



November 23, 2009

Landscape Architecture

Urban Design

Community Planning

Civil Engineering

Ms. Amy Supple
Project Manager
Hammes Company
22 East Mifflin Street, Suite 800
Madison, WI 53703

Re: Edgewater Hotel Renovation Traffic Impact

Dear Amy,

As part of the proposed renovation of the existing hotel facility, we have reviewed five issues related to traffic:

1. Estimated existing hotel trip generation as compared to the estimated trip generation with the proposed hotel renovation.
2. Reviewed traffic counts on the existing streets in the immediate area historically, currently, and projected with the proposed hotel renovation.
3. Reviewed the capacity of the existing streets as compared to their existing and projected demand.
4. Developed a comparison of other streets in the city that have similar traffic volumes and similar geometric design.
5. Recommended measures that can be further investigated to reduce trip generation by hotel employees.

Trip Generation

The existing hotel contains 100 rooms with a dining area and conference rooms. The renovated hotel will be expanded to 190 rooms with a similar sized dining area and conference rooms. Based on ITE trip generation rates for a hotel with similar accommodations, and assuming full occupancy, **Table 1** estimates that the hotel currently generates 883 trips per day with 85 trips during the Saturday peak hour and 66 trips and 69 trips respectively during the AM and PM week day peak hours.

As shown in **Table 2**, a renovated hotel with 190 rooms and full occupancy will increase to 1,678 daily trips, 164 trips during the Saturday peak hour, and 126 trips and 132 trips respectively during the AM and PM week day peak hours.

The proposed hotel renovation will result in an increase of 795 daily trips. Likewise there will also be increases in the peak hour trips by 60 trips in the AM and 63 trips in the PM and 79 trips during the Saturday peak hour. One thing to note with respect to the peak hour counts is that the weekday peak hour for a hotel (late morning and early afternoon) does not occur at the same time as the peak hour of the local streets (7:00 to 8:00 a.m. and 4:00 to 5:00 p.m.).

Traffic Volumes

Traffic counts in the area from 2006; include 7,000 vehicles per day (ADT) on Wisconsin Avenue north of Gilman, 5,800 on Langdon between Carroll and Wisconsin and 2,400 on Gilman on either side of Wisconsin Avenue.

It is estimated that the additional daily trips generated by the hotel (795) will be distributed with 80% using Wisconsin Avenue and 20% using Langdon Street. This will result in an increase of 636 vehicles on Wisconsin Avenue, bringing the projected daily traffic volume to 7,636 vehicles per day and 159 additional daily trips on Langdon Street, bringing the total number of trips on that street to 5,959 vehicles per day.

Historical traffic count trends over the last 16 years in the area of the hotel are shown in **Table 3**. The table indicates that traffic volumes on the local streets have been fairly consistent over the past 16 years. Langdon Street traffic volumes have ranged from 5,800 to 7,050 vehicles per day, the upper end of Wisconsin Avenue has ranged from 6,250 to 7,150 vehicles per day and Gilman has ranged from 2,350 to 3,500 vehicles per day over the past 16 years.

Also shown in the table are the projected traffic volumes on these same street sections with the addition of the hotel. With the additional trips, projected traffic volumes on the three streets (Gilman, Langdon and Wisconsin) remain within the historical range of traffic volumes.

Street Capacity

Street capacity is generally analyzed by the capacity of the intersections. However, a general rule of thumb for street sections is that a two lane urban street can accommodate 12,000-14,000 vehicles per day and a four lane facility can accommodate 24,000 to 26,000 vehicles per day. Gilman and Langdon Street, in the vicinity of the hotel, are 34/38 foot wide, two lane roadways with parking on both sides of the street. Traffic volumes on these two streets are well below the design capacity of a two lane street both with and without the expanded hotel. Wisconsin Avenue is also well below its design

Schreiber/Anderson Associates, Inc.

717 John Nolen Drive

Madison, WI 53713

T 608.255.0800

F 608.255.7750

www.saa-madison.com

capacity of 12,000 vehicles with its projected traffic volumes of 7,636. In addition, due to its comparatively wide 50 foot width, it could accommodate up to four lanes (24,000 - 26,000 ADT) with the removal of on-street parking.

Other Street Comparisons

Wisconsin Avenue currently has a daily traffic volume of 7,000 vehicles per day and projected volumes of 7,636. It is designed as a two lane road with parking on either side. The total street width is 50 feet. For comparative purposes, a number of other two lane streets with traffic volumes in the same range are shown in **Table 4**. These streets have higher 2006 traffic volumes than Wisconsin Avenue in 2006 as well as with the projected traffic volumes for Wisconsin Avenue with the proposed hotel renovation.

Trip Reduction

Reducing the number of trips made by the hotel can most effectively be done by focusing on the employees. Guest trips can be reduced by providing shuttle services for multiple guests and encouraging guests to walk to local restaurants and entertainment but it will, admittedly, be a marginal reduction. Incentivizing employees to use alternative modes of transportation has been shown to be the most effective measure to reduce automobile trips. This can include the following:

- Encourage the use of public transportation
- Rewards program for car pooling, walking, or bicycling
- Enlisting the assistance and resources of the Madison MPO sponsored rideshare program.

These measures can be more completely explored and detailed through the development of a Transportation Demand Management (TDM) Program.

Conclusion

The impact of the additional traffic generated by the proposed hotel renovation will be marginal. The existing street system has sufficient capacity to handle the increase in projected traffic volumes. The impact of the additional traffic can be further reduced by providing incentives for employees to use alternative modes of transportation.

Sincerely,

John Lichtenheld, Principal
Schreiber/Anderson Associates, Inc.

Enclosures: 4

Schreiber/Anderson Associates, Inc.

717 John Nolen Drive
Madison, WI 53713
T 608.255.0800
F 608.255.7750
www.saa-madison.com

Table 1 Edgewater Hotel Existing Trip Generation Estimates

Land Use	Daily	Daily		Peak Hour Trip Generation Rate			AM		PM		SATURDAY	
	Gen Rate	IN	OUT				IN	OUT	IN	OUT	IN	OUT
Hotel (Code 310) 100 Rooms	8.92 trips per Occupied Room	50%	50%	Weekday AM Peak .67 trips per Occupied Room	Weekday PM Peak .70 trips per Occupied Room	Saturday Peak .87 trips per Occupied Room	58%	42%	49%	51%	50%	50%
Hotel Generation	892	446	446	67	70	87	39	28	34	36	44	44
Total Trips Generated	892	446	446	67	70	87	39	28	34	36	44	44
(1%) Alternate Modes	9	9	9	1	1	2	1	1	1	1	1	1
Total New Driveway Trips	883	437	437	66	69	85	38	28	34	35	43	43

Source: ITE Trip Generation, 8th Edition, 2008.

Note: Peak hours of the generator typically do not coincide with the peak hours of adjacent traffic

Note: Assumes 100% hotel occupancy

Table 2 Edgewater Hotel Improvements Trip Generation Projections

Land Use	Daily	Daily		Peak Hour Trip			AM		PM		SATURDAY	
	Gen Rate	IN	OUT	Generation Rate			IN	OUT	IN	OUT	IN	OUT
Hotel (Code 310) 190 Rooms	8.92 per Occupied Room	50%	50%	Weekday AM Peak .67 trip per Occupied Room	Weekday PM Peak .70 per Occupied Room	Saturday Peak .87 trips per Occupied Room	55%	45%	57%	43%	50%	50%
Hotel Generation	1,695	847	847	127	133	165	70	57	76	57	83	83
Total Trips Generated	1,695	847	847	127	133	165	70	57	76	57	83	83
(1%) Alternate Modes	17	8	8	1	1	2	1	1	1	1	1	1
Net External Trips	1,678	839	839	126	132	164	69	57	75	57	82	82
(0%) Internally Captured Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total New Driveway Trips	1,678	839	839	126	132	164	69	57	75	57	82	82

Source: ITE Trip Generation, 8th Edition, 2008.

Note: Peak hours of the generator typically do not coincide with the peak hours of adjacent traffic

Note: Assumes 100% hotel occupancy

Table 3
Edgewater Hotel Area Historical Traffic Counts

Street Year	Gilman ADT	Wisconsin ADT	Langdon ADT
2006	2,350	7,000	5,800
	2,450	9,250	10,900
		9,750	
2004	2,600	6,250	7,050
	2,899	7,250	13,000
		12,450	
2000	2,450	7,150	6,100
	3,500	9,000	9,900
		10,250	
1990	2,600	6,400	6,000
	3,350	6,200	10,450
		9,000	
Projected w/ new hotel	2,400	7,636	5,960
	2,500	9,886	11,060
		10,050	

**Table 4
Madison Street Capacity Comparison**

Street Section	Langdon near Frances	Langdon near Union	Charter @U/W	Baldwin near E. Wash	Mills near Regent	Dayton E. of Park St.	Wisconsin Ave. near Langdon (projected)	Langdon near Wisconsin (projected)
2006 ADT (Average Daily Traffic)	9,500	10,900	9,500	8,000	8,400	8,000-11,000	7,636	5,960
Street Width (feet)	34	38	34	40	36	42-56	50	38
On Street Parking	Yes	Yes	No	Yes	Yes	One side	Yes	Yes