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Traffic Assessment

For Proposed

Bancroft Street Subdivision

Portland, Maine

INTRODUCTION

Josh Wagner is proposing to subdivide a 2.93-acre parcel of property located at 130/144 Bancroft Street creating a total of seven single-family house lots. Access to the property is provided with construction of a “new” dead-end street intersecting Bancroft Street adjacent to the existing Wagner home. The proposed subdivision street will be constructed to City standards and, with completion, the City will be petitioned for acceptance of the street.

This document determines daily and peak hour trip generation of the proposed project for both peak commuter time periods, examines current roadway safety trends in the general vicinity of the proposed project, and reviews vehicle sight distance.

SITE TRAFFIC

Site Trip Generation: Daily and peak hour trip generation was determined for the proposed project based upon trip tables presented in the ninth edition of the Institute of Transportation Engineers (ITE) “**TRIP GENERATION**” handbook. The ITE publication provides numerous land use categories and the average volume of trips generated by each category.

The following trip rate was used to calculate trip generation for the proposed project:

Land Use #210 – Single-Family Detached Housing

Weekday	= 9.52 trips per dwelling unit
AM Peak Hour	= 0.75 trips per dwelling unit
PM Peak Hour	= 1.00 trips per dwelling unit

Accordingly, the proposed 7 single-family homes can be expected to generate a total of 67 trips during a typical weekday; 5 trips in the morning peak hour and 7 trips in the evening peak hour.

Site Trip Distribution: The Institute of Transportation Engineers handbook also provides the following directional distribution rates for a single-family house lot:

AM Peak Hour	= 25% enter site and 75% exit site
PM Peak Hour	= 63% enter site and 37% exit site

Based upon the noted directional distribution patterns, 1 trip during the morning peak hour and 4 trips in the evening peak hour will enter the site and the remaining trips (4 AM trip and 3 PM trips) will exit.

EXISTING SAFETY CONDITIONS

The Maine Department of Transportation’s (MaineDOT) Accident Records Section provided the latest three-year (2014 through 2016) crash data for the 0.29 mile section of Bancroft Street between Capisic Street and Rockland Avenue.

2014 -2016 Traffic Accident Summary

<u>Location</u>	<u>Total Crashes</u>	<u>Critical Rate Factor</u>
1. Capisic Street @ Bancroft Street	2	0.60
2. Bancroft Street btw. Capisic Street and Rockland Avenue	1	0.54

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- *8 or more accidents*
- *A Critical Rate Factor greater than 1.00*

As the data presented in the table shows, the incidence of traffic crashes is very low; well below MaineDOT’s threshold criteria for identification of a high crash location.

SIGHT DISTANCE

The Maine Department of Transportation’s Highway Entrance and Driveway Rules require the following sight distances for a non-mobility roadway:

Sight Distance Standards

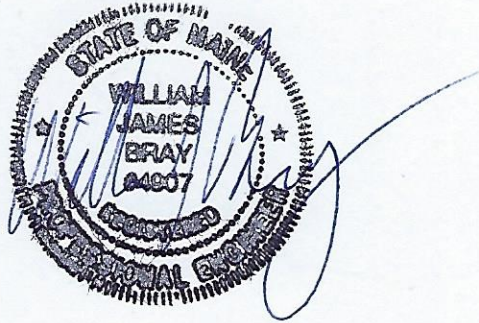
Speed Limit	Sight Distance
25 mph	200 feet
30	250
35	305
40	360
45	425
50	495
55	570

Bancroft Street is currently posted with a regulatory speed limit of 25 mph, which requires an unobstructed sightline of 200 feet. Field measurements determined for both directions of travel exceed 350-feet, a distance well in excess of the required design standards.

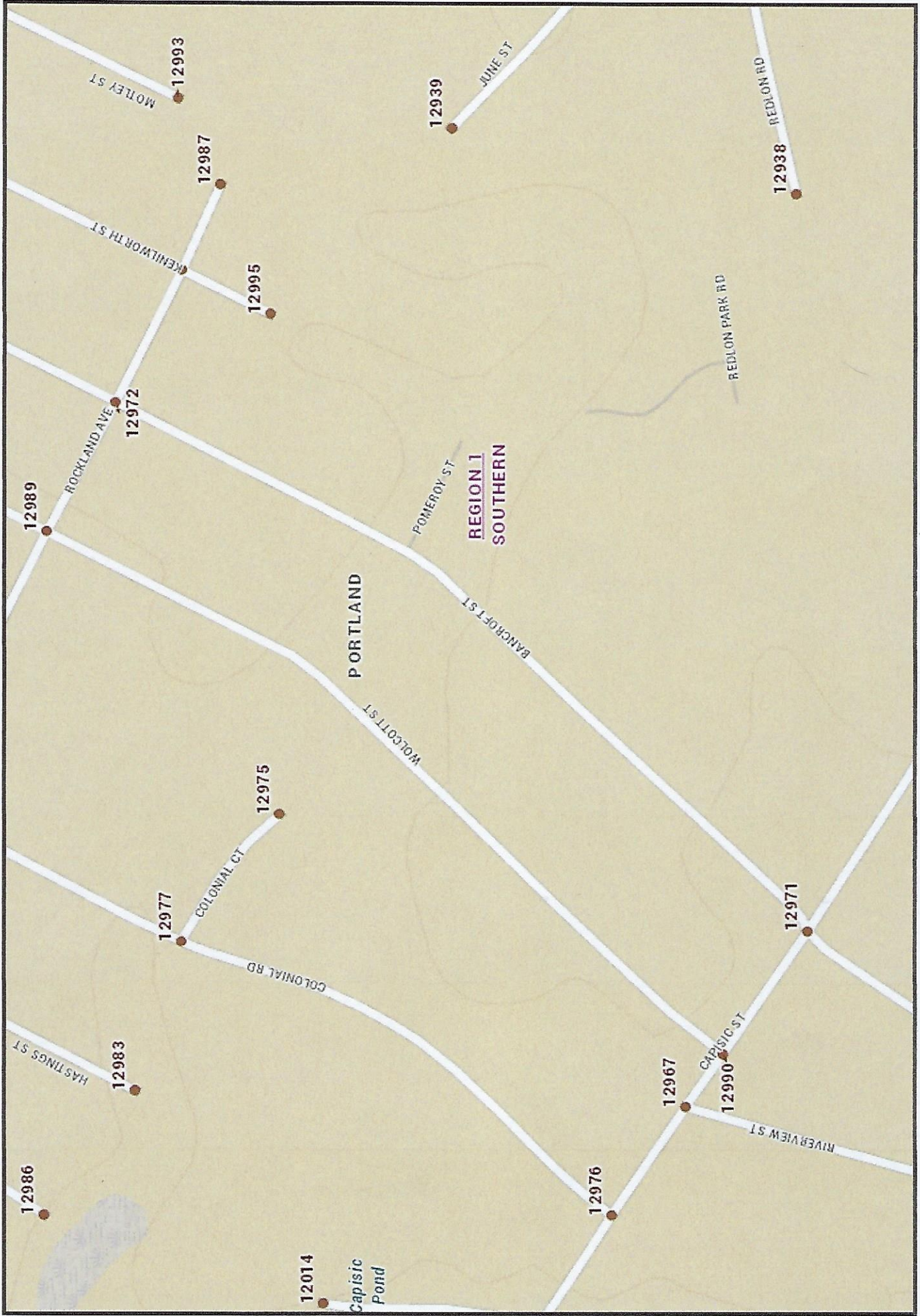
CONCLUSIONS

- The residential subdivision project can be expected to generate **67** daily trips; five (**5**) trips in the morning peak hour and **7** trips during the afternoon peak commuter hour.

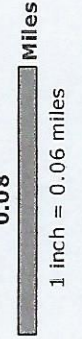
- The Maine Department of Transportation's most recent three-year (2014 to 2016) accident safety audit completed for the section of Bancroft Street between Capisic Street and Rockland Avenue shows a total of 3 crashes have occurred over the 0.29-mile section of Bancroft Street.
- Vehicle sightlines measured in both directions from the proposed subdivision road onto Bancroft Street meet and exceed, by a considerable margin, the non-mobility highway sight distance standard for a posted speed limit of 25mph.



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Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

Crash Summary I Section Detail Crash Summary II 1320 Public 1320 Private 1320 Summary

REPORT DESCRIPTION

Bancroft St in Portland

REPORT PARAMETERS

Year 2014, Start Month 1 through Year 2016 End Month: 12

Route: **0560033**

Start Node: **12971**

Start Offset: **0**

Exclude First Node

End Node: **12972**

End Offset: **0**

Exclude Last Node

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Node	Route - MP	Node Description	U/R	Nodes							Percent Annual M Injury Ent-Veh	Crash Rate	Critical Rate	CRF			
				Total Crashes	K	A	B	C	PD								
12971	0560033 - 0.16	Int of BANCROFT ST, CAPISIC ST	2	2	0	0	0	1	1	50.0	2.713	0.25	0.42	0.00			
												Statewide Crash Rate:	0.14				
12972	0560033 - 0.45	0503385 POR,BANCROFT ST,ROCKLAND AVE.	2	0	0	0	0	0	0	0.0	0.141	0.00	0.44	0.00			
												Statewide Crash Rate:	0.14				
Study Years: 3.00			NODE TOTALS:				2	0	0	0	1	1	50.0	2.854	0.23	0.41	0.57

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	Sections					Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF	
							K	A	B	C	PD						
12971	12972	187581	0 - 0.29	0560033 - 0.16 RD INV 05 60033	0.29	2	1	0	0	0	0	1	0.0	0.00042	787.28	1454.15	0.00
Int of BANCROFT ST, CAPISSIC ST Statewide Crash Rate: 400.79																	
Study Years:			3.00	Section Totals:		0.29	1	0	0	0	0	1	0.0	0.00042	787.28	1454.12	0.54
Grand Totals:						0.29	3	0	0	0	1	2	33.3	0.00042	2361.83	1715.94	1.38