

27 March 2025

Rick Chellman, Planning Board Chair City of Portsmouth 1 Junkins Avenue Portsmouth, NH 03801

RE: Submission for Design Review Public Hearing at 361 Hanover Street, Site Development

Dear Mr. Chellman and Planning Board Members:

On behalf of 361 Hanover Steam Factory, LLC, we are pleased to submit the attached plan set for **Design Review Public Hearing** for the above-mentioned project and request that we be placed on the agenda for your **April 17, 2025**, Planning Board Meeting. The project consists of the addition of **new structures** and the renovation of the existing commercial building at 361 Hanover Street with the associated and required site improvements. The new structures will be entirely residential to add much needed housing stock in a desirable location where significant walkable amenities are in proximity. The project was reviewed by the Planning Board under Preliminary Conceptual Consultation at the March 20, 2025, meeting, where the Public Hearing date was set.

The Portsmouth Zoning Board, and their February 18, 2025, meeting granted the following Variances:

- Variance from Section 10.642 to allow residential principal uses on the ground floor of the buildings;
- Variance from Section 10.5A41 Figure 10.5A41.10D to a) allow for "Apartment", "Rowhouse" and "Duplex" building types where they are not permitted; and
- b) allow a ground floor height of 10.5 feet where 12 feet is required.

Project Overview

The project is a re-purposing of the existing structure on the site being known as the Heinemann Building and Tax Map 138 – Lot 63, and the project is in the online portal as Land Use Application (LU) - 24 - 196. The property will be subdivided with the smaller building, known as the Last Chance Garage, placed on a separate lot. The site plan proposal is re-developing the larger lot with the Heinemann Building into entirely residential use by additions to the existing building and four proposed new buildings, according to the attached site plans. The project received some zoning relief as described above but otherwise is fully compliant with the Portsmouth Zoning Ordinance.

361 Hanover Street Design Review Public Hearing | 3-27-25 | 5010135.2977.01 | Page 1





Subdivision

The applicant is proposing to subdivide the existing parcel into two conforming parcels, each with one of the existing buildings contained thereon. The Subdivision Plan details the proposed property division. The plan shows the configuration of the existing lot. The Property has a long history of Industrial and Commercial land use. Built in the late 19th century as a 5-story brick and heavy timber structure with a flat roof and slab basement level, the Heinemann Building was originally owned and occupied by the Portsmouth Steam Factory. In the late 19th century, a fire destroyed the building reducing the building to a two-story building. In the 1950s, the building was later occupied with an auto dealership and later, in the 1970s, with JSA, an architectural design firm. In the 21st Century, the building was occupied by Heinemann, an international publishing company. A single story "modern" block addition with a shed roof was added mid-century toward the rear facing Foundry Place which was used as a loading dock for shipping and receiving. The existing condition shows a paved parking area behind the Heinemann Building and a bump out of the property lines. The area to the northeast of the Heinemann Building, towards what is now Foundry Place and the Foundry Place Garage, previously housed the Portsmouth Department of Public Works (DPW) Rock Street facility. Between that facility and the Heinemann Building there was a parking area which had been leased to the Heinemann Building and used for parking, that lease has expired. The property is currently in Condominium ownership. The Condominium will be dissolved, and the unit owners will become fee simple owners of the individual lots. The plans show an access easement to Hanover Street to serve the new lot.

Site Plan Submission

The submission requirements of the City of Portsmouth Site Plan Regulations have been reviewed. The information supplied herein is intended to assist in a determination of the project's compliance. Plans are drawn in accordance with scale and size requirements, with dates, titles, north orientation, Map and Lot, Zoning, revision blocks, and Legends. The proposed uses and Square footage of use are shown on the Architectural plans. The professional's seals with license numbers are on the submitted plans. The Existing Conditions plan shows the site topography, building location with floor elevation, feature locations, and driveway access / egress and current parking configuration. Available utility information is shown. Subsequent plans show the proposed development with the associated site improvements and construction details.

Site Zoning

Consistent with other properties along Foundry Place and Hill Street, the property is zoned Character District 5 (CD5). The CD5 District is an urban zoning district that allows for a wide array of higher density commercial and residential uses. The Property is also subject to several Overlay Districts. The northern half of the property is located within the North End Incentive Overlay District (NEIOD) and the entire property is also located within the Downtown Overlay District (DOD).

361 Hanover Street Design Review Public Hearing | 3-27-25 | 5010135.2977.01 | Page 2





The goals and objectives of the North End Vision Plan are focused on generating buildings, land uses, and site designs that support economic development while being respectful and sensitive to the surrounding context. Buildings are intended to step up or down in transitional areas - like the property at 361 Hanover Street – in response to the surrounding land use pattern. This stepping element is why the North End Incentive Overlay District (the "NEIOD"), and its encouragement of larger buildings, does not carry over to the parking lot portion of the property along Hanover Street. Additionally, the Vision Plan encourages ground-floor commercial uses to activate the sidewalk and enhance the pedestrian experience. Thus, the Downtown Overlay District (the "DOD") was extended into much of the North End. Although the Downtown Overlay District (the "DOD") includes 361 Hanover Street it is important to acknowledge that there are no other properties fronting on Hanover Street included in the DOD. This is a result of the DOD following property lines of the entire parcel. No other parcel spans the area between Foundry Place and Hanover Street.

The <u>Project Site Plan C3</u> details information regarding the proposed uses, including building size and parking counts. The required parking under the Portsmouth Zoning Ordinance (PZO) is as follows:

2 Units between 500-750 SF = 2 Spaces Required 38 Units over 750 SF = 50 Spaces Required Visitor Spaces - 1 per 5 units = 8 Spaces Required DOD Overlay Space Reduction (Section 10.1115.23) = 4 Spaces Deducted <u>Total Required Spaces = 56</u> Total Spaces Provided = 72 Spaces

We submit that the 4-space reduction is part of the Visitor parking requirement. There are two exterior guest parking spaces, and there will be 2 parking spaces in Building A for guests who are at the invitation of the unit owners with garage door access code. As required the stacked parking spaces (12 in Building A and 6 in Building D) will be assigned to a specific unit within those Buildings. There are plenty of parking options (1 and 2) relating to the total number of units. Interior parking spaces are detailed on the Architectural plans.

Site Plan C3 shows the proposed open space / non-impervious areas. The proposed project reduces the impervious surface total for the project and brings it into conformance with the 5% Open Space requirement. The proposed building uses, all conforming under the property variance, are listed on this sheet. Information regarding other Zoning Development Standards are detailed in the Table in the upper left-hand corner of the sheet. The Building Elevation plans show the proposed building heights. Ordinance conforming bike racks, both inside and outside, are shown.

Vehicular and Pedestrian Circulation

The previous application package included a technical <u>Memorandum</u> prepared by Vanesse & Associates, Inc. (VAi), the project Traffic Consultant, calculating site Trip Generation utilizing Institute of Traffic Engineers (ITE) Trip Generation Calculations. The Memorandum detailed the changes in traffic generation due to the project and the potential impact on the adjacent roadway

361 Hanover Street Design Review Public Hearing | 3-27-25 | 5010135.2977.01 | Page 3



HALEY WARD

network. The Summary and Recommendations (only) are included in this submission. Pedestrian access is shown on the site plans and consists of a sidewalk network. The tactile surface of the sidewalks vary where garage access is crossing. Turning movement plans are included in the Plan Set as Sheets T1 and T2, adjusted per discussion with the Portsmouth Fire Department.

Screening and Landscaping

The site currently is only landscaped with two trees at the existing building corners, which will have to be removed. The proposed landscaping improvements greatly expand the site landscaping along the Rock Street and Hanover Street frontages, as well as within the site. The space in front of the buildings at the street line is landscaped, and some more robust street trees are proposed along the Rock Street frontage. The tree locations require Portsmouth Tress and Greenery Committee approval which the developer will be on the agenda for approval. Some edits from the Preliminary Concept plan, based on feedback received already from the city, have been included in this submission. Landscaping is detailed on Landscape Plans L1 - L3.

Water and Sewage Systems

The site is served by municipal water and sewer. The development proposes appropriate connections to the water and sewer infrastructure on Hanover Street. The plan shows the subsequent Mill and Pave operation to restore the street surface. The utility demand generated by the additions and renovations are not expected to exceed the capacity of the existing infrastructure. Utilities are detailed on the <u>Utility Plan C4</u>.

Stormwater Management

The site drainage patterns are shown on <u>Sheet C5</u>. The proposed drainage system has been designed to capture site runoff and deliver it to the adjacent city closed pipe system. The roof drain filters provide post-development runoff treatment for a majority of the site. Erosion and sediment control practices will be implemented for both the temporary condition during construction and for final stabilization after construction. Therefore, there are no negative impacts to downstream receptors or adjacent properties anticipated as a result of this project.

Site Lighting

The re-development will introduce adequate lighting of the driveway and pedestrian corridors to provide a welcoming and safe pedestrian and vehicular experience. The lighting will all be building mounted. The lighting intensities are detailed on the <u>Lighting Plan C6</u>, and the proposed fixture cut sheets are included in the Supplemental Material submission.

361 Hanover Street Design Review Public Hearing | 3-27-25 | 5010135.2977.01 | Page 4





Site Signage

The site will be served by building mounted street number identification signage, the final design will be determined with TAC input. The project will be a Condominium Development, so a general identification sign will be proposed. The only other signage is required traffic, delivery, and parking controls such as the ADA signage and the stop sign.

Site Utilities and Solid Waste

Site utilities include natural gas, underground electric and communications services. The existing services will be adjusted and new corridors and conduits constructed as needed. The developer has met with Eversource to understand the underground utility network and understand electrical primary lines and required transformers and switchgear. A redundant primary electrical line loop, for additional reliability, will be created.

Solid Waste for Building A will be collected in an interior trash room, with access for trash haulers to pick up the trash on a regular schedule. Solid Waste for Buildings B1, B2, C and D will be in unit collection with City of Portsmouth curbside pickup.

The following plans are included in our submission:

- Cover Sheet This shows the Development Team, Legend, Site Location, and Site Zoning.
- Subdivision Plan This plan shows the division of the existing parcel into two conforming lots.
- Site Orthophoto This plan shows the site's relationship to the surrounding properties.
- Existing Conditions Plan C1 This plan shows the existing site conditions in detail.
- Demolition Plan C2 This plan shows proposed site demolition prior to construction.
- Site Plan C3 This plan shows the site development layout with the associated Zoning information and notations.
- Landscape Plans L1 to L3 These plans show proposed landscaping and bike rack details.
- Utility Plan C4 This plan shows concept site utilities.
- Grading Plan C5 This plan show project site grading, structure locations and elevations.
- Lighting Plan C6 This plan show proposed project lighting.
- Turning Template Plans T1 and T2 These plans show turning movements for passenger car and Portsmouth Fire Apparatus.
- Architectural Plans These plans show building floor plans and elevations and a Street Elevation.
- Detail Sheets D1 to D5: These plans show the associated construction details.



361 Hanover Street Design Review Public Hearing | 3-27-25 | 5010135.2977.01 | Page 5



Also attached to this submission is additional material to aid in the review of the application:

- ✓ Proposed Plant material
- ✓ Stormwater Inspection and Maintenance Plan
- ✓ Green Building Statement
- ✓ Lighting Specifications
- ✓ Traffic Memorandum (Recommendations)

We look forward to Planning Board review and Public Comment related to this submission and look forward to an in-person presentation at your meeting.

Sincerely,

John R. Chagnon, PE

P:\NH\5010135-Hampshire_Development\2977.01-Hanover St., Portsmouth-JRC\JN 2977\2024 Site Plan\Applications\City of Portsmouth Site Plan Design Review\Planning Board Public Hearing Submission Letter 2025.03.27.doc

361 Hanover Street Design Review Public Hearing | 3-27-25 | 5010135.2977.01 | Page 6



361 HANOVER

PLANTS BY TYPE

Trees

Acer rubrum 'Bowhall'

Bowhall Red Maple





LEAF SEASON Deciduous LEAF COLOR Dark Green, Red FLOWER COLOR n/a FLOWER SEASON n/a FRUIT SEASON n/a FRUIT TYPE n/a



HABIT Broad, Columnar, Pyramidal, Upright DESIGN STYLES Meadow, Ranch, Woodland LOCATION USES Lawn, Street Tree ATTRACTS WILDLIFE n/a

DESCRIPTION

Tree

HEIGHT

40 ft.

WIDTH

15 ft.

SUN

Full, Half

WATER

SOIL

Loam

Medium

40' tall with a 15' spread. Upright, pyramidal form. Reliable scarlet-red fall color.

Carpinus betulus 'Frans Fountaine'

Upright European Hornbeam



DESCRIPTION

Columnar in youth, more oval or vase shaped with age. Clean-looking tree. After 10 years, this beautiful tree is 20-25' tall and has spread 6-8'. It could end up being 50' tall! Foliage is deciduous and green in summer, turning gold in fall. It tolerates full sun to complete shade, clay or sandy soil, and is drought tolerant once it's established. It needs well draining soil. Great street or park tree since it can be easily pruned into a hedge. Columnar shaped in youth, becomes more oval or vase shape with age. Clean-looking tree.

Learn More at Papervale Trees

Juniperus virginiana 'Emerald Sentinel'

Emerald Sentinel Columnar Juniper







EAF SEASON
EAF COLOR Blue Green
lower color n/a
lower season n/a
RUIT SEASON Summer, Fall
RUIT TYPE



HABIT Columnar DESIGN STYLES Formal, Mediterranean, Ranch, Spanish LOCATION USES Background, Entry, Foundation, Walls / Fences ATTRACTS WILDLIFE n/a

DESCRIPTION

Emerald Sentinel Eastern Redcedar has green needles that are set off by vivid blue fruit in fall and winter. Evergreen foliage takes on purple tones in winter and is salt tolerant. The berry set makes this a wonderful cut green for winter arrangements. An excellent Conard-Pyle introduction and our favorite J. virginiana, bar none. It is also wet site tolerant.

Liquidambar sty. 'Slender Silhouette'

Slender Silouette Liquidambar









HABIT Columnar DESIGN STYLES English Cottage, Formal, Meadow, Ranch, Woodland LOCATION USES Background, Parking Strip, Park, Street Tree ATTRACTS WILDLIFE n/a

DESCRIPTION

Sandy, Clay, Loam, Rocky, Unparticular

Tree HEIGHT

20-40 ft.

WIDTH

3-6 ft.

SUN

Full

WATER

Medium

The exclamation point of the sweetgums forming an absolute pillar of foliage some 40' tall and only 6' wide at maturity. Makes a perfect, fast growing subject for narrow situations where vertical accent is required.

Quercus x Kindred Spirit®

Kindred Spirit Hybrid Oak





LEAF SEASON Deciduous LEAF COLOR Dark Green, Yellow FLOWER COLOR n/a FLOWER SEASON n/a FRUIT SEASON n/a FRUIT TYPE Nut / Nutlet



HABIT Columnar DESIGN STYLES English Cottage, Formal, Ranch, Woodland LOCATION USES Background, Lawn, Park ATTRACTS WILDLIFE Birds

Sandy, Clay, Loam

Tree HEIGHT

20-40 ft.

WIDTH

5-10 ft.

Full

WATER

Medium

Kindred Spirit® ('Nadler') Hybrid Oak is an interspecific hybrid of the Columnar English Oak (Q. robur fastigiata) and Swamp Oak (Q. bicolor). The habit is tightly columnar, and the foliage is clean and mildew resistant. The leaves are dark green with a silver underside, turning shades of yellow and bronze in fall. Quercus x Kindred Spirit® would make an excellent tall hedge, or be an attractive architectural element when used as a specimen.

Shrubs

Chamaecyparis obtusa 'Nana Gracilis'

Hinoki Cypress

PLANT TYPE	LEAF SEASON	HABIT
Shrub	Evergreen	Broad. Pvramidal
HEIGHT	LEAF COLOR	DESIGN STYLES
9 ft.	Dark Green	Formal, Japanese
width	FLOWER COLOR	LOCATION USES
4 ft.	n/a	Entry, Shrub Border, Foundation, Patio, Walkways
sun	FLOWER SEASON	ATTRACTS WILDLIFE
Full, Half	n/a	n/a
WATER Medium, Extra in Summer	FRUIT SEASON n/a	
soil Sandy, Loam	FRUIT TYPE n/a	
DESCRIPTION This beautiful conifer slowly (may take 10 years) reaches 3' but ever green, scale-like leaves. It is aromatic if crushed. This shrub does be	ntually may reach 9' tall and 4' wide. Mature habit is pyramidal or con est in full to part sun with well draining, moist, fertile soil. Plant in she	e-shaped. Foliage is evergreen with flattened branches of dark Itered area, not in windy locations.

Fothergilla gardenii

Dwarf Forthergilla





LEAF SEASON Deciduous LEAF COLOR Blue Green FLOWER COLOR White FLOWER SEASON Spring FRUIT SEASON n/a FRUIT TYPE n/a



HABIT Round DESIGN STYLES English Cottage, Meadow, Water Garden, Wetlands, Woodland LOCATION USES Background, Raised Planter ATTRACTS WILDLIFE Pollinators, Bees, Butterflies

Sandy, Loam

Medium, Extra in Summer

Shrub

HEIGHT

2-3 ft.

WIDTH

3-4 ft.

SUN

WATER

Half, Shade

A valuable compact ornamental shrub used for hedges and borders to provide multi-season interest in the landscape. Fragrant, creamy white, fuzzy, bottlebrush flowers cover the low, mounded, dense form in spring, followed by thick, toothy blue-green leaves in summer. Fall foliage is a brilliant medley of yellow, red, and orange. Deciduous.

Ilex crenata 'Hetzii'

Heitz Japanese Holly





LEAF SEASON Evergreen LEAF COLOR Dark Green FLOWER COLOR Green, White FLOWER SEASON Spring FRUIT SEASON Fall FRUIT TYPE Berry



HABIT Upright

DESIGN STYLES English Cottage, Formal, Mediterranean, Ranch, Woodland

LOCATION USES Background, Shrub Border, Patio, Street Tree, Walls / Fences, With Rocks

ATTRACTS WILDLIFE Birds

DESCRIPTION

Medium, Extra in Summer

Sandy, Clay, Loam, Rocky, Unparticular

Shrub

HEIGHT

3-8 ft.

WIDTH

4-6 ft.

WATER

sun Full, Half, Shade

Hetz's Japanese holly is an evergreen shrub, but it is a broadleaved, rather than a needled, evergreen. Its glossy, delicate leaves can make it a great choice if you are in the market for a bush with dense foliage that stays green year-round. Moderate-growing Hetz's Japanese holly is commonly confused with boxwood. These two popular shrubs are indeed similar, but they have subtle differences in appearance as well as pollination habits.

Juniperus communis 'Blueberry Delight'

Blueberry Delight Juniper









HABIT Prostrate DESIGN STYLES Japanese, Mediterranean, Seascape LOCATION USES Entry, Patio, Raised Planter, With Rocks ATTRACTS WILDLIFE n/a

DESCRIPTION

Sandy, Clay, Loam, Rocky, Unparticular

Full, Half, Shade

PLANT TYPE

Shrub

HEIGHT

0.8-1 ft.

WIDTH

4-5 ft.

SUN

WATER

Low

This beautiful plant was a native selection found in the rugged Dakota Badlands. Blueberry Delight Juniper (Juniperus communis var. depressa 'AmDak') is a tough little customer with a very exciting densely spreading growth habit. It's an ornamental evergreen that can grow in almost any dry condition.

Microbiota decussata

Siberian Carpet Cypress





LEAF SEASON Evergreen LEAF COLOR Green FLOWER COLOR n/a FLOWER SEASON n/a FRUIT SEASON n/a FRUIT TYPE n/a



HABIT Arching, Prostrate DESIGN STYLES Japanese LOCATION USES Entry, Shrub Border, Foundation, Patio, Park, With Rocks ATTRACTS WILDLIFE n/a

DESCRIPTION

Full, Half, Shade

Very Low, Low, Medium

Sandy, Clay, Loam, Rocky, Unparticular

Shrub

HEIGHT

1.5-2 ft.

WIDTH

7-8 ft.

SUN

WATER

Microbiota decussata is an evergreen shrub. Neat sprawling shrub that resembles a trailing arborvitae. Grows to 1.5' tall, 7'-8' wide, with many horizontal or trailing plume-like branches closely set with scale-like leaves.

Picea abies 'Nidiformis'

Bird's Nest Spruce





LEAF SEASON Evergreen LEAF COLOR Green, Light Green FLOWER COLOR n/a FLOWER SEASON n/a FRUIT SEASON Spring FRUIT TYPE n/a



HABIT Pyramidal DESIGN STYLES Japanese, Ranch, Woodland LOCATION USES Entry, Shrub Border, Foundation, Park, With Rocks ATTRACTS WILDLIFE n/a

DESCRIPTION

Sandy, Clay, Loam, Rocky, Unparticular

Shrub

HEIGHT

WIDTH

3 ft.

4 ft.

sun Full, Half

WATER

Medium

A stand-alone pendulous specimen that will grow as wide as it is high over time and add character to any rock garden or landscape. The unusual coning habit tends to modify the growth rate and shape.

Rhododendron 'Yaku Princess'

Yaku Princess Rhododendron





LEAF SEASON Evergreen
LEAF COLOR Yellow Green
FLOWER COLOR Pink, White, Multi-Colored
FLOWER SEASON Spring
FRUIT SEASON n/a
FRUIT TYPE n/a



HABIT Mound, Round DESIGN STYLES English Cottage, Formal, Japanese, Woodland LOCATION USES Entry, Shrub Border, Raised Planter, Walkways, With Rocks ATTRACTS WILDLIFE n/a

DESCRIPTION

Shrub

HEIGHT

4-5 ft.

WIDTH

4-5 ft.

sun Half, Shade

WATER Medium

Loam

Yaku Princess Rhododendron is a unique variety with a compactly branched low growth; bushy. In mid spring spheres of pinkish-white blooms with deeper pink and green spotting on the florets appear; trusses of apple-blossom pink buds open to white in spring. The green foliage has long leaves that have fuzzy, tan-orange undersides. Yaku Princess is vigorous, sun tolerant, and a low maintenance rhododendron that is perfect for foundation plantings.

Rhus aromatica Gro-Low

Gro-Low Fragrant Sumac





LEAF SEASON Evergreen LEAF COLOR Green, Dark Green FLOWER COLOR White FLOWER SEASON Spring FRUIT SEASON Summer FRUIT TYPE Berry



HABIT Mound, Round DESIGN STYLES Mediterranean, Ranch, Spanish LOCATION USES Background, Shrub Border, Park, Roadside, With Rocks ATTRACTS WILDLIFE n/a

DESCRIPTION

Very Low, Extra in Summer

Sandy, Clay, Loam, Rocky, Unparticular

Shrub

HEIGHT

2-3 ft.

WIDTH

6-8 ft.

WATER

sun Full

Rhus aromatica, commonly called fragrant sumac, is a deciduous Missouri native shrub which occurs in open woods, glades and thickets throughout the State. A dense, low-growing, rambling shrub which spreads by root suckers to form thickets in the wild. Typically grows 2-4' tall (less frequently to 6') and spreads to 10' wide. Trifoliate, medium green leaves turn attractive shades of orange, red and purple in autumn. Leaves and twigs are aromatic when bruised (hence the species name). Although smaller, the leaves resemble in appearance those of the related poison ivy (Rhus radicans). - Missouri Botanical Garden

Ground Covers

Sedum 'Weihenstephaner Gold'

Weihenstephaner Gold Stonecrop





WATER Low, Medium

Sandy, Rocky

DESCRIPTION

Weihenstephaner Gold' is a cultivar that features starry pale yellow flowers which acquire pink tones with age, blooming in summer on plants clad with and silvery gray-green foliage. It typically grows to only 3-4" tall.



LEAF SEASON Evergreen LEAF COLOR Yellow Green FLOWER COLOR Yellow FLOWER SEASON Spring FRUIT SEASON n/a FRUIT TYPE n/a



DESIGN STYLES Meadow, Mediterranean, Ranch, Spanish LOCATION USES Entry, Perennial Border, Patio, Walkways, With Rocks ATTRACTS WILDLIFE Pollinators

Perennials

Ajuga reptans 'Gaiety' Gaiety Bugleweed



PLANT TYPE Perennial
неіднт 0.5-0.75 ft.
width 1 ft.
sun Full, Half
WATER Medium, High, Extra in Summer
soil Sandy, Loam, Rocky

DESCRIPTION

A vigorous, low growing and spreading selection that features oval, bronze-purple foliage; lilac-purple flower spikes appear in the spring and into the early summer; heat tolerant and low maintenance; deadhead spent flowers.



LEAF SEASON Evergreen LEAF COLOR Bronze, Green FLOWER COLOR Blue FLOWER SEASON Spring, Summer FRUIT SEASON n/a FRUIT TYPE n/a



HABIT Horizontal, Mound DESIGN STYLES Meadow, Spanish, Wetlands, Woodland

LOCATION USES Perennial Border ATTRACTS WILDLIFE Pollinators

Amsonia hubrichtii

Arkansas Amsonia





LEAF SEASON Deciduous
LEAF COLOR Gold, Green
FLOWER COLOR Blue
FLOWER SEASON Spring, Summer
FRUIT SEASON n/a
FRUIT TYPE n/a



DESIGN STYLES English Cottage, Formal, Japanese, Meadow, Mediterranean, Ranch, Water Garden, Wetlands, Wild Garden, Woodland LOCATION USES

Perennial Border, Shrub Border, Foundation, Patio, Walkways, With Rocks

ATTRACTS WILDLIFE Pollinators, Bees, Butterflies

DESCRIPTION

PLANT TYPE

Perennial

HEIGHT 2-3 ft.

WIDTH

2-3 ft.

SUN

Loam

Full, Half WATER Medium

This southern native has very narrow, needle-like leaves that line the stems like bottle brushes. Surprisingly, they are soft as silk to the touch. From late spring thru early summer, 2-3 inch wide clusters of small, light blue, star-shaped flowers are borne above the short mound of ferny foliage. After blooming, it quickly grows to reach a height of about 3 feet. Amsonia adds a billowy, finely textured element to the landscape. It grows into a dense mass, much like a small shrub. The cool blue flowers can be useful in toning down adjacent flower colors. The most valuable feature of amsonia is its fall color; the entire plant turns a stunning shade of golden yellow. It makes an excellent backdrop for fall-blooming perennials such as sedums and garden mums.

Amsonia tab. 'Blue Ice'

Blue Ice Amsonia





LEAF SEASON Evergreen
LEAF COLOR Green
flower color Blue
FLOWER SEASON Spring, Summer
FRUIT SEASON n/a
FRUIT TYPE n/a



DESIGN STYLES English Cottage, Formal, Japanese, Meadow, Mediterranean, Ranch, Water Garden, Wetlands, Wild Garden, Woodland LOCATION USES

Perennial Border, Shrub Border, Foundation, Patio, Walkways, With Rocks

ATTRACTS WILDLIFE Pollinators, Bees, Butterflies

DESCRIPTION

Perennial

HEIGHT 1-1.3 ft.

WIDTH

2 ft.

SUN

Full, Half WATER Medium

Loam

Blue Ice bears gorgeous plump navy blue buds in late spring, opening to vivid periwinkle blue, star-shaped flowers. They are larger than the species and are borne in clusters at the ends of each stem. The bright green, compact, slowly spreading foliage forms the perfect background for the delightful blossoms and then turns a rich shade of yellow in fall. Amsonia adds a billowy, finely textured element to the landscape. It grows into a dense mass, much like a small shrub.

Amsonia tabernaemontana

Amsonia









DESIGN STYLES English Cottage, Formal, Japanese, Meadow, Mediterranean, Ranch, Water Garden, Wetlands, Wild Garden, Woodland LOCATION USES

Perennial Border, Shrub Border, Foundation, Patio, Walkways, With Rocks

ATTRACTS WILDLIFE Pollinators, Bees, Butterflies

DESCRIPTION

PLANT TYPE

Perennial

HEIGHT

2-3 ft.

WIDTH

2-3 ft.

SUN

Full, Half

WATER

Loam

Medium

Amsonia bears gorgeous blue buds in late spring, opening to vivid periwinkle blue, star-shaped flowers. They are larger than the species and are borne in clusters at the ends of each stem. The bright green, compact, slowly spreading foliage forms the perfect background for the delightful blossoms and then turns a rich shade of yellow in fall. Amsonia adds a billowy, finely textured element to the landscape. It grows into a dense mass, much like a small shrub.

Geranium macrorrhizum 'Bevan's Variety'

Bevan's Variety Geranium



DESCRIPTION

This is the best Geranium for ground cover use. It spreads quickly (but not invasively) and produces a canopy of deeply cut, bright green leaves so dense that weeds have no hope of gaining a toehold. It tolerates dry shade, conditions under which most plants quickly perish. Yes, it does flower, putting on a good display of 1" soft pink blooms in May and June. The leaves are highly aromatic and provide fall color in shades of red and orange as a finishing touch.

Hemerocallis 'Mary Todd'

Mary Todd Daylily





LEAF SEASON Evergreen LEAF COLOR Green FLOWER COLOR Yellow FLOWER SEASON Summer, Fall FRUIT SEASON n/a FRUIT TYPE n/a



HABIT Upright DESIGN STYLES English Cottage, Mediterranean, Ranch, Seascape LOCATION USES Entry, Perennial Border, Patio, Raised Planter, Walkways, With Rocks ATTRACTS WILDLIFE Birds, Hummingbirds, Butterflies, Wildlife

DESCRIPTION

Medium, Extra in Summer

Perennial

HEIGHT

WIDTH

2 ft.

2 ft.

sun Full, Half

WATER

Loam

Always Afternoon has 5½", dusky rose self with a striking plum purple eyezone and a green throat Petals are crimped with thin buff pink edges, sepals are smooth Semi-evergreen foliage stays nice all season

Sedum 'Angelina's Teacup'

Angelina's Teacup Stonecrop









DESIGN STYLES Meadow, Mediterranean, Ranch, Spanish LOCATION USES Entry, Patio, Walkways, With Rocks ATTRACTS WILDLIFE Pollinators

Sandy, Rocky

Low, Medium

Perennial HEIGHT

0.25 ft.

WIDTH

1.2 ft.

SUN

Full

WATER

Sedum Angelina's Teacup is a wonderful addition to the Sunsparkler series. This Sedum has a bright color all year round without the use of fertilizers. In spring, summer and autumn, Angelina's Teacup is golden yellow; in winter, this Sedum turns more orange. Compared to Sedum Angelina, Angelina's Teacup has a more dense and better branched habit. Angelina's Teacup does not bloom and therefore retains her beautiful, compact shape. It is a perfect Sedum as a ground cover but can also be used as a garden or pot plant. Angelina's Teacup becomes about 10 cm tall and 45 cm wide. Is hardy up to -25°C. Plant Angelina's Teacup in a well-drained soil that is not too heavy. Angelina's Teacup can be placed in the full sun as well as the semi-shade, but she prefers a spot in the sun.

Sedum Sunsparkler 'Dazzleberry'

Dazzleberry Stonecrop









HABIT Prostrate DESIGN STYLES Formal, Meadow, Mediterranean, Ranch, Spanish LOCATION USES Entry, Perennial Border, Parking Strip, Patio, Walkways, With Rocks ATTRACTS WILDLIFE Pollinators

Sandy, Clay, Rocky

Perennial

HEIGHT

0.5 ft.

WIDTH

1-3'

Full

Low

WATER

Bold and beautiful, SunSparkler® 'Dazzleberry' Sedum sports smoky blue-grey foliage in 6-inch-tall mounds. Come late summer, raspberry flower clusters cover the plant for long-lasting color. Easy-to-grow and pollinator-friendly, it's a great low maintenance perennial for groundcovers, rock gardens, borders, and containers in sunny, dry areas. 'Dazzleberry' will naturalize and spread creating a carpet of easy-care color.

Sedum sexangulare

Tasteless Stonecrop









HABIT Prostrate, Weeping DESIGN STYLES Meadow, Mediterranean, Ranch, Spanish LOCATION USES Entry, Patio, Walkways, With Rocks ATTRACTS WILDLIFE Pollinators

Sandy, Rocky

Low, Medium

Perennial

0.25-0.5 ft.

HEIGHT

WIDTH

1-2 ft.

SUN

Full

WATER

Sedum Angelina's Teacup is a wonderful addition to the Sunsparkler series. This Sedum has a bright color all year round without the use of fertilizers. In spring, summer and autumn, Angelina's Teacup is golden yellow; in winter, this Sedum turns more orange. Compared to Sedum Angelina, Angelina's Teacup has a more dense and better branched habit. Angelina's Teacup does not bloom and therefore retains her beautiful, compact shape. It is a perfect Sedum as a ground cover but can also be used as a garden or pot plant. Angelina's Teacup becomes about 10 cm tall and 45 cm wide. Is hardy up to -25°C. Plant Angelina's Teacup in a well-drained soil that is not too heavy. Angelina's Teacup can be placed in the full sun as well as the semi-shade, but she prefers a spot in the sun.

Waldsteinia ternata

Siberian Barren Strawberry





LEAF SEASON Evergreen, Semi-evergreen LEAF COLOR Green FLOWER COLOR Yellow FLOWER SEASON Spring FRUIT SEASON n/a FRUIT TYPE n/a



HABIT Prostrate DESIGN STYLES Japanese LOCATION USES Entry, Shrub Border, Foundation, Parking Strip, Patio, Park, Parking Lot, Walkways ATTRACTS WILDLIFE n/a

Sandy, Clay, Loam

Low, Extra in Summer

Perennial

HEIGHT

0.5 ft.

WIDTH

1 ft.

SUN

Full, Half

WATER

Glossy semi-evergreen groundcover for sun or shade. Distinctive 3-5 lobed leaves on stems spreading by stolons. Yellow flowers in spring. Can be utilized as a drought tolerant, weed-smothering, evergreen groundcover, in shaded conditions.

Grasses

Carex pensylvanica

Pennsylvania Sedge



n/a

A STATES

DESIGN STYLES Japanese, Meadow, Water Garden, Wetlands, Woodland LOCATION USES Entry, Perennial Border, Patio, Walkways, With Rocks ATTRACTS WILDLIFE n/a

DESCRIPTION

Loam

Pennsylvania Sedge has narrow, low-growing foliage that forms a lush green carpet. Our most popular native sedge, it makes a fine lawn alternative or ground cover. It spreads slowly by rhizomes and is most effective when planted in masses. Carex pensylvanica is perfect for woodland gardens or shady areas; however, it doesn't mind being planted in sun in cooler climates if it gets sufficient moisture. This petite, eight-inch beauty flowers in May. Carex pensylvanica is a great pollinator plant, supporting several caterpillar species. In the wild, it provides shelter and nesting material for birds. It is semi-evergreen and drought tolerant once established. This graceful little sedge is found in meadows or forest floors from Maine to Alabama and into the Dakotas.

Carex woodii

Wood's Sedge





Evergreen

LEAF COLOR

FLOWER COLOR

FLOWER SEASON

FRUIT SEASON

Green

Green

Spring

n/a FRUIT TYPE

n/a



HABIT Mound DESIGN STYLES

Meadow, Ranch, Water Garden, Wetlands, Wild Garden, Woodland

LOCATION USES

Perennial Border, Shrub Border, Lawn, Patio, Swimming Pool, Walkways, With Rocks

ATTRACTS WILDLIFE

Medium

Grass

0.5-1 ft.

WIDTH

0.75 ft.

Full, Half

WATER

SUN

Sandy, Clay, Loam, Rocky, Unparticular

DESCRIPTION

Carex woodii is a lovely perennial woodland sedge with narrow fine textured leaves. This sedge forms clonal colonies from underground rhizomes. In spring a sparse offering of yellow-green spikelets are held above the leaves. In the wild, this species occurs in well drained, moist or dry acidic or calcareous woods. In landscape situations, Carex woodii is an excellent groundcover for the shade garden.

Deschampsia cespitosa

Tufted Hair Grass









HABIT Upright DESIGN STYLES Meadow, Water Garden, Wetlands, Wild Garden, Woodland LOCATION USES Shrub Border, Raised Planter, With Rocks ATTRACTS WILDLIFE Wildlife

DESCRIPTION

Sandy, Clay, Loam, Rocky, Unparticular

Full, Half, Shade

PLANT TYPE

Grass HEIGHT

2 ft.

1 ft.

SUN

WATER

Low

WIDTH

The tufted hairgrass is a warm season, clumping grass that grows 10" tall with summer flowers that reach to 2' tall. This grass tolerates partial shade and heavy clay soils. It is good in waterside plantings and for mountain area meadows. This grass is a California native and is a beneficial insect plant. Flowers are insignificant.

Panicum virgatum 'Shenandoah'

Shenandoah Switch Grass



Shenandoah is a selection of our native prairie switchgrass grown for its burgundy colored foliage and pinkish flower spikes. This grass has especially nice fall color with the grass blades tinted with red and orange. Drought resistant/drought tolerant plant (xeric).

Schizachyrium scoparium 'The Blues'

The Blues Bluestem



autumn. Purplish-bronze flowers appear in 3" long racemes on branched stems rising above the foliage in August. Flowers give way to clusters of fluffy, silvery-white seed heads which may persist into early winter. Blue foliage and fall color are probably the best ornamental features of this grass. -Missouri Botanic Garden

Sporobolus heterolepis

Prairie Dropseed





PLANT TYPE Grass
HEIGHT 1.4 ft.
widтн 1.5 ft.
sun all
VATER LOW
oll Rocky, Unparticular

LEAF SEASON Semi-evergreen LEAF COLOR Green FLOWER COLOR Pink FLOWER SEASON Summer FRUIT SEASON n/a FRUIT TYPE n/a



HABIT Prostrate, Vase DESIGN STYLES Meadow, Mediterranean, Ranch, Spanish, Woodland LOCATION USES Entry, Patio, Park, Raised Planter, Swimming Pool, Walkways, With Rocks ATTRACTS WILDLIFE Birds

DESCRIPTION

This beautiful, reliable grass slowly reaches 15" tall and 18" wide. Leaves are thin, green, turning gold orange in fall, then bronze in winter. Slender airy panicles of pink or brown flowers rise above the foliage in summer. This grass needs full sun with well draining, dry, average soil. It tolerates gravelly soil also. Tiny seeds drop in fall and are not considered a nuisance but birds love them.
Bulbs

Crocus hybrids Crocus





LEAF SEASON Deciduous
LEAF COLOR Green
FLOWER COLOR Purple, White
FLOWER SEASON Spring
FRUIT SEASON n/a
FRUIT TYPE n/a



HABIT Arching, Upright DESIGN STYLES English Cottage, Formal, Japanese, Meadow, Mediterranean, Ranch, Seascape, Spanish, Wetlands, Wild Garden, Woodland LOCATION USES Entry, Perennial Border, Lawn, Swimming Pool, Walkways, With Rocks ATTRACTS WILDLIFE n/a

DESCRIPTION

Bulb

HEIGHT

0.5-1 ft.

width 1-2 ft.

SUN

Full, Half

WATER

Loam

Medium

Crocus blooming is the signal for spring's arrival. It can be planted in borders, rock gardens, and even in the midst of a lawn. After flowering, the foliage must be left intact until it withers. Purple is the main color but they also come in white, lilac, or white stripes. Very early blooming; naturalizes in lawn. Provide full sun to light shade and average, well-drained soil.

Conifers

Chamaecyparis obtusa 'Kosteri' Hinoki Cypress





LEAF SEASON Evergreen
LEAF COLOR Yellow Green
FLOWER COLOR n/a
FLOWER SEASON n/a
FRUIT SEASON n/a
FRUIT TYPE n/a



HABIT Pyramidal, Round DESIGN STYLES Formal, Japanese LOCATION USES Entry, Shrub Border, Foundation, Patio, Walkways ATTRACTS WILDLIFE n/a

Sandy, Loam

Medium, Extra in Summer

PLANT TYPE

Conifer

неі<mark>снт</mark> 4-5 ft.

WIDTH

4-5 ft. sun

Full, Half

WATER

Chamaecyparis obtusa 'Kosteri' is a very choice, irregularly pyramidal dwarf selection of Hinoki cypress with ascending branches and shell-like sprays of light olive-green foliage that assumes a bit of a yellow cast in winter. This attractive evergreen shrub has a rounded form that matures into a dwarf pyramidal shape. Flat sprays of deep green foliage add handsome texture to the landscape. Excellent for rock gardens or mixed borders. Withstands brief dry spells, once established in the landscape.

Juniperus procumbens 'Nana'

Dwarf Japanese Garden Juniper





Evergreen

LEAF COLOR

Blue Green

n/a

n/a

n/a FRUIT TYPE

n/a

FLOWER COLOR

FLOWER SEASON

FRUIT SEASON



HABIT Prostrate DESIGN STYLES Japanese, Seascape, Woodland LOCATION USES Entry, Shrub Border, Foundation, Parking Strip, Park, Raised Planter, With Rocks ATTRACTS WILDLIFE n/a

Sandy, Clay, Loam, Rocky, Unparticular

DESCRIPTION

Conifer

HEIGHT

0.5-1 ft.

WIDTH

5-6 ft.

SUN

Full

Low

WATER

The very dense growth of this plant is highlighted by foliage of a bluish green color. Its growth habit is very low, spreading, and mound-like, resembling a natural bonsai. This variety is one of the best Junipers for small garden spaces. Junipers are highly combustible plants.

STORMWATER INSPECTION & MAINTENANCE PLAN

FOR

361 Hanover Street Portsmouth, NH

Introduction

The intent of this plan is to provide 361 Hanover Street (herein referred to as "owner") with a list of procedures that document the inspection and maintenance requirements of the drainage structures for this development.

The following inspection and maintenance program is necessary to keep the stormwater management system functioning properly. These measures will also help minimize potential environmental impacts. By following the enclosed procedures, the owner will be able to maintain the functionality of the drainage structures and maximize their ability to drain the site effectively from stormwater runoff.

Annual Report

The owner shall prepare an annual Inspection & Maintenance Report. The report shall include a summary of the system's maintenance and repair by transmission of the Inspection & Maintenance Log and other information as required. A copy of the report shall be delivered annually to the City of Portsmouth Public Works Department.

Inspection & Maintenance Checklist/Log

The following pages contain a Stormwater Management System Inspection & Maintenance Checklist and a blank copy of the Stormwater Management System Inspection & Maintenance Log. These forms are provided to the owner as a guideline for performing the inspection and maintenance. This is a guideline and should be periodically reviewed for conformance with current practice and standards.

DRAINAGE STRUCTURE COMPONENTS

Non-Structural BMP's

Non-Structural best management practices (BMP's) include temporary and permanent measures that typically require less labor and capital inputs and are intended to provide protection against erosion of soils. Examples of non-structural BMP's on this project include but are not limited to: temporary and permanent mulching, temporary and permanent grass cover, trees, shrubs and ground covers, miscellaneous landscape plantings, dust control, tree protection, topsoiling, sediment barriers, and a stabilized construction entrance.

Structural BMP's

Structural BMP's are more labor and capital-intensive structures or installations that require more specialized personnel to install. Examples on this project include but are not limited to storm drain catch basins, roof drains and pipes.

Inspection and Maintenance Requirements

The following summarizes the inspection and maintenance requirements for the various BMP's that may be found on this project.

- 1. Landscaped areas: After each rain event of 0.5" or more during a 24-hour period, inspect landscaped areas for signs of disturbance, such as erosion. If damaged areas are discovered, immediately repair the damage. Repairs may include adding new topsoil, lime, seed, fertilizer and mulch.
- 2. Plantings: Planting and landscaping (trees, shrubs) shall be monitored bi-monthly during the first year to insure viability and vigorous growth. Replace dead or dying vegetation with new stock and adjust the conditions that caused the dead or dying vegetation. During dryer times of the year, provide weekly watering or irrigation during the establishment period of the first year. Make the necessary adjustments to ensure long-term health of the vegetated covers, i.e. provide more permanent mulch or compost or other means of protection. Clean up dead leaves yearly to avoid drainage issues.
- **3.** Storm Drain Catch Basins and Pipes: Monitor drain inlets and outlets during construction. Monitor sediment levels in catch basin sumps and remove as necessary.
- 4. **Roof Drains:** Maintain roof drains and review periodically for clogs. Roof drain filters will be installed within the buildings. Follow the Maintenance Specification as Detailed in the Plan Set.

Stormwater Management System

Inspection & Maintenance Checklist for Post Construction Condition—for 361 Hanover Street, Portsmouth, NH

BMP/System Component	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance/Cleanout Threshold
Closed Drainage System			
Drainage Pipes and Roof Drains	Yearly	Check for sediment clogging, or soiled runoff.	Clean entire drainage system and remove all sediments if discovered in piping.
Catch Basins	Bi-Annually	Check for excessive accumulation of sediment in sump	Remove sediment as necessary
Annual Report	Yearly	Prepare Annual Report, including all Inspection & Maintenance Logs. Provide to City (if required).	N/A

Stormwater Management System Maintenance Summary

BMP/System Component	Date	Inspector	Problems Noted, Required Maintenance	Date of Maintenance	Performed By
	mspecteu				

Inspection & Maintenance Log-for 361 Hanover Street, Portsmouth, NH

Data Sheets



MEMORANDUM

DATE:	March 14, 2025
<u>TO:</u>	City of Portsmouth Planning Board
PROJECT:	Redevelopment Plan at 361 Hanover Street Portsmouth, NH 03801
REGARDING:	Green Building/Energy Compliance Statement

Building energy compliance/performance will be measured by The Home Energy Rating System (HERS) Index. This is the industry standard by which a home's energy efficiency is measured. It's also the nationally recognized system for inspecting and calculating a home's energy performance. The target rating will be HERS 50 or less which far exceeds the 2018 IECC requirement of HERS 61 for Climate Zone 5.

Proposed buildings will exceed most of the requirements of the 2018 Energy Conservation Code including the following features:

Building Shell Features:

- <u>Slab Insulation R</u>-10.0 Edge, R-10.0 Under
- Windows U-Value: .280, SHGC: .4
- Exposed Floor R-30.0
- Walls R-20 plus R-5 cont. insulation
- <u>Roof -</u> R-49
- <u>Infiltration Rate -</u> 3.0 ACH50 (Blower Door Test)

Mechanical System Features:

- Building Load Calculations Performed in accordance with ASHRAE 140
- <u>Air Source Heat Pump</u> <u>Electric Heating 10.0 HPSF</u>, Cooling 18.0 SEER
- <u>Water Heating</u> Conventional Electric, .92 EF, 40.0 Gal.
- <u>Ventilation System</u> Balanced ERV, 150 CFM, 75.0 Watts, Compliance with ASHRAE 62
- <u>Programmable Thermostats</u>- Heating/Cooling
- <u>Plumbing Fixtures</u> Fixture flow rates to comply with the International Green Construction Code (IgCC). Showers, Sinks and lavatories with flows of



2.0/1.8/1.5gpm respectively.

• <u>Toilets</u> - Dual-flush tank-type toilets with flows of 0.9/1.28gal per flush

Lights and Appliance Features:

- <u>Interior Lighting</u> 100% LED most being Energy Star and/or DLC (Design Lighting Consortium) rated.
- Exterior Lighting 100% LED, to include auto daylight shutoffs.
- <u>Lighting Controls</u> Use of Dimmers, Daylighting Control Sensors and Photoelectric Sensors which further enhance energy savings and meet energy codes.
- <u>Refrigerator</u> <600 kWh/yr
- <u>Dishwasher</u> <270 kWh/yr
- <u>Range/Oven Fuel</u> Natural Gas, Electric Induction Cooktop Option
- <u>Clothes Dryer Fuel</u> Electric

Building Features:

- Wiring for Electric Vehicle Ready Spaces 1 per Unit
- Solar ready roof zones on roof pitches of 3/12 or less (oriented between 110° and 270° of true north) and capped roof penetration sleeves for future solar to be provided.

Commercial Recessed LED Downlight

Product Description

Designed for both new construction and retrofit applications, the CLR Select series can be installed directly into drywall, a ceiling grid or an existing 4", 6" or 8" mounting frame using spring loaded retention tabs. The CCT and output selectable design allows for easy adjustment to 3000, 3500, 4000, or 5000K and standard, medium or high output. With Standard and Low Output models available, the lighting can be easily tailored to match the space or meet rebate levels. With accessory trims in black and offering a full range of dimming via 1-10 volts, the CLR Select is adaptable to most any environment. The versatility of this light source is perfect for commercial applications, such as educational, governmental, retail and grocery, office or hospitality lighting.

Construction

- Spun aluminum trim
- Plastic driver housing
- 3' flexible metal conduit (FMC) whip
- Matte white powder coat
- Black faceplates available

Optical System

• Precision engineered polystyrene diffuser provides high uniformity, and reduced glare • No visible diodes, hot-spots, or shadows

• 4 CCT selection (3000K, 3500K, 4000K, 5000K) via switch on driver cover

Electrical

- 5 Wire whip 3 Input (L,N,G) and 2 controls (DIM+, DIM-)
- Universal range input 120 277 VAC, 60Hz
- 3 wattage selection (Standard, Medium, High) via switch on driver cover
- Default Setting of 4000K and Standard output
- 2 models of output Standard and Low

Controls

- Dimming via 1-10VDC controls
- Available Bluetooth Wireless Controls Accessory. See: www.nicorlighting.com/network-lighting-controls

Mounting and Installation

- Adjustable, spring loaded retention tabs ensure secure fixture retention on ceilings up to 1 1/2" thick
- Easy installation into most 4", 6" or 8" incandescent or fluorescent frames
- Frame not needed for new construction installation
- NON-IC Operating temperature of 0°F to 104°F (-18°C to 40°C)
- IC Operating temperature of 0°F to 77°F (-18° to 25°C)
- Metal rough-in templates and frames available
- For installations where power surge may be possible, NICOR recommends installing additional surge protection at the fixture or electrical distribution panel

Listings

- cULus 1598 Listed for wet locations
- · Certified for direct contact with insulation 4" model only
- Meets ASTM E283 airtight requirements
- TAA compliant
- RoHS compliant
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions
- TM-21 Reported L70(9k) life >72,000 hours
- · LM-79, LM-80 testing performed in accordance with IESNA standards

Warranty

- 5-year limited system warranty standard
- · Warranty does not cover product failure due to an overvoltage event (power surge)

Project

Catalog

Type

Date



CLRv3

Commercial LED Downlight

4", 6", 8" Diameters Selectable Wattage & CCT







Commercial Recessed LED Downlight

Ordering

Ordering Information Example: CLR63SUS9Wi							ple: CLR63SUS9WH
Series	Diameter	Version	Wattage	Voltage	сст	CRI	Color
CLR	4 (4 inch)	3 (Version 3.0)	S (Selectable)	U (120-277V)	S (Selectable)	9 (90 CRI)	WH (White)
	6 (6 inch)		SL (Selectable Low Lumen)				
	8 (8 inch)						

Specifications and dimensions subject to change without notice.

Recommended Dimmers*

Lutron NTSTV-DV-WH Lutron DVSTV Cooper SF10P

Legrand RH4FBL3PW

Accessories

Accessories	Accessories sold separately
Black 4"Trim	CLR43-TR-BK
Black 6″Trim	CLR63-TR-BK
Black 8"Trim	CLR83-TR-BK
3", 4", 6" Rough In Flat Template	ROUGHIN-TEMPLATE-346
8" Rough in Template	ROUGHIN-TEMPLATE-8
4" Rough In Frame	DLE4-ROUGHIN-FRAME
6″ Rough In Frame	DLE6-ROUGHIN-FRAME
3", 4", 6" Rough In Frame	MULTIFRAME-346-1
Emergency Battery Backup	EMI200-1-UNV
Bluetooth Wireless Controls	NLCDOWN1



CLRv3 Select Commercial Recessed LED Downlight

Performance Data			Standard Output			Low Output		
Model Num- ber	Output Set- ting	Nominal CCT	Light Output (Im)	Power Draw (W)	Efficiency (Lm/W)	Light Output (Im)	Power Draw (W)	Efficiency (Lm/W)
	Standard	3000 3500 4000 5000	806 818 829 830	7.0	115.2 116.9 118.4 118.6	594 615 622 600	6.9 6.7 6.6 6.8	86.5 91.6 93.9 88.4
CLR43SUS9WH CLR43SLUS9WH	Medium	3000 3500 4000 5000	1137 1164 1183 1174	9.9	114.8 117.6 119.5 118.6	686 710 718 693	7.8 7.7 7.6 7.8	87.4 92.6 94.9 89.3
	High	3000 3500 4000 5000	1269 1300 1322 1309	10.8	117.5 120.4 122.4 121.2	768 795 804 776	8.8 8.6 8.5 8.7	87.0 92.2 94.4 88.9
	Standard	3000 3500 4000 5000	1238 1288 1314 1319	12.8	96.7 100.6 102.7 103.0	639 685 703 681	6.9 6.7 6.7 6.9	92.1 102.5 105.5 98.8
CLR63SUS9WH CLR63SLUS9WH	Medium	3000 3500 4000 5000	1654 1737 1782 1767	17.5	94.5 99.3 101.8 101.0	798 857 879 852	8.9 8.6 8.6 8.9	89.6 99.6 102.6 96.0
	High	3000 3500 4000 5000	2119 2132 2250 2273	24.0	88.3 88.8 93.8 94.7	1011 1085 1113 1079	10.9 10.5 10.5 10.8	92.8 103.2 106.3 99.5
	Standard	3000 3500 4000 5000	2602 2750 2802 2764	24.9	104.5 110.4 112.5 111.0	1017 1042 1044 1026	11.6 11.4 11.5 11.6	87.3 91.1 91.0 88.4
CLR83SUS9WH CLR83SLUS9WH	Medium	3000 3500 4000 5000	2988 3194 3257 3192	29.3	102.0 109.0 111.2 109.0	1525 1564 1566 1539	15.5 15.3 15.3 15.5	98.3 102.5 102.4 99.5
	High	3000 3500 4000 5000	3480 3521 3668 3692	34.9	99.7 100.9 105.1 105.8	2135 2189 2193 2154	21.3 21.0 21.0 21.3	100.0 104.4 104.2 101.3



Commercial Recessed LED Downlight

Photometric Data - Standard Output

CLR4 11W, 3000K

Input Voltage (VAC) 120-277 System Level Power (W) 10.8 Delivered Lumens (Lm) 1269 System Efficacy (Lm/W) 117.5 Correlated Color Temp (K) 3048 Color Rendering Index (CRI) 95 R9=64 Beam Angle 83.6 Spacing Criteria 1.16

Data Multiplier				
	30K	35K	40K	50K
Low	0.635	0.645	0.653	0.654
Med	0.896	0.918	0.932	0.925
High	1.000	1.028	1.046	1.035



Intensity Summary (Candle Power)				
Angle	Mean CP			
0	699			
5	696			
15	663			
25	594			
35	480			
45	312			
55	150			
65	73			
75	37			
85	10			
90	0			

Cone of Light Tabulation					
Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)			
4	43.7	7.2			
6	19.4	10.7			
8	10.9	14.3			
10	7.0	17.9			
12	4.8	21.5			
14	3.5	25.0			
16	2.7	28.6			

Zonal Lumen Summary					
	Zone	Lumens	% of Luminaire		
	0-30	519	40.9%		
	0-40	806	63.6%		
	0-60	1156	91.1%		
	0-90	1269	100%		
	90-180	0	0%		
	0-180	1269	100%		

Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLR6 24W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	24.0
Delivered Lumens (Lm)	2119
System Efficacy (Lm/W)	88.3
Correlated Color Temp (K)	3000
Color Rendering Index (CRI)	93 R9=61
Beam Angle	87.9
Spacing Criteria	1.16

Data Multiplier				
	30K	35K	40K	50K
Low	0.548	0.608	0.620	0.622
Med	0.780	0.820	0.841	0.834
High	1.000	1.006	1.062	1.073



Intensity Summary (Candle Power)			
Angle	Mean CP		
0	1116		
5	1108		
15	1045		
25	930		
35	759		
45	525		
55	260		
65	99		
75	45		

11

0

85

90

Cone of Light Tabulation			
Mounted height Footcandles Diameter (Inches) Beam Center (Feet)		Diameter (Feet)	
4	69.7	7.7	
6	30.9	11.6	
8	17.4	15.4	
10	11.1	19.3	
12	7.7	23.1	
14	5.6	27.0	
16	4.3	30.8	

Zonal Lumen Summary			
Zone	Lumens	% of Luminaire	
0-30	829	39.1%	
0-40	1305	61.6%	
0-60	1953	92.2%	
0-90	2119	100%	
90-180	0	0%	
0-180	2119	100%	

Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

Cone of Light Tabulation			
Mounted height Footcandles Diameter (Inches) Beam Center (Feet)			
4	104.9	8.5	
6	46.6	12.8	
8	26.1	17.1	
10	16.7	21.4	
12	11.6	25.6	
14	8.5	29.9	
16	6.5	34.2	

Zonal Lumen Summary			
Zone	Lumens	% of Luminaire	
0-30	1252	36%	
0-40	1992	57.2%	
0-60	3178	91.3%	
0-90	3480	100%	
90-180	0	0%	
0-180	3480	100%	

Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.



CLR8 34W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	34.9
Delivered Lumens (Lm)	3480
System Efficacy (Lm/W)	99.7
Correlated Color Temp (K)	3065
Color Rendering Index (CRI)	93 R9=62
Beam Angle	93.8
Spacing Criteria	1.18

Data Multiplier				
	30K	35K	40K	50K
Low	0.748	0.790	0.805	0.794
Med	0.859	0.918	0.936	0.917
High	1.000	1.012	1.054	1.061



Intensity Summary (Candle Power)			
Angle	Mean CP		
0	1678		
5	1665		
15	1574		
25	1408		
35	1183		
45	895		
55	551		
65	208		
75	61		
85	15		
90	0		

NICOR, Inc. 2200 Midtown Place NE, Albuquerque, NM 87107 P: 800.821.6283 F: 800.892.8393 www.nicorlighting.com January 15, 2025 1:38 PM **CLR Select Page 4 of 6**

Commercial Recessed LED Downlight

Photometric Data - Low Output

CLR4 9W, 3000K

Input Voltage (VAC) 120-277 System Level Power (W) 88 Delivered Lumens (Lm) 768 System Efficacy (Lm/W) 87.0 Correlated Color Temp (K) 3048 Color Rendering Index (CRI) 95 R9=64 Beam Angle 80.1 Spacing Criteria 1.16

Data Multiplier				
	30K	35K	40K	50K
Low	0.773	0.801	0.810	0.781
Med	0.893	0.924	0.935	0.902
High	1.000	1.035	1.047	1.010



Intensity Summary (Candle Power)		
Angle	Mean CP	
0	423	
5	421	
15	401	
25	359	
35	290	
45	189	
55	91	
65	44	
75	22	
85	6	
90	0	

Cone of Light Tabulation			
Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)	
4	26.4	12.8	
6	11.7	19.2	
8	6.6	25.6	
10	4.2	32.0	
12	2.9	38.4	
14	2.1	44.8	
16	1.6	51.2	

Zonal Lumen Summary			
Zone	Lumens	% of Luminaire	
0-30	314	40.9%	
0-40	488	63.6%	
0-60	699	91.1%	
0-90	768	100%	
90-180	0	0%	
0-180	768	100%	

Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLR6 11W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	10.9
Delivered Lumens (Lm)	1011
System Efficacy (Lm/W)	92.8
Correlated Color Temp (K)	3022
Color Rendering Index (CRI)	93 R9=61
Beam Angle	89.0
Spacing Criteria	1.16

Data Multiplier				
	30K	35K	40K	50K
Low	0.632	0.678	0.695	0.674
Med	0.789	0.848	0.869	0.843
High	1.000	1.073	1.101	1.067



Intensity Summary (Candle Power)		
Angle	Mean CP	
0	532	
5	528	
15	499	
25	444	
35	362	
45	250	
55	124	
65	47	
75	22	
85	5	

90

0

Cone of Light Tabulation			
Mounted height Footcandles Diameter (Inches) Beam Center (Feet)			
4	33.3	7.7	
6	14.8	11.6	
8	8.3	15.4	
10	5.3	19.3	
12	3.7	23.1	
14	2.7	27.0	
16	2.0	30.8	

Zonal Lumen Summary			
Zone	Lumens	% of Luminaire	
0-30	395	39.1%	
0-40	623	61.6%	
0-60	932	92.2%	
0-90	1011	100%	
90-180	0	0%	
0-180	1011	100%	

Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

Cone of Light Tabulation			
Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)	
4	55.3	8.5	
6	24.5	12.8	
8	13.8	17.1	
10	8.8	21.4	
12	6.1	25.6	
14	4.5	29.9	
16	3.4	34.2	

Zonal Lumen Summary			
Zone	Lumens	% of Luminaire	
0-30	659	36%	
0-40	1049	57.2%	
0-60	1674	91.3%	
0-90	1833	100%	
90-180	0	0%	
0-180	1833	100%	

Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.



CLR8 22W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	21.3
Delivered Lumens (Lm)	2154
System Efficacy (Lm/W)	101.3
Correlated Color Temp (K)	3065
Color Rendering Index (CRI)	93 R9=62
Beam Angle	91.3
Spacing Criteria	1.18

	Data Multiplier				
		30K	35K	40K	50K
Lo	w	0.476	0.488	0.489	0.481
м	ed	0.714	0.733	0.733	0.721
Hi	gh	1.000	1.025	1.027	1.009



Intensity Summary (Candle Power)		
Angle	Mean CP	
0	884	
5	877	
15	829	
25	742	
35	623	
45	472	
55	290	
65	110	
75	32	
85	8	
90	0	

NICOR, Inc. 2200 Midtown Place NE, Albuquerque, NM 87107 P: 800.821.6283 F: 800.892.8393 www.nicorlighting.com January 15, 2025 1:38 PM CLR Select Page 5 of 6

Commercial Recessed LED Downlight

Dimensions



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.











18w LED 2309 Lumens | 30w LED 3848 Lumens 21w COB 1984 Lumens

IP65 • Suitable For Wet Locations

IK08 • Impact Resistant (Vandal Resistant)

Weight 8 lbs



Mounting Detail

2 3'



Ligman's micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.



The variable optic system allows for the designer to create hybrid distributions for precise lighting requirements.



Construction

Aluminum

Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket

Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management

I M6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours

Standard 10kv surge suppressor provided with all fixtures.

BUG Rating B2 - U0 - G0

Finishing

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence

Paint

UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Inspired by Nature Finishes The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

The Coating Process After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains.

Wood grain coating can create beautiful wood-looking products of any sort. There currently in use. V colors, designs, etc. There are over 300 combinations of designs use. Wood grains can be made with different

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

Added Benefits

 Resistance to salt-acid room, accelerated aging
 Boiling water, lime and condensed water resistant
 Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch
 Super durable (UV restant) TGIC free (non-toxic)

<u>Hardware</u>

Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes

Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens

Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED

Precise optic design provides exceptional light control and precise distribution of light. 1 FD CRI > 80

Lumen - Maintenance Life

L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Ligman Lighting USA reserves the right to change specifications without prior notice, please contact factory for latest information. Due to the continual improvements in LED technology data and components may change without notice

Cone-shaped wall-mounted downlight fixtures. Simple clean form hiding multiple high-performance glare free optic choices.

A cone shaped wall wash luminaire. Suitable for outdoor up, or down light applications. This luminaire is provided with precision optics and high powered LEDs, to provide narrow, medium, wide and very wide distributions. The vandal resistant tempered glass is available in clear or lightly frosted versions.

This product is suitable for commercial, as well as residential applications and with the selection of optics available can provide an excellent lighting solution. Integral electronic driver. Fixture is mounted over a 3" octagonal junction box.

To meet International Dark Sky criteria, 3000k or warmer LEDs must be selected and luminaire fix mounted (+/- 15° allowable to permit leveling).

Additional Options (Consult Factory For Pricing)



Surface Conduit Box Trim

NOTE: This trim covers a shallow single gang, surface mount junction box [Provided by contractor] Example: Hubbell: - 5322-0 - 1-Gang Weatherproof Box, Five 1/2" in. Threaded Outlets - or - 5332-0 - 1-Gang Weatherproof Box, Five 3/4 in. Threaded Outlets



UCI-30131 Cinati Type I, II, III & IV Surface







More Custom Finishes Available Upon Request

Consult factory for pricing and lead times







Cinati Product Family



Cinati 1

• UCI-30131-21w-1984lm • UCI-30131-18w-2309lm • UCI-30131-30w-3848lm

UVA-30001 Vancouver 24 Surface





8w COB 331 Lumens **IP65** • Suitable For Wet Locations IK08 • Impact Resistant Weight 13.6 lbs



Construction

Aluminum. Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket

Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management

I M6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours

Standard 10kv surge suppressor provided with all fixtures.

BUG Rating Contact Factory

Finishing

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence

Paint

UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Inspired by Nature Finishes The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching

The Coating Process

After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different of any sort. Th currently in use. colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

Added Benefits

 Resistance to salt-acid room, accelerated aging
 Boiling water, lime and condensed water resistant
 Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch Super durable (UV resistant) TGIC free (non-toxic)

<u>Hardware</u> Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture

Crystal Clear Low Iron Glass Lens

Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED

Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life L80 /B10 at 50,000 hours (This means that at least 90% of the

LED still achieve 80% of their original flux)

Ligman Lighting USA reserves the right to change specifications without prior notice, please contact factory for latest information. Due to the continual improvements in LED technology data and components may change without notice

Contemporary urban lighting furniture. Open-sided, three lattice pattern options or your bespoke design.

A stylish Dark Sky Compliant square high performance wall mounted luminaire with downward light distribution using LED lamps. This light column offers optimal visual comfort through glare control by utilizing a controlled optics designed by Ligman. These luminaires have a square design providing a unique wide light distribution, offering an architecturally appealing shadow pattern on the mounted surface. The internal sides of the supporting pillars are accented by light from the LED.

Color temperature 2700K, 3000K, 3500K and 4000K. The minimalistic shape provides distinctive lighting effects by night and decorative urban effect during the day. Suitable for pedestrian areas, precincts, building surrounds, shopping centers, squares and parks. The Vancouver comes standard with a unique waterproof internal driver housing compartment that is situated at the top of the pole to stop water and dust from entering the electrical components. This fixture is supplied completely wired with powercord and waterproof gland from the driver enclosure to the base of the column to ensure quick trouble-free installation.

Custom heights are available, please specify in options. Designed to complement the Vancouver Light Column and bollard.

Additional Options (Consult Factory For Pricing)



OB **Open Bottom**



UVA-30001

Vancouver 24 Surface

Lígman LIGHTING USA



More Custom Finishes Available Upon Request

Consult factory for pricing and lead times Cherry Beech Oak Walnut Chestnut Bamboo

Mahogany

Pine



Steel



Example: Inspired by Nature Finish



Birch Ligman Lighting USA reserves the right to change specifications without prior notice, please contact factory for latest information. Due to the continual improvements in LED technology data and components may change without notice

Vancouver Product Family





Vancouver 11

• UVA-10021-21w-570Im [9.4"x9.4"-39.3']



• UVA-10031-21w-490Im [9.4"x9.4"-39.3']

Vancouver 12



Vancouver 13

• UVA-10041-21w-704lm [9.4"x9.4"-39.3']

Vancouver 14

• UVA-70001-8w-331lm [6.3"x6.3"-15.7"]



Vancouver 15

• UVA-70011-21w-815Im [9.4"x9.4"-15.7"]



• UVA-20141-33w-2858Im [9.4"x9.4"-13.3'] • UVA-20142-66w-4287Im [9.4"x9.4"-14.5'] • UVA-20143-99w-5716lm [9.4"x9.4"-15.7']

• UVA-20144-132w-7145Im [9.4"x9.4"-17']

Vancouver 19



• UVA-20131-33w-2858Im [9.4"x9.4"-13.3'] • UVA-201312-66w-4287Im [9.4"x9.4"-14.5'] • UVA-20133-99w-5716Im [9.4"x9.4"-15.7"] • UVA-20134-132w-7145Im [9.4"x9.4"-17']



• UVA-20121-33w-2858 lm [9.4"x9.4"-13.3'] • UVA-20122-66w-4287Im [9.4"x9.4"-14.5'] • UVA-20123-99w-5716Im [9.4"x9.4"-15.7"] • UVA-20124-132w-7145Im [9.4"x9.4"-17']



• UVA-20112-66w-4287lm [9.4"x9.4"-14.5'] • UVA-20113-99w-5716lm [9.4"x9.4"-15.7"] • UVA-20114-132w-7145Im [9.4"x9.4"-17"]





Vancouver 26

• UVA-30012-21w-490lm [6.3"x6.3"-23.6"]





Vancouver 28

• UVA-30021-39w-1336lm [9.4"x9.4"-39.3"] • UVA-30031-33w RGBW-429Im [9.4"x9.4"-39.3"]

Vancouver 29

• UVA-30022-39w-1167Im [9.4"x9.4"-39.3"] • UVA-30032-33w RGBW-1158lm [9.4"x9.4"-39.3"]



• UVA-20151-33w-1429Im [9.4"x9.4"-12.1']



Vancouver 30

• UVA-30023-39w-1670Im [9.4"x9.4"-39.3"] • UVA-30033-33w RGBW-439Im [9.4"x9.4"-39.3"]







• UVA-70041-8w-165Im [6.3"x6.3"-15.7"]

• UVA-70051-21w-410Im [9.4"x9.4"-15.7"]

• UVA-30041-20w-1326Im [6.3."x6.3"-23.6"]

• UVA-30042-20w-1326Im [6.3."x6.3"-23.6"]

• UVA-30043-20w-1326Im [6.3."x6.3"-23.6"]

CARLES OF





• UVA-30051-40w-2781lm [9.4"x9.4"-39.3"]

Vancouver 71 • UVA-30052-40w-2781lm [9.4"x9.4"-39.3"]

• UVA-30053-40w-2781lm [9.4"x9.4"-39.3"]

MEMORANDUM

TO:	 361 Hanover Steam Factory, LLC c/o Mr. Shayne Forsley Hampshire Development Corp. 41 Industrial Drive #20 Exeter, NH 03833 	FROM:	Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE Managing Partner <i>and</i> Mr. Makenlove Marc Transportation Engineer Vanasse & Associates, Inc. 35 New England Business Center Drive Suite 140 Andover, MA 01810-1066 (978) 269-6830 jdirk@rdva.com *Professional Engineer in CT, MA, ME, NH, RI and VA
DATE:	March 7, 2025	RE:	10068
SUBJECT:	Traffic Impact Study Kearsarge Mill Residential Develop Portsmouth, New Hampshire	ment – 361	Hanover Street

Vanasse & Associates, Inc. (VAI) has conducted a Traffic Impact Study (TIS) in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of the Kearsarge Mill located at 361 Hanover Street in Portsmouth, New Hampshire, to accommodate a multifamily residential development (hereafter referred to as the "Project"). This study has been completed in accordance with the New Hampshire Department of Transportation (NHDOT) guidelines for the preparation of a TIS as defined in the Driveway Permit Policy and evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project, along Hanover Street and Bridge Street. Based on this assessment, we have concluded the following with respect to the Project:

- Using trip-generation statistics published by the Institute of Transportation Engineer (ITE),¹ the Project is expected to generate approximately 384 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 38 vehicle trips expected during the weekday morning peak-hour and 41 vehicle trips expected during the weekday evening peak-hour;
- 2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no (0) changes in level of service (LOS) and all movements at the study area intersections shown to continue to operate at LOS B or better, where an LOS "D" or better is defined as "acceptable" operating conditions. Project-related impacts were generally defined as an increase in average motorist delay of up to 1.1 seconds that resulted in a corresponding increase in vehicle queuing of up to one (1) vehicle;



¹*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

- 3. Under 2025 Opening Year Build and 2035 Build conditions, all movements exiting the Project site driveway to Hanover Street were shown to operate at LOS A with negligible vehicle queuing. All movements along Hanover Street approaching the Project site driveway were shown to operate at LOS A, also with negligible vehicle queuing; and
- 4. Lines of sight at the intersection of the Project site driveway with Hanover Street were found to exceed the recommended minimum distance for the intersection to operate in a safe manner based on the appropriate speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations defined herein.

The following details our assessment of the Project.

PROJECT DESCRIPTION

The Project will entail the renovation of the Kearsarge Mill building located at 361 Hanover Street in Portsmouth, New Hampshire, and the construction of three (3) new multifamily residential buildings that will front along Hanover Street. When complete, up to 48 residential units will be provided and dispersed between four (4) buildings as follows: the existing four-story Kearsarge Mill building (Building "A") will be renovated to accommodate up to 34 residential units; two new three story buildings (Buildings "B" and "C") that will accommodate four (4) residential units and two (2) residential units, respectively; and a new three story building (Building "D") that will accommodate eight (8) residential units. The Project site encompasses approximately $1.0\pm$ acres of land bounded by Foundry Place to the north; Hanover Street to the south; residential properties to the east; and Rock Street and the Rock Street park to the west. The Project site is currently improved with the Kearsarge Mill building and supporting parking and appurtenances. Figure 1 depicts the Project site location in relation to the existing roadway network.

Access to the Project site will be provided by way of a new driveway that will intersect the south side of Hanover Street approximately 60 feet east of Rock Street. On-site parking will be provided for 71 vehicles, consisting of both surface parking and covered parking beneath the residential units that are to be located in the Kearsarge Mill building.

STUDY METHODOLOGY

This study was prepared in consultation with the City of Portsmouth and NHDOT; was performed in accordance with the NHDOT guidelines for the preparation of TISs as defined in the Driveway Permit Policy and the standards of the Traffic Engineering and Transportation Planning Professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage of the study involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics, pedestrian and bicycle facilities, and public transportation services; observations of traffic flow; and the collection of daily and peak-period traffic counts.

In the second stage of the study, future conditions on the transportation system were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future demands on the transportation system that are expected due to growth independent of the Project. In accordance with NHDOT guidelines for the preparation of TISs, four future conditions were evaluated: 1) 2025 No-Build





conditions *without* the Project; 2) 2025 Opening-Year Build conditions *with* the Project; 3) 2035 No-Build conditions *without* the Project; and 4) 2035 Build conditions (ten-year projection from opening-year) *with* the Project. The analyses conducted in stage two of the study identify existing or projected future roadway capacity and traffic safety issues.

The third stage of the study presents and evaluates measures to address roadway and intersection capacity issues and safety concerns, if any, identified in stages one and two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in August 2024. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of Hanover Street, Rock Street, Pearl Street, Bridge Street, and Foundry Place, and the following intersections: Hanover Street at Rock Street; Hanover Street at Pearl Street; Hanover Street at Bridge Street; and Bridge Street at Foundry Place. The following describes the study area roadways and intersections.

Roadways

Hanover Street

Hanover Street is a Tier 5, Class 5, local roadway that is under City jurisdiction and traverses the study area in a general west-east direction, conveying traffic in a one-way eastbound direction between Pearl Street and Bridge Street and one-way westbound between Rock Street and Brewster Street, with two-way traffic between Pearl Street and Rock Street. The one-way roadway segments vary from 30 feet in width with one-street parking along both sides to 18-feet with on-street parking along one side. The two-way segment is approximately 27-feet in width with on-street parking along one side. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 miles per hour (mph) in a residential district.² Sidewalks are provided along both sides of the roadway within the study area. Illumination is provided by way of streetlights mounted on wood poles. Land use along Hanover Street in the vicinity of the Project site consists of residential and commercial properties.

Rock Street

Rock Street is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northwest-southeast direction, conveying one-way northbound traffic between Islington Street and Hanover Street and two-way traffic between Hanover Street and Sudbury Street. The one-way roadway segment is approximately 28-feet in width with on-street parking along one side, with the two-way segment varying from 16 to 20-feet in width. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. Sidewalks are provided along both sides of the roadway. Illumination is provided by way of streetlights mounted on wood poles. Land use along Rock Street in the vicinity of the Project site consists of residential and commercial properties and the Rock Street Park.

²RSA 265:60 defines the "reasonable and prudent standard" as follows: "No person shall drive a vehicle on a way at a speed greater than is reasonable and prudent under the conditions and having regard to the actual and potential hazards then existing. In every event speed shall be so controlled as may be necessary to avoid colliding with any person, vehicle, or other conveyance on or entering the way in compliance with the legal requirements and the duty of all persons to use due care."



Pearl Street

Pearl Street is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northwest-southeast direction and accommodates two-way travel between Islington Street and Hanover Street. Within the study area, Pearl Street provides an approximate 28-foot wide traveled-way with parking along one side and a faded double-yellow centerline approaching Hanover Street. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. Sidewalks are provided along both sides of the roadway. Illumination is provided by way of streetlights mounted on wood poles. Land use along Pearl Street in the vicinity of the Project site consists of residential and commercial properties.

Bridge Street

Bridge Street is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northwest-southeast direction and conveys two-way traffic between Islington Street and Maplewood Avenue. Within the study area, Bridge Street provides two 10- to 19-foot-wide travel lanes separated by a double-yellow centerline with no marked shoulders and on-street parking along one or both sides of the roadway where defined by pavement markings. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. Sidewalks are provided along both sides of the road within the study area. Illumination is provided by way of streetlights mounted on wood poles, steel poles, and ornamental lighting fixtures. Land use along Bridge Street in the vicinity of the Project site consists of residential and commercial properties.

Foundry Place

Foundry Place is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northeast-southwest direction and conveys two-way traffic between Bridge Street its terminus in a cul-de-sac approximately 600 feet southwest of Bridge Street. Within the study area, Foundry Place provides two 12-foot-wide travel lanes separated by a double-yellow centerline with no marked shoulders. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. A sidewalks is provided along the north side of the roadway within the study area. Illumination is provided by ornamental lighting fixtures. Land use along Foundry Place in the vicinity of the Project site consists of residential and commercial properties, Rock Street Park and the Foundry Place garage. Direct access to the Project will not be provided from Foundry Place.

Intersections

Table 1 and Figure 2 summarize existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in August 2024.







Figure 2

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities

Table 1STUDY AREA INTERSECTION DESCRIPTION

Intersection	Traffic Control Type ^a	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
Hanover St./ Rock St.	S	1 general-purpose lane provided on Hanover St. westbound and Rock St. southbound; Hanover St. west leg is one-way westbound; Rock St. south leg is one-way northbound on-street parking along one or both sides of Hanover St. and Rock St. south leg	No	Yes; sidewalks along both sides of the intersecting roadways	Yes; shared traveled- way ^b
Hanover St./ Pearl St	S	1 general-purpose lane provided on Hanover St. west leg and on Pearl St.; Hanover St. east leg is one- way eastbound; on-street parking along one or both sides of Hanover St. and Pearl St.	No	Yes; sidewalks along both sides of the intersecting roadways	Yes; shared traveled- way on Hanover St.
Hanover St./ Bridge St	S	1 general-purpose lane provided on Bridge St. and Hanover St. east leg; Hanover St. west leg is one-way eastbound; on- street parking along one or both sides of Hanover St. and Bridge St.	No	Yes; sidewalks along both sides of the intersecting roadways; crosswalks across all legs	Yes; shared traveled- way
Bridge St./ Foundry Pl.	S	1 general-purpose travel lane on all approaches	No	Yes; sidewalks along both sides of the intersecting roadways; crosswalks provided across Foundry Pl. and the Bridge St. north leg	Yes; shared traveled- way

^aS = stop signal control.

^bCombined shoulder and travel lane width equal to or exceeding 14 feet.

Existing Traffic Volumes

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, turning movement counts (TMCs), and vehicle classification counts were completed in August 2024. The ATR counts were conducted on August 6th through 7th, 2024 (Tuesday through Wednesday, inclusive) on Hanover Street east of Rock Street in order to record weekday daily traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and evening (3:00 to 6:00 PM) peak-period TMCs performed at the study area intersections on Tuesday, August 6, 2024. These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.



Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, 2019 peak-hour and average daily traffic count data were reviewed for NHDOT Continuous Count Station No. 02125001, which is located on Dover Point Road in Strafford, were reviewed. Based on a review of this data, it was determined that traffic volumes for the month of August are approximately 1.0 percent below peak-month (June) conditions. As such, the August traffic volumes were adjusted upward by 1.0 percent in order to be representative of peak-month conditions in accordance with NHDOT standards.

In order to account for the impact on the traffic volume and trip patterns resulting from the COVID-19 pandemic, traffic-volume data collected at NHDOT Continuous Count No. 02125001 was reviewed. Traffic-volume data for August 2024 was compared to data collected at the same location in August 2019. The following summarizes the comparison between the August 2024 and August 2019 traffic volumes:

- Average Daily Traffic Volumes: -0.3%
- Weekday Morning Peak-Hour Traffic Volumes: -3.0%
- Weekday Evening Peak-Hour Traffic Volumes: +2.4%

As such, the average weekday traffic volumes were adjusted upward by 0.3 percent (multiplied by 1.003) and the weekday morning peak-hour traffic volumes were adjusted upward by 3.0 percent (multiplied by 1.03); no adjustment was required to the weekday evening peak-hour traffic volumes as the August 2024 traffic volumes were found to be 2.4 percent higher than the traffic volumes in August 2019.

The 2024 Existing peak-month traffic volumes are summarized in Table 2, with the weekday morning and evening peak-month, peak-hour traffic volumes graphically depicted on Figures 3 and 4, respectively. Note that the peak-hour traffic volumes that are presented in Table 2 were obtained from the aforementioned figures.

Table 22024 EXISTING PEAK-MONTH TRAFFIC VOLUMES

Location/Peak Hour	AWT ^a	VPH ^b	K Factor ^c	Directional Distribution ^e
Hanover Street, east of Rock Street:	510			
Weekday Morning (8:00 – 9:00 AM)		54	10.6	96.3% EB
Weekday Evening (3:45 – 4:45 PM)		42	8.2	90.5% EB

^aAverage weekday traffic in vehicles per day.

^bVehicles per hour.

^cPercent of daily traffic occurring during the peak hour.

^dPercent traveling in peak direction.

EB = eastbound.

As can be seen in Table 2, Hanover Street east of Rock Street was found to accommodate approximately 510 vehicles on an average weekday (two-way, 24-hour volume) under peak-month conditions, with approximately 54 vehicles per hour (vph) during the weekday morning peak-hour and 42 vph during the weekday evening peak-hour.







*Illegal movement. Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

> Vanasse & Associates inc



Not To Scale





*Illegal movement. Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.



Figure 4

2024 Existing **Peak-Month** Weekday Evening Peak-Hour Traffic Volumes
Spot Speed Measurements

Vehicle travel speed measurements were performed on Hanover Street in the vicinity of the Project site in conjunction with the ATR counts, the results of which are summarized in Table 3.

	Hanov	er Street
	Eastbound	Westbound
Mean Travel Speed (mph)	13	11
85 th Percentile Speed (mph)	14	13
Statutory Speed Limit (mph)	30	30

Table 3VEHICLE TRAVEL SPEED MEASUREMENTS

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Hanover Street in the vicinity of the Project site was found to be 13 mph in the eastbound direction and 11 mph westbound. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 14 mph in the eastbound direction and 13 mph westbound, which is 16 to 17 mph below the statutory speed limit (30 mph) in the vicinity of the Project site. The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances and is often used in establishing posted speed limits.

Pedestrian and Bicycle Facilities

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in August 2024. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways, as well as the location of existing and planned future bicycle facilities. Sidewalks are provided along both sides of the study area roadways, with marked crosswalks provided at the Bridge Street/Hanover Street and Bridge Street/Foundry Place intersections. Formal bicycle facilities are not provided within the study area; however, the study area roadways generally provide sufficient width to accommodate bicycle travel in a shared-traveled-way configuration.³

Public Transportation

Regularly scheduled public transportation services are not provided within the study area; however, east of the Project site, the Cooperative Alliance for Seacoast Transportation (COAST) provides fixed-route bus services by way of the following routes:

- *Route 13:* Dover/Portsmouth
- *Route 40:* Islington/Borthwick Trolley
- *Route 41:* Lafayette Trolley

³A minimum combined travel lane and paved shoulder width of 14 feet is required to support bicycle travel in a shared-traveledway condition.



- *Route 42:* Pease Shuttle
- *Route 43:* Newington/Portsmouth
- *Route 44:* Portsmouth City Hall/Kittery (PNSY Gate 1)

All six bus routes include a stop at Hanover Station, which is 0.3 mile to the northeast of the Project site, or an approximate 7-minute walking distance. Route 40 has a stop located at the Islington Street/ Tenner Street intersection, which is located 0.1 miles to the southeast of the Project site, or an approximate 3-minute walking distance. In addition to fixed-route bus services, COAST provides paratransit services for eligible persons who cannot use fixed-route transit at all or some of the time due to a physical, cognitive, or mental disability in compliance with the Americans with Disabilities Act (ADA).

The public transportation schedules and fare information are attached.

Motor Vehicle Crash Data

Motor vehicle crash data for the study area intersections has been requested from the Portsmouth Police Department in order to examine motor vehicle crash trends occurring within the study area. The data will be summarized in a supplement to this TIS once the data is received.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the years 2025 and 2035, which reflect the anticipated opening-year of the Project and a ten-year planning horizon from opening-year, respectively, consistent with NHDOT TIS guidelines. The future condition traffic-volume projections incorporate identified specific development projects by others, as well as general background traffic growth as a result of development external to the study area and presently unforeseen projects. Anticipated Project-generated traffic volumes superimposed upon the 2025 and 2035 No-Build traffic volumes reflect the Build conditions with the Project.

Future Traffic Growth

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Specific Development by Others

The City of Portsmouth Planning Department was contacted in order to determine if there were any projects planned within the Town that would have an impact on future traffic volumes within the study area. Based on this consultation, the following projects were identified for review in conjunction with this assessment:



- Proposed Lot 5, Deer Street Development, 70 Maplewood Avenue, Portsmouth, New Hampshire. This project entails the construction of a mixed-use development to be located at 70 Maplewood Avenue, east of the Project site. The Project will consist of a four-story mixed-use building with retail, office, hotel, and commercial space.
- Proposed Lot 2 Community Space, Foundry Place, Portsmouth, New Hampshire. This project entails the construction of community space to be located at Foundry Place, east of the Foundry Place garage. The community space will consist of an 8,521 sf open space plaza.
- Proposed Lot 3, Deer Street Development, Deer Street, Portsmouth, New Hampshire. This project entails the construction of a mixed-use development to be located at 165 Deer Street, northeast of the Project site. The Project will consist of a five-story hotel with a rooftop restaurant and bar.
- Proposed Lot 4, Deer Street Development, Deer Street, Portsmouth, New Hampshire. This project entails the construction of a mixed-use development to be located at 163 Deer Street, northeast of the Project site. The Project will consist of a four-story commercial and office building with a restaurant on the first floor.
- Proposed Lot 6, Deer Street Development, Deer Street, Portsmouth, New Hampshire. This project entails the construction of a mixed-use development to be located at 89 and 99 Foundry Place, east of the Project site. The project will consist of a four-story multifamily residential building with ground floor commercial space.

Traffic volumes associated with identified specific development projects by others were obtained from information filed with the City and using trip-generation data published by the ITE⁴ for similar land uses as those identified. No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

General Background Traffic Growth

Traffic-volume data compiled by NHDOT from count station No. 02125001 was reviewed in order to determine general traffic growth trends in the area. This data indicates that traffic volumes have fluctuated over the 10-year period between 2009 and 2019, with the average traffic growth rate found to be approximately 0.04 percent. In order to provide a prudent planning condition from which to assess the potential impact of the Project on the transportation infrastructure, a higher 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

The City of Portsmouth and NHDOT were contacted in order to determine if there were any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, no roadway improvement projects are currently scheduled within the study area beyond routine maintenance activities.



⁴Institute of Transportation Engineers, op. cit. 1.

No-Build Traffic Volumes

The 2025 and 2035 No-Build peak-month, peak-hour traffic volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2024 Existing peak-month, peak-hour traffic volumes and then adding the peak-hour traffic volumes associated with the identified specific development projects by others. The resulting 2025 No-Build weekday morning and evening peak-month, peak-hour traffic volumes are shown on Figures 5 and 6, respectively, with the corresponding 2035 No-Build peak-month, peak-hour traffic volumes shown on Figure 7 and 8.

PROJECT-GENERATED TRAFFIC

As proposed, the Project will entail the construction of up to 48 multifamily residential housing units. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE⁵ for a similar land use as that proposed were used. ITE Land Use Code (LUC) 220, *Multifamily Housing (Low Rise)*, was used to develop the anticipated traffic characteristics of the Project, the results of which are summarized in Table 4.

	Vehicle Trips ^a					
Time Period	Entering	Exiting	Total			
Average Weekday	192	192	384			
Weekday Morning Peak-Hour	9	29	38			
Weekday Evening Peak-Hour	26	15	41			

Table 4TRIP GENERATION SUMMARY

^aBased on ITE LUC 220, *Multifamily Housing (Low Rise)*; 48 units.

Project-Generated Traffic-Volume Summary

As can be seen in Table 4, the Project is predicted to generate approximately 384 vehicle trips on an average weekday (two-way, 24-hour volume, or 192 vehicles entering and 192 exiting) and approximately 38 vehicle trips (9 vehicles entering and 29 exiting) expected during the weekday morning peak-hour and 41 vehicle trips (26 vehicles entering and 15 exiting) expected during the weekday evening peak-hour.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was determined based on a review of U.S. Census Journey-to-Work data for the City of Portsmouth and then refined based on a review of existing traffic patterns within the study area. The general trip distribution for the Project is graphically depicted on Figure 9, with the additional traffic expected to be generated by the Project assigned onto the study area roadway network as shown on Figures 10 and 11.



⁵Institute of Transportation Engineers, op. cit. 1.





2025 No-Build **Peak-Month** Weekday Morning Peak-Hour Traffic Volumes

Figure 5







Figure 6

2025 No-Build **Peak-Month** Weekday Evening Peak-Hour Traffic Volumes







Figure 7

2035 No-Build **Peak-Month** Weekday Morning Peak-Hour Traffic Volumes







Figure 8

2035 No-Build **Peak-Month** Weekday Evening Peak-Hour Traffic Volumes







Build Traffic Volumes

The 2025 Opening-Year Build and 2035 Build condition traffic volumes were developed by adding the peak-hour Project-generated traffic to the corresponding 2025 and 2035 No-Build peak-month, peak-hour traffic volumes. The resulting 2025 Opening-Year Build condition weekday morning and evening peak-hour traffic volumes are graphically depicted on Figures 12 and 13, respectively, with the corresponding 2035 Build condition peak-month, peak-hour traffic volumes depicted on Figures 14 and 15.

TRAFFIC OPERATIONS ANALYSIS

In order to assess the potential impact of the Project on the roadway network, a detailed traffic operations analysis (motorist delays, vehicle queuing, and level of service) was performed at the study area intersections. Capacity analyses provide an indication of how well transportation facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

In brief, six levels of service are defined for each type of facility. They are given letter designations ranging from A to F, with LOS "A" representing the best operating conditions and LOS "F" representing congested or constrained operations. An LOS of "E" is representative of a transportation facility that is operating at its design capacity while an LOS of "D" is generally defined as the limit of "acceptable" traffic operations. Since the level of service of a traffic facility is a function of the flows placed upon it, such a facility may operate at a wide range of levels of service depending on the time of day, day of week, or period of the year. The Synchro® 12 intersection capacity analysis software, which is based on the analysis methodologies and procedures presented in the 7th Edition Highway Capacity Manual (HCM)⁶ for unsignalized intersections.

Analysis Results

Level-of-service and vehicle queue analyses were conducted for 2024 Existing, 2025 No-Build, 2025 Opening-Year Build, 2035 No-Build, and 2035 Build conditions for the study area intersections and the Project site driveway. The results of the intersections capacity and vehicle queue analyses are summarized in Table 5, with the detailed analysis results presented in the Attachment.

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area. For context, we note that an LOS of "D" or better is generally defined as "acceptable" operating conditions.

Hanover Street at Rock Street

Under 2025 Opening-Year and 2035 Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS A with negligible vehicle queueing.

Hanover Street at Pearl Street

Under 2025 Opening-Year Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS A with negligible vehicle queueing.



⁶*Highway Capacity Manual*, Transportation Research Board; Washington, DC; 2022.







Figure 12

2025 Opening-Year Build **Peak-Month** Weekday Morning Peak-Hour Traffic Volumes







2025 Opening-Year Build **Peak-Month** Weekday Evening Peak-Hour Traffic Volumes







Figure 14

2035 Build **Peak-Month** Weekday Morning Peak-Hour Traffic Volumes







Figure 15

2035 Build **Peak-Month** Weekday Evening Peak-Hour Traffic Volumes Under 2035 Build peak-month conditions, no changes in level of service was shown to occur over No-Build conditions, with all movements at the intersection shown to continue to operate at LOS A. Project-related impacts were generally defined as an increase in an average motorist delay of less than 1.0 seconds that resulted in a corresponding increase in vehicle queuing of up to one (1) vehicle.

Hanover Street at Bridge Street

Under 2025 Opening-Year and 2035 Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS A with vehicle queues of up to one (1) vehicle.

Bridge Street at Foundry Place

Under 2025 Opening-Year and 2035 Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS B or better with vehicle queues of up to (2) vehicles.

Hanover Street at the Project Site Driveway

Under 2025 Opening-Year and 2035 Build peak-month conditions, all movements at the Project site driveway intersection with Hanover Street were shown to operate at LOS A during both the weekday morning and evening peak hours with negligible vehicle queuing predicted.



Table 5 UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

		2024 Ex	kisting			2025 N	o-Build		20	25 Opening	g-Year Bui	ld		2035 No	o-Build			2035 1	Build	
	Domanda	Dalayb	LOS	Queue ^d	Domand	Delay	LOS	Queue	Domand	Dalay	LOS	Queue	Domand	Dalay	LOS	Queue	Domond	Dolov	LOS	Queue
Unsignalized Intersection/Peak Hour/Movement	Demanu	Delay	103	93	Demand	Delay	103	93	Demand	Delay	103	95	Demanu	Delay	103	93	Demand	Delay	103	93
Hanover Street at Rock Street																				
Weekday Morning:																				
Hanover Street WB TH/RT	2	7.1	А	0	2	7.1	А	0	6	7.1	А	0	2	7.1	Α	0	6	7.2	А	0
Rock Street NB LT/TH/RT	22	6.7	А	0	22	6.7	А	0	23	6.7	А	0	25	6.7	Α	0	26	6.7	А	0
Rock Street SB LT/RT	36	7.3	А	0	36	7.3	А	0	35	7.4	А	0	40	7.4	Α	0	39	7.4	А	0
Weekday Evening:																				
Hanover Street WB TH/RT	4	7.1	А	0	4	7.1	А	0	6	7.1	А	0	4	7.1	А	0	5	7.2	А	0
Rock Street NB LT/TH/RT	21	6.9	А	0	21	6.9	А	0	23	6.9	А	0	23	6.9	А	0	27	6.9	А	0
Rock Street SB LT/RT	33	7.2	А	0	33	7.2	А	0	33	7.3	А	0	27	7.3	А	0	38	7.3	А	0
Hanover Street at Pearl Street																				
Weekday Morning.																				
Hanover Street FB LT/TH/RT	52	0.1	А	0	52	0.1	А	0	76	0.1	А	0	58	0.1	А	0	82	0.1	А	0
Hanover Street WB I T/TH	2	2.6	Δ	0	2	2.6	Δ	0	2	2.6	Δ	Ő	20	2.6	Δ	0	2	2.6	Δ	Ő
Dearl Street ND LT/TH/DT	19	2.0	A .	0	19	2.0	A .	0	22	2.0	A A	0	20	2.0	A	0	25	2.0	A .	0
Pearl Street ND L1/10/K1	10	0.0	A	0	18	0.0	A	0	23	0.9	A	0	20	0.0	A	0	23	0.9	A	0
Pearl Street SB L1/1H/K1	1	8.3	А	0	1	8.3	А	0					1	8.5	А	0				
weekaay Evening:	20	0.0		0	20	0.0		0	51	0.0		0	40	0.0		0	= (0.0		0
Hanover Street EB L1/1H/R1	38	0.0	A	0	38	0.0	A	0	51	0.0	A	0	43	0.0	A	0	56	0.0	A	0
Hanover Street WB TH	1	0.0	A	0	1	0.0	A	0	1	0.0	A	0	1	0.0	A	0	1	0.0	A	0
Pearl Street NB LT/TH/RT	29	8.8	A	0	29	8.8	A	0	51	9.0	A	0	32	8.9	A	0	54	9.1	A	1
Pearl Street SB LT/TH/RT	16	8.6	А	0	16	9.1	А	0					16	9.1	А	0				
Hanover Street at Bridge Street																				
Weekday Morning:																				
Hanover Street EB LT/TH/RT	58	7.7	А	1	58	8.0	А	1	77	8.2	А	1	64	8.1	Α	1	83	8.3	А	1
Hanover Street WB LT/RT	54	7.3	Α	0	54	7.6	Α	1	60	8.0	А	1	60	7.8	А	1	64	7.9	А	1
Bridge Street NB TH/RT	82	7.2	Α	1	130	8.0	Α	1	131	8.1	А	1	140	8.1	А	1	140	8.2	А	1
Bridge Street SB LT/TH	25	7.5	А	0	57	7.9	А	0	58	7.9	А	0	60	8.0	Α	1	63	8.1	А	1
Weekday Evening:																				
Hanover Street EB LT/TH/RT	77	8.1	А	1	77	8.4	А	1	99	8.8	А	1	86	8.6	А	1	84	8.7	А	1
Hanover Street WB LT/TH/RT	78	8.3	A	1	79	8.6	A	1	75	8.6	A	1	87	8.8	A	1	97	9.0	A	1
Bridge Street NB TH/RT	159	79	A	1	197	8.5	A	1	197	8.6	A	1	215	8.8	A	1	215	89	A	1
Bridge Street SB LT/TH	59	8.1	A	1	100	8.6	A	1	108	8.7	A	1	107	8.8	A	1	115	8.9	A	1
Duide - Start of Frank due Dires																				
Bridge Street at Foundry Place																				
weekaay Morning:	22	10.0		0	(7	11.5	P		(7	11.6	D		(0)	11.0	D		70	10.0	P	
Foundry Place EB L1/R1	22	10.0	A	0	6/	11.5	В	1	67	11.6	В	1	69	11.8	в	1	70	12.3	в	1
Bridge Street NB LT/TH	61	3.2	A	0	109	3.6	A	0	118	3.6	Α	0	116	3.6	A	0	125	4.7	A	0
Bridge Street SB TH/RT	146	0.0	A	0	200	0.0	A	0	203	0.0	А	0	216	0.0	A	0	219	0.0	A	0
Weekday Evening:																				
Foundry Place EB LT/RT	108	10.5	в	1	165	12.5	в	2	165	12.7	В	2	176	13.1	в	2	176	13.2	в	2
Bridge Street NB LT/TH	64	1.4	Α	0	102	2.4	А	0	103	2.4	А	0	108	2.3	Α	0	109	2.3	А	0
Bridge Street SB TH/RT	71	0.0	А	0	120	0.0	А	0	128	0.0	А	0	129	0.0	А	0	137	0.0	А	0
Hanover at the Project Site Driveway																				
weekaay Morning:									<i>5</i> 0	0.1		0					50	0.1		0
Hanover Street EB 1H/K1									52	0.1	A	0					58	0.1	A	0
Hanover Street WB LT/TH									10	0.0	A	0					10	0.0	A	0
Project Site Driveway SB LT/RT									29	8.9	А	0					29	8.9	А	0
Weekday Evening:																				
Hanover Street EB TH/RT									42	0.7	А	0					47	0.6	А	0
Hanover Street WB LT/TH									26	0.0	А	0					26	0.0	А	0
Project Site Driveway SB LT/RT									15	8.9	А	0					15	8.9	А	0

^aDemand in vehicles per hour. ^bAverage control delay per vehicle (in seconds). ^cLevel of service. ^dQueue length in vehicles. NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

SIGHT DISTANCE MEASUREMENTS

Sight distance measurements were performed at the Project site driveway intersection with Hanover Street in accordance with the American Association of State Highway and Transportation Officials (AASHTO)⁷ requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a routeway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an oncoming vehicle and safely complete a turning or crossing maneuver with oncoming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 6 presents the measured SSD and ISD at the subject intersection.

Table 6 SIGHT DISTANCE MEASUREMENTS^a

		Feet	
Intersection/Sight Distance Measurement	Required Minimum (SSD)	Desirable (ISD) ^b	Measured
Hanover Street at the Project Site Driveway Stopping Sight Distance:			
Hanover Street approaching from the East	115		188
Hanover Street approaching from the West	115		281
Intersection Sight Distance:			
Looking to the East from the Project Driveway	115	195	146
Looking to the West from the Project Driveway	115	225	150

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on a 20-mph approach speed along Hanover Street.

^bValues shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

As can be seen in Table 6, the available lines of sight to and from Hanover Street at its intersection with the Project site driveway exceed the recommended minimum sight distance to function in a safe manner (SSD) based on a 20-mph approach speed which is slightly higher than the measured 85th percentile vehicle travel speed (13/16 mph).

⁷A Policy on Geometric Design of Highway and Streets, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.



SUMMARY

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed redevelopment of the Kearsarge Mill located at 361 Hanover Street in Portsmouth, New Hampshire, to accommodate a multifamily residential development. This study has been completed in accordance with the NHDOT guidelines for the preparation of a TIS as defined in the Driveway Permit Policy and has evaluated the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

- 1. Using trip-generation statistics published by the ITE,⁸ the Project is expected to generate approximately 384 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 38 vehicle trips expected during the weekday morning peak-hour and 41 vehicle trips expected during the weekday evening peak-hour;
- 2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no (0) changes in level of service and all movements at the study area intersections shown to continue to operate at LOS B or better, where an LOS "D" or better is defined as "acceptable" operating conditions. Project-related impacts were generally defined as an increase in average motorist delay of up to 1.1 seconds that resulted in a corresponding increase in vehicle queuing of up to one (1) vehicle;
- 3. Under 2025 Opening Year Build and 2035 Build conditions, all movements exiting the Project site driveway to Hanover Street were shown to operate at LOS A with negligible vehicle queuing. All movements along Hanover Street approaching the Project site driveway were shown to operate at LOS A, also with negligible vehicle queuing; and
- 4. Lines of sight at the intersection of the Project site driveway with Hanover Street were found to exceed the recommended minimum distance for the intersection to operate in a safe manner based on the appropriate speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the recommendations that follow.

RECOMMENDATIONS

Project Access

Access to the Project site will be provided by way of a new driveway that will intersect the south side of Hanover Street approximately 60 feet east of Rock Street. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulations, many of which are reflected on the site plans:



⁸Institute of Transportation Engineers, op. cit. 1.

- The Project site driveway will be 24 feet in width and will be designed to accommodate the turning and maneuvering requirements of moving vans, trash/recycling vehicles and the largest anticipated responding emergency vehicle.
- > Vehicles exiting the Project site to Hanover Street should be placed under STOP-sign control.
- ➤ Where perpendicular parking is proposed, the drive aisle behind the parking should be a minimum of 23 feet in order to facilitate parking maneuvers.
- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).⁹
- Sidewalks have been provided within the Project site that link the existing and proposed buildings to the existing sidewalks along Hanover Street, Rock Street and Foundry Place and crosswalks are proposed for crossing Rock Street (two (2) locations), at the Hanover Street/Rock Street intersection and across Pearl Street.
- ADA-compliant wheelchair ramps should be provided at all pedestrian crossings to be constructed or modified in conjunction with the Project, including for crossing the Project site driveway, or the driveway should be designed so that the sidewalk crosses the driveway (i.e., pan-type drive).
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas should be designed and maintained so as not to restrict lines of sight.
- Snow accumulations (windrows) within sight triangle areas should be promptly removed where such accumulations would impede sightlines.
- Consideration should be given to providing electric vehicle (EV) charging stations for use by residents of the Project.

Transportation Demand Management

In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles (SOVs), the following Transportation Demand Management (TDM) measures should be implemented as part of the Project:

- A transportation coordinator should be assigned for the Project, who may also have other duties and responsibilities, to coordinate the TDM program;
- A "welcome packet" should be provided to residents detailing available public transportation services, bicycle and walking alternatives, and other commuting options;
- > A central maildrop should be provided within each building; and
- Secure bicycle parking should be provided at an appropriate location within the Project site, including exterior bicycle racks and interior weather protected bicycle parking.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

⁹Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, D.C.; 2009.



PROPOSED DEVELOPMENT **361 HANOVER STREET** PORTSMOUTH, NEW HAMPSHIRE SITE PERMIT PLANS

OWNER/APPLICANT:

361 HANOVER STEAM FACTORY, LLC 41 INDUSTRIAL DRIVE UNIT 20 EXETER, NH 03833 TEL. (603) 235-5475

CIVIL ENGINEER/LAND SURVEYOR:

HALEY WARD, INC. 200 GRIFFIN ROAD, UNIT 3 PORTSMOUTH, N.H. 03801 TEL. (603) 430-9282

ARCHITECT:

SCOTT BROWN 29 WATER STREET, SUITE 209 NEWBURYPORT, MA 01950 TEL. (978) 465-3535

PLANNING CONSULTANT:

NICHOLAS CRACKNELL TEL. (978) 270-4789

LAND USE ATTORNEY:

BOSEN & ASSOCIATES 266 MIDDLE STREET PORTSMOUTH, N.H. 03801 TEL. (603) 427-5500



MAP 10.5A21A CHARACTER DISTRICTS AND CIVIC DISTRICTS

racter Districts CD5 Character District 5 CD4 Character District 4 CD4-L1 Character District 4-L1 CD4-L2 Character District 4-L2

Civic District Municipal District

Civic District

Municipal District Overlay Districts

OLOD Osprey Landing Overlay District Downtown Overlay District Historic District

> MAP 10.5A21B BUILDING HEIGHT STANDARDS



DWC NO

INDEX OF SHEETS

DWG NO.	
-	SUBDIVISION PLAN
-	SITE ORTHOPHOTO
C1	EXISTING CONDITIONS PLAN
C2	DEMOLITION PLAN
C3	SITE PLAN
L1-L3	LANDSCAPE PLANS
C4	UTILITY PLAN
C5	GRADING PLAN
C6	LIGHTING PLAN
T1	PASSENGER VEHICLE TURNING 1
T2	FIRE TRUCK TURNING TEMPLATE
-	ARCHITECTURAL PLANS
D1-D5	DETAILS

APPROVED BY THE PORTSMOUTH PLANNING BOARD

PORTSMOUTH APPROVAL CONDITIONS NOTE:

PORTSMOUTH SITE PLAN REVIEW REGULATIONS.

CHAIRMAN

ALL CONDITIONS ON THIS PLAN SET SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE CITY OF

DATE





UTILITY CONTACTS

ELECTRIC:

EVERSOURCE 1700 LAFAYETTE ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 436-7708, Ext. 555.5678 ATTN: NICHOLAS KOSKO

SEWER & WATER:

PORTSMOUTH DEPARTMENT OF PUBLIC WORKS 680 PEVERLY HILL ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 427-1530 ATTN: DOUG SPARKS

NATURAL GAS: UNITIL 325 WEST ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 294-5144 ATTN: DAVE BEAULIEU

COMMUNICATIONS: FAIRPOINT COMMUNICATIONS JOE CONSIDINE 1575 GREENLAND ROAD GREENLAND, N.H. 03840 Tel. (603) 427-5525

CABLE: COMCAST 155 COMMERCE WAY PORTSMOUTH, N.H. 03801 Tel. (603) 679-5695 (X1037) ATTN: MIKE COLLINS

TEMPLATE

PERMIT LIST: PORTSMOUTH HDC:

PORTSMOUTH ZONING BOARD: APPROVED

PORTSMOUTH SITE REVIEW: PORTSMOUTH CONDITIONAL USE PERMIT: TBD

SITE EXCAVATION NOTE: SITE EVACUATION SHALL FOLLOW PROCEDURES AS OUTLINED IN TH FOLLOWING STATUTES:

RSA 227-C:8-A DISCOVERY OF REMAINS AND NOTIFICATION OF AUTHORITIES (CONSTRUCTION SITES). RSA 289:3 CEMETERIES-LOCATIONS (25 FEET FROM KNOWN CEMETERY LOCATION).

IF REMAINS ARE ENCOUNTERED CONTACT:

MARK DOPERALSKI

STATE ARCHAEOLOGIST DIVISION OF HISTORICAL RESOURCES NH DEPARTMENT OF NATURAL AND CULTURAL RESOURCES 172 PEMBROKE ROAD CONCORD, NH 03301

http://www.nh.gov/nhdhr

LEGEND:

XISTING	PROPOSED	
		PROPERTY LINE SETBACK
— s ——	S	SEWER PIPE
— G — —	SL	SEWER LATERAL GAS LINE
— D ——	D	STORM DRAIN
— w ——	W	WATER LINE
— WS ——— — UGF ———	WS UGF	WATER SERVICE
— OHW ——	OHW	OVERHEAD ELECTRIC/WIRES
	UD	FOUNDATION DRAIN
111 111	II	EDGE OF PAVEMENT (EP)
-100 97×3	<u> </u>	CONTOUR SPOT ELEVATION
- -		UTILITY POLE
Q- ''''''		WALL MOUNTED EXTERIOR LIGHTS
		TRANSFORMER ON CONCRETE PAD
	\bigotimes	ELECTRIC HANDHOLD
SO GSO	NSO GSO	SHUT OFFS (WATER/GAS)
\bowtie	GV	GATE VALVE
- Op	+++HYD	HYDRANT
СВ	СВ	CATCH BASIN
\bigcirc	● ^{SMH}	SEWER MANHOLE
	DMH	DRAIN MANHOLE
\bigcirc	I MH	TELEPHONE MANHOLE
(14)	(14)	PARKING SPACE COUNT
PM		PARKING METER
LSA	$\begin{array}{c c} \psi & \psi & \psi & \psi \\ \psi & \psi & \psi & \psi \\ \psi & \psi &$	LANDSCAPED AREA
TBD	TBD	TO BE DETERMINED
CI	CI	CAST IRON PIPE
DI	DI	DUCTILE IRON PIPE
PVC	PVC	POLYVINYL CHLORIDE PIPE
RCP	RCP	REINFORCED CONCRETE PIPE
AC		ASBESTOS CEMENT PIPE VITRIFIED CLAY PIPE
EP	EP	EDGE OF PAVEMENT
EL.	EL.	ELEVATION
FF	FF	FINISHED FLOOR
INV S —	INV c –	INVERI SLOPE ET/ET
TBM	TBM	TEMPORARY BENCH MARK
TYP	TYP	TYPICAL

SITE PERMIT PLANS PROPOSED DEVELOPMENT **361 HANOVER STREET** PORTSMOUTH, N.H.



PLAN SET SUBMITTAL DATE: 26 MARCH 2025

5010135.2977.01

 \square CALL TOLL FREE







DEMOLITION NOTES

- A) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE DESIGNER. IT IS THE CONTRACTORS' RESPONSIBILITY TO LOCATE UTILITIES AND ANTICIPATE CONFLICTS. CONTRACTOR SHALL REPAIR EXISTING UTILITIES DAMAGED BY THEIR WORK AND RELOCATE EXISTING UTILITIES THAT ARE REQUIRED TO BE RELOCATED PRIOR TO COMMENCING ANY WORK IN THE IMPACTED AREA OF THE PROJECT.
- B) ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTORS UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL, OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
- C) ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO THE ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- D) THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
- E) SAWCUT AND REMOVE PAVEMENT ONE FOOT OFF PROPOSED EDGE OF PAVEMENT TRENCH IN AREAS WHERE PAVEMENT IS TO BE REMOVED.
- F) IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL THE PERMIT APPROVALS.
- G) THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL CONSTRUCTION PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR ANY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK.
- H) THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE, UTILITIES, VEGETATION, PAVEMENT, AND CONTAMINATED SOIL WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ANY EXISTING DOMESTIC / IRRIGATION SERVICE WELLS IN THE PROJECT AREA IDENTIFIED DURING THE CONSTRUCTION AND NOT CALLED OUT ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER FOR PROPER CAPPING / RE–USE.
-) PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS WITHIN CONSTRUCTION LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE HIGH FLOW SILT SACK BY ACF ENVIRONMENTAL OR APPROVED EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF WARRANTED OR FABRIC BECOMES CLOGGED. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
- J) THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFELY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
- K) ANY CONTAMINATED MATERIAL REMOVED DURING THE COURSE OF THE WORK WILL REQUIRE HANDLING IN ACCORDANCE WITH NHDES REGULATIONS. CONTRACTOR SHALL HAVE A HEALTH AND SAFETY PLAN IN PLACE, AND COMPLY WITH ALL APPLICABLE PERMITS, APPROVALS, AUTHORIZATIONS, AND REGULATIONS



	ZUNIN	G DEVELOP	WENT STANDARI	3			
CD5: CHARACTER DISTRICT 5,	, DOD: DOWNTOWN OVERLAY DISTRICT			PROPOSED	DRODOCED	Т	
	REQUIRED	EXISTING	PROPOSED - Building A	Building B1/B2	Building C	PROPOSED - Building D	
-leight	2-3 stories 40'	2 Stories/ 18' +/-	3 stories with attic/ 40'	3 stories / 36'	3 stories / 36'	3 stories with attic/ 40'	
Penthouses	may exceed bldg height by 2'	N/A	N/A	N/A	N/A	N/A	
Roof appurtenance	may exceed bldg height by 10'	<10'	<10'	No	No	<10'	
Facade Types		N/A	N/A	N/A	N/A	N/A	
	commercial, live-work, mixed use, flex						
Building Types	space & community.	Commerical	Apartment	Duplex	Duplex	Apartment	
Front (principle) max S/B	5	99'	99'	0'	5'	5'	
Front (secondary) max S/B	5	0'	0'	2'	N/A	N/A	
Side S/B	NR	NR	NR	NR	NR	NR	
Rear yard S/B	5'	N/A	N/A	>5'	>5'	>5'	
Front lotline buildout	80% min	100%	100%	80%	80%	80%	
ot area (sf)	NR	N/A	N/A	N/A	N/A	N/A	
LOT area per dwelling	NR	N/A	N/A	N/A	N/A	N/A	
Building coverage,							
maximum	95%	38%	47%	8%	6%	5.0%	
Maximum building footprint	20,000	14,808	18,082	3,120	2,240	4,340	
Ground floor area per use,	15 000	14 000	<1E 000	2.000			
X6m	15,000	14,808	<15,000	3,120	2,240	4,340	
Dermitted uses	570	Commercial	Residential	25%	25%	25%	
Permitted uses Block length may (ft)	225	205'	205'	AO'	Residential	Residential	
Facade modulation length			200			10	
max (ft)	100	205	65'	82'	40'	72'	
Entrance spacing, max (ft)	50	>50'	50	20'	20'	<50'	
Floor height above							
sidewalk, max	36"	0'	0'	15"	15"	2"	
Ground story height, min	12'	10'	10.5'	12'	12'	12'	
Second story height, min	10'	10'	10.5'	11'	11'	11'	
Glazing, shopfront, min	70%	N/A	N/A	N/A	N/A	N/A	
Glazing, other	20%-50%	>20%	>20%	>20%	>20%	>20%	
Roof types	flat, gable, hip, gambrel, mansard	Flat	Mansard	Hip	Hip	Mansard	
IMI	PERVIOUS S (TO PROPI	URFA Erty Lin	CE AREA	AS			
	PRE-CONSTR	UCTION	POST-CONS	STRUCTIC	N		
31100101	L IMPERVIOUS	(S.F.)	IMPERVIOUS (S.F.)				
MAIN STRUCTU	RES	14615		82			
		22,623			16		
WAI KWAYS		117		1,8	211		
STEPS/STOOPS		0			09		
CURBING		31			0		
TOTAL		38042		366	nal		

PROPOSED OPEN SPACE ON PROPOSED LOT 1: 356 S.F./7.5%

38,528

98.7%

LOT SIZE

% LOT COVERAGE

SUDBURY STREET (PUBLIC RIGHT OF WAY)

38,528

95.0%

EXISTING PARKING AREA

TO BE RESTORED, TYP.

1'X1' STONE PILLAR -----

 $\begin{pmatrix} 138 \\ 60 \end{pmatrix}$

LSA

LSA

CONCRETE

RETAINING

WALL -----

CONCRETE

SLAB/STEP -

LITTLE

BOX ----

VS B

36" OAK

111111111111

 $\begin{pmatrix} 138\\ 22 \end{pmatrix}$

10" BIRCH

11111111

 $\underbrace{\begin{array}{c}138\\19\end{array}}$

PROPOSED STOOP, TYP.

ROCK

ST

OF WAY)

PROPOSED GREEN SPACE

IN WORK AREA

LIBRARY

(11)

24" OAK

man my

LSA

THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.

ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.

APPROVED BY THE PORTSMOUTH PLANNING BOARD





В

Α

13. LANDSCAPE CONTRACTOR SHOULD REPLACE DEAD PLANTINGS IMMEDIATELY UPON OWNER DIRECTION WITHIN THE

EET SIZE	IS SCALED	FOR ASME D.	DO NOT RED	DUCE OR I	ENLARGE
			DONOTINEE		

Ц Ц

0

361

ΗZ

HANOVER ST ORTSMOUTH,

Σ Ū

Q

õ

NDSCAR

TERRENCE

PARKER

NTS

Towner ...

Landscape Architect

REV. DATE DESCRIPTION

NO. DATE ISSUE NOTE

Sheet No.

Scale

B

3/13/2025 361 HANOVER ST. Sheet Title LANDSCAPE DETAILS

L-2

1

Α

В

with ASTM and CPSC specifications.	
roken, or severely worn pipe, and	
og of every part used	
ig of every part used.	

terra firma Iandscape architecture	office 603,430.8388 terrence@terrafirmalandarch.com
ect Title 361 HANOVER	361 HANOVER STREET PORTSMOUTH, NH
Landscape Architect	E and the second
Scale 1"=1'-0)"
REV. DATE DESCRIPTION	
NO. DATE ISSUE NOTE Project Manager Drawn I Date 3/13/2025 Project ID 361 HANOVER	By ed By ST.
LANDSCAPE Sheet No. L-3	DETAILS

P

UTILITY NOTES:

THROUGHOUT CONSTRUCTION.

- 1) SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
- 2) COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY.
- 3) CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
- 4) ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, POLYWRAPPED, CEMENT LINED DUCTILE IRON PIPE.
- 5) ALL WATERMAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION AND BEFORE ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE WITH THE CITY OF PORTSMOUTH.
- 6) ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
- 7) ALL WORK WITHIN CITY R.O.W. SHALL BE COORDINATED WITH CITY OF PORTSMOUTH8) CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES
- 9) ANY CONNECTION TO EXISTING WATERMAIN SHALL BE CONSTRUCTED BY THE CITY OF PORTSMOUTH.
- 10) EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
- 11) ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
- 12) THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH BUILDING DRAWINGS AND UTILITY COMPANIES.
- 13) ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
- 14) ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
- 15) THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATED TO THE OWNER PRIOR TO THE COMPLETION OF PROJECT.
- 16) THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED IN THESE DRAWING TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
- 17) CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
- 18) A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS WATER ABOVE SEWER.
- 19) SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
- 20) GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH.
- 21) COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
- 22) ALL SEWER PIPES WITH LESS THAN 6' COVER SHALL BE INSULATED.

NEW SEWER

CONNECTION-CUT IN WYE

77777777

 $\begin{pmatrix} 138\\ 19 \end{pmatrix}$

CB Q

i an i an		NAGE		URE TAI	BLE		
STRUCTURE	PROP/EX	RIM	SIZE/TYPE	INVERT IN	INVERT OUT	DIRECTION	
CB 1	EX	20.66	8" CPP		17.46	SW	
			8" CPP	17.51		SF	
CB 2	EX	20.35	12" CPP		15.70	NW	
	EX		8" CPP	15.80		NE	
			8" CPP	1650		SE	
CB 3	EX	19.29	12" CPP		15.64	NW	
			8" CPP	16.24		SW	
<u>, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		an a	8" CPP	16.29		SE	
CB 4	EX	18.90	12" CPP		15.65	SE	
CB 5	EX	15.00	12" CPP		10.00	SW	
			12" CPP	10.00		SE	
CB 6	EX	15.60	12" CPP		12.85	SW	
laj della della con per esta con esta della d			8" CPP	13.20		NE	
CB 7	EX	17.43	8" CPP		16.28	SW	
CB 8	EX	12.15	12" CPP		7.45	NW	
CB 9&10	EX	9.76	12" CPP	n yang ang ang ang ang ang ang ang ang ang	5.86	NE	
CB 11	EX	10.07	12" CPP		6.17	SE	
CB 12	EX	10.22	12" CPP		6.92	w	
<u></u>							
DMH 1	EX	19.81	12" CPP		15.56	SW	
			12" CPP	15.56		E	
DMH 2	EX	19.08	12" CPP	na na an a	15.03	SW	
···· · · · · · · · · · · · · · · · · ·			12" CPP	15.03		NE	
			12" CPP	15.43		NW	
			12" CPP	15.43		SE	
DMH 3	EX	15.30	12" CPP		10.65	NW	
			12" CPP	10.65		NE	
DMH 4	EX	11.86	18" CPP		5.46	NW	
			15" CPP	5.56		NE	
			4" PVC	9.36		S	
DMH 5	EX	9.87		NO	DATA		
DMH 6	EX	11.84	NO DATA				
DMH 7	EX	10.19	18" CPP		6.29	SW	
			12" CPP	6.44		NW	
			12" CPP	6.39		E	

SUDBUI	RY	SI	FREET
(PUBLIC	RIGHT	OF	WAY)

DMH .

PROPOSED DRAINAGE STRUCTURE TABLE							
STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT		
CB P1	PROP	18.80	12" HDPE		16.58		
CB P2	PROP	18.84	12" HDPE 16.38				
		-	12" HDPE		16.28		
CB P3	PROP	18.88	12" HDPE	16.04			
			12" HDPE		15.94		
CB P4	PROP	18.88	12" HDPE	15.87			
			12" HDPE		15.77		
DMH P1	PROP	MATCH	12" HDPE	15.47			
		GRADE					
			12" HDPE		15.37		

Luminaire Schedule						
Symbol	Qty	Label	Arrangeme			
	4	С	Single			
	12	W	Single			
	7	W2	Single			

 \bigstar










<u>UNIT 307</u> 1,962 SQ. FT. INSIDE FINISHED FACE)	<u>UNIT 306</u> 1,962 SQ. FT. (TO INSIDE FINISHED FACE)	<u>L</u> 1,8 (TO INSIDE
OUTDOOR SPACE	OUTDOOR SPACE	



SCOTT MBROWN ESTD ARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM STREET 03801 **V** BUILDING Ż R Ύ Τ A HAN PORT 36 **REVISION & REISSUE NOTES** No. Date Notes A 3-11-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION Project Manager Date Project # 2024-09 X.X. 3-14-25 Scale: AS NOTED THIRD LEVEL PLAN: **BUILDING A** A1.3a 0 5 IO I5 FT COPYRIGHT 2025 SCOTT M. BROWN, ARCHITECTS LLC















2 SOUTH (LEFT SIDE) ELEVATION Scale: 1/8" = 1'-0"

EAST (FRONT) ELEVATION

Scale: 1/8" = 1'-0"



SCOTT BROWN ESTD ARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM TREE' 3801 \triangleleft ,DING S 0 R Ζ ĹĽ I AT BUIL HAN OR. Δ 36 **REVISION & REISSUE NOTES** No. Date Notes A 3-11-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION Project Manager Date Project # 2024-09 X.X. 3-14-25 Scale: AS NOTED PROPOSED **ELEVATIONS: BUILDING A** A2.1a COPYRIGHT 2025 SCOTT M. BROWN, ARCHITECTS LLC

0 5 IO I5 FT





SCO TMBROWNARCHITECTS 2007 ARCHITECTS 2007 ARMARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM					
BUILDING A at 361 HANOVER STREET portsmouth, nh 03801					
REVISION & REISSUE NOTES No. Date Notes A 3-11-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION					
Project # 2024-09Project Manager X.X.Date 3-14-25Scale:AS NOTEDPROPOSED ELEVATIONS: BUILDING A					
A2.2a COPYRIGHT 2025 SCOTT M. BROWN, ARCHITECTS LLC					

0 5 IO I5 FT



THIRD FLOOR PLAN 3 Scale: 3/16" = 1'-0"

% 2



1

Scale: 3/16" = 1'-0"



0 5 []_____

	SCO TTMBROWNARCHITECTS 2007 ARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM					
	BUILDINGS B1/B2 at 361 HANOVER STREET portsmouth, nh 03801					
	REVISION & REISSUE NOTES No. Date Notes A 3-5-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION					
	Project # 2024-09 Project Manager X.X. Date 3-14-25 Scale: AS NOTED LAYOUT PLANS: BUILDINGS B1/B2					
10 FT	A1.1b					





BUILDING B: NORTH (REAR) ELEVATION
Scale: 3/16" = 1'-0" 4





BUILDING B: WEST (LEFT SIDE) ELEVATION
Scale: 3/16" = 1'-0"







SCOTT BROWN ESTD ARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM STREET B1/B2801 m Ο ΗZ $\boldsymbol{\mathcal{O}}$ R BUILDING Ľ T A ⊢ 0 \bigcirc HAN S ORT Δ 36 **REVISION & REISSUE NOTES** Notes No. Date 3-5-25 DESIGN REVIEW SUBMISSION 3-14-25 TAC SUBMISSION Date Project # **Project Manager** 2024-09 3-14-25 X.X. Scale: AS NOTED PROPOSED **ELEVATIONS: BUILDING B1/B2** A2.1b COPYRIGHT 2025 SCOTT M. BROWN, ARCHITECTS LLC





) File Name |HanoverSt_SD_BuildingC_Elevations.)





SCO TMBROWN TMBROWNARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM					
BUILDING C at 361 HANOVER STREET portsmouth, nh 03801					
REVISION & REISSUE NOTES No. Date Notes A 3-5-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION					
Project # 2024-09Project Manager X.X.Date 3-14-25Scale:AS NOTEDLAYOUT PLANS: BUILDING C					
A1.1C					



AD FIIE Name 61HanoverSt_SD_BuildingC_Elevations.v





S C O T T M BR O W N A R C HIT E C T S 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM				
BUILDING C at 361 HANOVER STREET portsmouth, nh 03801				
REVISION & REISSUE NOTES No. Date Notes A 3-5-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION				
Project # 2024-09 X.X. Date 3-14-25 Scale: AS NOTED LAYOUT PLANS: BUILDING C A 1 2.C				













BUILDING C: WEST (REAR) ELEVATION
Scale: 3/16" = 1'-0"





SCOTT BROWN ESTD ARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM TREET 801 \bigcirc m $\boldsymbol{\mathcal{O}}$ 5 0 ,DIN R Ζ Ľ I A Ο BUIL HANO S ORT Δ 36 **REVISION & REISSUE NOTES** Notes No. Date 3-5-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION Date **Project Manager** Project # 3-14-25 X.X. 2024-09 Scale: AS NOTED **ELEVATION OPTIONS: BUILDING C** A2.1c COPYRIGHT 2025 SCOTT M. BROWN, ARCHITECTS LLC









cab File **361Ha**l

(2 BUILDING Scale: 3/16" = 1'-	<u>D: SOUTH (LEFT :</u> ^{o"}	SIDE) ELEVA	<u>ΓΙΟΝ</u>	
					0
					T.O. 3R
					T.O. 2N

1 BUILDING D: EAST (FRONT) ELEVATION Scale: 3/16" = 1'-0"

S C O T M BR O W N ESTD ARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM					
BUILDING D at 361 HANOVER STREET portsmouth, NH, 03801					
REVISION & REISSUE NOTES					
No.DateNotesA3-5-25DESIGN REVIEW SUBMISSIONB3-14-25TAC SUBMISSION					
Project # Project Manager Date 2024-09 X.X. 3-14-25					
Scale: AS NOTED ELEVATIONS: BUILDING D					
A2.1d COPYRIGHT 2025 SCOTT M. BROWN, ARCHITECTS LLC					



CAD File Name
361HanoverSt_SD_BuildingD_Plans.





1 BUILDING D: WE Scale: 3/16" = 1'-0"	EST (REAR) ELEVATION



SCO TTMBROWNARCHITECTS TTMBROWNARCHITECTOON
BUILDING D at 361 HANOVER STREET portsmouth, nh, 03801
REVISION & REISSUE NOTES No. Date Notes A 3-5-25 DESIGN REVIEW SUBMISSION B 3-14-25 TAC SUBMISSION
Project # 2024-09 Scale: AS NOTED
ELEVATIONS: BUILDING D
A2.2d COPYRIGHT 2025 SCOTT M. BROWN, ARCHITECTS LLC







SCO TTMBROWNARCHITECTS 2007 48 MARKET STREET NEWBURYPORT, MA 01950 T. 978.465.3535 WWW.SCOTTBROWNARCHITECT.COM						
STREET ELEVATIONS at 361 HANOVER STREET portsmouth, nh, 03801						
REVISION & REISSUE NOTES No. Date Notes A 3-14-25 TAC SUBMISSION						
Project # Project Manager Date 2024-09 X.X. 3-14-25 Scale: AS NOTED						
STREET ELEVATIONS						
A2.1						

EROSION CONTROL NOTES

CONSTRUCTION SEQUENCE

DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.

IF REQUIRED THE CONTRACTOR SHALL OBTAIN AN NPDES PHASE II STORMWATER PERMIT AND SUBMIT A NOTICE OF INTENT (N.O.I) BEFORE BEGINNING CONSTRUCTION AND SHALL HAVE ON SITE A STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) AVAILABLE FOR INSPECTION BY THE PERMITTING AUTHORITY DURING THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THE S.W.P.P.P. AND INSPECTING AND MAINTAINING ALL BMP'S CALLED FOR BY THE PLAN. THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (N.O.T.) FORM TO THE REGIONAL EPA OFFICE WITHIN 30 DAYS OF FINAL STABILIZATION OF THE ENTIRE SITE OR TURNING OVER CONTROL OF THE SITE TO ANOTHER OPERATOR.

THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT: OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY

THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER; AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO

THE ENGINEER, THE OWNER, AND THE CONTRACTOR; A REPRESENTATIVE OF THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;

4. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

INSTALL PERIMETER CONTROLS, i.e., SILTSOXX AND CATCH BASIN PROTECTION AROUND THE LIMITS OF DISTURBANCE BEFORE ANY EARTH MOVING OPERATIONS. THE USE OF HAYBALES IS NOT ALLOWED.

THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES. PLACE FODS AS NEEDED.

CUT AND GRUB ALL TREES, SHRUBS, SAPLINGS, BRUSH, VINES AND REMOVE OTHER DEBRIS AND RUBBISH AS REQUIRED. DEMOLISH BUILDINGS AND FENCES AS NEEDED.

ROUGH GRADE SITE.

LAYOUT AND INSTALL ALL BURIED UTILITIES AND SERVICES UP TO 10' OF THE PROPOSED BUILDING FOUNDATIONS. CAP AND MARK TERMINATIONS OR LOG SWING TIES.

CONSTRUCT BUILDING.

CONNECT UTILITIES.

PLACE BINDER LAYER OF PAVEMENT AND CONSTRUCT SIDEWALK BASE.

PLANT LANDSCAPING IN AREAS OUT OF WAY OF BUILDING CONSTRUCTION. PREPARE AND STABILIZE FINAL SITE GRADING BY ADDING TOPSOIL, SEED, MULCH AND FERTILIZER.

AFTER BUILDINGS ARE COMPLETED, FINISH ALL REMAINING LANDSCAPED WORK.

FINISH PAVE AND COMPLETE SIDEWALKS.

REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF FINAL STABILIZATION OF THE SITE.

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF A BUILDING REDEVELOPMENT AND ADDITIONS WITH ASSOCIATED UTILITIES AND PARKING

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 0.820 ACRES.

BASED ON THE USCS WEB SOIL SURVEY THE SOILS ON SITE CONSIST OF URBAN LAND WHICH HAS AN UNSPECIFIED HYDROLOGIC SOIL GROUP RATING, ASSUMED D.

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA A CLOSED DRAINAGE SYSTEM TO THE CITY OF PORTSMOUTH CLOSED DRAINAGE SYSTEM WHICH ULTIMATELY FLOWS TO THE NORTH MILL POND.

GENERAL CONSTRUCTION NOTES

THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE". THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED FOR MORE THAN 45 DAYS

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

DUST CONTROL: DUST CONTROL MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.

DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS. IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

SILTSOXX SHALL BE PERIODICALLY INSPECTED DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM. ALL DAMAGED SILTSOXX SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT. SUBSIDENCE OR OTHER RELATED PROBLEMS.

ALL NON-STRUCTURAL, SITE-FILL SHALL BE PLACED AND COMPACTED TO 90% MODIFIED PROCTOR DENSITY IN LAYERS NOT EXCEEDING 18 INCHES IN THICKNESS UNLESS OTHERWISE NOTED.

FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIAL, TRASH, WOODY DEBRIS, LEAVES, BRUSH OR ANY DELETERIOUS MATTER SHALL NOT BE INCORPORATED INTO FILLS.

FILL MATERIAL SHALL NOT BE PLACED ON FROZEN FOUNDATION SUBGRADE.

DURING CONSTRUCTION AND UNTIL ALL DEVELOPED AREAS ARE FULLY STABILIZED, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH ONE HALF INCH OF RAINFALL.

THE CONTRACTOR SHALL MODIFY OR ADD EROSION CONTROL MEASURES AS NECESSARY TO ACCOMMODATE PROJECT CONSTRUCTION.

ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED: BASE COURSE GRAVELS HAVE BEEN INSTALLED ON AREAS TO BE PAVED

- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED

- EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.

- IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHOOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM

304.2 HAVE BEEN INSTALLED

STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA.

STABILIZATION MEASURES TO BE USED INCLUDE: - TEMPORARY SEEDING:

MULCHING.

ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN THESE AREAS, SILTSOXX, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.

DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILTSOXX, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

MAINTENANCE AND PROTECTION

THE SILTSOXX BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

SILTSOXX SHALL BE REMOVED ONCE SITE IS STABILIZED, AND DISTURBED AREAS RESULTING FROM SILTSOXX REMOVAL SHALL BE PERMANENTLY SEEDED.

THE CATCH BASIN INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM REACHING THE DRAINAGE SYSTEM AND/OR CAUSING SURFACE FLOODING

SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.

WINTER NOTES

ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS:

AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;

STOCKPILES

LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES

PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

CONCRETE WASHOUT AREA

THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE: THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FAILITY:

2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER; CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM

DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS: 4. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES

- FIRE-FIGHTING ACTIVITIES; FIRE HYDRANT FLUSHING;
- WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
- WATER USED TO CONTROL DUST;
- POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING; ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
- PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
- UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
- UNCONTAMINATED GROUND WATER OR SPRING WATER; FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
- UNCONTAMINATED EXCAVATION DEWATERING: 12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL

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

BLASTING NOTES

CONTRACTOR SHALL CONTACT THE NHDES AND/OR LOCAL JURISDICTION PRIOR TO COMMENCING ANY BLASTING ACTIVITIES. FOR ANY PROJECT FOR WHICH BLASTING OF BEDROCK IS ANTICIPATED, THE APPLICANT SHALL SUBMIT A BLASTING PLAN THAT IDENTIFIES:

- WHERE THE BLASTING ACTIVITIES ARE ANTICIPATED TO OCCUR: - THE ESTIMATED QUANTITY OF BLAST ROCK IN CUBIC YARDS; AND
- SITE-SPECIFIC BLASTING BEST MANAGEMENT PRACTICES.



TYPICAL ONE-LANE LAYOUT

D

SYSTEM. STARTING WITH THE LAST MAT IN THE SYSTEM, EACH SUCCES STACKED FOR LOADING BY FORKLIFT OR EXCAVATOR ONTO A TRU



	FB 444 PG 1	5010135
QUIRED)	EROSION PROTEC NOTES AND DET	TION D1
CATIONS IN THE FODS TRACKOUT CONTROL SSIVE MAT SHOULD THEN BE MOVED AND ICK FOR REMOVAL FROM THE SITE.	SCALE: AS SHOWN	MARCH 20
CH THAT THE VEHICLE WILL MAKE A SHALLOW NTROL SYSTEM. PYRAMIDS BECOME FULL OF SEDIMENT. IS AFTER A STORM EVENT. BRUSHING IS THE NICALLY. ETC. SHOULD BE UTILIZED AS NECESSARY WENT ICE BUILDUP. E ORDER OF INSTALLATION. THE INNERMOST POINT OF THE SITE OR THE REMOVED FIRST.	JOHN JOHN SSI PRO CHAGNON NOT OST SSIONAL EN	A SHRE- 43.
TION. THE FIRST MAT SHOULD BE PLACED THE VEHICLE WILL EXIT STRAIGHT FROM OCATION, MATS SHOULD BE ANCHORED TO ARE INSTALLED. ANCHORS SHOULD BE PLACED MAT IN ITS CURRENT POSITION. AN H BRACKET SHOULD BE PLACED AT THE SENT TO THE FIRST MAT. T MAT, MAKE SURE THE H BRACKET IS TOGETHER. CONNECT THE TWO MATS TOGETHER. MAT SHOULD BE ANCHORED AT EVERY SYSTEM IS CONTINUOUS WITH NO GAPS IN ODS TRACKOUT CONTROL SYSTEM REPEATING	0 ISSUED FOR COMMENT NO. DESCRIPTION REVISIO	3/14 N DA ⁻ DNS
TO BE PLACED SHOULD CORRESPOND TO WHERE FODS TRACKOUT CONTROL SYSTEM IS N OR STORM WATER POLLUTION PREVENTION OF THE OF FODS TRACKOUT CONTROL SYSTEM LL THE UTILITY NOTIFICATION CENTER AT 811. ONTROL SYSTEM IS TO BE PLACED, ANY VED SUCH AS LARGE ROCKS, LANDSCAPING	SITE REDEV 361 HANOVE PORTSMOUT	'ELOPMEN R STREET 'H, N.H.
JRBED LAND AREA ONTO A PAVED STREET. TION MAY NEED TO BE MODIFIED TO MEET ILD BE INSTALLED SAFELY WITH PROPER		
NTS		
CONSTRUCTION JOINT O BREAK IN CONSTRUCTION		
MIN. MAX.	3) CONTRACTOR SHALL INSTALL AND MEASURES IN ACCORDANCE WITH THE MANUAL, VOLUME 3, EROSION AND SEI CONSTRUCTION. (NHDES DECEMBER 20	MAINTAIN EROSION CONTROL "NEW HAMPSHIRE STORMWATER DIMENT CONTROLS DURING 08).
PAVEMENT 16" MIN. 18" MAX.	2) UNDERGROUND UTILITY LOCATIONS AVAILABLE EVIDENCE AND ARE NOT FIE PROTECTING ANY ABOVEGROUND OR UN SOLE RESPONSIBILITY OF THE CONTRAC UTILITY CONFLICTS SHOULD BE REPORT ENGINEER.	ARE BASED UPON BEST LD VERIFIED. LOCATING AND NDERGROUND UTILITIES IS THE CTOR AND/OR THE OWNER. TED AT ONCE TO THE DESIGN
- VERTICAL GRANITE CURB (NHDOT ITEM 609.01 & 609.02)	NOTES: 1) THE CONTRACTOR SHALL NOTIFY D (1-888-344-7233) AT LEAST 72 HOU ANY EXCAVATION ON PUBLIC OR PRIVA	DIG SAFE AT 1-888-DIG-SAFE JRS PRIOR TO COMMENCING TE PROPERTY.
1/2" ASPHALT TREATED FELT TO	WWW.HALEYWARD.COM	200 Griffin Rd. Uni Portsmouth, New Hampshire 03 603.430.9



HALEYWARD

ENGINEERING | ENVIRONMENTAL | SURVEYING

200 Griffin Rd. Unit 14

603.430.9282

Portsmouth, New Hampshire 03801

5010135.297







WWW.HALEYWARD.COM

200 Griffin Rd. Unit 14 Portsmouth, New Hampshire 03801 603.430.9282

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.



SCALE: AS SHOWN

FB 444 PG 1

DETAILS

MARCH 2025

D2

5010135.2977

4) FORD TYPE STAINLESS STEEL TAPPING SADDLES OR APPROVED EQUAL

3) "CLEAR" DIMENSIONS SHOWN ATE REQUIRED FOR WORKSPACE.

1) ALL MATERIALS SHALL BE APPROVED BY THE PORTSMOUTH WATER

GRANITE OR CONCRETE BLOCKS FOR SUPPORT



10"

TAPPING GATE

VALVE



1	ICHOR DIMENSIONS ALLATION IN ROCK						
S.I. WORKING PRESSURE							
45° BEND		5° ND	22 1/2* BEND		11 1/4 BEND		
1	Н	L	н	L	Н	L	
,	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"	
,	0'-9"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"	
,	1'-0"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0"	
,	1'-0"	1'-0"	0'-9"	1'-0"	0'-9"	1'-0'	
,	1'-3"	1'-3"	1'-0"	1'-0"	0'-9"	1'-0"	

S.I. WORKING PRESSURE						
	45° BEND		22 1/2* BEND		11 1/4 BEND	
	н	L	н	L	Н	L
"	1'-0"	1'-4"	0'-9"	1'-0"	0'-6"	1'-0"
"	1'-0"	1'-4"	0'-9"	1'-0"	0'-6"	1'-0"
"	1'-4"	1'-6"	1'-0"	1'-0"	0'-9"	1'-0"
"	1'-8"	2'-0"	1'-3"	1'-3"	1'-0"	1'-0'
,,	2'-0"	2'-2"	1'-6"	1'-6"	1' - 3''	1'-3"



and the second second



ADSORBENT MEDIA THEN IS REMOVED AND THE TRASH AND DEBRIS CAN BE REMOVED FROM

MAINTENANCE A MINIMUM OF TWO TO FOUR TIMES PER YEAR, AND REPLACEMENT OF MEDIA

3. ONCE THE FILTER IS FREE, REMOVE THE INTERIOR INSERT. REMOVE THE HYDROCARBON

FROM THE INTERIOR INSERT AND REPLACING WITH A NEW MEDIA, WRAPPING IT THE SAME WAY.

PLACE THE FILTER BACK IN LINE WITH THE PIPE AND SLIDE BACK THE TOP AND BOTTOM

6. EVALUATION OF THE HYDROCARBON MEDIA SHALL BE PERFORMED AT EACH CLEANING. IF

8. THE HYDROCARBON MEDIA WITH ABSORBED HYDROCARBONS IS CONSIDERED HAZARDOUS

AND DISPOSED OF AS HAZARDOUS MATERIAL. PLEASE REFER TO STATE AND LOCAL REGULATIONS

9. FOLLOWING MAINTENANCE AND/OR INSPECTION, THE MAINTENANCE OPERATOR SHALL PREPARE A MAINTENANCE/INSPECTION RECORD. THE RECORD SHALL INCLUDE ANY MAINTENANCE ACTIVITIES PERFORMED, AMOUNT AND DESCRIPTION OF DEBRIS COLLECTED, AND CONDITION OF

10. THE OWNER SHALL RETAIN THE MAINTENANCE/INSPECTION RECORD FOR A MINIMUM OF FIVE YEARS FROM THE DATE OF MAINTENANCE. THESE RECORDS SHALL BE MADE AVAILABLE TO THE GOVERNING MUNICIPALITY FOR INSPECTION UPON REQUEST AT ANY TIME. 11. ANY TOXIC SUBSTANCE OR ITEM FOUND IN THE FILTER IS CONSIDERED AS HAZARDOUS MATERIAL AND CAN ONLY BE HANDLED BY A CERTIFIED HAZARDOUS WASTE TRAINED PERSON

STORMWATER TREATMENT MAINTENANCE



WWW.HALEYWARD.COM

HALEYWARD

ENGINEERING | ENVIRONMENTAL | SURVEYING 200 Griffin Rd. Unit 14 Portsmouth, New Hampshire 03801 603.430.9282

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

	2			
0	ISSUED FOR COMMENT	3/14/25		
NO.	DESCRIPTION	DATE		
	REVISIONS			
	JOHN JOHN JOHN No. 7651 PROTOSTONAL ENGINE			
SC	ALE: AS SHOWN N	IARCH 2025		
	DETAILS	D4		

FB 444 PG 1

5010135.2977



GENERAL NOTES

1) IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAK PROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.

2) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE, OR POURED IN PLACE RÉINFORCED CONCRETE IF POURED AS A COMPLETE MANHOLE.

3) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.

4) LEAKAGE TEST MAY NOT BE FEASIBLE, BUT SHALL CONFORM TO ENV-WQ 704.17.

5) INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE AND TANGENT TO THE CENTERLINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY

6) FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A THREE INCH (MINIMUM HEIGHT) WORD "SEWER" FOR SEWERS AND "DRAIN" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER. CASTINGS SHALL CONFORM TO CLASS 30. ASTM A48

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

100%	PASSING	1 INCH SCREEN
%-100%	PASSING	3/4 INCH SCREE
%- 55%	PASSING	3/8 INCH SCREE
%- 10%	PASSING	#4 SIEVE
%- 5%	PASSING	#8 SIEVE

WHEN ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1-1/2 INCH SHALL BE USED.

8) FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES: RCP & CI PIPE - ALL SIZES - 48"

9) SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A RÉINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.

10) MANHOLE STEPS MAY BE PERMITTED UPON REQUEST BY THE OWNER AS SECONDARY ADDITIONAL SAFETY FEATURE SUPPLEMENTARY TO THE PRIMARY PORTABLE LADDER ENTRY AND WHEN INSTALLED UNDER THE FOLLOWING CONDITIONS:

- 1. THE STEPS SHALL BE MANUFACTURED OF 5/8ths INCH ROUND STAINLESS STEEL, PLASTIC COVERED STEEL OR PLASTIC. THEY SHALL BE SHAPED SO THAT THEY CANNOT BE PULLED OUT OF THE CONCRETE WALL IN WHICH THEY ARE EMBEDDED.
- 2. THE STEPS SHALL BE EMBEDDED IN THE CONCRETE BY THE MANUFACTURER DURING MANUFACTURE OR IMMEDIATELY FOLLOWING REMOVAL OF FORMS. SECURING THE STEPS WITH MORTAR IN DRILLED OR CAST HOLES, WILL NOT BE ACCEPTABLE
- 3. THE STEPS SHALL BE OF THE DROP TYPE WITH A DEPRESSED SECTION FOR HANDHOLD. APPROXIMATELY 14" x 10" IN DIMENSION.

11) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE ENGINEER, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATER TIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET, IN 2 ROWS.

12) PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL, WILL DEPEND FOR WATERTIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERIC SEALANT

13) THE PURPOSE OF THIS PLAN IS TO SHOW STANDARDS FOR SEWER CONSTRUCTION.

14) ALL WORK SHALL BE IN COMPLIANCE WITH NHDES CODE OF ADMINISTRATIVE RULES PART ENV-WQ 704 DESIGN OF SEWERAGE.

15) BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE CROWN OF THE LARGEST INCOMING PIPE.

CLEAR OPENING INCLUDING FRAME AND COVER 30"

- ECCENTRIC CONE

GENERAL NOTES

1) MINIMUM PIPE SIZE FOR HOUSE SERVICE SHALL BE FOUR INCHES.

- 2) PIPE AND JOINT MATERIALS:
- A. PLASTIC SEWER PIPE

1. PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

ASTM STANDARDS	GENERIC PIPE MATERIAL	SIZES APPROVED	
D3034 F679 F794 AWWA C900	*PVC (SOLID WALL) PVC (SOLID WALL) PVC (RIBBED WALL) PVC (SOLID WALL)	8" THROUGH 15 18" THROUGH 27 8" THROUGH 36 8" THROUGH 18	5" 7" 6" 8"
*PVC:	POLYVINYL CHLORIDE		

2. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-ON BELL AND SPIGOT TYPE.

3) DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.

4) JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.

5) HOUSE SEWER INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE

DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.

MÉETING ASTM C33 STONE SIZE NO. 67.

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

13) BACKFILL UP TO SUBBASE GRAVEL SHALL BE WITH EXCAVATED SOIL FROM TRENCHING OPERATIONS, COMPACT IN 8" STICKS OR SHEEPSFOOT ROLLERS. PLACE NO LARGE ROCKS WITHIN 24" OF PIPE. TRENCHES THAT ARE NOT ADEQUATELY COMPACTED SHALL BE RE-EXCAVATED AND BACKFILLED UNDER THE SUPERVISION OF THE DESIGN ENGINEER OR GOVERNING BODY. UNSUITABLE BACKFILL MATERIAL INCLUDES CHUNKS OF PAVEMENT, TOPSOIL, ROCKS OVER 6" IN SIZE, MUCK, PEAT OR PIECES OF PAVEMENT.

16) SAND BLANKET: CLEAN SAND, FREE FROM ORGANIC MATTER, SO GRADED THAT 90% - 100% PASSES A 1/2 INCH CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2 INCHES IS IN CONTACT WITH THE PIPE.

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

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

COMMENCING ANY EXCAVATION.

WATER MAIN CROSSING-CONCRETE ENCASEMENT WILL





PIPF

PIPE

-CUT "U" SCALLOP TO ACCEPT INCOMING LINE -U-CUT 3/4 PIPE DEPTH ELASTOMERIC -BOOT -PVC BELL (REMOVE CLEAN HORIZ. LINE) -CALDER STYLE COUPLING PVC OR -S. S. ANCHOR DI PIPF-- REMOVABLE BAND -SHELF -BRICK--INVERT-90° ELBOW WITH BELL REMOVED -BRICK MASONRY FILL -SIZE GUIDE: (1) - 8" OR 10" DROP: 4'-0" DIA

(2) - 8" OR 10" DROP)

DROP > 5'-0" DIA.

DROP)

(1) - 12"(1) - 15"

(SDR 35) (T-1 & T-2)

HALEYWARD

WWW.HALEYWARD.COM

ENGINEERING | ENVIRONMENTAL | SURVEYING 200 Griffin Rd. Unit 14 Portsmouth, New Hampshire 03801 603.430.9282

NOTES

FB 444 PG 1

5010135.227

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).