



HALEY WARD®
ENGINEERING | ENVIRONMENTAL | SURVEYING

March 9, 2022

Town of Kittery
Attn: Bart McDonough, Town Planner
200 Rogers Road
Kittery, Maine 03904

Re: Kittery Aroma Joes | Planning Board Review Comments

Dear Mr. McDonough:

Haley Ward, Inc. (Haley Ward) has prepared the following response to the comments that were raised by the Planning Board at their December 9, 2021, meeting. We were not provided a list of formal comments, so the following items are from our notes during the meeting.

- 1. The applicant should request a waiver to have the site access located on Route 1 instead of Parsons Lane. Include a sketch of what the Parsons Lane access could look like. Include reasons why access from Parsons Lane is not feasible.**

We request a waiver as noted above for the site access to be located on Route 1 as shown on our proposed site plan. Attached to this letter is a sketch showing what the access could look like from Parsons Lane. Parsons Lane is a private drive that is not suitable for commercial use. There are safety issues with the proximity of the existing drive to the existing business to the north. Adding a commercial traffic entrance adjacent to that existing business would create serious safety issues for vehicles from both locations entering and exiting. The site access has been discussed in detail with MaineDOT through our Traffic Movement Permit process, and it has been determined that the access as proposed, directly across Route 1 from another new commercial entrance, is the best location. We would also note that this location is very close to the existing entrance to this lot.

- 2. The applicant should add the pre and post development impervious area numbers to the plan.**

The attached revised site plan includes these numbers in the project summary table.





3. The applicant should perform a Geotechnical study and provide a report prior to final approval in lieu of a soils survey.

Please refer to the draft geotechnical report.

4. Please add snow storage areas to the site plan and note that snow will be removed from the site if the storage areas become full.

Please refer to the attached revised site plan.

5. Provide information on the proposed plantings and how they will screen headlights from shining onto Route 1.

The proposed plantings were selected based on the town ordinance. We revised some of the tree's species to provide more evergreen plantings instead of deciduous. The trees are all 12' tall at time of planting, and the shrubs are all 2-3 feet high at time of planting. We believe that we have strategically placed them in order to keep headlights from shining into the road.

6. The applicant should request a waiver for the proposed flat roof.

We are requesting a waiver for the back section of the building to have a flat roof. The front part of the building that faces Route 1 has a gable end. The small back half has a flat roof section.

7. Verify that all proposed signage meets the sign ordinance.

We have reviewed the sign ordinance and believe that the proposed signage complies with it. Please refer to the attached sign detail for the proposed pylon sign.

We look forward to reviewing the revised plans with the planning board at the meeting on March 24th. If you have any questions, please do not hesitate to contact the undersigned at (207) 989-4824 or sthies@haleyward.com.

Sincerely,
Haley Ward, Inc.

Sean Thies, PE
Senior Project Manager

SMT/cmj
Attach.



REPORT

21-0653 S

March 8, 2022

Explorations and Geotechnical Engineering Services

Proposed Coffee Shop
523 Route 1
Kittery, Maine

Prepared For:

Haley Ward
Attention: Sean Thies, PE
One Merchants Plaza, Suite 701
Bangor, Maine 04401

Prepared By:

S. W. Cole Engineering, Inc.
10 Centre Road
Somersworth, New Hampshire 03878
T: 603-692-0088

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21-0653 S

March 8, 2022

Haley Ward
Attention: Sean Thies, PE
One Merchants Plaza, Suite 701
Bangor, Maine 04401

Subject: Explorations and Geotechnical Engineering Services
Proposed Coffee Shop
523 Route 1
Kittery, Maine

Dear Sean:

In accordance with our revised Proposal, dated February 18, 2022, we have performed subsurface explorations for the subject project. This report summarizes our findings and geotechnical recommendations, and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information at the site to develop geotechnical recommendations relative to foundations and earthwork associated with the proposed building and pavement construction. Our scope of services included seven test boring explorations, soils laboratory testing, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is an open lot southwest of Route 1 / Parsons Lane intersection in the Town of Kittery. We understand from our discussion with you regarding the project, there has been some site filling undertaken to raise the grade to its current elevation. The site is graded relatively flat extending about 200 feet away from Route 1 from elevation 78 to 74 feet. At this point the site slopes downward to the west to elevation 48 feet. The

upper 20 to 25 feet of elevation of the slopes vary from 2H:1V to 1.5H:1V, becoming steeper approaching the south.

Based on the information provided, we understand proposed construction plans call for construction of a new small lightweight structure housing a coffee shop covering 1,010 square feet in plan area. Construction will include entrance drive, drive through loop, and associated paved parking covering approximately 200 by 200 feet area in plan dimensions. We understand a finished floor elevation of 78.5 feet is proposed for the building and finish grade for the pavement will vary from 75 to 78 feet. The pavement area will extend beyond the top of the existing slope in the central portion of the existing west slope. New slope grading in this area will be graded to 2H:1V.

Proposed and existing site features are shown on the “Exploration Location Plan” attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Seven test borings (B-1 through B-7) were made at the site on February 23, 2022 by S. W. Cole Explorations, LLC. The exploration locations were selected and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using a recreational grade GPS receiver. The approximate exploration locations are shown on the “Exploration Location Plan” attached in Appendix B. Logs of the explorations and a key to the notes and symbols used on the logs are attached in Appendix C. The elevations shown on the logs were estimated based on topographic information shown on the “Exploration Location Plan”.

2.2 Field Testing

The test borings were drilled using hollow stem auger techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. SPT blow counts results are shown on the logs.

2.3 Laboratory Testing

Soil samples obtained from the explorations were returned to our laboratory for further classification and testing. Three sieve analysis and moisture content tests were

performed. The results of moisture content tests are shown on the logs and the sieve analysis results are attached in Appendix D.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

Test borings B-1 and B-2 were made in the general vicinity of the proposed building and encountered a soils profile generally made up of 6 inches of fill consisting of brown gravelly sand some silt overlying 6 to 8 feet of loose to medium dense uncontrolled fill consisting of dark brown silty gravelly sand with cobbles and boulders overlying native medium dense to very dense glacial till. These borings were terminated in glacial till at depths of 26.0 and 20.5 feet, respectively.

Test borings B-3 and B-7 were made in the proposed paved areas. These test borings encountered uncontrolled fill consisting of loose to medium dense dark brown gravelly silty sand trace organics possible cobbles and boulders extending to depths of about 10.5 to 20 feet increasing in depth to the west. The fills overlie native medium dense sand and medium dense to very dense glacial till where the borings were terminated at depths varying from 12.0 to 22.0 feet.

Refer to the attached logs in Appendix B for more detailed subsurface information.

3.2 Groundwater

The test borings did not encounter free water. Long-term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use. Further, it is likely that water is perched within the silty fill materials.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principal geotechnical considerations include:

- All uncontrolled fills must be completely removed from beneath the proposed building footprint and extending beyond the edge of the footings by 1 foot laterally for every 1 foot of over-excavation below the bottom of footing. The over-excavation should be backfilled with properly compacted Granular Borrow. Provided the excavated fill does not contain debris, organic, other deleterious matter or oversized rock particles and moisture content is adequate for achieving compaction, it may be possible to re-use the material to backfill the over-excavation in controlled compacted lifts.
- Spread footing foundations and a slab-on-grade floors bearing on properly prepared subgrades appear suitable for the proposed building. Footings should bear on at least 6-inches of compacted Crushed Stone overlying undisturbed native soils or Crushed Stone overlying suitable Granular Borrow over undisturbed native soils. On-grade floor slabs should bear on at least 12-inches of properly compacted Structural Fill overlying properly prepared subgrades.
- Uncontrolled fills in the paved areas come with unknowns related to fill composition and compaction. These properties create uncertainties and risk of settlement when supporting of pavements and utilities. Given the depth of the fill, it is unlikely practical or economically feasible to completely over-excavate and replace the fill, however this approach would eliminate the risk of settlement from uncontrolled fills. It is our opinion the risk associated with allowing fills to remain below paved areas involves poor lack of support to the pavement. The lack of support will likely result in settlement and cracking of pavement and an overall shorter pavement life. Additional maintenance of the pavement will be required during its life. The owner must understand and accept the risks and consequences if the fills are allowed to remain in place.
- There are methods that can help reduce the risk of poor pavement performance, but not eliminate the risk. Some of these methods include; partial over-excavation to two feet below pavement section subgrade, proof-rolling with a large vibratory drum roller, placement of a geotextile reinforcing fabric/grid, and placement of new controlled subgrade fill below the pavement section.
- We recommend the existing slope in the southwest portion of the site be flattened to 2H:1V by extending the toe further to the west and filling over the existing slope.

- Earthwork and grading activities should occur during drier, non-freezing weather of Spring, Summer and Fall. Excavation of bearing surfaces should be completed with a smooth-edged bucket to lessen subgrade disturbance.

4.2 Site and Subgrade Preparation

We recommend that site preparation begin with the construction of an erosion control system to protect adjacent drainage ways and areas outside the construction limits. Surficial organics, roots and topsoil should be completely removed from areas of proposed fill and construction. As much vegetation as possible should remain outside the construction areas to lessen the potential for erosion and site disturbance.

Building Pad and Footings: As discussed, uncontrolled fills are present in the proposed building area. All uncontrolled fills must be completely removed from beneath the proposed building. The extent of removal should extend 1 foot laterally outward from outside edge of perimeter footings for every 1-foot of excavation depth (1H:1V bearing splay). The over-excavated area should be backfilled with compacted Granular Borrow.

We recommend that final cuts to subgrade made using a smooth-edged bucket and that footings be underlain by at least 6-inches of Crushed Stone.

Pavement and Utilities: Uncontrolled fills encountered beneath proposed paved areas extend up to 20 feet below existing grade. The uncontrolled fills in the paved areas are not ideal for support of pavement, however in our opinion there is not a practical or economical construction approach to address these fills. Considering the site use it is our opinion the fills can remain under paved areas, however all parties should recognize that settlement and loss of support will likely occur and pavement distress is to be expected. Often this requires more frequent maintenance and results in a shorter pavement life. At a minimum the pavement subgrade should be proof-rolled with a vibratory roller compactor weighing at least 10 kips.

Beneath pipes and utility structures where fills soils are the subgrade, we recommend over-excavating with a smooth edged bucket and installing at least 1 foot of Crushed Stone wrapped in non-woven geotextile below customary bedding materials followed by geotextile fabric and customary bedding materials.

4.3 Excavation and Dewatering

Excavation work will generally encounter uncontrolled fills. Care must be exercised during construction to limit disturbance of the bearing soils. Earthwork and grading activities should occur during drier, non-freezing weather of Spring, Summer and Fall. Final cuts to native subgrade should be performed with a smooth-edged bucket to help reduce strength loss from soil disturbance.

Vibrations from construction should be controlled below threshold limits of 0.5 in/sec for structures, water supply wells and infrastructure within 500 feet of the project site. More restrictive vibration limits may be warranted in specific cases with sensitive equipment, historic structures or artifacts on-site or within close proximity.

Sumping and pumping dewatering techniques should be adequate to control water in shallow excavations. Controlling the water levels to at least one foot below planned excavation depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures, utilities and roadways. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

4.4 Foundations

We recommend the proposed building be supported on spread footings founded on at least 6-inches of Crushed Stone overlying undisturbed native soils or Crushed Stone overlying suitable Granular Borrow over undisturbed native soils. For foundations bearing on properly prepared subgrades, we recommend the following geotechnical parameters for design consideration:

Geotechnical Parameters for Spread Footings and Foundation Walls	
Design Frost Depth (100 year AFI)	4.0 feet
Net Allowable Soil Bearing Pressure	3.0 ksf
Base Friction Factor	0.35
Total Unit Weight of Backfill	125 pcf
At-Rest Lateral Earth Pressure Coefficient	0.5
Internal Friction Angle of Backfill	30°
Seismic Soil Site Class	D (IBC 2015)
Estimated Total Settlement	1-inch
Differential Settlement	½-inch

4.5 Foundation Drainage

We recommend an underdrain system be installed on the outside edge of the perimeter footings. The underdrain pipe should consist of 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in Crushed Stone and wrapped in non-woven geotextile fabric. The underdrain pipe must have a positive gravity outlet protected from freezing, clogging and backflow. Surface grades should be sloped away from the building for positive surface water drainage.

4.6 Slab-On-Grade

On-grade floor slabs in heated areas may be designed using a subgrade reaction modulus of 100 pci (pounds per cubic inch) provided the slab is underlain by at least 12-inches of compacted Structural Fill placed over properly prepared subgrades. The structural engineer or concrete consultant must design steel reinforcing and joint spacing appropriate to slab thickness and function.

We recommend a sub-slab vapor retarder particularly in areas of the building where the concrete slab will be covered with an impermeable surface treatment or floor covering that may be sensitive to moisture vapors. The vapor retarder must have a permeance that is less than the floor cover or surface treatment that is applied to the slab. The vapor retarder must have sufficient durability to withstand direct contact with the sub-slab base material and construction activity. The vapor retarder material should be placed according to the manufacturer's recommended method, including the taping and lapping of all joints and wall connections. The architect and/or flooring consultant should select the vapor retarder products compatible with flooring and adhesive materials.

The floor slab should be appropriately cured using moisture retention methods after casting. Typical floor slab curing methods should be used for at least 7 days. The architect or flooring consultant should assign curing methods consistent with current applicable American Concrete Institute (ACI) procedures with consideration of curing method compatibility to proposed surface treatments, flooring and adhesive materials.

4.7 Entrance Slabs and Sidewalks

Entrance slabs and sidewalks adjacent to the building must be designed to reduce the effects of differential frost action between adjacent pavement, doorways, and entrances. We recommend that non-frost susceptible Structural Fill be provided to a depth of at

least 4.0 feet below the top of entrance slabs. This thickness of Structural Fill should extend the full footprint of the entrance slab thereafter, transitioning up to the bottom of the adjacent sidewalk or pavement gravels at a 3H:1V or flatter slope.

4.8 Fill, Backfill and Compaction

We recommend the following fill and backfill materials: recycled products must also be tested in accordance with applicable environmental regulations and approved by a qualified environmental consultant.

Granular Borrow: Fill to raise grades in building and paved areas, as well as to repair soft areas, should be sand or silty sand meeting the requirements of 2020 MaineDOT Standard Specification 703.19 Granular Borrow.

Structural Fill: Backfill for foundations, slab base material and material below exterior entrances slabs should be clean, non-frost susceptible sand and gravel meeting the gradation requirements for Structural Fill as given below:

Structural Fill	
Sieve Size	Percent Finer by Weight
4 inch	100
3 inch	90 to 100
¼ inch	25 to 90
No. 40	0 to 30
No. 200	0 to 6

Crushed Stone: Crushed Stone, used beneath foundations and for underdrain aggregate should be washed ¾-inch crushed stone meeting the requirements of 2020 MaineDOT Standard Specification 703.13 Crushed Stone ¾-Inch.

Reuse of Site Soils: The on-site fill soils may be suitable for reuse as Granular Borrow, provided they meet the gradation requirements, are free of organics and debris, and are at a compactable moisture content at the time of reuse.

Placement and Compaction: Fill should be placed in horizontal lifts and compacted such that the desired density is achieved throughout the lift thickness with 3 to 5 passes of the compaction equipment. Loose lift thicknesses for grading, fill and backfill activities should not exceed 12 inches. We recommend that fill and backfill in building

and paved areas be compacted to at least 95 percent of its maximum dry density as determined by ASTM D-1557. Crushed Stone should be compacted with 3 to 5 passes of a vibratory plate compactor having a static weight of at least 500 pounds.

4.9 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. The contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather. If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.10 Paved Areas

We anticipate paved areas will be subjected primarily to passenger vehicle and light delivery truck traffic. Considering the site soils, and proposed usage, we offer the following pavement section for consideration.

FLEXIBLE (HMA) PAVEMENT SECTION – 2020 MaineDOT Standard Specs	
Pavement Layer	Material Thickness
MaineDOT 9.5 mm Hot Mix Asphalt	1 ½ inches
MaineDOT 19.0 mm Hot Mix Asphalt	2 ½ inches
MaineDOT 703.06 Aggregate Base Type A	6 inches
MaineDOT 703.06 Aggregate Subbase Type D	12 inches
Proof-rolled Subgrade, at a minimum	

The base and subbase materials should be compacted to at least 95 percent of their maximum dry density as determined by ASTM D-1557. Hot mix asphalt pavement should be compacted to 92 to 97 percent of its theoretical maximum density as determined by ASTM D-2041. A tack coat should be used between successive lifts of bituminous pavement.

It should be understood that frost penetration can be on the order of 4 feet in this area. In the absence of full depth excavation of frost susceptible soils below paved areas and subsequent replacement with non-frost susceptible compacted fill, frost penetration into

the subgrade will occur and some heaving and distress of pavement must be anticipated.

4.11 Design Review and Construction Testing

S.W.COLE should be retained to review the construction documents prior to bidding to determine that our earthwork, foundation and pavement recommendations have been properly interpreted and implemented.

A construction materials testing and quality assurance program should be implemented during construction to observe compliance with the design concepts, plans, and specifications. S.W.COLE is available to observe earthwork activities, the preparation of foundation bearing surfaces and pavement subgrades, as well as to provide testing and IBC Special Inspection services for soils, concrete, and asphalt construction materials.

5.0 CLOSURE

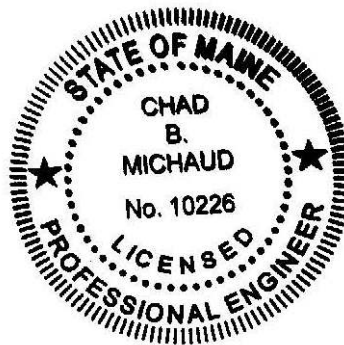
It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the construction phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.

Chad B. Michaud, P.E.
Principal Geotechnical Engineer

AJS/CBM:rec



APPENDIX A

Limitations

This report has been prepared for the exclusive use of Haley Ward for specific application to the proposed Coffee Shop on 523 Route 1 in Kittery, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

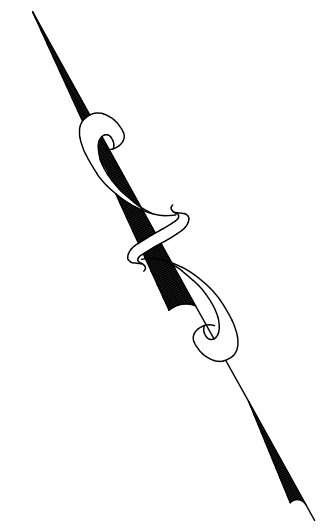
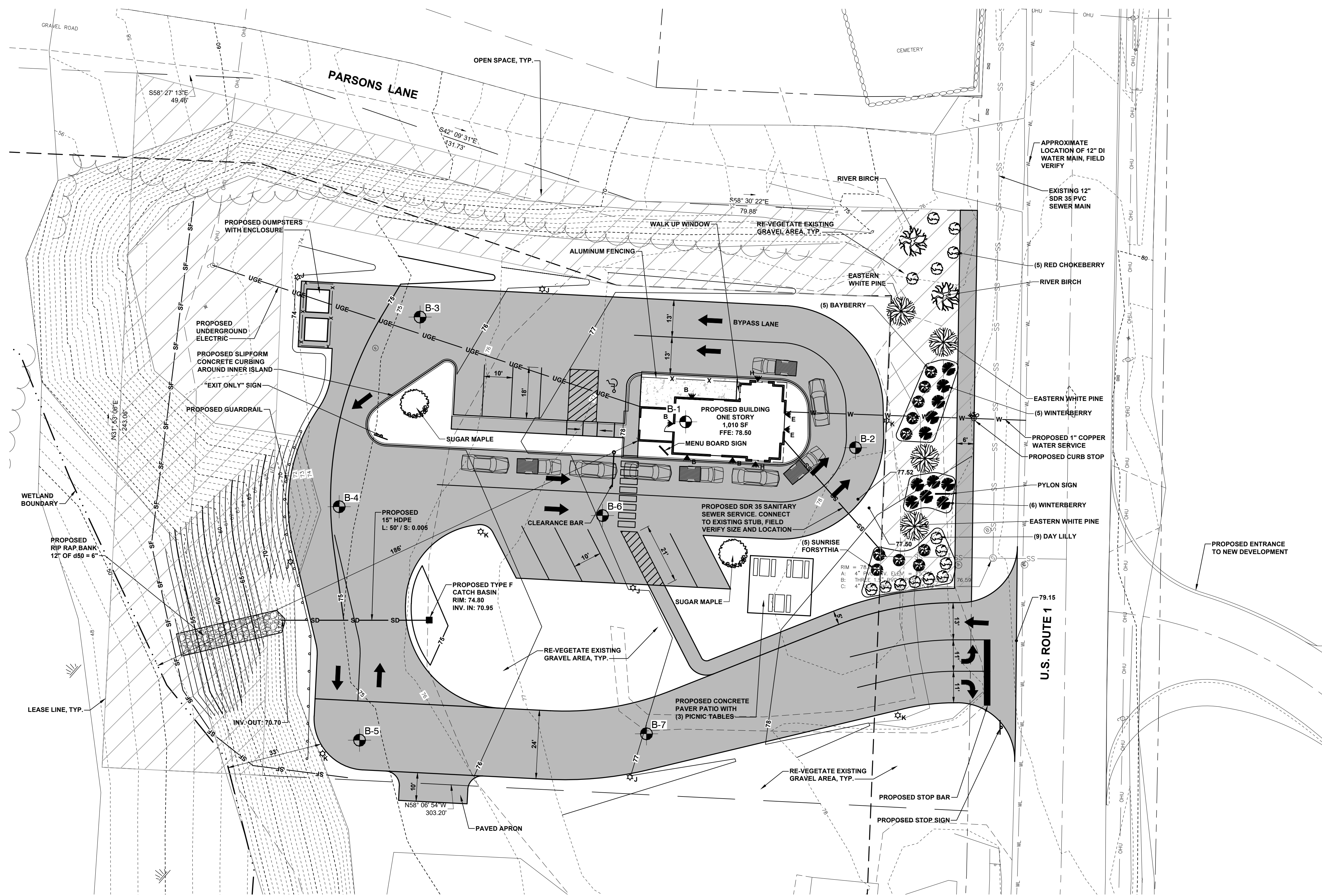
Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

Figures

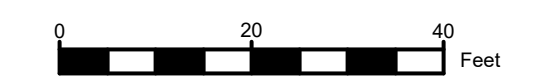


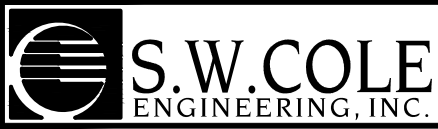
LEGEND:

 APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1" = 20' SCALE PLAN OF THE SITE ENTITLED "PROPOSED SITE PLAN," PREPARED BY HALEY WARD, DATED 05/26/2021.
2. THE BORINGS WERE LOCATED IN THE FIELD BY GPS SURVEY BY S. W. COLE ENGINEERING, INC. USING A RECREATIONAL GRADE GPS RECEIVER.
3. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
4. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.



	
HALEY WARD EXPLORATION LOCATION PLAN PROPOSED COFFEE SHOP 523 ROUTE 1 KITTERY, MAINE	
Job No.: 21-0653 Date: 03/08/2022	Scale: 1" = 20' Sheet: 1

P:\2021\21-0653\CAD\Drawings\21-0653-ELP.dwg, 3/8/2022 8:59:04 AM, T1: CEH, S.W. Cole Engineering, Inc.

APPENDIX C

Exploration Logs and Key



BORING LOG

BORING NO.: B-1
SHEET: 1 of 1
PROJECT NO.: 21-0653
DATE START: 2/23/2022
DATE FINISH: 2/23/2022

CLIENT: Haley Ward
PROJECT: Proposed Coffee Shop
LOCATION: 523 Route 1, Kittery, Maine

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 77.5' +/- **TOTAL DEPTH (FT):** 26.0 **LOGGED BY:** Antonio Santiago
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / N/A **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A / N/A **CORE BARREL:** N/A
HAMMER EFFICIENCY FACTOR: _____ **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free-water observed.

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level
▽ At time of Drilling D = Split Spoon Sample Pen. = Penetration Length WOR = Weight of Rods S_v = Field Vane Shear Strength, kips/sq.ft.
▽ At Completion of Drilling U = Thin Walled Tube Sample Rec. = Recovery Length WOH = Weight of Hammer q_u = Unconfined Compressive Strength, kips/sq.ft.
▽ After Drilling R = Rock Core Sample bpf = Blows per Foot RQD = Rock Quality Designation Ø = Friction Angle (Estimated)
V = Field Vane Shear mpf = Minute per Foot PID = Photoionization Detector N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks	
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD					Field / Lab Test Data
75 5 70 10 65 15 60 20 55 25	0-0.9		1D	X	0-0.9	11/3	3-50/5"	ID 6228M w = 9.8 %	0.5	Brown, gravelly SAND some silt (FILL) Medium dense to loose, dark brown, gravelly silty SAND with cobbles and boulders (FILL)		
	2-4		2D	X	2-4	24/18	11-22-18-9					
	5-7		3D	X	5-7	24/6	3-4-4-4					
	7-9		4D	X	7-9	24/6	3-3-6-23					
	10-12		5D	X	10-12	24/12	18-16-18-21			8.5	Dense, brown, gravelly silty SAND (TILL)	
	15-17		6D	X	15-17	24/12	13-24-18-27					
	20-21.3		7D	X	20-21.3	16/14	20-34-50/4"					
	25-26		8D	X	25-26	12/8	15-50					

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Bottom of Exploration at 26.0 feet

BORING NO.: B-1

BORING / WELL 21-0653.GPJ SWCE TEMPLATE.GDT 3/8/22



BORING LOG

BORING NO.: B-2
SHEET: 1 of 1
PROJECT NO.: 21-0653
DATE START: 2/23/2022
DATE FINISH: 2/23/2022

CLIENT: Haley Ward
PROJECT: Proposed Coffee Shop
LOCATION: 523 Route 1, Kittery, Maine

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 78' +/- **TOTAL DEPTH (FT):** 20.5 **LOGGED BY:** Antonio Santiago
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / N/A **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A / N/A **CORE BARREL:** N/A
HAMMER EFFICIENCY FACTOR: _____ **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free-water observed.

GENERAL NOTES:

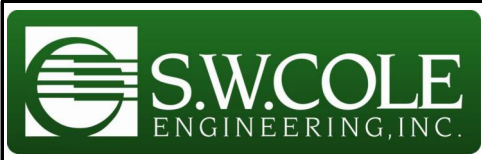
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▽ At time of Drilling D = Split Spoon Sample Pen. = Penetration Length WOR = Weight of Rods S_v = Field Vane Shear Strength, kips/sq.ft.
▽ At Completion of Drilling U = Thin Walled Tube Sample Rec. = Recovery Length WOH = Weight of Hammer q_u = Unconfined Compressive Strength, kips/sq.ft.
▽ After Drilling R = Rock Core Sample bpf = Blows per Foot RQD = Rock Quality Designation Ø = Friction Angle (Estimated)
▽ After Drilling V = Field Vane Shear mpf = Minute per Foot PID = Photoionization Detector N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
			1D		0-2	24/12	2-8-11-21		0.5	Brown, gravelly SAND some silt (FILL)	
			2D		2-4	24/18	22-22-20-21			Medium dense to loose, dark brown, silty gravelly SAND with cobbles and boulders (FILL)	
	5		3D		5-7	24/12	2-3-6-16	ID 6229M w = 18.6 %			
	70		4D		7-9	24/16	16-25-29-25	ID 6230M w = 6.2 %	6.5	Dense, brown, silty gravelly SAND (TILL)	
	10		5D		10-12	24/20	12-14-15-13				
	15		6D		15-16	12/8	20-50				
	60		7D		20-20.5	6/4	50				
Bottom of Exploration at 20.5 feet											

BORING / WELL 21-0653.GPJ SWCE TEMPLATE.GDT 3/8/22

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-2**



BORING LOG

BORING NO.: B-3
SHEET: 1 of 1
PROJECT NO.: 21-0653
DATE START: 2/23/2022
DATE FINISH: 2/23/2022

CLIENT: Haley Ward
PROJECT: Proposed Coffee Shop
LOCATION: 523 Route 1, Kittery, Maine

Drilling Information
LOCATION: See Exploration Location Plan **ELEVATION (FT):** 75.5' +/- **TOTAL DEPTH (FT):** 17.0 **LOGGED BY:** Antonio Santiago
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / N/A **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A / N/A **CORE BARREL:** N/A
HAMMER EFFICIENCY FACTOR: _____ **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free-water observed.

GENERAL NOTES:
KEY TO NOTES AND SYMBOLS:
Water Level
∇ At time of Drilling D = Split Spoon Sample Pen. = Penetration Length WOR = Weight of Rods S_v = Field Vane Shear Strength, kips/sq.ft.
∇ At Completion of Drilling U = Thin Walled Tube Sample Rec. = Recovery Length WOH = Weight of Hammer q_u = Unconfined Compressive Strength, kips/sq.ft.
∇ After Drilling R = Rock Core Sample bpf = Blows per Foot RQD = Rock Quality Designation Ø = Friction Angle (Estimated)
∇ After Drilling V = Field Vane Shear mpf = Minute per Foot PID = Photoionization Detector N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION						Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data				
75	5 10 15		1D		0-2	24/14	4-8-5-19		Medium dense to loose, dark brown, gravelly silty SAND trace organics with cobbles and boulders (FILL)			
		2D		2-4	24/10	4-5-7-7						
70		3D		5-7	24/6	3-2-2-1						
		4D		7-9	24/8	1-2-2-2						
65		5D		10-12	24/12	2-1-2-2						
		6D		12-14	24/14	1-1-4-12						
60		7D		15-17	24/18	10-11-14-19						
								13.5 Medium dense, tan, gravelly silty SAND (TILL)				
Bottom of Exploration at 17.0 feet												

BORING / WELL 21-0653.GPJ SWCE TEMPLATE.GDT 3/8/22

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-3



BORING LOG

BORING NO.: B-4
SHEET: 1 of 1
PROJECT NO.: 21-0653
DATE START: 2/23/2022
DATE FINISH: 2/23/2022

CLIENT: Haley Ward
PROJECT: Proposed Coffee Shop
LOCATION: 523 Route 1, Kittery, Maine

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 75' +/- **TOTAL DEPTH (FT):** 19.0 **LOGGED BY:** Antonio Santiago
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / N/A **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A / N/A **CORE BARREL:** N/A
HAMMER EFFICIENCY FACTOR: _____ **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free-water observed.

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level D = Split Spoon Sample Pen. = Penetration Length WOR = Weight of Rods S_v = Field Vane Shear Strength, kips/sq.ft.
▽ At time of Drilling U = Thin Walled Tube Sample Rec. = Recovery Length WOH = Weight of Hammer q_u = Unconfined Compressive Strength, kips/sq.ft.
▼ At Completion of Drilling R = Rock Core Sample bpf = Blows per Foot RQD = Rock Quality Designation Ø = Friction Angle (Estimated)
▽ After Drilling V = Field Vane Shear mpf = Minute per Foot PID = Photoionization Detector N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
			1D		0-2	24/6	6-8-6-5		Medium dense to loose, dark brown, gravelly silty SAND trace organics possible cobbles and boulders (FILL)		
			2D		2-4	24/4	6-7-9-6				
70	5		3D		5-7	24/10	3-2-2-2				
			4D		7-9	24/8	1-1-2-1				
65	10		5D		10-12	24/10	1-6-5-3				
			6D		12-14	24/12	2-4-2-2				
60	15		7D		15-17	24/14	3-3-4-15				
			8D		17-19	24/16	10-12-12-22				
								16.5	Medium dense, tan, gravelly silty SAND (TILL)		

Bottom of Exploration at 19.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-4

BORING / WELL 21-0653.GPJ SWCE TEMPLATE.GDT 3/8/22



BORING LOG

BORING NO.: B-5
SHEET: 1 of 1
PROJECT NO.: 21-0653
DATE START: 2/23/2022
DATE FINISH: 2/23/2022

CLIENT: Haley Ward
PROJECT: Proposed Coffee Shop
LOCATION: 523 Route 1, Kittery, Maine

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 75' +/- **TOTAL DEPTH (FT):** 22.0 **LOGGED BY:** Antonio Santiago
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / N/A **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A / N/A **CORE BARREL:** N/A
HAMMER EFFICIENCY FACTOR: _____ **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free-water observed.

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
 Water Level
 At time of Drilling
 At Completion of Drilling
 After Drilling
D = Split Spoon Sample Pen. = Penetration Length
U = Thin Walled Tube Sample Rec. = Recovery Length
R = Rock Core Sample bpf = Blows per Foot
V = Field Vane Shear mpf = Minute per Foot
WOR = Weight of Rods WOH = Weight of Hammer
RQD = Rock Quality Designation S_v = Field Vane Shear Strength, kips/sq.ft.
PID = Photoionization Detector N/A = Not Applicable
q_u = Unconfined Compressive Strength, kips/sq.ft.
Ø = Friction Angle (Estimated)

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
70 65 60 55	5 10 15 20		1D		0-2	24/12	3-7-14-14		Medium dense to loose, dark brown, gravelly silty SAND trace organics possible cobbles and boulders (FILL)		
			2D		2-4	24/4	8-7-12-8				
			3D		5-7	24/10	2-2-3-2				
			4D		7-9	24/4	4-3-12-12				
			5D		10-12	24/6	11-23-8-4				
			6D		15-17	24/16	5-5-5-7				
			7D		17-19	24/14	5-6-6-10				
			8D		20-22	24/10	7-9-14-26				
							20.0	Medium dense, brown, SAND some silt			

Bottom of Exploration at 22.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-5**

BORING / WELL 21-0653.GPJ SWCE TEMPLATE.GDT 3/8/22



BORING LOG

BORING NO.: B-6
SHEET: 1 of 1
PROJECT NO.: 21-0653
DATE START: 2/23/2022
DATE FINISH: 2/23/2022

CLIENT: Haley Ward
PROJECT: Proposed Coffee Shop
LOCATION: 523 Route 1, Kittery, Maine

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 77.5' +/- **TOTAL DEPTH (FT):** 12.0 **LOGGED BY:** Antonio Santiago
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / N/A **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A / N/A **CORE BARREL:** N/A
HAMMER EFFICIENCY FACTOR: _____ **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free-water observed.

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level
▽ At time of Drilling D = Split Spoon Sample Pen. = Penetration Length WOR = Weight of Rods S_v = Field Vane Shear Strength, kips/sq.ft.
▽ At Completion of Drilling U = Thin Walled Tube Sample Rec. = Recovery Length WOH = Weight of Hammer q_u = Unconfined Compressive Strength, kips/sq.ft.
▽ After Drilling R = Rock Core Sample bpf = Blows per Foot RQD = Rock Quality Designation Ø = Friction Angle (Estimated)
V = Field Vane Shear mpf = Minute per Foot PID = Photoionization Detector N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
			1D		0-2	24/12	3-9-14-8		Medium dense to loose, dark brown, gravelly silty SAND trace organics possible cobbles and boulders (FILL)		
			2D		2-4	24/6	6-3-4-8				
	5		3D		5-7	24/16	10-10-8-8				
	7.0		4D		7-9	24/18	8-4-6-5				
	10		5D		10-12	24/14	5-14-15-16				
								10.5	Medium dense, brown, gravelly silty SAND (TILL)		

Bottom of Exploration at 12.0 feet

BORING / WELL 21-0653.GPJ SWCE TEMPLATE.GDT 3/8/22

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-6**



BORING LOG




BORING NO.: B-7
SHEET: 1 of 1
PROJECT NO.: 21-0653
DATE START: 2/23/2022
DATE FINISH: 2/23/2022

CLIENT: Haley Ward
PROJECT: Proposed Coffee Shop
LOCATION: 523 Route 1, Kittery, Maine

Drilling Information

LOCATION: See Exploration Location Plan **ELEVATION (FT):** 77.5' +/- **TOTAL DEPTH (FT):** 14.0 **LOGGED BY:** Antonio Santiago
DRILLING CO.: S. W. Cole Explorations, LLC **DRILLER:** Jeff Lee **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 **AUGER ID/OD:** 2 1/4 in / 5 5/8 in **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic / N/A **HAMMER WEIGHT (lbs):** 140 **CASING ID/OD:** N/A / N/A **CORE BARREL:** N/A
HAMMER EFFICIENCY FACTOR: **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): No free-water observed.

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level
 At time of Drilling D = Split Spoon Sample Pen. = Penetration Length WOR = Weight of Rods S_v = Field Vane Shear Strength, kips/sq.ft.
 At Completion of Drilling U = Thin Walled Tube Sample Rec. = Recovery Length WOH = Weight of Hammer q_u = Unconfined Compressive Strength, kips/sq.ft.
 After Drilling R = Rock Core Sample V = Field Vane Shear bpf = Blows per Foot RQD = Rock Quality Designation Ø = Friction Angle (Estimated)
 mpf = Minute per Foot PID = Photoionization Detector N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
75 5 70 10 65	0-2		1D		24/10	10-11-15-40		Medium dense to loose, dark brown, gravelly silty SAND trace organics possible cobbles and boulders (FILL)			
	2-4		2D		24/6	33-16-13-13					
	5-7		3D		24/0	6-6-6-7					
	7-9		4D		24/4	3-4-6-6					
	10-12		5D		24/0	14-8-8-9					
	12-14		6D		24/12	11-17-22-24					
	12.0						Medium dense, brown, gravelly silty SAND (TILL)				

Bottom of Exploration at 14.0 feet

BORING / WELL 21-0653.GPJ SWCE TEMPLATE.GDT 3/8/22

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-7**

KEY TO NOTES & SYMBOLS

Test Boring and Test Pit Explorations

Stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q _u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S _v	-	field vane shear strength, kips/sq. ft.
L _v	-	lab vane shear strength, kips/sq. ft.
q _p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W _L	-	liquid limit - Atterberg test
W _P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ _T	-	total soil weight
γ _B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
“Y”	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16” thickness
Seam:	1/16” to 1/2” thickness
Layer:	1/2” to 12” thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: Test Boring Explorations - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: Test Pit Explorations - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

APPENDIX D

Laboratory Test Results

Project Name KITTERY ME - PROPOSED COFFEE SHOP - GEOTECHNICAL ENGINEERING

Project Number 21-0653

Client HALEY WARD, INC.

Lab ID 6228M

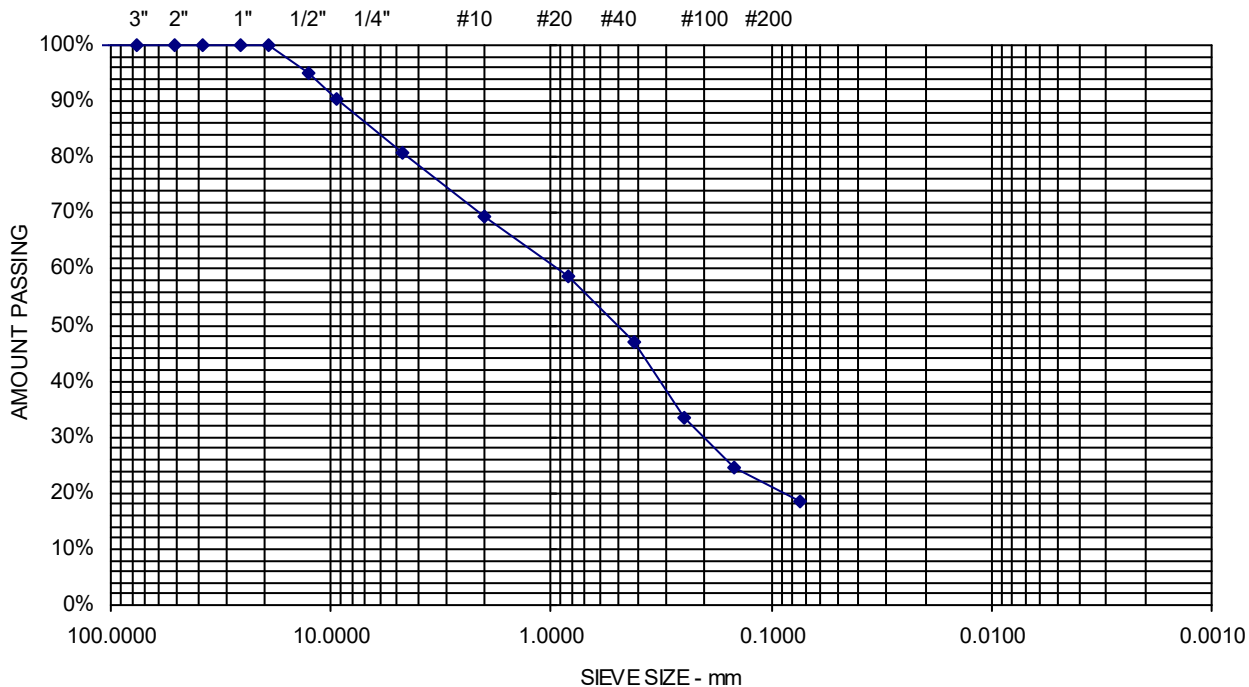
Date Received 3/2/2022

Date Completed 3/3/2022

Material Source B-1, 2D, 2-4'

Tested By DANIEL JACK

<u>STANDARD DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	
150 mm	6"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	95	
9.5 mm	3/8"	90	
4.75 mm	No. 4	81	19.3% Gravel
2.00 mm	No. 10	70	
850 μm	No. 20	59	
425 μm	No. 40	47	62.2% Sand
250 μm	No. 60	33	
150 μm	No. 100	25	
75 μm	No. 200	18.4	18.4% Fines



Comments: Moisture Content = 9.8%

Project Name KITTERY ME - PROPOSED COFFEE SHOP - GEOTECHNICAL ENGINEERING

Project Number 21-0653

Client HALEY WARD, INC.

Lab ID 6229M

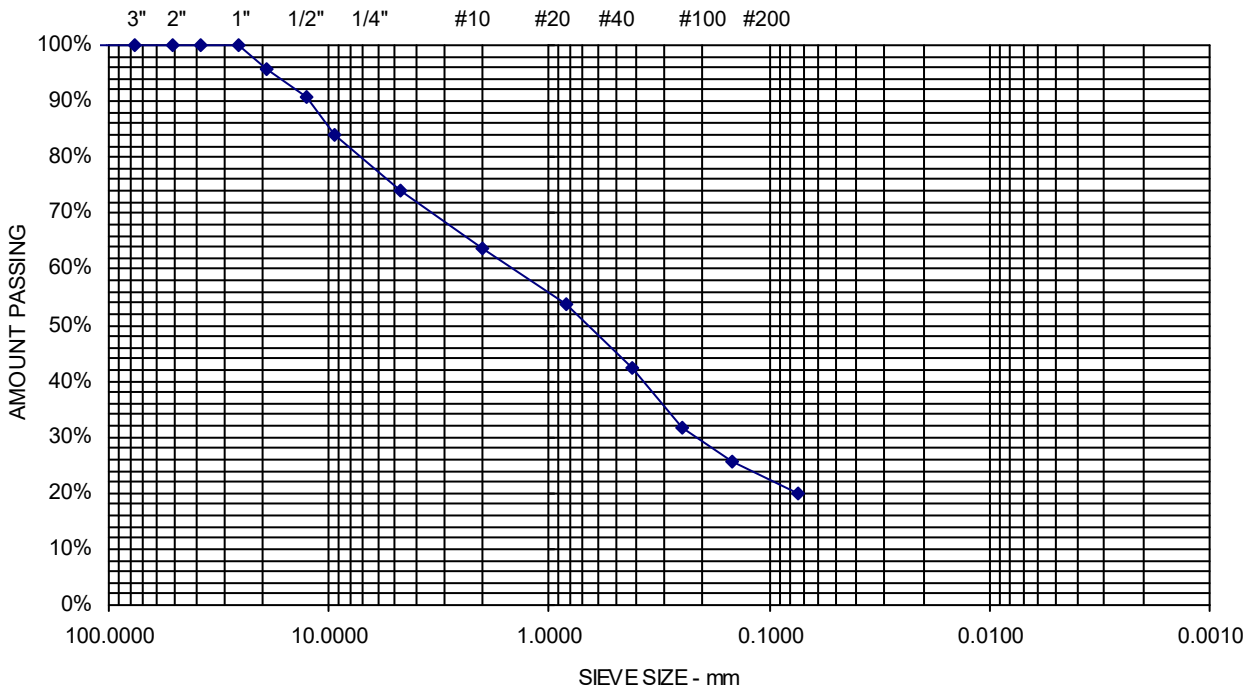
Date Received 3/2/2022

Date Completed 3/3/2022

Material Source B-2, 3D, 5-7'

Tested By DANIEL JACK

<u>STANDARD DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	
150 mm	6"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	96	
12.5 mm	1/2"	91	
9.5 mm	3/8"	84	
4.75 mm	No. 4	74	25.9% Gravel
2.00 mm	No. 10	64	
850 μm	No. 20	54	
425 μm	No. 40	42	54.1% Sand
250 μm	No. 60	32	
150 μm	No. 100	25	
75 μm	No. 200	20.0	20% Fines



Comments: Moisture Content = 18.6%

Project Name KITTELY ME - PROPOSED COFFEE SHOP - GEOTECHNICAL
ENGINEERING

Project Number 21-0653

Client HALEY WARD, INC.

Lab ID 6230M

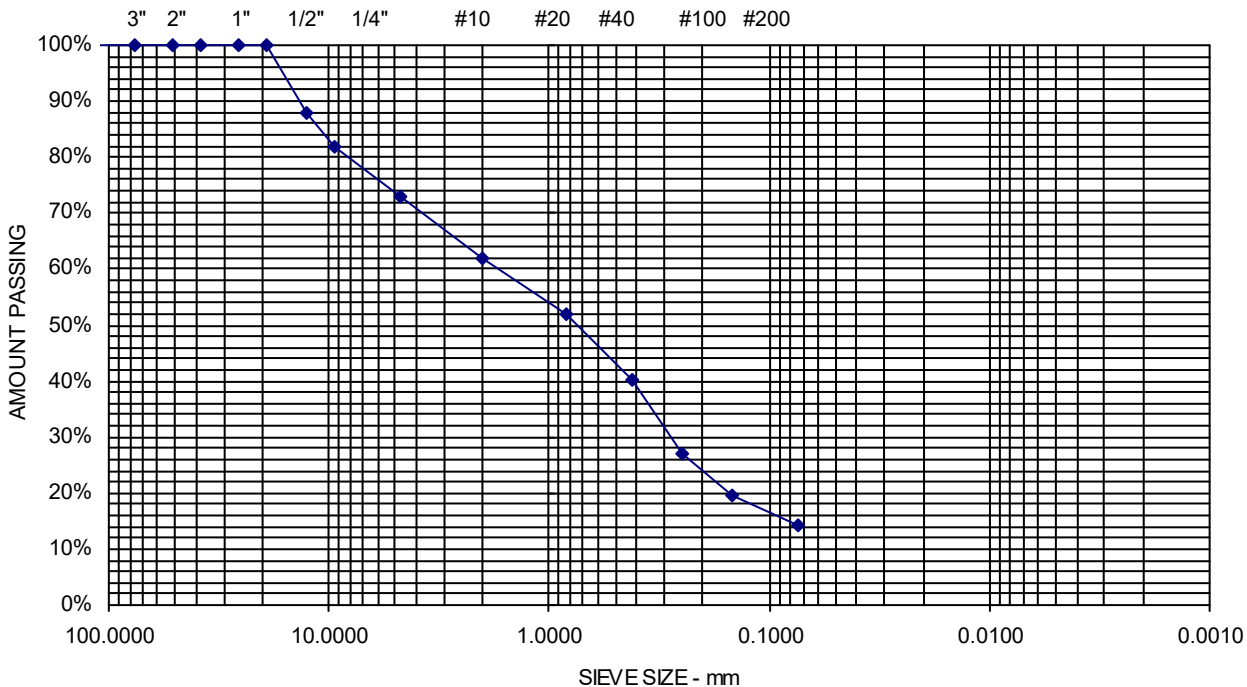
Date Received 3/2/2022

Date Completed 3/3/2022

Material Source B-2, 4D, 7-9'

Tested By DANIEL JACK

<u>STANDARD DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	
150 mm	6"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	88	
9.5 mm	3/8"	82	
4.75 mm	No. 4	73	27.2% Gravel
2.00 mm	No. 10	62	
850 μm	No. 20	52	
425 μm	No. 40	40	58.4% Sand
250 μm	No. 60	27	
150 μm	No. 100	20	
75 μm	No. 200	14.4	14.4% Fines



Comments: Moisture Content = 6.2%

EXTERIOR SIGNAGE: PYLON SIGN

SIGN SPECIFICATIONS

[A] - PYLON

Lighting: Lit
 Material: White Lexan
 Cabinet Color: Blue [TBD]
 Voltage: [TBD]
 Installation: New Structure

[B] - GRAPHICS

Material: Vinyl
 Color: Blue [TBD]

[C] - GRAPHICS

Material: Vinyl
 Color: Red [TBD]

[D] - GRAPHICS

Material: Vinyl
 Color: Grey [TBD]

[E] - POLE

Material: Pole Cover
 Color: Blue [TBD]



NOTES:

Aroma Joe's Blue Paint Details - see Exterior Finishes

LANDSCAPING SCHEDULE

QUANTITY	TYPE	SPECIES	COMMON NAME	SIZE
2	TREE	ACER SACCHARUM	SUGAR MAPLE	12' HEIGHT, 2.5" CALIPER
4	TREE	PINUS STROBUS	EASTERN WHITE PINE	12' HEIGHT, 2.5" CALIPER
2	TREE	BETULA NIGRA	RIVER BIRCH	12' HEIGHT, 2.5" CALIPER
5	SHRUB	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	2'-3' HIGH
5	SHRUB	MYRICA PENNSYLVANICA	BAYBERRY	2'-3' HIGH
11	SHRUB	ILEX VERTICILLATA	WINTERBERRY	2'-3' HIGH
5	SHRUB	FORSYTHIA 'SUNRISE'	SUNRISE FORSYTHIA	2'-3' HIGH
9	PERENNIAL	HEMEROCALLIS SPECIES	DAY LILLY	#2 POT

NOTE: PROPOSED LANDSCAPING SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE DEVELOPMENT.

SITE DEVELOPMENT DATA		ALLOWED	PROPOSED
TAX MAP:	66 LOT: 26		
OWNER:	LYNCH, CHARLES S 13 POCAHONTAS ROAD KITTERY POINT, ME 03905-5300	MINIMUM FRONT YARD 30'	30'
		MINIMUM SIDE / REAR YARD 30'	100'
		MINIMUM LOT SIZE 200,000 SF	13.8 ACRES
		MINIMUM STREET FRONTAGE 250'	500'
		MAXIMUM BUILDING HEIGHT 40'	18'
LOT SIZE:	13.8 ACRES		
ZONE:	MIXED USE (MU)		
		PROJECT LEASE AREA: 66,275 SF (1.52 ACRES)	
		EXISTING IMPERVIOUS AREA: 42,057 SF (0.96 ACRES) (63% OF LOT)	
		PROPOSED IMPERVIOUS AREA: 25,460 SF (0.58 ACRES) (38% OF LOT)	
APPLICANT:	GCS ENTERPRISES LLC 352 WARREN AVE PORTLAND, ME 04103		
ENGINEER:	HALEY WARD (FORMERLY CES, INC.) ATTN: SEAN THIES, PE ONE MERCHANTS PLAZA, SUITE 701 BANGOR, MAINE 04401		
NOTES:			
1. THERE ARE NO PROPOSED SOIL DISTURBANCES TO WETLANDS OR VERNAL POOLS.			
2. PARKING, THIS IS A DRIVE-THROUGH RESTAURANT WITH NO CUSTOMER SEATING. ONLY EMPLOYEE-PARKING HAS BEEN PROPOSED.			

- NOTE:
- OPEN SPACE AREA REQUIRED: 23,174 SF / OPEN SPACE PROVIDED 24,000 SF (APPROXIMATE)
 - ANY FUTURE DEVELOPMENT OF THE PROPERTY OUTSIDE THE LEASED AREA WILL BE REQUIRED TO COMPLY WITH THE KITTERY LAND USE ORDINANCE.
 - SNOW WILL BE REMOVED FROM SITE IF DESIGNATED SNOW STORAGE AREAS ARE INSUFFICIENT.



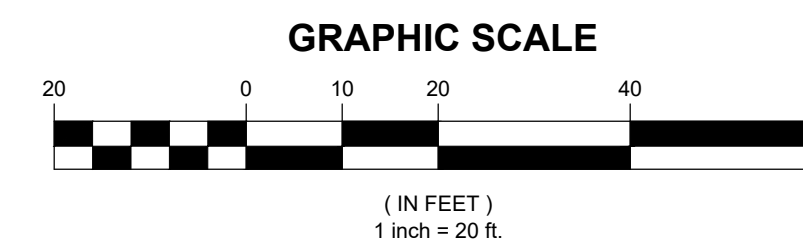
LOCATION MAP: USGS QUADRANGLE: YORK HARBOR
MAPTECH® USGS TOPOGRAPHIC SERIES™,
SCALE: 1"=2000'
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WWW.MAPTECH.COM/TOPO

LEGEND:

DESCRIPTION	EXISTING	PROPOSED
PROPERTY LINE	---	---
BENCHMARK	⊕	⊕
MANHOLE	⊙	⊙
UTILITY POLE	⊕	⊕
CATCH BASIN	⊕	⊕
HYDRANT	⊕	⊕
EDGE OF GRAVEL	---	---
EDGE OF PAVEMENT	---	---
MAJOR FOOT CONTOUR	--- 100 ---	--- 100 ---
MINOR FOOT CONTOUR	--- 98 ---	--- 98 ---
STORM DRAIN	SD	SD
SANITARY SEWER	SS	SS
OVERHEAD UTILITIES	OHU	OHU
UNDERGROUND UTILITIES	UGU	UGU
WETLAND BOUNDARY	---	---
SILT FENCE	SF	SF
PAVED SURFACE	▭	▭
SITE LIGHTING	⊕	⊕

PLAN REFERENCE:

- INFORMATION BASED ON SITE PLAN BY ANDERSON LIVINGSTON ENGINEERS, INC. DATED APRIL 9, 2018.
- ON JULY 20 & 21, 2021 HALEY WARD CONDUCTED A HIGHWAY SURVEY AND SOME LIMITED TOPOGRAPHY ON THE SUBJECT PROPERTY AS WELL AS TIE INTO THE BOUNDARY SURVEY BY ANDERSON LIVINGSTON ENGINEERS, INC.



REV.	DATE	DESCRIPTION	BY	CHK.
2	2022.03.08	PER PLANNING BOARD COMMENTS	WAB	SMT
1	2021.12.01	PER PEER REVIEW COMMENTS	WAB	SMT

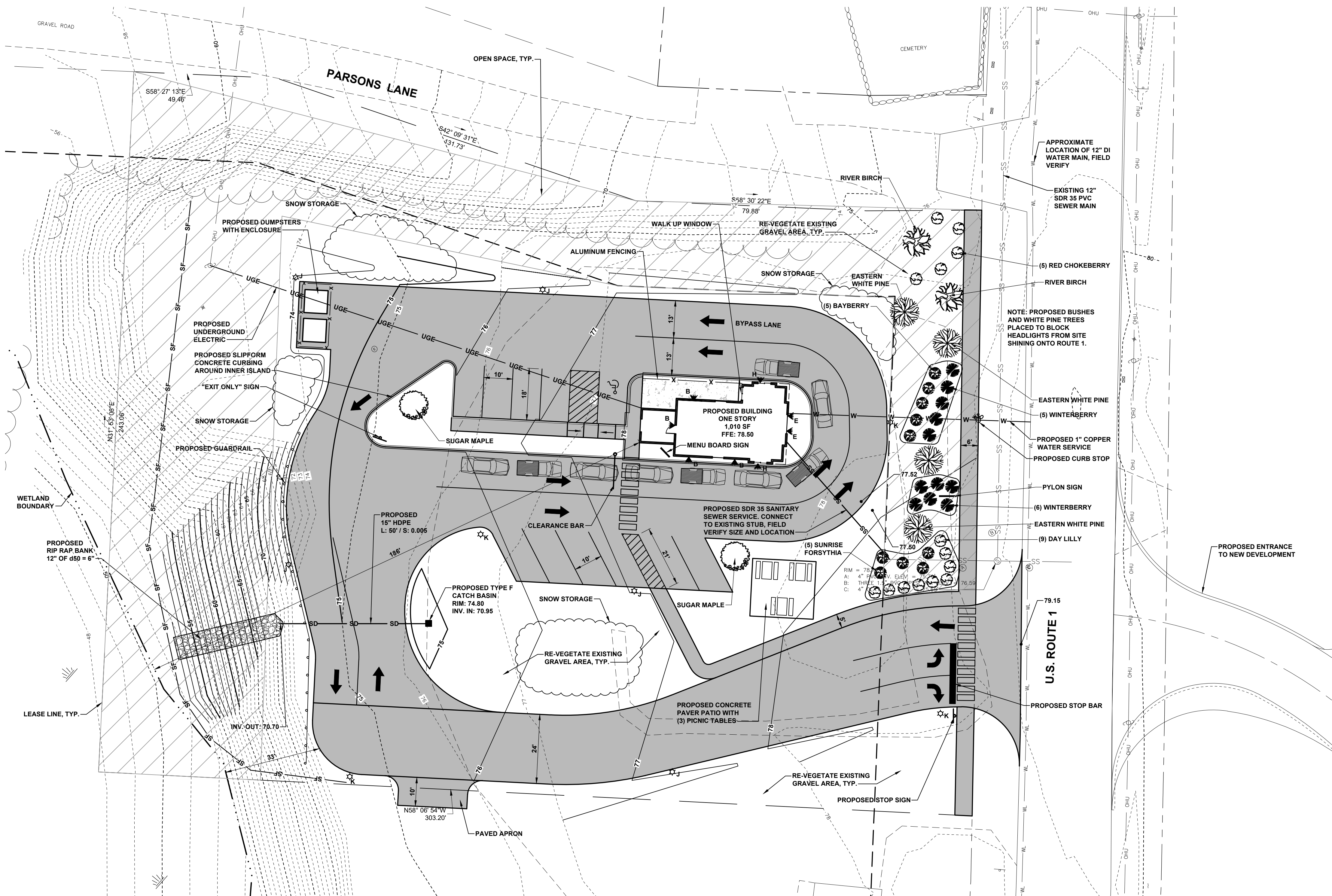
NOT FOR CONSTRUCTION

HALEY WARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
One Merchants Plaza, Suite 701
Bangor, Maine 04401
207.987.4824
WWW.HALEYWARD.COM

GCS ENTERPRISES LLC
US ROUTE 1, KITTERY, MAINE

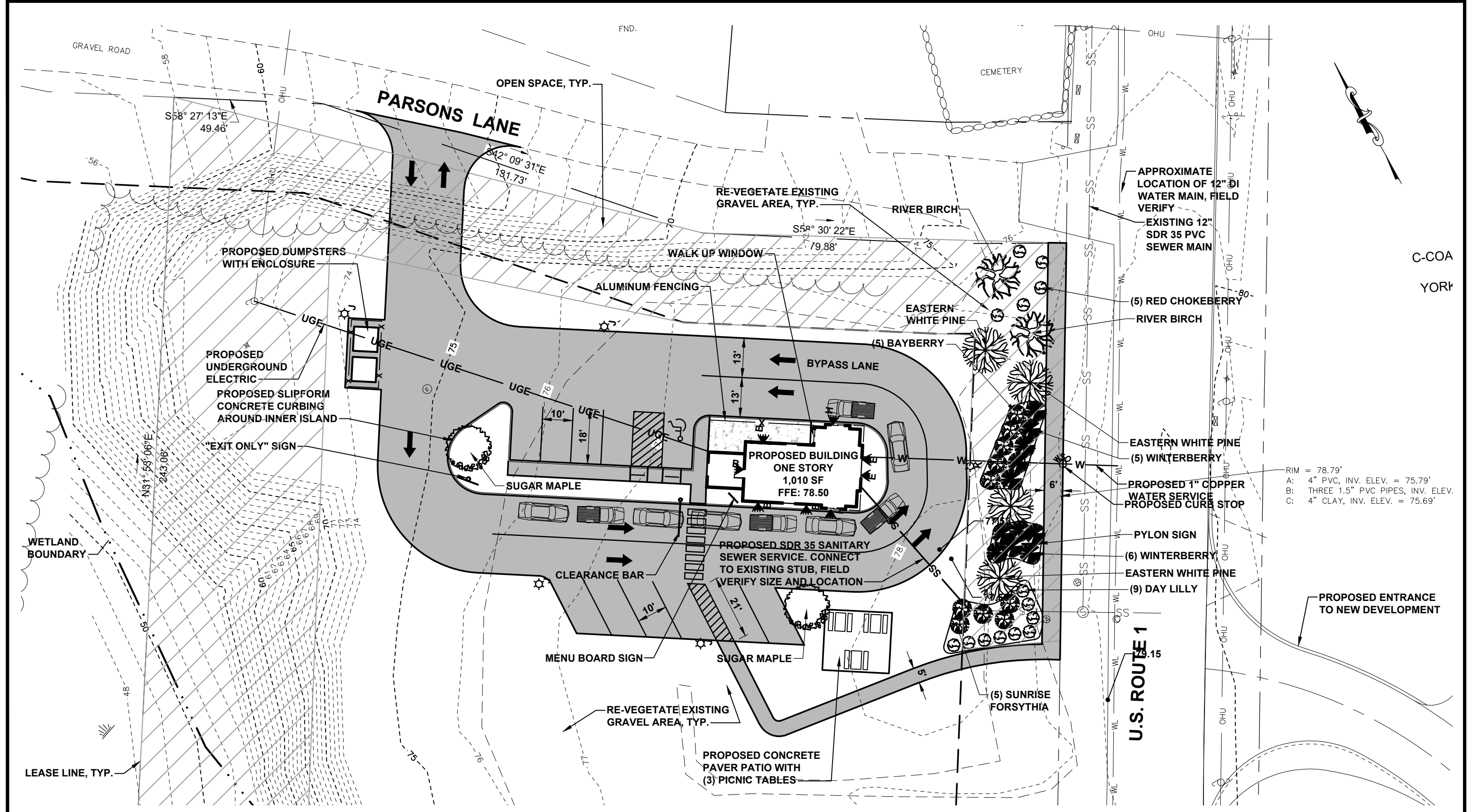
PROPOSED SITE PLAN

DATE: 2021.05.26 SCALE: 1"=20'
DRAWN BY: WAB DESIGNED BY: WAB CHECKED BY: SMT
PROJECT No.: 13522.001
DRAWING No.: **C101** REV: **2**



SITE PLAN
SCALE: 1"=20'

FILE LOCATION: P:\3325\SPARK_FRANCHISE_SOLUTIONS\001-AROMA_JONES-ROUTE 1, KITTERY-SMT\02-CAD_DRAWINGS\04\LDON_DWG\03\13522.001-C-SP-PW-CAD_2022.03.08_10.19 AM



P:\13522-SPARK_FRANCHISE_SOLUTIONS\001-AROMA_JOES-ROUTE_1_KITTERY-SM\02-CAD_DRAWINGS\CIVIL\DSGN_DWG\13522_001-ALT_ENT.DWG

PROJECT	GCS ENTERPRISES LLC US ROUTE 1, KITTERY, MAINE		DWG No.	1	BY	WAB	DRAWING STATUS
	ALTERNATE ENTRANCE SKETCH		JN	13522.001	DATE	2022.02.28	
TITLE					SCALE	1"=30'	REV.
				REV. DATE		NOT FOR CONSTRUCTION	





April 5, 2022

Bart McDonough, Town Planner
Town of Kittery
200 Rogers Road
Kittery, Maine 03904

**RE: Town of Kittery, Planning Board Services
523 US Route 1, Aroma Joe's Site Plan Review Application
Tax Map 66, Lot 26; Mixed Use (MU) Zone
CMA #591.139**

Dear Bart:

CMA Engineers has received the following information for Assignment #139, review #2 of the Aroma Joe's Site Plan review comment responses, located at 523 US Route 1, Map 66 Lot 26 in the Mixed-Use Zone.

- 1) Planning Board Review Comments response letter and associated documentation, prepared by Haley Ward, Inc. of Bangor, ME, dated March 9, 2022.

We have reviewed the information submitted for conformance with the Kittery Land Use and Development Code (LUDC) and general engineering practices and offer the comments below that correspond directly to the Town's Ordinances.

The proposed development includes a drive thru coffee shop, associated infrastructure including drainage, and associated driveway and parking. The facility would be served by the Kittery Sewer Department and the Kittery Water District. The information submitted includes responses to Planning Board comments from December 2021, geotechnical report, exterior signage details, and drawings (proposed site plan and alternate entrance sketch).

We note that we have not yet received a full plan set for the project.

With respect to Planning Board comments from December 9, 2021:

1. The applicant has requested a waiver for site access from Route 1. Discussions with MaineDOT have resulted in agreeing that this is the proposed entrance location. A Traffic Movement Permit has been drafted.
2. The pre and post development impervious area numbers have been added to the plans.
3. The applicant has provided a Geotechnical study in lieu of a soils survey as requested.
4. Snow storage areas and a note about snow removal have been added to the plans.
5. The applicant has revised the landscaping plan for additional evergreen plantings and states that their placement will block headlights from shining into the road.
6. The applicant has requested a waiver for the flat roof on the back section of the building (the front of the building has a gable end).
7. The applicant has provided a sign detail and believes that proposed signage complies with the ordinances.

We believe the Planning Board's comments have been addressed.

We note that the applicant, did not respond directly to our review from October 29, 2021, and the following comments remain unaddressed:

16.8 Design and Performance Standards-Built Environment

Article IV Streets and Pedestrianways/Sidewalks Site Design

16.8.4.13 Sidewalks

Discussion of sidewalk installation was part of the MDOT scoping meeting and consequently, the applicant has added a proposed sidewalk on site. Details of the sidewalk should be provided.

Article VI Water Supply

Where is the closest existing hydrant located?

The plans should provide details for the water service (size, material, bedding, curb stop, etc.)

Is fire suppression required?

The proposed water service should be reviewed and approved by the Kittery Water District.

Article VII Sewage Disposal

We note that some of our previous comments may have been addressed, but the text is located under some landscaping features and cannot be read.

The applicant should indicate the size and material of the service.

The applicant should indicate the location of the proposed cleanout.

The plans should provide details for the sewer service (size, material, bedding, cleanout, etc.)

Is a grease trap required for this service?

The proposed sewer service should be reviewed and approved by the Superintendent of Sewer Services.

Article VIII. Surface Drainage

16.8.8.2 Post-Construction Stormwater Management

The O&M plan should be reviewed and clarified specifically meet address the compliance requirements of the Post-Construction Stormwater Management section, including submitting a certification of inspection to the Town Code Enforcement Officer by July 31st. Please clarify.

Article IX. Parking, Loading and Traffic

16.8.9.1

The proposed parking spaces are for employees only and 12 spaces (including 1 handicap accessible space) are provided. There is no "Drive Thru Coffee Restaurant" listed as a use. The closest use, drive-in restaurants, snack bars and fast food outlets, has a minimum of 15 parking spaces plus additional spaces for seats. The proposed restaurant has no seating. 12 spaces seems adequate for the proposed use. Is this acceptable to the Planning Board?

Article XVII. Utilities

Underground electricity is proposed with installation of a new utility pole. The applicant should coordinate with Central Maine Power on electrical details and approvals.

Article XIXI. Sprinkler Systems

A sprinkler system is not proposed. Is a sprinkler system appropriate for this application?

Article XXIV. Exterior Lighting


An exterior lighting plan has been prepared for the proposed site plan and building. It appears that the maximum footcandles standard of 8 is exceeded in the drive thru (however the applicant lists the maximum footcandles as 2.9). Please clarify, correct or apply for a waiver.

Other

The applicant has contacted the Maine Historic Preservation Commission, the Maine Natural Areas Program, and the Maine Department of Inland Fisheries and Wildlife with respect to protected habitat or species on site. The Maine Natural Areas Program has responded that there are no rare botanical features within the project area. The applicant should forward response from the other parties upon receipt.

Should you have any questions, please do not hesitate to call.

Very truly yours,
CMA ENGINEERS, INC.


Jodie Bray Strickland, P.E.
Senior Project Engineer

cc: Sean Thies, P.E., Haley Ward, Inc.

JBS:rol