### Town of Kittery Planning Board Meeting June 9, 2022

### 28 Wyman Avenue —Sketch Plan Review, Cluster Residential Development

Action: Accept or deny plan as complete; continue application to a subsequent meeting; set site walk Pursuant to Title 30-A M.R.S.A. §4401-4408 *Municipal Subdivision Law* and §16.8.10.H, *Cluster Residential Development* of the Town of Kittery Land Use and Development Code, owner Lusitano, LLC requests approval for a cluster residential development proposing three (3) single-family residences as a condominium on real property with an address of 28 Wyman Avenue (Tax Map 16, Lot 148) located in the Residential-Urban (R-U) Zone.

PR OJECT TRACKING

K OJECI TRA	R OJECT TRACKING				
REQ'D	ACTION	COMMENTS	STATUS		
YES	Sketch Plan Acceptance/Approval	June 9, 2022 possible	TBD		
NO	Site Visit	TBD	TBD		
YES	Preliminary Plan Review Completeness/Accepta nce	TBD	TBD		
YES	Public Hearing	TBD	TBD		
YES	Preliminary Plan Approval	TBD	TBD		
YES	Final Plan Review and Decision	TBD	TBD		

Applicant: Prior to the signing of the approved Plan any Conditions of Approval related to the Findings of Fact along with waivers and variances (by the BOA) must be placed on the Final Plan and, when applicable, recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER IN 1/4" HIGH LETTERS AT LOWER RIGHT BORDER OF ALL PLAN SHEETS. As per Section 16.8.11.M - Grading/construction final plan required. Grading or construction of roads, grading of land or lots, or construction of buildings is prohibited until the original copy of the approved final plan endorsed has been duly recorded in the York County registry of deeds when applicable.

### **Project Introduction**

The property at 28 Wyman (Map 16, Lot 148) currently has a boarding house and a garage/barn located on it. The lot is 82,839 sf (1.9 acres) in size and is located in the Residential-Urban Zone (R-U). A wetland spreads along the northern portion of the property. The property fronts Wyman Avenue in two places but neither has sufficient frontage (100 continuous feet required) so the lot is legally non-conforming as regards street frontage. A residential neighborhood surrounds the property.

The Board first reviewed this project in January as a preliminary site plan review. The project was reclassified to a subdivision (per State statute and Title 16, a subdivision includes anything that creates residential units that do not share a common wall) for this meeting. Due to having just three units, the project is a minor subdivision. Because Kittery permits cluster residential development and makes a conventional subdivision a special exception, the applicant is offering the plans as a cluster residential development that also is a condominium – meaning that the three residential units will share the one lot. It is also

### **Purpose of Application Phase**

The sketch plan phase allows the Board to: 1) determine if sufficient information has been supplied, and if not request the information, 2) to ask questions and 3) give direction to the applicant. If the Board finds the application insufficient or requires additional information, the Board should request that information be provided for the next meeting.

### **Submission Requirements**

The Subdivision Ordinance in Section 16.8.10. requires the following information for Sketch Plan submittal:

### Covenants

No information on any covenants nor Condominium Association documents were provided with the plan.

High-intensity Class "A" soil survey and soil interpretation sheets

The applicant has provided a soil survey.

### Available community facilities

The plan highlights a "Common Area" green space on sheet C-2 but no additional information on what facilities or amenities might be included has been provided.

### Utilities

The site plan (sheet C-4) shows the plan for utility services. The plan shows using an existing sewer connection, as well as using an existing water connection. Existing overhead electrical lines will terminate at a new pole where underground electrical service will extend to each condo unit. A stormwater management plan has been supplied with drop inlets connected to an outfall at the eastern edge of the property. This outfall appears to be located in an area labeled "Common Area" on other plan sheets.

### *Number of residential or business lots and/or dwelling units:*

Applicant has detailed that three single family dwelling units are proposed. The applicant has provided the net residential calculations to show a yield of 3 units.

### Typical lot width and depth

There are no new lots being proposed, as all three dwelling units are proposed on the existing lot.

### Price range

No price range information was given. The applicant has supplied dwelling unit layouts.

### Business areas

No business areas are proposed.

### Playgrounds, park areas and other public areas;

The plan highlights a "Common Area" green space on sheet C-2 but no additional information on what facilities or amenities might be included has been provided.

### Street improvements

The plan proposes a 40-foot right-of-way with a 16-foot-wide pavement strip that ends as a shared common driveway.

Page 3 of 4

The Cluster Residential Development language in Section 16.8.10.H. requires that open space must contain at least 50% of the total property area and 30% of the net residential acreage. This plan appears to meet those thresholds; however, the applicant should provide this information more clearly in the site notes.

The applicant has provided a letter from the Maine Department of Environmental Protection stating that the vernal pool identified on the site is not significant, noting that the pool provides some habitat for wood frogs and spotted salamanders but does not meet biological criteria. The vernal pool was surveyed by Joseph Noel.

Because this is a Minor Subdivision, if the Planning Board accepts and approves the Sketch Plan then the next step is Final Plan review. A Public Hearing would still need to be set by the Planning Board during any Final Plan review.

### **Development Standards**

### Setbacks

The proposed residential structure closest to the wetland is shown to be over 100 feet from the wetland. The end of the shared driveway (per §16.3, a driveway may service two or less residential units) depicted on the plan is located approximately 65 feet from the wetland. Per Table 16.5.30 *Minimum Setbacks from Wetlands and Waterbodies*, a traveled way of road or driveway can be located 10 feet from the wetland. Rear and side setbacks for the R-U zone are 15 feet which is the requirement (see §16.4.13.D)

### Road/Common Driveway

The plans show a 16-foot-wide private way which extends just past Unit 1. From there, a common driveway provides access to Unit 2 and 3. Because the street frontage for this property is nonconforming (less than 100 feet) and the proposed use is intensifying from one residential use/building to three residential uses/buildings, the private road will serve to provide both access and frontage to the units. However, it is not required for each unit to have its own 100-foot frontage though because it is a condominium – one lot shared in common by three residential units. As shown on the plans the private way is over 100 feet long, thus providing the frontage required for the condominium. The private way will be named by the applicant (once the name is approved by the Town's addressing officer) and all three units will derive their addresses from that road, if the plan is approved.

While the plan does show a small amount of common pavement between Unit 1's limited common area driveway and the road and again at the very end of the proposed pavement beyond Unit 3, neither is sufficient for a turnaround without travel into the private driveways. Because adequate emergency vehicle access must be assured, in addition to other vehicles who may need to turn around, the Fire Chief will be asked to weigh in at the sketch plan phase because a minor subdivision moves from sketch to final plan without a preliminary phase.

If the Fire Chief determines that the turnaround/hammerhead or cul-de-sac should be located between Units 1 and 2, the common driveway could likely remain. If he prefers the turnaround to be located beyond Unit 3, the private way will need to be extended to service all three units.

<u>Recommendation:</u> Staff recommends that the plans be shown to the Fire Chief at the next convenient Technical Review Committee meeting.

Open Space

Per §16.8.10.H.(6).(e), a cluster residential development must provide open space. The requirement is that 50% of the lot must remain undeveloped (which usually includes all the wetlands, water bodies etc.) with 30% of that comprised of upland. No open space calculations are shown. A label on the plan reads "Common Area (plus/minus 69,352 ft/1.59 acres)". Staff noted to the applicant's engineer that the limited common areas around each residential unit are very limited and suggested that more area around each unit for private enjoyment would be well-received. This would presumably cut into the 1.59 acres of common space that also serves as open space.

<u>Recommendation</u>: Staff recommends that the open space calculations be added to the plan notes and that the open space be shown clearly and labeled as such on the plans.

### Cluster Residential Development

An important component of a cluster residential development plan is that dimensional requirements are allowed flexibility in the interests of reducing infrastructure and impact on the land. The plan as shown is compact, with limited impervious surface, underground utilities as required, public water and sewer, and infrastructure located well beyond required setbacks from the wetlands.

### Waivers

The applicant will want to address the submission requirements of both the cluster residential development and Kittery's subdivision ordinance. There may be instances where the applicant would like to request a waiver. Waiver requests are best submitted during sketch plan, rather than final plan.

### **Recommended Motions**

Below are motions, depending on how the Planning Board will like to proceed:

### Move to accept sketch plan cluster residential development application as complete

Move to accept the sketch subdivision plan application from owner Lusitano, LLC for a cluster residential development proposing three (3) single-family residences as a condominium on real property with an address of 28 Wyman Avenue (Tax Map 16, Lot 148) located in the Residential-Urban (R-U) Zone

### Move to set a site visit for the sketch plan cluster subdivision application

Move to set a site visit on \_\_\_\_\_\_2022, as part of the review of the sketch subdivision plan application from owner Lusitano, LLC for a cluster residential development proposing three (3) single-family residences as a condominium on real property with an address of 28 Wyman Avenue (Tax Map 16, Lot 148) located in the Residential-Urban (R-U) Zone

# WYMAN HILL

# 28 WYMAN AVENUE KITTERY, MAINE

Assessor's Parcel 16, Lot 148

# Plan Issue Date:

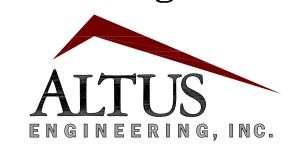
May 19, 2022

Planning Board Submission

# Owner/Applicant: LUSITANO, LLC JIM HIGGINS

119 KINGS HIGHWAY NO. ELIOT, MAINE 03903 (617) 501-6149

# Civil Engineer:



133 Court Stre

www.altus-eng.com

# Architect: HIGGINS + DESIGN

119 Kings Highway North Eliot, ME 03903 (617) 501-6149 jimhiggins05@comcast.net

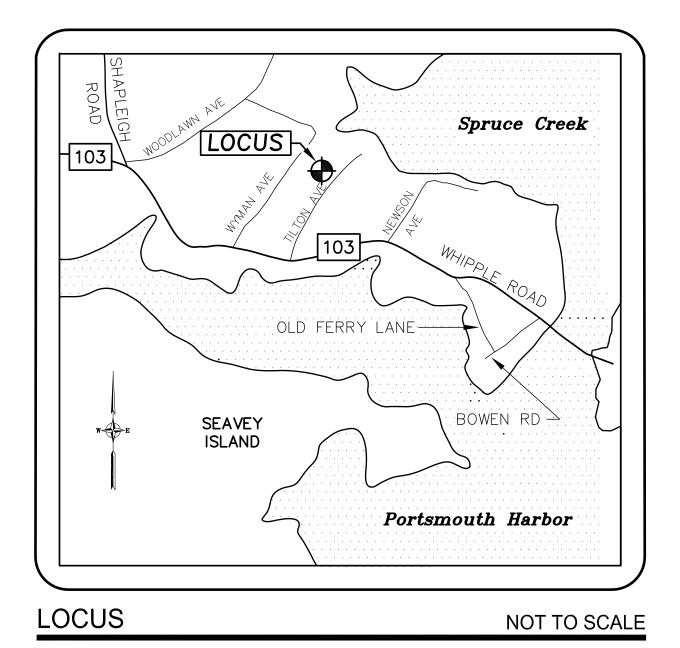
# Surveyor:



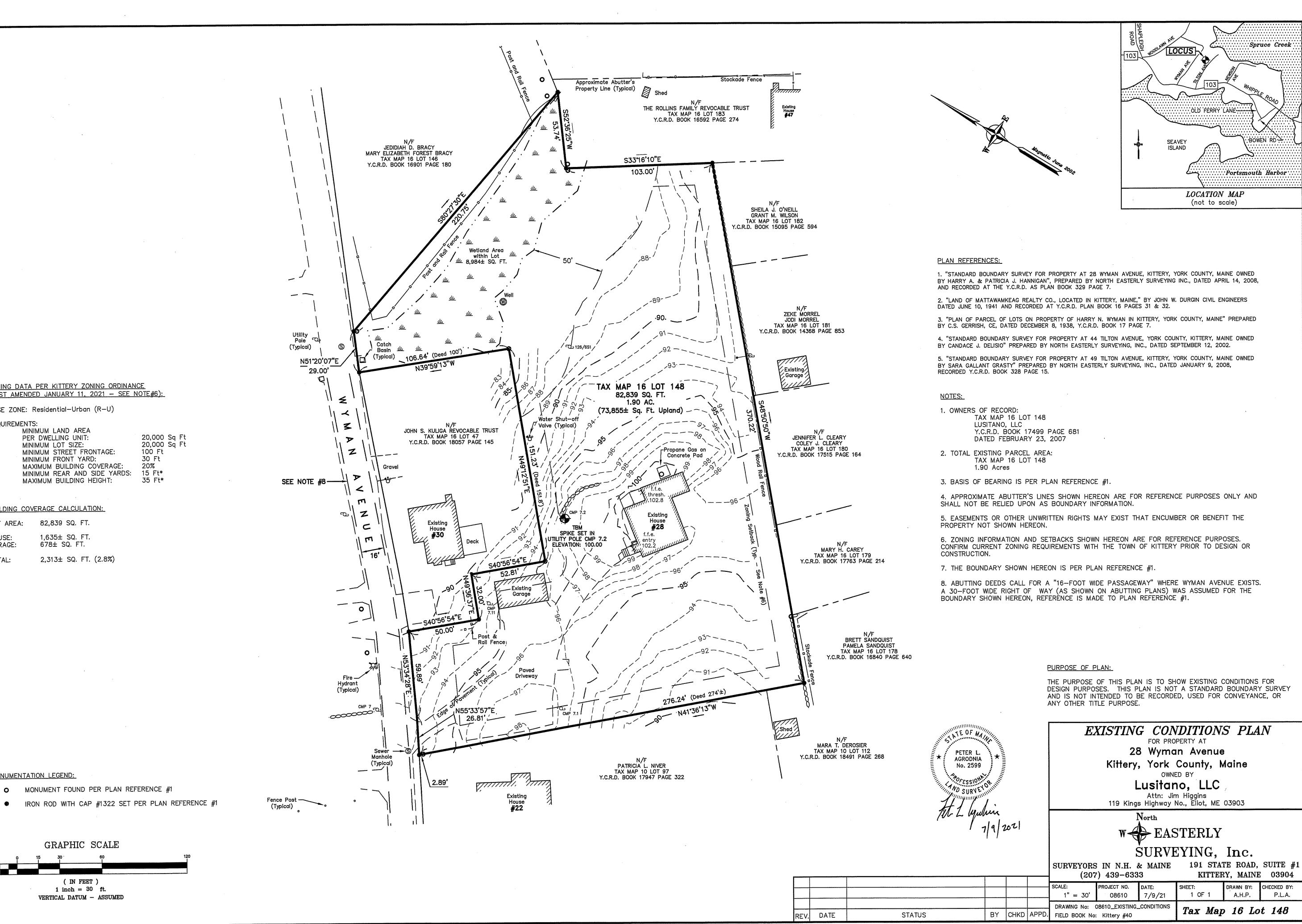
191 STATE ROAD, SUITE #1 KITTERY, MAINE 03904

# Soils/Wetlands Scientist: MICHAEL MARIANO, CSS

75 Prospect Street Somersworth, NH 03878 (603) 692-4457



Sheet Index Title	$Sheet \ No.:$	Rev.	Date
Existing Conditions Plan	1 of 1	0	07/09/21
Demolition Plan	C-1	0	12/22/21
Condominium Site Plan	C-2	1	05/19/22
Grading & SWM Plan	C - 3	0	12/22/21
Utility Plan	C - 4	0	12/22/21
Erosion Control Notes	C - 5	0	12/22/21
Erosion Control Details	C-6	0	12/22/21
Details Sheet	C - 7	0	12/22/21
Details Sheet	C-8	0	12/22/21
Layout Plans	A01	0	11/22/21
Elevations	A02	0	11/22/21
Elevations	A03	0	11/22/21



ZONING DATA PER KITTERY ZONING ORDINANCE

MINIMUM STREET FRONTAGE:

MAXIMUM BUILDING HEIGHT:

1,635± SQ. FT.

2,313± SQ. FT. (2.8%)

O MONUMENT FOUND PER PLAN REFERENCE #1

GRAPHIC SCALE

( IN FEET )

1 inch = 30 ft.

VERTICAL DATUM - ASSUMED

678± SQ. FT.

MAXIMUM BUILDING COVERAGE:

MINIMUM REAR AND SIDE YARDS: 15 Ft\*

BASE ZONE: Residential—Urban (R—U)

MINIMUM LAND AREA

MINIMUM FRONT YARD:

PER DWELLING UNIT:

MINIMUM LOT SIZE:

BUILDING COVERAGE CALCULATION:

LOT AREA: 82,839 SQ. FT.

MONUMENTATION LEGEND:

REQUIREMENTS:

GARAGE:

TOTAL:

(LAST AMENDED JANUARY 11, 2021 - SEE NOTE#6):

20,000 Sq Ft

20,000 Sq Ft

100 Ft

30 Ft

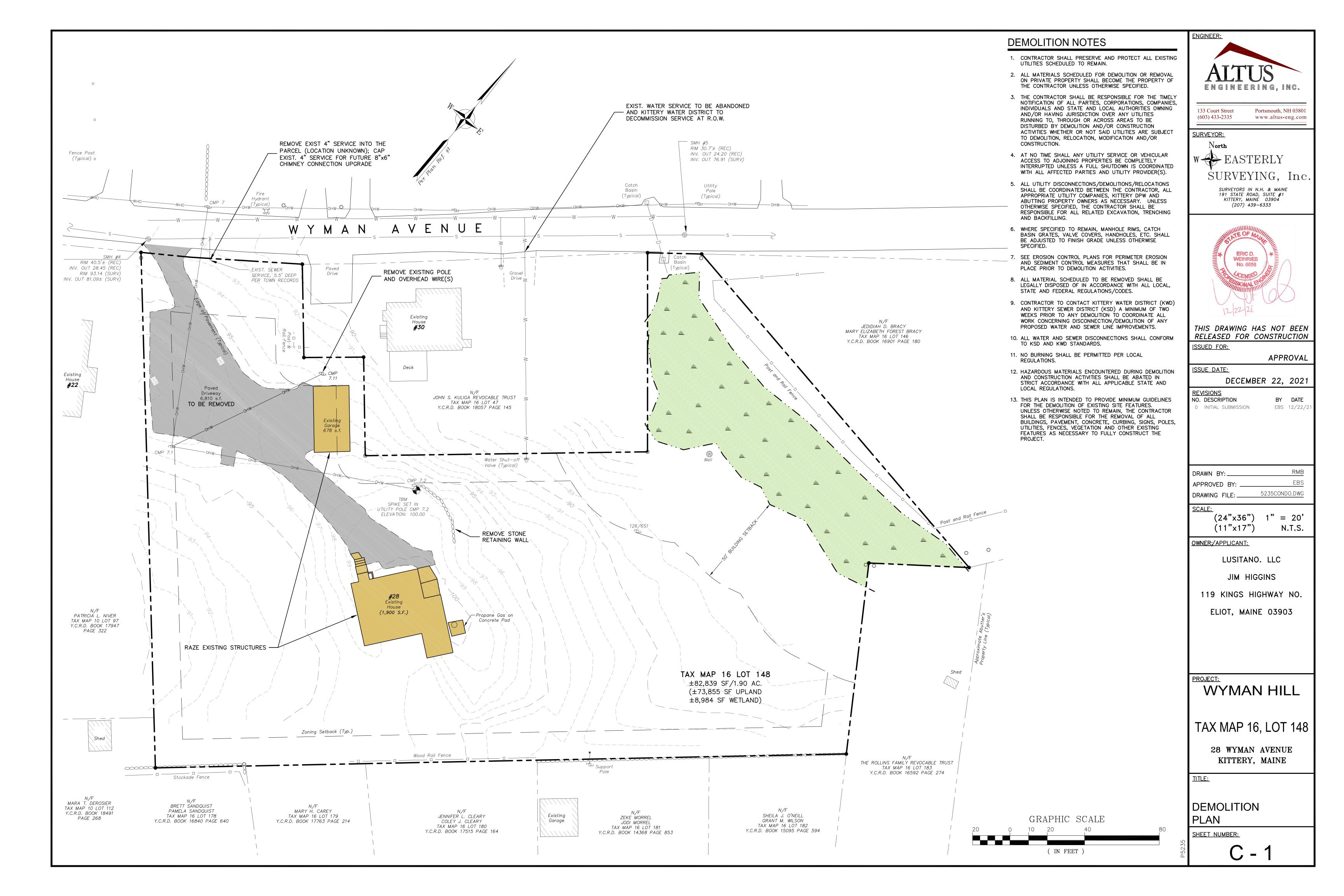
'Spruce Creek

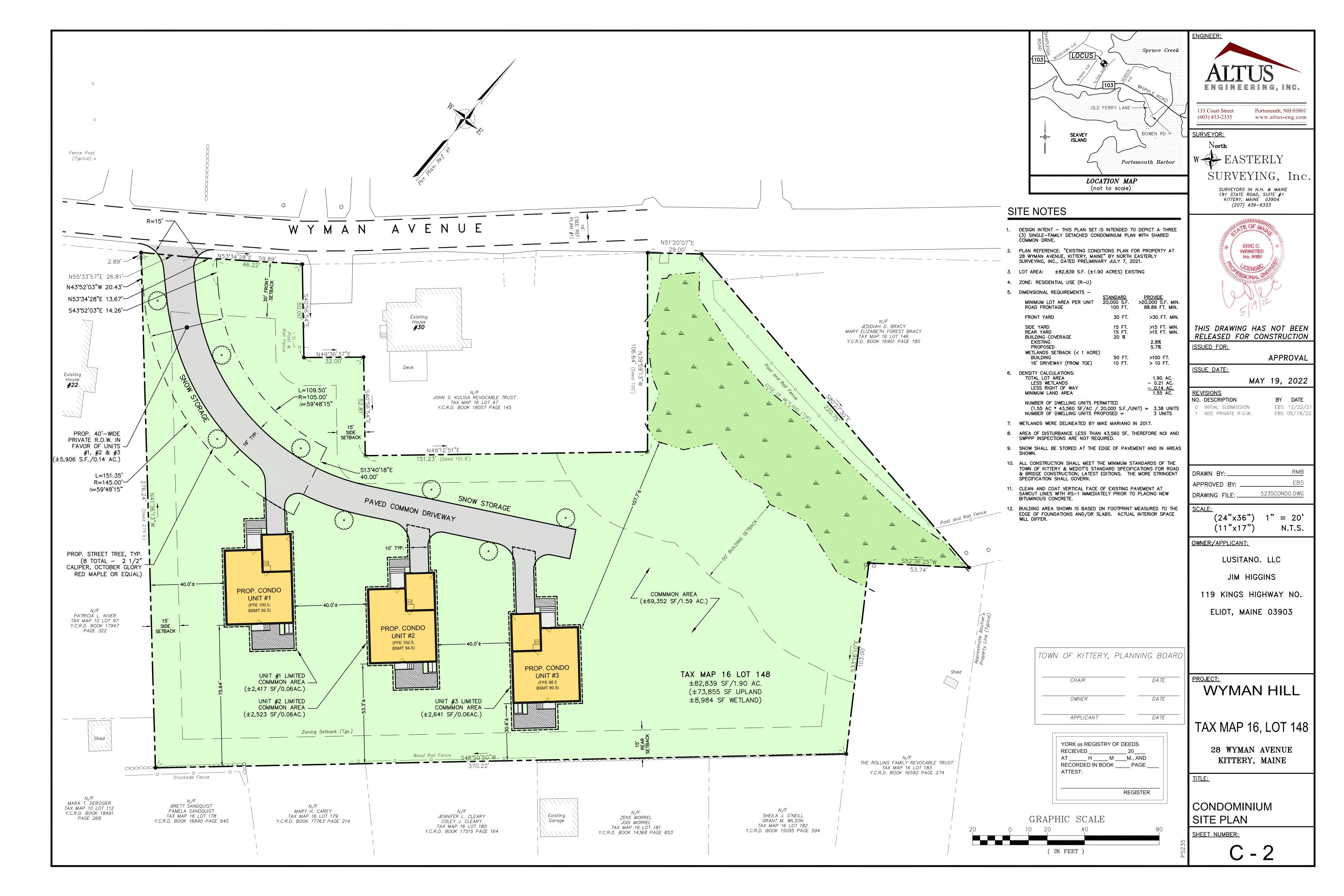
BOWEN RD 🔑

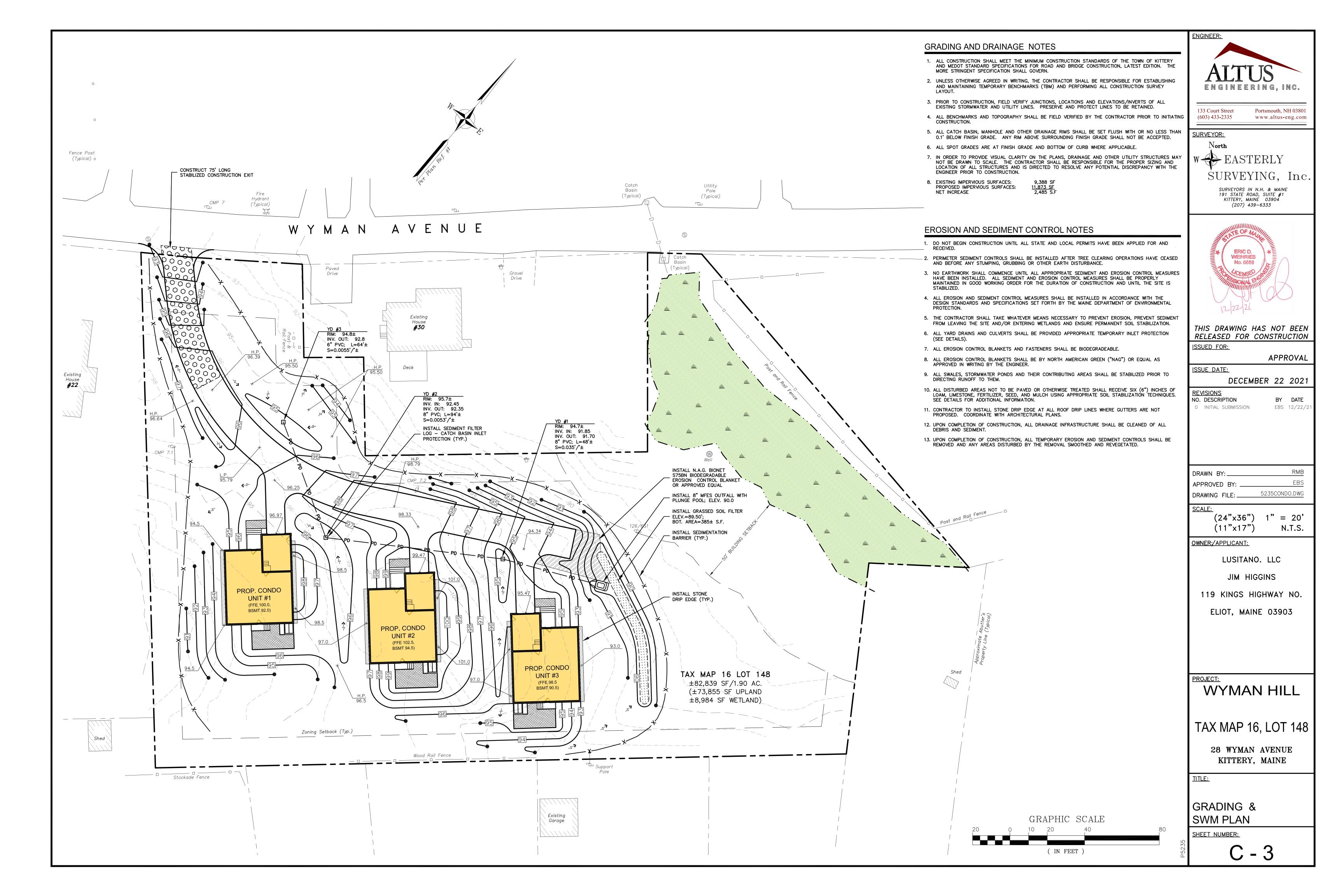
Portsmouth Harbor

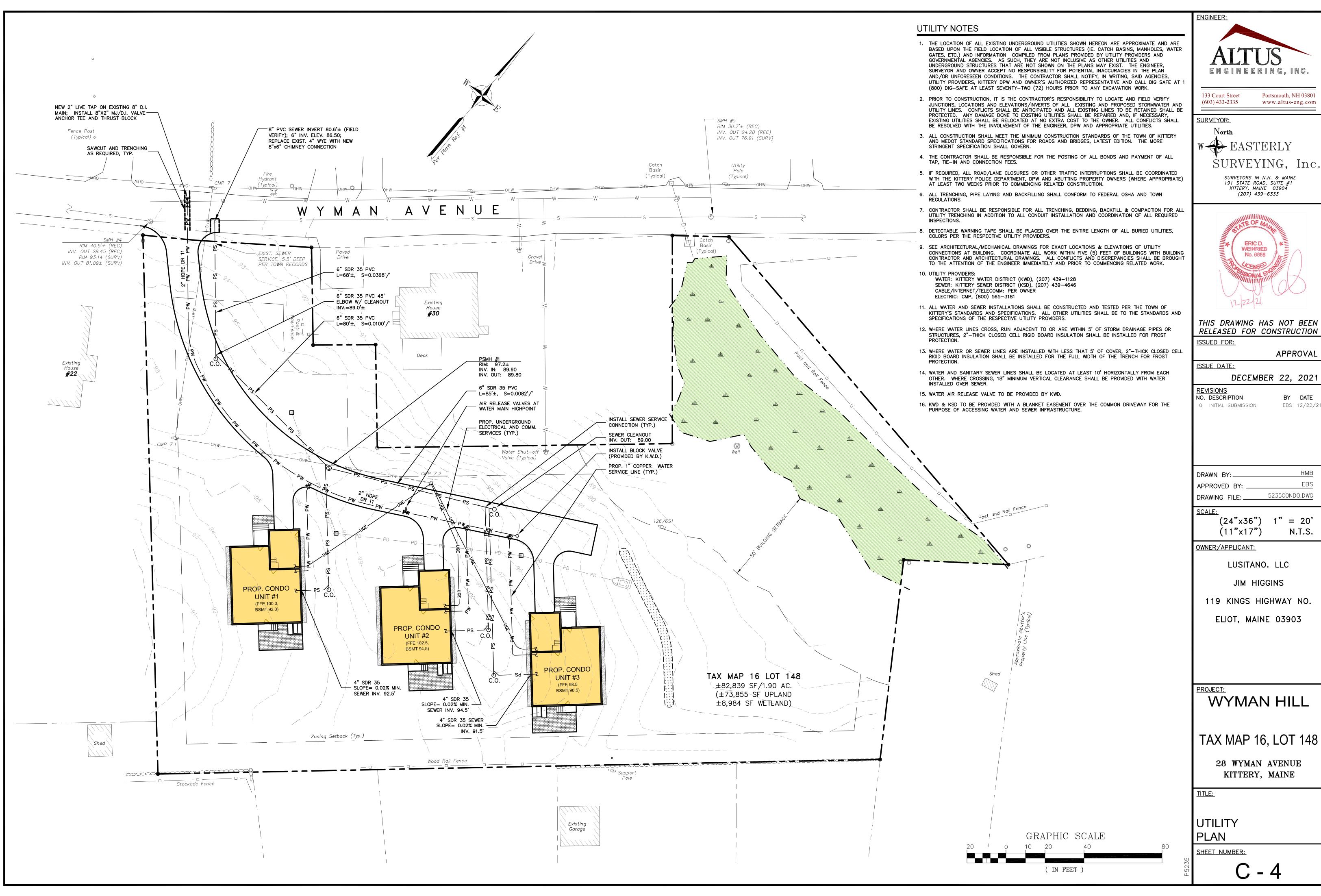
DRAWN BY: CHECKED BY:

A.H.P.











THIS DRAWING HAS NOT BEEN

EBS 12/22/2

DRAWN BY:	RMB
APPROVED BY:	EBS
DRAWING FILE:	5235CONDO.DWG

### ROJECT NAME AND LOCATION

Re-development Plan Map 16 Lot 148 Kittery, Maine

Latitude: 043° 05' 16" N Longitude: 070° 43′ 45″ W

### **DESCRIPTION**

he project consists of a three (3) single—family detached condominium units with shared drive. The project will be completed in a single phase.

### DISTURBED AREA

he total area to be disturbed is approximately 0.8 acres for constructing new driveway and dwelling units ncluding lot development). Prior to lot clearing and soil disturbance, sedimentation barrier shall be installed to prevent sediment leaving the lot.

### SEQUENCE OF MAJOR ACTIVITIES

- Install temporary erosion control measures including perimeter controls as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the
- Clear and grub wooded area; strip and stockpile loam. Stockpiles shall be temporarily stabilized with hay hales mulch and surrounded by a hay bale or silt fence barrier until material is removed and final
- grading is complete. Shut off and terminate existing services; demolish existing structures and pavement.
- Construct ditches and stabilize prior to directing flow to them. Construct drainage structures, swales & road base materials.
- Ditches and swales with grades over 5% shall have sides and bottom reinforced with excelsior matting.
- Shape site to desired grades Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
- Install landscaping. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

### NAME OF RECEIVING WATER

Innamed wetlands complex and open drainage systems to tidal waters of Spruce Creek.

### TEMPORARY EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES

Il work shall be in accordance with state and local permits. Installation or construction of erosion control neasures shall conform to the practices described in the "2014 Revision to the 2003 Maine Erosion and Sediment Control Field Guide for Contractors, published by the Maine Department of Environmental Protection.

Minimum erosion control measures will need to be implemented and the contractor will be responsible to naintain all components of the erosion control plan until the site is fully stabilized. However, based on site and weather conditions during construction, additional erosion control measures may need to be implemented. All areas of instability and erosion must be repaired immediately during construction and need to be maintained ıntil the site is fully stabilized or vegetation is established. A construction log must be maintained for the erosion and sedimentation control inspections and maintenance.

as indicated in the sequence of Major Activities, perimeter controls shall be installed prior to commencing any elearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area, silt fences and hay bale barriers and any earth/dikes will be removed once permanent measures are established.

During construction, runoff will be diverted around the site with stabilized channels where possible channels where possible. Sheet runoff from the site will be filtered through hay bale barriers, stone check dams, and/or silt fences. All storm drain inlets shall be provided with inlet filters or stone check dams. Stone rip ap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

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

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

### NSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

- Perimeter controls shall be installed prior to earth moving operations. The smallest practical portion of the site will be denuded at one time and no more than be mulched in
- one day. All disturbed areas must be stabilized by temporary measures within 5 days of initial disturbance and stabilized by permanent measures immediately after final grading.
- Sediment barriers shall be installed downgradient of stockpiles and diversion swales installed upgradient of stockpiles to prevent movement of soil.
- Built-up sediment shall be removed from silt fence or other barriers when it has reached one-third the height of the tubular barrier or bale, or when "bulges" occur in silt fence. All diversion dikes shall be inspected and any breaches promptly repaired.
- Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the
- All ditches and swales shall be stabilized prior to directing runoff to them. All diversion dikes will be
- inspected and any breaches promptly repaired. Temporary water diversion (swales, basins, etc) shall be used as necessary until areas are stabilized.
- Ponds and swales shall be installed early on in the construction sequence (before rough grading site). 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: a. Base coarse gravels have been installed in areas to be paved;
- A minimum of 90% vegetated growth as been established;
- A minimum of 3 inches of non-erosive material such as stone of riprap has been installed; or Erosion control blankets have been properly installed.

## MULCHING

- \* In sensitive areas (within 100 ft of streams, wetlands and in lake watersheds) temporary mulch
- shall be applied within 7 days of exposing soil or prior to any storm event. \* Areas, which have been temporarily or permanently seeded, shall be mulched immediately following
- \* Areas which cannot be seeded within the growing season shall be mulched for over—winter protection and the area should be seeded at the beginning of the growing season.
- \* Mulch anchoring should be used on slopes greater than 5% in late fall (past September 15), and over-winter (September 15 - April 15).

## Type of Mulch

Hay or Straw Mulches Organic mulches, including hay and straw, shall be air-dried, free of undesirable seeds and coarse materials. Application rate shall be 2 bales (70—90 pounds) per 1000 sq. ft. or 1.5 to 2 tons (90—100 bales) per acre to cover 75 to 90 % of the ground surface. Hay mulch subject to wind

Erosion Control Mix Erosion control mix shall consist primarily of organic material and shall include any of the following: shredded bark, stump grindings, composted bark or other acceptable products based on a similar raw source. Wood or bark chips, ground construction debris or reprocessed wood products shall not be acceptable as the organic component of the mix.

- It can be used as a stand-alone reinforcement: \* On slopes 2 horizontal to 1 vertical or less. \* On frozen ground or forested areas.

Other reinforcement BMPs (i.e. riprap) should be used: \* On slopes with groundwater seepage;

blowing shall be anchored via: netting; peg and twine or tracking.

At low points with concentrated flows and in gullies; At the bottom of steep perimeter slopes exceeding 100 feet in length;

\* At the edge of gravel parking areas and areas under construction.

Below culvert outlet aprons; and Around catch basins and closed storm systems.

Erosion control mix shall contain a well-graded mixture of particle sizes and may contain rocks less than 4" in diameter. Erosion control mix must be free of refuse, physical contaminants, and material toxic to plant growth. The mix composition shall meet the following standards:

- \* The organic matter content shall be between 80 and 100%, dry weight basis. \* Particle size by weight shall be 100% passing a 6" screen and a minimum of 70%, maximum of
- 85%, passing a 0.75" screen.
- \* The organic portion needs to be fibrous and elongated. \* Large portions of silts, clays or fine sands are not acceptable in the mix.

- \* Erosion control mix shall not be used on slopes steeper than 2:1. \* On slopes of 3:1 or less; 2 inches plus an additional 1/2 inch per 20 feet of slope up to 100
- \* On slopes between 3:1 and 2:1, 4 inch plus an additional 1/2 inch per 20 feet of slope up to

<3:1 slope slopes between 3:1 and 2:1 <20' of slope 2.0" <60' of slope

The thickness of the mulch at the bottom of the slope needs to be

<100' of slope 4.0" \* It shall be placed evenly and must provide 100% coverage with the soil totally invisible.

Any required repairs shall be made immediately, with additional erosion control mix placed on top of the mulch to reach the recommended thickness. When the mix is decomposed, clogged with sediment, eroded or ineffective, it shall be replaced or repaired. Erosion control mix mulch shall be left in place. If the mulch needs to be removed spread it out into the landscape.

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets shall be inspected after rain events for dislocation or failure. If washouts or breakage occur, re—install the nets as necessary after repairing damage to the slope. Inspections shall take place until grasses are firmly established (95% soil surface covered with grass). Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

### C. TEMPORARY VEGETATION

- Proper seedbed preparation and the use of quality seed are important in this practice just as in permanent seeding. Failure to carefully follow sound agronomic recommendations will often result
- in an inadequate stand of vegetation that provides little or no erosion control. \* Nutrients and pesticides used to establish and maintain a vegetation cover shall be managed to protect the surface and ground water quality.
- \* Temporary seeding shall be used extensively in sensitive areas (ponds and lake watersheds, steep slopes, streambanks, etc.).
- \* Late fall seeding may fail and cause water quality deterioration in spring runoff events, thus other measures such as mulching shall be implemented.

Seedbed Preparation Apply limestone and fertilizer according to soil test recommendations. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 600 pounds per acre or 13.8 pounds per 1,000 square feet of 10-10-10 (N-P20S-K20) or equivalent. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of 3 tons per acre (138 lb. per 1,000 square feet).

- \* Select seed from recommendations in enclosed table. \* Where the soil has been compacted by construction operations, loosen soil to a depth of 2 inches
- before applying fertilizer, lime and seed. \* Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder (slurry including seed and fertilizer). Hydroseeding that includes mulch may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

Apply mulch over seeded area according to the TEMPORARY MULCHING BMP.

Temporary seeding shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

<u>Temporary S</u>	eeding Rates an	<u>d Dates</u>		
Seed	Lb./Ac	Seeding Depth	Recommended Seeding Dates	Remarks
Winter Rye	112 (2.0 bu)	1-1.5 in	8/15-10/1	Good for fall seeding. Select a hardy species, such as Aroostook Rye.
Oats	80 (2.5 bu)	1-1.5 in	4/1-7/1 8/15-9/15	Best for spring seeding. Early fall seeding will die when winter weather moved in, but mulch will provide protection.
Annual Ryegrass	40	.25 in	4/1-7/1	Grows quickly but is of short duration. Use where appearance is important. With mulch, seeding may be done throughout growing season.
Sudangrass	40 (1.0 bu)	.5-1 in	5/15-8/15	Good growth during hot summer periods.
Perennial	40 (2.0 bu)	.25 in	8/15-9/15	Good cover, longer lasting than Annual Ryegrass. Mulching will allow seeding throughout growing season.
Temporary mulch wi and/or without dorn			10/1-4/1	Refer to TEMPORARY MULCHING BMP PERMANENT VEGETATION BMP.

## D SEDIMENT BARRIERS

## <u>Tubular Sediment Barrier</u>

- a. To be provided by an approved manufacturer or supplier: Installed per manufacturer's specifications;
- c. Barrier shall be removed when they have served their useful purpose but not before the upslope areas has been permanently stabilized.

## <u>Organic Filter Berm</u> See detail

- \* Sediment barriers shall be installed along the down gradient side of proposed ground disturbance areas prior to any construction activities.
- \* The barrier must be placed along a relatively level contour.

- \* Hay bale barriers, silt fences and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired immediately if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment
- barriers shall be replaced with a temporary check dam. \* Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced
- \* Sediment deposits should be removed when deposits reach approximately one third (1/3) the height of the barrier.
- \* Filter berms should be reshaped as needed.
- \* Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed or removed to conform to the existing grade, prepared and seeded. \* Additional stone may have to be added to the construction stabilized entrance, rock barriers,

# stone lined swales, etc., periodically to maintain proper function of the erosion control structure.

- Bedding stones larger than  $1\frac{1}{2}$ , trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 6" to prepare a seedbed and mix fertilizer (refer to Landscape Drawings and Specifications) into the
- 2. Fertilizer (refer to Landscape Drawings and Specifications) lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests.

## 3. Seed Mixture (See Landscape Drawings for additional information):

- 3.1. Lawn seed mix shall be a fresh, clean new seed crop. The Contractor shall furnish a dealer's guaranteed statement of the composition of the mixture and the percentage of purity and ermination of each variety. 3.2. Seed mixture shall conform to landscape specifications
- 4. Sodding sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

### DEWATERING

A dewatering plan shall be implemented to address excavation de-watering following heavy rainfall events or where the excavation may intercept the groundwater table during construction. The collected water needs treatment and a discharge point that will not cause downgradient erosion and offsite sedimentation or within a resource.

All dewatering discharge locations shall be located on relatively flat ground at least 75' from streams and 25' from wetlands. The contractor shall utilize dirtbags, erosion control mix berms, or similar methods for filtration of dewatering and shall conform to the Maine Erosion and Sediment Control BMPs.

The contractor shall be responsible for installing, monitoring, maintaining, repairing, replacing and removing all of the erosion and sedimentation controls or appointing a qualified subcontractor to do so. Maintenance measures will be applied as needed during the entire construction cycle. immediately following any significant rainfall, and at least once a week, a visual inspection will be made of all erosion and sedimentation controls as follows:

1. Silt fence shall be inspected and repaired. Sediment trapped behind these barriers shall be excavated when it reaches a depth of 6" and redistributed to areas undergoing final grading.

2. Construction entrance shall be visually inspected and repaired as needed. Any areas subject to rutting shall be stabilized immediately. If the voids of the construction entrance become filled with mud, more crushed stone shall be added as needed. The public roadway shall be swept should mud be deposited/tracked onto them.

### STANDARDS FOR STABILIZING SITES FOR THE WINTER The following standards and methodologies shall be used for stabilizing the site during the winter

- construction period: 1. Standard for the timely stabilization of disturbed slopes (any area having a grade greater than 25%) — the contractor will seed and mulch all slopes to be vegetated by September 15th. If the contractor fails to stabilize any slope to be vegetated by September 15th, then the contractor will take one of the following actions to stabilize the slope for late fall and winter.
- A. Stabilize the soil with temporary vegetation and erosion control mats: by October 1st the contractor will seed the disturbed slope with winter rye at a rate of 3 pounds per 1000 square feet and then install erosion control mats or anchored hay mulch over the seeding. The contractor will monitor growth of the rye over the next 30 days.
- B. <u>Stabilize the slope with wood-waste compost</u>: the contractor will place a six-inch layer of wood-waste compost on the slope by November 15th. The contractor will not use wood—waste compost to stabilize slopes having grades greater than 50% (2h:iv) or having groundwater seeps on the slope face. C. Stabilize the slope with stone riprap: the contractor will place a layer of stone riprap on the slope by

November 15th. The development's owner will hire a registered professional engineer to determine the

- stone size needed for stability on the slope and to design a filter layer for underneath the riprap. 2. Standard for the timely stabilization of disturbed soils — by September 15th the contractor will seed and mulch all disturbed soils on the site. If the contractor fails to stabilize these soils by this date, then the
- contractor will take on of the following actions to stabilize the soil for late fall and winter. A. Stabilize the soil with temporary vegetation: by October 1st the contractor will seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet, and anchor the mulch with plastic netting. The contractor will monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1, then the contractor will mulch the area for
- over-winter protection as described in item iii of this standard. Stabilize the soil with sod: the contractor will stabilize the disturbed soil with properly installed sod by October 1st. proper installation includes the contractor pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root
- growth into the disturbed soil. Stabilize the soil with mulch: by November 15th the contractor will mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Immediately after applying the mulch, the contractor will anchor the mulch with netting or other method to prevent wind from moving the mulch off the disturbed soil.

Winter inspections shall be preformed after, each rainfall, snowstorm or thawing and at least once a week. All areas within 75 feet of a protected natural resource must be protected with a double row of sediment

- EROSION CONTROL REMOVAL An area is considered stable if it is paved or if 90% growth of planted seeds is established. once an area is considered stable, the erosion control measures can be removed as follows:
- I. <u>Silt Fence:</u> Silt fence shall be disposed of legally and properly off—site. all sediment trapped behind these controls shall be distributed to an area undergoing final grading or removed and relocated off—site. 2. <u>Stabilized Construction Entrance</u>: The stabilized construction entrance shall be removed once the compacted roadway base in in place. Stone and sediment from the construction entrance shall be
- redistributed to an area undergoing grading or removed and relocated offsite. 3. <u>Miscellaneous:</u> Once all the trapped sediments have been removed from the temporary sedimentation devices the disturbed areas must be regraded in an aesthetic manner to conform to the surrounding topography. Once graded these disturbed areas must be loamed (if necessary), fertilized, seeded and
- The above erosion controls must be removed within 30 days of final stabilization of the site. Conformance with this plan and following these practices will result in a project that complies with the state regulations and the standards of the natural resources protection act, and will protect water quality in areas downstream from the project.

# INSPECTION AND MAINTENANCE

mulched in accordance with the rates previously stated.

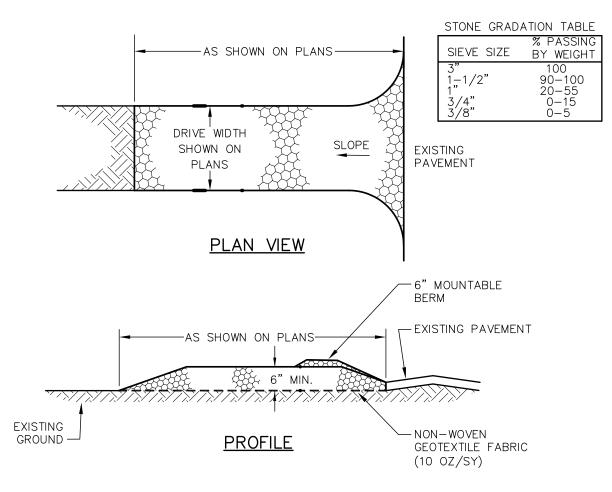
- 1. All sediment control measures shall be inspected at least once each week and following any storm event of 0.5 inches or greater for the duration of construction and until the site is fully stabilized. An inspection report shall be made after each inspection by a qualified inspector engaged by the Owner. The qualified inspector shall be a Professional Engineer licensed in Maine or be a Certified Professional in
- Erosion and Sediment Control approved by the Owner. 2. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within
- 24 hours and completed within 72 hours. 3. Inspection and maintenance requirements: Inspect disturbed and impervious areas, erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and after a 0.5 inches or greater storm event and prior to completion of permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards in the MCGP and any departmental companion document to the MCGP, must conduct the inspection. This person must be identified in the inspection log. If best management practices (BMPs) need to be modified or if additional BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event

(rainfall). All measures must be maintained in effective operating condition until areas area permanently

4. Inspection Log (report): A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the inspection log the correct action taken and when it was taken. The log must be made accessible to the department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of the permanent stabilization.

## **HOUSEKEEPING**

1. Spill prevention: Controls must be used to prevent pollutants from construction and waste materials stored onsite, including storage practices to minimize exposure of the materials to stormwater and appropriate spill prevention, containment, and response planning implementation. The contractor and owners need to take care with construction and waste materials such that contaminates do not enter the stormwater. The storage of materials such as paint, petroleum products, cleaning agents and the like are to be stored in watertight containers. The use of the products should be in accordance with manufacturer recommendations. When fueling equipment, including snowblowers and lawnmowers, have oil absorbent pads available below the fueling. Refueling of small engines by the owner should occur in the garage or on a paved surface. Any spill or release of toxic or



### CONSTRUCTION SPECIFICATIONS

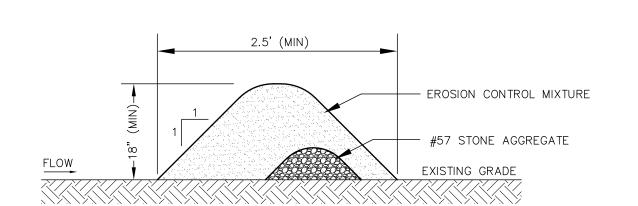
- 1. STONE SIZE MEDOT STANDARD STONE SIZE #4 SECTION 703 OF MEDOT STANDARD.
- 2. <u>LENGTH</u> DETAILED ON PLANS (50 FOOT MINIMUM).
- 3. <u>THICKNESS</u> SIX (6) INCHES (MINIMUM).
- 4. <u>WIDTH</u> FULL DRIVE WIDTH UNLESS OTHERWISE SPECIFIED.
- 5. <u>FILTER FABRIC</u> MIRAFI 600X OR EQUAL APPROVED BY ENGINEER.
- SURFACE WATER CONTROL ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT
- FRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.

WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. 9. STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AT ALL ENTRANCES TO PUBLIC

### STABILIZED CONSTRUCTION EXIT NOT TO SCALE

RIGHTS-OF-WAY, AT LOCATIONS SHOWN ON THE PLANS, AND/OR WHERE AS DIRECTED BY THE



EXCEED 2').

ORGANIC FILTER BERM

- 1. ORGANIC FILTER BERMS MAY BE UTILIZED IN LIEU OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
- 2. THE EROSION CONTROL MIXTURE USED IN FILTER BERMS SHALL BE A WELL-GRADED MIX OF PARTICLE SIZES THAT MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, AND/OR ACCEPTABLE MANUFACTURED PRODUCTS AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH. EROSION CONTROL MIXTURE SHALL MEET THE FOLLOWING STANDARDS:
- a) THE ORGANIC CONTENT SHALL BE 80-100% OF DRY WEIGHT.
- b) PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70-85% PASSING A 0.75" SCREEN. c) THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
- d) LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE. e) SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm. f) THE pH SHALL BE BETWEEN 5.0 AND 8.0.
- NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM. 4. ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES NO STEEPER THAN 3:1 AND UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE) AND A MINIMUM OF 36" WIDE. ON LONGER AND/OR STEEPER SLOPES, THE BERM SHALL BE TALLER AND WIDER TO ACCOMMODATE THE POTENTIAL FOR ADDITIONAL RUNOFF (MAXIMUM HEIGHT SHALL NOT

3. ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE

- 5. FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING
- 6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FILTER BERMS WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE BERM.
- 7. ORGANIC FILTER BERMS MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED PROVIDED ANY SEDIMENT DEPOSITS TRAPPED BY THEM ARE REMOVED AND DISPOSED OF PROPERLY.
- 8. FILTER BERMS ARE PROHIBITED AT THE BASE OF SLOPES STEEPER THAN 8% OR WHERE THERE IS FLOWING WATER WITHOUT THE SUPPORT OF ADDITIONAL MEASURES SUCH AS SILTFENCE.

NOT TO SCALE

<u>NGINEER:</u>

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



THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

**APPROVAL** 

BY DATE

EBS 12/22/2

RMB

**ISSUE DATE:** 

O INITIAL SUBMISSION

**DECEMBER 22, 2021** 

SSUED FOR:

<u>REVISIONS</u>

NO. DESCRIPTION

DRAWING FILE: \_

SCALE:

DRAWN BY:

APPROVED BY

NOT TO SCALE

5235DETAILS.DWG

OWNER:/APPLICANT:

LUSITANO. LLC

JIM HIGGINS

ELIOT, MAINE 03903

119 KINGS HIGHWAY NO.

**RE-DEVELOPMENT** 

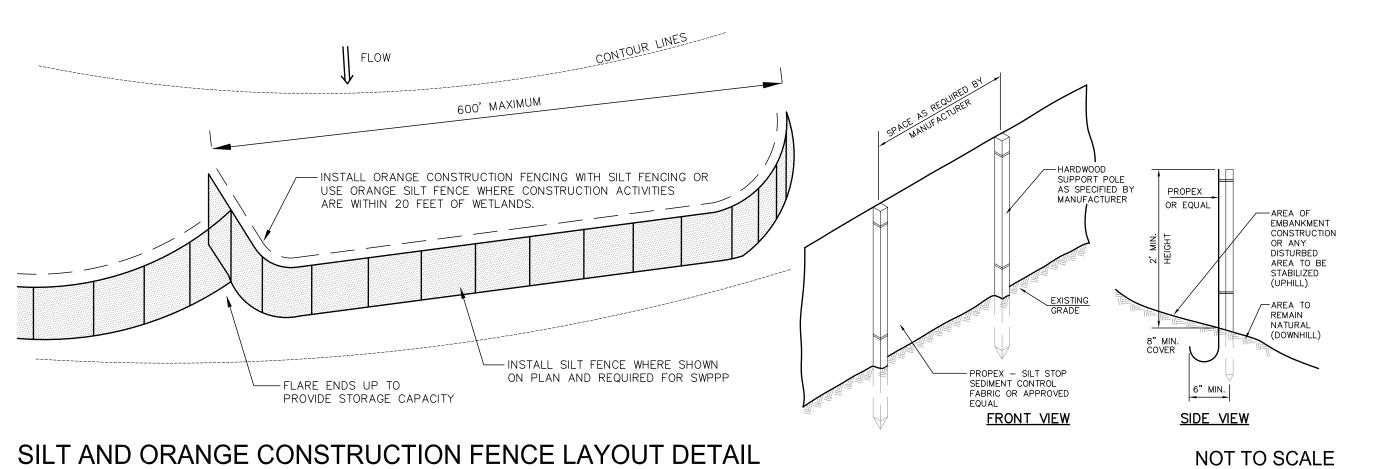
TAX MAP 16, LOT 148

PLAN

28 WYMAN AVENUE KITTERY, MAINE

**I**EROSION CONTROL NOTES

<u>SHEET NUMBER:</u>



DRAIN PIPE w/FLARED

END SECTION -

THE DEPTH OF RIPRAP

ORNAMENTAL PLANTINGS OUTSIDE

LIMITS OF FILTER BED

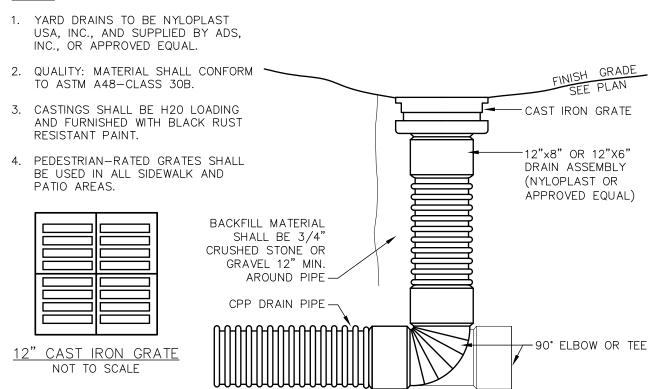
89.50

88.42'

88.17

87.17

90-100



YARD DRAIN (YD) NOT TO SCALE - MINIMUM DEPTH (D) =18" OR AS SHOWN ON PLANS

L 6" COMPACTED LOAM, SEED, MULCH AND FERTILIZER

- 1. THE FOUNDATION AREA OF THE SWALE SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. 2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED
- TO MEET THE DESIGN CRITERIA AND BE FREE OF IRREGULARITIES. 3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR
- TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED SWALE.
- 4. VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO DIRECTING STORMWATER TO IT. 5. MAINTENANCE OF THE VEGETATION IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE SWALE. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO

CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP GRASSES IN A

- VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE SWALE. 6. THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF
- RAINFALL IN 24 HOURS TO DETERMINE ITS CONDITION. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

### THE STONE SIZES. PLUNGE POOL NOT TO SCALE

4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT

OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL

5. THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL

LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF

OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE

OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18".

770 VOCV-

CONSTRUCT PLUNGE POOL TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO ACCOUNT FOR

2' MIN. —

EROSION STONE USED FOR THE PLUNGE POOL SHALL MEET THE FOLLOWING GRADATION:

PERCENT PASSING BY WEIGHT

-NON-WOVEN GEOTEXTILE

FABRIC (10 OZ/SY) AND

10 MIL. POLY BARRIER

-EROSION STONE 18" MIN.

DEPTH (SEE NOTE #3)

SCARIFIED EXISTING NATIVE



ALL AREAS OUTSIDE FILTER BED 90.0'

13" SOIL FILTER MEDIA (OPTION A OR B BELOW) 3" 3/8" PEA STONE

12" 3/4" WASHED CRUSHED STONE BEDDING

PÔNDÌNG AREA

**VEGETATED SWALE** 

CRUSHED STONE BEDDING \*  $\underline{\mathsf{SIEVE}}$   $\underline{\mathsf{SIZE}}$   $\underline{\mathsf{\%}}$  Passing by weight 100 3/4" 90 - 100 3/8" 20 - 55 # 4 0 -10 #8 0 - 5

NOT TO SCALE

EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 OF MEDOT STANDARD SPECIFICATIONS

FIL	TER MEDIA MI	XTURES	
	Percent of	Gr	adation of material
Component Material	Mixture by Volume	Sieve No.	Percent by Weight Passing Standard Siev
F	ilter Media Opt	ion A	
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
F	ilter Media Opt	ion B	
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
		10	85 to 100
Logmy opered gand	70 1 00	20	70 to 100
Loamy coarse sand	70 to 80	60	15 to 40
		200	8 to 15

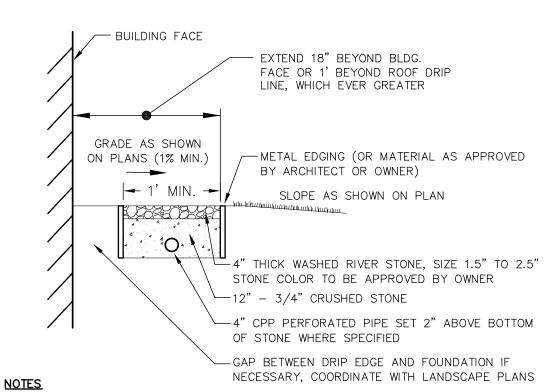
\_\_\_\_ 2" x 2" WOODEN STAKE (TYP.); - STAKE ON 10' LINEAR SPACING REBAR W/ORANGE SAFETY CAP MAY BE USED IN PAVED SURFACE ONLY FILTREXX® 12" SILT-SOXX<sup>IM</sup>-AREA TO BE WATER FLOW PROTECTED AREA TO BE  $\Longrightarrow$ PROTECTED WORK AREA WORK AREA - FILTREXX® COMPOST SILT-SOXX<sup>TM</sup>

PLAN VIEW

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

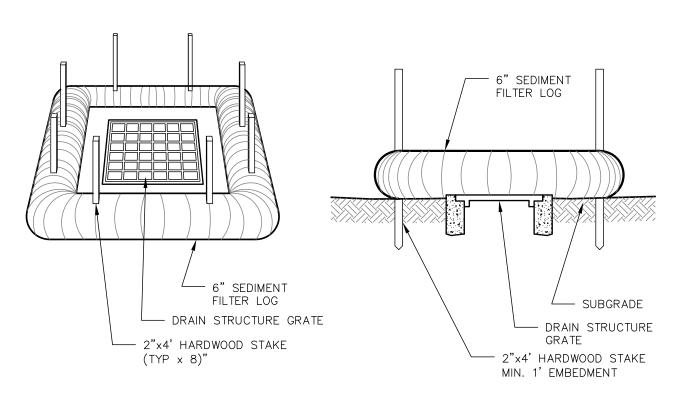
4. ALL SEDIMENT TRAPPED BY SILTSOXX SHALL BE DISPOSED OF PROPERLY.

TUBULAR SEDIMENT BARRIER



1. INSTALL DRIP EDGE AT ALL ROOF DRIPLINES WHERE GUTTERS ARE NOT PROPOSED.

### DRIP EDGE DETAIL NOT TO SCALE



SEDIMENT FILTER LOG -CATCH BASIN INLET PROTECTION

NOT TO SCALE

NOT TO SCALE

### 1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL. SOIL FILTER MEDIA SHALL EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.

- DO NOT PLACE GSF INTO SERVICE UNTIL IT HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS STABILIZED. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES TO THE GSF DURING ANY STAGE OF CONSTRUCTION.
- 5. DO NOT TRAFFIC EXPOSED SURFACES OF GSF WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION ACTIVITIES WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE BASIN.

## MAINTENANCE REQUIREMENTS

<u>NOTES</u>

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, PRUNING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF

# DESIGN REFERENCES

- UNH STORMWATER CENTER • EPA (1999A)
- MAINE STORMWATER MANAGEMENT DESIGN MANUAL, VOLUME 3, MAY 2016 AS AMENDED.

TYPICAL GRASSED SOIL FILTER (GSF)

NOT TO SCALE

<u>ENGINEER:</u> ENGINEERING, INC.

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



THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

APPROVAL

BY DATE

EBS 12/22/2

ISSUED FOR:

**ISSUE DATE:** 

DECEMBER 22, 2021

<u>REVISIONS</u>

NO. DESCRIPTION O INITIAL SUBMISSION

> RMB DRAWN BY: \_\_ APPROVED BY

SCALE:

NOT TO SCALE

5235DETAILS.DWG

OWNER:/APPLICANT:

DRAWING FILE: \_\_

LUSITANO. LLC

JIM HIGGINS

119 KINGS HIGHWAY NO. ELIOT, MAINE 03903

**RE-DEVELOPMENT** PLAN

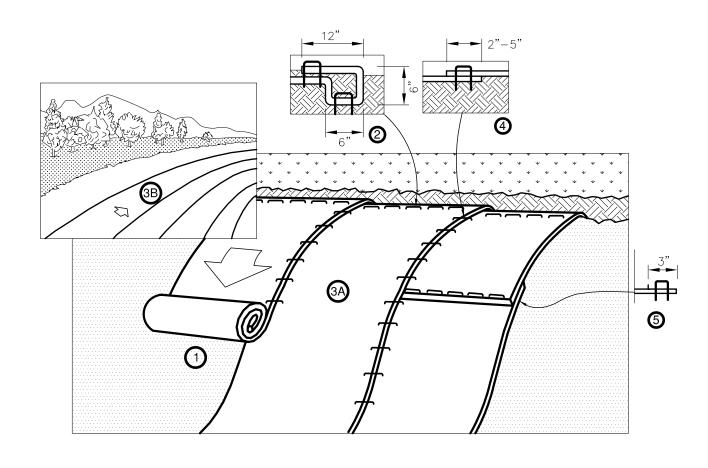
TAX MAP 16, LOT 148

28 WYMAN AVENUE KITTERY, MAINE

**EROSION CONTROL** DETAILS

<u>SHEET NUMBER:</u>

C - 6



### NOTES

- 1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
- 3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
- 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
- 5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET - SLOPE NOT TO SCALE

# WATER MAIN TRENCH

6" COMPACTED LOAM

SURFACE TREATMENT

AND SEED OR OTHER

5' COVER (MIN)

(7' COVER MAX) —

CLEAN GRANULAR

COMPACTED AS

SPECIFIED -

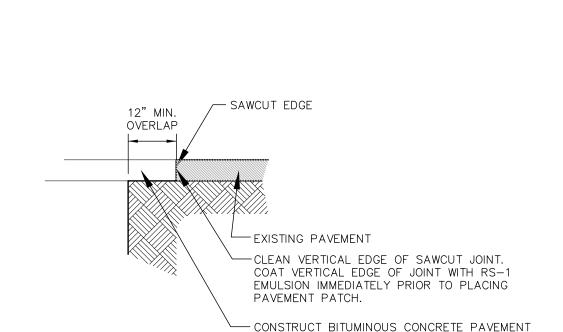
6" NOMINAL (12" IN LEDGE)

AS SPECIFIED

BACKFILL MATERIAL

PER PLANS -

NOT TO SCALE



NOTES:

THE ENGINEER.

(SEE PAVEMENT CROSS SECTION)

NON-PAVED AREA | PAVED AREA

l (MIN)

3' (MIN)

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL

2. ALL TRENCHING AND BACKFILL SHALL CONFORM WITH THE STANDARDS OF THE KITTERY WATER

MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99,

- SEE PAVEMENT SECTION

SEE PAVEMENT SECTION

SEE PAVEMENT SECTION

CAUTION TAPE READING

"CAUTION WATER LINE

BACKFILL TAMPED IN

STANDARD PROCTOR

12" LIFTS TO 95%

MAXIMUM DENSITY

HDPE DR11 OR CTS

SAND BLANKET

PIPE IN LEDGE

SAND BLANKET/BARRIER

SIEVE SIZE

200

6" BELOW PIPE IN

EARTH AND 12" BELOW

% FINER BY WEIGHT

90 - 100

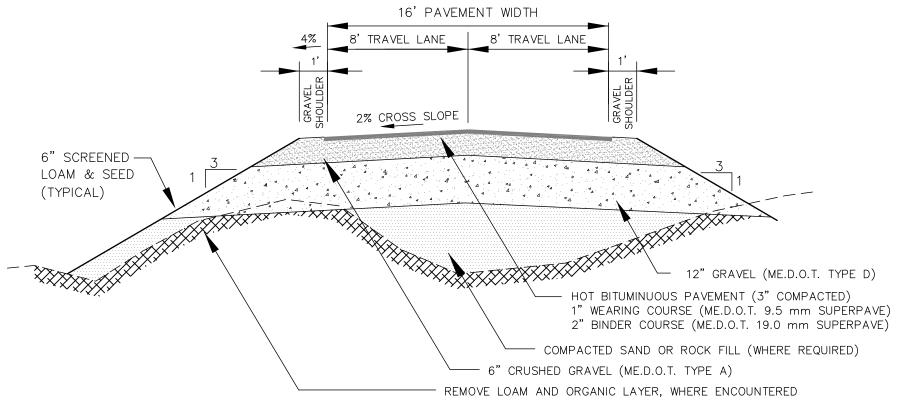
0 - 15

PLASTIC TUBING WATER

BURIED BELOW"

# TYPICAL PAVEMENT SAWCUT

NOT TO SCALE



TYPICAL ROADWAY CROSS SECTION

5. TACK COAT SHALL BE APPLIED BETWEEN SUCCESSIVE LIFTS OF ASPHALT.
6. THE BITUMINOUS PAVEMENT SHALL BE COMPACTED TO 92 TO 97 PERCENT OF ITS THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D-2041. THE BASE AND SUBBASE MATERIALS SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF THEIR MAXIMUM DRY

PEAK RATED FREQUENCY OR BY MEANS APPROVED BY

3. FILL BELOW PAVEMENT GRADES SHALL BE GRANULAR

GEOTECHNICAL ENGINEERING INSPECTIONS WITH THE

CONSTRUCTION MANAGER PRIOR TO PLACING GRAVELS.

BORROW COMPACTED PER MDOT REQUIREMENTS.

4. SITEWORK CONTRACTOR SHALL COORDINATE

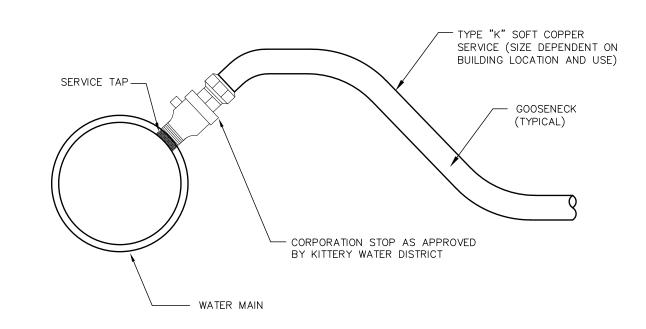
 ALL EXISTING FILL, BURIED ORGANIC MATTER, LOAM, AND/OR OTHER QUESTIONABLE MATERIAL SHALL BE REMOVED FROM BELOW ALL PAVEMENT, SHOULDERS AND UNDERGROUND PIPING/UTILITIES TO DEPTHS INDICATED.
 SUBGRADE SHALL BE PROOFROLLED A MINIMUM OF 6 PASSES WITH A VIBRATORY COMPACTOR OPERATING AT

DENSITIES AS DETERMINED BY ASTM D-1557.

NOT TO SCALE

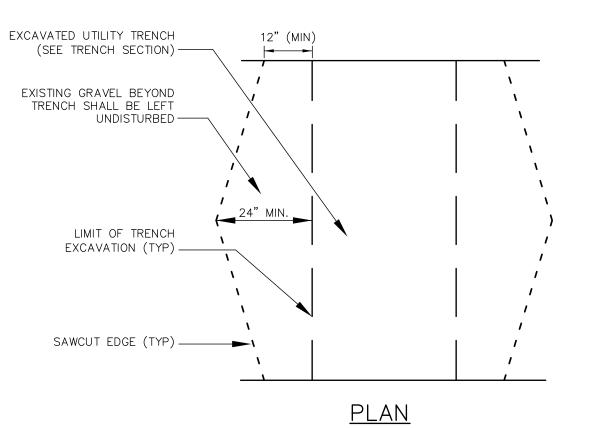
CONTRACT LIMIT -WATER MAIN EDGE OF PAVEMENT \_\_\_ 1' MIN. \_\_ 1'-0" MIN. -CORPORATION STOP APPROVED BY KITTERY WATER DISTRICT — 1" (MIN.) CTS PLASTIC TUBING SERVICE LINE CAP & WITNESS CURB STOP AT OR BEYOND (ANY McDONALD CONTRACT LIMIT OR FORD BRAND) -AS SHOWN ON THE PLANS.

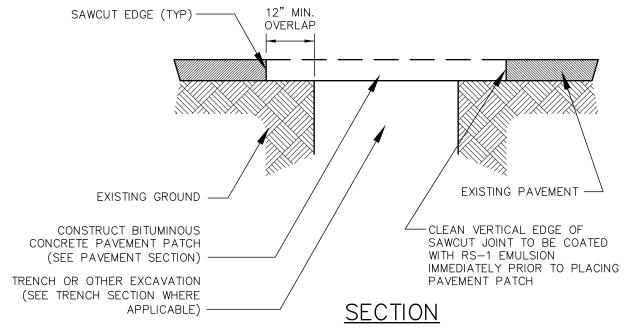
NOTE: ALL MATERIALS AND SPECIFICATIONS SHALL CONFORM TO KITTERY WATER DEPARTMENT STANDARDS AND REQUIREMENTS. VERIFY PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.



# WATER SERVICE CONNECTION

NOT TO SCALE



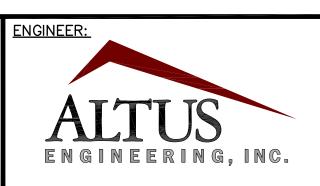


## <u>NOTES</u>

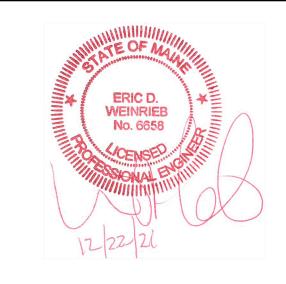
- 1. MACHINE CUT EXISTING PAVEMENT.
- 2. ALL TEMPORARY, DAMAGED OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
- 3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET MEDOT REQUIREMENTS.

TYPICAL TRENCH PATCH

NOT TO SCALE



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



THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

ISSUED FOR:

SSLIE DATE:

ISSUE DATE:

DECEMBER 22, 2021

REVISIONS
NO. DESCRIPTION

IO. DESCRIPTIONBYDATE0 INITIAL SUBMISSIONEBS 12/22/2

APPROVAL

DRAWN BY: \_\_\_\_\_ RMB

APPROVED BY: \_\_\_\_\_ EBS

DRAWING FILE: \_\_\_\_ 5235DETAILS.DWG

SCALE:

NOT TO SCALE

OWNER:/APPLICANT:

LUSITANO. LLC

JIM HIGGINS

119 KINGS HIGHWAY NO.

ELIOT, MAINE 03903

PROJECT:

RE-DEVELOPMENT
PLAN

TAX MAP 16, LOT 148

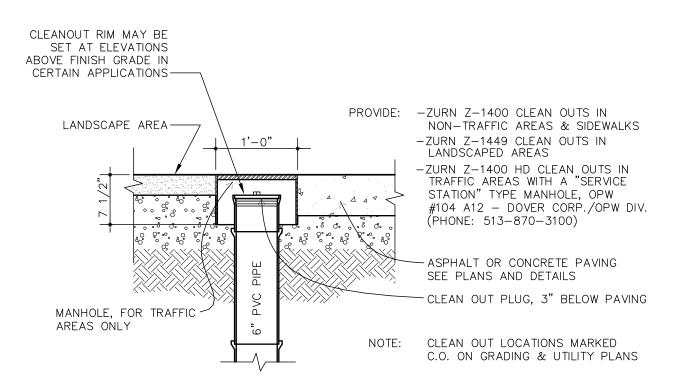
28 WYMAN AVENUE KITTERY, MAINE

TITI C.

DETAIL SHEET

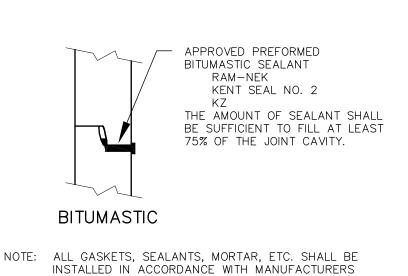
SHEET NUMBER:

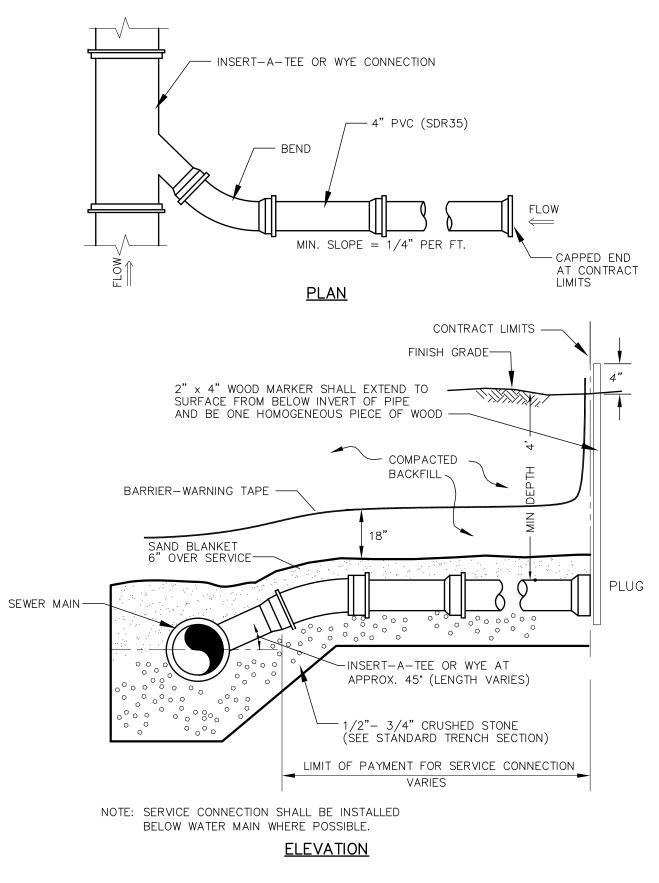
C-7



**CLEANOUT** 

NOT TO SCALE





### NON-PAVED AREA | PAVED AREA LOAM AND SEED OR OTHER SURFACE TREATMENT PER PLANS -- SEE PAVEMENT SECTION 6" GRAVEL BORROW — SUITABLE EXCAVATED SEE PAVEMENT SECTION BACKFILL OR CLEAN GRANULAR BACKFILL SEE PAVEMENT SECTION MATERIAL COMPACTED AS SPECIFIED -"CAUTION - WARNING" TAPE 18" BELOW SURFACE -SAND BLANKET AS SPECIFIED BELOW -WOOD SHEETING AS REQUIRED (3" MINIMUM THICKNESS) — -SCREENED GRAVEL OR CRUSHED STONE BEDDING FOR FULL WIDTH OF THE TRENCH NON-WOVEN GEOTEXTILE UP TO SPRINGLINE OF PIPE, 6" A.O.S.=70 OR LESS — BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UNDISTURBED SOIL -3'-0" (MIN) OR D+2 - ROCK SUBGRADE

- 1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99,
- 2. INSULATE GRAVITY SEWER AND FORCEMAINS WHERE THERE IS LESS THAN 5'-0" OF COVER WITH 2" THICK CLOSED CELL RIGID BOARD INSULATION, 18" ON EACH SIDE OF PIPE.

FOR SINGLE PIPE

(WHICHEVER IS GREATER)

3. MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDEN TRENCH ACCORDINGLY IF MULTIPLE PIPES

(TEMPLATE)

SAND I	BLANKET/BARRIER	SCREENED GRAVEL O	R CRUSHED STONE BEDDING
SIEVE SIZE	% FINER BY WEIGHT	SIEVE SIZE	% PASSING BY WEIGHT
1/2" 200	90 - 100 0 - 15	1" 3/4" 3/8" # 4 # 8	100 90 - 100 20 - 55 0 - 10 0 - 5

SECTION B-B

### STANDARD TRENCH NOTES

- 1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWING.
- 2. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH SHALL
- 3. SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. BLANKET MAY BE REPLACED WITH BEDDING MATERIAL FOR CAST-IRON, DUCTILE IRON, AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE AND THE GEOTEXTILE IS RELOCATED ACCORDINGLY.
- 4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL ALL WET OR SOFT MUCK, PEAT, OR CLAY, ALL EXCAVATED LEDGE MATERIAL, ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION, AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN CROSS COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLE RECONSTRUCTION WILL BE PRESERVED.
- 5. BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE MAINE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES
- 6. SHEETING, IF REQUIRED: WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION 1 FOOT ABOVE THE TOP OF PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAT 1 FOOT ABOVE THE TOP
- 7. W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.) ALSO, W SHALL BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
- 8. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL, FILL AND/OR LOAM SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- 9. CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE MAINE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATION REQUIREMENTS FOR CLASS A (3000#) CONCRETE AS FOLLOWS: CEMENT: 6.0 BAGS PER CUBIC YARD WATER: 5.75 GALLONS PER BAG

CEMENT MAXIMUM SIZE OF AGGREGATE: 1 INCH CONCRETE ENCASEMENT IS <u>NOT</u> ALLOWED FOR PVC PIPE.

- 10. CONCRETE FULL ENCASEMENT: IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MINIMUM). BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.
- 11. MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DESIGN STANDARDS REQUIRE TEN FEET (10') SEPARATION BETWEEN WATER AND SEWER. REFER TO TOWN'S STANDARD SPECIFICATIONS FOR METHODS OF PROTECTION IN AREAS THAT CANNOT MEET THESE REQUIREMENTS.
- 12. IN AREAS WHERE DEWATERING IS REQUIRED OR THE TRENCH SLOPE EXCEEDS 5%, THE CONTRACTOR SHALL INSTALL TRENCH DAMS IN ACCORDANCE WITH MEDEP REGULATIONS.

SEWER MANHOLE DETAIL B

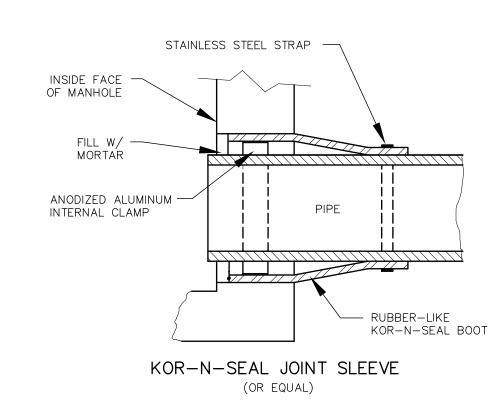
NOT TO SCALE

SEWER SERVICE CONNECTION

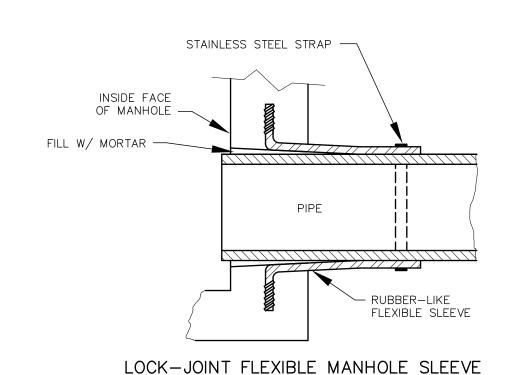
NOT TO SCALE

DRAINAGE & SEWER TRENCH

NOT TO SCALE



NOTE: ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.



(OR EQUAL)

SEWER MANHOLE DETAIL A

NOT TO SCALE

SEWER MANHOLE

- 30" CLEAR OPENING INCLUDING FRAME AND COVER WITH PICK-HOLES NOTE: MANHOLE STEPS SHALL NOT BE PERMITTED FRAME TO BE SET IN BED OF MORTAR \$}}}} ADJUST TO GRADE WITH -BRICK, 2 COURSES (MIN.); MAXIMUM 12" ADJUSTMENT 2'-0" MIN. - ECCENTRIC CONE 4'-0" MAX. 48" MIN. 2 LAYERS OF BUTYL RUBBER JOINT COMPOUND (TYP.) (SEE DETAIL-B) -SEE DETAIL-A FOR APPROVED JOINTING METHODS \_ 5" MIN. 2'-6" MIN. 6" BEDDING OF 1/2" TO 3/4" CRUSHED STONE

BASE SECTION TO BE FULL WALL THICKNESS AND -MORTAR ALL AROUND MONOLITHIC TO A POINT 6" 3" MAXIMUM DISTANCE TO FLEXIBLE JOINT ABOVE THE PIPE CROWN OF PIPE INTO MANHOLE (SEE NOTE 9) - STEEL REINFORCED - BRICK MASONRY SECTION A-A TOP OF SHELF SHALL BE 1" ABOVE CROWN OF HIGHEST PIPE 12" MIN. EACH SIDE CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE. INVERT AND SHELF TO BE PLACED AFTER LEAKAGE TEST TYPICAL SECTION UNDERLAYMENT OF MANHOLE

INVERT AND SHELF SHALL

BE BRICK MASONRY. —

## MANHOLE NOTES:

- 1. IT IS THE INTENTION OF THE MAINE DEP THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT IN ANY APPROVED MANHOLE. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MAN-HOLE CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE, A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
- 2. <u>BARRELS AND CONE SECTIONS</u> SHALL BE PRECAST REINFORCED.
- 3. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.
- 4. <u>LEAKAGE TEST</u> SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN'S STANDARD SPECIFICATIONS AND WITH MAINE DEP 10-144 CMR 241.
- 5. <u>INVERTS AND SHELVES</u> MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION. THE INVERTS SHALL BE LAID OUT IN CURVES, OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. BRICK MASONRY SHALL CONFORM WITH ASTM C32.
- 6. MORTAR MORTAR USED FOR MANHOLE CONSTRUCTION SHALL CONFORM WITH MAINE DEP 10-144
- 7. FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL CONFORM WITH ASTM A48/48M, BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) LETTER "S" FOR SEWERS OR "D" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH
- 8. <u>BEDDING</u> SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33.

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

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

9. <u>CONCRETE</u> FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000 LBS.) CONCRETE OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS:

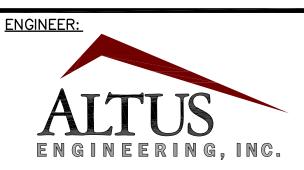
CEMENT 6.0 BAGS PER CUBIC YARD WATER 5.75 GALLONS PER BAG CEMENT MAXIMUM SIZE OF AGGREGATE 1 INCH 9.

10. FLEXIBLE JOINT A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:

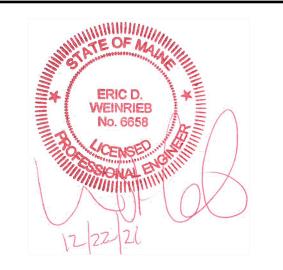
PVC PIPE - 60" RCP & CI PIPE - ALL SIZES - 48" AC & VC PIPE - UP THROUGH 12" DIAMETER - 18" AC & VC PIPE - LARGER THAN 12" DIAMETER - 36"

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

NOT TO SCALE



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



THIS DRAWING HAS NOT BEEN RELEASED FOR CONSTRUCTION

<u>SSUED FOR:</u>

**ISSUE DATE:** 

<u>REVISIONS</u>

DECEMBER 22, 2021

NO. DESCRIPTION O INITIAL SUBMISSION

BY DATE EBS 12/22/2

**APPROVAL** 

RMB DRAWN BY: EBS APPROVED BY 5235DETAILS.DWG DRAWING FILE: \_

SCALE:

NOT TO SCALE

OWNER:/APPLICANT:

LUSITANO. LLC

JIM HIGGINS

ELIOT, MAINE 03903

119 KINGS HIGHWAY NO.

**RE-DEVELOPMENT PLAN** 

TAX MAP 16, LOT 148

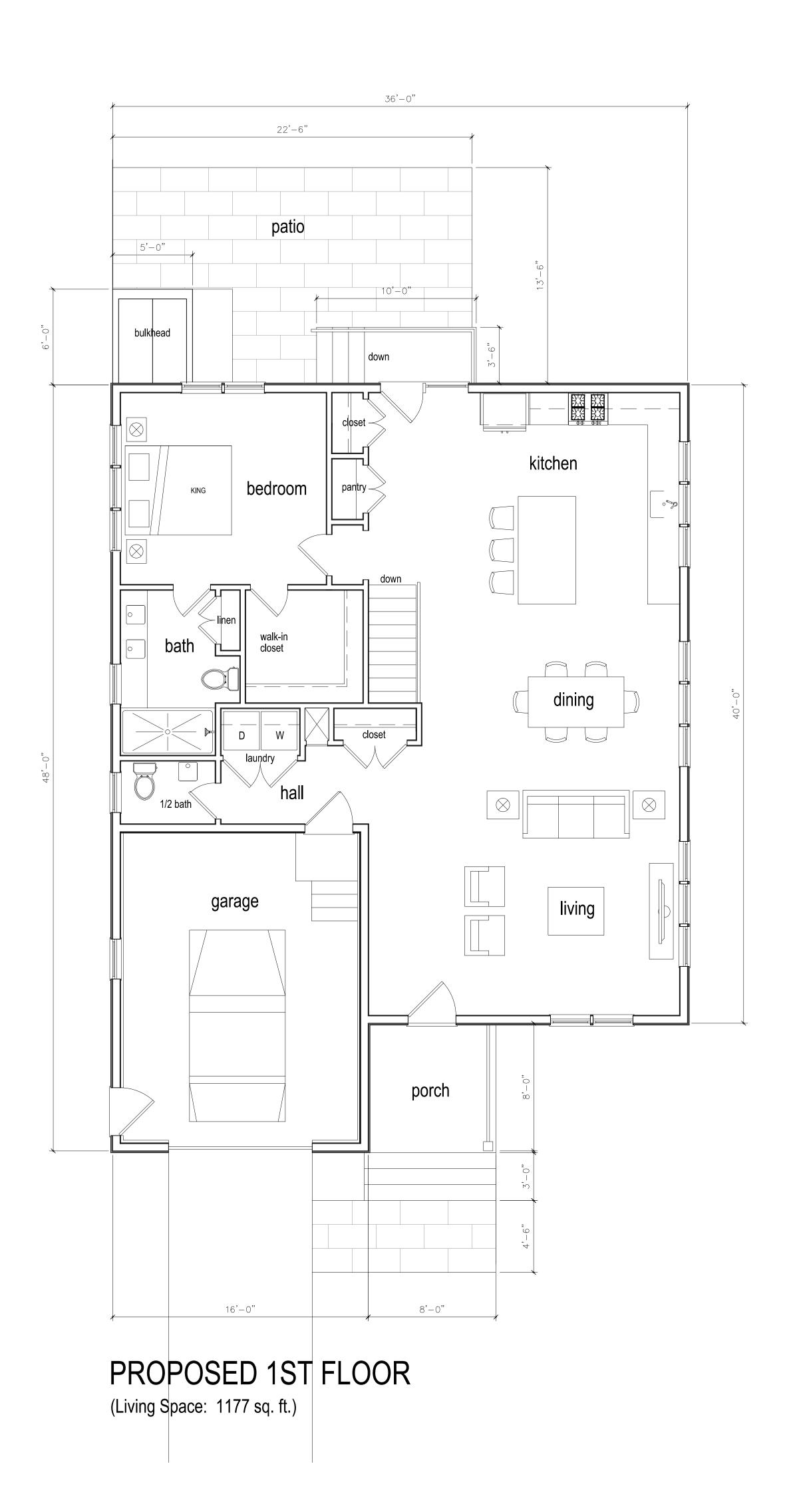
KITTERY, MAINE

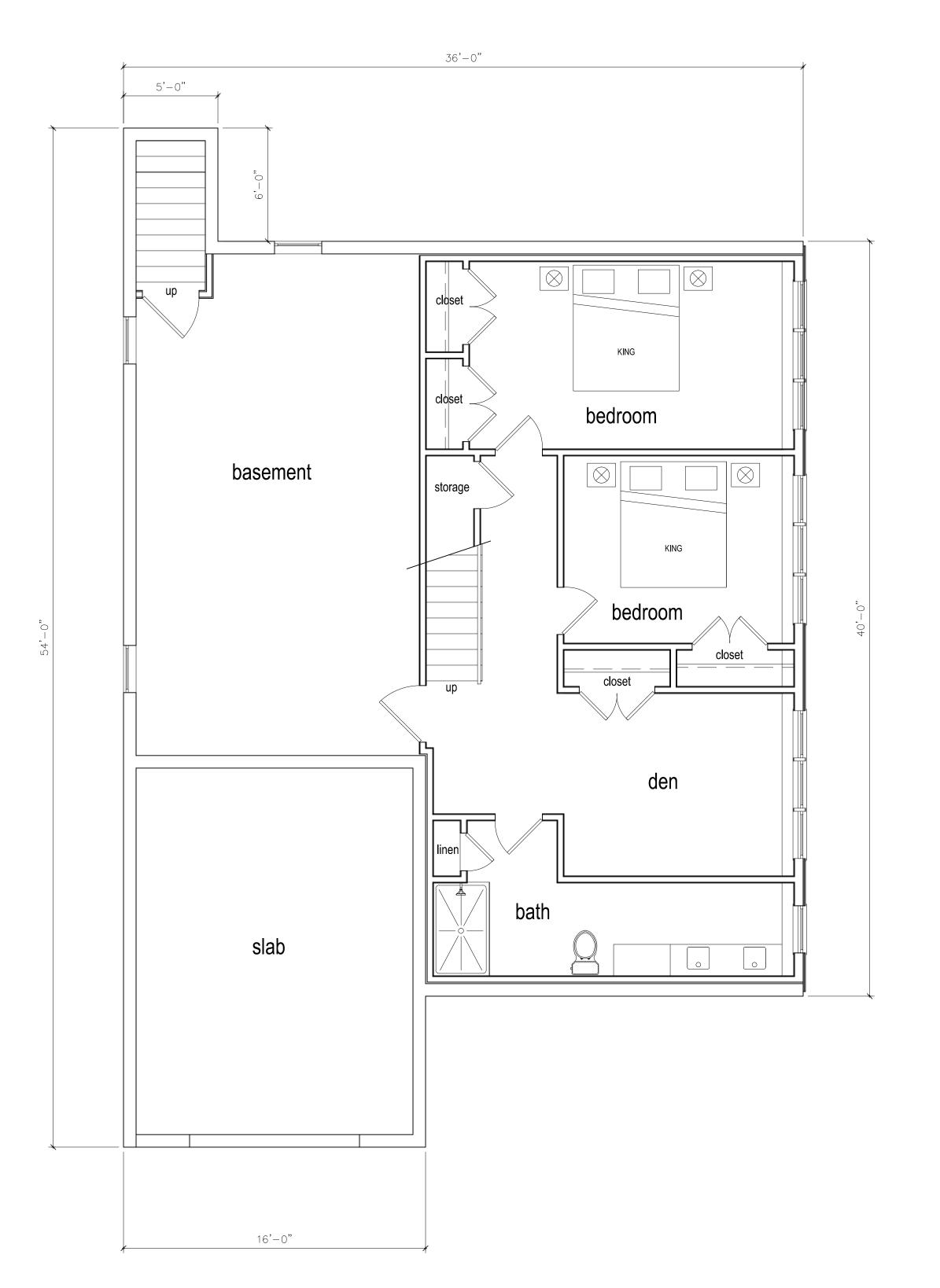
28 WYMAN AVENUE

DETAIL SHEET

SHEET NUMBER:

C - 8





# PROPOSED LOWER LEVEL

(Living Space: 729 sq. ft.)

# Wyman Hill

revisions

# **Residential Unit**

28 Wyman Avenue Kittery Maine

architectural designer

# HIGGINS + DESIGN

119 Kings Highway North Eliot, ME 03903 Tel 617.501.6149 jimhiggins05@comcast.net

# Proposed Residential Unit

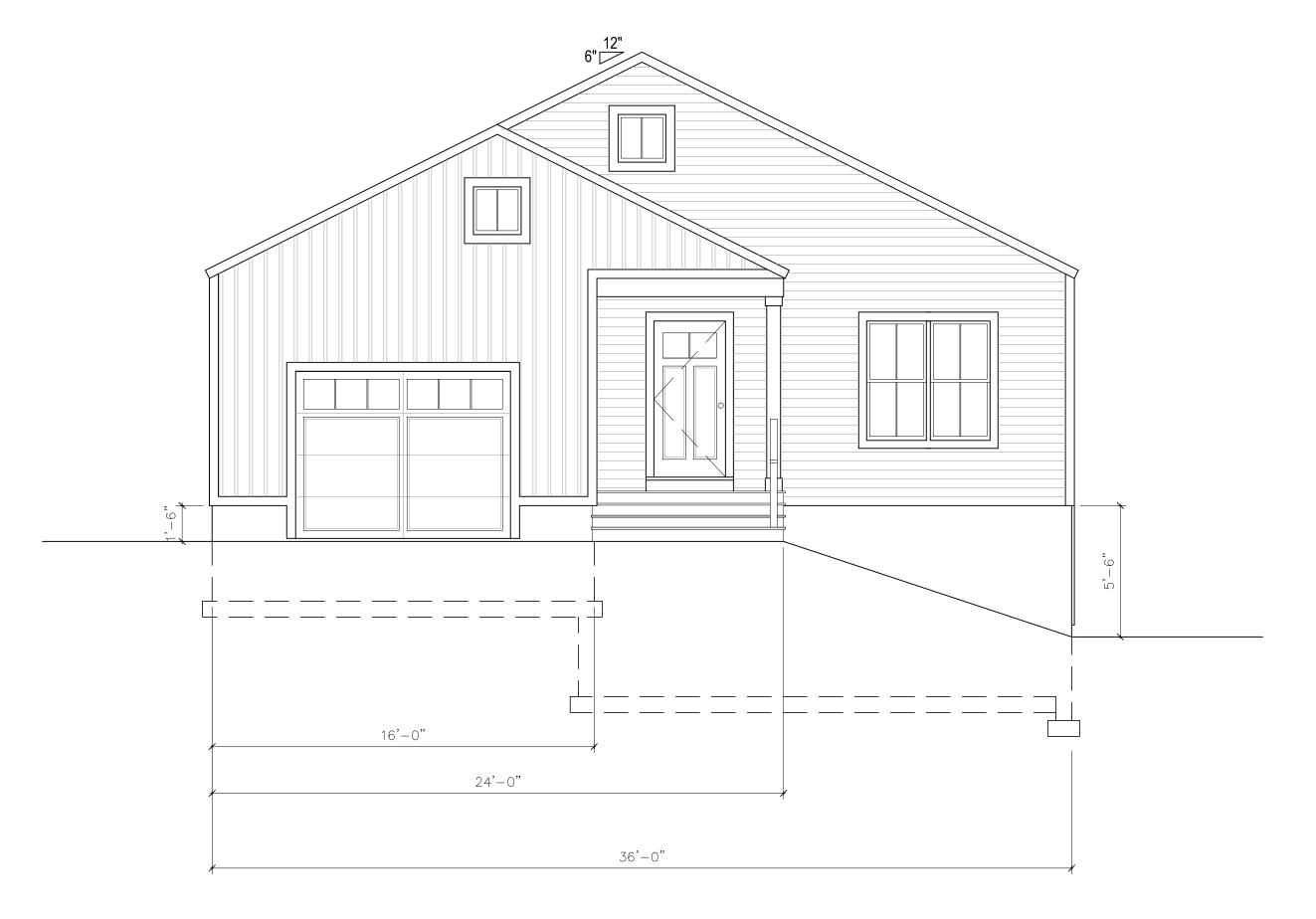
# **LAYOUT PLANS**

scale
1/4"=1'-0"

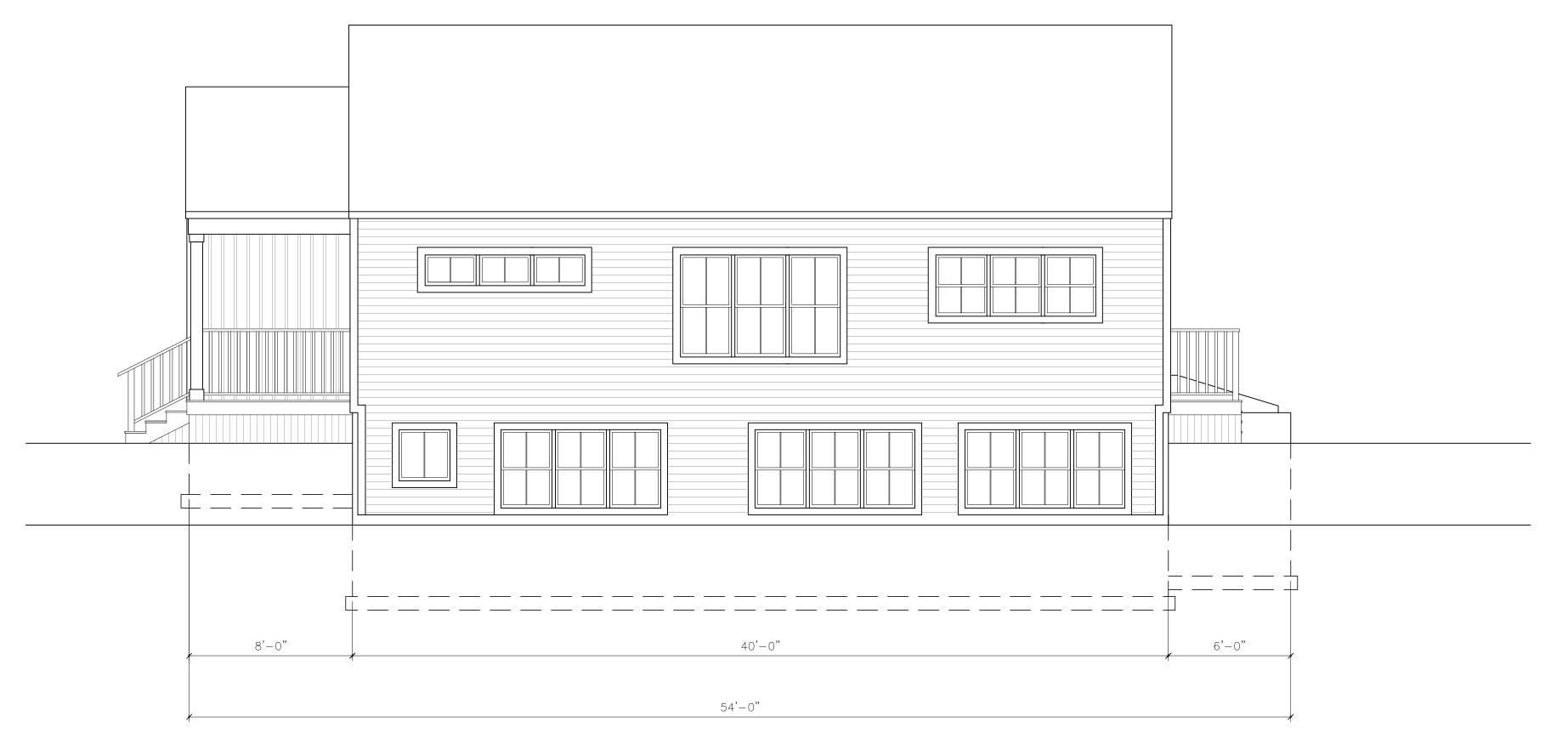
date
November 22, 2021

project
Kittery01

**A01** 



FRONT ELEVATION



RIGHT SIDE ELEVATION

revisions

# Wyman Hill

# **Residential Unit**

28 Wyman Avenue Kittery Maine

architectural designer

# HIGGINS + DESIGN

119 Kings Highway North Eliot, ME 03903 Tel 617.501.6149 jimhiggins05@comcast.net

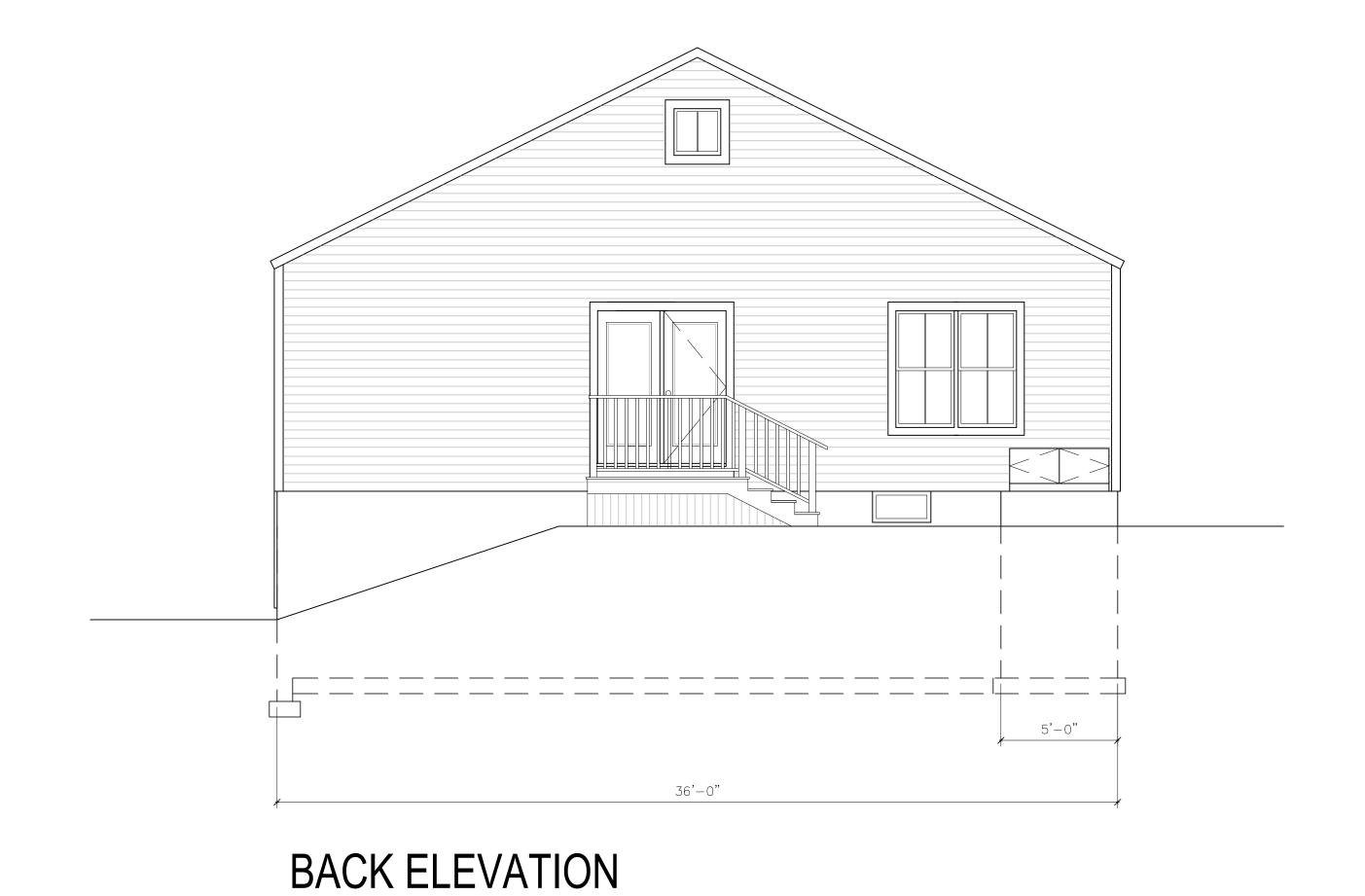
# Proposed Residential Unit

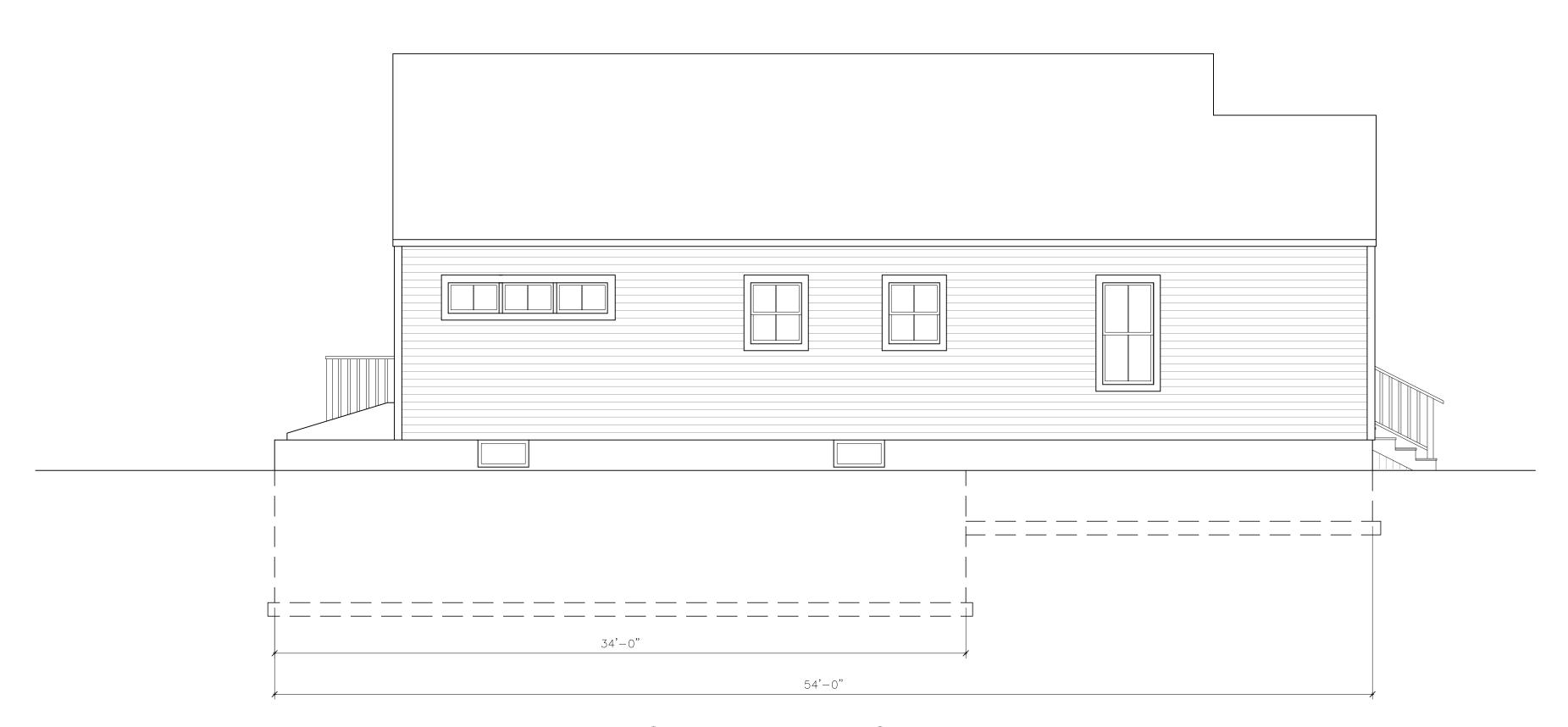
# **ELEVATIONS**

scale
1/4"=1'-0"

date
November 22

project Kittery01 **A02** 





LEFT SIDE ELEVATION

revisions

12-5-16 Kitchen Layout, Exterior Door Revisions

# Wyman Hill

# **Residential Unit**

28 Wyman Avenue Kittery Maine

architectural designer

# HIGGINS + DESIGN

119 Kings Highway North Eliot, ME 03903 Tel 617.501.6149 jimhiggins05@comcast.net

# Proposed Residential Unit

# **ELEVATIONS**

scale
1/4"=1'-0"

date
November 22, 20

project
Kittery01

**A03** 

# JANET T. MILLS GOVERNOR

# STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION



May 23, 2022

Joseph Noel Consultant PO Box 174 South Berwick, ME 03908

Re: Vernal Pool Significance Determination, Pool ID # 4743-Kittery

Dear Joseph Noel:

Vernal pools are temporary to semi-permanent wetlands occurring in shallow depressions that typically fill during the spring and dry during the summer or in drought years. They provide important breeding and foraging habitat for a wide variety of specialized wildlife species including several rare, threatened, and endangered species.

Based on your field survey, it has been determined that the vernal pool identified above on the property of James Higgins is NOT SIGNIFICANT because either: 1. the feature does not meet the definition of a vernal pool under the Significant Wildlife Habitat rules, 06-096 CMR 335(9) or 2. the vernal pool does not meet the biological standards for exceptional wildlife use of the Significant Wildlife Habitat rules, 06-096 CMR 335(9)(B). Therefore, activities within 250 feet of the pool are not regulated under the Natural Resources Protection Act (NRPA) unless there are other protected natural resources nearby such as streams or freshwater wetlands. I have attached a copy of the database printout that verifies the State's findings with respect to your survey.

I want to also advise you that the pool area on the property can be considered a freshwater wetland and therefore direct pool alterations may require permitting under the NRPA.

The Department will notify the landowner of the pool status under separate cover. If you have any questions or need further clarification, please contact Mark Stebbins at 207-592-4810 or email at: Mark.N.Stebbins@maine.gov

Sincerely,

Nicholas D. Livesay, Director Bureau of Land Resources

cc. town file

WEBSITE: www.maine.gov/dep

### **IFW Recommendations for Significant Vernal Pool Determinations**

The following is a list of pools and IFW's recommendations for whether or not they qualify as Significant Vernal Pools, one of Maine's Significant Wildlife Habitats.

### Data current as of: Friday, May 06, 2022

			· · ·
IFW's Pool ID: 4743 Twp: Kittery Observer's ID: VP1 (JWN #22-10)		UTM Coordinates of Pool Center: 359282 E, 4772074 N ProjectType: 28 Wyman Avenue	
Landowner: James Higgins		Contact:	Joseph Noel - Consultant
	119 Kings Highway North	<del></del>	PO Box 174
	Eliot, ME 03903	<del></del>	South Berwick, ME 03908
	(617) 501-6149 jimhiggins05@comcast.net	<del></del>	(207) 384-5587 jwnoel@aol.com

Survey Date: 4/7/2022 Additional Survey Dates: 04/20/2022

IFW's Recommendation: RED: NOT SIGNIFICANT, does not meet the biological criteria

IFW Comments: Pool provides some habitat for wood frogs and spotted salamanders but does not meet biological criteria.

### Letter of Authorization

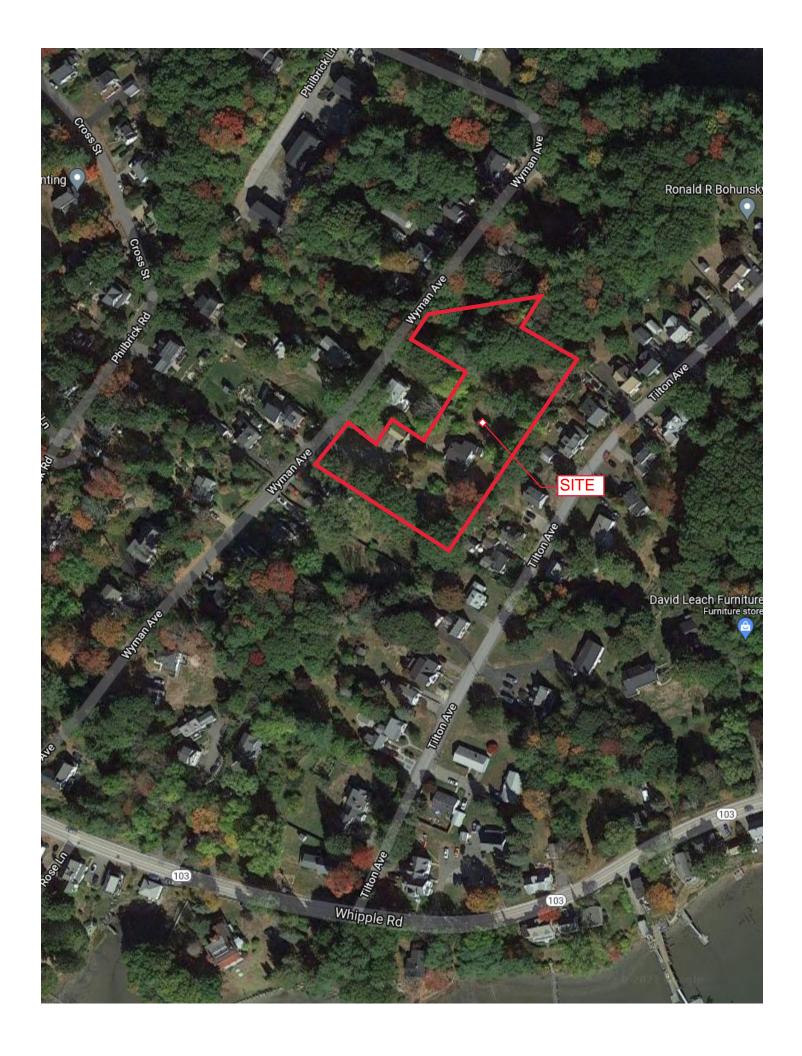
I, Jim Higgins of Lusitano, LLC ("LLC"), hereby authorize Altus Engineering, Inc. of Portsmouth, NH to represent the LLC as the Owner and Applicant in all matters concerning the engineering and related permitting of a site plan on Kittery Tax Map 16, Lot 148 located at 28 Wyman Ave. in Kittery Maine. This authorization shall include any signatures required for Federal, State and Municipal permit applications.

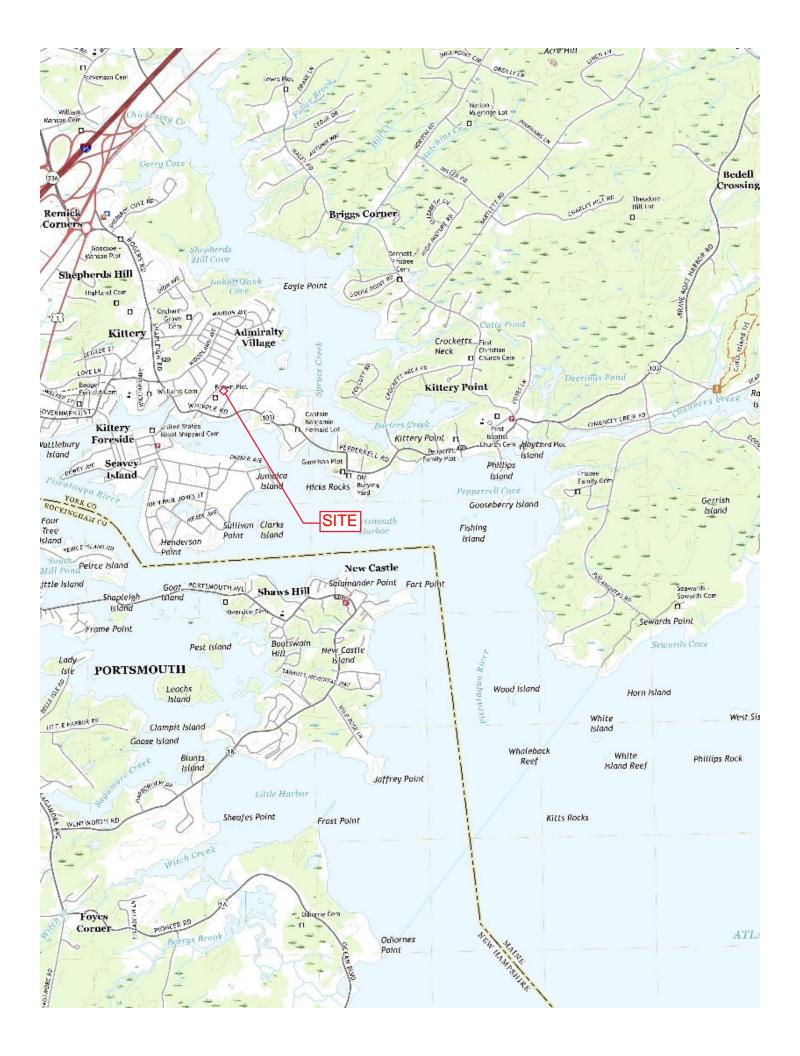
James D. Williams 12.21.21

Jim Higgins Date

- Halling Favers 12.21.20

Print Name Date





## DEED OF SALE BY PERSONAL REPRESENTATIVE

### KNOW ALL MEN BY THESE PRESENTS

That LINDA L. THERIAULT of Eliot, County of York and State of Maine, duly appointed and acting Personal Representative of the Estate of HARRY JOSEPH HANNIGAN a/k/a HARRY J. HANNIGAN, deceased, who died testate, as shown by the probate records of the County of York, Maine, Docket No. 2015-0936, and having given notice to each person succeeding to an interest in the real property described below at least ten (10) days prior to the sale, by the power conferred by the Probate Code, and every other power, for consideration paid, grants to LUSITANO LLC, a Maine Limited Liability Company, % Rui Monteiro-Claro with a mailing address of 119 Kings Highway North, Eliot, ME 03903, all the right, title and interest of the Estate in and to the following described real estate, together with the buildings thereon, situate in Kittery, County of York and State of Maine and bounded as follows:

SEE Exhibit A attached hereto and made a part hereof.

BEING the same premises conveyed by Amelia M. Hannigan to Harry J. Hannigan and Patricia A. Hannigan as joint tenants by Deed dated August 4, 1986 and recorded in the York County Registry of Deeds, Book 3961, Page 42. The said Patricia A. Hannigan predeceased her husband, leaving Harry J. Hannigan the surviving joint tenant.

WITNESS my hand and seal this 20th day of June, 2017.

Witness

Linda L. Theriault
Personal Representative
of the Estate of
Harry Joseph Hannigan
a/k/a Harry J. Hannigan

STATE OF MAINE YORK, ss.

June 20, 2017

Then personally appeared the above-named LINDA L. THERIAULT in her said capacity as Personal Representative of the Estate of Harry Joseph Hannigan a/k/a Harry J. Hannigan and acknowledged the foregoing instrument to be her free act and deed,

Before me,

Donna M. Reynolds, Notary Public My commission expires 6/30/22

Probate\HANNGAN~H.PRD.Wyman 16395-23817



28 Wyman Avenue Kittery, Maine Kittery Map 16, Lot 148

### EXHIBIT A

A certain lot or parcel of land with the existing house and garage and all other improvements located thereon, depicted as "TAX MAP 16, Lot 148, 82,839 square feet,1.90 acres", on plan entitled, "Standard Boundary Survey for Property at 28 Wyman Avenue, Kittery, York County, Maine owned by Harry A. & Patricia J. Hannigan, 28 Wyman Avenue, Kittery, ME 03904," prepared by Easterly Surveying, Inc., 191 State Road, Suite #1, Kittery, Maine 03904, dated 4/3/08 and recorded in the York County Registry of Deeds on April 15, 2008 in Plan Book 329 at Page 7.

### STORMWATER INSPECTION AND MAINTENANCE MANUAL

### Wyman Hill Kittery Assessor's Map 16, Lot 148

### OWNER AT TIME OF APPROVAL: Lusitano, LLC 119 King's Highway North Elliot, Maine 03903

Proper inspection, maintenance, and repair are key elements in maintaining a successful stormwater management program on a developed property. Routine inspections ensure permit compliance and reduce the potential for deterioration of infrastructure or reduced water quality. Inspections should also be carried out after any rainfall of 1" or more. Qualified inspectors shall be Professional Engineers licensed in the State of Maine or Certified Professionals in Erosion and Sediment Control. The following responsible parties shall be in charge of managing the stormwater facilities:

### **RESPONSIBLE PARTIES:**

Owner:	Lusitano, LLC	(617) 501-6149	
	Name	Company	Phone
Inspection:	Lusitano, LLC		(617) 501-6149
·	Name	Company	Phone
Maintenance	e: Lusitano, LLC		(617) 501-6149
	Name	Company	Phone

### **NOTES:**

Inspection and maintenance responsibilities shall transfer to any future property owner(s).

This manual shall be updated as needed to reflect any changes related to any transfer of ownership and/or any delegation of inspection and maintenance responsibilities to any entity other than those listed above.



### **GRASSED UNDERDRAINED SOIL FILTERS**

Underdrain soil filters control stormwater quality by capturing and retaining runoff and passing it through a filter bed comprised of a specific media. The basin shall be inspected semi-annually and following major storm events for evidence of erosion, clogging or of bypass conditions.

### Maintenance

- *Drainage:* The filter should within 24 to 48 hours following a one-inch storm or greater. If the system drains too fast, adjust the outlet release valve opening to regulate the outflow.
- *Sediment Removal*: Sediment and plant debris should be removed from the pretreatment structure at least annually.
- *Mowing*: If mowing is desired, only hand-held string trimmers or push-mowers are allowed on the filter (no tractor) and the grass bed should be mowed no more than 2 times per growing season to maintain grass heights of no less than 6 inches.
- Fertilization: Fertilization of the underdrained filter area should be avoided unless absolutely necessary to establish vegetation.
- Weeding: Weeding to control unwanted or invasive plants if necessary.
- *Grass cover:* Maintaining a healthy cover of grass will minimize clogging with fine sediments. If ponding exceeds 48 hours, the top of the filter bed should be rototilled to reestablish the soil's filtration capacity.
- Soil Filter Replacement: The top several inches of the filter can be replaced with fresh material if water is ponding for more than 72 hours, or the basin can be rototilled, seeded and mulched. Once the filter is mature, adding new material (a 1-inch to 2-inch cover of mature compost) can compensate for subsidence.

### **CULVERTS AND DRAINAGE PIPES**

*Function* – Culverts and drainage pipes convey stormwater away from buildings, walkways, and parking areas and to surface waters or closed drainage systems.

### Maintenance

- Culverts and drainage pipes shall be inspected semi-annually, or more often as needed, for accumulation of debris and structural integrity. Leaves and other debris shall be removed from the inlet and outlet to insure the functionality of drainage structures. Debris shall be disposed of on site where it will not concentrate back at the drainage structures or at a solid waste disposal facility.
- Riprap Areas Culvert outlets and inlets shall be inspected during annual maintenance and operations for erosion and scour. If scour or erosion is identified, the owner shall take appropriate means to prevent further erosion.

### **YARD DRAINS**

Function – Yard drains collect stormwater, primarily from paved surfaces, landscape areas and roofs.

### Maintenance

- Remove leaves and debris from structure grates on an as-needed basis.
- Sumps shall be inspected and cleaned annually and any removed sediment and debris shall be disposed of at a solid waste disposal facility.

### LANDSCAPED AREAS - FERTILIZER MANAGEMENT

*Function* – Fertilizer management involves controlling the rate, timing and method of fertilizer application so that the nutrients are taken up by the plants thereby reducing the chance of polluting the surface and ground waters. Fertilizer management can be effective in reducing the amounts of phosphorus and nitrogen in runoff from landscaped areas, particularly lawns.

### Maintenance

- Have the soil tested by your landscaper or local Soil Conservation Service for nutrient requirements and follow the recommendations.
- Do not apply fertilizer to frozen ground.
- Clean up any fertilizer spills.
- Do not allow fertilizer to be broadcast into water bodies.
- When fertilizing a lawn, water thoroughly, but do not create a situation where water runs off the surface of the lawn.

### LANDSCAPED AREAS - LITTER CONTROL

*Function* – Landscaped areas tend to filter debris and contaminates that may block drainage systems and pollute the surface and ground waters.

### Maintenance

- Litter Control and lawn maintenance involves removing litter such as trash, leaves, lawn clippings, pet wastes, oil and chemicals from streets, parking lots, and lawns before materials are transported into surface waters.
- Litter control shall be implemented as part of the grounds maintenance program.

### **VEGETATIVE SWALES**

*Function* – Vegetative swales filter sediment from stormwater, promote infiltration, and the uptake of contaminates. They are designed to treat runoff and dispose of it safely into the natural drainage system.

### Maintenance

- Timely maintenance is important to keep a swale in good working condition. Mowing of grassed swales shall be monthly to keep the vegetation in vigorous condition. The cut vegetation shall be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale.
- Fertilizing shall be bi-annual or as recommended from soil testing.
- Inspect swales following significant rainfall events.
- Woody vegetation shall not be allowed to become established in the swales or rock riprap outlet protection and if present shall be removed.
- Accumulated debris disrupts flow and leads to clogging and erosion. Remove debris and litter as necessary.
- Inspect for eroded areas. Determine cause of erosion and correct deficiency as required. Monitor repaired areas.

### RIP RAP OUTLETS, PLUNGE POOLS, SWALES, LEVEL SPREADERS AND BUFFERS

*Function* – Rip rap outlets and plunge pools slow the velocity of runoff, minimizing erosion and maximizing the treatment capabilities of associated buffers. Vegetated buffers, either forested or meadow, slow runoff which promotes and reduces peak rates of runoff. The reduced velocities and the presence of vegetation encourage the filtration of sediment and the limited bio-uptake of nutrients.

### Maintenance

- Inspect riprap, level spreaders and buffers at least annually for signs of erosion, sediment buildup, or vegetation loss.
- Inspect level for signs of condensed flows. Level spreader and rip rap shall be maintained to disperse flows evenly over level spreader.
- If a meadow buffer, provide periodic mowing as needed to maintain a healthy stand of herbaceous vegetation.
- If a forested buffer, then the buffer should be maintained in an undisturbed condition, unless erosion occurs.
- If erosion of the buffer (forested or meadow) occurs, eroded areas should be repaired and replanted with vegetation similar to the remaining buffer. Corrective action should include eliminating the source of the erosion problem and may require retrofit or reconstruction of the level spreader.
- Remove debris and accumulated sediment and dispose of properly.

### **GENERAL CLEAN UP**

- Upon completion of the project, the contractor shall remove all temporary stormwater structures (i.e., temporary stone check dams, silt fence, temporary diversion swales, catch basin inlet filter, etc.). Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared, and seeded. Remove any sediment in catch basins and clean drain pipes that may have accumulated during construction.
- Once in operation, all paved areas of the site should be swept at least once annually at the end of winter/early spring prior to significant spring rains.

### MUNICIPAL REPORTING

The Owner shall retain a qualified post-construction stormwater inspector to inspect the site's stormwater infrastructure. By July 1 of each year, said inspector shall provide a completed and signed certification to the Town's Code Enforcement Officer that the inspection has been completed. The notification shall include a determination of the ongoing maintenance and functionality of the infrastructure, describe any deficiencies, and outline any necessary corrective action taken or recommended to the Owner.

### **APPPENDIX**

- A. Stormwater System Operations and Maintenance Report
- B. Site Grading and Drainage Plan

### STORM WATER SYSTEM OPERATION AND MAINTENANCE REPORT

	General Information				
Pro	oject Name				
Ow	ner				
Ins	pector's Name(s)				
	pector's Contact				
	te of Inspection		Start Time:	End Time:	
Tyl	pe of Inspection: Annual Report Post-storr	m event 🔲 Due	e to a discharge of significant amounts of sedi	ment	
Not	tes:				
			charges of Significant Amounts of Sedin	ment	
	oject (Control of Control of Cont	Status	Notes	C.1 C.11 :	
			indicated by (but is not limited to) observation	ons of the following.	
NOI	te whether any are observed during	g inis inspection:	Notes/ Action take	on ·	
1	Do the current site conditions ref	elect  Yes	Trotes/ Action take	en.	
1	the attached site plan?	□No			
2	Is the site permanently stabilized				
	temporary erosion and sediment	□No			
	controls are removed, and storm				
	discharges from construction act	ıvıty			
3	are eliminated?  Is there evidence of the discharge	e of <b>\Q</b> Yes			
3	significant amounts of sediment				
	surface waters, or conveyance	10 110			
	systems leading to surface water	s?			
		<u>.</u>			
		Permit (	Coverage and Plans		
#	BMP/Facility	Inspected	Corrective Action Needed and Notes	Date Corrected	
	Grassed Underdrained Soil Filter				
	V. ol Dodan	□No			
	Yard Drains	□Yes □No			
	Drainage Pipes	□Yes			
	Brumage ripes	□No			
	Plunge Pools	□Yes			
		□No			
	Vegetated Areas	□Yes			
-		□No			
		□Yes □No			
		□Yes			
		□No			



Natural Resources Conservation

Service

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

# Custom Soil Resource Report for York County, Maine



### **Preface**

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

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

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

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

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

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

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

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

# **Contents**

Preface	2
Soil Map	5
Soil Map	
Legend	
Map Unit Legend	
Map Unit Descriptions	
York County, Maine	
LnB—Lyman loam, 3 to 8 percent slopes, rocky	10
LnC—Lyman loam, 8 to 15 percent slopes, rocky	11

# Soil Map

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



### MAP LEGEND

### Area of Interest (AOI)

Area of Interest (AOI)

### Soils

Soil Map Unit Polygons



Soil Map Unit Lines



Soil Map Unit Points

### Special Point Features

**⊚** B

Blowout

 $\boxtimes$ 

Borrow Pit

Ж

Clay Spot

^

Closed Depression

Š

Gravel Pit

.

Gravelly Spot

0

Landfill

٨.

Lava Flow

Marsh or swamp

\_

Mine or Quarry

仌

Miscellaneous Water

0

Perennial Water
Rock Outcrop

į.

Saline Spot

. .

Sandy Spot

. .

Severely Eroded Spot

\_

Sinkhole

8

Slide or Slip

Ø

Sodic Spot

### LLGLIND



Spoil Area Stony Spot



Very Stony Spot



Wet Spot Other



Special Line Features

### Water Features

\_

Streams and Canals

### Transportation

Rails

~

Interstate Highways

\_\_

US Routes

 $\sim$ 

Major Roads

~

Local Roads

### Background

Marie Control

Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20.000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: York County, Maine Survey Area Data: Version 19, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

### **Map Unit Legend**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LnB	Lyman loam, 3 to 8 percent slopes, rocky	1.5	20.2%
LnC	Lyman loam, 8 to 15 percent slopes, rocky	5.8	79.8%
Totals for Area of Interest		7.2	100.0%

### **Map Unit Descriptions**

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

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

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

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

### Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

### York County, Maine

### LnB—Lyman loam, 3 to 8 percent slopes, rocky

### **Map Unit Setting**

National map unit symbol: 2trq7

Elevation: 0 to 520 feet

Mean annual precipitation: 36 to 65 inches
Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 60 to 160 days

Farmland classification: Farmland of statewide importance

### **Map Unit Composition**

Lyman, rocky, and similar soils: 86 percent

Minor components: 14 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

### **Description of Lyman, Rocky**

### Setting

Landform: Mountains, hills

Landform position (two-dimensional): Shoulder, summit, backslope

Landform position (three-dimensional): Mountaintop, mountainbase, crest, side

slope

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till

derived from mica schist

### **Typical profile**

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loam

E - 3 to 5 inches: fine sandy loam

Bhs - 5 to 7 inches: loam Bs1 - 7 to 11 inches: loam

Bs2 - 11 to 18 inches: channery loam

R - 18 to 28 inches: bedrock

### **Properties and qualities**

Slope: 3 to 8 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00

to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: D Hydric soil rating: No

### **Minor Components**

### Tunbridge, rocky

Percent of map unit: 6 percent Landform: Hills, mountains

Landform position (two-dimensional): Backslope, summit, shoulder

Landform position (three-dimensional): Mountaintop, mountainbase, side slope,

crest

Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

### Skerry, rocky

Percent of map unit: 5 percent Landform: Hills, mountains

Landform position (two-dimensional): Footslope, backslope

Landform position (three-dimensional): Mountaintop, mountainbase, crest, side

slope

Microfeatures of landform position: Closed depressions, closed depressions

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: No

### Hermon, rocky

Percent of map unit: 2 percent Landform: Hills, mountains

Landform position (two-dimensional): Backslope, summit, shoulder

Landform position (three-dimensional): Mountaintop, mountainbase, side slope,

crest

Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

### Brayton, rocky

Percent of map unit: 1 percent Landform: Hills, mountains

Landform position (two-dimensional): Toeslope, footslope

Landform position (three-dimensional): Mountaintop, mountainbase, crest, side

slope

Microfeatures of landform position: Closed depressions, closed depressions

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

### LnC—Lyman loam, 8 to 15 percent slopes, rocky

### Map Unit Setting

National map unit symbol: 2trq9

Elevation: 0 to 690 feet

Mean annual precipitation: 36 to 65 inches

### Custom Soil Resource Report

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 60 to 160 days

Farmland classification: Not prime farmland

### **Map Unit Composition**

Lyman, rocky, and similar soils: 86 percent

Minor components: 14 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

### **Description of Lyman, Rocky**

### Setting

Landform: Hills, mountains

Landform position (two-dimensional): Shoulder, summit, backslope Landform position (three-dimensional): Mountaintop, mountainbase,

mountainflank, crest, side slope

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till

derived from mica schist

### **Typical profile**

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loam

*E - 3 to 5 inches:* fine sandy loam

Bhs - 5 to 7 inches: loam
Bs1 - 7 to 11 inches: loam

Bs2 - 11 to 18 inches: channery loam

R - 18 to 28 inches: bedrock

### **Properties and qualities**

Slope: 8 to 15 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00

to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D Hydric soil rating: No

### **Minor Components**

### Tunbridge, rocky

Percent of map unit: 6 percent Landform: Mountains, hills

Landform position (two-dimensional): Backslope, summit, shoulder Landform position (three-dimensional): Mountaintop, mountainbase,

mountainflank, side slope, crest

Down-slope shape: Convex

### Custom Soil Resource Report

Across-slope shape: Convex Hydric soil rating: No

### Skerry, rocky

Percent of map unit: 5 percent Landform: Hills, mountains

Landform position (two-dimensional): Footslope, backslope

Landform position (three-dimensional): Mountaintop, mountainbase,

mountainflank, crest, side slope

Microfeatures of landform position: Closed depressions, closed depressions, open

depressions, open depressions

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: No

### Hermon, rocky

Percent of map unit: 2 percent Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Mountaintop, mountainbase,

mountainflank, side slope, crest

Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

### Brayton, rocky

Percent of map unit: 1 percent Landform: Hills, mountains

Landform position (two-dimensional): Toeslope, footslope

Landform position (three-dimensional): Mountaintop, mountainbase,

mountainflank, crest, side slope

Microfeatures of landform position: Open depressions, open depressions, closed

depressions, closed depressions

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes