



MEMORANDUM

Date: January 2, 2010 Project #: 10495
To: Charlie Thornton
ICON Venue Group
From: Mike Coleman, P.E. and Julia Kuhn, P.E.
Project: PGE Park Remodel
Subject: Comprehensive Transportation Management Plan Report

INTRODUCTION

This report recommends revisions to PGE Park's current Comprehensive Transportation Management Plan (CTMP) that was adopted by City Council in 2000 when the stadium was last renovated to accommodate the return of AAA baseball to Portland. The CTMP is being revised to support the stadium's next transformation from an all-purpose sports facility to a soccer and football venue that will no longer host baseball. Beginning in the Spring of 2011, the Portland Beavers AAA baseball club will leave the stadium and the Portland Timbers Soccer Club will move up from the Class A Soccer League to Major League Soccer (MLS).

BACKGROUND

History

The CTMP is a key component of the existing Good Neighbor Agreement (GNA) that was approved by City Council in 2000. The GNA describes itself as a public-private agreement between the City and the Stadium operator, "subject to review and comment by the Goose Hollow Foothills League (GHFL) and the Northwest District Association (NWDA). It is intended to assure that the input of the neighborhood representatives and nearby property owners will be obtained and will continue to be a vital component in all stages of the planning, redevelopment, construction and operation of the Stadium." The GNA lists the CTMP as one of several strategies intended to mitigate neighborhood impacts from stadium events.

Current CTMP

In keeping with the GNA, the Agreement in general and the CTMP in particular must be updated to best serve the stadium's next incarnation and the community's ongoing evolution. There are 15 mitigation measures in the current CTMP. Some have proven to be more effective than others. Some have actually become obsolete due to advances in technology and communications since

2000. Others need to be revisited because of changing conditions in the community, like the addition of the Civic condominium building on SW Morrison Street; the continued popularity of Goose Hollow and the Northwest District as great places to live, work and play; the introduction of metered parking on Sundays (a common MLS game day); and the growing popularity and convenience of traveling by bike and transit. Also the teams and players of the MLS are expected to draw soccer fans from much greater distances than the current Class A team does.

Future of PGE Park

Beginning in 2011, activities at PGE Park will change. **Baseball** will no longer be played at the stadium. The 71 Portland Beaver baseball games that traditionally occur from early April through early September will no longer take place. Also college baseball events like 2009's Rose City Invitational, Oregon State-Missouri State series, and Oregon-Oregon State Civil War Series will no longer take place. Portland Beaver baseball attendance averaged approximately 5,000 fans per game in 2009.

The number of **soccer** events hosted by the stadium is expected to stay about the same when the club moves from Class A to MLS (approximately 20 regular season matches), but attendance is expected to increase significantly. During the 2009 season Class A league games drew an **average attendance** of 8,000 fans per game. As a member of MLS, an average of 14,000 fans is expected at the Timbers' regular season home games.

Also matches will move from predominantly weekdays to predominantly weekends. Nearly all Class A games start at 7:00. Eight of the 14 MLS weekend games are likely to start at 1:00 pm on a weekend day. The Timbers expect their MLS **home game schedule** to be similar to the Seattle Sounders of the MLS league. Judging from their 2009 home game schedule, approximately 14 the Timbers' MLS games could be on weekends (10 on Saturdays and 4 on Sundays). The remaining 6 games could occur on mid-week evenings. Approximately half of the weekend matches begin in the early afternoon. All other matches begin at approximately 7:00 in the evening. The regular season begins in March and ends in October. Table 1 summarizes the differences between the Timbers' Class A home matches and the likely MLS home matches.

Other PGE Park events will continue to include approximately six **Portland State Vikings football** games per season, weekly Friday night **high school football** regular season double-headers and one weekend of post season high school football playoff double-headers.

Table 1
Comparison of Current Class A and MLS Home Schedules

2009 Teams	League	Average Attendance	Regular Season	Total Regular Season Home Matches	Number of Regular Season Games per Day of Week (Typical)						
					Mon	Tue	Wed	Thu	Fri	Sat	Sun
Timbers	Class A	8,000	March - September	21	-	-	1	7	5	5	3 ¹
Seattle Sounders	MLS	14,000	March - October	21	-	2	2	3	-	11 ²	3 ³

¹ All Sunday Timbers Class A matches started at 5:00.

² Five Saturday Sounder MLS matches started at noon or 1:00.

³ All Sunday Sounder MLS matches started at noon or 1:00

Background Summary

In light of the changes that have occurred since the CTMP was adopted ten years ago and the changes anticipated at PGE Park beginning in Spring 2011, twelve mitigation measures have been identified and recommended for a revised CTMP that would effectively support a popular MLS team, enhance the experience of those who attend matches, and mitigate event-related impacts to the immediate neighborhoods.

METHODOLOGY

Recommended revisions to the CTMP were identified through a **two-part process**. One part consisted of observing and analyzing the transportation characteristics of two recent PGE Park events similar to future MLS and high school football events. Observing these events supplied important information about the current CTMP's performance and provided clues to improving it for future events. The second part of the process consisted of developing effective transportation strategies for a revised CTMP.

Event Analysis

To anticipate and prepare for the potential transportation-related impacts of PGE Park's new program of events, two representative events were observed and analyzed during the Fall of 2009. The Sunday October 4th Timbers playoff match drew the same number of fans expected for future MLS matches, approximately 14,400. The stadium also hosted the State High School semi-final football playoffs. The two 6A games were held on Friday evening December 4th. The two 5A games were played on Saturday afternoon December 5th.

During the Timbers match, information was gathered to determine how fans arrived and departed the match. Individual fans were interviewed at random to determine what percentage of attendees traveled by car, light rail, bus, bike or by walking. Conditions experienced before,

during and after the match were monitored to gain a general understanding of vehicular and bike parking and overall travel characteristics.

CTMP Revision

Several sources of information were used to develop a revised CTMP that will effectively serve the stadium's future. Specifically,

- Information about the performance of the current CTMP was gathered from those who participate in its implementation.
- A general assessment of the existing transportation infrastructure and its capabilities and limitations was conducted.
- New and creative opportunities were explored primarily in the realms of emerging technologies and public-private partnering.
- Patrons' current tendencies toward transportation choices were analyzed based on the characteristics of the Fall 2009 events.

Most of this work was accomplished through interviewing and collaborating with those who have participated in the current CTMP. The remainder of the work was accomplished by interviewing local agency staff specializing in relevant subjects and researching the practices of other outdoor sports venues.

Both the event analysis and the CTMP revision processes are addressed in detail in this report.

EVENT ANALYSIS

The analysis of the Fall 2009 events provides an understanding of how events at PGE Park generally impact the surrounding area. The final Portland Timbers match of the 2009 season was chosen for the study as it closely approximated conditions expected at future MLS events. The match occurred on Sunday, October 4th between 4:00 and 6:00 p.m. and was attended by approximately 14,400 people. Being a critical post-season playoff soccer match, the attendance was especially high and likely reflective of attendance expected at future MLS matches. It was also held on a day and at a time when many future MLS matches are expected to take place.

Both an intercept survey and an on-street parking supply and demand study were conducted before, during, and after the match. The intercept survey provided an understanding of the travel experiences, choices, and perceptions of attendees, while the parking study provided an understanding of both vehicular and bike parking demand and the extent of spill-over into the surrounding neighborhoods. Additional information obtained during the match includes, field observations of Transit Ridership and Pedestrian Circulation around PGE Park.

KEY QUESTIONS

This study attempted to answer a number of key questions that could enhance patrons' experiences while also mitigating transportation-related impacts on the neighborhood. These include:

- How popular is each transportation mode for traveling to a major soccer match at PGE Park?
- What factors influence travel mode choice?
- How is on-street parking utilized by those who attend a major soccer match at PGE Park?
- What are the impacts associated with each transportation mode?
- What is the supply and demand for bicycle parking?

Further detail on each of these key questions is summarized below.

INTERCEPT SURVEY

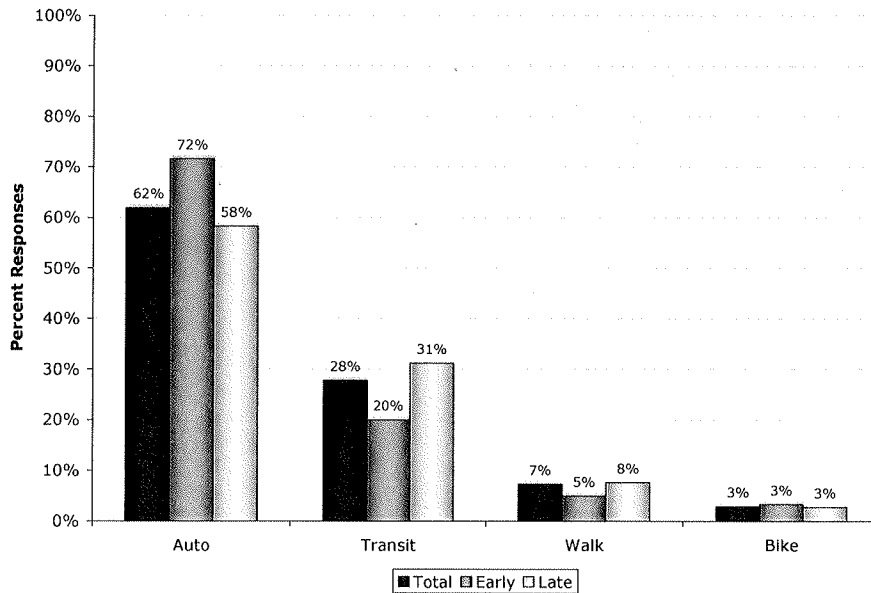
As indicated previously, the intercept survey provided an understanding of the travel experiences, choices, and perceptions of PGE Park patrons. The results showed that regardless of their mode choice, respondents tended to value convenience, travel time and cost when selecting how they traveled to the soccer match. Knowing these values helped identify measures that would both protect the surrounding neighborhoods and enhance Park patrons' game day experiences.

Information from the survey can generally be broken down into two categories: Travel Mode and the Factors Influencing Travel Mode, and Parking Preferences and Perceptions. *Detailed survey responses are provided in Appendix "A" along with an example of the survey instrument.*

Travel Mode

The results of the intercept survey confirmed the field observations that auto and transit use represent the largest percentage of the overall mode split for the event, accounting for approximately 90 percent of the total responses. Exhibit 1 illustrates the popularity of each transportation mode. Of the survey respondents, sixty-two (62) percent traveled by auto, 28 percent traveled by transit, seven (7) percent walked, and three (3) percent rode bikes.

Exhibit 1 Travel Mode Choice



As shown in Exhibit 1, there is little variation in the mode split between those patrons that arrived early, stayed late or were there only for the game itself. The survey did show a slightly higher inclination for patrons who drove to arrive earlier; this was likely reflective of the desire to find convenient on-street parking.

Factors Influencing Travel Mode Choice

Respondents were asked to identify the top three factors influencing their travel mode choice. Table 2 summarizes the results.

Table 2
Top Three Factors Influencing Travel Mode Choice

Mode Choice of Respondent	Top Response		Second Response		Third Response	
	Response	Percentage	Response	Percentage	Response	Percentage
Overall	Convenience	29%	Travel Time	28%	Availability and Cost of Parking	10%
Responses by Travel Mode						
Auto	Travel Time	38%	Convenience	28%	Lack of Access to Transit	7%
Transit	Convenience	33%	Availability and Cost of Parking	18%	Cost	14%
Bike	Convenience	22%	Availability and Cost of Parking	22%	Cost	11%
Walk	Travel Time	57%	Convenience	19%	Health Considerations	10%

As shown in Table 2, Convenience, Travel Time, and Cost were the predominant influences on respondents' travel mode choices. These influences were a fundamental consideration when developing transportation mitigation measures that both minimize impacts to the immediate neighborhood and enhance the experience of attending a PGE Park event.

Comparison to 2000 Intercept Survey Results

The results from the intercept survey are generally consistent with the results from the Women's World Cup soccer match study conducted in 2000 by David Evans and Associates, Inc. (DEA). The event drew just over 20,000 spectators. According to the Women's World Cup survey, 55 to 60 percent of patrons arrived by auto and 25 to 35 percent arrived by transit. However, less than one percent of patrons were estimated to arrive by bicycle and 7 percent by walking.

Arrival and Departure Times

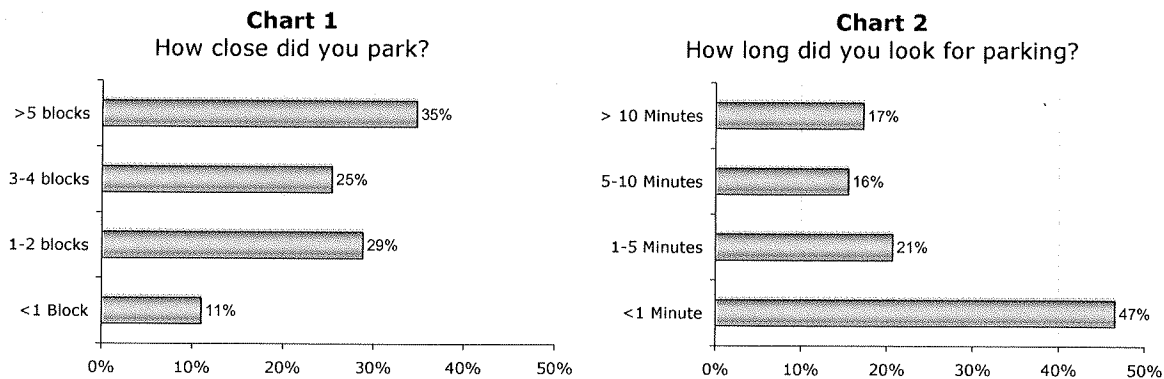
Providing incentives for event patrons to arrive early and stay late can help reduce the impacts associated with large numbers of last-minute arrivals. Those impacts include traffic congestion, competition for on-street vehicle and bike parking opportunities, vehicles queuing to access parking lots and garages, cramped light rail cars, crowded sidewalks and crosswalks, and delay at the stadium entry gates.

Many of the survey respondents arrived early or planned to stay late in order to eat, drink and socialize. Promoting these reasons and identifying additional incentives for arriving early and staying could reduce transportation-related impacts.

Others arrived early to improve chances of finding a desirable parking space or to purchase day-of-game tickets. Potential strategies can be employed by PGE Park to help direct patrons to specific parking areas to reduce the uncertainty of finding convenient locations to park for the event. On-line ticket purchasing could help reduce the need to visit the stadium ticket office and eliminate the uncertainty of ticket availability. This could include encouraging patrons to park in downtown parking garages and riding the light rail from downtown to PGE Park. This strategy is used successfully for events at the Rose Garden Arena.

Parking Preferences and Perceptions

Respondents who arrived by automobile were asked where they parked and how much time they spent looking for parking. Of the respondents, 57 percent parked on the street, while the remaining 43 percent parked either in a parking garage or in an off-street parking lot. Of the people who parked on the street, 68 percent reported spending no more than five minutes looking for parking and 40 percent were able to find parking within two blocks from PGE Park. For reasons discussed in the following section, these results may not be indicative of the overall soccer match attendance. For example, there are not enough on-street parking stalls within two blocks of the stadium to achieve the survey results. Charts 1 and 2 summarize the results.



Dependability and Value of Intercept Survey Results

Although a total of 210 surveys were completed (representing approximately 1.5 percent of the 14,400 patrons), a review of the findings suggest that it may not be statistically significant and may be skewed toward the non-auto patrons.

Most of the surveys were conducted at the Park's two main entrances while patrons were waiting to go into the stadium. The remaining surveys were conducted throughout the food concession area while the match was taking place. Surveyors were not able to interview patrons who went directly into the stadium unless they happened to be interviewed in one of the concession areas. Therefore the results may over-represent those who arrived early and got the nearest parking spaces and under-represented those who arrived closer to game time and had to park farther away or those who came on MAX trains and arrived just before game time.

Several survey questions also asked respondents to quantify their parking experience by stating how far away they parked and how long they looked for parking. Both questions rely on a respondent's sense of distance and time, making their replies unreliable.

It should also be noted that game day conditions were very conducive to traveling by bicycle and walking. The weather was sunny and unseasonably warm. The game began at 4:00 and ended well before dusk, allowing time to leave the game with nearly one hour of day light remaining. It is reasonable to presume that walking and cycling may be less popular for events that begin or end after dark or are held in inclement weather.

Despite these issues, the survey can help to inform CTMP strategies that can effectively protect the surrounding neighborhoods and enhance the experience of attending PGE Park events. The survey interviews provide information about patrons' values, circumstances and perceptions; fundamentals that reveal the reasons behind their choices of travel and fundamentals that are likely to be shared by most people attending the match.

ON-STREET PARKING CONDITIONS

The Parking Supply and Demand Study identified the extent to which events at PGE Park affect on-street parking conditions in the surrounding neighborhoods. The two neighborhoods most likely to be affected by events at PGE Park are the Goose Hollow neighborhood located south of Burnside and west of I-405 and the Northwest District neighborhood located north of Burnside and west of I-405. *Figure 1 illustrates the location of the Goose Hollow and Northwest District neighborhoods in relation to PGE Park.* Also shown on Figure 1 are the areas studied within each neighborhood as well as the three Residential Parking Permit Program (RPPP) areas located in the two neighborhoods.

Data Collection Methodology

The data collection effort consisted of a detailed inventory of the on-street parking supply. Parking spaces were mapped and designated as short-term time limits, long-term time limits, loading, taxi, or disabled. The parking utilization and duration of stay was recorded on an hourly basis from 2:00 to 10:00 pm during the game.

Data Analysis

The data collection effort provided detailed information about parking utilization, duration of stay, and turnover in each of the study areas. **Utilization** refers to the percentage of parking spaces that are occupied at a point in time. Monitoring utilization throughout the day revealed the demand for on-street parking before, during, and after the soccer match. A parking system is generally considered to be full, or at its effective capacity, when it reaches 85-percent utilization. Beyond this level, drivers can have a difficult time locating the few available spaces.

Duration of stay refers to the amount of time a car spends in a parking space and provides general information about the extent of parking violations. With the exception of the RPPP areas, virtually all on-street parking around PGE Park has specific time limitations. Understanding people's willingness to risk exceeding parking time limits provides some understanding of people's willingness to use inappropriate parking spaces for PGE Park events.

Duration of stay also provides information about parking **turnover**, which indicates the number of vehicles that use a given space over the course of the study period. Turnover is especially important for short-duration spaces typically located near retailers. High utilization and high turnover is important for retail activities and drawing customers into the downtown. Monitoring parking turnover during the soccer match provided an indication of how well short-term parking activities continued to perform when PGE Park event parking was at a premium.



NORTHWEST DISTRICT

AREA 1

PGE PARK

AREA 2

GOOSE HOLLOW

PARKING ZONE L

PARKING ZONE K

PARKING ZONE A

LEGEND

- - - - - STUDY AREAS
- - - - - PARKING AREAS

NEIGHBORHOOD MAP
PORTLAND, OREGON

FIGURE
1

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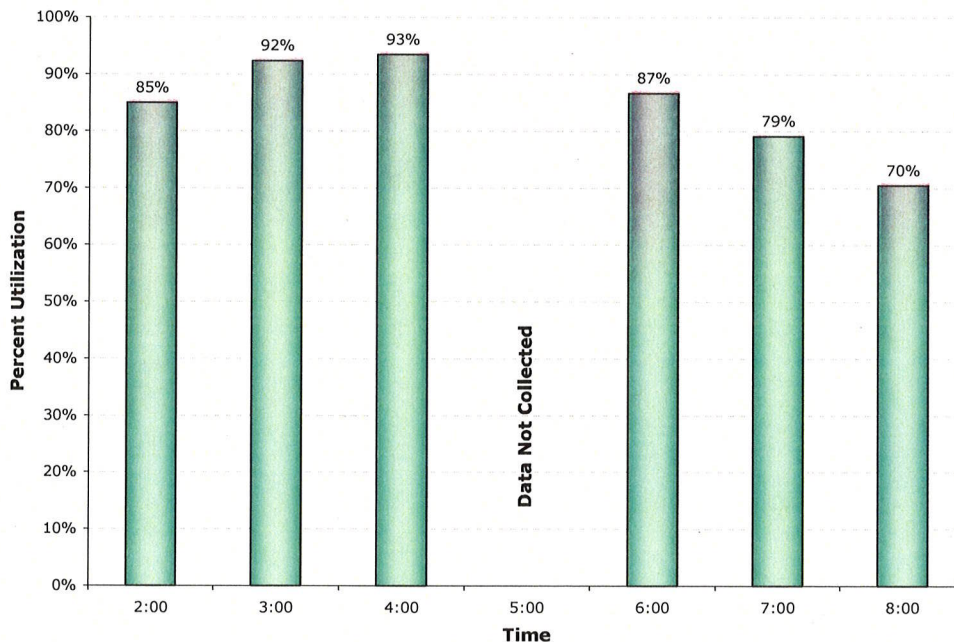
Northwest District (Area 1) On-Street Parking Conditions

Area 1 represents that area north of W Burnside Street and west of I-405 that is within a ½ mile walking distance from PGE Park. It encompasses all of RPPP Zone L, which restricts the duration of on-street parking for non-permit holders to 2-hours between 6:00 p.m. and 11:00 p.m. Monday through Friday, and 1:00 p.m. to 11:00 p.m. Saturday and Sunday. The Zone L RPPP is a seasonal program that operates from April to October, primarily to discourage on-street parking for PGE Park events. Area 1 also includes a portion of RPPP Parking Zone K. Zone K has the same daily parking restrictions as Zone L, but is in effect year round.

Area 1 Utilization

The hourly utilization profile for Area 1 is summarized in Exhibit 2.

Exhibit 2
Area 1 Utilization



As shown in Exhibit 2, the peak demand for on-street parking in Area 1 occurred between 4:00 p.m. and 5:00 p.m. with a peak hour utilization rate of approximately 93 percent. However, at 2:00 p.m., well before people began arriving for the Timbers match, Area 1's on-street parking capacity was already 85 percent occupied. The high demand for on-street parking in the Northwest District effectively limits the availability of on-street parking for events at PGE Park. This data suggests that there is a very limited amount of residual parking capacity available for event patrons and that any parking opportunities depend exclusively on the turnover of non-event parking.

For a closer examination of peak hour conditions, Figure 2 displays the on-street utilization during the 4:00 p.m. to 5:00 p.m. peak hour by block face. For the purpose of comparison, Figure 3 displays the on-street utilization during the 8:00 p.m. to 9:00 p.m. hour, well after the soccer match ended. As shown, the high demand for on-street parking was still broadly distributed throughout Area 1 two hours after the soccer match ended. This is additional evidence of the consistently high demand for parking for purposes other than PGE Park events. The area located east of NW 19th Street was the only area that experienced a significant decrease in on-street utilization as the survey period ended.

Area 1 Duration of Stay and Turnover

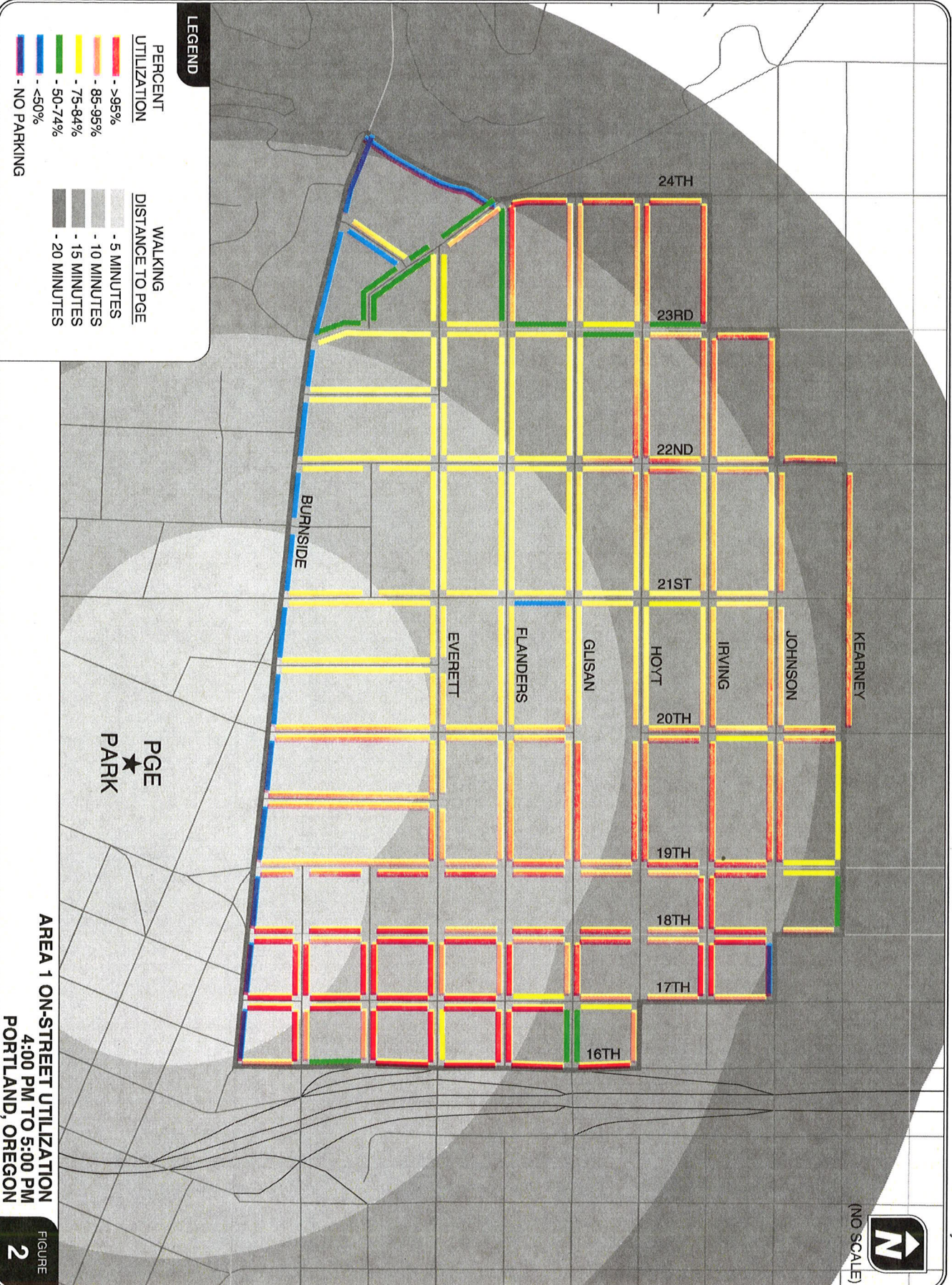
The average duration of stay and turnover rates observed in Area 1 are provided in Table 3.

Table 3
Area 1 On-Street Parking Duration of Stay/Turnover

Type of Space	Number of Spaces	Total Vehicles	Average Duration of Stay	Average Turnover*
1 Hour	220	660	2 Hour 1 Min	3.0
2 Hour	857	1359	2 Hour 4 Min	1.6
3 Hour	535	907	3 Hours 11 Min	1.7
RPPP	647	948	3 Hours 48 Min	1.5
Overall	2404	3815	3 Hour 2 Min	1.6

Note: Turnover and duration analyses are based on survey data collected between 2:00 and 10:00 p.m.
 *Average Turnover = Total Vehicles per Number of Spaces
 **Overall spaces include 5, 10, 15, 20, and 30 minutes spaces along with Loading and No Parking spaces.

As shown in Table 3, the only significant violations of time of stay restrictions occurred in the one-hour parking spaces. Time of stay violations may have also occurred in the RPPP zones but were undetected because the surveyors did not note the presence of parking permits. The RPPP precludes non-permitted vehicles for staying more than two hours. *Detailed duration of stay information is provided in Appendix "B", including detailed duration of stay characteristics for each hour of the study period.*



LEGEND

- PERCENT UTILIZATION**
- >95%
 - 85-95%
 - 75-84%
 - 50-74%
 - <50%
 - NO PARKING
- WALKING DISTANCE TO PGE**
- 5 MINUTES
 - 10 MINUTES
 - 15 MINUTES
 - 20 MINUTES

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING

AREA 1 ON-STREET UTILIZATION
4:00 PM TO 5:00 PM
PORTLAND, OREGON

FIGURE
2



1 08 33 31 39



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LEGEND

PERCENT UTILIZATION

- - >95%
- - 85-95%
- - 75-84%
- - 50-74%
- - <50%
- - NO PARKING

WALKING DISTANCE TO PGE

- 5 MINUTES
- 10 MINUTES
- 15 MINUTES
- 20 MINUTES

**AREA 1 ON-STREET UTILIZATION
8:00 PM TO 9:00 PM
PORTLAND, OREGON**

**FIGURE
3**

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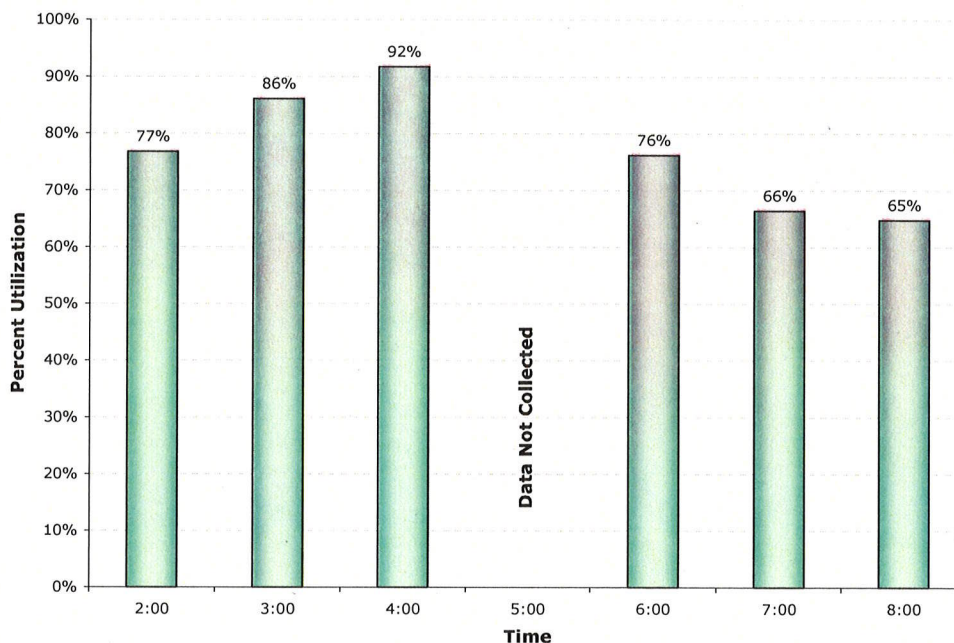
Goose Hollow (Area 2) On-Street Parking Conditions

Area 2 represents the area south of W. Burnside Street and west of I-405 that is within a ½ mile walking distance from PGE Park. Area 2 encompasses a large portion of RPPP Zone A, which restricts the duration of on-street parking for non-permit holders to 2-hours between 7:00 p.m. and 11:00 p.m. Monday through Friday, and 1:00 p.m. to 11:00 p.m. Saturday and Sunday year round. The Zone A parking permit program was put in place primarily to discourage on-street parking for events at PGE Park.

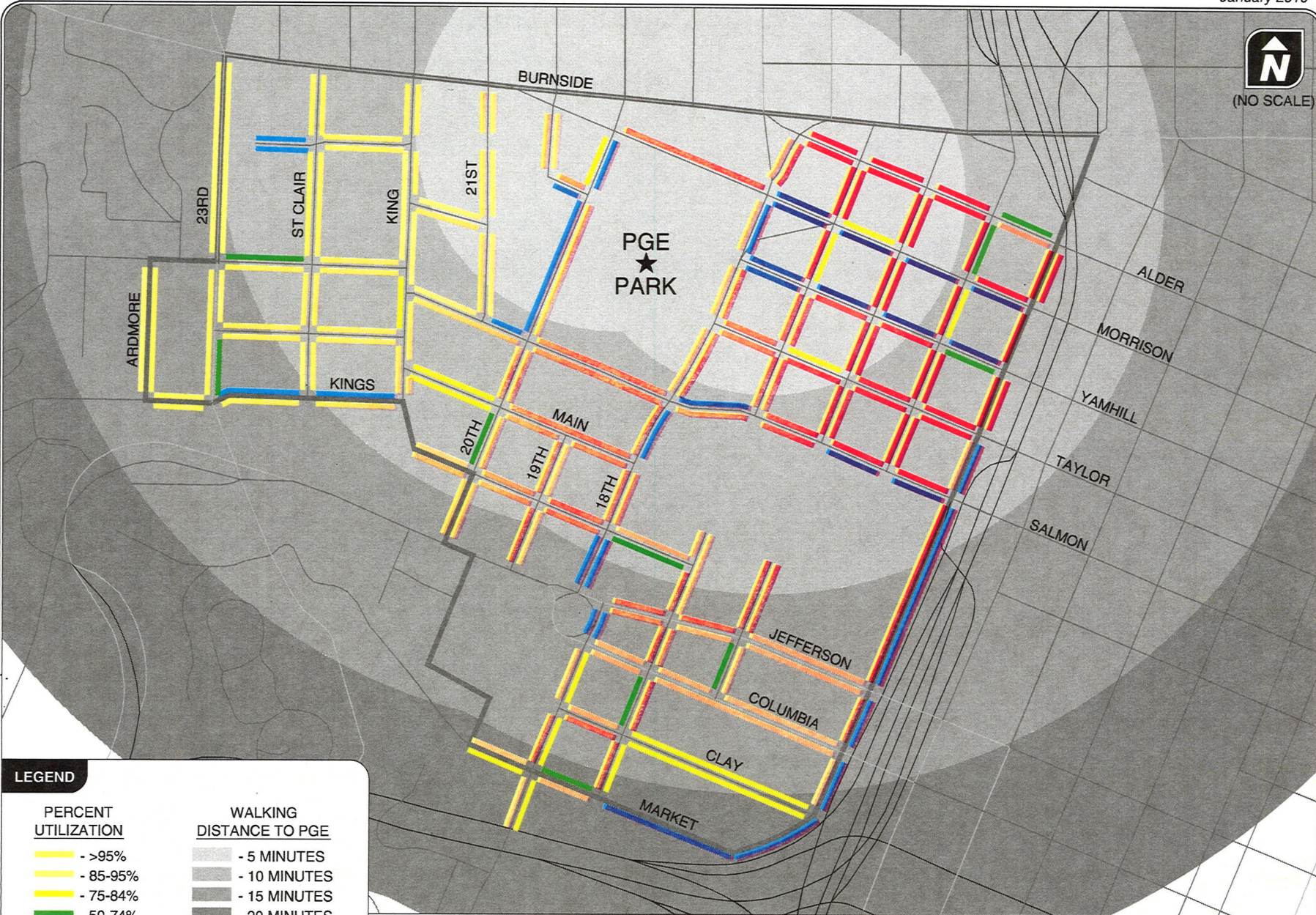
Area 2 Utilization

The hourly utilization profile for Area 2 is summarized in Exhibit 3.

Exhibit 3
Area 2 Utilization



As shown in Exhibit 3, the relatively low demand for on-street parking in Area 2 by uses other than those associated with the PGE event, resulted in a larger potential supply of on-street parking for PGE patrons. For a closer examination of peak hour conditions, Figure 4 displays the on-street parking utilization during the 4:00 p.m. to 5:00 p.m. peak hour by block face. For the purpose of comparison, Figure 5 displays the on-street utilization during the 8:00 p.m. to 9:00 p.m. off-peak hour.



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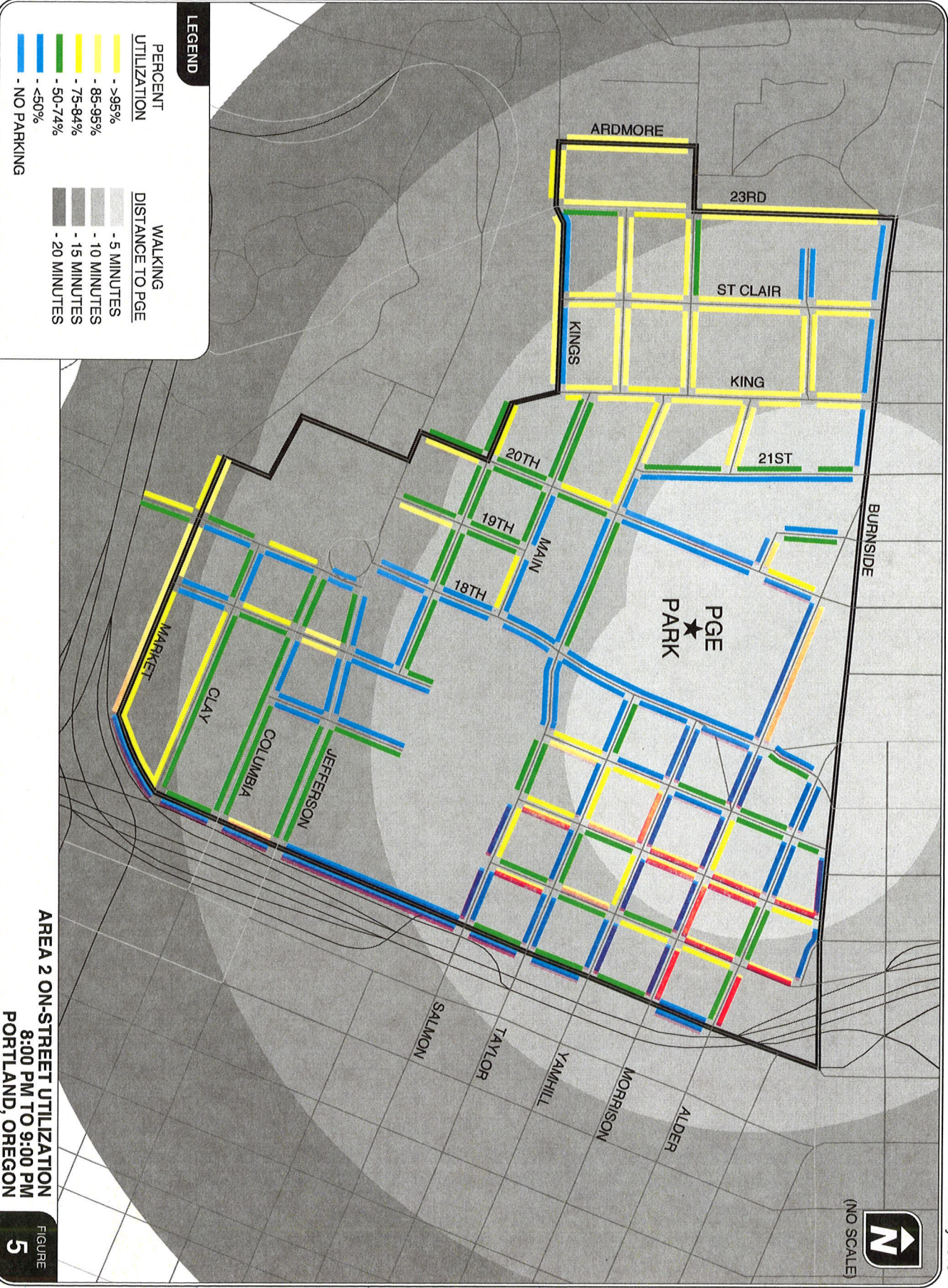
LEGEND

PERCENT UTILIZATION	WALKING DISTANCE TO PGE
- >95%	- 5 MINUTES
- 85-95%	- 10 MINUTES
- 75-84%	- 15 MINUTES
- 50-74%	- 20 MINUTES
- <50%	
- NO PARKING	

AREA 2 ON-STREET UTILIZATION
 4:00 PM TP 5:00 PM
 PORTLAND, OREGON

FIGURE
4

183553



AREA 2 ON-STREET UTILIZATION
8:00 PM TO 9:00 PM
PORTLAND, OREGON

FIGURE
5



(NO SCALE)

January 2010

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As shown on Figure 4, the high demand for on-street parking was broadly distributed throughout Area 2 during the peak hour of the Timbers game, with significant utilization rates shown throughout. As shown on Figure 5, the demand for on-street parking in Area 2 significantly decreased two hours after the Timbers game, with the exception of the area located west of King Road, a predominantly residential area

Area 2 Duration of Stay and Turnover

The average duration of stay and turnover rates observed in Area 2 are provided in Table 4.

Table 4
Area 2 On-Street Parking Duration of Stay/Turnover

Type of Space	Number of Spaces	Total Vehicles	Average Duration of Stay	Average Turnover*
1 Hour	75	150	2 Hour 27 Min	2.0
90 Minute	56	126	2 Hour 23 Min	2.25
2 Hour	95	177	2 Hour 32 Min	1.9
3 Hour	68	144	2 Hour 15 Min	2.1
5 Hour	294	626	2 Hour 26 Min	2.2
NPO	935	1297	3 Hour 43 min	1.4
Overall	1683	2694	3 Hour 5 Min	1.6

Note: Turnover and duration analyses are based on 2:00 p.m. to 10:00 p.m. data.
 *Average Turnover = Total Vehicles per Number of Spaces
 **Overall spaces include 5, 10, 15, 20, and 30 minutes spaces along with Loading and No Parking spaces.

As shown in Table 4, it appears that the time limits on individual parking spaces may not have influenced driver behavior during the event. Regardless of the parking space's type, the average duration of stay in a time-limited space was observed to average about 2 hours and 25 minutes even in spaces limited to 2 hours or less. It appears that people generally used the parking for as long as they needed to regardless of its time limit.

BIKE RIDERSHIP

A total of 236 locked bikes were observed during the Timbers match within close proximity to the two main entrances to PGE Park. The specific area monitored was bounded by SW 20th Avenue and its cross streets, both sides of W Burnside Street, and SW 18th Avenue and its cross streets, from W Burnside Street to SW Salmon Street. As indicated previously this represents a significant increase in the number of people biking to a major PGE Park soccer event when compared to the previous study based on the 2000 Women's World Cup match that drew over 20,000 fans. Because demand exceeded the supply of permanent bike parking racks located around PGE Park, bikes were locked to temporary pedestrian barricades, street signs, light poles, trees, and benches. As discussed previously, the Timbers match likely represented ideal conditions for bike and pedestrian travel to the game. This high level of demand may not be easy to replicate for all future MLS games. For this reason, the recommended CTMP strategies include

provisions for additional permanent bike parking as well as temporary bike parking to facilitate games with higher than typical bicycle demand.

Additional bike ridership data was collected around PGE Park on Friday, December 4th and Saturday, December 5th during the Oregon State High School Football Playoffs. Each day presented a double-header with games beginning at 5:00 and 8:00 p.m. on Friday and at 12:00 and 3:00 p.m. on Saturday. Bike ridership data was collected during, before, and after each game in order to identify potential differences in bike ridership between high school football events and major soccer events at PGE Park. The results of the data collection effort indicate that even the largest of high school football events draws virtually no bike-riding patrons.

TRANSIT RIDERSHIP

Ridership data obtained from TriMet closely matches the intercept survey results. As expected, MAX was a popular way to get to the Timbers match. Ridership data collected at PGE Park's two Max stations on the day of the Timbers match (October 4th) was compared to ridership during the previous Sunday (September 27th). On October 4th arrivals during the 2:00 and 3:00 hours and departures during the 6:00 hours were much higher than the same hours on September 27th. There was little difference in activity during the other hours of the two days. *Appendix "C" provides detailed comparisons of both day's arrivals and departures at the MAX stations as well as several of the bus stop locations in the area.*

FINDINGS

The information gathered during the Portland Timbers' October 4th playoff match and the State 6A football playoff games held on December 4th and 5th leads to a number of findings relevant to identifying transportation impact mitigation measures for PGE Park's Comprehensive Transportation Management Plan.

On-street parking is in high demand at all times, especially in the Northwest District and the residential hills of Goose Hollow. This everyday condition limits the availability of on-street parking for PGE Park events. During events, remaining available on-street parking gets used by event goers, which in turn limits the availability of parking for those who rely on it on a daily basis.

Effective mitigations would:

- Provide convenient and plentiful event parking in surface lots and parking garages at a cost and convenience on par with the cost of on-street parking,
- Preserve sufficient on-street parking for everyday uses, even during PGE Park events, and
- Provide convenient and affordable alternatives to driving and parking at PGE Park events.

As one expects, and as confirmed by the surveys, those who drive to PGE Park events look for the nearest available and least expensive parking. On-street parking is inexpensive relative to parking lot and parking garage fees. In fact it is free after 7:00 p.m. But available on-street parking moves farther from the stadium as the start of the event approaches, and drivers circulate farther from the stadium to find the most available on-street parking opportunity at that moment. For large events like the Timbers playoff match, this search can take so much time and effort that convenience ultimately becomes more important than cost and drivers finally choose off-street parking over on-street parking.

Effective mitigations would:

- Make parking lots and parking garages more convenient and inexpensive, and
- Assure drivers that they can drive directly to a parking space without having to drive around hunting for it.

Traveling to PGE Park by bike has grown in popularity. Like drivers, cyclists value convenient parking located as close to the stadium as possible. Unlike drivers searching for parking opportunities, many cyclists make parking opportunities by locking their bikes to anything they consider secure. At the Timbers playoff match most of the bikes surveyed were parked within 200 feet of the stadium even though there were not enough bike racks.

Effective mitigations would:

- Promote cycling as an alternative to driving to help reduce the need for car parking, and
- Provide enough bike parking concentrated as close to the stadium gates as possible to assure cyclists that convenient parking will be available and there will be no need to search for or invent parking.

Arriving at and leaving a stadium event by transit, especially by MAX, is very convenient for many event patrons given the location of the two stations on SW Morrison Street. Ridership is very high for events but could grow more popular if the beginning and end of their travel were equally convenient and if the cost of traveling by transit were even more competitive compared to driving.

Useful mitigations would

- Encourage the use of park and ride lots to access transit,
- Discount the cost of transit passes so groups could travel by transit at a cost that is on par with or is less than carpooling to an event, and
- Supply enough transit service so patrons can leave an event without delay due to overcapacity light rail trains and buses.

Event patrons who come from out-of-town or rarely come to PGE Park typically need assistance and/or information in order to have the most pleasant experience possible. Making a long trip to an unfamiliar community can be stressful to the patron and can possibly be unsettling to the community if patrons are lost or confused about reaching the stadium.

Useful mitigations would

- Provide clear and thorough information about traveling to the stadium, and
- Offer alternatives to driving to the stadium.

RECOMMENDED CTMP REVISIONS

The findings from observing the Timbers playoff match and high school football playoff games were combined with the results from interviews with key event management staff and City representatives to identify twelve mitigations for the updated CTMP. Information about the event management and City representative interviews is provided in *Appendix "D."*

Together the mitigation measures help to accomplish three objectives:

- Discourage drivers from parking in residential areas near the stadium,
- Make it as convenient as possible to travel to PGE Park events without a motor vehicle and,
- Make it possible for those who drive to go directly to a parking space rather than circulate on the streets looking for on-street parking.

The recommended CTMP mitigation measures are listed below and discussed in detail in the single-page descriptions in Appendix "E".

- Measure 1. Extend the Free Rail Zone to Goose Hollow to facilitate the use of downtown parking garages and link PGE Park to the City's central business districts.
- Measure 2. Add additional MAX trains after events to facilitate a higher number of post game trips from the stadium.
- Measure 3. Provide free day-of-game TriMet passes to all season ticket holders to encourage transit use.
- Measure 4. Increase the supply of permanent bike parking in the public rights-of-way nearest the PGE Park entry gates to promote cycling to stadium events.
- Measure 5. Offer day-of-game secured bike parking for those who wish to leave accessories with their bikes.

- Measure 6. Retain existing Residential Parking Permit Program (RPPP) Areas to discourage event parking in residential neighborhoods.
- Measure 7. Reduce visitor parking time limits in Residential Parking Permit Program (RPPP) areas to 90 minutes to assure that soccer fans will not parking in residential neighborhoods.
- Measure 8. Conduct on-street parking enforcement to assure compliance with RPPP restrictions and metered parking requirements.
- Measure 9. Offer prepaid event parking at predetermined parking lots and structures to eliminate the need to search for parking.
- Measure 10. Accommodate the use of special group buses by providing convenient bus loading zones and bus parking areas.
- Measure 11. Provide thorough web-based day-of-game information on PGE Park's, Timbers' and Vikings' websites.
- Measure 12. Consider temporarily closing SW Morrison Street's eastbound traffic access during Timbers matches to facilitate pedestrian circulation, group bus loading/unloading and other event-related activities.

CONCLUSION

With the departure of the Portland Beavers AAA Baseball after the 2010 season the total number of events at PGE Park will decrease. With the conversion of Timbers Soccer from Class A to MLS the number of soccer events is not expected to change, but the average attendance is expected to increase significantly, from approximately 8,000 to 14,000. The most significant transportation-related impacts of large PGE Park events relate to the use of on-street parking that is consistently in short supply due to the needs of the surrounding neighborhoods. The recommended CTMP acknowledges and capitalizes on available public infrastructure and services, up-to-date communications technologies, established working relationships, and community values regarding multimodal transportation (particularly the growing popularity of cycling) to mitigate transportation impacts and enhance the experience of attending an event at PGE Park.

Appendix A
Survey Instrument and
Detailed Survey
Responses

SURVEY INSTRUMENT**Questionnaire**Date: October 4th, 2009 ~ Location: PGE Park

1. Did you come to PGE Park early for other purposes?
 - a. Yes
 - b. No

If so, why?

a. _____

b. _____

2. Will you stay after the game for other purposes?
 - a. Yes
 - b. No

If so, why?

a. _____

b. _____

3. What was your primary travel mode for this trip?
 - a. Auto
 - b. Transit
 - c. Bike
 - d. Walk

4. Did you use more than one mode to reach PGE Park?
 - a. Yes
 - b. No

5. If so, which ones?

a. _____

b. _____

6. What were the top three factors influencing your travel mode?

a. _____

b. _____

c. _____

For Walk, Bike, Transit modes, **Thank you for your time.** The remaining questions are for Private Vehicle respondents only.

7. If you drove, where did you park?
 - a. On the street
 - b. In a garage
 - c. In a surface lot
 - d. Other: _____

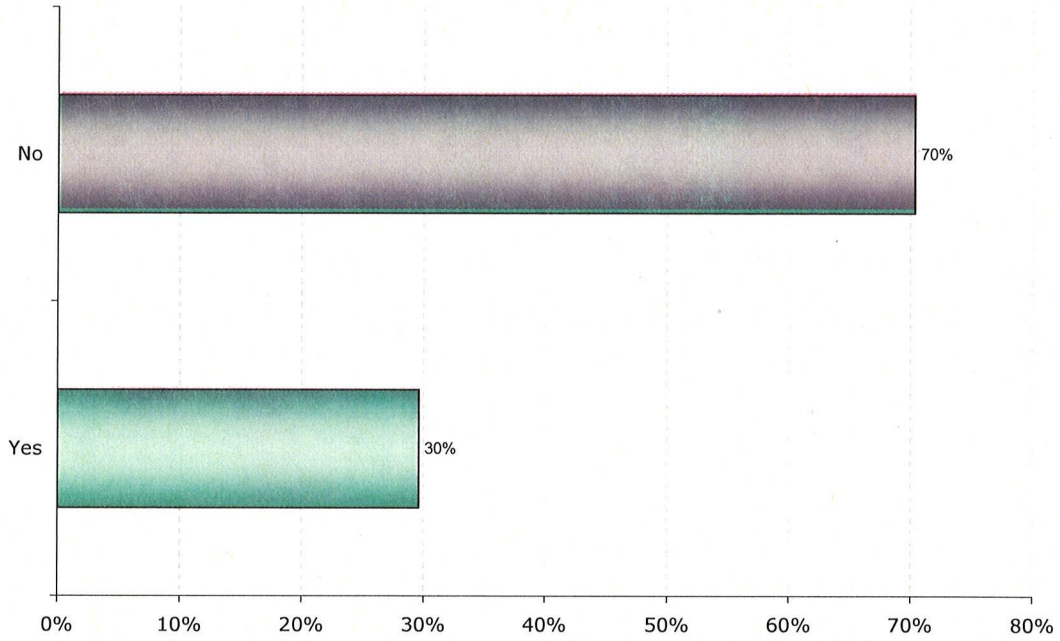
8. How close did you park?
 - a. Less than one block
 - b. 1 to 2 blocks
 - c. 3 to 4 blocks
 - d. More than 4 blocks

9. How long did you look for a parking space?
 - a. Less than one minute
 - b. One to five minutes
 - c. Five to ten minutes
 - d. More than ten minutes

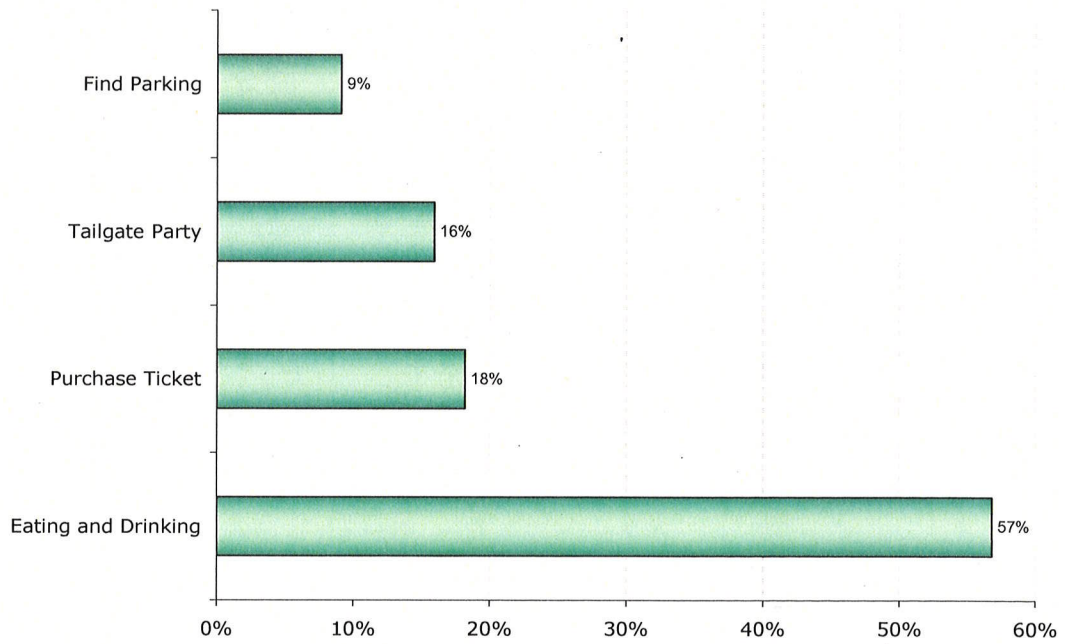
10. Under what circumstances would you choose not to drive and park for future events at PGE?

DETAILED SURVEY RESPONSES

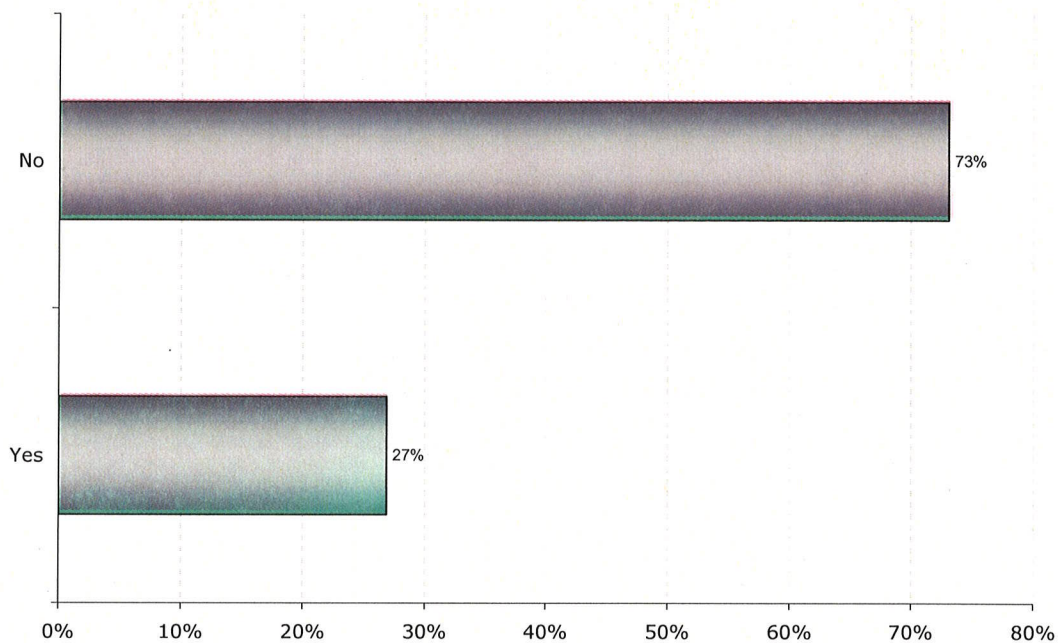
Question1: Did you come to PGE Park early for other purposes?



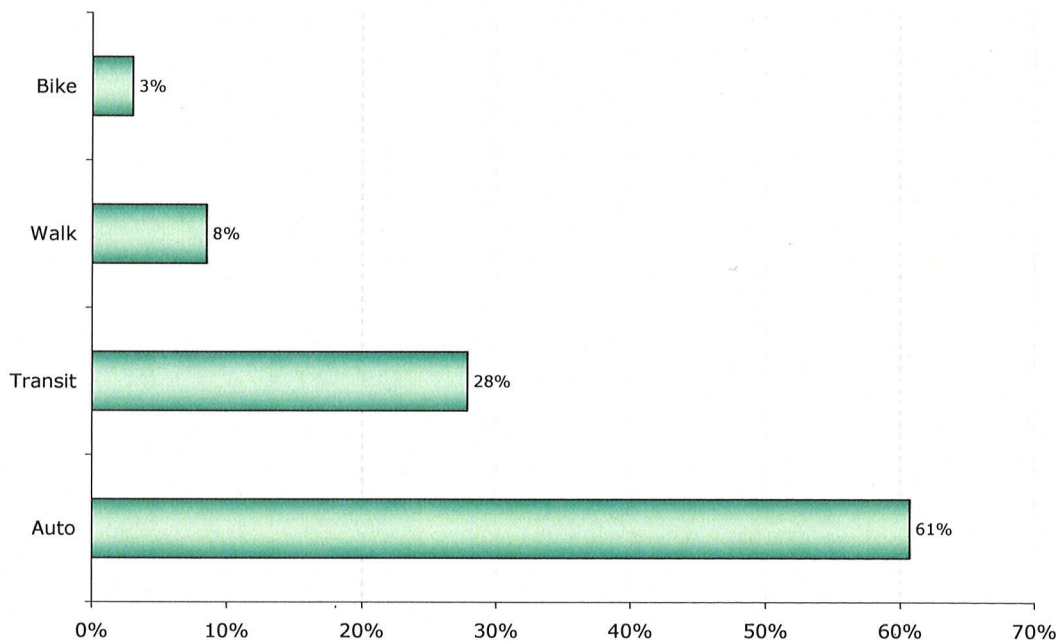
Question 1A



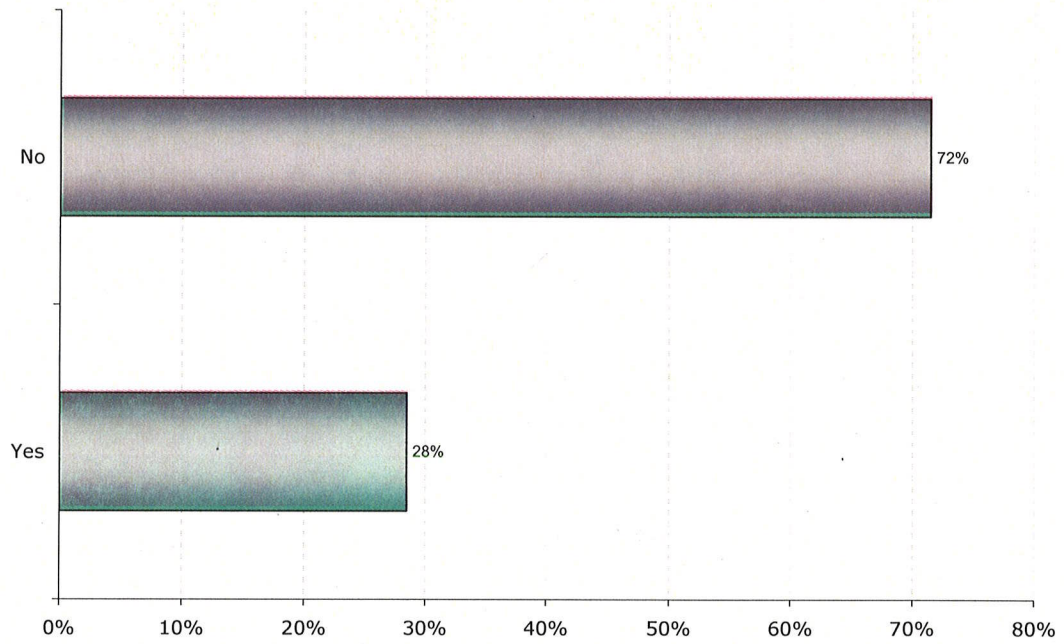
Question 2: Will you stay after the game for other purposes?



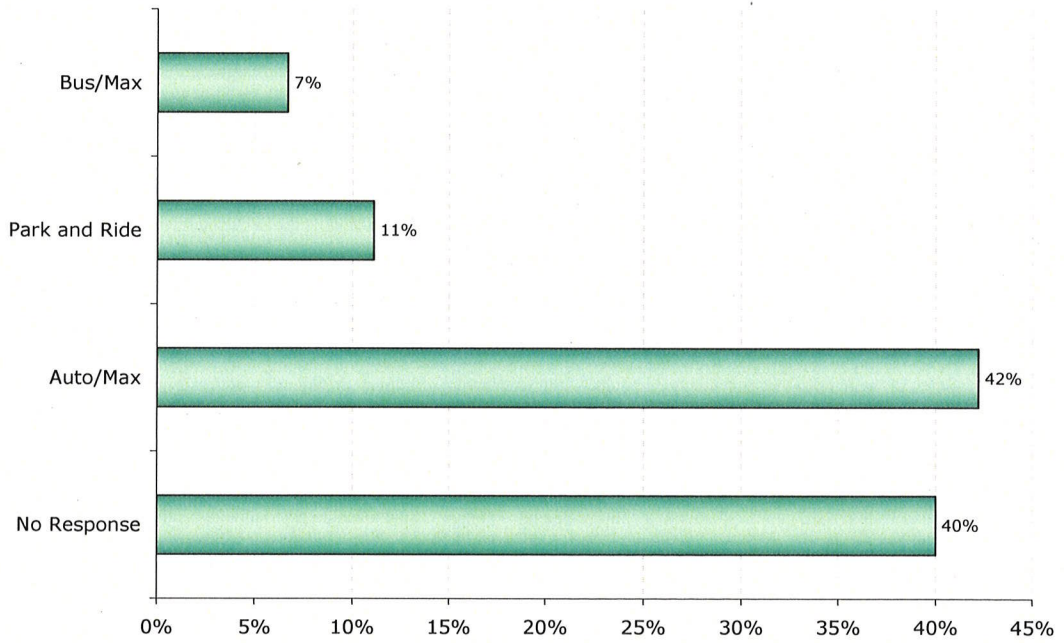
Question 3: What was your primary travel mode for this trip?

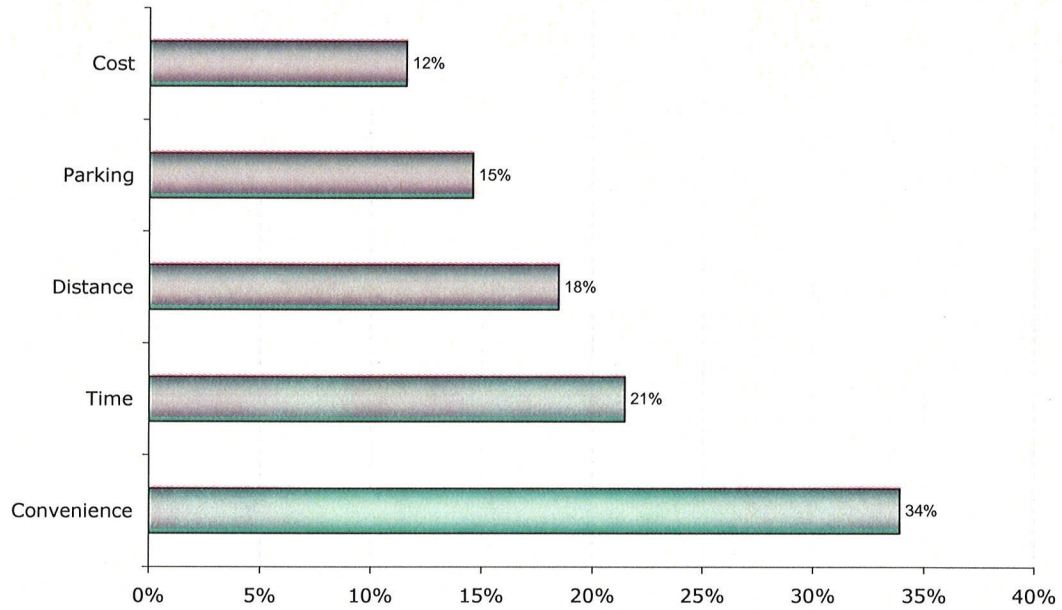
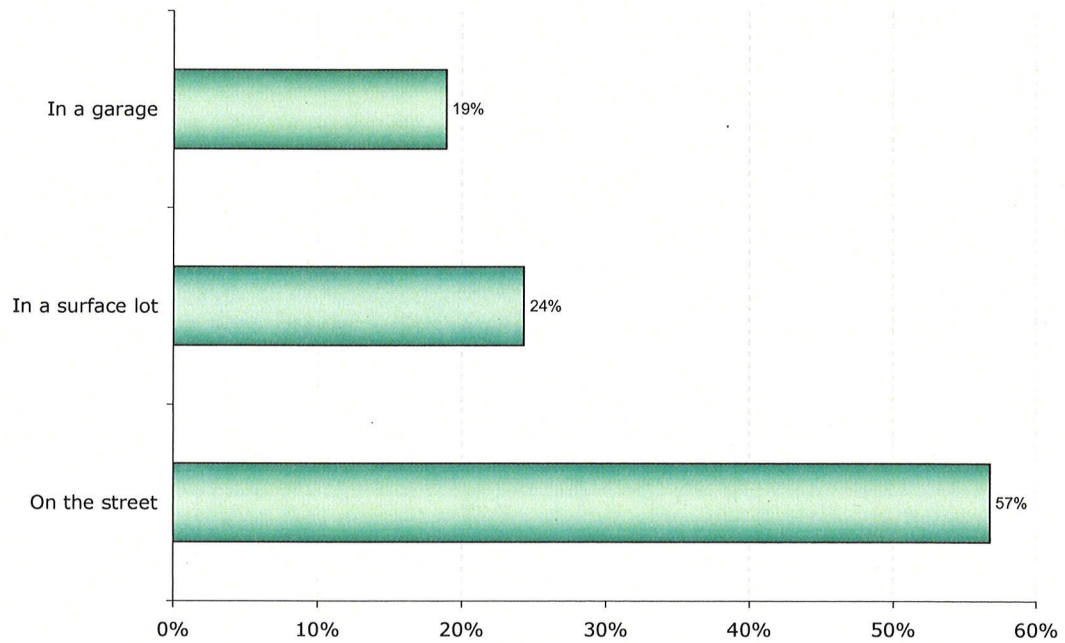


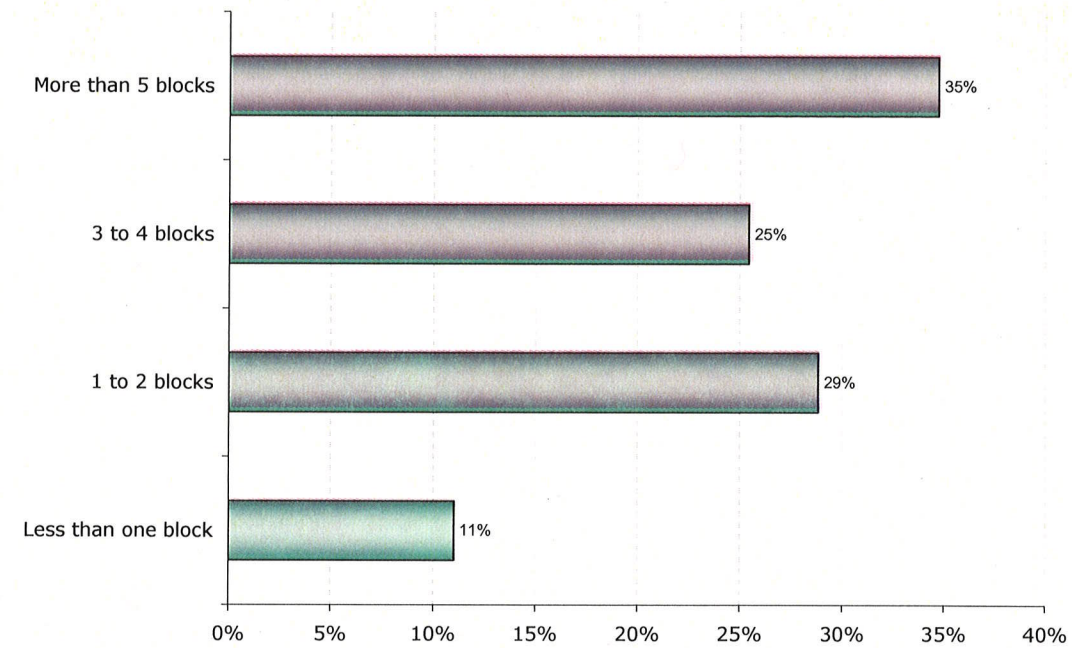
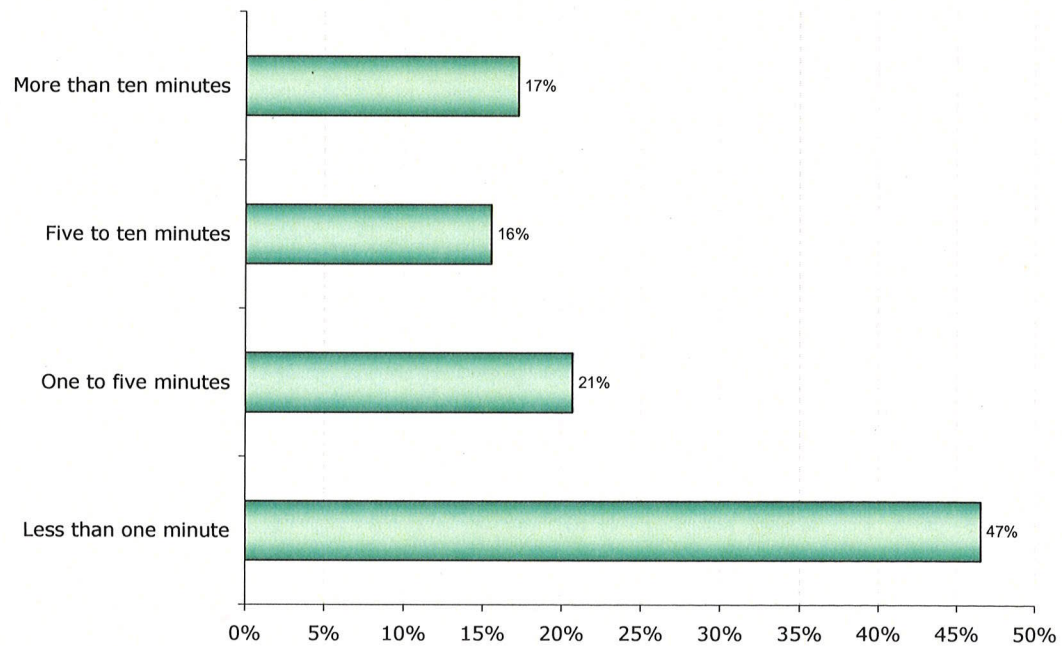
Question4: Did you use more than one mode to reach PGE Park?



Question 5a



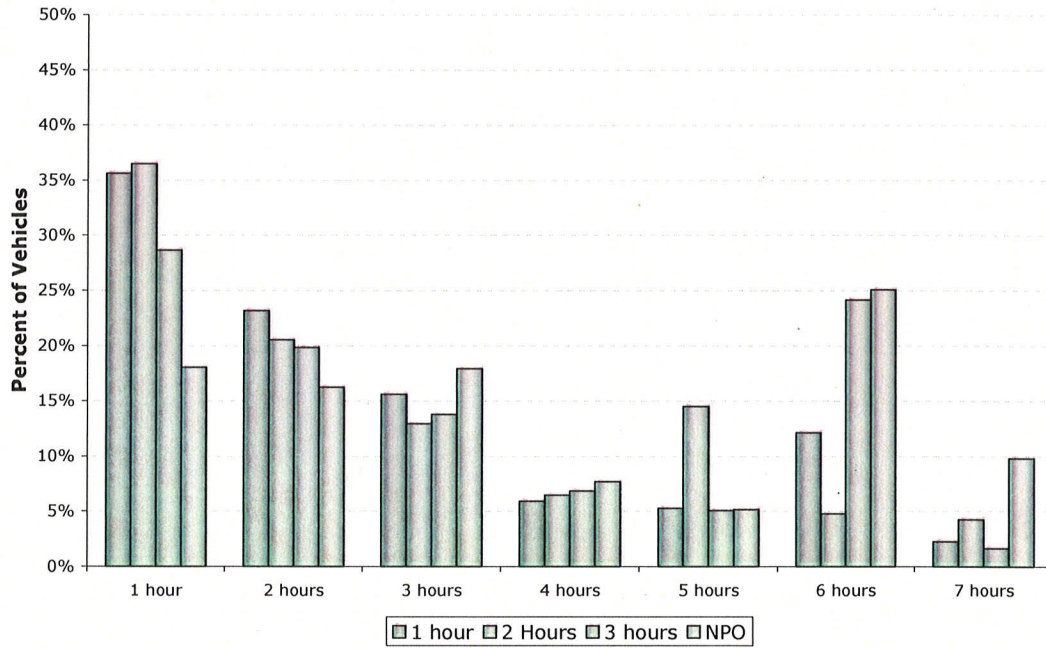
Question 6: What were the top three factors influencing your travel mode?**Question 7: If you drive, where did you park?**

Question 8: How close did you park?**Question 9: How long did you look for a parking space?**

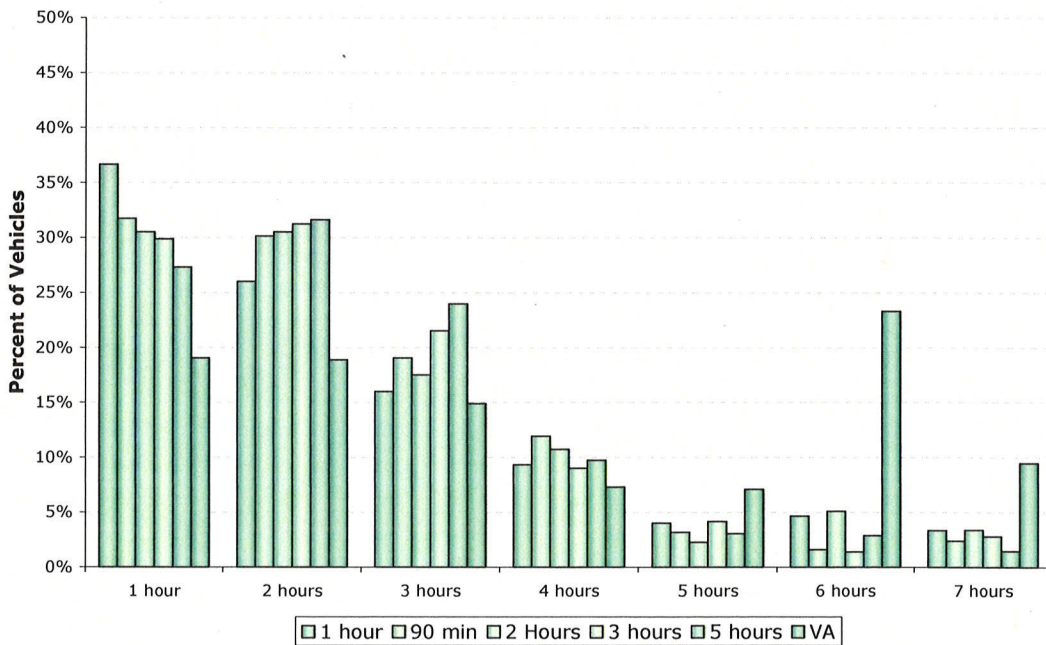
Appendix B
Detailed Duration of Stay
Information

DETAILED DURATION OF STAY INFORMATION

Area 1 Duration of Stay Summary



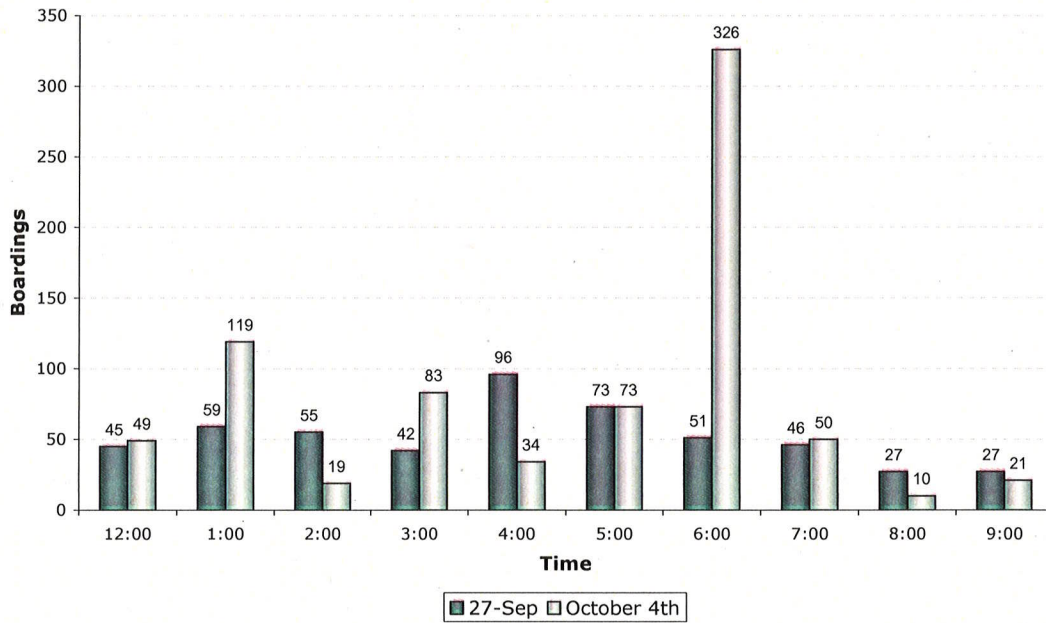
Area 2 Duration of Stay Summary



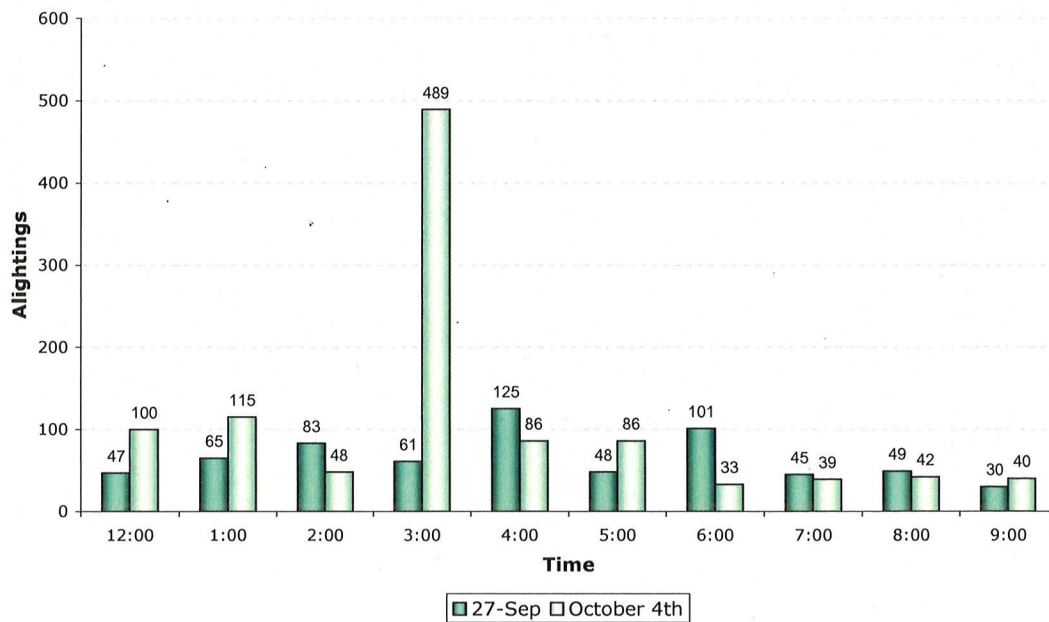
Appendix C
Boarding and Alightings
Near PGE Park

MAX BOARDINGS AND ALIGHTINGS NEAR PGE PARK

Total Max Boardings
PGE Park and King Hill/Salmon St Max Stations

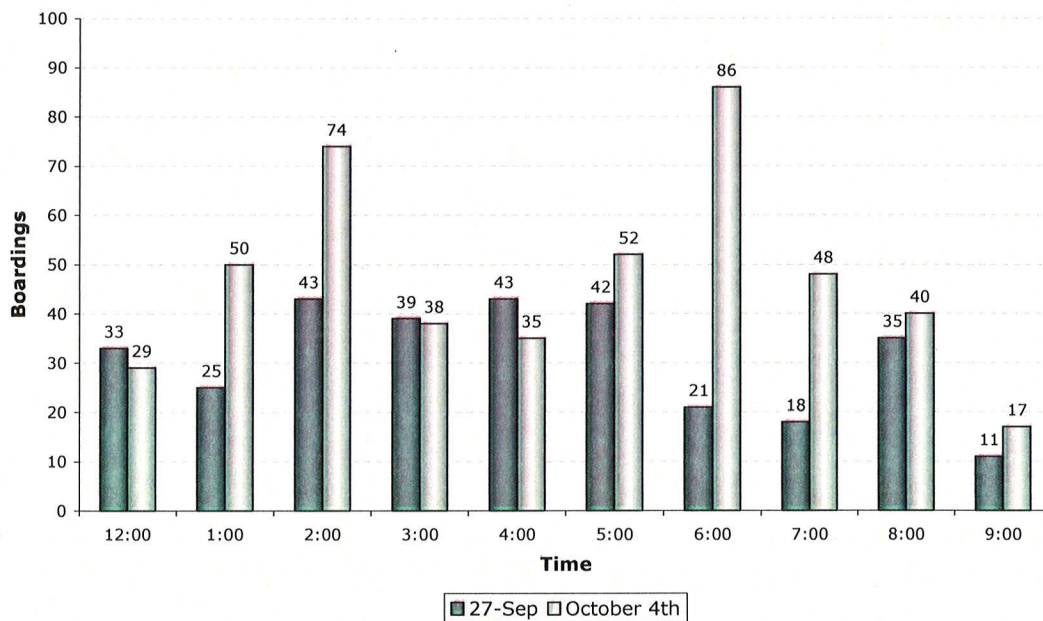


Total Max Alightings
PGE Park and King Hill/Salmon St Max Stations

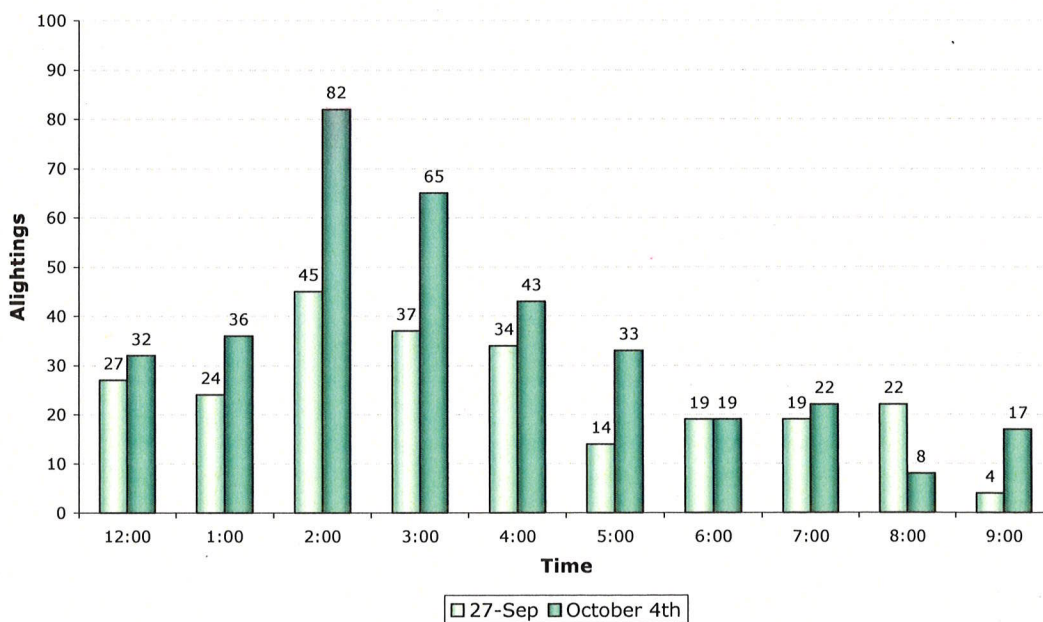


BUS BOARDINGS AND ALIGHTINGS NEAR PGE PARK

Total Bus Boardings
All Stops Located Within the Vicinity of PGE Park



Total Bus Alightings
All Stops Located Within the Vicinity of PGE Park



Appendix D
Meetings and Interviews

MEETINGS AND INTERVIEWS

The following describes the contacts and meetings that helped identify revisions to the CTMP that would effectively mitigate transportation-related impacts to the neighborhoods around PGE Park.

City staff members responsible for managing the stadium's design review, land use approval process and construction permitting were consulted to confirm their transportation-related expectations and procedural protocols. The following staff members assisted:

- Kara Faravanti, Portland Bureau of Development Services
- Karl Lisle, Portland Bureau of Planning and Sustainability
- Kurt Krueger, Portland Bureau of Transportation

The current CTMP was reviewed with **project management representatives** from PGE Park, the City of Portland, Peregrine Sports/ICON Venue Group and ABA Architects to get an initial assessment of each mitigation measure's performance since the CTMP was adopted in 2000.

Individual specialists most familiar with various transportation-related issues were consulted directly and their advice and observations were incorporated into a set of draft mitigation recommendations. The following individuals were consulted:

- Ken Puckett, Vice President of Operations for PGE Park
- David Logsdon, City of Portland
- Doug Thompson, Portland Bureau of Transportation, Special Events Coordinator
- Sarah Figliozzi, Portland Bicycle Parking Specialist
- Jeff Smith, Portland Bicycle Operations Specialist
- Ramon Corona, Portland Parking Management Supervisor
- David Crout, TriMet boarding/alighting data technician

The draft CTMP recommendations were reviewed with the **project management team** to assess their viability, thoroughness and effectiveness and to refine the specifics of each mitigation measure when necessary. A second draft of the CTMP was then prepared.

The draft CTMP recommendations were presented to the **GNA working group** hosted by David Logsdon and consisting of representatives of PGE Park, GHFL and NWDA. The working group met weekly to revise the current GNA as needed. The recommended CTMP met with their approval

Appendix E
CTMP Single page
Descriptions

MEASURE 1: EXTEND "FREE RAIL ZONE" TO GOOSE HOLLOW***Description:***

The westerly boundary of the MAX Free Rail Zone is currently SW 10th Avenue. This measure would extend the westerly boundary so it includes the MAX stations at SW 18th/Morrison and SW 18th/Salmon in Goose Hollow. These two stations are only one minute apart.

Objective:

Encourage PGE Park patrons to use parking garages in the downtown core, particularly the Smart Park structure at SW 10th and Alder. Encourage those who drive to Park events to drive directly to parking garages instead of circulating on the streets looking for an on-street parking space.

Discussion:

Providing free and convenient light rail transportation between downtown garages and the Park would compliment Mitigation Measure 9 (Prepaid event parking at various private lots).

Cost/Revenue

Operating costs would not change.

A relatively small amount of revenue would be lost. Only those who currently buy a ticket to specifically travel between today's Free Rail Zone and the Goose Hollow stations would no longer need to pay.

Implementer: TriMet

Implementation Details:

Move fare inspectors to reflect the new Free Rail Zone boundary.

Challenges/Opportunities:

The Goose Hollow Foothills League endorses this measure.

Implementing this measure may be beyond the control and influence of those who operate PGE Park.

MEASURE 2: ADD ADDITIONAL MAX TRAINS AFTER EVENTS***Description:***

Retain this existing CTMP mitigation measure. The measure states: "At attendance of 5000+ some form of additional trains is recommended by the CTMP. [PGE Park] needs to communicate expected attendance with TriMet two days in advance of events."

Objective:

Encourage MAX ridership by providing convenient MAX service after events.

Discussion:

This measure is part of the current CTMP and should be continued. PGE Park and TriMet have established an ongoing working relationship that has made Measure routine.

Providing good MAX service after events, when everyone wants to leave at the same time, is important for encourage MAX ridership.

Cost/Revenue

Refer to existing financial arrangements. Hopefully ridership will more than pay for the additional service.

Implementer: TriMet in cooperation with PGE Park

Implementation Details:

Current CTMP implementation details will continue to apply.

Challenges/Opportunities:

Major League Soccer event attendance is anticipated to be relatively predictable. This could simplify the communications protocol between PGE Park and TriMet. An alternative protocol would be to simply agree that two extra Blue Line MAX trains will be provided in each direction during the first 30 minutes after a Timbers match.

MEASURE 3: SEASON TICKET HOLDERS GET FREE TRIMET PASSES***Description:***

Retain this existing CTMP mitigation measure. Continue providing free all-day all-zone TriMet passes to Timbers season ticket holders for the day of the match.

Objective:

Encourage transit ridership.

Discussion:

This is a current mitigation measure and has been an ongoing practice involving coordination between PGE Park and TriMet. Its effectiveness is difficult to measure but anecdotal information indicates that this measure is popular with season ticket holders.

There are currently approximately 500 Beaver season ticket holders and 2500 Timbers season ticket holders. Season ticket sales are expected to be much greater than this when MLS arrives. An anticipated 12,000 ticket holders will be eligible for free day-of-game transit passes through full or partial season ticket sales. If the TriMet pass program continues, transit ridership could increase significantly.

Cost/Revenue:

All-day all-zone transit passes currently cost \$4.75.

Implementer: PGE Park

Implementation Details:

This would be a continuation of current PGE Park-TriMet cooperation.

Challenges/Opportunities:

It is anticipated that most Timbers tickets will be season tickets. As a result this measure will encourage transit use.

The possibility of expanding this program to include the options of discounted parking passes or free secured bike parking should be explored.

MEASURE 4: PERMANENT BIKE PARKING

Description: Provide permanent bike “staples” for as many bikes as possible within 300 feet of the Park’s entry gates. Provide additional temporary bike parking capacity for weekend daytime soccer matches.

Objective: Encourage bike ridership as a convenient transportation alternative.

Discussion:

Many Major League Soccer fans will be traveling distances that make cycling an impractical alternative.

Permanent bike parking for 300 bikes would accommodate 1.5% of a capacity crowd (20,000 people). 1.5% may seem like a small percentage but it is a large percentage of the Park patrons who live within cycling distance of the Park. According to Portland Bureau of Transportation staff, most cycling trips to/from the Park will tend to be no longer than 3.5 miles. A relatively small percentage of total attendance will be traveling less than 3.5 miles.

Providing bike parking very close to the Park and in numbers that help assure that a cyclist will find an available rack will enhance convenience for cyclists.

Weekend matches that begin and end in daylight can be expected to draw the most cyclists. Providing temporary bike parking spaces would help serve this peak demand condition.

Cost/Revenue:

Permanent bike parking “staples” cost approximately \$250 to install. Dero brand stackable portable bike racks are one option for serving peak bike parking demands. Their cost is yet to be determined.

Implementer: PGE Park

Implementation Details:

Develop a map showing existing and potential bike parking locations. Work with City Transportation staff to identify permanent bike parking opportunities.

Challenges/Opportunities:

Bike parking should be located near the Park gates but not where it interferes with pedestrian circulation, ticket window and gate access, or emergency access considerations. Preferably adequate bike parking should be in a single location so cyclists know they can go directly to parking and not need to circulate looking for parking opportunities.

MEASURE 5: SECURED BIKE PARKING FOR EVENTS***Description:***

For a fee, provide secured bike storage to supplement permanent bike rack parking.

Objective:

Encourage bike ridership as a convenient transportation alternative.

Discussion:

Secured bike parking would serve cyclists who prefer the extra reassurance that their bike is being monitored. This would be especially important to those who have panniers and other accessories that they would prefer not to take into the Park.

Because there is no space in PGE Park, a temporary secure area would need to be established and staffed outside the Park.

Materials associated with the operation (fencing, temporary racks, and perhaps street closure signs and barricades) would need to be purchased, assembled for the event, disassembled after the event and stored. Another alternative would be to rent the materials. A third alternative would be to contract with a private bike storage vendor.

Cost/Revenue:

Charging a fee for this service would defray costs.

Implementer: PGE Park

Implementation Details:

This measure will require a staff to assemble, operate and disassemble the secured area. Implementation will involve setting up the secured bike storage location approximately 90 minutes before the match, collecting fees and guarding the bikes until approximately 30 minutes after the match.

Challenges/Opportunities:

Finding a location to store a large number of bicycles near the Park entry gates could be a challenge.

This measure will require ongoing staffing and management.

MEASURE 6: RETAIN EXISTING RESIDENTIAL PARKING PERMIT PROGRAM (RPPP) AREAS***Description:***

Keep the existing RPPP areas intact.

Objective:

Prevent Major League Soccer patrons from parking in RPPP areas.

Discussion:

The RPPP areas are part of the current CTMP. They are popular with the community and should be retained.

Cost/Revenue:

Ongoing costs associated with administering the RPPPs are covered by parking permit fees.

Implementer: City

Implementation Details: Continue the current programs

Challenges/Opportunities: None

MEASURE 7: REDUCE VISITOR PARKING TIME LIMIT IN RESIDENTIAL PARKING PERMIT PROGRAM (RPPP) AREAS***Description:***

To prevent soccer patrons from parking in RPPP areas, reduce RPPP visitor parking time limits from two hours to ninety minutes.

Objective:

Prevent Major League Soccer patrons from parking in RPPP areas.

Discussion:

Because soccer matches are typically two hours long, the current visitor time limits may not effectively discourage soccer patrons from parking in the neighborhoods.

Baseball games were more than three hours long, so the two-hour time limit prevented baseball patrons parking in the RPPP areas.

Reducing the time limits may negatively impact neighborhood residents on non-game days.

Cost/Revenue:

There would be an expense associated with modifying the signs

Implementer: City

Implementation Details: To be determined

Challenges/Opportunities:

Obtain feedback from Goose Hollow and NWDA regarding visitor time limits. Modify visitor time limits to 90 minutes if feedback supports this change.

MEASURE 8: CONDUCT ONSTREET PARKING ENFORCEMENT***Description:***

Provide enforcement of on-street time limits before and during games.

Objective:

Discourage event patrons from parking illegally in Residential Parking Permit Program (RPPP) areas and in short-term metered stalls.

Discussion:

Parking enforcement presence before events will provide a visible deterrent against illegal parking without utilizing a large number of parking deputy hours. Deploying deputies to the vicinity of PGE Park when patrons are arriving will encourage them to choose legal parking alternatives.

Enforcement will help protect RPPP areas as well as encourage the appropriate use of metered parking stalls in the vicinity of the Park

Cost/Revenue:

Additional revenue potential through tickets issued.

Implementer: Portland Bureau of Transportation Parking Enforcement Section

Implementation Details: To be determined.

Challenges/Opportunities:

It has been reported that event day parking enforcement has historically been rare.

MEASURE 9: PREPAID EVENT PARKING AT VARIOUS PRIVATE LOTS***Description:***

Offer prepaid parking at various lots at a discount.

Objective:

Encourage those who drive to go directly to prearranged parking locations instead of circulating throughout the neighborhood looking for parking.

Discussion:

Event parking passes sold over the internet could be discounted in order to encourage patrons to buy passes in advance and as a result drive directly to their parking location, avoiding having to circulate looking for parking.

Cost/Revenue:

Revenue could be shared between parking providers and PGE.

Implementer: Initiated by PGE Park.

Implementation Details:

Details will need to be negotiated among the parties.

Challenges/Opportunities:

Web-based sales would need to be set up.

MEASURE 10: SPECIAL GROUP BUSES***Description:***

Encourage large groups to travel to the Park by bus.

Objective:

Minimize automobile parking demand.

Discussion:

Special group buses offer convenience and opportunity for groups to spend even more time together.

Travel by bus may be an especially desirable alternative for groups that come to the Park from longer distances. For example a group from Salem may find it less expensive to travel to a soccer match by bus.

Providing bus transportation may also be an effective means of drawing customers to local restaurants/tavern before and after games.

Cost/Revenue

This measure could pay for itself through bus fares and/or subsidies from the bus' sponsor.

Implementer: Private bus services

Implementation Details:

Bus parking is available on SW Salmon Street in front of Lincoln High School.

Challenges/Opportunities:

Bus transportation may not be as attractive for local groups where traveling by car may cost less than traveling by bus. For example if a family of 4 can travel by car and park for less than the cost of 4 bus seats, then group buses may not be as attractive.. If group buses can be subsidized to make it affordable, perhaps it will draw patrons who would not have come to the game otherwise. Revenue that is lost through transportation subsidies might be redeemed through purchases at the match.

MEASURE 11: WEB-BASED DAY-OF-GAME INFORMATION***Description:***

Create a tab on the PGE Park and Timbers websites providing mode-specific information about traveling to events.

Objective:

Promote alternatives to car travel.

Discussion:

Identifying each mode's terminus in relationship to the Park's entry gates will emphasize the superior location of MAX stations and bike parking compared to vehicle parking.

Emphasizing the location of parking garages will also encourage patrons to go directly to a garage instead of circulating to find onstreet parking.

Identifying the Residential Parking Permit Program (RPPP) neighborhoods will let patrons know ahead of time that they should not even explore parking in the neighborhoods.

Cost/Revenue

Minimal cost

Implementer:

PGE Park and Timbers

Implementation Details:

Locate the website tab in a prominent position where people will find it easily. Include a map identifying RPPP neighborhoods, bike parking, MAX stations, bus stops, parking lots and garages, Park entry gates and ticket windows.

Challenges/Opportunities:

Challenges are minimal.

MEASURE 12: TEMPORARILY CLOSING SW MORRISON STREET***Description:***

Close eastbound SW Morrison Street between SW 18th Avenue and SW 20th Avenue and between W Burnside Street and SW 20th Avenue during soccer matches.

Objective:

Encourage pedestrian circulation and accommodate a variety of potential activities.

Discussion:

Mitigation 14 in the current CTMP states, "The CTMP allows for closing streets adjacent to the Park. For projected attendance over 14,000 streets can be closed without approval of adjacent neighbors and by going through the street closure procedure."

Anticipating that Major League Soccer games will consistently draw at least 14,000 fans per game., Mitigation 14 could be executed at all matches.

Providing westbound traffic flow between SW 18th and SW 20th Avenues retains access to onstreet parking and the Civic's parking garage.

Possible transportation uses of SW Morrison Street could include temporary bike parking and temporary bus loading/unloading.

Cost/Revenue:

Cost would be limited to the cost of appropriate traffic control signing and possibly temporary fencing.

Implementer: PGE Park

Implementation Details:

The City would need to issue a street use permit allowing PGE Park to close the street.

Challenges/Opportunities:

Storing street closure materials will require space. Implementing street closures will require staffing.