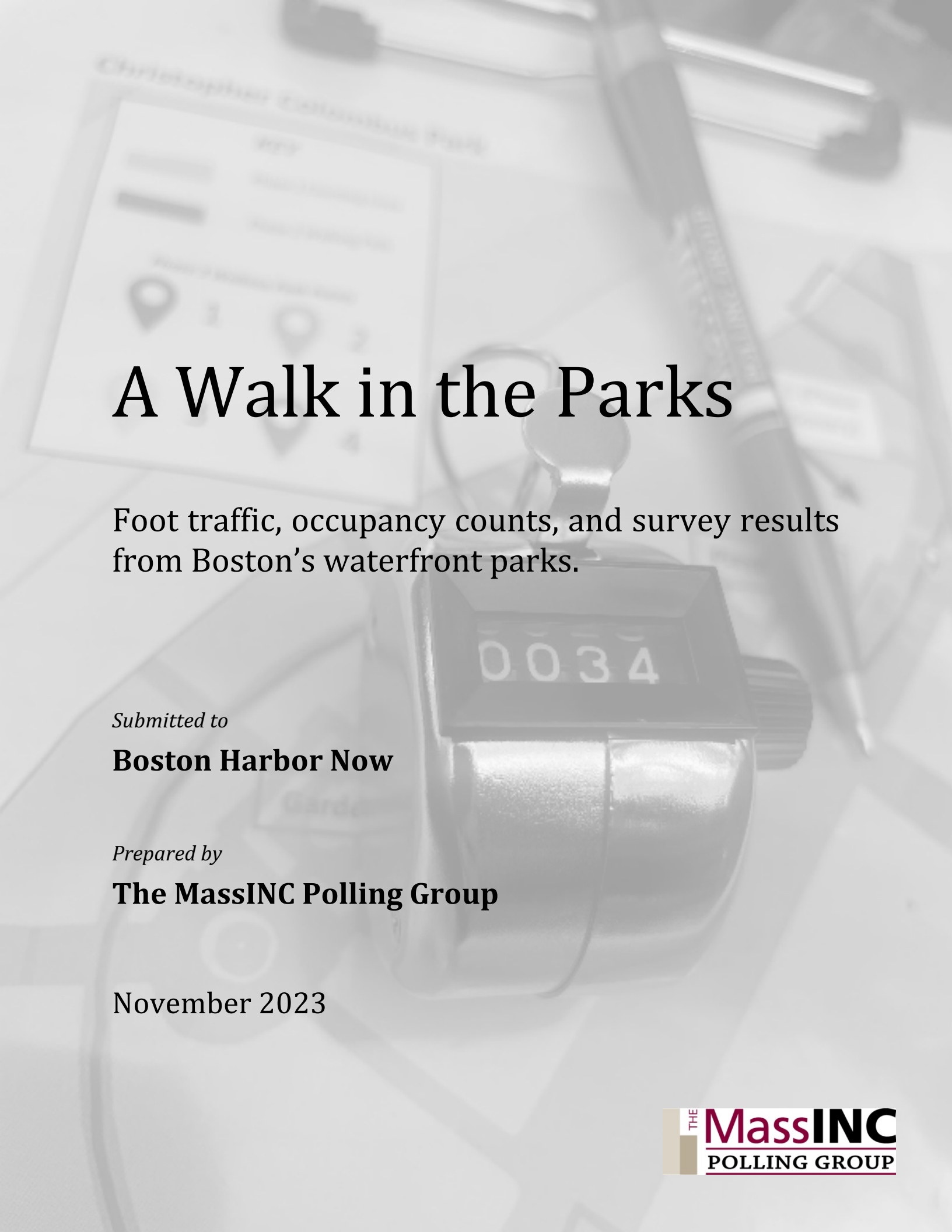


A Walk in the Parks

Foot traffic, occupancy counts, and survey results from Boston's waterfront parks.

Submitted to

Boston Harbor Now

Prepared by

The MassINC Polling Group

November 2023

THE MassINC POLLING GROUP

Contents

Project overview

The data in this report reflects foot traffic and occupancy counts for parks along the Boston waterfront. The purpose of the project is to compare and contrast eyewitness data collected by on-the-ground data collectors with occupancy and traffic data based on cell phone location databases. The five parks included in the study are Christopher Columbus Park, Piers Park, Martin Richard Park, Pope John Paul II Park, and Castle Island.

Specifically, the goals were to measure how many people are in the parks at various times, measure how many people are passing through the parks, and to survey park visitors on their demographics and experiences. Accomplishing these goals involved in-person data collection divided between three distinct activities.

1. Foot traffic counts. For the first 10-minute period each hour, staff counted adults entering each park from two specific locations. Foot traffic data is based on these counts extrapolated to the full hour.

2. Occupancy counts. For the second 10-minute period each hour, staff walked predetermined routes through each park, counting adult occupants. Hourly occupancy data is based on these counts.

3. Survey research. For the period from 20 to 50 minutes after the hour, staff approached a predetermined combination of either walkers or occupants of each park and asked them to take a brief survey.

The approaches used first two elements were based on Jan Gehl's methodologies in measuring city life, laid out in his work How to Study Public Life, and survey component.

The project was conducted by The MassINC Polling Group and sponsored by Boston Harbor Now.

Survey Results

Survey background

While counting traffic and occupancy can provide a wealth of data on traffic patterns and other factors of interest, some facts can only be gathered by asking park-goers directly. Examples include why people come to the park, what they are doing there, how they got there, and demographic data. To gather this data, a short, 2-3 minute questionnaire was administered by the data collectors among a subset of park visitors. This section contains results of the survey. The survey questionnaire was designed as a collaborative effort between Boston Harbor Now and The MassINC Polling Group. Additional results can be found in the crosstabs included as part of the full report package.

Distance and travel

The five parks covered by this survey could be grouped in several ways based on differences in how they are used. On possibility would be centrally located parks vs local parks. Local parks are visited much more by people who live nearby who come to the park on purpose. These include PJPII, Castle Island and Piers Park. Centrally located parks (Columbus and Martin's) are crossed by commuters, large numbers of tourists, and fewer people from the immediate area. These differences showed up in the survey data when analyzing respondents' origin ZIP code.

Respondent ZIPs were geocoded using latitude and longitude. Distance from the park was then calculated using the Haversine formula, while calculates the distance between two points on a sphere using latitude and longitude measurements. The results of these calculations are shown in the charts below. Similar to the maps, they show most visitors to Piers and PJPII coming from very close by, Castle Island drawing visitors from more places around Boston, and Columbus and Martin's with a very broad range of visitors. For both, please note many respondents did not provide ZIP codes. Based on the interviews MPG staff conducted, this was almost entirely international visitors without a home ZIP. As such, the "No ZIP / Refused" option in the table and maps below represents a large share of international visitors.

Distance traveled to each park

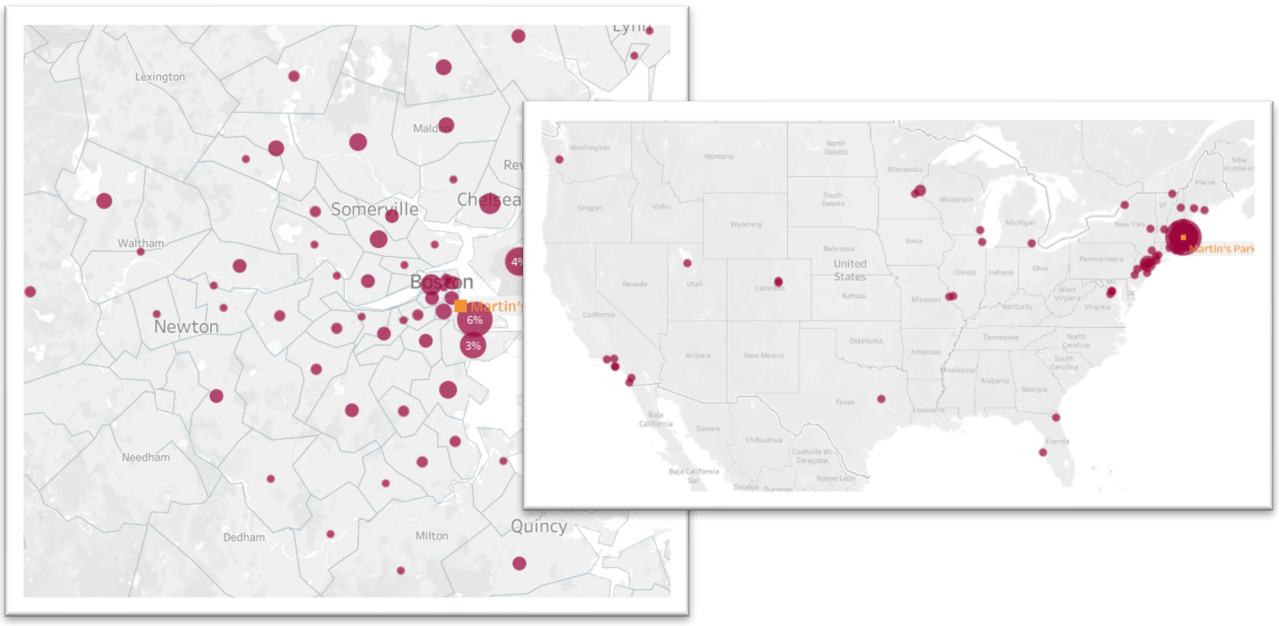
% of respondents traveling _____ miles to each park

	Martin's Park	PJPII Park	Columbus Park	Piers Park	Castle Island
< 2 Miles	16%	44%	18%	53%	15%
2 to 10	30%	47%	34%	28%	49%
10 to 25	17%	6%	7%	4%	21%
25 to 50	7%	1%	6%	3%	7%
50+	15%	1%	24%	9%	5%
No ZIP / Refused	14%	1%	11%	3%	3%

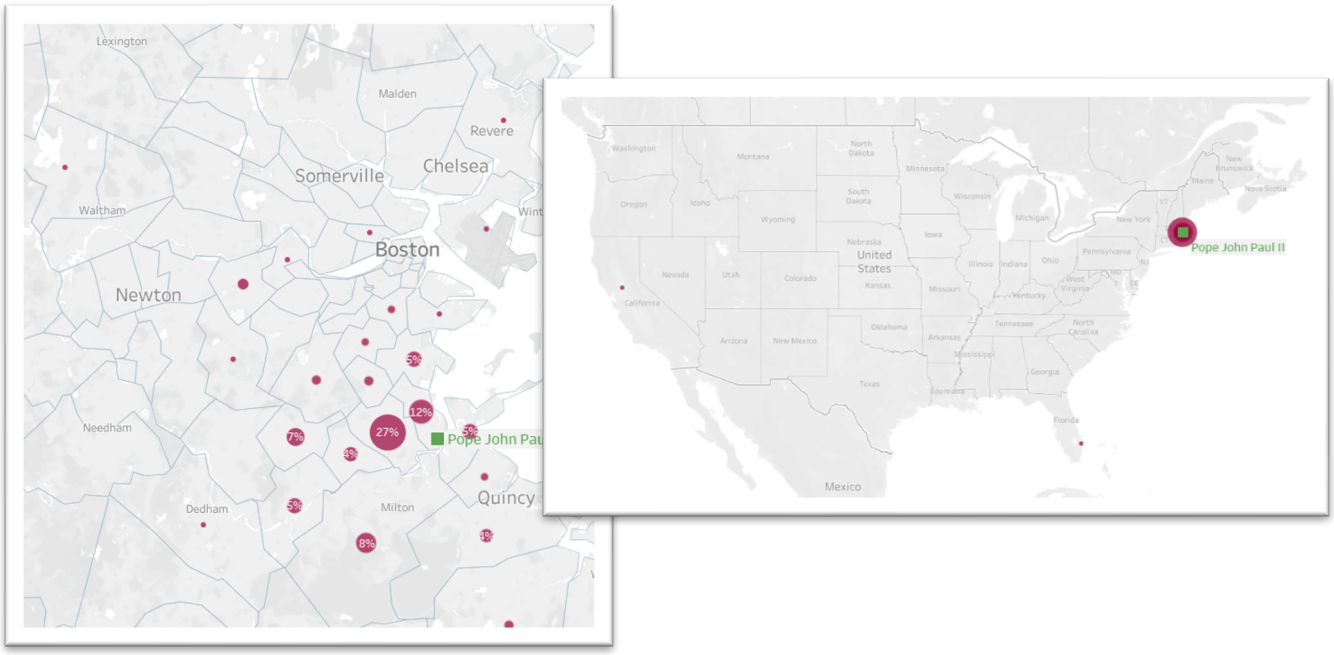
Respondent mapping

Respondents' home ZIP codes were placed on a map (see maps below). The maps show the differences in points of origin very clearly. For Piers and PJPII, the vast majority are from close by. On the other end of the spectrum, Columbus and Martin's drew a much broader array of home ZIPs due to their locations and layouts. Columbus serves as a pass through route for people walking to and from the North End and the Greenway as well as people coming and going from ferries and other Harbor activities. Martin's Park is situated near the Children's museum and also contains a cut through foot path used by crowds of pedestrians and commuters. Both also drew large numbers of international visitors. Castle Island is a destination park rather than a cut through, but given the many amenities, draws visitors from a broader cross section of Boston.

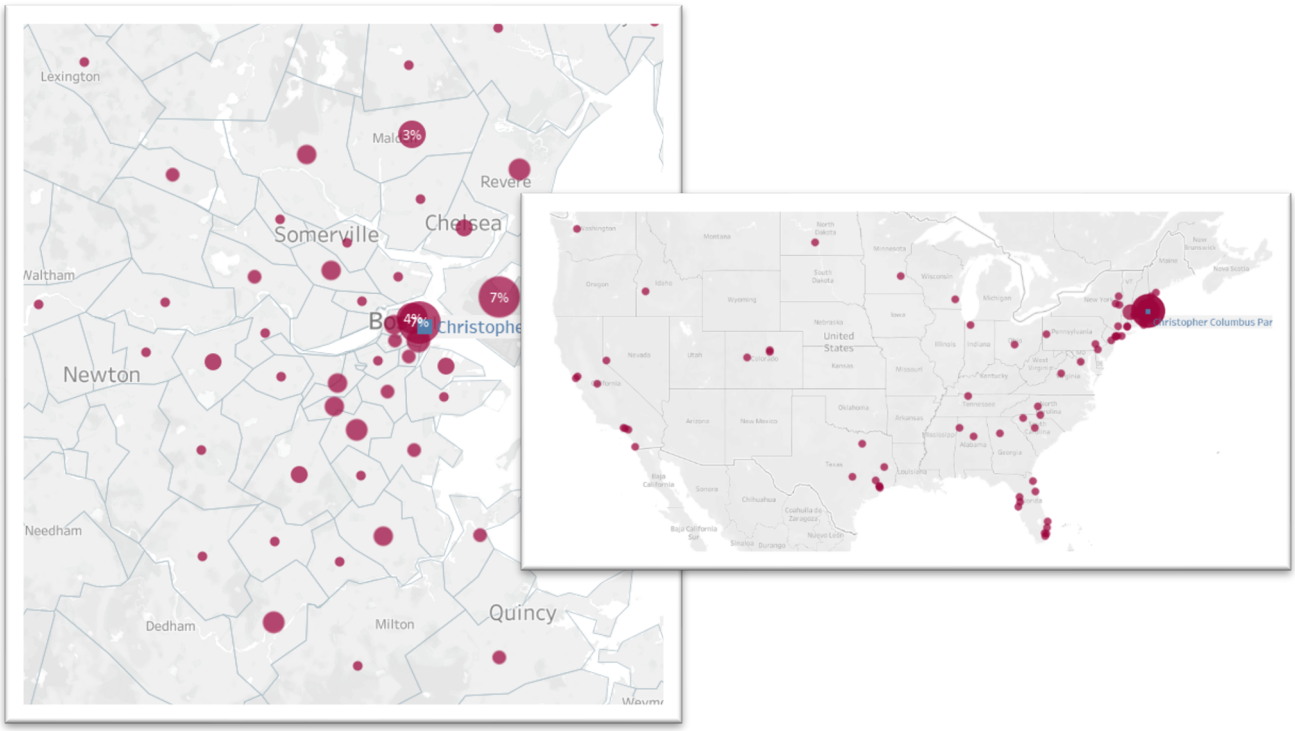
Martin's Park (15% no ZIP / not shown)



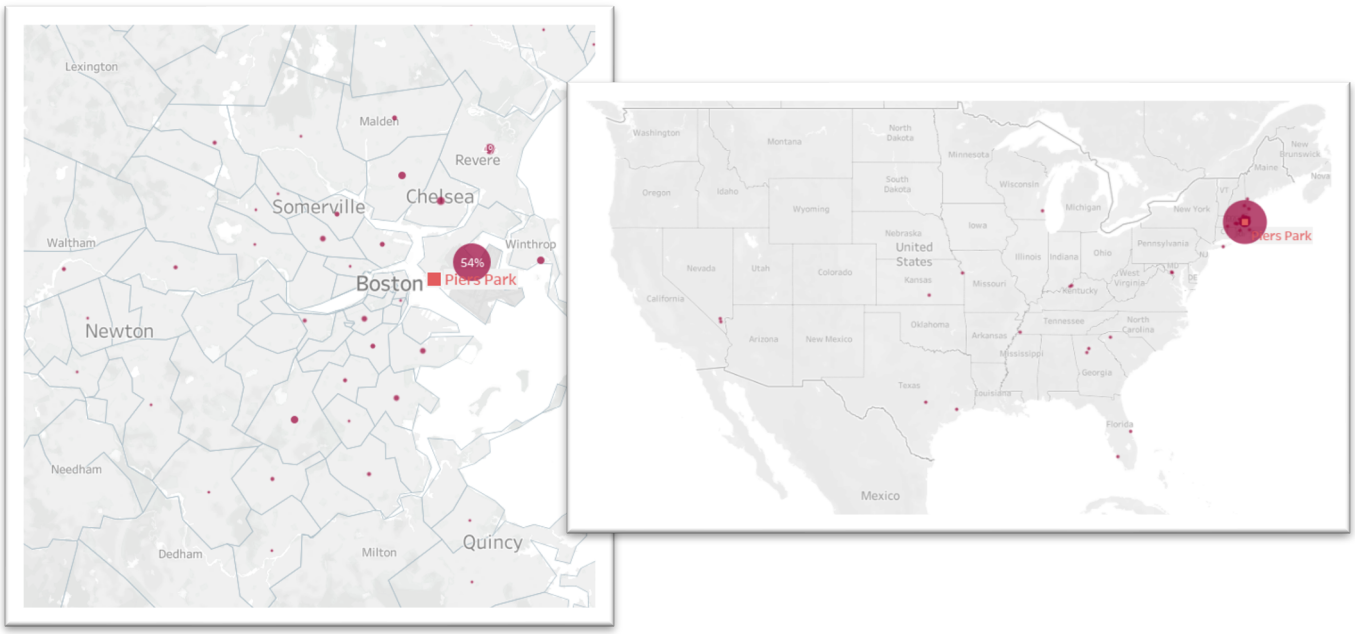
Pope John Paul II Park (1% no ZIP / not shown)



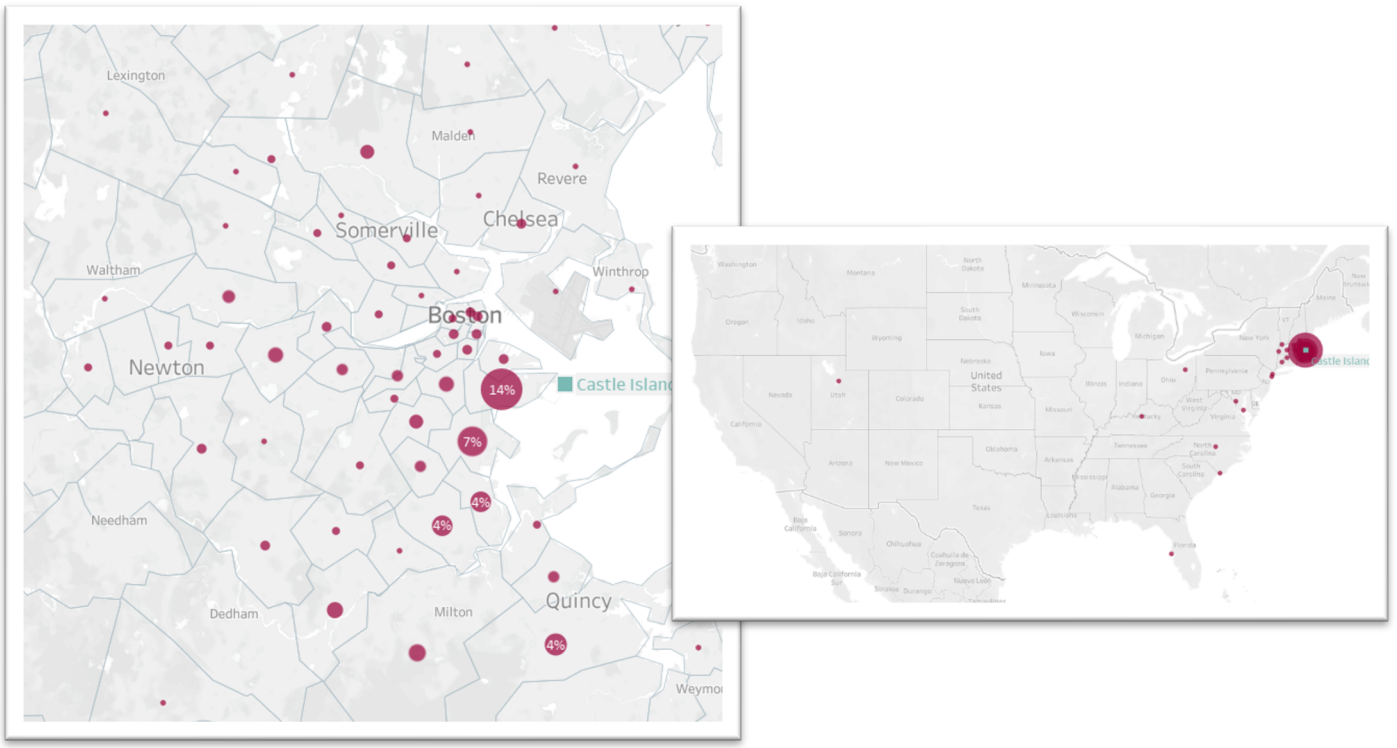
Christopher Colombus Park (24% no ZIP / not shown)



Pier's Park (3% no ZIP / not shown)



Castle Island (5% no ZIP / not shown)



Mode usage

Park location and usage also had a major impact on the modes of travel visitors used to get to the park. Castle island is primarily a driving destination with people coming to the park intentionally and usually in cars. As the charts show, visitors mostly drove to Castle Island and PJPII, while the other three included a mix of driving, walking, and transit. It is likely biking is undercounted across parks. Several field interviewers noted the practical difficulties of trying to interview people on their bikes.

Modes of travel to each park

% of respondents traveling to the park via different modes of transportation

	Martin's Park	PJPII Park	Columbus Park	Piers Park	Castle Island
Walked	50%	18%	59%	53%	9%
Drove alone	17%	50%	9%	9%	28%
Drove or rode with others	17%	24%	8%	23%	56%
Took the MBTA subway	12%	1%	22%	7%	2%
Took a taxi, Uber or Lyft	4%	1%	2%	2%	2%
Took the commuter rail	3%	1%	3%	<1%	%
Took a public bus	3%	1%	2%	1%	1%
Took a ferry	2%	0%	4%	4%	0%
Rode my own bike	1%	6%	1%	3%	1%
Took a corporate or private shuttle	0%	0%	1%	<1%	1%
Rode a BlueBike or other bikeshare	0%	0%	<1%	1%	2%
Other	1%	1%	2%	2%	1%
Prefer not to say	<1%	0%	<1%	<1%	0%

Particularly for the destination parks, the stop at the park was often one of a long series of stops rather than trip directly to and from the park. Particularly for tourists, trips would often involve several stops are other sites, perhaps a restaurant, a ferry, and part of the Freedom trail. As such, respondents often listed several modes, and parsing the time to get to the park was not really possible. This difference shows up clearly when exploring where people said they were coming from. For Martin's Park and Columbus, about half said they were coming from "somewhere else," while large majorities of visitors to other parks said they came from home.

Origin location for trip to the park

% of respondents who said they came to the park from _____

	Martin's Park	PJPII Park	Columbus Park	Piers Park	Castle Island
Home	29%	67%	32%	68%	83%
Work	20%	14%	17%	13%	7%
Somewhere else	48%	10%	51%	18%	10%
Prefer not to say	2%	10%	1%	1%	0%

Who visitors came with

The use and location of each park dictated the types of groups that visit each. For example, only about a quarter (23%) of respondents at Martin's Park (which is mainly a playground) said they were there without children. At PJPII, which is mainly walking, running, and biking trails, two thirds of adults were there with no other adults.

Party composition for trip to the park

% of respondents who said they came to the park with _____

	Martin's Park	PJPII Park	Columbus Park	Piers Park	Castle Island
No other adults	39%	65%	43%	43%	32%
1-3 adults	59%	30%	53%	45%	59%
4+ adults	2%	5%	4%	11%	8%
Don't Know / Refused	0%	0%	0%	<1%	0%
No children	23%	70%	79%	67%	67%
1-3 adults	70%	27%	20%	28%	27%
4+ adults	8%	3%	1%	5%	6%
Don't Know / Refused	0%	0%	0%	0%	0%

How visitors ended up at the park

This difference in location also showed up in reason in how people ended up at the park. For PJPII, Piers, and Castle Island, visitors were much more likely to say they came intentionally. For , there were many more who said they just happened to find the park, and that they were just passing through.

Circumstance around visiting each park

% of respondents who offered each response about their trip to the park

	PJPII Park	Piers Park	Castle Island	Columbus Park	Martin's Park
Spending time	88%	74%	92%	54%	63%
Just passing through	12%	26%	8%	45%	37%
Prefer not to say	0%	<1%	0%	<1%	0%
Came intentionally	95%	92%	97%	62%	72%
Happened to find it	5%	6%	3%	36%	27%
Another reason	1%	2%	0%	<1%	1%
Prefer not to say	0%	0%	0%	1%	<1%
To be with friends or family outside	22%	45%	52%	24%	78%
To enjoy the outdoors	46%	59%	72%	59%	56%
To get some exercise	64%	29%	55%	15%	25%
To relax and unwind	41%	57%	62%	65%	24%
Another reason	9%	24%	17%	20%	16%
Prefer not to say	0%	<1%	0%	1%	<1%

Key differences are highlighted

The survey also found very different usage patterns for each park. For example, Martin's Park, which is concentrated around a playground and is near the Children's Museum, was much more likely to draw families with children. Castle Island visitors were more likely to say they were there to enjoy the outdoors and relax.

Visit frequency

The frequency with which respondents come to each park is driven largely by its location and uses. Both Martin's and Columbus had a large share of tourist who were visiting the park for the first time, and who are unlikely to return. Columbus also had a share of local residents who use the park for a walking route or for picnics and other outdoor activities. PJPII and Piers each had a large number of frequent visitors. Castle Island is a bit more out of the way, but remains a beloved destination for locals from around the area. This translates to periodic visitation for most respondents rather than daily or weekly visits.

Visit frequency for each park

% of respondents who said they visit each park with each frequency

	Martin's Park	PJPII Park	Columbus Park	Piers Park	Castle Island

Almost every day	7%	19%	10%	20%	12%
At least once a week	9%	23%	14%	26%	15%
A few times a month	15%	24%	12%	18%	23%
Once a month	11%	8%	8%	7%	16%
Less than once a month	57%	24%	53%	28%	33%
Prefer not to say	1%	1%	3%	1%	0%

Demographics

Piers Park and Pope John were more frequented by their surrounding neighborhoods, East Boston, and Dorchester respectively. Because they are located in diverse neighborhoods, the parks also had the most diverse visitor base. Martin's Park, despite being close to the city center, recorded the largest share of white visitors at 67%.

Demographics of park visitors

% of visitors in each demographic group

	Martin's Park	PJPII Park	Columbus Park	Piers Park	Castle Island
White	67%	53%	61%	59%	64%
Black	5%	33%	7%	6%	14%
Hispanic	15%	8%	15%	26%	8%
Asian	9%	4%	10%	3%	9%
Other / More than one	4%	2%	6%	6%	4%
Don't Know / Refused	1%	0%	1%	1%	1%
High school or less	10%	9%	11%	18%	16%
Some college, no degree	16%	20%	16%	17%	24%
College degree	44%	43%	50%	39%	37%
Advanced degree	29%	27%	22%	26%	22%
Don't Know / Refused	1%	1%	1%	1%	0%
Total % with a BA+	73%	70%	71%	64%	59%

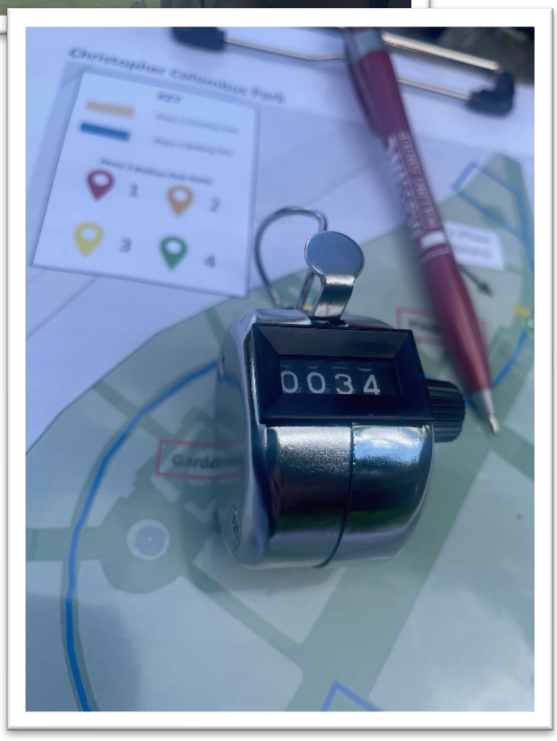
Foot Traffic and Occupancy Results

Foot traffic methods

Foot traffic figures were obtained by direct observation. Two staff were located at different spots within each park. They conducted counts of adults passing by for the first ten minutes of each hour. Staff used handheld clickers to keep track of the counts, which were then entered into an online form. These counts were then multiplied by six to arrive at the final hourly estimates. A full description of the counting methodology and maps of counting locations are contained in Appendix A of this report.

The parks chosen for this project showed considerable variation in their overall traffic levels as well as the patterns of traffic each experienced. For some, foot traffic peaked during mealtimes or rush hour. For others, it was more or less steady throughout the day.

Occupancy count methods



Occupancy figures were obtained by direct observation. Two staff conducted counts in each park once per hour. In smaller parks, each staff member counted the entire park, and the resulting counts were averaged to obtain the final figures. For the larger parks (Castle Island, Pope John Paul II park), each staff member was responsible for counts covering half the park. Staff used handheld clickers to keep track of the counts, which were then entered into an online form. A full description of the counting methodology and maps of parks and counting routes are contained in Appendix A of this report.

The parks chosen for this project showed considerable variation in occupancy levels as well as the patterns of occupancy each experienced.

Comparative Park Usage

Each of the parks had different patterns of use as a result of its unique features, amenities, accessibility, and location.

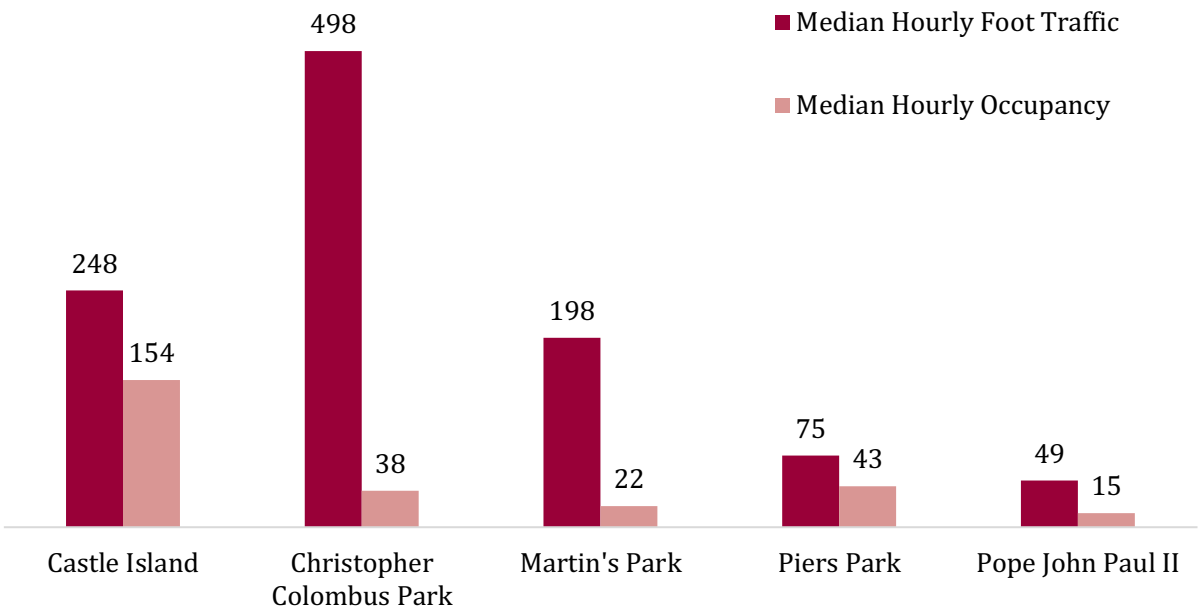
The foot traffic versus occupancy of different parks indicated two broad usage patterns.

1. Downtown park: High foot traffic relative to low occupancy suggests a downtown park, with relatively more people there because of its location rather than its amenities. Christopher Columbus and Martin's Park were examples, and featured large numbers of people simply walking through the park, perhaps pausing briefly, and then continuing on their way. There were exceptions, of course. Christopher Columbus featured several large gatherings during the field period.

2. Destination park: Parks with roughly even foot traffic and occupancy were likely destination parks as opposed to commuter parks. Castle Island, PJPII, and Piers are not located on main commuting routes. Castle Island is a major destination park additionally because it features a Fortress on its North Trail that attracted tourists with vast greenery, a beach, and a playground on its South Trail that was host to children's birthday parties, religious gatherings, and other celebrations on weekends. PJPII fells loosely into this category, but is also distinct in that it is more difficult to access and a very low traffic park.

Comparison of foot traffic and occupancy counts by park

Median counts by park – foot traffic and occupancy

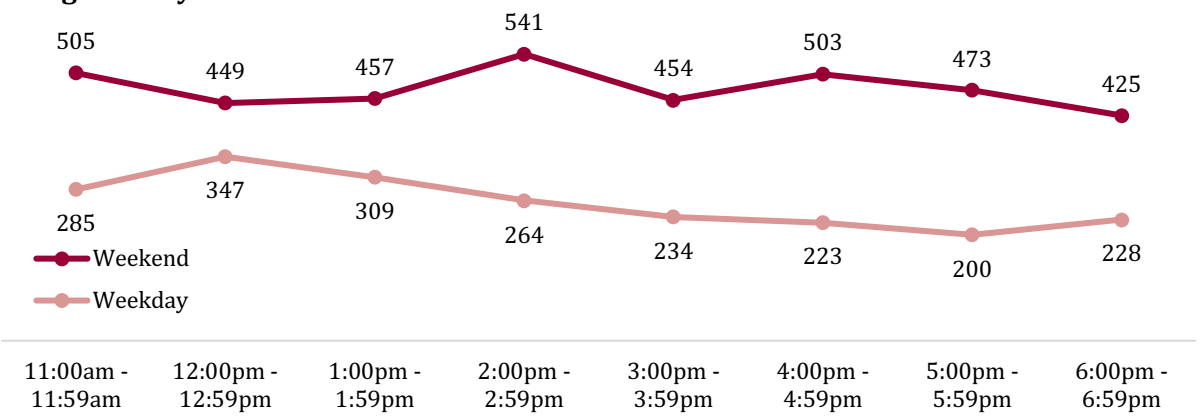


Castle Island

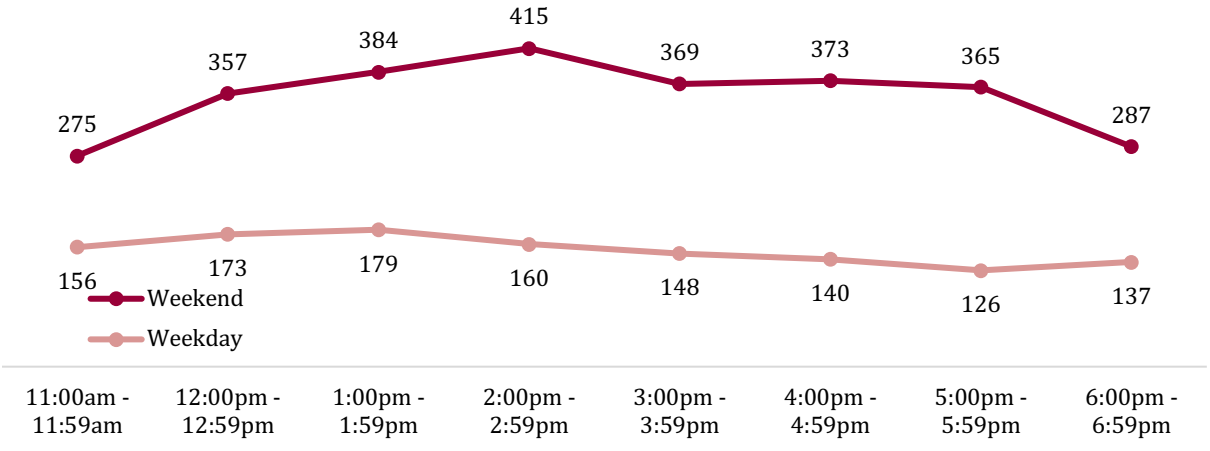
Castle Island had the highest average hourly occupancy reflecting its many amenities and the amount of time visitors stayed once in the park. Park amenities include a playground, beaches, fortress, many benches, walking and running paths, a fishing area, a war memorial, picnic tables, and the iconic Sullivan's for visitors' fast food and soft serve cravings. The park is not on key commuting routes or near other walking destinations, meaning people would be extremely unlikely to pass through on their way to somewhere else. Weekday foot traffic peaked around noon. Weekend foot traffic and occupancy were somewhat higher than weekday figures.

Key figures – Castle Island	
Average weekday hourly foot traffic	261
Average weekend hourly foot traffic	476
Average weekday occupancy	152
Average weekend occupancy	353

Average Hourly Foot Traffic - Castle Island



Average Hourly Occupancy - Castle Island

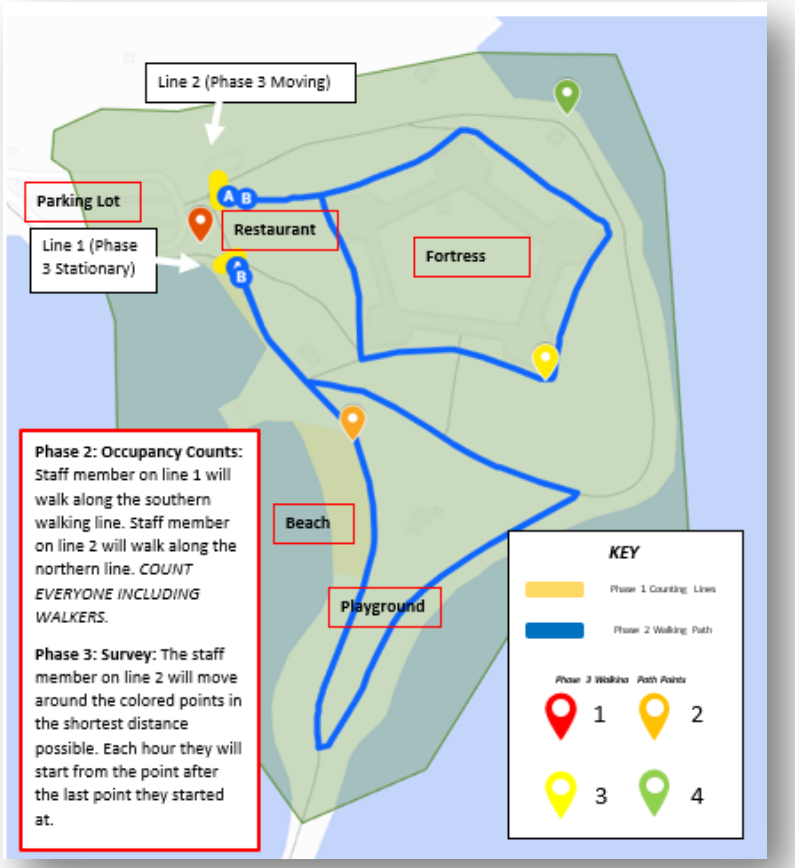


This park is part of Pleasure Bay, which encircles an area of the harbor in South Boston. It is at the end of a road which does not lead anywhere else. Because of the park's location, it is a destination rather than a place people pass through. There are relatively few people from out of town, though some tourists do visit the park.

Phase 1 – Foot traffic: Staff were located at 2 points near the entrance. The first staff member counted anyone entering on the north paths. The second counted anyone walking down the southern paths. The second also counted people walking into the park from a trail that cuts through the grass; this trail was in between the north and south counting lines.

Phase 2 – Occupancy: At Castle Island, everyone in the park, regardless of whether they were walking on a path or sitting in on the grass, was counted as an occupant. Due to its location and size, nearly every visitor came to the park to use it, as opposed to passing through. One staff member counted the northern part of the park around the fortress while the other counted the southern portion, including the beaches, playground, and picnic area. The staff generated two distinct counts.

Phase 3 – Surveys: One staff member collected surveys while standing in place. The other walked around the park, beginning at one of four points in the park each hour, and collected surveys among people staying in the park. By rotating starting



points for the moving data collected, each part of the park was sampled, some of which would be used in different ways.

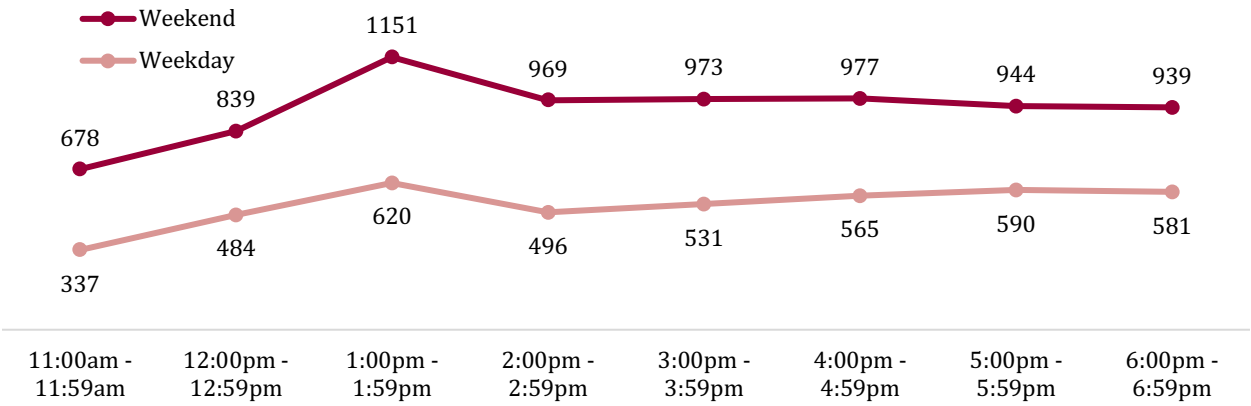
- A large portion of visitors come by vehicle (84%) as the park is buttressed by a moderately sized parking lot and car-centric roadway with metered parking. The closest neighborhood is about 0.7 miles away. There is a beachy boardwalk parallel to the road, but there is limited shade along the path.
- The park is sizeable with multiple areas for varying recreational activities. Large picnics are common in the many well-shaded grass areas. There are multiple areas with beach or waterfront access where visitors swim, sunbathe, fish, or just watch boats and planes in and over the harbor. There's also a playground for children and families.
- The boardwalk section, called the Head Island Causeway, encircles the entirety of Pleasure Bay totaling about 2 miles of trail. Biking, running, and walking is common for this reason.
- Sullivan's is both a part of the larger destination and a destination in itself. A restaurant serving typical New England fare, the restaurant is typically busy throughout the day, at its peaks having long lines. It sits at the entrance of the park, immediately adjoining the parking lot.
- According to the Mass Historical Society, Fort Independence is the "oldest fortified military site in British North America." The "Castle" (or fort) of "Castle Island" is an attraction drawing guided tours to the park on weekends.

Christopher Columbus

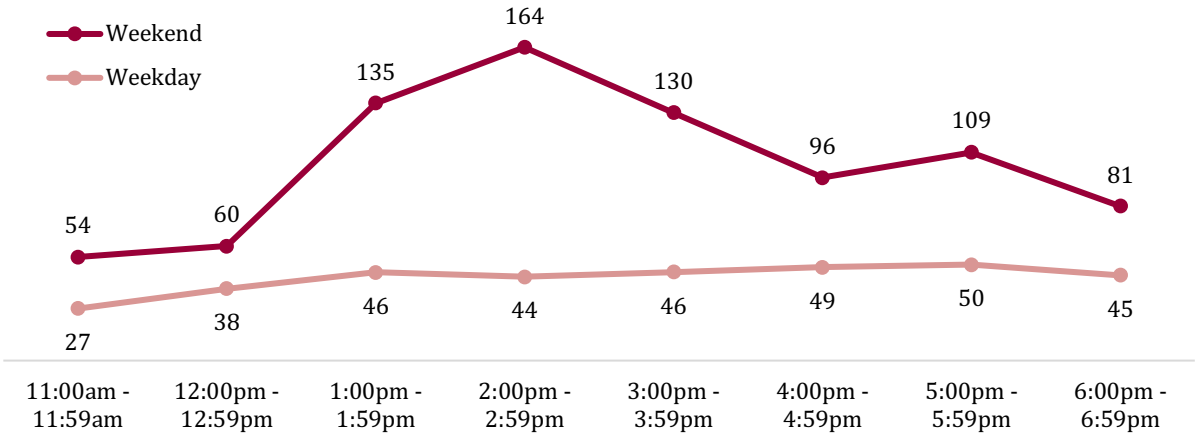
This is very clearly a downtown park. It has the highest average foot traffic of all the waterfront parks included in the study. Foot traffic patterns on weekdays vs weekends are almost identical with weekend levels just being higher overall, peaking around 1pm. A steady stream of tourists, commuters, and locals walking through key foot traffic consistently high throughout the fielding period. Relatively fewer people remained in the park for very long. Some would stop for photos or to view the gardens, and others stopped for picnics. But for the most park, the park is not a place people stayed very long.

Key figures	
Average weekday hourly foot traffic	526
Average weekend hourly foot traffic	934
Average weekday occupancy	43
Average weekend occupancy	104

Average Hourly Foot Traffic - Christopher Columbus



Average Hourly Occupancy - Christopher Columbus



This park is situated across the Greenway from Faneuil Hall and Quincy Market, on the edge of the North End, and just next to the departure point for several ferries, island tours, and other boat activities. It is also near a number of other attractions, restaurants, hotels, and more. Because of the park's location, the park's occupants are divided into two main groups, people from the neighborhood, and people passing through. Other than close neighbors, there are relatively few Boston residents from beyond the neighborhood passing through the park.

Phase 1 – Foot traffic: Staff were located at the two main entrances on the east and west ends of the path through the park. One staff member counted people entering through entrances on the east end, and the other staff member counted people entering through entrances on the west end.

Phase 2 – Occupancy: Data collectors circulated independently in opposing directions, counting occupants throughout the entire park. Since many people cut through the park without stopping, people walking on the paths in the park or on the boardwalk section on the perimeter were not counted as occupants. Data collectors observed whether someone appeared to be walking through the park or walking somewhere to start using the park. Both staff counted the same population so total occupancy counts will be an average of these two independent counts.

Phase 3 – Surveys: One staff member collected surveys while standing in place. The other walked around the park, beginning at a rotating point in the park, and collected surveys among people staying in the park. By rotating starting points for the moving data collected, the surveys were able to capture different use cases at each part of the park.

- It is very heavily photographed, with tourists stopping to snap photos, and others visiting the park specifically for photographs. Several wedding parties took photos in the park. Other individuals and groups who brought along professional photographers.
- One day during the data collection period, an Indian Independence Day celebration took place in the park which marked the end of the parade route.
- The park located amid many other high traffic areas, including Downtown, the Greenway, the North End, an adjoining hotel, and a ferry departure point. Many people move through the park on their way to somewhere else.
- Despite being relatively compact, the park still has a sizeable amount of grass space. This grass space was used for a multitude of activities: picnicking, small exercise classes, just relaxing, playing with dogs, etc.

On the periphery of the park were local street vendors and musicians, including Boston-related clothing sellers, fruit stands, and flower vendors.

There were frequently groups having picnics. During fielding, several, large groups of young people gathered (potentially college students).

There was a gathering for a park bench dedication for a woman who passed away in the park.

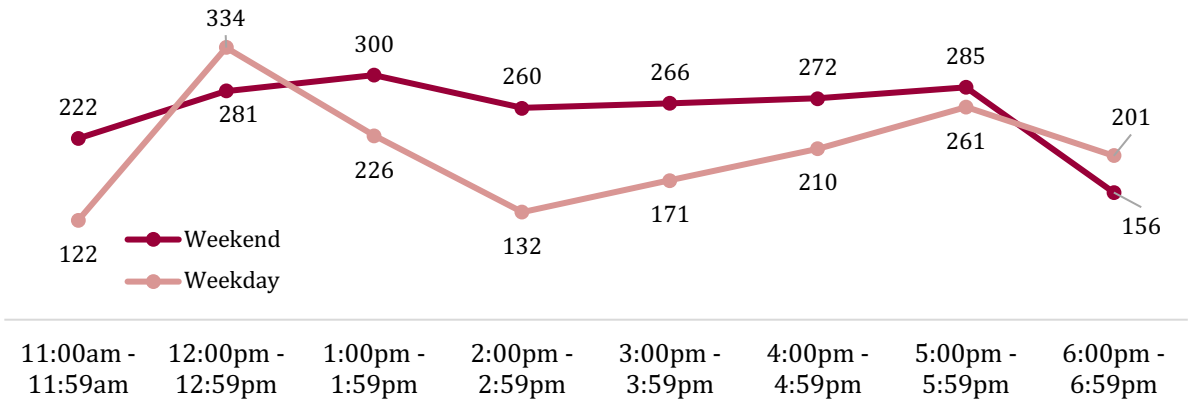
Along with Piers Park, there was a noticeable Spanish-speaking population visiting the park.

Martin's Park

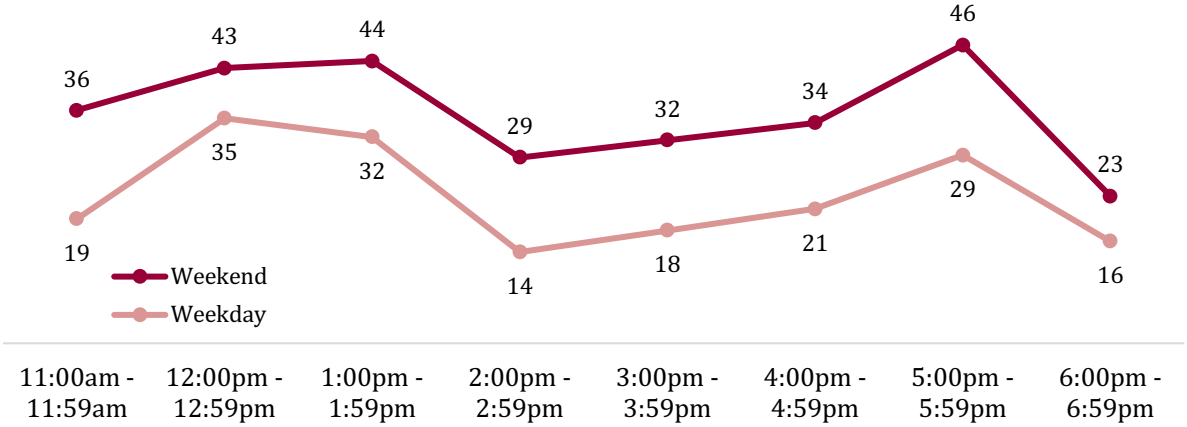
Martin's Park foot traffic and occupancy figures are influenced by its popular children's playgrounds, location near Boston Children's Museum, and placement in a busy downtown area. In addition to people visiting intentionally, the park is also used as a cut through route for pedestrians which explains the large difference between foot traffic and occupancy. Overall, weekends are a more popular time to spend time in the park. However, morning and evening rush hour periods on weekdays come close to matching weekend foot traffic levels.

Key figures	
Average weekday hourly foot traffic	208
Average weekend hourly foot traffic	255
Average weekday occupancy	23
Average weekend occupancy	36

Average Hourly Foot Traffic - Martin's Park



Average Hourly Occupancy - Martin's Park



Martin's Park is in the Seaport neighborhood at the corner of Seaport Blvd and the Harborwalk, just outside the Boston Children's Museum. It contains a playground, walking paths, and a path cutting across the park from the Harborwalk to Sleeper St.

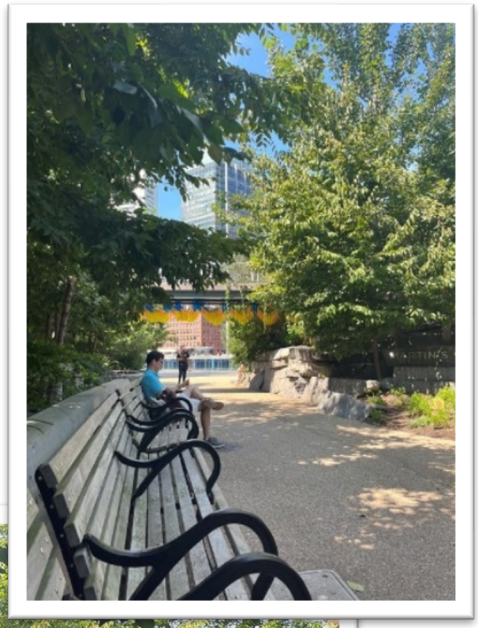
Due to the park's location, many pedestrians cut through the park without stopping. Most others visit the park for the playground and a much smaller contingent to relax on the benches Relatively few tourists come to the park as the primary destination, but rather stop at it after visiting the Children's Museum nearby.

Phase 1 – Foot traffic: Data collectors were located at the two main entrances on the east and west ends of the path through the park. They counted people entering the park from their respective entrances. After testing, it became clear one data collector could count both entrances. This was done for the last few data of data collection at the park.

Phase 2 – Occupancy: Data collectors circulated independently and in opposite directions, counting occupants throughout the entire park. For the majority of shifts at Martin's Park there were two counts for each hour. The total occupancy counts are an average of these two independent counts. The last few days one staff member took only one count for occupancy.

Phase 3 – Surveys: One staff member collected surveys while standing in place. The other walked around the park, beginning at a rotating point in the park, and collected surveys among people staying in the park. By rotating starting points for the moving data collected, staff avoided getting only surveys among people near the entrances.

- The location of the park provides an easy cut through, and a more pleasant walking route than the alternatives. The playground areas are also fenced off and gated. Because of this many passers do not see themselves as "using" the park.
- Many parents self-reported as tourists, coming primarily for the nearby Children's Museum, and just happening upon Martin's Park or planning to stop at Martin's Park only after choosing the Museum as a destination.
- The shaded benches are largely used by parents (and other family members) with kids using the park area. A smaller contingent use them as a place to stop on their way elsewhere.

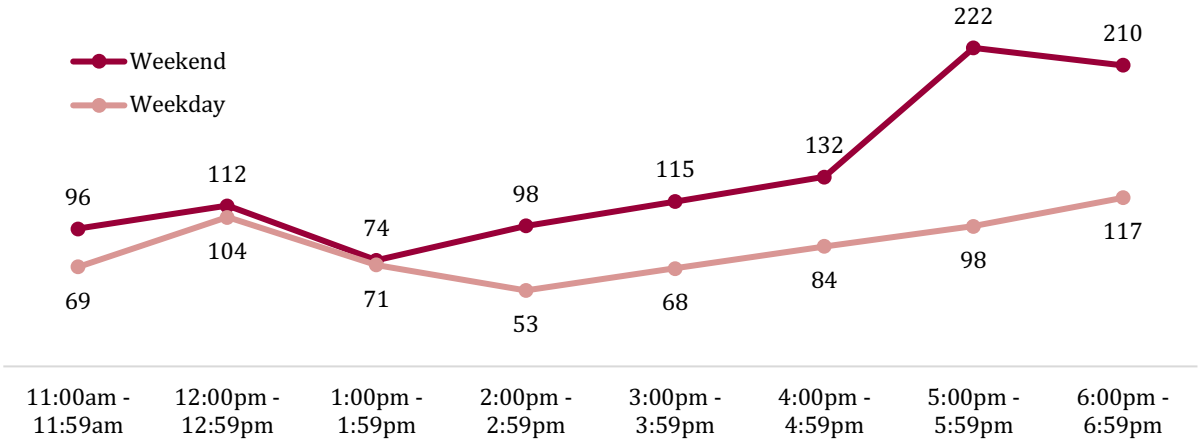


Piers Park

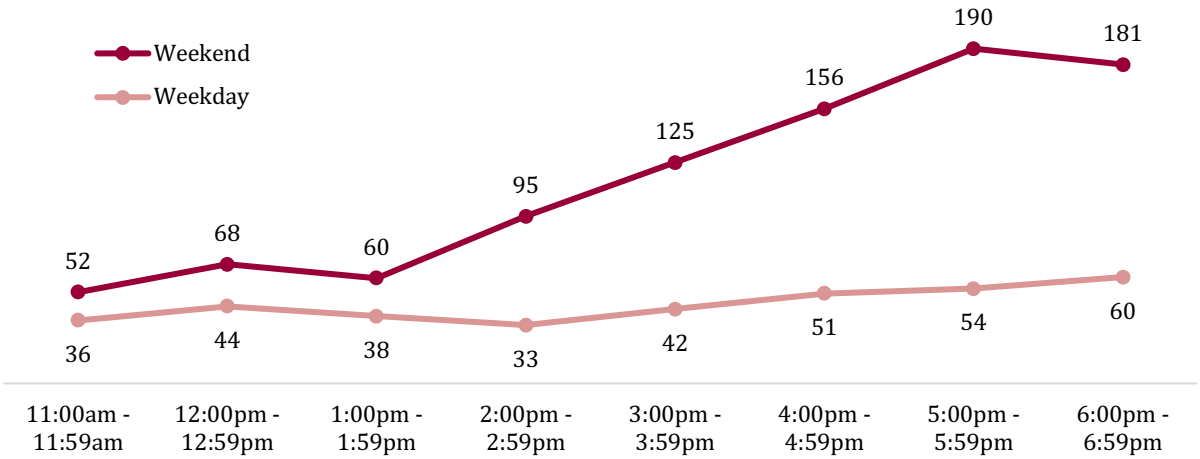
Piers Park is primarily a destination rather than a cut through. Weekend patterns of foot traffic and occupancy varied substantially from weekdays. Weekdays saw a fairly flat rate of foot traffic and occupancy. Aside from a higher overall volume, weekend foot traffic and occupancy followed a similar pattern. There was a small rise and peak around noon and a more notable rise and higher peak around 5pm.

Key figures	
Average weekday hourly foot traffic	83
Average weekend hourly foot traffic	132
Average weekday occupancy	45
Average weekend occupancy	116

Average Hourly Traffic - Piers Park



Average Hourly Occupancy - Piers Park



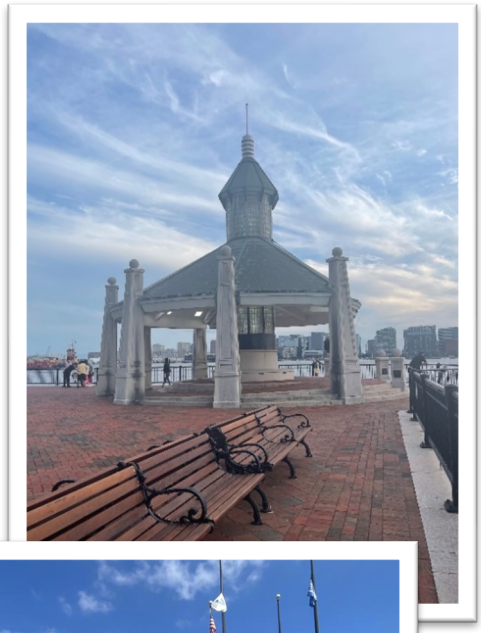
This park is situated in East Boston, directly across the bay from Christopher Columbus Park. It contains several paths, a pavilion, a children's play area, an adult outdoor gym area, the Piers Park Sailing Center, and an extended dock area. The narrowest point of Piers Park leads out to a path surrounded by water with a clear view of the Boston skyline up close. The MassPort Police Authority also have a presence at Piers Park, with a small building where they are located. A member of the team rides around Piers Park daily on a bike to check on the perimeters of the park.

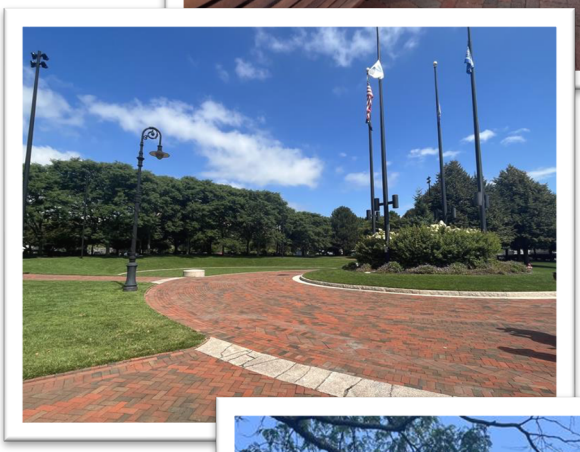
Piers Park's set-up provides space for a variety of activities across demographics. There are areas specifically for children and families, however, also a common place for individuals exercising, people to take a stroll, a spot to bring dinner or lunch, host an event or wedding and more. The uses of Piers Park seem extensive. During the summer time, Piers Park's Sailing Center was filled with children attending the camp. When they were not out sailing, a sidewalk would be filled with children and counselors playing games.

Phase 1 – Foot Traffic: There are two walking entrances into the park as well as entrances for a parking lot. One staff member counted people entering the park from one entrance closest to the playground. The other staff stood between the second entrance and the parking lot, counting people entering the park by foot or by car, taking special care only to count those from cars who came into the park area.

Phase 2 – Occupancy: Both staff members counted the same population for occupancy. They followed the same route each time walking in opposing directions. Piers Park is entirely fenced off except for a very limited number of entrances, because of this the park cannot be used to get somewhere else. For that reason, staff counted everyone within the boundaries of the park, including those walking on trails. Staff members did not count people at the Piers Park Sailing Center or anyone in the water.

Phase 3 – Surveys: One staff member remained stationary at the entrance closest to the playground. They surveyed people entering and leaving the park. The other staff members moved around the park following the same path each hour, but starting at a different point.





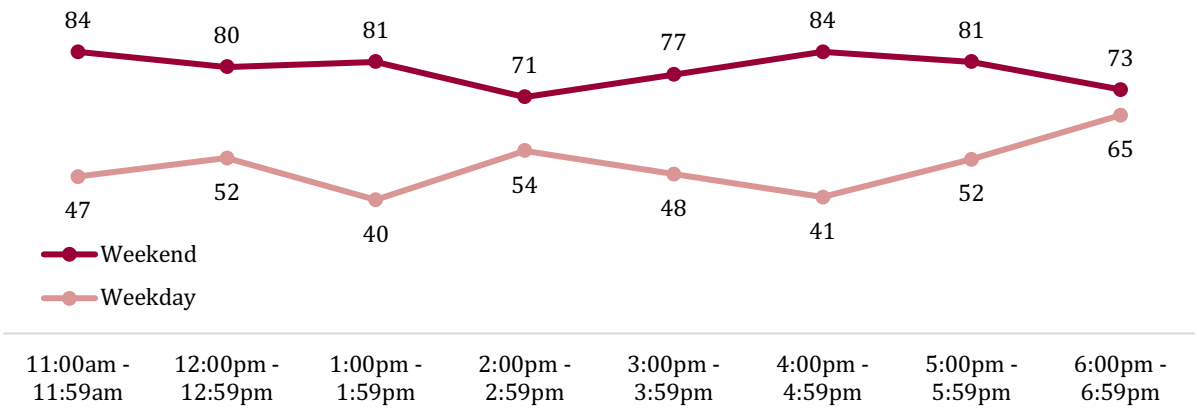
- There was a noticeable Spanish-speaking population visiting the park.
- Throughout the data collection period, the park hosted a drummer performance, and the park grass filled up with attendees, an engagement proposal was set-up, a small wedding reception was hosted, and many small groups had group dinners. This period also corresponded with East Boston Pride Day.
- Permits are necessary for large private events held at the park. This period also corresponded with East Boston Pride Day.
- Some number of people use the parking lot to park and go somewhere else besides the park. It cannot be said for certain how frequently this occurs.

Pope John Paul II

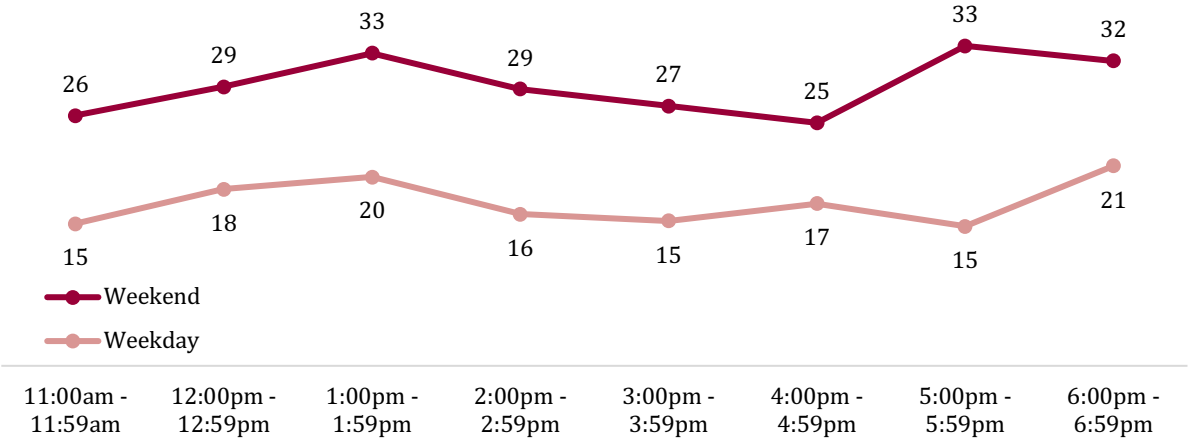
Pope John Paul II was the least frequented park with only a few dozen people occupying it on any given day. It's a large park covered in green lawn and tall grass, dotted with gazebos, where the primary attractions are the playground and walking paths.

Key figures	
Average weekday hourly foot traffic	50
Average weekend hourly foot traffic	79
Average weekday occupancy	17
Average weekend occupancy	29

Average Hourly Foot Traffic - Pope John Paul II



Average Hourly Occupancy - Pope John Paul II



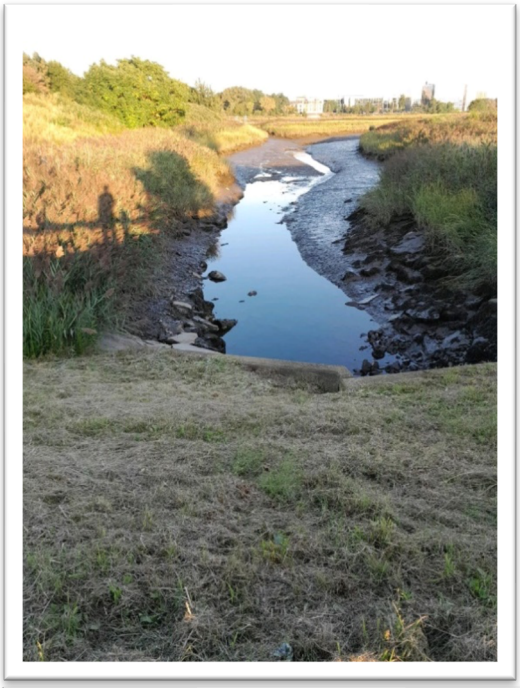
The largest of the parks in this study, PJPII park is located between I-93 and the Neponset River, and is comprised of hiking trails, athletic fields, and open space. Because of the park's location, accessibility, and size, it is partially a destination for locals and partially seen as just part of a larger route (The Neponset River Trail). There were relatively little people from out of the area (Dorchester area, Quincy, & other surrounding neighborhoods & towns; 53% of visitors came from the zip codes immediately surrounding the park), and nearly none who were describable as tourists.

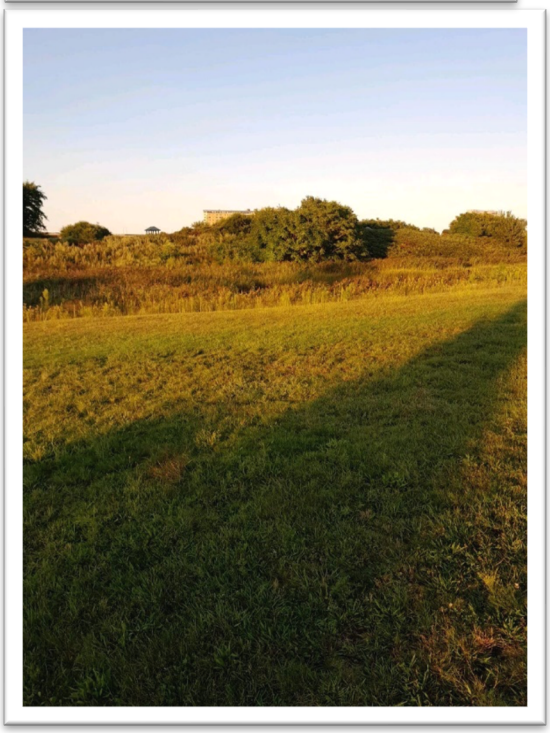
Phase 1 – Foot traffic: One staff member was located at the entrance of the north section, while the other was stationed at the entrance of the south section. The first staff member counted anyone entering into the north part of the park from the walking route or parking lot. The second counted anyone walking into the

Phase 2 – Occupancy: At Pope John Paul II, everyone in the park was counted as an occupant due to its location and the fact that people come to the park intentionally and do not just pass through headed somewhere else. One staff member counted the northern part of the park including a playground and sports field. The other staff counted the southern part of the park including two covered sitting areas. This generated two distinct counts.

Phase 3 – Surveys: Staff members switched between moving and stationary survey collection every two hours. The northern staff member would be stationary while the southern staff member would be moving, and vice versa. While doing stationery collection, the staff members would survey people coming in and out of the parks at & around the entrance they were at for Phase 1. For moving survey collection, the staff members would rotate the starting point for their walking path each hour between two places in their section; this was to ensure all parts of the park were sampled. Their path and they walked it remained consistent.

- This park is large enough where the north and south sections feel like two distinct parks.
- Pope John Paul II had by far the lowest level of foot traffic and occupancy. A substantial portion, if not all, of parkgoers are walking, running, or cycling on the foot trails. Although this deviates between the north and south sections.
- A noticeable proportion of parkgoers were using this park as a dog park. Signage reminding people to pick up after their dogs indicates that DCR recognizes this usage.
- A noticeable proportion of users were frequent and dedicated visitors. Often, the same people were asked to complete a survey over multiple days of the collection period (66% of users reported visiting a few times a month or more). Alternatively, there weren't many, if any, tourists. Most parkgoers seemed to be from the neighborhood.
- The north section includes a kid's playground and sports field. Although the sports field remained unused for most of our time collecting data, there was at least once a children's soccer match. The playground was well used but is only a small section in an exceptionally large park.
- The south section has two covered seating areas in the center, but these were often vacant.





Appendix A: Data Collection Methodology

Obtaining reliable counts and survey responses requires standardization to ensure data collectors are following similar procedures. To establish methodological standards, we followed Jan Gehl's methodologies in measuring city life, laid out in his work "How to Study Public Life."

Hourly Rythm

Data collection hours were from 11 AM to 7 PM. Each hour of data collection was broken down into four elements. The 11 AM hour is shown as an example.

1. 11:00 – 11:10 Foot traffic count.
2. 11:10 – 11:20 Occupancy Count.
3. 11:20 – 11:50 Surveying.
4. 11:50 – 12:00 Data entry and reset.

This hourly rhythm was then repeated throughout the data collection shift.

Park Edges

Obtaining reliable counts requires defining park boundaries. For example, Columbus Park has public sidewalks surrounding it. Castle Island has a restaurant and a parking lot near the park entrance. To standardize counting methods, maps were created and shared during the training process. These are shown below.

Foot Traffic

During the first ten minutes of each hour, data collection staff counted foot traffic. Foot traffic was defined as anyone entering the park through specific points. Staff stood at two fixed locations identified during the research design phase. Each location allowed data collectors to view the entrance while remaining unobtrusive. Data collectors used simple mechanical clickers to count every adult person who walked into the entrance(s) they were assigned. Counts did not overlap, as each data collector was assigned to a different location.

Occupancy

During the second ten minutes of each hour, data collectors counted occupancy. To count occupancy data collectors walked along predetermined routes. For smaller parks (Christopher Colombus, Martin's Park, and Piers Park) the two staff walked in opposing directions on the same route, conducting fully overlapping counts. For these parks, the final count data is an average of the two independent counts. For the larger parks (PJPII and Castle Island), staff each covered roughly half the park to allow for a full count during the ten-minute counting window. Because these counts cover different areas, the final count data represents a sum of each hour's counts for these parks. .

Occupancy was defined as those using the park rather than passing through. Because of the difference in park usage and format, park-specific approaches were used to measure occupancy. At Christopher

Colombus and Martin's Park, only people who were staying in the park were counted to avoid counting people just passing through the parks without using them. The other three parks are not used as cut through routes, meaning anyone in the park can be seen as using the park, even if they are walking or running. For these three. occupancy was defined as anyone within the park, whether moving or stationary.

Imputation

During data collection, there were some periods where only one of two data collectors was present in the park. This occurred due to staff conflicts, illness, transportation challenges, and other factors. Other hourly observations were not entered due to staff breaks. Additionally, there were individual hours where one data collector at a given park entered data, where the other did not. This occurred due to technological challenges (e.g. cell phone batteries) or data collectors simply forgetting to enter data for one hour. A combination of these factors results in missing data in the final traffic and occupancy counts. To estimate values for this missing data, a set of common data imputation techniques were used. For staff breaks, imputed values were based on the average of the two adjacent hours for the same park and location. For foot traffic and occupancy with 1 missing collector, values were imputed using a linear regression model based on other traffic values from the same park.

Data Quality

During the field period, MPG staff became suspicious that several data collectors were not entering legitimate data based on actual observations. A detailed analysis was conducted to identify potentially suspicious data. MPG President Steve Koczela is a recognized expert in data fabrication detection, a published author, and the former Associate Editor of the Statistical Journal of the International Association for Official Statistics focused on data fabrication. The potentially suspicious data was quarantined and is not included in any of the analysis presented in this report. MPG staff personally made up the hours affected by the potentially suspicious data to ensure the project was completed to specification.

Surveying

The survey was conducted via face-to-face interviewers in each park. Interviews took approximately 2-3 minutes. One interviewer circulated around the park to interview people staying in the park. The other interviewer stood in the same location where they counted foot traffic and interviewed people walking into the park. Data collectors approached every 3rd person they encountered (if moving) or who passed by them in either direction (if stationary). If foot traffic was low or there were difficulties in surveying, data collectors changed to surveying every person. This system was put in place to avoid sampling bias, where a surveyor may only ask the people they feel most comfortable approaching.

Survey interviews were conducted from 20 minutes past the hour to 50 minutes past. To facilitate the interview, an online survey was programmed using Alchemer. The survey was available in English and Spanish. Because many of the interviewers were not fluent in Spanish, the link to the Spanish survey took respondents to a self-administered survey, while English surveys were administered by the data collectors.

Visitors who did not speak either English or Spanish could not take the survey. This likely led to modest coverage bias related to people who did not speak either language and did not have anyone in their party who could take the survey. Cyclists were also likely underrepresented given the practical difficulties of stopping someone to ask them to take a survey.

Survey data was collected between 11 AM and 7 PM during the field period. A drawing for a set of $500 Visa giftcards was offered as incentive to participate. Practically, this incentive does not seem to have been much of an aid to boosting response rates. After testing various interview request scripts, respondents were typically only told about the incentive near the end of the survey rather than the beginning.