ITS Intermountain Transportation Solutions
Traffic Studies ♦ Transportation Analysis ♦ Signal Design ♦ Site Planning

January 9, 2013

Raymond Wright, P.E.
City of Spokane
Transportation Department
11707 East Sprague Avenue, Suite 106
Spokane Valley, Washington 99206

RE: CONVENTION CENTER PHASE II EXPANSION, TRIP GENERATION CONFIRMATION LETTER AND IMPACT FEE ESTIMATE

Dear Mr. Wright, P.E:

This letter provides a trip generation and impact fee summary for the Phase II expansion of the Spokane Convention Center in Spokane, WA. The analysis was prepared to support State Environmental Policy Act (SEPA) application and City building permit processes. Please review and contact our office with questions and/or comments regarding the project or this letter.

PROJECT DESCRIPTION

The Convention Center fronts the Spokane River located north of Spokane Falls Boulevard and west of the Division Street/Brown Street couplet in the Central Business District (CBD) of the City. Open for public use and occupancy in year 2006, the Center includes 100,160 square-feet (s.f.) of exhibition and meeting space for conventions, conferences, meetings, and trade shows (total does not reflect auxiliary uses such as public staging areas or storage). Principal access is located a little over 200 feet west of Brown Street along the north side of Spokane Falls Boulevard. This driveway provides access to the Double Tree Hotel, the Convention Center, C.I. Shenanigans Restaurant (which closed the week of October 8, 2012), and a 400 stall parking garage intended principally for support of Center and Hotel activities (the Restaurant has a designated surface parking lot). City of Spokane transportation staff has indicated no issue with the operation of this right-in and right-out only driveway. Figure 1 shows the location of the existing Convention Center.

The existing building was constructed as Phase I of a more significant proposal and plan from year 2004/2005 that includes 173,000 square-feet (s.f.) of exhibition/meeting space (this area again addresses active venue spaces that does not reflect auxiliary/support space such as kitchens, ventilation, etc). SEPA documentation and the majority of studies performed to support this project, such as the *Spokane Convention Center Expansion Traffic Impact Analysis* (Transpo 2004), were reviewed and approved assuming the development of 173,000 s.f. of active exhibition and meeting space. Thus, 73,840 s.f. of active meeting facilities are have yet to be developed and are approved through many permitting processes on file with the City of Spokane.

Officials with the Spokane Public Facilities District are currently proposing a 91,500 s.f. expansion of the Convention Center adjacent to existing facilities. Approximately 44,450 s.f. of this will be "active" space used for exhibitions, meeting, etc, with these areas projected to generate the majority

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of additional site trips. The remainder of the facility is designated for passive support of current and proposed exhibit/meeting areas (storage areas, kitchens, etc.) and will not actively generate or support attendees and patrons (or notable trip levels). As such, the Phase II proposal will expand exhibition/meeting areas of the Convention Center to 144,610 s.f. of active attendance/exhibition areas, which is below the 173,000 s.f. allowance previously approved by City officials. The remaining facilities will NOT generate traffic or may generates staff trips occuring outside of the peak timeframes described through this letter. Access would continue from the current driveway.

The project site located within a Downtown General (DTG) zone of the City, which allows for the proposal. The project would initiate following the acquisition of permits from City officials, with completion scheduled by year 2014. A site plan will be provided to City staff by SPFD officials soon.

ATTENDANCE PROJECTIONS AND FIELD SURVEYS

Trip generation was forecast based on 85th percentile attendance projections for the proposed expansion, as established using attendance trends for the current facility. Spokane Public Facilities District officials provided attendance information for conventions, trade shows, meetings, and conferences for a timeframe extending between January 2010 and September 2012, as broken down on a daily basis. The data was reviewed to determine the highest average and 85th percentile attendance days between the years reviewed, and then average and 85th percentile attendance per 1,000 gross-floor area was determined for the existing 100,160 square-foot facility. Table 1 provides a summary of annual attendances, with summary details attached in Excel spreadsheets.

Table 1. Attendance Summaries Year 2010 Through September 2012

	Year 2010	Year 2011	Year 2012 (nine months)
Total Visitors	265,749	244,765	213,871
Average Daily Visitors	1171	964	1230
85th Percentile Daily Visitors	1,502	1,188	1,560

As shown, average and 85th percentile attendance days were both noted to occur this year (2012), with an average of 1,230 attendees and 85th percentile of 1,560 attendees. This calculates to an average rate of 12.28 attendees per 1,000 square feet and an 85th percentile rate of 15.58 attendees per 1,000 square-feet of existing Convention Center floor area.

As indicated, approximately 44,450 s.f. of the proposed expansion will actively generate additional attendee-trips, which are the trips expected to impact City streets during the typical weekday AM and PM peak hours. Thus, after applying the rates discussed in the previous paragraph, it is expected that active expansion areas will generate an average daily attendance of 546 additional persons and an 85th percentile daily attendance of 693 additional persons.

Field Observations

Traffic surveys were performed in November and December to support trip generation projections for this project. Surveys were administered through interviews performed throughout three days

during the Washington State School Directors Conference (November 14-17) and the Northwest Mining Conference (December 2-7). The combined attendance of these two events was 2,000 persons; of which, 181 surveys were collected representing 9.1 percent of attendees between events. The questions were intended to obtain as much travel information as possible within a limited number of questions (thus, having a minimal impact on the attendee's time). A summary of survey questions administered at these conferences include:

1. Where are you from?
2. How did you travel to Spokane for this event (i.e. Car, train, plane, bus, etc.)?
3. How did you travel to the Convention Center today (i.e. Walk, car, transit, shuttle, etc.)?
4. If you stayed at a hotel, which hotel did you stay at (name or location sufficient)?
5. If you drove to the Convention Center, where did you park? (i.e. Convection Center Garage or Other). Please provide lot name or describe general location.
6. If you drove or arrived in taxi/shuttle, how many convention attendees rode with you?
7. Any comments on how we can better serve your transportation needs?
8. General comments?

Survey results were summarized into information that could be helpful in predicting trip generation for the proposed expansion. Table 2 provides a summary of key survey results, including summary approach information (approach Spokane and Convention Center), hotel stay, and vehicle occupancy rates. Each row identifies the summary result, with the attendees and percentages of total participants summarized by each row.

Table 2. Survey Result Summary Information

Total Participants	181 Attendees (100 Percent Attendee/Participants)			
Method of Arrival to Spokane, WA.	Drive -Regionally Located 98 Attendees (54.1 Percent)		Fly - Non-Region Located 83 Attendees (45.9 Percent)	
Method of Arrival to Convention Center (No Transit Noted during interviews)	Walk/Bike 57 Attendees (31.5 Percent)	Drive 38 Attendees (21.0 Percent)	Walk/Bike 46 Attendees (25.4 Percent)	Drive 12 Attendees (6.6 Percent)
	Shuttle 3 Attendees (1.7 Percent)	Taxicab 0 Attendees (0.0 Percent)	Shuttle 18 Attendees (9.9 Percent)	Taxicab 7 Attendees (3.9 Percent)
Local Hotel Stay	Yes Hotel 72 Attendees (39.8 Percent)	No Hotel 25 Attendees (13.8 Percent)	Yes Hotel 81 Attendees (44.8 Percent)	No Hotel 2 Attendees (1.1 Percent)
Vehicle Occupancy Rates	Walk/Bike NA	Drive 1.2 Att/Veh	Walk/Bike NA	Drive 1.7 Att/Veh
	Shuttle 3.3 Att/Veh	Taxicab NA	Shuttle 4.8 Att/Veh	Taxicab 2.0 Att/Veh

Of the 84 participants who addressed the parking location question (many abstained as they walked to the facility), approximately 64.3 percent parked in the Convention Center garage, 13.1 percent parked in the South Convention Center lot (across Spokane Falls Boulevard from Convention Center), with the remaining 22.6 percent parking principally at hotels (and walking or Shuttle to campus). Note that many attendees were staying at hotels located within walking distance of the convention (Double Tree, Marriott, Travel Lodge), which is why the walking percentages are so high. The remaining survey questions reflect comments from participants, with the following being repeated comments of attendees (three or more attendees):

- Improved shuttle service and notification between hotels and Convention Center;
- Provide shuttle service between airport and Convention Center;
- Attempt to promote improved taxi-service between Airport and Convention Center;
- Day pass for parking at Convention Center lots (have to pay again if leave campus);
- Great facility and Spokane is a nice City. ☺

TRIP GENERATION

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* (8th Edition, 2008) does not maintain a land use that addresses the travel characteristics of a "convention center." As such, and upon confirmation with City officials, Phase II trip generation was projected using the process and methodology outlined within the original *Spokane Convention Center Expansion Traffic Impact Analysis* (Transpo, 2004), from here on referred to as Convention Center TIA, and based on projected attendance projections and the supplemental survey data collected from surveyed conventions. Please review this study in context to this letter for further description of the process.

Note trip generation was developed using studies and surveys that reflect travel to/from for the Convention Center itself, and not from hotels. It is true that convention-associated trips would arrive and depart Spokane in-route to hotels, but this impact is a function of hotel trip generation and not of the convention center. The process/steps used in estimating trip generation are summarized as follows:

1. Average and 85th percentile attendance projections were established as described in the previous section. The expanded 44,450 s.f. of active convention facilities are projected to elevate attendance by 546 persons on an average day and 693 persons on an 85th percentile attendance day.
2. Per the survey process, 54.1 percent of attendees are expected from this region (eastern Washington and northern Idaho) and approach Spokane via personal automobile. The remaining 45.9 percent of attendees are expected from outside of this region and will use various travel modes to access conventions, conferences, trade-shows, and meetings.
3. Person trips were determined by applying a factor of 2.5 to attendance for regional and non-regional attendees to provide for one inbound and one outbound trip per attendee, with a 25 percent margin to account for inbound/outbound trips associated with employees, ticket acquisitions, deliveries, lunch-runs, etc. This is an assumption based on the previous Convention Center TIA, and is confirmed based on our experiences with other projects. Table 3 provides a summary of average and 85th percentile attendees and person trip totals based on the first three steps in the process.

Table 3. Daily Attendance and Person Trip Summaries		
	Average	85th Percentile
Total Daily Attendees	546	693
- Local/Regional (54.1 Percent)	- 295	- 375
- Outside Region (45.9 Percent)	- 251	- 318
Person Trips Per Attendee	2.5	2.5
Total Person Trips	1,363	1,733
- Local/Regional	- 735	- 938
- Outside Region	- 628	- 795

4. The distribution of attendees between travel modes was then determined. Based upon the surveys, about 38.8 percent of local attendees would travel to/from the site by auto or taxi, 3.1 percent via shuttles, and 58.1 percent by walking or biking. Of attendees from outside the region, about 22.9 percent are expected by auto or taxi, 21.7 percent by transit or hotel shuttles, and 55.4 percent by walking or biking. Table 4 provides a summary of approaching and departing person trips by way of the principal travel modes discussed.

Table 4. Travel Mode Summaries		
	Average	85th Percentile
Total Person Trips	1,363	1,733
Local/Regional Person Trips	735	938
- Automobile/Taxi (38.8 Percent)	- 285	- 364
- Transit/Shuttle (3.1 Percent)	- 23	- 29
- Walk/Bike (58.1 Percent)	- 427	- 545
Outside Region Person Trips	628	795
- Automobile/Taxi (22.9 Percent)	- 144	- 182
- Transit/Shuttle (21.7 Percent)	- 136	- 173
- Walk/Bike (55.4 Percent)	- 348	- 440

5. For local events, a rate of 1.2 persons per automobile/taxi and 3.3 persons per shuttle was assumed as based on surveys. A rate of 1.7 persons per automobile/taxi and 4.8 persons per shuttle were assumed of non-regional trips. This was applied to person trips to estimate trip generation for the Convention Center expansion.

6. The original Convention Center TIA makes some assumptions about arriving/departing and inbound/outbound distributions, and these assumptions were again used for this study. The TIA estimates that 30 percent of total automobile trips occur during the AM peak hour and 30 percent during the PM peak hour. An 80 percent inbound and 20 percent outbound assumption was used for the AM peak hour, with the reverse (20% in/80% out) assumed for the PM peak hour. Table 5 provides a summary of approaching and departing vehicle trips based on average attendances. Table 6 provides a summary based on 85th percentile

attendance for the weekday, and AM and PM peak hours of the typical weekday. Again, these are trip projections with the additional number of attendees assumed for events with the Convention Center expansion.

Table 5. Vehicle Trip Generation Summaries – Average

	Weekday Total	AM Peak Hour (30 Percent) (80% inbound-20% outbound)			PM Peak Hour (30 Percent) (20% inbound-80% outbound)		
		In	Out	Total	In	Out	Total
Local/Regional Vehicle Trips	245	58	15	73	15	58	73
- Automobile/Taxi (1.2 occupancy)	- 238	- 57	- 14	- 71	- 14	- 57	- 71
- Transit/Shuttle (3.3 occupancy)	- 7	- 1	- 1	- 2	- 1	- 1	- 2
Local/Regional Vehicle Trips	113	25	9	34	9	25	34
- Automobile/Taxi (1.7 occupancy)	- 85	- 21	- 5	- 26	- 5	- 21	- 26
- Transit/Shuttle (4.8 occupancy)	- 28	- 4	- 4	- 8	- 4	- 4	- 8
Total Vehicle Trips	**358**	**83**	**24**	**107**	**24**	**83**	**107**

Table 6. Vehicle Trip Generation Summaries – 85th Percentile

	Weekday Total	AM Peak Hour (30 Percent) (80% inbound-20% outbound)			PM Peak Hour (30 Percent) (20% inbound-80% outbound)		
		In	Out	Total	In	Out	Total
Local/Regional Vehicle Trips	312	75	19	94	19	75	94
- Automobile/Taxi (1.2 occupancy)	- 303	- 73	- 18	- 91	- 18	- 73	- 91
- Transit/Shuttle (3.3 occupancy)	- 9	- 2	- 1	- 3	- 1	- 2	- 3
Local/Regional Vehicle Trips	143	27	10	37	10	27	37
- Automobile/Taxi (1.7 occupancy)	- 107	- 21	- 5	- 26	- 5	- 21	- 26
- Transit/Shuttle (4.8 occupancy)	- 36	- 6	- 5	- 11	- 5	- 6	- 11
Total Vehicle Trips	**455**	**102**	**29**	**131**	**29**	**102**	**131**

As shown, the expansion will generate 358 weekday trips during an average attendance condition, with 107 trips generated during the AM peak hour and 107 trips during the PM peak hour. There are 455 weekday trips generated by the 85th percentile condition, with 131 trips generated during the AM peak hour and 131 trips generated during the PM peak hour.

Trip Reductions

The expansion has resulted in the closure of C.I. Shenanigans, which was a popular restaurant and bar located adjacent to (east) of the existing Convention Center. There are currently no plans to replace this restaurant anywhere within the CBD and, as such, the increase of trips associated with the expansion can be somewhat offset with the loss of this historically active restaurant.

Restaurant trips were determined using Institute of Transportation Engineers (ITE) *Trip Generation Manual* (8th Edition, 2008), per standard local methodologies. Even though Shenanigans serves breakfast and has a bar, this was a quality restaurant with higher prices and lower turnover rates. Thus, trip generation was predicted based on ITE Land Use Code 931 for a Quality Restaurant based upon rates that equates trips to the 7,000 square-foot size of the building. A summary of trip generation for the restaurant is provided on Table 7 for the weekday and AM and PM peak hours of the typical weekday.

Table 7. Vehicle Trip Generation Summaries – CI Shenanigans Restaurant

	Weekday Total	AM Peak Hour (33% inbound-67% outbound)			PM Peak Hour (67% inbound-33% outbound)		
		In	Out	Total	In	Out	Total
Total Vehicle Trips	630	2	4	6	35	17	52

As shown, the restaurant is predicted to generate 630 weekday trips with 6 trips generated during the AM and 52 trips during the PM peak hour. These trips were then reduced from the projected totals of the convention center expansion to determine the net increase of traffic projected with the expansion versus reduction of the restaurant, over current traffic totals that exist on City streets today. A summary of this comparison is provided on Table 8 for the weekday, and AM and PM peak hours of the typical weekday. The comparison was provided based off 85th percentile trip generation projections for the expansion, as this is the trip impact condition that would be reviewed for City concurrency evaluations.

Table 8. Vehicle Trip Gains – Net Gain In Trips (85th Percent Condition)

	Weekday Total	AM Peak Hour (30 Percent) (33% inbound-67% outbound)			PM Peak Hour (30 Percent) (67% inbound-33% outbound)		
		In	Out	Total	In	Out	Total
Convention Expansion	455	102	29	131	29	102	131
C.I. Shenanigans	630	2	4	6	35	17	52
Net Gain	-175	+100	+25	+125	-6	+85	+79

As shown, there is a net loss of 175 trips throughout the typical weekday. However, there is an increase of traffic during peak/commute rush hours with a gain of 125 trips projected during the AM peak hour and 79 trips during the PM peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution was also based on data available from the Convention Center TIA, which in turn was based upon survey information collected for the initial study. These distributions were approved by City of Spokane staff. A summary of these distributions, and the resulting assignments

and projected gains in weekday and peak hourly trips, is shown on Table 9. Trip assignments were developed based on the net gains in traffic shown on Table 8 for the 85th percentile attendance condition, as other trips already existing within the street system (as they were restaurant trips).

Table 9. Vehicle Trip Generation Assignments –Gain In Traffic

	Percent Distribution	Weekday	AM Peak Hour	PM Peak Hour
Division/Ruby North	20%	-35	46	36
Division Street South	5%	-9	12	9
Washington Street North	5%	-9	12	9
Stevens/Washington South	3%	-5	7	6
Monroe/Lincoln North	10%	-18	23	19
Monroe/Lincoln South	2%	-3	5	4
Interstate 90 West	10%	-18	23	19
Interstate 90 East	30%	-53	69	56
2nd/3rd Avenues West	3%	-5	7	6
2nd/3rd Avenues East	3%	-5	7	6
Main/Riverside Avenues West	2%	-3	5	4
Spokane Falls/MLK Blvd East	2%	-3	5	4
Sprague Avenue East	5%	-9	12	9
Total Trip Gains	100%	-175	125	79

TRAFFIC IMPACT FEE

The City of Spokane maintains a traffic impact fee for road improvements within the CBD. According to the fee schedule (attached), there is a TIF of $90 per PM peak hour trips gained for a project, which in this case is a net gain of 79 PM peak hour trips. The resulting TIF associated with the Convention Center Expansion is therefore **$7,110** as based upon conservative 85th percentile attendance projections.

The initial Convention Center expansion was approved to a building footprint of 173,000 s.f., with 73,840 square-feet reserved for future development. Thus, a level of traffic impacts have already been addressed and mitigated with initial approvals. It should therefore be noted that some duplication of mitigation will occur with the payment of this fee, but SPFD officials have agreed to it for the betterment of the downtown transportation.

SUMMARY AND CONCLUSIONS

A 91,500 s.f. expansion of the Spokane Convention Center has been proposed by the Spokane Public Facilities District, with about 44,450 s.f. of this area used as "active" space for exhibitions,

conventions, events, etc. The remainder of the expansion is designated for passive support of current and proposed exhibit/meeting areas (storage, kitchens, etc.) and will not actively generate new site trips.

The 85th percentile attendances of the existing Convention Center was reviewed and broken down into a rate of 15.58 attendees per 1,000 s.f. of building area. Based on this rate, the 44,450 s.f. expansion of active attendance areas results in a projected gain of 693 persons.

Trip generation was based on the methodologies researched and outlined within the *Spokane Convention Center Expansion Traffic Impact Analysis* (Transpo, 2004), and based on manual surveys performed for two conventions in November and December 2012. The result is 85th Percentile attendance projections for the Center are expected to generate 358 typical weekday trips, with 107 trips generated during the AM and 107 trips generated during the PM peak hours.

The expansion has resulted in the closure of an existing busy restaurant called C.I. Shenanigans, and this restaurant generates trips that already occur upon City streets. Thus, the expansion and restaurant trip totals were compared to determine the net gain in traffic projected with this development action. The result is a net decrease of 175 weekday trips; although a gain of 125 trips is expected during the AM peak hour and 79 trips during the PM peak hour.

The City maintains a traffic impact fee for the downtown area of $90 per PM peak hour trip. Trip gains and the fee were compared to estimate a total of $7,110 in transportation impact fees would be provided to support City roadway improvements and mitigation strategies.

We hope this information is sufficient to support SEPA and City building permit processes. Again, please review and feel free to contact our office with questions and/or comments.

Sincerely,
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