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ITEM 5—17 and 25 US Route 236—Major Site Plan — Preliminary Review

Action: Hold public hearing. Approve plan or continue review. Geoff Aleva, on behalf of owner/applicant 25 & 17 Route 236 LLC, is proposing to develop a 35-unit rooming house and associated parking shared with an existing 7-unit apartment on the properties of 25 and 17 Route 236, Tax Map 21 Lot 20 & Map 20 Lot 12, in the Route 236 Commercial (C-2) Zone.

Town of Kittery

Planning Board Meeting

November 16 2023

PROCESS SUMMARY

REQ'D	ACTION	COMMENTS	STATUS
NO	Sketch Plan Acceptance/Approval	8/10/23	Accepted
YES	Planning board determination of completeness	10/26/23	Accepted
NO	Site Visit	Scheduled for 11/9/23	Pending
YES	Public Hearing	Scheduled for 11/16/23	Pending
YES	Preliminary Plan Approval	Scheduled for 11/16/23	Pending
YES	Final Plan Review and Decision		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 16.4.4.L - 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.

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OTHER PERMITS AND REQUIREMENTS

- Wetland delineation study
- State Fire Marshal NFPA #13 fire protection system approval.
- DEP construction permitting and site review.

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PROJECT INTRODUCTION

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This is the second preliminary review for a proposed 3-story rooming house that would consist of 61 beds and 35 total rental units. The development is located on the properties of 17 & 25 Route 236, both of which are non-conforming lots due to road frontage. The proposed rooming house would be located entirely on the property of 17 Route 236, which currently contains woodlands and a shed that would be demolished. The existing apartment and parking lot are located entirely on 25 Route 236. The apartment is a legally non-conforming use in the C-2 zone, meets current parking requirements, and will not be modified as a part of the development. A 420-foot driveway provides access to both lots from route 236, and directly abuts a 1,314 sq ft. wetland on the northwest side of the lot (the bottom left corner of the site plan).

The proposed rooming house would have nine 1-bedroom units and twenty-six 2-bedroom units for a total of 35 rooms. Each floor would have separate bathrooms for men and women, shared living room space, and a shared kitchen. Workers would be charged rent for staying in the rooming house, and a superintendent would live on the site in one of the single bed units, meaning the development meets the definition of a rooming house per §16.3. Parking spaces would connect to the existing parking lot for the apartment. The applicant is proposing a bike storage shed and vanpool service to facilitate alternative methods of travel for the tenants of the rooming house. Existing utilities servicing the apartment would be extended to the proposed development, and the project proposes to utilize existing vegetation to provide screening along Route 236.

On October 26th, the planning board accepted the preliminary site plan application as complete, then scheduled a site walk on November 9th and a public hearing on November 16th. Third-party review of the site plan and drainage analysis by CMA has been completed, and confirmed all identified issues are not significant enough to hinder preliminary plan approval. The applicant has submitted a response letter to this peer review, as well as a site plan with revisions following feedback from the review engineer and Technical Review Committee. After holding the public hearing, staff suggest advising the applicant based on input from the review engineer and public comment. WAIVERS REQUESTED

- 1. Minimum Parking Standards: the applicant requests to reduce parking minimum requirements from 49 spaces to 37 spaces. The applicant argues current parking requirements do not accurately represent the expected parking demand and proposes a vanpool service and facilities to encourage biking to compensate for reduced parking.
- 2. Landscaping of parking requirements: the applicant is requesting a waiver of a landscape strip as the site is screened with an existing tree line and not visible to the surrounding lots.
- 3. Landscaping plan modification: the applicant is requesting a waiver from parking lot landscaping requirements, as they believe the site contains adequate screening through existing vegetation that will not be removed as part of the development.

STAFF COMMENTS

 Listed below are additional comments provided by staff in addition to general review of standards:

- 1. Following feedback from the Technical Review Committee, the applicant has added a fire hydrant next to the apartment building in the proposed plan, to provide adequate emergency service access to the entire lot.
- 2. At the sketch review, the planning board asked if an elevator was required in the rooming house. This determination is the purview of the State Fire Marshal. The applicant is currently communicating with the State Fire Marshal's Office to determine whether an elevator will be required and anticipates an answer before final plan approval.
- 3. In the revised site plan, the scope of work contains a note that the superintendent will always keep a ledger of tenants. Staff suggest this note be included in the final plan sheet.
- 4. Following input from the planning board, the applicant increased the size of the proposed patio to 24x50 feet to provide increased recreational area.
- 5. The applicant is proposing a combination of ground and building-mounted lighting. A full photometric plan is a requirement at the final site plan review.
- 6. The proposed new ADA parking space has been designated as van accessible, to ensure the accessibility of the vanpool service.
- 7. The applicant provided a FIRM map showing the parcels are outside of the nearby flood zones indicated by the survey.
- 8. The applicant has stated the intention of the rooming house is to house staff year-round, and not will not be utilized during a specific season.

Staff reviewed the application and provided materials and have provided their determination on the requirements and standards below:

Code Ref.	§16.4 Land Use Zone Standards				
	Standard	Determination			
§16.4.20.B/C.	Permitted/Special Exception Uses	The proposed use is permitted			
§16.4.20.D.(2).(a).	Lot size: 40,000 sq ft. minimum	It appears the standard is satisfied.			
§16.4.20.D.(2).(b).	Street frontage: 150 ft minimum	25 Route 236 is a legally nonconforming lot with less than approximately 60 feet of frontage.			
		17 Route 236 is a legally nonconforming lot with 0 frontage. Merging the two lots will reduce overall nonconformance.			
§16.4.20.D.(2).(c).	Front setback: 50 ft minimum	It appears the standard is satisfied.			
§16.4.20.D.(2).(d).	Rear and side setbacks: 30 ft minimum	It appears the standard is satisfied.			
	NOTE: Except as may be required by the buffer provisions of this title, and where the side and/or rear yards of the proposed nonresidential use abut a residential zone or use; in which case a minimum of 40 feet is required.				
§16.4.20.D.(2).(e).	Building height: 40 ft maximum	It appears the standard is satisfied.			
§16.4.20.D.(2).(f).	Imperious surface: 40% maximum	It appears the standard is satisfied.			
§16.4.20.D.(2).(g).	Water body setback for water dependent uses: 0 ft minimum	Not applicable.			
§16.4.20.D.(2).(i)	Gasoline sales not located within: 1,000 feet of an existing station or private residence 150 feet of an existing structure	Not applicable			
§16.4.20.D.(2).(j).	Repair garages not located within 150 feet of a private dwelling or existing structure	Not applicable			

§16.4.20.D.(2).(1).	Mixed-use building must have nonresidential uses comprising at least 50% of the street-facing first floor	The proposed development is for a single use. The standard is not applicable.
§16.4.20.D.(2).(m).	Underground utilities are required.	It appears the standard is satisfied.
§16.4.20.D.(3).(a).	New parking must be visually screened through the use of landscaping or fencing from adjacent public streets or residential properties.	The applicant is requesting a waiver from the screening requirement, described above.
	Parking space dimensions: 19' x 9'	Otherwise, the standard appears satisfied.
§16.4.20.D.(3).(b)	New buildings must follow principles set forth in the Design Handbook	
		It appears the standard is satisfied.
§16.4.20.D.(3).(c).	Landscaping improvements: • Minimum 20 feet vegetated planter strip adjacent to the right of way of public roads.	The applicant is requesting a waiver from landscaping improvements, as they do not abut residential properties. The proposed development is not adjacent to Route 236. The driveway servicing the two existing lots is also not considered a right-of-way.
§16.4.20.D.(3).(d).	Special situations applying to landscaping standards.	Does not appear applicable.
§16.4.20.D.(3).(e).	Waste storage areas such as dumpsters must be within an enclosure and visually screened by fencing, landscaping, or other treatments.	It appears the standard is satisfied.
§16.4.20.D.(3).(f).	Vehicle and pedestrian circulation standards must meet the general provisions of the Design Handbook.	It appears the standard is satisfied.
Code Def	§16.5 Performance Standards	
Code Ref.	Standard	Determination
§16.5.14.B	The creation of new flag-shaped lots is prohibited.	Because 17 Route 236 is a land-locked parcel, merging the two lots together would reduce overall non-

Code Ref.	Standard	Determination
§16.7.11.F.(e).	 A minimum of 49 parking spaces are required: 14 spaces for the existing 7-room apartment (2 spaces per apartment) 35 spaces for the new rooming house (1 space per room) §16.7.10 Preliminary Site Plan Requirements 	The applicant is requesting a waiver to allow for 37 parking spaces, as described above. The plan appears to meet ADA space requirements
§16.5.30	All wetlands of 501 sq ft.or greater trigger setbacks for certain uses	The driveway is within a 30-foot setback for a wetland identified in the southwest corner. The driveway is legally non-conforming and will not be expanded in any way as a part of this development.
§16.5.27	Street Standards: sidewalks are required along the entire Old Post Road ROW	The only frontage to Route 236 is through the private driveway. Per the definition of a driveway in 16.3, it is too short to be considered a right-of-way.
§16.5.25	Sprinkler Systems are required in all buildings of three or more stories.	Sprinkler systems must meet NFPA standards.
§16.5.10	Essential Services	All utilities must be underground. The plan proposes to upgrade a failed culvert in the private driveway. Following feedback from the Fire department, the applicant has added a fire hydrant adjacent to the existing apartment building.
		conformity by increasing its road frontage from 0 to ~60. 25 Route 236 is an already existing flagshaped lot, meaning the merging would not increase non-conformity.

§16.7.10.C.(4).(u).	Approval letter from Town sewage.	Provided
§16.7.10.C.(4).(t).	Test pit analysis.	Not applicable
§16.7.10.C.(4).(s).	Traffic impact analysis.	Neither proposed number of parking spaces nor estimated trip generation trigger requirements for a traffic impact analysis.
§16.7.10.C.(4).(r).	Vehicular traffic report.	Provided
§16.7.10.C.(4).(q).	Soil survey.	Provided
§16.7.10.C.(4).(p).	Stormwater management plan and drainage analysis.	Provided
§16.7.10.C.(4).(o).	Erosion and sedimentation control plan.	Provided
§16.7.10.C.(4).(n).	Kittery Water District approval letter.	Provided
§16.7.10.C.(4).(m).	Identified property encumbrances.	Provided
§16.7.10.C.(4).(1).	Natural features or site elements to be preserved.	Provided
§16.7.10.C.(4).(k).	 Proposed development area including: Location and detail of proposed structures and signs Proposed utilities including power, water, and sewer. Sewage facilities type and placement. Domestic water source Lot lines, rights-of-way, and street alignments Road and other paved area plans Existing and proposed setbacks Storage areas for waste or hazardous materials Topographic contours of existing contours and finished grade elevations Locations and dimensions of artificial features such as pedestrian ways, sidewalks, curb cuts, driveways, fences, retaining walls, 	Provided
§16.7.10.C.(4).(j).	Existing conditions survey including all identified structures, natural resources, rights-of-way, and utilities located on and within 100 feet of the property.	Provided
§16.7.10.C.(4).(a-i).	 Paper plan sheets no smaller than 11" x 17" Scale of drawing no greater than 1 inch = 30 feet Code block in right-hand corner Standard boundary survey of existing conditions Compass with arrow pointing true north Locus map of property Vicinity map and aerial photograph Surveyed acreage of parcel(s), rights-of-way, wetlands, and amount of street frontage Names and addresses of owners of record abutting property 	Provided

	Evaluation of development by Technical Review Committee department heads.	Provided
§16.7.10.C.(4).(w).	Additional submissions as required.	None identified at this time

DISCUSSION, NEXT STEPS, AND RECOMMENDATIONS

The purpose of a public hearing is to gather feedback from abutters, residents, and interested parties that may identify potential suggestions for the proposed development. The issues identified by staff have been resolved, and the engineer peer review has confirmed there are no significant issues with the plan set and drainage analysis. Staff believe the application is ready to receive approval on the condition that the third-party engineer review the final site plan application to confirm all identified issues have been resolved. holding the hearing, staff suggest the planning board discuss the feedback gathered by the public and peer review and advise the applicant accordingly.

RECOMMENDED MOTIONS

- Below are recommended motions for the Board's use and consideration:
- Motion to conditionally approve the application as complete
- Move to approve (with conditions listed above) the preliminary site plan by Geoff Aleva, on behalf of owner/applicant 25 & 17 Route 236 LLC, proposing to develop a 35-unit rooming house and associated parking shared with an existing 7-unit apartment on the properties of 25 and 17 Route 236, Tax Map 21 Lot 20 & Map 20 Lot 12, in the Route 236 Commercial (C-2) Zone.



CMA ENGINEERS, INC. CIVIL | ENVIRONMENTAL | STRUCTURAL

35 Bow Street Portsmouth New Hampshire 03801-3819

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

October 10, 2023

Maxim Zakian, Town Planner Town of Kittery 200 Rogers Road Kittery, Maine 03904

RE: Town of Kittery, Planning Board Services
Major Site Plan Review – Preliminary Review
Rooming House Redevelopment, 17 & 25 Route 236, Tax Map 20, Lot 12 and Tax Map 21, Lot 20
CMA #591.165

Dear Max:

CMA Engineers has received the following information for Assignment #165 for a preliminary site plan review for the proposed redevelopment and rooming house construction at 17 & 25 Route 236 in Kittery (Tax Map 20, Lot 12 and Tax Map 21, Lot 20).

- 1) Application and supporting documentation prepared by Civil Consultants dated 9/14/2023.
- 2) Stormwater Management Plan prepared for 25 & 17 Route 236 LLC dated August 2023 by Civil Consultants.
- 3) Plan set entitled "Site Plan Land of 25 & 17 Route 236, LLC" by Civil Consultants dated 8/18/2023.
- 4) Memorandum regarding Preliminary Plan Project Narrative by Civil Consultants dated 9/14/2023.

The proposed project will construct a new 3-story, 6,789 sf rooming house, with drainage and parking, for the primary use of employees of the property owner. There is an existing 2-story, 3,543 sf seven-unit apartment building with associated parking and drainage on-site. Access to the new building is proposed through the existing apartment building parking lot. There are no wetland impacts proposed.

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.

16.4 Zoning Regulations

16.4.20 Commercial 2, Route 236 Commercial Zone (C-2)

16.4.20.B.10. The proposed use (rooming house) is allowed in the C-2 Zone. We note that the existing apartment building is a nonconforming use. No alterations to the apartment building are proposed.

16.4.20.D.(2) The plans should show required and proposed space standards for the C-2 zone in a table (we note required standards are listed in note 9 on Sheet L1) to demonstrate compliance.

16.4.20.D.(3)(c)[1]. The applicant has requested a waiver from this standard with the explanation that the site is screened with natural vegetation. We note that in the waiver section of the application the applicant has not provided the ordinance section.

16.7 General Development Requirements

16.7.11 Performance Standards and Approval Criteria

16.7.11.A. Water Supply

16.7.11.A.(2) The applicant has requested that the Kittery Wate District provide review and comments. KWD should also comment on capacity to serve the new development. We note that the proposed water estimate is established from NH Septic rules; is this appropriate for a Maine project?

The plans should include size and material of the proposed water main/services.

The location of the existing well used as a water supply for the apartment building should be shown on the plan if the apartment building is not proposed to tie into the new water.

16.7.11.B Sewage Disposal

16.7.11.B.(1)(b) The applicant has requested that the Town's sewer services department provide review and comments. The Town's SSS should also comment on capacity to serve the new development. We note that the proposed sewer estimate is established from NH Septic rules; is this appropriate for a Maine project?

The proposed sewer is extremely long with multiple bends. Sewer manholes should be proposed as part of the design.

What size is the proposed sewer main? What are the sizes, materials, and details of the service connections? Information should be provided for the proposed force main and pump station.

16.7.11.C. Stormwater and Surface Drainage

Stormwater treatment is accomplished through the use of closed drainage including catch basins and piping, infiltration with roofline drip edge and open drainage with a detention pond and level lip spreader and forested buffer.

We have the following comments on the drainage analysis:

- 1. The invert out of pipe 41P is listed as 49.0 in the Pipe Listing table in the Drainage Analysis and used in modeling but shown as 49.3 on the plan.
- 2. The invert out of pipe 42P is listed as 49.0 in the Pipe Listing table in the Drainage Analysis and used in modeling but shown as 49.3 on the plan.
- 3. The invert in of the 15" HDPE culvert crossing at the intersection with Route 236 is specified as 38.9 in the Pipe Listing table in the Drainage Analysis but indicated as 39.0 on the plan. These elevations should match.
- 4. The invert out of the 15" HDPE culvert crossing at the intersection with Route 236 is specified as 38.00 in the Pipe Listing table in the Drainage Analysis but indicated as "to match existing" on the plan. This should be verified in the field.



- 5. We note that the 12-hour storm amounts are highlighted in the Extreme Precipitation Table, but the 24-hour amounts are correctly used in modelling.
- 6. The storm water design is provided for the 2 and 25-year storms per the Ordinance. It is assumed that the emergency spillway elevations and the pond depths were designed for bigger storms but there is no way to verify these assumptions with the information that was provided. Full design calculations should be provided.

16.7.11.E. Vehicular traffic

The applicant has provided an Assessment of Traffic Generation for the exiting apartment building and proposed rooming house. The rooming house is categorized as an "off-campus student apartment" with 35 bedrooms. It is not clear that this is the most accurate categorization for this use. The number of trips are then modeled off of the number of rooms (35) but there are actually 61 beds. It does not appear that these additional beds are accounted for in the estimate. The applicant has stated that the primary use of the rooming house is for foreign, seasonal employees. Are there no other renters aside from the seasonal employees? Is the building vacant during the off-season?

16.7.11.F. Parking and loading (parking waiver)

16.7.11.F.(4)(d) The applicant has requested a waiver from the requirement of 2 parking spaces per dwelling unit for the rooming house and is instead proposing 1 space per 3 beds. The applicant states that the occupants are seasonal, foreign workers likely without vehicles and ridesharing, carpooling and vans will be provided. The use is stated primarily for the owner's workers. Are there no other renters aside from the seasonal employees? Is the building vacant during the off-season? Where was the 1 space per 3 beds figure derived from? Additionally, we note that the existing apartment building has 13 parking spaces, which is less than the 2 spaces per dwelling unit required by the Ordinance. Finally, if more parking spaces are required and provided a traffic impact study is required for lots with 40 or more spaces per 16.7.10.C.(4)(s).

16.7.11.4.(4)(g) The applicant has requested a waiver from the requirement of parking screening but does not specifically comment on interior landscaping requirements in parking lots. The existing and proposed parking lots are connected to form a parking lot with 37 spots. There is no proposed landscaping inside or adjacent to the parking lot. The applicant should apply for a waiver.

16.7.11.H Exterior Lighting Requirements

Site lighting is proposed. Please provide a photometric plan.

General Comments

- 1. There are inconsistencies between the plan set and the project narrative with respect to number of bedrooms, number of beds and parking spaces.
- 2. The parking space assumptions for a rooming house (1 space per 3 beds) result in a reduced number of parking spaces that does not trip the requirement of a traffic impact study. The assumptions.
- 3. The applicant has requested a waiver from submitting a landscaping plan with the justification that the site is screened with natural vegetation. The natural vegetation screens the property from surrounding lots but does not provide any onsite screening or aesthetics.



Site Plan Comments

We have the following comments with respect to the site plans.

Sheet L1-Proposed Site Plan:

- 1. The Scope of Work indicates that project will "...result in the construction of over 5,000 of gross nonresidential floor area..."
- 2. The plan shows, and the scope of work states, that there are 35 rooms, 61 beds and 12 rooms per floor. This is in conflict with the 11 rooms per floor, 33 rooms and 57 beds discussed in the project narrative.
- 3. The plan shows 24 additional spaces but 22 are described in the project narrative.
- 4. The Proposed Parking Spaces Table indicates that there are 14 existing spaces and 23 proposed but the plan shows 13 existing and 24 proposed.
- 5. The 1 space per 3 beds, 21 spaces required in the Proposed Parking Spaces table does not have data to support the assumption.
- 6. In the Proposed Coverage Info table, the existing pavement amount decreases. The area that is to be removed should be shown on the plan.
- 7. In the Proposed Coverage Info table, the proposed dripline filter is included in the impervious calculation.
- 8. There are items/linetypes on the plan that should be defined in the legend.
- 9. The pipe sizes and materials should be called out on the plan.
- 10. There are multiple symbols used for catch basins.
- 11. The dumpster pad needs to be enclosed.
- 12. The existing ADA space should have a sign.
- 13. Areas of pavement and concrete should be called out on the plan.
- 14. Is there a significance to the colored lines? If so, these should be explained in the legend.
- 15. The size and material of the sewer force main should be called out.
- 16. The size and material of the water should be called out.
- 17. The water main and services should have gate valve and shutoff.
- 18. The proposed stormwater pond to the south of the building should be labeled.
- 19. Profiles of the water and sewer mains should be provided.
- 20. Where does the piping for the 3'stone drip edge on the east side of the building outlet?
- 21. The sawcut lines to install the proposed 15" HPE culvert at the intersection with Route 236 and the water main connection should be shown.
- 22. Existing utility information size, material, inverts, etc. should be shown on the plan.
- 23. The proposed inert out of the 15" HDPE culvert at the intersection with Route 236 should be field verified and indicated on the plan.
- 24. There are P numbers for the piping (P1, P2, etc.) but there is no table or notes that explain the designation.



Sheet L2-Proposed Construction Details:

- 1. Where is the riprap apron(s) located? These should be called out on the plan.
- 2. Where is silt fence proposed to be used? Call this out on the plan.
- 3. Moe information and details are required on the proposed site lighting.
- 4. The Water Line Trench detail should show warning tape.
- 5. There should be a detail for the water service.
- 6. The Sewer/Drain line Trench with Insulation detail should show warning tape. Where is cover anticipated to be less than 5'? A sewer profile should be provided.
- 7. There should be a detail for the sewer service.
- 8. Where are the wall mount lights located?
- 9. There should be a detail for the pond.
- 10. The Roofline Drip edge Filter detail indicates there are foundation drains. These should be shown on the plan.
- 11. There should be a striping detail.
- 12. Details for the water main connection should be provided.
- 13. Provide details for thrust blocks.
- 14. Details for the sewer main connection should be provided.
- 15. There should be a trench patch detail for the work in Route 236.
- 16. The Typical Pavement Section should specify pavement and gravel thicknesses (not match existing). The details should include tackifier and/or lane joint adhesive.

Sheet L3-Maintenance Notes:

1. The Maintenance Procedures should be updated to apply to this project.

Sheet EC1-Boundary/Existing Conditions Plan:

1. Existing utilities – sizes, materials, inverts, etc. should be shown on the plan.

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

Very truly yours,

CMA ENGINEERS, INC.

Jodie Bray Strickland, P.E.

Project Manager

Attachment

cc: Geoffrey Aleva, P.E., Civil Consultants

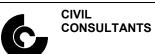


CIVIL CONSULTANTS MEMORANDUM

то:	TO: CMA Engineers- Jodie Bray Strickland, PE		FROM:	Geoffrey R. Aleva, PE	DATE:	11/2/2023
SUBJ	SUBJECT: Major Site Plan Review – Preliminary Review					
PROJECT: Rooming House Redevelopment, 17 & 25 Route 236, Tax Map 20, Lot 12 and Tax Map Lot 20 C.C. Project # 2218000		and Tax Map 21,				

Following please find CIVIL CONSULTANTS's responses to the memorandum from CMA Engineers- Jodie Bray Strickland dated 10/10/2023.

COMMENT	RESPONSE
16.4 Zoning Regulations	
16.4.20 Commercial 2, Route 236 Commercial Zone (C-2)	
16.4.20.B.10. The proposed use (rooming house) is allowed in the C-2 Zone. We note that the existing apartment building is a nonconforming use. No alterations to the apartment building are proposed.	No response required
16.4.20.D.(2) The plans should show required and proposed space standards for the C-2 zone in a table (we note required standards are listed in note 9 on Sheet L1) to demonstrate compliance.	A table has been added to Sheet 11
16.4.20.D.(3)(c)[1]. The applicant has requested a waiver from this standard with the explanation that the site is screened with natural vegetation. We note that in the waiver section of the application the applicant has not provided the ordinance section.	The waiver request has been revised at the 10/26 planning board meeting to include all appropriate sections. A straw poll of the Planning Board at the 10/26 meeting indicated acceptance of the proposed waivers.
16.7 General Development Requirements	
16.7.11 Performance Standards and Approval Criteria	
16.7.11.A. Water Supply 16.7.11.A.(2) The applicant has requested that the Kittery Wate District provide review and comments. KWD should also comment on capacity to serve the new development. We note that the proposed water estimate is established from NH Septic rules; is this appropriate for a Maine project? The plans should include size and material of the proposed water main/services.	A capacity letter from the Water District, attached. We used anticipated design flows from the NH septic standards because it included a flow value for rooming houses with meals. The Maine standards did not. We have indicated our interpretation of the water line on the plans. We will develop
The location of the existing well used as a water supply for the apartment building should be shown on the plan if the apartment building is not proposed to tie into the new water.	detailed construction information after more engineering is completed on the sprinkler system of the building and the demands that may dictate the pipe size.
	The existing apartment building will be connected to the new water service and the well abandoned.
16.7.11.B Sewage Disposal 16.7.11.B.(1)(b) The applicant has requested that the Town's sewer services department provide review and comments. The Town's SSS should also comment on capacity to serve the new	A capacity letter from the District, attached. The same logic for design flows was presented for the sewer usage.



development. We note that the proposed sewer estimate is established from NH Septic rules; is this appropriate for a Maine project? The proposed sewer is extremely long with multiple bends. Sewer manholes should be proposed as part of the design. What size is the proposed sewer main? What are the sizes, materials, and details of the service connections? Information should be provided for the proposed force main and pump station.

The proposed building will pump to a new manhole as shown on the revised plans. This will connect to the existing gravity sewer from the existing apartment building.

16.7.11.C. Stormwater and Surface Drainage

Stormwater treatment is accomplished through the use of closed drainage including catch basins and piping, infiltration with roofline drip edge and open drainage with a detention pond and level lip spreader and forested buffer.

We have the following comments on the drainage analysis:

- 1. The invert out of pipe 41P is listed as 49.0 in the Pipe Listing table in the Drainage Analysis and used in modeling but shown as 49.3 on the plan.
- 2. The invert out of pipe 42P is listed as 49.0 in the Pipe Listing table in the Drainage Analysis and used in modeling but shown as 49.3 on the plan.
- 3. The invert in of the 15" HDPE culvert crossing at the intersection with Route 236 is specified as 38.9 in the Pipe Listing table in the Drainage Analysis but indicated as 39.0 on the plan. These elevations should match.
- 4. The invert out of the 15" HDPE culvert crossing at the intersection with Route 236 is specified as 38.00 in the Pipe Listing table in the Drainage Analysis but indicated as "to match existing" on the plan. This should be verified in the field.
- 5. We note that the 12-hour storm amounts are highlighted in the Extreme Precipitation Table, but the 24-hour amounts are correctly used in modelling.
- 6. The storm water design is provided for the 2 and 25year storms per the Ordinance. It is assumed that the emergency spillway elevations and the pond depths were designed for bigger storms but there is no way to verify these assumptions with the information that was provided. Full design calculations should be provided.

Please see responses below. An additional sheet has been added to highlight the development area. The pipe sizes have been indicated on the plans the pipe call out has been removed.

- 1. The difference has been corrected to match the plan and does not change the calculations.
- 2. The difference has been adjusted to match the plan. The change does not alter the output.
- 3. The out has been revised to 39, it does not impact the output.
- 4. An outlet elevation has been indicated based on the site grading. The existing outlet is buried. It may require adjustment in the field during installation. Contractor to coordinate work with Public Works.
- 5. Yes, that was an error, the correct storm values were used during the analysis.
- 6. The HydroCAD analysis for the emergency overflow at Pond 46P is not reached during the 50-yr storm event.

16.7.11.E. Vehicular traffic

The applicant has provided an Assessment of Traffic Generation for the exiting apartment building and proposed rooming house. The rooming house is categorized as an "off-campus student apartment" with 35 bedrooms. It is not clear that this is the most accurate categorization for this use. The number of trips are then modeled off of the number of rooms (35) but there are actually 61 beds. It does not appear that these additional beds are accounted for in the estimate. The applicant has stated that the primary use of the rooming house is for foreign, seasonal employees. Are there no other renters aside

The project traffic review utilized off campus student apartments from the ITE traffic manual as the closest use. The ITE manual indicates that some users of this type of dormitory usage will use public transportation and shuttles to and from the building.

Although public transportation is not available here, the employers of the tenants do have vans and shuttles to address transportation.



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CIVIL CONSULTANTS MEMORANDUM

from the seasonal employees? Is the building vacant during the off-season?	The ITE manual indicates the usage a per bedroom and was thus indicated in the traffic review. The tenants will be seasonal workers from various businesses in the area. There is a need for seasonal workers year-round. The intention is to have the building open all year.
	We feel that the indicated parking stalls shown on site will be sufficient for the users.
16.7.11.F. Parking and loading (parking waiver) 16.7.11.F.(4)(d) The applicant has requested a waiver from the requirement of 2 parking spaces per dwelling unit for the	14 spaces are provided for the existing 7 unit apartment building, meeting the requirements.
rooming house and is instead proposing 1 space per 3 beds. The applicant states that the occupants are seasonal, foreign workers likely without vehicles and ridesharing, carpooling and vans	23 spaces will be provided for the new building.
will be provided. The use is stated primarily for the owner's workers. Are there no other renters aside from the seasonal employees? Is the building vacant during the off-season? Where was the 1 space per 3 beds figure derived from? Additionally,	The planning board at the 10/26 meeting appeared to unanimously support the concept of the reduced parking.
we note that the existing apartment building has 13 parking spaces, which is less than the 2 spaces per dwelling unit required by the Ordinance. Finally, if more parking spaces are required and provided a traffic impact study is required for lots with 40 or more spaces per 16.7.10.C.(4)(s).	The renters will be for seasonal workers, the project intent is to utilize this building for those users. The site has limitations on parking and this proposal optimizes the use. The reduced parking is based on the fact that most will not have their own vehicles.
	The plan provides 23 spaces for the proposed 61 beds.
16.7.11.4.(4)(g) The applicant has requested a waiver from the requirement of parking screening but does not specifically comment on interior landscaping requirements in parking lots. The existing and proposed parking lots are connected to form a parking lot with 37 spots. There is no proposed landscaping inside or adjacent to the parking lot. The applicant should apply for a waiver.	The waiver request has been revised at the 10/26 planning board meeting to include all appropriate sections. A straw poll of the Planning Board at the 10/26 meeting indicated acceptance of the proposed waivers.
16.7.11.H Exterior Lighting Requirements Site lighting is proposed. Please provide a photometric plan.	We are working on a lighting plan and will provide it for the final plan review. The lighting will center on the parking are with 3-4 new poles.
	The access pathway lighting will be building mount at the doors. That final lighting will be shown on the architectural plans.



General Comments The plans indicate the correct layout. There are inconsistencies between the plan set and the There will be 61 beds in this facility. project narrative with respect to number of bedrooms, number of beds and parking spaces. The parking space assumptions for a rooming house (1 2. As described here the reduced space per 3 beds) result in a reduced number of parking is based on the design intent. parking spaces that does not trip the requirement of a A traffic impact study is not traffic impact study. The assumptions. warranted. The applicant has requested a waiver from submitting We are seeking a landscape waiver a landscaping plan with the justification that the site is screened with natural vegetation. The natural for the entire project. We are not vegetation screens the property from surrounding lots proposing any additional onsite but does not provide any onsite screening or aesthetics. screening.

Site Plan Comments

We have the following comments with respect to the site plans.

Sheet L1-Proposed Site Plan:

- 1. The Scope of Work indicates that project will "...result in the construction of over 5,000 of gross nonresidential floor area..."
- 2. The plan shows, and the scope of work states, that there are 35 rooms, 61 beds and 12 rooms per floor. This is in conflict with the 11 rooms per floor, 33 rooms and 57 beds discussed in the project narrative.
- 3. The plan shows 24 additional spaces but 22 are described in the project narrative.
- 4. The Proposed Parking Spaces Table indicates that there are 14 existing spaces and 23 proposed but the plan shows 13 existing and 24 proposed.
- 5. The 1 space per 3 beds, 21 spaces required in the Proposed Parking Spaces table does not have data to support the assumption.
- 6. In the Proposed Coverage Info table, the existing pavement amount decreases. The area that is to be removed should be shown on the plan.
- 7. In the Proposed Coverage Info table, the proposed dripline filter is included in the impervious calculation.
- 8. There are items/linetypes on the plan that should be defined in the legend.
- 9. The pipe sizes and materials should be called out on the plan.
- 10. There are multiple symbols used for catch basins.
- 11. The dumpster pad needs to be enclosed.
- 12. The existing ADA space should have a sign.
- 13. Areas of pavement and concrete should be called out on the plan.
- 14. Is there a significance to the colored lines? If so, these should be explained in the legend.
- 15. The size and material of the sewer force main should be called out.
- 16. The size and material of the water should be called out.
- 17. The water main and services should have gate valve and shutoff.

The plans have been updated to address the proposed conditions and address the review comments.

- 1. No response required.
- 2. The plans correctly indicate the room count.
- 3. The plan correctly indicates the parking spaces.
- 4. The table has been updated on the plans.
- 5. The data used to support this assumption is from information from the property owner who is developing this for this type of worker.
- 6. Slight change in existing pavement is the small removal of pavement along the connection to the new work.
- 7. No change proposed.
- 8. The plans have been updated
- 9. The plans have been updated to indicate the pipe sizes.
- 10. The symbols have been simplified.
- 11. Plans indicate it is enclosed with detail on fencing shown on Sheet L3.



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- 18. The proposed stormwater pond to the south of the building should be labeled.
- 19. Profiles of the water and sewer mains should be provided.
- 20. Where does the piping for the 3'stone drip edge on the east side of the building outlet?
- 21. The sawcut lines to install the proposed 15" HPE culvert at the intersection with Route 236 and the water main connection should be shown.
- 22. Existing utility information size, material, inverts, etc. should be shown on the plan.
- 23. The proposed invert out of the 15" HDPE culvert at the intersection with Route 236 should be field verified and indicated on the plan.
- 24. There are P numbers for the piping (P1, P2, etc.) but there is no table or notes that explain the designation.

- 12. The existing ADA space has been noted with a sign.
- 13. Pavement has been indicated on the plan.
- 14. The colored line is the building setback line and has been noted on the plan.
- 15. The force main will size will be determined when the pump station is designed.
- 16. The water line size has been indicated. It will be verified during the building design.
- 17. Water gate valve and shutoff valves will be determined and coordinated with Kittery Water District.
- 18. Stormwater pond has been labeled
- 19. We do not feel that profiles are needs for this work. The site utilities will be coordinated with the property town department.
- 20. Foundation drains and pipe outlets have been shown.
- 21. The sawcut line has been indicated.
- 22. Drain line pipe sizes have been shown. Existing sewer service size is unknown.
- 23. The new 15" HDPE will replace the existing 12" CMP. Inverts have been indicated.
- 24. P designations have been removed and the drain line pipe sizes have been added.

Sheet L2-Proposed Construction Details:

- 1. Where is the riprap apron(s) located? These should be called out on the plan.
- 2. Where is silt fence proposed to be used? Call this out on the plan.
- 3. More information and details are required on the proposed site lighting.
- 1. Riprap aprons have been indicated.
- 2. Silt fence detail has been removed, erosion control mulch berm is proposed.



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4. The Water Line Trench detail should show warning tape. 3. Site lighting requirements are to determined. See above comment.	10
5. There should be a detail for the water service. <i>more information. We will provide</i>	
6. The Sewer/Drain line Trench with Insulation detail lighting plan in the next submission line is the next submission of the sewer/Drain line is the sewer/Drain line	n.
should show warning tape. Where is cover anticipated	
to be less than 5'? A sewer profile should be provided. 4. Warning tape has been indicated.	
7. There should be a detail for the sewer service. 5. Water service detail has been add	ed.
8. Where are the wall mount lights located? 6. Sewer and drain line warning tap	e
9. There should be a detail for the pond. has been added.	
10. The Roofline Drip edge Filter detail indicates there are 7. Sewer service detail has been add	led.
foundation drains. These should be shown on the plan. 8. Wall mount light will be determined.	
11. There should be a striping detail. when the building design is	
12. Details for the water main connection should be <i>completed</i> .	
provided. 9. Storm pond outlet inverts are	
13. Provide details for thrust blocks. 3. Storm point outlet inverts are indicated.	
14. Details for the sewer main connection should be 10. Foundation drains have been addrains have been addr	ad
provided. 10. Foundation drains have been dad to plans.	еа
15. There should be a trench patch detail for the work in 11. Striping dimensions are shown or	the
Route 236. Route 36.	ine
16. The Typical Pavement Section should specify 12. Water connection details have be	en
pavement and gravel thicknesses (not match existing). added.	
The details should include tackifier and/or lane joint 13. Thrust block detail has been adde	d
adhesive. 14. Sewer manhole has been added for	
connection from force main.	,
	ad
15. Trench patch detail has been add	zu
to plans.	
16. A pavement replacement detail he	
been added. New pavement section	n is
for parking area.	
Sheet L3-Maintenance Notes:	
1. The Maintenance Procedures should be updated to 1. The maintenance notes have been	
apply to this project.	
Sheet EC1-Boundary/Existing Conditions Plan:	
1. Existing utilities – sizes, materials, inverts, etc. should 1. Existing utility sizes have been	
be shown on the plan. indicated on the site plan. The E	CI
plan does not indicate undergrou	
utilities.	•
The existing sewer information	
shown on L1 is based on informa	ion
provided by the Kittery Sewer	
Department. We have added an	
additional sheet to indicate the	
known utilities, See Sheet ECSP.	
known untitles, See Sheet ECSP.	

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ATTACHMENTS:

- Water and Sewer Capacity Letters
- Updated Site Plans



CIVIL CONSULTANTS ohn C. Perry, President ames E. Golter, Treasurer lobert A. Gray, Clerk Michael H. Melhorn, Trustee Larla J. Robinson, Trustee



Michael S. Rogers, Superintendent Carl B. Palm, Assistant Superintendent Melissa J. Locke, Office Manager

OFFICE OF

KITTERY WATER DISTRICT

17 State Road Kittery, ME 03904-1565 TEL: 207-439-1128 FAX: 207-439-8549

Email: info@kitterywater.org

Kittery Planning Board 200 Rogers Road Kittery, ME 03904

October 13, 2023

Re: 25 & 17 Route 236, Kittery

Dear Planning Board Members,

Michiel D. Rog_

Please accept this letter as verification that the Kittery Water District does have the capacity to supply the proposed Rooming House to be located at 25 & 17 Route 236, Kittery with Municipal Water Service.

Sincerely,

Michael S. Rogers Superintendent

•

cc: Geoffrey Aleva, P.E. President, Civil Consultants



TOWN OF KITTERY, MAINE

SEWER DEPARTMENT

200 Rogers Road, Kittery, ME 03904

Telephone: (207) 439-4646 Fax: (207) 439-2799

October 13, 2023

Re: Treatment Plant Capacity-Acceptance letter 25 & 17 Route 236 Kittery, ME 03904

Geoff Aleva,

This letter is to confirm the acceptance of sanitary sewer discharge for the proposed Project at 25 & 17 Route 236 in the Town of Kittery Maine. The sewer system (piping and pumping stations) and the treatment plant will have the capacity and ability to handle the discharge flow estimates of 5,685 Gallons per day of wastewater requiring treatment and disposal.

This project must follow all specifications in accordance with design and performance standards set by the Kittery Sewer Department found in Title 13 of the Town Code.

Before the connection to the Kittery Sewer line, you will need to obtain a sewer permit from the Town of Kittery and pay all Impact and Entrance fees.

During the engineering and construction process plans may change, if they do, consideration for acceptance may change. Please notify me of any changes in design or construction.

If you have further questions or concerns, please contact me.

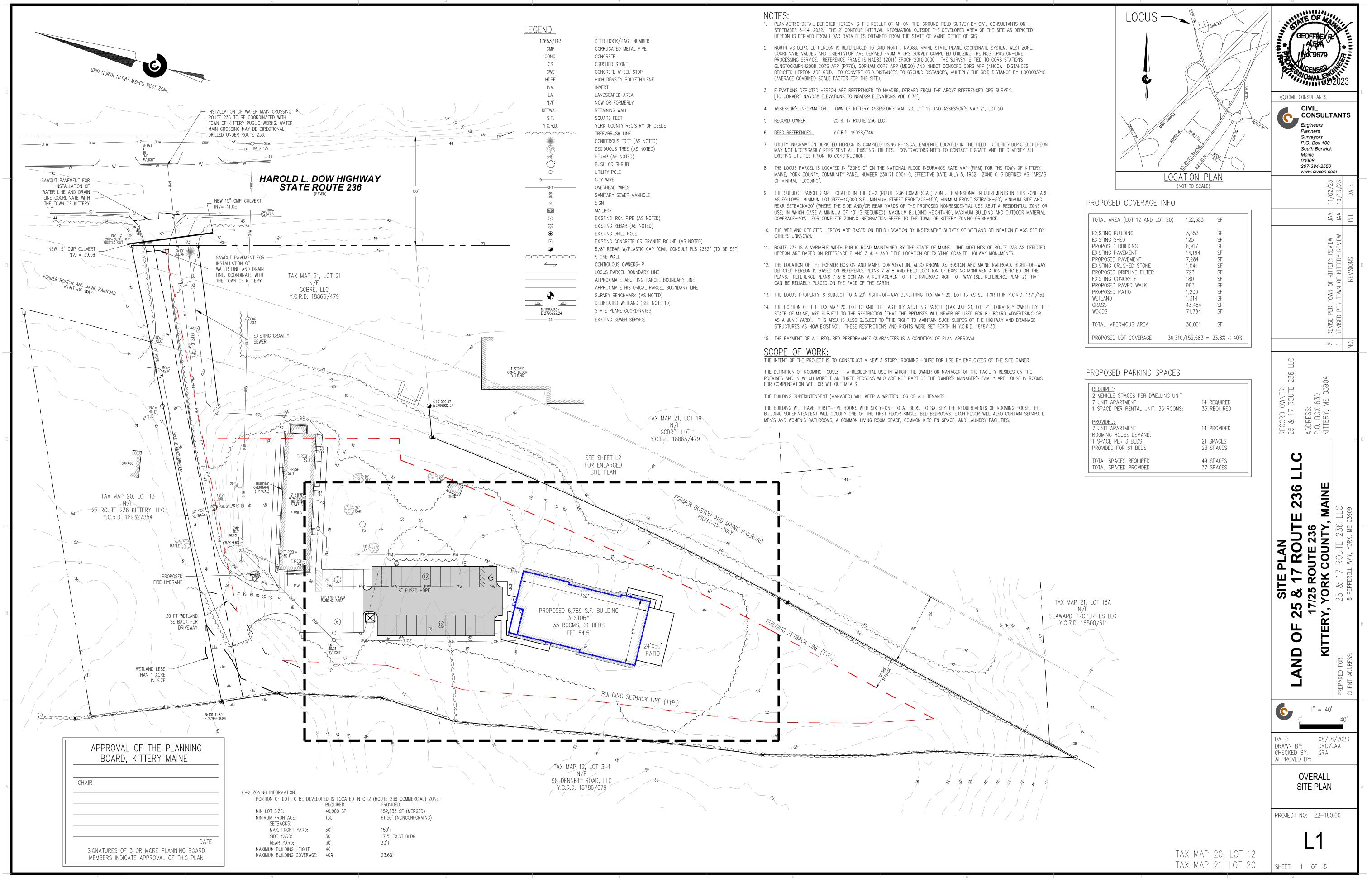
Sincerely,

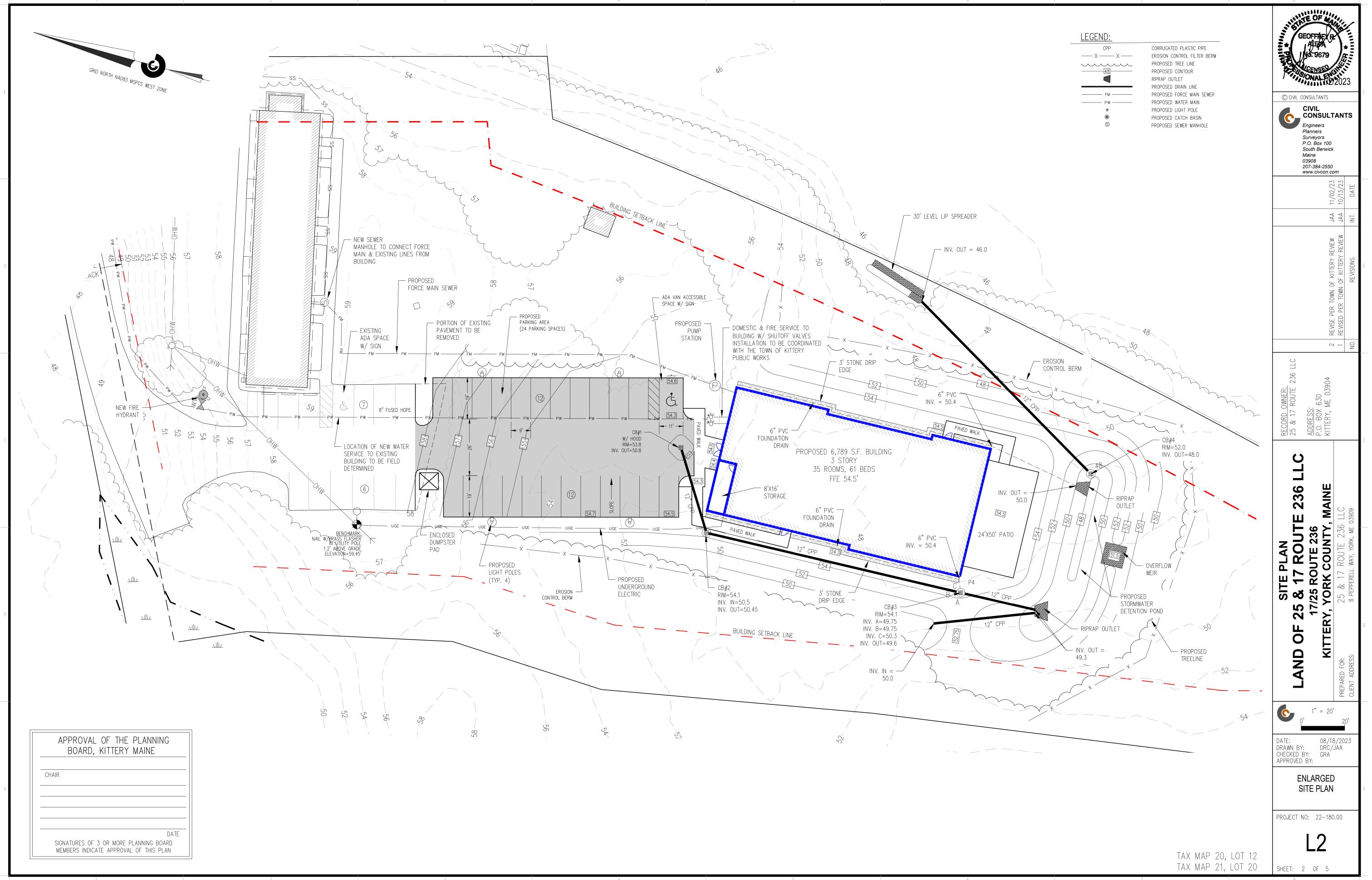
Timothy Babkirk Town of Kittery

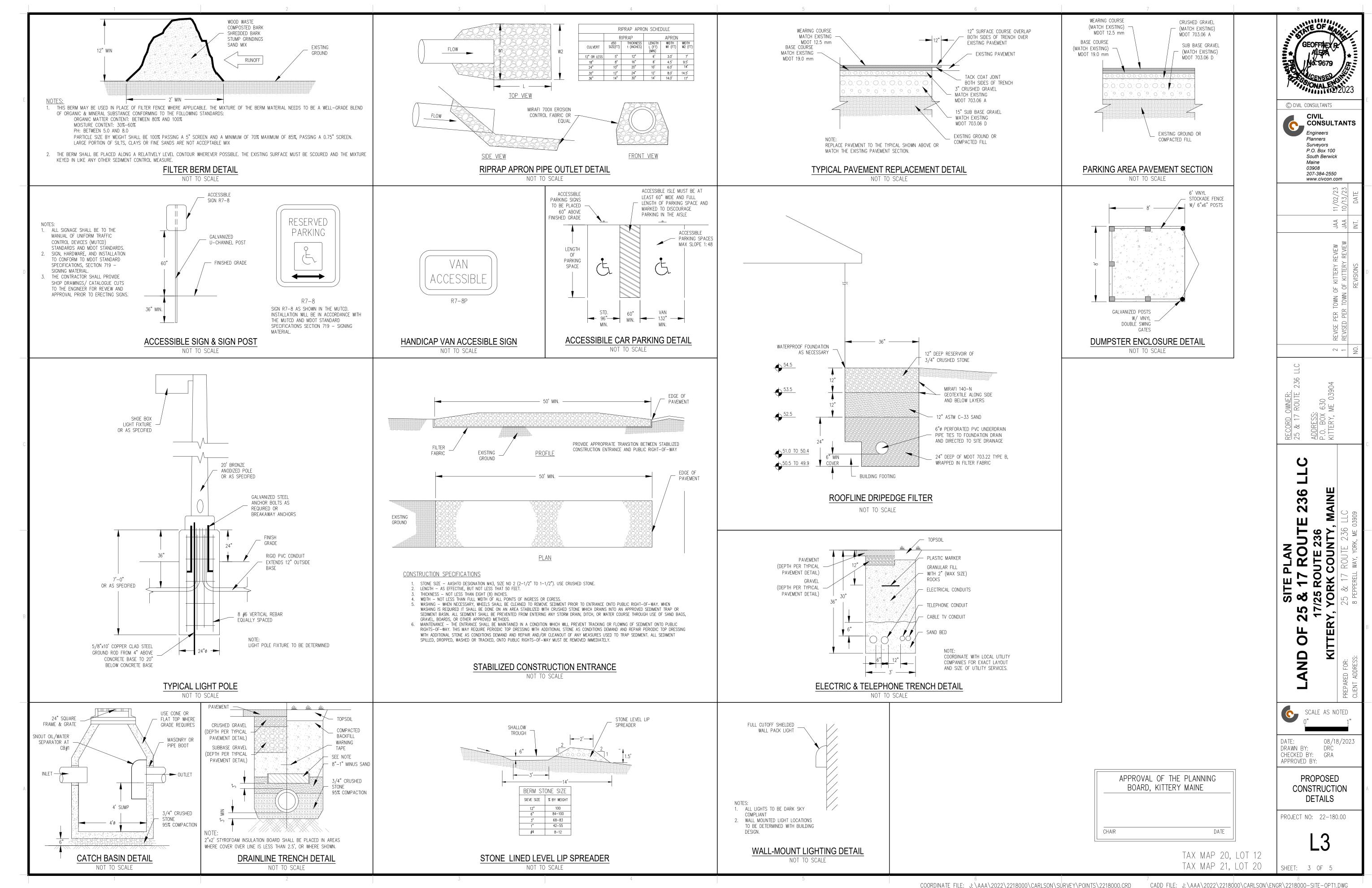
Superintendent of Sewer Services

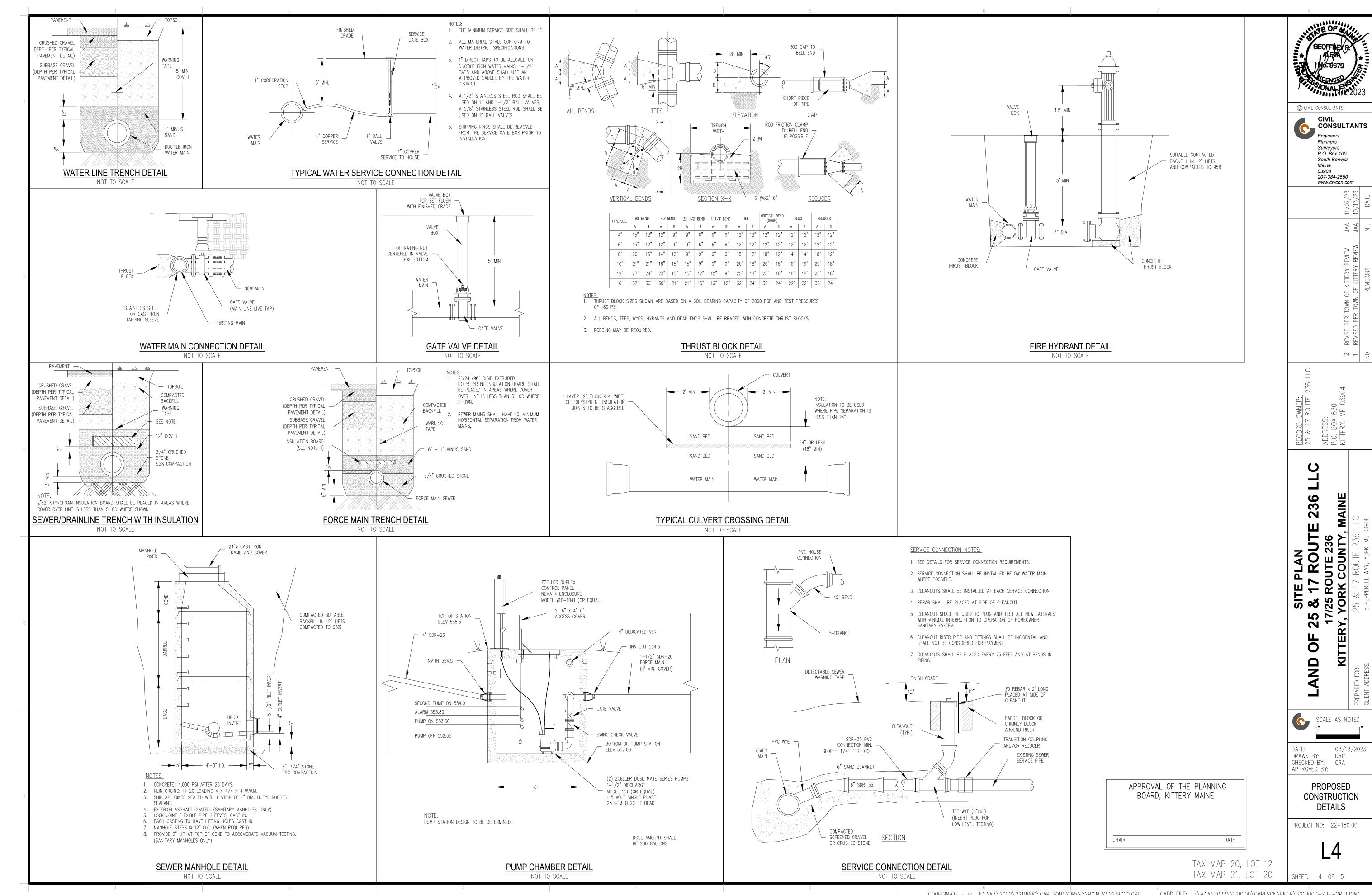
1-207-439-4646

tbabkirk@kitteryme.org









MAINTENANCE PROCEDURES

DETERMINE IF THEY NEED TO BE CLEANED OR REPLACED.

THE FOLLOWING PROCEDURES ARE BASED ON THE MAINE STORMWATER MANAGEMENT DESIGN MANUAL, TECHNICAL DESIGN MANUAL VOLUME III, MAY 2016. MAINTENANCE PROCEDURES WILL BE FOLLOWED FOR INITIAL AND LONG TERM MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES AT THIS SITE. NOTE: FOR THE PURPOSES OF THESE PROCEDURES, A MAJOR STORM EVENT IS CLASSIFIED AS A RAINFALL EXCEEDING 3.0 INCHES. A SIGNIFICANT RAINFALL IS 1/2" IN A 24

DETENTION BASINS SHOULD BE INSPECTED ANNUALLY FOR EROSION. THEREAFTER, DESTABILIZATION OF SIDE SLOPES EMBANKMENT SETTLING AND OTHER SIGNS OF STRUCTURE FAILURE, AND LOSS OF STORAGE VOLUME DUE TO SEDIMENT ACCUMULATION. CORRECTIVE ACTION SHOULD BE TAKEN IMMEDIATELY UPON IDENTIFICATION

MAINTENANCE AGREEMENT: A LEGAL ENTITY SHOULD BE ESTABLISHED OR INSPECTING AND MAINTAINING ANY DETENTION BASIN. THE LEGAL AGREEMENT SHOULD LIST SPECIFIC MAINTENANCE RESPONSIBILITIES (INCLUDING TIMETABLES) AND PROVIDE FOR THE FUNDING TO OVER LONG-TERM INSPECTION AND MAINTENANCE.

INLET AND OUTLET INSPECTIONS: THE INLET AND OUTLET OF THE BASIN SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT FLOW STRUCTURES ARE NOT BLOCKED BY DEBRIS. INSPECTIONS SHOULD BE CONDUCTED MONTHLY DURING WET WEATHER CONDITIONS (MARCH TO NOVEMBER). FLOW STRUCTURES SHOULD BE EASILY ACCESSIBLE FOR INSPECTION AND THE REMOVAL OF DEBRIS BLOCKAGE DURING STORM CONDITIONS.

EMBANKMENT MAINTENANCE: EMBANKMENTS SHOULD BE MAINTAINED TO PRESERVE THEIR INTEGRITY AS IMPOUNDMENT STRUCTURES, INCLUDING: MOWING, CONTROL OF WOODY VEGETATION, RODENT, AND OUTLET MAINTENANCE AND REPAIR. BASINS SHOULD BE MOWED NO MORE THAN TWICE A YEAR DURING THE GROWING SEASON TO MAINTAIN MAXIMUM GRASS HEIGHTS LESS THAN 12 INCHES. ALL ACCUMULATED TRASH AND DEBRIS SHOULD BE REMOVED.

SEDIMENT REMOVAL: SEDIMENT SHOULD BE REMOVED FROM THE PRETREATMENT STRUCTURE AT LEAST ANNUALLY AND FROM THE BASIN WHEN NECESSARY.

INFILTRATION BASINS, DRY WELLS AND INFILTRATION TRENCHES MAINTENANCE: PREVENTIVE MAINTENANCE IS VITAL FOR THE LONG-TERM EFFECTIVENESS OF AN INFILTRATION SYSTEM. SINCE INFILTRATION IS LESS CONSPICUOUS THAN MOST BMPS, IT IS EASY TO OVERLOOK DURING MAINTENANCE INSPECTIONS. THE FOLLOWING CRITERIA APPLY TO ALL INFILTRATION SYSTEMS.

FERTILIZATION: FERTILIZATION OF THE AREA OVER THE INFILTRATION BED SHOULD BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.

SNOW STORAGE: SNOW REMOVED FROM ANY ON-SITE OR OFF-SITE AREAS MAY NOT BE STORED OVER AN INFILTRATION AREA, WITH THE EXCEPTION OF STORAGE ON PERMEABLE PAVEMENT.

MONITORING AND INSPECTIONS: INSPECT THE INFILTRATION SYSTEM SEVERAL TIMES IN THE FIRST YEAR OF OPERATION AND AT LEAST ANNUALLY THEREAFTER. CONDUCT THE INSPECTIONS AFTER LARGE STORMS TO CHECK FOR SURFACE PONDING AT THE INLET THAT MAY INDICATE CLOGGING. WATER LEVELS IN THE

THE BASIN WILL NEED TO BE REHABILITATED IF IT FAILS TO DRAIN BEFORE THE NEXT RAIN EVENT OF 72 HOURS. POLLUTION-CONTROL DEVICES: POLLUTION-CONTROL DEVICES SUCH AS OIL-WATER SEPARATORS, SKIMMERS, AND BOOMS SHOULD BE INSPECTED REGULARLY TO

OBSERVATION WELL SHOULD BE RECORDED OVER SEVERAL DAYS AFTER THE STORM TO ENSURE THAT THE SYSTEM DRAINS WITHIN 24 TO 48 HOURS AFTER FILLING.

SEDIMENT REMOVAL AND MAINTENANCE OF SYSTEM PERFORMANCE: SEDIMENT MUST BE REMOVED FROM THE SYSTEM AT LEAST ANNUALLY TO PREVENT DETERIORATION OF SYSTEM PERFORMANCE. THE PRE-TREATMENT INLETS SHOULD BE CHECKED AND CLEANED OUT WHEN ACCUMULATED SEDIMENT OCCUPIES MORE THAN 10% OF THE AVAILABLE CAPACITY. THIS CAN BE DONE MANUALLY OR BY A VACUUM PUMP. INLET AND OUTLET PIPES SHOULD BE CHECKED FOR CLOGGING. ACCUMULATED GREASE AND OIL FROM SEPARATOR DEVICES SHOULD BE REMOVED FREQUENTLY AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS. THE SYSTEM MUST BE REHABILITATED OR REPLACED IF ITS PERFORMANCE IS DEGRADED TO THE POINT THAT APPLICABLE STORMWATER STANDARDS ARE NOT MET.

PRETREATMENT BUFFER STRIPS: IF A GRASS BUFFER STRIP IS USED IN CONJUNCTION WITH THE INFILTRATION BMP IT SHOULD HAVE VIGOROUS AND DENSE. VEGETATION. BARE SPOTS OR ERODED AREAS SHOULD BE REPAIRED AND/OR RE-SEEDED OR RE-SODDED. WATERING AND/OR FERTILIZATION SHOULD BE PROVIDED DURING THE FIRST FEW MONTHS AFTER THE STRIP IS ESTABLISHED, AND MAY BE NEEDED IN TIMES OF DROUGHT. GRASS FILTER STRIPS SHOULD BE MOWED REGULARLY TO PREVENT THE UNCONTROLLED GROWTH OF WEEDS, BUT FILTER STRIP PERFORMANCE WILL BE IMPAIRED IF THE GRASS IS CUT TOO SHORT.

MAINTENANCE: A DRIPLINE FILTER BED NEEDS TO BE MAINTAINED LIKE ANY OTHER FILTER BASIN. THE MAINTENANCE ACTIVITIES FOR FILTRATION BMPS LISTED IN CHAPTER 7.2 OF THE BMP MANUAL APPLY EQUALLY TO THIS TYPE OF STRUCTURE. ANY DEBRIS MUST BE REMOVED FROM THE RESERVOIR COURSE. THE MAINTENANCE PLAN NEEDS TO ADDRESS THAT THESE STRUCTURES ARE PART OF THE STORMWATER MANAGEMENT PLAN FOR THE PROJECT, CANNOT BE PAVED OVER 1. STABILIZATION OF DITCHES AND CHANNELS OR ALTERED IN ANYWAY. NO GUTTER MAY BE INSTALLED ON THE ROOF LINE.

MAINTENANCE: THE AREA SHOULD BE INSPECTED FOR FAILURES FOLLOWING HEAVY RAINFALL AND REPAIRED AS NECESSARY FOR NEWLY FORMED CHANNELS OR GULLIES. BARE SPOTS SHOULD BE RESEEDED OR RESODDED. TRASH, LEAVES AND/OR ACCUMULATED SEDIMENTS SHOULD BE REMOVED. WOODY OR OTHER UNDESIRABLE VEGETATION SHOULD BE CONTROLLED. CHECK DAM INTEGRITY SHOULD BE CHECKED.

- AERATION: THE BUFFER STRIP MAY REQUIRE PERIODIC MECHANICAL AERATION (BY ROTOTILLING OR OTHER) TO RESTORE INFILTRATION CAPACITY. THIS AERATION MUST BE DONE DURING A TIME WHEN THE AREA CAN BE RESEEDED AND MULCHED PRIOR TO ANY SIGNIFICANT RAINFALL.
- MOWING: GRASS SHOULD NOT BE TRIMMED EXTREMELY SHORT, AS THIS WILL REDUCE THE FILTERING EFFECT OF THE SWALE (MPCA, 1989). THE CUT VEGETATION SHOULD BE REMOVED TO PREVENT THE DECAYING ORGANIC LITTER FROM ADDING POLLUTANTS TO THE DISCHARGE FROM THE SWALE. MOWED HEIGHT OF THE GRASS SHOULD BE 2-4 INCHES TALLER THAN THE MAXIMUM FLOW DEPTH OF THE DESIGN WATER QUALITY STORM. A MINIMUM MOW HEIGHT OF 6 INCHES IS GENERALLY RECOMMENDED (GALLI, 1993).
- EROSION: IT IS IMPORTANT TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES TO STABILIZE THIS AREA AS SOON AS POSSIBLE AND RETAIN ANY
- ORGANIC MATTER IN THE BOTTOM OF THE TRENCH. • FERTILIZATION: ROUTINE FERTILIZATION AND/OR PESTICIDE USE IS STRONGLY DISCOURAGED. IF COMPLETE RESEEDING IS NECESSARY, HALF THE ORIGINAL
- RECOMMENDED RATE OF FERTILIZER SHOULD BE APPLIED WITH A FULL RATE OF SEED. SEDIMENT REMOVAL: LEVEL OF SEDIMENT DEPOSITION IN THE CHANNEL SHOULD BE MONITORED REGULARLY, AND REMOVED FROM GRASSED CHANNELS BEFORE

MAINTENANCE: LONG TERM MAINTENANCE OF THE LEVEL SPREADER IS ESSENTIAL TO ENSURE ITS EFFECTIVENESS. SPREADERS CONSTRUCTED OF WOOD, ASPHALT, STONE OR CONCRETE CURBING ALSO REQUIRE INSPECTION AND MAINTENANCE.

- INSPECTIONS: AT LEAST ONCE A YEAR AND FOLLOWING MAJOR STORMS, THE LEVEL SPREADER POOL SHOULD BE INSPECTED FOR SAND ACCUMULATION AND
- DEBRIS THAT MAY REDUCE ITS CAPACITY. • SEDIMENT REMOVAL: SEDIMENT BUILD-UP WITHIN THE SWALE SHOULD BE REMOVED WHEN IT HAS ACCUMULATED TO APPROXIMATELY 25% OF DESIGN VOLUME
- OR CHANNEL CAPACITY. DISPOSE OF THE SEDIMENTS APPROPRIATELY. DEBRIS: REMOVE DEBRIS SUCH AS LEAF LITTER, BRANCHES AND TREE GROWTH FROM THE SPREADER.
- MOWING: VEGETATED SPREADERS MAY REQUIRE MOWING. SNOW STORAGE: DO NOT STORE SNOW WITHIN THE AREA OF THE LEVEL SPREADER.

CHANNEL WHEN IT REDUCES THE CAPACITY OF THE CHANNEL.

LEVEL SPREADER REPLACEMENT: THE RECONSTRUCTION OF THE LEVEL SPREADER MAY BE NECESSARY WHEN SHEET FLOW FROM THE SPREADER CHANNELIZE

MAINTENANCE: SEDIMENT REMOVAL FROM THE SUMP AND ANY FLOATING DEBRIS AND PRODUCTS IS IMPERATIVE FOR THE CONTINUITY OF THE EFFECTIVENESS OF THE

MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE STRUCTURE. THE SUMP NEEDS CLEANING WHEN SEDIMENTS ARE VISIBLE AT THE BOTTOM OF THE OUTLET PIPE.

- INSPECTION: WATER QUALITY INLETS SHOULD BE INSPECTED THREE TO FOUR TIMES ANNUALLY.
- SEDIMENT REMOVAL: SEDIMENT SHOULD BE REMOVED WHEN ACCUMULATION IS WITHIN 6 INCHES OF THE BOTTOM OF THE HOOD.

OVERWINTER STABILIZATION

MAINE EROSION AND SEDIMENT CONTROL BMP (3/2016)

ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER MUST BE TAKEN.

SOD LINING: A DITCH OR CHANNEL MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS.

STONE LINING: A DITCH OR CHANNEL MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA. . STABILIZATION OF DISTURBED SLOPES

ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL

TEMPORARY VEGETATION AND EROSION CONTROL MATS: BY OCTOBER 1, THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING PERMANENT DAMAGE IS DONE TO THE GRASSED VEGETATION, OR IF INFILTRATION TIMES ARE LONGER THAN 12 HOURS. SEDIMENT SHOULD BE REMOVED FROM A RATE OF 3 POUNDS PER 1,000 SQUARE FEET FOLLOWED BY INSTALLATION OF EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS.

> SOD: THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE 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. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. EROSION CONTROL MIX: EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION

> CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAT 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. STONE RIPRAP: PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. 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 TO BE INSTALLED BENEATH THE RIPRAP.

3. STABILIZATION OF DISTURBED SOILS

TEMPORARY VEGETATION: BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3-LBS PER 1,000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75-LBS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVERWINTER PROTECTION AS FOLLOWS.

MULCH: BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150-LBS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL. MAINTENANCE

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85% TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

STABILIZATION SCHEDULE BEFORE WINTER

SEPTEMBER 15 ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED. SEEDED AND MULCHED. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET.

OCTOBER 1 IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3-LBS PER 1,000 SQUARE FEET AND MULCHED.

NOVEMBER 15 ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST

DECEMBER 1 ALL DISTURBED AREAS WHERE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED VEGETATION, MUST BE PROTECTED FOR OVER-WINTER. NOTE: THE DATES GIVEN ARE FOR PROJECTS IN SOUTH-CENTRAL MAINE.

EROSION AND SEDIMENT CONTROL PRACTICES

BLANKET, OR OTHER COMPARABLE MEASURES.

- NO SOIL SHALL BE DISTURBED DURING THE PERIOD OF MARCH 1 THROUGH APRIL 15, NOR DURING ANY OTHER PERIOD WHEN SOILS ARE SATURATED DUE TO RAIN OR SNOW MELT.
- 2. DISTURBED SOILS SHALL BE STABILIZED WITHIN ONE (1) WEEK FROM THE TIME IT WAS LAST ACTIVELY WORKED USING TEMPORARY OR PERMANENT

MEASURES SUCH AS PLACEMENT OF RIPRAP, MULCH OR EROSION CONTROL

- 3. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF AT LEAST ONE (1) BALE PER 500 SQUARE FEET (1-2 TONS PER ACRE).
- 4. IF MULCH IS LIKELY TO BE REMOVED DUE TO TO STEEP SLOPES OR WIND, IT SHALL BE ANCHORED WITH NETTING, PEG OR TWINE, OR OTHER SUITABLE METHOD AND SHALL BE MAINTAINED UNTIL A CATCH OF VEGETATION IS ESTABLISHED OVER THE ENTIRE DISTURBED AREA.
- 5. IN ADDITION TO PLACEMENT OF RIPRAP, MULCH OR EROSION CONTROL BLANKETS, ADDITIONAL STEPS SHALL BE TAKEN WHERE NECESSARY IN ORDER TO PREVENT SEDIMENTATION OF THE WATER. EVIDENCE OF SEDIMENTATION INCLUDES VISIBLE GULLY EROSION, DISCOLORATION OF WATER BY SUSPENDED PARTICLES AND SLUMPING OF BANKS, SILT FENCES, STAKED HAY BALES AND OTHER SEDIMENTATION CONTROL MEASURES, WHERE PLANNED FOR, SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF WORK, BUT SHALL ALSO BE INSTALLED WHEREVER NECESSARY DUE TO SEDIMENTATION.
- MULCH OR OTHER TEMPORARY MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS PERMANENTLY STABILIZED WITH VEGETATION OR OTHER PERMANENT CONTROL MEASURES AFTER WHICH TEMPORARY MEASURES WILL BE REMOVED.
- PERMANENT RE-VEGETATION OF ALL DISTURBED AREAS, USING NATIVE PLANT MATERIAL WHEN POSSIBLE, SHALL OCCUR WITHIN 30 DAYS FROM THE TIME THE AREAS WERE LAST ACTIVELY WORKED, OR FOR FALL AND WINTER ACTIVITIES, BY JUNE 15, EXCEPT WHERE PRECLUDED BY THE TYPE OF ACTIVITY (E.G. RIRRAP, ROAD SURFACES, ETC.). THE VEGETATIVE COVER SHALL BE MAINTAINED.
- 8. DISPOSAL OF COLLECTED DEBRIS MUST BE IN CONFORMANCE WITH MAINE SOLID WASTE LAW, TITLE 38 MRSA SECTION 1301 ET. SEQ.
- 9. LIME AND FERTILIZER APPLICATION RATES SHALL NOT EXCEED THE FOLLOWING:

GROUND LIMESTONE: 3 TONS/ACRE (130 LBS./1000 S.F.) FERTILIZER, 10-10-10 OF EQUIVALENT: 600 LBS./ACRE (14 LBS./1000 S.F.)

FERTILIZER SHALL NOT BE APPLIED BEFORE START OF THE GROWING SEASON NOR AFTER SEPTEMBER 30. FERTILIZED AREAS SHALL BE MULCHED TO REDUCE OFF-SITE TRANSPORT OF NUTRIENTS UNTIL USED BY VEGETATIVE

SEEDING MIXTURE AND SCHEDULE:

SPREAD TOPSOIL UNIFORMLY 6" DEEP OVER AREAS TO BE RECLAIMED. THE FOLLOWING SEED MIXTURE SHALL BE USED:

KENTUCKY BLUEGRASS 0.46 LBS./1000 S.F. CREEPING RED FESCUE 0.46 LBS./1000 S.F. PERENNIAL RYE GRASS 0.11 LBS./1000 S.F. TOTAL 1.03 LBS./1000 S.F.

APPLY LIME AND FERTILIZER AS SPECIFIED UNDER THE EROSION AND SEDIMENTATION CONTROL NOTES. WORK INTO THE TOP (4) INCHES OF SOIL PRIOR TO SEEDING. AFTER SEEDING, APPLY MULCH HAY AS SPECIFIED. ON FLAT AREAS AND NOT EXPOSED TO WIND, THE MULCH WILL BE ANCHORED BY WETTING DOWN. IN OTHER AREAS, JUTE NETTING SHALL BE USED FOR ANCHORAGE. THE ABOVE SEEDING SCHEDULE IS APPLICABLE IF SEEDING DURING THE GROWING SEASON (APRIL 15 TO JUNE 15 AND AUGUST 30 TO SEPTEMBER 30). BETWEEN JUNE 15 AND AUGUST 30, SEEDING WILL BE DELAYED UNTIL AUGUST 30. IF SOIL IS DISTURBED BETWEEN OCTOBER 1 AND NOVEMBER 1, DELAY SEEDING UNTIL NOVEMBER 1. AFTER NOVEMBER AND BEFORE A SNOW COVER FORMS, THE SAME PROCEDURE WILL BE FOLLOWED EXCEPT THE SEED RATE WILL BE DOUBLED. AFTER SNOW COVER AND BEFORE APRIL 15, SEEDING WILL BE DELAYED UNTIL APRIL 15. HAY MULCH WILL BE APPLIED AT A RATE OF 150 LBS./1000 SQUARE FEET. THIS WILL BE ANCHORED BY NON-ASPHALTIC TACKIFIER SPRAYED ON LAWNS AND JUTE NETTING IN DRAINAGE WAYS AND OTHER AREAS.

APPROVAL OF THE PLANNING

BOARD, KITTERY MAINE

RE OF

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CONSULTANTS Engineers Planners Surveyors P.O. Box 100 South Berwick 207-384-2550

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MAINTENANCE NOTES

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CHAIR

