FEHR PEERS

TECHNICAL MEMORANDUM #2

Date: August 13, 2019

To: File

From: Tom Gaul, John Gard, Netai Basu, and Mike Samuelson; Fehr & Peers

Subject: ***Project Travel Demand Estimates for Inglewood Basketball and Entertainment Center***

LA2018-3002

This memorandum presents Fehr & Peers' project travel demand estimates for the Inglewood Basketball and Entertainment Center (IBEC). It describes the IBEC's expected travel characteristics under non-event days, during minor day-time events, and during evening NBA basketball games and concerts.

I. Evening Event Arrival and Departure Temporal Patterns

Table 1 shows the arrival and departure temporal patterns of NBA game attendees from a survey administered to Clippers ticket purchasers[1] and the arrival pattern of concert goers as counted at The Forum.[2] As the table shows, NBA game attendees arrive and depart in a more concentrated time period, and therefore a higher percentage of all attendees travel in the peak hour for an NBA game compared to a concert.

II. Weekday and Weekend Evening Event Trip Generation

Trip generation estimates were developed for NBA games and concerts for the weekday pre-event and post-event period and the weekend pre-event period. The estimated event trip generation for NBA games for these three periods is shown in Tables 2A, 2B, and 2C, and the estimated trip generation for concerts is shown in Tables 3A, 3B, and 3C.

The EIR analyzes the effects of a sold-out NBA game for the weekday and weekend pre-event time period, and a sold-out concert for the weekday post-event time period, which are the events that are estimated to produce the greatest number of trips for these three peak hours of analysis. Tables 2A and 2B provide the vehicle trip generation for the pre-event time periods, and Table 3C shows the trip generation for the post-event time period. The project is estimated to generate 5,777 vehicle trips (5,192 inbound and 585 outbound) in the weekday pre-event hour, 5,728 vehicle trips (5,140 inbound and 588 outbound) in the weekend pre-event hour,

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[1] More information on the Clippers fan survey is provided in Attachment A to this memorandum.

[2] Observations made before and after multiple events at The Forum in December 2018 are described below.

and 8,156 vehicle trips (736 inbound and 7,420 outbound) in the weekday post-event hour. The trip generation tables include several inputs, which are described below:

Table 1A – Arrival Times at Concerts and NBA Clippers Games			
Arrival (Minutes before game/concert start)	Weekday Forum Driveway Counts [1]	Weekend Forum Driveway Counts [1]	NBA Game Attendees Survey [2]
150 to 120	4%	5%	3%
120 to 90	7%	10%	7%
90 to 60	15%	18%	20%
60 to 30	**26%**	**27%**	**33%**
30 to 0	**27%**	**23%**	**35%**
0 to -30	20	18%	2%
Peak hour percentage of total arrival	53%	50%	68%
Table 1B – Departure Times at Concerts and NBA Clippers Games			
-30 to 0	7%	4%	5%
0 to 30	**44%**	**32%**	**78%**
30 to 60	**39%**	**52%**	**10%**
60 to 90	10%	12%	4%
90 to 120	-	-	2%
More than 120	-	-	1%
Peak hour percentage of total arrival	83%	84%	88%

Notes:
[1] Driveway vehicle counts were taken before and after four concerts at The Forum, Fleetwood Mac (December 13 and 15, 2018) and Childish Gambino (December 16 and 17, 2018). For each concert, observations were made at driveways used by The Forum concert attendees.
[2] More information on the survey is provided in Attachment A.
Totals may not sum to 100% due to rounding.

- **Venue attendance and staffing:** Attendance assumes a sold-out venue and maximum staffing, as described in the *Anticipated Annual Event Characteristics* provided by the applicant in September 2018.
- **Transit mode share:** Transit mode share was developed using data from the NBA game attendee survey conducted by Fehr & Peers. The survey asked attendees about their mode choice and origin zip code for both weekday and weekend games. This information was used to develop a logic model to calibrate mode choice with travel time. Different transit mode share was developed for both weekday and weekend, and pre-game and post-game, based on transit and driving travel times during those periods. The development of the model is discussed in more detail in Attachment B to

this memorandum. The transit mode share assumes shuttles running between the IBEC and nearby stops on the Metro Green Line and Metro Crenshaw/LAX Line. As shown in the tables, mode share is estimated at 6% for weekday NBA events (5% via rail transit and 1% via bus) and 7% for weekend NBA events (6% via rail transit and 1% via bus). The transit mode share is estimated to be one percentage point less for concerts, where there are fewer repeat attendees due to the one-off nature of concerts, meaning that attendees may be less likely to be familiar with transit operations.

- **Transportation network companies (TNC) mode share:** Attendee TNC mode share is based on data from the Golden 1 Center (Sacramento) Year One Travel Monitoring Report[3] and the NBA game attendee survey. Although the NBA game attendee survey showed only 4% of attendees using TNCs to travel to/from Clippers games, the data from the Golden 1 Center showed 9% of attendees using TNCs. The analysis conservatively estimates that TNC use would continue to grow in the Los Angeles region, and would account for 10% of attendee trips in 2024 when the IBEC is planned to open. This is conservative because each TNC trip actual creates both an inbound and outbound trip. Employee TNC mode share assumes a more modest mode share, as employees would likely have more consistent routines and are considered less likely to use TNCs for commuting.
- **Average vehicle occupancy (AVO):** Attendee AVO was developed for the pre-event scenarios based on results of the NBA game attendee survey. Attendee responses were weighted based on their ticket type (season ticket holder, half-season ticket holder, and individual game ticket holder) to match the percentage of each group for the 2017-2018 NBA season. As shown in the tables, the AVO was 2.27. For the post-event scenario, the attendee AVO of 2.18 was estimated from observations at concerts at The Forum[3]. Employee AVO was estimated at 1.18, based on the 2017 National Household Travel Survey for commute trips.[4]
- **Arrival and Departure Patterns:** Attendee arrival and departure patterns for NBA games are based on the NBA game attendee survey. Attendee arrival and departure patterns for concerts are based on data collected at four concerts at The Forum in December 2018. Staff arrival and departure patterns are based on data from applicant's *Anticipated Annual Event Characteristics* from September 2018.

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[3] Driveway vehicle counts were taken before and after four concerts at The Forum, Fleetwood Mac (December 13 and 15, 2018) and Childish Gambino (December 16 and 17, 2018). For each concert, observations were made at driveways used by The Forum concert attendees, and the number of people in each vehicle entering was observed. Driveway counts over a three-hour pre-event period and a two-hour post-event period were also used to estimate arrival and departure patterns for attendees.

[4] *Summary of Travel Trends*. 2017 National Household Travel Survey. https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf

Table 2A. Weekday Pre-Event NBA Game Vehicle Trip Generation															
		Transit Mode Share		TNC Mode Share and Vehicles				Private Vehicles Mode Share and Vehicles				Pre-Event Hour Arrive	Pre-Event Hour Vehicle Trips [a]		
	Persons	%	Persons	%	Persons	AVO	Vehicles	%	Persons	AVO	Vehicles		In	Out	Total
Attendees	18,000	6%	1,080	10%	1,800	2.27	793	84%	15,120	2.27	6,661	68%	5,069	539	5,608
Employees	1,320	5%	66	2%	26	1.18	22	93%	1,228	1.18	1,041	10%	107	30 [b]	137
Shuttle Bus													16	16	32
Total	19,320		1,146		1,826		815		16,348		7,702		5,192	585	5,777

[a] Does not include trip generation associated with ancillary uses.
[b] Data from the project applicant indicated that 30 staff would be departing during the pre-event hour. The mode split for those staff are estimated to be the same as arriving staff.

Table 2B. Weekend Pre-Event NBA Game Vehicle Trip Generation															
		Transit Mode Share		TNC Mode Share and Vehicles				Private Vehicles Mode Share and Vehicles				Pre-Event Hour Arrive	Pre-Event Hour Vehicle Trips [a]		
	Persons	%	Persons	%	Persons	AVO	Vehicles	%	Persons	AVO	Vehicles		In	Out	Total
Attendees	18,000	7%	1,260	10%	1,800	2.27	793	83%	14,940	2.27	6,581	68%	5,014	539	5,553
Employees	1,320	5%	66	2%	26	1.18	22	93%	1,228	1.18	1,041	10%	107	30 [b]	137
Shuttle Bus													19	19	38
Total	19,320		1,326		1,826		815		16,168		7,622		5,140	588	5,728

[a] Does not include trip generation associated with ancillary uses.
[b] Data from the project applicant indicated that 30 staff would be departing during the pre-event hour. The mode split for those staff are estimated to be the same as arriving staff.

Table 2C. Weekday Post-Event NBA Game Vehicle Trip Generation															
		Transit Mode Share		TNC Mode Share and Vehicles				Private Vehicles Mode Share and Vehicles				Post-Event Hour Departure	Post-Event Hour Vehicle Trips [a]		
	Persons	%	Persons	%	Persons	AVO	Vehicles	%	Persons	AVO	Vehicles		In	Out	Total
Attendees	18,000	6%	1,080	10%	1,800	2.27	793	84%	15,120	2.27	6,661	88%	698	6,560	7,258
Employees	1,320	5%	66	2%	26	1.18	22	93%	1,228	1.18	1,041	77%	17	814	831
Shuttle Bus													20	20	40
Total	19,320		1,146		1,826		815		16,348		7,702		735	7,394	8,129

[a] Does not include trip generation associated with ancillary uses.

Table 3A. Weekday Pre-Event Concert Vehicle Trip Generation															
		Transit Mode Share		TNC Mode Share and Vehicles				Private Vehicles Mode Share and Vehicles				Pre-Event Hour Arrive	Pre-Event Hour Vehicle Trips [a]		
	Persons	%	Persons	%	Persons	AVO	Vehicles	%	Persons	AVO	Vehicles		In	Out	Total
Attendees	18,500	5%	925	10%	1,850	2.18	849	85%	15,725	2.18	7,213	53%	4,273	450	4,723
Employees	1,120	5%	56	2%	22	1.18	19	93%	1,042	1.18	883	10%	91	30 [b]	121
Shuttle Bus													11	11	22
Total	19,620		981		1,872		868		16,767		8,096		4,375	491	4,866

[a] Does not include trip generation associated with ancillary uses.
[b] Data from the project applicant indicated that 30 staff would be departing during the pre-event hour. The mode split for those staff are estimated to be the same as arriving staff.

Table 3B. Weekend Pre-Event Concert Vehicle Trip Generation															
		Transit Mode Share		TNC Mode Share and Vehicles				Private Vehicles Mode Share and Vehicles				Pre-Event Hour Arrive	Pre-Event Hour Vehicle Trips [a]		
	Persons	%	Persons	%	Persons	AVO	Vehicles	%	Persons	AVO	Vehicles		In	Out	Total
Attendees	18,500	6%	1,110	10%	1,850	2.18	849	84%	15,540	2.18	7,128	50%	3,989	425	4,414
Employees	1,120	5%	56	2%	22	1.18	19	93%	1,042	1.18	883	10%	91	30 [b]	121
Shuttle Bus													13	13	26
Total	19,620		1,166		1,872		868		16,582		8,011		4,093	468	4,561

[a] Does not include trip generation associated with ancillary uses.
[b] Data from the project applicant indicated that 30 staff would be departing during the pre-event hour. The mode split for those staff are estimated to be the same as arriving staff.

Table 3C. Weekday Post-Event Concert Vehicle Trip Generation															
		Transit Mode Share		TNC Mode Share and Vehicles				Private Vehicles Mode Share and Vehicles				Post-Event Hour Departure	Post-Event Hour Vehicle Trips [a]		
	Persons	%	Persons	%	Persons	AVO	Vehicles	%	Persons	AVO	Vehicles		In	Out	Total
Attendees	18,500	5%	925	10%	1,850	2.18	849	85%	15,725	2.18	7,213	83%	705	6,691	7,396
Employees	1,120	5%	56	2%	22	1.18	19	93%	1,042	1.18	883	79%	15	713	728
Shuttle Bus													16	16	32
Total	19,620		981		1,872		868		16,767		8,096		736	7,420	8,156

[a] Does not include trip generation associated with ancillary uses.

Shuttle bus volumes were calculated based on the number of attendees riding rail transit to be transported to or from the Metro Green Line and Crenshaw/LAX Lines during the event peak hour (based on 45 passengers per bus), plus two shuttles for employees.

III. Event Parking

Project parking demand for private vehicles is shown in Tables 2 and 3, and varies based on the event from 7,622 to 8,096 vehicles. The IBEC project is proposed to provide a total of 4,125 parking spaces in three parking facilities:

- The south parking structure (650 spaces)
- The east parking structure (365 spaces)
- The west parking structure (3,110 spaces)

All the spaces in the east parking structure and the west parking structure are proposed to be dedicated to attendee parking. In the south parking structure, 100 spaces would be reserved for players and key team employees, and 550 spaces would be for attendees.

A total of 4,025 spaces would be provided for attendee parking on the IBEC project site (4,125 total spaces less 100 spaces reserved for key team employees). As such, as many as 4,071 vehicles (8,096 estimated maximum parking demand less 4,025 spaces on-site) will need to be parked off-site. Except when a major event at the NFL stadium is taking place concurrently, it is anticipated that all remaining parking for IBEC event attendees and employees would occur off-site at the former Hollywood Park site in new parking lots or structures to be constructed for the NFL stadium or in the existing parking garage at the Hollywood Park Casino. At least 9,000 parking spaces are being constructed at Hollywood Park for the NFL Stadium and approximately 575 parking spaces would be available for IBEC use at the Hollywood Park Casino.

Due to the high parking demand and limited parking supply associated with events at IBEC and through discussions with the project applicant, most on-site parking would be pre-paid, and vehicles would arrive consistently to all available parking locations (i.e. the IBEC would not fill all on-site spaces first and then direct drivers to off-site spaces). The analysis will consider all off-site parking to occur at Hollywood Park (except when a major event at the NFL stadium is taking place concurrently) and the Hollywood Park Casino, rather than other off-site locations, for two reasons:

- Hollywood Park and the Hollywood Park Casino are the most convenient locations. Hollywood Park will have a large supply of parking that would otherwise typically be

unused, and the Hollywood Park Casino parking structure typically has available unused spaces in it. Hollywood Park and the Hollywood Park Casino would therefore likely price their parking attractively compared to other off-site parking options in order to generate extra revenue. Hollywood Park and the Hollywood Park Casino will offer the easiest pedestrian connections to the IBEC, and the large supply of parking at these locations will ensure that parking will be available to attendees and employees, as compared to smaller lots which may fill up.

- Assigning vehicles to parking locations in Hollywood Park and at the Hollywood Park Casino, in the center of the study area, will lead to associated trips passing through more study intersections, and will create the most conservative analysis. Assigning trips to other off-site lots which are located closer to the edge of the study area would minimize the effect of the project on the transportation network.

Parking During Concurrent Forum and IBEC Events

Off-site parking for IBEC events during times when there are concurrent events at the IBEC and The Forum would be accommodated at Hollywood Park and the Hollywood Park Casino in the same manner as for IBEC-only events. Parking for The Forum during times when there are concurrent events at the IBEC and The Forum would be accommodated in The Forum parking lots and at Hollywood Park, which is consistent with current and past practices.

Parking During Concurrent NFL Stadium Events

The concurrent IBEC/NFL Football Game Sunday afternoon scenario would not substantively affect the ability of concertgoers to park at Hollywood Park for a Sunday evening concert at the IBEC since the majority of fans for an afternoon football game will have departed before the majority of concertgoers arrive for the evening concert. Off-site parking for the IBEC event under this scenario would occur at Hollywood Park and the Hollywood Park Casino similar to a standalone IBEC event.

The concurrent weekday evening NFL Stadium 25,000-person scenario[5] would, however, result in all parking in the NFL Stadium lots to be full due to the activities in the NFL stadium and therefore not available for IBEC parking. Therefore, during events at the IBEC that occur concurrently with an event at the NFL stadium, it is anticipated that off-site parking would be accommodated at a variety of sites, most within one mile of the project site. It is anticipated, based on information provided by the City's consultant planning for stadium operations, that

[5] Concurrent Event scenarios are described in greater detail in Chapter 3.14 of the Inglewood Basketball and Entertainment Center Draft Environmental Impact Report.

a 25,000-person event in the stadium could be parked within the 9,000 stadium parking spaces to be provided at Hollywood Park.

For events at the stadium requiring more than 9,000 parking spaces, the City of Inglewood is coordinating with local parking suppliers to provide parking for events at the IBEC and the NFL stadium. In January 2019, the City of Inglewood released a Request for Proposals (RFP) for the NFL Stadium's remote parking facilities and shuttle services which includes the location of approximately 70 additional off-site parking facilities that could be available for the IBEC and other sports and entertainment venues, including the number of spaces at each site. In discussions with City staff involved in developing the NFL stadium's transportation management and operations plan (TMOP), the off-site parking locations listed below are currently under consideration for NFL game attendees to supplement the 9,000 spaces being built for the NFL Stadium on the Hollywood Park site, with shuttle service provided to the NFL Stadium. The intent is that NFL fans would pre-purchase parking at a selected off-site location and then be taken by shuttle to the stadium itself:[6]

- Los Angeles Southwest College
- El Camino College
- Playa District
- Wateridge Office Park (located northeast of the intersection of La Cienega Boulevard & Slauson Avenue)
- Pacific Concourse
- 5200 West Century Garage

The TMOP also anticipates that stadium eventgoers could park at the Civic Center Garage, the Senior Center Garage, and the Locust Street Garage in downtown Inglewood.

Based on this data, the analysis identified several potential off-site parking options for the IBEC. As shown in Table 4 and Figure 1, several sites would be within walking distance of the IBEC and two sites would require shuttling . After discussions with staff from the City of Inglewood, this analysis will use the Los Angeles Gateway area and Southwest College for off-site parking for IBEC attendees and employees during concurrent events with the NFL stadium. Attendees and employees would be shuttled from the Los Angeles Gateway area and Southwest College to the IBEC.

The strategy of the NFL TMOP to have stadium fans pre-purchase parking, either at the stadium site or at a remote location supported by shuttles, makes it reasonable to assume that smaller

[6] Source: *City of Inglewood, South Bay SBHP & MSP Candidate Project Fact Sheet*, Trifiletti Consulting, May 9, 2019.

and more dispersed parking facilities located close to the IBEC and NFL stadium would be available for IBEC patrons. The weekday event at the NFL stadium assumes a capacity of 25,000 attendees, which would require less off-site parking compared to a weekend 70,000 attendee event, but may continue to use some of the off-site lots listed. As stated above, assuming IBEC attendees park close to the arena would maximize the impact of the Project and produce the most conservative analysis.

A total of 8,560 off-site parking spaces have been identified for potential use by IBEC attendees during concurrent events at the stadium. This would meet the off-site parking requirement of 4,071 spaces (8,096 maximum parking demand less 4,025 IBEC on-site spaces). Shuttling pick-up/drop-off at the IBEC would occur on the east side of Prairie Avenue, adjacent to the arena. Shuttling pick-up/drop-off at off-site locations (parking or transit stops) would either occur off-street within parking lots or along the curb at marked bus stop locations.

For the analysis of IBEC events happening concurrently with an event at the NFL stadium, vehicles will be assigned to parking lots and structures based on the capacity of parking in each lot or structure and the proximity to the IBEC. Due to the timing of events at the IBEC, and the parking demands at locations near the IBEC which typically peak during the day and are substantially reduced in the evening, there should be minimal overlap in parking demand between these facilities and IBEC events.

Parking for IBEC Daytime Events and Non-Event Days

For the non-event day and daytime event scenarios, all IBEC-related parking would occur at one of the three on-site parking structures.

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Table 4. Potential Off-Site Parking Locations for IBEC During Concurrent Event at NFL Stadium					
Location	**Address**	**Distance from IBEC (miles)**	**Transportation to IBEC**	**Total Number of Spaces** [a]	**Available Number of Spaces** [b]
Inglewood Southside Christian Church	3947 104th St	0.3	Walk	100	67
Dolores Huerta School	4125 105th St	0.5	Walk	100	67
Morningside High School	10500 Yukon Av	0.9	Walk	300	200
Inglewood City Lot	1170 Maple St	0.7	Walk	200	133
Office	4540 Century	0.8	Walk	150	100
Lennox Pre-School	10319 Firmona Av	1.0	Walk	200	133
Subtotal: Spaces within Walking Distance of IBEC				**1,050**	**700**
Los Angeles Gateway Area	Between I-405 and LAX	1.6	Shuttle	9,990	6,660
Southwest College	Southeast corner Imperial Hwy & Western Av	2.9	Shuttle	1,800	1,200
Subtotal: Spaces Requiring Shuttling [c]				**11,790**	**7,860**
Total				**12,840**	**8,560**

[a] RFP-0125, City of Inglewood, January 2019.
[b] Reduced by 1/3 to account for non-attendee vehicles using parking.
[c] All employees would be shuttled from the Los Angeles Gateway area to the IBEC during concurrent events at the NFL stadium. The remaining attendees who are not able to find parking at other lots (either on-site or the other off-site locations) are assumed to park in the Los Angeles Gateway area or Southwest College and be shuttled to the IBEC.

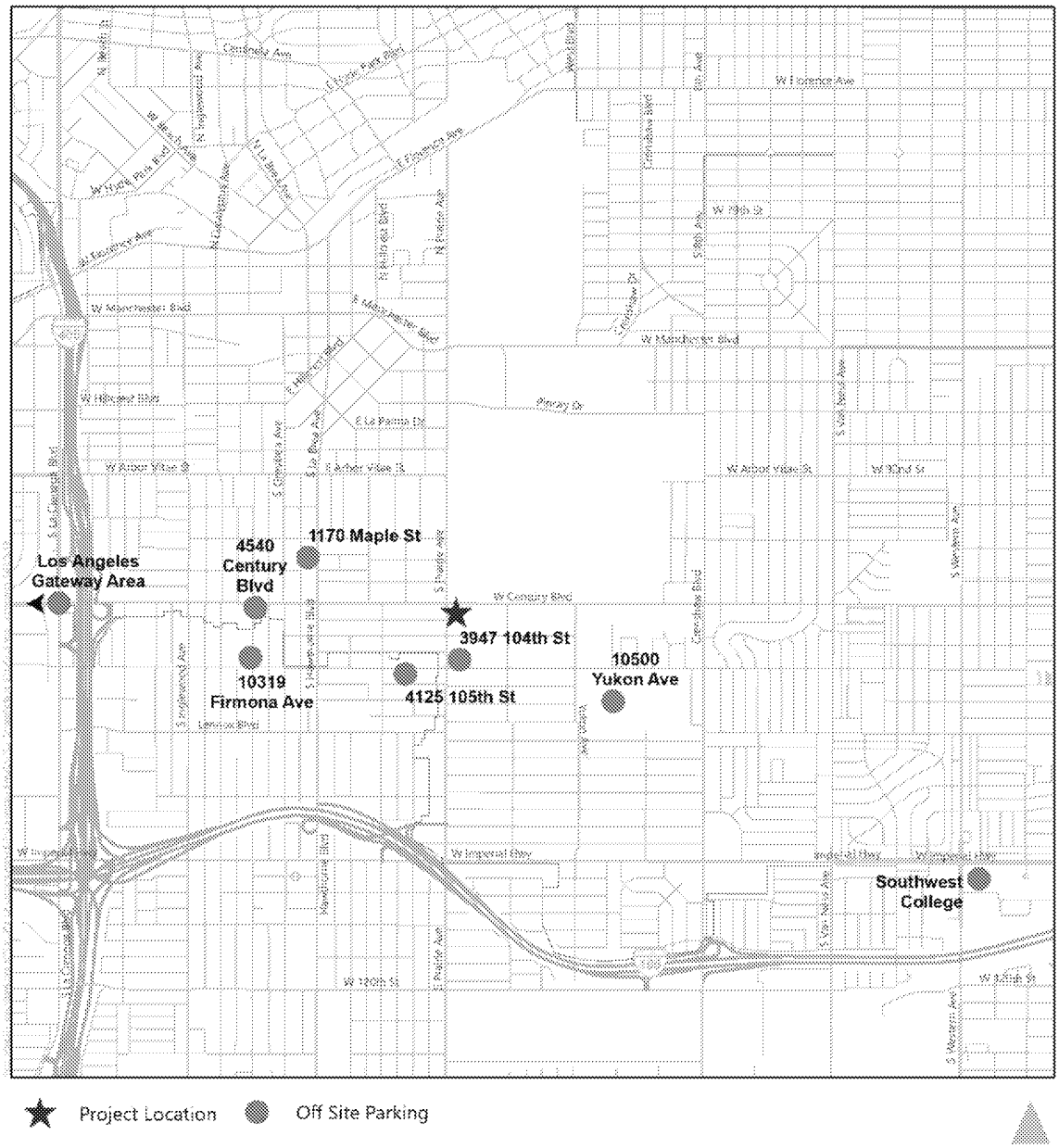

Figure 1. Potential Off-site Parking Locations for IBEC during Concurrent Event at NFL Stadium.

IV. Evening IBEC Events Trip Distribution

Trip distribution for NBA games (pre-event period analysis) was developed based on mobile source data ("big data") records that show origins and destinations of fans attending Clippers games at Staples Center. The data represents approximately 20,000 one-way trips to and from 12 home Clippers games during the 2017-2018 NBA season, and includes only dates when there were no other events happening at the Staples Center, LA Live, or the Convention Center. Trip distribution for concerts (post-event period analysis) was developed based on mobile source data from 44 dates when events were held at The Forum from October 2017 to April 2018 and four dates in December 2018 when events were held, which includes a total of approximately 59,000 one-way trips. Concert trip distribution also considered intersection vehicle counts collected in Fall/Winter 2018 at nine locations near The Forum during dates that had concerts and dates when The Forum was not in use. The difference in these volumes between 'no event' and 'with concert' was used to inform distribution to and from The Forum.

The Clippers organization provided ticket purchase data by zip code for the 2017-2018 NBA season. Fehr & Peers considered using these data to calculate distribution, but ultimately decided that mobile source data is more accurate for several reasons:

- Mobile source data includes only trips that began or ended within the arena site, while ticket purchase data includes tickets that were not used and tickets that were purchased from the team and sold on the secondary market;
- Mobile source data reflects actual trip origins and destinations, while ticket data reflects the zip code of the credit card where the tickets were purchased;
- A substantial portion of ticket purchases (approximately 25%) were from zip codes that are well outside of the Los Angeles region, likely mostly representing corporate purchases which would have to be excluded from the data set.

The general distribution of attendees was compared between concerts at The Forum and NBA Clippers games across the nine sub-area planning regions in Los Angeles County (as defined by Los Angeles County Metropolitan Transportation Authority) and the bordering counties and the results are presented in Table 4. As shown in Table 5, the percent of trips coming from each subarea for concerts at The Forum and NBA games at Staples Center are relatively similar. The largest discrepancies are in Central Los Angeles (where NBA attendees make up a greater share of attendees by seven percentage points) and the Gateway Cities (where concert attendees make up a greater share of attendees by six percentage points).

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Table 4. Distribution based on Mobile Source Data for NBA Games and Concerts		
Subarea	**Staples Center Basketball Game**	**Forum Concert**
Los Angeles County - San Gabriel Valley	12%	9%
Los Angeles County - Central Los Angeles	25%	18%
Los Angeles County - Arroyo Verdugo	2%	2%
Los Angeles County - Gateway Cities	13%	19%
Los Angeles County - Las Virgenes/Malibu	1%	0%
Los Angeles County - San Fernando Valley	9%	11%
Los Angeles County - South Bay	13%	18%
Los Angeles County - North Los Angeles County	2%	2%
Los Angeles County - Westside Cities	7%	5%
San Bernardino County	3%	3%
Riverside County	1%	1%
Orange County	11%	11%
Ventura County	1%	1%

Figure 2 displays the distribution for trips to the venues for attendees at the two event types. The difference between distributions for NBA games and concerts could be due to differences in the type of event attendees. Most NBA game attendees are season ticket holders who attend multiple games a year and would be less likely to travel long distances for games occurring every week. Concert attendees are purchasing tickets for individual shows, and are more willing to travel longer distances to attend a single show for an artist or band. Data from the Golden 1 Center in Sacramento indicate that single game ticket buyers drove an average of 50% longer than season ticket holders, further supporting the difference in distribution between NBA attendees (most of whom are season ticket holders) and concert attendees (who purchase tickets for one individual event and may be willing to drive longer distances).

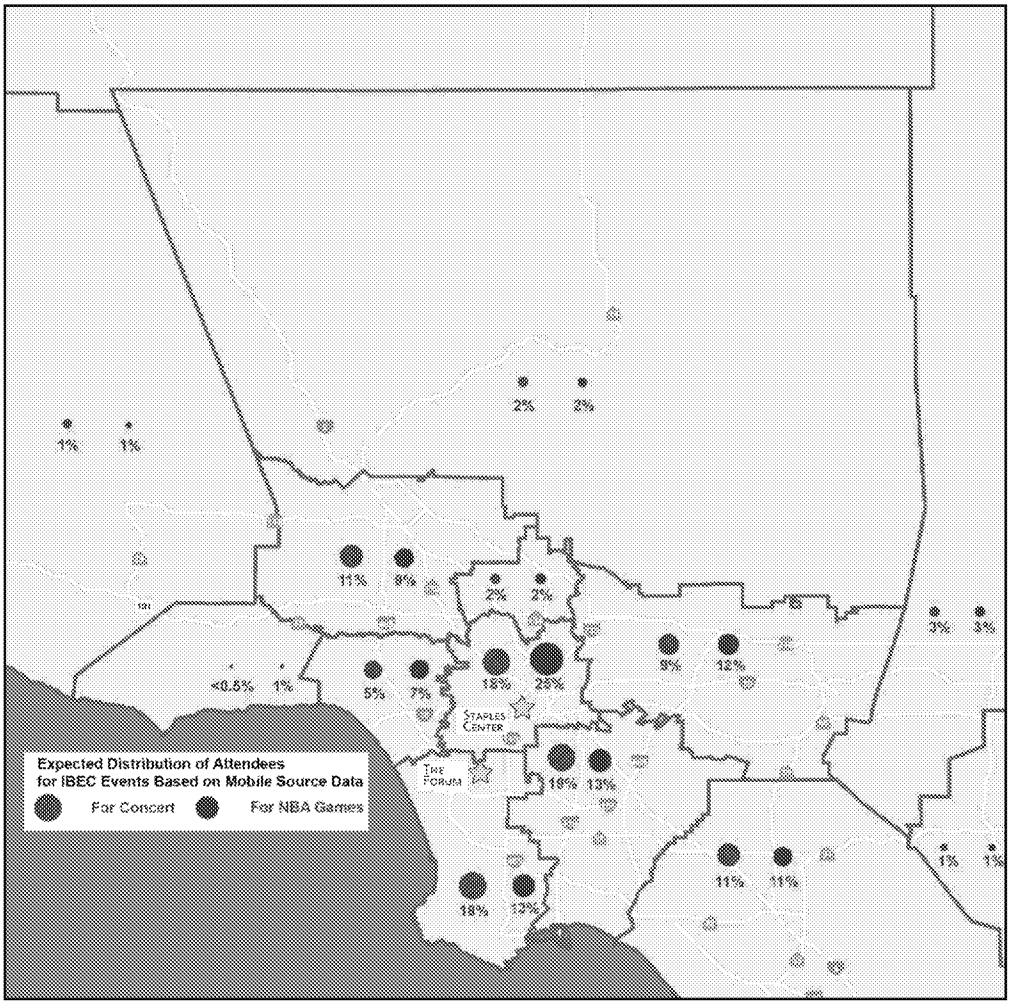

Figure 2. Expected Distribution of Attendees for IBEC events.

V. Ancillary Land Use Trip Generation and Distribution

Trip generation for non-event days considers the proposed ancillary land uses on the site and the estimated trips generated by these land uses are shown in Tables 6A and 6B.

Based on the Project site plan, the following land uses and quantities are assumed to be on the site and operating on a non-event day:

Part of Arena Structure:

- Office: 71,000 square feet (sf)
- Practice and Training Facility: 85,000 sf
- Sports Medical Clinic: 25,000 sf

Ancillary Uses

- Community Space: 15,000 sf
- Full-Service Restaurant/Lounge: 15,000 sf
- Business Hotel: 150 rooms
- Coffee Shop: 5,000 sf
- Quick-Service Restaurant: 4,000 sf
- Team Store: 7,000 sf
- Other Team/Experience/Retail: 17,000 sf

The NOP states that the medical clinic may be open to the public, and based on statements by the applicant, Fehr & Peers is conservatively assuming the full clinic space would be open to the public.

Based on employment estimates provided by the applicant in September 2018, Fehr & Peers assumes there would be a maximum of 329 Clippers employees at the IBEC on non-event days, as shown in Table 7. In addition, the September 2018 employment estimates included the number of employees for ancillary uses at the IBEC, as shown in Table 8.

The trip generation estimates for most of the ancillary uses (office, medical clinic, community space, restaurant, and retail) are based on the square footage of the proposed site plan using trip generation data from the Institute of Transportation Engineers' *Trip Generation, 10th Edition*,[7] as the staffing levels provided by the applicant may change over time. For the practice facility, trip generation is based on the number of staff at these locations, as this land use does not have a comparable land use code in ITE that factors in the unique nature of the IBEC. Fehr & Peers assumes that the medical clinic would specialize in Sports Medicine and would be open on weekdays during normal business hours, similar to the Kaiser-operated sports medicine clinic within the Golden 1 Center in Sacramento.

Mode split data, internalization rates, and pass-by credits are developed using NCHRP 684,[8] Fehr & Peers' developed MainStreet tool (which combines NCHRP 684 and additional survey data), ITE data on pass-by trips, and local knowledge of the transportation system. As the business hotel is on a separate site from the rest of the project, there is no internalization assumed for this use. In all, non-event day net new trip generation is estimated to be approximately 4,706 daily trips, 294 trips in the AM peak hour and 409 trips in the PM peak hour.

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[7] *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.

[8] *National Cooperative Highway Research Program 684, Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*, Transportation Research Board, 2011.

Table 6A. Trip Generation Estimate for IBEC Ancillary Land Uses on Non-Event Day

Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b]								Estimated Trip Generation						
			Daily	AM Peak Hour			PM Peak Hour			Trip Rate	Daily	AM Peak Hour Trips			PM Peak Hour Trips		
			Rate	Rate	% In	% Out	Rate	% In	% Out	Unit	Trips	In	Out	Total	In	Out	Total
Office	710	71 ksf	[c]	[c]	86%	14%	[c]	16%	84%	per ksf	761	80	13	93	13	69	82
Internal capture			*3%*		*9%*	*9%*		*10%*	*10%*		(23)	(7)	(1)	(8)	(1)	(7)	(8)
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(37)	(4)	(1)	(5)	(1)	(3)	(4)
Sub-total											**701**	**69**	**11**	**80**	**11**	**59**	**70**
Practice Facility	[d]	54 employees	[d]	[d]	100%	0%	[d]	0%	100%	per person	108	54	0	54	0	54	54
Sub-total											**108**	**54**	**0**	**54**	**0**	**54**	**54**
Sports Medicine Clinic	630	25 ksf	38.16	3.69	78%	22%	3.28	29%	81%	per ksf	954	72	20	92	24	58	82
Internal capture			*5%*		*14%*	*14%*		*15.0%*	*15.0%*		(48)	(10)	(3)	(13)	(4)	(9)	(13)
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(45)	(3)	(1)	(4)	(1)	(2)	(3)
Sub-total											**861**	**59**	**16**	**75**	**19**	**47**	**66**
Retail [e]	SanDAG	24 ksf	40.00	1.20	60%	40%	3.60	50%	50%	per ksf	960	17	12	29	43	43	86
Internal capture			*5%*		*14%*	*14%*		*15%*	*15%*		(48)	(2)	(2)	(4)	(6)	(6)	(12)
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(46)	(1)	(1)	(2)	(2)	(2)	(4)
Pass-by credit			*10%*		*10%*	*10%*		*10%*	*10%*		(87)	(1)	(1)	(2)	(4)	(4)	(8)
Sub-total											**779**	**13**	**8**	**21**	**31**	**31**	**62**
Full-Service Restaurant/ Lounge [f]	931	15 ksf	83.84	0.73	55%	45%	7.80	67%	33%	per ksf	1,258	6	5	11	78	39	117
Internal capture			*5%*		*14%*	*14%*		*15.0%*	*15.0%*		(63)	(1)	(1)	(2)	(12)	(6)	(18)
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(60)	0	0	0	(3)	(2)	(5)
Pass-by credit			*10%*		*10%*	*10%*		*10%*	*10%*		(114)	(1)	0	(1)	(6)	(3)	(9)
Sub-total											**1,021**	**4**	**4**	**8**	**57**	**28**	**85**
Quick-Service Restaurant	930	4 ksf	315.17	2.07	67%	33%	14.13	55%	45%	per ksf	1,261	5	3	8	31	26	57
Internal capture			*5%*		*14%*	*14%*		*15.0%*	*15.0%*		(63)	(1)	0	(1)	(5)	(4)	(9)
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(60)	0	0	0	(1)	(1)	(2)
Pass-by credit			*50%*		*50%*	*50%*		*50%*	*50%*		(569)	(2)	(2)	(4)	(13)	(11)	(24)
Sub-total											**569**	**2**	**1**	**3**	**12**	**10**	**22**
Coffee Shop [g]	932	5 ksf	112.18	9.94	55%	45%	9.77	62%	38%	per ksf	561	28	22	50	30	19	49
Internal capture			*5%*		*14%*	*14%*		*15.0%*	*15.0%*		(28)	(4)	(3)	(7)	(5)	(3)	(8)
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(27)	(1)	(1)	(2)	(1)	(1)	(2)
Pass-by credit			*20%*		*20%*	*20%*		*20%*	*20%*		(101)	(5)	(4)	(9)	(5)	(3)	(8)
Sub-total											**405**	**18**	**14**	**32**	**19**	**12**	**31**
Community Space	495	15 ksf	28.82	1.76	66%	34%	2.31	47%	53%	per ksf	432	17	9	26	16	19	35
Internal capture			*5%*		*14%*	*14%*		*15.0%*	*15.0%*		(22)	(2)	(1)	(3)	(2)	(3)	(5)
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(21)	(1)	0	(1)	(1)	(1)	(2)
Pass-by credit			*20%*		*20%*	*20%*		*20%*	*20%*		(78)	(3)	(2)	(5)	(3)	(3)	(6)
Sub-total											**311**	**11**	**6**	**17**	**10**	**12**	**22**
Business Hotel	312	150 Rooms	4.02	0.39	59%	41%	0.32	55%	45%	per room	603	35	24	59	26	22	48
Internal capture			*0%*		*0%*	*0%*		*0%*	*0%*		0	0	0	0	0	0	0
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(30)	(2)	(1)	(3)	(1)	(1)	(2)
Sub-total											**573**	**33**	**23**	**56**	**25**	**21**	**46**
Project Total Trips											**5,328**	**263**	**83**	**346**	**184**	**274**	**458**
Total Trips for Existing Land Uses to be Removed (Table 6B)											**(622)**	**(32)**	**(20)**	**(52)**	**(23)**	**(26)**	**(49)**
Net New Trips											**4,706**	**231**	**63**	**294**	**161**	**248**	**409**

Notes:

a. Size in thousand square feet (ksf) unless otherwise noted.

b. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 10th Edition* , 2017, unless otherwise noted.

c. ITE Office trip generation equations used rather than linear trip generation rate:

Daily: Ln(T) = 0.97 * Ln(X) + 2.50, where T = trips, X = area in ksf

AM Peak Hour: (T) = 0.94 * (X) + 26.49, where T = trips, X = area in ksf

PM Peak Hour: T = 0.95 * Ln(X) + 0.36, where T = trips, X = area in ksf

d. Trip generation for Practice Facility is based on the projected basketball operations staff provided by the Clippers in September 2018.

e. San Diego Association of Governments (SanDAG) rate for Specialty Retail used for retail components.

f. ITE does not provide a directional distribution for Full-Service Restaurant/Lounge (ITE 931) during the AM peak hour. Directional distribution for High-Turnover Sit-Down Restaurant (ITE 932) used.

g. Coffee shop intended to be similar to a High-Turnover Sit-Down Restaurant (ITE 932).

Table 6B. Trip Generation Estimate for Existing Land Uses to be Removed

Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b]								Estimated Trip Generation						
			Daily	AM Peak Hour			PM Peak Hour			Trip Rate	Daily	AM Peak Hour Trips			PM Peak Hour Trips		
			Rate	Rate	% In	% Out	Rate	% In	% Out	Unit	Trips	In	Out	Total	In	Out	Total
Fast Food with Drive-Through	934	1.118 ksf	470.95	40.19	51%	49%	32.67	52%	48%	per ksf	527	23	22	45	19	18	37
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(26)	(1)	(1)	(2)	(1)	(1)	(2)
Pass-by credit			*50%*		*50%*	*50%*		*50%*	*50%*		(251)	(11)	(11)	(22)	(9)	(9)	(18)
Sub-total											**250**	**11**	**10**	**21**	**9**	**8**	**17**
Manufacturing	140	28.809 ksf	[c]	0.62	77%	23%	0.67	31%	69%	per person	264	14	4	18	6	13	19
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(13)	(1)	0	(1)	0	(1)	(1)
Sub-total											**251**	**13**	**4**	**17**	**6**	**12**	**18**
Motel	320	38 rooms	3.35	0.38	54%	46%	0.38	55%	45%	per room	127	8	6	14	8	6	14
Transit/Bike/Walk			*5%*		*5%*	*5%*		*5%*	*5%*		(6)	0	0	0	0	0	0
Sub-total											**121**	**8**	**6**	**14**	**8**	**6**	**14**
Total Trips for Existing Land Uses to be Removed											**622**	**32**	**20**	**52**	**23**	**26**	**49**

Notes:

a. Size in thousand square feet (ksf) unless otherwise noted.

b. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 10th Edition* , 2017.

c. ITE Manufacturing trip generation equations used rather than linear trip generation rate:

Daily: T = 3.16 * X + 160.04, where T = trips, X = area in ksf

Table 7. Los Angeles Clippers Employees at IBEC (Non-Event Conditions)		
Employment	Description	Total Employees
Basketball Operations	Players, coaches, training staff, etc.	54
Business Operations	Executive management, legal, finance, human resources, media and broadcasting staff, public and community relations, hospitality services, etc.	100
Business Operations Support	Customer service, sales and marketing support, team operations support	100
Arena Operations and Management	Management, arena maintenance and operations, security, housekeeping	75
	Total	329

Table 8. Employees at Ancillary Uses within the IBEC		
Employment	Description	Total Employees
Restaurant	Full staff and management for full-service restaurant(s)	112
Shopping Center / Retail	Flagship team store, quick-service restaurant and coffee shop, and general retail/service employees	146
Sports Medicine Clinic	Care providers (doctors, nurses, specialists) and business operations staff	35
Arena & Plaza Experience	Staff for LA Clippers and IBEC arena experiences	70
Community Space	Staff, management, and instructors for flexible community space, meeting rooms/classrooms, and related areas	26
Business Hotel	Staff and management for limited service hotel	50
	Total	439

Based on data from the Clippers fan survey, 37% of fans currently visit a bar or restaurant near the Staples Center before games and 9% visit to a bar or restaurant near the arena after games. Based on these data, and the amount of attendees for events at the IBEC, this analysis will use an internalization rate of 80% for travel to or from the retail, restaurant, and community space ancillary land uses during the pre-event and post-event hours for evening events at the IBEC. As the attendance at daytime events is smaller – 2,000 people at morning events and 7,500 people at afternoon events – the internalization rate for the retail, restaurant, and community space uses would drop to 20% for morning events beginning in the weekday AM peak hour and 50% for afternoon events ending in the weekday PM peak hour. (Since the events would not operate during the entire day but the ancillary uses would, the corresponding daily internalization rates for the retail, restaurant, and community space uses would be 30% on days with large evening events, 10% on days with small morning events, and 20% on days with afternoon events.) During evening events, the office space, practice facility, and the medical clinic are all assumed to be closed and would not generate trips, but these spaces would be open with normal internalization rates for daytime events. As the business hotel is located offsite, it would not have an internalization rate at any time.

Trip distribution for ancillary land uses was developed using data from the Southern California Association of Governments (SCAG) travel demand model. Model outputs were adjusted based on observed intersection operational characteristics to develop the project assignment.

VI. Daytime Event Trip Generation and Distribution

The daytime event scenario analyzes two different types of events that may occur at the IBEC on weekdays:

- Corporate/Community Event with 2,000 people attending, beginning in the weekday AM peak hour
- Other Sporting Event or Gathering with 7,500 people attending, ending in the weekday PM peak hour

Tables 9A and 9B show the estimated vehicle trip generation for the two daytime events. The trip generation inputs are described below:

- **Venue attendance and staffing:** attendance assumes a sold-out venue and maximum staffing, as described in the project *Anticipated Annual Event Characteristics* provided by the applicant in September 2018.

- **Transit mode share:** assumes that no shuttle buses would run between the IBEC and the nearby Metro light rail stations and 1% of attendees would arrive using public buses.
- **Transportation network companies mode share:** TNC mode share is assumed to be the same as evening events (10%).
- **Average vehicle occupancy:** AVO for the morning event is estimated to be 1.20 persons per vehicle. This value is consistent with a morning civic event analysis for the Golden 1 Center EIR, where data was used from a survey conducted in 2012 at the Spokane Convention Center in Spokane, WA. AVO for the afternoon event is estimated to be 2.18, the same as evening concerts.
- **Pre-event hour arrival percentage and post-event hour departure percentage:** Pre-event arrival peak is estimated at 80%, as some participants would arrive either prior to the peak hour or would arrive late. Post-event departure is assumed to be the same as the evening events. Employee arrival and departure is taken from *Anticipated Annual Event Characteristics* provided by the project applicant.

The analysis will add traffic associated with these daytime events to traffic from the ancillary land uses to consider the full effect on the street system when daytime events are taking place. As stated above, the internalization rate for retail, restaurant, and community space will be 20% during morning events and 50% for afternoon events to factor in that attendees at daytime events would likely patronize the businesses on the IBEC site.

Vehicle distribution for these events is based on mobile source data from events at The Forum. All parking for daytime events is assumed to take place within the parking facilities provided on the IBEC site.

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Table 9A. Weekday AM Peak Hour Vehicle Trip Generation – Daytime Corporate/Community Event														
		Transit Mode Share		TNC Mode Share and Vehicle				Private Vehicles Mode Share and Vehicle				AM Peak Hour Arrive	Pre-Event Hour Vehicle Trips		
		%	Persons	%	Persons	AVO	Vehicle	%	Persons	AVO	Vehicle		In	Out	Total
Attendees	2,000	1%	20	10%	200	2.18	92	89%	1,780	1.20	1,483	80%	1,260	74	1,334
Employees	25	5%	1	2%	1	1.18	1	93%	23	1.18	19	60%	12	1	13
Total	2,025		21		201		93		1,803		1,502		1,272	75	1,347

Table 9B. Weekday PM Peak Hour Vehicle Trip Generation – Other Sporting Event/Community Gathering														
		Transit Mode Share		TNC Mode Share and Vehicle				Private Vehicles Mode Share and Vehicle				PM Peak Hour Depart	Post-Event Hour Vehicle Trips		
		%	Persons	%	Persons	AVO	Vehicle	%	Persons	AVO	Vehicle		In	Out	Total
Attendees	7,500	1%	75	10%	750	2.18	344	89%	6,675	2.18	3,062	88%	303	2,997	3,300
Employees	480	5%	24	2%	10	1.18	8	93%	446	1.18	378	80%	6	310	316
Total	7,980		99		760		352		7,121		3,440		309	3,307	3,616

VII. Closure of 101st Street and 102nd Street

In addition to generating new trips to and from the IBEC development itself, the IBEC project would result in localized changes to the existing traffic patterns due to the permanent closure of segments of 101st Street and 102nd Street. The segment of 101st Street between Prairie Avenue and Freeman Avenue and the segment of 102nd Street between Prairie Avenue and Doty Avenue would be affected. The closure of the 101st Street segment would accommodate the west parking structure, and the closure of the 102nd Street segment would accommodate the arena. A new privately-owned but publicly-accessible alley would be created to the west of the west parking structure, connecting Century Boulevard to 102nd Street.

In order to reflect these closures, data on existing volumes using these streets were collected and then used to develop estimates of shifts onto parallel streets in the project scenarios. Vehicles traveling on 102nd Street east of Prairie Avenue were shifted to Century Boulevard and 104th Street, while vehicles on 101st Street west of Prairie Avenue were shifted to Century Boulevard and 102nd Street (which is unaffected west of Prairie Avenue). Daily traffic counts on 101st and 102nd Streets were taken on April 14 and April 27, 2018. Weekday volumes were 1,137 on 101st Street and 5,561 on 102nd Street in the affected segments, and 966 and 4,099 on weekends, respectively. These vehicle volume shifts are made for all project scenarios.

ATTACHMENT A – CLIPPERS FAN SURVEY

In order to better understand the travel behavior of existing Clippers fans, Fehr & Peers coordinated with the City of Inglewood, ESA, and Clippers staff to develop and administer a brief survey that collected information about travel patterns of existing Clippers fans at Staples Center, including mode choice, arrival and departure times, and differences in travel on weekdays and weekends. The survey was sent via email by Clippers staff to a list of 20,905 email addresses of ticket purchasers, and 714 completed surveys were received (3.4% response rate). The email from Clippers staff was sent on May 22, 2018, and the survey was closed on June 24, 2018.

Survey results are summarized in the tables below. Response percentages in the tables may not equal 100% due to rounding.

Question 1: What type of ticket package do you currently have?	
Individual game tickets	47%
Full season ticket plan	32%
Half Season- Red Plan	11%
Half Season- Blue Plan	8%
No Response	1%

Question 2: What is your primary mode of travel when attending a game on weekdays?	
Lyft/Uber	3%
Driving	77%
Train	11%
Walking	3%
Bus	2%
Biking	0%
Other	2%
No Response	1%

Examination of the answers to Question 2 by type of buyer indicated that single game purchasers and half-season purchasers have a higher likelihood to use public transit on weekdays than season ticket holders. Information from the Clippers indicates that 71% of ticket purchasers in the 2017-18 season were full season, 11% half-season, and 18% single game which, when compared to the answers to Question 1, indicates that the survey oversampled single game purchasers and undersampled full season purchasers. Reweighting the survey results for Question 2 to reflect the distribution of ticket buyers yields an overall transit mode split on weekdays of 9% via train and 2% via bus.

Question 3: What is your primary mode of travel when attending a game on weekends?	
Lyft/Uber	4%
Driving	77%
Train	12%
Walking	2%
Bus	2%
Biking	0%
Other	2%
No Response	1%

Similar to Question 2, examination of the answers to Question 3 by type of buyer indicated that single game purchasers and half-season purchasers have a higher likelihood to use public transit on weekends than season ticket holders. Similarly reweighting the survey results for Question 3 to reflect the distribution of ticket buyers yields an overall transit mode split on weekends of 10% via train and 2% via bus.

Question 4: If you drive to Staples Center for a Clippers game, how many other people are typically in the car with you?	
0	9%
1	56%
2	18%
3	9%
4 or more	5%
No Response	3%

The responses to Question 4 yield an overall average vehicle occupancy (AVO) of 2.43 across all respondents. Disaggregated by type of buyer, the AVOs were 2.16 for full season ticket buyers, 2.25 for half season ticket buyers, and 2.69 for single game buyers. Reweighting the survey results to reflect the distribution of ticket buyers yields an overall AVO of 2.27.

Question 5: How many Clippers games did you attend this season?	
0	1%
1-5	33%
6-10	19%
11-20	16%
21-30	14%
More than 30	16%
No Response	1%

Question 6: Which of the following do you typically do before tip-off?	
Go to a bar/restaurant within walking distance of the arena	37%
Go straight to Staples Center	56%
Go to a bar/restaurant outside of walking distance of the arena	5%
Other	2%
No Response	1%

Question 7: How early do you typically arrive downtown for Clippers Games?	
I typically arrive after tip-off	2%
I arrive right at tip-off	9%
Less than 30 minutes before tip-off	25%
30 minutes to 1 hour before tip-off	33%
1 to 1.5 hours before tip-off	20%
1.5 to 2 hours before tip-off	7%
More than 2 hours before tip-off	2%
No Response	1%

Question 8: Which of the following do you typically do after the game?	
I go directly home or to a bar/restaurant outside of walking distance	86%
Go to a bar/restaurant within walking distance of the arena	9%
Other	3%
No Response	1%

Question 9: After the game, how long do you typically stay downtown?	
I typically leave before the game ends	5%
I leave right when the game ends	55%
Less than 30 minutes after the game ends	22%
30 minutes to 1 hour after the game ends	10%
1 to 1.5 hours after the game ends	4%
1.5 to 2 hours after the game ends	2%
More than 2 hours after the game ends	1%
No Response	1%

ATTACHMENT B – RAIL TRANSIT MODE SHARE MODEL DEVELOPMENT

In order to estimate rail transit mode share for large events at the IBEC, Fehr & Peers developed a transit mode share logic model using data from the Clippers fan survey and the cost of travel. The model was calibrated and validated to Staples Center, and the IBEC location was used to estimate the share of transit users at the new venue. To estimate travel cost, the model considers the estimated drive time and the cost of parking and compares it with the estimated transit travel time and the cost of transit fares.

The following inputs were used for the model:

- **Trip origin/destination:** For the existing calibration and validation, the model assumed all transit trips would end at the Pico Station on the Metro Expo/Blue Lines and patrons would walk to Staples Center (estimated to take five minutes). For the future, the model calculated travel time to the two stations nearest to the IBEC, the Hawthorne/Lennox Station on the Metro Green Line and the Downtown Inglewood Station on the Metro Crenshaw Line, and assumed individuals would use the station that was fastest from their point of origin. Zip code centroids were used at origins, with the relevant arena (Staples Center for the existing version of the model, IBEC for the future version of the model) as the destination. Travel time was calculated by zip code.
- **Drive times** were estimated using ESRI's Ready-to-Use Services Network Analyst tool to calculate the fastest route. Weekday drive times considered a route beginning at 6:00 PM on Friday April 6, 2018, and weekend drive times considered a route beginning at 5:00 PM on Saturday April 7, 2018. As ESRI's tool does not account for the additional congestion caused by special events, the model assumed an additional 10 minutes of drive time to account for event related congestion.
- **Transit travel times** were estimated using train frequency and travel times from existing Metro Rail schedules. For the Crenshaw Line and lines that will use the Regional Connector (current Expo, Gold, and Blue lines), which are currently under construction and anticipated to be open by 2030, Metro planning and environmental documents were used to identify the planned service frequency and travel times. Wait times and transfer times at stations were generated using the scheduling information and were estimated as half of the vehicle headway on the line (i.e. if a line runs every 10 minutes, the wait time would be five minutes). A transfer penalty of 10 minutes was also applied within the model.
- **Transit users first/last mile** trips were estimated for each zip code. For zip codes with a transit station within their boundary, trips to the station were assumed to take 10 minutes. For zip codes without a station within their boundary, trips to the station were assumed to take 20 minutes. The model assumed a shuttle bus system would be

present to transport people between the IBEC and Metro stations, and that an additional 15 minutes would be required to travel from either station to the IBEC.

- **Parking cost** was estimated to be $20 per vehicle based on a review of existing parking costs at Staples Center, which is $8.70 per person when using the AVO of 2.3 from the trip generation.
- **Metro fare** was estimated to be $1.75 per person, based on the current individual trip fare in 2018.
- **Value of travel time** was taken from a U.S. Department of Transportation memorandum on the valuation of travel time, which states that the value of time for personal travel varies between $8.40 and $14.30 per hour for surface modes. The analysis assumes the highest value of time, $14.30 per hour or $0.24 per minute, as people who have already purchased a ticket are likely to want to ensure they arrive at the game on time to maximize their prior investment. Travel time in minutes was multiplied by $0.24 to estimate the value of patrons' travel time and added to either parking or transit fare to estimate total cost of travel.

The model estimated the percent choosing to drive and take transit based on drive and transit travel costs and survey mode choice results for each zip code. Mode share estimates were then compared to the fan distribution, as determined by mobile source data acquired during the 2017-2018 season. The model was calibrated to the existing rail transit mode shares for Clippers fans at Staples Center from the Clippers fan survey[1] (Attachment A) for both weekdays and weekends, and pre-event and post event. The existing rail transit mode share was slightly higher on weekends (10%) compared to weekdays (9%), which is reflected in the results of the model. The existing mode share was developed by weighting the survey responses by ticket type (full season ticket holder, half-season ticket holder, and single game purchaser) based on 2017-2018 season ticket purchases, in order to avoid skewing survey results. This weighting led to slightly lower existing rail transit mode shares as compared to the unweighted survey results. Estimated rail transit mode share for evening events at the IBEC is shown in Table B1.

Table B1. IBEC Estimated Rail Transit Mode Share for Evening Events

Period	Day	Estimated	
		To Staples	To IBEC
Pre-Event	Weekday	9%	5%
	Weekend	10%	6%
Post-Event	Weekday	9%	5%
	Weekend	10%	6%

[1] More information on the fan survey is provided in Attachment A.

Separate from this model, which considers only rail transit travel, the transit mode share analysis assumed that public bus mode share would be approximately half of the existing public bus mode share at Staples Center, resulting in 1% of attendees using the public bus system to travel to and from games on both weekdays and weekends.