

April 6, 2020

Ms. Jennifer Curtis, Planner
Town of Windham
8 School Road
Windham, ME 04062

Subject: Bangor Savings Bank Windham Branch/Office Building
745 & 747 Roosevelt Trail, Windham, Maine
Response to Staff Review Comments

Dear Ms. Curtis,

On behalf of Bangor Savings Bank (BSB), Sevee & Maher Engineers, Inc. (SME) is pleased to submit this comment response letter and supporting documentation for the Bangor Savings Bank Branch/Office Building project at 745 & 747 Roosevelt Trail in Windham. The drawings have been revised in response to staff review comments received in an email dated March 13, 2020 and Gorrill-Palmer traffic review comments received in an email dated 4/1/2020. SME is providing this letter to address review comments prior to the Planning Board meeting scheduled for April 13, 2020.

TOWN PLANNER:

- 1. Evidence meeting the requirements of 811.1.(d)(2)(ii): "The location and dimensions of all provisions for water supply and wastewater disposal, and evidence of their adequacy for the proposed use, including soils test pit data if on-site sewage disposal is proposed." (We usually accept an HHE-200)**

SME Response: SME submitted an electronic copy of a completed HHE-200 form to the Planning Office via email on April 1, 2020. A copy of the completed HHE-200 form is attached to this letter for reference.

- 2. Evidence of coordinating with PWD for public water hookup (Ability to Serve or equivalent)**

SME Response: A letter from PWD outlining their capacity to serve the project is included in the application package as Attachment E.

- 3. Ground floor elevations of existing buildings**

SME Response: Door sill elevations for existing buildings are included in the ALTA survey completed by Jones Associates. A copy of the ALTA survey is included in the project plan set.

4. **Location, front view, materials and dimensions of proposed signs with method for securing signs. (Also show existing signs, and indicate if they will stay, or indicate otherwise)**

SME Response: Building mounted signs are outlined on the architectural elevations included in the Application package as Attachment H. Design sheets from Neokraft Signs, Bangor Savings Bank's sign consultant, are attached to outline the location, front view, and dimensions for proposed free-standing signs for this project. All existing signs on the property will be removed before project completion.

5. **Show location and type of exterior lighting (show light poles on plan, and indicate type in details)**

SME Response: Light pole locations are outlined on plan sheet C-104. Cut sheets for exterior pole mounted light fixtures are included in the Application package as Attachment G.

6. **It is not clear from the plan that the designated right-turn-only entrance from northbound 302 is going to prohibit traffic from turning left from southbound 302 across northbound 302, to enter the site. Will the applicant please clarify what prohibits this movement and if it is adequate?**

SME Response: The geometry of the entrance island has been modified to further discourage entrance across the northbound travel lane from southbound US-302. Project plans have been updated to reflect this change. Copies of the updated plan sheets are attached for reference. We believe these modifications will keep alert, responsible drivers from using the entrance inappropriately.

7. **I see the recommendation for the intersection of Abby Road on the Traffic Analysis. I think it would be helpful if the applicant provided a diagram or plan and details showing the proposed pavement markings and sign**

SME Response: Project plans have been updated to include the pavement striping and signage recommendations outlined in the traffic analysis. Copies of the updated plan sheets are attached for reference.

TOWN ENGINEER:

1. **For infiltration Basin 2 (Pond 1CP1) the peak elevation for the water level in the basin calculated by HydroCad is 309.35' for the 25-yr storm compared to the top of the basin at 309.50'. Overflow, if/when it occurs, will likely flow onto the entrance to the drive-through on Route 115. The 0.15' of freeboard does not seem to be sufficient considering the overflow would go onto Rte. 115. It is recommended that the basin design be modified to provide at least 1 foot of freeboard.**

SME Response: Infiltration basin 2 (Pond 1CP1) is designed to provide 0.5 feet of freeboard above the emergency spillway elevation. Spot grades have been added to the grading plan for

clarity. Overflow is intended to travel overland to the municipal storm drain system in the right-of-way based on initial design recommendations from Town staff. Copies of the updated plan sheets, an updated stormwater quantity analysis, and updated post-development stormwater modeling calculations are attached for reference.

- 2. Although the amount of runoff flowing into the public right-of-way is being largely reduced, there are still about 5,000 - 6,000 SF flowing into Route 302 at the entrance to the project in this area. Other options to minimize the amount flowing onto Rte. 302 in this area should be considered.**

SME Response: Proposed improvements to site grading stormwater management will significantly reduce the peak flow and volume of stormwater runoff leaving the property and reduce the load on the existing municipal storm drain system. Further reductions in surface runoff from the property will require costly structural stormwater management devices that will burden the Applicant with long-term maintenance and potential replacement costs.

- 3. The entrance to the drive-through off of Route 115 appears to provide minimal room for queuing. The distance from the sidewalk on Route 115 is only about 80', which is room for about 4 vehicles. A traffic study has not yet been submitted, but when submitted, should evaluate whether the queuing distance is sufficient to prevent backing up onto Rte. 115.**

SME Response: The drive through is designed with two lanes to provide quick service and adequate queueing for bank patrons. The drive through is also equipped with a slip lane to minimize congestion. The site is also designed with open sight lines, which will allow patrons approaching the Bank to bypass the ME-115 site access, if necessary and enter the site from US-302 to queue internally. Based on historical use at other branches, the Bank views this as an extreme condition not typically experienced during normal operations.

Gorrill-Palmer Traffic Peer Review:

- 1. GP agrees with the use of the 10th edition of the Institute of Transportation Engineers' (ITE) Trip Generation manual. GP agrees that the most representative Land Use Codes (LUC) were used for the existing/proposed office area (LUC 710 – General Office) and proposed bank area (LUC 912 – Drive-In Bank). As mentioned in the report, there is not a representative land use code for retail. The LUC used (820 – Shopping Center) for the existing 938 SF retail building (iPhone repair store), in our opinion, does not accurately represent the use; however, based on the size of the retail building and potential other options that may have been used, changing this trip generation would not be expected to change any of the conclusions of the study.**

SME Response: No response necessary.

- 2. GP agrees with the existing trip generation for office and retail space.**

SME Response: No response necessary.

3. GP agrees with the proposed trip generation for office and bank development, with the exception of the PM Peak Hour of the Generator for the Bank, which we could not reproduce. Since the adjacent street trip generation is used for the remainder of the study and not the trip generation of the generator, the conclusions of the study would not change.

SME Response: No response necessary.

4. GP agrees with the methods used to seasonally and annually adjust the traffic counts to a 2021 no-build condition.

SME Response: No response necessary.

5. The Trip Assignments provided on Figure 4 do not appear to add from a roadway network perspective. The volumes entering and exiting the site appear correct, but the volumes flowing through the rest of the system do not appear to agree. Resulting changes to other figures or capacity analysis should be revisited.

SME Response: Sewall has addressed this comment in a response letter attached for reference.

6. The results of the traffic analysis for level of service are correctly identified from the simulation to the report (see above comment for possible changes). The applicant has noted that the level of service of one approach does change from an "E" to an "F". Per the Town of Windham Ordinance, if the level of service of an intersection is an "E" or worse, the level of service should not decrease because of the additional traffic. The overall intersection level of service is not provided. The applicants traffic engineer should provide a response to this item. This criteria can be waived by the Planning Board.

SME Response: Sewall has addressed this comment in a response letter attached for reference.

7. It should be noted that the results of the capacity analysis provided in the study are most likely not accurate due to the impacts on traffic flow from the adjacent signalized intersection. However, the results provided in the study can be used as an indicator of the level of impact of the project on the intersection.

SME Response: Sewall has addressed this comment in a response letter attached for reference.

8. GP agrees with the safety analysis for High Crash Locations and mitigation tactics to improve these locations. This includes additional striping and signage to not block the intersection.

SME Response: No response necessary.

9. It should be noted that the proposed access management measures (reduction of driveways and restriction of movements) to this corner should have a net positive impact to the overall area, reducing potential conflicts and improving safety. However, the applicant should

address the Town's double frontage requirements. We recommend the applicant revisit the channelization of the proposed driveways to improve the enforcement of right turn movements only. As currently shown at both driveways, the restrictions do not appear to be prohibitive enough.

SME Response: Municipal Ordinance Section 812(B) (2)(e) outlines where a lot has frontage on two (2) or more streets, the primary access to and egress from the lot shall be provided from the street where there is less potential for traffic congestion and for traffic and pedestrians hazards. Access from other streets may be allowed if it is safe and does not promote shortcutting through the site.

SME believes the current design adheres to this standard. The main site entrance is located on Abby Road, which is the street where there is less potential for traffic congestion and for traffic and pedestrian hazards. Access from ME-115 and US-302 are designed to be safe. Internal vehicular circulation routes do not promote shortcutting through the site.

SME has updated entrance geometry at the US-302 and ME-115 site entrances to improve access management and access drive channelization. Copies of the updated plan sheets are attached for reference. We believe these modifications will encourage alert, responsible drivers to follow proposed circulation routes on the property and at entrances and exits to the public right of way.

If you have any questions or comments, please do not hesitate to contact me.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

Jeffrey Read P.E.
Project Manager

cc: Mark Arienti, P.E, Town Engineer
David Latulippe, CJ Developers
Jason Donovan, Bangor Savings Bank

Attachments

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. Health & Human Services
Div of Environmental Health, 11 SHS
(207) 287-2070 Fax: (207) 287-4172

PROPERTY LOCATION		>> CAUTION: LPI APPROVAL REQUIRED <<	
City, Town, or Plantation	Windham	Town/City _____	Permit # _____
Street or Road	745 Roosevelt Trail	Date Permit Issued ____/____/____	Fee: \$ _____ Double Fee Charged []
Subdivision, Lot #		L.P.I. # _____	
OWNER/APPLICANT INFORMATION		Local Plumbing Inspector Signature _____ <input type="checkbox"/> Owner <input type="checkbox"/> Town <input type="checkbox"/> State The Subsurface Wastewater Disposal System shall not be installed until a Permit is issued by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.	
Name (last, first, MI) _____			
<input checked="" type="checkbox"/> Owner Donovan, Jason (for Bangor Savings Bank) <input type="checkbox"/> Applicant			
Mailing Address of Owner/Applicant _____			
Daytime Tel. #		Municipal Tax Map # _____ Lot # _____	
OWNER OR APPLICANT STATEMENT		CAUTION: INSPECTION REQUIRED	
I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.		I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.	
Signature of Owner or Applicant _____ Date _____		Local Plumbing Inspector Signature _____ (2nd) date approved _____	
PERMIT INFORMATION			
TYPE OF APPLICATION <input checked="" type="checkbox"/> 1. First Time System <input type="checkbox"/> 2. Replacement System Type replaced: _____ Year installed: _____ <input type="checkbox"/> 3. Expanded System <input type="checkbox"/> a. <25% Expansion <input type="checkbox"/> b. >25% Expansion <input type="checkbox"/> 4. Experimental System <input type="checkbox"/> 5. Seasonal Conversion	THIS APPLICATION REQUIRES <input checked="" type="checkbox"/> 1. No Rule Variance <input type="checkbox"/> 2. First Time System Variance <input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval <input type="checkbox"/> 3. Replacement System Variance <input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval <input type="checkbox"/> 4. Minimum Lot Size Variance <input type="checkbox"/> 5. Seasonal Conversion Permit	DISPOSAL SYSTEM COMPONENTS <input checked="" type="checkbox"/> 1. Complete Non-engineered System <input type="checkbox"/> 2. Primitive System (graywater & alt. toilet) <input type="checkbox"/> 3. Alternative Toilet, specify: _____ <input type="checkbox"/> 4. Non-engineered Treatment Tank (only) <input type="checkbox"/> 5. Holding Tank, _____ gallons <input type="checkbox"/> 6. Non-engineered Disposal Field (only) <input type="checkbox"/> 7. Separated Laundry System <input type="checkbox"/> 8. Complete Engineered System (2000 gpd or more) <input type="checkbox"/> 9. Engineered Treatment Tank (only) <input type="checkbox"/> 10. Engineered Disposal Field (only) <input type="checkbox"/> 11. Pre-treatment, specify: _____ <input type="checkbox"/> 12. Miscellaneous Components	
SIZE OF PROPERTY 0.9 +/- _____ <input type="checkbox"/> SQ. FT. <input checked="" type="checkbox"/> ACRES	DISPOSAL SYSTEM TO SERVE <input type="checkbox"/> 1. Single Family Dwelling Unit, No. of Bedrooms: _____ <input type="checkbox"/> 2. Multiple Family Dwelling, No. of Units: _____ <input checked="" type="checkbox"/> 3. Other: Bank and Insurance Company (specify) Current Use <input type="checkbox"/> Seasonal <input checked="" type="checkbox"/> Year Round <input type="checkbox"/> Undeveloped		
SHORELAND ZONING <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	TYPE OF WATER SUPPLY <input type="checkbox"/> 1. Drilled Well <input type="checkbox"/> 2. Dug Well <input type="checkbox"/> 3. Private <input checked="" type="checkbox"/> 4. Public <input type="checkbox"/> 5. Other		
DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)			
TREATMENT TANK <input checked="" type="checkbox"/> 1. Concrete <input checked="" type="checkbox"/> a. Regular <input type="checkbox"/> b. Low Profile <input type="checkbox"/> 2. Plastic <input type="checkbox"/> 3. Other: _____ CAPACITY: 1,000 GAL.	DISPOSAL FIELD TYPE & SIZE <input type="checkbox"/> 1. Stone Bed <input type="checkbox"/> 2. Stone Trench <input checked="" type="checkbox"/> 3. Proprietary Device <input type="checkbox"/> a. cluster array <input type="checkbox"/> c. Linear <input checked="" type="checkbox"/> b. regular load <input type="checkbox"/> d. H-20 load <input type="checkbox"/> 4. Other: _____ SIZE: 768 _____ <input checked="" type="checkbox"/> sq. ft. <input type="checkbox"/> lin. ft.	GARBAGE DISPOSAL UNIT <input checked="" type="checkbox"/> 1. No <input type="checkbox"/> 2. Yes <input type="checkbox"/> 3. Maybe If Yes or Maybe, specify one below: <input type="checkbox"/> a. multi-compartment tank <input type="checkbox"/> b. _____ tanks in series <input type="checkbox"/> c. increase in tank capacity <input type="checkbox"/> d. Filter on Tank Outlet	DESIGN FLOW 288 _____ gallons per day BASED ON: <input checked="" type="checkbox"/> 1. Table 4A (dwelling unit(s)) <input type="checkbox"/> 2. Table 4C (other facilities) SHOW CALCULATIONS for other facilities 24 employees w/no showers at 12 gpd each (288 gpd) <input type="checkbox"/> 3. Section 4G (meter readings) ATTACH WATER METER DATA
SOIL DATA & DESIGN CLASS PROFILE CONDITION 5 / B at Observation Hole # TP-1 Depth >65" of Most Limiting Soil Factor	DISPOSAL FIELD SIZING <input checked="" type="checkbox"/> 1. Medium---2.6 sq. ft. / gpd <input type="checkbox"/> 2. Medium---Large 3.3 sq. ft. / gpd <input type="checkbox"/> 3. Large---4.1 sq. ft. / gpd <input type="checkbox"/> 4. Extra Large---5.0 sq. ft. / gpd	EFFLUENT/EJECTOR PUMP <input type="checkbox"/> Not Required depends on level of <input checked="" type="checkbox"/> May Be Required plumbing in proposed bank <input type="checkbox"/> Required Specify only for engineered systems: DOSE: _____ gallons	LATITUDE AND LONGITUDE at center of disposal area Lat. N 43 _____ d 50 _____ m 5.2 _____ s Lon. W 70 _____ d 26 _____ m 16.4 _____ s if g.p.s, state margin of error: _____
SITE EVALUATOR STATEMENT			
I certify that on <u>3/25/2020</u> (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).			
<u>Andrew Gobeil</u> Site Evaluator Signature		#370 SE #	3/30/2020 Date
Andrew Gobeil Site Evaluator Name Printed		(207) 829-5016 Telephone Number	apg@smemaine.com E-mail Address
Note : Changes to or deviations from the design should be confirmed with the Site Evaluator.			

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services
Division of Health Engineering, Station 10
(207) 287-5672 Fax: (207) 287-3165

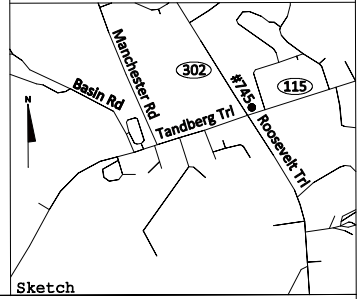
Town, City, Plantation
Windham

Street, Road, Subdivision
745 Roosevelt Trail

Owner or Applicant Name
Bangor Savings Bank

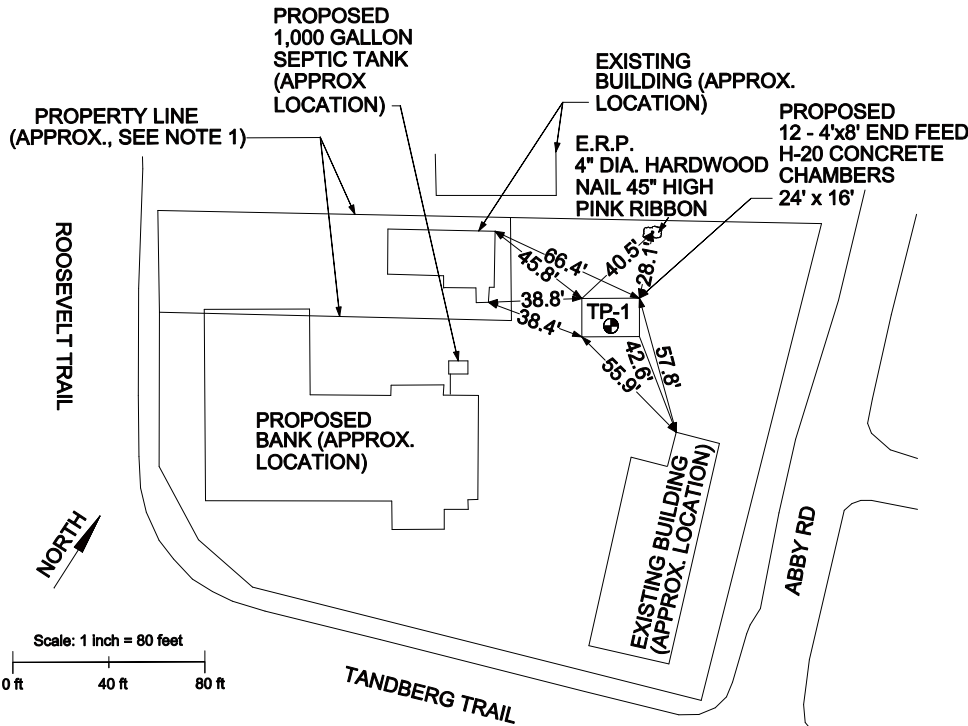
SITE PLAN Scale 1" = 80 ft.

SITE LOCATION PLAN
(map from Maine Atlas recommended)



Sketch

- NOTES:**
1. Property boundaries shown are approximate. Disposal field is located at least 10 feet from property line based on information provided by the owner.
 2. Proposed septic tank must be located at least 8 feet from proposed full-foundation.
 3. Area served by public water supply.
 4. Proposed foundation must be at least 20 feet from proposed disposal field.
 5. It is the responsibility of the contractor/excavator to confirm that there are no underground utilities (e.g., electric, gas, water) in areas required to be excavated.
 6. Proposed stormwater detention basin must be located at least 50 feet from proposed septic tank and disposal field.



SOIL PROFILE DESCRIPTION AND CLASSIFICATION

(Location of Observation Holes Shown Above)

Observation Hole # **TP-1** ☒ Test Pit ☐ Boring

0 " Depth of organic horizon above mineral soil

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Mottling
0	Fine Sandy Loam (fill)	Friable	10YR 6/6	
6				
12	Gravelly Fine to Course Sand (fill)		10YR 8/6	
18				
24				
30	Loamy Fine Sand		10YR 4/3	
36				
42	Gravelly Fine to Course Sand to 65"+	Loose to 65"+	10YR 8/6	None to 65"+
48				
Soil Profile		Classification	Slope	Limiting Factor
5		B	1	>65"
		Condition	Percent	Depth

Observation Hole # ☐ Test Pit ☐ Boring

" Depth of organic horizon above mineral soil

Depth below mineral soil surface (inches)	Texture	Consistency	Color	Mottling
0				
6				
12				
18				
24				
30				
36				
42				
48				
Soil Profile		Classification	Slope	Limiting Factor
				<input type="checkbox"/> Groundwater
				<input type="checkbox"/> Restrictive Layer
				<input type="checkbox"/> Bedrock

Andrew J. Jolani
Site Evaluator Signature

#370
SE #

3/30/2020
Date

Page 2 of 3
HHE-200 Rev. 10/02

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION		Maine Department of Human Services Division of Health Engineering, Station 10 (207) 287-5672 Fax: (207) 287-3165
Town, City, Plantation Windham	Street, Road, Subdivision 745 Roosevelt Trail	Owner or Applicant Name Bangor Savings Bank

SUBSURFACE WASTEWATER DISPOSAL PLAN

PROPERTY LINE
(APPROX., SEE PAGE 2, NOTE 1)

Scale: 1" = 30 ft.

Scale: 1" = 30 ft.

0 ft 15 ft 30 ft

NOTES:

1. Insulate distribution box.
2. All construction materials and installation methods must be in accordance with the State of Maine Subsurface Wastewater Disposal Rules (10-144, CMR 241).
3. Install 4-inch diameter PVC effluent line inside 6-inch diameter schedule 80 PVC conduit.

BACKFILL REQUIREMENTS Depth of Backfill (upslope) <u>0"</u> Depth of Backfill (downslope) <u>0"</u> DEPTHS AT CROSS-SECTION (shown below)	CONSTRUCTION ELEVATIONS <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Finished Grade Elevation</td> <td style="width: 20%;">(at Point A)</td> <td style="width: 40%; text-align: right;">-34"</td> </tr> <tr> <td>Top of Distribution Pipe</td> <td>(at Point A)</td> <td style="text-align: right;">-70"</td> </tr> <tr> <td>Bottom of Disposal Field</td> <td>(at Point A)</td> <td style="text-align: right;">-81"</td> </tr> </table>	Finished Grade Elevation	(at Point A)	-34"	Top of Distribution Pipe	(at Point A)	-70"	Bottom of Disposal Field	(at Point A)	-81"	ELEVATION REFERENCE POINT Location & Description: Nail 45" above ground in 4" diameter hardwood (see above). Reference Elevation is: 0.0" or: X
Finished Grade Elevation	(at Point A)	-34"									
Top of Distribution Pipe	(at Point A)	-70"									
Bottom of Disposal Field	(at Point A)	-81"									

DISPOSAL FIELD CROSS SECTION

NOTE: 1. SCARIFY GROUND SURFACE BELOW ALL FILL. USE GRAVELLY COARSE SAND WITHIN 3' OF CONCRETE CHAMBERS.

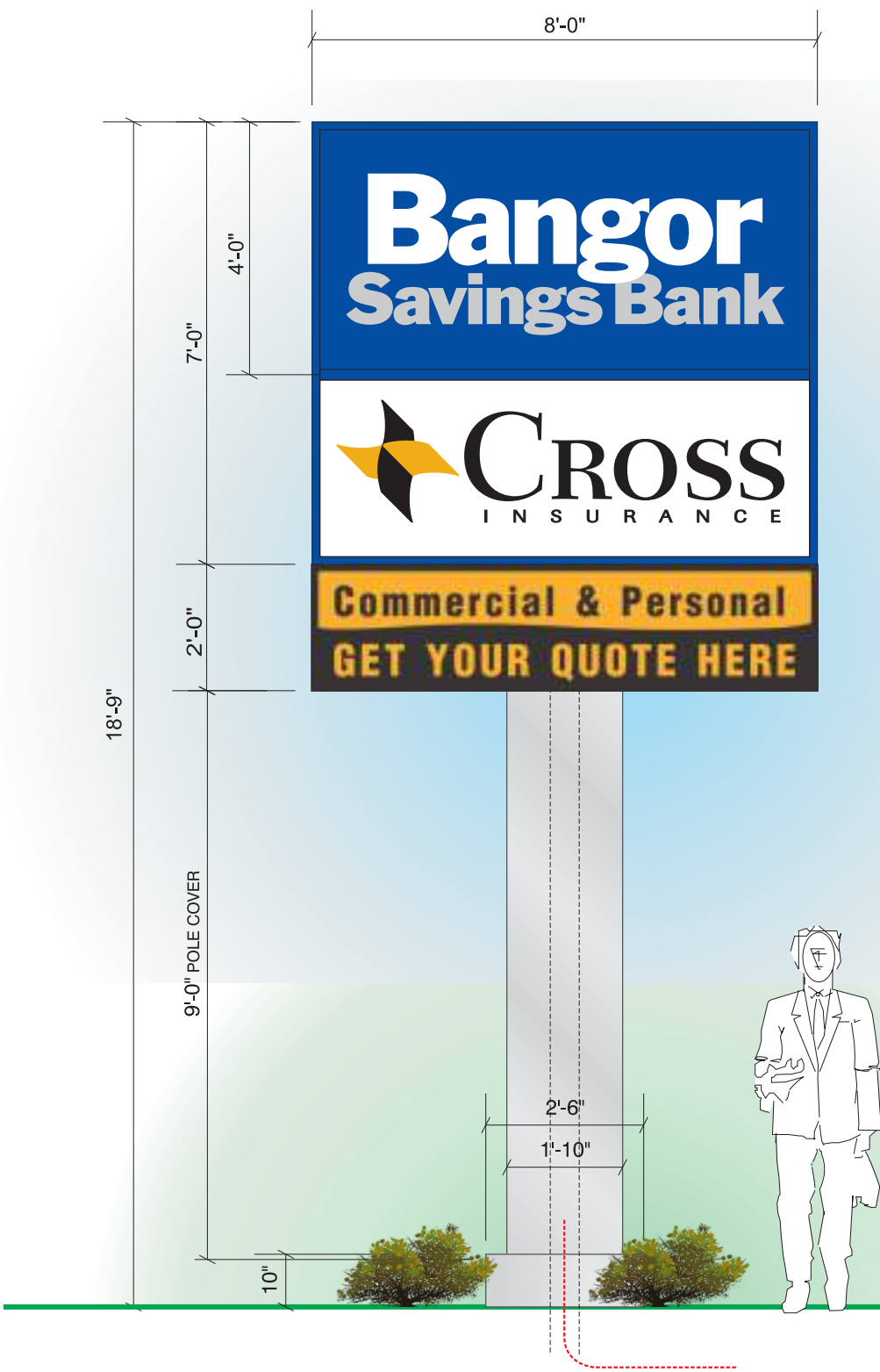
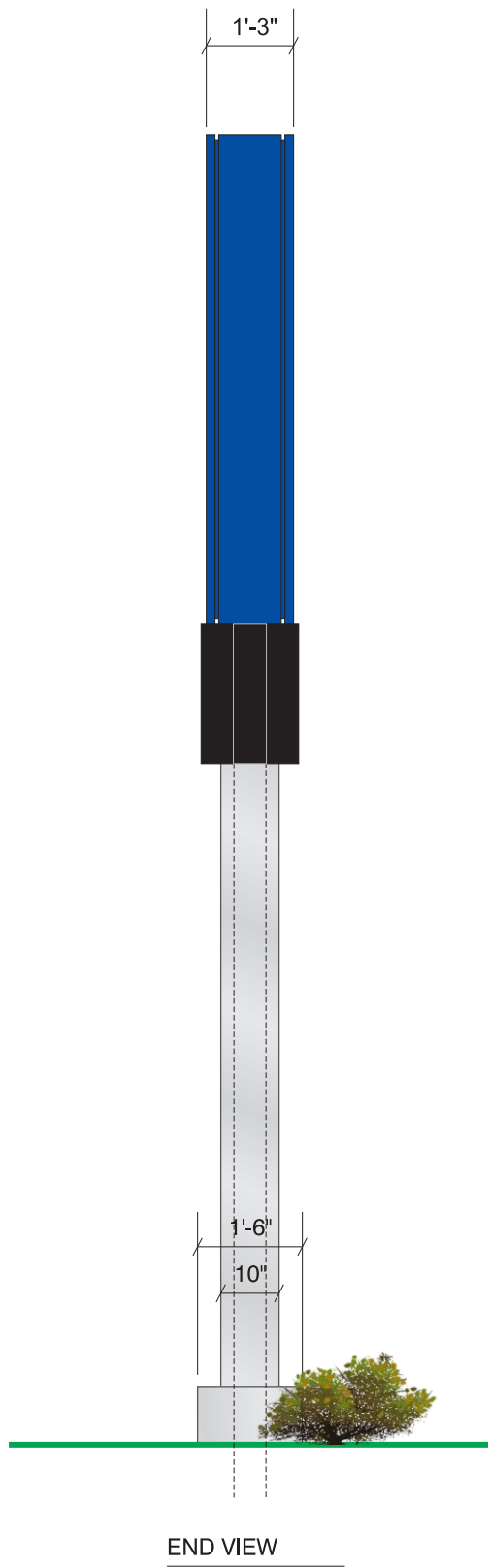
3' 16' 3'

Scales:

Vertical: 1" = 5 ft.

Horizontal: 1" = 5 ft.

<i>Andrew Dolan</i> Site Evaluator Signature	#370 SE #	3/30/2020 Date
Page 3 of 3 HHE-200 Rev. 10/02		



SIGNCOMP WIDEBODY [#2005] ALUMINUM EXTRUDED CABINET, 1½" RETAINER, TOP AND BOTTOM AND 1½" DUAL FRAME AND COVER ON SIDES, PAINTED 'AKZO' SIGN 4402, WHITE 'LED' ILLUMINATION,

'BANGOR' - 3/16" THICK TRANS WHITE SG ACRYLIC FACES WITH GSP TRANS COBALT BLUE [230-157] VINYL BACKGROUND AND KNOCKED OUT TRANS WHITE COPY; GSP TRANS SILVER OVERLAY ON "SAVINGS BANK",

'CROSS' - 3/16" THICK TRANS WHITE SG ACRYLIC FACES WITH MANGO TRANSL (230-125) AND MATTE BLACK,

'EMC' - FULL COLOR

FABRICATED .080 CLEAR ANODIZED ALUMINUM POLE COVER AND PEDESTAL

STEEL POLES, SET IN CONCRETE, ELECTRICAL TO SIGN LOCATION BY OWNER

DOUBLE-FACE INTERNALLY ILLUMINATED PYLON - RT 302
SCALE: 3/8"=1'-0" (1) REQUIRED

72
SQ FT

SEE SITE PLAN, PAGE 3

NEOKRAFT

SIGNS

Neokraft Signs, Inc.
647 Pleasant Street
Lewiston, Maine 04240
207.782.9654 | 800.339.2258
neokraft.com

Custom Sign Fabrication

These plans are the exclusive property of Neokraft Signs, Inc. and are the result of the original work of its employees. They are submitted to Neokraft's client for the sole purpose of consideration of whether to purchase these plans or to purchase from Neokraft a sign manufactured according to these plans.

Distribution or exhibition of these plans to anyone other than employees of said client, or use of these plans to construct a sign similar to the one embodied herein, is expressly forbidden. In the event that such exhibition or construction occurs, Neokraft expects to be reimbursed \$1500 in compensation for time and effort entailed in creating these plans.

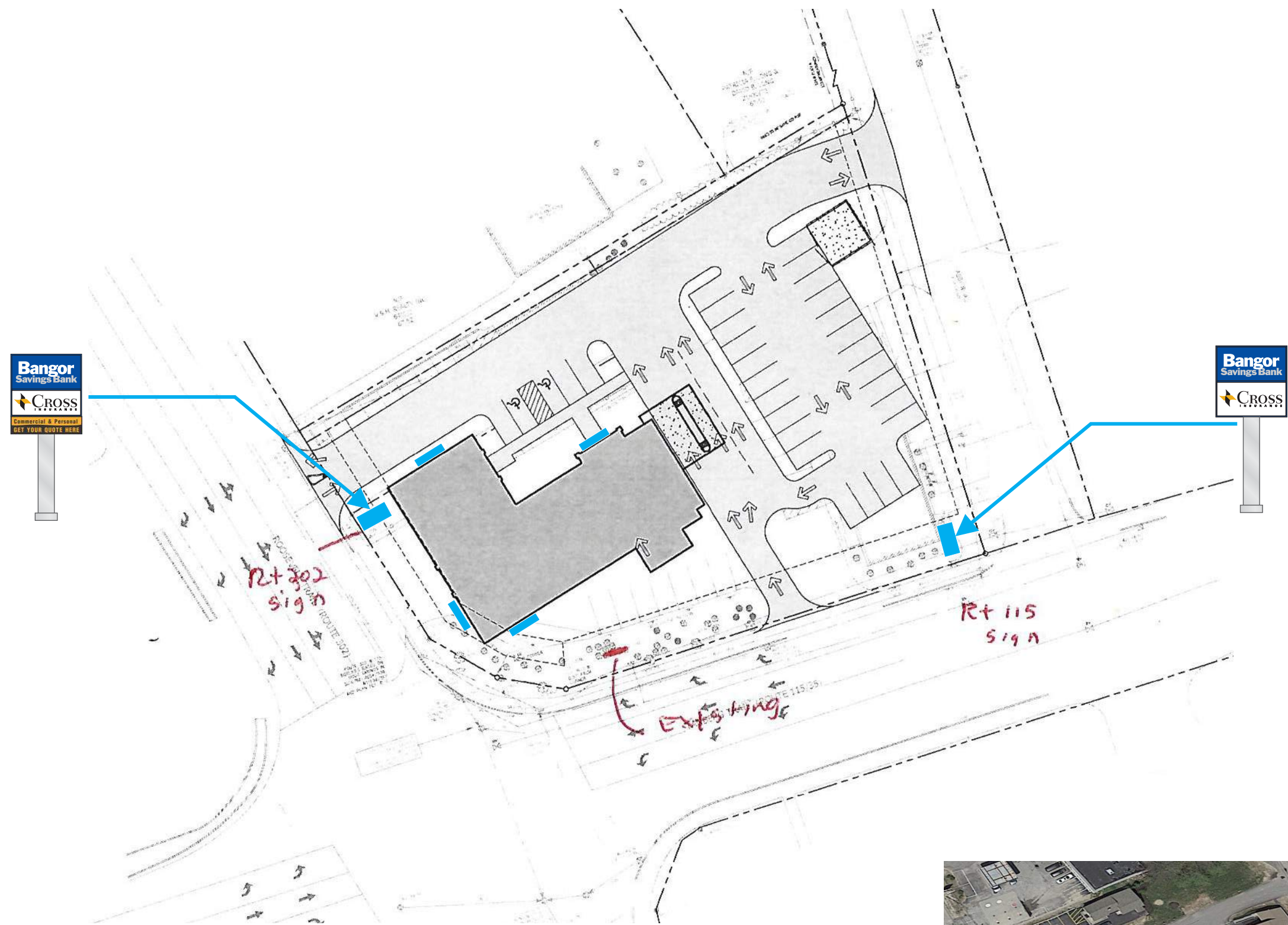
PRESENTATION

BANGOR SAVINGS BANK

@8338-3

ACCT ID:	012022
LOCATION:	745 ROOSEVELT TRAIL WINDHAM, MAINE
DRAWING NO:	1 OF 3
DRAWN BY:	BK REP: MM
DATE:	03.23.2020
QUOTE:	@8338-2
GEN REF:	18/3677.1, 19/5224.3, 16/1116-1.1

©COPYRIGHT 2019, BY NEOKRAFT SIGNS, INC. — X9



SITE PLAN - PYLON LOCATIONS
NO SCALE



NEOKRAFT SIGNS

Neokraft Signs, Inc.
647 Pleasant Street
Lewiston, Maine 04240
207.782.9654 | 800.339.2258
neokraft.com

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PRESENTATION

BANGOR SAVINGS BANK @8338-3

ACCT ID:	012022
LOCATION:	745 ROOSEVELT TRAIL WINDHAM, MAINE
DRAWING NO:	3 OF 3
DRAWN BY:	BK REP: MM
DATE:	03.23.2020
QUOTE:	@8338-2
GEN REF:	18/3677.1, 19/5224.3, 16/1116-1.1

5.0 STORMWATER QUANTITY ANALYSIS (Revised April 3, 2020)

Stormwater quantity is managed to the maximum extent practicable through minimizing the amount of impervious area on the site and utilizing the storage characteristics of the infiltration basins in the southern portion of the project area.

Stormwater peak flow rates were modeled for the 2-, 10-, and 25-year/24-hour storm events with Type III Soil Conservation Service rainfall distribution, using the HydroCAD computer modeling system by Applied Microcomputer Systems of Chocorua, New Hampshire. The peak flow rates at each Analysis Point are summarized in Table 1. Copies of the calculations for the pre-development and post-development models are provided in Appendix B.

Table 1

STORMWATER QUANTITY SUMMARY

AP	2-yr Storm		10-yr Storm		25-yr Storm	
	Pre- (cfs)	Post- (cfs)	Pre- (cfs)	Post- (cfs)	Pre- (cfs)	Post- (cfs)
1	2.29	1.23	4.43	2.43	6.21	3.45

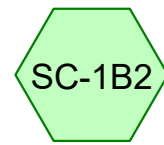
Site drainage from the proposed redevelopment will generally follow the pre-development conditions. As outlined in Table 1, our model indicates decreased peak flow rates at AP-1 for the post-development conditions, which represents a reduction in surface runoff to the municipal storm drain system as compared to the existing conditions.



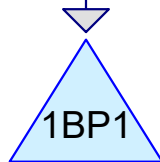
Perimeter



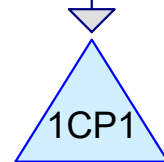
Roof



Parking Lot



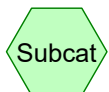
Infiltration Basin #1



Infiltration Basin #2



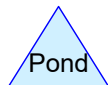
Analysis Point #1



Subcat



Reach



Pond



Link

Routing Diagram for BSB Windham - Proposed 04032020
Prepared by Sevee & Maher Engineers, Inc., Printed 4/3/2020
HydroCAD® 10.10-3a s/n 01260 © 2020 HydroCAD Software Solutions LLC

BSB Windham - Proposed 04032020*Type III 24-hr 2-yr Storm Rainfall=3.10"*

Prepared by Sevee & Maher Engineers, Inc.

Printed 4/3/2020

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC-1A: Perimeter

Runoff Area=36,666 sf 68.23% Impervious Runoff Depth>1.16"
Tc=5.0 min CN=79 Runoff=1.23 cfs 0.082 af

Subcatchment SC-1B1: Roof

Runoff Area=10,924 sf 64.08% Impervious Runoff Depth>1.05"
Tc=5.0 min CN=77 Runoff=0.33 cfs 0.022 af

Subcatchment SC-1B2: Parking Lot

Runoff Area=17,180 sf 80.42% Impervious Runoff Depth>1.63"
Tc=5.0 min CN=86 Runoff=0.81 cfs 0.054 af

Pond 1BP1: Infiltration Basin #1

Peak Elev=308.11' Storage=88 cf Inflow=0.33 cfs 0.022 af
Discarded=0.18 cfs 0.022 af Primary=0.00 cfs 0.000 af Outflow=0.18 cfs 0.022 af

Pond 1CP1: Infiltration Basin #2

Peak Elev=308.56' Storage=529 cf Inflow=0.81 cfs 0.054 af
Discarded=0.23 cfs 0.054 af Primary=0.00 cfs 0.000 af Outflow=0.23 cfs 0.054 af

Link AP-1: Analysis Point #1

Inflow=1.23 cfs 0.082 af
Primary=1.23 cfs 0.082 af

Summary for Subcatchment SC-1A: Perimeter

Runoff = 1.23 cfs @ 12.08 hrs, Volume= 0.082 af, Depth> 1.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Storm Rainfall=3.10"

Area (sf)	CN	Description
131	32	Woods/grass comb., Good, HSG A
14,767	98	Paved roads w/curbs & sewers, HSG A
11,517	39	Pasture/grassland/range, Good, HSG A
10,251	98	Paved parking, HSG A
36,666	79	Weighted Average
11,648		31.77% Pervious Area
25,018		68.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes Minumum

Summary for Subcatchment SC-1B1: Roof

Runoff = 0.33 cfs @ 12.08 hrs, Volume= 0.022 af, Depth> 1.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Storm Rainfall=3.10"

Area (sf)	CN	Description
7,000	98	Roofs, HSG A
3,924	39	Pasture/grassland/range, Good, HSG A
10,924	77	Weighted Average
3,924		35.92% Pervious Area
7,000		64.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes min

Summary for Subcatchment SC-1B2: Parking Lot

Runoff = 0.81 cfs @ 12.08 hrs, Volume= 0.054 af, Depth> 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Storm Rainfall=3.10"

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Type III 24-hr 2-yr Storm Rainfall=3.10"

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Area (sf)	CN	Description
13,816	98	Paved parking, HSG A
3,364	39	Pasture/grassland/range, Good, HSG A
17,180	86	Weighted Average
3,364		19.58% Pervious Area
13,816		80.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes minimum

Summary for Pond 1BP1: Infiltration Basin #1

Inflow Area = 0.251 ac, 64.08% Impervious, Inflow Depth > 1.05" for 2-yr Storm event
 Inflow = 0.33 cfs @ 12.08 hrs, Volume= 0.022 af
 Outflow = 0.18 cfs @ 12.24 hrs, Volume= 0.022 af, Atten= 46%, Lag= 9.2 min
 Discarded = 0.18 cfs @ 12.24 hrs, Volume= 0.022 af
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 308.11' @ 12.24 hrs Surf.Area= 833 sf Storage= 88 cf

Plug-Flow detention time= 3.3 min calculated for 0.022 af (100% of inflow)

Center-of-Mass det. time= 3.0 min (814.7 - 811.7)

Volume	Invert	Avail.Storage	Storage Description
#1	308.00'	3,645 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
308.00	748	0	0	748
309.00	1,683	1,184	1,184	1,691
310.00	3,332	2,461	3,645	3,349

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.00'	9.070 in/hr Exfiltration over Wetted area
#2	Primary	309.50'	10.0' long x 4.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66
			2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.18 cfs @ 12.24 hrs HW=308.11' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.18 cfs)**Primary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=308.00' (Free Discharge)↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 1CP1: Infiltration Basin #2

Inflow Area = 0.394 ac, 80.42% Impervious, Inflow Depth > 1.63" for 2-yr Storm event
 Inflow = 0.81 cfs @ 12.08 hrs, Volume= 0.054 af
 Outflow = 0.23 cfs @ 12.44 hrs, Volume= 0.054 af, Atten= 72%, Lag= 21.7 min
 Discarded = 0.23 cfs @ 12.44 hrs, Volume= 0.054 af
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 308.56' @ 12.44 hrs Surf.Area= 1,083 sf Storage= 529 cf

Plug-Flow detention time= 14.6 min calculated for 0.053 af (100% of inflow)
 Center-of-Mass det. time= 14.4 min (802.4 - 788.0)

Volume	Invert	Avail.Storage	Storage Description	
#1	308.00'	1,788 cf	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
308.00	810	0	0	810
309.00	1,325	1,057	1,057	1,338
309.50	1,602	731	1,788	1,623

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.00'	9.070 in/hr Exfiltration over Wetted area
#2	Primary	309.25'	6.0' long x 4.0' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00			
2.50 3.00 3.50 4.00 4.50 5.00 5.50			
Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66			
2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32			

Discarded OutFlow Max=0.23 cfs @ 12.44 hrs HW=308.56' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.23 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=308.00' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link AP-1: Analysis Point #1

Inflow Area = 1.487 ac, 70.76% Impervious, Inflow Depth > 0.66" for 2-yr Storm event
 Inflow = 1.23 cfs @ 12.08 hrs, Volume= 0.082 af
 Primary = 1.23 cfs @ 12.08 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

BSB Windham - Proposed 04032020*Type III 24-hr 10-yr Storm Rainfall=4.60"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC-1A: Perimeter

Runoff Area=36,666 sf 68.23% Impervious Runoff Depth>2.29"
Tc=5.0 min CN=79 Runoff=2.43 cfs 0.161 af

Subcatchment SC-1B1: Roof

Runoff Area=10,924 sf 64.08% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=77 Runoff=0.67 cfs 0.044 af

Subcatchment SC-1B2: Parking Lot

Runoff Area=17,180 sf 80.42% Impervious Runoff Depth>2.91"
Tc=5.0 min CN=86 Runoff=1.42 cfs 0.096 af

Pond 1BP1: Infiltration Basin #1

Peak Elev=308.41' Storage=378 cf Inflow=0.67 cfs 0.044 af
Discarded=0.23 cfs 0.044 af Primary=0.00 cfs 0.000 af Outflow=0.23 cfs 0.044 af

Pond 1CP1: Infiltration Basin #2

Peak Elev=309.14' Storage=1,247 cf Inflow=1.42 cfs 0.096 af
Discarded=0.30 cfs 0.096 af Primary=0.00 cfs 0.000 af Outflow=0.30 cfs 0.096 af

Link AP-1: Analysis Point #1

Inflow=2.43 cfs 0.161 af
Primary=2.43 cfs 0.161 af

Summary for Subcatchment SC-1A: Perimeter

Runoff = 2.43 cfs @ 12.08 hrs, Volume= 0.161 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Storm Rainfall=4.60"

Area (sf)	CN	Description
131	32	Woods/grass comb., Good, HSG A
14,767	98	Paved roads w/curbs & sewers, HSG A
11,517	39	Pasture/grassland/range, Good, HSG A
10,251	98	Paved parking, HSG A
36,666	79	Weighted Average
11,648		31.77% Pervious Area
25,018		68.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes Minumum

Summary for Subcatchment SC-1B1: Roof

Runoff = 0.67 cfs @ 12.08 hrs, Volume= 0.044 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Storm Rainfall=4.60"

Area (sf)	CN	Description
7,000	98	Roofs, HSG A
3,924	39	Pasture/grassland/range, Good, HSG A
10,924	77	Weighted Average
3,924		35.92% Pervious Area
7,000		64.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes min

Summary for Subcatchment SC-1B2: Parking Lot

Runoff = 1.42 cfs @ 12.07 hrs, Volume= 0.096 af, Depth> 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Storm Rainfall=4.60"

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Type III 24-hr 10-yr Storm Rainfall=4.60"

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Area (sf)	CN	Description
13,816	98	Paved parking, HSG A
3,364	39	Pasture/grassland/range, Good, HSG A
17,180	86	Weighted Average
3,364		19.58% Pervious Area
13,816		80.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes mininum

Summary for Pond 1BP1: Infiltration Basin #1

Inflow Area = 0.251 ac, 64.08% Impervious, Inflow Depth > 2.13" for 10-yr Storm event
 Inflow = 0.67 cfs @ 12.08 hrs, Volume= 0.044 af
 Outflow = 0.23 cfs @ 12.39 hrs, Volume= 0.044 af, Atten= 66%, Lag= 18.7 min
 Discarded = 0.23 cfs @ 12.39 hrs, Volume= 0.044 af
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 308.41' @ 12.39 hrs Surf.Area= 1,089 sf Storage= 378 cf

Plug-Flow detention time= 10.6 min calculated for 0.044 af (100% of inflow)
 Center-of-Mass det. time= 10.3 min (806.1 - 795.7)

Volume	Invert	Avail.Storage	Storage Description
#1	308.00'	3,645 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
308.00	748	0	0	748
309.00	1,683	1,184	1,184	1,691
310.00	3,332	2,461	3,645	3,349

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.00'	9.070 in/hr Exfiltration over Wetted area
#2	Primary	309.50'	10.0' long x 4.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66
			2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.23 cfs @ 12.39 hrs HW=308.41' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.23 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=308.00' (Free Discharge)
 ↑ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 1CP1: Infiltration Basin #2

Inflow Area = 0.394 ac, 80.42% Impervious, Inflow Depth > 2.91" for 10-yr Storm event
 Inflow = 1.42 cfs @ 12.07 hrs, Volume= 0.096 af
 Outflow = 0.30 cfs @ 12.50 hrs, Volume= 0.096 af, Atten= 79%, Lag= 25.6 min
 Discarded = 0.30 cfs @ 12.50 hrs, Volume= 0.096 af
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 309.14' @ 12.50 hrs Surf.Area= 1,400 sf Storage= 1,247 cf

Plug-Flow detention time= 31.4 min calculated for 0.095 af (100% of inflow)
 Center-of-Mass det. time= 31.2 min (805.6 - 774.4)

Volume	Invert	Avail.Storage	Storage Description
#1	308.00'	1,788 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
308.00	810	0	0	810
309.00	1,325	1,057	1,057	1,338
309.50	1,602	731	1,788	1,623

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.00'	9.070 in/hr Exfiltration over Wetted area
#2	Primary	309.25'	6.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.30 cfs @ 12.50 hrs HW=309.14' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.30 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=308.00' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link AP-1: Analysis Point #1

Inflow Area = 1.487 ac, 70.76% Impervious, Inflow Depth > 1.30" for 10-yr Storm event
 Inflow = 2.43 cfs @ 12.08 hrs, Volume= 0.161 af
 Primary = 2.43 cfs @ 12.08 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment SC-1A: Perimeter

Runoff Area=36,666 sf 68.23% Impervious Runoff Depth>3.28"
Tc=5.0 min CN=79 Runoff=3.45 cfs 0.230 af

Subcatchment SC-1B1: Roof

Runoff Area=10,924 sf 64.08% Impervious Runoff Depth>3.09"
Tc=5.0 min CN=77 Runoff=0.97 cfs 0.065 af

Subcatchment SC-1B2: Parking Lot

Runoff Area=17,180 sf 80.42% Impervious Runoff Depth>3.98"
Tc=5.0 min CN=86 Runoff=1.92 cfs 0.131 af

Pond 1BP1: Infiltration Basin #1

Peak Elev=308.67' Storage=682 cf Inflow=0.97 cfs 0.065 af
Discarded=0.28 cfs 0.064 af Primary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.064 af

Pond 1CP1: Infiltration Basin #2

Peak Elev=309.35' Storage=1,554 cf Inflow=1.92 cfs 0.131 af
Discarded=0.32 cfs 0.120 af Primary=0.45 cfs 0.010 af Outflow=0.77 cfs 0.131 af

Link AP-1: Analysis Point #1

Inflow=3.45 cfs 0.240 af
Primary=3.45 cfs 0.240 af

Summary for Subcatchment SC-1A: Perimeter

Runoff = 3.45 cfs @ 12.08 hrs, Volume= 0.230 af, Depth> 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Storm Rainfall=5.80"

Area (sf)	CN	Description
131	32	Woods/grass comb., Good, HSG A
14,767	98	Paved roads w/curbs & sewers, HSG A
11,517	39	Pasture/grassland/range, Good, HSG A
10,251	98	Paved parking, HSG A
36,666	79	Weighted Average
11,648		31.77% Pervious Area
25,018		68.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes Minumum

Summary for Subcatchment SC-1B1: Roof

Runoff = 0.97 cfs @ 12.08 hrs, Volume= 0.065 af, Depth> 3.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Storm Rainfall=5.80"

Area (sf)	CN	Description
7,000	98	Roofs, HSG A
3,924	39	Pasture/grassland/range, Good, HSG A
10,924	77	Weighted Average
3,924		35.92% Pervious Area
7,000		64.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes min

Summary for Subcatchment SC-1B2: Parking Lot

Runoff = 1.92 cfs @ 12.07 hrs, Volume= 0.131 af, Depth> 3.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Storm Rainfall=5.80"

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Type III 24-hr 25-yr Storm Rainfall=5.80"

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Area (sf)	CN	Description
13,816	98	Paved parking, HSG A
3,364	39	Pasture/grassland/range, Good, HSG A
17,180	86	Weighted Average
3,364		19.58% Pervious Area
13,816		80.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 minutes mininum

Summary for Pond 1BP1: Infiltration Basin #1

Inflow Area = 0.251 ac, 64.08% Impervious, Inflow Depth > 3.09" for 25-yr Storm event
 Inflow = 0.97 cfs @ 12.08 hrs, Volume= 0.065 af
 Outflow = 0.28 cfs @ 12.43 hrs, Volume= 0.064 af, Atten= 71%, Lag= 21.3 min
 Discarded = 0.28 cfs @ 12.43 hrs, Volume= 0.064 af
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 308.67' @ 12.43 hrs Surf.Area= 1,329 sf Storage= 682 cf

Plug-Flow detention time= 17.1 min calculated for 0.064 af (100% of inflow)
 Center-of-Mass det. time= 16.9 min (804.2 - 787.3)

Volume	Invert	Avail.Storage	Storage Description
#1	308.00'	3,645 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
308.00	748	0	0	748
309.00	1,683	1,184	1,184	1,691
310.00	3,332	2,461	3,645	3,349

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.00'	9.070 in/hr Exfiltration over Wetted area
#2	Primary	309.50'	10.0' long x 4.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66
			2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.28 cfs @ 12.43 hrs HW=308.66' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.28 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=308.00' (Free Discharge)
 ↑ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 1CP1: Infiltration Basin #2

Inflow Area = 0.394 ac, 80.42% Impervious, Inflow Depth > 3.98" for 25-yr Storm event
 Inflow = 1.92 cfs @ 12.07 hrs, Volume= 0.131 af
 Outflow = 0.77 cfs @ 12.30 hrs, Volume= 0.131 af, Atten= 60%, Lag= 13.6 min
 Discarded = 0.32 cfs @ 12.30 hrs, Volume= 0.120 af
 Primary = 0.45 cfs @ 12.30 hrs, Volume= 0.010 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 309.35' @ 12.30 hrs Surf.Area= 1,516 sf Storage= 1,554 cf

Plug-Flow detention time= 33.3 min calculated for 0.130 af (100% of inflow)
 Center-of-Mass det. time= 33.0 min (799.9 - 766.9)

Volume	Invert	Avail.Storage	Storage Description
#1	308.00'	1,788 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
308.00	810	0	0	810
309.00	1,325	1,057	1,057	1,338
309.50	1,602	731	1,788	1,623

Device	Routing	Invert	Outlet Devices
#1	Discarded	308.00'	9.070 in/hr Exfiltration over Wetted area
#2	Primary	309.25'	6.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.32 cfs @ 12.30 hrs HW=309.35' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.32 cfs)

Primary OutFlow Max=0.45 cfs @ 12.30 hrs HW=309.35' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Weir Controls 0.45 cfs @ 0.75 fps)

Summary for Link AP-1: Analysis Point #1

Inflow Area = 1.487 ac, 70.76% Impervious, Inflow Depth > 1.94" for 25-yr Storm event
 Inflow = 3.45 cfs @ 12.08 hrs, Volume= 0.240 af
 Primary = 3.45 cfs @ 12.08 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

BSB Windham - Proposed 04032020

Prepared by Sevee & Maher Engineers, Inc.

HydroCAD® 10.10-3a s/n 01260 © 2020 HydroCAD Software Solutions LLC

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Printed 4/3/2020

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April 3, 2020

Jeffrey T. Read, P.E.
Civil Engineer
Sevee & Maher Engineers, Inc.
4 Blanchard Road
Cumberland, ME 04021

RE: WINDHAM PEER REVIEW RESPONSE

INTRODUCTION

This is written to respond to peer review comments provided by Randy Dunton, P.E. PTOE at Gorrill Palmer (GP) in an email dated March 31, 2020 to the Town of Windham regarding the traffic analysis we prepared for the new Bangor Savings Bank, dated March 16, 2020. The original GP comments are repeated below along with our response in italics:

The study was well done and generally followed acceptable standards and methodology. This review included the following:

1. GP agrees with the use of the 10th edition of the Institute of Transportation Engineers' (ITE) *Trip Generation* manual. GP agrees that the most representative Land Use Codes (LUC) were used for the existing/proposed office area (LUC 710 – General Office) and proposed bank area (LUC 912 – Drive-In Bank). As mentioned in the report, there is not a representative land use code for retail. The LUC used (820 – Shopping Center) for the existing 938 SF retail building (iPhone repair store), in our opinion, does not accurately represent the use; however, based on the size of the retail building and potential other options that may have been used, changing this trip generation would not be expected to change any of the conclusions of the study.
No response necessary.
2. GP agrees with the existing trip generation for office and retail space.
No response necessary.
3. GP agrees with the proposed trip generation for office and bank development, with the exception of the PM Peak Hour of the Generator for the Bank, which we could not reproduce. Since the adjacent street trip generation is used for the remainder of the

study and not the trip generation of the generator, the conclusions of the study would not change.

No response necessary.

4. GP agrees with the methods used to seasonally and annually adjust the traffic counts to a 2021 no-build condition.

No response necessary.

5. The Trip Assignments provided on Figure 4 do not appear to add from a roadway network perspective. The volumes entering and exiting the site appear correct, but the volumes flowing through the rest of the system do not appear to agree. Resulting changes to other figures or capacity analysis should be revisited.

GP is correct. There were two typos in the diagram involving the trip assignments at the Route 302 intersection. The corrected diagram is attached. Note that it did not impact the Abby Road intersection volumes so it had no impact on the analysis since the Route 302 intersection was not analyzed.

6. The results of the traffic analysis for level of service are correctly identified from the simulation to the report (see above comment for possible changes). The applicant has noted that the level of service of one approach does change from an “E” to an “F”. Per the Town of Windham Ordinance, if the level of service of an intersection is an “E” or worse, the level of service should not decrease because of the additional traffic. The overall intersection level of service is not provided. The applicants traffic engineer should provide a response to this item. This criteria can be waived by the Board.

The analysis originally was performed utilizing Synchro and the HCM approach. This approach only calculates level of service (LOS) for the minor, opposed movements at unsignalized intersections. To determine overall intersection LOS Sewall ran Synchro/SimTraffic, the average of five simulation runs. These LOS ranges are described below for reference:

Unsignalized Intersection Level of Service

<u>LOS</u>	<u>Delay Range</u>
A	<= 10.0 seconds
B	> 10.0 and <= 15.0
C	> 15.0 and <= 25.0
D	> 25.0 and <= 35.0
E	> 35.0 and <= 50.0
F	> 50.0

The results by approach and for the overall intersection are attached to this memorandum and summarized below:

Route 115 and Abby Road		
AM Peak Hour Levels of Service		
	2021	2021
<u>Approach/Movement</u>	<u>No-Build</u>	<u>Build</u>
Eastbound Route 115	A (1.2)	A (1.0)
Westbound Route 115	A (0.2)	A (0.3)
Northbound Walgreens	A (5.3)	A (5.0)
Southbound Abby Road	A (3.8)	A (4.6)
Overall Intersection	A (1.3)	A (1.2)

PM Peak Hour Levels of Service		
	2021	2021
<u>Approach/Movement</u>	<u>No-Build</u>	<u>Build</u>
Eastbound Route 115	A (2.2)	A (3.5)
Westbound Route 115	A (0.6)	A (1.1)
Northbound Walgreens	D (26.8)	C (24.4)
Southbound Abby Road	D (25.1)	E (40.0)
Overall Intersection	A (3.2)	A (4.2)

As seen in the above tables, SimTraffic gave much better results than the Synchro HCM approach. These results similarly show that there are no capacity concerns in the AM peak hour. The SimTraffic results show no constraints on the northbound Walgreens approach which HCM showed to be failing. The results show that the Abby Road approach will operate at LOS “E” overall and not “F”. Further, and most importantly, the analysis shows that the overall intersection functions at LOS “A” during both peak hour periods so there are no concerns in regard to meeting the ordinance which prohibits LOS “E” or lower for an intersection. The minor improvements shown for some approaches between No Build and Build conditions is simply due to the low approach volumes and the variability in the SimTraffic runs.

7. It should be noted that the results of the capacity analysis provided in the study are most likely not accurate due to the impacts on traffic flow from the adjacent signalized intersection. However, the results provided in the study can be used as an indicator of the level of impact of the project on the intersection.

Sewall concurs with this comment. Without analysis of the Route 302 intersection, which this project will have no measurable impact on, it isn't possible to truly model operations at Abby Road since signal queues can potentially interfere with Abby Road movements. As noted by GP the intent was to simply show the level of impact to Abby Road.

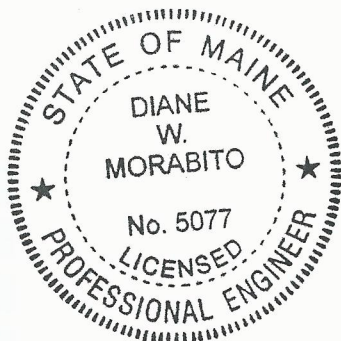
8. GP agrees with the safety analysis for High Crash Locations and mitigation tactics to improve these locations. This includes additional striping and signage to not block the intersection.

No response necessary.

9. It should be noted that the proposed access management measures (reduction of driveways and restriction of movements) to this corner should have a net positive impact to the overall area, reducing potential conflicts and improving safety. However, the applicant should address the Town's double frontage requirements. We recommend the applicant revisit the channelization of the proposed driveways to improve the enforcement of right turn movements only. As currently shown at both driveways, the restrictions do not appear to be prohibitive enough.

It is understood that Sevee & Maher will be revising the site plan and addressing this site access and design comment.

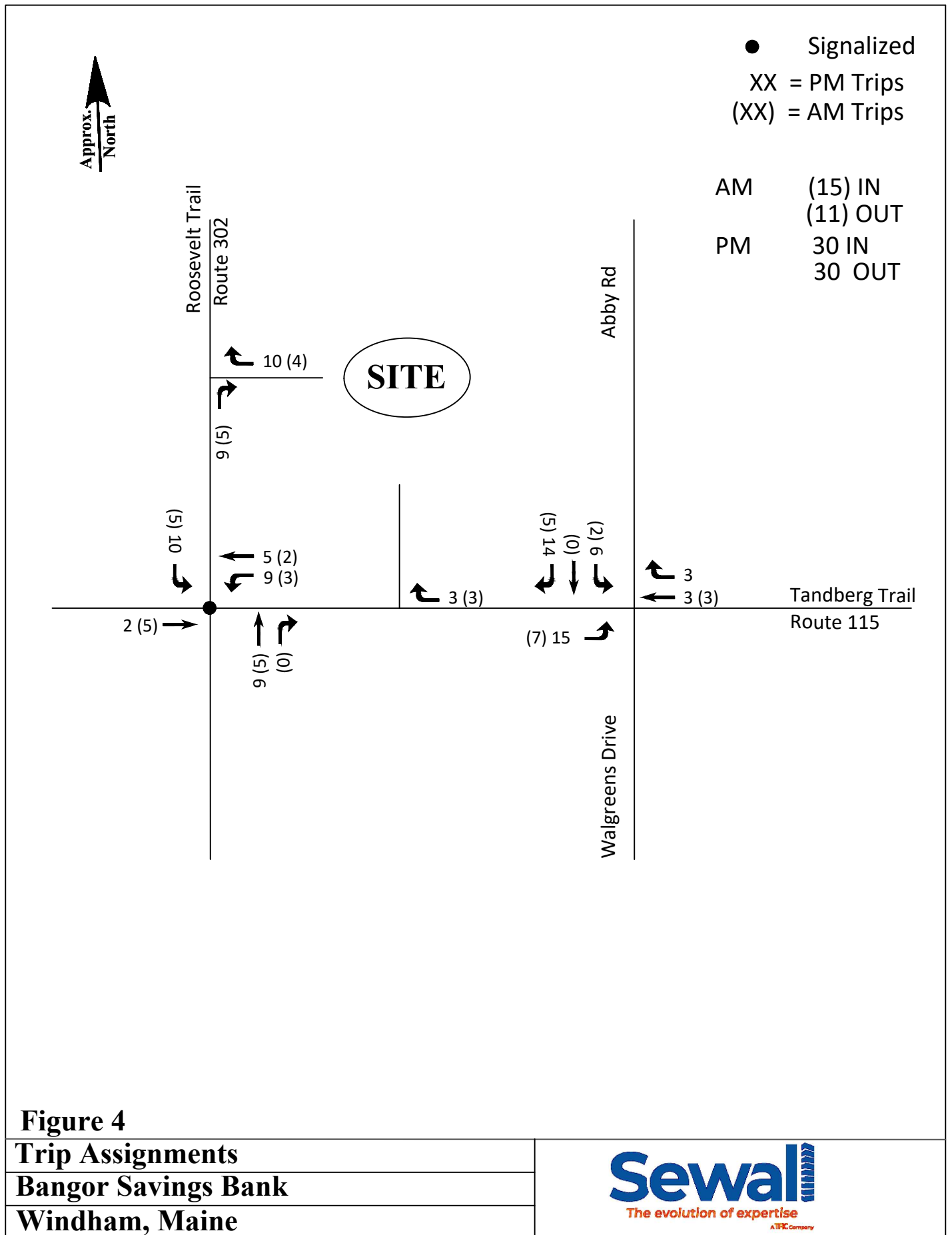
As always, please do not hesitate to contact me if you or the Town of Windham have any additional questions or concerns.



Sincerely,

A handwritten signature in black ink that reads "Diane W. Morabito" followed by a stylized flourish.

Diane W. Morabito, P.E. PTOE
Vice President Traffic Engineering



Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	226	236	209	227	204	220
Vehs Exited	232	231	207	226	201	220
Starting Vehs	10	9	8	12	6	9
Ending Vehs	4	14	10	13	9	9
Travel Distance (mi)	49	50	44	48	44	47
Travel Time (hr)	1.8	1.8	1.6	1.8	1.6	1.7
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	12	11	14	11	9	12
Fuel Used (gal)	1.5	1.6	1.4	1.5	1.3	1.5

Interval #0 Information Seeding

Start Time 6:57
End Time 7:00
Total Time (min) 3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time 7:00
End Time 7:10
Total Time (min) 10

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	226	236	209	227	204	220
Vehs Exited	232	231	207	226	201	220
Starting Vehs	10	9	8	12	6	9
Ending Vehs	4	14	10	13	9	9
Travel Distance (mi)	49	50	44	48	44	47
Travel Time (hr)	1.8	1.8	1.6	1.8	1.6	1.7
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	12	11	14	11	9	12
Fuel Used (gal)	1.5	1.6	1.4	1.5	1.3	1.5

3: Walgreens Dr/Abby Road & Route 115 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.1	4.6	0.1	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	1.2	0.2	5.3	3.8	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	0.0	4.9	3.7	0.2

Total Network Performance

Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.4
Total Delay (hr)	0.1
Total Del/Veh (s)	1.3
Stop Delay (hr)	0.0
Stop Del/Veh (s)	0.2

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	237	246	224	222	222	231
Vehs Exited	240	243	225	214	229	230
Starting Vehs	13	6	12	4	14	9
Ending Vehs	10	9	11	12	7	9
Travel Distance (mi)	50	52	48	47	49	49
Travel Time (hr)	1.9	1.9	1.7	1.7	1.8	1.8
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	18	12	8	10	10	12
Fuel Used (gal)	1.6	1.6	1.5	1.4	1.5	1.5

Interval #0 Information Seeding

Start Time 6:57
End Time 7:00
Total Time (min) 3
Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time 7:00
End Time 7:10
Total Time (min) 10
Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	237	246	224	222	222	231
Vehs Exited	240	243	225	214	229	230
Starting Vehs	13	6	12	4	14	9
Ending Vehs	10	9	11	12	7	9
Travel Distance (mi)	50	52	48	47	49	49
Travel Time (hr)	1.9	1.9	1.7	1.7	1.8	1.8
Total Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1
Total Stops	18	12	8	10	10	12
Fuel Used (gal)	1.6	1.6	1.5	1.4	1.5	1.5

3: Walgreens Dr/Abby Road & Route 115 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.2	2.4	0.1	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	1.0	0.3	5.0	4.6	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	0.0	4.5	4.5	0.2

Total Network Performance

Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.4
Total Delay (hr)	0.1
Total Del/Veh (s)	1.2
Stop Delay (hr)	0.0
Stop Del/Veh (s)	0.2

Abby Road & Route 115
2021 No Build Pm

04/02/2020

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	327	339	324	326	319	326
Vehs Exited	329	338	328	321	326	328
Starting Vehs	16	12	19	12	18	13
Ending Vehs	14	13	15	17	11	13
Travel Distance (mi)	70	73	69	69	69	70
Travel Time (hr)	2.8	2.8	2.8	2.6	2.7	2.8
Total Delay (hr)	0.4	0.3	0.4	0.2	0.4	0.3
Total Stops	41	23	25	11	29	23
Fuel Used (gal)	2.4	2.3	2.3	2.2	2.3	2.3

Interval #0 Information Seeding

Start Time 6:57
End Time 7:00
Total Time (min) 3
Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time 7:00
End Time 7:10
Total Time (min) 10
Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	327	339	324	326	319	326
Vehs Exited	329	338	328	321	326	328
Starting Vehs	16	12	19	12	18	13
Ending Vehs	14	13	15	17	11	13
Travel Distance (mi)	70	73	69	69	69	70
Travel Time (hr)	2.8	2.8	2.8	2.6	2.7	2.8
Total Delay (hr)	0.4	0.3	0.4	0.2	0.4	0.3
Total Stops	41	23	25	11	29	23
Fuel Used (gal)	2.4	2.3	2.3	2.2	2.3	2.3

3: Walgreens Dr/Abby Road & Route 115 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.8	0.2	2.5	0.2	0.5
Total Delay (hr)	0.1	0.0	0.1	0.0	0.2
Total Del/Veh (s)	2.2	0.6	26.8	25.1	2.5
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.1
Stop Del/Veh (s)	0.5	0.1	25.5	24.7	1.5

Total Network Performance

Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.5
Total Delay (hr)	0.3
Total Del/Veh (s)	3.2
Stop Delay (hr)	0.1
Stop Del/Veh (s)	1.5

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	7:10	7:10	7:10	7:10	7:10	7:10
Total Time (min)	13	13	13	13	13	13
Time Recorded (min)	10	10	10	10	10	10
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	312	347	339	338	344	335
Vehs Exited	324	346	337	332	341	336
Starting Vehs	19	11	17	11	14	13
Ending Vehs	7	12	19	17	17	13
Travel Distance (mi)	67	74	71	71	73	71
Travel Time (hr)	2.7	2.9	3.0	2.7	3.2	2.9
Total Delay (hr)	0.4	0.4	0.5	0.3	0.7	0.5
Total Stops	40	25	53	25	44	36
Fuel Used (gal)	2.3	2.4	2.4	2.3	2.5	2.4

Interval #0 Information Seeding

Start Time 6:57
End Time 7:00
Total Time (min) 3
Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time 7:00
End Time 7:10
Total Time (min) 10
Volumes adjusted by Growth Factors.

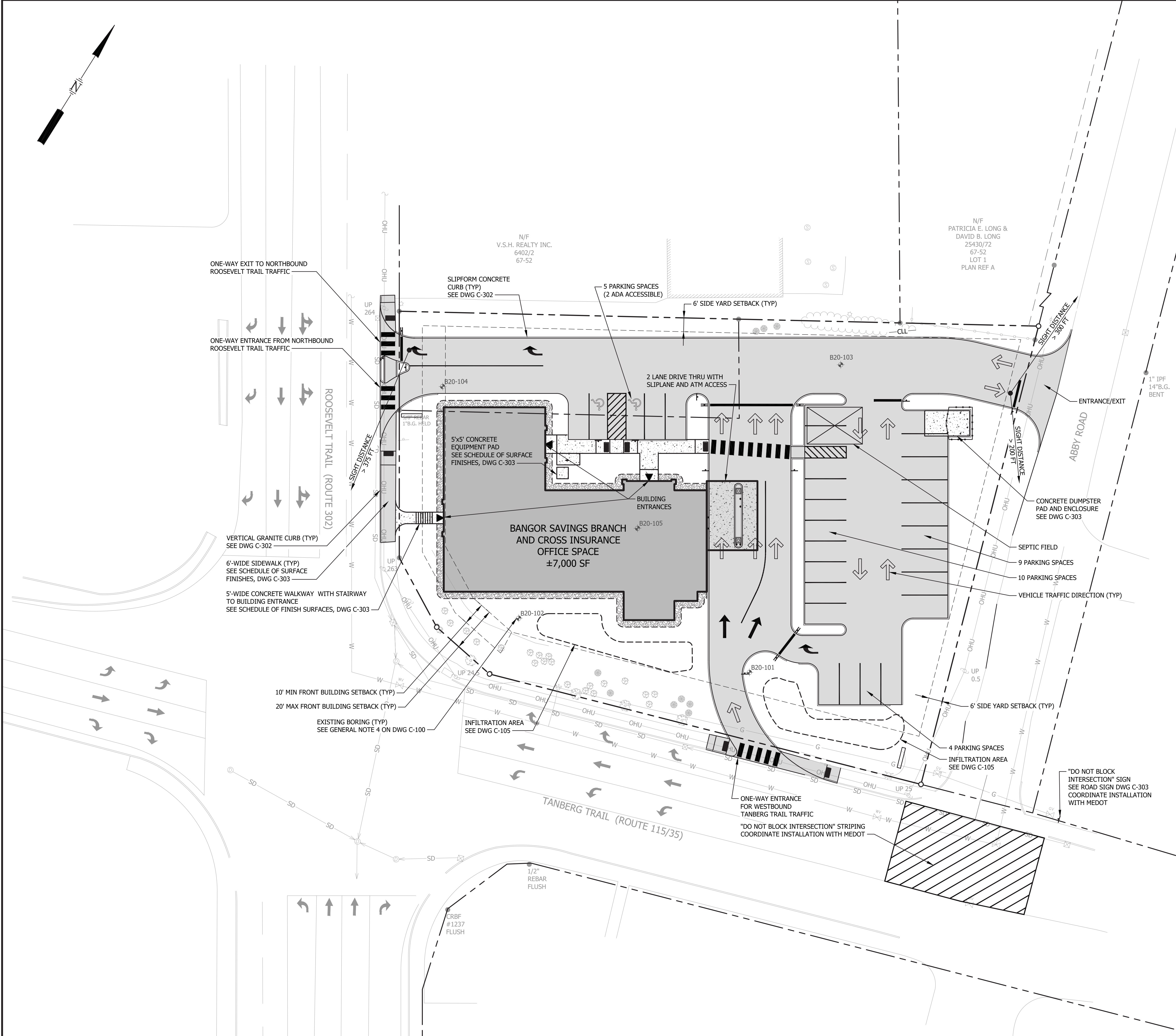
Run Number	1	2	3	4	5	Avg
Vehs Entered	312	347	339	338	344	335
Vehs Exited	324	346	337	332	341	336
Starting Vehs	19	11	17	11	14	13
Ending Vehs	7	12	19	17	17	13
Travel Distance (mi)	67	74	71	71	73	71
Travel Time (hr)	2.7	2.9	3.0	2.7	3.2	2.9
Total Delay (hr)	0.4	0.4	0.5	0.3	0.7	0.5
Total Stops	40	25	53	25	44	36
Fuel Used (gal)	2.3	2.4	2.4	2.3	2.5	2.4

3: Walgreens Dr/Abby Road & Route 115 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.8	0.2	2.7	0.8	0.5
Total Delay (hr)	0.1	0.1	0.0	0.1	0.3
Total Del/Veh (s)	3.5	1.1	24.4	40.0	3.4
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.2
Stop Del/Veh (s)	1.0	0.3	23.6	40.0	1.9

Total Network Performance

Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.5
Total Delay (hr)	0.4
Total Del/Veh (s)	4.2
Stop Delay (hr)	0.2
Stop Del/Veh (s)	1.9



- NOTE:**
- SEE DWG C-100 FOR GENERAL, GRADING, UTILITY, DIG SAFE, AND SURVEYORS NOTES, PLAN REFERENCES, LEGENDS, AND ABBREVIATIONS.
- ZONING NOTES:**
- PROJECT INFORMATION:
ADDRESS: 745 AND 747 ROOSEVELT TRAIL

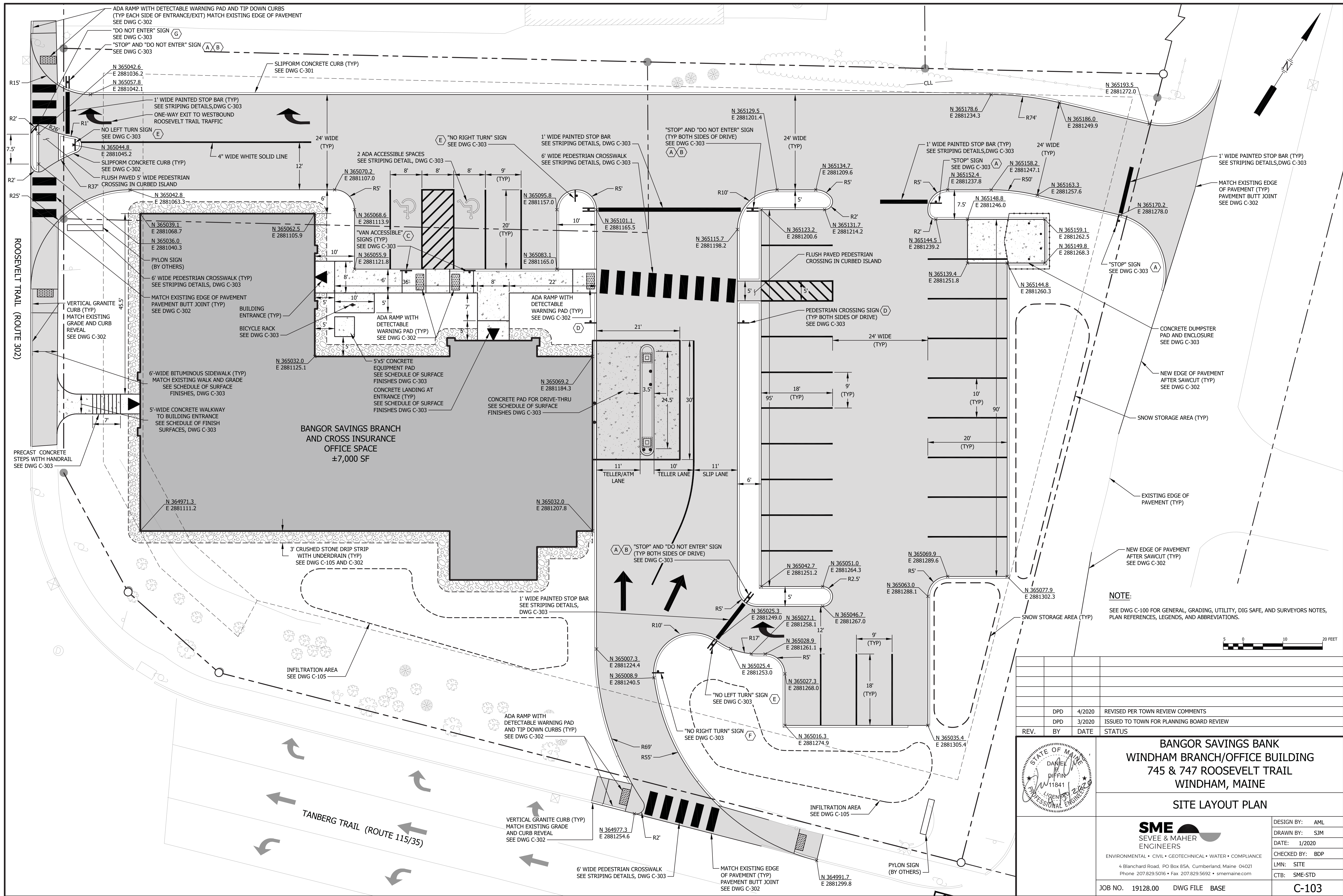
OWNER: CROSS REALTY, LLC
TAX MAP 67/LOT 55 AND MAP 67/LOT 543

APPLICANT: BANGOR SAVINGS BANK
 - ZONING: COMMERCIAL 1 DISTRICT
 - PROPOSED USE: COMMERCIAL OFFICE AND BANK
 - DIMENSIONAL STANDARDS:

	REQUIRED	PROVIDED
ROAD FRONTAGE =	100'	
FRONT ROUTE 302 STREET SETBACK =	10' MIN TO 20' MAX	20'
OTHER STREET FRONT SETBACK =	0' MIN TO 20' MAX	20'
REAR YARD SETBACK =	6'	> 6'
SIDE YARD SETBACK =	6'	> 6'
 - UTILITIES:
PROPERTY IS SERVED BY PUBLIC WATER, PRIVATE SEPTIC, UNDERGROUND ELECTRIC, AND NATURAL GAS.
 - PROPOSED IMPERVIOUS AREA: ±28,100 SF
 - PROPOSED USE: COMMERCIAL
 - PARKING SUMMARY: NO MINIMUM NUMBER OF PARKING SPACES. 29 PROVIDED.
 - THERE ARE NO WETLANDS ON THIS SITE.
 - THE PROPERTY IS LOCATED OUTSIDE OF THE 100-YEAR FLOODPLAIN.

APPROVED BY THE TOWN OF WINDHAM PLANNING BOARD	
DATE	

DPD	4/2020	REVISED PER TOWN REVIEW COMMENTS			
DPD	3/2020	ISSUED TO TOWN FOR PLANNING BOARD REVIEW			
REV.	BY	DATE	STATUS		
<div><div></div><div><div>BANGOR SAVINGS BANK WINDHAM BRANCH/OFFICE BUILDING 745 & 747 ROOSEVELT TRAIL WINDHAM, MAINE</div><div>SITE OVERVIEW PLAN</div></div></div>					
<div>SME SEVEE & MAHER ENGINEERS</div> <div>ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE 4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021 Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com</div>			DESIGN BY: AML DRAWN BY: SJM DATE: 1/2020 CHECKED BY: BDP LMN: SITEOVER CTB: SME-STD		
JOB NO. 19128.00 DWG FILE BASE			C-102		



REV.	BY	DATE	STATUS
	DPD	4/2020	REVISED PER TOWN REVIEW COMMENTS
	DPD	3/2020	ISSUED TO TOWN FOR PLANNING BOARD REVIEW

BANGOR SAVINGS BANK WINDHAM BRANCH/OFFICE BUILDING 745 & 747 ROOSEVELT TRAIL WINDHAM, MAINE	
SITE LAYOUT PLAN	
	DESIGN BY: AML
	DRAWN BY: SJM
	DATE: 1/2020
	CHECKED BY: BDP
LMN: SITE	
CTB: SME-STD	
JOB NO. 19128.00 DWG FILE BASE	
C-103	

SME SEVEE & MAHER ENGINEERS
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Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com

