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PARKING DEMAND STATEMENT

Date: November 18, 2013

Project: Joint Forces Headquarters, Augusta, Maine

The proposed Joint Forces Headquarters project in Augusta consists of a new 100,791 gross square feet (GSF) facility. According to the Augusta Code of Ordinances, required parking for an office building is 3 spaces per 1000 GSF, which equates to 303 parking spaces. This is consistent with the average parking supply ratio of 3.3 spaces per 1000 GSF for government office buildings according to *Parking Generation* (4th edition, Institute of Traffic Engineers). This ratio, however, is based on an average employee density of 4 employees per 1000 GSF. Because the proposed Joint Forces Headquarters facility is not a typical government office building, and consists of spaces not typical of a traditional office building (e.g. auditorium, assembly hall, classrooms, locker rooms, emergency response areas, etc.), the anticipated employee density is much lower than the average employee density as reported in *Parking Generation* (4th edition, Institute of Traffic Engineers) for government office buildings. The Maine Army National Guard anticipates that there will be 148 full-time employees working during regular business hours (1.47 employees per 1000 GSF) and 181 members of the Maine Army National Guard on select weekends for training purposes (1.80 employees per 1000 GSF), both of which are significantly lower than 4 employees per 1000 GSF.

Parking Generation (4th edition, Institute of Traffic Engineers) provides an alternative method to predict parking supply for government office buildings based on the number of employees according to the following formula (n=4, R^2=0.81):

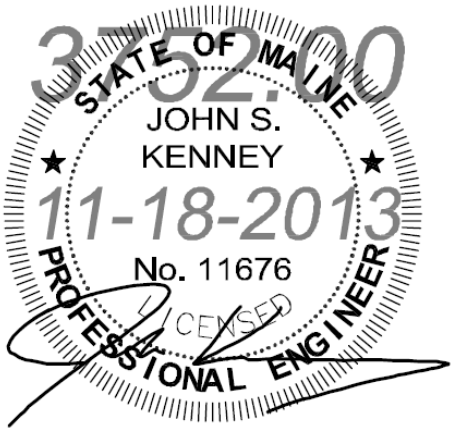
$$P = 1.13x - 61$$

where P equals the number of parking spaces and x equals the number of employees. This formula may be more applicable for the proposed Joint Forces Headquarters facility. Based on this formula, only 107 parking spaces will be needed. Based on the four (4) study points to develop this formula, the 85% percentile and range of parking supply are 1.01 vehicles per employee and 0.65 to 1.13 vehicles per employee, respectively, which equates to 150 spaces with a range of 97 to 168 spaces. The applicant is proposing to provide 230 parking spaces. These spaces will accommodate full time employees and visitors to the facility during regular business hours and members of the Maine Army National Guard during select weekends. The

excess parking will provide capacity for visitors to the facility, which will be made available to other state and federal agencies for meetings, workshops, etc.

Future building areas as shown on the proposed site plans will provide space for an additional 48 employees, both during regular business hours and on select weekends. Applying the upper range ratio of 1.13 spaces per employee for government office buildings (*Parking Generation*, 4th edition, Institute of Traffic Engineers), 55 additional spaces will be needed. The proposed site plans show future parking build-out for 57 additional spaces.

Based on the proposed use of this facility, reported occupancy by the Maine Army National Guard and information obtained from *Parking Generation* (4th edition, Institute of Traffic Engineers), 303 parking spaces as required by the Augusta Code of Ordinances appears to be excessive. The number of proposed parking spaces is consistent with data reported in *Parking Generation* (4th edition, Institute of Traffic Engineers) for this use. Therefore, the applicant is requesting a waiver for the Augusta Planning Board to construct fewer parking spaces than required by ordinance. Note that the stormwater management system has been designed to accommodate stormwater runoff from the full build-out of the proposed project.



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Land Use: 730
Government Office Building

Description

A government office building is an individual building containing either the entire function or simply one agency of a city, county, state, federal, or other governmental unit.

Database Description

The database consisted of three suburban sites and one urban site. Parking demand rates at the suburban sites were similar to those at urban sites and, therefore, the data were combined and analyzed together.

- Average parking supply ratios: 3.3 spaces per 1,000 square feet (sq. ft.) gross floor area (GFA) and 0.9 spaces per employee (both based on three study sites).
- Average employee density: 4 employees per 1,000 sq. ft. GFA.

The study sites for this land use served a wide range of functions, from a city hall to a federal agency's office building. Most of the study sites typically had a high rate of visitors who conducted business with the governmental unit.

The following table presents the time-of-day distribution of parking demand at the single site with continuous-count data.

Based on Vehicles per 1,000 sq. ft. GFA	Weekday	
Hour Beginning	Percent of Peak Period	Number of Data Points
12:00–4:00 a.m.	–	0
5:00 a.m.	–	0
6:00 a.m.	–	0
7:00 a.m.	–	0
8:00 a.m.	–	0
9:00 a.m.	83	1
10:00 a.m.	100	1
11:00 a.m.	92	1
12:00 p.m.	77	1
1:00 p.m.	59	1
2:00 p.m.	71	1
3:00 p.m.	78	1
4:00 p.m.	–	0
5:00 p.m.	–	0
6:00 p.m.	–	0
7:00 p.m.	–	0
8:00 p.m.	–	0
9:00 p.m.	–	0
10:00 p.m.	–	0
11:00 p.m.	–	0

Study Sites/Years

Newport News, VA (1984); Metairie, LA (1986); Kirkland, WA (1991); Bothell, WA (1991)

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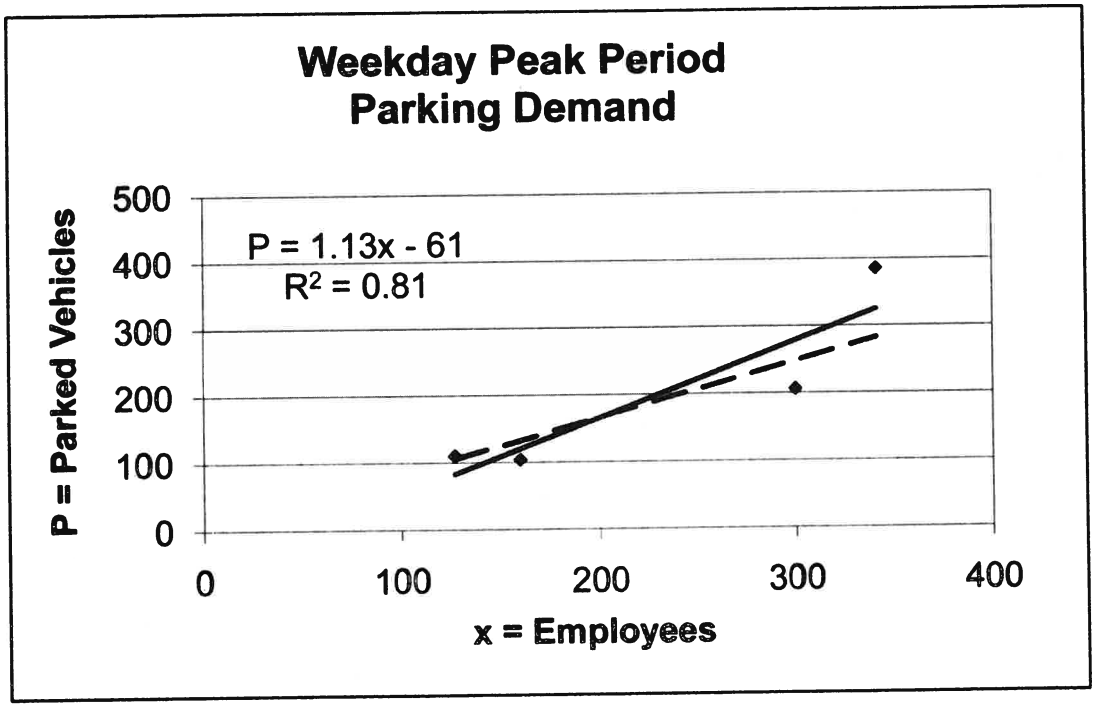
Average Peak Period Parking Demand vs. Employees
On a: Weekday

Statistic	Peak Period Demand
Peak Period	9:00 a.m.–12:00 p.m.
Number of Study Sites	4
Average Size of Study Sites	230 employees
Average Peak Period Parking Demand	0.83 vehicles per employee
Standard Deviation	0.22
Coefficient of Variation	26%
Range	0.65–1.13 vehicles per employee
85th Percentile	1.01 vehicles per employee
33rd Percentile	0.69 vehicles per employee



◆ Actual Data Points ——— Fitted Curve - - - - Average Rate