TOWN OF BRUNSWICK
PLANNING BOARD
85 UNION STREET
BRUNSWICK, ME 04011

PLANNING BOARD
AGENDA
BRUNSWICK TOWN HALL
COUNCIL CHAMBERS
85 UNION STREET

TUESDAY, MARCH 3, 2015, 7 P.M.

1. **Election of Officers**

2. **Case # 15-004 Brunswick Sewer District Garage/Office Facilities:** The Board will review and take action on a combined Sketch and Final Major Review application submitted by the Brunswick Sewer District, for construction of a 4,950 sf garage/office building, a 4,950 sf garage, and associated site improvements on two lots totaling 29.9 acres; located at 10 Pine Tree Road, in the Town Residential 4 / Jordan Acres (TR4) Zoning District. Assessor's Map U54, Lots 7 & 12.

3. **Case # 15–007 Common Development Plan Amendment:** The Planning Board will review and take action on proposed boundary and dimensional amendments to the previously approved Common Development Plan (CDP). Submitted by Priority Real Estate Group, LLC, and the Midcoast Regional Redevelopment Authority; located in the BNAS Reuse District. Assessor's Map 40, Lots 1, 10, 16, 32, 34, 37, 48, 50, 52, 52, 72, 76, 84, &103.

4. **Zoning Ordinance Rewrite Committee (ZORC) Update**

5. **Approval of Minutes**
   a. January 13, 2015 Draft 1

6. **Other Business**

7. **Adjourn**

PLEASE NOTE:
The February 24th meeting of Planning Board has been rescheduled to March 3rd.
REVISED 3/2/15 to include the Election of Officers

This agenda is mailed to owners of property within 200 feet of the above referenced development proposals as well as others upon request. It is the practice of the Planning Board to allow public comment on development review applications and all are invited to attend and participate.
Please call the Brunswick Department of Planning and Development (725-6660) with questions or comments. Individuals needing auxiliary aids for effective communications please call 725-6659 or TDD 725-5521. This meeting will be televised.

DRAFT FINDINGS OF FACT
Major Development Review
Combined Sketch and Final Site Plan
March 3, 2015

Project Name:	Brunswick Sewer District Garage/Office Facilities
Address:	10 Pine Tree Road
Case Number:	15-004
Tax Map:	Map 55, Lots 7 & 12
Zoning District:	Town Residential 4 (TR4)
Applicant:	Brunswick Sewer District 10 Pine Tree Road Brunswick, ME 04011
Authorized Representative:	Wright-Pierce 99 Main Street Topsham, ME 04086

Staff reviewed the application and has determined it is complete.

PROJECT SUMMARY

Staff review is based on the following application materials prepared by Wright-Pierce:

- Major Development Plan Application Packet for the Brunswick Sewer District dated January 2015.
- The following Drawings, dated February 15, 2015:
    - Cover Page
    - C-1, entitled "General Notes, Legend, Abbreviations, and Details".
    - C-2, entitled "Overall Site Plan".
    - C-3, entitled "Existing Site and Clearing Plan".
    - C-4, entitled "Site Layout Plan".
    - C-5, entitled "Site Grading Plan, Landscaping, and Erosion Control Plan".
    - C-6, entitled "Site Utility Plan".
    - C-7, entitled "Erosion Control Notes and Details".
    - C-8, entitled "Civil Details I".
    - C-9, entitled "Civil Details II".
    - C-10, entitled "Civil Details III".
    - A-2, entitled "Garage #1 Plan".
    - A-3, entitled "Garage #2 Plan".
    - A-5, entitled "Elevations".
    - A-7, entitled "Details".
    - E-3, entitled "Electrical Site Demolition and Modification Plan".

The applicant is proposing construction of a 4,950 sf garage/office building, a 4,950 sf garage, and associated site improvements, on two lots totaling 29.9 acres. The project

site is an undeveloped and mostly wooded portion of the Brunswick Sewer District (BSD) property, located west of and adjacent to the existing BSD administrative building and sewer treatment facility. The project extends across 2 lots; however, in accordance with Section 401.1.F of the zoning ordinance, if the development is proposed on two or more lots but functions as a single project, it may be treated as a single lot.

The proposed structures will provide storage and maintenance space for all of BSD's vehicles and equipment, house the collections system staff, and allow BSD to re-consolidate its operations to the treatment facility site. Presently, the Sewer District leases space offsite to accommodate these needs.

The project's proposed impervious area will consist of 9,900 sf of new building space and 25,497 sf of pavement, for a total of 35,397 sf of impervious area. Included in that paved area is a 1,507 sf driveway connecting the roadway to the existing administration office parking lot. Combined, the two lots are currently 16% impervious; the proposed project will result in an impervious increase of 3%. The project qualifies for a Stormwater Permit by Rule because it results in more than one acre of disturbed area (approximately 70,000 sf) in a non-urban-impaired watershed.

The application packet, including a project narrative, is attached hereto.

The following waivers have been requested by the applicant:

1. Class A High Intensity Soil Survey. *No subsurface disposal systems are proposed, which would necessitate a soils survey.*
2. Location of all existing trees over 10 inches in diameter. *There are no on-site alternative locations for 2 garages that don't impact wooded areas. Limits of clearing do not contain any specimen trees. Limits of clearing are shown on the plan.*

Staff recommends approval of the requested waivers.

Review Standards from Section 411 of the Town of Brunswick Zoning Ordinance

411.1 Ordinance Provisions

The property is located in the Town Residential (TR4) Zoning District. The proposed development complies with all applicable standards of the TR4 Zoning District. *The Board finds that the provisions of Section 411.1 are satisfied.*

411.2 Preservation of Natural Features

There are no existing features on the site that would be considered as having natural, scenic, or historic value to the Town. There are no surface waters, wildlife habitats, steep slopes, or other natural resources on the property. A 1.07 acre wooded area will need to be cleared for development of the garage complex; however a 100-foot wooded buffer will remain between the developed area and the back property lines of the houses along Merrymeeting Drive. Overall, the development does not occur within or cause harm to

any land which is not suitable for development. *The Board finds that the provisions of Section 411.2 are satisfied.*

411.3 Surface Waters, Wetlands and Marine Resources

No water bodies, streams, wetlands, or vernal pools have been identified on the site. The applicant has submitted a stormwater management plan that satisfactorily addresses stormwater quality and quantity. Overall the project will not adversely affect the water quality of Casco Bay or its estuaries. *The Board finds that the provisions of Section 411.3 are satisfied.*

411.4 Flood Hazard Areas

The project area is not located within a 100 year flood hazard zone. *The Board finds that the provisions of Section 411.4 are satisfied.*

411.5 Stormwater Management

The project area is characterized as a relatively flat, wooded area with moderate slopes to the west, leading to the residential properties along Merrymeeting Road. On-site soils are considered course-to-medium-textured, moderately well-drained soils, with permeability that ranges from moderately rapid to rapid. The majority of the stormwater generated at the site, including the two garages, will travel from the northeast in a southwesterly direction via overland flow into a shallow vegetated swale near the base of the slope extending down from the rear of the residential lots on Merrymeeting Drive. Stormwater will infiltrate into the soil as it travels down through the swale. There is also a vegetated infiltration trench located between the garages to capture additional stormwater. Stormwater runoff from the majority of the driveway and parking areas will be directed into 2 underdrained bioretention cells, which are design to capture sediment and provide an initial treatment, before being conveying into stormdrain pipes and then into the Town stormdrain system, which drains into the Androscoggin River 600 feet north of the project. The project qualifies for a Stormwater Permit by Rule from the DEP because it results in more than one acre of disturbed area (approximately 70,000 sf) in a non-urban-impaired watershed. The Town Engineer has reviewed this stormwater plan and has determined that treatment measures satisfy Maine DEP's Best Management Practices. *The Board finds that the provisions of Section 411.5 are satisfied.*

411.6 Groundwater

The project is not located within an aquifer protection zone, nor is it located above a sand and gravel aquifer. Stormwater treatment features will be developed to meet minimum separation requirements to groundwater. The Board finds that the development will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater. *The Board finds that the provisions of Section 411.6 are satisfied.*

411.7 Erosion and Sedimentation Control

An Erosion and Sedimentation Control plan for the site construction and long term operation has been developed following the Maine DEP Best Management Practices. The disturbed areas of the site will be isolated through the use of silt fencing and other

measures designed to minimize the transport of sediment from the site. The erosion and sedimentation control plan has been developed in accordance with Best Management Practices and will not cause unreasonable soil erosion or reduction in the land's capacity to hold water so that a dangerous or unhealthy situation results. *The Board finds that the provisions of Section 411.7 are satisfied.*

411.8 Sewage Disposal

The site will be connected to the existing sewer main leading to the wastewater treatment facility. A letter from the BSD indicating ability to serve the project has been included in the application materials. *The Board finds that the provisions of Section 411.8 are satisfied*.

411.9 Water Supply

The proposed garage facilities will be served by a new 2 inch domestic service connection. There will also be a 4 inch fire connection. A letter from Brunswick & Topsham Water District indicating ability to serve the project has been included in the application materials. *The Board finds that the provisions of Section 411.9 are satisfied.*

411.10 Aesthetic, Cultural and Natural Values

This site is not located within the Natural Resource Protection Zone, or Village Review Zone. The proposed project will not have any undue adverse effect on the scenic or natural beauty of the area, historic sites, or significant wildlife habitat identified by the Maine Departments of Environmental Protection and Inland Fisheries & Wildlife or by the Town of Brunswick, or rare and irreplaceable natural areas. *The Board finds that the provisions of Section 411.10 are satisfied.*

411.11 Community Impact

Impacts in water use, sewage disposal, or solid waste disposal associated with this project will be negligible. There will be no change in traffic flow; construction of the garage facilities will allow for the re-consolidate of BSD operations to the treatment facility site, which would result in a decrease in traffic to and from the site. There will be no impacts to the public school system, parks and recreation resources, public safety, or public works resources; municipal resources are available to service the project. *The Board finds that the provisions of Section 411.11 are satisfied.*

411.12 Traffic

For the past 2 years the BSD has been leasing space at Brunswick Landing, which generates additional trips between the sites. Prior to that, operations were all located on-site, so the BSD is resuming historical operational levels. The project will not result in any changes to the public road system nor will it create unsafe conditions. *The Board finds that the provisions of Section 411.12 are satisfied.*

411.13 Pedestrian and Bicycle Access and Safety

The applicant has agreed to add to the plan bicycle parking in front of the administrative building, to the satisfaction of the Director of Planning and Development. *The Board finds that the provisions of Section 411.13 are satisfied, with the condition that bicycle*

parking shall be added to the approved plan in front of the administrative building, to the satisfaction of the Director of Planning and Development.

411.14 Development Patterns
By preserving a 100 foot wooded buffer between the new garage facilities and the properties on Merrymeeting Drive, the project is preserving the character of this residential neighborhood. The project will have no adverse impacts on Brunswick's historic development pattern or adjacent mixed-use neighborhoods. *The Board finds that the provisions of Section 411.14 are satisfied.*

411.15 Architectural Compatibility
The proposed architecture of the garage facilities includes vertical metal siding for the garage areas, cement board clapboards and shingles for the office area, and a standing seam metal roof, which will be in keeping with the appearance of the nearby administration building and wastewater treatment facility. The new construction will be screened from adjacent residential properties by a 100 foot wooded buffer. *The Board finds that the provisions of Section 411.15 are satisfied.*

411.16 Municipal Solid Waste Disposal
Not applicable – a solid waste impact fee is not required for this nonresidential use. *The Board finds that the provisions of Section 411.16 are not applicable.*

411.17 Recreation Needs
Not applicable – a recreation impact fee is not required for this nonresidential use. *The Board finds that the provisions of Section 411.17 are not applicable.*

411.18 Access for Persons with Disabilities
The site and buildings will be accessible to the extent required. Accessible parking has been provided. *The Board finds that the provisions of Section 411.18 are satisfied.*

411.19 Financial Capacity and Maintenance
The District intends to secure a loan from the Maine DEP Clean Water State Revolving Loan Fund for the proposed improvements. Interim financing for the project has already been established. *The Board finds that the provisions of Section 411.19 are satisfied.*

411.20 Noise and Dust
The project has a relatively low noise profile. During construction, work will be done in accordance with Section 109.4.E. of the Brunswick Zoning Ordinance. Construction dust control will use Best Management Practices as outline in the Maine Erosion and Sedimentation Control BMP Manuel, as published by the MDEP. Upon construction completion, the proposed development is not anticipated to contribute to unreasonable noise or dust. *The Board finds that the provisions of Section 411.20 are satisfied.*

411.21 Right, Title and Interest
The project site is a portion of property owned by the BSD, reference deed dated July 27, 1990, and recorded in Book 9254, Page 82, Cumberland County Registry of Deeds,

giving the applicant sufficient right, title and interest to develop the land. *The Board finds that the provisions of Section 411.21 are satisfied.*

411.22 Payment of Application Fees
The applicant has paid all applicable development review application fees. *The Board finds that the provisions of Section 411.22 are satisfied.*

APPROVED MOTIONS
BRUNSWICK SEWER DISTRICT GARAGE/OFFICE FACILITIES
CASE NUMBER: 15-004

Motion 1: That the Major Development Review combined Sketch and Final Site Plan application is deemed complete.

Motion 2: That the Board waives the following requirements:

1. Class A High Intensity Soil Survey.
2. Show all trees over 10 inches in diameter.

Motion 3: That the Major Development combined Sketch and Final Site Plan application is approved with the following conditions:

1. That the Board's review and approval does hereby refer to these findings of fact, the plans and materials submitted by the applicant and the written and oral comments of the applicant, its representatives, reviewing officials, and members of the public as reflected in the public record. Any changes to the approved plan not called for in these conditions of approval or otherwise approved by the Director of Planning and Development as a minor modification shall require a review and approval in accordance with the Brunswick Zoning Ordinance.

2. Prior to issuance of a Building Permit, bicycle parking shall be shown on the approved plan in front of the administrative building, to the satisfaction of the Director of Planning and Development.

3. Prior to issuance of a Building Permit, provide a copy to the Planning Department of the completed Permit-By-Rule that was submitted to the DEP.

* Please note that Development Review approvals by the Planning Board shall expire at the end of two years after the date of Final Site Plan approval unless all construction has been completed by that date (Section 407.4.B of the Brunswick Zoning Ordinance).

TOWN OF BRUNSWICK, MAINE

INCORPORATED 1739

DEPARTMENT OF PLANNING & DEVELOPMENT
TOWN HALL - ROOM 216
85 UNION STREET
BRUNSWICK, ME 04011

ANNA BREINICH, FAICP
DIRECTOR OF PLANNING & DEVELOPMENT

PHONE: 207-725-6660
FAX: 207-725-6663

February 11, 2015

STAFF REVIEW COMMITTEE NOTES

Staff Present:
John Foster (DPW), Jeff Hutchinson (Codes), Clint Swett (Assessing), Jeremy Doxsee (Planning, non-voting member)

Public Present:
None

Case # 15-004 Brunswick Sewer District Garage/Office Facilities: The Committee will review and provide a recommendation to the Planning Board regarding a combined Sketch and Final Major Review application submitted by the Brunswick Sewer District, for construction of a 4,950 sf garage/office building, a 4,950 sf garage, and associated site improvements on two lots totaling 29.9 acres; located at 10 Pine Tree Road, in the Town Residential 4 / Jordan Acres (TR4) Zoning District. Assessor's Map U54, Lots 7 & 12.

Present for Applicant:

Jeff Preble & Neil Cheseldine (Wright-Pierce), Rob Pontau (Brunswick Sewer District)

Staff Comments**:**

John Foster and Jeff Hutchinson:

- Planting beds and/or foundational plantings should be added in front of garage #1. Garage #2 has several overhead doors which may make landscaping unfeasible. Planting areas should be curbed.
- 35' between the island and the garage is quite wide. Pine Tree Road itself is only 20'. Consider ways to reduce pavement.
- Same with second proposed entrance to Administration Building: Pine Tree Road is 20' but proposed entrance is 26'.
- Discussed lighting plan.
  - Make sure fixtures are full cut-off, and not semi-cut off.
  - Based on discussions, Rob instructed W-P to make sure wall lights on side and rear of buildings are motion activated, and not on all night.
- John reviewed the stormwater plan and has determined it complies with Town standards / BMPs.

Jeremy Doxsee

- Where will dumpster and enclosure be?
    - Rob: Existing dumpster by treatment plant will remain.
- Provide an overview of the stormwater plan.
    - Jeff: Approximately half of the stormwater (roofs of buildings) will be infiltrated and other half (paved areas) will be treated with BMPs and directed into stormwater system.

Clint Swett

- The addresses for the two garages will be 9 & 11 Pine Tree Road.

END

WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

MAJOR SITE PLAN APPLICATION
for the
BRUNSWICK SEWER DISTRICT

January 2015

WRIGHT-PIERCE
Engineering a Better Environment

WRIGHT-PIERCE
Engineering a Better Environment

Water
Wastewater
Infrastructure

February 6, 2015
W-P Project No. 12493D

Mr. Jeremy Doxsee, AICP
Town Planner
Department of Planning and Development
85 Union Street
Brunswick, ME 04011

Subject: Final Site Plan Review Application
Brunswick Sewer District, Garage/Office Facility

Dear Mr. Doxsee:

On behalf of the Brunswick Sewer District we are pleased to submit the attached Sketch and Final Site Plan Application for a Garage/Office Facility Project proposed for the Brunswick Sewer District. As discussed during our phone conversation yesterday, we have included 10 copies of the application package along with 3 full sized copies of the drawings and 8 – 11 x 17 copies of the drawings. A CD is included with pdf files of the application and drawings as requested.

We should note that the property areas included with the signed application page were based on the Town GIS parcel data. Actual areas of the parcels based on the boundary survey are 5.1 aces for lot 54/12 and 24.8 acres for lot 54/7. So the total parcel area owned by the District is 29.9 acres. A summary of the percent impervious area for the lots is provided at the end of the Section 411 review criteria write up. We have also included the total clearing area in that discussion.

We look forward to your review and to meeting with the Planning Board to discuss the project. If you have any questions, please let me know.

Very truly yours,

WRIGHT-PIERCE

Jeffrey D. Preble, PE
Senior Project Manager

JDP/
Enclosure

cc: Rob Pontau, BSD

99 Main Street
Topsham, ME 04086 USA
Phone 207.725.8721 | Fax 207.729.8414

WASTEWATER TREATMENT PLANT

GARAGE COMPLEX

MAJOR SITE PLAN APPLICATION

FOR THE

BRUNSWICK SEWER DISTRICT

JANUARY 2015

Prepared By:

Wright-Pierce
99 Main Street
Topsham, Maine 04086

BRUNSWICK SEWER DISTRICT WASTEWATER TREATMENT PLANT

GARAGE COMPLEX

MAJOR SITE PLAN APPLICATION

TABLE OF CONTENTS

EXHIBITS

MAJOR DEVELOPMENT REVIEW
SKETCH PLAN APPLICATION

1. Project Name: Wastewater Treatment Plant Garage Complex

2. Project Applicant
   Name: Brunswick Sewer District
   Address: 10 Pine Tree Road
   Brunswick, ME 04011
   Phone Number: 729-0148

3. Authorized Representative
   Name: Wright-Pierce
   Address: 99 Main Street
   Topsham, ME 04086
   Phone Number: 725-8721

3. List of Design Consultants. Indicate the registration number, address and phone number Of any engineer, surveyor, architect, landscape architect or planner used:

   1. Wright-Pierce, Neil Cheseldine, PE #8227
   2. Wright-Pierce, Jeff Preble, PE #6390
   3. _____

5. Physical location of property being affected: 10 Pine Tree Road

6. Lot Size: 4.8 ac

7. Zoning District: TR-4

8. Indicate the interest of the applicant in the property and abutting property. For example, is the applicant the owner of the property and abutting property? If not, who owns the property subject to this application? The Brunswick Sewer District owns this parcel and adjacent parcel 54-7 (31.47 ac).

9. Assessor's Tax Map 54 Lot Number 12 of subject property.

10. Brief description of proposed use: Construction of two 55x90 garage buildings across from the Administration Building.

11. Describe specific physical improvements to be done: Building construction and associated site improvements and utility connections.

Owner Signature: _____

Applicant Signature (*if different*): _____

Required Attachments (by Applicant):

- Sketch Plan Check List
- Sketch Plan Requirements for Open Space Developments (if applicable)
- Request for Waivers (if applicable)
- Required Copies of Sketch Plan

Required Attachment (by Planning and Development Department):

- Listing of all owners of property within 200-foot radius of property under review.

SKETCH PLAN REQUIREMENTS

Key: "O"= omit; "S"=submit; "NA"=not applicable; "W" = waiver; "P"=pending

Item	O	S	NA	W	P	**Comments**
Indicate Variances Granted			X			
Indicate Special Permits			X			
Indicate Special Exceptions			X			
Date, north point, scale		X				
Land area, existing use of the property, location of proposed development, locations reserved for future development		X				
Tentative rights-of-way locations, lot lines, lot numbers, lot areas			X			
Estimated soil boundary locations from the Soil Conservation Service Medium Intensity Soil Survey noting areas of severe and very severe soil limitations		X				
Existing natural, topographical, and cultural features including areas of steep slopes, bedrock outcrops, ponds, streams, aquifers, and other water bodies, wetlands, groundwater recharge areas, slumps, flood hazard areas, trees, and other vegetation, excavation sites, stone walls, net site area, historic and archeological sites, structures, or districts, and any other pertinent features.		X				
Tentative locations of proposed structures, owners of existing structures, and neighboring land uses		X				
Special conservation and recreation areas			X			
Location map		X				
Zoning information, including the zoning district(s) in which the property is located and the location of any overlay zones depicted on the plan.		X				TR-4: The subject parcel is outside any overlay zones.
Any conditions imposed by previous development on the site.			X			
Other information Planning Board/Staff Review Committee deems necessary to conduct an informed review.			X			
Letter of consent signed by property owner authorizing the development review application in cases where applicant is not the owner of the property.			X			
Application Fee		X				
For Open Space Developments, sketch plan design review requirements indicated in Section 308.1			X			
Open Space Development: Request for Bonus Density			X			

MAJOR DEVELOPMENT REVIEW
FINAL PLAN APPLICATION

1. Project Name: Wastewater Treatment Plant Garage Complex

2. Project Applicant
   Name: Brunswick Sewer District
   Address: 10 Pine Tree Road
   Brunswick, ME 04011
   Phone Number: 729-0148

3. Authorized Representative
   Name: Wright-Pierce
   Address: 99 Main Street
   Topsham, ME 04086
   Phone Number: 725-8721

4. List of Design Consultants. Indicate the registration number, address and phone number Of any engineer, surveyor, architect, landscape architect or planner used:
   1. Wright-Pierce, Neil Cheseldine, Maine PE #8227
   2. Wright-Pierce, Jeff Preble, Maine PE #6390
   3. _____

5. Physical location of property being affected: 10 Pine Tree Road

6. Lot Size: 4.8 ac

7. Zoning District: TR-4

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9. Assessor's Tax Map 54 Lot Number 12 of subject property.

10. Brief Description of proposed: Construction of two 55x90 garage buildings across from the Administration Building.

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Applicant Signature (*if different*): _____

Required Attachments (by Applicant):
- Final Plan Check List
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- Request for Waivers (if applicable)
- Required Copies of Final Plan

Required Attachment (by Planning and Development Department):
- Listing of all owners of property within 200-foot radius of property under review.

FINAL PLAN REQUIREMENTS

Key: "O" = omit; "S"=submit; "NA"=not applicable; "W" = waiver P=pending

Item	O	S	NA	W	P	**Comments**
Name of Development		X				
Scale, date, north point, area, number of lots (if subdivision)			X			
Boundaries of all lots and tracts with accurate distances and bearings, locations of all permanent monuments property identified as existing or proposed.		X				See Exhibit I.
Certification by a professional land surveyor that the land has been surveyed and the boundaries established in accordance with the State of Maine Board of Licensure for Professional Surveyors standards for Category 1 (Standard Boundary Survey), conditions 1, 2, or 3.		X				
Existing zoning district and overlay designation.		X				TR-4
Names of engineer and surveyor; and professional registration numbers of those who prepared the plan.		X				
Names of current owner(s) of subject parcel and abutting parcels.		X				
Name, location, width of paving and rights-of-way, profile, cross-section dimensions, curve radii of existing and proposed streets; profiles of center-lines of proposed streets, at a horizontal scale of 1" equals 50' and vertical scale of 1 inch equals 5 feet, with all elevations referred to in U.S.G.S. datum.		X				
A general road plan noting circulation, direction, traffic control devices, street lighting and type of lighting proposed.		X				See Light Fixures in Exhibit H.
Existing and proposed easements associated with the development.		X				Natural gas easement
Kind, location, profile and cross-section of all proposed drainage facilities, both within the development and outside of it, and a storm-water management plan which includes the submission requirements listed in the storm-water management checklist available in the Planning Department.		X				See Stormwater Management Plan description in Exhibit D.
Location of features, natural and artificial, such as water bodies, wetlands, streams, vegetation, railroads, ditches and buildings.		X				See Exhibit B for Wetland Report.

Location of existing and proposed utilities; water, sewer, electrical lines, and profiles of underground facilities. Tentative locations of any private wells.		X				
Existing and proposed location, size, profile and cross section of sanitary sewers; description, plan and location of other means of sewage disposal with evidence of soil suitability.		X				
Topography with counter intervals of not more than 2 feet.		X				
A Class A (high intensity) Soil Survey prepared in accordance with the standards of the Maine Association of Professional Soil Scientists.				X		
Location of all existing trees over 10 inches in diameter, locations of tree stands, and a plan showing all trees to removed as a result of the development proposal.				X		Garage site is currently wooded and will require clearing to the limits shown on the drawings.
Lighting plan showing details of all proposed lighting and the location of that lighting in relation to the site.		X				
Existing locations and proposed locations, widths and profiles of sidewalks.		X				
Location map.		X				
Approximate locations and dimensions of proposed parking areas.		X				Project will result in a net increase of 3 parking spaces, bringing total to 28 spaces.
Proposed ownership and approximate location and dimensions of open spaces for conservation and recreation.			X			
Grading, erosion control, and landscaping plan; proposed finished grades, slopes, swells, and ground cover or other means of stabilization.		X				
Reference to special conditions stipulated by the Planning Board, with conditions either set forth in full or on the plan or identified as specific documents filed with the Board.			X			
A wetlands map drawn by a specialist delineating wetland boundaries in accordance with the methods prescribed by the US Army Corps of Engineers.		X				See Exhibit B.
Dedicated public open specs, areas protected by conservation easements, and existing and proposed open spaces or recreation areas.			X			No change in existing use of adjacent recreational fields.

For Open Space Development, a note indicating the total permitted lot count of the entire land tract based upon the destiny standards in this Ordinance, the number of lots created by the Plan, and the numebr of lots permitted to be subdivided in the future, as well as a table showing setback requirements and impervious surface coverage limits for each lot.			X			
Building envelops showing acceptable locations for principal and accessory structures.		X				

FINAL PLAN/SUPPORTING DOCCUMENTS

Key: "O" = omit; "S"=submit; "NA"=not applicable; "W" = waiver P=pending

Item	O	S	NA	W	P	**Comments**
Documentation of Ownership or contract.		X				
Drafts of legal documents appropriate to the application, including: deeds, easements, conservation easements, deed restrictions or covenants, home/property owners association declarations and by-laws, and such other agreements or documents as are necessary to show the manner in which conservation land will be owned, maintained, and protected.		X				See Exhibit I.
Draft performance guarantee or conditional agreement.		X				
Disclosure of any required permits from the Department of Environmental Protection, Marine Resources, US Army Corps of Engineers, Department of Inland Fisheries and Wildlife, or other agencies, as applicable; or, if a permit has already been granted, a copy of that permit.		X				
Any additional studies required by the Planning Baord, which are deemed necessary in accordance with this Ordiancne.			X			
Storm water management program for the propsed project prepared by a professional engineer.		X				See Exhibit D.
A storm water management checklist prepared by the Cumebrland County Soil and Water Conservation District made availabel at the Brunswick Department of Planning and Development.			X			

An erosion and sedimentation control checklist prepared by the Cumberland County Soil and Water Conservation District.			X			
A statement from the Brunswick-Topsham Water District of conditions under which water will be provided.		X				
A statement from the Brunswick-Topsham Water District of its review and comments on the proposed use if the project involves development within the Aquifer Protection Zone.			X			Letter dated 12/31/14.
A Statement from the Fire Chief recommending the number, size, and location of hydrants, available pressure levels, road layout and street and project name, and any other fire protection measures to be taken.		X				
A statement from the Superintendent of the Brunswick Sewer District of the conditions under wich the Sewer Disticit wil provide sewerage disposal service and approval of the santiary sewers proposed within the development.		X				Letter dated 12/30/14.
Where a septic system is to be used, evidence of soil suitablity.			X			N/A
All applicable materials necessary for the reviewing entity to review the propsoal in accordance with the Criteria of Section 411.		X				
A plan of all buildings with new construction or expansion of an existing facility, including type, size, and footprint, floor layout, setback, elevation of first floor slab, storage, and loading areas.		X				
An elevation view of all sides of each building proposed indicating height, color, bulk, surface treatment, and signage.		X				
A circulation plan describing all pedestrian and vehicle traffic flow on surrounding road systems.		X				
The size and proposed location of water supply and sewage disposal systems.		X				
A site landscaping plan indicating grade change, vegetation to be preserved, new plantings used to stabilize areas of cut and fill, screening, the size, location and purpose and type of vegetation.		X				

BRUNSWICK SEWER DISTRICT
10 PINE TREE ROAD
BRUNSWICK, ME 04011

brunswicksewer.org
facebook.com/brunswicksewer
info@brunswicksewer.org
(207) 729-0148

December 31, 2014

Re: Treatment Plant Upgrade and Garage Construction Project
Brunswick Sewer District

To whom it may concern,

Please accept this letter of authorization, authorizing the following, singularly and jointly, to represent the Brunswick Sewer District, and act as its authorized agent in the matters related to the Treatment Plant Upgrade and Garage Construction project, Brunswick, Maine.

Jeffrey D. Preble, P.E.
Wright-Pierce
99 Main Street
Topsham, ME 04086
207-725-8721
jdp@wright-pierce.com

Please contact me with any questions or concerns. Thank you for your consideration in this matter.

Sincerely,

Robert A. Pontau Jr., P.E.
Assistant General Manager
Brunswick Sewer District
207-729-0148 x 116
rpontau@brunswicksewer.org

Section 411 Review Standards
Final Site Plan Review Application
Brunswick Sewer District, Garage/Office Facility

411.1 Ordinance Provisions

A. The proposed site plan meets the Town's zoning requirements for use, density and dimensional requirements for the TR-4 zoning District. The site dimension requirements are listed on a table on the site plans.

B. The proposed site plan meets the Town's requirements as listing in Chapter 3 of the Zoning Ordinance.

411.2 Preservation of Natural Features

The development has been orientated to preserve the existing berm located to the west of the proposed buildings and preserve as much of the wooded buffer towards Merrymeeting Drive as possible. A minimum of a 100-foot wooded buffer will remain between the developed area and the back property lines along Merrymeeting Drive. The total area of clearing required for the garage complex is approximately 1.07 acres. Project drawings of the development are included in Exhibit A.

411.3 Surface Waters, Wetlands and Marine Resources

The site is not located adjacent to a water body as is indicated in the attached location map. A wetland delineation survey was conducted on the site and no wetlands were determined to exist on the site. A copy of the wetlands report from Penobscot Environmental Consulting dated January 7, 2015 is included with the application as Exhibit B. Some wetlands do exist along the ditch line to Route 1. The project is located well away from these wetland locations. The stormwater from the developed portion of the site will be treated in accordance with the Maine DEP Stormwater Best Management Practices and be connected to an existing storm drain adjacent to the site. Refer to the stormwater management plan presented in the site permit application.

411.4 Flood Hazard

The site is not located within a 100 year flood hazard zone as depicted on the flood map included with this application as Exhibit C.

411.5 Stormwater Management

The stormwater management plan for the site includes the quality treatment of the stormwater from the developed portion of the site in accordance with the Maine Department of Environmental Protection (MDEP) Stormwater Best Management Practices (BMPs). Features proposed for the site include bioswales and stormwater infiltration basins. The storm water management plan is included with the application in Exhibit D.

411.6 Groundwater

The project will not impact groundwater at the site. The site is not situated over a sand and gravel aquifer. Stormwater treatment features will be developed to meet the minimum separation requirements to groundwater.

411.7 Erosion Control

A written Erosion and Sedimentation Control plan for the site construction and long term operation has been developed following the Maine DEP BMPs for erosion and sedimentation controls and is included with the application as Exhibit E. The plan includes steps to be followed during construction of the site as well as recommendations for the maintenance of the site as a part of the ongoing upkeep of the facility.

411.8 Sewage Disposal

The site will be connected to the existing sewer main leading to the wastewater treatment facility. A letter from the BSD indicating the ability to serve the project has been included with the application in Exhibit F.

411.9 Water

Domestic water use will be served by a 2-inch water service connected to the existing 8-inch water main near the site. In addition, a 4-inch sprinkler service will be provided for fire protection. A letter indicating the Brunswick Topsham Water District's (BTWD) ability to serve the project has been included with the application in Exhibit F.

411.10 Aesthetic, Cultural and Natural Values

A – Coastal Protection Zone – the site is not located in the Coastal Protection Zones.
B – Natural Resource Protection Zone – the site is not located in a natural resource area or in a floodplain.
C – Village Review Zone – the site sits outside of the Village Review Zone.
D – Preservation of Natural Features – a wooden buffer to adjacent properties will be preserved.
E – Steep Slopes – there are no steep slopes on the site that impact the proposed development.
F – Historic Resources – the Maine Historic Preservation Commission was contacted and they have indicated there are no historic features on the site. Correspondence with the MHPC is included in Exhibit G.

411.11 Community Impact

The project will not require significant community resources. The project is aimed at consolidating operations of the District by providing space for the collections system crew at the wastewater treatment facility. The District's collections system crew has been renting space at Brunswick Landing. The move will allow the District to provide better efficiency in its operations. The impact of the project on community resources will be minimal.

411.12 Traffic

The proposed project will have minimal impact on existing traffic patterns. The District's scheduling goal is to take occupancy of the Garage Complex by the end of November 2015 to coincide with the expiration of the lease on the current facility. The project will restore traffic patterns to their historical levels, when the full crew utilized the wastewater treatment facility site.

411.13 Pedestrian and Bicycle Access and Safety

Access to the site will continue to be served by Pine Tree Road. Access to the recreation fields adjacent to the plant will not be affected by the project. A minimum of a 10-foot cleared space will be provided between the new chain link fence and the tree line which will provide additional walking space in the area.

411.14 Development Patterns

The use proposed at the site is essential for efficient operations of the Sewer District and providing wastewater treatment for the community.

411.15 Architectural Compatibility

The proposed architecture of the building will be in keeping with the appearance of the administration building and wastewater treatment facility. The proposed buildings will have vertical metal siding with the office area having cement board clapboards and shingles. The roof will be a sloped standing seam metal roof which is very similar to several of the adjacent buildings. A floor plan and elevations of the proposed building have been included with the application.

411.16 Municipal Solid Waste

It is anticipated that the project will produce minimal operational solid waste. The Sewer District does not anticipate any changes to its handling of solid wastes as a result of this project.

411.17 Recreational Needs

The project is not a residential project so this requirement is not applicable to the project. However, as noted under paragraph 411.13 additional walking space will be created along the new fence line.

411.18 Access for Person with Disabilities

The site and buildings will be accessible to the extent required. Accessible parking has been provided.

411.19 Financial Capacity and Maintenance

The District intends to secure a loan from the Maine DEP Clean Water State Revolving Loan Fund for the proposed improvements. Interim financing for the project has already been secured.

411.20 Noise and Dust

The project has a relatively low noise profile. The facility will not generate dust during operation. Minimal dust generation is anticipated during construction and will be minimized as addressed in the Erosion and Sedimentation Control Plan, included with this application.

411.21 Finding of Right, Title and Interest

The project site is a portion of property owned by the Brunswick Sewer District, reference deed dated July 27, 1990, and recorded in Book 9254, Page 82, Cumberland County Registry of Deeds.

411.22 Finding of Payment of Application Fee

The application fee for this project will be paid directly by the Brunswick Sewer District.

411.23 Additional Design Review Information

In review of the initial submittal for this project, it was requested to provide additional information regarding the percentage of impervious area coverage for the two lots owned by the Brunswick Sewer District. Since the BSD owns both lots and in accordance with Section 309 of the ordinance, the breakout has been provided for each lot individually and with both lots combined. Total areas for each of the lots are based on the property surveys for the parcels. This information is summarized in the following table.

	Lot 54-12	Lot 54-7	Combined Lots
Total Area (Ac)	5.1	24.8	29.9
Existing Impervious Area (Ac)	0.48	4.44	4.92
Existing % Impervious	9%	18%	16%
Post Development Impervious Area (Ac)	0.96	4.71	5.67
Proposed % Impervious	18.8%	19.0%	19.0%

EXHIBIT A
Project Drawings
(Attached under separate cover)

EXHIBIT B
Wetlands Report

PENOBSCOT
ENVIRONMENTAL CONSULTING, INC.

January 7, 2015

Jeff Preble, P.E., Senior Project Manager
Wright-Pierce
99 Main Street
Topsham, Maine 04086

Re: Brunswick, Maine, Wastewater Treatment Facility Wetland Survey

Dear Jeff,

On December 31, 2014, I visited the Brunswick Wastewater Treatment Facility (WWTF) to determine if wetlands regulated by the Town of Brunswick, Maine Department of Environmental Protection (MDEP), or the US Army Corps of Engineers (Corps) were present. There was no snow on the ground at the time of the site visit and soils were not frozen.

Using wetland definitions and delineation methodologies found in the Brunswick Zoning Ordinance, the MDEP Natural Resources Protection Act, and the federal Clean Water Act, I surveyed the project area (see attached map) for regulated wetlands, streams, or potential vernal pools. No such areas, however, were encountered. Soils, instead, are relatively well-drained sandy loam and forested areas are dominated by upland trees such as white pine and red oak. Non-forested areas are generally associated with the WWTF and its associated roads and parking lots. Just outside of the project area, a wetland is situated between US Route One and the northerly embankment of the WWTF (see attached map). As this area is outside of any proposed building envelopes, it was not flagged and was, instead, delineated based on aerial photo interpretation.

Please let me know if you have any questions regarding these observations.

Sincerely,
PENOBSCOT ENVIRONMENTAL CONSULTING, INC.

Michael Thompson, M.Sc., CWB, PWS
President

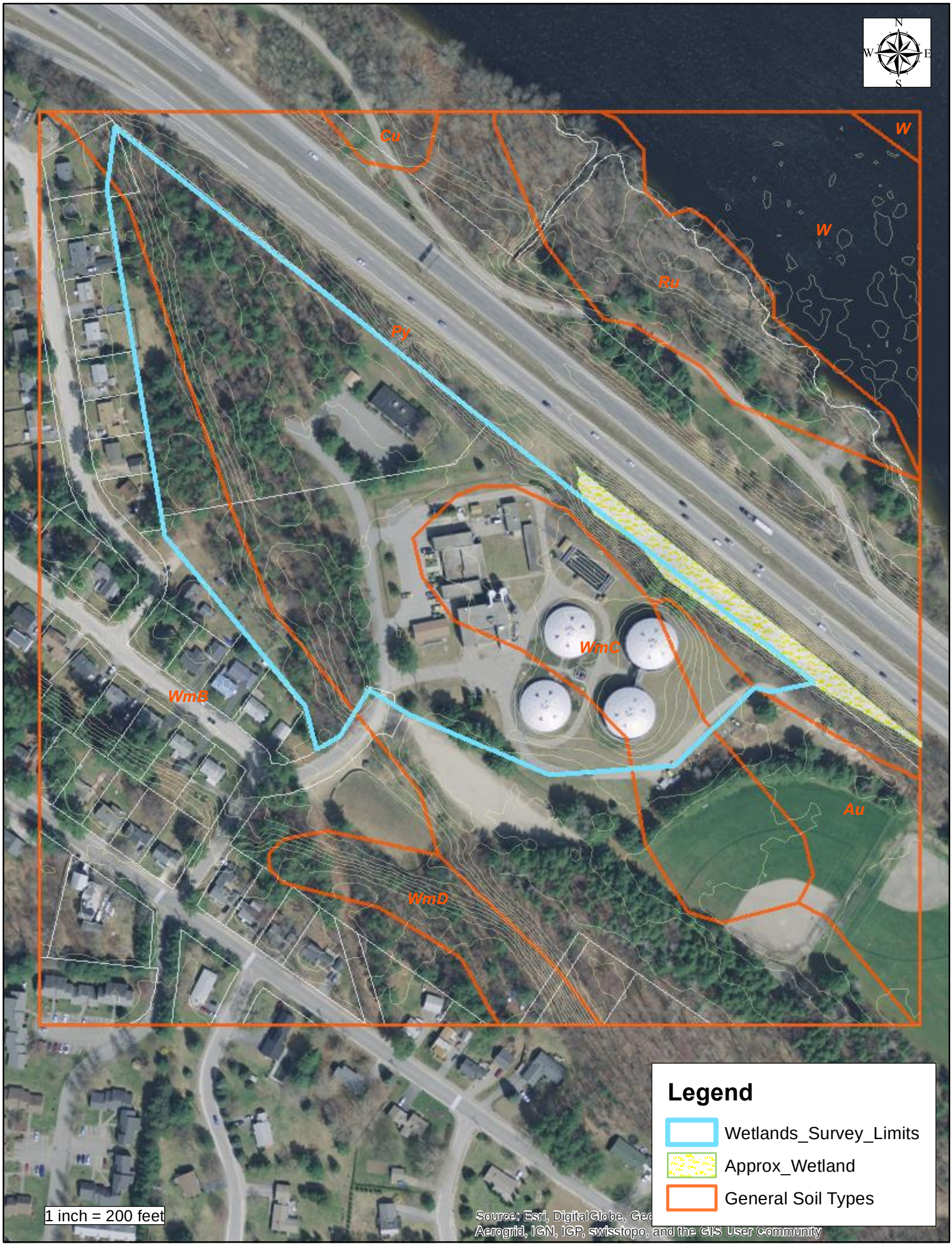

Cu
W
W
Ru
Py
WmC
WmB
Au
WmD
N
W
E
S
Legend
Wetlands_Survey_Limits
Approx_Wetland
General Soil Types
1 inch = 200 feet
Source: Esri, DigitalGlobe, Ge
Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

EXHIBIT C
100-year Flood Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 19. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov

Base map information shown on this FIRM was derived from digital orthophotography. Basemap files were provided in digital form by State of Maine, Maine Office of GIS (MeGIS). Ortho imagery was produced at a scale of 1:600 and is dated August 2012. The projection used in the preparation of this map is Maine State Plane West (FIPSZONE 1802). The horizontal datum is NAD 83, GRS1980 spheroid.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

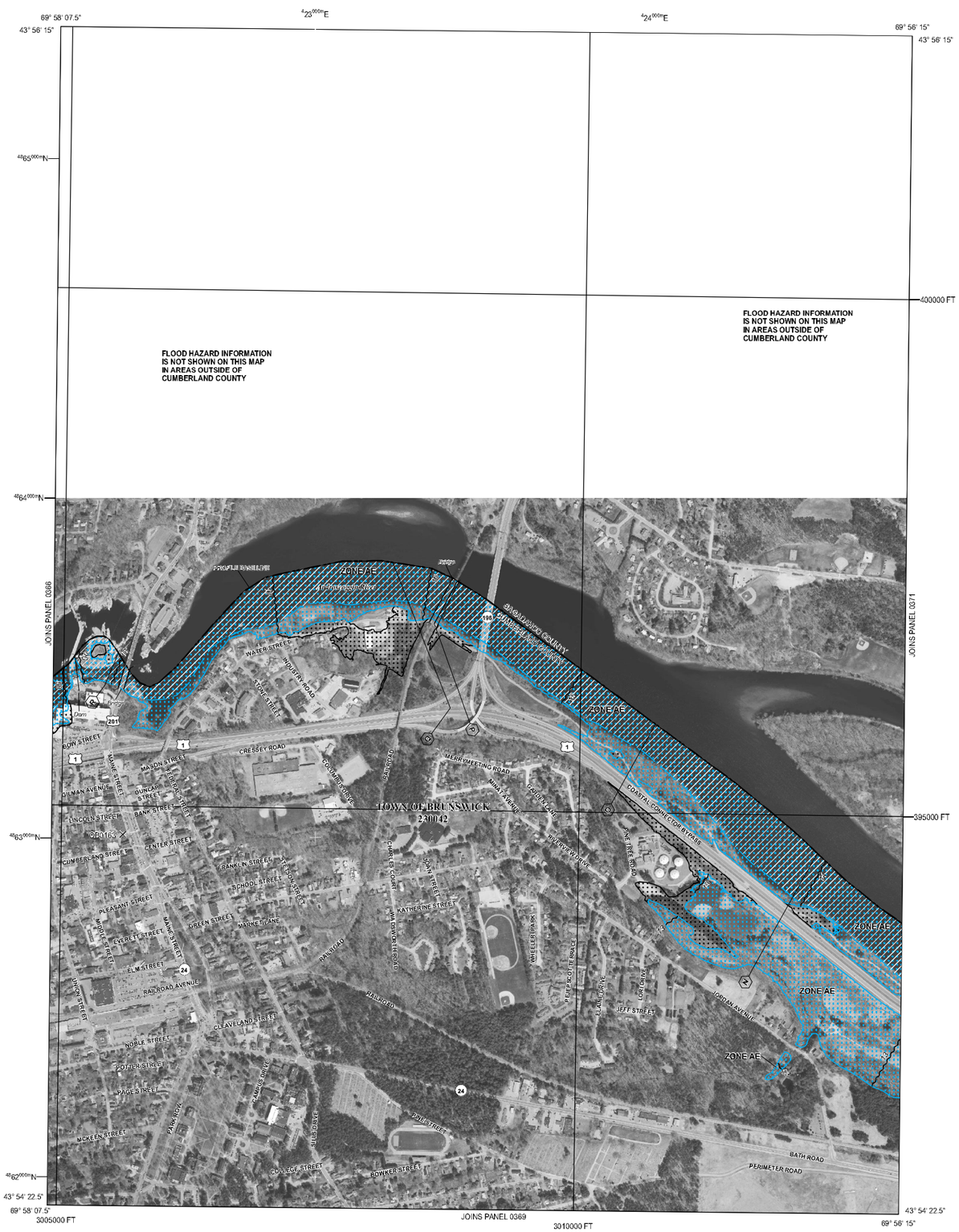
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

State of Maine Floodway Note: Under the Maine Revised Statutes Annotated (M.R.S.A.) Title 38 § 439-A, 7C where the floodway is not designated on the Flood Insurance Rate Map, the floodway is considered to be the channel of a river or other water course and the adjacent land areas to a distance of one-half the width of the floodplain, as measured from the normal high water mark to the upland limit of the floodplain, unless a technical evaluation certified by a registered professional engineer is provided demonstrating the actual floodway based upon approved FEMA modeling methods.

Only coastal structures that are certified to provide protection from the 1-percent-annual chance flood are shown on this panel. However, all structures taken into consideration for the purpose of coastal flood hazard analysis and mapping are present in the UHHM database in S_Gen_Struct.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- Limit of Moderate Wave Action coincident with Zone Break
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT — 5000-foot ticks: Maine State Plane West Zone (FIPS Zone 1802), Transverse Mercator projection
- 4869000mN — 1000-meter Universal Transverse Mercator grid values, zone 19
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0367F

FIRM

FLOOD INSURANCE RATE MAP

CUMBERLAND COUNTY, MAINE
(ALL JURISDICTIONS)

PANEL 367 OF 862
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRUNSWICK, TOWN OF	230042	0367	F

PRELIMINARY
NOVEMBER 5, 2013

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
23005C0367F
EFFECTIVE DATE

Federal Emergency Management Agency

EXHIBIT D
Stormwater Management Plan

SECTION 411.5

STORMWATER MANAGEMENT

Garage/Office Complex Facility
Brunswick Sewer District
Brunswick, Maine

Stormwater Management (General Standards)

A. Narrative

The project site is a mostly undeveloped and wooded portion of the Brunswick Sewer District property at Pine Tree Road. Currently the developed portion of the property is the site of the Sewer District's waste water treatment facility and administrative offices.

The proposed project consists of a 4,950 square foot garage/office building and another 4,950 square foot heated garage space. These proposed structures will serve the collections system crew and their equipment and allow the Sewer District to consolidate its operations to the treatment facility site. The project will also result in approximately 20,860 square feet of paved parking and vehicle maneuvering areas and a 1,507 square-foot paved driveway connecting the existing roadway and existing parking lot at the Sewer District's administration offices.

In summary, the total project impervious area of 35,397 square feet will include 9,900 square feet of new buildings and 25,497square feet of pavement.

Additional project details are set forth in the Project Stormwater Management Plan attached as Section 411.5A, which is included as part of Exhibit D of this application.

B. General Standards Submissions

See the Project Stormwater Management Plan attached as Section 411.5A, which is included as part of Exhibit D of this application.

C. Components of the Maintenance Plan

See the detailed inspection and maintenance program attached as Section 411.7B, which is included as part of Exhibit E of this application.

D. Maintenance by a Homeowner Association

Not Applicable.

E. Maintenance of Facilities by a Municipality or Quasi-Municipal District

The facilities will be managed by the applicant, the Brunswick Sewer District

SECTION 411.5A

STORMWATER MANAGEMENT PLAN

Brunswick Sewer District
Proposed Garage/Office Facility
8 & 10 Pine Tree Road
Brunswick, Maine

1.1 INTRODUCTION

This Stormwater Management Plan has been prepared to address the stormwater runoff impacts for stormwater quality associated with the proposed development of the garage/office facility.

2.1 EXISTING CONDITIONS

The portion of the Brunswick Sewer District property proposed for development is primarily wooded and is situated on the westerly side of and at the northerly terminus of the existing paved roadway serving the Sewer District's facility from Pine Tree Road. The existing facility consists of the Sewer District's administration offices and waste water treatment plant ("WWTP") located on 29.9 acres generally bounded on the northeast by U.S. Route 1, on the south by land of the Brunswick & Topsham Water District, on the southwest by residential properties fronting on Jordan Avenue and Riverview Drive, and on the west by residential properties fronting on Merrymeeting Road.

The topography of the site proposed for development is an undeveloped wooded area that is relatively flat with moderate slopes up to the rear of the residential lots fronting on Merrymeeting Road. According to the Soil Survey, Cumberland County, Maine, published by the USDA, Soil Conservation Service ("Soil Survey"), the on-site soils are predominately of the Podunk Series (hydrologic soil group B) bordered by the Windsor Series (hydrologic soil group A).

According to the Soil Survey, the Podunk Series consists of deep, nearly level, moderately well-drained, medium-textured soils. Permeability ranges from moderately rapid to rapid and runoff is slow. Available water capacity is high.

The Soil Survey states that the Windsor Series is deep, excessively drained, nearly level to strongly sloping, coarse-textured soils. Permeability is rapid or very rapid and available water capacity is low.

The majority of the stormwater generated at the proposed site generally travels from the northeast in a southwesterly direction via overland flow towards a shallow depressed area near the base of the slope extending down from the rear of the residential lots. As there are no wetlands on the site (See the attached Wetlands Investigation Report) and no areas of standing water, stormwater flows appear to infiltrate down through the soils prior to reaching the depressed area.

Stormwater from a portion of the administration offices parking lot, from the lawn area between the parking lot and the access road, and from a portion of the access road travel overland to a series of catch basins and a storm drain system located at the WWTP site.

2.1.1 Land Cover

The undeveloped portion of the project site is occupied by a stand of evergreen/hardwood trees.

2.1.2 Site Topography

(See Section 2.1, above)

2.1.3 Surface Water Features

There are no streams on or adjacent to the site. The site is not tributary to any lakes that are impaired or threatened by phosphorous and is not located in the watershed of an Urban Impaired Stream as defined by Maine DEP.

2.1.4 Soils

(See Section 2.1, above.)

3.1 PROPOSED CONDITIONS

The proposed project consists of a 4,950 square foot garage/office building and a 4,950 square foot heated garage space. These proposed structures will serve the collections system crew and their equipment and allow the Sewer District to consolidate its operations to the treatment facility site. The project will also include approximately 20,860 square feet of paved parking and vehicle maneuvering areas and a 1,507 square-foot paved driveway connecting the existing roadway to the existing parking lot at the Sewer District's administration offices.

In summary, the total project impervious area of 35,397 square feet will include 9,900 square feet of new buildings and 25,497 square feet of pavement.

Development of the project as proposed will involve keeping the existing access road leading to the administration offices building as the means of access to the project. The paved maneuvering area at the two garages will be an expansion westerly and northerly of the access road and will, in part, be buffered from the access road by the inclusion of a grassed island that will contain a stormwater Best Management Practices structure ("BMP"). The two garages will be sited along the westerly side of the paved maneuvering area and will be separated by a small grassed island containing a second BMP. Two BMPs will be installed along the northerly side of the paved area and one additional BMP will be located along the southerly side. Runoff from a portion the existing paved area and buildings at the administration office site will be treated by a BMP installed along the access driveway and runoff from a portion of the disturbed area to the rear of the garage/office building will also be treated by a BMP. The proposed BMPs will be installed to treat stormwater from the impervious and landscaped surfaces of the site prior to the stormwater being allowed to either infiltrate into the soil or to be conveyed off-site to the Androscoggin River.

3.1.1 Alteration to Drainage Characteristics

The existing drainage characteristics of the site will be modified slightly to allow for the incorporation of stormwater BMPs into the site design to provide water quality treatment.

3.1.2 Alteration to Land Cover

The existing land cover, consisting mainly of evergreen and hardwood trees, will be altered to the extent necessary to provide the proper site for the project. Land cover outside of the project site will be preserved in its current state to provide screening for adjacent properties and to maintain, as much as possible, the existing character of the site.

3.1.3 Downstream Waterbodies

Surface runoff from the development is tributary to the Androscoggin River located approximately 600 feet northerly of the project site.

4.1 REGULATORY REQUIREMENTS

4.1.1 Town of Brunswick

The proposed project will require Development Review approval by the Town of Brunswick Planning Board. According to the Town of Brunswick Zoning Ordinance, "Subsection 411.5, Storm Water Management" of "Section 411, Review Standards", "…The proposed development shall satisfy the recommended storm water quality standards described in Storm Water Management for Maine: Best Management Practices, published by the State of Maine Department of Environmental Protection, November, 1995, as amended."

This Stormwater Management Plan has been developed to meet the applicable stormwater standards of the Town of Brunswick.

The current MDEP stormwater water quality standards are set forth in Chapter 500, Stormwater Management, Section 4, Stormwater Standards, which describes the stormwater standards that apply to a project disturbing one acre or more. The Section goes on to state that if the project will disturb an acre or more but will not result in an acre or more of impervious area or five acres or more of new developed area, then the project must meet the Basic Standards as set forth in Section 4 A. Section 4 A (1) states that a project "…qualifies for a stormwater permit by rule (PBR) described in Section 7, and therefore need only meet basic standards, if it results in one or more acres of disturbed area and the following: … (b) Less than one acre of impervious area and five acres of developed area

in any other watershed" (i.e. not in the watershed of a lake most at risk or an urban impaired stream).

This project qualifies for a Permit by Rule as it will disturb more than one acre (1.30 acres) but less than five acres and will result in less than one acre of impervious area (0.78 acres). The applicant will file a Stormwater Permit by Rule application/notification concurrently with its Major Development application with the Town of Brunswick.

The project will also need to provide water quality treatment of the stormwater runoff. The applicant proposes to treat the runoff by incorporating BMPs into the site design as discussed in Section 3.1, above and in the following Section 4.2.

4.1.2 Maine Department of Environmental Protection (MDEP)

The proposed project, in conjunction with the existing development on the Sewer District property, does not meet the threshold for review under the Site Location of Development Law. It does, however, require the filing of a Stormwater Permit by Rule application/notification as called for in the Stormwater Management Law.

4.2 WATER QUALITY TREATMENT

4.2.1 General Considerations

Stormwater quality treatment for the project will be provided by the proposed BMPs. The proposed BMPs include two Infiltration Trenches ("IT"), three Underdrained Bioretention Cells ("BRC"), and two Vegetated Swales ("VS"). The two ITs will be used to treat and infiltrate the majority of the runoff from the roofs of the two garages; the three BRCs will treat runoff from the majority of the paved surfaces; and one of the two VS will treat and infiltrate runoff from a portion of the access road and from a portion of the administration offices existing parking lot and buildings while the other VS will treat and infiltrate runoff from a paved walkway and from a portion of new vegetated slopes.

Outflows from the BRCs will be collected by underground piping and directed into the existing storm drain system of the WWTP which in turn, directs the collected runoff to a roadside ditch along U.S. Route 1 that outlets into the Androscoggin River.

The locations of the proposed BMPs and existing storm drain system are shown on the attached Project Plan Set. The details, design and specifications for the proposed BMPs are also shown on the attached Project Plan Set.

4.2.2 BMP Design Considerations

The ITs were designed and sized in accordance with the following considerations set forth in Chapter 6, Infiltration BMPs, Section 6.2.2 Infiltration Trench of MDEP Volume III. BMP Technical Design Manual:

> Treatment Volume - An Infiltration Trench ("IT") must retain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped developed area and infiltrate this volume into the ground.

The BRCs were designed and sized in accordance with the following considerations set forth in Chapter 7.0, Filtration BMPs, Section 7.2, Underdrained Bioretention Cell BMP of MDEP Volume III. BMP Technical Design Manual:

> Treatment Volume - An Underdrained Bioretention Cell ("BRC") must detain and filter a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped developed area.
>
> Filter Area - The surface area of the filter must be no less than the sum of 7% of the impervious area and 3% of the landscaped area draining to the filter;
>
> Basin Size - The size of a filter bed should never exceed 2,000 sq. ft. in basin bottom area; and
>
> Peak Storage Depth of the Channel Protection Volume - May not exceed 6 inches and should be designed to drain dry within 24 to 48 hours.

The VSs were designed and sized in accordance with the following considerations set forth in Chapter 8.0, Conveyance and Distribution Structures, Section 8.1, Vegetated Swales of MDEP Volume III. BMP Technical Design Manual:

> Minimum Channel Dimensions - The minimum width of the flat bottom of a trapezoidal channel shall be at least 3 times the channel depth; and channel side slopes shall not exceed 3 (horizontal):1 (vertical) for seeded or sodded slopes.
>
> Flow Velocity - The channel should be designed for low velocity flow. A velocity of 1 fps is the maximum design storm flow velocity recommended when vegetated swales are being designed as a BMP.

4.2.3 Required and Proposed Project Stormwater Runoff Treatment

Although the project does not require MDEP approval, the Town of Brunswick Zoning Ordinance, "Subsection 411.5, Storm Water Management" of "Section 411, Review Standards", requires that "…The proposed development shall satisfy the recommended storm water quality standards described in Storm Water Management for Maine: Best Management Practices, published by the State of Maine Department of Environmental Protection, November, 1995, as amended." The DEP General Stormwater Quality Standards require that the stormwater management system control *(treat)* runoff from no less than 95% of the impervious area and no less than 80% of the developed area that is impervious or landscaped.

The BMPs proposed for the project will treat runoff from portions of existing impervious and developed areas as well as from new impervious and developed areas.

The following **Table #1** shows the calculations used for sizing the BMPs and the required and provided water quality treatment volumes of the ITs and BRCs, all in accordance with the MDEP stormwater quality standards.

TABLE 1 - BRUNSWICK SEWER DISTRICT STORMWATER TREATMENT SUMMARY

BMP	Watershed Area	BMP Surface Area (SF)	Landscaped Area ("LSA") (SF)		Impervious Area ("IA") (SF)		LSA Treatment Vol. Req. (CF) = LSA x 0.4"	IA Treatment Vol. Req. (CF) = IA x 1"	Total Treatment Vol. Req. (CF)	Treatment Vol. Provided (CF)
			Total	Treated	Total	Treated				
IT 1	6990	493	897	897	5,600	5,600	30	467	497	523
IT 2	3630	255	625	625	2,750	2,750	21	229	250	434
BRC 1	9775	904	1,971	1,971	6,900	6,900	66	575	641	851
BRC 2	8311	1,183	1,079	1,079	6,049	6,049	36	504	540	723
BRC 3	13745	997	2,760	2,760	9,988	9,988	92	832	924	1,532
VS 1*	18291	430	5,453	5,453	12,408	12,408	N/A	N/A	N/A	N/A
VS 2	4490	244	7,933	7,933	540	540	N/A	N/A	N/A	N/A
UN 1	1974	N/A	0	0	1,974	0	N/A	N/A	N/A	N/A
UN 2	4227	N/A	4,227	0	0	0	N/A	N/A	N/A	N/A
TOTALS	71433	3,832	24,945	20,718	46,209	44,235				

* = Includes Additional Undist. Exist. IA & LSA outside of the Project area that are proposed to be treated as part of this Project

	Total	Treated
TOTAL EXIST. PROJECT IA	4,637	4,637
TOTAL NEW PROJECT IA	30,760	28,786
TOTAL PROJECT IA	35,397	33,423
ADDITIONAL UNDISTURBED EXIST. IA	10,812	10,812
TOTAL ADDITIONAL UNDISTURBED EXIST. & PROJECT IA	46,209	44,235

TREATMENT PERCENTAGES
(Includes treating existing and new areas)

	REQUIRED	PROPOSED
DEV. AREA TREATED	80%	91%
IA TREATED	95%	96%

	Total	Treated
TOTAL EXIST. PROJECT DEV. AREA (LSA+IA)	0	0
TOTAL NEW PROJECT DEV. AREA	54,889	48,688
TOTAL PROJECT DEV. AREA	54,889	48,688
ADDITIONAL UNDISTURBED EXIST. DEV AREA	16,265	16,265
TOTAL ADD'L UNDIST'D EXIST. & PROJECT DEV. AREA	71,154	64,953

As can be seen in **Table 1**, the proposed BMPs exceed the minimum sizing and water quality storage requirements. By incorporating the BMPs into the project's stormwater management system, the required standard of 80% treatment of the project's developed area is exceeded, by achieving 91% treatment and the required standard of 95% treatment of the project's impervious area is exceeded by achieving 96% treatment.

5.1 CONCLUSIONS

By incorporating the proposed BMPs presented in this report into the project's stormwater management system, and by limiting as much as possible, the amount of new impervious surfaces, runoff from the proposed facility will receive treatment that meets or exceeds the requirements of "Subsection 411.5, Storm Water Management" of "Section 411, Review Standards" of the Town of Brunswick Zoning Ordinance.

5.2 MAINTENANCE & PROTECTION OF STORMWATER SYSTEM

Long-term responsibilities for maintenance and protection of the project's stormwater drainage system, stormwater treatment systems, landscaped and paved areas and permanent erosion control measures will be assumed by the applicant. A Maintenance Plan has been developed for the project and the components of the plan are detailed in "Section 411.7, Erosion Control" included with Exhibit E of this application.

MEMORANDUM

WRIGHT-PIERCE
Engineering a Better Environment

TO:	Jeff Preble	DATE:	1/19/15
FROM:	William Edgar	PROJECT NO.	12493D
SUBJECT:	Test Pitting Results – Brunswick Sewer District, Brunswick, Maine		

Test pitting was conducted at the proposed garage/office complex site (Site) adjacent to the existing Brunswick Sewer District Administration Building located on the Pine Tree Road in Brunswick, Maine. The proposed garage/office complex includes the construction of one 4,950 square foot (sf) office/garage building and one 4,950 sf heated garage building with associated parking areas located west of the existing Administration Building. The purpose of the test pitting activities was to identify potential evidence of the estimated average seasonal high water table (EASHWT) in order to support the proposed stormwater management measures at the Site. It should also be noted that a separate geotechnical investigation will be performed at the Site in order to determine the proposed building foundation requirements. This memo summarizes the subsurface material observations made during test pitting activities at the Site.

Published Soils Information

United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) published information for the soil type at the Site was also reviewed as part of this assessment. According to the USDA, the soils at the Site are mapped as Podunk (Py) fine sandy loam to depths of more than 80 inches and are classified as a moderately well drained soil unit.

Test Pits

A total of four test pits were completed at the Site. Soils within the tested area consisted of approximately one foot of dark brown topsoil (sand silt and organics) and brown to light brown fine sandy loam to depths of 8 feet below ground surface (bgs). Soils at test pits TP-1 and TP-2 consisted of light brown-gray fine sandy loam between 2 and 8 feet bgs. A 1" thick layer of dark brown fine sandy loam was observed approximately 3.5' bgs in TP-2 (see photo); however, redoximorphic (soil mottling) features were not observed above or below the observed layer

suggesting the observed staining is likely due to infiltration interruptions rather than evidence of a fluctuating water table. A similar layer of brown fine sandy loam was also observed in test pit TP-1 and TP-4 at approximately 4’ bgs. Similar to TP-2, no evidence of soil mottling was observed in the vicinity of the observed layer.

Based on results of the test pitting activities, evidence of EASHWT was not observed in the test pits at the Site. In addition, groundwater was not observed in any of the test pits and refusal was not encountered. Test pit locations are shown on Figure 1 (attached) and test pit logs are also attached.

Notes:
1. Test pit locations are approximate.
2. Soils information was obtained from the USDA Webs Soil Survey online database.
3. Parcel information obtained from the Town of Brunswick and is approximate.
4. Map developed by Wright-Pierce GIS dept.

N

US Route 1

TP-1

Py

Brunswick S.D.
Administration
Building

WmB

TP-2

TP-3

TP-4

WmC

Pine Tree Road

Legend

- Site Boundary
- Parcels
- USDA Soils (Py)
- Test Pit

0 30 60 Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AI

TEST PIT LOCATION PLAN

Proposed Office/Garage Complex
Brunswick Sewer Department

PROJ NO:	DATE:
12493D	1/21/2015

WRIGHT-PIERCE
Engineering a Better Environment

FIGURE: 1

XYZ W:\GIS_Development\Projects\ME\Brunswick\12493DMXDs\12493D_Figure1-TP_Locations.mxd

WRIGHT-PIERCE
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0		Dark Brown Organics		0-1			
		Brown Fine Sandy Loam		1-2			
		Light Brown Fine Sandy Loam		2-5			1" thick Orng-Brown layer observed at approx 4' bgs
5		Light Brown-Gray Sandy Loam		5-8			
		*No Refusal Encountered, No evidence of Water Table					
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WRIGHT-PIERCE
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0		Dark Brown Organics		0-1			
		Brown Fine Sandy Loam		1-3			
5		Lt Brown-Gray Fine Sandy Loam		3-8			Dark brown layer approx. 1" thick observed at 3.5' bgs
10		*No Refusal Encountered, No evidence of Water Table					
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Engineering a Better Environment

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0		Dark Brown Organics		0-1			
		Brown Fine Sandy Loam		1-2			
5		Light Brown-Gray Fine Sandy Loam		2-3.5			
10		*No Refusal Encountered, No evidence of Water Table					
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0		Dark Brown Organics		0-1			
		Brown Fine Sandy Loam		1-3.5			
		Lt Brown and Gray Fine Sandy Loam		3.5-4.5			Brown fine sandy loam approx. 2" thick observed at 4' bgs
5		Gray Fine Sandy Loam		4.5-6.5			
		*No Refusal Encountered, No evidence of Water Table					
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30							
35							
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EXHIBIT E
Erosion Control Plan

SECTION 411.7

EROSION CONTROL

Garage/Office Complex Facility
Brunswick Sewer District
Brunswick, Maine

A. Narrative

A narrative addressing the measures and practices for the project's erosion and sedimentation control measures has been attached as Section 411.7A, Erosion and Sedimentation Control Plan.

Also attached as Section 411.7B, Inspection, Maintenance, and Housekeeping Plan, are measures to be implemented to ensure that the erosion and sedimentation control measures called in the Erosion and Sedimentation Control Plan for are properly cared for.

B. Implementation Schedule

The current project schedule indicates the site work will begin in the Spring of 2015 with the goal of having the facility completed by October 2015.

C. Plan of Existing Conditions and Plan of Proposed Conditions

See drawings C-3, C-5 and C-6 depicting all existing and proposed site features, respectively.

D. Plan of Locations of Erosion Control BMPs

See drawing C-5 depicting the locations of all proposed temporary and permanent erosion control measures to be installed on the site.

E. Plan of Limits of Areas to be Disturbed by Construction

See drawing C-5 depicting the limits of areas to be disturbed by construction activities.

F. Plan of Details and Specifications of Erosion and Sediment Control Measures

See drawing C-7 for Notes and Details of Erosion and Sediment Control Measures.

G. Design Calculations

The erosion and sediment control measures to be implemented have been designed in accordance with the guidelines presented in the Maine Erosion and Sediment Control handbook for Construction: Best Management Practices (BMPs).

H. Third Party Inspection - Not applicable.

SECTION 411.7A

EROSION AND SEDIMENTATION CONTROL PLAN

Garage/Office Complex Facility
Brunswick Sewer District
Brunswick, Maine

INTRODUCTION

This Erosion and Sedimentation Control Plan (E&S Plan) has been developed to provide a strategy to prevent unreasonable erosion of soil and sediment transport beyond the project site. These strategies apply to the proposed development immediately prior to soil disturbing activities on the site and shall remain in place until the site is permanently stabilized.

The information presented in this E&S Plan is provided as an overview of the anticipated measures to be used on this site. In some instances, additional measures may be required due to unexpected conditions that arise during construction. Also, specific detail on the application of a recommended practice for an unexpected instance may not be covered in this E&S Plan. For additional detail on any of the erosion and sedimentation control measures discussed in this E&S Plan or for further recommendations of applicable practices, refer to the "Maine Erosion and Sedimentation Control BMP" manual published by the Maine Department of Environmental Protection (MDEP) dated March 2003, as revised.

1.0 PLAN IMPLEMENTATION PHASES

Generally, the implementation of this plan occurs in three distinct phases as described below:

1.1 Pre-construction Phase

Prior to the beginning of any construction, perimeter sediment barriers (i.e. silt fence, erosion control mix berm, etc…) shall be installed at, or just below, the limits of clearing or grubbing, and/or just above any adjacent property line or protected natural resource. Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

1.2 Construction Phase

Areas undergoing actual construction shall only expose that amount of mineral soil necessary for progressive and efficient site construction. Any area that has been disturbed and is not "permanently stabilized" (as described by this E&S Plan) shall be considered "open." Open areas shall be protected and stabilized with temporary erosion and sedimentation control measures as shown on the project plans and as described within this E&S Plan.

Preparation for winter stabilization applies to some disturbed areas that are open on or after September 15th of the construction season (refer to the Winter Construction Section of this E&S Plan, Paragraph B – Overwinter Stabilization Timeframe). Any areas that remain open after November 1 or new soil disturbance that occurs after November 1, but before April 15, must be protected by additional measures as described in the Winter Construction section of this E&S Plan. The recommendations outlined in the Winter Construction section of this E&S Plan shall supersede other conflicting recommendations.

1.3 Post-construction phase

Once the site has reached permanent stabilization, remove any temporary sediment control measures, such as silt fence, within 30 days. All accumulated sediment/debris in the permanent stormwater management system, ditches, swales, paved surfaces, and/or any other location that has accumulated sediment/debris during construction shall be removed and disposed of in an approved manner.

2.0 PERMANENT STABILIZATION

The strategies outlined in this E&S Plan shall be in effect until the site reaches permanent stabilization. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well established. If necessary, areas must be seeded and mulched again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. The following list defines permanent stabilization for applicable situations.

2.1 Seeded Areas: For seeded areas, permanent stabilization means a 90% cover of vigorous perennial growth with no evidence of washing or rilling of the topsoil.

2.2 Sodded Areas: For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

2.3 Permanent Mulch: For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to approved application rates and limitations.

2.4 Riprap: For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of well-graded gravel or approved geotextile to prevent soil movement from behind the riprap.

2.5 Paved Areas: For paved areas, permanent stabilization means the placement of compacted gravel subbase is completed.

2.6 Ditches, channels, and swales: For open channels, permanent stabilization means the channel is stabilized with a 90% cover of vigorous perennial growth, a well-graded riprap lining, or with another non-erosive lining such as specified. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

3.0 TEMPORARY EROSION AND SEDIMENTATION CONTROL BMPS

The placement/use of the following erosion and sedimentation control measures shall be in accordance with the "Maine Erosion and Sedimentation Control BMP" manual published by the Maine Department of Environmental Protection (MDEP) dated March 2003, as revised.

3.1 Sediment Barriers: Prior to the beginning of any construction, sediment barriers (i.e. silt fence, erosion control mix berms, etc…) shall be installed across the slope(s), on the contour, at or just below the limits of clearing or grubbing, and/or just above any adjacent property line or watercourse to protect against construction related erosion. Sediment barriers shall be maintained until all tributary open areas have been permanently stabilized. The following are recommended perimeter sediment barriers:

- **Silt fence**: Shall be installed per the detail on the plans. The effective height of the fence shall not exceed 36 inches. It is recommended that silt fence be removed by cutting the fence materials at ground level so as to avoid additional soil disturbance.
- **Staked hay bales**: Shall be installed per the detail on the plans. Bales shall be wire-bound or string-tied and these bindings must remain parallel with the ground surface during installation to prevent deterioration of the bindings. Bales shall be installed within a minimum four (4) inch deep trench line with ends of adjacent bales tightly abutting another.
- **Erosion control mix berm**: Shall be installed per the detail on the plans. The mix shall consist primarily of organic material and contain a well-graded mixture of particle sizes. The mix must meet the most recent composition specifications published by the MDEP. No trenching is required for installation of this barrier.

3.2 Surface Stabilization: All disturbed areas that will not be worked for more than 7 days shall be protected and stabilized with mulch or other non-erodable cover. Areas located within 75 feet of a wetland or waterbody must be protected and stabilized within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first. Areas that have been seeded (temporary or permanent) shall be stabilized immediately. The following are recommended practices for surface stabilization:

- **Hay or straw Mulch:** Organic mulches including hay and straw need to be air-dried, free of undesirable seeds and coarse materials. Application rate shall be 2 bales (70-90 lbs) per 1000 square feet or 1.5 to 2 tons (90-100 bales) per acre. This type of mulch must be anchored with a tackifier amendment and/or via physical means (i.e. vehicle tracking, jute netting, etc…) to avoid displacement by wind or water.
- **Erosion control mix**: Erosion Control Mix can be manufactured on or off the site. It is composed primarily of shredded bark, stump grindings, composted bark, or other acceptable products based on a similar raw source. The mix must meet the most recent composition specifications published by the MDEP. The mix shall be placed evenly and must provide 100% soil coverage. Erosion control mix shall be applied such that the thickness on slopes 3:1 or less is 2 inches plus ½ inch per 20 feet of slope up to 100 feet. The thickness on slopes between 3:1 and 2:1 is 4 inches plus ½ inch per 20 feet of slope up to 100 feet. This shall not be used on slopes greater that 2:1.
- **Erosion control blankets**: Erosion Control Blankets are used on steep slopes (3H:1V and greater) and also areas that will receive concentrated stormwater flows. Blankets aid in controlling erosion on disturbed soils and critical areas during the establishment period of vegetation. Various forms of erosion control blankets are commercially available, each with different advantages for different applications. The type of blanket to be used for individual applications shall be as indicated on the development plan set or via the use of an approved equivalent blanket. In all applications, the blanket manufacturer's specifications and installation methods shall be referenced and adhered to.

3.3 Soil Stockpiles: All topsoil shall be stockpiled for future use on the project at a stable location on-site. Structural measures, such as sediment barriers, may be warranted for additional sediment control of the stockpile areas. Stockpiles of soil or subsoil shall be mulched with hay or straw or with erosion control mix. This must be done within 24 hours of stocking and re-established prior to any rainfall. Any soil stockpile will not be placed (even covered with hay or straw) within 75 feet from any protected natural resources.

3.4 Stabilized Construction Entrance/Exit: Prior to any clearing or grubbing, a stabilized construction entrance/exit shall be constructed wherever traffic will exit the construction site onto a paved roadway in order to minimize the tracking of sediment and debris from the construction site onto public roadways. The entrances and adjacent roadway areas shall be periodically swept or washed to further minimize the tracking of mud, dust or debris from the construction area.

When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. Stabilized construction exits shall be constructed in areas as specified and detailed on the plans.

3.5 Stone Check Dams: Stone check dams are generally temporary devices, which are constructed across a swale or drainage ditch. Their purpose is to reduce the velocity of concentrated stormwater flows, thereby reducing erosion of the swale or ditch. These devices will also trap small amounts of sediment generated in the ditch itself, however, they are not an effective sediment trapping device and should not be used as such. Stone check dams are typically constructed of 2"-3" crushed stone and stand 24 inches in height.

3.6 Storm Drain Inlet Protection: Storm drains are typically operational prior to permanent stabilization of tributary areas. In these instances hay bales, crushed stone barriers, and/or silt sacks shall be used within a catch basin or prior to a pipe entrance. This temporary protection will assist in the removal of sediment prior to entrance into a storm drainage system and the prevention of clogging and/or loss of capacity. These devices alone will not prevent all sediment from entering the stormwater system and should be used in conjunction with other devices to achieve desired sediment removal levels.

3.7 Dewatering: Water from construction dewatering will pass first through a filter bag or secondary containment structure (e.g. hay bale lined pool) prior to discharge. The discharge site shall be selected to avoid flooding, icing and sediment discharges to a protected natural resource. Discharge is permitted within the filter basin locations prior to the installation of the filter media.

3.8 Dust Control: Dust control during construction shall be achieved by the use of a watering truck to periodically sprinkle the exposed roadway areas as necessary to reduce dust during the dry months. Applying other dust control products such as calcium chloride or other manufactured products are allowed if authorized by the proper local, state and/or federal regulating agencies. However, it is the contractor's ultimate responsibility to mitigate dust and soil loss from the site. Street sweepers will also be used to keep the access drives free from materials that may become airborne.

4.0 VEGETATIVE MEASURES

4.1 Temporary Vegetation: If any disturbed area of soil will be left bare for more than 7 days, or if construction is to be completed in phases over an extended duration, temporary seeding and mulching shall commence immediately following initial fine grading of the site. In sensitive areas (within 75 feet of protected natural resources) temporary mulch must be applied within 48 hours or prior to any storm event on all disturbed surfaces. It shall be maintained and reseeded, as necessary, to ensure good vegetative cover for the entire duration of construction. Seed will be selected from the following table (Table 1 - Temporary Seed Mixture) according to the time of year or via an approved equivalent method.

TABLE 1
TEMPORARY SEED MIXTURE

Seed	Lbs./Acre	Lbs./1000s.f.	Recommended Seeding Date
Winter Rye	112	2.6	8/15 thru 10/1
Oats	80	1.8	4/1 thru 7/1 8/15 thru 9/15
Annual Ryegrass	40	0.9	4/1 thru 7/1
Sudangrass	40	0.9	5/15 thru 8/15
Perennial	40	0.9	8/15 thru 9/15

Note:

Some tree and shrub species may be desirable for sites primarily covered with sand and gravel. These methods shall be approved by the appropriate regulatory authority prior to use.

4.2 Permanent Vegetation: Revegetation measures shall commence immediately upon completion of final grading of areas to be loamed and seeded. Revegetation measures shall consist of the following:

4.2.1 Seedbed Preparation

- Four (4) inches of loam will be spread over disturbed areas and smoothed to a uniform surface. Loam shall be free of subsoil, clay lumps, stones and other objects over 2" in any dimension, and without weeds, roots or other objectionable material.

- Soil tests shall be taken at the time of soil stripping to determine fertilization requirements. Soil tests shall be taken promptly as to not interfere with the 7-day limit on soil exposure (48-hours adjacent to a protected natural resource). Based upon test results, soil amendments shall be incorporated into the soil prior to final seeding. In lieu of soil tests, soil amendments may be applied as shown below in Table 2:

TABLE 2
RECOMMENDED SOIL AMENDMENTS

Item	Application Rate
10-20-20 Fertilizer (N-P205-K20 or equal)	18.4lbs./1,000 s.f.
Ground Limestone (50% calcium and magnesium oxide)	138-lbs./1,000 s.f.

- Work lime and fertilizer into the soil as nearly as practical to a depth of four (4) inches with proper equipment. Roll the area to firm the seedbed except on clay, silty soils or coarse sand.

4.2.2 Application of Seed

- **Seeding**: The seed mixture shown below in Table 3 shall be utilized for permanent seeding applications. Alternate seed mixtures may be utilized as approved. Refer to Appendix A of the MDEP Erosion and Sedimentation Control BMP manual for additional seed mixture options.

TABLE 3
PERMANENT SEED MIXTURE

Seed Type	Application Rate
Creeping Red Fescue	0.46 lbs/1,000 s.f. (20 lbs/acre)
Red Top	0.05 lbs/1,000 s.f. (2 lbs/acre)
Tall Fescue	0.46 lbs/1,000 s.f. (20 lbs/acre)
Total:	0.97 lbs/1,000 s.f. (42 lbs/acre)

- **Hydroseeding:** Shall be conducted on prepared areas as described above. Hydroseeding shall not be done on slopes steeper than 2H:1V. Lime and

fertilizer may be applied simultaneously with the seed. Recommended seeding rates must be increased by 10% when hydroseeding.

- **Surface Stabilization:** Mulching or other approved surface stabilization methods shall commence immediately after seed is applied. Refer to the surface stabilization section of this plan for more information.

4.2.3. Sodding

Following seedbed preparation, sod can be applied in lieu of seeding in areas where immediate vegetation is most beneficial such as ditches, around stormwater drop inlets and areas of aesthetic value. Sod should be laid at right angles to the direction of flow starting at the lowest elevation. Sod should be rolled or tamped down to even out the joints once laid down. Where flow is prevalent the sod must be properly anchored down. Irrigate the sod immediately after installation. In most cases, sod can be best established between April 1 and November 15 of the construction year.

5.0 WINTER CONSTRUCTION

The winter construction period is from November 1 through April 15. If the construction site is not permanently stabilized by November 15 then the site needs to be protected with over-winter stabilization. While the current schedule calls for completion of the project by October 2015, the following measures will be implemented if work is required beyond November 1, 2015.

Winter excavation and earthwork shall be completed such that no more than 1 acre of the site is without stabilization at any one time. Limit the exposed area to those areas in which work is expected to be under taken during the proceeding 15 days and that can be mulched in one day prior to any snow event. All areas shall be considered to be denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded and mulched.

Any added measures, which may be necessary to control erosion/sedimentation from the site dependent upon the actual site and weather conditions, must be installed. Continuation of earthwork operations on additional areas shall not begin until the exposed soil surface on the area being worked has been stabilized, in order to minimize areas without erosion control protection.

5.1 Winter Construction BMP Adjustments

1) **Sediments Barriers:** During frozen conditions, sediment barriers shall consist of erosion control mix berms as frozen soil prevents the proper installation of hay bales and silt fences.

2) **Mulching:** Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, asphalt emulsion chemical, track or weed cellulose fiber. When the ground surface is not visible through the mulch then cover is sufficient. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

   - **Open Surfaces (flatter than 8%)**: Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 square feet or 1.5 tons/acre) and shall be properly anchored. Mulch shall not be spread on top of snow. The snow will be removed down to one-inch depth or less prior to application. After each day of final grading, the

area will be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched with straw or hay at a rate of 150 lb. per 1,000 square feet (3 tons/acre) and adequately anchored that ground surface is not visible through the mulch.

- **Open Slopes (8% or steeper) and Drainage Ways**: Slopes shall not be left exposed for any extended time of work suspension unless fully mulched and anchored with netting or erosion control blankets. Mulching shall be applied at a rate of 230-lbs/1,000 square feet on all slopes steeper than 8%. Mulch netting shall be used to anchor mulch in all drainage ways with a slope steeper than 3% for slopes exposed to direct winds and for all other slopes steeper than 8%. Erosion control blankets shall be used in lieu of mulch in all drainage ways. Erosion control mix can be used to substitute erosion control blankets on slopes that do not exceed 2H:1V. In this case, the erosion control mix shall be spread out, not placed in a berm as it is installed as a sedimentation barrier.

3) **Soil Stockpiles:** Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or at 150-lbs/1,000 square feet (3 tons per acre) or with a four-inch layer of wood waste erosion control mix. This will be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpile will not be placed (even covered with hay or straw) within 100 feet from any natural resources.

4) **Natural Resources Protection:** Any areas within 100 feet from any protected natural resources, if not stabilized with a minimum of 90% mature vegetation catch, shall be mulched by December 1 and anchored with plastic netting or protected with erosion control mats. During winter construction, a double line of sediment barriers (i.e. silt fence backed with hay bales or erosion control mix) will be placed between any natural resource and the disturbed area. Projects crossing the natural resource shall be protected a minimum distance of 100 feet on either side from the resource. Existing projects not stabilized by December 1 shall be protected with the second line of sediment barrier to ensure functionality during the spring thaw and rains.

5) **Seeding:** Between the dates of October 15 and April 1st, loam or seed will not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has been loamed, final graded with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be selected to be placed prior to the placement of mulch and fabric netting anchored with staples. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5-lbs/1000 square feet. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 90% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.2 Overwinter Stabilization Timeframe

1) **Ditches and Channels:** All stone-lined ditches and channels must be constructed and stabilized on the site by November 15. All grass-lined ditches and channels must be constructed and stabilized by September 15. If a ditch or channel is not grass-lined by

September 15, then one of the following actions must be taken to stabilize the ditch for late fall and winter.

- **Install a sod lining in the ditch**: A ditch must be lined with properly installed sod by October 1. Proper installation includes the contractor pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, watering the sod to promote root growth into the disturbed soil, and anchoring the sod with jute or plastic mesh to prevent the sod strips from sloughing during flow conditions.

- **Install a stone lining in the ditch**: A ditch must be lined with stone riprap by November 15. A registered professional engineer must be hired to determine the stone size and lining thickness needed to withstand the anticipated flow velocities and flow depths within the ditch. If necessary, the ditch must be regraded prior to placing the stone lining to prevent the stone lining from reducing the ditch's cross-sectional area.

2) **Disturbed Slopes:** All stone-covered slopes must be constructed and stabilized by November 15. All slopes to be vegetated must be seeded by September 15. The MDEP will consider any area having a grade greater than 15% (10H:1V) 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 and winter.

- **Stabilize the soil with temporary vegetation and erosion control blankets**: By October 1 the disturbed slope must be seeded with winter rye at a seeding rate of 3 pounds per 1,000 square feet and apply erosion control blankets over the mulched slope. If the rye fails to grow at least three inches or cover at least 90% of the disturbed slope by November 1, the slope will be covered with a layer of erosion control mix or stone riprap as described in the following standards.

- **Stabilize the slope with sod**: The disturbed slope must be stabilized with properly installed sod by October 1. Proper installation includes 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. Slopes steeper than 33% (3H:1V) or having groundwater seeps on the slope face, may not use late-season sod installation for stabilization.

- **Stabilize the slope with erosion control mix**: A six-inch layer of erosion control mix must be spread over the slope by November 15. Prior to placing the erosion control mix, any snow accumulation on the disturbed slope must be removed. Slopes steeper than 50% (2H:1V) or having groundwater seeps on the slope face can not use erosion control mix to stabilize slopes.

- **Stabilize the slope with stone riprap**: A layer of stone riprap can be placed on the slope by November 15. A registered professional engineer must be hired to determine the stone size needed for stability and to design a filter layer for underneath the riprap.

3) **Other Disturbed Soils:** By September 15, all disturbed soils on areas having a slope flatter than 15% (6.7H:1V) must receive seed and mulch. If disturbed areas are not stabilized by this date, then one of the following actions must be taken to stabilize the soil for late fall and winter.

- **Stabilize the soil with temporary vegetation**: By October 1, seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1,000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet, and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or cover at least 90% of the disturbed soil before November 1, then mulch the area for over-winter protection as described in the following "Stabilize the soil with mulch" standard.

- **Stabilize the soil with sod**: Stabilize the disturbed soil 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, and watering the sod to promote root growth into the disturbed soil.

- **Stabilize the soil with mulch**: By November 15, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Prior to applying the mulch, any snow accumulation on the disturbed area must be removed. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

6.0 INSPECTION AND MAINTENANCE

Inspection and maintenance are required of all erosion and sedimentation control measures outlined in this plan. Refer to the Inspection, Maintenance, and Housekeeping plan for this project for an outline of the associated inspection and maintenance requirements.

SECTION 411.7B

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

Garage/Office Complex Facility
Brunswick Sewer District
Brunswick, Maine

Introduction

The following plan outlines the anticipated inspection and maintenance procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed in order to ensure the intended function of the designed measures and to prevent unreasonable adverse impacts to the surrounding environment.

The procedures outlined in this inspection and maintenance plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional detail on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the Maine Department of Environmental Protection (MDEP).

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, material storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need

maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
- Sediment deposits should be removed after each storm event. They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to the requirements of this plan.

C. Temporary Storm Drain Inlet Protection:

- The inlet protection structure shall be inspected before each rain event and repaired as necessary.
- Sediment shall be removed and the storm drain sediment barrier restored to its original dimensions when the sediment has accumulated to half of the design depth of the trap.
- Barriers shall be removed upon permanent stabilization of the tributary area.
- Upon removal of the barrier, all accumulated sediments downstream of the structure shall be cleaned from the storm drain system.

D. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

E. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

F. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

After Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in all applicable permits, shall conduct the inspections.

2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction.

A. Vegetated Areas:

- Inspect vegetated areas, particularly slopes and embankments, early in the

growing season or after heavy rains to identify active or potential erosion problems.

- Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

B. Catch Basins:

- Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.
- If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

C. Winter Sanding:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

D. Underdrained Bioretention Cells:

- Check the soil filter embankments for sloughing or erosion. The vegetation should be well established and maintained. Remove any trees or shrubs growing in the pond or on the inside of the pond embankments.
- Check the catch basin structure for sediment accumulation or other blockages.
- Debris and sediment buildup shall be removed from the forebay and basin as needed. Any bare area or erosion rills shall be repaired with new filter media or sandy loam then planted and mulched.
- The soil filter should be inspected after every major storm in the first year to be sure it is functioning properly and that the plants are establishing. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 48 hours following a one inch storm or greater.
- Soil Filter Replacement: The mulch shall be replaced with fresh material on a yearly basis.
- Sediment Removal: Sediment and plant debris should be removed from

the pretreatment structure at least annually. Removed sediments should be disposed of in an acceptable manner.

- Fertilization: Fertilization of the underdrained filter area should be avoided unless absolutely necessary to establish vegetation.
- Harvesting and Weeding: Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary. Plants that are not thriving must be replaced.

E. Infiltration Trench:

- Inlet Maintenance: Remove any fallen leaves and other debris from the trench's surface inlet at least every fall after leaf drop and every spring after snow melt. If left in place, the trash and leaves will clog the trench inlet.
- Rehabilitation: Clogging in a surface trench is most likely to occur near the top of the trench between the top layer of stone and the protective layer of filter fabric. Relieve this surface clogging by carefully removing the top layer of stone, removing the clogged filter fabric, installing new fabric, and replacing the top layer of stone. If the old stone is reused, it should be washed to remove any fine sediment prior to being placed back in the trench.

F. Vegetated Swales:

- 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. The 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.
- Routine Maintenance and Inspection: The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, reseeding/sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation and to check the condition and integrity of the check dams.
- Aeration: The buffer strip may require periodic mechanical aeration 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.
- Erosion: It is important to install erosion and sediment control measures to stabilize this area as soon as possible and to retain any organic matter in

the bottom of the trench.

- Fertilization: Routine fertilization and/or use of pesticides is strongly discouraged. If complete re-seeding is necessary, half the original recommended rate of fertilizer should be applied with a full rate of seed.
- Sediment Removal: The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel.

3. Duration of Maintenance: Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system.

Housekeeping

The following general performance standards apply to the proposed project both during and after construction.

A. Spill prevention: Controls must be used to prevent pollutants from being discharged from materials and equipment on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. Groundwater protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

C. Fugitive sediment and dust: Actions must be taken to insure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

D. Debris and other materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

E. Trench or foundation dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected

water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

EXHIBIT F
Project Statements

Brunswick Sewer District
10 PINE TREE ROAD
BRUNSWICK, MAINE 04011
TELEPHONE (207) 729-0148 bsd@brunswicksewer.org FAX (207) 729-0149

December 30, 2014

Neil P. Chelseldine PE, Project Manager
Wright-Pierce
99 Main Street
Topsham, Maine 04086

Re: Garage/Office Facility Construction – Willingness and Capacity to Serve

Dear Neil,

This letter is in response to your request for a willingness and capacity to serve letter regarding the District's proposed construction of an office/garage facility on our property located at 8-10 Pine Tree Road in Brunswick, Maine.

I have reviewed the material provided and conclude that the project as proposed will not adversely affect facilities of the District. **The Brunswick Sewer District (BSD) has both the willingness and capacity to serve the proposed project.**

The proposed facility will consist of one 4,900 SF office/garage built to house a staff of approximately 8 crew members and a small workshop. Another 4900 SF heated garage will be constructed adjacent to the new office. Each facility will have water sewer lines extended to them. Floor drains will also be routed to the sewer. Service connections will be made directly into the District's main line sewer that runs to the treatment plant. The project will not be subject to an entrance charge.

Although there is no sewer permit needed for the project, the following conditions apply to construction:

1. All sewer-related construction will be performed to District standards.
2. All sanitary sewer construction will comply with provisions of the Maine State Plumbing Code.
3. Design and construction of project sanitary sewers will exclude all non-sanitary ground, surface, foundation drain, floor drain, sump pump, and roof drain waters.
4. Horizontal clearance between utility infrastructures will be sufficient to allow future utility maintenance operations without disturbance to adjacent utility infrastructure.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Robert A. Pontau Jr., PE
Assistant General Manager

BRUNSWICK & TOPSHAM
WATER DISTRICT

PO Box 489
Topsham, Maine 04086
Telephone (207) 729-9956
Fax (207) 725-6470

Alan J. Frasier, PE
General Manager

Craig W. Douglas, PE
District Engineer

Daniel O. Knowles, CPA
Director of Finance and
Data Management Systems

William G. Alexander, Jr.
Operations Manager

December 31, 2014

Jeffrey D. Preble, P.E.
Wright-Pierce Engineering
99 Main Street
Topsham, Maine 04086
Via email: jeff.preble@wright-pierce.com

RE: Pine Tree Road – Brunswick Sewer District, Brunswick, ME

Dear Mr. Preble:

This letter is to inform you that the District has the ability to serve the referenced project, and will provide service in accordance with Maine Public Utilities Commission and Brunswick & Topsham Water District Rules and Regulations.

According to previous correspondence, the proposed domestic peak flow is 20gpm which will be served with a new 2" service. You have also requested a 4" fire with a proposed flow requirement of 640 gpm.

The District requires the customer or its authorized agent to make application for service for all new service and meter installation requests, including change of use. An application form can be found on our website www.btwater.org.

Feel free to contact me if you have any questions.

Sincerely,

Craig W. Douglas
District Engineer

EXHIBIT G

Maine Historic Preservation Commission

WRIGHT-PIERCE
Engineering a Better Environment

Water
Wastewater
Infrastructure

January 8, 2015
W-P Project No. 12493D

Mr. Kirk F. Mohney
Deputy State Historic Preservation Officer
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, ME 04333

Subject: Garage/Office Complex, Brunswick Sewer District
Brunswick, Maine

Dear Mr. Mohney:

The Brunswick Sewer District is proposing to construct a new garage/office complex at its wastewater treatment facility located off Pine Tree Road in Brunswick. Refer to the attached project location map. The project is taking place adjacent to their existing administration building in a currently wooded area.

At this time, we are requesting your agency's review of the proposed project. Should you have any questions or concerns, please contact us.

Sincerely,

WRIGHT-PIERCE

Jeffrey D. Preble, PE
Senior Project Manager

Enclosures

Google earth

feet 1000
meters 400

BRUNSWICK WWTF

PROPOSED GARAGE & OFFICE COMPLEX

WRIGHT-PIERCE
Engineering a Better Environment

Water
Wastewater
Infrastructure

RECEIVED
JAN 09 2015
By 0032-15

January 8, 2015
W-P Project No. 12493D

Mr. Kirk F. Mohney
Deputy State Historic Preservation Officer
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, ME 04333

Subject: Garage/Office Complex, Brunswick Sewer District
Brunswick, Maine

Dear Mr. Mohney:

The Brunswick Sewer District is proposing to construct a new garage/office complex at its wastewater treatment facility located off Pine Tree Road in Brunswick. Refer to the attached project location map. The project is taking place adjacent to their existing administration building in a currently wooded area.

At this time, we are requesting your agency's review of the proposed project. Should you have any questions or concerns, please contact us.

Sincerely,

WRIGHT-PIERCE

Jeffrey D. Preble, PE
Senior Project Manager

Enclosures

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney, 1/16/15
Kirk F. Mohney, Date
Deputy State Historic Preservation Officer
Maine Historic Preservation Commission

99 Main Street
Topsham, ME 04086 USA
Phone 207.725.8721 | Fax 207.729.8414

EXHIBIT H
Lighting Fixtures

LITHONIA LIGHTING®

Catalog Number	DOM6-LED-900L-35K-120-DL61
Notes	Garage Canopy Fixture
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for a wide variety of low- to medium-height ceiling applications, and for shower and outdoor applications where a wet lensed fixture is required. The system maintains 70% lumen output at more than 50,000 hours.

CONSTRUCTION — 16-gauge galvanized steel mounting/plaster frame with torsion springs to mount open conical shape reflector.

Rugged, one-piece, die-cast housing with white interior dome reflector.

LED light source shielded from direct view.

Vertically adjustable mounting brackets that use 16-gauge flat bar hangers (included), 1/2" conduit or C channel T bar fasteners. Provides 3-3/4" total adjustment.

Post installation adjustment possible from above or below the ceiling.

Galvanized steel junction box with bottom-hinged access covers and spring latches. Two combination 1/2"-3/4" and three 1/2" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out) No. 12 AWG conductors, rated for 90°C.

Fixture height of 5-3/4" allows installation in shallow plenum applications.

Secondary housing adjustment system for precise, final ceiling-to-flange alignment.

Maximum 1-1/2" ceiling thickness.

ELECTRICAL — Utilizes high-brightness LEDs mounted to a metal core circuit board, ensuring cool-running operation, 3500K, CRI > 80.

Thermal control ensures cool running LEDs.

Thermal protection provided against improper insulation use.

High-efficiency, electronic LED driver mounted in the junction box.

Luminaire should be installed in applications where ambient temperatures do not exceed 50°C. Ambient temperatures that exceed 50°C will result in reduced lamp life and will void warranty.

Input wattage for 600L is 15.6W. Input wattage for 900L is 25.0W.

The DOM6 LED with DIM option operates with all 0-10V dimming switches. The following dimming switches have been confirmed to dim to 10% output:

Synergy® model number: ISD BC 120/277

Leviton® model number: IP710-DLX

Lutron® model number: NTFTV-WH. For on/off control, this switch requires a power pack. Consult Lutron for more information.

LISTINGS — CSA Certified to U.S. and Canadian safety standards. Wet location listed.

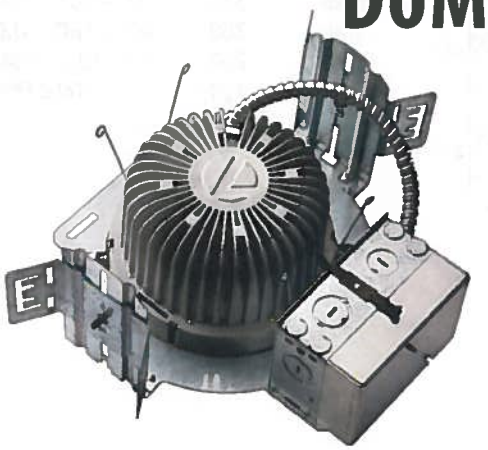
WARRANTY — Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

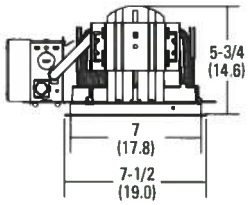
Note: Specifications subject to change without notice.

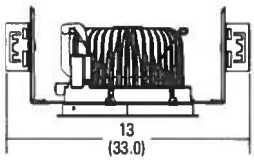
DOM

DOM6 LED

6" WET LENS LED







Specifications

Aperture: 6-3/4 (17.1)
Ceiling opening: 7 (17.8)
Overlap trim: 7-1/2 (19.0)
Height: 5-3/4 (14.6)
Length: 11-1/8 (28.3)
Standard width: 13 (33.0)

All dimensions are inches (centimeters) unless otherwise specified.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: DOM6 LED 900L 35K 120 DL64

DOM6 LED					
Series	**Lumen output**[1]	**Color temperature**	**Voltage**	**Reflector**[2]	**Options**
DOM6 LED	600L 900L	35K 3500K 40K 4000K	120 277 347[3]	DL61 White splay, flat clear lens DL6B1 Black baffle, flat clear lens DL64 White splay, fresnel lens DL6B4 Black baffle, flat fresnel lens DL6T73 White splay, tempered prismatic lens DL6BT73 Black baffle, tempered prismatic lens	DIM 0-10V dimming driver, 10% minimum light output ELRB722 Bodine® emergency battery pack with remote test switch provides 86% light output or roughly 770 lumens, for up to 90 minutes (900L only)[4] NPP16D nLight® network relay pack with 0-10V dimming. Refer to TN-602. Fixtures must be ordered with DIM option. NPP16DER nLight® network relay pack with 0-10V dimming for emergency circuit operation. Refer to TN-602. Fixtures must be ordered with DIM option.[5]

Accessories: *Order as separate catalog number.*

IDS BC 120/277 WH	Synergy white switch
IDS BC 120/277 IV	Synergy ivory switch

Notes

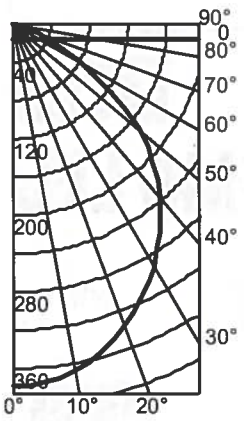
1 Total system delivered lumens; power factor > 0.90.
2 Not available with ELRB722
3 White integral flange.
4 ELRB722 available only with 900L.
5 For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.

DOM6 LED 6" WET LENS LED

PHOTOMETRICS

DOM6 LED 900L DL64; 784 delivered lumens, input watts: 24.9, Test No. LTL 17962. Tested in accordance with IESNA LM-79-2008.

Polar Plot



Intensity Distribution

Vertical Angle	Horizontal Angle 0
0	378
5	376
15	355
25	315
35	266
45	206
55	121
65	49
75	17
85	3
90	0

Zonal Lumen Summary

Zone	Lumens	% Lamp
0° - 30°	280.3	35.8
0° - 40°	445.7	56.9
0° - 60°	711.6	90.8
0° - 90°	784.0	100.0
90° - 180°	0.0	0.0
0° - 180°	784.0	*100.0

*Total Efficiency

Coefficients of Utilization

	pf	20%					
	pc	80%		70%		50%	
RCR	pw	50%	30%	50%	30%	50%	30%
	0	119	119	116	116	111	111
	1	107	103	105	102	101	98
	2	95	90	94	88	90	86
	3	85	78	84	77	81	75
	4	77	69	75	68	73	67
	5	69	61	68	61	66	60
	6	63	55	62	54	60	53
	7	57	49	57	49	55	48
	8	53	45	52	45	51	44
	9	49	41	48	41	47	40
	10	45	38	45	37	44	37

Notes

- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/-5% when operating between 120-347V +/-10%.

DOWNLIGHTING: One Lithonia Way Conyers, GA 30012 Phone: 800.315.4935 Fax: 770-860-3129 www.lithonia.com

LUMARK®

DESCRIPTION

The patent pending Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

Catalog #	XTOR2A-PC1-WG/XTOR	Type	R - LED
Project	BRUNSWICK SEWER DISTRICT GARAGE COMPLEX		
Comments		Date	1-8-15
Prepared by	DWL		

SPECIFICATION FEATURES

Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and large design. The small housing is available in 10W and 20W. The large housing is available in the 30W model. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three (3) half-inch, NPT threaded conduit entry points. The universal back box supports both the small and large forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Solid state LED Crosstour luminaries are thermally optimized with five (5) lumen packages in cool 5000K or neutral warm 3500K LED color temperature (CCT).

Electrical

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 10W models operate in -40°C to 40°C [-40°F to 104°F]. 20W and 30W models operate in -30°C to 40°C [-22°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 70% of initial light output after 72,000 hours of operation. Three (3) half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

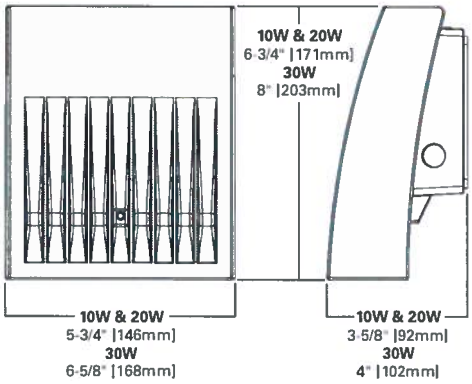
Warranty

Five-year warranty.

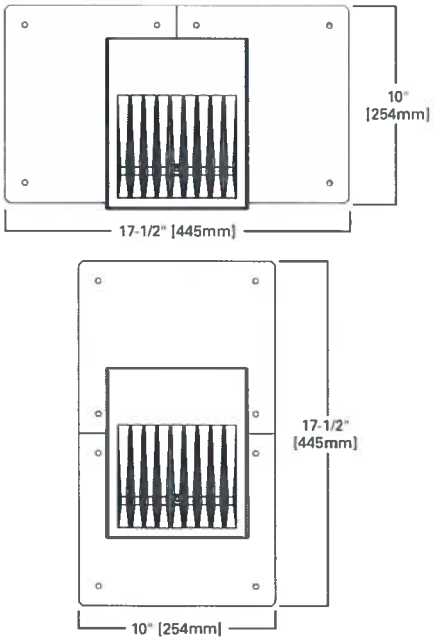
XTOR
CROSSTOUR LED

APPLICATIONS:
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA

UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingressed Protection Rated
Lighting Facts® Registered
DesignLights Consortium® Qualified*
Title 24 Compliant

TECHNICAL DATA

40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

Effective Projected Area:
(Sq. Ft.)
XTOR1A/XT0R2A=0.34
XTOR3A = 0.45

SHIPPING DATA:

Approximate Net Weight:
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

Cooper Lighting
by EATON

*www.designlights.org

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
10W Model		
25°C	> 91%	> 350,000
40°C	> 91%	> 340,000
50°C	> 91%	> 330,000
20W Model		
25°C	> 91%	> 340,000
40°C	> 90%	> 320,000
50°C	> 90%	> 300,000
30W Model		
25°C	> 91%	> 340,000
40°C	> 91%	> 320,000
50°C	> 90%	> 300,000

LUMENS - CRI/CCT TABLE

LED Information	XTOR1A	XTOR2A	XTOR2A-N	XTOR3A	XTOR3A-N
Delivered Lumens (Wall Mount)	734	1432	1323	2649	2273
Delivered Lumens (With Flood Accessory Kit)	713	1424	1315	2614	2243
B.U.G. Rating*	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0
CCT (Kelvin)	5000	5000	3500	5000	3500
CRI (Color Rendering Index)	67	65	68	65	68
Power Consumption (Watts)	8W	21W	21W	30W	30W

* B.U.G. Rating does not apply to floodlighting.

CURRENT DRAW

Voltage	Model Series		
	10W	20W	30W
120V	0.06A	0.21A	0.29A
208V	0.04A	0.13A	0.18A
240V	0.04A	0.12A	0.16A
277V	0.03A	0.10A	0.14A
347V	0.03A	0.08A	0.11A

ORDERING INFORMATION

Sample Number: XTOR2A-N-WT-PC1

Series [1]	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)	**Accessories** (Order Separately)
XTOR1A=Small Door, 10W **XTOR2A**=Small Door, 20W **XTOR3A**=Small Door, 30W	**[Blank]**=Bright White (Standard) 5000K **N**=Neutral Warm White, 3500K [2]	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White	**PC1**=Photocontrol 120V [3] **PC2**=Photocontrol 208-277V [3,4] **347V**=347V [5] **HA**=50°C High Ambient [5]	**WG/XTOR**=Wire Guard [6] **XTORFLD-KNC**=Knuckle Floodlight Kit [7] **XTORFLD-TRN**=Trunnion Floodlight Kit [7] **XTORFLD-KNC-WT**=Knuckle Floodlight Kit, Summit White [7] **XTORFLD-TRN-WT**=Trunnion Floodlight Kit, Summit White [7] **EWP/XTOR**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTOR-WT**=Escutcheon Wall Plate, Summit White

NOTES: 1 DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. 2 XTOR1A not available in 3500K. 3 Photocontrols are factory installed. 4 Order PC2 for 347V models. 5 Thru-branch wiring not available with HA option or with 347V. 6 Wire guard for wall/surface mount. Not for use with floodlight kit accessory. 7 Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

STOCK ORDERING INFORMATION

10W Series	20W Series	30W Series
XTOR1A=10W, 5000K, Carbon Bronze	XTOR2A=20W, 5000K, Carbon Bronze	XTOR3A=30W, 5000K, Carbon Bronze
XTOR1A-WT=10W, 5000K, Summit White	XTOR2A-N=20W, 3500K, Carbon Bronze	XTOR3A-N=30W, 3500K, Carbon Bronze
XTOR1A-PC1=10W, 5000K, 120V PC, Carbon Bronze	XTOR2A-WT=20W, Summit White	XTOR3A-WT=30W, Summit White
	XTOR2A-PC1=20W, 120V PC, Carbon Bronze	XTOR3A-PC1=30W, 120V PC, Carbon Bronze

5 Days Quick-Ship

5-DAY QUICK SHIP ORDERING INFORMATION

10W Series	20W Series	30W Series
XTOR1A-WT-PC1=10W, 5000K, Summit White, 120V PC	XTOR2A-PC2=20W, 5000K, 208-277V PC, Carbon Bronze	XTOR3A-PC2=30W, 5000K, 208-277V PC, Carbon Bronze
	XTOR2A-WT-PC1=20W, 5000K, Summit White, 120V PC	XTOR3A-WT-PC1=30W, 5000K, Summit White, 120V PC
	XTOR2A-WT-PC2=20W, 5000K, Summit White, 208-277V PC	XTOR3A-WT-PC2=30W, 5000K, Summit White, 208-277V PC
	XTOR2A-N-WT=20W, 3500K, Summit White	XTOR3A-N-WT=30W, 3500K, Summit White
	XTOR2A-N-PC1=20W, 3500K, 120V PC, Carbon Bronze	XTOR3A-N-PC1=30W, 3500K, 120V PC, Carbon Bronze
	XTOR2A-N-PC2=20W, 3500K, 208-277V PC, Carbon Bronze	XTOR3A-N-PC2=30W, 3500K, 208-277V PC, Carbon Bronze
	XTOR2A-N-WHT-PC1=20W, 3500K, Summit White, 120V PC	XTOR3A-N-WHT-PC1=30W, 3500K, Summit White, 120V PC
	XTOR2A-N-WT-PC2=20W, 3500K, Summit White, 208-277V PC	XTOR3A-N-WT-PC2=30W, 3500K, Summit White, 208-277V PC

LUMARK®

DESCRIPTION

The patent pending Lumark Crosstour™ MAXX LED Wall Pack Series of luminaries provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

Catalog #	XTOR5A-PC1-WG-XTORMX	Type	T-LED
Project	BRUNSWICK SEWER DISTRICT GARAGE COMPLEX		
Comments		Date	1-8-15
Prepared by	DWL		

SPECIFICATION FEATURES

Construction
Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 50W and 85W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

Optical
Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Solid state LED Crosstour luminaries are thermally optimized with two lumen packages in cool 5000K or neutral warm 3500K LED color temperature (CCT).

Electrical
LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 50W and 85W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available. Crosstour MAXX luminaires maintain greater than 83% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation.

Emergency Egress
Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Area and Site Pole Mounting
Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits 2-3/8" or 3-1/2" O.D. Tenon.

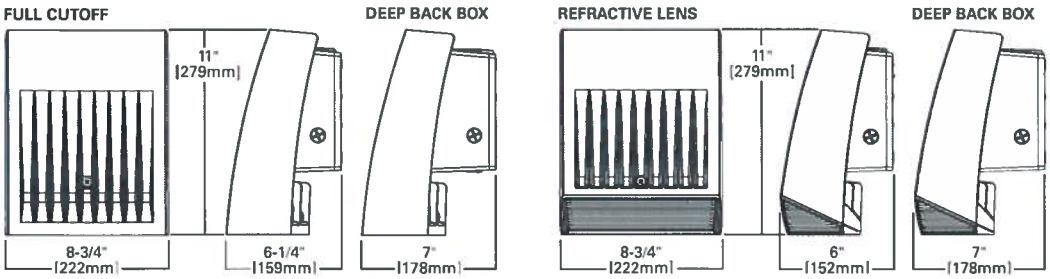
Finish
Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.

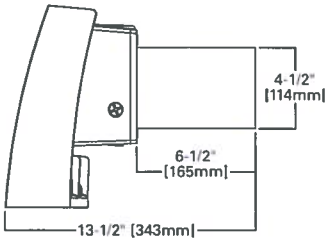
XTOR
CROSSTOUR MAXX LED

APPLICATIONS:
WALL / SURFACE
INVERTED
SITE LIGHTING

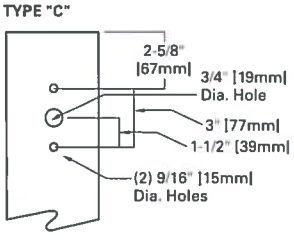
DIMENSIONS



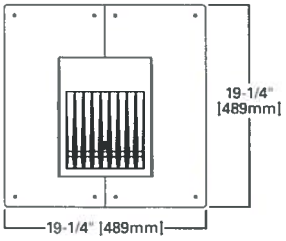
OPTIONAL POLE MOUNT ARM



ARM DRILLING



ESCUTCHEON PLATES



CERTIFICATION DATA

UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
NOM Compliant Models
3G Vibration Tested
UL924 Listed (CBP Models)
IP66 Rated
Lighting Facts® Registered
DesignLights Consortium® Qualified*

TECHNICAL DATA

40°C Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

Effective Projected Area (Sq. Ft.):
XTOR5A/XTOR9A = 0.54
With Pole Mount Arm = 0.98

SHIPPING DATA:

Approximate Net Weight:
12-15 lbs. [5.4-6.8 kgs.]

* www.designlights.org

POWER AND LUMENS BY FIXTURE MODEL

50W LED Information	XTOR5A	XTOR5ARL	XTOR5A-N	XTOR5ARL-N
Delivered Lumens	4,282	4,553	3,532	3,830
B.U.G. Rating	B1-U0-G1	B1-U3-G2	B1-U0-G1	B1-U3-G2
CCT (Kelvin)	5000K	5000K	3500K	3500K
CRI (Color Rendering Index)	65	65	68	68
Power Consumption (Watts)	50W	50W	50W	50W

85W LED Information	XTOR9A	XTOR9ARL	XTOR9A-N	XTOR9ARL-N
Delivered Lumens	7,192	7,416	5,456	5,702
B.U.G. Rating	B1-U0-G1	B1-U3-G3	B1-U0-G1	B1-U3-G2
CCT (Kelvin)	5000K	5000K	3500K	3500K
CRI (Color Rendering Index)	65	65	68	68
Power Consumption (Watts)	86W	85W	84W	82W

EGRESS Information	50W and 85W Full Cutoff CBP Egress LED	50W and 85W Refractive Lens CBP Egress LED
Delivered Lumens	509	468
B.U.G. Rating	N.A.	N.A.
CCT (Kelvin)	4000K	4000K
CRI (Color Rendering Index)	65	65
Power Consumption (Watts)	1.8W	1.8W

CURRENT DRAW

Current (A)	Model Series			
	XTOR5A	XTOR9A	XTOR5A-CBP (Fixture/Battery)	XTOR9A-CBP (Fixture/Battery)
120V	0.43	0.72	0.68/0.25	0.97/0.25
208V	0.25	0.41	--	--
240V	0.22	0.36	--	--
277V	0.20	0.32	0.41/0.21	0.53/0.21
347V	0.16	0.26	--	--
480V	0.12	0.19	--	--

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance	Theoretical L70 (Hours)
50W Model	72,000 Hours	
25°C	98%	500,000
40°C	97%	490,000
50°C	97%	490,000
85W Model	72,000 Hours	
25°C	96%	221,000
40°C	94%	192,000
50°C	83%	140,000

ORDERING INFORMATION

Sample Number: XTOR5A-N-WT-PC1

Series [1]	LED Kelvin Color	Housing Color	Options (Add as Suffix)
Full Cutoff **XTOR5A=50W** **XTOR9A=85W** **Refractive Lens** **XTOR5ARL=50W** **XTOR9ARL=85W**	**[Blank]=Bright White (Standard) 5000K** **N=Neutral Warm White, 3500K**	**[Blank]=Carbon Bronze (Standard)** **WT=Summit White**	**347V=347V** [2,3,4,5] **480V=480V** [2,3,4,5,6] **PC1=Photocontrol 120V** [7] **PC2=Photocontrol 208-277V** [7,8] **DIM=0-10V Dimming Driver** [2] **PMA=Pole Mount Arm (C Drilling) with Round Adapter** [3] **HA=50°C High Ambient** [5] **MS-L20=Motion Sensor for ON/OFF Operation** [2,3,9,12] **MS/DIM-L20=Motion Sensor for Dimming Operation** [2,3,9,10,11,12] **CBP=Cold Weather Battery Pack** [2,3,10,13]

Accessories (Order Separately)	
WG-XTORMX=Crosstour MAXX Wire Guard **PB120V=Field Installed 120V Photocontrol** **PB277V BUTTON PC=Field Installed 208-277V Photocontrol** [8] **VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon** [14] **VA1041-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon** [14] **VA1042-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon** [14] **VA1043-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon** [14] **VA1044-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon** [14] **VA1045-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon** [14]	**VA1046-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon** [14] **VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon** [14] **VA1034-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon** [14] **VA1035-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon** [14] **VA1036-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon** [14] **VA1037-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon** [14] **VA1038-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon** [14] **VA1039-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon** [14] **EWP/XTORMX=Escutcheon Wall Plate, Carbon Bronze** **EWP/XTORMX-WT=Escutcheon Wall Plate, Summit White**

NOTES: 1 DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. 2 Not available with HA option. 3 Deep back box is standard for 347V, 480V, CBP, PMA, MS-L20 and MS/DIM-L20. 4 Not available with CBP option. 5 Thru-branch wiring not available with HA option or with 347V. 6 Not to be used with un-grounded systems. 7 Not available with MS-L20 and MS/DIM-L20 options. 8 Use PC2 with 347V or 480V option for photocontrol. Factory wired to 208-277V lead. 9 For use in downlight orientation only. Optimal coverage at mounting heights of 9'-20'. 10 120V or 277V only. 11 Factory set to 50% power reduction after 15-minutes of inactivity. Dimming driver included. 12 Includes integral photo sensor. 13 Operating temperatures -20°C to 25°C. 14 Replace XX with CB for carbon bronze or WT for summit white.

STOCK ORDERING INFORMATION

50W Series	85W Series
Full Cutoff	
XTOR5A=50W, 5000K, Carbon Bronze	XTOR9A=85W, 5000K, Carbon Bronze
XTOR5A-PC1=50W, 5000K, 120V PC, Carbon Bronze	XTOR9A-PC1=85W, 5000K, 120V PC, Carbon Bronze
XTOR5A-WT= 50W, 5000K, Summit White	XTOR9A-WT=85W, 5000K, Summit White
XTOR5A-N=50W, 3500K, Carbon Bronze	XTOR9A-PC2=85W, 5000K, 208-277V PC, Carbon Bronze
	XTOR9A-480V=85W, 5000K, 480V, Carbon Bronze
	XTOR9A-PMA=85W, 5000K, Pole Mount Arm, Carbon Bronze
Refractive Lens	
XTOR5ARL=50W, 5000K, Refractive Lens, Carbon Bronze	XTOR9ARL=85W, 5000K, Refractive Lens, Carbon Bronze
XTOR5ARL-PC1=50W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR9ARL-PC1=85W, 5000K, Refractive Lens, 120V PC, Carbon Bronze
XTOR5ARL-WT=50W, 5000K, Refractive Lens, Summit White	XTOR9ARL-WT=85W, 5000K, Refractive Lens, Summit White
XTOR5ARL-N=50W, 3500K, Refractive Lens, Carbon Bronze	XTOR9ARL-PC2=85W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze
	XTOR9ARL-480V=85W, 5000K, Refractive Lens, 480V, Carbon Bronze
	XTOR9ARL-PMA=85W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze

5 Days Quick-Ship

5-DAY QUICK SHIP ORDERING INFORMATION

50W Series	85W Series
Full Cutoff	
XTOR5A-CBP=50W, 5000K, Carbon Bronze, Cold Weather Battery Pack	XTOR9A-CBP=85W, 5000K, Carbon Bronze, Cold Weather Battery Pack
XTOR5A-480V=50W, 5000K, Carbon Bronze, 480V	XTOR9A-N=85W, 3500K, Carbon Bronze
XTOR5A-PC2=50W, 5000K, Carbon Bronze, 208-277V PC	
Refractive Lens	
XTOR5ARL-PC2=50W, Refractive Lens, 5000K, Carbon Bronze, 208-277V PC	XTOR9ARL-CBP=85W, Refractive Lens, 5000K, Carbon Bronze, Cold Weather Battery Pack
XTOR5ARL-CBP=50W, Refractive Lens, 5000K, Carbon Bronze, Cold Weather Battery Pack	XTOR9ARL-N=85W, Refractive Lens, 3500K, Carbon Bronze
XTOR5ARL-480V=50W, Refractive Lens, 5000K, Carbon Bronze, 480V	

EXHIBIT I
Boundary, Deed, Easements

SCHEDULE A

PARCEL #1 - A certain lot or parcel of land, with the buildings thereon, situated on the westerly side of re-located Route U. S. #1, in the Town of Brunswick, in the County of Cumberland and State of Maine, and being more specifically bounded and described as follows:

BEGINNING at a point marked by a granite monument, said granite monument being the most northwesterly corner of the land conveyed by Charles L. Strout and Lillian L. Strout to the Brunswick Sewer District by Warranty Deed, dated February 21, 1950 and recorded in the Cumberland County Registry of Deeds in Book 1989, Page 370; thence S 88° 18' E a distance of one hundred fifty-five and thirty-one one hundredths (155.31) feet, more or less, along land of the Inhabitants of the Town of Brunswick to a point and land of the State of Maine; thence S 37° 37' E by land of the State of Maine a distance of six hundred fifty (650') feet to a point and land of the Brunswick Sewer District; thence S 52° 23' W a distance of ninety and fifty-nine one hundredths (90.59) feet by land of the Brunswick Sewer District to a point; thence N 86° 18' W by other land of the Brunswick Sewer District a distance of five hundred sixteen and forty-two one hundredths (516.42) feet to a point; thence N 03° 42' E along the easterly side line of Lots Numbered 73 through and including Lot Numbered 80 as shown on Sheet U-6A of the 1964 Brunswick Assessors Tax Maps, a distance of five hundred forty-eight (548') feet to the point begun at. Said parcel containing four and eighty one hundredths (4.80) acres, more or less.

EXCEPTING AND RESERVING, however, unto the Brunswick Sewer District, its successors and assigns, an easement along the easterly side of said lot for the purpose of laying, maintaining and repairing a pipe or pipes for the purposes of said Brunswick Sewer District, said easement being bounded and described as follows: BEGINNING at a point marking the more northeasterly point of the parcel hereinbefore described; thence S 37° 37' E a distance of six hundred fifty (650') feet to a point; thence S 52° 23' W a distance of fifty (50') feet to a point; thence N 29° 05' W a distance of two hundred two and twenty-four one hundredths (202.24) feet to a point; thence N 37° 37' W a distance of four hundred sixty-seven and fifty-eight one hundredths (467.58) feet to a point; thence S 86° 18' E a distance of twenty-six and sixty-three one hundredths (26.63) feet to a point and place begun at.

It is made a part of the consideration of conveyance that the Grantee, its successors and assigns, will not at any time construct on this easement any buildings or obstructions to the use thereof by the said Brunswick Sewer District. Should the said Grantee, its successors and assigns, violate the provisions of this restriction, then this conveyance shall be void and the premises shall revert to the Brunswick Sewer District, its successors and assigns.

Schedule A - RE Management Inc. to Brunswick Sewer District
Page 2

PARCEL #2 - A certain lot or parcel of land, located in Brunswick, in the County of Cumberland and State of Maine, being a triangular parcel of land, containing approximately one-fourth (1/4) acre, bounded and described as follows:

Easterly by U. S. Route #1; westerly by land of Farragut Park; and southerly by land of Pine Tree Engineering.

Meaning and intending to convey all the same premises conveyed to the Pine Tree Engineering by Brunswick Resources Corporation, by its deed dated June 18, 1969 and recorded in the Cumberland County Registry of Deeds in Book 3090, Page 779 (Parcel #1) and by deed from Brunswick Resources Corporation dated May 28, 1971 and recorded in said Registry of Deeds in Book 3172, Page 869 (Parcel #2).

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING all the same premises conveyed to RE Management Inc. by Deed of Coastal Savings Bank dated May 24, 1987, and recorded in the Cumberland County Registry of Deeds at Book 7804, Page 150.

RE MANAGEMENT INC., a Maine corporation with principal place of business in Brunswick, County of Cumberland and State of Maine

033413

~~of~~ ~~(being unmarried)~~, for consideration paid, grant to BRUNSWICK SEWER DISTRICT, a corporation duly organized and existing under the laws of the State of Maine, with principal offices in Brunswick, County of Cumberland and State of Maine

~~of~~ with ~~quit claim~~ covenant

the land in Brunswick, Cumberland County, State of Maine, to wit:

All those certain lots or parcels of land, with the buildings thereon, described in Schedule A attached hereto.

BK9254PG0081

IN WITNESS WHEREOF the said RE MANAGEMENT INC. has caused this instrument to be executed this 17th day of July, 1989, by PAUL O. KELLEY, its duly authorized PRESIDENT.

~~wife of said grantor,~~

~~joins as grantor and releases all rights by descent and all other rights~~

~~Witness my hand and seal this day of 19~~

RE MANAGEMENT INC.

By: Paul O. Kelley Jr.

Its: President

PAUL O. KELLEY, JR.

The State of Maine

Cumberland ss. July 17 19 90

Then personally appeared the above named Paul O. Kelley, President of RE MANAGEMENT INC. and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said RE MANAGEMENT INC.

~~and acknowledged the foregoing instrument to be free act and deed~~

Before me,

~~Justice of the Peace~~ - Attorney at Law - ~~Notary Public~~

John MONCURE

1204 S QUITCLAIM DEED WITH COVENANT

MN

MAGNETIC OBSERVATION 1996

PLAN REFERENCES

"Jordan Park Brunswick, Maine," by Nisbet & Griffin, Inc., dated May 1941, recorded in CCRD P.B. 27, Pg. 25.

"Brunswick Sewer District, Brunswick, Maine, Charles L. Strout Land," by E. F. Pooler & Son, dated Feb. 1950, recorded in CCRD P.B. 35, Pg. 28.

"Riverview Grove, Brunswick, Maine, Second Increment," by Wright & Pierce, dated April 12, 1954, recorded in CCRD P.B. 41, Pg. 64A.

"Maine State Highway Commission Right of Way Map, State Highway '26', Brunswick," S.H.C. File No. 3-141, dated May 1960, recorded in CCRD P.B. 62, Pg. 64.

"Maine State Highway Commission Right of Way Map, State Highway '26', Brunswick," S.H.C. File No. 3-146, Sheet 1 of 11, dated August 1961, recorded in CCRD P.B. 66, Pg. 50.

"Maine State Highway Commission Right of Way Map, State Highway '26', Brunswick," S.H.C. File No. 3-179, dated October 1965, Sheets 1, 2, & 3 of 5, recorded in CCRD P.B. 82, Pgs. 3, 4, & 5.

"State of Maine Department of Transportation Right of Way Map, State Highway '17', Brunswick," D.O.T. File No. 3-394, dated April 1994.

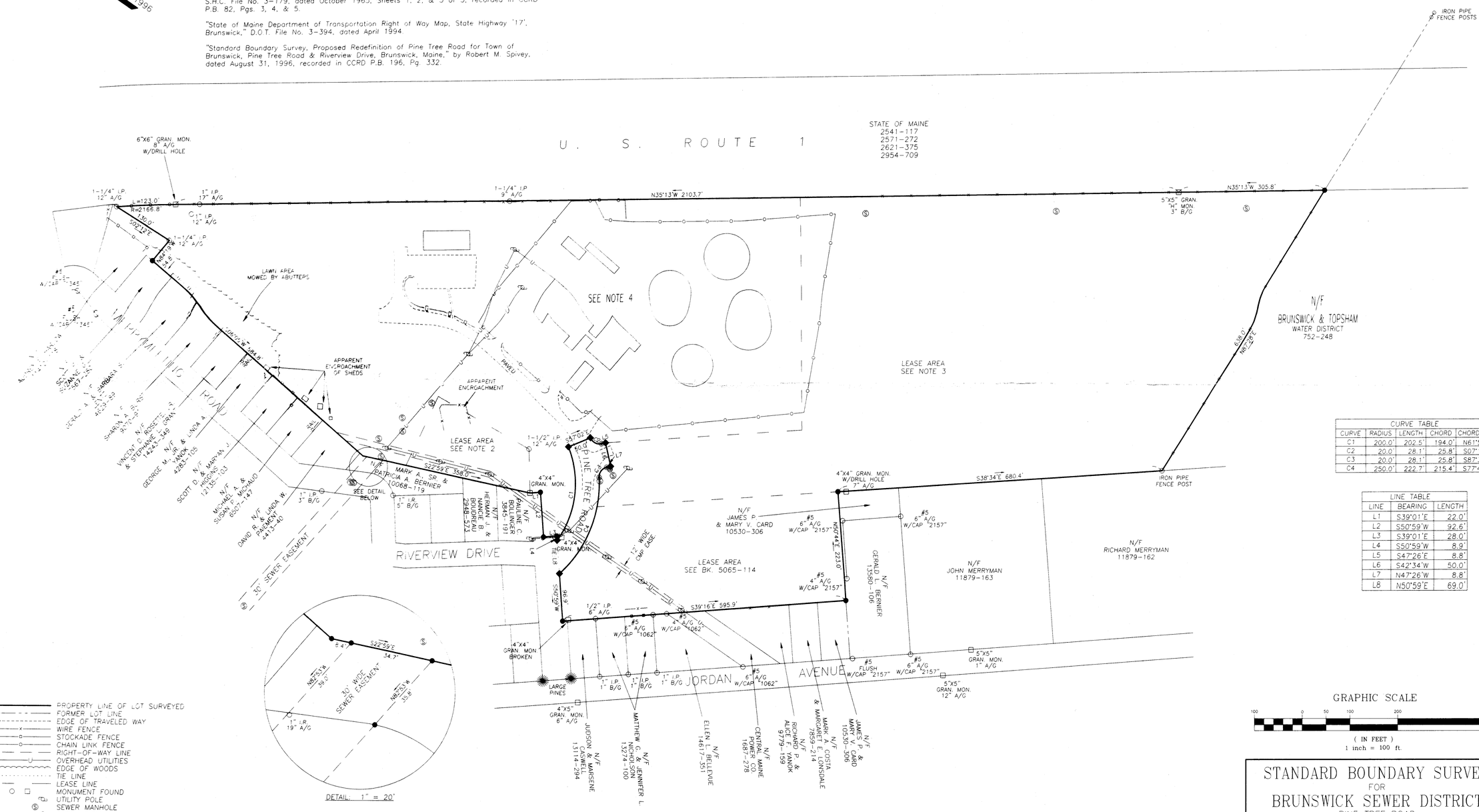
"Standard Boundary Survey, Proposed Redefinition of Pine Tree Road for Town of Brunswick, Pine Tree Road & Riverview Drive, Brunswick, Maine," by Robert M. Spivey, dated August 31, 1996, recorded in CCRD P.B. 196, Pg. 332.

DEED REFERENCES - CUMBERLAND COUNTY REGISTRY OF DEEDS

Bk.	838,	Pg. 111	William H. Strout to Brunswick Electric Light and Power Co. (easement)
Bk.	1989,	Pg. 370	Charles L. & Lilla L. Strout to Brunswick Sewer District
Bk.	2962,	Pg. 122	Brunswick Sewer District to Central Maine Power Co. (easement)
Bk.	3126,	Pg. 143	Brunswick Sewer District to Central Maine Power Co. (easement)
Bk.	5065,	Pg. 114	Brunswick Sewer District to Town of Brunswick (lease)
Bk.	9254,	Pg. 81	RE Management, Inc. to Brunswick Sewer District
Bk.	9375,	Pg. 128	Brunswick Sewer District to CMP Co. & NET&T Co. (easement)
Bk.	12899,	Pg. 133	Discontinuance Order
Bk.	12899,	Pg. 135	Brunswick Sewer District to Town of Brunswick

NOTES

1. Locus is shown as lots 7 & 7B on Town of Brunswick Tax Map 40.
2. See lease agreement between Brunswick Sewer District and Herman Boudreau dated July 1, 1996, on file with the Brunswick Sewer District.
3. See lease agreement between Brunswick Sewer District and Town of Brunswick dated June 9, 1975, on file with the Brunswick Sewer District.
4. See Plan titled "Plan of Improvements for Brunswick Sewer District, Pine Tree Road, Brunswick, Maine," by Robert M. Spivey, dated June 14, 2000 for detail of improvements.
5. Total area of Brunswick Sewer District lot = 29.9 acres±.



CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD	CHORD BRG
C1	200.0'	202.5'	194.0'	N61°58'E
C2	20.0'	28.1'	25.8'	S07°14'E
C3	20.0'	28.1'	25.8'	S87°39'E
C4	250.0'	222.7'	215.4'	S77°40'W

LINE TABLE

LINE	BEARING	LENGTH
L1	S39°01'E	22.0'
L2	S50°59'W	92.6'
L3	S39°01'E	28.0'
L4	S50°59'W	8.9'
L5	S47°26'E	8.8'
L6	S42°34'W	50.0'
L7	N47°26'W	8.8'
L8	N50°59'E	69.0'

LEGEND

- PROPERTY LINE OF LOT SURVEYED
- FORMER LOT LINE
- EDGE OF TRAVELED WAY
- WIRE FENCE
- STOCKADE FENCE
- CHAIN LINK FENCE
- RIGHT-OF-WAY LINE
- OVERHEAD UTILITIES
- EDGE OF WOODS
- TIE LINE
- LEASE LINE
- MONUMENT FOUND
- UTILITY POLE
- SEWER MANHOLE
- CATCH BASIN
- SOFTWOOD
- 3" DIA. ALUMINUM MONUMENT SET 1996
- 5/8" IRON REBAR SET 1996
- 5/8" IRON REBAR SET 2000
- I.P. IRON PIPE
- I.R. IRON ROD
- N/F NOW OR FORMERLY OF
- CCRD CUMBERLAND COUNTY REGISTRY OF DEEDS
- 4413-40 DEED BOOK AND PAGE IN CCRD
- A/G - B/G ABOVE GRADE - BELOW GRADE
- #5 5/8" REBAR

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

I certify to Brunswick Sewer District exclusively, that to the best of my knowledge this plan conforms to the standards of a Category 1, Condition III survey as defined by the Maine State Board of Licensure for Professional Land Surveyors with the following exceptions:

1. Distances less than 35' are ±0.05'.
2. No new deed description prepared.
3. No separate report prepared.

NOT AN AUTHORIZED COPY WITHOUT EMBOSSED SEAL AND ORIGINAL SIGNATURE OF ROBERT M. SPIVEY HERE

STATE OF MAINE, CUMBERLAND, SS
REGISTRY OF DEEDS
Received _____, 20__
at ___h ___m ___M and recorded in
Plan Book _____, Page _____
Attest: _____
Register

STANDARD BOUNDARY SURVEY
FOR
BRUNSWICK SEWER DISTRICT
PINE TREE ROAD
BRUNSWICK, MAINE

Owner of record: Brunswick Sewer District 10 Pine Tree Road Brunswick, Maine 04011	Prepared by: ROBERT M. SPIVEY, P.L.S. 1338 P. O. Box 901 Brunswick, ME 04011 207-721-0511
Project: 796 File: B796-EXT Scale: 1" = 100'	Date of Survey: June 2000 Date of Plan: June 14, 2000

WRIGHT-PIERCE
Engineering a Better Environment

BID SET No. _____

BRUNSWICK SEWER DISTRICT

CONTRACT DRAWINGS FOR

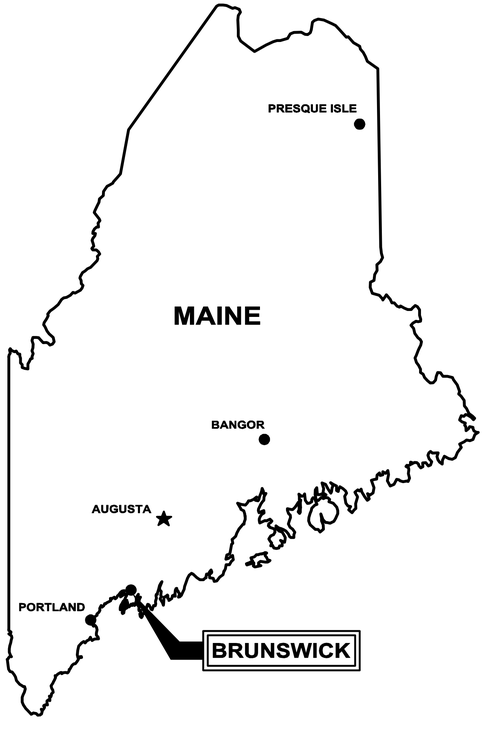
WASTEWATER TREATMENT PLANT GARAGE COMPLEX

FEBRUARY 2015

PLANNING BOARD SUBMITTAL

ZONING-BASED LOT DIMENSIONAL REQUIREMENTS [1]
PROPOSED USE: WASTEWATER TREATMENT FACILITY GARAGE COMPLEX

ZONING DISTRICT	PROPOSED USE	MIN. LOT SIZE REQUIRED / LOT SIZE PROVIDED	MIN. LOT WIDTH REQUIRED / LOT WIDTH PROVIDED	MIN. FRONT YARD REQUIRED / FRONT YARD PROVIDED	MIN. REAR YARD REQUIRED / REAR YARD PROVIDED	MIN. SIDE YARD REQUIRED / SIDE YARD PROVIDED	MAX. IMPERV. SURFACE COVERAGE PERMITTED / IMPERV. SURFACE COVERAGE PROPOSED	MAX. BUILDING HEIGHT PERMITTED / BUILDING HEIGHT PERMITTED PROPOSED	MAX. BUILDING FOOTPRINT PER STRUCTURE / FOOTPRINT PERMITTED PROPOSED
IN TOWN RESIDENTIAL (TR)	N/C	10,000 36.27 AC ±	65 FT NO CHANGE	20 FT NO CHANGE	20 FT NO CHANGE	15 FT 92 FT	35% 19%	35 FT 34.5 FT	5000 FT 4950 FT



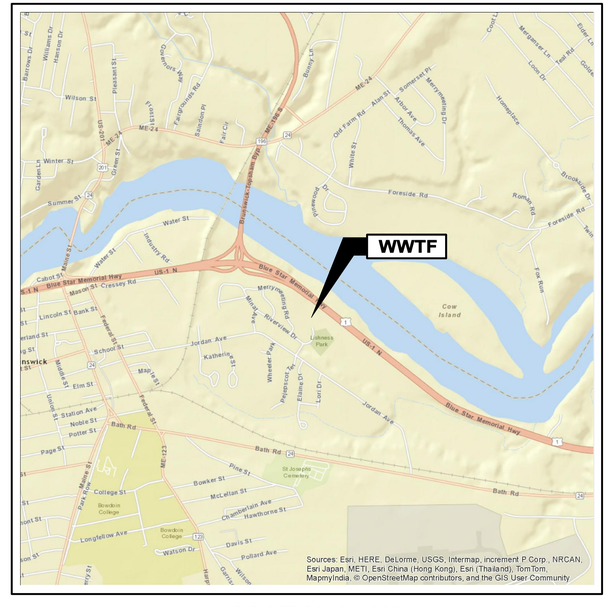
DRAWING INDEX

APPROVED BY
TOWN OF BRUNSWICK PLANNING BOARD
SUBJECT TO THE
CONDITIONS OF APPROVAL
SET FORTH BELOW

CHAIRPERSON _____ DATE _____

TOWN OF BRUNSWICK PLANNING BOARD CONDITIONS OF APPROVAL:

1. ***



LOCATION PLAN
SCALE: 1"=2000'

STATE OF MAINE
JEFFREY D. PREBLE
NO. 9581
LICENSED
PROFESSIONAL ENGINEER
7-19-15

WRIGHT-PIERCE
Engineering a Better Environment
Offices Throughout New England
888.621.8156 | www.wright-pierce.com

FOR PERMITTING PURPOSES ONLY

FOR REVIEW _____

FOR BIDDING _____

WP PROJECT No. 12493D

GENERAL NOTES

1. THE CONTRACTOR IS REFERRED TO SECTION 01050 OF THE SPECIFICATIONS REGARDING COORDINATION WITH OTHERS, INCLUDING RESPONSIBILITIES AND RELATED COSTS.

2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

ELECTRIC:	STORM DRAINS:	WATER:
CENTRAL MAINE POWER 83 EDISON DRIVE AUGUSTA, MAINE 04336 TEL. (207) 626-9443	BRUNSWICK PUBLIC WORKS 9 INDUSTRY RD BRUNSWICK, MAINE 04011 TEL. (207) 725-6657	BRUNSWICK-TOPSHAM WATER DISTRICT P.O. BOX 489 TOPSHAM, ME 04086 TEL. 207-725-6470
TELEPHONE:	**CABLE TELEVISION:**	**NATURAL GAS:**
FAIRPOINT COMMUNICATIONS 139 STATE STREET AUGUSTA, ME 04330 TEL. (207) 626.2007	COMCAST 336 BATH ROAD BRUNSWICK, ME 04011 TEL. (207) 729-2623	MAINE NATURAL GAS P.O. BOX 99 BRUNSWICK, ME 04011 TEL. (207) 729-0420

DIG SAFE:

TEL. 1-800-225-4977

3. ALL EXISTING SEWER AND STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING SEWERS, STORM DRAIN LINES OR CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW SEWER OR WHEN NOT SHOWN OR INDICATED.

4. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.

5. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48_HOUR NOTIFICATION TO CENTRAL MAINE POWER OR FAIRPOINT, RESPECTIVELY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES

6. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH MDOT REQUIREMENTS.

7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO COMMENCING CONSTRUCTION. THE BRUNSWICK POLICE DEPARTMENT (725-5521) AND BRUNSWICK FIRE DEPARTMENT (725-5541) ARE TO BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. REFER TO SPEC. SECTION 01570.

8. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

9. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS_OF_WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE SINCLAIR SANITARY DISTRICT.

10. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE TO THE PLANS. TEST PITS ARE REQUIRED WHERE SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG PRIOR TO CONNECTING PROPOSED SEWERS TO EXISTING SEWERS. THE RESULTS OF TEST PITS DUG TO DETERMINE EXISTING SEWER ELEVATIONS AND LOCATIONS WILL BE REPORTED TO THE ENGINEER. ADJUSTMENTS TO INVERTS, LENGTHS, AND SLOPES OF PROPOSED SEWER MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED LINES AND STRUCTURES AS SHOWN ON THE DRAWINGS. THE LAYOUT PLAN SHALL BE REVIEWED BY THE ENGINEER PRIOR TO CONSTRUCTION. THE HORIZONTAL ALIGNMENT OF THE NEW SEWERS AND FORCE MAINS MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR APPROVAL BY THE ENGINEER.

12. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS_OF_WAY AND PROPERTY LINES ON STATE OR COUNTY_OWNED PROPERTY OR EASEMENTS. ALL GRUBBINGS AND EXCESS EXCAVATED MATERIAL ARE THE PROPERTY OF THE CONTRACTOR AND WILL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.

13. COMPACTION TESTS SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION OF THE PROJECT WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

14. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF THE WORKDAY. OPEN TRENCHES OUTSIDE OF THE WAY MAY BE LEFT OPEN IF THE CONTRACTOR PROVIDES ADEQUATELY SAFE BARRICADING AND LIGHTS.

15. CONTRACTOR SHALL CONTROL DUST TO A TOLERABLE LIMIT AS OUTLINED IN SPECIFICATION SECTION 01562. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH AND DEBRIS ON PUBLIC STREETS OUTSIDE THE PROJECT AREA. STREETS OPENED TO THE PUBLIC SHALL BE KEPT SWEPT AND FREE OF DEBRIS.

22. ALL MANHOLES ARE 4 FOOT DIAMETER, ECCENTRIC CONE TOP, UNLESS OTHERWISE NOTED. THE INVERTS SHOWN ARE AT THE INSIDE FACE OF THE MANHOLE.

23. INSULATE OVER ANY GRAVITY SEWER OR FORCE MAIN PIPE WHEN COVER IS LESS THAN 5.0 FT, OR THERE IS LESS THAN 2 FT BETWEEN THE SEWER OR FORCE MAIN AND A CULVERT.

24. ALL ROAD AND PARKING AREA SURFACES SHALL PITCH 1/4 INCH PER FOOT MINIMUM UNLESS OTHERWISE NOTED. ALL VEGETATED AREAS ABOVE MEAN HIGH WATER ELEVATION THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH RIPRAP SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED AT NO ADDITIONAL EXPENSE TO THE OWNER.

25. INITIAL PAVING SHALL BE CONDUCTED WITHIN TWO WEEKS OF COMPLETION OF PLACEMENT OF FINAL BACKFILL UNLESS OTHERWISE AUTHORIZED BY ENGINEER. INITIAL PAVEMENT SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR FOR A MINIMUM PERIOD OF 2 MONTHS BEFORE FINAL PAVEMENT IS PLACED. FINAL PAVEMENT MAY BE PLACED OVER THE INITIAL PAVING PROVIDED INITIAL PAVING COURSE IS IN GOOD REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND SHIMMING THE INITIAL PAVEMENT AS NECESSARY TO ACCEPT THE FINAL PAVING COURSE. IF CONDITIONS WARRANT, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE INITIAL PAVING PRIOR TO FINAL PAVING.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING ALL EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED BY HIS OPERATIONS AT NO EXPENSE TO THE OWNER. THIS WORK IS TO BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MAINE.

27. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

28. SEE APPENDIX A OF THE SPECIFICATIONS FOR BORING LOGS. THESE ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

29. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.

CIVIL DEMOLITION NOTES

1. REFER TO THE EXISTING SITE PLAN, DRAWING C-3, FOR ADDITIONAL INFORMATION REGARDING EXISTING FACILITIES. REFER TO DRAWING C-5 FOR LIMITS OF WORK.

2. DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES, BUT IS TO REMAIN, SHALL BE REINSTALLED/REPLACED AS NEEDED. EXISTING PIPES AND CONDUIT DESIGNATED AS "ABANDONED" MAY BE REMOVED IF THE CONTRACTOR SO CHOOSES. IF ABANDONED PIPE CONFLICTS WITH NEW SITE PIPING OR FACILITIES, THEN A PORTION OF THE ABANDONED PIPE SHALL BE REMOVED AND THE NEW ENDS OF ABANDONED PIPE CAPPED, OR PLUGGED WITH CONCRETE.

3. ALL EXISTING PIPING AND UTILITIES WHICH ARE BENEATH PROPOSED STRUCTURES, AND ARE TO BE ABANDONED, SHALL BE REMOVED TO A MINIMUM OF 5 FEET OUTSIDE OF THE STRUCTURE. PIPE AND UTILITIES BENEATH PROPOSED STRUCTURES THAT ARE TO REMAIN SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE INDICATED.

4. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION FOR HIS USE. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER.

6. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND HIS DEWATERING OPERATIONS.

SITE GRADING NOTES

1. STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115. REFER TO DRAWING C-4, FOR LIMIT OF WORK AND STRIPPING.

2. ALL AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4 INCHES OF SOIL SHALL BE LOAM. REFER TO SPECIFICATION SECTION 02485, LOAMING AND SEEDING.

3. THE CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.

4. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY HAY BALE FILTERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM.

5. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM. ORIENTATION IS GRID NORTH MAINE STATE PLANE COORDINATE SYSTEM. PROJECT BENCH MARK WILL BE PROVIDED BY THE ENGINEER.

6. ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.

7. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS AND EXCESS EXCAVATED MATERIAL FROM WITHIN THE CONSTRUCTION LIMIT OF WORK, TO A SUITABLE SITE PROVIDED BY THE CONTRACTOR, IN COMPLIANCE WITH ALL STATE AND LOCAL REGULATIONS. ANY EXCESS SUITABLE MATERIAL MAY REMAIN ON SITE AT THE REQUEST OF THE OWNER.

8. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY HIS CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.

9. ALL VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.

SITE LAYOUT NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS. THE ENGINEER WILL PROVIDE TWO POINTS THAT DEFINE THE HORIZONTAL CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

2. IN GENERAL, THE GIVEN STRUCTURE LOCATIONS ARE TO THE OUTSIDE FACE OF THE STRUCTURE FOUNDATION WALL, NOT FOOTINGS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING AND STRUCTURE DIMENSIONS. RADII SHOWN FOR ROADS ARE TO EDGE OF PAVEMENT.

3. THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND ENGINEER. THE CONTRACTOR SHALL LIMIT HIS ACTIVITIES TO THESE AREAS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY HIS OPERATIONS. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MAINE, AT NO ADDITIONAL COST TO THE OWNER.

5. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

6. BOLLARD LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE BOLLARD LOCATION WITH THE ENGINEER. SEE DETAIL ON DRAWING C-8.

7. PARKING SPACES SHALL BE 9' WIDE x 18' LONG (TYPICAL) FOR REGULAR SPACES, AND 12' WIDE x 18' LONG (TYPICAL) FOR HANDICAP SPACES, UNLESS SHOWN OTHERWISE.

SITE PIPING NOTES

1. ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN PIPING WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN PRESSURIZED LINES SHALL BE SUITABLY RESTRAINED WITH THRUST BLOCKS OR RETAINER GLANDS (RETAINER GLANDS ALLOWED FOR DUCTILE IRON PIPE ONLY). SEE DRAWING C-9 FOR THRUST BLOCK DETAILS. PROVIDE ALL BENDS (HORIZONTAL AND VERTICAL) AS REQUIRED TO MEET THE GRADES AND ALIGNMENT INDICATED ON THE DRAWINGS.

2. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING PIPING AND UTILITIES IN THE FIELD BY TEST PIT EXCAVATION PRIOR TO COMMENCING INSTALLATION OF ANY OF THE NEW PIPING AFFECTED. WHERE NEW PIPE CONNECTS TO EXISTING PIPING OR STRUCTURAL PENETRATION, CONTRACTOR SHALL VERIFY ELEVATION BY TEST PIT, AS REQUIRED, PRIOR TO INSTALLATION OF ANY OF THE ASSOCIATED/AFFECTED NEW PIPING. IDENTIFIED CONFLICTS WITH EXISTING PIPING AND UTILITIES WILL BE REVIEWED WITH THE ENGINEER PRIOR TO COMMENCING INSTALLATION. THE HORIZONTAL ALIGNMENT OF NEW PIPING MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR REVIEW AND ACCEPTANCE OF THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

3. ALL BURIED CONNECTIONS TO STRUCTURES, SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4 FEET FROM THE STRUCTURES. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED (SOLID SLEEVE). REFER TO SPECIFICATION SECTION 15088.

4. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.

5. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE DEMOLITION PLAN, DRAWING C-3.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH SPECIFICATION SECTION 02050.

7. WHERE POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER OR SLUDGE LINES. A MINIMUM SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER OR SLUDGE LINE SHALL BE MAINTAINED, IF POSSIBLE. WHERE A WATER LINE CROSSES UNDER A WASTEWATER OR SLUDGE LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.

8. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO ANY TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE OWNER.

9. ELECTRICAL CONDUIT RUNS ARE INDICATED ON THE ELECTRICAL DRAWINGS.

10. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE BASED ON PREVIOUS CONSTRUCTION DESIGN PLANS, WHICH ARE AVAILABLE FOR INSPECTION AT THE ENGINEER'S OFFICE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.

11. CONTRACTOR TO NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.

ABBREVIATIONS

A	AIR
ABE	AERATION BASIN EFFLUENT
CB	CATCH BASIN
CI	CAST IRON PIPE
CLS	CHLORINE SOLUTION
CW	CITY WATER
DEC	SODIUM BISULFITE SOLUTION
DEW	DEWATERING
DI	DUCTILE IRON PIPE
DR	DRAIN
EHH	ELECTRICAL HAND HOLE
FE	FINAL EFFLUENT
FM	FORCE MAIN
GS	GALVANIZED STEEL PIPE
H	HEAT
HYD	HYDRANT
INF	INFLUENT SEWER
INV	INVERT ELEVATION
OHE	OVERHEAD ELECTRICAL
OUT	OUTFALL
P.C.	POINT OF CURVATURE
PE	POLYETHYLENE PIPE
PRW	PROCESS WATER
PTE	PRELIMINARY TREATMENT EFFLUENT
PVC	POLYVINYL CHLORIDE PIPE
PW	PLANT WATER
RCP	REINFORCED CONCRETE PIPE
S	SEWER
SAM	SAMPLER LINE CONDUIT
SC	SCUM
SCE	SECONDARY CLARIFIER EFFLUENT
SD	STORM DRAIN
SEP	SEPTAGE
SL	SLUDGE
SMH	SEWER MANHOLE
SS	STAINLESS STEEL PIPE
SUP	SUPERNATANT
UD	UNDERDRAIN
UDC	UNDERDRAIN COLLECTOR
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
W	WATER
XFMR	TRANSFORMER

FOR PERMITTING PURPOSES ONLY

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
122	CONTOUR	123
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	STOCKADE FENCE	
	BARB WIRE FENCE	
	RETAINING WALL	
	GUARDRAIL	
8" S	SEWER	8"S
4" FM	SEWER FORCE MAIN	4"FM
4" G	GAS	4"G
4" W	WATER	8"W
15" SD	STORM DRAIN	15"SD
6" UD	UNDERDRAIN	6"UD
12" CMP	CULVERT	12" CMP
UGE	UNDERGROUND ELECTRIC	UGE
	OVERHEAD ELECTRIC	OHE
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
124.6	SPOT ELEVATION	134.5
SMH	SEWER MANHOLE	SMH
DMH	DRAINAGE MANHOLE	DMH
CB CB	CATCH BASIN	CB CB
EMH	ELECTRIC MANHOLE	EMH
TMH	TELEPHONE MANHOLE	TMH
	GATE VALVE	
	CURB STOP	
	YARD HYDRANT	
	HYDRANT	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	EDGE OF WATER	
	STREAM	
	EDGE OF WETLANDS	
	WETLANDS	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
MB	MAILBOX	
	TEMPORARY BENCH MARK	
TP-2	TEST PIT	
B-3	TEST BORING	
P-4	TEST PROBE	
MW	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	
	ROCK OUTCROP	
	SOIL TYPE LINE	

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	PLANNING BOARD REVIEW	JDP	2-15
2			
3			
4			
5			

DESIGNED BY: JDP
CAD COORD: BAJ
CAD: JJM
CHECKED BY: NPC
DATE: 2-6-15
APPROVED BY: JDP
DATE: 2-6-15
PROJECT NO: 12493D

STATE OF MAINE — JEFFREY D. PIERCE — REGISTERED PROFESSIONAL ENGINEER

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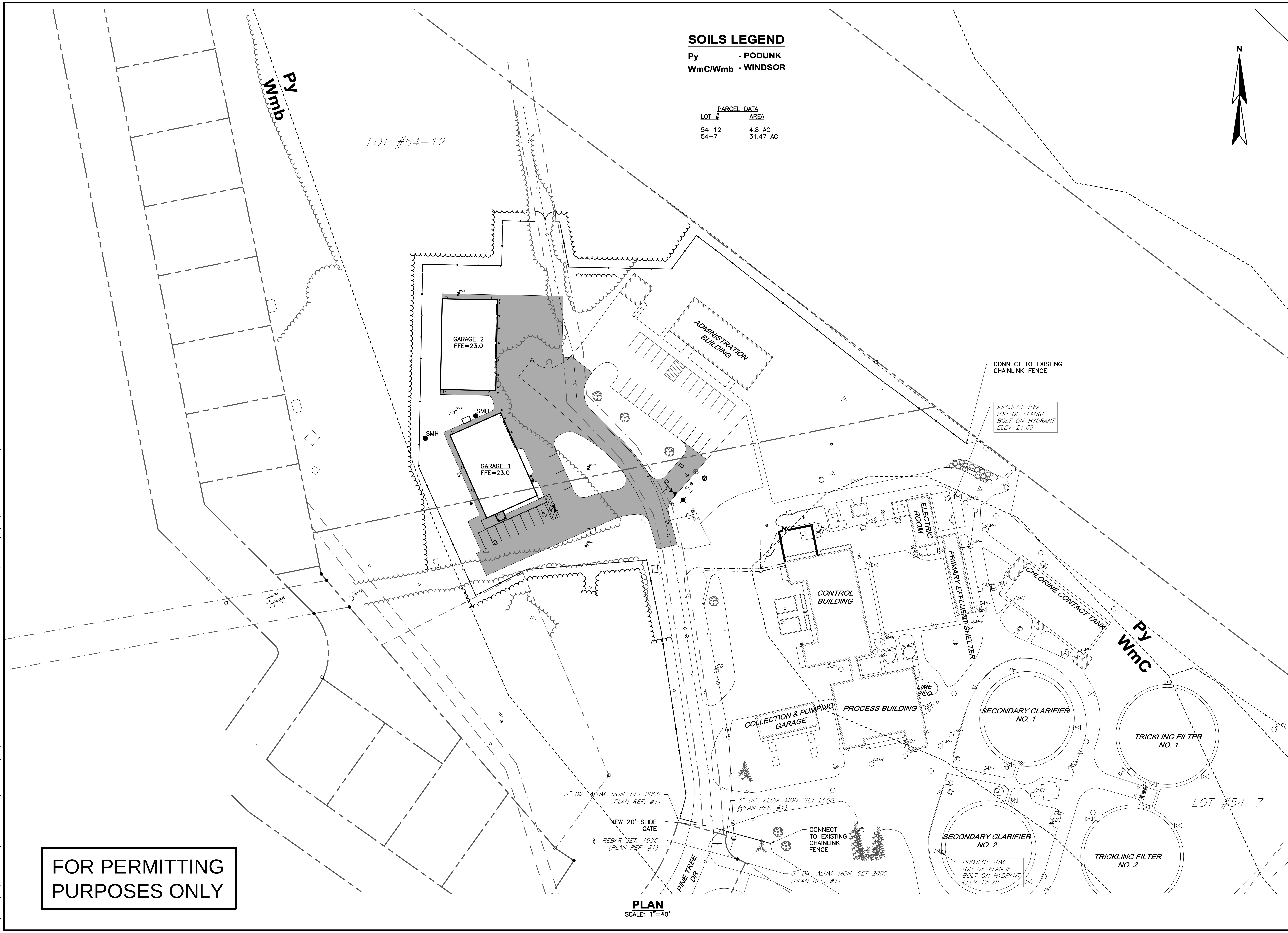
BRUNSWICK, MAINE
BRUNSWICK SEWER DISTRICT
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

DRAWING
C-1



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PLAN
SCALE: 1"=40'

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BRUNSWICK, MAINE
BRUNSWICK SEWER DISTRICT
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

OVERALL SITE PLAN

DRAWING
C-2

N/F
VINCENT D. ROSETTE, JR.
& STEPHANIE L. GRANT
BOOK 14243 PAGE 349

N/F
GEORGE M., JR. & LINDA A. YANOK
BOOK 4283 PAGE 105

N/F
SCOTT D. & MARYAN J. HIGGINS
BOOK 12135 PAGE 103

N/F
MICHAEL A. & SUSAN P. MICHAUD
BOOK 6507 PAGE 147

N/F
DAVID R. & LINDA W. PAIEMENT
BOOK 4413 PAGE 40

SHED
(PLAN REF. #1)

SHED
(PLAN REF. #1)

SHED
(PLAN REF. #1)

SHED
(PLAN REF. #1)

CLEARING LIMITS, TYP

20' GAS EASEMENT
(PLAN REF. #2)

6" GAS MAIN
(PLAN REF. #2)

GARAGE

ADMINISTRATION BUILDING
SILL=23.93'

TP-1

TP-2

TP-3

TP-4

TBM
N: 394918.8331
E: 3010335.8937

TBM
N: 394866.8669
E: 3010256.8088

TBM
N: 394730.2609
E: 3010290.2911

TBM
N: 394663.4325
E: 3010336.6139

PAVEMENT
REMOVAL LIMITS

PROJECT TBM
TOP OF FLANGE BOLT
WITH BLACK "X"
ELEV=24.36'

REMOVE EXISTING
PAVEMENT
MARKINGS

EXISTING HYDRANT TO BE
RELOCATED – SEE UTILITY
PLAN, DWG C-6

SMH
RIM EL.=20.52'

REMOVE EXISTING
CHAINLINK FENCE –
SEE DWG C-2 FOR
CONTINUATION

CHAIN LINK FENCE

REMOVE AND RELOCATE
EXISTING TREE

CB
RIM EL.=19.20
INV IN(4" CLAY-SE)=11.47
INV IN(18" RCP-SW)=11.68
INV OUT(18" RCP-NE)=11.55

CUT AND CAP ABANDONED
SEWER OVERFLOW AS
REQUIRED FOR PROPOSED
STORM DRAIN

CORE DRILL EXISTING
STRUCTURE TO ACCEPT
NEW 8" SEWER

PIPE HAS BEEN
PLUGGED AND GROUTED

APPROXIMATE LOCATION EXISTING WATER
MAIN (PER B/A WATER DISTRICT GIS)

ABANDONED OVERFLOW

8" AC

6"

OVERFLOW

30" RCP, SAN

SMH
30" INV=14.80

SMH (PLAN REF. #3)
RIM EL.=25.81
INV IN(30" RCP-W)=16.80
INV IN(12" CLAY-SW)=17.05
INV OUT(24" RCP-E)=19.90
INV OUT(27" RCP-E)=15.90

SMH
RIM EL.=18.41
INV IN(12" CLAY-W)=16.80
INV OUT(12" CLAY-NE)=16.74

DMH
RIM EL.=27.19
INV IN(18" RCP-W)=20.87
INV OUT(18" RCP-E)=20.64

5/8" REBAR SET, 2000
(PLAN REF. #1)

5/8" REBAR SET, 2000
(PLAN REF. #1)

5/8" REBAR SET, 2000
(PLAN REF. #1)

" I.P., 3" B.G.
LAN REF. #1)

1" I.R., 19" A.G.
(PLAN REF. #1)

30' SEWER EASEMENT

DMH
RIM EL.=22.01
INV IN(18" RCP-W)=19.01
INV OUT(18" RCP-E)=19.01

15.09'

CLEAR PATH FOR
NEW STORM
DRAIN
CONNECTION

DMH
RIM EL.=21.13
INV IN(24" RCP-W)=11.13
INV IN(30" RCP-S)=13.45
INV OUT(24" RCP-E)=11.02

DMH
RIM EL.=19.25
INV IN(18" RCP-W)=12.93
INV OUT(18" RCP-E)=12.83

SMH
RIM EL.=20.82
INV IN(27" RCP-W)=15.22
INV IN(30" RCP-S)=15.22
INV OUT(30" RCP-N)=15.12

CB
RIM EL.=18.52
INV IN(18" RCP-W)=12.03
INV IN(18" RCP-S)=12.13
INV OUT(18" RCP-NE)=11.92

CHAIN LINK FENCE

LEASED AREA
(PLAN REF. #1)

SEPTIC
WASTE
TRUCKING
AREA

CONCRETE
PAD

PAVED
PARKING

LANDSCAPED

CONC.

LANDSCAPED

CONC.
CURB

CONC.
CURB

CONC.

FFE=20.32'

FFE=23.23

FFE=20.2

PLAN
SCALE: 1"=20'

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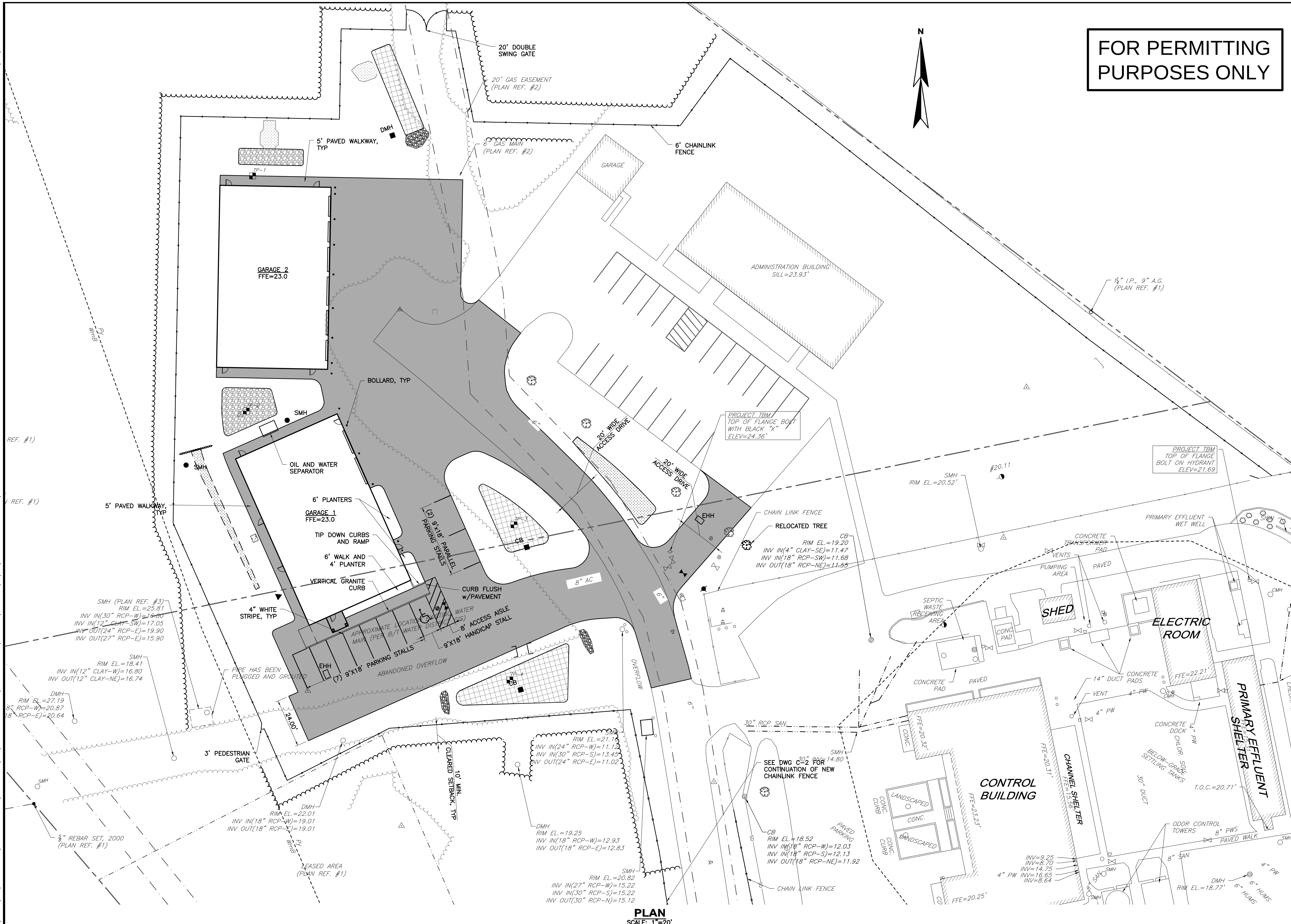
BRUNSWICK, MAINE
BRUNSWICK SEWER DISTRICT
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

EXISTING SITE AND CLEARING PLAN

DRAWING
C-3



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N
20' DOUBLE SWING GATE
20' GAS EASEMENT (PLAN REF. #2)
6' GAS MAIN (PLAN REF. #2)
6' CHAINLINK FENCE
DMH
5' PAVED WALKWAY, TYP
GARAGE
ADMINISTRATION BUILDING SILL=23.93'
GARAGE 2 FFE=23.0
BOLLARD, TYP
SMH
OIL AND WATER SEPARATOR
6' PLANTERS
GARAGE 1 FFE=23.0
TIP DOWN CURBS AND RAMP
6' WALK AND 4' PLANTER
VERTICAL GRANITE CURB
CURB FLUSH w/PAVEMENT
4" WHITE STRIPE, TYP
(2) 9'x18' PARALLEL PARKING STALLS
8' ACCESS AISLE
9'X18' HANDICAP STALL
(7) 9'X18' PARKING STALLS
ABANDONED OVERFLOW
20' WIDE ACCESS DRIVE
20' WIDE ACCESS DRIVE
8" AC
6"
EHH
PROJECT TBM TOP OF FLANGE BOLT WITH BLACK "X" ELEV=24.36'
CHAIN LINK FENCE
RELOCATED TREE
CB RIM EL.=19.20 INV IN(4" CLAY-SE)=11.47 INV IN(18" RCP-SW)=11.68 INV OUT(18" RCP-NE)=11.55
SMH RIM EL.=20.52'
PROJECT TBM TOP OF FLANGE BOLT ON HYDRANT ELEV=21.69
1½" I.P., 9" A.G. (PLAN REF. #1)
PRIMARY EFFLUENT WET WELL
CONCRETE TRANSFORMER PAD
VENTS
PUMPING AREA
PAVED
SEPTIC WASTE RECEIVING AREA
SHED
ELECTRIC ROOM
CONC PAD
CONCRETE PAD
14" DUCT PADS
CONCRETE PADS
VENT
4" PW
CONCRETE DOCK
BELOW-GRADE SETTLING TANKS
30" DUCT
T.O.C.=20.71'
PRIMARY EFFLUENT SHELTER
FFE=22.21'
CONTROL BUILDING
CHANNEL SHELTER FFE=15.56
FFE=20.32'
FFE=20.51'
FFE=23.23'
FFE=20.25'
LANDSCAPED
CONC.
ODOR CONTROL TOWERS
8" PWS
PAVED WALK
8" SAN
DMH RIM EL.=18.77'
6" HUMS
SMH (PLAN REF. #3) RIM EL.=25.81 INV IN(30" RCP-W)=16.60 INV IN(12" CLAY-SW)=17.05 INV OUT(24" RCP-E)=19.90 INV OUT(27" RCP-E)=15.90
SMH RIM EL.=18.41 INV IN(12" CLAY-W)=16.80 INV OUT(12" CLAY-NE)=16.74
DMH RIM EL.=27.19 INV IN(18" RCP-W)=20.87 INV OUT(18" RCP-E)=20.64
PIPE HAS BEEN PLUGGED AND GROUTED
APPROXIMATE LOCATION OF WATER MAIN (PER B/T WATER DISTRICT)
24.00'
3' PEDESTRIAN GATE
10' MIN. CLEARED SETBACK, TYP
RIM EL.=21.16 INV IN(24" RCP-W)=11.12 INV IN(30" RCP-S)=13.43 INV OUT(24" RCP-E)=11.02
OVERFLOW
30" RCP SAN
SMH 30" INV=14.80
SEE DWG C-2 FOR CONTINUATION OF NEW CHAINLINK FENCE
CB RIM EL.=18.52 INV IN(18" RCP-W)=12.03 INV IN(18" RCP-S)=12.13 INV OUT(18" RCP-NE)=11.92
PAVED PARKING
CHAIN LINK FENCE
DMH RIM EL.=22.01 INV IN(18" RCP-W)=19.01 INV OUT(18" RCP-E)=19.01
DMH RIM EL.=19.25 INV IN(18" RCP-W)=12.93 INV OUT(18" RCP-E)=12.83
SMH RIM EL.=20.82 INV IN(27" RCP-W)=15.22 INV IN(30" RCP-S)=15.22 INV OUT(30" RCP-N)=15.12
⅝" REBAR SET, 2000 (PLAN REF. #1)
EASED AREA (PLAN REF. #1)
INV=9.25 INV=8.70 INV=14.75 INV=16.65 INV=8.64
4" PW
PLAN
SCALE: 1"=20'

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	PLANNING BOARD REVIEW	JDP	2-15

DESIGNED BY: JDP
CAD COORD.: BAJ
CAD: JJM
CHECKED BY: NPC
DATE: 2-6-15
APPROVED BY: JDP
DATE: 2-6-15
PROJECT NO. 12493D

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BRUNSWICK, MAINE
BRUNSWICK SEWER DISTRICT
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

SITE LAYOUT PLAN

DRAWING
C-4

LAST SAVED BY: JJM 2/12/2015 3:32 PM

G:\DWGS\ME\BRUNSWICK\12493-GARAGE\12493-FD\CIV\SITE LAYOUT.DWG | SITE LAYOUT | 1:4.56 | ---- | 2/19/2015 10:32:45 AM | JJM

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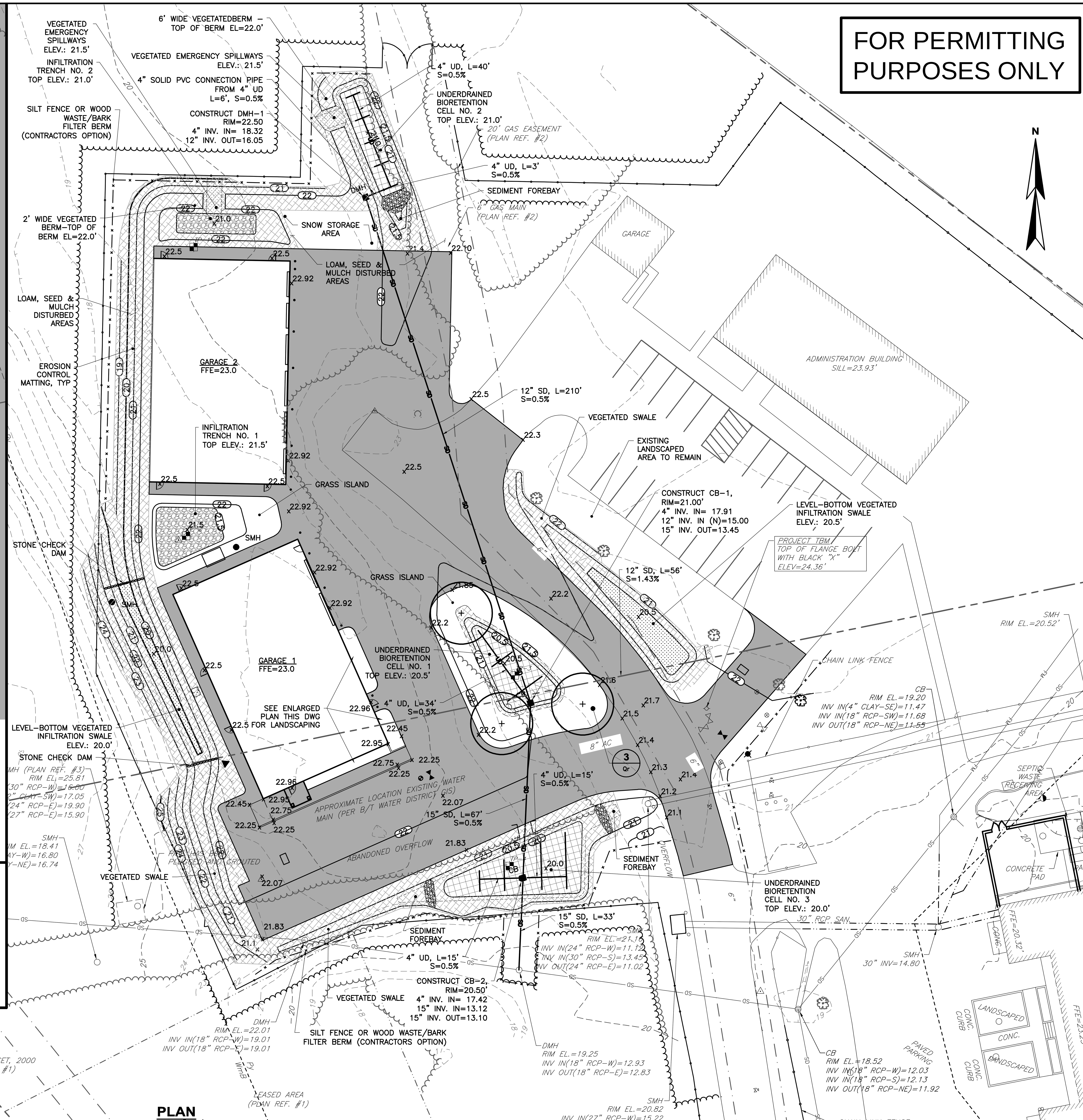
LANDSCAPING PLAN

SCALE: 1"=5'

Building South and West Façades					
Plant Schedule					
Symbol	Botanical Name	Common Name	Size	Qty.	Comments
	Shrubs				
Hp	Hydrangea paniculata 'Snow Mountain'	Snow Mountain Hydrangea	6'-8'	2	Clump, multi stemmed
Jh	Juniperous horizontalis 'Bar Harbor"	Bar Harbor Juniper	#3 container	6	growns to 6' width
	Groundcovers, Perennials, & Grasses				
An	Aster novae angliae 'Purple Dome'	Purple Dome New England Aster	#1 container	57	plant 18" o.c., staggered
Lt	Lilium tigrinum	Tiger Lily	#1 Container	24	plant 18" o.c. in massing, staggered
Hp	Hemerocallis 'Purple D'Oro'	Purple d'Oro Daylily	#1 container	40	plant 12" o.c. in massing, staggered
Hs	Hemerocallis Hybrid 'Stella d'Oro'	Stella d'Oro Daylily	#1 container	86	plant 12" o.c. in massing, staggered
Pv	Panicum virgatum 'Heavy Metal'	Heavy Metal Switchgrass	#1 container	18	plant 18" o.c. in massing, staggered
Qr	Quercus rubra	Red Oak	2"-2.5" cal.	3	

Vegetated Drainage Swale					
Plant Schedule					
Approximate size = 400 s.f.					
Symbol	Botanical Name	Common Name	Size	Qty.	Comments
	Shrubs				
Ca	Clethra alnifolia 'Hummingbird'	Hummingbird Summersweet	#3 container	5	compact cultivar, plant 3'-4' o.c., staggered
Mp	Myrica pensylvanica	Northern Bayberry	#3 container	7	plant 5' o.c. in center of swale, staggered
Rv	Rosa virginiana	Virginia Rose	#3 container	9	plant 5' o.c. in massing, plant at lower
					end of swale in center, staggered
	Groundcovers, Perennials, & Grasses				
An	Aster novae angliae 'Purple Dome'	Purple Dome New England Aster	#1 container	18	plant 18" o.c. in 3 massings, staggered



PLAN

SCALE: 1"=20'

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STATE OF MAINE — JEFFREY D. PREBLE — REGISTERED PROFESSIONAL ENGINEER

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BRUNSWICK, MAINE
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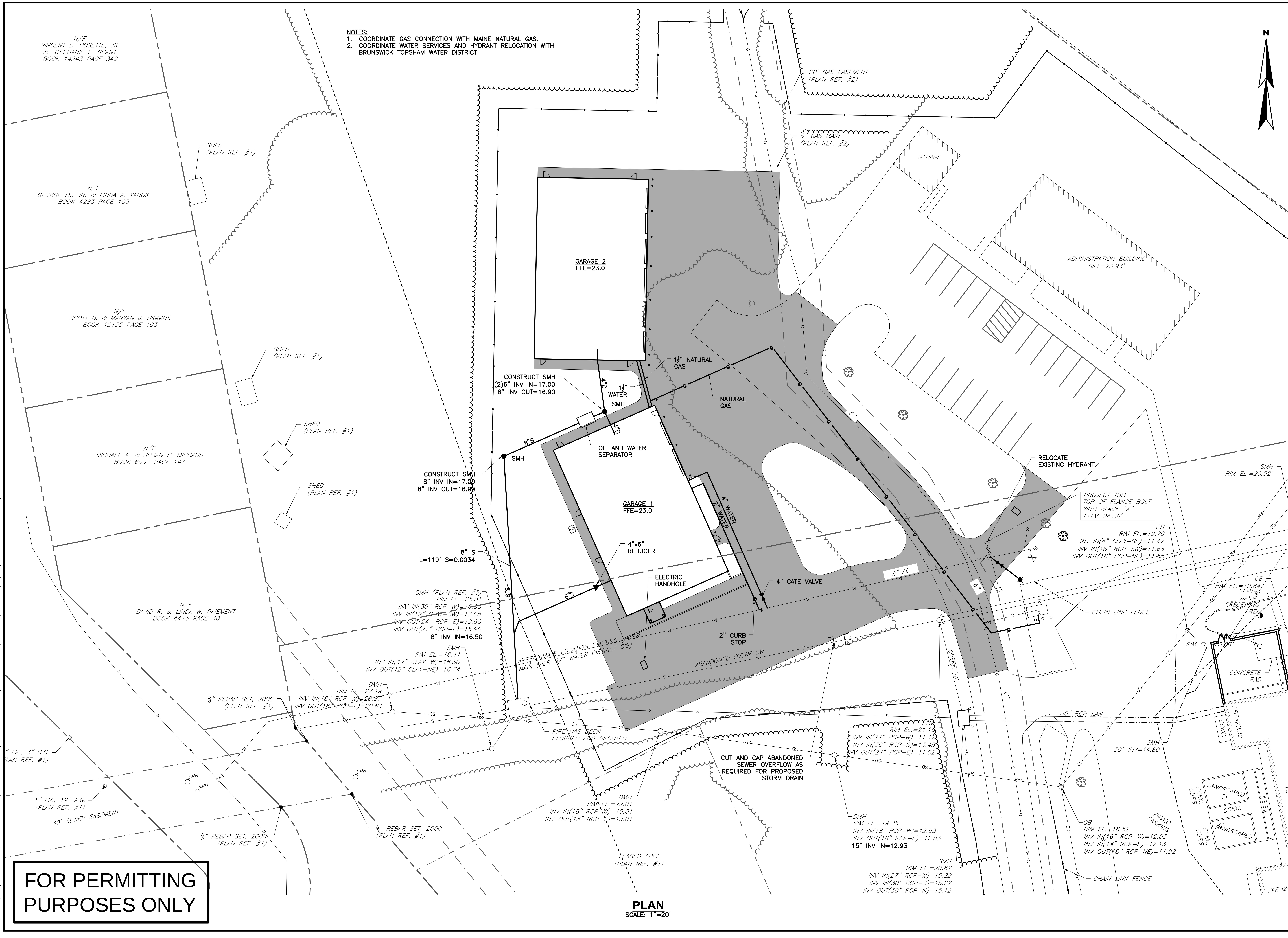
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

SITE GRADING, LANDSCAPING, AND EROSION CONTROL PLAN

DRAWING
C-5

LAST SAVED BY: JJM 2/5/2015 2:18 PM


NOTES:
1. COORDINATE GAS CONNECTION WITH MAINE NATURAL GAS.
2. COORDINATE WATER SERVICES AND HYDRANT RELOCATION WITH BRUNSWICK TOPSHAM WATER DISTRICT.
N
N/F VINCENT D. ROSETTE, JR. & STEPHANIE L. GRANT BOOK 14243 PAGE 349
N/F GEORGE M., JR. & LINDA A. YANOK BOOK 4283 PAGE 105
N/F SCOTT D. & MARYAN J. HIGGINS BOOK 12135 PAGE 103
N/F MICHAEL A. & SUSAN P. MICHAUD BOOK 6507 PAGE 147
N/F DAVID R. & LINDA W. PAIEMENT BOOK 4413 PAGE 40
SHED (PLAN REF. #1)
20' GAS EASEMENT (PLAN REF. #2)
6" GAS MAIN (PLAN REF. #2)
GARAGE
ADMINISTRATION BUILDING SILL=23.93'
GARAGE 2 FFE=23.0
GARAGE 1 FFE=23.0
CONSTRUCT SMH (2)6" INV IN=17.00 8" INV OUT=16.90
CONSTRUCT SMH 8" INV IN=17.00 8" INV OUT=16.90
SMH
OIL AND WATER SEPARATOR
1½" NATURAL GAS
1½" WATER
NATURAL GAS
4" WATER
2" WATER
4"x6" REDUCER
ELECTRIC HANDHOLE
4" GATE VALVE
2" CURB STOP
8" S L=119' S=0.0034
6"S
8"S
8" AC
RELOCATE EXISTING HYDRANT
PROJECT TBM TOP OF FLANGE BOLT WITH BLACK "X" ELEV=24.36'
SMH RIM EL.=20.52'
CB RIM EL.=19.20 INV IN(4" CLAY-SE)=11.47 INV IN(18" RCP-SW)=11.68 INV OUT(18" RCP-NE)=11.55
CB RIM EL.=19.84
SEPTIC WASTE RECEIVING AREA
CHAIN LINK FENCE
CONCRETE PAD
SMH (PLAN REF. #3) RIM EL.=25.81 INV IN(30" RCP-W)=16.00 INV IN(12" CLAY-SW)=17.05 INV OUT(24" RCP-E)=19.90 INV OUT(27" RCP-E)=15.90
8" INV IN=16.50
SMH RIM EL.=18.41 INV IN(12" CLAY-W)=16.80 INV OUT(12" CLAY-NE)=16.74
APPROXIMATE LOCATION EXISTING WATER MAIN (PER B/T WATER DISTRICT GIS)
ABANDONED OVERFLOW
OVERFLOW
DMH RIM EL.=27.19 INV IN(18" RCP-W)=20.87 INV OUT(18" RCP-E)=20.64
⅝" REBAR SET, 2000 (PLAN REF. #1)
PIPE HAS BEEN PLUGGED AND GROUTED
CUT AND CAP ABANDONED SEWER OVERFLOW AS REQUIRED FOR PROPOSED STORM DRAIN
SMH RIM EL.=21.16 INV IN(24" RCP-W)=11.12 INV IN(30" RCP-S)=13.45 INV OUT(24" RCP-E)=11.02
30" RCP SAN
SMH 30" INV=14.80
DMH RIM EL.=22.01 INV IN(18" RCP-W)=19.01 INV OUT(18" RCP-E)=19.01
DMH RIM EL.=19.25 INV IN(18" RCP-W)=12.93 INV IN(18" RCP-E)=12.83 15" INV IN=12.93
SMH RIM EL.=20.82 INV IN(27" RCP-W)=15.22 INV IN(30" RCP-S)=15.22 INV OUT(30" RCP-N)=15.12
CB RIM EL.=18.52 INV IN(18" RCP-W)=12.03 INV IN(18" RCP-S)=12.13 INV OUT(18" RCP-NE)=11.92
LEASED AREA (PLAN REF. #1)
1" I.P., 3" B.G. (PLAN REF. #1)
1" I.R., 19" A.G. (PLAN REF. #1)
30' SEWER EASEMENT
PAVED PARKING
LANDSCAPED
CONC.
CONC. CURB
FFE=20.32'
FFE=23.23
FOR PERMITTING PURPOSES ONLY

PLAN
SCALE: 1"=20'

G:\DWGS\ME\BRUNSWICK\12493-GARAGE\12493-FD\CIV\SITE UTILITY.DWG | SITE UTILITY | 1:4.56 | ---- | 2/19/2015 10:33:49 AM | JJM

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BRUNSWICK, MAINE
BRUNSWICK SEWER DISTRICT
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

SITE UTILITY PLAN

DRAWING
C-6

EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE "MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES", MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED MARCH 2003.

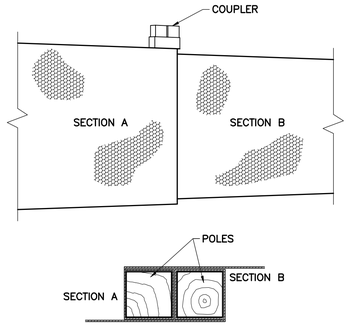
THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES", MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DATED MARCH 2003.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
3. SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPGRADIENT DRAINAGE AREAS.
4. INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS MUST BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2 TO 1) UNLESS STABILIZED WITH RIPRAP OR OTHER STRUCTURAL MEANS.
7. IF FINAL SEEDING AND SODDING IS NOT EXPECTED PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY ANNUAL RYEGRASS SEEDING AND MULCHING ON ROUGH GRADED SUBSOIL TO PROTECT THE SITE AND DELAY PERMANENT LOAMING, FINE GRADING, AND SEEDING OR SODDING UNTIL SPRING.
8. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
12. STABILIZATION SCHEDULE BEFORE WINTER:

SEPTEMBER 15	ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. SLOPES 3:1 OR GREATER TO BE STABILIZED WITH EROSION CONTROL MATTING AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND MULCHED.
OCTOBER 1	ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR EROSION CONTROL BLANKET.
NOVEMBER 15	ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.
DECEMBER 1	ALL DISTURBED AREAS WHERE THE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.

EROSION AND SEDIMENTATION CONTROL NOTES - WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED SUCH THAT THE AREA CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MUST BE STABILIZED WITH MULCH. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
7. THE APPLICATION OF MULCH TO FINE GRADED AREAS WILL BE STABILIZED AS FOLLOWS:
   A) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION, CHEMICAL TACK OR WOOD CELLULOSE FIBER.
   B) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GRATER THAN 8%.
   C) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
8. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
9. DURING WINTER CONSTRUCTION PERIODS ALL SNOW SHALL BE REMOVED FROM AREAS OF MULCHING PRIOR TO PLACEMENT.



JOINING SILT FENCE SECTIONS
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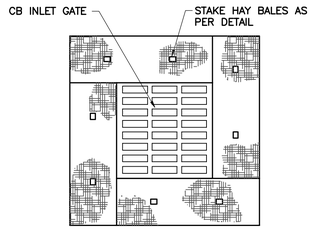
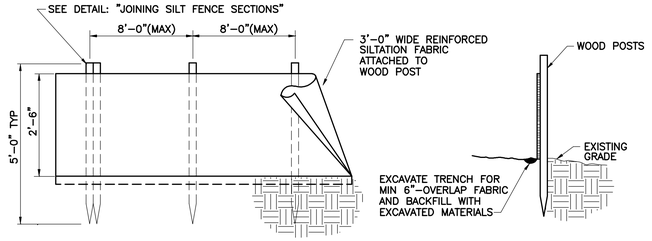


NOTE:
EMBED HAYBALES MINIMUM OF 4".

HAY BALE CB INLET PROTECTION
SCALE: "NTS"



SILT FENCE INSTALLATION DETAIL
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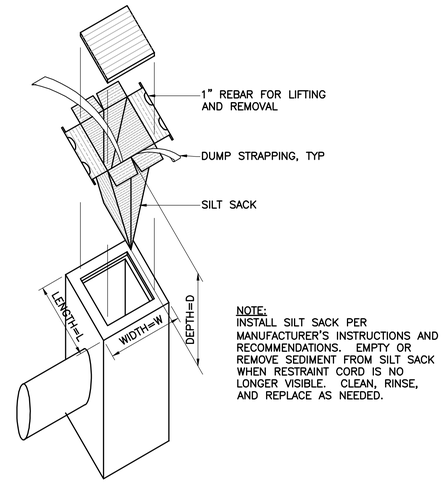
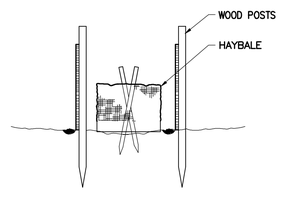
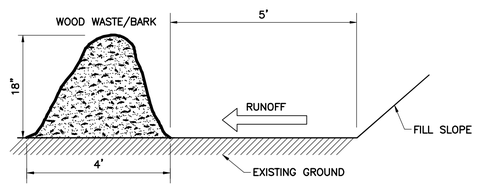


NOTE:
INSTALL SILT SACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. EMPTY OR REMOVE SEDIMENT FROM SILT SACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.

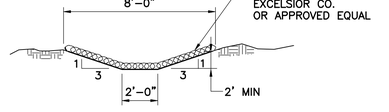
SILT SACK CATCH BASIN INLET
SCALE: NTS



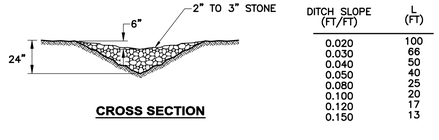
COMBINATION SILT FENCE AND HAY BALE BARRIER
SCALE: "NTS"



WOOD WASTE/BARK FILTER BERM
SCALE: "NTS"

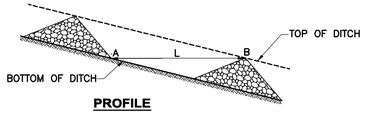


EROSION CONTROL MATTING - DITCHES
SCALE: "NTS"



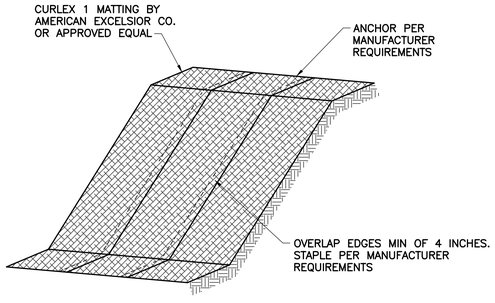
CROSS SECTION

DITCH SLOPE (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13



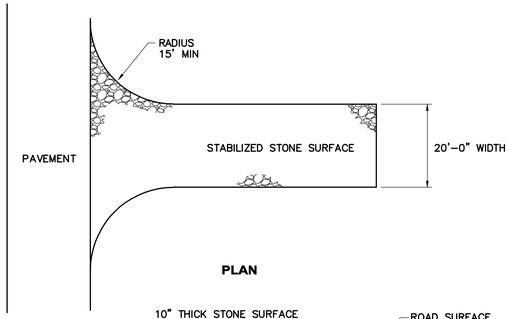
PROFILE

STONE CHECK DAM DETAIL
SCALE: "NTS"



INSTALL ON SLOPES 3:1 OR GREATER

EROSION CONTROL MATTING - SLOPES
SCALE: "NTS"



(TEMPORARY, TO BE REMOVED PRIOR TO FINAL SITE PAVING)

STABILIZED CONSTRUCTION ENTRANCE
SCALE: "NTS"

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STATE OF MAINE — JEFFREY D. PIERCE — 10033 — REGISTERED PROFESSIONAL ENGINEER

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BRUNSWICK, MAINE
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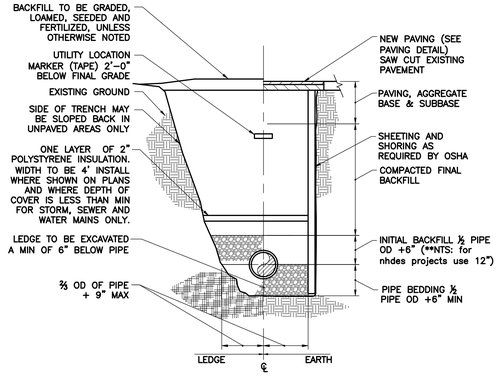
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

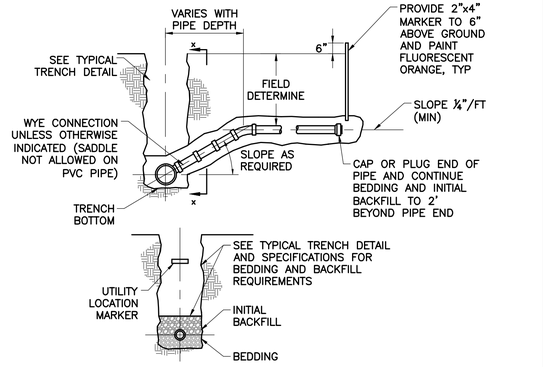
EROSION CONTROL NOTES AND DETAILS

DRAWING
C-7



NOTES:
1. ALL EXCAVATION MUST MEET OSHA STANDARDS.
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' AND WHERE SHOWN ON PLANS TO PREVENT TRENCH GROUNDWATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.
3. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS.

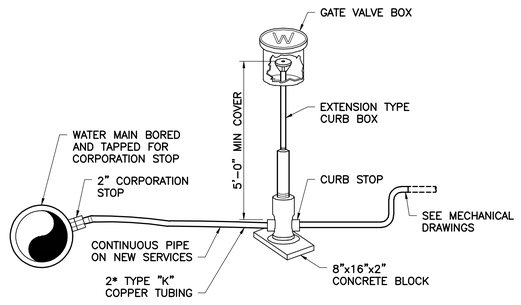
PIPE TRENCH
SCALE: "NTS"



SECTION X-X

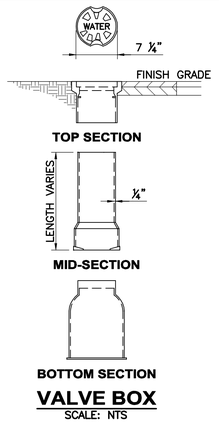
NOTES:
1. ALL SERVICE CONNECTIONS TO BE 6"ø UNLESS OTHERWISE SHOWN ON THE PLANS.
2. USE CHIMNEY DETAIL WHERE SERVICE CONNECTION ENTERS SEWER AT GREATER THAN 60° TO THE HORIZONTAL.
3. EXTEND SERVICE 4'(MIN) BEYOND LIMIT OF SIDEWALK.

SEWER SERVICE CONNECTION
SCALE: "NTS"



* ADJUST COVER PER FROST DEPTH FOR PROJECT AREA

WATER SERVICE CONNECTION
SCALE: NTS

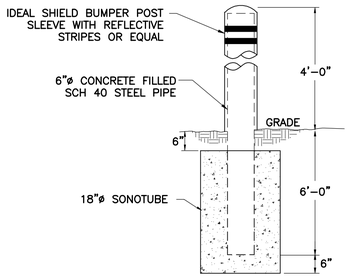


VALVE BOX
SCALE: NTS

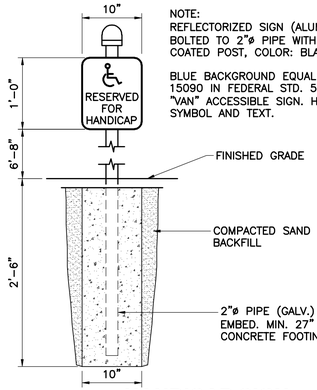
FOR PERMITTING PURPOSES ONLY

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	PLANNING BOARD REVIEW	JDP	2–15
2			
3			
4			

DESIGNED BY: JDP
CAD COORD.: BAJ
CAD: JJM
CHECKED BY: NPC
DATE: 2–6–15
APPROVED BY: JDP
DATE: 2–6–15
PROJECT NO: 12493D



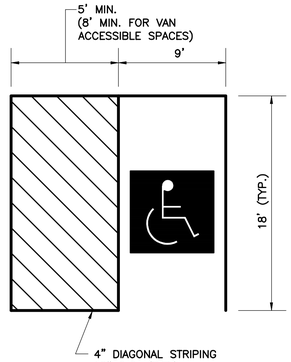
BOLLARD
SCALE: NTS



NOTE:
REFLECTORIZED SIGN (ALUMINUM SUBSTRATE BOLTED TO 2"ø PIPE WITH CAP. VINYL COATED POST, COLOR: BLACK

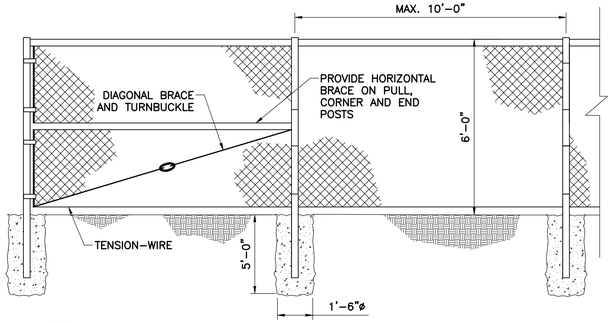
BLUE BACKGROUND EQUAL TO COLOR 15090 IN FEDERAL STD. 5952. PROVIDE ONE "VAN" ACCESSIBLE SIGN. HIGHWAY WHITE SYMBOL AND TEXT.

HANDICAP SIGN
SCALE: NTS



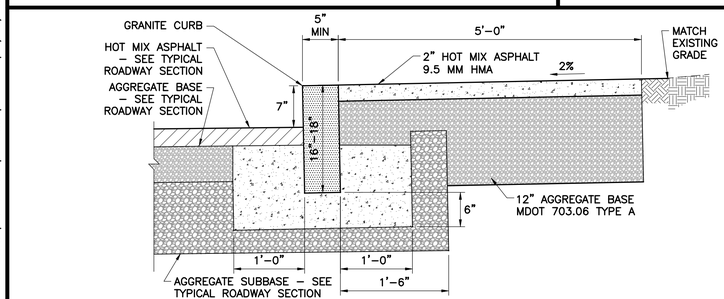
NOTES:
UNLOADING ZONE SHALL MEET ADA REQUIREMENTS.

HANDICAP PARKING
SCALE: NTS

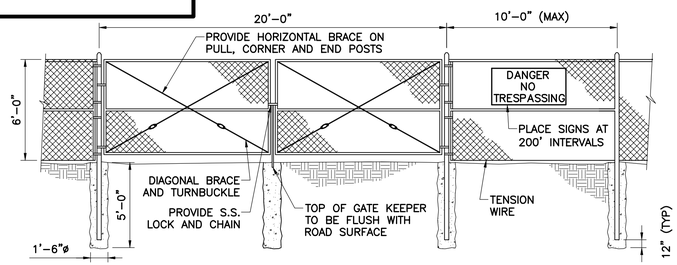


NOTES:
1. SECURE POSTS IN CONCRETE AS SHOWN AT PULL, CORNER AND END POSTS (INCLUDING GATE POSTS)
2. IF CHAINLINK FENCE IS INSTALLED IN UNFRACTURED LEDGE, POST SHALL PENETRATE 2'–0" INTO THE LEDGE AND SHALL BE GROUTED INTO 6"ø HOLE.

CHAINLINK FENCE
SCALE: "NTS"

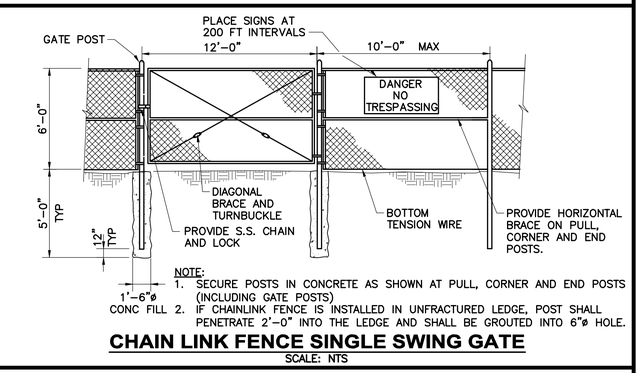


GRANITE CURB WITH BITUMINOUS SIDEWALK
SCALE: NTS



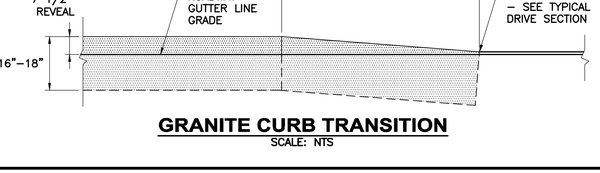
NOTES:
1. SECURE POSTS IN CONCRETE AS SHOWN AT PULL, CORNER AND END POSTS (INCLUDING GATE POSTS)
2. IF CHAINLINK FENCE IS INSTALLED IN UNFRACTURED LEDGE, POST SHALL PENETRATE 2'–0" INTO THE LEDGE AND SHALL BE GROUTED INTO 6"ø HOLE.

CHAINLINK FENCE AND LOCKING DOUBLE GATE
SCALE: "NTS"

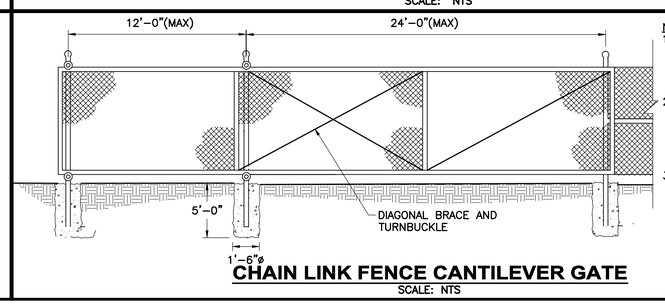


NOTE:
1. SECURE POSTS IN CONCRETE AS SHOWN AT PULL, CORNER AND END POSTS (INCLUDING GATE POSTS)
2. IF CHAINLINK FENCE IS INSTALLED IN UNFRACTURED LEDGE, POST SHALL PENETRATE 2'–0" INTO THE LEDGE AND SHALL BE GROUTED INTO 6"ø HOLE.

CHAIN LINK FENCE SINGLE SWING GATE
SCALE: NTS

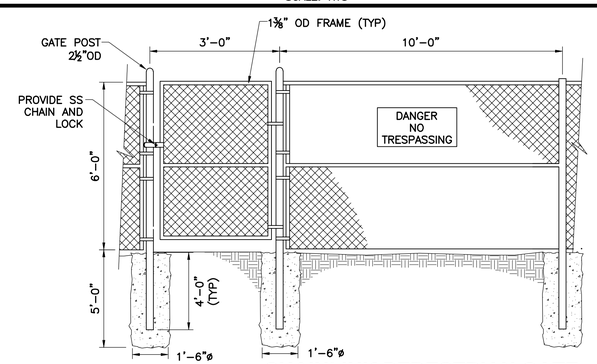


GRANITE CURB TRANSITION
SCALE: NTS



NOTES:
1. SECURE POSTS IN CONCRETE AS SHOWN AT PULL, CORNER AND END POSTS (INCLUDING GATE POSTS)
2. IF CHAINLINK FENCE IS INSTALLED IN UNFRACTURED LEDGE, POST SHALL PENETRATE 2'–0" INTO THE LEDGE AND SHALL BE GROUTED INTO 6"ø HOLE.
3. GATE OPERATOR SHALL BE STANLEY MODEL 540.

CHAIN LINK FENCE CANTILEVER GATE
SCALE: NTS



CHAINLINK PEDESTRIAN GATE
SCALE: "NTS"

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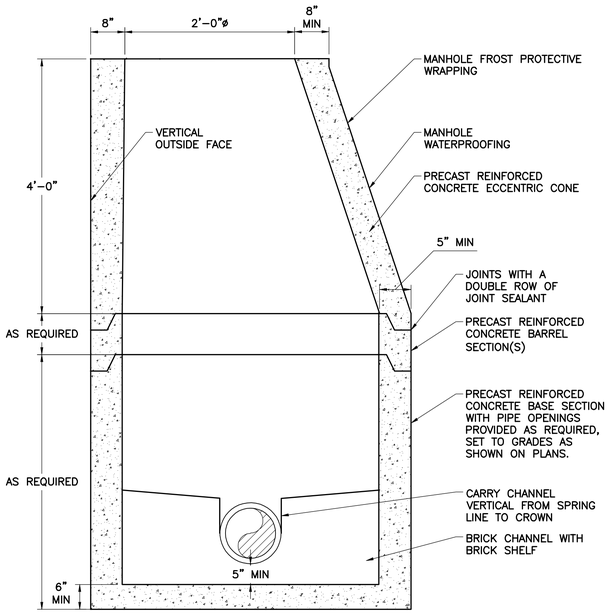
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

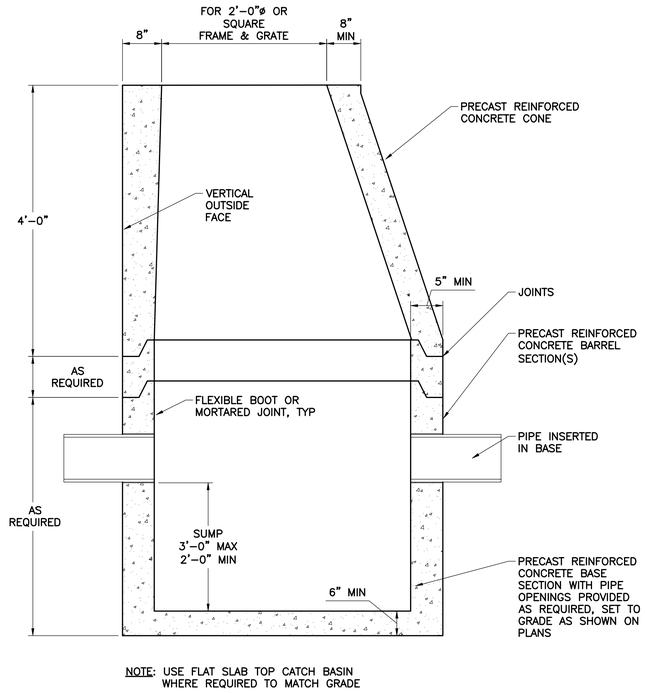
CIVIL DETAILS I

DRAWING
C–8



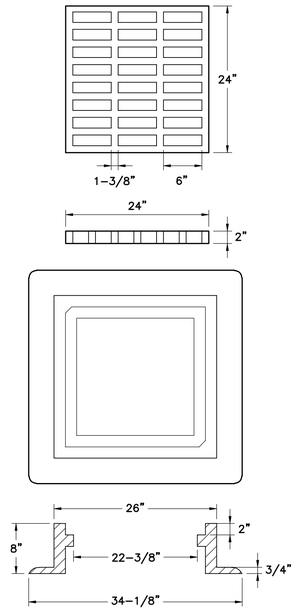
NOTES:
1. MANHOLE CHANNELS REQUIRING A CHANGE IN DIRECTION ARE TO BE BUILT ON A SMOOTH CURVE OF THE LONGEST POSSIBLE RADIUS. IF SIDE PIPES ENTER CHANNEL, SHAPE TO RECEIVE ADDED SIDE FLOW.
2. USE A FLAT SLAB TOP MANHOLE WHEN THE HEIGHT DIFFERENCE BETWEEN THE HIGHEST INVERT AND RIM IS LESS THAN 6'-0" AND WHEN MANHOLE DIAMETER IS GREATER THAN 4'-0".

TYPICAL 4-FT MANHOLE
SCALE: "NTS"

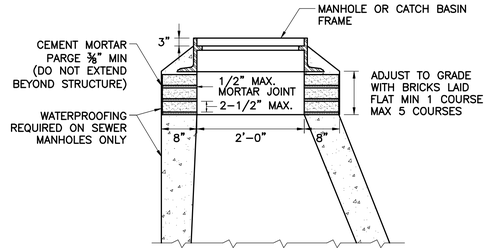


NOTE: USE FLAT SLAB TOP CATCH BASIN WHERE REQUIRED TO MATCH GRADE

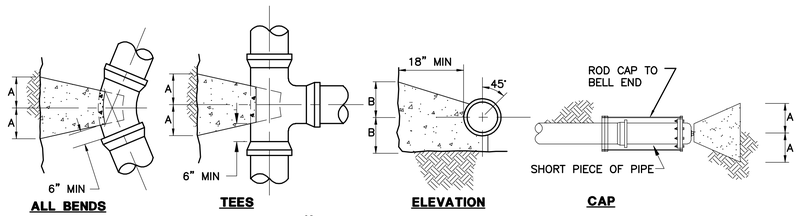
4-FT CATCH BASIN
SCALE: NTS



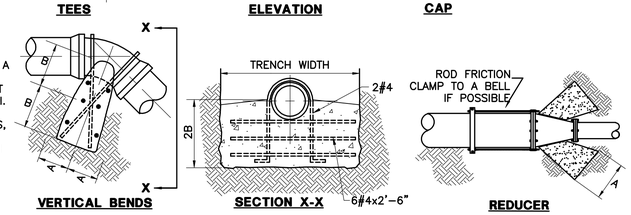
CATCH BASIN FRAME AND COVER
SCALE: NTS



MANHOLE AND CATCH BASIN FRAME INSTALLATION
SCALE: NTS

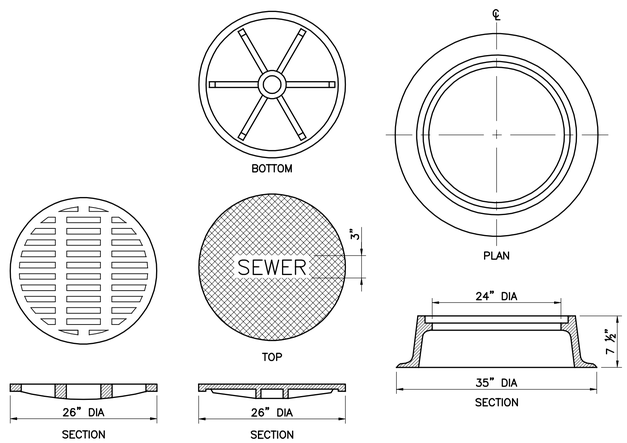


NOTES
1. THRUST BLOCK SIZES SHOWN ARE BASED ON A SOIL BEARING CAPACITY OF 2000 PSF AND TEST PRESSURES OF 180 PSI.
2. ALL BENDS, TEES, WYES, HYDS. & DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS.
3. RODDING MAY BE REQUIRED



PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		VERTICAL BEND (DOWN)		PLUG		REDUCER	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
6"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
8"	20"	15"	14"	12"	9"	9"	9"	6"	18"	12"	33"	24"	14"	14"	18"	12"
10"	21"	21"	18"	15"	15"	9"	9"	9"	20"	18"	40"	27"	16"	16"	20"	18"
12"	27"	24"	23"	15"	15"	12"	12"	9"	25"	18"	48"	30"	18"	18"	25"	18"
16"	37"	30"	30"	21"	21"	15"	13"	12"	32"	24"	57"	36"	22"	22"	32"	24"

THRUST BLOCKS
NTS



CATCH BASIN & MANHOLE STANDARD COVER AND FRAME
SCALE: NTS

NOTE:
SEWER MANHOLES FRAMES AND COVERSHALL BE 24" PAMREX FRAME AND COVER.

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NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	PLANNING BOARD REVIEW	JDP	2-15

DESIGNED BY: JDP
CAD COORD.: BAJ
CAD: JJM
CHECKED BY: NPC
DATE: 2-6-15
APPROVED BY: JDP
DATE: 2-6-15
PROJECT NO: 12493D

STATE OF MAINE — JEFFREY D. PIERCE — REGISTERED PROFESSIONAL ENGINEER — 12/31/2015

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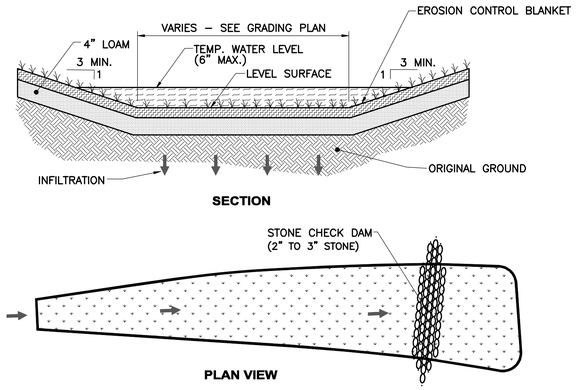
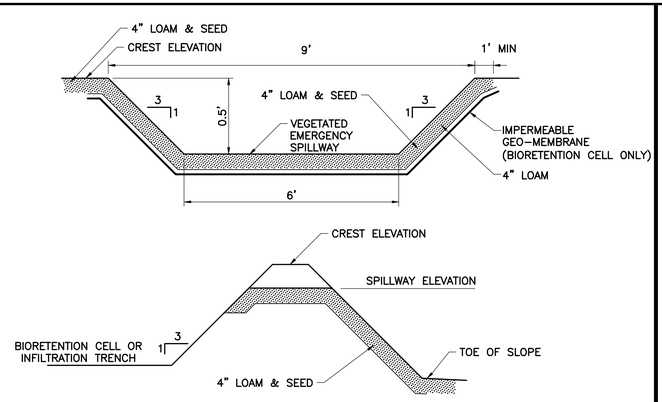
GARAGE COMPLEX

DETAILS II

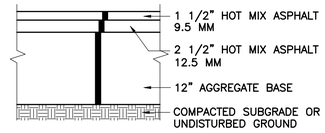
DRAWING
C-9



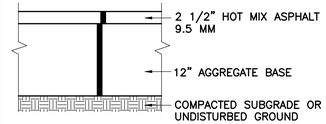
VEGETATED SWALE WITH STONE CHECK DAM
SCALE: "NTS"



VEGETATED EMERGENCY SPILLWAY
SCALE: NTS



PARKING LOT PAVEMENT
SCALE: "NTS"



WALKWAY PAVEMENT
SCALE: "NTS"

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	PLANNING BOARD REVIEW	JDP	2–15

DESIGNED BY: JDP
CAD COORD.: BAJ
CAD: JJM
CHECKED BY: NPC
DATE: 2–6–15
APPROVED BY: JDP
DATE: 2–6–15
PROJECT NO: 12493D

POND CONSTRUCTION NOTES:

1. CONSTRUCTION OVERSIGHT:
   INSPECTION OF THE FILTER BASINS SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. AT A MINIMUM, INSPECTIONS WILL OCCUR:
   - AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED;
   - AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA;
   - AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED;
   - AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
2. TESTING AND SUBMITTALS:
   ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN SHALL BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS. THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MATERIAL. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:
   - SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE USED FOR THE FILTER MATERIAL AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
   - PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES; 1996A) ON THE UNDERDRAIN BEDDING MATERIAL.
   - PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90– 92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.

NATIVE PERENNIAL PLANT SPECIES:

THE SOIL FILTER SURFACE MUST BE PLANTED WITH PLANTS THAT ARE TOLERANT OF WELL DRAINED SOILS AND FREQUENT INUNDATION. NATIVE PLANTS SHOULD BE CHOSEN FOR THEIR TOLERANCE TO URBAN RUNOFF, POLLUTANT LOADING, TEMPERATURE AND PH. A LIST OF APPROPRIATE PLANT SPECIES HAS BEEN PROVIDED IN APPENDIX B OF VOLUME I. A LANDSCAPE DESIGNER OR ARCHITECT SHOULD BE INVOLVED TO SELECT THE APPROPRIATE PLANTS FOR SITE CONDITIONS. BEWARE OF INVASIVE PLANT SPECIES. UPON PLANTING, THE SOIL FILTER SHALL BE MULCHED WITH BUT MUST NOT BE FERTILIZED.

SOIL FILTER MEDIA:

SOIL FILTER MEDIA MUST CONSIST OF A SILTY SAND SOIL OR SOIL MIXTURE COMBINED WITH 20% TO 25% BY VOLUME (NO LESS THAN 10% BY DRY WEIGHT) OF A MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH. OTHER ORGANIC SOURCES MUST BE APPROVED BY THE DEPARTMENT; HOWEVER AN AGRICULTURAL SOURCE IS NOT ACCEPTABLE FOR THE ORGANIC COMPONENT OF THE MEDIA.

THE RESULTING MIXTURE MUST HAVE NO LESS THAN 8% PASSING THE 200 SIEVE AND SHALL HAVE A CLAY CONTENT OF LESS THAN 2%. THE SYSTEM MUST BE DESIGNED TO DRAIN THE SURFACE STORAGE VOLUME IN NO LESS THAN 24 HOURS AND NO MORE THAN 48 HOURS.

AS AN EXAMPLE, THE MIXTURE MAY CONTAIN BY VOLUME THE FOLLOWING:
- 50% OF SAND (MEDOT #703.01 CONTAINS INSUFFICIENT FINE FOR THE MEDIA AND MUST BE AMENDED);
- 20% OF LOAMY TOPSOIL; AND
- 30 % OF COMPOSTED WOODY FIBERS AND FINE SHREDDED BARK, SUPERHUMUS OR EQUIVALENT.

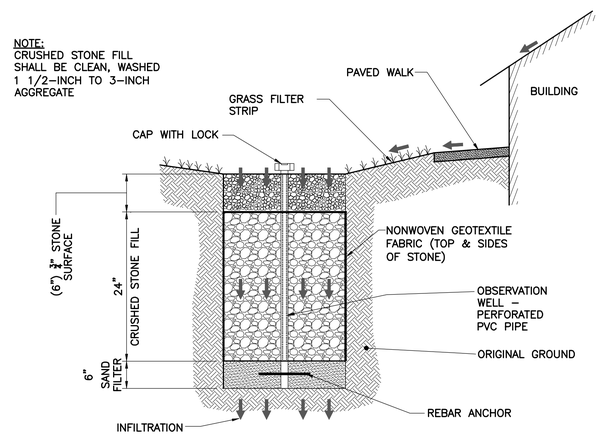
TABLE I	
MAINE DOT SPECIFICATIONS FOR UNDERDRAINS (MEDOT #703.22)	
PIPE BEDDING - UNDERDRAIN TYPE B	
SIEVE #	% PASSING BY WEIGHT
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	0–15
#200	0–5

TABLE II	
MAINE DOT SPECIFICATIONS FOR AGGREGATE (MEDOT #703.01)	
FOR USE IN SOIL FILTER MEDIA	
SIEVE #	% PASSING BY WEIGHT
3/8"	100
#4	95–100
#8	80–100
#16	50–85
#30	25–60
#60	10–30
#100	2–10
#200	0–5

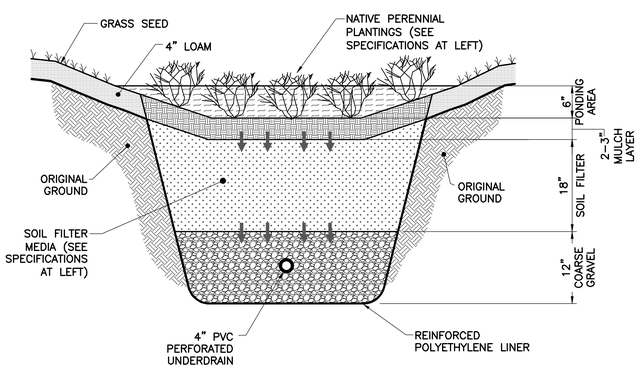
TABLE III

STORMWATER MANAGEMENT FEATURE	SURFACE ELEVATION	MINIMUM AREA REQUIRED (SF)	TREATMENT AREA PROVIDED (SF)
INFILTRATION TRENCH No.1	21.5	497	523
INFILTRATION TRENCH No.2	21.0	250	434
BIO RETENTION CELL No.1	20.5	641	851
BIO RETENTION CELL NO.2	21.0	540	723
BIO RETENTION CELL NO.3	20.0	924	1532

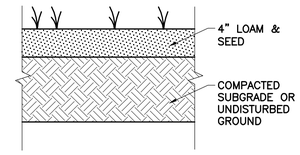
UNDERDRAINED BIORETENTION CELL SPECIFICATIONS



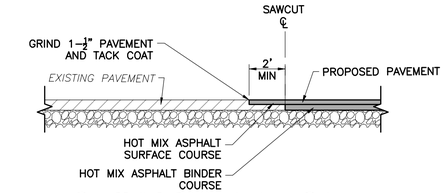
INFILTRATION TRENCH BMP DETAIL
SCALE: NTS



UNDERDRAINED BIORETENTION CELL BMP DETAIL
SCALE: NTS



LOAM AND SEED
SCALE: NTS



SHIPLAP PAVEMENT JOINT
SCALE: NTS

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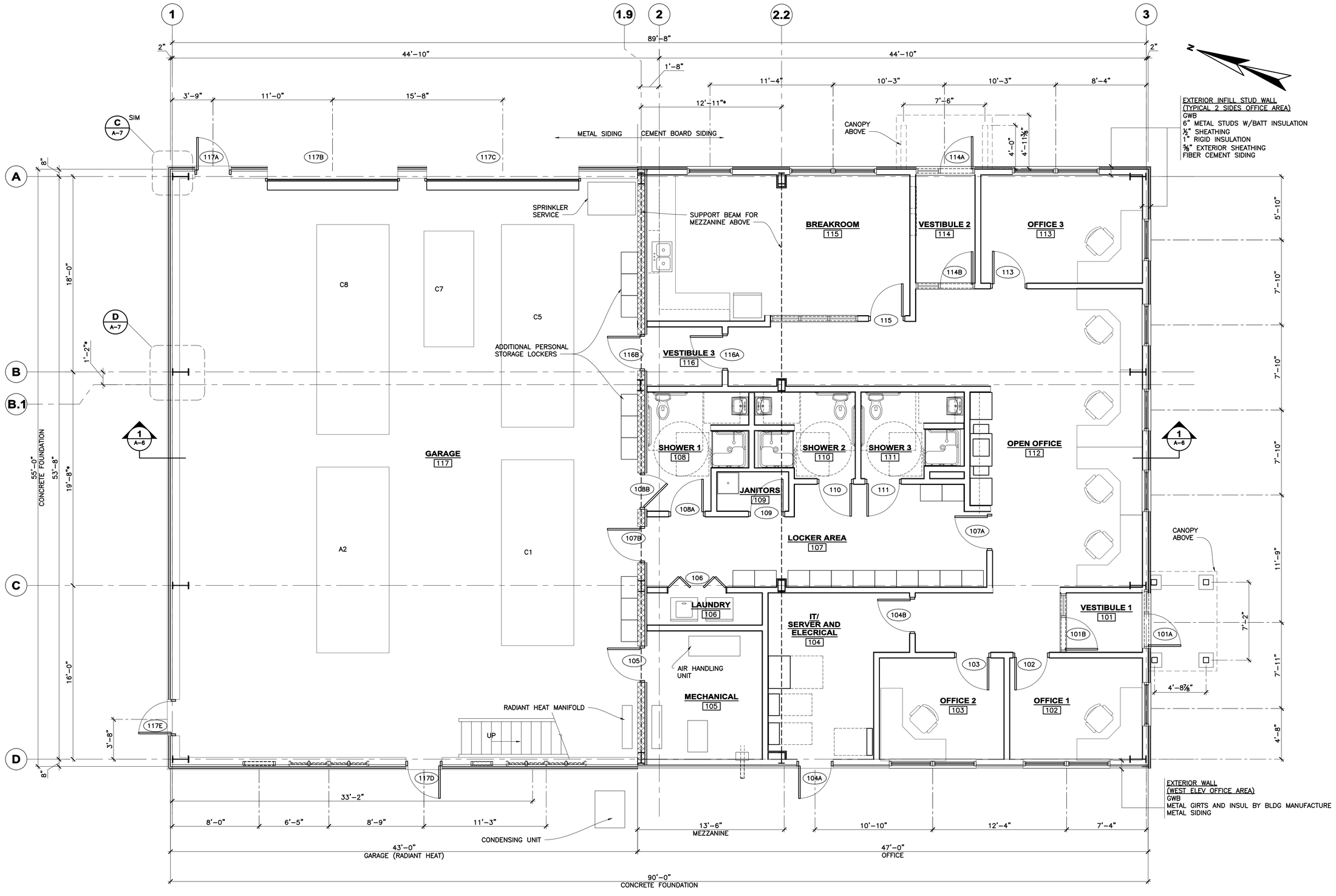
DETAILS III

DRAWING
C–10



GARAGE No. 1 PLAN

SCALE: 1/4"=1'-0"

* = FINAL STEEL COLUMN PLACEMENT TO BE COORDINATED WITH STUD WALLS BELOW

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	PLANNING BOARD REVIEW	JDP	2-15

DESIGNED BY: CBM
CAD COORD: BAJ
CAD: CBM/JWB2
CHECKED BY: DJP
DATE: 2-6-15
APPROVED BY: DJP
DATE: 2-6-15
PROJECT NO: 12493D

STATE OF MAINE DANIEL J. PRATT No. 9421 REGISTERED PROFESSIONAL ENGINEER 2-6-15

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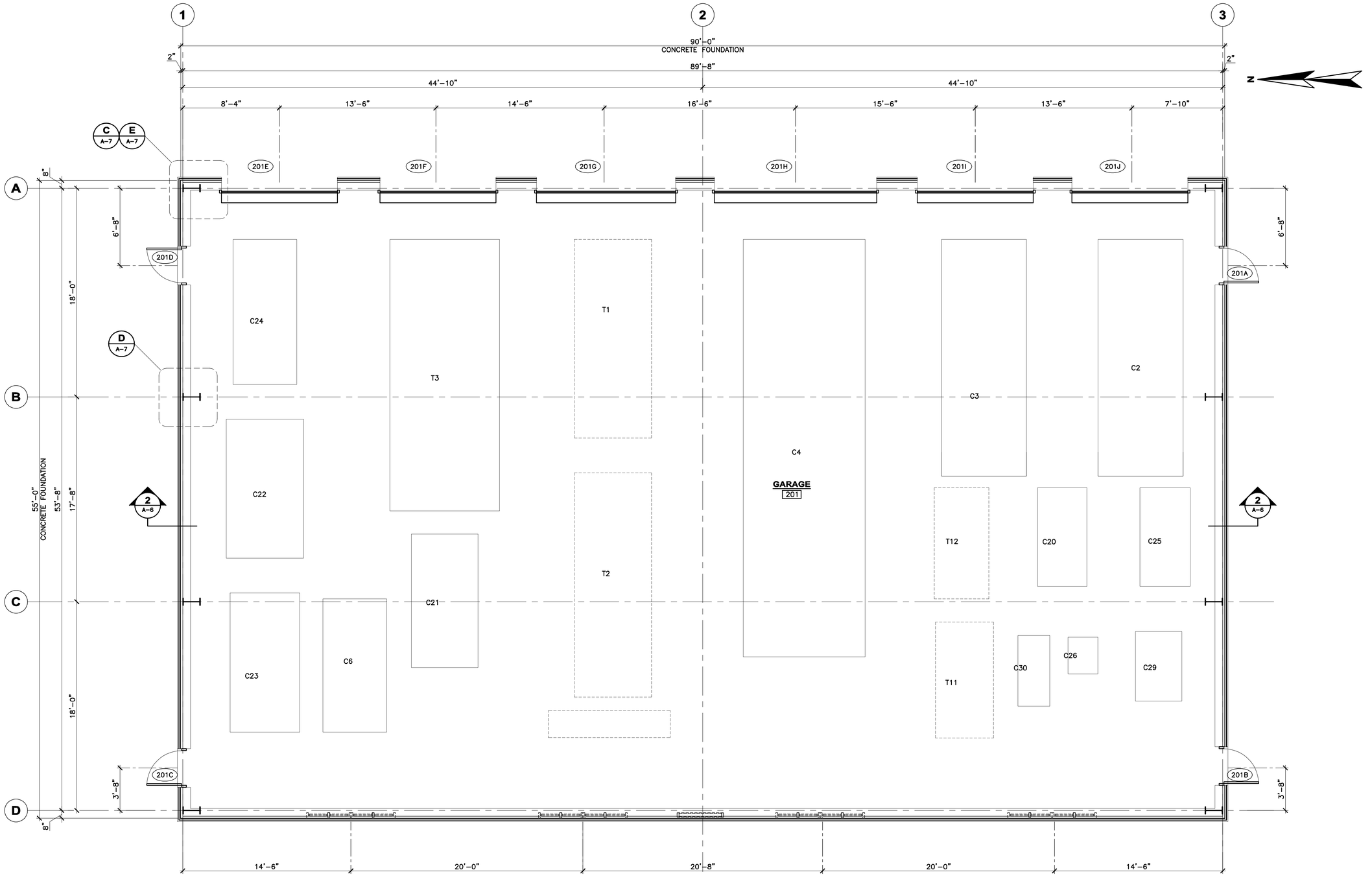
GARAGE COMPLEX

GARAGE #1 PLAN

DRAWING
A-2



GARAGE No. 2
PLAN
SCALE: 1/8"=1'-0"

* = FINAL STEEL COLUMN PLACEMENT TO BE COORDINATED WITH STUD WALLS BELOW

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	PLANNING BOARD REVIEW	JDP	2-15

DESIGNED BY: CBM
CAD COORD.: BAJ
CAD: CBM/JWB2
CHECKED BY: DJP
DATE: 2-6-15
APPROVED BY: DJP
DATE: 2-6-15
PROJECT NO: 12493D

STATE OF MAINE
DANIEL J. PRATT
No. 9421
REGISTERED PROFESSIONAL ENGINEER
2-6-15

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BRUNSWICK, MAINE
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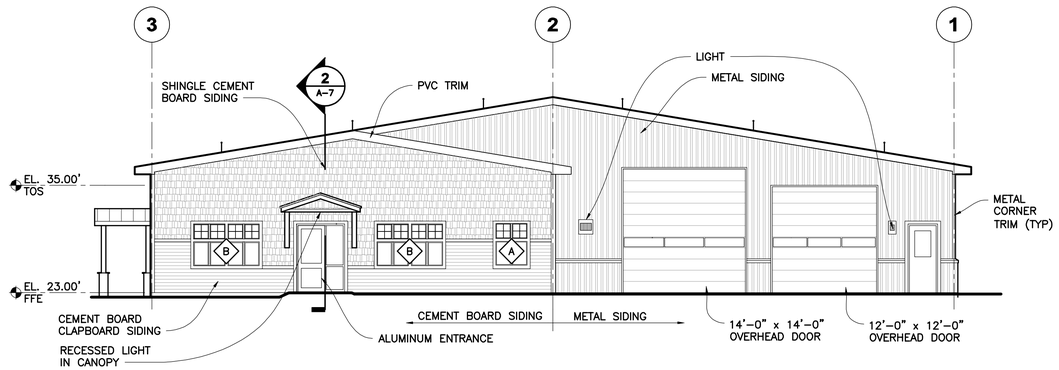
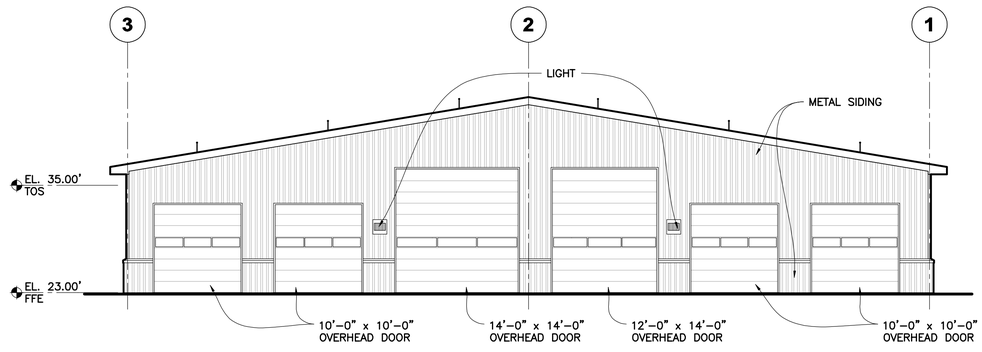
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

GARAGE #2 PLAN

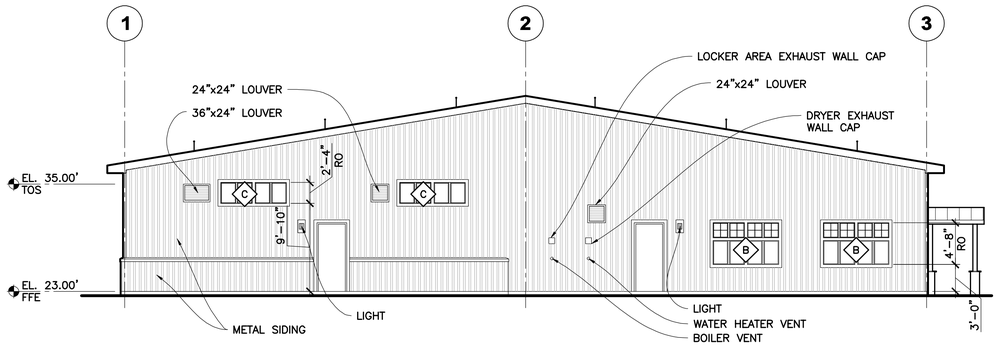
DRAWING
A-3



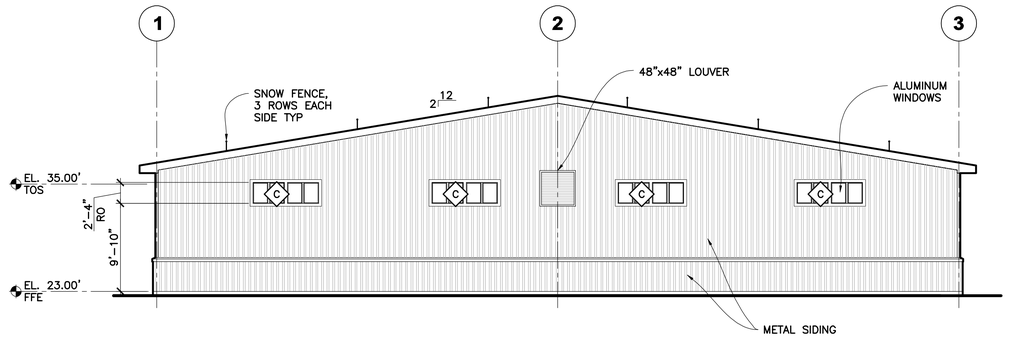
GARAGE No. 1
EAST ELEVATIONS
SCALE: 1/8"=1'-0"



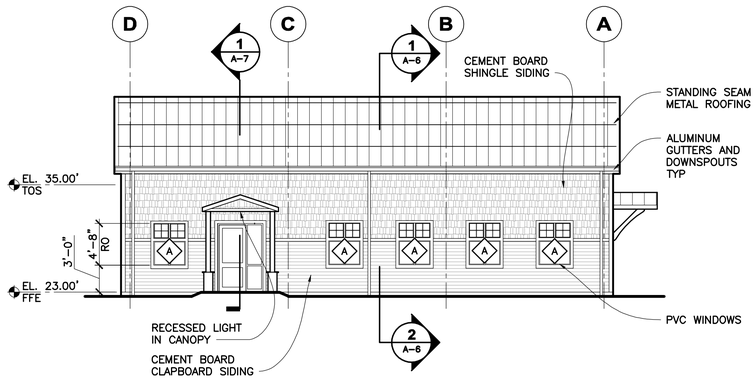
GARAGE No. 2
EAST ELEVATION
SCALE: 1/8"=1'-0"



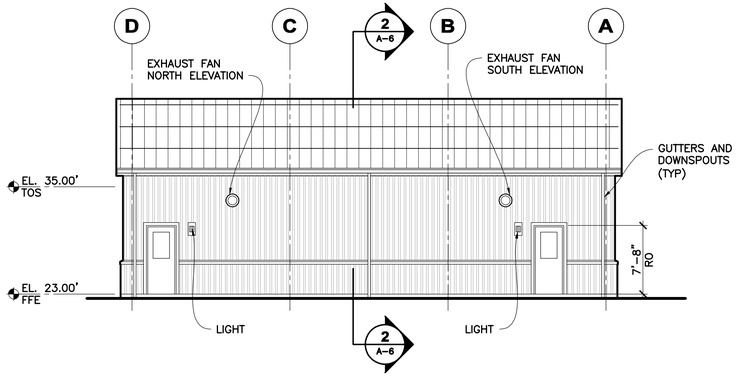
GARAGE No. 1
WEST ELEVATIONS
SCALE: 1/8"=1'-0"



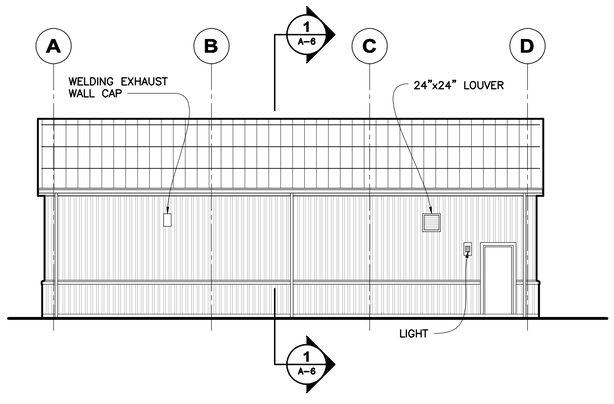
GARAGE No. 2
WEST ELEVATION
SCALE: 1/8"=1'-0"



GARAGE No. 1
SOUTH ELEVATION
SCALE: 1/8"=1'-0"



GARAGE No. 2
SOUTH ELEVATION
SCALE: 1/8"=1'-0"
NORTH ELEVATION SIM.



GARAGE No. 1
NORTH ELEVATION
SCALE: 1/8"=1'-0"

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	PLANNING BOARD REVIEW	JDP	2-15

DESIGNED BY: CBM
CAD COORD: BAJ
CAD: CBM/JWB2
CHECKED BY: DJP
DATE: 2-6-15
APPROVED BY: DJP
DATE: 2-6-15
PROJECT NO: 12493D

DANIEL J. PRATT No. 9431 REGISTERED PROFESSIONAL ENGINEER STATE OF MAINE
2-6-15

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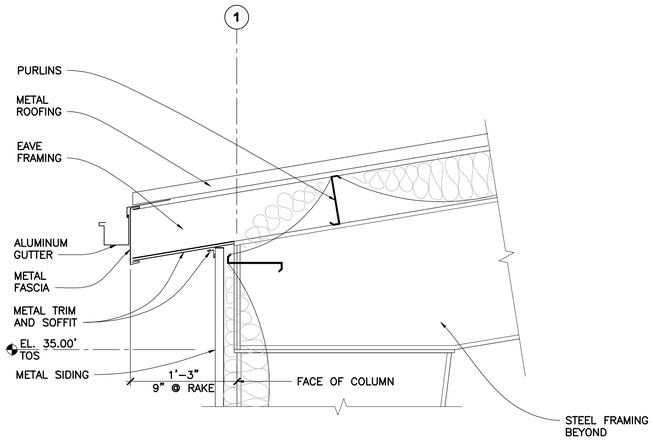
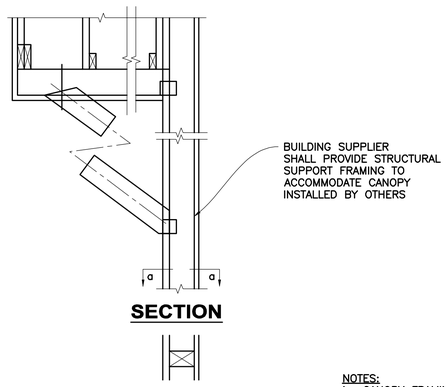
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

ELEVATIONS

DRAWING
A-5

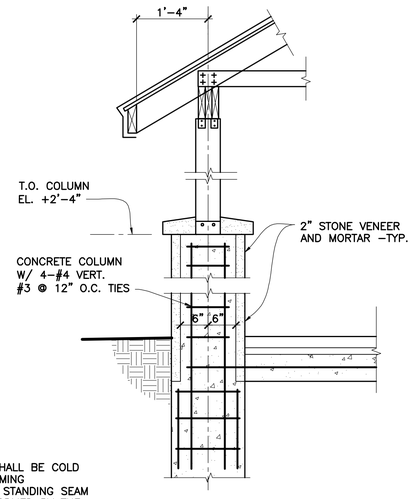


EAVE DETAIL A / A-4
SCALE: 1"=1'-0"



SECTION

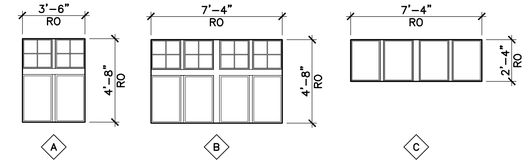
a-a PLAN VIEW



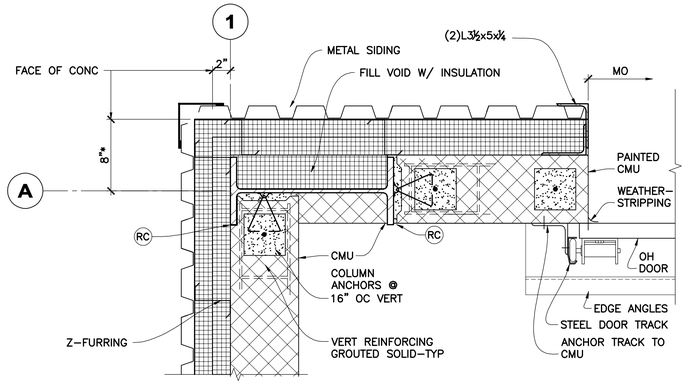
NOTES:
1. CANOPY FRAMING SHALL BE COLD FORMED METAL FRAMING
2. ROOFING SHALL BE STANDING SEAM METAL ROOFING SUPPLIED BY THE BUILDING MANUFACTURE AND INSTALLED BY OTHERS.

CANOPY SECTION 2 / A-3
SCALE: 3/4"=1'-0"

CANOPY SECTION 1 / A-3
SCALE: 3/4"=1'-0"

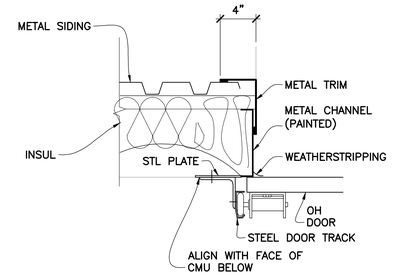


WINDOW SCHEDULE

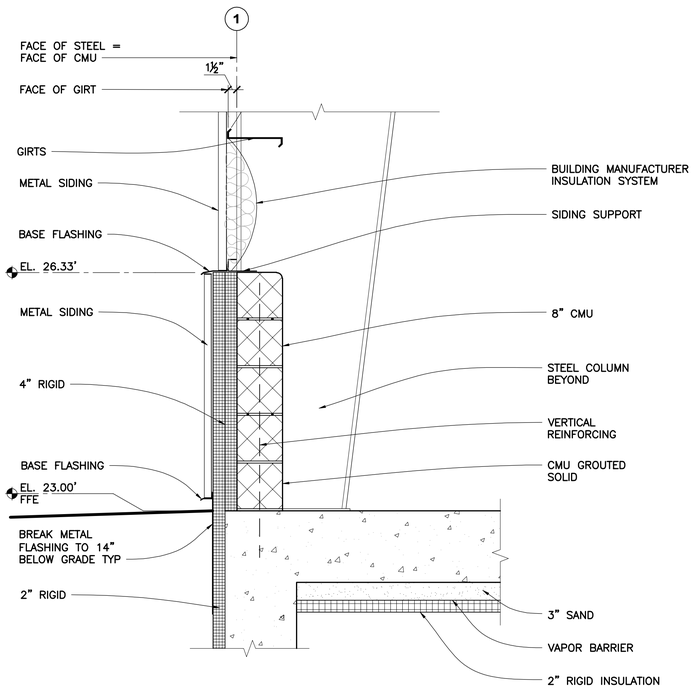


* FINAL COLUMN LOCATION TO BE DETERMINED BASED ON PRE-ENGINEREED STEEL BUILDING PROVIDED

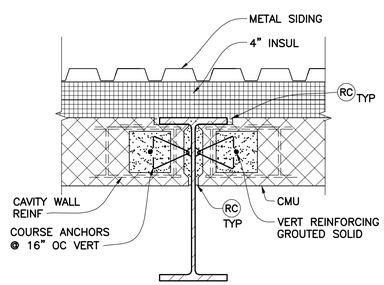
OH DOOR DETAIL C / A-2
SCALE: 1 1/2"=1'-0"



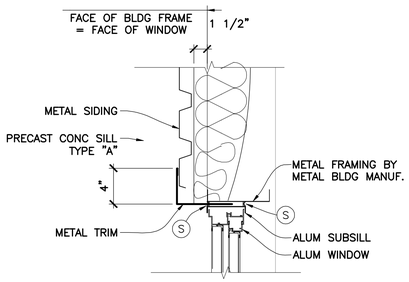
OH DOOR DETAIL E / -
SCALE: 1 1/2"=1'-0"



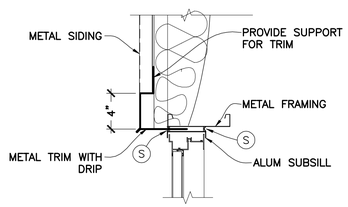
BASE OF WALL DETAIL B / A-4
SCALE: 1"=1'-0"



WALL DETAIL D / A-2
SCALE: 1 1/2"=1'-0"



ALUM WINDOW JAMB F / -
SCALE: 1 1/2"=1'-0"



ALUM WINDOW HEAD G / -
SCALE: 1 1/2"=1'-0"

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	PLANNING BOARD REVIEW	JDP	2-15

DESIGNED BY: CBM
CAD COORD: BAJ
CAD: CBM/JWB2
CHECKED BY: DJP
DATE: 2-6-15
APPROVED BY: DJP
DATE: 2-6-15
PROJECT NO: 12493D

STATE OF MAINE — DANIEL J. PRATT No. 9421 — REGISTERED PROFESSIONAL ENGINEER

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WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

DETAILS

DRAWING
A-7

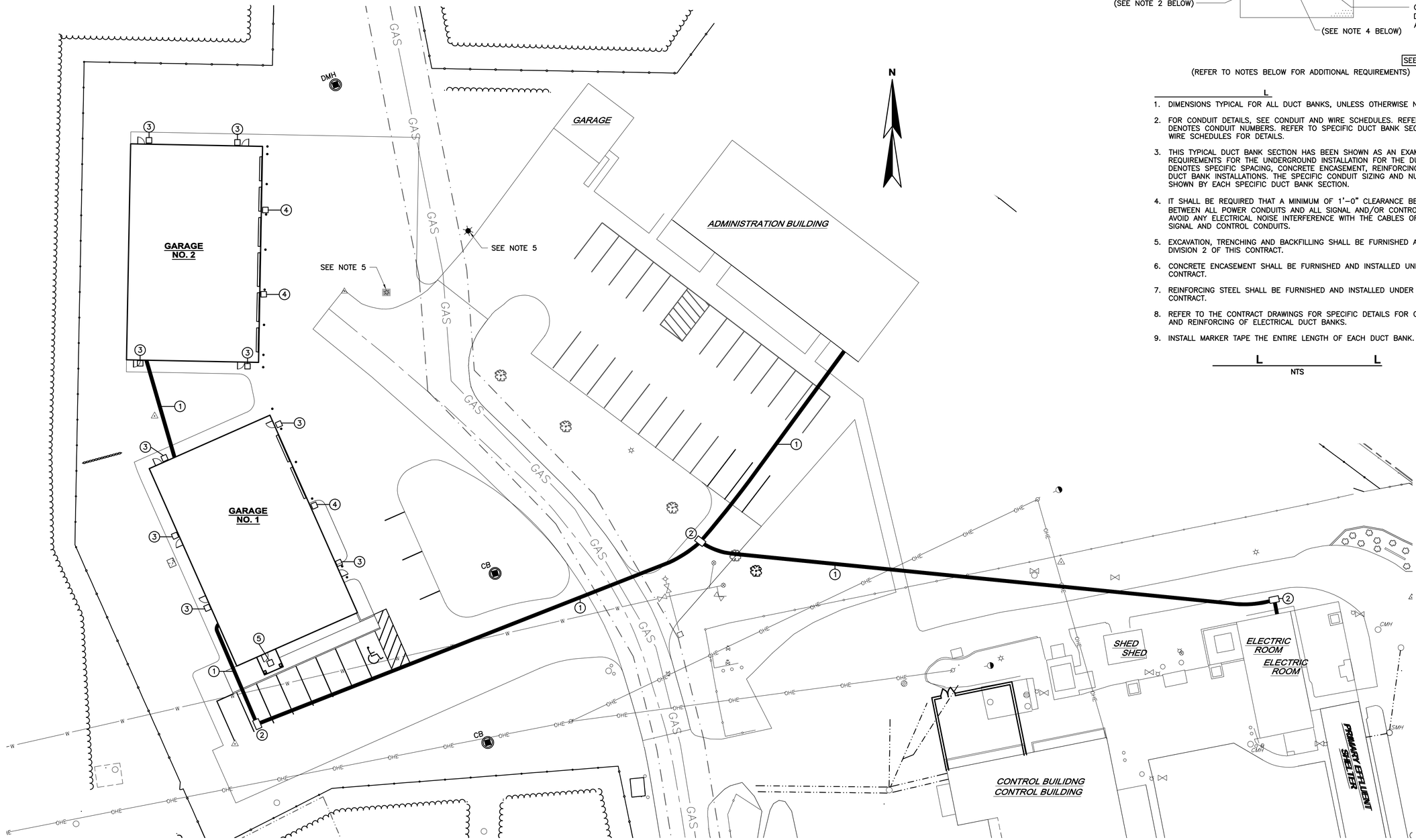
FOR PERMITTING PURPOSES ONLY

NOTES:

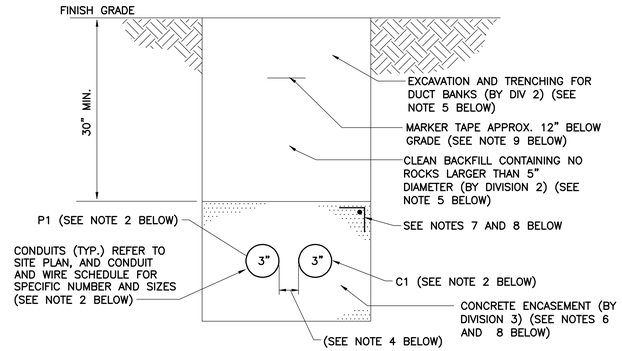
1. FOR ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES, REFER TO DRAWINGS E–1 AND E–2.
2. WORK SHOWN ON THIS DRAWING IS PROVIDED FOR PRELIMINARY ESTIMATING PURPOSES ONLY. ALL ELECTRICAL WORK WILL BE VERIFIED DURING FINAL DESIGN PHASE.
3. ELECTRICAL DUCT BANK FROM WWTF TO NEW GARAGE COMPLEX SHALL CONSIST OF ONE 3 INCH CONDUIT FOR 480V POWER, ONE 3 INCH CONDUIT FOR DATA COMMUNICATIONS, FIBER OPTIC CABLES, ETC., AND ONE 3 INCH SPARE CONDUIT.
4. ELECTRICAL DUCT BANK FROM ADMINISTRATION BUILDING TO NEW GARAGE COMPLEX SHALL CONSIST OF ONE 3 INCH CONDUIT FOR DATA COMMUNICATIONS, FIBER OPTIC CABLES, ETC., AND ONE 3 INCH SPARE CONDUIT.
5. REMOVE, RELOCATE AND RECONNECT EXISTING POLE MOUNTED LIGHT FIXTURE TO NEW LOCATION AS SHOWN ON DRAWING.

EQUIPMENT LEGEND:

(1) NEW ELECTRICAL DUCT BANK (TYP.) (SEE DETAIL THIS DRAWING) (SEE NOTES 3 AND 4)
(2) NEW ELECTRICAL HANDHOLE (TYP.)
(3) TYPE "R" EXTERNAL LIGHT FIXTURE
(4) TYPE "T" EXTERNAL LIGHT FIXTURE
(5) CANOPY TYPE LIGHT FIXTURE



ELECTRICAL SITE
DEMOLITION AND MODIFICATION PLAN
SCALE: 1"=20'



(REFER TO NOTES BELOW FOR ADDITIONAL REQUIREMENTS)

L

1. DIMENSIONS TYPICAL FOR ALL DUCT BANKS, UNLESS OTHERWISE NOTED.
2. FOR CONDUIT DETAILS, SEE CONDUIT AND WIRE SCHEDULES. REFERENCES P1 AND C1 DENOTES CONDUIT NUMBERS. REFER TO SPECIFIC DUCT BANK SECTIONS AND CONDUIT AND WIRE SCHEDULES FOR DETAILS.
3. THIS TYPICAL DUCT BANK SECTION HAS BEEN SHOWN AS AN EXAMPLE OF THE REQUIREMENTS FOR THE UNDERGROUND INSTALLATION FOR THE DUCT BANK SYSTEM. THIS DENOTES SPECIFIC SPACING, CONCRETE ENCASEMENT, REINFORCING, ETC. REQUIRED FOR DUCT BANK INSTALLATIONS. THE SPECIFIC CONDUIT SIZING AND NUMBERS HAVE BEEN SHOWN BY EACH SPECIFIC DUCT BANK SECTION.
4. IT SHALL BE REQUIRED THAT A MINIMUM OF 1'–0" CLEARANCE BE PROVIDED AT ALL TIMES BETWEEN ALL POWER CONDUITS AND ALL SIGNAL AND/OR CONTROL CONDUITS IN ORDER TO AVOID ANY ELECTRICAL NOISE INTERFERENCE WITH THE CABLES OR WIRES WITHIN THESE SIGNAL AND CONTROL CONDUITS.
5. EXCAVATION, TRENCHING AND BACKFILLING SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 2 OF THIS CONTRACT.
6. CONCRETE ENCASEMENT SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 3 OF THIS CONTRACT.
7. REINFORCING STEEL SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 3 OF THIS CONTRACT.
8. REFER TO THE CONTRACT DRAWINGS FOR SPECIFIC DETAILS FOR CONCRETE ENCASEMENT AND REINFORCING OF ELECTRICAL DUCT BANKS.
9. INSTALL MARKER TAPE THE ENTIRE LENGTH OF EACH DUCT BANK.

L L
NTS

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	BUILDING PROCUREMENT	NPC	2–15

DESIGNED BY: DWL
CAD COORD.: BAJ
CAD: SJM
CHECKED BY: NPC
DATE: 2–6–15
APPROVED BY: DWL
DATE: 2–6–15
PROJECT NO: 12493D

STATE OF MAINE — DAVID W. LASKEY — No. 9079 — REGISTERED PROFESSIONAL ENGINEER — FOR PERMITTING PURPOSES ONLY

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BRUNSWICK SEWER DISTRICT
WASTEWATER TREATMENT PLANT
GARAGE COMPLEX

ELECTRICAL SITE
DEMOLITION AND MODIFICATION PLAN

DRAWING
E–3

DRAFT FINDINGS OF FACT
Amendment to a Major Development Review
Final Common Development Plan
Meeting Date: March 3, 2015

Project Name:	Common Development Plan at Brunswick Landing
Address:	NA
Case Number:	15-007
Tax Map:	Assessor's Map 40, Lots 1, 10, 16, 32, 34, 37, 48, 50, 52, 52, 72, 76, 84, &103.
Zoning:	Located in the BNAS Reuse District in the CMU Land Use District
Applicant:	**Midcoast Regional Redevelopment Authority**
	2 Pegasus Drive #1-200
	Brunswick, Maine 04011
	Priority Real Estate Group
	2 Main Street
	Topsham, ME 04086
Authorized Representative:	None

Staff reviewed the application and has made a determination of completeness.

PROJECT SUMMARY

Staff review is based on the following application materials:

- Amended Common Development Plan letter from MRRA, dated February 3, 2015.
- Drawing entitled "Common Development Plan Amendment #1", undated.
- Untitled drawing of enlarged CDP showing approximate building footprint, undated.

The applicant is requesting an amendment to the previously approved (July 2014) Common Development Plan (CDP) containing 14 lots with frontage on Bath Road, Admiral Fitch Avenue, and Pegasus Street at Brunswick Landing. The applicant is seeking to include a 15th parcel within the CDP boundary - Lot 32 of the approved Brunswick Landing Subdivision Plan. This amendment is in advance of a development application for Lot 32 for an assisted living facility.

In addition, the applicant is seeking to amend the accompanying Dimensional Standard table to allow for a maximum building footprint per structure of 50,000 sf, applicable only to rear/interior lots that don't have frontage on Bath Road, Admiral Fitch Avenue, and Pegasus Street (see footnote #4 on the attached, amended Dimensional Table).

This requested amendment does not replace the approved CDP "master plan"; rather it would be an addendum to it. Accordingly, all previously approved waivers and conditions of approval would remain as part of the July 22nd, 2014 approval. That approval has been attached hereto.

Review Standards from Section 413 of the Town of Brunswick Zoning Ordinance

413.1 Criteria for Designation as a Common Development Plan

In reviewing a proposal for a project to be designated as a common development plan, the Planning Board shall find that all of the following criteria will be met:

A. All buildings and structures shall be part of, and consistent with, a common pattern of development. In the case of a single building on an individual lot, the proposed building shall be consistent with the pattern of development on surrounding lots. The relationship of the buildings to public and private streets and to parking areas shall result in a unified pattern.

Lot 32 does not front Admiral Fitch Avenue, but rather is accessed by way of a private drive through Lot 30. The building's footprint is proposed to be segmented, so that it will not appear as monolithic. Overall, the relationship of the building and private drive to adjacent lots will contribute to the CDP's cohesive, unified development pattern. The rear lot boundaries along Neptune and Anchor Drives are adjacent to the Residential Land Use District, which has no maximum building footprint restriction. ***The Board finds that the provisions of Section 413.1.A are satisfied.***

B. The development shall incorporate private or public amenities that enhance the development's pedestrian friendly environment.

As originally approved, internally, the CDP will provide pedestrian connections between buildings, parking areas, and outdoor focal points – such as the existing static airplane on Lot 7A, new gazebos, landscaped areas, and benches. Each site shall provide a cross walk or direct connection to existing and new sidewalks. Bicycle racks will be provided at each building and a bicycle rest/repair station will be provided as part of the proposed development of Lot 6. As indicated, exterior benches and bicycle racks shall be of consistent materials and colors. There is a 4 foot-wide sidewalk on the west side of Admiral Fitch Avenue that runs to Pegasus Street. A 4 foot-wide sidewalk begins on the east side of Admiral Fitch Avenue, after Forrestal Drive, and continues to Pegasus Street. Existing sidewalks will be preserved. New sidewalks shall be provided on Pegasus Street consistent in width and materials of existing sidewalks.

As the proposed assisted living facility will have clients that need to be maintained in a secured environment, public access to and from the site will be restricted. As such, this lot may have less public access and fewer public amenities than other lots. ***The Board finds that the provisions of Section 413.1.B are satisfied.***

C. There shall be common vehicular and pedestrian circulation systems that create a pedestrian friendly environment for the entire development and that integrate the individual buildings into an overall pattern.

As originally approved, each site shall provide a cross walk or direct connection to existing and new sidewalks. An existing bicycling/walking path exists on the former rail bed lying west of Admiral Fitch Drive. This path will be preserved by easement for continued use. Depending on individual site developments for Lots 8, 9, 10, 11, 12 and 14, re-location of the path may be necessary. There is a 4 foot-wide sidewalk on the west side of Admiral Fitch Avenue that runs to Pegasus Street. A 4 foot-wide sidewalk begins on the east side of Admiral Fitch Avenue, after Forrestal Drive, and continues to Pegasus Street.

To the extent possible, Lot 32 will integrate the design of the building and site into the overall pattern of the CDP, and will make accommodations for pedestrian connectivity; however given that the proposed use is a residential care facility for Alzheimer's patients, the site will need to have a secure perimeter so that residents cannot inadvertently wander off site. Integrating the needs of access and connectivity with perimeter security will be done during development review.

The Board finds that the provisions of Section 413.1.C are satisfied.

D. There shall be an overall design theme or treatment of site improvements including lighting, signs, paving, site furniture, and landscaping.

The design theme or treatment of site improvements for Lot 32 shall conform to those contained within the originally approved CDP, repeated below.

<u>Landscaping</u>

A repeatable streetscape theme will be located between all buildings and streets. This will include grasses and shrubs for varying color, and maintenance of existing street trees.

The landscaping will focus on four main areas: The first is the space between the buildings and streets. A landscape pattern/theme coordinated between the various parcels will provide four season interest.

The second focus area will be the building foundation planting and entrances, which will have a more detailed and refined landscape consisting of a variety of plants providing color and year round interest.

The third focus area is the parking lot where low maintenance shade trees and flowering ornamental trees will be used to break up the visual expanse of pavement and provide shade in the summer months.

The fourth focus area is the general landscape, which is comprised of lawn areas, stormwater areas, and street entrances. Low maintenance planting will be used to provide small park areas for employees and visitors to relax and gather. These plantings will visually enhance street entrances and assist in stormwater management.

<u>Lighting</u>

Site lighting will be via pole and building mounted cut-off luminaires with LED fixtures. Bronze pole heights will be appropriately scaled, and fixtures will be consistent throughout the CDP.

Signs

Ground lighted monument signs will be provided along the frontage of individual development lots. The base of these monument signs will be of natural stone or natural stone veneer with non-modular ashlar layout. The signs will have granite posts and will be painted wood and/or composite material, having a maximum height of 8 feet and a maximum width of 6 feet. Business identification signs for Lot 5 shall be compatible in design and type to those located within the CDP, monument in type and may be back-lit. The specific size shall be determined during development review.

The Board finds that the provisions of Section 413.1.D are satisfied.

E. If the project is located in the CC District, the development will conform to the Cook's Corner Design Standards relating to common development plans. ***NA - the Board finds that the provisions of Section 413.1.E are satisfied.***

Additional Review Criteria for CDP located within BNAS Reuse District:

A-III.7 Dimensional and Density Table for the Land Use Districts
(Footnote [1] – Removing all dimensional and density standards for CDP)

If the Common Development Plan is located within the BNAS Reuse District, the dimensional and density standards will be approved by the Planning Board and applied specific to the CDP area. ***The Board approves the dimensional and density standards as amended and finds that the provisions of Section A-III.7 are satisfied. Such standards shall be placed on the common development plan.***

DRAFT MOTIONS
COMMON DEVELOPMENT PLAN AT BRUNSWICK LANDING
AMENDMENT # 1
CASE NUMBER: 15-007

Motion 1: That the combined Sketch/Final Major Development Review Common Development Plan application is deemed complete.

Motion 2: That the originally approved Major Development Review Final Common Development Plan conditions shall apply to Amendment #1 in addition to the following conditions:

1. That the Board's review and approval does hereby refer to these findings of fact, the plans and materials submitted by the applicant and the written and oral comments of the applicant, its representatives, reviewing officials, and members of the public as reflected in the public record. Any changes to the approved plan not called for in these conditions of approval or otherwise approved by the Director of Planning and Development as a minor modification shall require a review and approval in accordance with the Brunswick Zoning

2. Prior to issuance of a Building Permit, the applicant shall submit an amended Common Development Plan, sealed and signed by a qualified Surveyor or Engineer, containing the following:
    a. All information from the original July 22, 2014 approval.
    b. The amended CDP boundary, to include Lot 32.
    c. The amended Dimensional Standards table, to include footnotes 3 & 4.

** Please note that Development Review Site Plan approvals by the Planning Board shall expire at the end of two years after the date of final approval unless all construction has been completed by that date (Section 407.4.B of the Brunswick Zoning Ordinance).*

MRRA

Midcoast Regional
Redevelopment Authority

February 3, 2015

Mr. Jeremy Doxsee, Town Planner
Town of Brunswick
85 Union Street
Brunswick, Me 04011

Re: Amendment #1 to Brunswick Landing Common Development Plan

Dear Jeremy:

On behalf of the Midcoast Regional Redevelopment Authority (MRRA), I am pleased to submit this request to amend the existing Common Development Plan (CDP) at Brunswick Landing, which was approved by the Brunswick Planning Board on April 29, 2014. This requested amendment (Amendment #1) provides for:

1. Inclusion of Lot #32 to the CDP (see Figures 1 and 2); and
2. Adding a new dimensional maximum building footprint for back lots not fronting on Bath Road, Admiral Fitch Avenue and Pegasus Street (see Table 1).

Lot #32 (12.26 acres) is the site of the former mobile home park at the Naval Air Station and is bounded by Neptune Drive and Anchor Drive. This subject parcel is a transition parcel between community mixed-use and residential designations. It should be noted that other land use designations fronting on these two streets are predominantly residential, where there is no minimum building footprint size.

This requested amendment allows for a larger-scaled development project on Lot #32 than would be permitted along Bath Road, Admiral Fitch Avenue and Pegasus Street. This amendment would accommodate the proposed Avita Assisted Living Facility, a 45,408 SF single story, 60 bed assisted living facility specializing in memory care or other similar sized facilities on that parcel.

Please contact me should you have any questions.

Sincerely,

Steven H. Levesque
Executive Director

Attachments

cc: Jim Howard, Priority Real Estate Group
Will Conway, Sebago Technics

Table 1

Dimensional Standards

Proposed Amendments in Yellow

Standard	CDP
Maximum Lot Area	None
Maximum Residential Density	24 units per acre
Minimum Lot Width	None
Minimum Building Frontage	None
Maximum Building Frontage	None
Minimum Front Yard[1]	15 Feet
Maximum Front Yard[2]	50 Feet
Minimum Rear Yard	0 Feet
Minimum Side Yard	0 Feet
Maximum Impervious Coverage	100%
Minimum Building Height	1 Story
Maximum Building Height	4 stories or 50 Feet
Maximum Building Footprint per Structure[3]	20,000 Square Feet
Maximum Building Footprint per Structure[4]	50,000 Square Feet

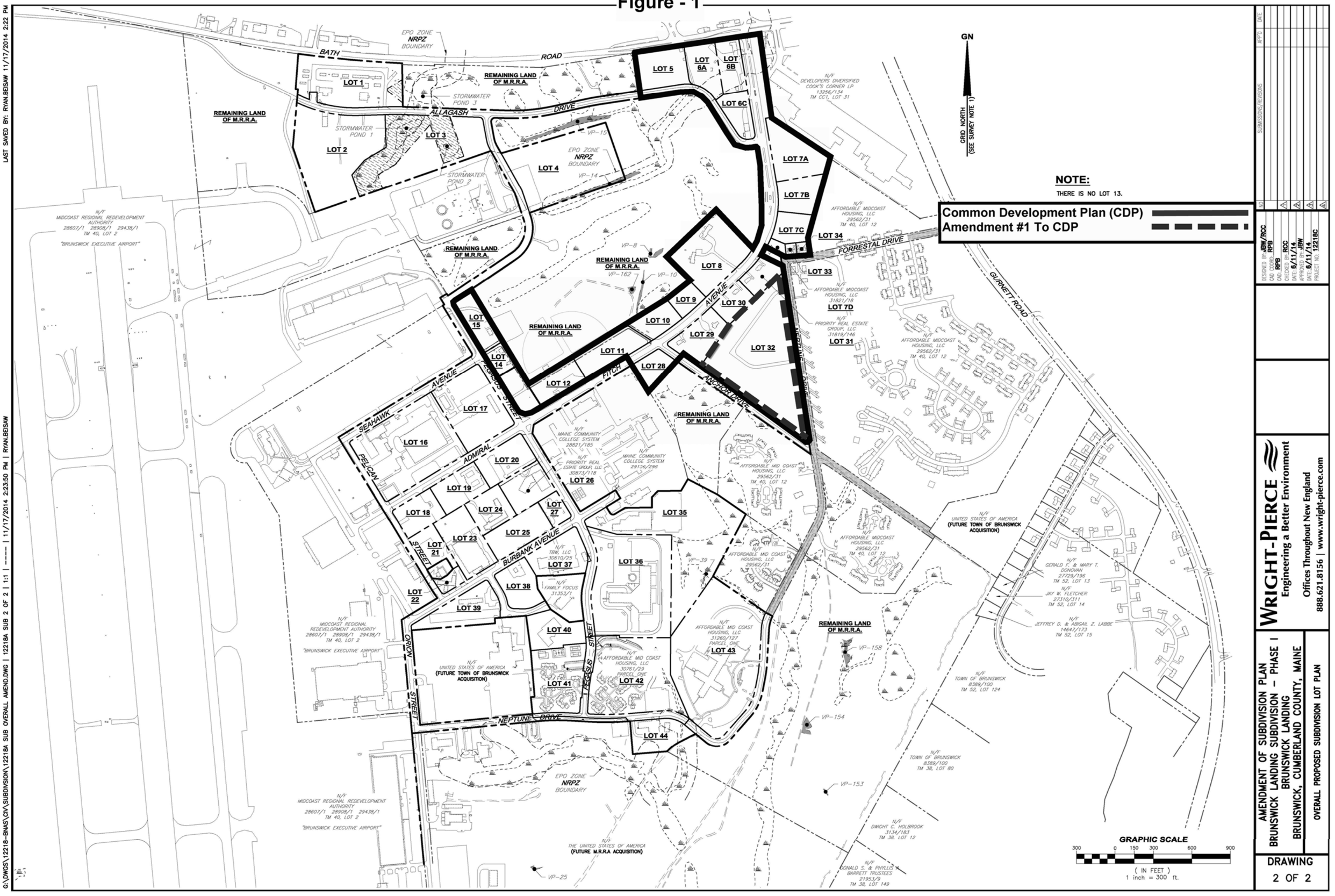
[1] Setback must include landscaping and shall not include parking.

[2] Applies to Admiral Fitch Avenue and Pegasus Street only.

[3] Applies to lots fronting Bath Road, Admiral Fitch Avenue and Pegasus Street.

[4] Applies to back lots not fronting Bath Road, Admiral Fitch Avenue and Pegasus Street.

Figure - 1



NO. | SUBMISSIONS/REVISIONS | DATE | APP'D

DESIGNED BY: JBW/RCC
CAD COORD: RPB
CAD: RPB
CHECKED BY: RCC
DATE: 6/11/14
APPROVED BY: JBW
DATE: 6/11/14
PROJECT NO: 12218C

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AMENDMENT OF SUBDIVISION PLAN
BRUNSWICK LANDING SUBDIVISION – PHASE I
BRUNSWICK LANDING
BRUNSWICK, CUMBERLAND COUNTY, MAINE

OVERALL PROPOSED SUBDIVISION LOT PLAN

DRAWING
2 OF 2

LAST SAVED BY: RYAN.BEISAW 11/17/2014 2:22 PM

G:\DWGS\12218-BNWS\CIV\SUBDIVISION\12218A SUB OVERALL AMEND.DWG | 12218A SUB 2 OF 2 | 1:1 | ----- | 11/17/2014 2:23:50 PM | RYAN.BEISAW

Amendm
with bui

Figure - 2

LOT 8

LOT 30

Lot 32

LOT 9

LOT 29

LOT 31

N/F
PRIORITY REAL ESTATE
GROUP, LLC
31819/146

AVENUE

NEPTUNE DRIVE

ANCHOR DRIVE

REMAINING LAND
OF M.R.R.A.

N/F

BRUNSWICK PLANNING BOARD
JANUARY 13, 2015

MEMBERS PRESENT: Chair Charlie Frizzle, Vice Chair Margaret Wilson, Bill Dana, Soxna Dice, Dale King, and Richard Visser

MEMBERS ABSENT: Dann Lewis

STAFF PRESENT: Director of Planning and Development, Anna Breinich; Town Planner, Jeremy Doxsee

A meeting of the Brunswick Planning Board was held on Tuesday, January 13, 2015 in Council Chambers, 1ST Floor, 85 Union Street. Chair Charlie Frizzle, called the meeting to order at 7:00 P.M.

Case # 14-038 Sketch Plan for Professional Office Buildings and Lot Line Adjustments to Brunswick Landing Subdivision (Case # 14-017): The Board will review and take action on a Sketch Plan Major Development Review application submitted by Priority Real Estate Group to adjust lot lines delineating Lots 6A, B, & C of the previously approved Amended Brunswick Landing Subdivision and to develop a 10,000 sf footprint office building, a 15,000 sf footprint office building, a 4,000 sf footprint financial institution with a drive through, a 195 space parking lot, along with associated site improvements, on 3 contiguous lots (6A, 6B, 6C) totaling 5.61 acres, located at 4-16 Admiral Fitch Drive, in the BNAS Reuse District (R-CMU Land Use District), and also within the previously Planning Board-approved Brunswick Landing Common Development Plan area. Assessor's Map 40, Lot 37.

Jeremy Doxsee introduced the application for Lot 6 as proposed in the Common Development Plan (CDP) approved in June 2014 and noted that this application is for Sketch Plan Major Development review with a Final Plan to follow. Jeremy said that this application is for 3 lots, Lot 6A is 1.34 acres, Lot 6B is 1.49 acres and Lot 6C is 2.78 acres with primary access on Admiral Fitch Ave. with secondary access off Allagash Drive. In total, this project includes 5.61 acres with a proposed a 10,000 sf footprint office building, a 15,000 sf footprint office building, a 4,000 sf footprint financial institution with a drive through, a 195 space parking lot, and associated site improvements. Jeremy pointed out that the basic layout of the site and service have been included in packet and that the development has been designed in compliance with the CDP.

Charlie Frizzle noted that they should be looking at plan C101 included in the packet.

Tom Saucier, Site Design Associates, reviewed a PowerPoint presentation and the proposed lot layout. Margaret Wilson asked what the setbacks were for each building. Tom replied that they will be labeled on the final plan. Margaret said that the applicant should be clear about what is/are the front and the sides of the buildings and asked what the address will be as she is concerned with the setbacks. Tom replied that the front for 6A would be Bath Road. Lot 6B is a corner lot with frontage on Admiral Fitch and Bath Road and Lot 6C with frontage on Admiral Fitch Drive and Allagash Drive.

With respects to the Staff Review comments, Charlie Frizzle asked about adding a cross walk on Admiral Fitch and Tom Saucier replied that there will be a sidewalk. Charlie said that John Foster noted that the drive thru lane is very wide and Tom replied that they can narrow it up a little. With respect to building frontages, Charlie said that they all appear to face the internal parking lot, but said that it is the view of these buildings from the front / Bath Road that they need to be concerned about and will need to pay attention to. With respects to Stormwater, Charlie said that the Town would prefer that stormwater be addressed collectively and Tom replied that stormwater will be addressed collectively in the beginning, but it may not be permanent depending on how the lots are sold. Bill Dana asked where the sewer drains go and Tom replied that there is a pump system; the Sewer District has been informed. Dale King asked why the drive thru lane is so wide and Tom replied that this was a concept that is still in design. Jeremy Doxsee pointed out that lot 6C has a potential stormwater area and lot 6A could be permitted to use lot 6C for stormwater. Soxna Dice asked if they could reduce the impervious coverage through reducing the drive thru making or by removing the island in the separate drive way entrance for the financial institution. Tom replied that they discussed this in Staff Review and with the way the lots are going to be sold they need to keep the second access. Tom said that they can reduce the endcaps and make the lanes narrower. Soxna suggested waiving some of the parking spaces and Tom replied that if the buildings are sold as single story buildings, they can reduce parking. Tom said that if the developer felt that the tenant required less parking per the Town requirement then they would ask for a waiver as it is $3,000 per parking space and it would make sense, but at this point, they are at a concept plan. Margaret Wilson replied that she shares Soxna's concern about reducing the impervious surface and said that anything that can be done to reduce the impervious surface, the better. Charlie replied that if parking meets requirement, he is less inclined to place a lot of restrictions on the developer.

With regards to the stream, Charlie Frizzle said that he is persuaded by the arguments that the applicant has put forth but asked for clarification on the 75 foot and the 25 buffers and asked that the applicant to describe these measurements. Tom Saucier clarified the measurements and jurisdiction of the DEP over a stream and adjacent land area. Soxna Dice asked who reviews these types of determinations when they are part of an application and Jeremy Doxsee replied that they do not have an expert on staff, but they do have experience on staff and that staff can refer to the consultant engineer. Jeremy said that he has spoken to Steve Walker who questioned the methodology that Mr. Forester used in deciding whether or not the stream met the Town criteria. Tom reviewed the process in which they went through in determining natural resources and why they felt that the stream doesn't meet the Town definition but meets the DEP stream determination. Margaret Wilson clarified that the reason why this is relevant is because the town has a 75 foot no disturb rule and the state has a 25 foot no disturb rule requirement. Jeremy Doxsee asked if staff could obtain a written copy of the common methodology practices that were used along with the dates that site visits were made.

With regards to the forested wetlands, Tom Saucier stated that they have submitted a detailed response to Steve Walkers concerns. Tom said that municipalities usually regulate wetlands and noted that in reviewing the definition of a fresh water wetland, it specifically excludes forested wetlands. Soxna Dice asked for clarification on NRPZ protections and Jeremy Doxsee replied that there is no specific standard, but one could conclude that in preserving natural resources, you are preserving wetlands to the extent that they work with applicants.

Charlie Frizzle opened the meeting to public comment. No comments were made and the public comment period was closed.

MOTION BY BILL DANA THAT THE BOARD DEEMS THE SKETCH PLAN TO BE COMPLETE. SECONDED BY SOXNA DICE, APPROVED UNANIMOUSLY.

MOTION BY DALE KING THAT THE BOARD APPROVES THE SKETCH PLAN. SECONDED BY BILL DANA, APPROVED UNANIMOUSLY.

Zoning Ordinance Rewrite Committee (ZORC) Update

Anna Breinich said that they are in the process of completing the review of the general public comments. It is the intention to wrap up items such as signs and be able to wrap up the text by beginning of February for Clarion Associates to rewrite and then staff will be looking at the zoning maps. Anna Breinich reviewed the upcoming meeting schedule.

Approval of Minutes

No minutes were approved at this meeting.

Other Business

No other business.

Adjourned
This meeting was adjourned at 8:05 P.M.

Attest

Tonya D. Jenusaitis
Recording Secretary