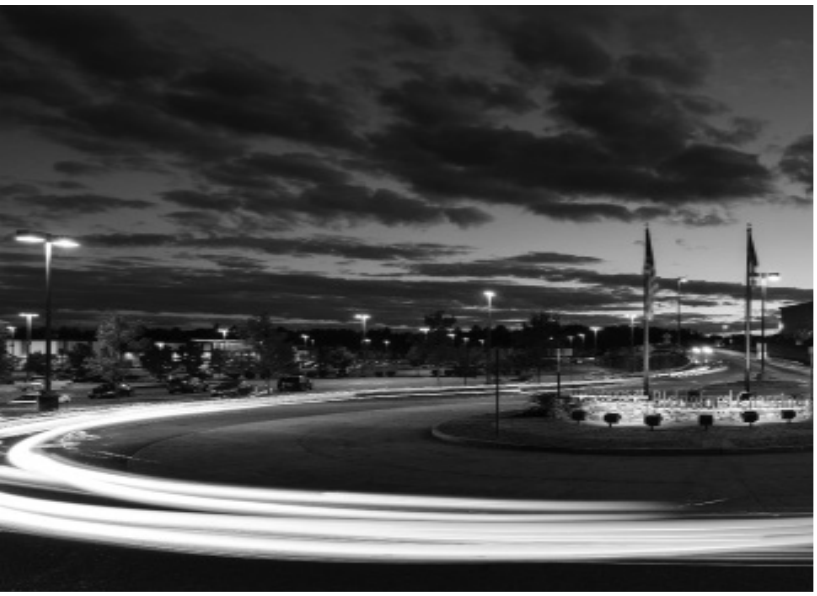
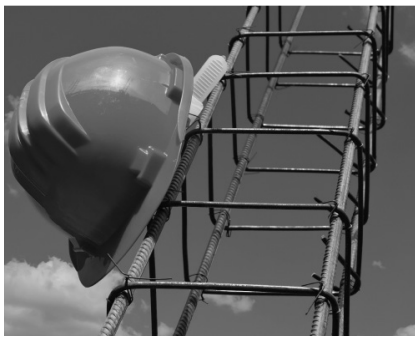
15. Traffic

The following documents have been provided by Gorrill Palmer Consulting Engineers Inc.

Relationships.
Responsiveness.
Results.





Traffic Forecast, Parking Assessment and TDM Plan Front Street Redevelopment Portland, Maine

PREPARED FOR:
Portland Housing Corporation
14 Baxter Boulevard
Portland, ME 04101

September 2017

SUBMITTED BY:
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207.772.2515

Traffic / Parking Evaluation
Front Street Redevelopment
Portland, Maine

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Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

Gorrill Palmer was retained by the Portland Housing Development Corporation (PHDC) to prepare this traffic forecast, parking study, neighborhood responses, and Transportation Demand Management Plan for their proposed Front Street Redevelopment project. The project consists of razing 50 outdated affordable residential housing units and replacing them with 100 modern and up to date affordable residential units. The proposed units are to be located in numerous buildings between Front Street and Illsley Street. Based on this study, our office has determined the following:

1. The additional traffic forecast as a result of the expansion is 13 and 16 trip ends in the weekday AM and PM peak hours respectively. Total (existing + expansion) for the development after completion of the expansion is forecast at 26 AM and 31 PM peak hour trip ends. A trip end is either a trip in or out of the site, thus a round trip would equal two trip ends. Because the additional trips are less than the 99 trip end threshold per peak hour, this project does not require a Maine Department of Transportation (MaineDOT) Traffic Movement Permit.

2. Based on the crash history provided by MaineDOT, there are two high crash locations on Washington Avenue in the immediate vicinity of the site. However, it is our understanding that the City is currently completing improvement projects on Washington Avenue where the high crash locations are located, so any crash patterns may change.

3. Based on the parking evaluation, comparisons, and additional research completed as part of this assessment, it is our opinion that the proposed project is providing sufficient parking to accommodate the residential units after expansion.

4. Neighborhood concerns include traffic volumes, speeds, parking, and the proposed development integrating into the surrounding neighborhood. The traffic volumes and parking for the site are not anticipated to significantly impact the surrounding neighborhood. PHA is working with the City to address what options they have available to address maintaining reasonable speeds throughout the neighborhood without encouraging traffic diversion.

5. A Transportation Demand Management (TDM) Plan has been prepared that will support the City's transportation and environmental sustainability goals by encouraging and promoting bicycling, walking, and use of transit.

Based on these findings, it is the opinion of Gorrill Palmer that the proposed project can be accommodated by the surrounding roadway network and the City's transportation system.

I. Existing and Proposed Site

The proposed site is located between Front Street and Illsley Street in Portland, Maine and currently includes 19 detached buildings containing 50 affordable housing units and 182 bedrooms. The proposed redevelopment will replace these buildings with new semi-connected buildings and increase the number of housing units and bedrooms to 100 and 221 respectively. Parking for the project will be accommodated by a total of 100 off-street parking spaces, an increase of approximately 50 spaces.

II. Background Conditions

Gorrill Palmer (GP) has based this study on the following information

- A site plan prepared by Carroll Associates
- Trip Generation methodology used in the Bayside Anchor study completed by our office in May 2014 and the 58 Boyd Street study completed by our office in November 2016
- Crash data for 2014-2016 provided by MaineDOT
- A parking inventory performed for the Bayside Anchor study at the existing East Bayside PHA properties, the adjacent streets, and at similar projects in Portland
- A parking count completed within the neighborhood on Sunday, July 9, 2017 at approximately 10:30 in the evening.

III. Trip Generation

Residential Units Trip Generation

GP used the Institute of Transportation Engineers' (ITE) publication *Trip Generation*, 9th Edition to estimate the potential trip generation for the proposed 100 affordable housing units (net increase of 50 units). Based on Land Use Code (LUC) 220 – Apartment, the proposed 100 units of housing is forecast to generate the following trip ends:

Weekday:	665 trip ends
AM Peak Hour:	51 trip ends
PM Peak Hour:	62 trip ends

A trip end is a trip into or out of the site, thus a round trip is equal to two trip ends.

ITE trip rates are based on surveys of predominantly suburban locations rather than urban. In addition, more importantly, these surveys do not take into account whether the units are affordable units, which typically has a lower trip generation. Therefore, GP reviewed a trip generation count for Pearl Place which was taken on Tuesday, October 5, 2010 from 3:30 PM to 5:30 PM. Based on the counts, the actual trip generation for

Pearl Place was lower than the ITE forecast trip generation. Twenty peak hour trips were recorded at the site driveway for the 60 units in place when the count was completed, and no on-street parking associated with the facility was observed during the count. It should be noted that significant pedestrian trips to and from the site were observed, which is also anticipated for the Front Street project. This resulted in a PM peak hour trip generation rate of 0.33 trip ends per unit for the existing facility.

Given these results and the fact that the project is in an urban area, and the area is bikeable, walkable, and located near Portland METRO Routes 9a and 9b on Washington Avenue, our office has reduced the rates derived from ITE LUC 220 for apartments by 50% resulting in the following trip generation forecast for the 100 proposed affordable housing units:

Weekday:	334 trip ends
AM Peak Hour:	26 trip ends
PM Peak Hour:	31 trip ends

It should be noted that this is the same trip generation methodology used in the recent Bayside Anchor study completed by GP in May 2014 and approved by the City. This methodology was also used in the 58 Boyd Street study completed by GP in November 2016.

Trip Generation Credit

Typically, trip generation credit is given for any on-site use within the last ten years. Therefore, trips generated by the existing 50 affordable housing units can be subtracted from the forecasted future trip generation when determining the need for a MaineDOT Traffic Movement Permit. Since the existing development is also affordable housing units, the same methodology used to forecast the proposed site trip generation was used to estimate the trip generation credit. GP used ITE LUC 220 – Apartment and reduced the trip generation rates by half to estimate the traffic generated by the existing 50 affordable housing units. The following summarizes the trip generation credit:

Weekday:	167 trip ends
AM Peak Hour:	13 trip ends
PM Peak Hour:	15 trip ends

Total Site Trip Generation

The trip generation credit (50 units) has been subtracted from the forecast trip generation (100 units) to yield the net trip generation. The following table summarizes the trip generation for the site:

Net Trip Generation Summary

	Weekday	AM Peak Hour	PM Peak Hour
Proposed Trip Generation	334	26	31
Trip Generation Credit	167	13	15
Net Trip Generation	**167**	**13**	**16**

As shown in the table, the net trip generation for the site is forecast to be 13 trip ends during the AM peak hour and 15 trip ends during the PM peak hour. This level of trip generation does not require a MaineDOT Traffic Movement Permit since it is less than the 99 trip end threshold during a peak hour.

It should be noted that this is likely a conservative increase in trip generation because while the number of affordable housing units is doubling (50 units to 100 units), the number of bedrooms is **only increasing by approximately 21 percent (182 bedrooms to 221 bedrooms).**

IV. Crash Data

GP obtained the crash data for the immediate area from MaineDOT for the period of 2014-2016, the most recent period available at the time this study was prepared (attached). In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define a High Crash Location (HCL). Both criteria must be met in order to classify as an HCL.

1. A critical rate factor of 1.00 or more for a three year period. A Critical Rate Factor (CRF) compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate of less than average; **and**

2. A minimum of eight crashes over the same three-year period.

Based on a review of the crash report from MaineDOT, there are two HCLs in the immediate vicinity of the site, both of which are segments of Washington Avenue. Additionally, there are two intersections on Washington Avenue that experienced high numbers of crashes over the past three years, although they do not have a CRF of 1.00 or greater. The following table summarizes the four locations, the number of crashes, the CRF, and whether or not it is a HCL.

Crash Summary

Location	# Crashes	CRF	HCL
Intersections			
Bates / Veranda / Washington	34	0.94	No
Presumpscot / Washington	27	0.89	No
Roadway Segments			
Washington Ave – Bates to Galvin	12	1.73	Yes
Washington Ave – Presumpscot to Cummings	12	1.51	Yes

As shown in the table, the two intersections of interest do not meet the criteria for a HCL, but the two roadway segments do. Typically, GP would examine the police reports for the collisions that occurred to identify crash patterns. However, it is our understanding that the City is currently exploring improvements for this area of Washington Avenue, so crash patterns may be changed as a result of those efforts. It should also be reiterated that the proposed expansion is only increasing traffic by 13 and 16 trip ends during the AM and PM peak hours respectively.

V. Parking Evaluation

While PHA wants to provide adequate parking for the project, parking results in a loss of open space, increases stormwater impacts, and uses valuable urban land. At the same time, providing too little parking would have adverse effects on residents and the surrounding neighborhood. The applicant's goal through the parking demand analysis process is to find the appropriate ratio of parking spaces. Our office has data suggesting actual parking demand at 100% capacity will be below the one space per unit. To estimate the parking demand for the proposed project, GP consulted two sources; a parking use inventory of the existing East Bayside PHA properties that was conducted for the Bayside Anchor study, and other relevant parking studies GP has completed. These are summarized below:

Parking Study of Existing East Bayside PHA Properties and On Street Parking

In support of the 58 Boyd Street project, GP completed an inventory of occupied and available parking spaces for the East Bayside PHA properties as well as the adjacent neighborhood streets on Sunday evening, September 10th 2017 every 45 minutes from approximately 9 PM to midnight. This represents a time period when most residents would be parked in the neighborhood. The peak period, when the highest number of vehicles were parked throughout the neighborhood, occurred at midnight. A summary of the results for the peak period is presented below:

Parking Survey Results within East Bayside PHA Properties

- Highest Demand observed in PHA Parking Lots: 96 spaces
- Total Parking Lot Spaces: 162 Spaces
- Total Available Spaces in Parking Lots: 66 spaces

According to occupancy information furnished by PHA, 197 units of the 201 total units were occupied as of September 19, 2017. Therefore, the overall parking ratio within the PHA off street lots was 0.49 (96/197) spaces per unit. It should be noted that 144 units have parking stickers to allow them to park in PHA lots, but the peak demand in the lots was 96 vehicles, which is less than the number of stickered vehicles. The peak demand is approximately 0.67 (96/144) spaces used per sticker.

On Street Parking for Area Bounded by Anderson, Cumberland, Greenleaf, Oxford, Madison and Boyd Streets

- Highest On Street Demand Observed: 212 spaces
- Total On Street Spaces: 348 spaces
- Total Available Spaces On Street: 136 spaces

This data shows there was substantial available parking within the neighborhood. While 66 spaces were available within the PHA parking lots, some residents may be parking on the street. Therefore, to estimate the total parking demand associated with the existing PHA properties, GP included the number of occupied spaces adjacent to PHA properties, which were estimated to be 80 spaces. Adding these additional spaces to the 96 spaces occupied in the existing PHA lots results in an overall existing parking ratio of 0.89 spaces per occupied unit for the PHA housing properties. <u>This is conservatively high since the inventory was generous when attributing the on street parking to the PHA properties.</u>

GP also determined the number of unoccupied on and off street parking spaces within 300 and 500 feet of 58 Boyd Street. The data summarized below is for 12 midnight, which was the peak period observed:

Unoccupied parking within 300 feet of the site:

- Parking lots: 8 spaces
- On Street spaces: 17 spaces
- Total: 25 spaces

Unoccupied parking within 500 feet of the site:

- Parking lots: 38 spaces
- On Street spaces: 41 spaces
- Total: 79 spaces

Other Relevant Parking Studies

GP reviewed data from other projects that were on file to estimate an appropriate parking ratio for this project which is summarized below:

Island View Apartments in Portland, Maine

This inventory was performed on July 12, 2004 from 6:00 PM to 9:00 PM. Island View Apartments is a 70-unit apartment building on the corner of North Road and Walnut Road in Portland. It contains a total of 84 parking spaces, 29 of which are designated visitor parking only, and two of which are handicap parking. In the peak half hour period, a maximum of 49 parking spaces were occupied. This gives a demand of 0.70 parking spaces per dwelling unit.

Previous Parking Occupancy Study

As part of studies for similar projects in the past, GP examined the parking occupancy of apartment buildings in downtown Portland with dedicated parking lots, either behind or within the building as part of another application. GP completed parking occupancy counts from 10-11 PM (within the peak period, based on ITE and Urban Land Institute {ULI} data) at 53 Danforth Street, 645 Congress Street, and Walker Terrace (at the corner of Congress Street and Walker Street) on Tuesday, October 26, 2010.

In addition, GP referenced the parking supply for Franklin Towers and Oak Street Lofts. Franklin Towers has 200 units and, based on aerial data, a parking supply of 58 spaces. Oak Street Lofts has 37 units and 16 parking spaces, although it should be noted that half of the spaces (eight) are for motorcycles. For the purposes of this assessment it is assumed that the peak demand at both of these facilities is at 100% occupancy. The following table summarizes the calculated parking demand for each facility based on the occupancy counts:

Parking Demand Studies Summary

Facility	Number of Units	Peak Demand (occupied spaces)	Demand Rate (spaces per unit)
53 Danforth	43	29	0.67
645 Congress	56	28	0.50
Walker Terrace	40	20	0.50
Oak Street Lofts	37	16*	0.43
Franklin Towers	200	58**	0.29
Average Parking Demand (spaces per unit)			**0.48**

*Assumes 100% occupancy at Oak Street Lofts

**Assumes 58 spaces based on aerial imagery and 100% occupancy at Franklin Towers

As shown in the table, the parking occupancy counts for various facilities in Portland indicate an average need for 0.48 parking spaces per apartment unit within the Portland Peninsula.

Recommended Parking Ratio

Based on the level of parking demand at the above referenced studies, and the planned implementation of the Transportation Demand Management Plan, it is the opinion of GP that an appropriate parking demand rate for the proposed Front Street project is 0.75 spaces per unit to achieve 100% capacity. This is consistent with the parking rate used for the recent Bayside Anchor and 58 Boyd Street projects.

Existing Availability Parking Study

To understand more about the current parking conditions, GP completed a general review of off-street parking within the neighborhood (see attached Parking Occupancy Map). In addition, we also field reviewed the four primary parking lots associated with the existing 50 units. The parking evaluation was completed at approximately 10:30 PM on a Sunday night (July 9, 2017). Sunday nights are typically a good time to gather this type of data since most people are at home at this time on a Sunday starting to prepare for the up coming week. The streets are not striped for parking spaces, so to complete this evaluation, we based the on-street parking capacity on information provided by the City. For purposes of determining spaces, they assume a parking space is 20 feet in length, parking stops 5 feet from a driveway, and 20 feet from the centerline of a crosswalk. We also eliminated those areas where parking was not allowed. The following table summarizes the results of the evaluation. The results of the parking evaluation are also shown on the attached Figure 1.

Parking Evaluation Summary

Segment	Counted	Capacity	Available
Front St. (Johansen St. to West Presumpscot St.)	22	65	43
Front St. (West Presumpscot St. to Randall St.)	5	34	29
Illsley St. (West of Cummings St.)	0	1	1
Illsley St. (Cummings St. to West Presumpscot St.)	11	22	11
Illsley St. (West Presumpscot St. to Randall St.)	10	35	25
West Presumpscot St. (Washington Ave. to Illsley St.)	5	13	8
West Presumpscot St. (Illsley St. to Front St.)	13	25	12
Randall St. (Illsley St. to Front St.)	3	21	18
Illsley St. Parking Lot	6	13	7
Front St. Western Parking Lot	4	13	9
Front St. Eastern Parking Lot	5	13	8
Front Street Parking Lot	9	11	2
Total	**93**	**266**	**173**

As can be seen, there is ample existing on-street parking availability. The existing on-street parking availability combined with the the proposed off-street parking spaces for the proposed development, which will remove vehicles from the street, will provide more than enough parking for neighborhood residences. The attached Figure 1 shows the percent occupancy of each street and lot. As can be seen from the Figure, with the exception of one short section of West Presumpscot Street (which is still less than 75% capacity), the adjacent roadway network is less than 50% occupied. This includes the streets that are directly adjacent to the existing site.

Concerns were raised at a recent neighborhood meeting that residences may not want to pay to be able to park within the parking lots, and instead opt to park on the street. It is my understanding that PHA reviewed how many of their residences had paid for an off-street parking pass to park within the parking lots and that all 50 residences had a sticker. There is a potential that some units have more than one vehicle, and do park on the street; however, from the above on-street parking evaluation, it is clear there is still more than enough on-street parking.

VI. Neighborhood Comments

The applicant hosted a neighborhood meeting on May 17, 2017 to provide the neighborhood with details on the proposed project and to listen to the comments and concerns regarding the redevelopment. The minutes from the meeting are attached. The primary traffic comments from the neighborhood are summarized as follows with preliminary responses:

Comment: Several attendees voiced a concern regarding anticipated increases in traffic volumes.

Response: As detailed in Section III of this Study, the development is forecast to increase the existing site trip generation by 13 AM peak hour trip ends and 16 PM peak hour trip ends. This level of trip generation is not anticipated to significantly impact the operation of the adjacent roadway network

Comment: Attendees were concerned with the speed of traffic through the neighborhood

Response: Although not discussed in this study, PHA is has expressed a willingness to explore potential traffic calming measures for the immediate neighborhood and is pursuing this with the City. They recognize the importance of maintaining reasonable speeds throughout the neighborhood. They are also sensitive to consistency of speed throughout the neighborhood and not try to slow traffic in one area only to have drivers divert and speed through other areas.

Comment: The neighborhood feels parking on Front Street is overused and hazardous. Additional concern that there will not be enough parking provided off-street.

Response: Parking is detailed in Section V of this study. Based on that evaluation the parking demand for 100% capacity is forecast at approximately 75 parking spaces.

VII. Transportation Demand Management (TDM) Plan

PHA has requested the development of a Transportation Demand Management (TDM) Plan for this project that will support the City's transportation and environmental sustainability goals as well as the PHA's Green Policy by encouraging and promoting bicycling, walking, and use of transit. Avesta Housing Management will be managing the project for PHA and is very familiar with the importance of a TDM Plan. The following is a description of the elements of the TDM Plan.

TDM Coordinator

Avesta has a Property Manager who will coordinate the TDM Plan. The TDM Coordinator will be responsible for posting changes and updates to the METRO schedule and potential UHaulCarshare information in the lobby as well as other information relevant to promoting and encouraging the greater use of bicycling, walking, and bus-based transit. Portland Housing is also striving to have a Transportation Demand Management line item approved for the operating budget to help further subsidize METRO passes and potentially a UHaulCarShare system and Lyft personal ride share service.

PHA Goals for Parking

In addition to adopting the philosophy of the City in trying to reduce the need for parking spaces and encourage other modes of travel, PHA has also identified internal goals as follows:

- Provide limited, safe, well managed parking for PHA / PHDC residents
- Reduce agency costs of maintaining parking areas
- Reduce vehicle congestion
- Increase tenants use of public transportation
- Utilize PHA land more efficiently, making it available for other purposes
- Reduce the costs of new housing development by building / providing less parking
- Reduce the cost of housing to tenants
- Reduce fuel usage and carbon emissions, consistency with PHA Green Policy
- Increase resident wellness

Parking Requirements in Lease

The following are key parking requirements that will be detailed in the lease agreement:

- One parking space per household provided (if available at site)
- Tenants must register vehicle with PHA
- Vehicle must be kept operable, inspected and registered with State of Maine
- Eligible registered vehicles receive a PHA sticker to be displayed
- Tenants will be charged an annual $60.00 Parking Reservation Fee to help off-set costs of maintaining parking areas and administering parking rules. Monthly $5 charge on one vehicle allowed to be parked on site

Automobile Parking Reduction Strategies

The Applicant proposes to take the following measures to reduce the demand for vehicles:

Bicycle Parking

PHA Housing is proposing to provide a total of 50 parking spaces for bicycles on-site, with 40 of these within the buildings and others on outside racks. The bicycle shelter will provide increased bicycle security and protection from the weather.

Encourage Use of Local Transit

The Front Street housing development is a walkable distance of 0.2 miles away from the closest METRO bus stop, which is located on Washington Avenue. Avesta's TDM Coordinator will provide route maps, schedules, and ticket information in packets along with their lease agreement. As PHA does for its public housing residents, Front Street will potentially provide discounted monthly Metro bus passes to households, with a preference to families with no vehicle, depending on MaineHousing requirements for subsidizing METRO passes with parking fees. If allowed, Front Street would propose the following:

- $45 monthly passes will be reduced to $25
- Maximum of 2 passes per household
- Work with Metro on development and implementation of bus pass program

UHaulCarShare

In Portland, the UHaulCarShare service currently provides a total of seven vehicles, one of which is utilized by Avesta Housing at their 409 Cumberland development. This service is a shared car program that allows people to rent the vehicle for various trips. Based on a review of June 2015 to May 2016 data, the vehicle used by residents of 409 Cumberland Avenue was used for an average of 30 trips per month with an average distance of 39 miles per trip. The closest vehicle to the Front Street development is located at 115 Congress Street, which is approximately a 1.5 mile walk from the site. These vehicles are available on an hourly or daily basis. PHA will make residents aware of and encourage use of this service, which will allow for use of a car for certain trips, which can reduce the need for an owned car. Information will be provided to each incoming resident with their lease agreement.

Sidewalk Facilities

Sidewalks surround the proposed project encouraging walking to and from the site. In addition, the site is in close proximity to the Back Cove Trail and to Payson Park, part of the Portland Trail system. PHA is also working with the Parks Department to establish a better connection to Payson Park.

Tenant Packets

Upon signing a lease, each tenant will be provided with an extensive packet which will include information on transportation incentives and resources. Tenant packets will, at a minimum, include:

- Information on METRO pass reduced fees or free ride tickets to be provided by PHA
- The Greater Portland Transit Guide and other bus transit trip planning resources
- Registration and program information for UHaulCarShare
- Bicycle commuting information and other resources gathered from the Bicycle Coalition of Maine, the Portland Gear Hub Bicycles for All Mainers Program, and Bicycle Meet Up commuter program
- Portland Trails map

Education

Work with Portland Metro and Greater Portland Council of Governments to educate and market the use of public transit in the Portland area to PHA residents. It is our understanding that the following information will be provided to tenants:

- Metro plans to increase the number of bus shelters along routes
- Metro has expanded service to Yarmouth and Brunswick
- Metro will be launching "real time bus arrival information" via website, text message and mobile applications
- Educate potential users on the average annual costs associated with owing a car (approximately $5,822/year) and the savings if they were to use the bus

Monitoring

As part of the TDM Plan monitoring program, Avesta Property Managementwill assess the utilization of its on and off site parking on an ongoing basis and will monitor the operation of the parking areas. Demand for handicapped parking will be monitored on a monthly basis. Avesta Property Managementwill track tenant requests for additional on-site bicycle and scooter/motorcycle parking.

One year after initial occupancy and annually thereafter, Avesta Property Management will revisit the TDM Plan, taking into account the following:

- Tenant vehicle ownership (bicycle, scooter/motorcycle, automobile)
- Tenant parking utilization of on and off street parking, including nearby parking garages and on-street parking spaces
- The means of travel by tenants (bus, walk, bicycle, automobile, scooter/motorcycle, car share, carpool, or other)

Avesta Property Management will update the TDM Plan and submit a draft plan to the City's TDM Manager for review and comments. Should the vehicle ownership of the tenants exceed 1.0 spaces per unit or 100 spaces, or specific parking issues are identified, additional TDM measures and/or parking measures will be considered.

Timetable for Action Items

This project will be managed by Avesta Property Management. The applicant will work with the City in establishing expected timelines for each of the action items.

Appendix

Trip Generation Calculations
MaineDOT Crash Data
Parking Occupancy Map
Neighborhood Meeting Minutes

JN: 3323
Project Description: Front Street Affordable Housing
Project Location: Portland, Maine
Date: 6/13/2017

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Apartment
Land Use Code (LUC) 220

Proposed
Dwelling Units: 100

Average Rate

Time Period	ITE Trip Rate	Sample Size	Trip Ends		Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 6.65 (X)	88	665		50%	50%	333	332	N/A
AM Peak Hour of Adj. Street Traffic	T = 0.51 (X)	78	51		20%	80%	10	41	N/A
PM Peak Hour of Adj. Street Traffic	T = 0.62 (X)	90	62		65%	35%	40	22	N/A
AM Peak Hour of Generator	T = 0.55 (X)	83	55		30%	70%	17	38	N/A
PM Peak Hour of Generator	T = 0.67 (X)	85	67		60%	40%	40	27	N/A
Saturday	T = 6.39 (X)	15	639		50%	50%	320	319	N/A
Saturday Peak Hour of Gen.	T = 0.52 (X)	14	52	**	50%	50%	26	26	N/A

* Percentages rounded to nearest 5%
** Not Available (Assumption)

Fitted Curve Equation

Time Period	ITE Trip Rate	Sample Size	Trip Ends		Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 6.06 (X) + 123.56	88	730		50%	50%	365	365	0.87
AM Peak Hour of Adj. Street Traffic	T = 0.49 (X) + 3.73	78	53		20%	80%	11	42	0.83
PM Peak Hour of Adj. Street Traffic	T = 0.55 (X) + 17.65	90	73		65%	35%	47	26	0.77
AM Peak Hour of Generator	T = 0.54 (X) + 2.45	83	56		30%	70%	17	39	0.82
PM Peak Hour of Generator	T = 0.60 (X) + 14.91	85	75		60%	40%	45	30	0.80
Saturday	T = 7.85 (X) - 256.19	15	529		50%	50%	264	265	0.85
Saturday Peak Hour of Gen.	T = 0.41 (X) + 19.23	14	60	**	50%	50%	30	30	0.56

* Percentages rounded to nearest 5%
** Not Available (Assumption)

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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

Rt 26 area

REPORT PARAMETERS

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

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	End Node: **17040**	End Offset: **0**	☐ **Exclude Last Node**
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	End Node: **13547**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0560302**	Start Node: **13534**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **13537**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0560307**	Start Node: **13534**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **17036**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0560391**	Start Node: **13538**	Start Offset: **0**	☑ **Exclude First Node**
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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

Rt 26 area

REPORT PARAMETERS

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

Route: **0560609**	Start Node: **13535**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **13549**	End Offset: **0**	☑ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
18737	0026X - 1.21	Int of BATES ST VERANDA ST WASH AV SB WASHINGTO	9	34	0	1	2	6	24	27.3	11.233	1.01	1.07	0.00
												Statewide Crash Rate:	0.71	
17036	0026X - 1.27	Int of GALVIN ST, WASHINGTON AV	2	7	0	0	0	2	5	28.6	8.689	0.27	0.29	0.00
												Statewide Crash Rate:	0.13	
17037	0026X - 1.32	Int of RANDALL ST WASHINGTON AV	2	5	0	0	1	2	2	60.0	8.769	0.19	0.29	0.00
												Statewide Crash Rate:	0.13	
13583	0026X - 1.35	Int of CHURCHILL ST, WASHINGTON AV	2	6	0	0	0	2	4	33.3	8.732	0.23	0.29	0.00
												Statewide Crash Rate:	0.13	
17038	0026X - 1.41	Int of PRESUMPSCOT ST W PRESUMPSCOT ST WASHIN(	9	27	0	1	2	6	18	33.3	9.134	0.99	1.11	0.00
												Statewide Crash Rate:	0.71	
17039	0026X - 1.50	Int of CUMMINGS ST WASHINGTON AV	2	2	0	0	0	0	2	0.0	6.859	0.10	0.31	0.00
												Statewide Crash Rate:	0.13	
A13547	0026X - 1.55	Int of JOHANSEN ST, WASHINGTON AV	2	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.13	
P17040	0026X - 1.56	Int of OAKLEY ST WASHINGTON AV	2	3	0	0	0	1	2	33.3	6.691	0.15	0.31	0.00
												Statewide Crash Rate:	0.13	
13537	0560403 - 0	Int of FRONT ST JOHANSEN ST	2	0	0	0	0	0	0	0.0	0.085	0.00	0.09	0.00
												Statewide Crash Rate:	0.14	
13534	0560302 - 0	Int of FRONT ST GALVIN ST	2	0	0	0	0	0	0	0.0	0.040	0.00	-1.25	0.00
												Statewide Crash Rate:	0.14	
13535	0560302 - 0.04	Int of FRONT ST RANDALL ST	2	0	0	0	0	0	0	0.0	0.088	0.00	0.12	0.00
												Statewide Crash Rate:	0.14	
13536	0560302 - 0.15	Int of FRONT ST W PRESUMPSCOT ST	2	1	0	0	0	0	1	0.0	0.102	3.27	0.25	13.15
												Statewide Crash Rate:	0.14	
13538	0560307 - 0.08	0503952 POR,ILLSLEY,GALVIN ST.	2	0	0	0	0	0	0	0.0	0.069	0.00	-0.15	0.00
												Statewide Crash Rate:	0.14	
13549	0560391 - 0.04	0503963 POR,ILLSLEY,RANDALL ST.	2	0	0	0	0	0	0	0.0	0.118	0.00	0.35	0.00
												Statewide Crash Rate:	0.14	
13550	0560391 - 0.14	Int of ILLSLEY ST W PRESUMPSCOT ST	2	0	0	0	0	0	0	0.0	0.156	0.00	0.48	0.00
												Statewide Crash Rate:	0.14	
13551	0560391 - 0.24	0503965 POR,ILLSLEY,CUMMINGS ST.	2	0	0	0	0	0	0	0.0	0.051	0.00	-0.66	0.00
												Statewide Crash Rate:	0.14	
13552	0560391 - 0.27	0503966 POR,ILLSLEY ST,END	2	0	0	0	0	0	0	0.0	0.011	0.00	-10.20	0.00
												Statewide Crash Rate:	0.14	
13553	0560609 - 0	0503967 POR,,RANDALL ST,END	2	0	0	0	0	0	0	0.0	0.017	0.00	-5.33	0.00
												Statewide Crash Rate:	0.14	
Study Years:	3.00	**NODE TOTALS:**		85	0	2	5	19	58	30.6	60.844	0.47	0.43	1.08

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
17036	18737	3123985	0 - 0.06	0026X - 1.21	0.06	2	12	0	0	1	0	11	8.3	0.00515	776.24	448.69	1.73
Int of GALVIN ST, WASHINGTON AV				ST RTE 26											Statewide Crash Rate: 193.12		
17036	17037	3120740	0 - 0.05	0026X - 1.27	0.05	2	2	0	0	0	1	1	50.0	0.00436	153.02	467.99	0.00
Int of GALVIN ST, WASHINGTON AV				ST RTE 26											Statewide Crash Rate: 193.12		
13583	17037	3123939	0 - 0.03	0026X - 1.32	0.03	2	1	0	0	0	0	1	0.0	0.00261	127.56	533.65	0.00
Int of CHURCHILL ST, WASHINGTON AV				ST RTE 26											Statewide Crash Rate: 193.12		
13583	17038	3130464	0 - 0.06	0026X - 1.35	0.06	2	5	0	0	0	1	4	20.0	0.00521	319.80	447.44	0.00
Int of CHURCHILL ST, WASHINGTON AV				ST RTE 26											Statewide Crash Rate: 193.12		
17038	17039	3129290	0 - 0.09	0026X - 1.41	0.09	2	12	0	0	2	0	10	16.7	0.00618	647.14	429.04	1.51
Int of PRESUMPSCOT ST W PRESUMPSCOT ST WASHINGTON AV				ST RTE 26											Statewide Crash Rate: 193.12		
13547	17039	188353	0 - 0.05	0026X - 1.50	0.05	2	4	0	0	1	2	1	75.0	0.00340	391.74	498.42	0.00
Int of JOHANSEN ST, WASHINGTON AV				ST RTE 26											Statewide Crash Rate: 193.12		
13547	17040	3130189	0 - 0.01	0026X - 1.55	0.01	2	0	0	0	0	0	0	0.0	0.00066	0.00	745.15	0.00
Int of JOHANSEN ST, WASHINGTON AV				ST RTE 26											Statewide Crash Rate: 193.12		
13537	13547	188337	0 - 0.12	0560403 - 0	0.12	2	0	0	0	0	0	0	0.0	0.00012	0.00	1732.01	0.00
Int of FRONT ST JOHANSEN ST				RD INV 05 60403											Statewide Crash Rate: 401.45		
13534	13535	188330	0 - 0.04	0560302 - 0	0.04	2	0	0	0	0	0	0	0.0	0.00001	0.00	-5673.21	0.00
Int of FRONT ST GALVIN ST				RD INV 05 60302											Statewide Crash Rate: 401.45		
13535	13536	188332	0 - 0.11	0560302 - 0.04	0.11	2	1	0	0	0	0	0	0.0	0.00004	7412.68	1138.86	6.51
Int of FRONT ST RANDALL ST				RD INV 05 60302											Statewide Crash Rate: 401.45		
13536	13537	188335	0 - 0.16	0560302 - 0.15	0.16	2	1	0	0	0	0	1	0.0	0.00012	2897.34	1730.97	1.67
Int of FRONT ST W PRESUMPSCOT ST				RD INV 05 60302											Statewide Crash Rate: 401.45		
13534	13538	188331	0 - 0.08	0560307 - 0	0.08	2	0	0	0	0	0	0	0.0	0.00004	0.00	1021.50	0.00
Int of FRONT ST GALVIN ST				RD INV 05 60307											Statewide Crash Rate: 401.45		
13538	17036	188339	0 - 0.04	0560307 - 0.08	0.04	2	2	0	0	0	0	2	0.0	0.00003	21847.89	333.98	65.42
0503952 POR,ILLSLEY,GALVIN ST.				RD INV 05 60307											Statewide Crash Rate: 401.45		
13538	13549	188338	0 - 0.04	0560391 - 0	0.04	2	1	0	0	0	0	1	0.0	0.00000	81539.47	-25630.05	0.00
0503952 POR,ILLSLEY,GALVIN ST.				RD INV 05 60391											Statewide Crash Rate: 401.45		
13549	13550	188355	0 - 0.10	0560391 - 0.04	0.10	2	3	0	0	0	0	3	0.0	0.00004	26599.28	828.23	32.12
0503963 POR,ILLSLEY,RANDALL ST.				RD INV 05 60391											Statewide Crash Rate: 401.45		
13550	13551	188357	0 - 0.10	0560391 - 0.14	0.10	2	0	0	0	0	0	0	0.0	0.00004	0.00	884.43	0.00
Int of ILLSLEY ST W PRESUMPSCOT ST				RD INV 05 60391											Statewide Crash Rate: 401.45		
13551	13552	188359	0 - 0.03	0560391 - 0.24	0.03	2	0	0	0	0	0	0	0.0	0.00001	0.00	-14016.71	0.00
0503965 POR,ILLSLEY,CUMMINGS ST.				RD INV 05 60391											Statewide Crash Rate: 401.45		
13549	17037	188356	0 - 0.04	0560609 - 0.15	0.04	2	0	0	0	0	0	0	0.0	0.00005	0.00	1167.02	0.00
0503963 POR,ILLSLEY,RANDALL ST.				RD INV 05 60609											Statewide Crash Rate: 401.45		
13535	13553	188334	0 - 0.07	0560609 - 0	0.07	2	0	0	0	0	0	0	0.0	0.00002	0.00	-457.55	0.00
Int of FRONT ST RANDALL ST				RD INV 05 60609											Statewide Crash Rate: 401.45		

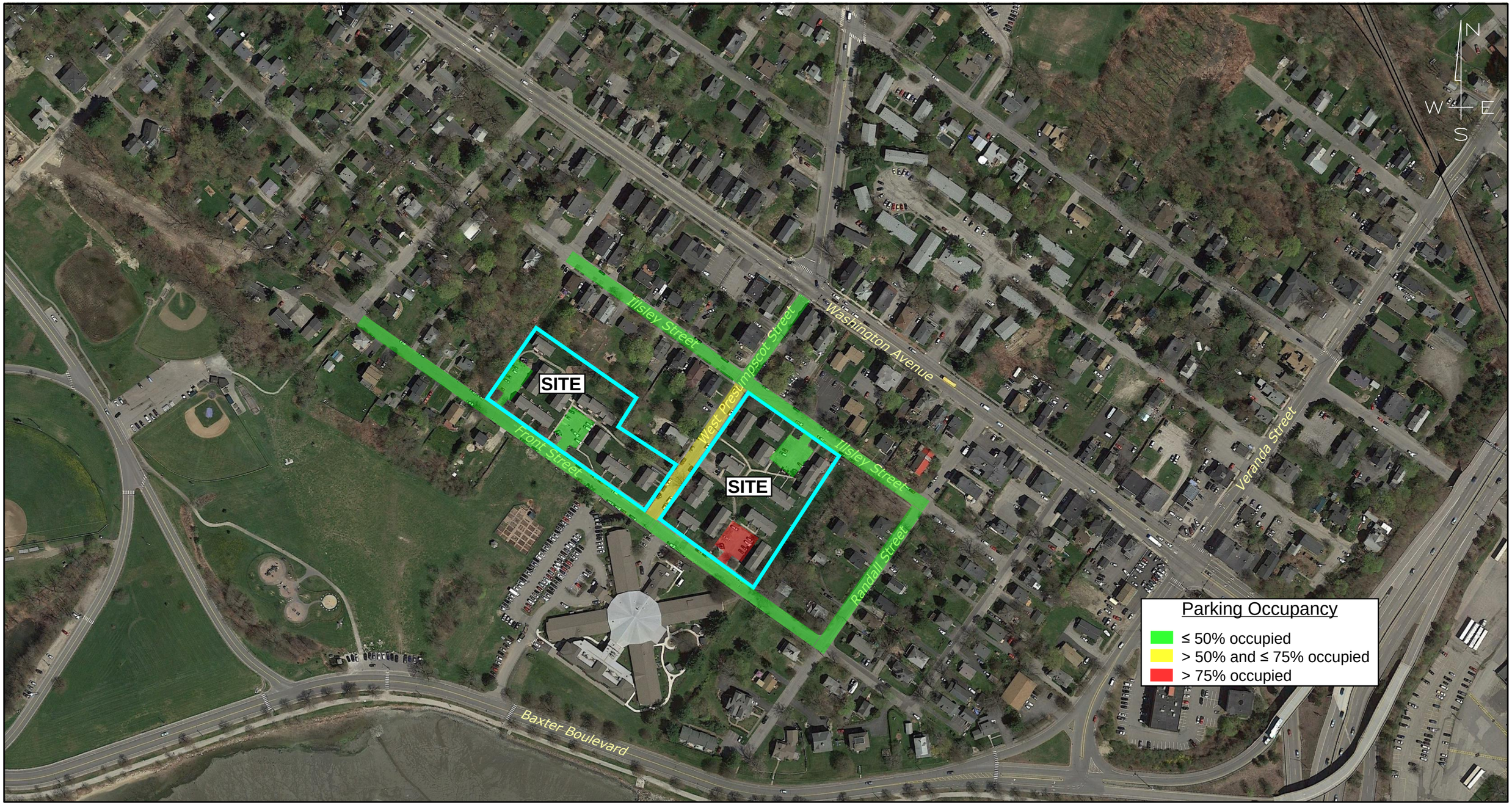
Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
13550	17038	188358	0 - 0.05	0560599 - 0.08	0.05	2	2	0	0	0	0	2	0.0	0.00007	9201.43	1601.95	5.74
Int of ILLSLEY ST W PRESUMPSCOT ST				RD INV 05 60599											Statewide Crash Rate: 401.45		
13536	13550	188336	0 - 0.08	0560599 - 0	0.08	2	3	0	0	0	0	3	0.0	0.00007	13698.63	1606.05	8.53
Int of FRONT ST W PRESUMPSCOT ST				RD INV 05 60599											Statewide Crash Rate: 401.45		
13551	17039	188360	0 - 0.05	0560176 - 0	0.05	2	2	0	0	0	1	0	100.0	0.00002	31491.10	-994.82	0.00
0503965 POR,ILLSLEY,CUMMINGS ST.				RD INV 05 60176											Statewide Crash Rate: 401.45		
13535	13549	188333	0 - 0.08	0560609 - 0.07	0.08	2	0	0	0	0	0	0	0.0	0.00006	0.00	1442.38	0.00
Int of FRONT ST RANDALL ST				RD INV 05 60609											Statewide Crash Rate: 401.45		
Study Years: 3.00				**Section Totals:**	1.54		51	0	0	4	5	40	17.6	0.02832	600.26	317.23	1.89
				Grand Totals:	1.54		136	0	2	9	24	98	25.7	0.02832	1600.69	440.28	3.64

Parking Occupancy Map

Figure No. 1



Front Street Development
PORTLAND, MAINE

Design: ET
Draft:
Checked: RED
Scale: NONE
Date: SEPT 2017
File Name: 3323 Figure

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Front Street Re-Development
Meeting Minutes
May 17, 2017, Presumpscot Elementary School

Team Members Present:

PHA - Mark Adelson (Executive Director), Jay Waterman (Director of Development), Trevor Nugent (Dir. Of public Housing), Emily Mancini-Fitch (Housing Services Manager), Shirley Peterson (PHA Board President)
Utlle Architecture and Design - Jonathan Evans, Katie Wirtz, Evan Parkinson
Government Strategies - Kim Cook
Carroll Associates Landscape Architecture - Pat Carroll

Portland Housing Authority hosted a neighborhood meeting regarding the re-development of the Front Street public housing project in Portland's East Deering neighborhood. The meeting was held at the Presumpscot Elementary School on May 17, 2017 from 6:30-8:00pm.

The meeting was noticed by mail to property owners within 500 feet of the proposed development using the City Planning Department's mailing list. PHA also noticed all Front Street Public Housing residents with flyers

Sign-in sheets and the flyer that was sent are attached.

Mark Adelson, Executive Director, opened the meeting with introductions and gave some background on the Housing Authority and PHA's Strategic Vision Plan for renovation or re-development of its 1,000+ housing units in Portland

Jonathan Evans from Utile Architecture and Design, presented the project, the neighborhood context. Jonathan gave a history of project, noted it is at the end of its useful life. Discussed the needs of the neighborhood. There are currently 182 bedrooms in 18 bldgs plus the community room. He said it is important to look at the community needs, listed from previous meetings. Opportunities:

- meet needs of project but respectful of neighborhood
- scale of housing
- traffic calming measures on Presumpscot St.

Jonathan showed existing and proposed views of project.

Jay Waterman discussed the process at the planning board, the schedule, and next steps. Pat Carroll, Landscape Architect, presented the site plan.

Comments from attendees (*responses or discussion in italics)*:

- It appears that most residents of current development have more than 1 car. Sharon Kiley offered to sell her property to use as parking lots. Traffic speed on Presumpscot is fast and dangerous.

- Area needs more parking, residents have more than 1 car, parking on Front St and neighboring streets.
- Too many Front Street residents park on the street and the streets do not get plowed.
- Concern for location of school bus stop around development as it blocks traffic.
- Area resident wants it to be pedestrian friendly, enhance sidewalks, curb flares, improved pedestrian safety.
    - *Design team explained some of the ideas of pedestrian friendly design and connection to Payson Park; making all sidewalks that are in rough shape new and safe; better crosswalks and potential bump-outs for a shorter distance from curb to curb.*
- Concept design shown, the architecture is not in keeping with neighborhood. Looking for 'Maine" archtype, project is in 1922 neighborhood.
- The design shown with the flat roofs is too modern looking. We want brick exterior and a design that is in keeping with the neighborhood.
- It is a problem that people are cutting through the nursing home to Baxter Blvd.
- Wants to change neighborhood traffic habits, cut thru nursing home driveway to Baxter Blvd, wants some kind of blvd access. Other concern that senior housing would cut off access to the Blvd. if this were used too much.
- Need for a traffic study
    - *This is pending and will be submitted with the Site Plan application to the planning board*
    - *Jay Waterman gave an estimated timeframe for the project of a site plan application submission in Summer 2017 with a construction start in Fall of 2018 and occupancy in Fall of 2019.*
- Traffic Study should be done at different times of day to show the different usage and different cars.
- Changing nature of neighborhood; this is not India St or West End, different than other neighborhoods; there are challenges and opportunities; didn't like flat roofs
- Concern about design as too urban and would change the feel of the neighborhood; concern it is too dense.
- Concern about sewer capacity and school capacity for more children
    - *Jay noted that utilities (sewer/water) are through the City and Portland Water District. Unit mix has not been determined but there will be some 4-5 BR units and many more studios and 1BR units. It will also be mixed income at 80% affordable and 20% market rate.*
- Concern about new height being taller than current building height.
    - *It was noted that the 2-3 story buildings will not be any taller than the pitched roofs and will meet the zoning requirements for R-5 PRUD.*
- Playgrounds too close to windows, move away from buldings.
- Concern that buildings are too close to the road and need larger front yards for playing and neighbor interaction
    - *There will be setbacks and small front yards and stoops*
- Concern that distance from parking to unit entry is too far.
- An area resident asked the timing of project and the need for traffic study.
    - *Team noted that the project is going to planning board Fall 2017. Pat Carrol noted a traffic study is part of that submission to the planning board and that will*

help the planning board impose a number of off-street parking spaces

- Questioned scale of project, doubling number of units on site. Questioned speed table on Presumpscot; described using Cummings as escape to Washington Ave. Need to slow traffic on Randall and Johannsen.

- Too many cars parked on the street and people drive too fast in the neighborhood.
  - *This is something the team would like work with the area residents and the City on to find solutions because PHA does not want too many cars on the street or unsafe streets.*

- Need 2nd exit onto Washington Ave; questioned school population; questioned similarity to Washington Gardens; Issues with sewer system on Washington Avenue

- A Front Street resident asked about basements.
  There will be no basements if Front Street is re-developed.

- Concern about sewer capacity and soils on this site.
  - *There is public sewer in the area and the Portland Water District said that it has the capacity to serve the proposed new project size and BR mix.*

- How is trash handled; school buses; questioned who takes care of housing.
  - *Trash service will take trash from rooms in buildings. No dumpsters.*

- Questioned ownership of property; where can she read about project; lack of outdoor space for individual residents
  - *There will be information on PHA's website soon. More information after submission to the planning board.*

- Questioned occupancy rate/ bedroom occupancy of 60% valid?
  - *The 60% only refers to the maximum number of people per bedroom under HUD rules. PHA tracks this and our occupancy is less than the maximum of 2 persons per bedroom by about 55% or about 1 person per bedroom.*

- Residents parking on streets, not in parking lots; main issues traffic, parking ,school impact
  - *There was discussion about existing number of bedrooms increasing only by 21% even though the number of units is going from 50 to 99.*

- Preference for community play areas to be separated from residential areas. Area resident has kids that have broken a window when using the play space close to her residence.

- There are only parking outlets to Front Street planned. There should be parking outlets to other streets.
  - *Design team noted driveways onto Illsley as well as Front Street.*

- Concern about doubling number of units and the amount of traffic.

- Could Cummings Street be built to ease traffic? Speed bumps on Johannsen and Randall a possibility?
  - *These are City issues that we could help the neighbors discuss with the City.*
  - *Discussion about Cummings street and turning it into a real street*

- Area resident asked if the management company will do a better job of keeping the trash picked up. Trash is a problem.
  - *Design Team noted that there will be indoor trash rooms and a trash service that picks up trash. The dumpsters and their enclosures will go away.*

- Concern for who manages the property.

- Would like to see a digital or hard copy of the presentation
  - *It was noted that the presentation and the meeting minutes would be on the PHA website.*

- Does not like the aesthetics of residents storing things outdoors. They should have storage. Prefer fenced back yards. Residents should all have private outdoor space.

- Having individualized outdoor spaces is important to residents. Residents in surrounding neighborhood have access to outdoor spaces.

- What is required for site plan application to the City planning board?
    - *Pat Carroll explained the level of plan details, performance guidelines, utilization rates, construction management plans, etc. that need to be submitted.*
- Traffic is too fast; Would like to feel invited into the new development and have areas for kids to play; wants to strengthen the sense of community.
    - *Team explained they want as much integration with the neighborhood as possible and make the design of the new development "permeable" so that area residents feel welcome walking through.*

- *When is the next community meeting?*
    - *2-3 months from this meeting after site plan submission. There is also a required public hearing at the planning board for anyone to come and give comments.*

END OF MEETING MINUTES

Note: This memorandum represents our understanding of the events which transpired and the actions which were taken. If they do not conform to a recipient's understanding, prompt written notice must be communicated to the writer. If no corrections or objections are made, this memorandum will be relied upon as a factual interpretation of this meeting.