STONEFIELD

April 21, 2026

Alec Bass
Assistant City Planner
41 Green Street
Concord, NH 03301

RE: Major Site Plan Review – Multi-family Residential Adaptive Reuse
Map 6414Z, Lot 1
103 North State Street
City Of Concord, Merrimack County, New Hampshire

Dear Mr. Bass;

Stonefield Engineering and Design is pleased to submit the enclosed applications for a Conditional Use permit for the above-referenced project. The submission includes the required plans, reports, and supporting documentation for the City's review and consideration.

Please find the following items enclosed.

ITEM DESCRIPTION	*DATED*	*COPIES*	*PREPARED BY*
Abutters List	04/21/2026	1	Stonefield Engineering & Design
Owner Authorization Form	03/16/2026	1	Associated Enterprise, LLC
Conditional Use Permit Checklist	03/11/2026	1	Stonefield Engineering & Design
Site Plans	04/15/2026	1	Stonefield Engineering & Design
Site Photographs	03/11/2026	1	Stonefield Engineering and Design

Please contact our office if you have any questions or comments regarding this submission.

Best regards,

Joshua Kline, PE (NH License No. 16530)
Stonefield Engineering and Design, LLC

Nick Salvesen
Stonefield Engineering and Design, LLC

Via Email & Online Portal

Z:\Boston\BOS\2025\BOS-250093 Associated Enterprises - 103 North State Street, Concord, NH\Correspondence\Outgoing\Municipal\2024-04-21_Cover Letter to Planning Board - CUP.docx

Project Narrative:

On behalf of the Applicant, Stonefield Engineering and Design has prepared the following Project Narrative describing the proposed development. The subject property is located at 103 North State Street in the City of Concord, Merrimack County, New Hampshire and is identified as Map 6414Z, Lot 1. The property contains approximately 20,563 square feet (0.45 acres) with approximately 94 feet of frontage along North State Street and is located within the Civic Performance (CVP) Zoning District. The site is currently used as commercial office space.

In addition to the Major Site Plan application, the applicant requests approval for a conditional use permit pursuant to Section 28-7-8(C)(2) Separation of a driveway in a non-residential area to waive the requirement of two hundred (200) feet of separation between proposed driveways and intersections and driveways on adjacent lots.

a. *The use is specifically authorized in this ordinance as a conditional use;*

   The use is specifically authorized by ordinance and within this zone per section 28-7-11(f).

b. *If completed as proposed by the applicant, the development in its proposed location will comply with the requirements of this article, and with the specific conditions of standards established in this ordinance for the particular use;*

   The development in its proposed location will comply with the requirements of the article and with the conditions of standards established in this ordinance for the particular use other than the driveway separation.

c. *The use will not materially endanger the public health or safety;*

   The use will not materially endanger the public health or safety, The driveway as it presently exists does not meet the requirements for driveway separation or width. The proposed plan increases the width of the driveway to improve traffic circulation within the site.

d. *The use will be compatible with the neighborhood and with adjoining or abutting uses in the area in which it is to be located;*

   The use is compatible with the neighborhood and with adjoining or abutting uses in the area in which it is to be located. The use is permitted with the area.

e. *The use will not have an adverse effect on highway or pedestrian safety;*

   The use will not have an adverse effect on highway or pedestrian safety as widening the driveway will improve traffic circulation allowing more room for vehicle egress and ingress as well as additional room for pedestrians.

f. *The use will not have an adverse effect on the natural, environmental, and historic resources of the City;*

The use will not have an adverse effect on the natural, environmental, and historic resources of the City. The proposed adaptive reuse is a positive impact.

g. *The use will be adequately serviced by necessary public utilities and by community facilities and services of a sufficient capacity to ensure the proper operation of the proposed use, and will not necessitate excessive public expenditures to provide facilities and services with sufficient additional capacity.*

The use will be adequately serviced by necessary public utilities and by community facilities and services of a sufficient capacity to ensure the proper operation of the proposed use, and will not necessitate excessive public expenditures to provide facilities and services with sufficient additional capacity. The proposed use can be serviced.

STONEFIELD

March 18, 2026

Alec Bass
Assistant City Planner
41 Green Street
Concord, NH 03301

RE: Major Site Plan Review – Multi-family Residential Adaptive Reuse
Map 6414Z, Lot 1
145-171 Chase Avenue
City Of Concord, Merrimack County, New Hampshire

Dear Mr. Bass;

Stonefield Engineering and Design is pleased to submit the enclosed applications for a Major Site Plan and Conditional Use permit for the above-referenced project. The submission includes the required plans, reports, and supporting documentation for the City's review and consideration.

Please find the following items enclosed.

ITEM DESCRIPTION	*DATED*	*COPIES*	*PREPARED BY*
Abutters List	03/11/2026	1	Stonefield Engineering & Design
Owner Authorization Form	03/16/2026	1	Associated Enterprise, LLC
Major Site Plan Review Checklist	03/11/2026	1	Stonefield Engineering & Design
Site Plans	03/18/2026	1	Stonefield Engineering & Design
Stormwater Management Statement	03/18/2026	1	Stonefield Engineering & Design
Operation & Maintenance Plan	3/11/2026	1	Stonefield Engineering & Design
Architectural Plans (Elevations & Floor Plan)	02/18/2026	1	Inscription Architects

Please contact our office if you have any questions or comments regarding this submission.

Best regards,

Joshua Kline, PE (NH License No. 16530)
Stonefield Engineering and Design, LLC

Nick Salvesen
Stonefield Engineering and Design, LLC

Via Email & Online Portal

Z:\Boston\BOS\2025\BOS-250093 Associated Enterprises - 103 North State Street, Concord, NH\Correspondence\Outgoing\Municipal\2024-03-08_Cover Letter to Planning Board.docx

Project Narrative:

On behalf of the Applicant, Stonefield Engineering and Design has prepared the following Project Narrative describing the proposed development. The subject property is located at 103 North State Street in the City of Concord, Merrimack County, New Hampshire and is identified as Map 6414Z, Lot 1. The property contains approximately 20,563 square feet (0.45 acres) with approximately 94 feet of frontage along North State Street and is located within the Civic Performance (CVP) Zoning District. The site is currently used as commercial office space.

In addition to the Major Site Plan application, the applicant is applying for a conditional use permit to waive the requirement for non-residential use for lots greater than 20,000 SF seeking a residential permit, as noted in section 28-4-5(e)(1).

The proposed project consists of the existing 15,341 square-foot structure being retrofited to a multi-family residential dwelling, with 21 dwelling units, with one full-movement driveway. Site improvements include parking, lighting, landscaping, utilities, signage, and stormwater management infrastructure.

Vehicular access will be provided via one full-movement driveway along North State Street, allowing safe and efficient internal circulation. Based on the major site plan regulations, this project does not exceed the threshold of more than 200 vehicle trip ends per day or more than twenty (20) peak hour trip ends, to require a traffic study. The weekday daily, morning and evening peak hours, and Saturday daily and midday peak hour trip generation for the proposed 21-unit residential development, per the latest edition of ITE's Trip Generation Manual utilizing Land Use 220 "Multifamily Housing (Low-Rise)", can be found in **TABLES 1 and 2**.

TABLE 1 – PROPOSED WEEKDAY TRIP GENERATION

	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Weekday Daily		
Land Use	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
21-Unit Multifamily Housing (Low-Rise) *ITE Land Use 220*	3	7	10	8	5	13	65	65	130

Note: The weekday morning and weekday evening peak hour projections were obtained from data for the peak hour of generator published by ITE.

TABLE 2 – PROPOSED SATURDAY TRIP GENERATION

	Saturday Midday Peak Hour			Saturday Daily		
Land Use	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
21-Unit Multifamily Housing (Low-Rise) *ITE Land Use 220*	4	6	10	48	48	96

Overall, the project will utilize an existing structure while incorporating site upgrades that improve circulation, drainage, and overall site function. The proposed development is consistent with the intent of the Civic Performance (CVP) District and represents an appropriate and beneficial reuse of the property.

CITY OF CONCORD

New Hampshire's Main Street™

Community Development Department

Planning Division

Waiver Request Form – Site Plan Regulations

Instructions:

1. List the section for which the waiver is being requested, along with a brief explanation of the request.
2. Explain how the waiver request complies with each criterion.

Section 36.08 *Waivers: Where the Planning Board finds that extraordinary hardships or practical difficulties may result from strict compliance with these regulations and/or the purposes of these regulations may be served to a greater extent by an alternative proposal, it may approve waivers to these subdivision regulations so that substantial justice may be done and the public interest secured, provided that such waiver shall not have the effect of nullifying the intent and purpose of these regulations…*

Waiver from Section 12.03, 15.02(1), 16.02(1) - Signed and Sealed Landscape Plan

11.05, 11.07 - attending seperate hearings for Review of Completeness and Public Hearing.

and further provided the Planning Board shall not approve waivers unless it shall make findings based upon the evidence presented to it in each specific case that:

(1) The granting of the waiver will not be detrimental to the public safety, health, or welfare or injurious to other property;

The granting of the above waivers will not be detrimental to the public safety, health or welfare or injurious to other property because the above requested waivers are administrative and will not affect the quality of the proposed development.

(2) The conditions upon which the request for a waiver is based are unique to the property for which the waiver is sought and are not applicable generally to other property;

The conditions upon which the request for a waiver for a waiver is based are unique to the property for which the waiver is sought and are not applicable generally to other property because this is a redevelopment project where the existing building is to remain with minor site improvements. The project consists of an adaptive reuse and the site poses unique challenges given its shape, existing building location, and existing condition.

(3) Because of the particular physical surroundings, shape, or topographical conditions of the specific property involved, a particular and unnecessary hardship to the owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations are carried out;

Adhering to the strict letter of these regulations would have a significant impact to the project deadlines and would be an unnecessary hardship to the owner.

(4) Specific circumstances relative to the subdivision or conditions of the land in such subdivision indicate that the waiver will property carry out, or not be contrary to, the spirit and intent of the regulations; and

The requested waivers above are intended to keep the application moving forward in a timely manner and will not compromise the intent of the regulations.

(5) *The waiver will not in any manner vary the provisions of the Zoning Ordinance, Master Plan Reports, or Official Map.*

Holding the Completeness review and landscape plans that have not been stamped will not vary the provisions of the zoning ordinance, master plan reports, or official maps.

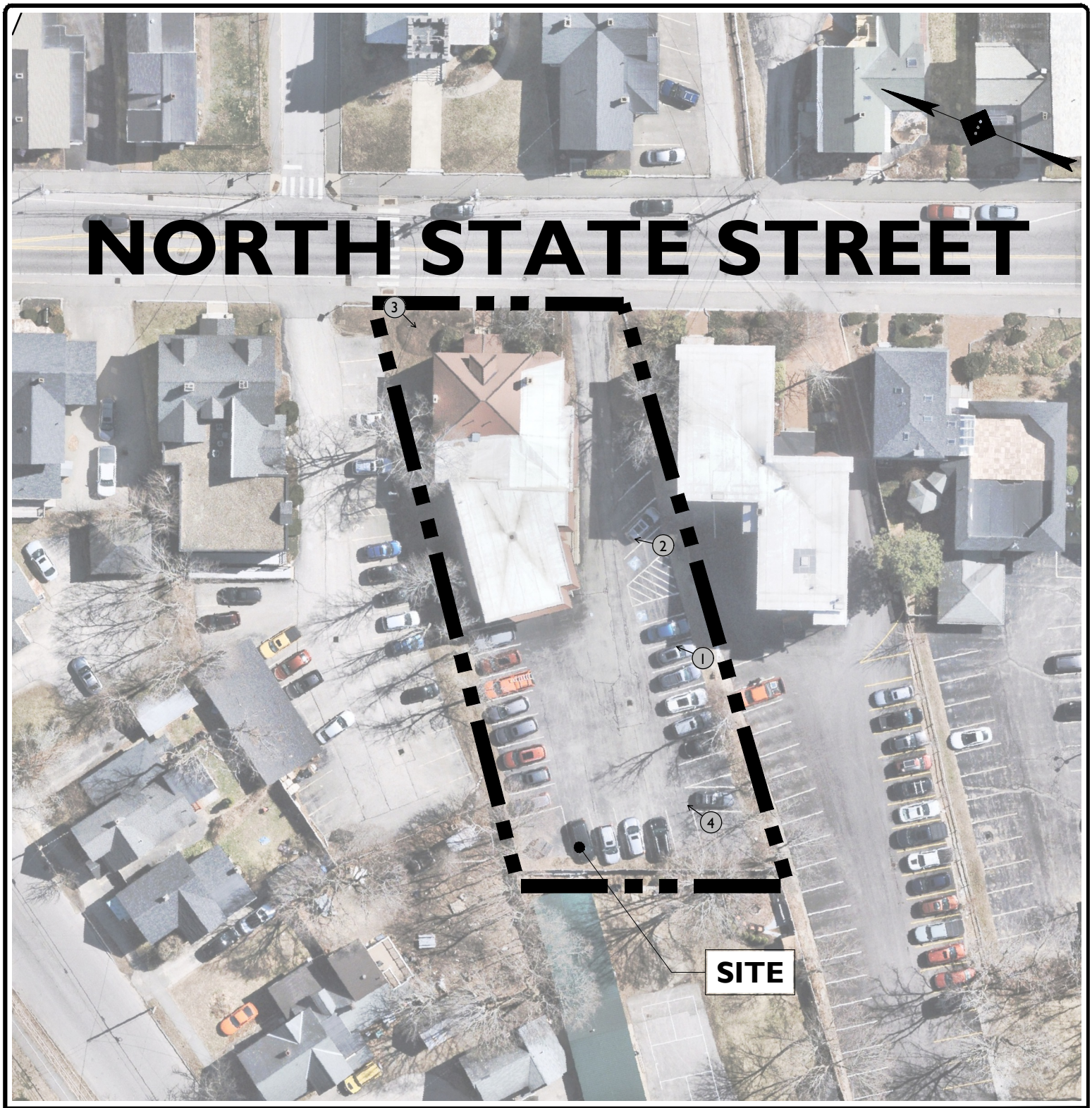
Finally, note if the waiver complies with RSA 674:44(III)(e)(1) or (2) below and explain how.

(1) Strict conformity would pose an unnecessary hardship to the applicant and waiver would not be contrary to the spirit and intent of the regulations

OR

(2) Specific circumstances relative to the site plan, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations

The application was submitted initially, 03/18/2025, after receiving the staff report the applicant choose to continue the review to the following hearing on 05/20/2025. The Applicant updated the plans to meet completeness based on the staff report provided 4/10/2026



SITE PHOTOGRAPHS

50' 0' 50' 100'

GRAPHIC SCALE IN FEET

1" = 50'

SOURCE: NEARMAP AERIAL, DATED MARCH 04, 2026

PROPOSED MULTI-FAMILY ADAPTIVE REUSE

MAP 6414Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD, MERRIMACK COUNTY, NEW HAMPSHIRE

DRAWN BY:	NNS
CHECKED BY:	JHK
DATE:	3/11/2026
SCALE:	N/A
PROJECT ID:	BOS-250093

STONEFIELD engineering & design

Rutherford, NJ · New York, NY · Boston, MA
Princeton, NJ · Tampa, FL · Detroit, MI
www.stonefieldeng.com

120 Washington Street, Suite 201, Salem MA 01970
Phone 617.203.2076

PHOTOGRAPH 1

PHOTOGRAPH 2

SITE PHOTOGRAPHS

PROPOSED MULTI-FAMILY ADAPTIVE REUSE

MAP 6414Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD, MERRIMACK COUNTY, NEW HAMPSHIRE

DRAWN BY:	NNS
CHECKED BY:	JHK
DATE:	3/11/2026
SCALE:	N/A
PROJECT ID:	BOS-250093

STONEFIELD engineering & design

Rutherford, NJ · New York, NY · Boston, MA
Princeton, NJ · Tampa, FL · Detroit, MI
www.stonefieldeng.com

120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

PHOTOGRAPH 3

PHOTOGRAPH 4

SITE PHOTOGRAPHS

PROPOSED MULTI-FAMILY ADAPTIVE REUSE

MAP 6414Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD, MERRIMACK COUNTY, NEW HAMPSHIRE

DRAWN BY:	NNS
CHECKED BY:	JHK
DATE:	3/11/2026
SCALE:	N/A
PROJECT ID:	BOS-250093

STONEFIELD engineering & design

Rutherford, NJ · New York, NY · Boston, MA
Princeton, NJ · Tampa, FL · Detroit, MI
www.stonefieldeng.com

120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

STONEFIELD

April 15, 2026

Alec Bass
Assistant City Planner
City of Concord
41 Green Street
Concord, NH 03301

RE: Staff Report Response Letter
Multifamily Conversion – Major Site Plan (2026-028)
Associated Enterprises, Inc.
Map 6414Z, Lot 1
145-171 Chase Avenue
City of Concord, Merrimack County, New Hampshire
Application #: 2026-028

Mr. Bass:

Our office is submitting documents on behalf of the Applicant/Owner to address comments contained within the 'Staff Report for planning Board'. Please find the following items enclosed:

ITEM DESCRIPTION	DATED	COPIES	PREPARED BY
01 – Site Plans	04-15-2026	1	Stonefield Engineering & Design
02 – Truck Turn Exhibit	04-15-2026	1	Stonefield Engineering & Design
03 – Architectural Plans	04/15/2026	1	Inscription Architects
04 – Existing Conditions Survey (S&S)	04-15-2026	1	Richard D. Bartlett & Associates, LLC.

Should you have any questions regarding the submission items or responses above please do not hesitate to contact our office.

Regards,

Joshua Kline, PE
Stonefield Engineering and Design, LLC

Nick Salvesen
Stonefield Engineering and Design, LLC

Via Email

The following is an itemized response to the comments contained within the City of Concord Staff Report dated April 15, 2026. For the sake of brevity, any comments that are statements of fact or have been previously addressed are not included in the response below:

Site Plan Regulations Determination of Completeness:

3.1 *Section 12.02(1)(b) requires the title block on all plans and drawings to provide the name and address of the owner and applicant. Specifically, the applicant information is present on the title block but the name and address of the owner is missing and shall be included in the title block throughout the civil plans.*

The submission documents have been updated to reflect the owner's name and address in the title block throughout both the Site Plan and Architectural Plans.

3.2 *Section 12.02(1) Title Block requires the title of the plan; name and address of the owner and applicant; the date the plan was prepared and subsequent revisions; and, the name, address and seal of the licensed professionals who prepared the plan. Specifically, the title of the architectural plans differs from the civil plans and one of the two plan titles needs to be revised for a consistent plan title on the cover sheets and within the title blocks. Additionally, the architectural plan set is missing the name and address of the property owner and the address of the licensed professional who prepared the architectural plans (Inscription Architects). Lastly, the architectural cover sheet incorrectly notes the owner as Remi Hinxhia, and shall be revised to Associated Enterprises, Inc.*

The title blocks for both the Site Plans and Architectural Plans have been updated.

3.3 *Section 12.03(1), Section 15.02(1) Preparation, and Section 16.02(1) Preparation requires a New Hampshire Licensed Land Surveyor shall prepare, sign and seal the existing condition plan. Specifically, Plan Reference Materials 1 on the cover sheet indicate that a survey was prepared by Richard D. Bartlett & Associates, Inc on November 2025. However, the existing conditions sheet C-2 contains no signature or seal of the NH Licensed Land Surveyor who prepared the existing conditions plan and shall be added.*

Please find enclosed the signed and sealed survey.

3.4 *Section 12.03(3), Section 15.02(1) Preparation, and Section 16.02(1) Preparation requires landscape plans shall be prepared by a New Hampshire Licensed Landscape Architect who shall sign and seal the landscape plan(s). Specifically, the signature and seal of the NH Licensed Landscape Architect who prepared the landscape plan shall be added to landscape plan, unless if otherwise a waiver has been requested and granted by the Planning Board to not require the landscape plans to be prepared by a NH Licensed Landscape Architect.*

The Applicant is requesting a waiver at this time from this section.

3.5 *Section 12.06(1) Certificate of Ownership requires on the existing conditions plan and the site plan a certificate of ownership identifying each parcel, including which property is owned by each owner, and a deed citation for each deed from the Merrimack County Registry of Deeds. Specifically, a reference note shall be added to the existing conditions and site plan sheets identifying the property owner, property address, Tax Map Lot information and applicable deed citation(s).*

The submission materials have been updated to reflect the property owner, address, Tax Map Lot information and applicable deed citations on the Existing Conditions Sheet and Site Plan Sheet (Sheet C-2, Sheet C-4).

3.6 *Section 13.01(6) State and Federal Permits requires a copy of any application made to a State or Federal Agency required for the approval of this site plan, including those required for the development of off-site improvements. Specifically, the applicant shall submit to the City Planning Division a copy of any State or Federal permit application and add a reference note on the site plan indicating the required State or Federal permits. If no State or Federal permits are required, the reference note shall indicate that no State or Federal permits are required are part of this application.*

The submission materials have been updated to include a note of required state or federal permits on the Cover Sheet (Sheet C-1).

3.7 *Section 15.02(8) Addresses requires the address of each existing and proposed building or use shall be noted on the site plan as approved by the City Engineer, as well as, addresses for abutting properties. Specifically, the property address shall be provided for the building on the site plan and all abutting properties. The applicant shall coordinate with the City Engineer if the existing addressing of 103 North State Street is going to be changed as a result of the 21 new residential units proposed.*

The address of the existing structure has been noted on the plans based on available information, if the address is requested to change in the future the final plans would include the requested updated.

3.8 *Section 15.03(2) Abutters requires on the existing conditions sheet, the full names and addresses of all property owners and abutters as indicated in the records of the City Tax Assessor not more than five (5) days before the filing of the application. The Tax Assessor's Map-Block-Lot number for each parcel. Specifically, the full names, addresses, and Map-Block-Lot information is missing from the owner parcel and all abutting parcels and shall be added.*

The submission materials have been updated to reflect the property owner, address, Tax Map Lot information and applicable deed citations on the Existing Conditions Sheet and Site Plan Sheet (Sheet C-2, Sheet C-4).

3.9 *Section 15.03(10) Municipal Utilities requires on the existing conditions sheet, the location, size, material, and type of municipal utilities currently serving the site including all structures, valves, hydrants, meters, and other appurtenances. Specifically, the sanitary sewer service on the existing conditions plan needs to be labeled as sanitary sewer, and shall also include both the size and material(s).*

The submission materials have been updated to include labels of all known information for the existing sanitary sewer service on the Existing Condition Sheet (Sheet C-2). The applicant will perform additional exploratory work as required to field verify existing utilities prior to construction.

3.10 *Section 15.03(11) Non-Municipal Utilities requires on the existing conditions sheet, the location, type and size, where applicable, of the non-municipal utilities which currently serve the site including transformers, switch boxes and other appurtenances. Specifically, the size and material of the existing gas service shall be provided on the existing conditions sheet.*

The submission materials have been updated to include labels of all known information for the existing gas service on the Existing Condition Sheet (Sheet C-2).

3.11 *Section 15.03(13) Flood Hazard requires on the existing conditions sheet, a notation as to whether or not the property is located in a FH-Flood Hazard Zoning Overlay District. Specifically, a note shall be added to the existing conditions sheet stating whether or not the property is located within the City's Flood Hazard (FH) Overlay District.*

The submission materials have been updated to include a tabulation of all overlay districts and buffers present on the site on the Site Plan Sheet (Sheet C-4).

3.12 *Section 15.03(22) Abutting Properties requires on the existing conditions sheet existing abutting properties including intersecting property lines, buildings, wells and septic systems, owners name and address, property address, and Tax Assessors Map-Block-Lot number. Specifically, abutting property lines, buildings, owners names and address, and Map Block Lot information shall be added to the existing conditions sheet.*

The submission materials have been updated to include intersecting property lines, buildings property owner names, address, Map-Block-Lot information and applicable deed citations on the Existing Conditions Sheet (Sheet C-2).

3.13 *Section 15.03(24) Zoning requires on the existing conditions sheet Zoning District Boundary lines, including Overlay Districts with labels be provided. Specifically, the Zoning District Boundary lines and labels are missing from the existing conditions sheet and shall be added.*

The requested Zoning District Boundary has been provided on the Existing Conditions Sheet (Sheet C-2).

3.14 *Section 15.04(1) Property Lines requires on the site plan the property lines of the parcel to be developed with bearings and dimensions. Specifically, the bearings and dimensions of the parcel's property lines shall be added to the site plan.*

The requested bearings and dimensions have been provided on the Existing Conditions Sheet (Sheet C-2).

3.15 *Section 15.04(4) Proposed Use requires each site plan shall clearly identify each existing and proposed use planned for the site. Specifically, a note shall be added to the site plan clearly identifying the existing and proposed use.*

The Submission materials have been updated to reflect the existing and proposed use for the site on the Site Plan Sheet (Sheet C-4).

3.16 *Section 15.04(20) Flood Hazard requires on the site plan that a notation as to whether or not the property is located in a Flood Hazard (FH) Overlay District. Specifically, a note shall be added to the site plan sheet stating whether or not the property is located within the City's Flood Hazard (FH) Overlay District.*

The submission materials have been updated to include a tabulation of all overlay districts and buffers present on the site on the Site Plan Sheet (Sheet C-4).

3.17 *Section 15.04(23)(g) requires on the site plan a tabulation of the total number of dwelling units, and total number of dwelling units by type and number of bedrooms. Specifically, a note shall be added to the site plan for the total number of dwelling units and the total number of dwelling units by type and bedrooms.*

The Submission materials have been updated to include a tabulation of total number of dwelling units, total number of dwelling units by type, and number of bedrooms on the Site Plan Sheet (Sheet C-4).

3.18 *Section 15.04(23)(L) requires on the site plan a tabulation of required parking and loading areas, including handicapped and compact spaces. Specifically, the tabulation of required handicap accessible spaces shall be added to the parking tabulations on the site plan.*

The off-street parking requirements table has been updated to include accessible parking requirements and the proposed counts of accessible parking spaces. Refer to the Site Plans Sheet (Sheet C-4).

3.19 *Section 16.02(18) Demolition Plan requires where building, site improvement, or utility demolition is proposed, a demolition plan shall be provided. The demolition plan shall show the extent of removal of all building, structures, pavement, and landscaping, etc. Specifically, sheet C-6 indicates that the contractor will confirm feasibility to reuse all existing utilities. The feasibility of all existing utilities needs to be confirmed prior to final approval of the site plan for all municipal and non-municipal utilities; the demolition and utility plans shall be revised to incorporate limits of disturbance as necessary; and, the site plan and demolition plans shall be revised to show the restoration limits.*

The submission materials have been updated to reflect the existing utilities that are proposed to be demolished and replaced and the associated limit of disturbance line. Refer to the Demolition Plan Sheet (Sheet C-3).

3.20 *Section 16.03(5) Windows, Doors, and Roofs requires on the architectural plans, the type and pitch of roofs shall be noted on the elevations. The size and spacing of all windows and door openings shall be noted on the elevations. Specifically, the architectural elevations shall be revised to include the type and pitch of the roofs and size and spacing dimensions for all windows and door openings.*

The architectural elevations have been updated to include the size and spacing of all existing to remain windows and doors openings, as well as the type and pitch of the existing roof.

3.21 *Section 16.03(7) Colors and Materials requires on the architectural plans, the proposed colors and materials to be use for all siding, roofs, foundations, trim, doors, windows, mechanical equipment, and all other apparent features shall be noted on the architectural elevations. Specifically, the architectural elevations shall show the proposed colors to be used for siding, roofs, foundations, trim, doors, and windows. The architectural elevations shall also show mechanical equipment proposed as part of the project, or provide a note stating that there is no roof or ground mounted mechanical equipment proposed.*

The architectural plans have been updated to include the requested information.

3.22 *Section 16.03(9) Colored Rendering requires on the architectural plans, a colored rendering of each elevation shall be provided at a scale suitable for public display before the Architectural Design Review Committee and the Planning Board. Specifically, a colored rendering of each elevation shall be provided.*

The architectural plans have been updated to include the requested color rendering.

Site Plan Regulations Compliance:

3.23 *Section 13.02(8) State and Federal Permits requires prior to final approval, copies of approval for any required State or Federal Permits. Specifically, prior to final approval, copies of approval for any required State or Federal Permits shall be provided to the City Planning Division.*

Acknowledged.

3.24 *Section 18.06 Handicap Accessible Spaces requires parking spaces for vans carrying handicapped individuals shall contain a rectangular area of at least 19-feet in length and 11-feet in width, together with an access aisle of 5-feet in width immediately adjacent to the parking space. Whereas only 1 accessible space is provided and required it shall be van accessible. Specifically, the proposed dimensions of the accessible space and adjacent access aisle shall be revised so that the space is 11-feet wide and the access aisle is 5-feet in width to conform with Section 18.06 of the Site Plan Regulations and City of Concord Construction Detail M-4 Parking Space Layout.*

The Site Plan has been updated to reflect the dimensions of the for a van accessible parking space with a 19-feet in length and 11-feet in width parking space and 19-feet in length and 5-feet in width access aisle. Refer to the Site Plan Sheet (Sheet C-4).

3.25 *Section 18.17 Tree Plantings requires one tree shall be planted for each 1000 square feet of any proposed parking area including parking spaces, internal landscape islands, access aisles, driveways, fire lanes, and other vehicular circulation areas. Specifically, the applicant is proposing 2 new trees and to maintain 3 existing trees for 5 trees meeting the requirements of the less strict Section 28-7-10(d) Landscape Material Standards of the City's Zoning Ordinance. Where a conflict between two provisions occurs, the more strict shall apply. Specifically, the applicant shall revise their tree tabulations and tree plantings to meet the requirements of 1 tree per every 1,000-square-feet unless a waiver is requested and approved from Section 18.17 Tree Plantings to allow 1 tree per 2,000-square-feet of parking area, access aisles, and driveways instead of 1 tree per 1,000-square-feet.*

The Applicant acknowledges the comment and will comply as a condition of approval.

3.26 *Section 18.17 Tree Plantings states existing trees preserved on the site may count on a one for one basis when located within twenty (20) feet of any parking lot, access aisle, vehicular sale or rental area, driveway or loading area. Specifically, near the western corner of the building and accessible parking area, the applicant has identified an existing tree to remain being counted toward the total tree count. However, this tree is located on the property of 105 North State Street and cannot be included a part of the existing trees being counted toward the total required tree tabulations.*

The Applicant acknowledges the comment and will comply as a condition of approval.

3.27 *Section 18.21 Snow Storage requires provisions shall be made for snow storage in the design of all parking areas and snow storage areas shall be shown on the site plan. Snow storage areas shall be functional and designed to avoid damage to landscaping, to not impede site drainage, to not block pedestrian ways, or hinder vehicular access or block site lines at intersections, either on or off site. Specifically, the site plan shall show and note any and all provisions for snow storage of the site.*

The submission documents have been updated to reflect the snow storage locations and size information on Site Plan Sheet (Sheet C-4).

3.28 *Section 20.01 Solid Waste Facility Standards requires all areas where refuse or recycling containers are to be located as well as the area for the accommodation of vehicles which empty these containers, shall be provided as set forth in Article 28-7, Access Circulation and Parking of the City of Concord Zoning Ordinance, and the City of Concord Construction Standards and Details, as most recently adopted, and in accordance with these as these regulations.*

Acknowledged.

Section 28-7-14(b) Location of Refuse Container Loading Area's requires refuse container loading areas shall be designed to allow a collection vehicle to maneuver safely and conveniently to and from an adjacent street without any maneuvering, backing, or standing on any street.

Acknowledged.

Specifically, a vehicle turning template shall be provided demonstrating that the enclosure will be able to be safely and conveniently accessed and serviced by the servicing vehicle. If the proposed location cannot be safely and conveniently accessed then the location of the dumpster enclosure shall be relocated.

A vehicle maneuvering exhibit has been complied and submitted to demonstrate the ability of a front-loading refuse vehicle to enter the site, turn around, service the refuse area, and exit the site safely. Refer to the Vehicle Maneuvering Exhibit.

3.29 *Section 20.06 Solid Waste Facility Screening requires a solid waste disposal or recycling facility unless blocked from view from the public right-of-way and abutting properties by buildings or walls, shall be provided with solid opaque gates for the fenced enclosure. Specifically, the dumpster does not appear as though it will be entirely screened from view from the abutting 105 North State Street property and a gate shall be added to the front of the fence enclosure. A gate detail shall also be added to sheet C-12 Construction Details.*

The Site Plan Sheet has been updated to include a gate on the proposed trash enclosure. The trash enclosure detail has been updated to reflect the added gate. Refer to the Site Plan Sheet and Construction Details (Sheet C-4 and Sheet C-14).

3.30 *Section 20.07 Design of Solid Waste Disposal Areas requires the design of the screening shall be compatible with the architecture of the proposed development. Specifically, the Board on Board fence detail on Sheet C-12, intended for the dumpster enclosure does not specify the color or stain proposed and shall be added to the detail notes.*

The Applicant acknowledges the comment and will comply as a condition of approval. At this time the final stain of the fence has not been selected.

3.31 *Section 21.02 General Requirements requires both on-site, and off-site, sidewalks and other pedestrian facilities shall be provided in locations which are functional and efficient and which enhance pedestrian safety. Specifically, the accessible route from the accessible parking location to the accessible entrance requires significant travel in the 24-foot wide, 2-way drive aisle. The accessible access from the parking spaces to the accessible entrance shall be revised to provide for a safer route. Staff would recommend the applicant explore the feasibility of providing the accessible space at or near the location of the current dumpster enclosure to shorten the distance travelled.*

The applicant has reviewed the accessibility and pedestrian access in depth for the property, given this is an adaptive reuse of an existing non-conforming building being brough into the compliance the locations and design of the

3.32 *Section 26.02 Mechanical Equipment requires roof top and ground mounted mechanical equipment shall be provided with full screening from both abutting properties and public rights of way. Specifically, the applicant shall show any proposed rooftop or ground mounted mechanical equipment on the site plans or architectural plans as applicable. If no roof top or ground mounted is proposed, a note shall be added accordingly. The applicant shall also show the location of any existing or proposed external utility meters on the site plan and architectural elevations for review by the Architectural Design Review and Planning Board.*

The architectural plans have been updated to reflect the location of proposed mechanical equipment. Refer to the updated architectural plans.

3.33 *Section 27.07(4) Biodiversity requires proposed trees shall be selected to encourage biological diversity. No more than twenty-five (25%) percent of the trees to be planted in any development shall be of the same species. The applicant is proposing 9 arborvitae evergreen trees to meet certain screening requirements of the site. Specifically, the applicant shall revise the planting schedule to include a mix of evergreens that will satisfy the screening requirements and the biodiversity requirements, unless a waiver from this section is otherwise obtained.*

Acknowledged.

3.34 *Section 27.07(6) Planting Specifications requires all plant materials shall be planted in accordance with the City of Concord's Construction Standards and Details. Specifically, the proposed landscaping details on Sheet C-11 shall be replaced, or revised to meet or exceed the City Construction Details L-1 through L-9. Additionally, a note shall be added on the landscaping sheet that all work shall conform to the City of Concord Construction Standards and Details.*

Acknowledged.

3.35 *Section 29.04 Building and façade lighting requires all building and canopy lighting shall meet the standards contained in Article 28-7-7(j), Illumination of Parking Areas of the City of Concord Zoning Ordinance, and the standards established herein. Specifically, tabulations shall be provided on the lighting plan demonstrating that the building lighting meets or exceeds the requirements from Section 28-7-7(j) of a 4:1 lighting uniformity ratio, which is the ratio of average illumination to minimum illumination.*

Acknowledged.

3.36 *Section 29.07 Nuisance and Glare requires light trespass beyond property boundaries greater than two-tenths (0.2) foot candles anywhere above the horizontal plane shall be considered non- compliant. Specifically, the lighting plan appears to show a foot candle measurement of 0.3 outside of the property boundaries at the driveway connection to North State Street and shall be revised so that no light trespass beyond property boundaries is greater than 0.2-foot candles.*

The lighting plan has been updated to reflect the new location of the wall mounted light fixture and the associated calculations. Refer to the Lighting Plan Sheet (Sheet C-7).

3.37 *In addition to remaining on the cover sheet of the civil plan set, the Planning Board approval block also needs to be added to Sheet C-4 Site Plan.*

The Site Plan Sheet has been updated to include the Planning Board approval block. Refer to the Site Plan Sheet (Sheet C-4).

3.38 *Whereas architectural design review approval is required for this application, the architectural plans are shall be incorporated as part of the final approval. The applicant shall provide on the cover sheet of the architectural plans a sheet index and the Planning Board approval block, or the civil and architectural plans may be combined into a single project plan set with the architectural sheets listed in the sheet index.*

The architectural plans have been updated to include the Planning Boards approval block. Refer to the Architectural Plans.

3.39 *The Engineering Services Division compliance comments are noted in the attached 6-page memo to Alec Bass from Paul Gildersleeve and Pete Kohalmi, dated April 2, 2026.*

Please see below initial responses, as a condition of approval compliance would be provided.

Conditional Use Permits:

6.1 *The applicant requests approval for a conditional use permit pursuant to Section 28-4-5(e)(1) Mixed Use Component Required to waive the requirement to provide a nonresidential use on a lot larger than 20,000-square-feet that is located within the Civic Performance (CVP) District.*

Analysis of the required criteria for Section 28-9-4(b) Conditional Use Permits for the principal use follows:

a. *The use is specifically authorized in this ordinance as a conditional use;*

Review: The applicant has not provided information addressing this criterion. Because the applicable information relative to this criterion has not been provided, Staff cannot determine at this time if this criterion has been met.

The use is specifically authorized by ordinance and within this zone.

b. *If completed as proposed by the applicant, the development in its proposed location will comply with the requirements of this article, and with the specific conditions of standards established in this ordinance for the particular use;*

Review: The applicant has not provided information addressing this criterion. Because the applicable information relative to this criterion has not been provided, Staff cannot determine at this time if this criterion has been met.

The development in its proposed location will comply with the requirements of the article and with the conditions of standards established in this ordinance for the particular use other than the commercial component.

c. *The use will not materially endanger the public health or safety;*

Review: The applicant has not provided information addressing this criterion. Because the applicable information relative to this criterion has not been provided, Staff cannot determine at this time if this criterion has been met.

The use will not materially endanger the public health or safety, and will benefit the community by providing additional housing.

d. *The use will be compatible with the neighborhood and with adjoining or abutting uses in the area in which it is to be located;*

Review: The applicant has not provided information addressing this criterion. Because the applicable information relative to this criterion has not been provided, Staff cannot determine at this time if this criterion has been met.

The use is compatible with the neighborhood and with adjoining or abutting uses in the area in which it is to be located. The use is permitted with the area.

e. *The use will not have an adverse effect on highway or pedestrian safety;*

Review: The applicant has not provided information addressing this criterion. Because the applicable information relative to this criterion has not been provided, Staff cannot determine at this time if this criterion has been met.

The use will not have an adverse effect on highway or pedestrian safety.

f. *The use will not have an adverse effect on the natural, environmental, and historic resources of the City;*

Review: The applicant has not provided information addressing this criterion. Because the applicable information relative to this criterion has not been provided, Staff cannot determine at this time if this criterion has been met.

The use will not have an adverse effect on the natural, environmental, and historic resources of the City. The proposed adaptive reuse is a positive impact.

g. *The use will be adequately serviced by necessary public utilities and by community facilities and services of a sufficient capacity to ensure the proper operation of the proposed use, and will not necessitate excessive public expenditures to provide facilities and services with sufficient additional capacity.*

Review: The applicant has not provided information addressing this criterion. Because the applicable information relative to this criterion has not been provided, Staff cannot determine at this time if this criterion has been met.

The use will be adequately serviced by necessary public utilities and by community facilities and services of a sufficient capacity to ensure the proper operation of the proposed use, and will not necessitate excessive public expenditures to provide facilities and services with sufficient additional capacity. The proposed use can be serviced.

The following is an itemized response to the comments contained within the City of Concord Memorandum dated April 2, 2026. For the sake of brevity, any comments that are statements of fact or have been previously addressed are not included in the response below:

1. General

   a. *Provide any State and Federal permits required, pursuant to CSPR 13.02(8).*

      Acknowledged.

2. Stormwater Management Plan

   a. *Include the pipe sizing in the existing and proposed HydroCAD analysis, pursuant to CSPR 16.02(12)(a) and 22.07(1).*

      Pipe sizing will be provided as a condition of approval.

3. Sheet C-2: Existing Conditions Plan

   a. *Show the existing sanitary-sewer service-line size, material, and slope, and the rim and invert elevations of existing manhole 1084 and downstream manhole 1083 and the pipe length between them, pursuant to CSPR 15.03(10). Show drainage manhole 1083 on the plans.*

      The Existing Conditions Plan has been updated to include the known rim elevations and inverts for manholes 1084 and 1083. Refer to the Existing Condition Plan Sheet (Sheet C-2).

   b. *Show the existing rims and inverts of storm manhole 4901 and onsite catch basin 1312 and the length of pipe between them, pursuant to CSPR 15.03(10).*

      The existing conditions plan sheet has been updated to include the rim elevation and pipe inverts of storm manhole 4901 and catch basin 1312. Refer to the Existing Conditions Plan Sheet (Sheet C-2).

   c. *Show existing easements and restriction information, pursuant to CSPR 12.06(2,3). If none exist, indicate as such.*

      The Existing Conditions Plan sheet has been updated to include a note stating the presence of easements or restrictions located on site. Refer to the Existing Conditions Plans Sheet (Sheet C-2).

   d. *Show the existing address on plan view, pursuant to CSPR 15.04(5).*

      The Existing Conditions Plan has been updated to reflect the property owner, address, Tax Map Lot information and applicable deed citations on the Existing Conditions Sheet and Site Plan Sheet (Sheet C-2).

   e. *Show the North State Street Right of Way width, pursuant to CSPR 15.04(9).*

      The Existing Conditions Plan has been updated to include the dimension for the North State Street Right-of-Way. Refer to the Existing Conditions Plan Sheet (Sheet C-2).

f. *The Existing Conditions Plan appears to be a boundary survey and needs to be stamped by a licensed land surveyor. Or, in the alternative, substitute a stamped Richard D. Bartlett & Associates survey plan.*

A signed and sealed survey has been provided.

g. *A lot of the text on the existing conditions plan, including boundary data, is obscured by lines and/or physical feature line types. The plan should be cleaned up so that all of the text is readable.*

The existing conditions plan has been updated for clarity, additionally the existing conditions plan from the Surveyor has been included in the resubmission package. Refer to the Existing Conditions Plan Sheet and Existing Conditions Plan (Sheet C-2).

4. Sheet C-4: Site Plan

a. *Asphalt curb and curb transitions are not allowed, pursuant to CCSD Section 3(3)(C) and CSPR 18.19. Please replace them with granite.*

The proposed asphalt curbing is contained on-site.

b. *Please provide CCSD Detail CR-3 for handicap ramps.*

The Construction Details Sheets have been updated to include Detail CR-3. Refer to Construction Details Sheet (Sheet C-13).

c. *Please show a striped, accessible path of travel from the handicap unloading area to the front entrance, pursuant to 2010 ADA Standards requirements and CSPR 21.04, and as referenced in ADA Note (5) on Sheet C-5.*

The Site Plan has been updated to show a proposed 4-feet in width striped access path from the ADA access aisle to the front of the property. Refer to the Site Plan Sheet (Sheet C-4).

d. *Please provide a detail with elevations for the main (side) entrance, steps, handicap ramp, and accessible path of travel.*

Acknowledged, a construction detail for the stairs and ramp at the side entrance is to be provided in the construction documents.

e. *Show snow storage locations, pursuant to CSPR 18.21. Ensure all snow is removed from the accessible path of travel.*

The Site Plan has been updated to reflect the snow storage locations and size information on Site Plan Sheet (Sheet C-4).

f. *Label the type of sign used adjacent to the handicap parking space, pursuant to CSPR 18.09.*

The Site Plan has been updated to include a sign call out for the ADA parking area. Refer to Site Plan Sheet (Sheet C-4).

g. *Provide an asphalt sidewalk detail for the proposed sidewalk in the ROW.*

The Construction Details Sheets have been updated to include an asphalt sidewalk detail. Refer to Construction Details Sheet (Sheet C-13).

h. *Show driveway flares where the proposed drive connects to N. State Street, as required in Detail D-5 on Sheet C-13, and pursuant to CSPR 18.10.*

The Site Plans has been updated to reflect the driveway as shown in detail D-5. Refer to the Site Plan Sheet (Sheet C-4).

i. *Show a callout for the onsite curbing to be vertical granite.*

On-site curbing is proposed to be asphalt cubring.

j. *Add CCSD Detail M-8, Single Dumpster Pad, to a detail sheet, pursuant to CSPR 20.07.*

The on-site private dumpster has been shown within the construction details.

k. *Confirm that the parking area is to be reconstructed per the Full Depth Asphalt Pavement Detail on sheet C-12 and call out on Site Plan.*

The Site Plan has been updated to include a note for proposed full depth asphalt. Refer to Site Plan Sheet (Sheet C-12).

l. *Please include any proposed easements, restrictions, or covenants, pursuant to CSPR 16.02(9). If none exist, indicate as such.*

The Existing Conditions Plan sheet has been updated to include a note stating the presence of easements or restrictions located on site. Refer to the Existing Conditions Plans Sheet (Sheet C-2).

m. *This sheet and subsequent sheets should include the boundary line data.*

The Site Plan Sheet has been updated to include the boundary line data. Refer to the Site Plan Sheet (Sheet C-4).

5. Sheet C-5: Grading Plan

a. *Please show grades at the driveway entrance that reflect the 2% slope required by Detail D-5 on Sheet C-13. The intent is to create a high point in the driveway entrance to separate street runoff from parking lot runoff.*

The grades have been provided.

b. *The curb heights shown are only 0.5'; however, 7" vertical granite curbing shown on Sheet C-13 requires a 0.58" height. Please revise the TC and BC height differential to be 7".*

The curb height has been provided once the transitions are completed.

6. Sheet C-6: Stormwater Management and Utility Plan

a. *The existing 1" domestic water service is not large enough to support this proposed development. Consider using the existing 6" fire line for domestic purposes also, or upsize the 1" pipe, pursuant to CSPR 15.04(17) and 16.02(14)(a), and 23.04(6).*

The Stormwater Management and Utility Plan has been updated to reflect the use of the existing 6" fire line for domestic and fire service. Refer to the Stormwater Management and Utility Plan Sheet (Sheet C-6).

b. *The existing 5"/6" sewer service is insufficient to service the proposed 21 units. Multi-family units require a minimum of 6" diameter pipe. Please replace with a new pipe of sufficient size as per CCSD 4.03.B.14 and CSPR 24.05.*

The Stormwater Management and Utility Plan has been updated to include a new proposed 6" Sanitary Service for the building. Refer to Stormwater Management and Utility Plan Sheet (Sheet C-6).

7. Sheet C-9: Soil Erosion and Sediment Control Details

a. Replace the Stabilized Construction Access Detail with CCSD Detail E-1.

The Soil Erosion and Sediment Control Details have been updated to include Detail E-1. Refer to the Soil Erosion and Sediment Control Details Sheet (C-9).

8. Sheet C-12: Construction Details

a. *On the Full Depth Asphalt Pavement Detail, change the "1" deep" to "1.5" deep," pursuant to CCSD Detail R-11. Include CCSD Details R-11 and R-12 on this sheet. Please show in plan view the sawcut line for the asphalt.*

The Construction Details have been revised to show "1.5" deep" to the milled asphalt note as well as include Details R-11 and R-12. Refer to Construction Details Sheets (Sheet C-12 and Sheet C-13).

b. *Remove the Parking Stall Markings, Accessible Parking Stall Markings, and Stop Bar & Arrow Details, and replace them with CCSD Details M-3-5.*

The Construction Details have been updated include Details M3 – M5. Refer to Construction Detail Sheets (Sheet C-12 and Sheet C-13).

c. *Callout on plan view the location the Concrete to Asphalt Transition Detail references.*

The Site plan has been updated to include a call out showing the location of a concrete to asphalt transition. Refer to the Site Plan Sheet (Sheet C-4).

d. *Add a handicap sign to the Sign Data Table Detail. Remove the Sign Post Detail and replace it with CCSD Detail M-1.*

The sign detail has been replaced with

e. *Remove the Asphalt Curb Detail.*

Noted.

f. *In the Reinforced 6" Concrete Mat Detail, Note (2), replace 1" thickness with "thickness shall be a minimum depth of ¼ thickness of slab," pursuant to CCSD Section 3(3)(O)(4). Show a callout on plan view of this detail, or remove the detail from this sheet.*

Acknowledged.

g. *On the Accessible Entrance Landing Detail, the landing must be a minimum of 60", pursuant to 2010 ADA Standards 405.7.3.*

Acknowledged.

9. Sheet C-13: Construction Details

   a. *Callout on plan view the location the Slope to Vertical Granite Curb Transition and the Vertical Granite Curb Details reference.*

      The callout has been provided.

   b. *Show a detail for and callout on plan view the Accessible Path of Travel required on Sheet C-4 from the handicap ramp unloading area to the front entrance.*

      The path of travel has been provided on the plan.

STONEFIELD

STORMWATER MANAGEMENT STATEMENT

Project: Associated Enterprise, INC.
Proposed Multi-family Residential Adaptive Reuse
Map 6414Z, Lot 1
103 North State Street
City of Concord, Merrimack County, New Hampshire

Dated: March 18, 2026

Reference: ***Site Plan***
(Prepared by Stonefield Engineering & Design, LLC, dated March 11, 2026)

PROJECT DESCRIPTION

Associated Enterprise, Inc. is proposing the adaptive reuse of an approximately 15,431 SF commercial building into a multi-family dwelling building with associated site improvements. The subject property is designated as Map 6414Z, Lot 1, commonly known as 103 North State Street.

The total project area is 20,653 SF (0.42 acres), the total area of impervious surfaces has decreased by 370 SF (0.008 acres), and the total area of disturbance is 15,066 SF (0.36 acres).

This Stormwater Management Statement has been prepared to analyze the stormwater conditions and has been prepared in accordance with the standards of the City of Concord.

In accordance with the City of Concord Site Plan Regulations the project is defined as a 'Minor Impact' Site Plan and the Stormwater Manageemnt Plan, and this statement have been prepared to address the standards and requirements outlined within the regulation. The project does not exceed pre-development conditions, reduces the quantity of storm water runoff through reduction of impervious surfaces, and implements a water quality unit to provide enhanced treatment of runoff to improve the quality of stormwater runoff.

PRE-DEVELOPMENT DRAINAGE CONDITIONS

Under existing conditions, the project site including the existing parking area and private driveway are collected via an existing catch basin within the parking area ultimately discharging to the conveyance within North State Street. The point of interest (POI) for the project is the municipal conveyance system within North State Street.

TABLE 1: PRE-DEVELOPMENT DRAINAGE AREA

Drainage Area	Description	Area Extents	Impervious Area	Time of Concentration
EX-1	Existing Runoff to North State Street (POI)	20,653 SF	15,436 SF	6.0*

**A minimum time of concentration of 6.0 minutes was assumed for the purposes of these calculations.*

Existing hydrologic calculations can be found in **APPENDIX A** of this Statement.

POST-DEVELOPED DRAINAGE CONDITIONS

Under proposed conditions, the general drainage patterns and ultimate Points of Interest will be maintained. The intent behind the proposed design is to maintain existing drainage patterns while reducing on-site impervious surfaces.

TABLE 2: POST-DEVELOPMENT DRAINAGE AREA

Drainage Area	Description	Area Extents	Impervious Area	Time of Concentration
P-1	Proposed Runoff to North State Street (POI)	20,653 SF	15,066 SF	6.0*

**A minimum time of concentration of 6.0 minutes was assumed for the purposes of these calculations.*

Proposed hydrologic calculations can be found in **APPENDIX A** of this Statement.

STORM EVENTS (PRE- VS. POST ANALYSIS)

In accordance with the City of Concord Site Plan Regulations the project through reduction in impervious surfaces shows a reduction in peak runoff flow rate and quantity for the site. Detailed hydrologic calculations comparing existing and proposed conditions can be found in Appendix B.

TABLE 3: STORMWATER RUNOFF

Storm Event	Existing Flow Rate (EX-1)	Proposed Flow Rate (P-1)	Proposed Reduction (%)
2-Year Storm	0.95 CFS	0.92 CFS	3.2%
10-Year Storm	1.52 CFS	1.48 CFS	2.6%
50-Year Storm	2.20 CFS	2.15 CFS	2.3%

TABLE 4: STORMWATER RUNOFF QUANTITY SUMMARY

Storm Event	Existing Volume (EX-1)	Proposed Volume (P-1)	Proposed Reduction (%)
2-Year Storm	3,254 CF	3,176 CF	2.4%
10-Year Storm	5,385 CF	5,260 CF	2.3%
50-Year Storm	8,044 CF	7,873 CF	2.1%

STORMWATER (GROUNDWATER) RECHARGE

The proposed redevelopment project generally maintains stormwater (groundwater) recharge rates on-site. The project overall decreases impervious surfaces to naturally enhance groundwater recharge on-site.

OFF-SITE FLOWS

The redevelopment project and surrounding area is generally flat and on-site runoff is maintained on-site. The project will not create new and/or additional off-site flows.

WATER QUALITY – PRE-TREATMENT, WATER QUALITY VOLUME, & DESIGN

The proposed redevelopment project replaces the on-site catch basin within the parking lot with a Contech CS-3 water quality unit to meet pre-treatment and water quality standards. The Contech CS-3 has been sized per manufacturer specifications to meet a predicted net annual TSS load removal efficiency of 93.4%. See **Appendix D** for the manufacturer TSS removal spreadsheet and the below **Table 5** for water quality volume and water quality flow calculations.

TABLE 5: STORMWATER RUNOFF QUANTITY SUMMARY

BMP ID	Drainage Area (SF)*	Impervious Area (SF)*	Required WQ Volume (CF)	Q (runoff depth) (in)	CN	I_a	I_a / P	Unit Peak Discharge (q_u) ($cfs/mi^2/in$)	WQ_f (cfs)
WQ-1	20,653 SF	15,066 SF	1,256 CF	0.85 in	98	0.04	0.03	600	0.38 cfs

CONCLUSION

As demonstrated within the Stormwater Management Plan and Statement, the project does not exceed pre-development conditions, reduces the quantity of storm water runoff through reduction of impervious surfaces, and implements a water quality unit to provide enhanced treatment of runoff to improve the quality of stormwater runoff.

The proposed project complies with all applicable stormwater management regulations and standards. As such, the project is not anticipated to have any adverse drainage impacts on neighboring properties, downstream watercourses, or adjoining conveyance systems.

Prepared by:

Joshua Kline, PE, PP

NH PE License No. 16530
Stonefield Engineering and Design, LLC

APPENDIX A
NRCS SOIL SURVEY

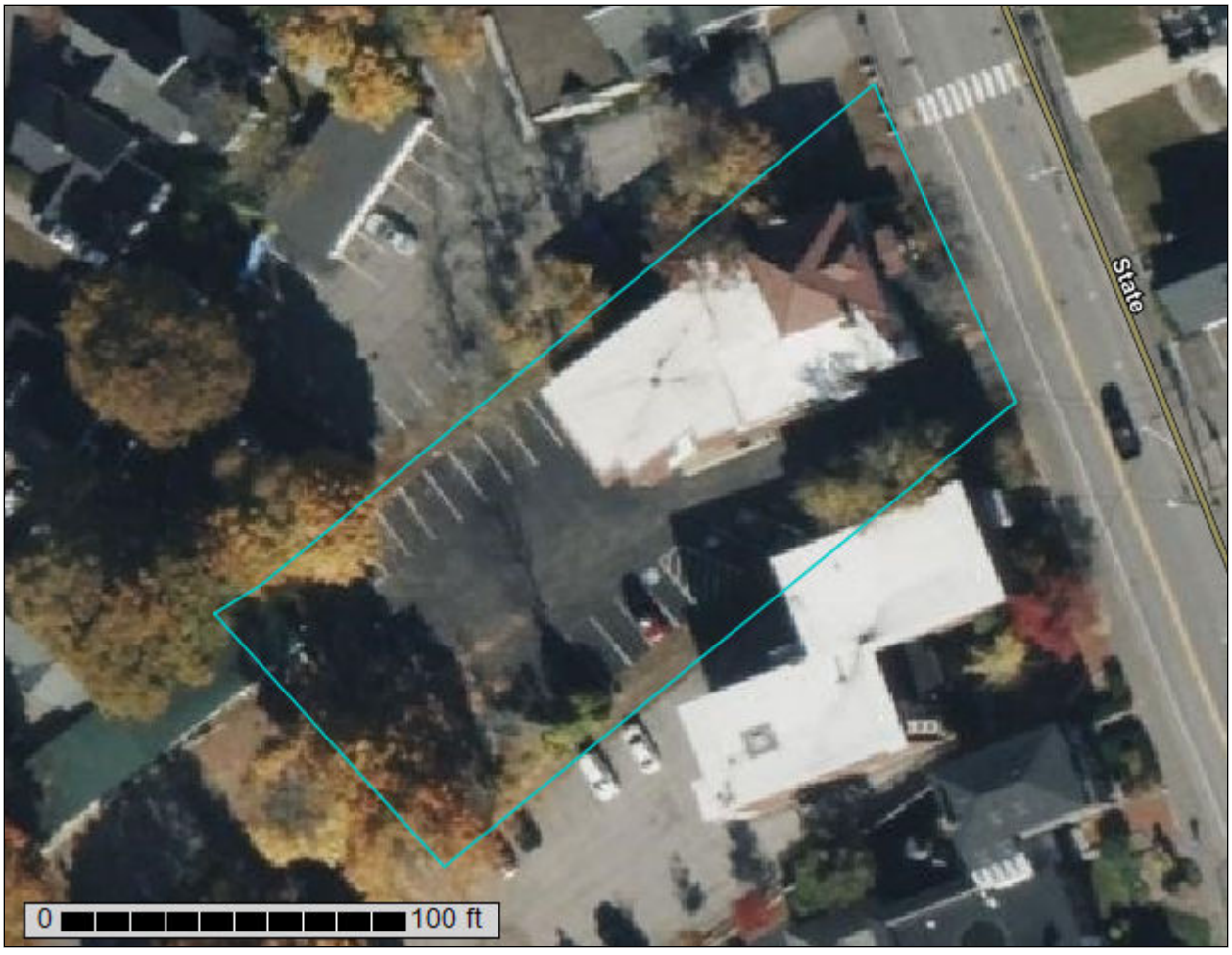
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Merrimack and Belknap Counties, New Hampshire



March 9, 2026

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:586 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Merrimack and Belknap Counties, New Hampshire
Survey Area Data: Version 31, Sep 10, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 6, 2022—Oct 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
598B	Windsor-Urban land complex, 0 to 8 percent slopes	0.5	100.0%
Totals for Area of Interest		**0.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Merrimack and Belknap Counties, New Hampshire

598B—Windsor-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w2wq
Landscape: Valleys
Elevation: 0 to 920 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Windsor and similar soils: 45 percent
Urban land: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor

Setting

Landscape: Valleys
Landform: Dunes, Deltas, Outwash terraces, Outwash plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

A - 0 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Description of Urban Land

Setting

Landscape: Glaciated uplands
Anthropogenic Feature: Urban land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Udorthents

Percent of map unit: 10 percent
Landscape: Valleys
Landform: Dunes, Deltas, Outwash terraces, Outwash plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landscape: Outwash plains, valleys
Landform: Deltas, Kames, Eskers, Outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Deerfield

Percent of map unit: 5 percent
Landscape: Outwash plains, valleys
Landform: Deltas, Kame terraces, Outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

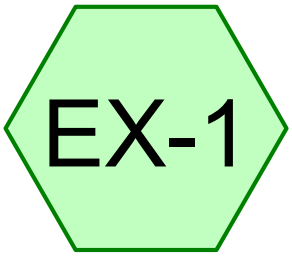
United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

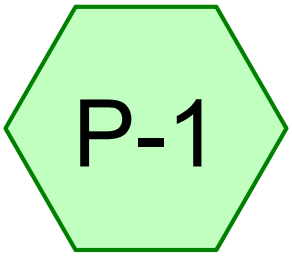
United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX B
HYDROCAD HYDROLOGIC CALCULATIONS



Existing Site



Proposed Site

Subcat Reach Pond Link

Routing Diagram for HydroCAD

Prepared by Stonefield Engineering & Design, Printed 3/18/2026

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: Existing Site Runoff Area=20,653 sf 74.74% Impervious Runoff Depth=1.89"
Flow Length=136' Tc=6.0 min CN=39/98 Runoff=0.95 cfs 3,254 cf

Subcatchment P-1: Proposed Site Runoff Area=20,653 sf 72.95% Impervious Runoff Depth=1.85"
Flow Length=149' Tc=6.0 min CN=39/98 Runoff=0.92 cfs 3,176 cf

Total Runoff Area = 41,306 sf Runoff Volume = 6,429 cf Average Runoff Depth = 1.87"
26.16% Pervious = 10,804 sf 73.84% Impervious = 30,502 sf

Summary for Subcatchment EX-1: Existing Site

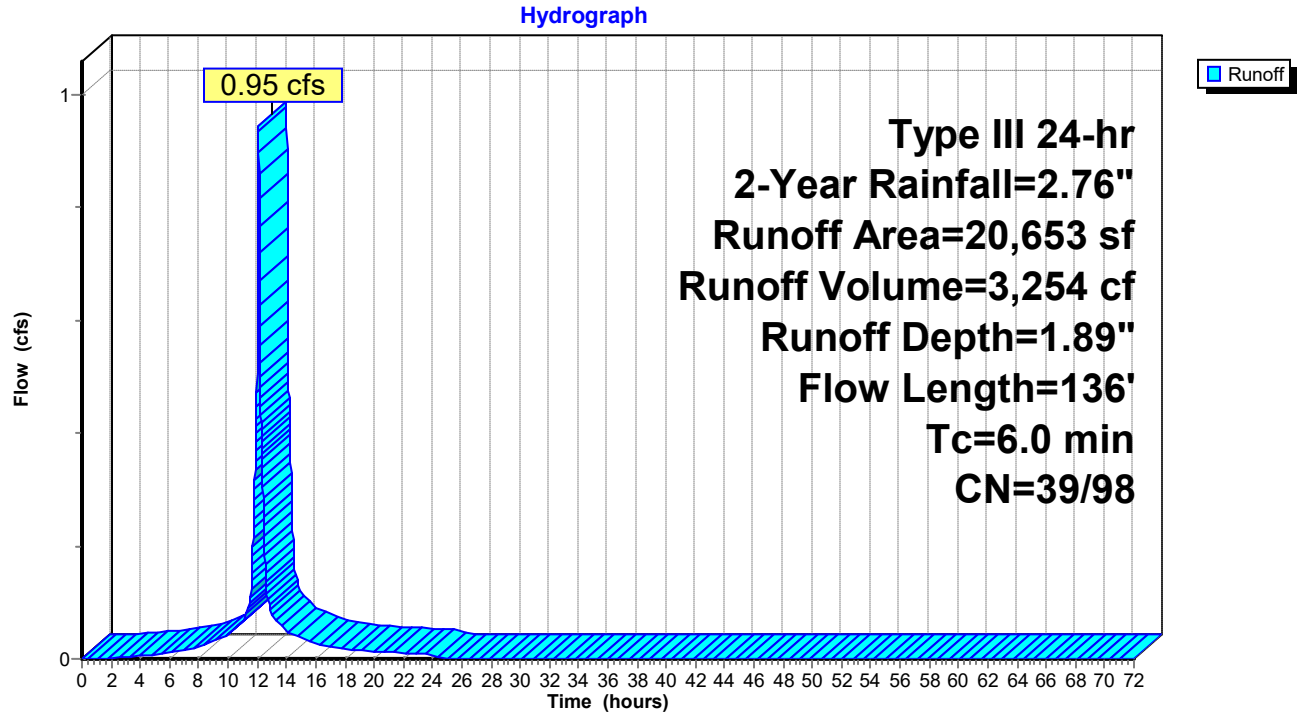
Runoff = 0.95 cfs @ 12.08 hrs, Volume= 3,254 cf, Depth= 1.89"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.76"

Area (sf)	CN	Description
15,436	98	Paved parking, HSG A
5,217	39	>75% Grass cover, Good, HSG A
20,653	83	Weighted Average
5,217	39	25.26% Pervious Area
15,436	98	74.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	11	0.0100	0.05		**Sheet Flow, Grass** Grass: Dense n= 0.240 P2= 2.76"
0.7	125	0.0188	2.78		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
4.2	136	Total, Increased to minimum Tc = 6.0 min			

Subcatchment EX-1: Existing Site



Summary for Subcatchment P-1: Proposed Site

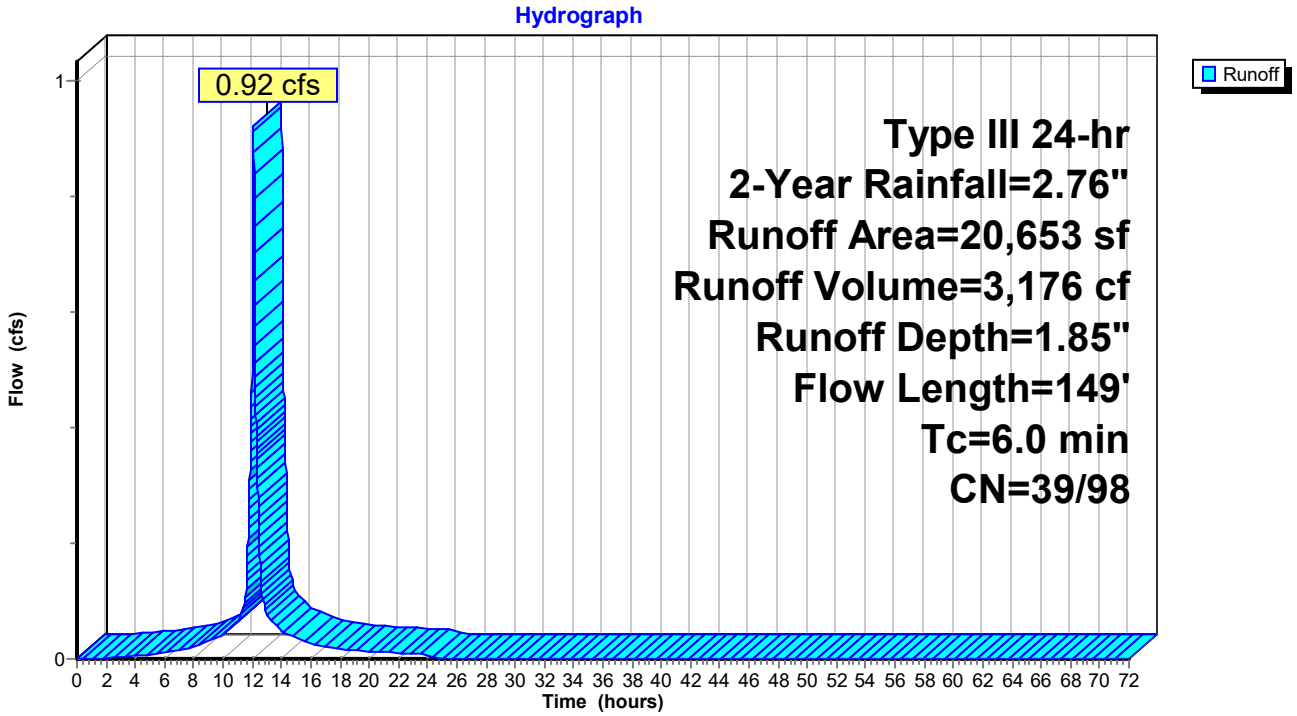
Runoff = 0.92 cfs @ 12.08 hrs, Volume= 3,176 cf, Depth= 1.85"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=2.76"

Area (sf)	CN	Description
15,066	98	Paved parking, HSG A
5,587	39	>75% Grass cover, Good, HSG A
20,653	82	Weighted Average
5,587	39	27.05% Pervious Area
15,066	98	72.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0024	0.55		**Sheet Flow, Grass** Smooth surfaces n= 0.011 P2= 2.76"
0.4	49	0.0081	1.83		**Shallow Concentrated Flow, 1B-1C** Paved Kv= 20.3 fps
3.4	149	Total, Increased to minimum Tc = 6.0 min			

Subcatchment P-1: Proposed Site



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: Existing Site Runoff Area=20,653 sf 74.74% Impervious Runoff Depth=3.13"
Flow Length=136' Tc=6.0 min CN=39/98 Runoff=1.52 cfs 5,385 cf

Subcatchment P-1: Proposed Site Runoff Area=20,653 sf 72.95% Impervious Runoff Depth=3.06"
Flow Length=149' Tc=6.0 min CN=39/98 Runoff=1.48 cfs 5,260 cf

Total Runoff Area = 41,306 sf Runoff Volume = 10,644 cf Average Runoff Depth = 3.09"
26.16% Pervious = 10,804 sf 73.84% Impervious = 30,502 sf

Summary for Subcatchment EX-1: Existing Site

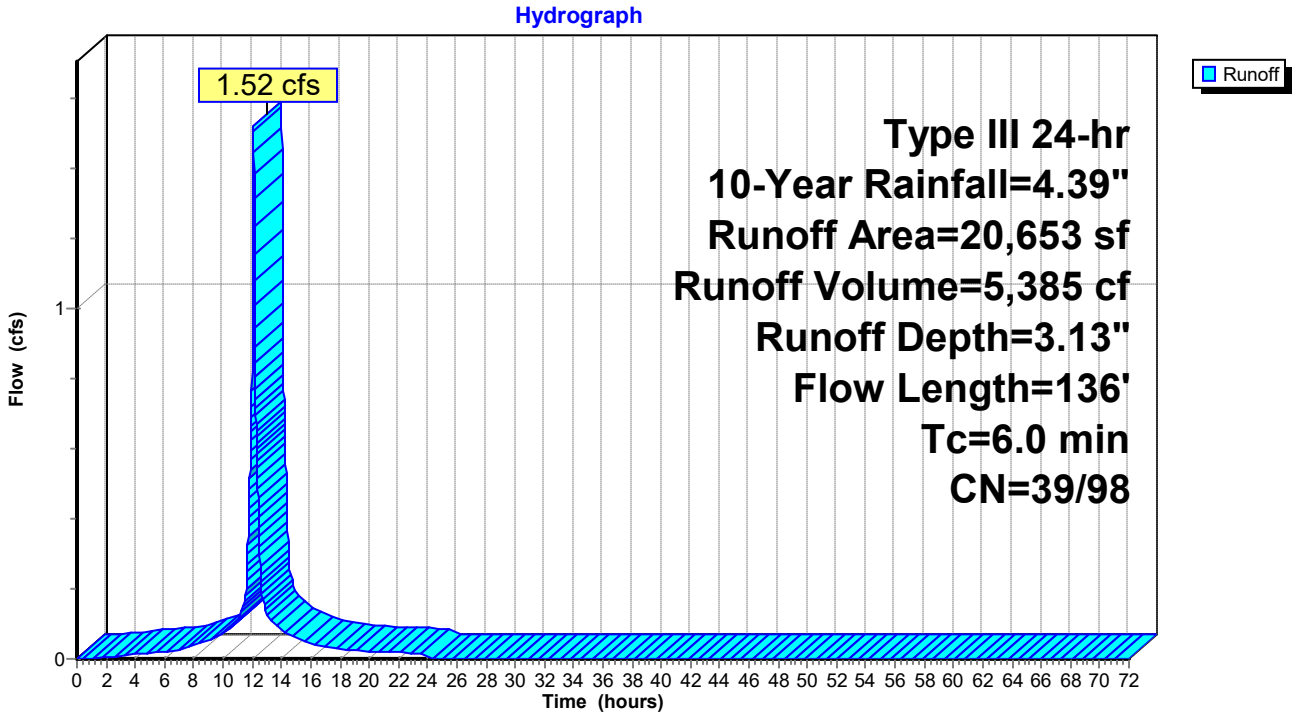
Runoff = 1.52 cfs @ 12.08 hrs, Volume= 5,385 cf, Depth= 3.13"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.39"

Area (sf)	CN	Description
15,436	98	Paved parking, HSG A
5,217	39	>75% Grass cover, Good, HSG A
20,653	83	Weighted Average
5,217	39	25.26% Pervious Area
15,436	98	74.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	11	0.0100	0.05		**Sheet Flow, Grass** Grass: Dense n= 0.240 P2= 2.76"
0.7	125	0.0188	2.78		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
4.2	136	Total, Increased to minimum Tc = 6.0 min			

Subcatchment EX-1: Existing Site



Summary for Subcatchment P-1: Proposed Site

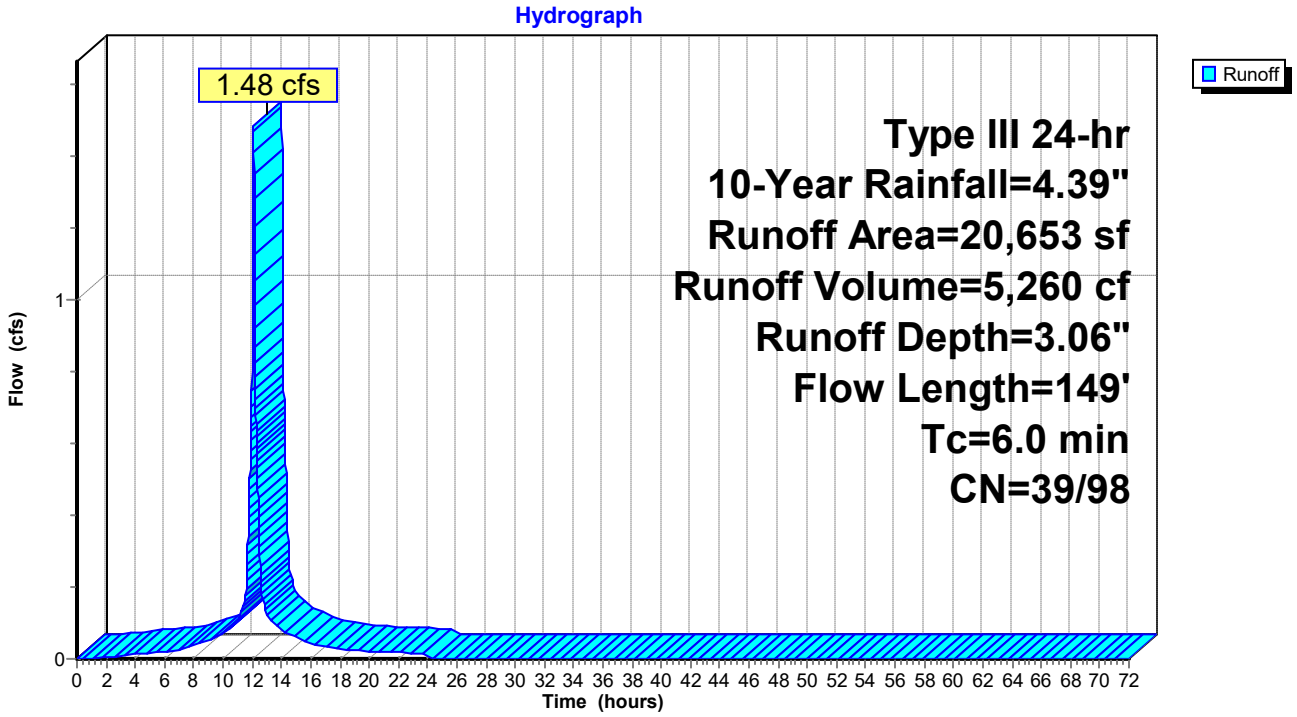
Runoff = 1.48 cfs @ 12.08 hrs, Volume= 5,260 cf, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.39"

Area (sf)	CN	Description
15,066	98	Paved parking, HSG A
5,587	39	>75% Grass cover, Good, HSG A
20,653	82	Weighted Average
5,587	39	27.05% Pervious Area
15,066	98	72.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0024	0.55		**Sheet Flow, Grass** Smooth surfaces n= 0.011 P2= 2.76"
0.4	49	0.0081	1.83		**Shallow Concentrated Flow, 1B-1C** Paved Kv= 20.3 fps
3.4	149	Total, Increased to minimum Tc = 6.0 min			

Subcatchment P-1: Proposed Site



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: Existing Site Runoff Area=20,653 sf 74.74% Impervious Runoff Depth=4.67"
Flow Length=136' Tc=6.0 min CN=39/98 Runoff=2.20 cfs 8,044 cf

Subcatchment P-1: Proposed Site Runoff Area=20,653 sf 72.95% Impervious Runoff Depth=4.57"
Flow Length=149' Tc=6.0 min CN=39/98 Runoff=2.15 cfs 7,873 cf

Total Runoff Area = 41,306 sf Runoff Volume = 15,917 cf Average Runoff Depth = 4.62"
26.16% Pervious = 10,804 sf 73.84% Impervious = 30,502 sf

Summary for Subcatchment EX-1: Existing Site

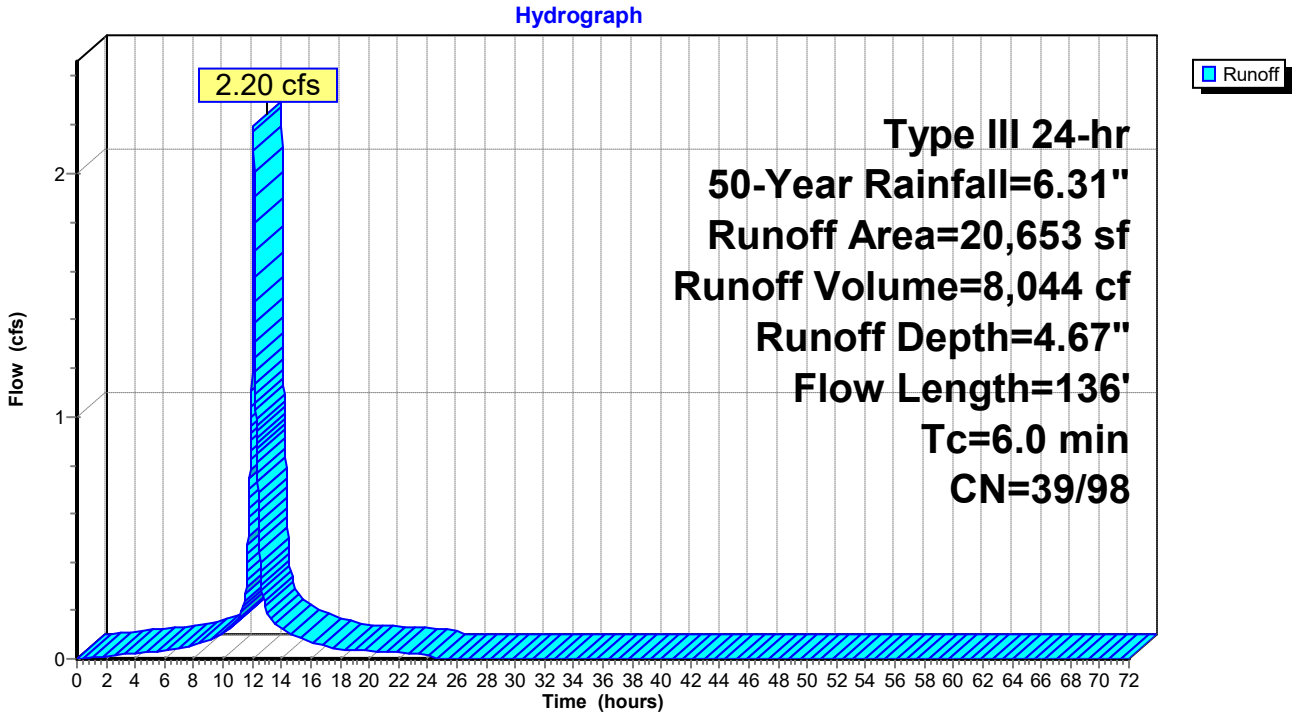
Runoff = 2.20 cfs @ 12.08 hrs, Volume= 8,044 cf, Depth= 4.67"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year Rainfall=6.31"

Area (sf)	CN	Description
15,436	98	Paved parking, HSG A
5,217	39	>75% Grass cover, Good, HSG A
20,653	83	Weighted Average
5,217	39	25.26% Pervious Area
15,436	98	74.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	11	0.0100	0.05		**Sheet Flow, Grass** Grass: Dense n= 0.240 P2= 2.76"
0.7	125	0.0188	2.78		**Shallow Concentrated Flow, pavement** Paved Kv= 20.3 fps
4.2	136	Total, Increased to minimum Tc = 6.0 min			

Subcatchment EX-1: Existing Site



Summary for Subcatchment P-1: Proposed Site

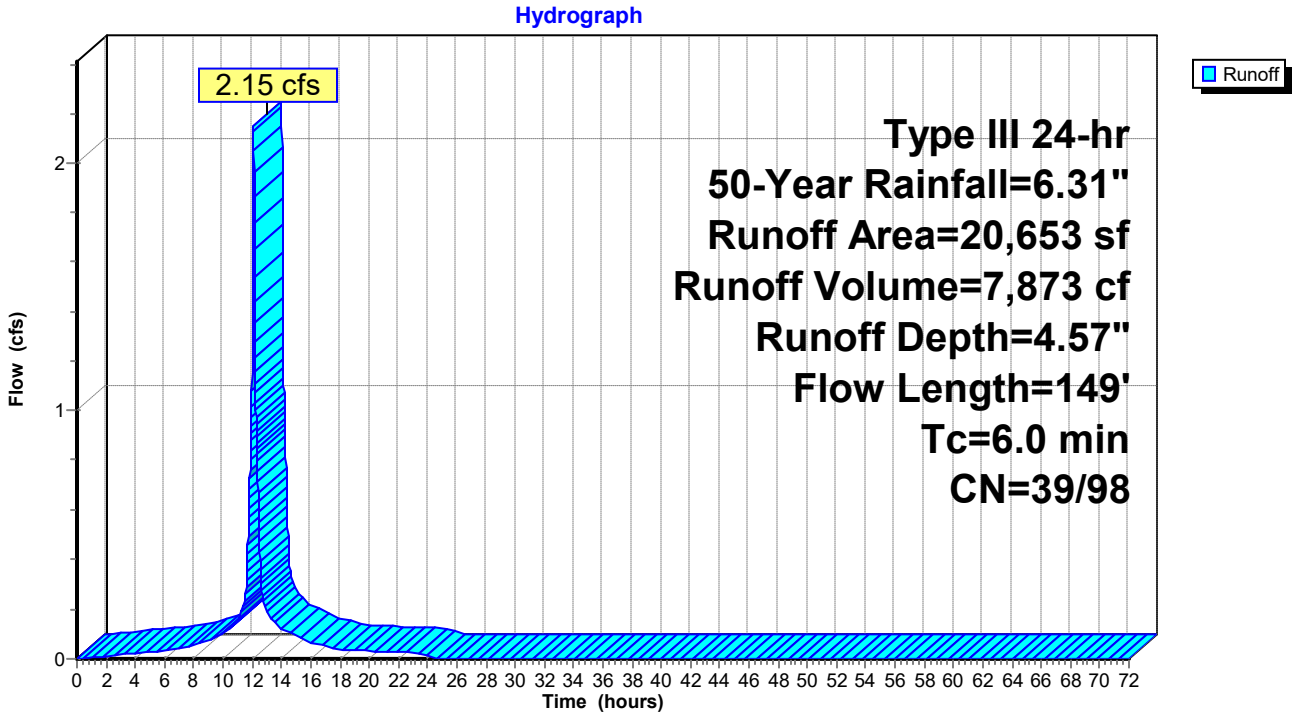
Runoff = 2.15 cfs @ 12.08 hrs, Volume= 7,873 cf, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year Rainfall=6.31"

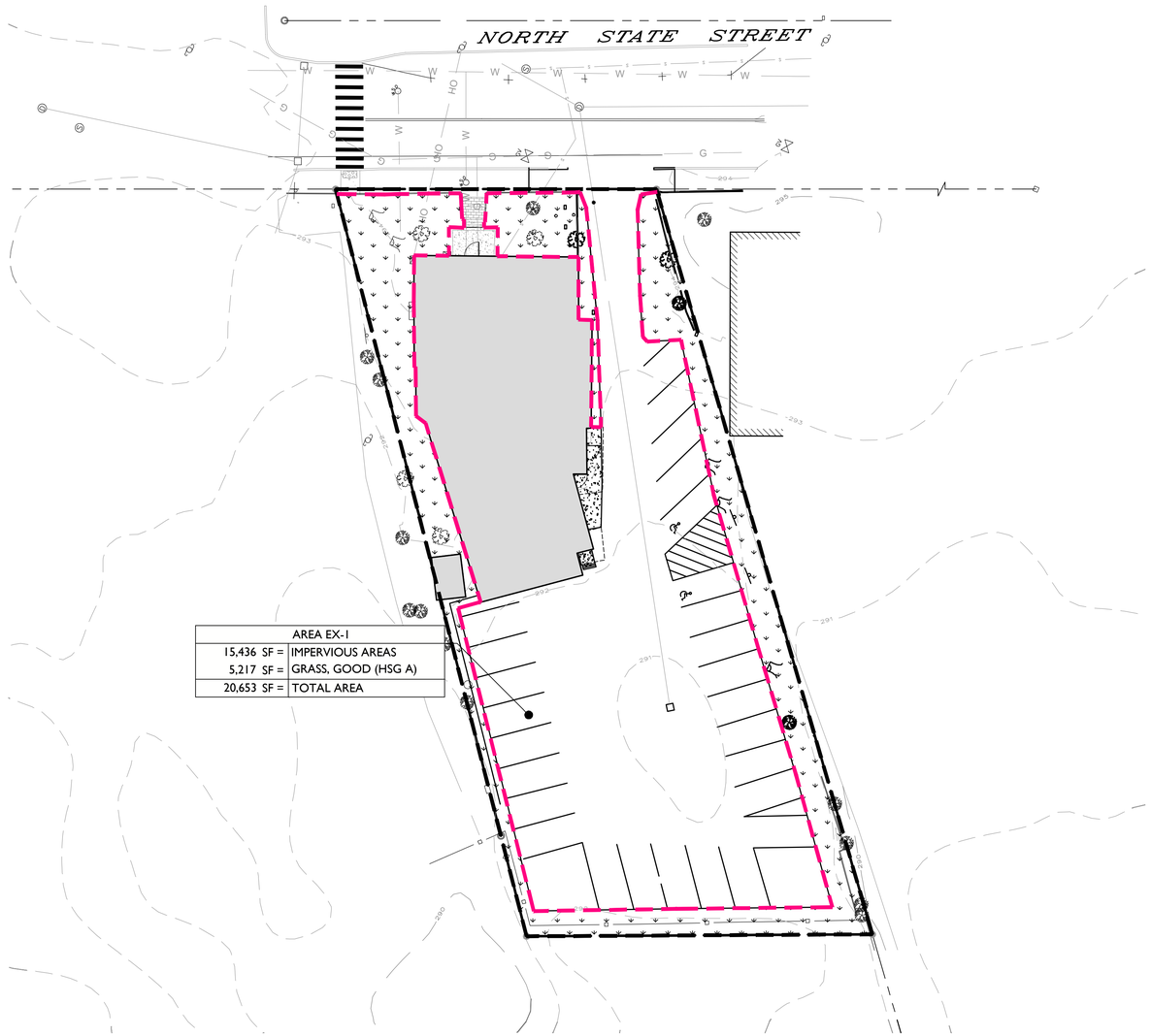
Area (sf)	CN	Description
15,066	98	Paved parking, HSG A
5,587	39	>75% Grass cover, Good, HSG A
20,653	82	Weighted Average
5,587	39	27.05% Pervious Area
15,066	98	72.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0024	0.55		**Sheet Flow, Grass** Smooth surfaces n= 0.011 P2= 2.76"
0.4	49	0.0081	1.83		**Shallow Concentrated Flow, 1B-1C** Paved Kv= 20.3 fps
3.4	149	Total, Increased to minimum Tc = 6.0 min			

Subcatchment P-1: Proposed Site



APPENDIX C
DRAINAGE AREA MAPS



SYMBOL	DESCRIPTION
	PROPERTY LINE
	EXISTING DRAINAGE AREA
	EXISTING PERVIOUS AREA

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 4414, BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

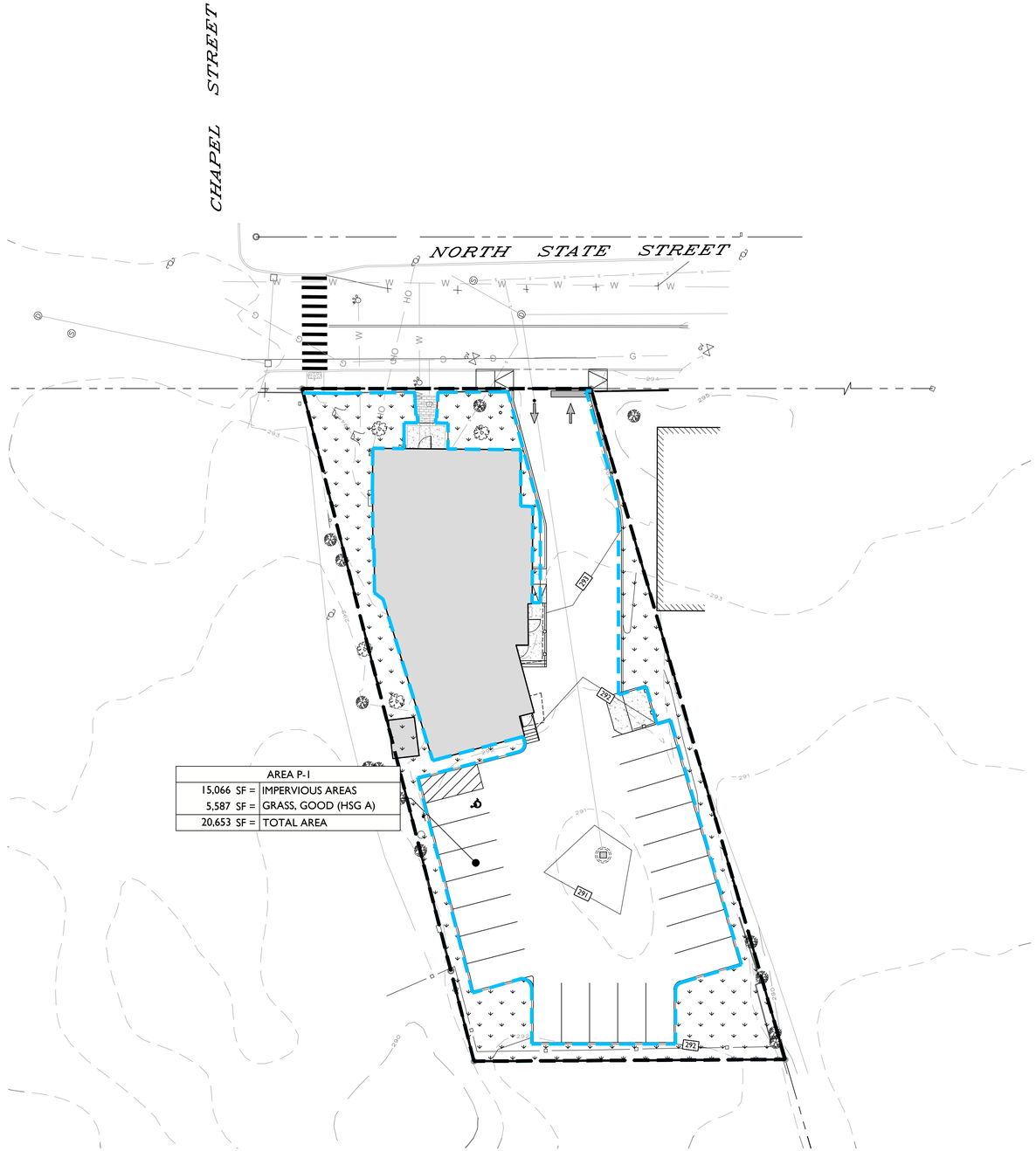
STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: BOS-250093

TITLE:
EXISTING DRAINAGE AREA MAP

DRAWING:
1 OF 2

Z:\BOSTON\BOS\2025\BOS-250093 ASSOCIATED ENTERPRISES - 103 NORTH STATE STREET, CONCORD, NH\CAD\DESIGN\DRAINAGE AREA MAP\BOS-250093-11_DRAINAGE AREA MAP.DWG



SYMBOL	DESCRIPTION
	PROPERTY LINE
	PROPOSED DRAINAGE AREA
	PROPOSED PERVIOUS AREA

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 4414 BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: BOS-250093

TITLE:
EXISTING DRAINAGE AREA MAP

DRAWING:
2 OF 2

Z:\BOS\PROJECTS\2025\BOS-250093 ASSOCIATED ENTERPRISES - 103 NORTH STATE STREET, CONCORD, NH\CAD\EXHIBITS\DRAINAGE AREA MAP\250093-11_DRAINAGE AREA MAP.DWG

STONEFIELD

APPENDIX D
CONTECH CS-3
TSS REMOVAL SPREADSHEET

Estimated Net Annual Solids Load Reduction
Based on the Rational Rainfall Method

CONTECH ENGINEERED SOLUTIONS

Porposed Multi Family
Concord, MA
WQU

CASCADE separator™

AREA	0.35	acres	CASCADE MODEL	CS-3	
WEIGHTED C	0.90		PARTICLE SIZE	110	microns
TC	6.00	minutes			

Rainfall Intensity[1] (in/hr)	Percent Rainfall Volume[1]	Hydraulic Loading Rate (gpm/ft2)	Removal Efficiency (%)	Incremental Removal (%)
0.02	13.0%	0.40	100.0	13.0
0.04	12.2%	0.80	100.0	12.2
0.06	11.2%	1.20	100.0	11.2
0.08	10.0%	1.60	100.0	10.0
0.10	8.2%	2.00	100.0	8.2
0.12	5.8%	2.40	100.0	5.8
0.14	6.5%	2.80	100.0	6.5
0.16	4.6%	3.20	100.0	4.6
0.18	3.7%	3.60	100.0	3.7
0.20	3.3%	4.00	100.0	3.3
0.25	6.7%	5.00	100.0	6.7
0.30	3.7%	6.00	100.0	3.7
0.35	2.4%	7.00	100.0	2.4
0.40	1.8%	8.00	100.0	1.8
0.45	1.9%	9.00	100.0	1.9
0.50	1.1%	10.00	100.0	1.1
0.75	2.6%	15.00	97.8	2.5
1.00	0.9%	20.00	93.1	0.9
1.50	0.4%	30.00	83.7	0.3
2.00	0.0%	40.00	74.3	0.0
				99.8
			Removal Efficiency Adjustment[2] =	6.5%
			Predicted % Annual Rainfall Treated =	93.5%
			Predicted Net Annual Load Removal Efficiency =	93.4%

1 - Based on 10 years of hourly precipitation data from NCDC 1683, Concord WSO Airport, Merrimack County, NH

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

STONEFIELD

STORMWATER OPERATIONS & MAINTENANCE PLAN

ASSOCIATED ENTERPRISE , LLC.

PROPOSED MULTI-FAMILY ADAPTIVE REUSE
MAP: 6414Z, LOT: 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

PREPARED FOR:
ASSOCIATED ENTERPRISE
136 N MAIN STREET, SUITE 2
CONCORD, NEW HAMPSHIRE, 03301

PREPARED BY:
STONEFIELD ENGINEERING & DESIGN, LLC
120 WASHINGTON STREET
SALEM, MASSACHUSETTS, 01907

REPORT DATE:
MARCH 18, 2026

JOSH KLINE, PE
NH PE LICENSE #16530

STONEFIELDENG.COM
617.203.2073 T. 201.340.4472 F.

REPORT CONTENTS

APPENDICES

1.0 INTRODUCTION

This Stormwater Operations & Maintenance Plan has been prepared to identify the operational and maintenance responsibilities for the proposed stormwater facilities for the development of the parcel located at 103 North State Street, Concord, New Hampshire. This Plan has been prepared in conjunction with the Land Development Plans and Stormwater Management Plan, prepared by Stonefield Engineering & Design LLC. and in accordance with the standards and regulations set forth by City of Concord and the New Hampshire Department of Environmental Services (NHDES).

Operation and maintenance of the permanent stormwater control Best Management Practices (BMPs) shall be the responsibility of the operator of the project site at the time that the applicable maintenance is required. Stormwater management improvements associated with this development include the implementation of one (1) water quality unit to tie-in to the existing municipal conveyance system. All guidelines, standards and requirements set forth in this Plan shall be implemented for all proposed stormwater infrastructure, as well as any existing features that will remain, including areas of preserved landscaping. These guidelines are not exclusive to the proposed improvements, and existing infrastructure that is to remain in post development conditions shall be maintained in accordance with this document as applicable.

A copy of this report shall be kept on-site at all times both during and after construction. Upon reviewing agency approval, the title and date of the maintenance plan as well as the contact information of the current agent responsible for maintaining the stormwater management measures for the project shall be recorded (as deemed required).

1.1 RESPONSIBILITY

The purpose of the Stormwater Operations and Maintenance (O&M) Plan is to ensure adequate inspection of the systems, removal of accumulated sediments, oils and debris, and implementation of corrective action and record keeping activities. The enclosed O&M activities will be performed by a Contract Operator for the scope of maintenance. The Contract Operator will be a professional engineer or other professional with expertise and experience with stormwater management facilities operation and maintenance. The Owner, its successors, and/or assigns shall be responsible for the maintenance of the stormwater infrastructure associated with the proposed site improvements. Adequate maintenance is defined in this document as good working condition.

The current responsible agent shall evaluate the maintenance plan for effectiveness at least annually and revise the plan, as necessary. A detailed, written log of all preventative and corrective maintenance performed for each stormwater management measure must be kept, including a record of all inspections and copies of maintenance-

related work orders. Upon request from a public entity with jurisdiction over the project area the responsible agent shall make available the maintenance plan and associate logs and other records for review.

Responsible Agent:

Name:	**TBD**
Address:	**TBD**
Contact:	**TBD**
Phone:	**TBD**
Email:	**TBD**

1.2 DOCUMENTATION

Quarterly Operation and Maintenance Record Log and Schedule will be kept by the Owner summarizing inspections, maintenance, repairs and any corrective actions taken. The log will include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, the location where the sediment and debris was disposed after removal will be indicated. Sample Inspection and Maintenance Logs for each stormwater BMP are enclosed. Additionally, invoices and other documentation of performance of maintenance activities (e.g., sediment disposal) shall be kept by the Owner or the legally authorized representative. The documentation will be kept on file.

The site supervisor shall be responsible for ensuring that the scheduled tasks as described in this plan are appropriately completed and recorded in the Maintenance Log. Accurate records of all inspections, routine maintenance and repairs shall be documented and these records shall be available for inspection by members of the governing authority as designated by the Town of West Warwick, or their designated agent, upon request.

1.3 CHANGES TO OPERATIONS & MAINTENANCE PLAN

The Owner(s) and/or Responsible Agent shall notify the designated Governing Authority of any changes to the Operations & Maintenance Plan. Amendments to the Plan include but are not limited to changes in ownership, changes in assignment of financial responsibility, change in responsible parties, and modifications to the procedures outlined herein. Changes to the Plan shall be recorded on the Amendment Log in **APPENDIX E** of this Plan.

2.0 INSPECTION & MAINTENANCE OF STORMWATER SYSTEMS

The Owner, Property Manager and maintenance staff will conduct the Operation and Maintenance program set forth in this document. The Owner or Property Manager will ensure that inspections and record keeping are timely and accurate, and that cleaning and maintenance are performed in accordance with the recommended frequency for each stormwater component. Inspection & Maintenance Log Forms (provided herein) shall include the date and the amount of the last significant storm event in excess of 1" of rain in a 24-hour period, physical conditions of the structures, depth of sediment in structures, evidence of overtopping or debris blockage and maintenance required of each structure.

The following areas, facilities and measures will be inspected by the Owner or Property Manager and maintained as specified below. The following guidelines are applicable to all known stormwater structures and facilities on the parcel. Identified deficiencies will be corrected. Accumulated sediments and debris will be properly handled and disposed of off-site, in accordance with local, state, and federal guidelines and regulations.

2.1 CONTECH® CASCADE SEPARATOR CS-3 WATER QUALITY UNITS

Structures: One (1) Contech® Cascade SeparatorCS-3 Water Quality Unit

- **WQ-1**
    - Design Intent: Pretreat runoff prior to entering the municipal conveyance system.
    - Approximate Location: Located in the proposed parking area.
    - Composition: Cascade Separator CS-3; Frame and Grate; Inline structure with internal bypass

Description: The CS-3 system must be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on-site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation. Inspection is the key to effective maintenance and is easily performed. At a minimum, inspections shall be performed twice per year (e.g. spring and fall), however, more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Installations shall also be inspected more frequently where excessive amounts of trash are expected. Each individual owner must ensure that any and all of their proprietary stormwater pretreatment devices are maintained in accordance with the requirements stated in the *Cascade Separator Guide*, which requires the sump to be inspected a minimum of 2 times per year. Additionally, the device must be cleaned out when either pollutant removal capacity is reduced by 50% or more, or when 50% or more of the device's pollutant storage capacity is filled or displaced. The system must be cleaned and maintained in accordance with manufacturer specifications as identified in **APPENDIX C.**

Maintenance Equipment: Cleaning of CS-3 systems must be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Operator shall perform all maintenance in accordance with the manufacturer specifications.

Maintenance Access: Access to the CS-3 unit is typically achieved through two manhole or grate access covers. One allows inspection and cleaning out of separation chamber and isolated sump while the other allows for inspection and cleaning out of sediment captured and retained on the outside screen. Confined space entry procedures must be followed if physical access is required.

Inspection & Maintenance Summary: The table below provides a brief summary of inspection and maintenance actions for the CS water quality units. Operator shall refer to manufacturer specifications enclosed herein for specific means and methods inspection and maintenance.

TABLE 2: CS WATER QUALITY GENERAL MAINTENANCE SCHEDULE *

Frequency	Operation & Maintenance Activity
• Minimum two times per year	Inspection Actions • Visual inspection shall ascertain that system components are in working order & no visible blockages or obstructions. • Quantify accumulation of hydrocarbons, trash and sediment in system. • Inspect filter fabric for clogging, tearing, or other damage. • Inspect chambers for sediment, debris and other obstructions. • Evaluate structural integrity of overall system and inspect for cracks, settlement, leaking, or other indications of malfunction.
• Annually • When at 50% sediment capacity	Preventive Maintenance Actions • Perform a clean-out when either pollutant removal capacity is reduced by 50% or more, or when 50% or more of the device's pollutant storage capacity is filled or displaced or an appreciable level of hydrocarbons and trash has accumulated. Remove trash, debris, organic matter and other obstructions. • Cleaning shall only be conducted during dry weather conditions when no flow is entering the system. • In the event of a spill, units shall be cleaned immediately. • Remove and replace degraded perimeter stone as required. • Remove and replace damaged filter fabric as required.
• Promptly as Needed	Corrective Maintenance Actions • Notify Owner of any structural damage or other indication of malfunction and of all system repairs needed in a timely manner. • Perform corrective maintenance activities as required on applicable system components in accordance with all applicable local and manufacturer recommendations. Responsible party shall thoroughly document all required and completed corrective actions including repair and replacement of system components.

***This table is a brief summary of inspection and maintenance measures required for the Contech® CS-3 Cascade Separator and is not intended to replace or overrule the enclosed manufacturer specifications.**

Operator is responsible for reviewing and adhering to all manufacturer specifications for the Contech® CS-3 Cascade Separator.

3.0 GENERAL SITE OPERATIONS & MAINTENANCE

3.1 ONSITE CONVEYANCE SYSTEM

STORM DRAIN PIPING

The existing site storm drain system is comprised of a network of piping and structures discharging to the municipal conveyance system.

- Sediments and hydrocarbons will be properly handled and disposed of off-site, in accordance with local, state and federal guidelines and regulations.
- If there is evidence of clogging, blockages, or other failure of the conveyance system, appropriate remediation measures shall be conducted in a timely manner. All corrective measures taken shall be appropriately logged in accordance with this Plan.

3.1 VEGETATED AREAS

The maintenance of vegetated areas is essential in maintaining the functionality of the stormwater management system. This includes the health/density of vegetative cover and activities such as the application and disposal of lawn and garden care products, disposal of leaves and yard trimmings and proper aeration of soils.

It is the responsibility of the Property Owner to coordinate Landscape Maintenance of the onsite open space areas. Post-construction conditions shall incorporate a mix of existing and proposed landscape features and open space. This Plan is inclusive of all vegetation, both existing and proposed. At a minimum, the following maintenance and operations requirements shall be met during and after construction period:

- Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. If erosion is evident, armor the area with an appropriate lining or riprap stone.
- Inspect planted areas on a semi-annual basis and remove any litter.
- Maintain planted areas adjacent to pavement to prevent soil washout.
- Immediately clean any soil deposited on pavement.

- Re-seed bare areas; install appropriate erosion control measures when native soil is exposed, or erosion channels are forming.
- Plant alternative mixture of grass species in the event of unsuccessful establishment.
- The grass vegetation should be cut to a height between three and four inches.
- Pesticide/Herbicide Usage – No pesticides are to be used unless a single spot treatment is required for a specific control application unless approved and applied by a licensed professional.
- No pesticides or herbicides are allowed within the 100' adjacent upland resource area property without prior approval of the Governing Authority unless approved and applied by a licensed professional.
- Fertilizer usage should be avoided. If deemed necessary, fertilizer may only be of the low nitrogen and phosphorous variety. Fertilizer may be used to begin the establishment of vegetation in bare or damaged areas but should not be applied on a regular basis unless necessary.
- Fertilizer applications shall be limited to the spring and early fall and applied per the manufacturers' specifications. Nitrogen content shall not exceed 25% with ratios for Nitrogen, Phosphorus, and Potassium at 3-1-2 or 3-1-1. It is also recommended that at least 30%-50% of total nitrogen be slow release.
- Annual application of compost amendments and aeration are recommended.

3.3 MAINTENANCE OF STREETS & PARKING AREAS

Roadways with curbs and catch basins must be swept at a minimum of once per year. Roadways with curbs and catch basins that discharge to nitrogen or phosphorus impaired waters, or their tributaries are swept at a minimum of twice per year, once in the spring and once in the fall. Sweeping on central pedestrian pathway, used for emergency vehicles only, must be conducted on an as-needed basis. All street sweepings collected must be disposed of in accordance with NHDES regulations. The responsible party may temporarily store street sweepings in labor yards, but street sweepings must be disposed of offsite in a reasonable timeframe. Street sweepings may not be disposed of on parking lots or lands.

The following minimum maintenance measures shall be implemented:

- Sweep or vacuum standard asphalt pavement areas with a rotary brush sweeper (or another method approved by licensed professional) and properly dispose of removed material.
- Minimum recommended sweeping schedule:
    - October / November
    - April / May
    - More frequent sweeping of paved surfaces will result in less accumulation in catch basins, less cleaning of subsurface structures, and less disposal costs.

- Check dumpster areas frequently for spillage and/or pavement staining and clean, as necessary.
- No coal-tar, petroleum-based, or other parking lot "sealants" are permitted to be used on-site unless approved by local authority. Normal maintenance activities intended to extend the life expectancy of the pavement surfaces including the use of bitumen asphalt to seal developing cracks, asphalt repair are not subject to this special condition.

The following street and parking lot sweeping procedures shall be performed to reduce the discharge of pollutants:

Sweeping

- Street sweeping will be conducted in dry weather. Sweeping will not be conducted during or immediately after rainstorms.
- Dry cleaning methods will be used whenever possible with the exception of very fine water spray for dust control. Avoid wet cleaning or flushing of the pavement.
- When necessary, parking bans will be enacted to facilitate sweeping on busy streets.
- More frequent sweeping of paved surfaces will result in less accumulation in catch basins. Sweeping will be conducted in a manner that avoids depositing debris into storm drains. Deep sump catch basins shall be inspected and/or cleaned as needed after street sweeping concludes in accordance with the procedures set forth in *Section 2.1 Deep Sump Catch Basins* of this Plan.
- Sweeping shall generally be conducted with a vacuum sweeper, however alternative sweeping equipment (mechanical, regenerative air, vacuum filter, tandem sweeping) may be selected depending on the level of debris. Brush alignment, sweeper speed, rotation rate, and sweeping patterns will be set to optimate levels to manage debris.
- Sweeping equipment will be routinely inspected and maintained to reduce the potential for leaks.

Disposal

- If street sweepings are reused, e.g., as anti-skid material or to fill in parking lots, they will be properly filtered to remove solid waste, such as paper or trash, in accordance with their intended reuse. All reuse and/or disposal of street sweeping will be managed in accordance with current NHDES policies and regulations.
- Street sweepings can be stored for up to one year in approved temporary storage areas. Storage areas will be protected to prevent erosion and runoff and should be located away from wetland resource areas and buffer zones, surface water, or groundwater.
- Sweepings are classified as solid waste and are disposed of at solid waste disposal sites.

3.4 WINTER MAINTENANCE AND SNOW & ICE MANAGEMENT

It is the responsibility of the Property Owner to contract with a professional snow removal/winter conditions management contractor to treat the paved parking and walking areas within the developed area for safe access during winter conditions. All snow and ice operators are required to be trained in the NHDES practices. The contractor is responsible for minimizing de-icing applications while ensuring safe vehicle and pedestrian access to onsite facilities.

Snow storage and removal shall be conducted in accordance with the following minimum requirements:

- Snow will be stored in areas that do not block or hinder access to any structure or accessory facility.
- Snow storage areas will be managed to prevent blockage of storm drain catch basins, stormwater drainage channels, and on-street parking. Snow combined with sand and debris may block a storm drainage system, diminishing the drainage capacity of the system and causing localized flooding.
    - Storm drain catch basins and stormwater management systems shall be inspected and cleaned as needed at the end of the snow removal season in accordance with the procedures outlined in this Plan.
- Sand and debris deposited on vegetated or paved areas shall be cleared from the site and properly disposed of at the end of the snow season, no later than springtime.
- Snow shall not be dumped into any waterbody, pond, or wetland resource area.
- Snow shall not be dumped within a Wellhead Protection Area (WHPA) of a public water supply or within 200 feet of a private well, where road salt may contaminate water supplies.
- Snow shall not be dumped in sanitary landfills and gravel pits.

In addition to snow removal, potentially icy and unsafe paved surfaces are addressed as follows:

- The de-icing program consists of two treatment zones: The largest area, parking and vehicle circulation areas, and the smaller area, the sidewalks/front doors of the facility.
- The parking and vehicle circulation areas within the development will be treated with approved treatment product mixed with sand. Per deicing event up to 200 gallons per acre may be applied.
- The front door entrances and sidewalks of commercial units will have a non-sodium pelletized de-icing material that may contain calcium chloride or magnesium chloride as the active ice melting ingredient. The pellets are broadcast at a rate up to 1 lb. per 75-100 square feet.
- Only calcium or magnesium-based de-icing chemicals shall be used on surfaces where runoff/drainage will discharge into any wetland resources, or the 100' adjacent upland resource area.

The following winter maintenance procedures shall be performed to reduce the discharge of pollutants:

- Minimize the use and optimize the application of sodium chloride and other salt (while maintaining public safety) and consider opportunities for use of alternative methods.
- Optimize sand and/or chemical application rates through the use, where practicable, of automated application equipment (e.g., zero velocity spreaders), anti-icing and pre-wetting techniques. Implementation of pavement management systems, and alternate chemicals. Maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals.
- Prevent exposure of de-icing product (salt, sand, or alternative products) storage piles to precipitation by enclosing or covering the storage piles. Implement good housekeeping, diversions, containment, or other measures to minimize exposure resulting from adding to or removing materials from the pile. Store piles in such a manner as not to impact surface water resources, groundwater resources, recharge areas, and wells.

4.0 ESTIMATED ANNUAL BUDGET

The Owner and/or the Responsible Agent should perform a cost analysis and establish the annual operation and maintenance budget for the site. Once the budget has been established the below breakdown can be utilized to help track yearly costs for various onsite features and can be updated within **Table 4**.

The below values are subject to modification upon establishment of party responsible for completing associated work and/or consultation from manufacturers or responsible local authorities. Certain factors are not considered in the below estimates that may have significant cost implications. For example, removal and disposal of catch basin cleanings and sediment must be completed in accordance with local regulations and taken to a facility permitted by NHDES to accept solid waste; the cost, policy, requirements, proximity or other factors of the specific disposal facility is not able to be accurately accounted for at the time of this Plan. Significant corrective measures such as unforeseen structural repairs may not be considered in initial estimates.

TABLE 4: OPERATION AND MAINTENANCE BUDGET

System / Feature	Approximate Cost / Year
Infiltration Basin Inspection & Maintenance	--
Hood & Sump Inspection & Maintenance	--
Conveyance System Inspection & Maintenance	--
Sediment Debris and Trash Removal/Disposal	--
Landscape & Vegetation Inspection & Maintenance	--
Street Sweeping	--
Winter Maintenance / Snow & Ice Management	--

5.0 INSPECTION & LOGS OF PREVENTATIVE AND CORRECTIVE MEASURES

The person responsible for maintenance shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.

A maintenance plan shall include a schedule of regular inspections and tasks, and detailed logs of all preventative and corrective maintenance performed on the stormwater management measure, including all maintenance-related work orders. The person with maintenance responsibility must retain and, upon request, make available the maintenance plan and associated logs and other records for review by a public entity with administrative, health, environmental, or safety authority over the site.

All inspection and maintenance activities shall be recorded to document frequency of inspection and maintenance, and implementation of corrective action. All regularly scheduled inspections, inspections following major storm events, maintenance activities, and repairs shall be recorded. General Inspection and Maintenance Logs for each Stormwater BMP can be found in **APPENDIX D** of this Plan. The enclosed general log forms shall be considered a minimum standard for recording purposes; the Operator and Inspection/Maintenance Personnel are strongly encouraged to supplement the Log with additional notes and photos.

6.0 ANNUAL EVALUATION OF THE EFFECTIVENESS OF THE PLAN

The person responsible for maintenance shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed. The responsible party should evaluate the effectiveness of the maintenance plan by comparing the maintenance plan with the actual performance of the maintenance. The items to evaluate may include, but not limited to:

- Whether the inspections have been performed as scheduled;
- Whether the preventive maintenance has been performed as scheduled;
- Whether the frequency of preventative maintenance needs to increase or decrease;
- Whether the planned resources were enough to perform the maintenance;
- Whether the repairs were completed on time;
- Whether the actual cost was consistent with the estimated cost;
- Whether the inspection, maintenance, and repair records have been kept.

If actual performance of those items has been deviated from the maintenance plan, the responsible party should find the causes and implement solutions in a revised maintenance plan. Should modifications to the Plan be deemed necessary to ensure longevity of the site systems, the changes should be noted within the enclosed Amendment Log in **APPENDIX E**.

APPENDIX A
SITE PLANS

INVENTORY

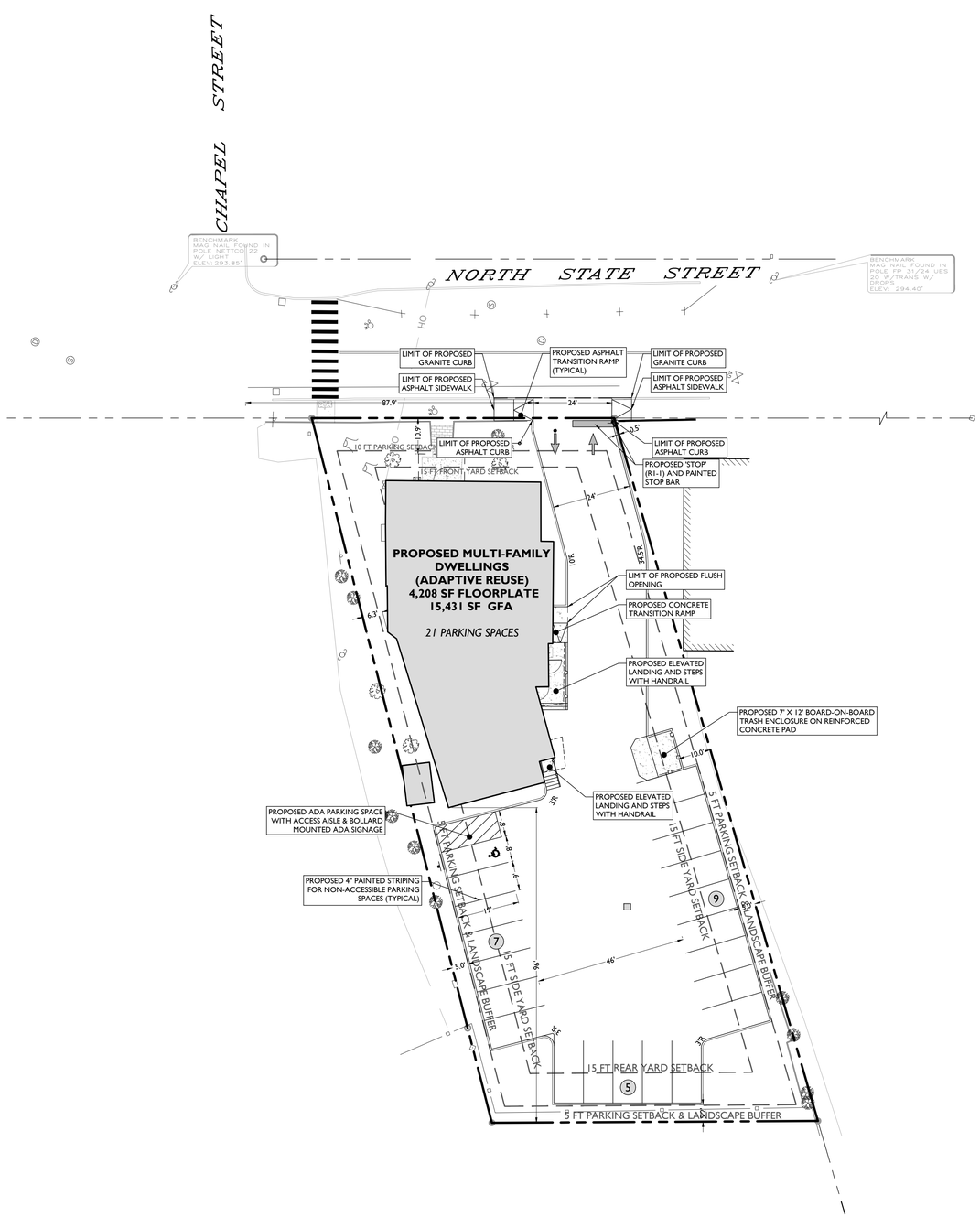
A-1: SITE PLANS

A-2: STORMWATER MANAGEMENT PLAN

A-3: SOIL EROSION & SEDIMENT CONTROL PLANS

A-4: LANDSCAPING PLANS

APPENDIX A-1
SITE PLAN



LAND USE AND ZONING

MAP 6414, BLOCK Z, LOT 1

CIVIC PERFORMANCE (CVP) DISTRICT

PROPOSED USE

MULTI-FAMILY DWELLING — PERMITTED

ZONING REQUIREMENT	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT SIZE	N/A	20,652 SF (0.47 AC)	NO CHANGE
MINIMUM LOT FRONTAGE	80 FT	92 FT	NO CHANGE
MAXIMUM LOT COVERAGE	80% (16,521 SF)	74.7% (15,436 SF)	72.9% (15,066 SF)
MAXIMUM BUILDING HEIGHT	45 FT	30 FT / 2 STORIES	NO CHANGE
MINIMUM FRONT YARD SETBACK	15 FT	10.9 FT (EN)	NO CHANGE
MINIMUM SIDE YARD SETBACK	15 FT	0.0 FT (EN)	NO CHANGE
MINIMUM REAR YARD SETBACK	15 FT	96.3 FT	NO CHANGE

(TBD) TO BE DETERMINED
(EN) EXISTING NON-CONFORMITY

OFF-STREET PARKING REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 5B-284	MINIMUM REQUIRED PARKING: ONE SPACES / DWELLING UNIT (1 SPACE / DU) x 21 UNITS = 21 SPACES	21 SPACES
§ 28-7-7	PARKING SPACE DIMENSIONS (90°): MINIMUM LENGTH: 19 FT MINIMUM WIDTH: 9 FT	19 FT 9 FT
	MINIMUM AISLE WIDTH: 90° PARKING: 24 FT (TWO-WAY)	24 FT
	MINIMUM DRIVEWAY WIDTH: TWO-WAY TRAFFIC: 24 FT	24 FT
	CURBING OR GUARD RAILS SHALL BE PLACED AROUND THE PERIMETER OF PARKING AREAS CONTAINING 5+ SPACES	COMPLIES
§ 28-7-8	SEPARATION OF DRIVEWAYS (NONRESIDENTIAL DISTRICT) MINIMUM SEPARATION FROM STREET INTERSECTION: 200 FT	86.5 FT (EN)
§ 28-7-10	PARKING LOT PERIMETER LANDSCAPE BUFFER: FOR PARKING LOTS >10 PARKING SPACES: 5 FT	5 FT
	ALONG COLLECTOR/ARTERIAL STREET: 10 FT	COMPLIES

(EN) EXISTING NON-CONFORMITY

MULTIFAMILY DWELLING REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 28-4-5(e)(1)	MIXED USE COMPONENT REQUIREMENT: FOR LOTS GREATER THAN 20,000 SF, RESIDENTIAL USES ARE PERMITTED ONLY WHERE 25% OF THE GFA CONSISTS OF NONRESIDENTIAL USES THAT ARE LOCATED WITHIN 50 FT OF A PUBLIC OR PRIVATE STREET.	DOES NOT COMPLY (*)
§ 28-4-5(e)(3)	MAXIMUM FLOOR AREA RATIO: MULTI-FAMILY DWELLINGS: 2.5 FAR	0.75 FAR

(*) THE PLANNING BOARD MAY WAIVE THE REQUIREMENT FOR NONRESIDENTIAL USE THROUGH THE APPROVAL OF A CONDITIONAL USE PERMIT

SYMBOL	DESCRIPTION
	PROPERTY LINE
	SETBACK LINE
	SAWCUT LINE
	PROPOSED CURB
	PROPOSED SIGNS / BOLLARDS
	PROPOSED BUILDING
	PROPOSED CONCRETE
	PROPOSED AREA LIGHT
	PROPOSED BUILDING DOORS

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTORS EXPENSE.
8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
11. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC. BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 6414 BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

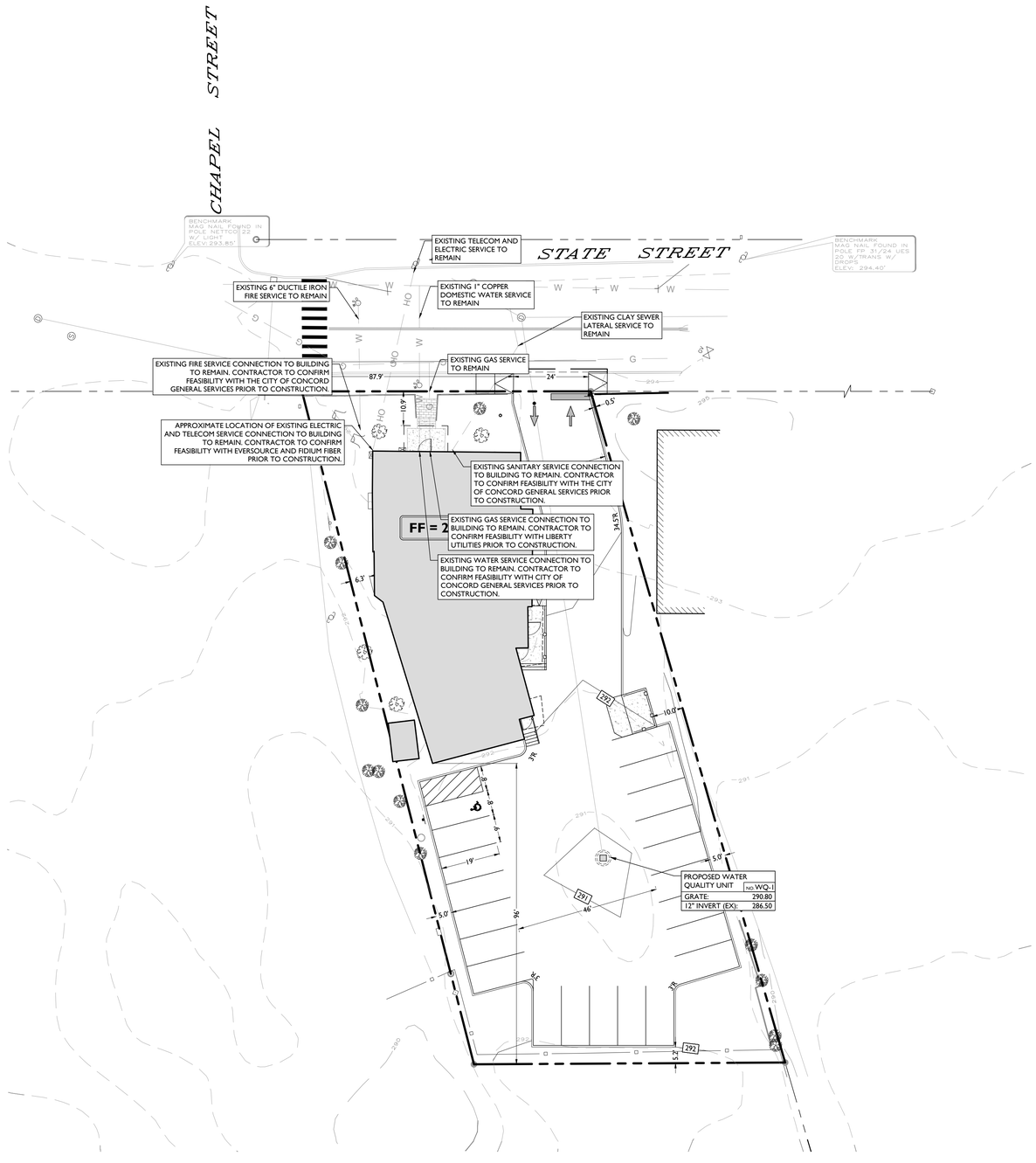
SCALE: 1" = 20' | PROJECT ID: BOS-250093

TITLE: SITE PLAN

DRAWING: C-4

Z:\BOS\PROJECTS\2025\BOS-250093 ASSOCIATED ENTERPRISES - 103 NORTH STATE STREET, CONCORD, NH\CAD\PLOT\XXX-SHEETS.DWG

APPENDIX A-2
STORMWATER MANAGEMENT PLAN



SYMBOL	DESCRIPTION
	PROPERTY LINE
SAN	PROPOSED SANITARY LATERAL
W	PROPOSED DOMESTIC WATER SERVICE
G	PROPOSED GAS LINE
	PROPOSED STORMWATER STRUCTURES

EXISTING UTILITY LOCATION NOTE:

EXISTING UTILITY SERVICES ARE BASED ON RECORD DOCUMENTS SUPPLIED BY THE CITY OF CONCORD. ALL UTILITY LOCATIONS ARE SHOWN FOR REFERENCE PURPOSES ONLY AND PRIOR TO CONSTRUCTION UTILITY LOCATIONS SHALL BE FIELD VERIFIED.

VERTICAL CLEARANCE NOTE:

CONTRACTOR SHALL MAINTAIN A MINIMUM 18" VERTICAL CLEARANCE BETWEEN THE PROPOSED UNDERGROUND ELECTRIC CONDUIT AND EXISTING SANITARY SEWER LINE AT ALL CROSSINGS. WHERE PRACTICABLE, THE SANITARY SEWER SHALL REMAIN BELOW THE ELECTRIC LINE. IF 18" VERTICAL SEPARATION CANNOT BE MAINTAINED, THE ELECTRIC CONDUIT SHALL BE INSTALLED WITHIN RIGID NON-METALLIC CONDUIT AND FULLY ENCASED IN CONCRETE.

EXCAVATION & UTILITY VERIFICATION NOTE:

PRIOR TO THE START OF CONSTRUCTION (RECOMMENDED 30 DAYS PRIOR) THE CONTRACTOR SHALL PERFORM EXPLORATORY TEST PITS AT LOCATIONS OF ALL UTILITY CROSSINGS OR CONNECTIONS WITH EXISTING UTILITY INFRASTRUCTURE. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ANY NECESSARY ROAD OPENING PERMITS TO PERFORM SAID EXPLORATORY WORK. SHOULD A CONFLICT BE DISCOVERED WITH THE INFORMATION CONTAINED WITHIN THESE PLANS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.

DRAINAGE AND UTILITY NOTES

1. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
2. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
4. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER SERVICE AND ANY WATER LINES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
5. ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
6. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
8. CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADIENT.
9. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT HAVE BEEN CAPPED, ABANDONED, OR RELOCATED BASED ON THE DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 6414 BLOCK Z, LOT 1
105 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

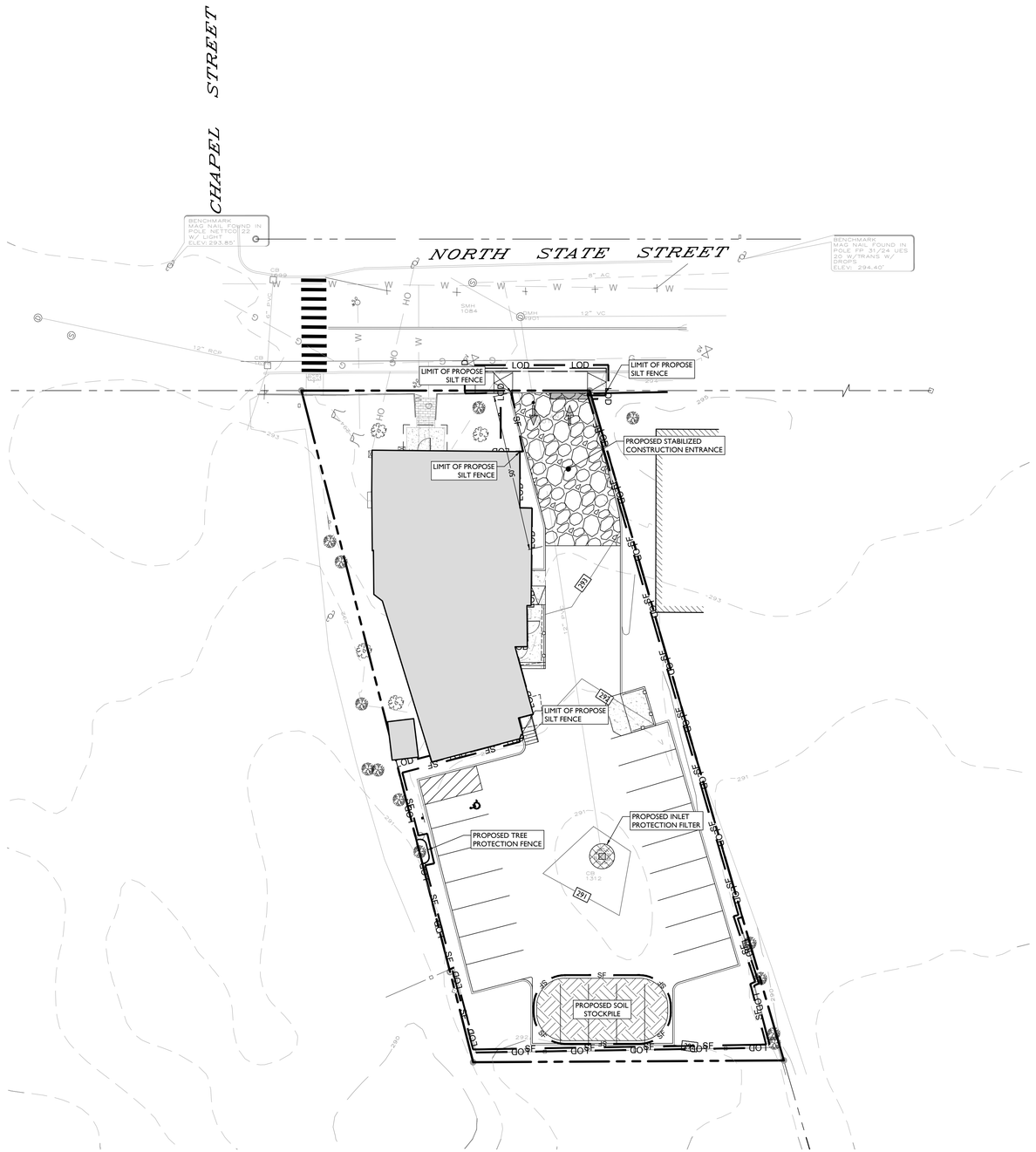
SCALE: 1" = 20' | PROJECT ID: BOS-250093

TITLE: STORMWATER MANAGEMENT & UTILITY PLAN

DRAWING: C-6

Z:\BOS\TOWNS\2025\BOS-250093 ASSOCIATED ENTERPRISES - 105 NORTH STATE STREET, CONCORD, NH\CAD\PLOT\XXX-UTILITY.DWG

APPENDIX A-3
SOIL EROSION & SEDIMENT CONTROL PLANS



SYMBOL	DESCRIPTION
	PROPERTY BOUNDARY
	ADJACENT PROPERTY BOUNDARY
LOD	PROPOSED LIMIT OF DISTURBANCE
SF	PROPOSED SILT FENCE
TPF	PROPOSED TREE PROTECTION FENCE
	PROPOSED STOCKPILE & EQUIPMENT STORAGE
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED INLET PROTECTION FILTER

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY STANDARDS.
3. THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN 1 INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED.

DUST CONTROL NOTES

1. MULCHES - SEE STANDARD OF STABILIZATION WITH MULCHES ONLY, PG. 5-1
2. VEGETATIVE COVER - SEE STANDARD FOR: TEMPORARY VEGETATIVE COVER, PG. 7-1, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION PG. 4-1 AND PERMANENT STABILIZATION WITH SOD, PG. 6-1
3. SPRAY-ON ADHESIVES - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.
4. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
5. SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.
6. BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
7. CALCIUM CHLORIDE - SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.
8. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

SOIL CHARACTERISTICS CHART

TYPE OF SOIL	WINDSOR-URBAN (598B)
PERCENT OF SITE COVERAGE	100%
HYDROLOGIC SOIL GROUP	A
DEPTH TO RESTRICTIVE LAYER	> 80 IN
SOIL PERMEABILITY	1.42 TO 99.90 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES

811 Know what's **below** **Call** before you dig.

20' 0' 20' 40'
GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 4414 BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

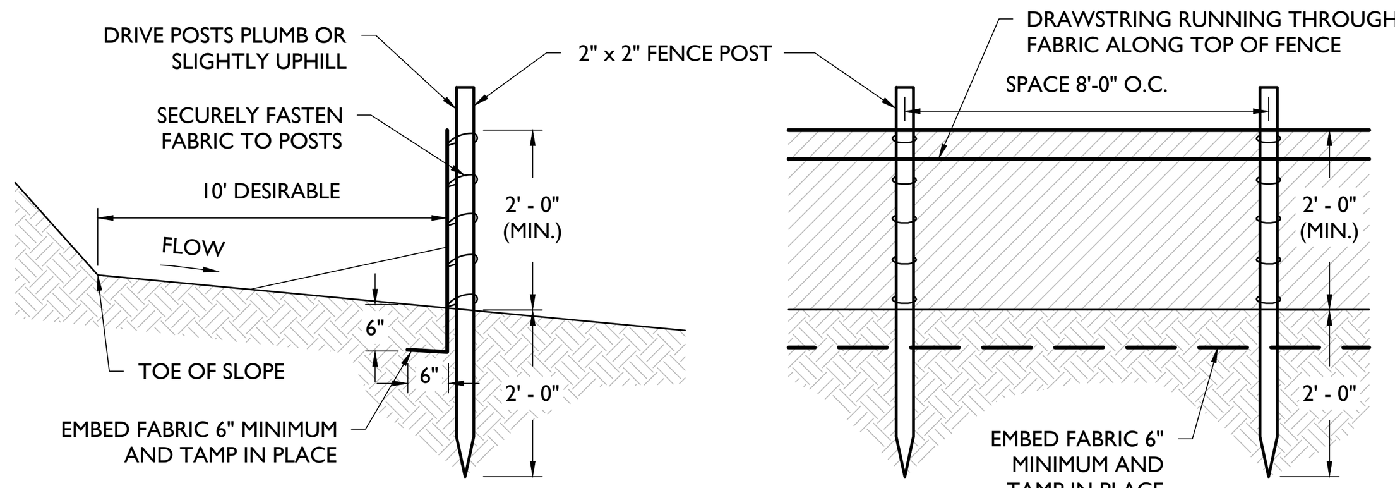
STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: BOS-250093

TITLE: SOIL EROSION & SEDIMENT CONTROL PLAN

DRAWING: C-8

Z:\BOS\PROJECTS\2025\BOS-250093 ASSOCIATED ENTERPRISE - 103 NORTH STATE STREET, CONCORD, NH\CAD\PLOT\XXX-PLAN-ESC.DWG

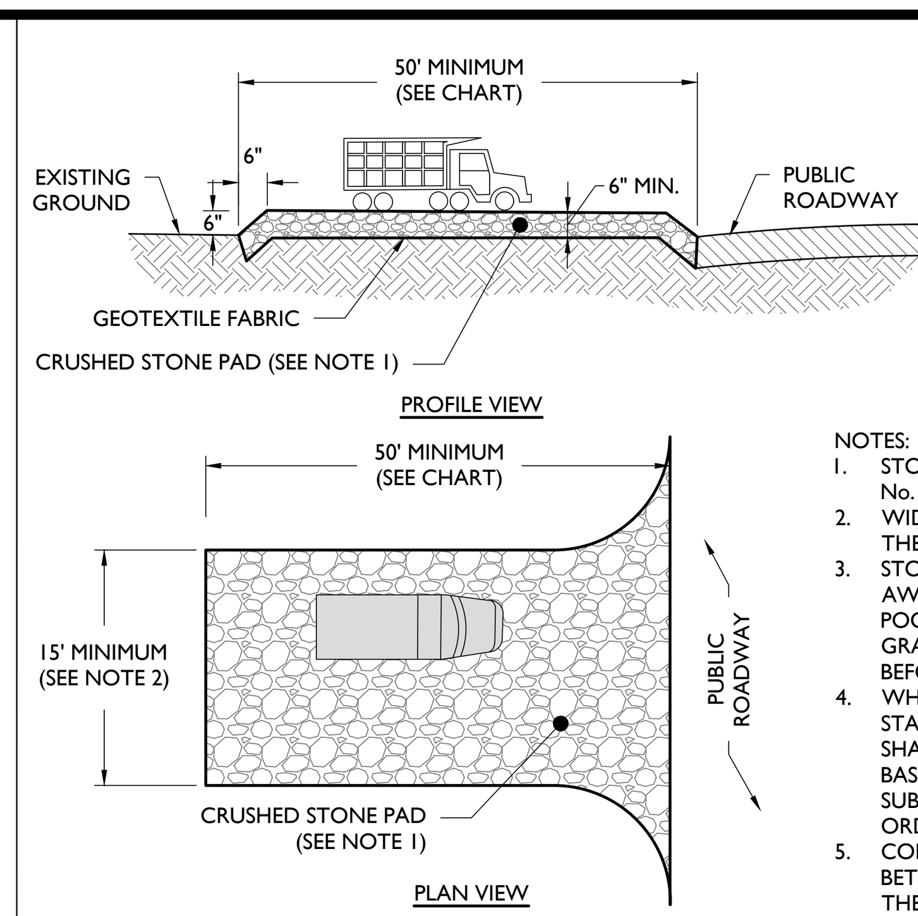


NOTES:
1. SECURELY FASTEN GEOTEXTILE TO FENCE POST BY USE OF WIRE TIES, HOG RINGS, STAPLES OR POCKETS. FOUR TO SIX FASTENERS PER POST.
2. GEOTEXTILE FABRIC TO BE EMBEDDED 6" (MIN.) AND TAMP IN PLACE.
3. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND THE POST TWICE AND ATTACHING AS SPECIFIED IN NOTE 1 ABOVE. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
4. SET SILT FENCE WITHIN PROJECT LIMITS. 10'-0" IS DESIRABLE.

SILT FENCE DETAIL

NOT TO SCALE

1



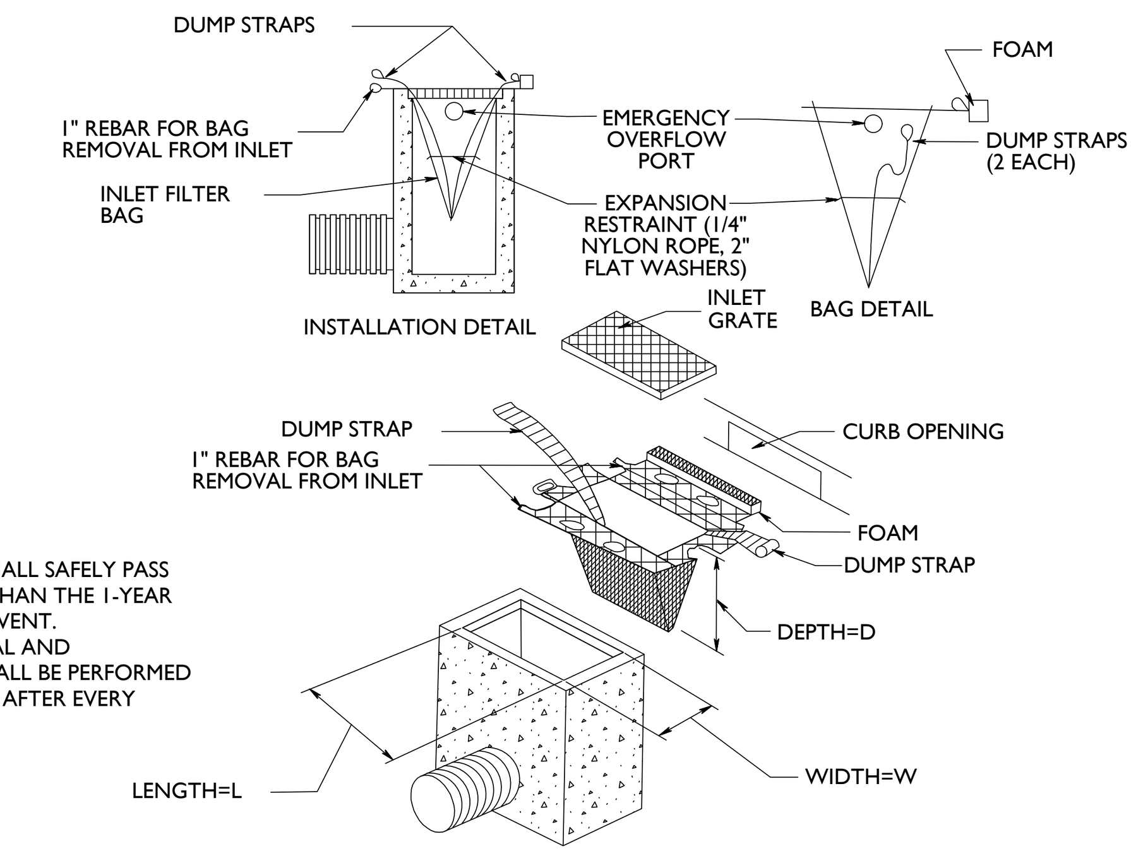
SLOPE OF PUBLIC ROADWAY	LENGTH OF STONE REQ'D	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0% TO 2%	50 FEET	100 FEET
2% TO 5%	100 FEET	200 FEET
> 5%	SEE NOTE 4	

NOTES:
1. STONE SHALL BE ASTM C-33, SIZE No. 2 (2.5" TO 1.5") OR No. 3 (2" TO 1") CLEAN CRUSHED ANGULAR STONE.
2. WIDTH SHALL BE 15' MINIMUM OR THE FULL WIDTH OF THE ACCESS POINT, WHICHEVER IS GREATER.
3. STORMWATER FROM UP-SLOPE AREAS SHALL BE DIVERTED AWAY FROM THE STABILIZED PAD, WHERE POSSIBLE. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE THE STABILIZED CONSTRUCTION ENTRANCE.
4. WHERE THE SLOPE OF THE ROADWAY EXCEEDS 5%, A STABILIZED BASE OF HOT MIX ASPHALT BASE COURSE SHALL BE INSTALLED. THE TYPE AND THICKNESS OF THE BASE COURSE AND USE OF DENSE GRADED AGGREGATE SUB-BASE SHALL BE AS PRESCRIBED BY LOCAL MUNICIPAL ORDINANCE OR GOVERNING AUTHORITY.
5. CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ACCESS AND THE PUBLIC ROADWAY.

STABILIZED CONSTRUCTION ACCESS DETAIL

NOT TO SCALE

2

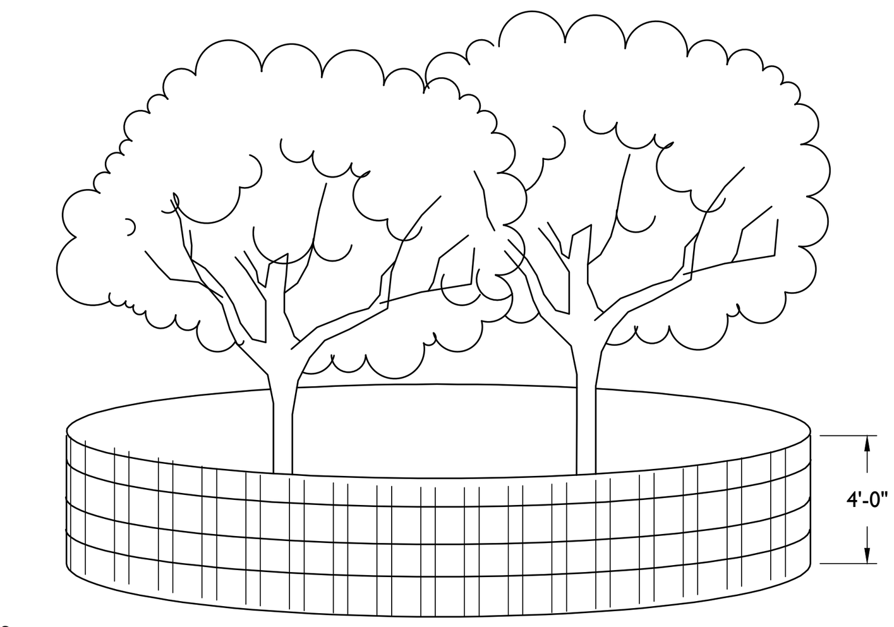


NOTES:
1. THE FILTER BAG SHALL SAFELY PASS FLOWS GREATER THAN THE 1-YEAR 24-HOUR STORM EVENT.
2. SEDIMENT REMOVAL AND MAINTENANCE SHALL BE PERFORMED FREQUENTLY AND AFTER EVERY STORM EVENT.

INLET FILTER BAG DETAIL

NOT TO SCALE

3



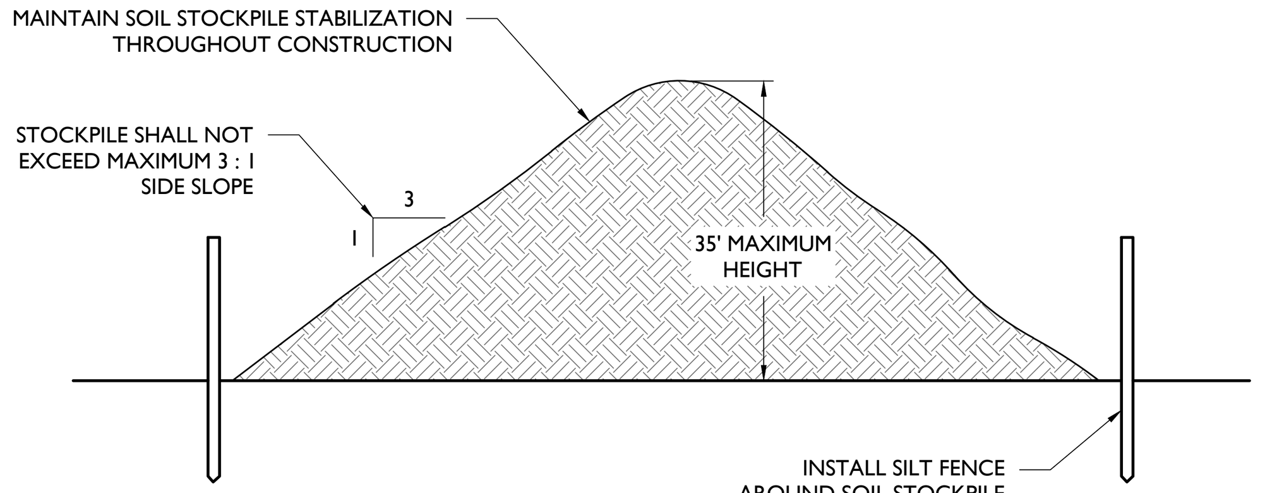
NOTES:

1. SNOW FENCING IS TO BE 4'-0" HIGH AND SELF SUPPORTED.
2. DO NOT STOCKPILE MATERIALS OR STORE EQUIPMENT WITHIN THE TREE PROTECTION FENCING.
3. SNOW FENCE TO BE INSTALLED AT DRIP LINE OF EXISTING TREE OR TREE CLUSTER TO BE PROTECTED OR NO CLOSER THAN 6' FROM TREE TRUNK IF NECESSARY.
4. IF THE PROJECT AREA ENCOMPASSES A PORTION OF THE DRIP LINE OF THE TREE, NO MORE THAN ONE THIRD OF THE OF THE TOTAL AREA OF WITHIN THE DRIP LINE SHOULD BE DISTURBED BY CONSTRUCTION OR REGRADING AND A 3" THICK LAYER OF MULCH SHALL BE INSTALLED OVER THE AREA OF THE DRIP LINE WHICH IS NOT PROTECTED BY FENCING TO PROVIDE A CUSHION.

TREE PROTECTION DETAIL

NOT TO SCALE

4



NOTES:
1. STOCKPILES SHALL BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
2. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH THE STANDARDS FOR PERMANENT OR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, AS APPROPRIATE (SEE SOIL EROSION NOTES).

SOIL STOCKPILE DETAIL

NOT TO SCALE

5

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 6414, BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

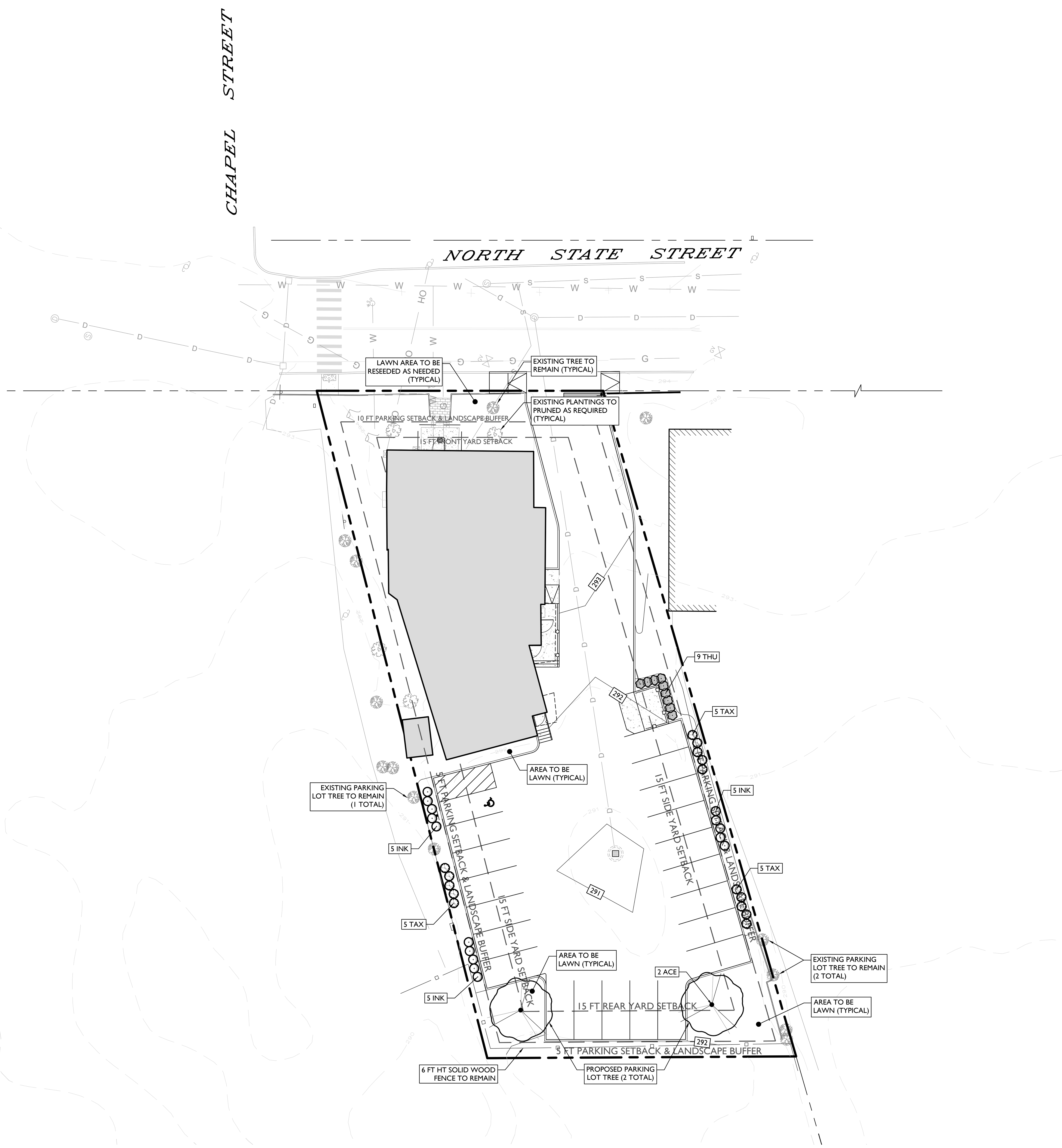
STONEFIELD engineering & design

SCALE: 1" = 20' | PROJECT ID: BOS-250093

TITLE:
SOIL EROSION & SEDIMENT CONTROL DETAILS

DRAWING:
C-9

APPENDIX A-4
LANDSCAPING PLANS



LANDSCAPING AND BUFFER REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
	PARKING LOT LANDSCAPING	
§ 28-7-10(a)	PARKING LOTS ABUTTING RESIDENTIAL DISTRICTS SHALL BE SCREENED	COMPLIES
§ 28-7-10(a)(1)	HEDGE. DENSE PLANTING, BERM, OR SOLID WALL OF 4 FT HEIGHT REQUIRED	COMPLIES(1)
§ 28-7-10(d)	1 TREE FOR EVERY 2,000 SF OF PARKING AREA	
	(9,962 SF) * (1 TREE / 2,000 SF) = 5 TREES	3 EXISTING TREES 2 PROPOSED TREES

(1) EXISTING OPAQUE 6 FT TALL FENCE TO REMAIN AND BE SUPPLEMENTED WITH EVERGREEN SHRUBS.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
DECIDUOUS TREES						
	ACE	2	ACER RUBRUM	RED MAPLE	2" - 2.5" CAL	B&B
EVERGREEN TREES						
	THU	9	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	5` - 6` HT	B&B
EVERGREEN SHRUBS						
	INK	15	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	24" - 30" HT	POT
	TAX	15	TAXUS X MEDIA 'DENSIFORMIS'	DENSE ANGLO-JAPANESE YEW	24" - 30" HT	POT

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

811

Know what's **below**
Call before you dig.

LANDSCAPING NOTES

1. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
2. THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
3. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH .
4. THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
5. THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.

20' 0' 20' 40'

GRAPHIC SCALE IN FEET
1" = 20'

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD
engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 6414, BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE JOSHUA KLINE No. 16530 LICENSED PROFESSIONAL ENGINEER
JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

STONEFIELD
engineering & design

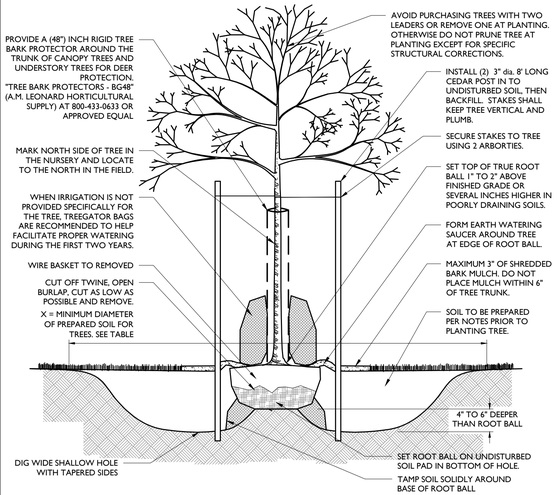
SCALE: 1" = 20' PROJECT ID: BOS-250093

TITLE: LANDSCAPING PLAN

DRAWING: C-10

NOTES:

1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER
2. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
3. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILDS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX



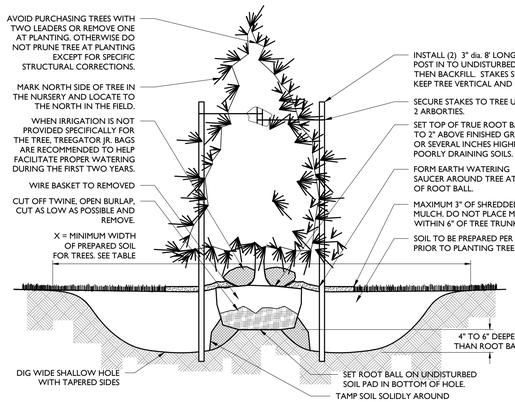
DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

1

NOTES:

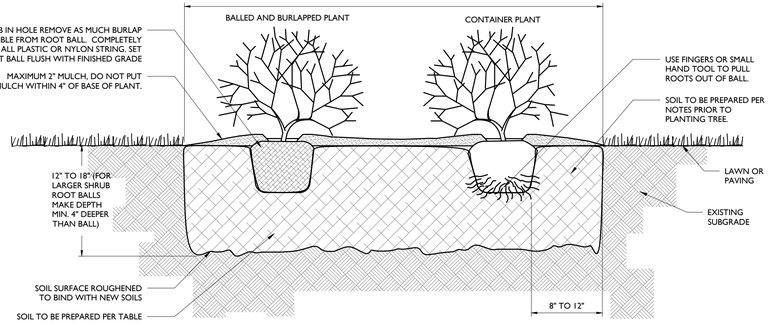
1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
3. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX



CONIFEROUS TREE PLANTING DETAIL

NOT TO SCALE

2



NOTES:

1. FOR THE CONTAINER-GROWN SHRUBS, USE FINGERS OR SMALL HAND TOOL TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. THOROUGHLY SOAK THE SHRUB ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL

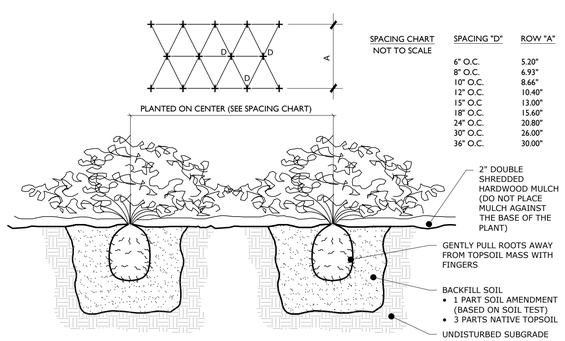
DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL

NOT TO SCALE

3

NOTES:

1. THOROUGHLY SOAK THE GROUND COVER ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
2. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILDS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILDS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX
3. ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT PER MANUFACTURER'S SPECIFICATIONS



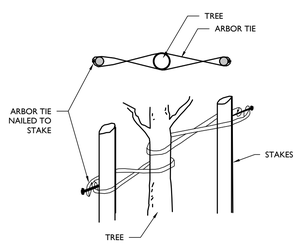
SPACING CHART
NOT TO SCALE

SPACING "D"	ROW "A"
6" O.C.	5.20"
8" O.C.	6.93"
10" O.C.	8.66"
12" O.C.	10.40"
15" O.C	13.00"
18" O.C.	15.60"
24" O.C.	20.80"
30" O.C.	26.00"
36" O.C.	30.00"

GROUND COVER/PERENNIAL/ANNUAL PLANTING DETAIL

NOT TO SCALE

4



INSTALLATION GUIDELINES:

1. LOOP TIE AROUND TREE AND NAIL TO CEDAR STAKE.
2. REMOVE ALL STAKING AND TIES AT END OF FIRST GROWING SEASON.
3. FOLD ENDS OF ARBORTIE BACK. SECURE TO STAKES WITH 1" GALVANIZED ROOFING NAIL OR USE A KNOT.
4. CONSULT LANDSCAPE ARCHITECT FOR STAKING OF TREES LARGER THAN 6".
5. SOURCES INCLUDE:
   GEMPLERS 1-800-332-6744 or GEMPLERS.COM
   CSP OUTDOORS 1-800-592-6940 or
   CSPOUTDOORS.COM

ARBORTIE DETAIL

NOT TO SCALE

5

GENERAL LANDSCAPING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIALS, OR OWNER/OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENTION OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
2. WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL.
3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR, BEFORE ORDERING OR PURCHASING MATERIALS, TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL, IF SO REQUESTED.
4. IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND SEED VERIFYING TYPE AND PURITY.
5. UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY-EIGHT HOURS (48 HRS.) IN ADVANCE OF THE ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE DESIGNER, OR GOVERNING MUNICIPAL OFFICIAL.
6. THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY PLACE.

PROTECTION OF EXISTING VEGETATION NOTES:

1. BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AT THE DRIP-LINE OR LIMIT OF DISTURBANCE AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL." NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
2. IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT.
3. IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRIP-LINE OF TREES TO REMAIN, THE WORK SHALL BE PERFORMED AS FOLLOWS:
   - TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT, BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE.
   - RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE, AND FILL NOT EXCEEDING 6 INCHES (6") IS REQUIRED, CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") AND FINISH APPROXIMATELY TWO INCHES (2") ABOVE THE FINISH GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL. WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED. IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."
   - LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION, NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST. WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL."

SOIL PREPARATION AND MULCH NOTES:

1. LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLE TO NOTIFICATION OF RESULTS.
2. BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIME AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SEED SPECIFICATION" OR "SOD SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL AMENDMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS FOLLOWS:
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM.
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
3. TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL OBTAINED FROM A WELL-DRAINED ARABLE SITE, FREE FROM ALL CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIAL GREATER THAN ONE INCH (1").
4. TOPSOIL SHALL HAVE A PH RANGE OF 5.0-7.0 AND SHALL NOT CONTAIN LESS THAN 6% ORGANIC MATTER BY WEIGHT.
5. OBTAIN TOPSOIL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROJECT SITE.
6. CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS.
7. UNLESS OTHERWISE NOTED IN THE CONTRACT, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBED AREA OF THE SITE.
8. LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LESS THE REQUIRED TOPSOIL), IN ACCORDANCE WITH THE APPROVED OR FINAL GRADING PLAN.
9. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THE APPROVED OR FINAL CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO INSTALLATION. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE WATER.
11. DOUBLE SHREDDED HARDWOOD MULCH OR APPROVED EQUAL SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND ALL TREES PLANTED BY LANDSCAPE CONTRACTOR. GROUND COVER, PERENNIAL, AND ANNUAL PLANTING BEDS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE OF SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF.
12. WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING.
13. SOIL SHALL BE LOOSENED WITH A BACKHOE OR OTHER LARGE COARSE-TILING EQUIPMENT UNLESS THE SOIL IS FROZEN OR EXCESSIVELY WET. TILING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE.
14. APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL.
15. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:

MYCRO® TREE SAVER - A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENTS.

- DIRECTIONS FOR USE: USE 3-OZ PER EACH FOOT DIAMETER OF THE ROOT BALL, OR 3-OZ PER INCH CALIPER. MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL, EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8 INCHES, AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL. APPLY WATER TO SOIL SATURATION.
- MYCOR® TREE SAVER® IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE.
- SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9.
- FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION.
- OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.

HEALTHY START MACRO TABS 12-8-8

- FERTILIZER TABLETS ARE PLACED IN THE UPPER 4 INCHES OF BACKFILL SOIL WHEN PLANTING TREES AND SHRUBS.
- TABLETS ARE FORMULATED FOR LONG-TERM RELEASE BY SLOW BIODEGRADATION, AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12-8-8 NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PROTEIN BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE. DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT 1 TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.

IRRIGATION DURING ESTABLISHMENT

SIZE AT PLANTING	IRRIGATION FOR VITALITY	IRRIGATION FOR SURVIVAL
< 2" CALIPER	DAILY FOR TWO WEEKS, EVERY OTHER DAY FOR TWO MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR TWO TO THREE MONTHS
2"-4 CALIPER	DAILY FOR ONE MONTH, EVERY OTHER DAY FOR THREE MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR THREE TO FOUR MONTHS
4 >" CALIPER	DAILY FOR SIX WEEKS, EVERY OTHER DAY FOR FIVE MONTHS, WEEKLY UNTIL ESTABLISHED	TWICE WEEKLY FOR FOUR TO FIVE MONTHS

TABLE NOTES:

1. AT EACH IRRIGATION, APPLY TWO TO THREE GALLONS PER INCH TRUNK CALIPER TO THE ROOT BALL SURFACE. APPLY IT IN A MANNER SO ALL WATER SOAKS THE ENTIRE ROOT BALL. DO NOT WATER IF ROOT BALL IS WET/SATURATED ON THE IRRIGATION DAY.

2. WHEN IRRIGATING FOR VITALITY, DELETE DAILY IRRIGATION WHEN PLANTING IN WINTER OR WHEN PLANTING IN COOL CLIMATES. ESTABLISHMENT TAKES THREE TO FOUR MONTHS PER INCH TRUNK CALIPER. NEVER APPLY IRRIGATION IF THE SOIL IS SATURATED.

3. WHEN IRRIGATION FOR SURVIVAL, TREES TAKE MUCH LONGER TO ESTABLISH THAN REGULARLY IRRIGATED TREES. IRRIGATION MAY BE REQUIRED IN THE NORMAL HOT, DRY PORTIONS OF THE FOLLOWING YEAR.

PLANT QUALITY AND HANDLING NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004) OR LATEST REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
2. IN ALL CASES, BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLANT LIST SHALL TAKE PRECEDENCE OVER COMMON NAMES.
3. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL HAVE A NORMAL HABIT OR SOUND, HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEM. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE.
4. PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (1-1/4") WHICH HAVE NOT COMPLETELY CALLOUSED SHALL BE REJECTED.
5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE.
6. THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF.
7. ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) MUST BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP. THE DIAMETER AND DEPTH OF THE BALLS OF EARTH MUST BE SUFFICIENT TO ENCOMPASS THE FIBROUS ROOT FEEDING SYSTEMS NECESSARY FOR THE HEALTHY DEVELOPMENT OF THE PLANT. NO PLANT SHALL BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING. THE BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS. ALL PLANTS THAT CANNOT BE PLANTED AT ONCE MUST BE HEELED-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED.
8. PLANTS TRANSPORTED TO THE PROJECT IN OPEN VEHICLES SHALL BE COVERED WITH TARPS OR OTHER SUITABLE COVERS SECURELY FASTENED TO THE BODY OF THE VEHICLE TO PREVENT INJURY TO THE PLANTS. CLOSED VEHICLES SHALL BE ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS. EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DIGGING, CARELESSNESS WHILE IN TRANSIT, OR IMPROPER HANDLING OR STORAGE SHALL BE CAUSE FOR REJECTION OF PLANT MATERIAL. ALL PLANTS SHALL BE KEPT MOIST, FRESH, AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS THE ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE.
9. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING DETAILS.
10. LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHEN POSSIBLE. THE ROOT BALL SHALL BE KEPT MOIST AT ALL TIME AND COVERED WITH MOISTENED MULCH OR AGED WOODCHIPS. PROPER IRRIGATION SHALL BE SUPPLIED SO AS TO NOT ALLOW THE ROOT BALL TO DRY OUT. PLANTINGS SHALL BE UNTIED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING, AND LEAF LOSS. PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH AND WATERED AS REQUIRED TO PRESERVE ROOT MOISTURE.
11. NO PLANT MATERIAL SHALL BE PLANTED IN MUDDY OR FROZEN SOIL.
12. PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DISEASED OR INJURED PLANTS SHALL BE REMOVED.
13. IF ROCK OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO RELOCATE OR ENLARGE PLANTING PITS OR DELETE PLANT MATERIAL FROM THE CONTRACT.
14. IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8') ABOVE GRADE, AND SHRUBS, GROUND COVER, PERENNIALS, AND ANNUALS SHALL BE MAINTAINED TO A HEIGHT NOT TO EXCEED TWO FEET (2') ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OR AGENCY.
15. INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS:
    PLANTS (MARCH 15 - DECEMBER 15)
    LAWNS (MARCH 15 - JUNE 15 OR SEPTEMBER 1 - DECEMBER 1)
16. THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPLANT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15):
    ABIES CONCOLOR
    ACER BUERGERIANUM
    ACER FREEMANII
    ACER RUBRUM
    ACER SACCHARINUM
    BETULA VARIETIES
    CARPINUS VARIETIES
    CEDRUS DEODARA
    CELTIS VARIETIES
    CERCIDIPHYLLUM VARIETIES
    CERCIS CANADENSIS
    CORNUS VARIETIES
    CRATAEGUS VARIETIES
    CORNUS VARIETIES
    CRATAEGUS VARIETIES
    CUPRESSOCYPARIS LEYLANDII
    FAGUS VARIETIES
    HALESIA VARIETIES
    ILEX X FOSTERII
    ILEX NELLIE STEVENS
    ILEX OPACA
    JUNIPERUS VIRGINIANA
    KOELREUTERIA PANICULATA
    LIQUIDAMBAR VARIETIES
    LIRIODENDRON VARIETIES
    MALUS IN LEAF
    NYSSA SYLVATICA
    OSTRYA VIRGINIANA
    PINUS NIGRA
    PLATANUS VARIETIES
    POPULUS VARIETIES
    PRUNUS VARIETIES
    PYRUS VARIETIES
    QUERCUS VARIETIES (NOT Q. PALUSTRIS)
    SALIX WEEPING VARIETIES
    SORBUS VARIETIES
    TAXODIUM VARIETIES
    TAXUX B REPANDENS
    TILIA TOMENTOSA VARIETIES
    ULMUS PARVIFOLIA VARIETIES
    ZELKOVA VARIETIES
17. IF A PROPOSED PLANT IS UNATTAINABLE OR ON THE FALL DIGGING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REQUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL PRIOR TO ORDERING AND INSTALLATION.
18. DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED AT THE END OF EACH WORK DAY. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED.
19. THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY.
20. A 90-DAY MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED.
21. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS IF ORIGINALLY REQUIRED, WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
22. MOW ALL GRASS AREAS AT REGULAR INTERVALS TO KEEP THE GRASS HEIGHT FROM EXCEEDING THREE INCHES (3"). MOWING SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS LENGTH. WHEN THE AMOUNT OF GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT DESTRUCTION OF THE UNDERLYING TURF. MOW GRASS AREAS IN SUCH A MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ON PAVED AREAS, AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING OF PAVED AREAS AND SIDEWALKS TO CLEAR THEM FROM MOWING DEBRIS.
23. GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND MULCHING.
24. SHOULD THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE CONTRACT SHALL BE ESTABLISHED.
25. LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION, THE LANDSCAPE CONTRACTOR SHALL FURNISH IT BY MEANS OR A WATERING TRUCK OR OTHER ACCEPTABLE MANNER.
26. THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL.
27. IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND ESTABLISHMENT.

PLANT MATERIAL GUARANTEE NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR (1 YR.) FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE.
2. THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE. THE LANDSCAPE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS.
3. ALL REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
4. THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

LAWN (SEED OR SOD) NOTES:

1. SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS.
2. SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND WITHIN THE PROVIDED "SEED SPECIFICATION" OR "SOD SPECIFICATION."
3. REFERENCE LANDSCAPE PLAN FOR AREAS TO BE SEEDED OR LAID WITH SOD.
4. SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY SEEDING SPECIFICATION."
5. PROTECT NEW LAWN AREAS AGAINST TRESPASSING WHILE THE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGNS, BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TRESPASS, EROSION, WASHOUT, SETTLEMENT OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.

ISSUE	DATE	BY	DESCRIPTION
00	03/18/2026	NS	FOR MUNICIPAL SUBMISSION

NOT APPROVED FOR CONSTRUCTION

STONEFIELD
engineering & design
Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com
120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

**MAP 6414, BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE**

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 16530
LICENSED PROFESSIONAL ENGINEER

STONEFIELD
engineering & design

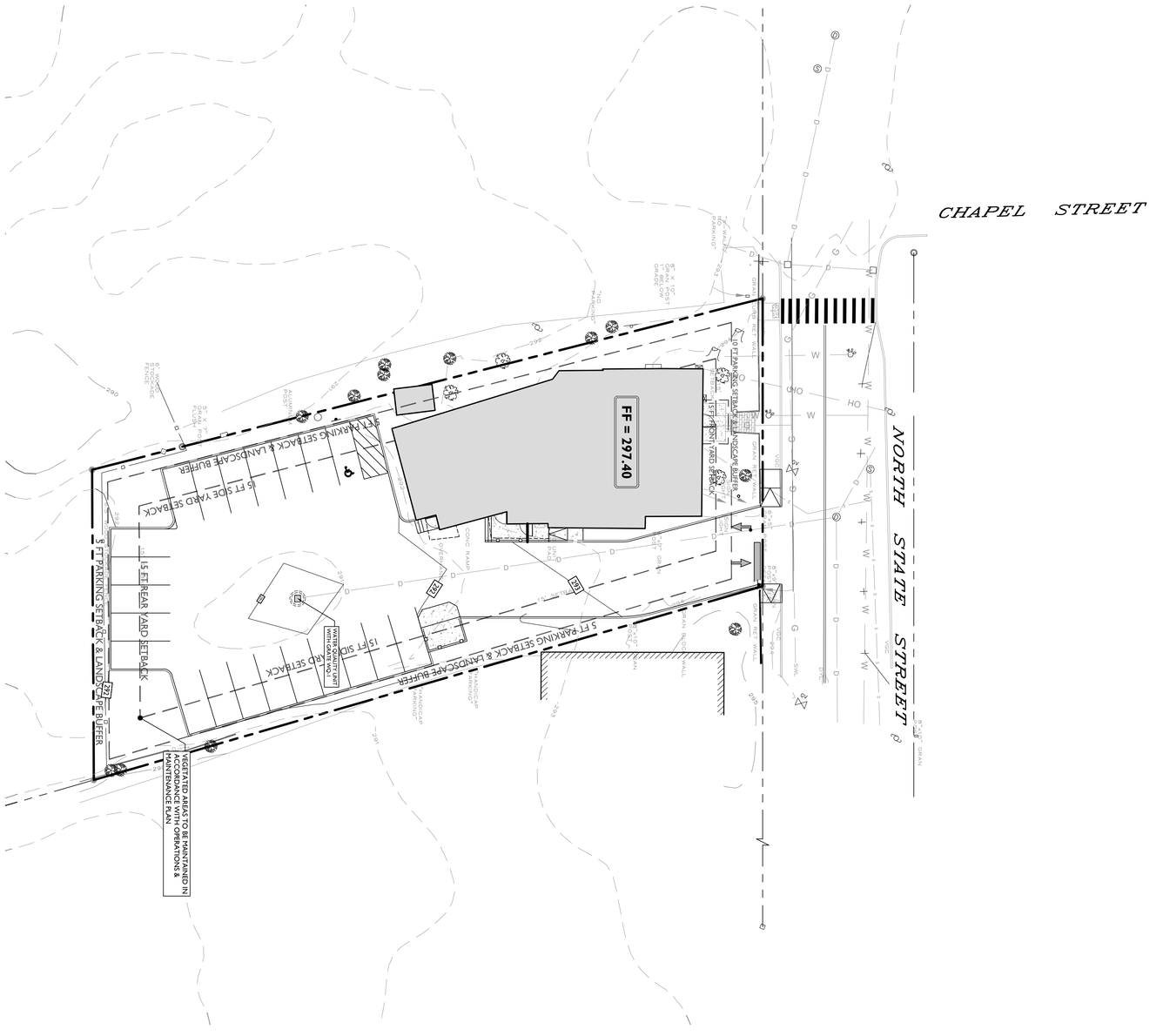
SCALE: AS SHOWN | PROJECT ID: BOS-250093

TITLE:
LANDSCAPING DETAILS

DRAWING:
C-11

APPENDIX B
STORMWATER BMP LOCATION EXHIBIT

Z:\BOSTON\BOS\2025\BOS-250093 ASSOCIATED ENTERPRISES - 103 NORTH STATE STREET, CONCORD, NH\CADD\EXHIBITS\BMP LOCATION MAP\2026-03-11_STORMWATER BMP LOCATION MAP.DWG



SITE PLAN

PROPOSED MULTI-FAMILY RESIDENTIAL ADAPTIVE REUSE

MAP 6414, BLOCK Z, LOT 1
103 NORTH STATE STREET
CITY OF CONCORD
MERRIMACK COUNTY, NEW HAMPSHIRE

JOSHUA H. KLINE, P.E.
NEW HAMPSHIRE LICENSE No. 15331
LICENSED PROFESSIONAL ENGINEER

STONEFIELD engineering & design

Rutherford, NJ · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Birmingham, MI
www.stonefieldeng.com

120 Washington Street, Suite 201, Salem, MA 01970
Phone 617.203.2076

NOT APPROVED FOR CONSTRUCTION

ISSUE	DATE	BY	DESCRIPTION
00	03/13/2026	NNS	FOR MUNICIPAL SUBMISSION

DRAWING: **1 OF 1**

TITLE: **STORMWATER BMP LOCATION MAP**

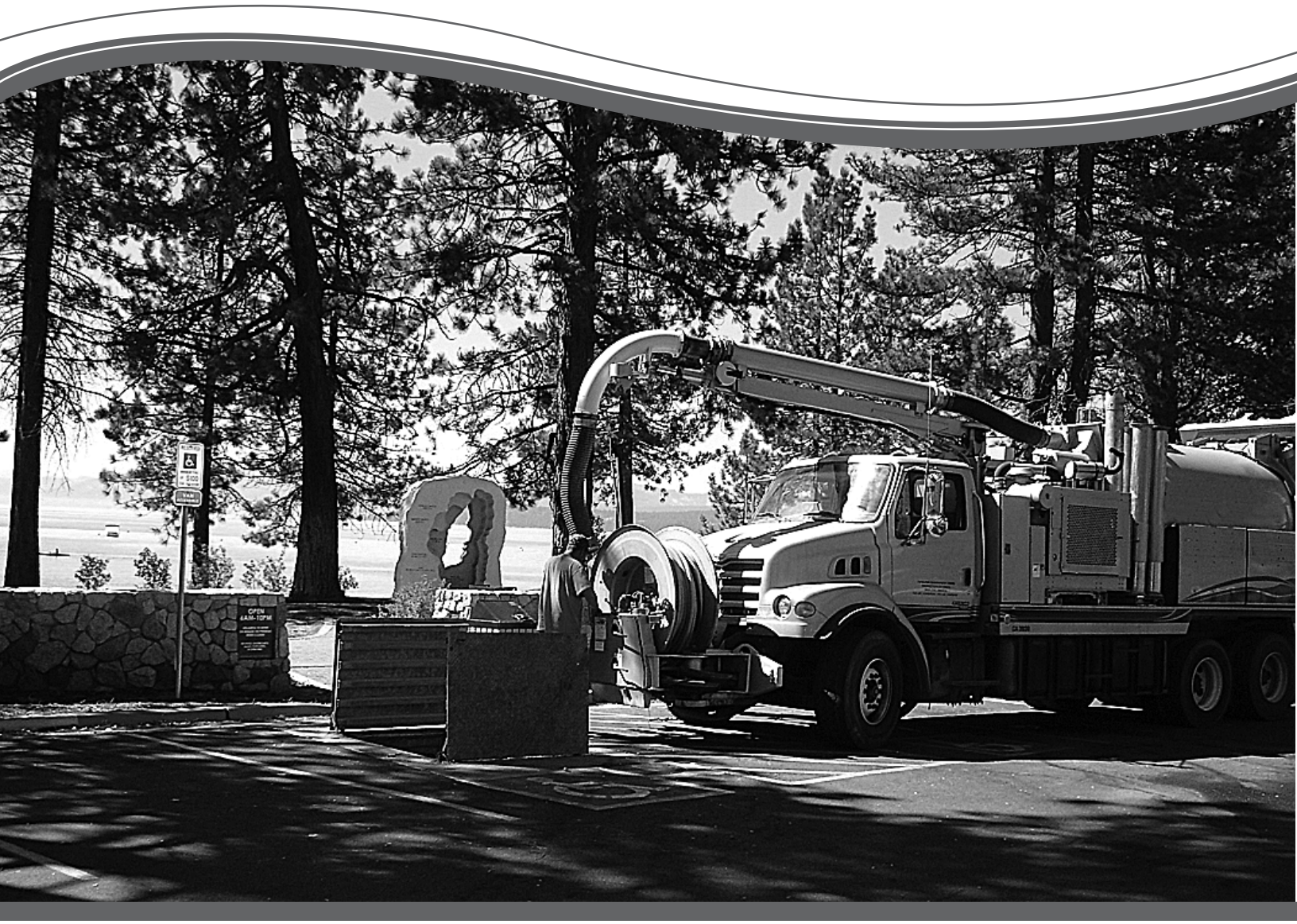
SCALE: 1" = 20' | PROJECT ID: BOS-250093

STONEFIELD engineering & design

APPENDIX C
CONTECH CS-3 CASCADE SEPARATOR OPERATIONS & MAINTENANCE GUIDE

CONTECH®
ENGINEERED SOLUTIONS

Cascade Separator® Inspection and Maintenance Guide



CASCADE
separator®

Maintenance

The Cascade Separator® system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects sediment and debris will depend upon on-site activities and site pollutant characteristics. For example, unstable soils or heavy winter sanding will cause the sediment storage sump to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (i.e. spring and fall). However, more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment wash-down areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

A visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet chamber, flumes or outlet channel. The inspection should also quantify the accumulation of hydrocarbons, trash and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided in this Inspection and Maintenance Guide.

Access to the Cascade Separator unit is typically achieved through one manhole access cover. The opening allows for inspection and cleanout of the center chamber (cylinder) and sediment storage sump, as well as inspection of the inlet chamber and slanted skirt. For large units, multiple manhole covers allow access to the chambers and sump.

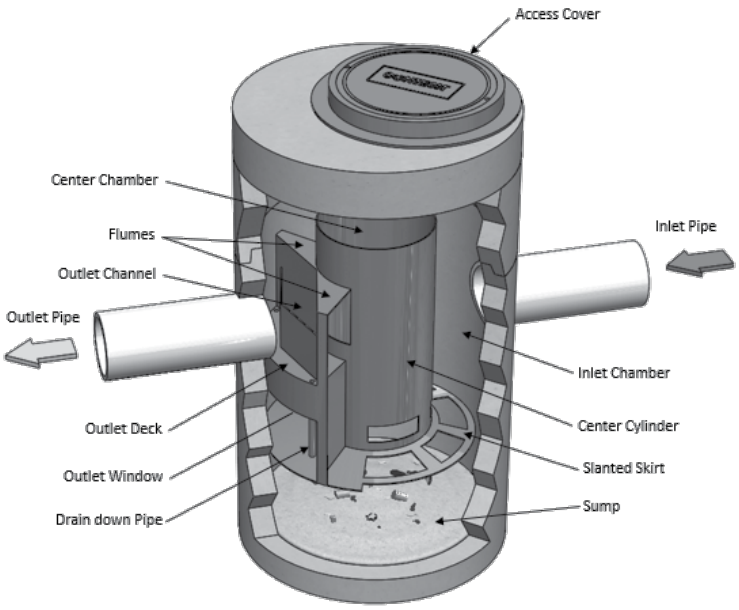
The Cascade Separator system should be cleaned before the level of sediment in the sump reaches the maximum sediment depth and/or when an appreciable level of hydrocarbons and trash has accumulated. If sorbent material is used, it must be replaced when significant discoloration has occurred. Performance may be impacted when maximum sediment storage capacity is exceeded. Contech recommends maintaining the system when sediment level reaches 50% of maximum storage volume. The level of sediment is easily determined by measuring the distance from the system outlet invert (standing water level) to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Finer, silty particles at the top of the pile typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the chart in this document to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage.

Cleaning

Cleaning of a Cascade Separator system should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole cover and insert the vacuum tube down through the center chamber and into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The areas outside the center chamber and the slanted skirt should also be washed off if pollutant build-up exists in these areas.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. Then the system should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and to ensure proper safety precautions. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the Cascade Separator system must be done in accordance with local regulations. In many locations, disposal of evacuated sediments may be handled in the same manner as disposal of sediments removed from catch basins or deep sump manholes. Check your local regulations for specific requirements on disposal. If any components are damaged, replacement parts can be ordered from the manufacturer.



Cascade Separator® Maintenance Indicators and Sediment Storage Capacities

Model Number	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y^3	m^3
CS-3	3	0.9	1.5	0.5	0.4	0.3
CS-4	4	1.2	2.5	0.8	0.7	0.5
CS-5	5	1.3	3	0.9	1.1	0.8
CS-6	6	1.8	3.5	1	1.6	1.2
CS-8	8	2.4	4.8	1.4	2.8	2.1
CS-10	10	3.0	6.2	1.9	4.4	3.3
CS-12	12	3.6	7.5	2.3	6.3	4.8

Note: The information in the chart is for standard units. Units may have been designed with non-standard sediment storage depth.

A Cascade Separator unit can be easily cleaned in less than 30 minutes.

A vacuum truck excavates pollutants from the systems.

Cascade Separator® Inspection & Maintenance Log

Cascade Model:			Location:		
Date	Depth Below Invert to Top of Sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The depth to sediment is determined by taking a measurement from the manhole outlet invert (standing water level) to the top of the sediment pile. Once this measurement is recorded, it should be compared to the chart in the maintenance guide to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage. Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.
2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

SUPPORT

- Drawings and specifications are available at www.ContechES.com.
- Site-specific design support is available from our engineers.

Contech Engineered Solutions LLC provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, sanitary sewer, stormwater, and earth stabilization products. For information, visit www.ContechES.com or call 800.338.1122

CONTECH ENGINEERED SOLUTIONS
800-925-5240
www.ContechES.com

APPENDIX D
INSPECTION CHECKLISTS

Associated Enterprises

103 North State Street, Concord, NH

Date / Time: _____

Days Since Previous Rainfall and Rainfall Amount: _____

Inspector: _____

Operation and Maintenance Log

All oil, sediment and debris to be disposed of in accordance with local, state, and federal guidelines and regulations.

Maintenance Item	Inspection Date	Action Taken	Initials
1. Water Quality Unit - Contech (Inspected four times per year in the first year and twice per year thereafter)			
Clean when sediment reaches 6 inches or when an appreciable level of hydrocarbons and trash covers over the water surface.			
Inspect that system components are in working order and that there are no blockages or obstructions in the inlet or separation screen			
Quantify accumulation of hydrocarbons, trash, and sediment.			
Clean SDS System at least once per year or when sediment has reached 75% of capacity or when appreciable level of hydrocarbons and trash has accumulated during dry weather conditions using vacuum truck			
Additional inspection, maintenance, and corrective measures taken as needed (please specify):			

Maintenance Item **2. Vegetated Areas** (Inspected & maintained annually & as needed)	Inspection Date	Action Taken	Initials
Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. If erosion is evident, armor the area with an appropriate lining or riprap stone.			
Inspect planted areas on a semi-annual basis and remove any litter.			
Maintain planted areas adjacent to pavement to prevent soil washout. Immediately clean any soil deposited on pavement.			
The grass vegetation should be cut to a height between three and four inches.			
Pesticide/Herbicide Usage – No pesticides are to be used unless a single spot treatment is required for a specific control application. No pesticides or herbicides are allowed within the 100' adjacent upland resource area or 200' riverfront area without prior approval of the Governing Authority.			
Additional inspection, maintenance, and corrective measures taken as needed (please specify):			

Notes:

APPENDIX E
ANNUAL EVALUATION FORMS

INVENTORY

E-1: ANNUAL EVALUATION LOG

E-2: AMENDMENT LOG

ANNUAL EVALUATION RECORD

The person responsible for maintenance shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed.

The responsible party should evaluate the effectiveness of the maintenance plan by comparing the maintenance plan with the actual performance of the maintenance. The items to evaluate may include, but not limited to,

- Whether the inspections have been performed as scheduled;
- Whether the preventive maintenance has been performed as scheduled;
- Whether the frequency of preventative maintenance needs to increase or decrease;
- Whether the planned resources were enough to perform the maintenance;
- Whether the repairs were completed on time;
- Whether the actual cost was consistent with the estimated cost;
- Whether the inspection, maintenance, and repair records have been kept.

If actual performance of those items has been deviated from the maintenance plan, the responsible party should find the causes and implement solutions in a revised maintenance plan.

Evaluator(s)	***Date of Evaluation***	***Decision***
		__Maintain current version OR __Revise current version Revision date _____ (also update the last revision date on the cover page) __Requires a new deed recording (also update the last recording information on the cover page)
		__Maintain current version OR __Revise current version Revision date _____ (also update the last revision date on the cover page) __Requires a new deed recording (also update the last recording information on the cover page)
		__Maintain current version OR __Revise current version Revision date _____ (also update the last revision date on the cover page) __Requires a new deed recording (also update the last recording information on the cover page)

Operations & Maintenance Plan Amendment Log

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by (Name(s) and Title)