions. Knox Marsh Road has access to Route 9 and Route 16/Spaulding Turnpike approximately three quarters of a mile east from the Sumner Drive and Knox Marsh Road intersection.

Site Generated Traffic

As currently planned, the site would be redeveloped with a new administrative and operations building, and a vehicle storage building. Typically, we would estimate new trips generated by the site by referring to the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, and the appropriate Land Use Code.

Although additional employees are being relocated to 42 Sumner Drive from 6 Sumner Drive, increasing trips generated from the site, the Sumner Drive at Knox Marsh Road intersection will experience the same amount of daily traffic entering and exiting the business park as part of the redevelopment project. However when a new tenant moves in to 6 Sumner Drive, it is expected there will be a small increase in trips at the intersection. Employee schedules are not expected to change, which would not affect the AM and PM peak hour trips from the site.

The land use surrounding the site primarily consists of commercial and industrial uses, and residential development on the southern side of Knox Marsh Road. East of the Knox Marsh Road at Sumner Drive intersection and in the vicinity of the Route 9 and Route 16 intersections, the annual average daily traffic (AADT) volume for Knox Marsh is 15,597 AADT. West of the Sumner Drive intersection the AADT decreases to 11,900.

Sight Distance

In the existing condition, the driveway runs parallel with Sumner Drive. Exiting vehicles have a clear line of sight for approximately 350 feet, until the road bends to the south. This would meet AASHTO's recommended intersection sight distance for a 35-mph road. The overall driveway geometry will not change in the proposed condition.

Conclusions

The proposed redevelopment of the COAST Bus Facility will provide adequate parking and proper onsite circulation for the building users and emergency vehicles. No additional trips will be generated by the redevelopment of the COAST facility. The minor amount of additional trips from a new tenant moving into 6 Sumner Drive will have a negligible impact on the Knox March Road at Sumner Drive intersection.



Large Dispenser Systems

envirosafe[™]
ABOVE-GROUND FUEL SYSTEMS

Large Dispenser Systems

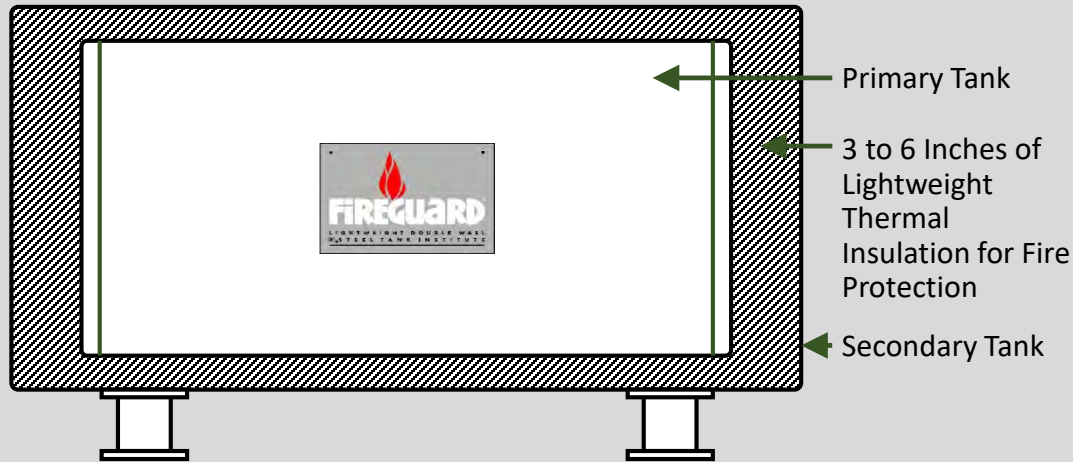
Ranges from **5,000** and **30,000** Gallons. These Systems are designed for both commercial and retail use. They offer a gas station like dispenser and are available with an optional canopy.



These systems are available in both Fireguard and Flameshield protection and can be customized to fit your specific needs.

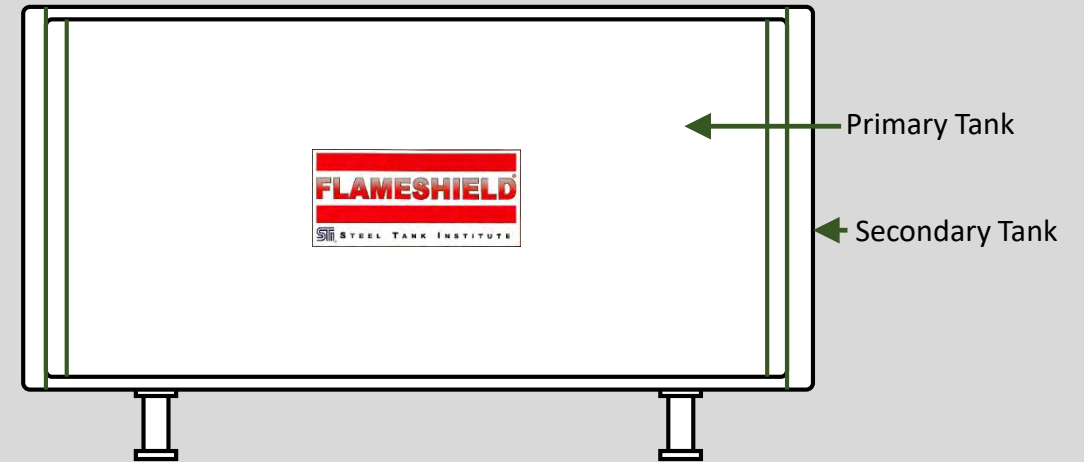
UL-2085 Fireguard VS UL-142 Flameshield

Our UL-2085 is up to 75% lighter in weight in comparison to our competitors vaulted tank.



Fireguard Tank:

1. UL-2085 labeled & listed
2. UL-2085 passes requirements for NFPA 30-30A
3. Double Wall Tank with 3" to 6" of lightweight thermal insulation for fire protection
4. 30 Year Warranty, backed by the Steel Tank Institute



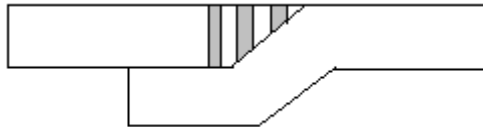
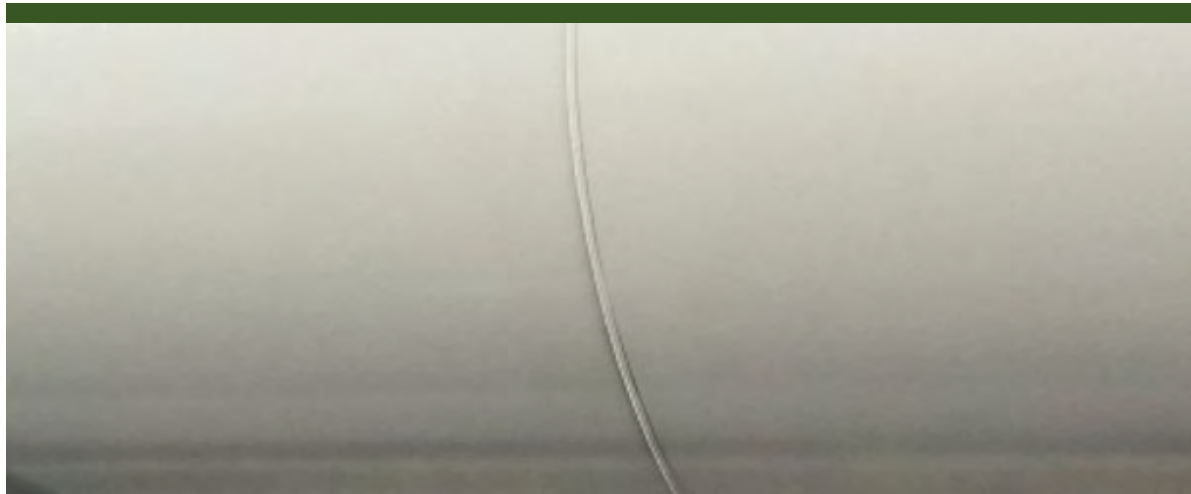
Flameshield Tank:

1. UL-142 labeled & listed
2. 2-hour Rating tested to SWRI 97-04
3. Double Wall Tank
4. 30 Year Warranty, backed by the Steel Tank Institute

An average 12,000 gallon concrete encased tank weighs approximately 100,000 lbs. Fireguard weighs 28,000 lbs.

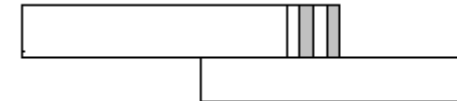
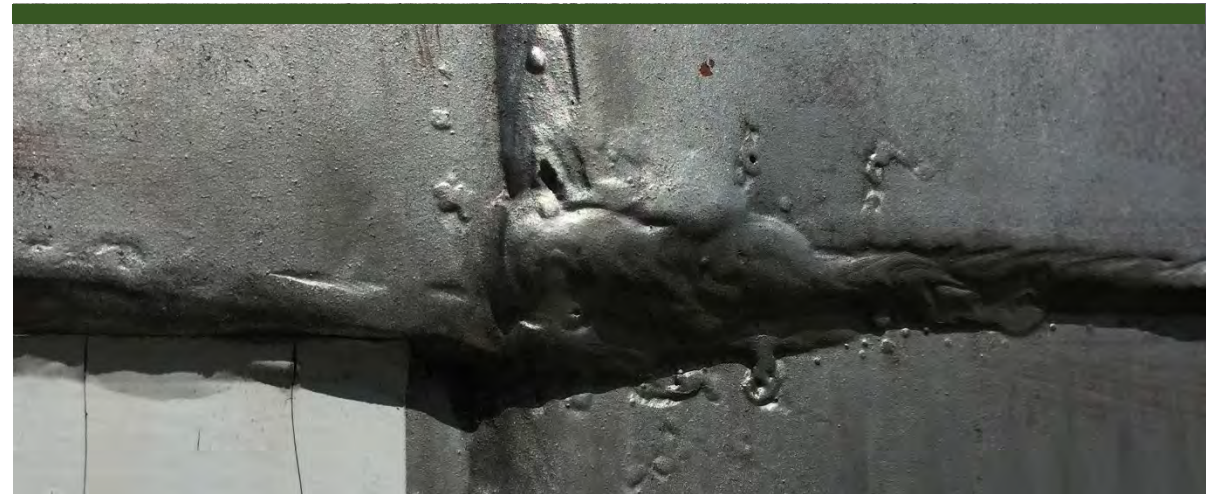
High Quality Welds

All of our weld seams on our tanks are joggled and sub-arch welded for a seamless caulk like finish. 100% penetration is guaranteed to eliminate corrosion and leaks.



Joggled Weld Joint

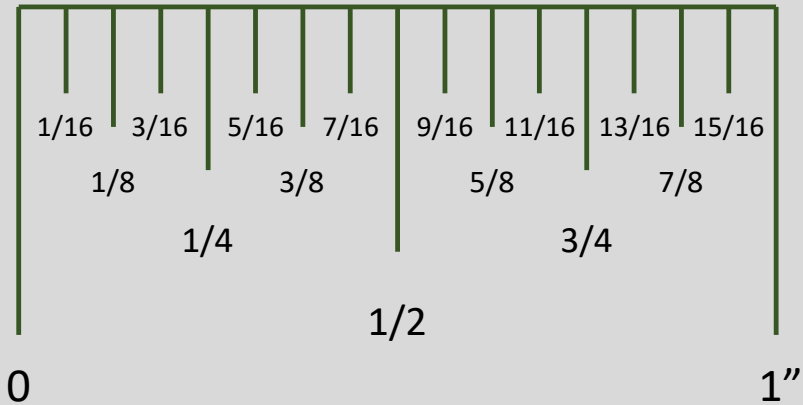
Most Competitor's Weld Seam



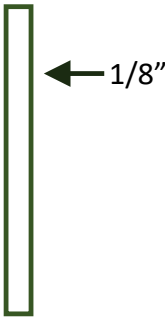
Simple Lap Joint

* All welded seams are also cross sectioned on top of all tanks.

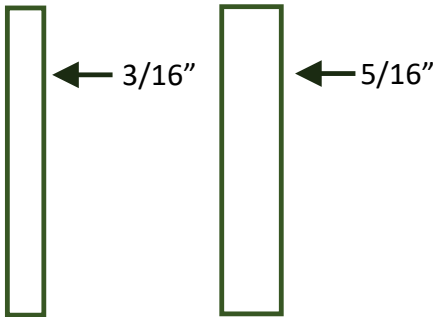
Steel Thickness



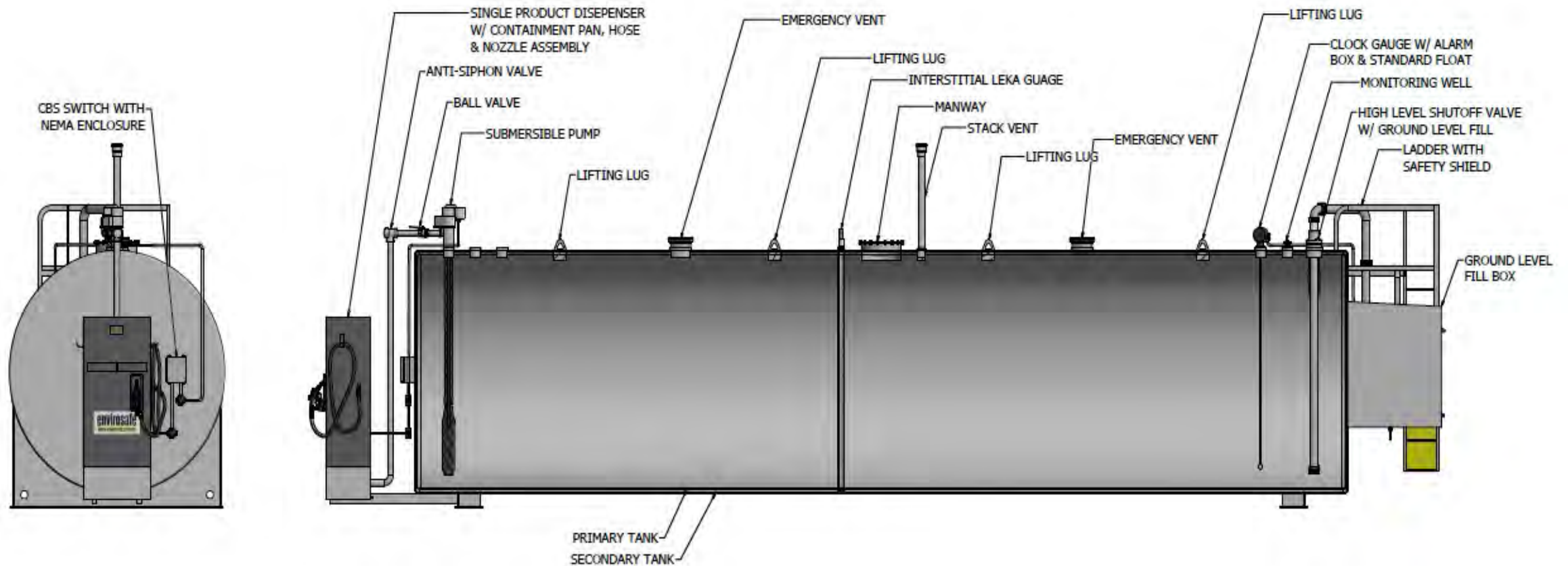
To STI standards the smallest unit of measure on the gauge shall be **1/8"**



Envirosafe's standard steel thickness starts at **3/16"** thru **5/16"**



Dispenser System Diagram with Fill Box



Fill Box is Welded to Tank, Not Bolted



Lessens Liability



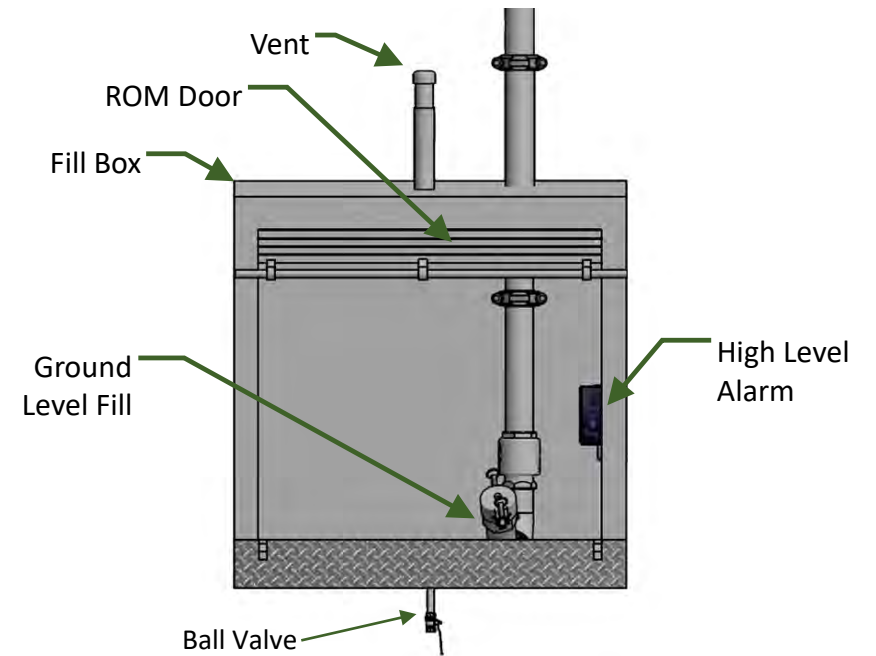
Adds Safety to Environment



Protects Equipment



Envirosafe is the only manufacturer that is allowed by the Steel Tank Institute to weld dispensing and fill boxes to tank.



Arrives On-site Complete and Ready to Operate



Tough Weather Paint



SHERWIN-WILLIAMS®



High Solids



Tropical Weathering Data Available



Fast Dry Times



Systems for Aggressive Environments



Low VOC



Colors Available

Direct to Metal (940 DTM) Polyaspartic Urethane



Fuel Management Systems

Can you benefit from a Fuel Management System?



WONDERBOX

Features & Benefits:

- Single hose fueling point
- 4,000 Users & Vehicles | 10,000 transactions
- Handles any fluid with proper pulse meter
- Export data to Excel/Word | Standard PIN code access
- Secured groups: Driver ID, Vehicle ID, Key Fob
- Printer Receipt capable for USB units
- Tank level capacity
- Level probe capability
- Local Area Network, Wi-Fi capability and HDM SKYDRIVE™ (available)

SUPERBOX

Features & Benefits:

- Handles up to 5 fueling points (*available as 2-Hose or 5-Hose configuration*)
- 4,000 Users & Vehicles | 10,000 transactions
- Handles any fluid with proper pulse meter
- Export data to Excel/Word | Standard PIN code access
- Secured groups: Driver ID, Vehicle ID, Key Fob
- Printer Receipt capable for USB units
- Tank level capacity
- Level probe capability
- Local Area Network, Wi-Fi capability and HDM SKYDRIVE™ (available)



WONDERBOX



SUPERBOX

Fuel Level Monitoring Systems

- Monitors and displays the fuel level stored.
- The level sensor utilizes a mechanical float to monitor the tank liquid level
- Electronically converts the fuel level to console.
- Up to 4 programmable liquid level alarm set points per tank
- Supports Email and SMS/Text Message alarm & status notifications.



Morrison Bros. 1218 Electronic Tank Monitoring System Shown. Other models available, ask Sales Associate for details.

Bulk DEF Storage & Dispensing



Can you benefit from a DEF-PRO All In One™ System?

SOUTHERN

The DEF-PRO All In One™ southern mini bulk DEF storage tank and dispensing system is a fully assembled out of the box system used for the safe storage and dispensing of Diesel Exhaust Fluid. ***This system is plug and play made easy.*** This system is a complete package.

Specs:

- Hornet W85 Hybrid Pump with 20 ft. delivery hose and automatic nozzle
- Flow meter
- Suction hose in place
- Heavy Duty Aluminum Lockable Cabinets



*Image shows optional hose reel upgrade option

NORTHERN

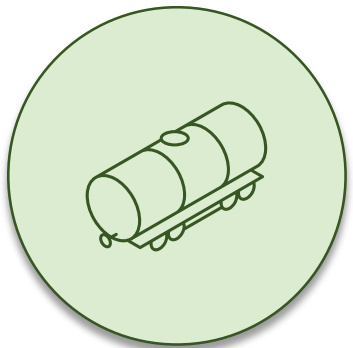
The DEF-PRO All In One Northern mini bulk DEF storage tank and dispensing system is a must for anyone who's looking for a safe way to store and dispense DEF in regions of the country where temperatures often fall below freezing. This system is designed to safely store and dispense DEF, even in the coldest of climates.

Specs:

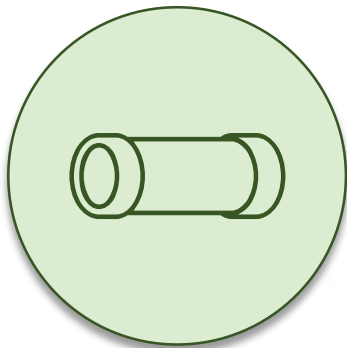
- Hornet W85 Hybrid Pump with 20 ft. delivery hose and automatic nozzle
- Liquid Level PS with LCD Display
- Flow meter
- Heavy Duty Aluminum Lockable Cabinets
- Tank Insulation
- Cabinet Heater



Bare Tank



Parts



Contractor



Time

Money

Frustration

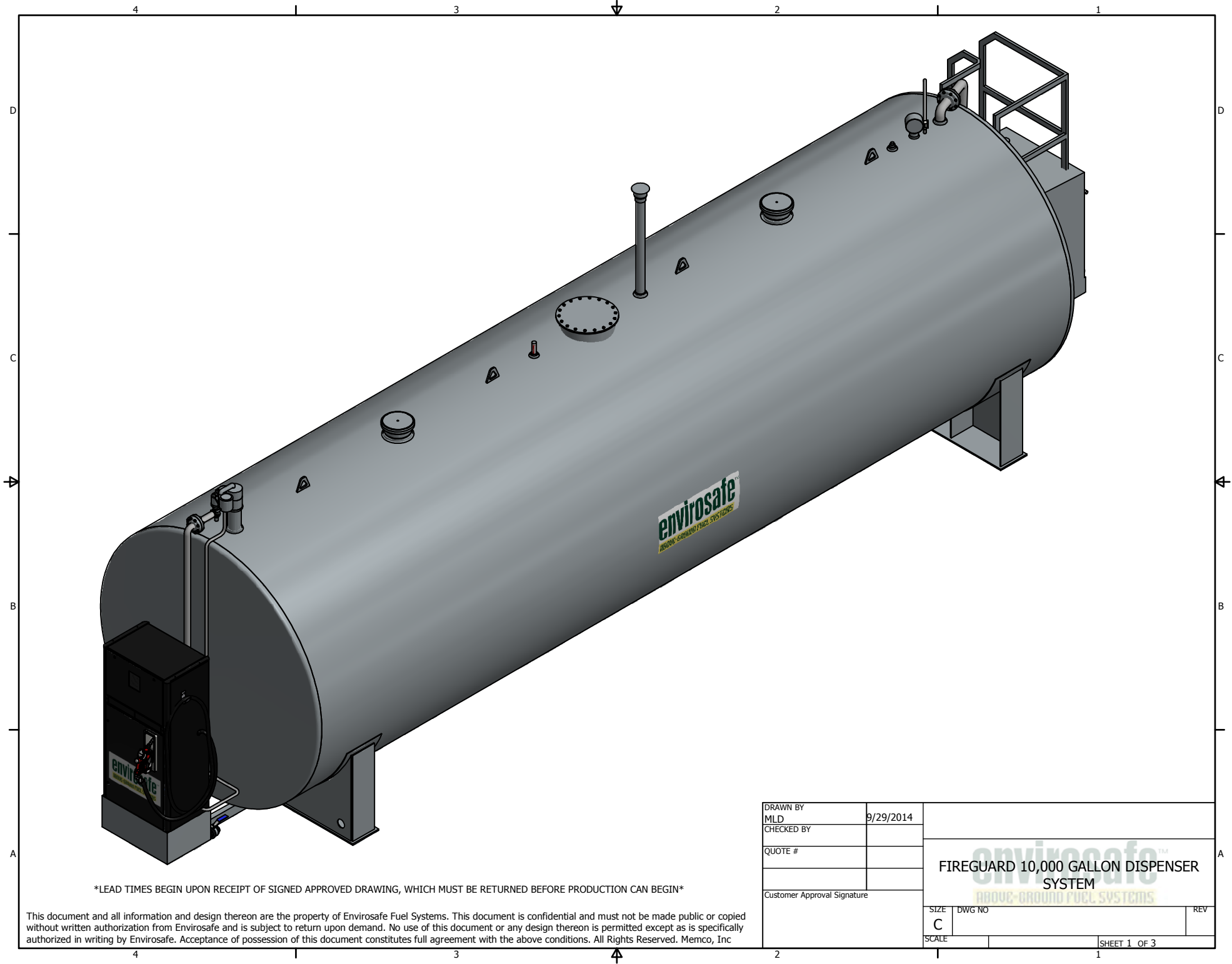
VS





Thank you!

envirosafeTM
ABOVE-GROUND FUEL SYSTEMS



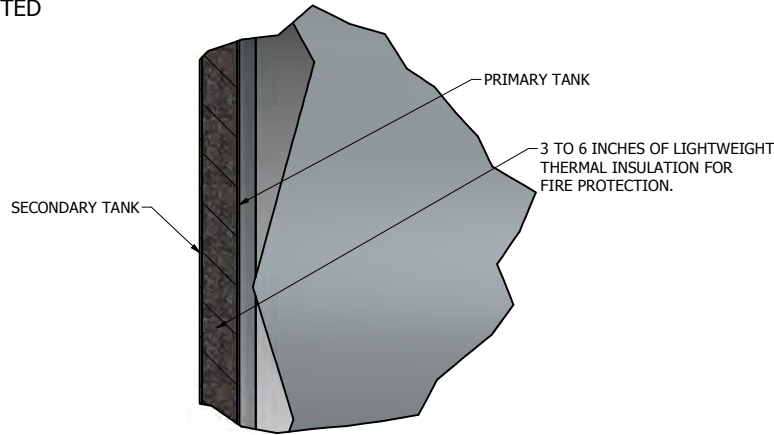
LEAD TIMES BEGIN UPON RECEIPT OF SIGNED APPROVED DRAWING, WHICH MUST BE RETURNED BEFORE PRODUCTION CAN BEGIN

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DRAWN BY	MLD	9/29/2014	envirosafe™ ABOVE-GROUND FUEL SYSTEMS FIREGUARD 10,000 GALLON DISPENSER SYSTEM		
CHECKED BY					
QUOTE #					
Customer Approval Signature			SIZE	DWG NO	REV
			C		
			SCALE	SHEET 1 OF 3	

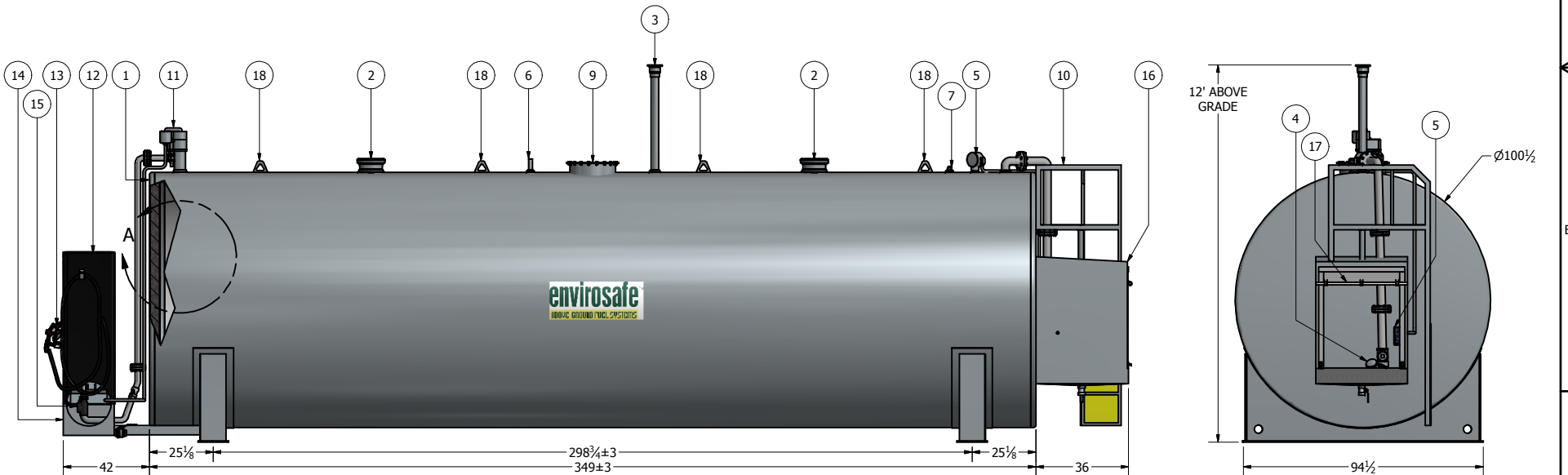
NOTES:

1. ENGINEERED HURRICANE TIE DOWN
2. EPOXY PRIMER & ACRYLIC POLYURETHANE COATING FOR HIGH PERFORMANCE FINISH
3. UL 2085 LABELED & LISTED
4. UL 2085 PASSES REQUIREMENTS FOR NFPA 30-30A INCLUDED 2 HOUR FIRE TESTED, IMPACT AND BALLISTIC TESTED



DETAIL A
SCALE 1 / 10

PARTS LIST		
ITEM	QTY	PART
1	1	FIREGUARD 10,000 GALLON TANK MOUNTED ON SADDLES
2	2	8" 8 OZ EMERGENCY VENT MALE W/ O-RING
3	1	2" STACK VENT (12' ABOVE GRADE)
4	1	MORRISON BROS HIGH LEVEL SHUTOFF VALVE W/ 3" GROUND LEVEL FILL
5	1	2" 918S CLOCK GAUGE W/ ALARM & STANDARD FLOAT FOR ACCURATE FUEL LEVEL READING
6	1	INTERSTITIAL LEAK GAUGE
7	1	MONITORING WELL W/ 2" CAP
8	1	TANK DECAL KIT (NOT PICTURED)
9	1	18" MANWAY FOR EASY INNER TANK ACCESSIBILITY
10	1	LADDER W/ SAFETY SHIELD
11	1	FE PETRO 3/4 HP PUMP ASSEMBLY W/ ANTI-SYPHON VALVE & BALL VALVE
12	1	BENNETT DISPENSER SINGLE HOSE/SINGLE PRODUCT W/ 10:1 PULSER
13	1	1" AUTOMATIC SHUTOFF NOZZLE, SWIVEL, BREAKAWAY & 18' X 1" HOSE
14	1	SINGLE PRODUCT DISPENSER CONTAINMENT PAN
15	1	EMERGENCY SHUTOFF VALVE (SHEAR VALVE)
16	1	UL LISTED LOCKABLE FILL BOX WELDED ON TANK 3' X 4' X 3', CROSS BROKEN FOR EASY DRAINAGE, 2" VENT
17	1	ROM DOOR (ROLL UP) 3' X 3'
18	4	LIFTING LUGS



SHELL THICKNESS: 1/4"
HEAD THICKNESS: 1/4"
DRY WEIGHT: 22,250 LBS

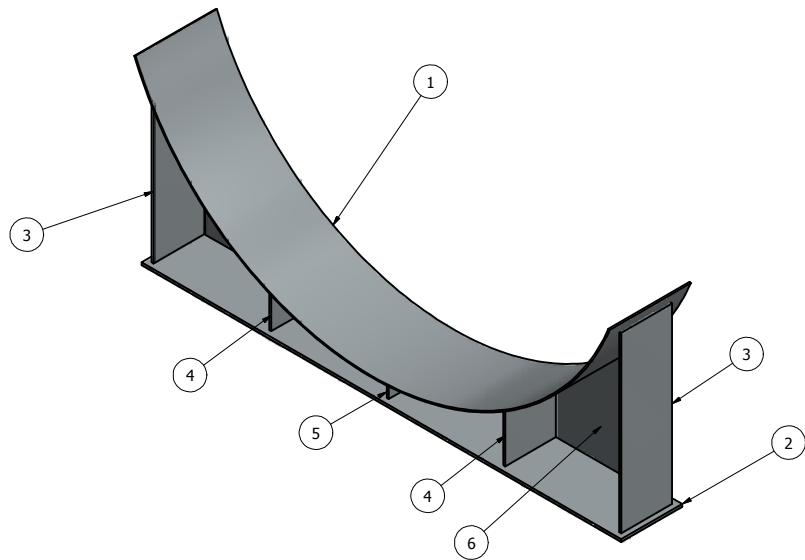
DRAWN BY	MLD	9/29/2014
CHECKED BY		
QUOTE #		
Customer Approval Signature		

FIREGUARD 10,000 GALLON DISPENSER SYSTEM

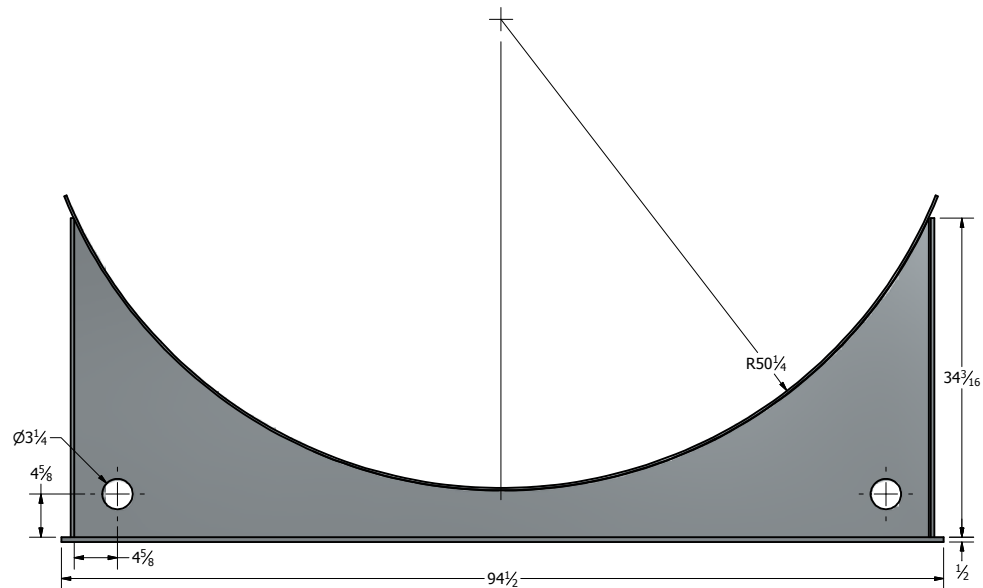
SIZE	DWG NO	REV
C		
SCALE		SHEET 2 OF 3

LEAD TIMES BEGIN UPON RECEIPT OF SIGNED APPROVED DRAWING, WHICH MUST BE RETURNED BEFORE PRODUCTION CAN BEGIN

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PARTS LIST		
ITEM	QTY	PART
1	1	SADDLE PLATE 119" X 16" X 1/4" THICK
2	1	BASE PLATE 94 1/2" X 12" X 1/2" THICK
3	2	STIFFENER PLATE (LONG) 34 3/16" X 10" X 1/4" THICK
4	2	STIFFENER PLATE (MEDIUM) 10 1/2" X 10" X 1/4" THICK
5	1	STIFFENER PLATE (SHORT) 5" X 10" X 1/4" THICK
6	1	WEB PLATE 92" X 34 3/16" X 1/4" THICK



LEAD TIMES BEGIN UPON RECEIPT OF SIGNED APPROVED DRAWING, WHICH MUST BE RETURNED BEFORE PRODUCTION CAN BEGIN

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DRAWN BY MLD	9/29/2014	 FIREGUARD 10,000 GALLON DISPENSER SYSTEM		
CHECKED BY				
QUOTE #				
Customer Approval Signature				
SIZE C	DWG NO	REV		
SCALE			SHEET 3 OF 3	

Quote



Memco Inc.

1789 E C 48
Bushnell, FL
USA, 33513
Phone : 800-555-4754

Quote No.	10547
Date :	04/01/2021
Contact :	Robert Doyle Phone : 6037382872

Bill To	ROBERTDO
Robert E Doyle PERA	
6 Acorn Ln	
Cumberland, ME	
USA, 04021	

Ship To	ROBERTDO
Robert E Doyle PERA	
6 Acorn Ln	
Cumberland, ME	
USA, 04021	

Expiration Date	Price Request	Terms	Carrier	FOB
04/01/2021		100% due prior to delivery - Wire or Check on Order	Not Applicable	
Sales Rep	Currency	Lead Time (Days)	Tax Group	
Sam Judkins (SJ)	USD	0	USDEXE	

No.	Qty	Item	Description	Disc. %	Amount
1	1.000	DISP	Dispenser Tank 1 10,000 Gallon Fireguard Tank Mounted on Saddles 2 8" 8 Oz Emergency Vent Male w/O-ring 1 3" Stack Vent (12' above grade) w/ 3" Updraft Vent 1 2" 918 Clock Gauge w/ Alarm & Standard Float for Accurate Fuel Level Reading 1 UL Listed Lockable Fill Box Welded on Tank 3'-6" x 4' x 4'-2", Cross Broken for Easy Drainage, 2" Vent, 2" Mushroom Cap, & 1/2" Ball Valve 1 Monitoring Well w/ 2" Cap 1 Engineered Hurricane Tie Down 1 Tank Decal Kit 1 Envirolastic 940 DTM Polyaspartic Urethane Coating for High Performance Finish 1 FE Petro 3/4 Hp. Pump Assy w/ Anti-Syphon Valve & Ball Valve w/ Relay & Nema7 Enclosure 1 Interstitial Leak Gauge 1 Emergency Shutoff Valve (Shear Valve) 1 Morrison Bros. Overfill Prevention Valve with test mechanism & 3" Ground Level Fill (Vertical Check Valve, Ball Valve, Fill Pipe w/ Diffuser, Fill Adapter, & Dust Cap) 1 18" Manway for easy inner tank accessibility 1 ROM Door (Roll Up) 3' x 3' 1 Ladder with Safety Shield and hand rails for fill box 1 UL 2085 Labeled & Listed 1 STEEL THICKNESS 1/4" SHELL & 5/16" HEAD 1 Touch-up Paint 1 Owners Manual	0%	\$53,487.34
2	2.000	P-0087	Swivel 1" Shipped Separately and Installed by Others	0%	\$152.42
3	2.000	P-2276	Breakaway 1" Shipped Separately and Installed by Others	0%	\$335.46
4	2.000	P-22341641091	Hose Whip 1"x 12" M x M Pumpflexll Shipped Separately and Installed by Others	0%	\$72.46
5	2.000	P-22341641181	Hose Pumpflex ll 1" X 18' w/MxM Fitting Shipped Separately and Installed by Others	0%	\$214.84
6	2.000	P-173312-03	Nozzle Hi-Flow Husky Diesel - Green 1" Shipped Separately and Installed by Others	0%	\$350.40
7	1.000	P-3712SNR-21-J-P-SO-ET	Dispenser Single Product/Dual Hose Low Cabinet, 2 sided, Side Mounted Nozzle Holders, 10:1 Pulser. W/ Electro-Mechanical Totalizers. 3712SNR-21-J-P-SO-ET (Envirosafe Silk Screen Logo on Door) Shipped Separately and Installed by Others	0%	\$6,535.00
8	1.000	P-SB PEDESTAL ASSY-2	Superbox 2 hose assembled to pedestal includes 2 contactors. Fully assembled. Shipped Separately and Installed by Others	0%	\$6,416.67

Subtotal: \$67,564.59

USD

Tank quotes are only good for 30 days. It does not include sales tax, permitting, installation, setup, or delivery unless stated otherwise. Petroleum equipment/parts are good for 30 days.

Please make checks payable to MEMCO Inc.

Ask Us About Our No Money Down Financing or Leasing Options!

Flameshield and Fireguard tanks include a 30-year tank warranty backed by the Steel Tank Institute.

All Equipment and Piping Quoted is Installed at Factory.

QUOTATION TERMS AND CONDITIONS:

Above Quote has been issued to Customer by MEMCO, INC. D/B/A Envirosafe Fuel Systems ("Memco, Inc." herein) for the purchase of and manufacture/fabrication of an above ground fuel system ("Product" herein).

All custom Quotes are estimates until the CAD drawings are completed and meet with customer's specifications and express approval at which time the estimate may be revised to reflect custom design specifications and requirements. Change orders during the production process will subject the customer to an increased charge.

Memco, Inc. will estimate a time within which manufacture/fabrication may be completed, but the nature of the Product will not enable Memco, Inc. to define a specific date.

The quote is based upon information available at the time it is prepared and is limited to items discussed and detailed during the quotation process. Memco, Inc. is not liable in any way for the system or tank's intended use.

These Terms and Conditions are expressly made part of the Manufacturing Sales Agreement.

1. Quotes are valid for 24 hours after issuance by Memco, Inc.

2. Drawings and Materials Lists:

A. Cost:

- i. Standard systems: \$300.00
- ii. Custom systems: \$500.00
- iii. Aviation systems: \$1,200.00

B. Timeframe: The schedule time for issuance of approval drawings and revisions is dependent upon engineering backlog at the time of the quote and order. The estimated wait time for submission is two weeks depending on the complexity of the project.

C. Custom Systems: Custom systems quoted are only estimates until the system is engineered in Auto CAD and an accurate quote based upon any custom equipment or engineering that the customer requires may be created. Thus, custom designed systems will receive a preliminary estimate and upon receipt of customer-approved drawings a formal quote and purchase price.

D. Drawing charges are not refundable.

E. Memco, Inc. is only responsible for customer's local rules and regulations when Memco, Inc. is coordinating the installation. CUSTOMER EXPRESSLY ASSUMES RESPONSIBILITY FOR IDENTIFICATION OF AND FOLLOWING CUSTOMER'S LOCAL RULES AND REGULATIONS FOR INSTALLATION AND USE OF THE PRODUCT.

3. NOT INCLUDED IN QUOTE: the following are not included in any quote for the manufacture of any Memco, Inc. product:

A. Local, State or Federal Sales Tax.

B. Local, State or Federal Permitting of any sort. Unless, Memco Inc, has been hired as installation contractor. Thus the actual costs of permitting are added to the final invoice.

C. Delivery (a delivery estimate may be given with your quote but is subject to change at any time for any reason).

D. Unless specifically listed, Installation (Installation is a service charge which is in addition to the manufacture/fabrication quote you have/will receive).

E. Spare parts (unless requested and specified on above quotation).

F. Unless specifically listed on the drawing, bill of materials and quote: valves, controls, piping or other attachments are not included and must be supplied by you and installed by you or a third party.

4. REQUIRED PAYMENT SCHEDULE:

A. Some or all materials may be ordered once the deposit is received to prevent material cost increases.

B. Upon acceptance of the product drawings, a 50% deposit is required to commence the manufacturing of your Product.

C. The remaining 50% will be required at the completion of the manufacturing process, before delivery and onsite installation.

D. If Memco, Inc. is doing Installation of product, Sixty Percent (60%) of the Installation fee must be prepaid before on-site delivery is commenced.

E. The product will not leave the manufacturing location until Memco, Inc. D/B/A Envirosafe Manufacturing, Installations, Sales Agreement are signed and returned, the remaining 50% due for manufacturing cost and 60% of installation charges are paid in full.

F. Fees may apply if changes are made after approval to start manufacture/fabrication.

G. Purchased items not requiring manufacture. i.e., stock tanks, pre-owned tanks, parts and equipment, must be invoiced and paid in full before delivery.

5. OTHER TERMS AND CONDITIONS:

A. Materials used in the construction of the Product may be domestic, foreign, or a combination of the two. Specific country of origin requests may increase your cost.

B. All freight is FOB Bushnell, Florida at the manufacturing facility of Memco, Inc. unless otherwise specified.

C. A freight estimate may be given. If so, the original freight estimate and the freight quote at the time of shipment may differ due to fluctuating fuel prices and supply and demand of trucks. Memco, Inc. is not responsible for any additional freight cost associated or delivery time associated with same.

D. Scratching and/or paint scarring may occur to painted or coated surfaces during the loading and shipping process. Field touch-up paint and labor is to be provided by you or a third party. Touch-up paint is available upon request, for a fee.

E. Because the tank equipment and piping on your Product will be subjected to vibrations and motion during delivery, Memco, Inc., will not be responsible for seepage or leaks at any connections. Piping is tested in our shop at these connections after assembly and before shipment to assure there are no leaks or seepage. Memco, Inc. takes all reasonable steps to minimize vibrations in transit. However, we cannot guarantee that seepage will not occur. Re-tightening connections on site BY OTHERS may be required.

F. Memco, Inc. is not responsible for malfunctions in equipment and/or parts due to changes in atmospheric pressure.

G. Memco, Inc. is not responsible for customer payment delays; the product will not ship until Memco, Inc. is paid in full.

H. Unless otherwise specified in writing, Memco, Inc. is not responsible for the customer's local rules, regulations and/or statutes. The customer is solely responsible for compliance with the same. By way of example only, Stage I or II Vapor Recovery, Overfill Prevention, etc.

I. Memco, Inc. is not responsible for the maintenance and/or upkeep of tanks stored on Memco, Inc.'s property after the 15 day inspection period has expired and or waiting for delivery.

J. Memco, Inc. recommends that you contact your fire marshal, environmental agencies, and AHJ (Authorities Having Jurisdiction) for approval before ordering.

6. ATTORNEY'S FEES – In the event any aspect of the agreement (at the quote stage, production, fabrication or delivery) litigation occurs which concerns the terms of or enforcement of this and/or the sales agreement, Memco, Inc. shall be entitled to the recovery of all reasonable and necessary attorney's fees and costs of court related to said litigation, including those incurred at the demand phase through the fees and costs associated with appellate review. Venue is established in Lake County Florida and all litigation or disputes arising as a result of this quote and/or the sales agreement are governed by the Laws of the State of Florida.

7. FORMAL CONTRACT: Formal contract is required to be signed and returned before the fuel tank/system will be released. (Ask your sales associate for a copy of contract).

8. By submitting a deposit to Memco, Inc., the buyer is acknowledging and accepting these quotation terms and conditions stated above.



CMA ENGINEERS, INC.

CIVIL | ENVIRONMENTAL | STRUCTURAL

35 Bow Street
Portsmouth, New Hampshire
03801-3819

P: 603 | 431 | 6196
www.cmaengineers.com

June 8, 2023

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

**RE: COAST Bus Facility
Streetscape Requirement Waiver
CMA #1250**

Dear Donna:

This letter is to request a waiver from the requirement to provide a 3D streetscape plan as part of the site review submittal for the new COAST facilities on Sumner Drive.

In lieu of a 3D streetscape plan, we are providing colored renderings of both building elevations, which include plantings and sidewalks. Given the unique location of the project, I believe the renderings submitted will adequately convey the visual aspects of the new COAST facilities.

In the absence of immediate neighboring structures, our hope is that a 3D streetscape plan is not required to understand how the proposed facilities integrate with the surrounding environment. With that in mind, we respectfully request your consideration for a waiver from the streetscape requirement.

As always, if you have any questions, feel free to contact me at your convenience.

Respectfully,

A handwritten signature in dark ink, appearing to read "B. Clark", written in a cursive style.

Benjamin Clark, P.E.
Senior Project Manager
CMA Engineers, Inc.

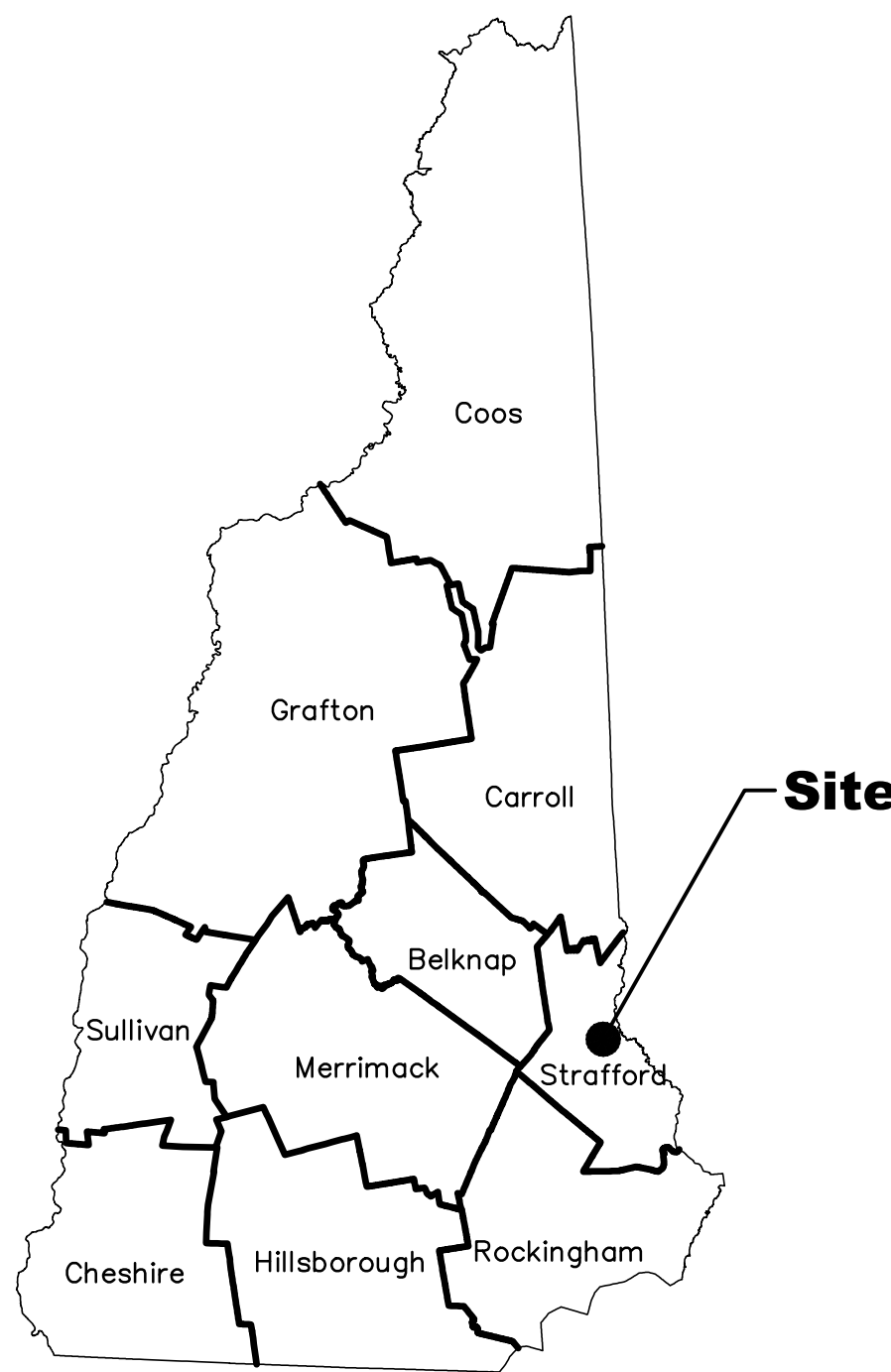
Cooperative Alliance for Seacoast Transportation Operations and Maintenance Facility

Preliminary Permitting Plans March 16, 2023

Revised: May 31, 2023

Sheet Index

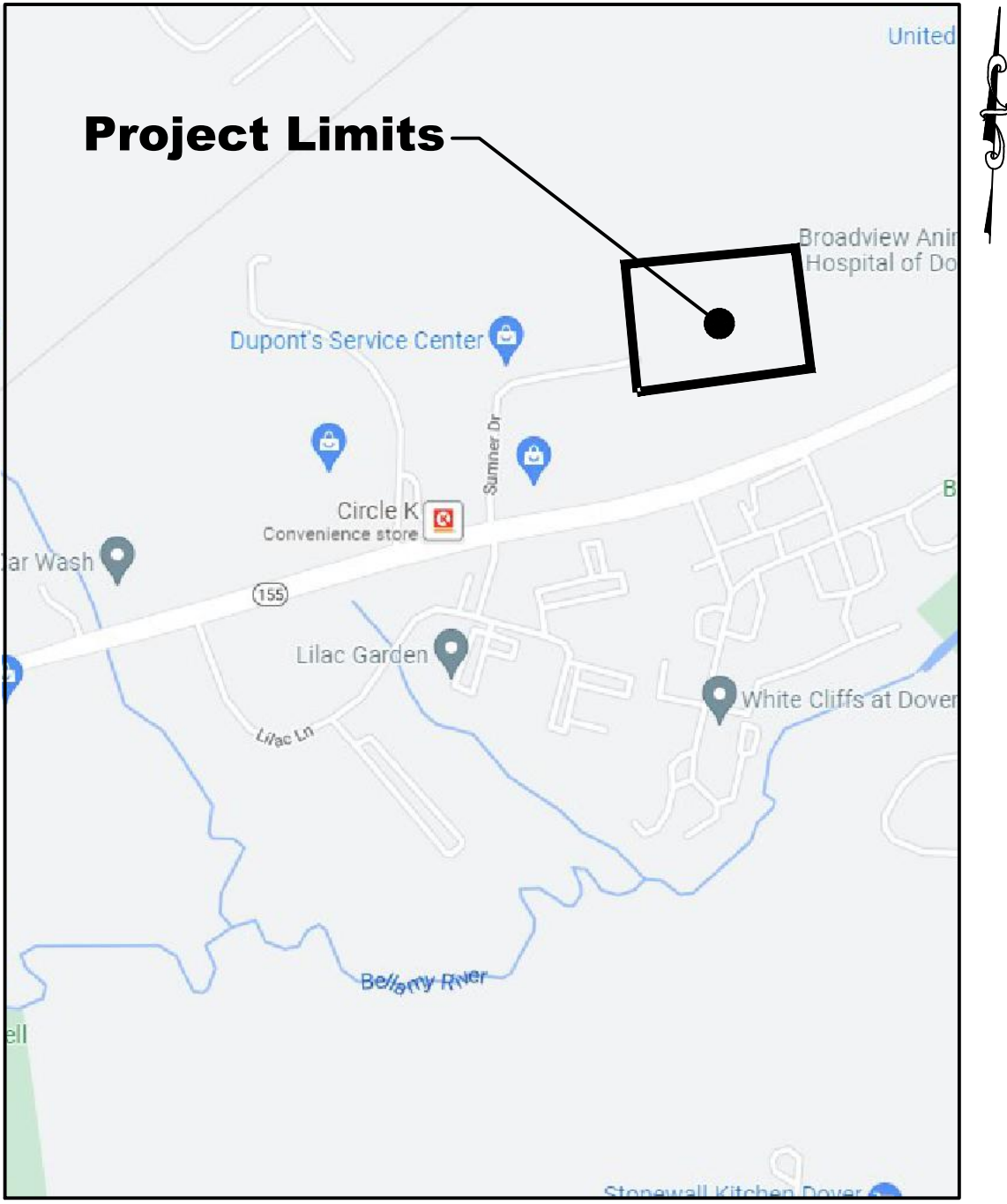
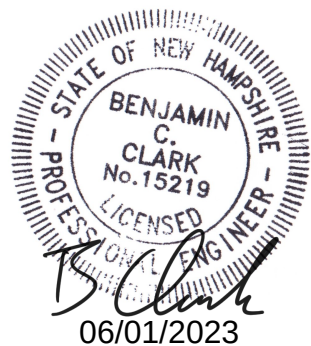
1	Cover Sheet
2-3	General Notes
4-5	Existing Conditions Plan
6	Site Preparation & Demolition Plan
7	Site Layout Plan
8	Utilities Plan
9	Grading & Drainage Plan
10	Sediment & Erosion Control Plan
11	Landscape Plan
12	Lighting Plan
13-22	Construction Details
23	Fire Truck Turning Template
24-25	Drainage Maps



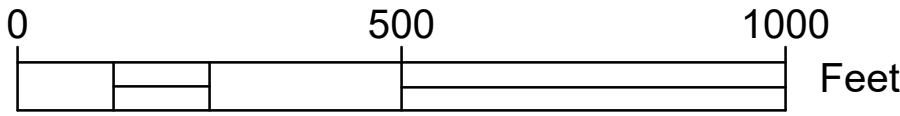
Locus Plan

Prepared For:
**Cooperative Alliance
for Seacoast
Transportation**
**42 Sumner Drive
Dover, NH 03820**

Prepared By:
**CMA
ENGINEERS**
CIVIL/ENVIRONMENTAL/STRUCTURAL
Portsmouth, NH • Manchester, NH • Portland, ME
603/431-6196 • 603/627-0708 • 207/541-4223
cmaengineers.com



Project Location



GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL BE IN CONFORMANCE WITH CURRENT CITY OF DOVER SPECIFICATIONS AND DETAILS.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND PROCEDURES, AND FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH ALL WORK INCLUDED UNDER THIS CONTRACT, INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA REGULATIONS. THE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL SAFETY BARRIERS, WARNING FLASHERS, ETC., AS REQUIRED BY THE CONDUCT OF THE WORK FOR THE PROTECTION OF WORKERS AND NON- WORKERS ALIKE. THE OWNER AND ENGINEER WILL PERIODICALLY REVIEW CONSTRUCTION FOR COMPLIANCE WITH THE PLANS AND SPECIFICATIONS; SUCH REVIEW DOES NOT IMPLY APPROVAL OF METHODS OF CONSTRUCTION.
3. THE CONTRACTOR SHALL PROVIDE STAGING AREAS AS REQUIRED FOR STAGING, PROCESSING, AND STOCKPILING OF EQUIPMENT AND MATERIALS. THE CONTRACTOR SHALL PREPARE THE AREA AS NECESSARY AND INSTALL ALL EROSION CONTROL DEVICES TO MEET NHDES STANDARDS. THE CONTRACTOR SHALL STOCKPILE, HANDLE AND TRANSPORT MATERIALS TO PRESERVE THEIR QUALITY AND FITNESS FOR THE WORK. MATERIALS SHALL ALSO BE STORED TO FACILITATE INSPECTION AND MAY BE SUBJECT TO INSPECTION AND RETESTING BEFORE INCORPORATION. IN THE WORK, PRIVATE PROPERTY SHALL NOT BE USED FOR STORAGE PURPOSES WITHOUT WRITTEN PERMISSION OF THE PROPERTY OWNER. IF REQUESTED, COPIES OF SUCH WRITTEN PERMISSION SHALL BE FURNISHED TO THE OWNER. AFTER COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL RETURN THE STAGING AREA TO PREEXISTING CONDITIONS TO THE SATISFACTION OF THE PROPERTY OWNER AND THE CITY.
4. EXISTING CONDITIONS SURVEY AND TOPOGRAPHY PROVIDED BY DOUCET SURVEY, LLC IN JULY 2020. BENCHMARKS AND HORIZONTAL CONTROL POINTS FOR THE CONTRACTOR TO LAYOUT THE WORK HAVE BEEN ESTABLISHED AND ARE SHOWN ON THE PLANS.
5. THE CONTRACTOR SHALL PERFORM ALL REQUIRED LAYOUT AND DEVELOPING AS-BUILT DOCUMENTATION WORK WITH COMPETENT, QUALIFIED PERSONNEL IN A MANNER CONSISTENT WITH THE CURRENT SURVEY/LAYOUT PRACTICES AND ACCEPTABLE TO THE ENGINEER. NO SEPARATE PAYMENT FOR THIS WORK WILL BE MADE. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH QUALIFIED PERSONS TO ASSIST IN THIS CHECKING AS NEEDED AND ON REQUEST OF THE ENGINEER. THE CONTRACTOR SHALL PERFORM ALL NECESSARY LAYOUT WORK IN ORDER TO CONSTRUCT ALL ELEMENTS OF THE PROJECT AS SHOWN ON THE PLANS AND SPECIFIED IN THE CONTRACT. THIS WORK SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, STAKEOUT NECESSARY TO ESTABLISH LINES AND GRADES AS EARTHWORK OPERATIONS PROGRESS; STAKEOUT, LAYOUT AND ELEVATIONS AS REQUIRED FOR INSTALLING DRAIN LINES, SEWER LINES, WATER LINES, AND OTHER ITEMS INCLUDED IN THE WORK.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE ACCURACY OF THE WORK. THE ENGINEER MAY CHECK ALL, OR ANY PORTION, OF THE LAYOUT, MADE BY THE CONTRACTOR. ANY NECESSARY CORRECTION TO THE WORK SHALL BE MADE IMMEDIATELY BY THE CONTRACTOR. SUCH CHECKING BY THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITIES FOR THE ACCURACY OR COMPLETENESS OF THE WORK. NO CLAIM WILL BE CONSIDERED BECAUSE OF ALLEGED INACCURACIES UNLESS THE CONTRACTOR NOTIFIES THE ENGINEER THEREOF IN WRITING IMMEDIATELY UPON DISCOVERY OF THE ALLEGED INACCURACIES AND AFFORDS THE ENGINEER THE OPPORTUNITY TO CHECK OR VERIFY THE CONTROL IN QUESTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL BENCHMARKS AND CONTROL POINTS. IF ANY OF THE CONTROL POINTS ARE DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION, THE CONTRACTOR SHALL REPLACE THEM AT NO EXPENSE TO THE OWNER. DAMAGED OR DESTROYED CONTROL POINTS, BENCHMARKS, OR TAKEOFF OR REFERENCE POINTS DAMAGED OR MADE INACCESSIBLE BY THE PROGRESS OF CONSTRUCTION SHALL BE REPLACED OR TRANSFERRED BY THE CONTRACTOR TO THE VERIFICATION OF THE ENGINEER. REPLACEMENT OF ANY LAYOUT POINTS SHALL BE PERFORMED BY, OR UNDER, THE DIRECTION OF A NH LICENSED LAND SURVEYOR.
8. APPARENT PROPERTY BOUNDARY IS BASED ON THE EXISTING CONDITIONS SURVEY. PERFORM ALL WORK WITHIN THE EXISTING PROPERTY BOUNDARY OR ACQUIRE A TEMPORARY RIGHT-OF-ENTRY AGREEMENT.
9. THE CONTRACTOR SHALL PROTECT PRIVATE PROPERTY AND SHALL TAKE ALL NECESSARY MEASURES AND PRECAUTIONS TO AVOID DAMAGE TO EXISTING TREES, SHRUBS, LAWN, PLANTINGS, ETC. THIS PROTECTION WILL INCLUDE THE TRIMMING OF TREES PRIOR TO CONSTRUCTION IF NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS/REPLACEMENT OF ALL DAMAGED ITEMS.
10. THE CONTRACTOR SHALL PLAN AND PERFORM TEST PIT EXCAVATION WELL IN ADVANCE OF COMMENCING CONSTRUCTION AND ORDERING MATERIALS TO ALLOW TIME TO REVIEW ACTUAL CONDITIONS ENCOUNTERED. TEST PITS NOT SPECIFICALLY IDENTIFIED, SHALL BE EXCAVATED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER.
11. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
12. ALL DRAINAGE STRUCTURES TO BE ABANDONED IN PLACE SHALL HAVE THE CONE REMOVED AND BE FILLED WITH GRAVEL. THE MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 12 INCHES OF COMPACTED THICKNESS. ALL PIPE CURVES SHALL BE PLUGGED WITH A CONCRETE MASONRY PLUG.
13. PLUGGING EXISTING PIPES WITH BRICK AND MORTAR SHALL BE CONSIDERED SUBSIDIARY TO THE DRAINAGE WORK.
14. PIPE CONNECTIONS TO REPLACEMENT STRUCTURES ARE SUBSIDIARY TO THE STRUCTURE.
15. ALL PROPOSED AND EXISTING DRAINAGE AND SANITARY SEWER STRUCTURE RIM AND PIPE INVERT ELEVATIONS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER.
16. THE CONTRACTOR SHALL SET ALL MANHOLE FRAMES AND COVERS, CATCH BASIN GRATES, AND WATER VALVE COVERS TO BE FLUSH WITH THE BASE PAVEMENT GRADES, THEN RAISED TO 1/8" TO 1/4" BELOW FINAL PAVEMENT ELEVATIONS DURING INSTALLATION OF THE FINAL WEARING COARSE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND RELOCATION OF ALL SIGNS THAT CONFLICT WITH THE WORK (INCIDENTAL TO CONSTRUCTION). ANY SIGNS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
18. FINAL LOCATION OF TRAFFIC SIGNS AND SUPPORTS AS SHOWN IN THE PLANS SHALL BE FIELD-CONFIRMED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER PRIOR TO INSTALLATION.
19. REMOVE TOPSOIL FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF THE SLOPE LINES. UNLESS OTHERWISE DIRECTED, STOCKPILE TOPSOIL AND USE IT ON THIS PROJECT AS NEEDED.
20. ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED OR LANDSCAPED OTHERWISE SHALL HAVE LOAM BORROW PLACED AND SEED. THE LOAM BORROW SHALL HAVE A MINIMUM DEPTH OF 4" AND SHALL BE PLACED FLUSH WITH THE TOP OF ADJACENT CURBING, EDGING, PAVEMENT MILLINGS, BACK OF SIDEWALK OR OTHER PAVED EDGE.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF THE PROJECT.

PERMIT NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS: LOCAL AND STATE, AS WELL AS FROM PUBLIC UTILITIES, INCLUDING BUT NOT LIMITED TO A RIGHT-OF-WAY TRENCH PERMIT FROM THE DOVER DPW.
2. THE CONTRACTOR SHALL PREPARE A PROJECT SPECIFIC STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND OBTAIN AN EPA CONSTRUCTION GENERAL PERMIT.
3. THE CONTRACTOR SHALL ADHERE TO ALL THE CONDITIONS OF THE ENVIRONMENTAL PERMITS OBTAINED FOR THE PROJECT (SEE APPENDIX IN SPECIFICATIONS).

EXISTING UTILITY NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LOCATIONS, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN, ON THESE PLANS PRIOR TO CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL NOTIFY DIG-SAFE AT 1-800-225-4977 AT LEAST 72 HOURS PRIOR TO BEGINNING WORK TO CONFIRM THE LOCATION OF UNDERGROUND UTILITIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR (IF DAMAGED) OF ALL EXISTING UTILITY MAINS AND SERVICES. THE LOCATIONS OF KNOWN GAS, WATER, AND SEWER MAINS SHOWN ON THESE DRAWINGS ARE APPROXIMATE. EXISTING GAS, WATER, AND SEWER SERVICE LATERALS MAY NOT BE SHOWN AND THE CONTRACTOR SHOULD ANTICIPATE THEIR EXISTENCE. THE CONTRACTOR SHOULD CONSIDER CONFLICTS, HAND EXCAVATION, AND DECREASE IN PRODUCTION WHEN PREPARING THEIR BID.

DISPOSAL OF SURPLUS MATERIAL:

1. UNSUITABLE MATERIALS AND BOULDERS/ROCK/STONES AS DEFINED BY THE SPECIFICATIONS THAT ARE NOT ACCEPTABLE AS FILL MATERIAL SHALL BE REMOVED FROM THE SITE. ALL PAVEMENT AND SUBGRADE SOILS REMOVED DURING CONSTRUCTION TO ACHIEVE PROPOSED GRADES SHALL BECOME PROPERTY OF THE CONTRACTOR. DISPOSAL IS THE CONTRACTOR'S RESPONSIBILITY.
2. UNLESS REQUESTED BY THE OWNER, ALL FRAMES, COVERS, GRATES, VALVES AND VALVE BOXES, AND CURBING TO BE REMOVED DURING THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ALL PAVEMENT, CONCRETE AND SUBGRADE SOILS REMOVED DURING CONSTRUCTION TO ACHIEVE PROPOSED GRADES SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ALL SIDEWALK PAVEMENT, SIDEWALK BRICK, CONCRETE OR BRICK STRUCTURES, SEWER MANHOLES, DRAINAGE, WATER AND SEWER PIPE TO BE REMOVED/DEMOLISHED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
3. IF ASBESTOS CEMENT (AC) PIPE IS ENCOUNTERED, ALL WORK SHALL BE DONE IN ACCORDANCE WITH ENV-A 1800 ASBESTOS MANAGEMENT AND CONTROL. IF THE AC PIPE IS BROKEN OR REQUIRES CUTTING OR BREAKING, A LICENSED ABATEMENT CONTRACTOR MUST COMPLETE THIS WORK AND PROPERLY BAG AND DISPOSE OF THE PIPE REMAINDERS. ALL DISPOSAL SHALL BE DONE IN ACCORDANCE WITH ENV-A 1800 AND ENV-SW 901. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING ASBESTOS CEMENT PIPE, INCLUDING SEWER CONNECTIONS, WITHIN THE LIMITS OF TRENCH EXCAVATION. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO USERS THROUGH THE USE OF TEMPORARY BYPASS PIPING AND VALVES.
4. REMOVAL AND PROPER DISPOSAL OF EXISTING DRAINAGE AND SANITARY SEWER STRUCTURES AND PIPE SHALL BE SUBSIDIARY TO PROPOSED WORK ITEMS WHEN THE EXISTING DRAINAGE AND SEWER ITEMS ARE LOCATED WITHIN THE TRENCH LIMITS OF THE PROPOSED DRAINAGE ITEMS AS SPECIFIED IN SECTION 206 OF THE NHDOT STANDARD SPECIFICATION.

BORING NOTES:

1. BORINGS INDICATED ON THE PLANS WERE MADE BY JOHN TURNER CONSULTING AND GEOTECHNICAL SERVICES, INC. IN JULY 2022. BLOW COUNTS SHOWN ARE THE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. STANDARD SPLIT-SPoon SAMPLER 6" USING A 140 LB WEIGHT FALLING 30".
2. BORINGS ARE FOR DESIGN PURPOSES SHOWING CONDITIONS AT BORING POINTS ONLY, AND DO NOT NECESSARILY INDICATE MATERIAL TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS INDICATE THUS  WERE MEASURED AT THE TIME OF EXPLORATION. THE WATER LEVELS ENCOUNTERED DURING CONSTRUCTION MAY VARY CONSIDERABLY DUE TO PREVAILING CLIMATE, RAINFALL, OR OTHER FACTORS.
4. THE GEOTECHNICAL INVESTIGATION REPORT IS PROVIDED AS AN APPENDIX TO THE CONTRACT DOCUMENTS.

SANITARY SEWER NOTES:

1. THE SANITARY SEWER MAIN SHALL BE SDR 35 PVC. THE PIPE SHALL BE CONNECTED TO THE EXISTING SEWER MANHOLE IN SUMNER DRIVE AND STUBBED AND CAPPED ON THE NORTH END FOR FUTURE CONNECTION AS SHOWN ON THE PLANS.
2. SEWER MAINS SHALL BE CONSTRUCTED WITH ADEQUATE SEPARATION FROM WATER MAINS. ADEQUATE SEPARATION IS DEFINED AS 10' OF HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION BELOW THE WATER MAIN. IF THE MINIMUM 18" VERTICAL SEPARATION IS NOT ACHIEVABLE, A WAIVER FROM NHDES IS REQUIRED.

GRADING AND DRAINAGE NOTES:

1. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, LATEST EDITION.
2. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 3' SUMPS.

EROSION CONTROL NOTES:

1. SEE SHEET D-101 AND D-102 FOR EROSION CONTROL NOTES AND DETAILS

WATER NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CITY OF DOVER'S CONSTRUCTION STANDARDS AND DETAILS AND NH DES ENV-DW 404. THE MORE STRINGENT REGULATION SHALL APPLY.
2. ALL WATER MAINS SHALL BE CLASS 52 CEMENT LINED DUCTILE IRON (CLDI) PIPE. ALL CLDI PIPE SHALL MEET, OR EXCEED, CURRENT AWWA C151 SPECIFICATIONS FOR DUCTILE IRON WATER PIPE.
3. WATER MAINS AND SERVICES SHALL HAVE A MINIMUM COVER OF 5'-0". WHERE TOP OF WATER MAIN IS LESS THAN 5'-0" BELOW FINISHED GRADE, THE CONTRACTOR SHALL INSTALL RIGID INSULATION IN CONFORMANCE WITH THE TYPICAL WATER TRENCH DETAIL.
4. ALL CLDI WATER MAINS SHALL BE ENCASED IN POLYETHYLENE ENCASEMENT (POLYWRAP). SEE SPECIFICATION SECTION 02611W.
5. AT PIPE CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER/DRAIN PIPE AS POSSIBLE. SPECIAL STRUCTURAL SUPPORTS FOR WATER AND SEWER PIPES MAY BE REQUIRED.
6. ALL MATERIALS COMING IN PHYSICAL CONTACT WITH DRINKING WATER MUST BE CERTIFIED TO MEET THE ANSI/NSF STANDARD 61 BY EITHER THE UNDERWRITERS LABS (UL) OR THE NATIONAL SANITATION FOUNDATION (NSF).
7. DISINFECTION AND TESTING OF WATER LINES SHALL BE DONE IN ACCORDANCE WITH CITY OF DOVER AND CURRENT AWWA STANDARDS.
8. ALL EXISTING WATER PIPE IDENTIFIED TO BE ABANDONED SHALL BE CAPPED AT ALL EXPOSED ENDS AND ABANDONED IN PLACE UNLESS REMOVAL IS REQUIRED BECAUSE OF OTHER INTERFERENCES (INCIDENTAL).
9. THE CONTRACTOR SHALL USE RESTRAINT SYSTEMS ON ALL VALVES AND FITTINGS UNLESS OTHERWISE NOTED ON THE PLANS.
10. ALL GATE VALVES SHALL HAVE RESTRAINED MECHANICAL JOINTS AND SHALL OPEN LEFT.
11. EXISTING CURB BOX AND/OR OTHER CASTINGS DISTURBED OR RELOCATED BY CONSTRUCTION ACTIVITIES SHALL BE ADJUSTED TO MATCH FINAL GRADE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER (SUBSIDIARY).
12. WHERE WATER MAIN IS LESS THAN 4'-0" HORIZONTALLY FROM A STRUCTURE, THE CONTRACTOR SHALL INSTALL 2" OF RIGID INSULATION ALONG THE SIDE WALL OF THE WATER MAIN TRENCH A MINIMUM OF 10'-0" HORIZONTALLY BEYOND THE CENTERLINE OF THE STRUCTURE IN BOTH DIRECTIONS TO PROTECT THE WATER MAIN FROM FREEZING.
13. MAINTAIN A MINIMUM OF 10' HORIZONTAL DISTANCE BETWEEN WATER MAIN AND SEWER PIPING. NOTIFY ENGINEERS IF ANY DISCREPANCY.
14. EXISTING FIRE HYDRANTS SHALL BE REMOVED, DECOMMISSIONED BELOW GRADE, AND DELIVERED TO A LOCATION SPECIFIED BY THE OWNER.
15. THE CONTRACTOR SHALL INSTALL THE WATER SERVICE CONNECTIONS (INCLUDING SERVICE SADDLES IF REQUIRED, LIVE TAPS, CORPORATIONS, CURB STOP, CURB BOX, AND PE WATER SERVICE PIPE) WITH TRACER WIRE AT THE SIZE SPECIFIED IN THE SERVICE SCHEDULE AND CONNECT THE EXISTING WATER SERVICE TO THE NEW CURB BOX. THE NEW SERVICE SHALL BE CONNECTED TO THE EXISTING SERVICE PIPE PAST THE CURB STOP UNLESS THE EXISTING WATER SERVICE PIPE IS GALVANIZED CAST IRON, GALVANIZED STEEL OR LEAD; IN THIS CASE, THE CONTRACTOR SHALL NOTIFY THE CITY AND ENGINEER.

UTILITY NOTES:

1. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
WATER/SEWER - CITY OF DOVER
ELECTRIC - EVERSOURCE ENERGY
GAS - UNITIL
2. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST ADDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
3. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
4. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
5. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, AND TRANSFORMER CONSTRUCTION WITH EVERSOURCE ENERGY.

sheet: 2 of 25	drawing no: N-1	Cooperative Alliance for Seacoast Transportation, Dover, NH	date: March 16, 2023	designed by: STF/RED			scale: 0 20' 40' Scale: 1" = 20'	checked by: BCC	approved by: PAC	project no: 1250	drawn by: CFC	CMA ENGINEERS CIVIL/ENVIRONMENTAL/STRUCTURAL Portsmouth, NH • Manchester, NH • Portland, ME 603/431-6196 • 603/627-0708 • 207/641-4223 c m a e n g i n e e r s . c o m	no. 1	revision Revised for City of Dover TRC Comments	date 5/31/23	by BCC
		Operations and Maintenance Facility 42 Summer Drive General Notes														

ABBREVIATIONS:

ABBREV.	MEANING
@	AT
ABD	ABANDONED
ABAN	ABANDON IN PLACE
ACP	ASBESTOS CEMENT PIPE
ADD'L	ADDITIONAL
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BTM	BOTTOM
BH	BRADLEY HEAD
BIT	BITUMINOUS CONCRETE
BLDG	BUILDING
BMP	BUILDING MONITORING POINT
BOW	BOTTOM OF WALL
BR	BRICK
CB	CATCH BASIN
C.B.	CONCRETE BOUND
CBCI	CATCH BASIN WITH CURB INLET
CC	CAST-IN-PLACE CONCRETE
CEM	CEMENT
CL	CLEAR
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CI	CAST IRON
CICL	CAST IRON CEMENT-LINED
CIP	CAST IN PLACE
C.O.	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
COR	CORNER
CP	CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
CSE	COBBLE STONE EDGE
D	DRAIN
DEPT	DEPARTMENT
DH	DRILL HOLE
DI	DUCTILE IRON
DIA	DIAMETER
DICL	DUCTILE IRON CEMENT-LINED
DIA	DIAMETER
DISCH	DISCHARGE
DMH	DRAIN MANHOLE
DLY	DOUBLE SOLID YELLOW LINE
DT	DRAIN TILE
DWG	DRAWING
EA	EACH
EF	EACH FACE
EM	ELECTRIC METER
E-Vault	ELECTRIC-Vault
EL, ELEV	ELEVATION
ELEC, E	ELECTRIC
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
ESHWL	EXIST. SEASONAL HIGH WATER TABLE
F&C	FRAME AND COVER
FA	FIRE ALARM
FD	FLOOR DRAIN
FED	FEDERAL
FH	FIRE HYDRANT
FM	FORCE MAIN
FND	FOUND
FP	FLAG POLE
FT	FOOT
GM	GAS METER
GRAN	GRANITE
HDPE	HIGH DENSITY POLYETHYLENE
HH	HAND HOLE
HORIZ	HORIZONTAL
HYD	HYDRANT
H/C	HANDICAP
INV	INVERT
IN	INCHES
IP	IRON PIPE
L	LEAVE
MBOX	MAIL BOX
MHW	MEAN HIGH WATER
MIN	MINIMUM
MON	MONUMENT
NIC	NOT IN CONTRACT
NO, #	NUMBER
NTS	NOT TO SCALE
PB	PULL BOX
PC	PRECAST CONCRETE
PCP	PRESTRESSED CONCRETE CYLINDER PIPE
PCI	PIT CAST IRON
PCB	PROPOSED CATCH BASIN
PDMH	PROPOSED DRAINAGE MANHOLE
PERF	PERFORATED
PM	PARKING METER
PNS	PIPE NOT SEEN
POCS	PROPOSED OUTLET CONTROL STRUCTURE
PROP	PROPOSE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	REMOVE/RELOCATE
REC	RECORD INFORMATION
REINF	REINFORCEMENT
RES	REVER. EXTENSION SEWER
RET	RETAIN
RCP	REINFORCED CONCRETE PIPE
RS	RECEIVING SHAFT
ROW	RIGHT-OF-WAY
SB	STREET LIGHT BASE
S.B.	STONE BOUND
SD	STORM DRAIN
SF	FIRE SERVICE
SGC	SLOPED GRANITE CURB
SILCC	STREET LIGHT CONTROL CABINET
SMH	SEWER MANHOLE
SPEC	SPECIFICATION
SWL	SINGLE WHITE LINE
SQ	SQUARE
S	SANITARY SEWER
ST	STEEL
STD	SINGLE TILE DUCT

ABBREV.	MEANING
STY	STORY
SW	SIDEWALK
T&B.	TOP AND BOTTOM
TBC	TOP BACK OF CURB
TCC	TRAFFIC CONTROL CABINET
TD	TELEDUCT
TEL	TELEPHONE CONDUIT/DUCT BANK
TH	TOP OF HATCH
TL	TRAFFIC LIGHT CONDUIT
TOH	TOP OF HOOD
TOW	TOP OF WALL
TRAF	TRAFFIC CONDUIT
TS	TRAFFIC SIGNAL
TYP	TYPICAL
UMP	UTILITY MONITORING POINT
UNK	UNKNOWN
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
W	WATER
W/	WITH
WYE	WYE CONNECTION
WIP	WROUGHT IRON PIPE
WM	WATER METER
WMH	WATER MANHOLE
WFLG	WETLAND FLAG

GENERAL SYMBOLS:

EXISTING	UTILITY POLE & GUY WIRE	PROPOSED
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	MAILBOX	
	VENT PIPE	
	SIGNS (TWO POSTS)	
	GRANITE BOUND FOUND	
	DRILL HOLE FOUND	
	IRON PIPE	
	IRON ROD	
	METAL POST	
	GRANITE OR CONC. POST	
	WOOD HUB	
	DRILL HOLE	
	WOOD FENCE POST	
	SIGNAL JUNCTION BOX	
	ELECTRICAL CONDUIT	
	PAD MOUNTED TRANSFORMER	
	ELECTRICAL PANEL	
	ELECTRICAL BOX	
	ELECTRIC METER	
	FIRE HYDRANT	
	GAS GATE VALVE	
	WATER GATE VALVE	
	WATER CURB STOP	
	VALVE ELECTRIC BOX	
	CATCH BASIN	
	DRAIN MANHOLE	
	ELECTRIC MANHOLE	
	TELEPHONE MANHOLE	
	WATER MANHOLE	
	SEWER MANHOLE	
	MANHOLE	
	BUSH/SHRUB	
	TREE STUMP	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	ROCK	
	BORING	
	TEST PIT	
	WETLAND	
	WETLAND FLAG	
	SPOT LIGHT	
	GUY WIRE	
	TAX SHEET - LOT NUMBER	
	STRAFFORD COUNTY REGISTRY OF DEEDS	
	EDGE OF PAVEMENT	
	SLOPED FACE GRANITE CURB	
	VERTICAL FACED GRANITE CURB	
	MODULAR BLOCK RETAINING WALL	
	CONCRETE RETAINING WALL	
	MORTARED RETAINING WALL	
	STONE RETAINING WALL	
	EDGE OF PAVEMENT	
	WOOD FENCE	
	CHAIN LINK FENCE	
	EROSION CONTROL FIBER ROLL	
	SPOT ELEVATION	
	City LAYOUT LINE	
	OVERHEAD WIRES	
	SEWER LINE	
	FORCEMAIN	
	DRAIN LINE	
	GAS LINE	
	WATER SERVICE UNDERGROUND	
	UNDERGROUND ELECTRIC LINE	
	UNDERGROUND COMMUNICATIONS	
	APPROX. ABUTTERS	
	LOT LINE	
	SHRUB LINE	
	TREE LINE	
	STONE WALL	
	GUARDRAIL	
	MAJOR CONTOUR LINE	
	MINOR CONTOUR LINE	
	EASEMENT LINE	
	WETLAND LINE	
	WATER MAIN	
	BARBED WIRE FENCE	
	CEMENT CONCRETE	
	CRUSHED STONE	
	RIP RAP	
	RETAINING WALL	
	LANDSCAPED AREA	
	BOLLARD	
	SLOPE LINE	
	CONSTRUCTION BASELINE	
	LIMITS OF WORK	
	THRUST BLOCK	
	ELECTRICAL MANHOLE	
	ELECTRICAL TRANSFORMER	
	OUTLET CONTROL STRUCTURE WITH GRATE	
	OUTLET CONTROL STRUCTURE WITH COVER	
	HEADWALL	
	FLARED END SECTION	
	BUILDING MOUNTED LIGHT	

Cooperative Alliance for Seacoast Transportation, Dover, NH	Operations and Maintenance Facility 42 Summer Drive	Legend and Abbreviations	date: March 16, 2023		designed by: STF/RED	 06/01/2023	 CIVIL/ENVIRONMENTAL/STRUCTURAL	Portsmouth, NH • Manchester, NH • Portland, ME 603/431-6196 • 603/627-0708 • 207/541-4223	c m a e n g i n e e r s . c o m	no.	revision	date	by
			project no: 1250	drawn by: CFC									
			checked by: BCC	approved by: PAC									
			scale:										
drawing no. N-2													
sheet:	3	of	25										

NOTES:

1. REFERENCE: PARCEL ID: H0035-C00004
42 SUMNER DRIVE
DOVER, NEW HAMPSHIRE
D.S.I. PROJECT NO. 6545
2. TOTAL PARCEL AREA: SQ. FT. OR AC.
3. OWNER OF RECORD: COOPERATIVE ALLIANCE FOR
SEACOAST TRANSPORTATION
42 SUMNER DRIVE
DOVER, NH 03820
S.C.R.D. BOOK 2200 PAGE 264
4. ZONE: CM
5. FIELD SURVEY PERFORMED BY J.M.L. & J.H.H. DURING JUNE 2020 USING A TRIMBLE S6 TOTAL STATION AND A TRIMBLE R10 SURVEY GRADE GPS WITH A TRIMBLE TSC3 DATA COLLECTOR AND A TRIMBLE DINI DIGITAL AUTO LEVEL. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.
6. HORIZONTAL DATUM BASED ON NAD83(2011) NEW HAMPSHIRE STATE PLANE COORDINATE ZONE (2800) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK.
7. VERTICAL DATUM IS BASED ON APPROXIMATE NAVD88(GEOD12A) ($\pm 2'$) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK.
8. JURISDICTIONAL WETLANDS DELINEATED BY WEST ENVIRONMENTAL, INC DURING JUNE 2020 IN ACCORDING TO THE:
• US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JANUARY, 1987).
• REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION (2012).
• NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). U.S. FISH AND WILDLIFE SERVICE (2013).
• CODE OF ADMINISTRATIVE RULES. WETLANDS BOARD, STATE OF NEW HAMPSHIRE (CURRENT).
• FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.0, 2016 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEHSTC (MAY 2017).
9. FLOOD HAZARD ZONE: "X", PER FIRM MAP #33017C0320E, DATED 09/30/2015.
10. PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 1' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.
11. UNDERGROUND UTILITIES WITHIN THE SURVEY AREA SHOWN HEREON ARE THE RESULT OF AN UNDERGROUND UTILITY DESIGNATION COMPLETED BY DOUCET SURVEY ON JUNE 2020 AND FROM DATA OBTAINED FROM RECORD MAPS AND DRAWINGS. DOUCET'S UTILITY DESIGNATION WAS COMPLETED IN ACCORDANCE WITH THE STANDARD PROCEDURES SET FORTH IN ASCE 38-02 AND CONSISTENT WITH APPROPRIATE QUALITY LEVELS. DRAIN AND SANITARY SEWER LINES WERE VISUALLY ALIGNED AND MAPPED AT QUALITY LEVEL C UNLESS OTHERWISE SHOWN. DRAIN AND SEWER LINES SHOWN AT QUALITY LEVEL B WERE LOCATED USING SURFACE GEOPHYSICAL TECHNIQUES. ALL ABOVE GROUND STRUCTURES, SURFACE FEATURES AND THE LOCATION OF THE MARK OUT ARE THE RESULT OF AN INSTRUMENT SURVEY COMPLETED BY DOUCET UNLESS OTHERWISE NOTED. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN OR CERTIFIED BY THE UNDERSIGNED. DIG SAFE NEW HAMPSHIRE AND THE APPROPRIATE AUTHORITIES MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION, OR CONSTRUCTION ACTIVITIES.
12. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING; THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC.
13. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT LEGAL DESCRIPTION, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE.

REFERENCE PLANS:

1. "SITE PLAN BUS TERMINAL AND MAINTENANCE FACILITY" DATED 8-26-94 BY CIVIL WORKS S.C.R.D. PLAN 1124 COAST SITE PLAN.
2. "F. W. WEBB MFG. CO. DIVISION OF LOT 3 SUMNER DRIVE" DATED SEPT, 1974 BY G. L. DAVIS & ASSOCIATES CIVIL ENGINEERS S.C.R.D. PLAN P001-F005-057.
3. "PROPERTY PLAN INDUSTRIAL DEVELOPMENT AUTHORITY SUMNER DAVIS LAND" DATED AUG, 1969 BY G. L. DAVIS & ASSOCIATES CIVIL ENGINEERS S.C.R.D. PLAN P011-F003-008.
4. "SUMNER DRIVE ACCESS PLAN FOR NEW HAMPSHIRE DISTRIBUTORS INC." DATED AUGUST 27, 1982 BY RICHAD D. BARTLETT L.L.S S.C.R.D. PLAN P023A-0129.
5. "LOT LINE ADJUSTMENT PLAN PREPARED FOR DENNIS QUINLAN AND RUTH SOUSANE" DATED AUGUST 24, 1993 BY MCENEANEY SURVEY ASSOCIATES, INC. S.C.R.D. PLAN P0042-0099.
6. "PLAN OF CONSERVATION EASEMENT- LAND OF RUTH SOUSANE AND DENNIS & NANCY QUINLAN" DATED DEC. 16, 1996 BY RICHARD P. TOWLE S.C.R.D. PLAN P0051-0097.

PURSUANT TO RSA 676:18, III:

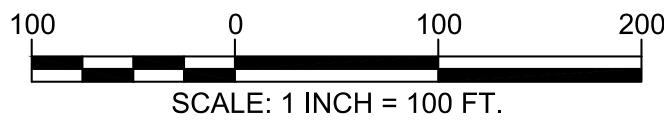
I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

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

_____. L.L.S. #824

_____. DATE

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



H-33-E-0
DENIS J. QUINLAN &
NANCY K. QUINLAN
89 KNOX MARSH RD
DOVER, NH 03820
S.C.R.D. BOOK 2052, PAGE 572

H-34-O-0
SAMPSON SUPERMARKETS, INC.
PO BOX 1000 MS 8000
PORTLAND, ME 04104-5005
S.C.R.D. BOOK 1645, PAGE 573

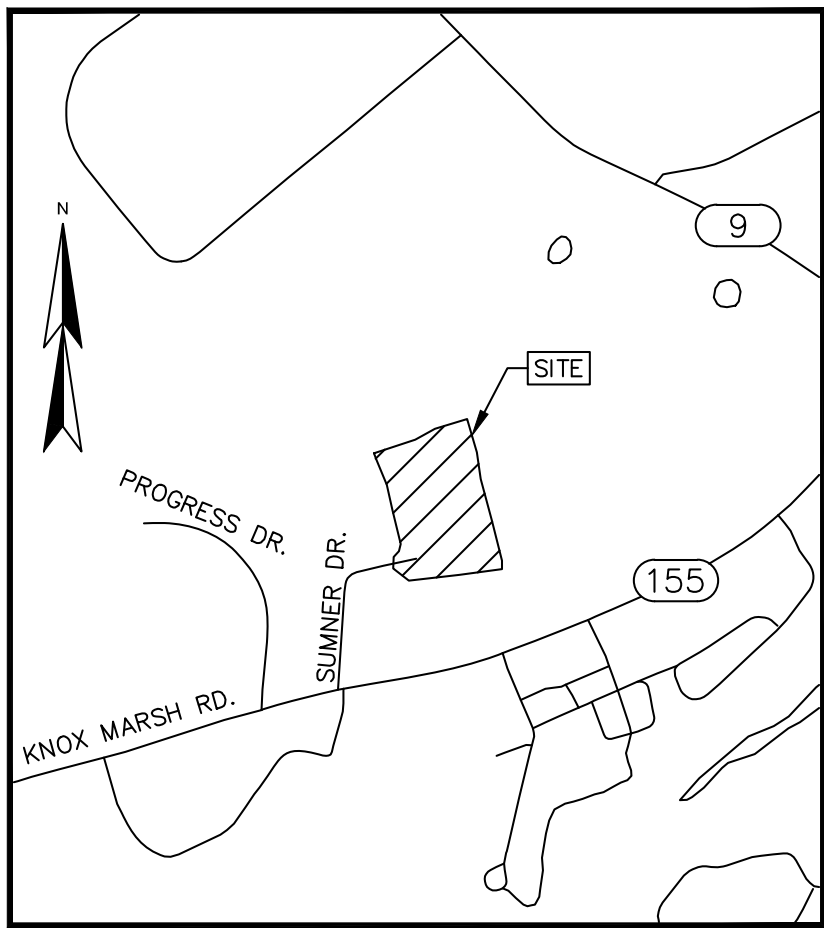
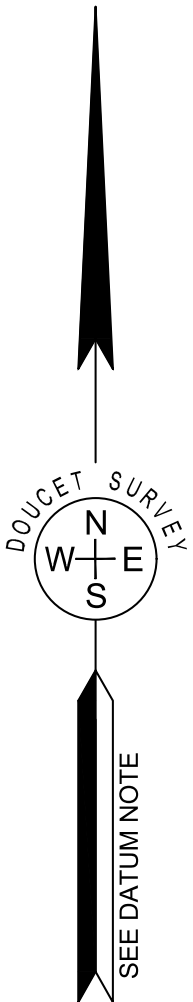
EXISTING RECIPROCAL
ACCESS EASEMENT
S.C.R.D. BK 1645 PG 575

H-31-O-0
RUTH K. SOUSANE &
NANCY K. QUINLAN
30 LITTLEWORTH RD
DOVER, NH 03820
S.C.R.D. BOOK 3820, PAGE 912

H-35-C-4
COOPERATIVE ALLIANCE FOR
SEACOAST TRANSPORTATION
42 SUMNER DR
DOVER, NH 03820
S.C.R.D. BOOK 2200, PAGE 264

EXISTING 30' UTILITY
ACCESS EASEMENT
S.C.R.D. BK 1645 PG 590

H-35-C-3C
10 SUMNER DR, LLC
6 SUMNER DR
DOVER, NH 03820
S.C.R.D. BOOK 4139, PAGE 614

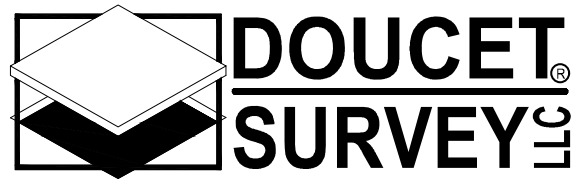


LEGEND
--- APPROXIMATE LOT LINE
--- APPROXIMATE ABUTTER LOT LINE
--- EXISTING EASEMENT LINE

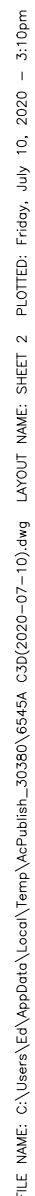
EXISTING CONDITIONS PLAN
FOR
CMA ENGINEERS
OF
COAST PUBLIC TRANSIT
42 SUMNER DRIVE
DOVER, NEW HAMPSHIRE

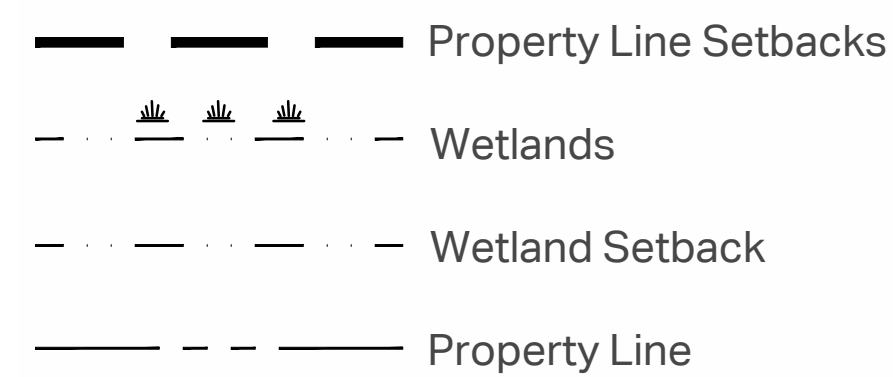
1	5/31/23	Revised for City of Dover TRC Comments	BCC
NO.	DATE	DESCRIPTION	BY

DRAWN BY:	E.D.P.	DATE:	JULY 2020
CHECKED BY:	W.J.D.	DRAWING NO.	6545A
JOB NO.	6545	SHEET	1 OF 2



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2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
<http://www.doucetsurvey.com>





F:\CADD\PROJECTS\1250 Coast On-Call Eng Services\Production\1250-Site Plan.dwg Date Plotted: May 31, 2023 - 10:47am Plotted By: CCHIARAMONTE

1. THE INTENT OF THIS PLAN IS TO PRESENT THE EXISTING COAST BUS FACILITY REDEVELOPMENT PROJECT CONSISTING OF 28,700 SF VEHICLE STORAGE BUILDING AND 17,000 SF ADMINISTRATION, OPERATIONS, AND MAINTENANCE BUILDING.

COOPERATIVE ALLIANCE FOR SEACOAST
TRANSPORTATION
42 SUMNER DRIVE
DOVER, NH 03820
S.C.R.D. BOOK 2200, PAGE 264

OWNER SIGNATURE _____

3. THE PARCEL SHOWN IS LOT NO. H-35, MAP C-4 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.
4. THE SUBJECT PARCEL CONTAIN 6.38 ACRES / 278,107 SF OF LAND.
5. EXISTING RECIPROCAL ACCESS EASEMENT S.C.R.D. BK. 1645 PG. 575 & EXISTING 30' UTILITY ACCESS EASEMENT S.C.R.D. BK. 1645 PG. 590
6. CURRENT CITY OF DOVER ZONING DISTRICT IS COMMERCIAL MANUFACTURING;

	<u>REQUIRED</u>	<u>PROVIDED</u>
MIN. LOT SIZE:	20,000 SF	278,107 SF
MIN. LOT FRONTAGE:	100 FT	188.34 FT
MIN. YARD SETBACKS:		
FRONT:	35 FT	150 FT
SIDE:	10 FT	91 FT
REAR:	10 FT	36 FT
ABUT-A-STREET:	35 FT	91 FT
MAX. LOT COVERAGE:	50 %	17 %
MAX. BUILDING HEIGHT:	50 FT	30 FT 8 IN
		26 FT
GREEN SPACE:	33 %	44 %

- GROUND WATER PROTECTION DISTRICT (TERTIARY)
- WETLAND PROTECTION DISTRICT

- $$\begin{aligned}\text{MAX. \# OF SPACES FOR INDUSTRIAL} &= 38,700 \text{ SF} \times 1/800 \text{ SF} \\ &= 48.3 \text{ SPACES}\end{aligned}$$

MAX. # OF SPACES ALLOWED = 75 SPACES
PROVIDED SPACES = 73 SPACES (3 ADA W/ 1 VAN)

10. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A FIELD SURVEY PERFORMED BY DOUCET SURVEY DURING JUNE 2020 USING A TRIMBLE S6 TOTAL STATION AND A TRIMBLE R10 SURVEY GRADE GPS WITH A TRIMBLE TSC3 DATA COLLECTOR AND A TRIMBLE DINI DIGITAL AUTO LEVEL, WITH A PRECISION GREATER THAN 1:15,000.

11. HORIZONTAL DATUM BASED ON NAD83(2011) NEW HAMPSHIRE
STATE PLANE COORDINATE ZONE (2800) DERIVED FROM
REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS
NETWORK.

12. VERTICAL DATUM IS BASED ON APPROXIMATE NAVD88(GEIOD12A) ($\pm 2'$) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK.

13. SUBJECT PARCEL IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA (33017C0320E EFF. 9/30/2015).

14. JURISDICTIONAL WETLANDS DELINEATED BY WEST ENVIRONMENTAL, INC DURING JUNE 2020 IN ACCORDING TO THE:

- 14.1. US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JANUARY, 1987).
- 14.2. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION (2012).
- 14.3. NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). U.S. FISH AND WILDLIFE SERVICE (2013).
- 14.4. CODE OF ADMINISTRATIVE RULES. WETLANDS BOARD, STATE OF NEW HAMPSHIRE (CURRENT).
- 14.5. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.0, 2016 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEHSTC (MAY 2017).

15. THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE

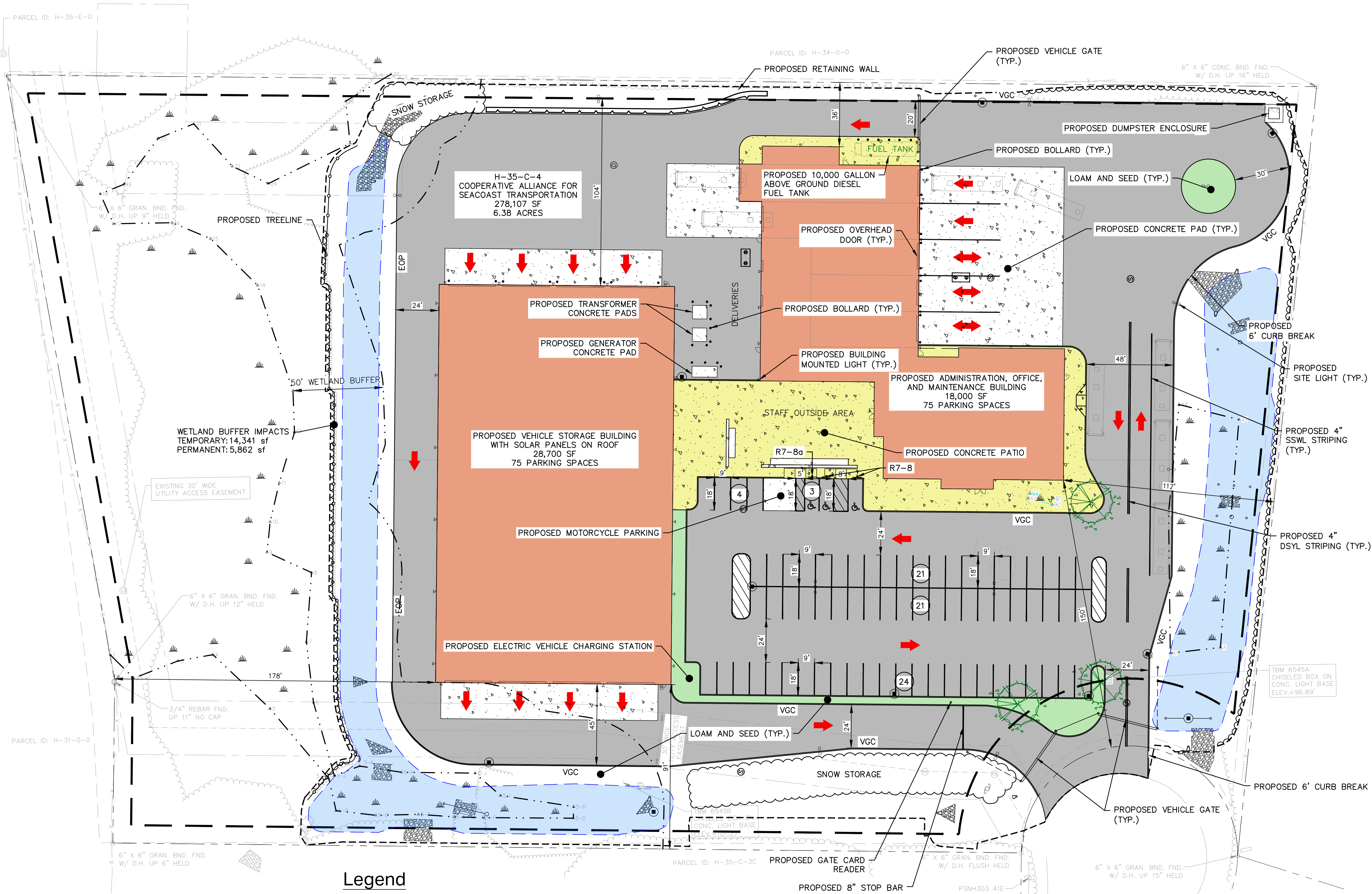
16. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.

17. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED WITHIN 50 FT OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED, AND CLEARLY IDENTIFIED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.

18. 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.

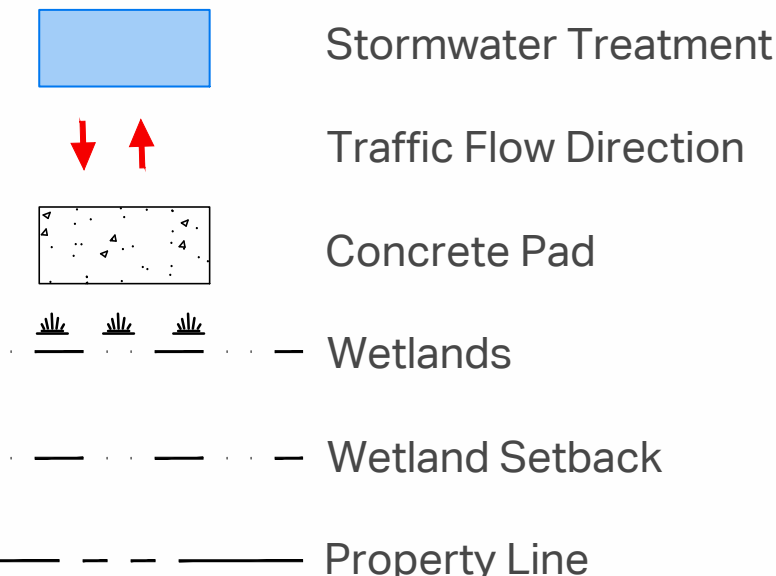
19. A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

20. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.

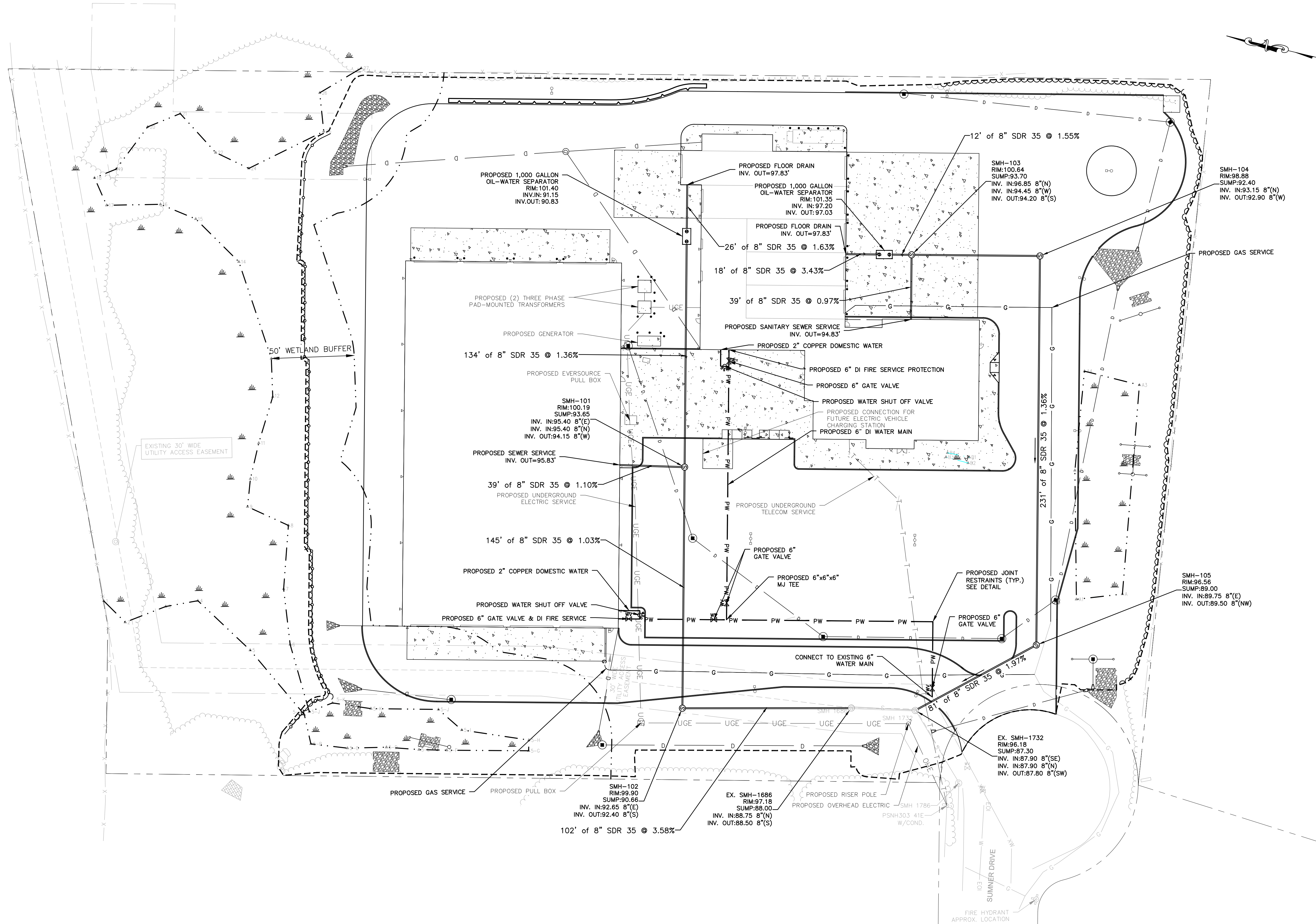


Legend for setbacks:

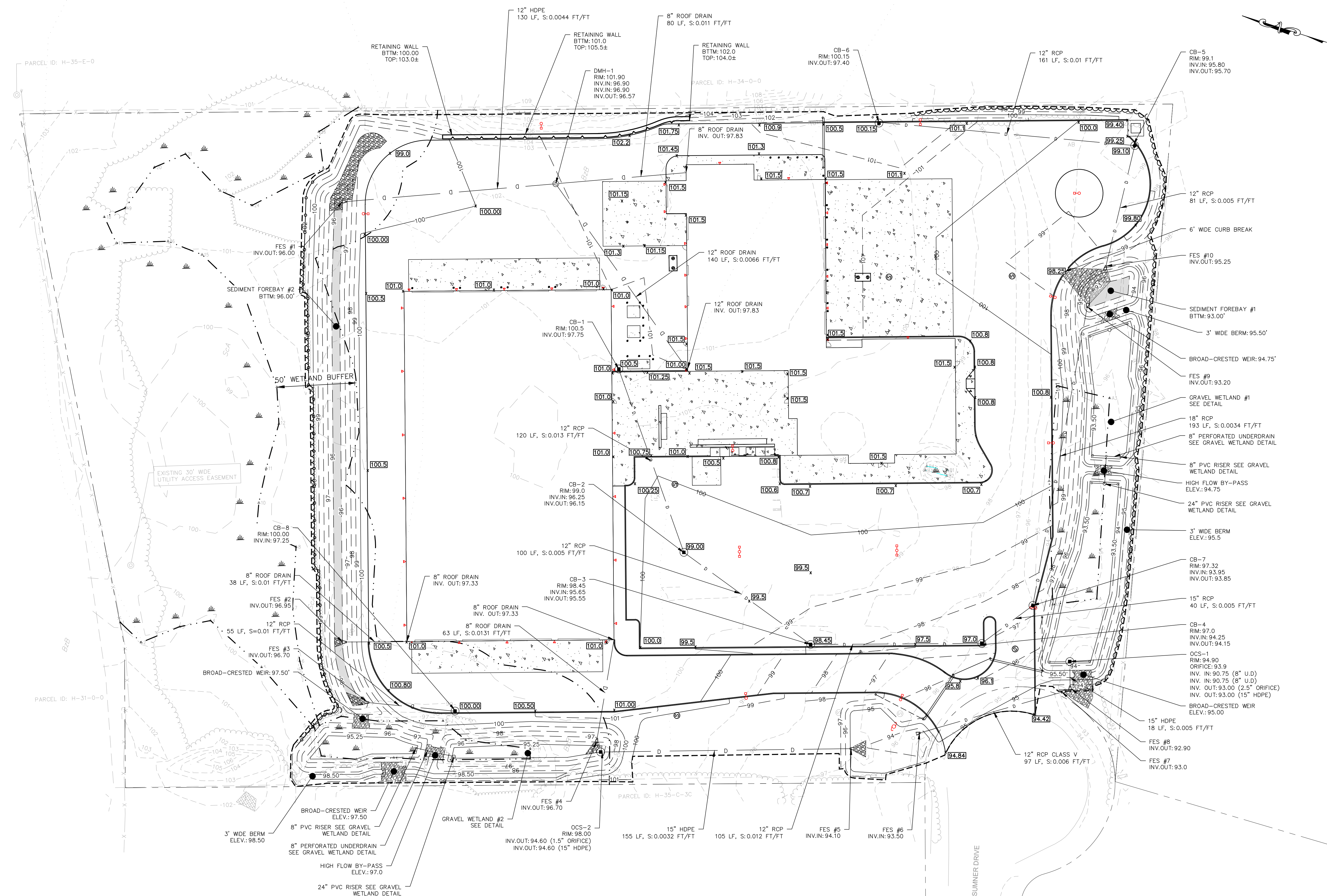
- Property Line Setbacks
- Pavement
- Building
- Sidewalk
- Grass/Landscaping



<u>PERMIT</u>	<u>FILED</u>	<u>APPROVED</u>
CITY OF DOVER – SITE PLAN	3/16/2023	–
CITY OF DOVER – CUP	3/16/2023	–
NHDES – AOT	–	–
NHDHR – RPR	–	–
NHB DATA CHECK	11/15/2022	11/17/2022
NH FISH AND GAME CONSULTATION	–	–
EPA ENOI	–	–
NHDES SEWER CONNECTION	–	–



date: March 16, 2023		designed by: ST/FRED	
project no: 1250		drawn by: CFC	
checked by: BCC		approved by: PAC	
scale: 1" = 30'		Scale: 1" = 30'	
drawing no. C-3		sheet: 8 of 25	
Cooperative Alliance for Seacoast Transportation, Dover, NH		Operations and Maintenance Facility	
42 Summer Drive		Utilities Plan	
CMA ENGINEERS		Civil/Environmental/Structural	
Portland, ME 04103		Manchester, NH 03102	
603/431-6196		603/627-0708	
Revised for City of Dover TRC Comments		1	
no.		revision	
date		by	
5/31/23		BCC	



Cooperative Alliance for Seacoast
Transportation, Dover, NH
Operations and Maintenance Facility
42 Sumner Drive
Grading & Drainage Plan

drawing no.
C-4

sheet: 9 of 25

CMA
ENGINEERS

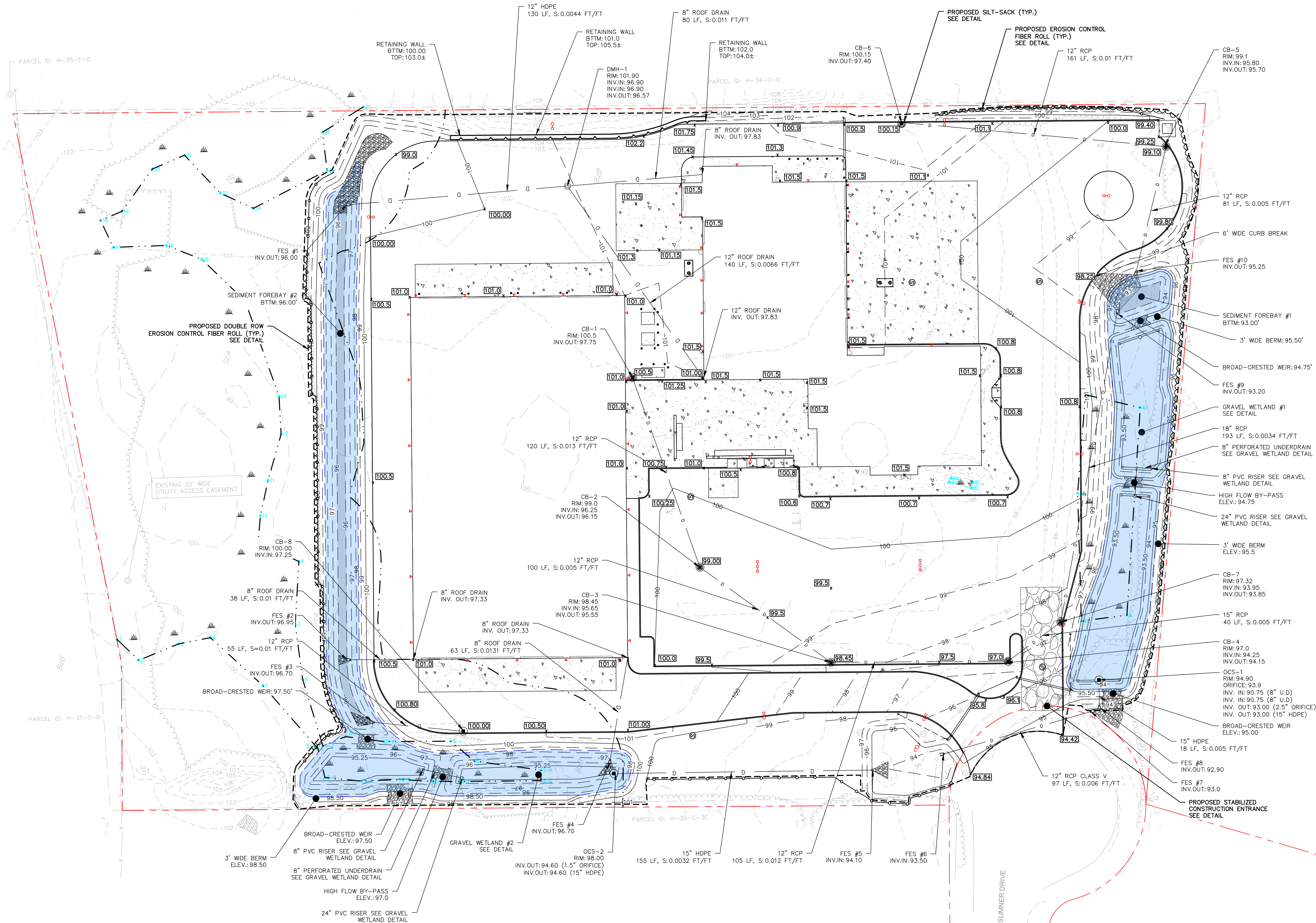
CIVIL/ENVIRONMENTAL/STRUCTURAL

Portsmouth, NH • Manchester, NH • Portland, ME
603/431-6196 • 603/627-0708 • 207/541-4223

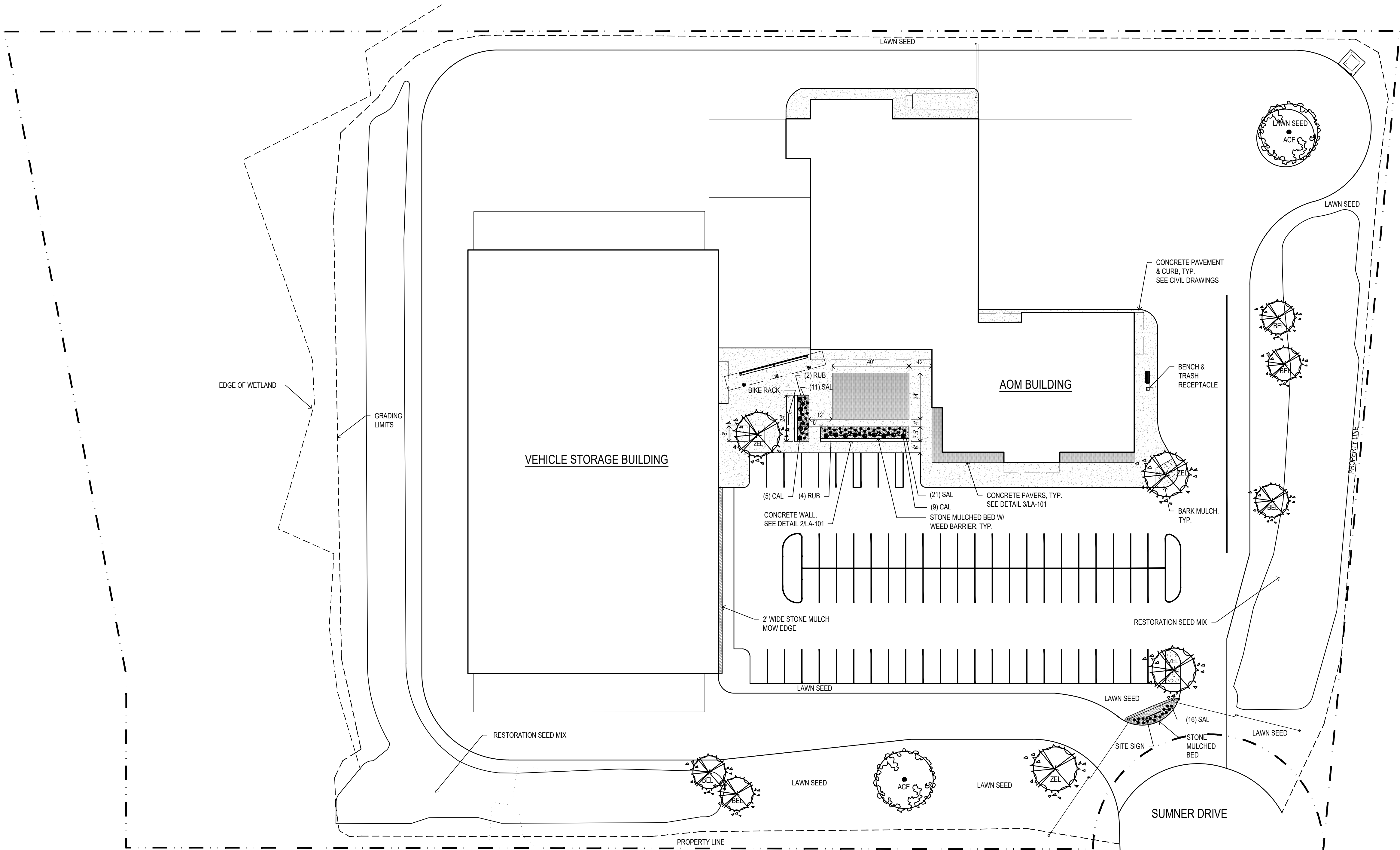
date: March 16, 2023	designed by: CFC
project no: 1250	drawn by: CFC
checked by: PAC	approved by: PAC

scale: 0 30' 60'

[illegible]



date: March 16, 2023		designed by: CFC		
project no: 1250		drawn by: CFC		
checked by: BCC		approved by: PAC		
drawing no. C-5		Cooperative Alliance for Seacoast Transportation, Dover, NH Operations and Maintenance Facility 42 Summer Drive Sediment and Erosion Control Plan		
sheet: 10 of 25		Civil/Environmental/Structural CMA ENGINEERS 603/431-6196 Portland, ME 04103 207/541-4223 cmaengineers.com		revised for City of Dover TRC Comments no. 1 date 5/31/23 by BCC



LANDSCAPE GENERAL NOTES

- ALL LANDSCAPE PLANTINGS SHALL BE LABELED WITH GENUS, SPECIES AND CULTIVAR. AT MINIMUM ONE PLANTING FROM EACH SPECIES SHALL BE LABELED. LABELING SHALL REMAIN IN PLACE UNTIL FINAL INSPECTION.
- ANY PLANTING MATERIALS THAT ARE NOT OF PROPER SPECIES, SIZE, OR IN GOOD CONDITION SHALL BE REJECTED.
- THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE BEGINNING LANDSCAPING INSTALLATION.
- ALL SEEDED AREAS SHALL HAVE A MINIMUM OF 6 INCHES OF TOPSOIL DEPTH. TOPSOIL TO BE TREATED WITH A 12-25-12 PELLETIZED FERTILIZER @ 10 LBS. PER 1,000 SQUARE FEET. ALL SEEDED AREAS TO BE POWER RAKED PRIOR TO SEEDING.
- THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A THICK, WEED FREE LAWN THROUGH THE FIRST MOWING.
- SOIL PLANTING MIXTURE SHALL BE A 6%-10% ORGANIC TOPSOIL, AMENDED WITH 10% WOOD ASH, 10% MANURE, & 30% PEAT MOSS(OR INCORPORATE ALL-GRO OR A SIMILAR DEHYDRATED NATURAL COMPOST MATERIAL. ALL PLANT MATERIAL PITS SHALL RECEIVE A MINIMUM OF 20% ALL-GRO OR EQUAL PLANT AMENDMENT.
- PERENNIAL BEDS TO HAVE A MINIMUM DEPTH OF 12 INCHES OF SOIL PLANTING MIXTURE OVER UNCOMPACTED SUBGRADE.
- ALL BAB MATERIAL WHICH ARE ENCASED IN WIRE BASKETS SHALL HAVE THE WIRES CUT LOOSE AND THE TOP THIRD REMOVED.
- IF ROAD BASE IS ENCOUNTERED IN THE PLANTING BEDS IT SHALL BE REMOVED AND REPLACED WITH AMENDED PLANTING MATERIAL.
- MULCHED AREAS SHALL HAVE A MINIMUM DEPTH OF 4" OF PINE/HEMLOCK BARK MULCH OVER WEED BARRIER FABRIC.
- STONE BED AREAS TO HAVE A MINIMUM 3 INCHES OF NATURAL NON-CRUSHED STONE OVER WEED BARRIER FABRIC.
- TREES SHALL HAVE A 4 INCH COVERING OF PINE/HEMLOCK MULCH. TREES SHALL HAVE A 6 FOOT DIAMETER SAUCER WITH A "V" GROOVE EDGE.
- TREES SHALL BE GUYED IN A TRIPOD FASHION WITH 2" X 2" X 8" HARDWOOD STAKES. ALL PLANTING SHALL BE HAND WATERED IMMEDIATELY AFTER PLANTING. PLANTINGS SHALL BE MONITORED FOR THE MAINTENANCE PERIOD (90 DAYS) AND APPLY ADDITIONAL WATERING AS REQUIRED FOR PLANT ESTABLISHMENT.
- THE CONTRACTOR IS TO PROVIDE A ONE YEAR WARRANTY ON ALL PLANTED MATERIALS. AT ONE YEAR FROM DATE OF INSTALLATION, ANY PLANTINGS NOT IN GOOD CONDITION SHALL BE REPLACED; ALL GUYS AND STAKES ARE TO BE REMOVED FROM TREES AND ANY LAWN BARE SPOTS ARE TO BE RESEEDED.

PLANT MATERIAL LEGEND

ACE	ACER SACHARUM 'FALL FIESTA' (SUGAR MAPLE)	2 1/2" CAL.
ZEL	ZELKOVA SERRATA (GREEN VASE ZELKOVA)	2 1/4" CAL.
BET	BETULA NIGRA MULTISTEM (RIVER BIRCH)	6'-7"
CAL	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' (REED GRASS)	#2 GAL.
RUB	RUDEBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' (BLACK EYED SUSAN)	#2 GAL.
SAL	SALVIA X SYLVESTRIS (BLUE HILL SAGE)	#1 GAL.

SEED MIXTURES

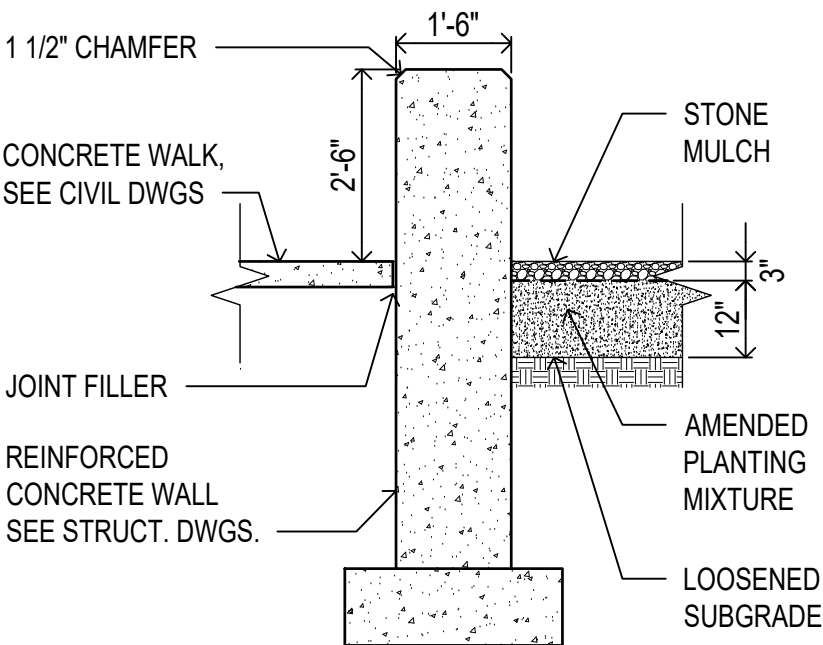
NEW ENGLAND WETLAND PLANTS, NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES
BLUE SEAL LANDSCAPER'S LAWN SEED MIX

MISC. PRODUCTS

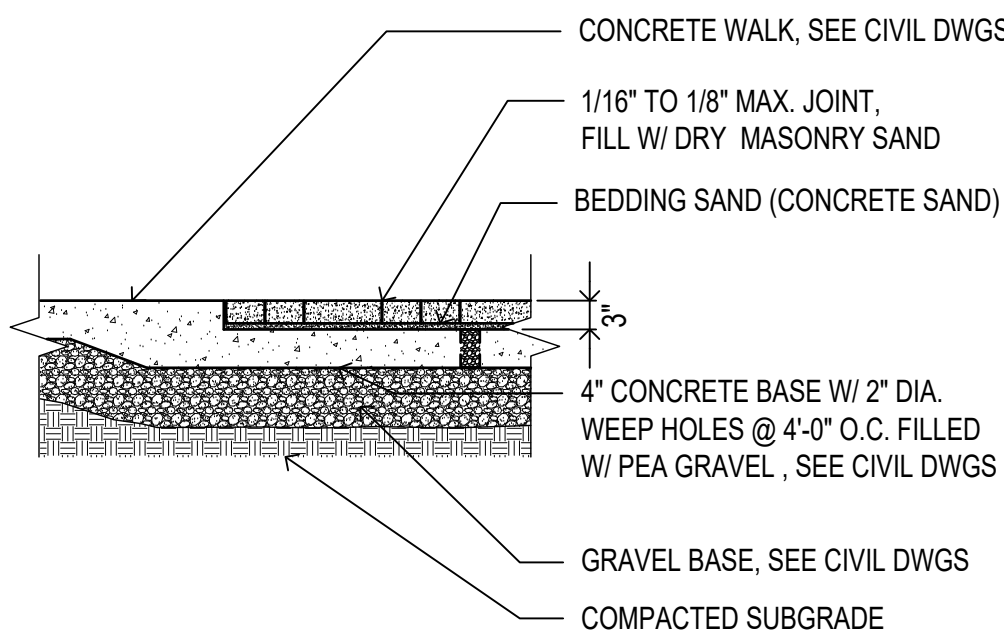
BARK MULCH: PREMIUM BLEND PINE/HEMLOCK MULCH
STONE MULCH: NON-CRUSHED ROOF BALLAST W/ 5 OZ. WEED BARRIER

ADDITIONAL ITEMS

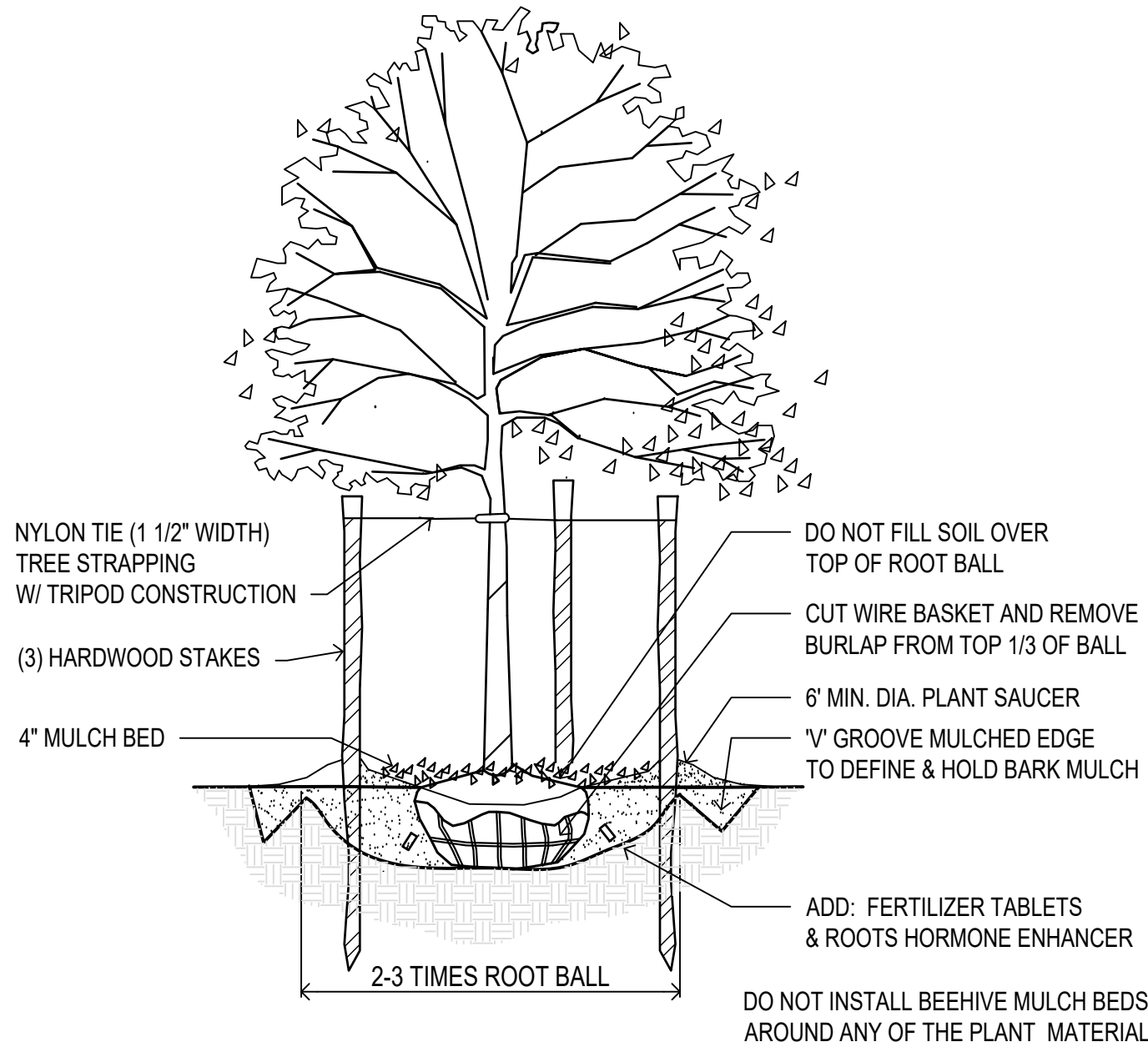
CONCRETE PAVERS: GENEST 4" X 8" X 2 3/8" PAVES, HOLLANDSTONE, COLOR: GRANITE MIX, BASKET WEAVE LAYING PATTERN. PAVERS TO SET IN SAND BED OVER A CONCRETE BASE. CONCRETE BASE TO HAVE WEEP HOLES @ 4'-0" O.C. SEE CIVIL DRAWINGS.
BIKE RACK: PILOT ROCK "SADDLEBACK" 7 BIKE RACK, HOT DIP GALVANIZED FINISH, RACK TO BE EMBEDDED IN 16" DIA. TUBE FOUNDATIONS, 4 FEET DEEP, 3000 LB. CONCRETE. FOUNDATIONS TO BE RECESSED BELOW CONCRETE WALK.
BENCH & TRASH CONTAINER: 6" RECYCLED PLASTIC AND POWDER COATED STEEL BENCH WITH BACK AND ARMS. MADISON CONTOUR BENCH MANUF. ANOVA. 35 GAL. MADISON TRASH RECEPTACLE WITH VISOR HOOD TOP, MATERIALS TO MATCH BENCH.



2 CONCRETE WALL SECTION DETAIL
LA-101 NTS



3 PAVER INSTALLATION DETAIL
LA-101 NTS



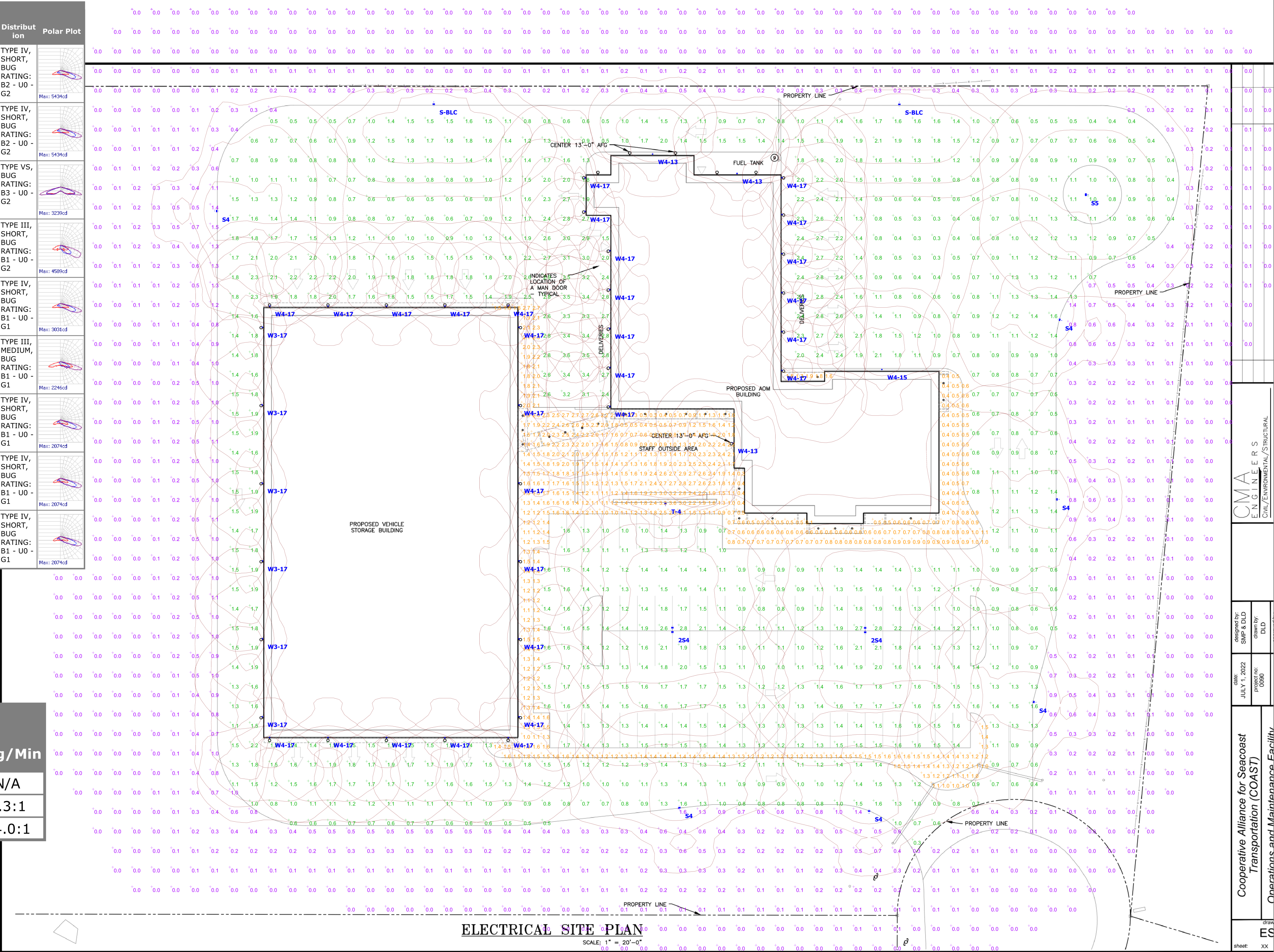
4 TREE PLANTING DETAIL
LA-101 NTS



Schedule												
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens per Lamp	LLF	Wattage	Distribut ion	Polar Plot
	2S4	2	Lithonia Lighting	DSX0 LED P3 30K TFTM MVOLT SPA DDBXD with SSS 22 4C DM28AS DDBXD	DSX0 LED Area Fixture; mounted at 24.5ft (22ft pole on 2.5ft base)	LED	DSX0_LED_P3_30K_TFTM_M VOLT.ies	7841	0.9	142	TYPE IV, SHORT, BUG RATING: B2 - U0 - G2	
	S4	6	Lithonia Lighting	DSX0 LED P3 30K TFTM MVOLT SPA DDBXD with SSS 22 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 24.5ft (22ft pole on 2.5ft base)	LED	DSX0_LED_P3_30K_TFTM_M VOLT.ies	7841	0.9	71	TYPE IV, SHORT, BUG RATING: B2 - U0 - G2	
	S5	1	Lithonia Lighting	DSX0 LED P3 30K TSM MVOLT SPA DDBXD with SSS 22 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 24.5ft (22ft pole on 2.5ft)	LED	DSX0_LED_P3_30K_TSM_MV OLT.ies	8141	0.9	71	TYPE VS, BUG RATING: B3 - U0 - G2	
	S-BLC	2	Lithonia Lighting	DSX0 LED P3 30K BLC MVOLT SPA DDBXD with SSS 22 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 24.5ft (22ft pole on 2.5ft base)	LED	DSX0_LED_P3_30K_BLC_MV OLT.ies	6428	0.9	71	TYPE III, SHORT, BUG RATING: B1 - U0 - G2	
	T-4	1	Lithonia Lighting	DSX0 LED P1 30K TSM MVOLT SPA DDBXD with SSS 12 4C DM19AS DDBXD	DSX0 LED Area Fiture; mounted at 24.5ft (12ft pole on 0.5ft base)	LED	DSX0_LED_P1_30K_TSM_MV OLT.ies	4373	0.9	38	TYPE IV, SHORT, BUG RATING: B1 - U0 - G1	
	W3-17	6	Lithonia Lighting	WDGE2 LED P3 30K 80CRI T3M SRM DDBXD	WDGE2 LED Wallpack; mounted at 17ft	LED	WDGE2_LED_P 3_30K_80CRI_ T3M.ies	3063	0.9	32.1375	TYPE III, MEDIUM, BUG RATING: B1 - U0 - G1	
	W4-13	3	Lithonia Lighting	WDGE2 LED P3 30K 80CRI TFTM SRM DDBXD	WDGE2 LED Wallpack; mounted at 13ft	LED	WDGE2_LED_P 3_30K_80CRI_ TFTM.ies	3015	0.9	32.1375	TYPE IV, SHORT, BUG RATING: B1 - U0 - G1	
	W4-15	1	Lithonia Lighting	WDGE2 LED P3 30K 80CRI TFTM SRM DDBXD	WDGE2 LED Wallpack; mounted at 15ft	LED	WDGE2_LED_P 3_30K_80CRI_ TFTM.ies	3015	0.9	32.1375	TYPE IV, SHORT, BUG RATING: B1 - U0 - G1	
	W4-17	29	Lithonia Lighting	WDGE2 LED P3 30K 80CRI TFTM SRM DDBXD	WDGE2 LED Wallpack; mounted at 17ft	LED	WDGE2_LED_P 3_30K_80CRI_ TFTM.ies	3015	0.9	32.1375	TYPE IV, SHORT, BUG RATING: B1 - U0 - G1	

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Outside of Parking Lot	+	0.2 fc	1.6 fc	0.0 fc	N/A	N/A
Parking Lot	+	1.3 fc	3.6 fc	0.3 fc	12.0:1	4.3:1
Sidewalk/Patio	+	1.4 fc	3.6 fc	0.1 fc	36.0:1	14.0:1



ELECTRICAL SITE PLAN

Plan View
Scale - 1" = 30'



COAST SITE
Lighting Layout

CMA
ENGINEERS
Civil/Environmental/Structural

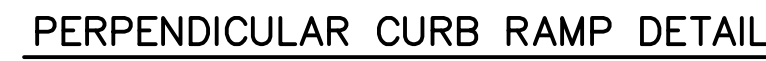
designed by
SMF & CLD
checked by
CLD

date
JULY 1, 2022
project no.
0880

drawn
ES

sheet
XX

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842
Date
07/22/2022
Scale
1"=30'
Drawing No.
Summary



THE ORDER OF PREFERENCE FOR LOCATION OF CORNER RAMPS:

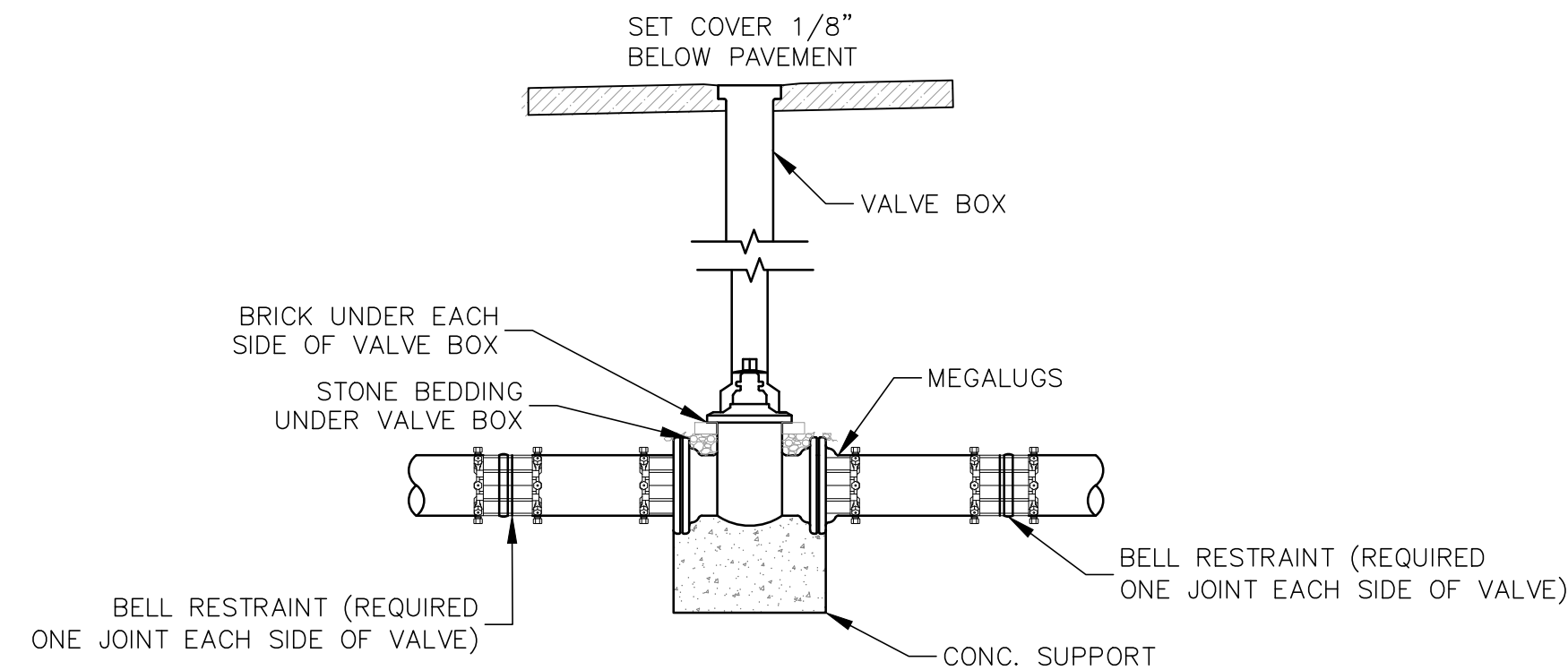
1. TWO SEPARATE RAMPS LOCATED ON TANGENT SIDEWALK AREA IMMEDIATELY OUTSIDE OF CORNER RADIUS.
2. TWO SEPARATE RAMPS SEPARATED BY 5' MINIMUM AS SHOWN ABOVE.
3. SINGLE RAMP SERVING TWO CROSSWALKS.

GENERAL NOTES

1. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1. THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION. RAMP RUNNING SLOPE EXCEPTION: A GREATER THAN 8.33% RAMP RUNNING GRADE IS ALLOWED WHERE THE THE ROADWAY AND THE SIDEWALK(S) ARE PARALLEL AND VERY CLOSE TOGETHER, WITH THE SAME GRADE, AND USING A GRADE OF 8.33% WOULD RESULT IN A RAMP LENGTH LONGER THAN 15'. IN THOSE CIRCUMSTANCES USE A MAXIMUM RAMP LENGTH OF 15' AND THE ALLOWABLE RUNNING SLOPE OF THE RAMP(S) IS GREATER THAN 8.33%
2. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FT. FROM THE ROADWAY CURB LINE.
3. INTERCEPT DRAINAGE ALONG THE CURB IN ADVANCE OF SIDEWALK CURB RAMPS OR LANDINGS. CATCH BASINS, MANHOLES, ETC. SHALL NOT BE LOCATED IN, OR AT THE BASE OF, SIDEWALK CURB RAMPS OR LANDINGS.
4. THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLARED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
5. THE SURFACE OF A PERPENDICULAR SIDEWALK CURB RAMP OR THE LANDING OF A PARALLEL SIDEWALK CURB RAMP SHALL CONTRAST VISUALLY WITH THE ADJOINING SIDEWALK SURFACE, EITHER ASPHALT/LIGHT-COLORED CONCRETE OR LIGHT-COLORED CONCRETE/DARK-STAINED CONCRETE. THE CONCRETE SURFACE SHALL BE SLIP RESISTANT.
6. DETECTABLE WARNING PANELS SHALL BE THE FULL WIDTH OF THE LANDING, BLENDED TRANSITION, OR CURB RAMP THEY ARE A PART OF AND SHALL BE A MINIMUM OF 2 FEET IN DEPTH. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.

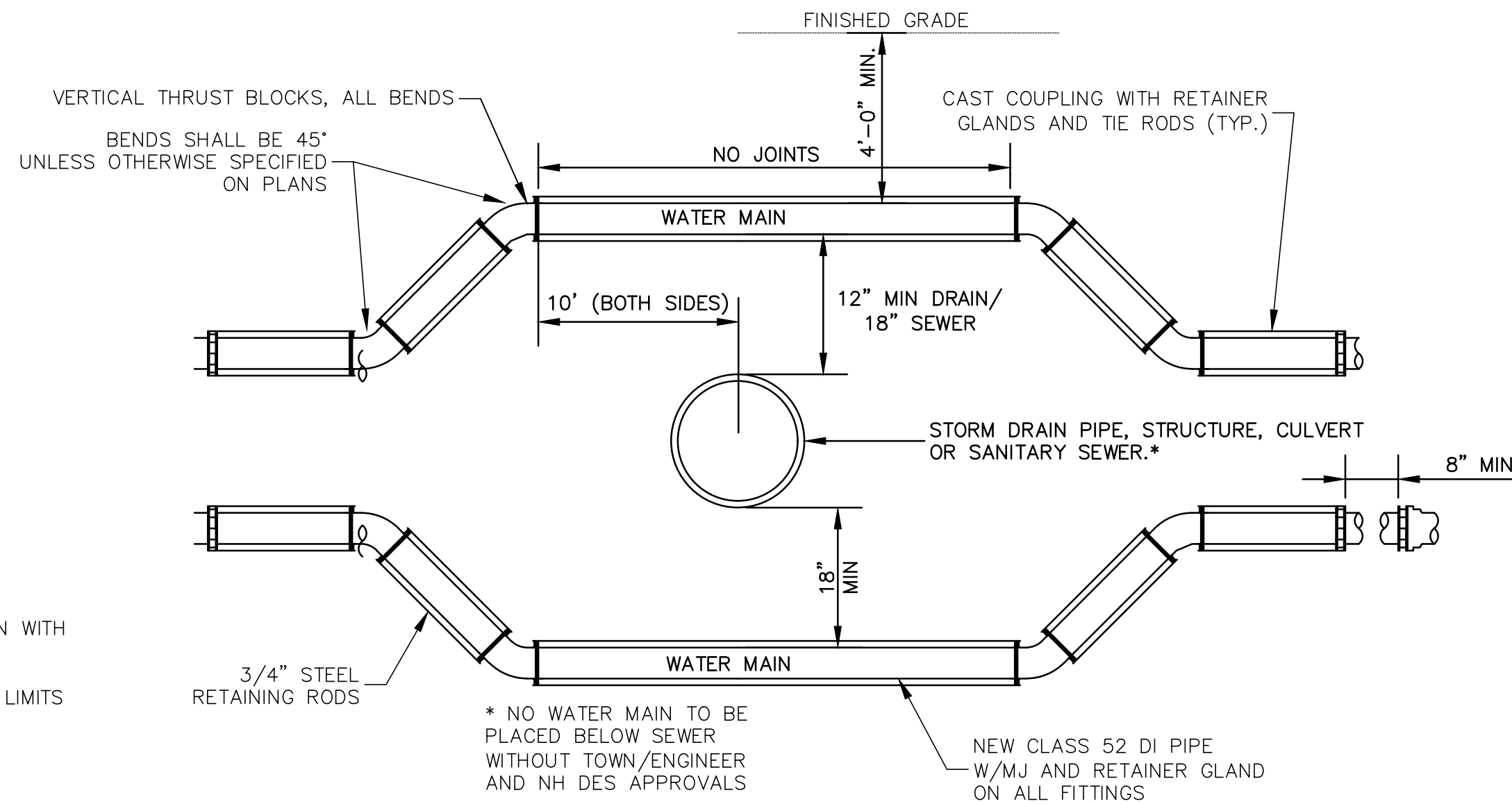


F:\CADD\PROJECTS\1250 Coast On-Call Eng Services\Production\1250 - Details.dwg Date Plotted: May 30, 2023 - 3:39pm Plotted By: CCHIARAMONTI



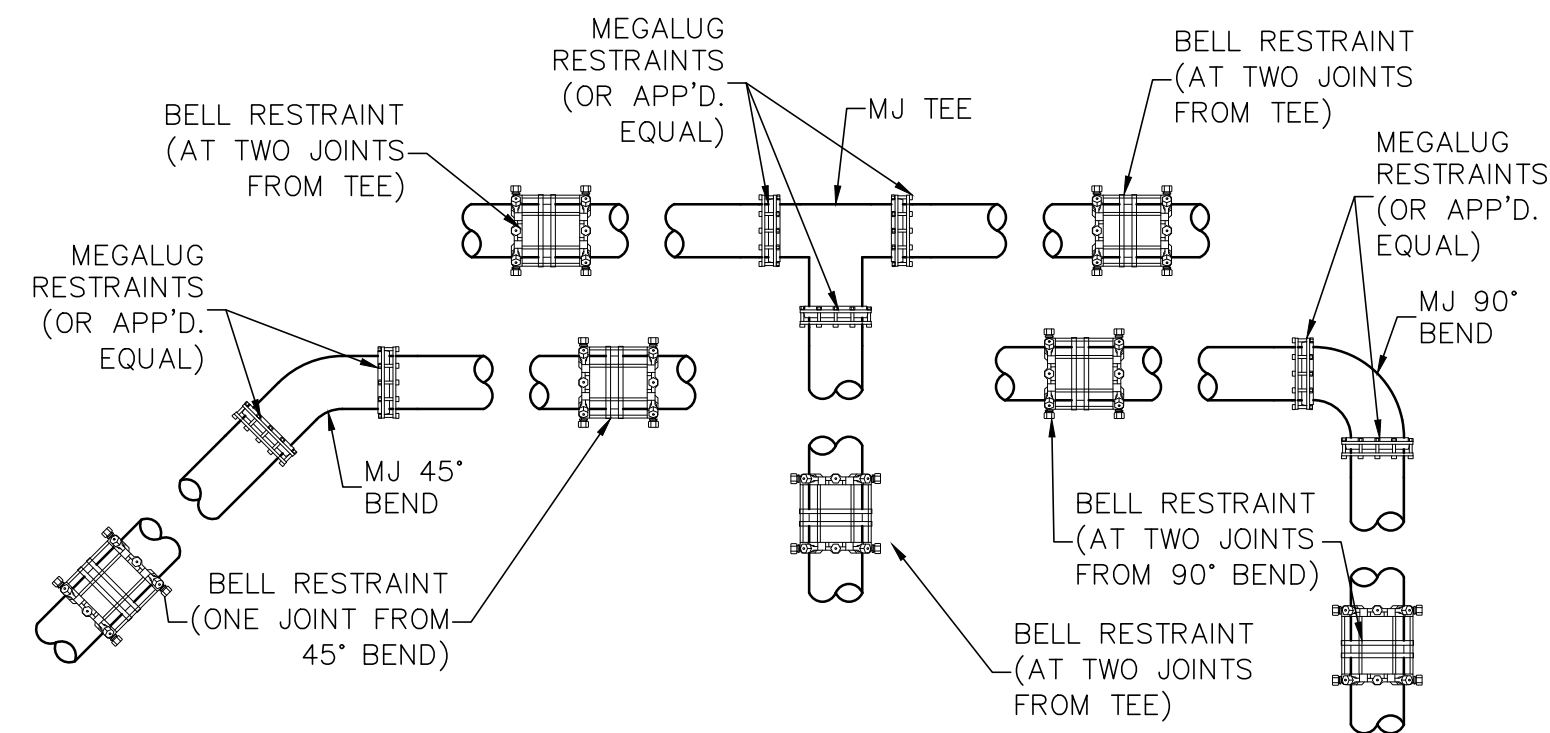
Valve & Valve Box Detail

Not to Scale



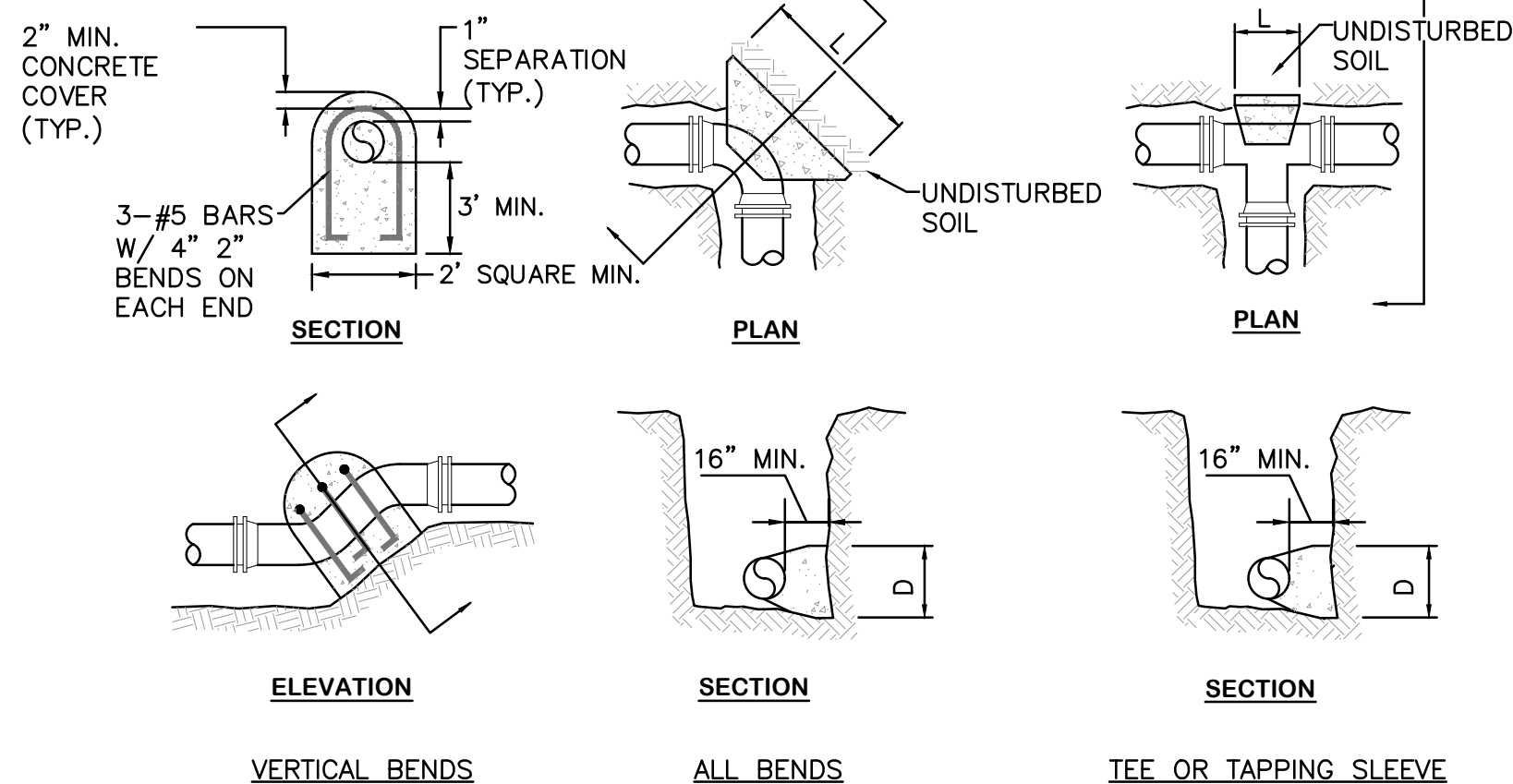
Valve & Valve Box Detail

Not to Scale



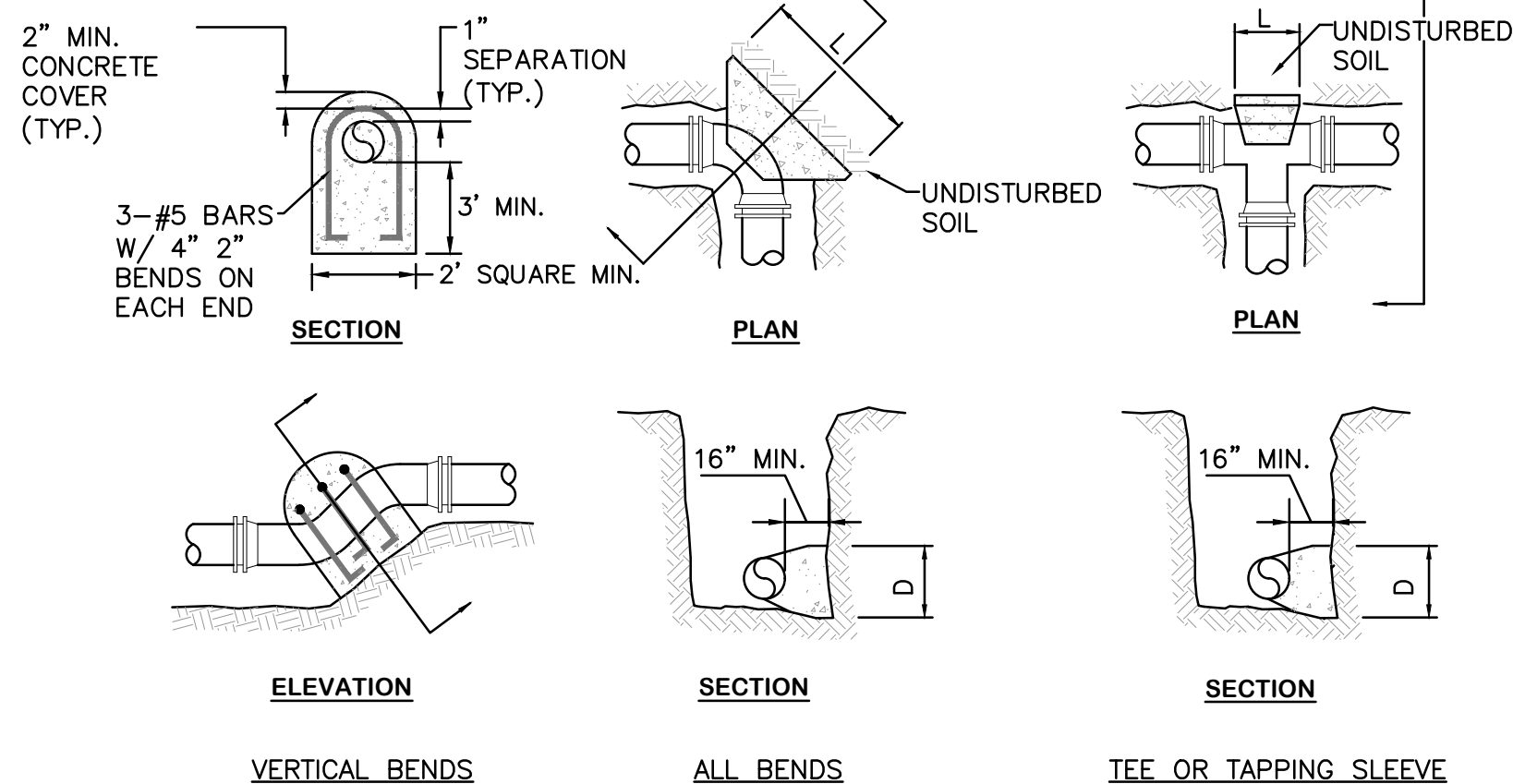
VALVE	RESTRAINED JOINTS
IN LINE VALVES	BELL RESTRT'S REQUIRED JOINT EACH SIDE/VALVE
FITTING	RESTRAINED JOINTS
22.5" BEND	1 EACH SIDE
45° BEND	1 EACH SIDE
90° BEND	2 EACH SIDE
TEE	1 EA SIDE/RUN 2 ON BRANCH

Not to Scale



Thrust Blocks

Not to Scale



Thrust Blocks

Not to Scale

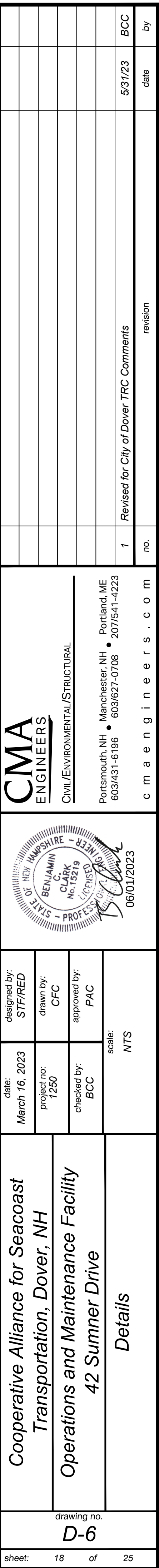
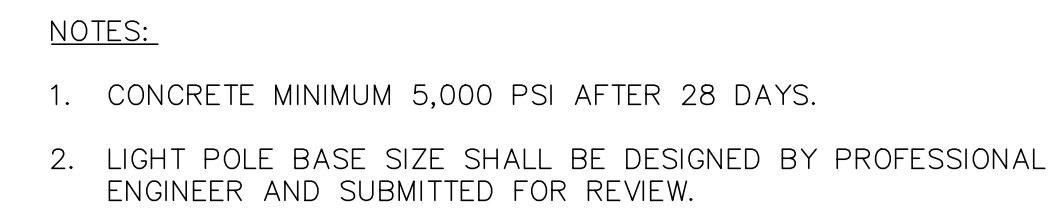
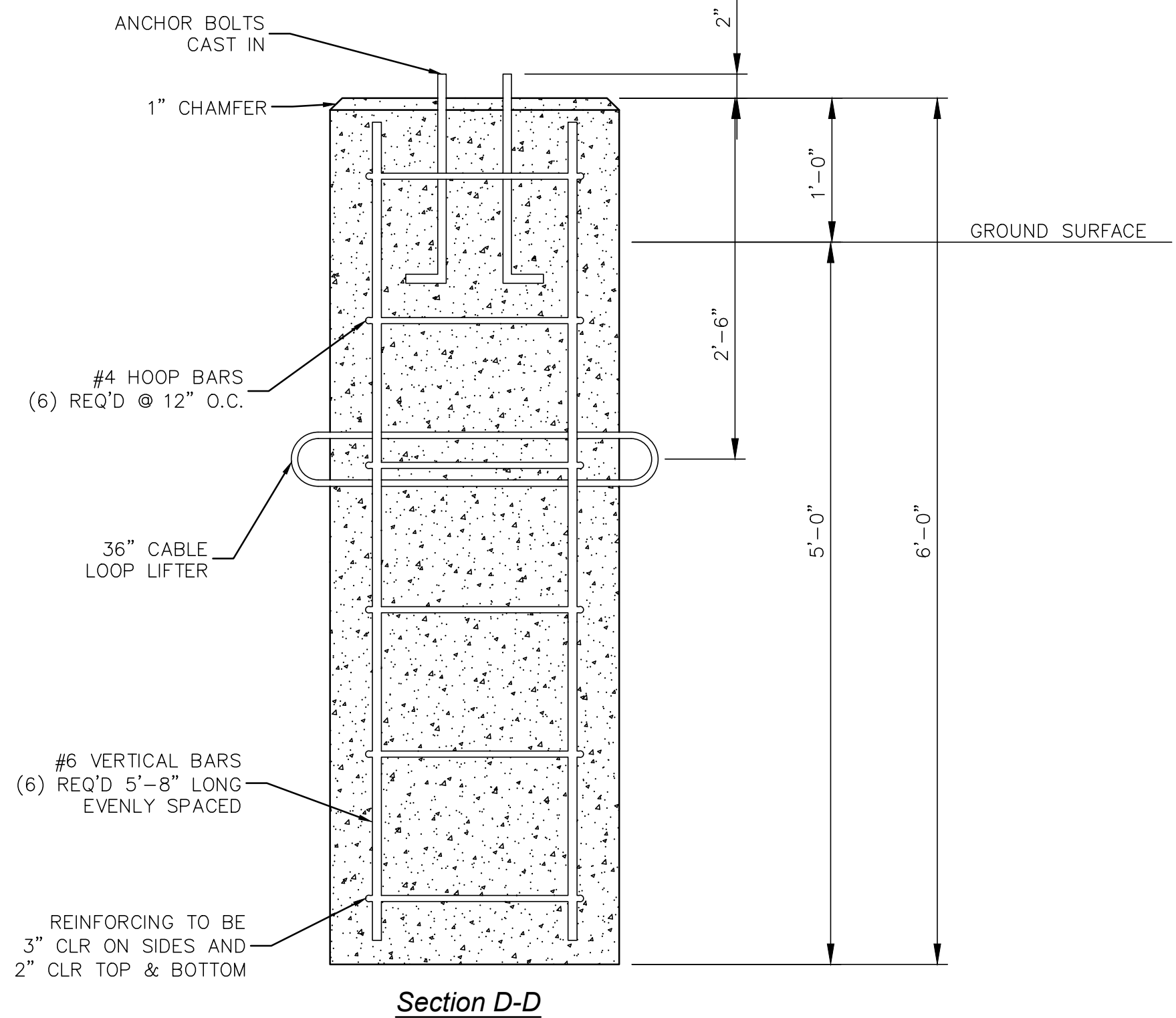
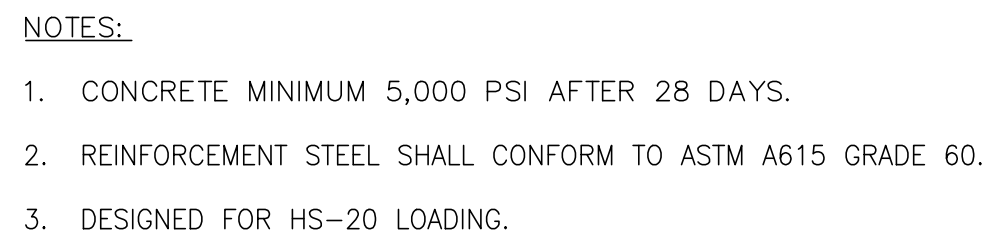
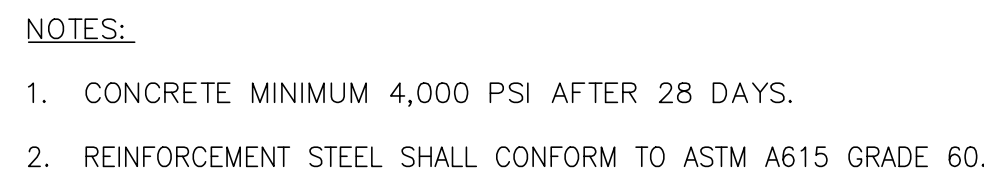
Nominal Dia. (in)	PIPE SIZE							
	4	6	8	10	12	16	20	24
Tees, Caps, Plugs, & Tapping Sleeves	1.05	2.32	4.15	6.37	9.15	16.23	25.44	36.58
90 Degree Bends	1.48	3.29	5.86	9.01	12.93	22.96	35.97	51.73
45 Degree Bends	0.80	1.78	3.17	4.88	7.00	12.42	19.47	28.00
22-1/2 Degree Bends	0.41	0.91	1.62	2.49	3.57	6.33	9.92	14.27
11-1/4 Degree Bends	0.21	0.46	0.81	1.25	1.79	3.18	4.99	7.17
	System Pressure:			100psi				
	Safety Factor:			1.5				
	Soil Bearing Capacity:			2,000psf				

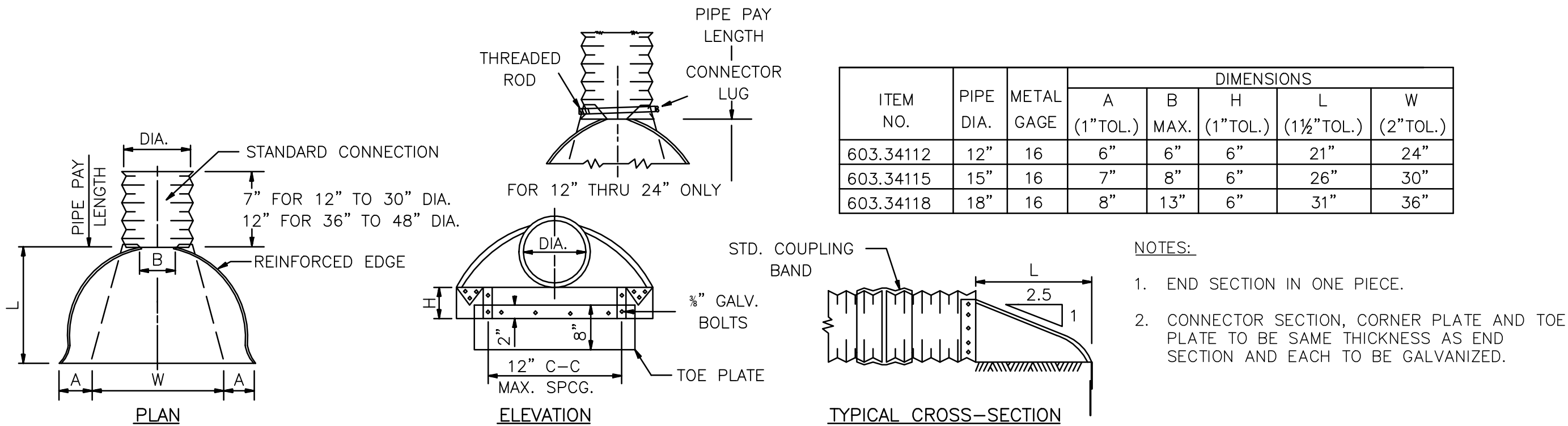
*Cooperative Alliance for Seacoast
Transportation, Dover, NH*

Operations and Maintenance Facility

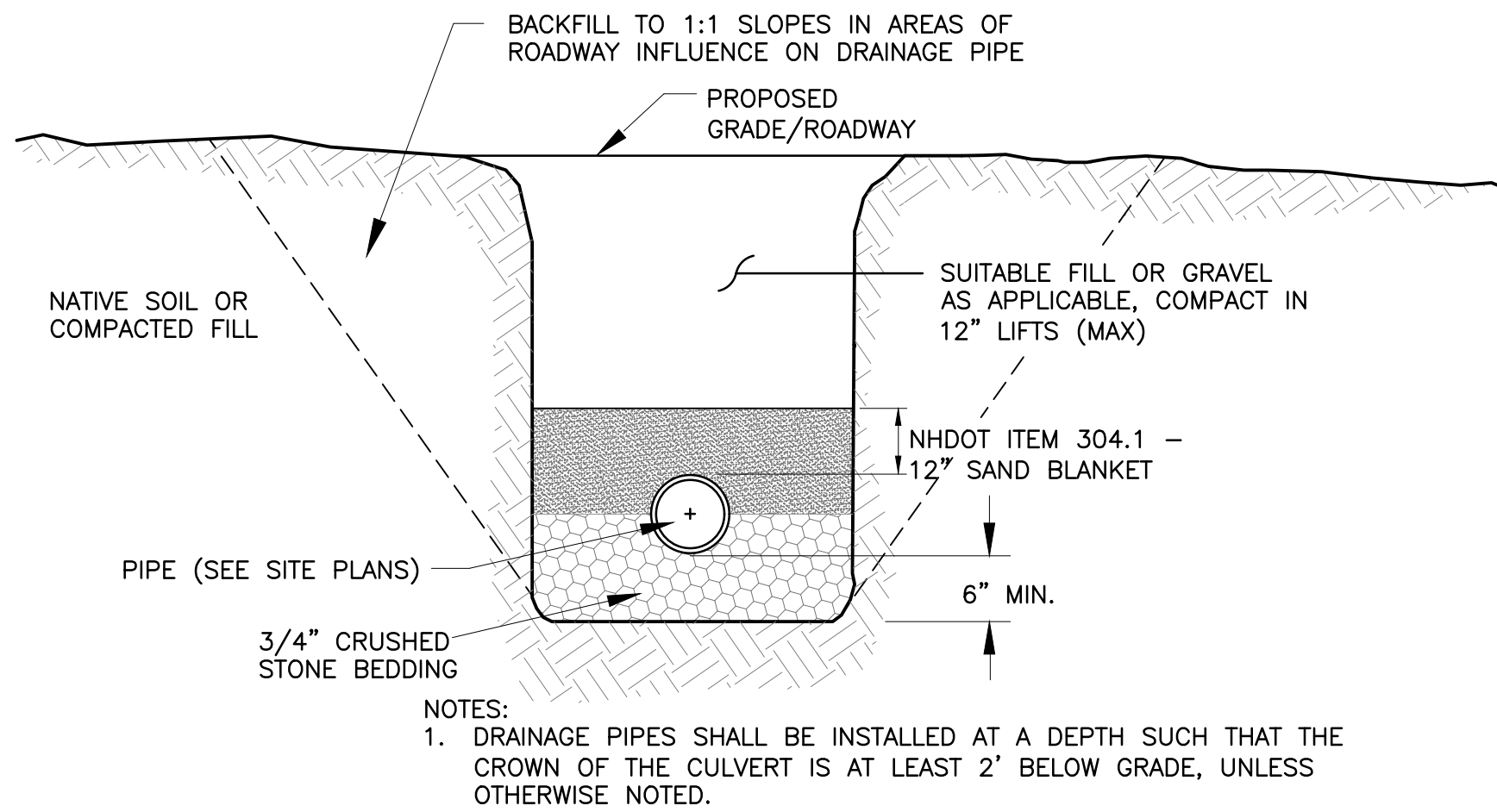
42 Summer Drive

Details

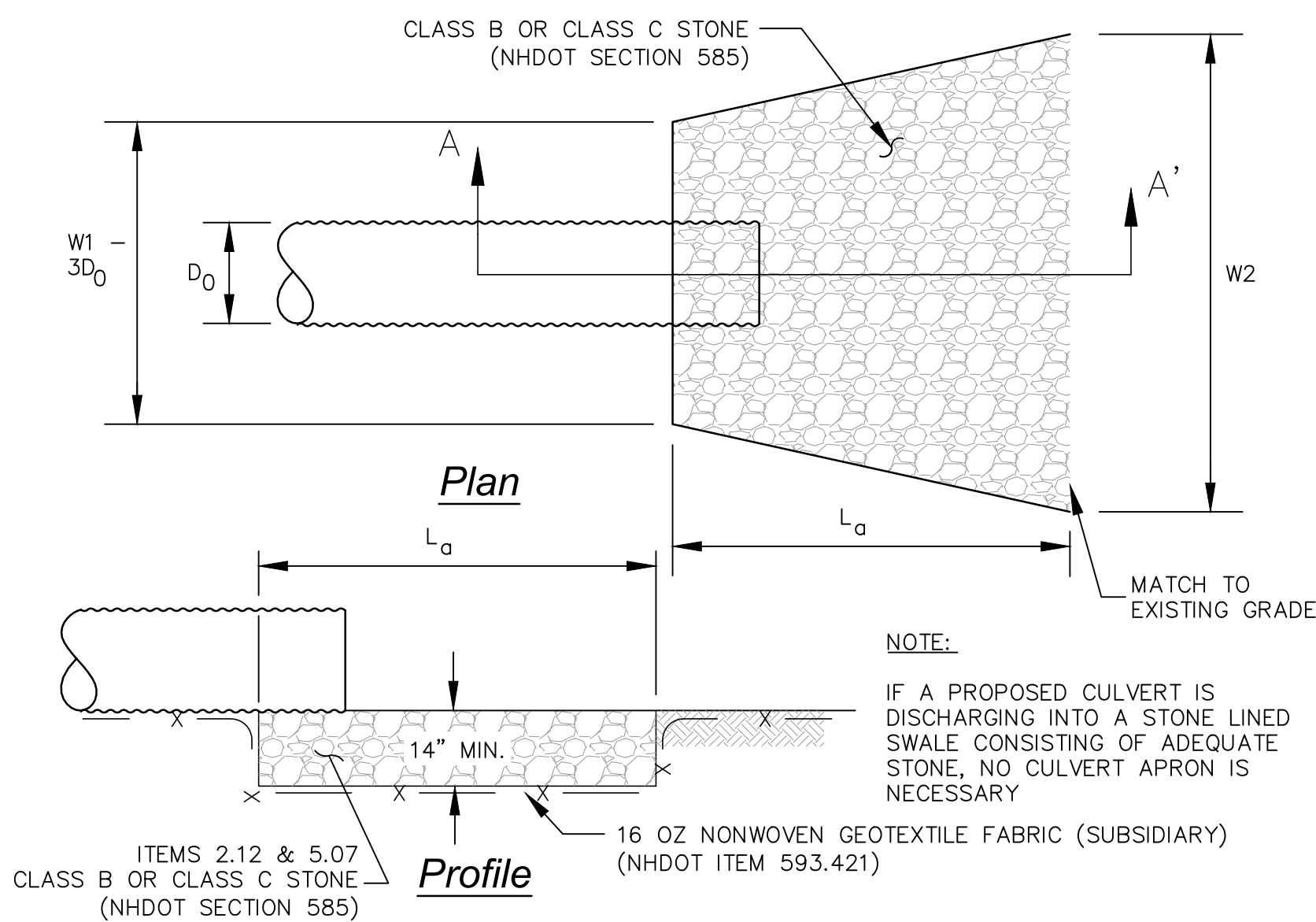




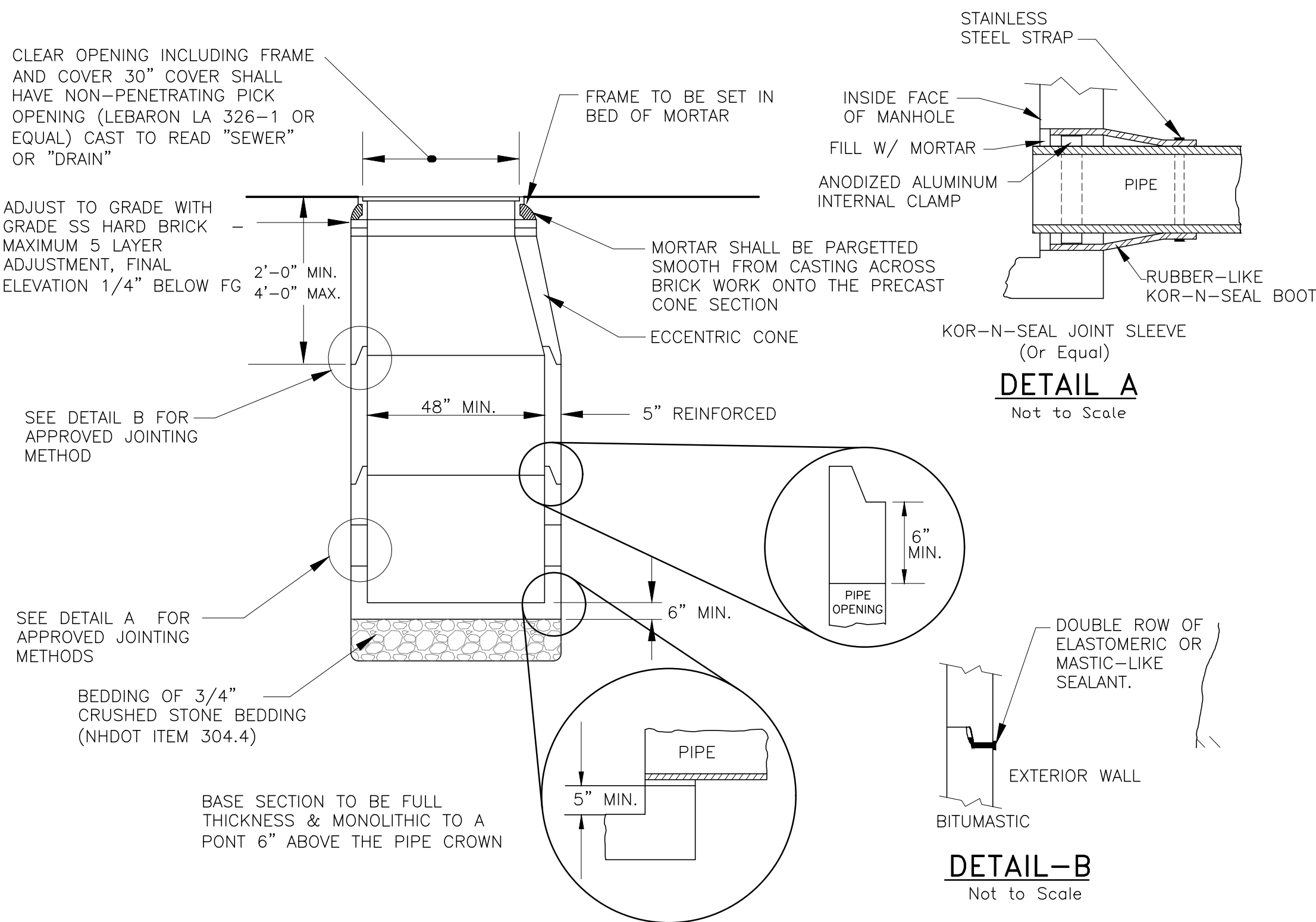
End Section Detail
Not to Scale



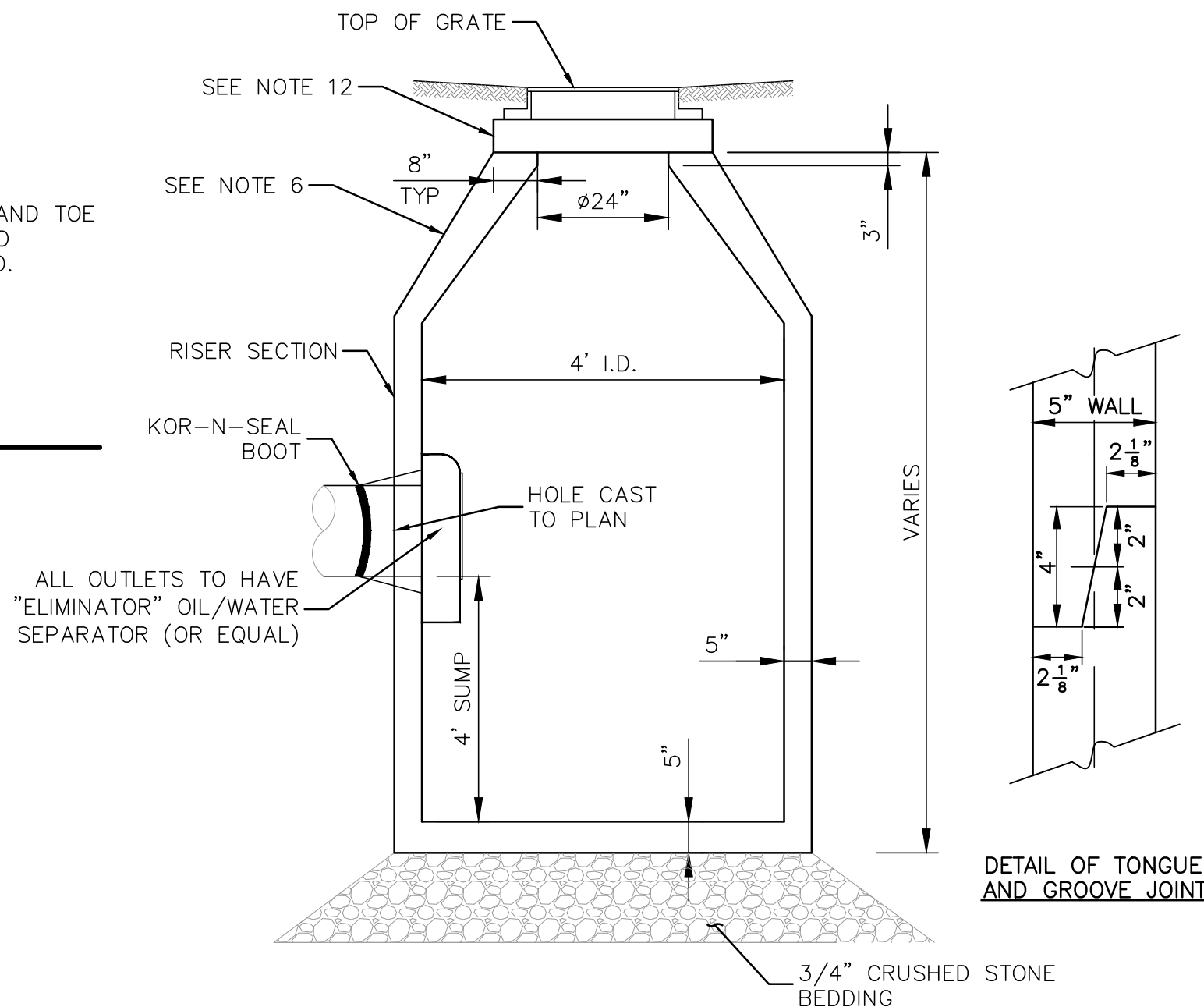
Drainage Pipe
Not to Scale



Stone Outlet Protection
Not to Scale



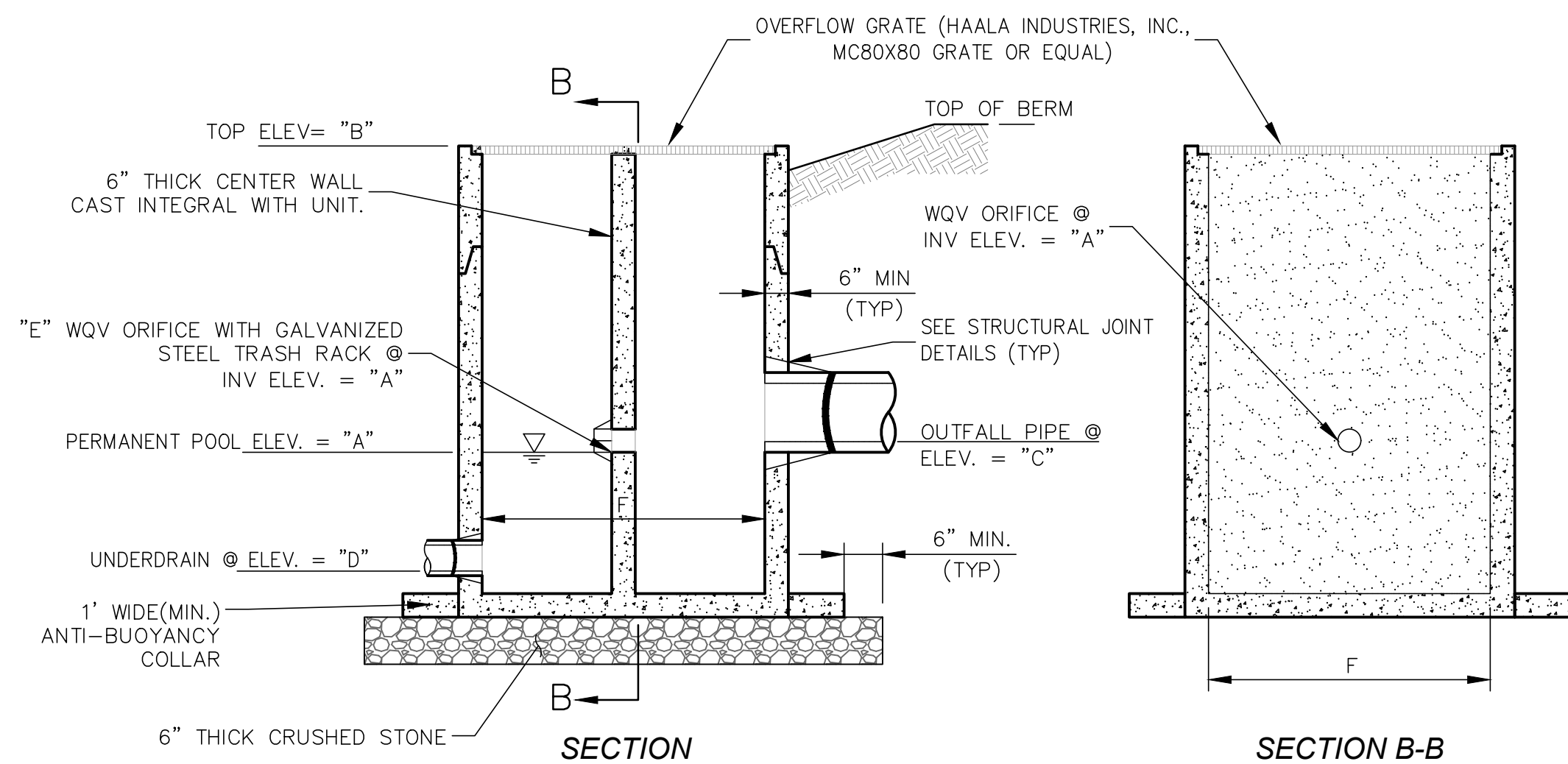
Drain Manhole Detail
Not to Scale



4' Diameter Catch Basin
Not to Scale

- NOTES:**
- ALL STRUCTURES SHALL MEET H-20 LOADING. CONCRETE SHALL BE CLASS AA, 4,000 PSI AFTER 28 DAYS.
 - CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 - THE TONGUE OR THE GROOVE OF THE WALL JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FOOT.
 - HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE EITHER AN APPROVED ELASTOMERIC OR BITUMASTIC-LIKE GASKET.
 - FOR BITUMASTIC TYPE JOINTS, THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. APPROVED BITUMASTIC SEALANTS INCLUDE RAM-NEK, KENT SEAL NO. 2, EZ OR EQUAL.
 - ECCENTRIC CONES SHALL BE USED WHEN DEPTH TO CROWN OF SHALLOWEST PIPE EXCEEDS 30"; OTHERWISE FLAT TOP SLABS SHALL BE USED. RISERS OF 12", 36" AND 48" CAN BE USED TO REACH THE DESIRED DEPTH.
 - ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES. NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
 - PIPE-TO-MANHOLE JOINTS SHALL BE A RUBBER-LIKE KOR-N-SEAL BOOT OR APPROVED EQUAL.
 - OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
 - CATCH BASIN GRATES TO BE NHDOT TYPE B WITH FRAMES.
 - FRAME AND GRATES SHALL BE BROUGHT TO GRADE USING GRADE SS HARD BRICKS (2 COURSE MIN., 12" MAX.) LAID FLAT. FRAMES SHALL BE SET IN A FULL BED OF MORTAR AND SEALED WITH PORTLAND CEMENT.
 - MANHOLE FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS HINGE COVER PER CITY OF PORTSMOUTH STANDARD.
 - INVERT AND SHELVE TO BE PLACED AFTER LEAKAGE TEST.
 - CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
 - INVERT BRICKS SHALL BE LAID ON EDGE.

- NOTES:**
- ALL SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH 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.
 - MANHOLE BARRELS AND CONE SECTIONS SHALL BE PRECAST CONCRETE.
 - PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C 478.
 - LEAKAGE TEST SHALL BE PERFORMED PRIOR TO BACKFILL IN ACCORDANCE WITH THE SPECIFICATIONS.
 - 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) "SEWER" OR "DRAIN" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
 - BEDDING: 3/4" CRUSHED STONE BEDDING (NHDOT ITEM 304.4).
 - HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE ENGINEER, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET APPLIED IN DOUBLE ROWS.
 - PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL WILL DEPEND FOR WATERTIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERIC SEALANT.
 - FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. APPROVED BITUMASTIC SEALANTS: RAM-NEK KENT SEAL NO. 2EZ
 - ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
 - NO MANHOLE STEPS ARE ALLOWED.

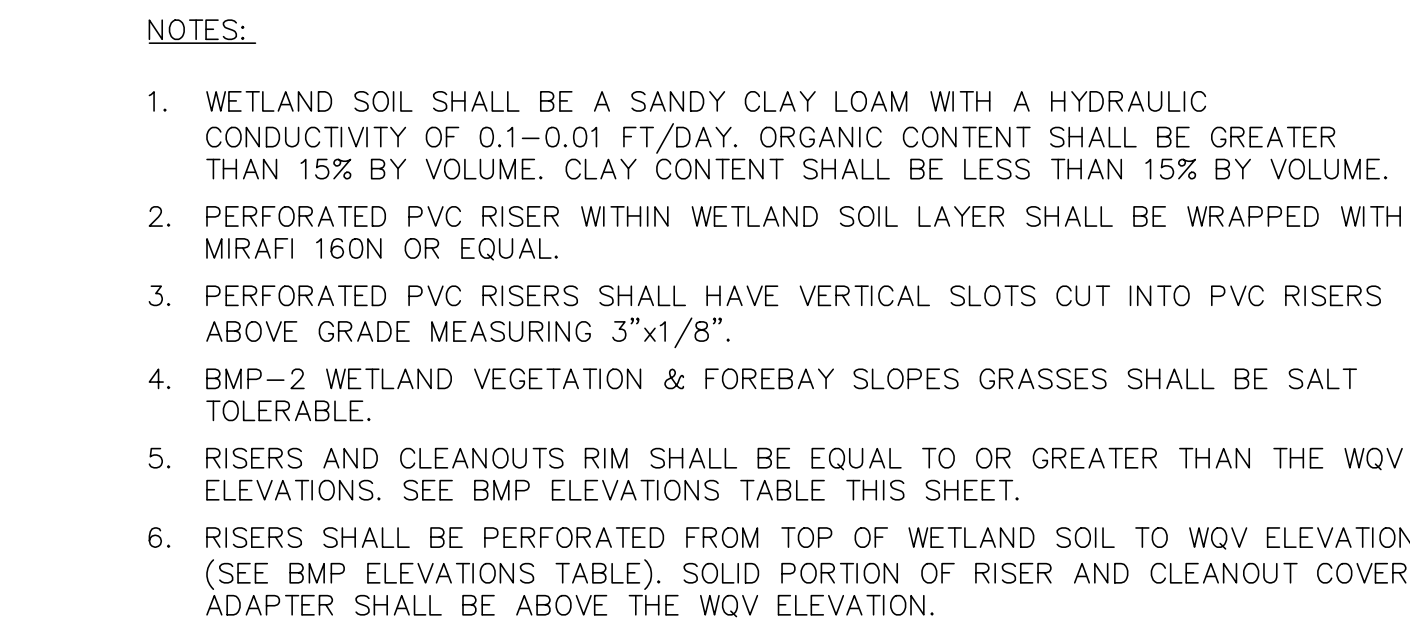


1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT)
2. PRECAST BOX STRUCTURE SHALL CONFORM TO ASTM C913 SPECIFICATIONS.
3. SEE DETAIL TITLE PIPE CONNECTION TO PRECAST MANHOLE STRUCTURES.
4. REINFORCEMENT:

- 4.1. DEFORMED BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
- 4.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185-GRADE 70
5. REIN. STEEL SHALL HAVE 1" MINIMUM COVER.
6. THE STRUCTURE SHALL BE DESIGNED FOR HS 20-44 LOADING AND TO PREVENT FLOTATION IF FULLY SUBMERGED.
7. CRUSHED STONE BEDDING SHALL CONFORM TO NHDOT 304.4.
8. PIPE ELEVATIONS SHOWN SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
10. OUTLET PIPE SHALL BE FLUSH WITH INNER WALL.
11. BASE SHALL BE A SINGLE CAST UP TO A MINIMUM OF 8 INCHES ABOVE OUTFALL PIPE OR TOP OF BMP SURFACE WHICH EVER IS HIGHER

STRUCTURE DIMENSIONS		
	POCS STRUCTURE ID	
ELEV.	OCS-1	OCS-2
A	93.00	94.58
B	94.90	98.00
C	93.00	94.58
D	90.58	-
E WQV ORIFICE DIA (IN)	2.5	1.5
F STRUCTURE LxW DIMENSIONS (IN)	48x48	48x48

Not to Scale

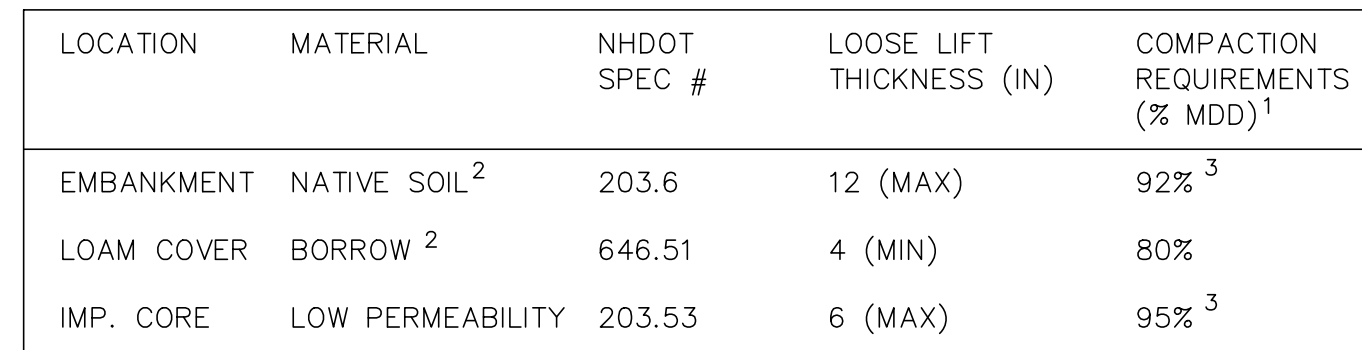


AASHTO #5 STONE (1" TO 1/2")	
SIEVE SIZE	% PASSING
1-1/2"	100
1"	90-100
3/4"	20-55
1/2"	0-10
3/8"	0-5

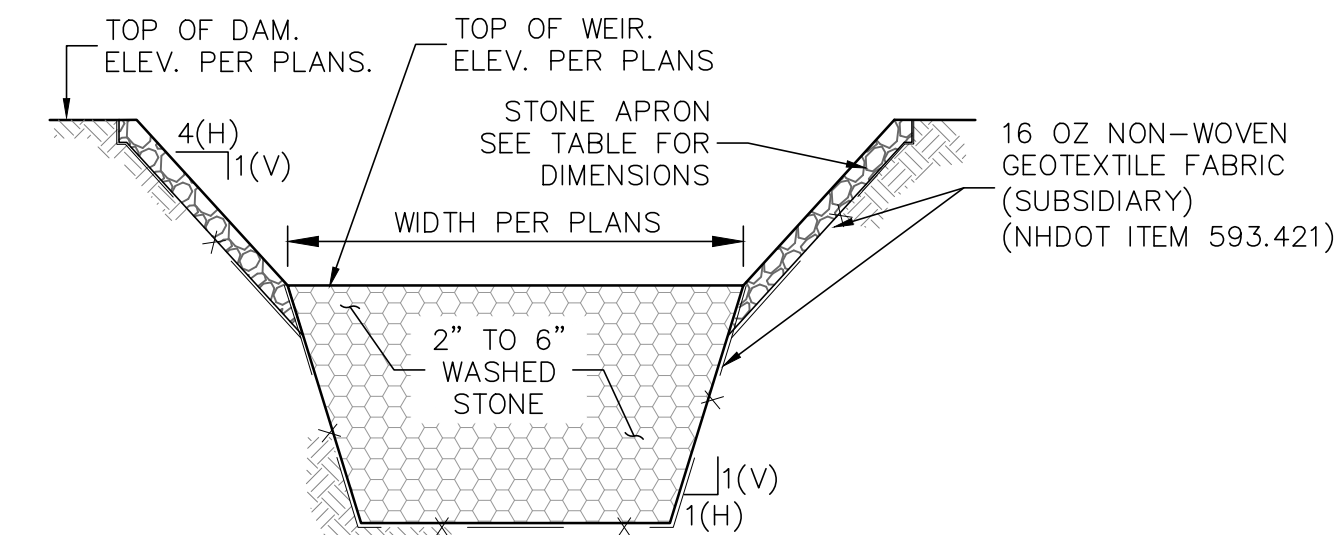
AASHTO #8 STONE (3/8" TO #8)	
SIEVE SIZE	% PASSING
1/2"	100
3/8"	85-100
#4	10-30
#8	0-10
#16	0-5

BMP ELEVATIONS		
	SUBSURFACE GRAVEL WETLANDS	
DIMENSION/ELEVATION	GW-1	GW-2
A	93.50	95.25
B	90.58	92.32
C (WQV ELEV)	93.76	97.13
D	95.0	98.50
E	8	8

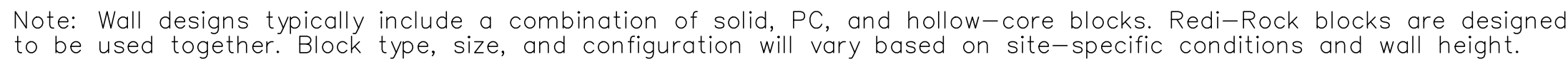
Not to Scale



LOW PERMEABILITY FILL	
SIEVE SIZE	% PASSING
3 IN	100
#4	80-100
#40	60-90
#100	40-60
#200	25-45



F:\CADD\PROJECTS\1250 Coast On-Call Eng Services\Production\1250 - Details.dwg Date Plotted: May 30, 2023 - 3:40pm Plotted By: CCHIARAMONTE



MINIMUM LETTER
HEIGHT 2"

NAME OF PROJECT

PER PLANNING BOARD APPROVAL
SITE & UTILITY WORKING HOURS ARE:

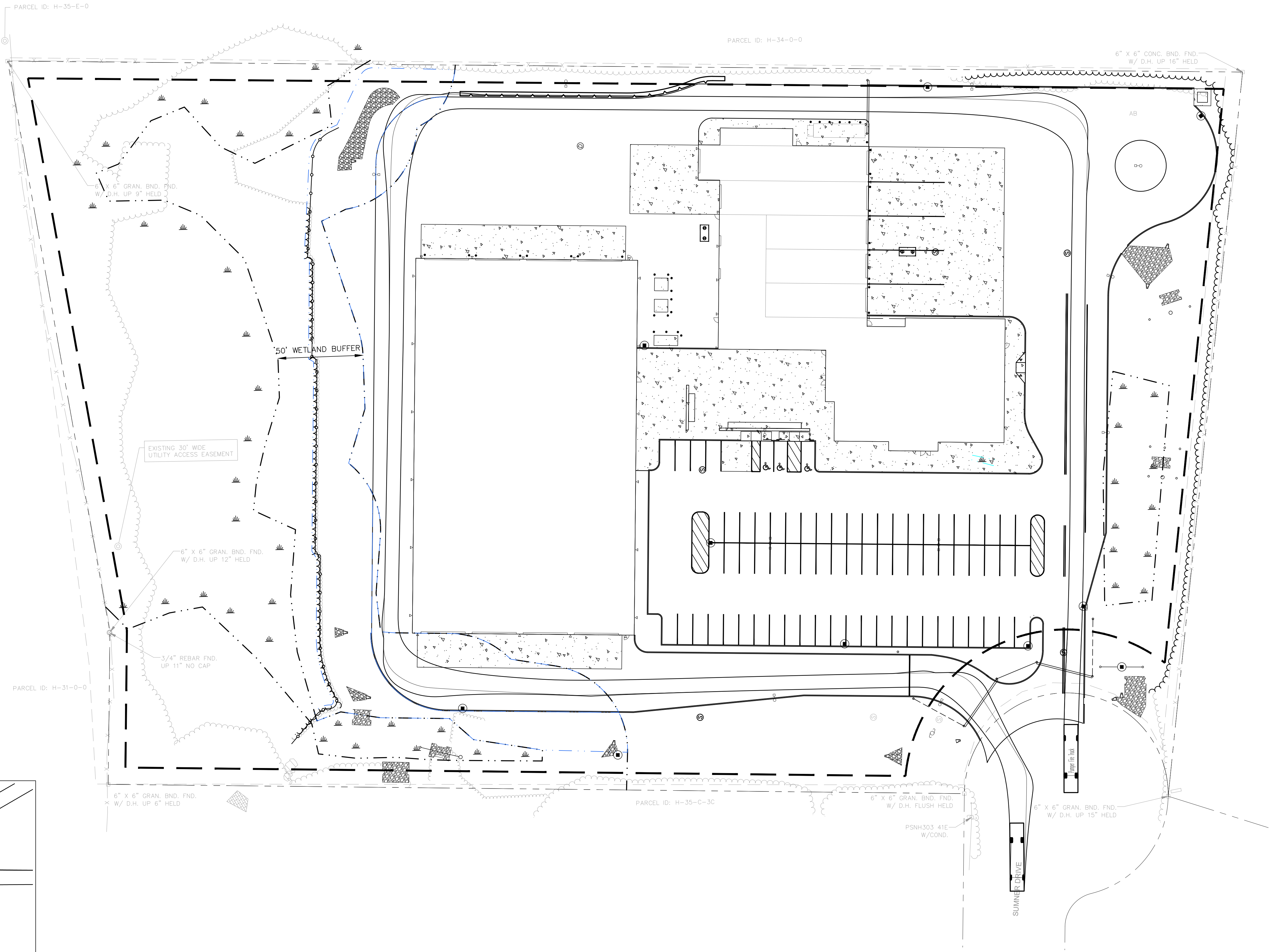
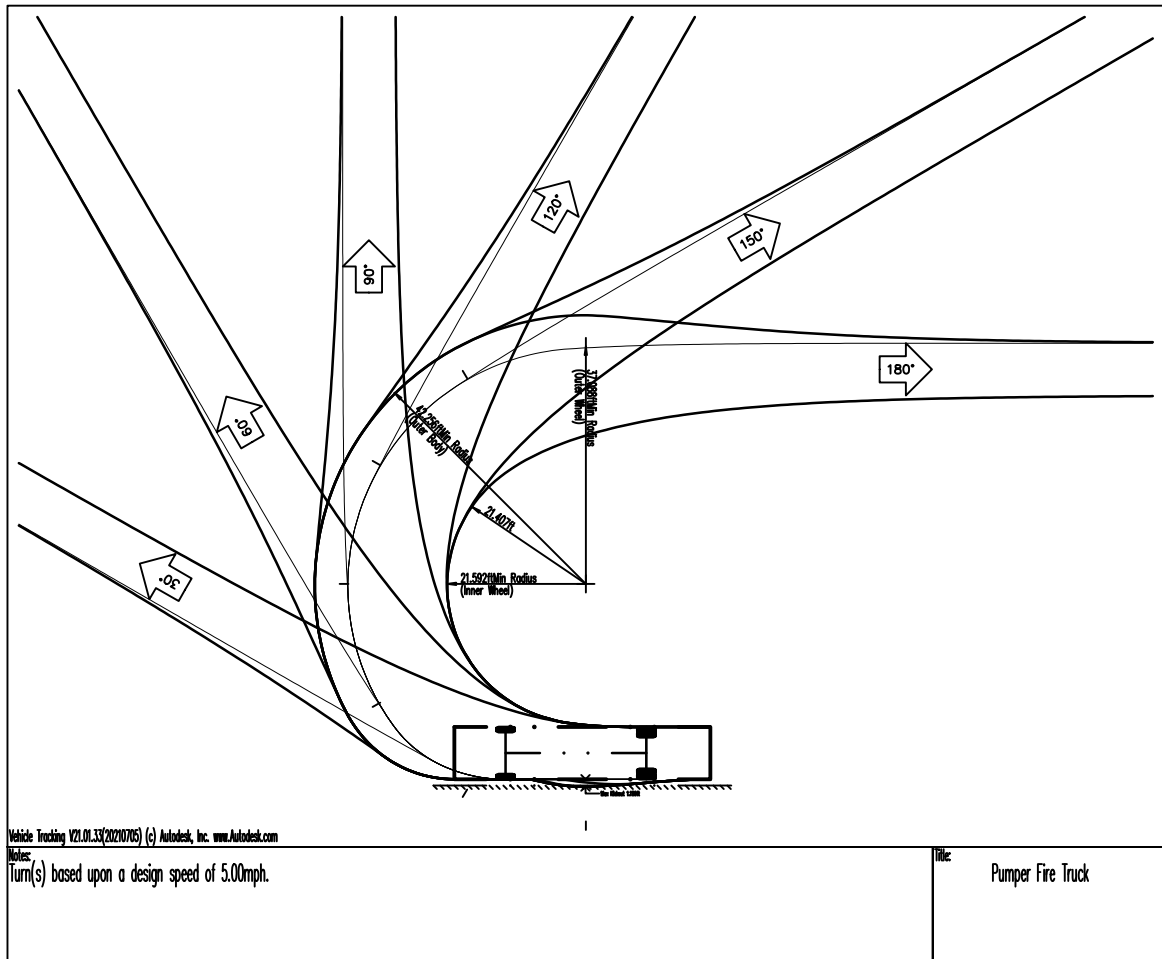
MONDAY – FRIDAY _____
SATURDAY _____
NO SUNDAY OR HOLIDAY HOURS

NAME OF DEVELOPER/SITE CONTRACTOR
24HR REACHABLE PHONE NUMBER

1. SIGN SHALL HAVE BLACK LETTERS ON A WHITE BACKGROUND
2. SIGN SHALL BE WEATHER RESISTANT AND SECURED TO THE GROUND
3. HOURS ON THE SIGN SHALL COMPLY WITH ALL PLANNING BOARD CONDITIONS OF APPROVAL.

Construction Sign
Not to Scale

F:\CADD\PROJECTS\1250 Coast On-Call Eng Services\Production\1250 - Details.dwg Date Plotted: May 30, 2023 - 3:40pm Plotted By: CCHIARAMONTE



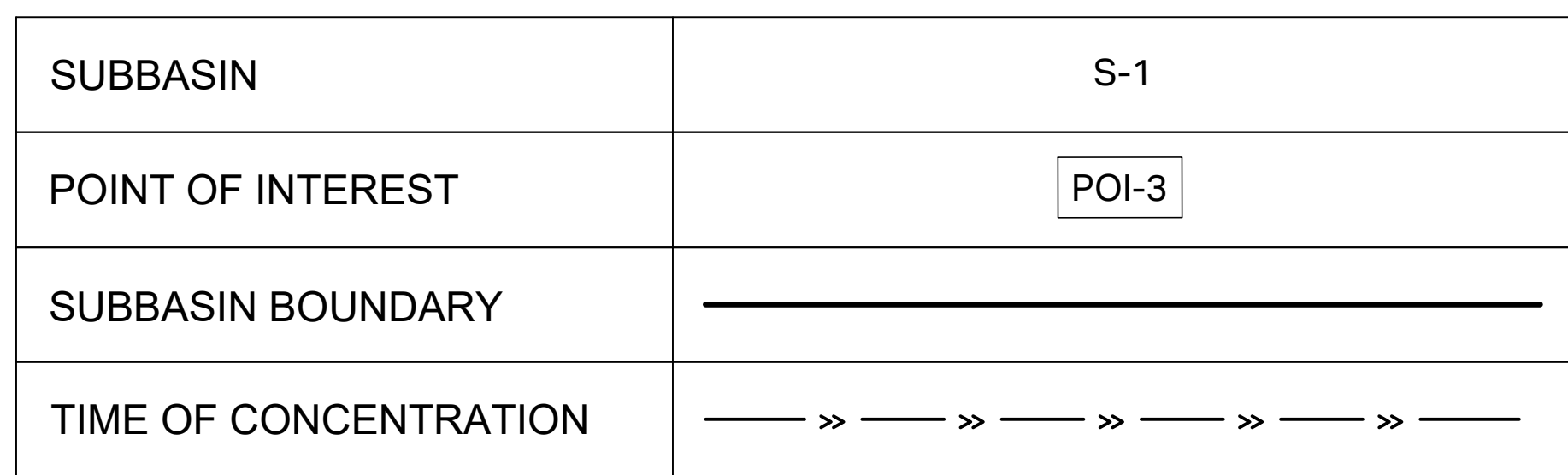
Cooperative Alliance for Seacoast Transportation, Dover, NH		designed by: ST/RED	date: March 16, 2023	drawn by: CFC	scale: 0 30 60' Scale: 1" = 30'
Operations and Maintenance Facility		checked by: PAC	project no: 1250	approved by: PAC	
42 Sumner Drive					
Fire Truck Turning Movement Plan					
drawing no. T-1					
sheet: 23 of 25					

CMAENGINEERS

Civil/Environmental/Structural

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1		Revised for City of Dover TRC Comments		BCC	
no.		revision		by	
		date		5/31/23	



F:\CADD\PROJECTS\1250 Coast On-Call Eng Services\Production\1250-Drainage Maps.dwg Date Plotted: May 30, 2023 - 3:41pm Plotted By: CCHIARAMONTE