

Friendly Streets Initiative
collaboration with
Desnoyer Park Improvement Association

Parking Study of Pelham Boulevard
REPORT

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Photo of Pelham Boulevard by Darius Gray

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INTRODUCTION/EXECUTIVE SUMMARY

This report presents a study of parking patterns on Pelham Boulevard. This research was conducted for the Desnoyer Park Neighborhood Improvement Association (DPIA) in collaboration with the Friendly Streets Initiative (FSI). The study area is Pelham Boulevard, with East River Parkway to the South and St. Anthony Avenue to the north.

Data was collected three times daily over the duration of one month in Summer 2014. Field notes and video constitute primary data sources.

On-street parking conditions were observed to determine both the available parking capacity and actual use. We estimate that there are 144 available parking spaces in the study area. We found that, on average, eleven motor vehicles are parked on Pelham Boulevard per day. This is 7.6% of available parking on Pelham Boulevard.

When parking volume is greatest – consistently in the evenings -- it is due to occasional events at Desnoyer Park as well as normal evening residential parking. Events at Desnoyer Park draw motor vehicle parking on Pelham Boulevard, while leaving available parking capacity on streets adjacent to the Park unutilized.

The section of Pelham Boulevard with the highest rates of parking are from Doane Avenue to St. Anthony. This is particularly the case on the West side of Pelham Boulevard.

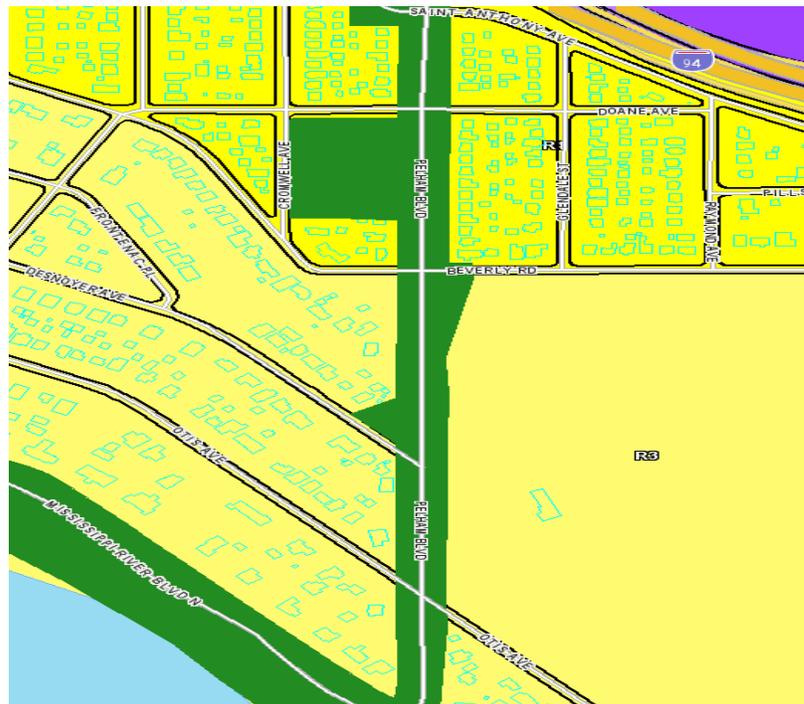
PELHAM BOULEVARD PARKING CONDITIONS

Several factors affect parking conditions on Pelham Boulevard: Land use, Pelham's parks including its Grand Round designation, and City parking ordinances. These conditions provide the context necessary for understanding the quality and quantity of parking on Pelham Boulevard.

Land Use and Grand Round Designation

The study area is composed mostly of single family homes and public parks. Illustration 1 shows the designated zoning codes for the area of study. There are two non-residential entities present in the study area: Kids Park (day care facility at Desnoyer Park), and Town & Country Club. Town & Country Club lies on the eastern border of the study area, from Otis Avenue to Beverly Road. Town & Country Club has its own surface parking lot and is therefore not believed to account for any parking volume on Pelham Boulevard.

Illustration 1: Zoning/Land Use in Desnoyer Park



Key: Green = City parkland; yellow R3 and R4 = residential. The “R3” section north of Otis, west of Pelham, and south of Beverly is the Town & Country Club golf course.

Pelham contains three parks: Desnoyer, Triangle, and the Grand Round. Desnoyer Park, on the west side of Pelham between Beverly Road and Doane Avenue, includes baseball diamonds, a basketball court, playground, and “Kids Park,” a private day care facility. Desnoyer Park is a frequently used park, a centerpiece of the neighborhood. Pelham’s Triangle Park is located on the west border of the area of study between Desnoyer Avenue and Beverly Road. Desnoyer Park creates temporary increases in volume of parked motor vehicles on Pelham. Finally, Pelham is part of the Grand Round Boulevard, a linear park that is an entity of Saint Paul Parks and Recreation. At present that designation, either with signage or through infrastructure, is not visibly evident. But it is at the southernmost part of the study area – East River Road – where many commuters and recreational walkers and bicyclists can be found.

Parking Uses

Based on land use in the project area, we believe that the parking we observed is residential, except for the following:

- Desnoyer Park holds events that draw motor vehicles that tend to park on Pelham Boulevard while leaving available parking on nearby (perpendicular) streets underutilized.
- Near East River Road, which draws some motor vehicles to access recreational use of the Grand Round on the Mississippi.

Parking Restrictions

The study area contains several kinds of parking restrictions. The largest are no parking zones along the east side of Pelham Boulevard beginning 200 feet south of Otis Avenue, proceeding north to Beverly Road. And on the west side of Pelham is another no parking zone, beginning 200 feet south of Beverly Road and proceeding north to Beverly Road. There are also areas that prohibit parking due to proximity to intersections, driveways, fire hydrants, and stop signs.

Driveways and Alleys

The presence of easily accessible alternatives to on-street parking, such as driveways and alleys, may be part of the reason for the low rate of motor vehicle parking on Pelham. From East River Road to Beverly Road, driveways are accessible directly from Pelham Boulevard, or on a street adjacent to Pelham Boulevard. The residences from Beverly Road to St. Anthony Avenue use the alleyways.

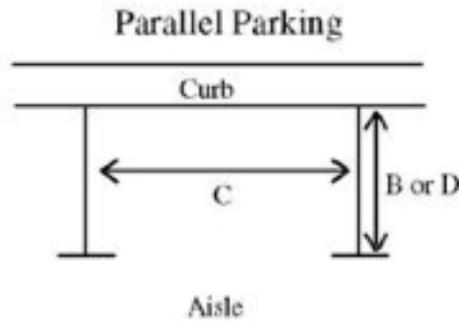
METHODOLOGY

Our charge was to observe motor vehicle parking on Pelham Boulevard. To do so we first needed to determine available parking on Pelham Boulevard. Then we made daily systematic observations over the course of one month.

Determining Available Parking on Pelham

To obtain an approximate count of parking spaces through the study area, we assume the standard length of a “parallel” parking space to be 21 feet (www.ci.minneapolis.mn.us). The total number of feet per block, minus areas restricted to parking, was divided by 21 feet to obtain a total number of available spaces. See Illustration 2.

Illustration 2: Parallel Parking Space Dimensions



Angle (A)	Type	Width (B)	Curb Length (C)	Stall Depth (D)	1 Way Aisle Width (E)	2 Way Aisle Width (E)
0 (Parallel)	Standard	8' 6"	21'	8' 6"	12'	22'

Source: City of Minneapolis

To get as accurate a measure of available parking as possible, we accounted for proximity to driveways, fire hydrants, intersections, and stop signs. In total, we subtracted 20 feet per driveway from each block. The presence of fire hydrants in the study area also resulted in a subtraction of 20 feet, as does proximity to an intersection. Thirty feet from a stop sign is also designated as no parking.

East River Road to Otis Avenue

East River Road to Otis Avenue is about 450 feet in length. To account for the presence of a stop sign in the southern intersection of this section, 30 feet was subtracted from total number of feet. On the west side there are two driveways (-40 feet) present. Thirty feet was subtracted to account for the presence of a stop sign to the north. What remains is 350 feet for parking, approximately 16 parking spaces. On the east side there is one driveway (-20 feet) present. At the northern intersection there is signed 100 feet no parking restriction. Approximately 300 feet are available for parking, which is approximately 14 parking spaces.

Otis Avenue to Desnoyer Avenue

Otis Avenue to Desnoyer Avenue is about 400 feet in length. On the west side of Pelham, at both ends there is a 20-foot no parking designation due to proximity to an intersection. There is one driveway present accounting for another 20-foot subtraction leaving about 340 feet for parking. This section has approximately 16 parking spaces. On the east side of Pelham, its total length is designated no parking.

Desnoyer Avenue to Beverly Road

This section of Pelham Boulevard is approximately 660 feet long. On the west side of Pelham, there are 100 feet no parking designated, beginning 100 feet south of the northern intersection. There is one driveway that is within the 100 feet no parking designation; therefore it was not subtracted again in the final approximation of the total feet of this section.

There are four residences with driveways, one is within a 100-foot no parking zone therefore it was necessary to subtract only 60 feet rather than 80 feet from the total count. At the southernmost point of this section there is no parking due to proximity to an intersection. This reduced the final count of this section by 20 feet. A fire hydrant is within this 20 feet of no parking designation, and does not affect the final approximation. This brings the approximate total length of this section open for parking at 470. There are approximately 22 parking spaces in this section. On the east side of Pelham, the total length is designated no parking.

Beverly Road to Doane Avenue

Beverly Road to Doane Avenue is approximately 560 feet long. A 20-foot no parking zone is located on the south side of this section due to proximity to an intersection, and a 30 feet no parking zone located at the north side is due to proximity to a stop sign. A fire hydrant is within the designated zone on the southwest side. The approximate length of this section useable for parking is approximately 510 feet on both the west and east sides of the area of study. That means the presence of approximately 24 parking spaces on each side (total 48).

Doane Avenue to St. Anthony Avenue

Doane Avenue to St. Anthony Avenue is approximately 350 feet. A 20-foot no parking zone is located on the south side due to proximity to an intersection. A 30-foot no parking zone is located at the north side due to proximity to a stop sign. A fire hydrant is within that designated zone on the southwest side. The approximate length of this section useable for parking is approximately 300 feet on both the west and east sides of Pelham Boulevard. Thus there are 14 parking spaces on each side (total 28).

In total, there are an estimated 144 parking spaces available on Pelham Boulevard from East River Road to St. Anthony Road. Table 1 presents the full motor vehicle parking occupancy capacity for each block in the area of study.

Table 1: Motor Vehicle Parking Availability on Pelham Boulevard, By Location

<u>Location, orientation on Pelham</u>	<u>Available parking spaces</u>
River to Otis, west side	16
River to Otis, east side	14
Otis to Desnoyer, west side	16
Otis to Desnoyer, east side	0 (no parking zone)
Desnoyer to Beverly, west side:	22
Desnoyer to Beverly, east side:	0 (no parking zone)
Beverly to Doane, west side:	24
Beverly to Doane, east side:	24
Doane to St. Anthony, west side:	14
Doane to St. Anthony, east side:	14
TOTAL	144

Data Collection

Parking data was collected for the duration of one month, from June 9 to July 11, 2014. Data was collected at three different times in the day, weekdays and weekends:

- 8:00 a.m. – 9:00 a.m.
- 12:00 p.m. – 1:00 p.m.
- 5:00 p.m. - 6:30 p.m. (up to 7:00 p.m. on weekends)

To collect the data for the parking study, Darius Gray and Kim Club traversed the area of study, documenting where cars/trucks were parked. Field notes were taken on diagrammatic map of Pelham Boulevard. They also took video recording to document visually the parking use of the street. A total of 89 observations were made, as well as dozens of video recordings. Click on the following link for a sample of videos created for this parking study:

<https://www.youtube.com/playlist?list=PLoORR2fTU48qN4QIR9542AciSD9on1T1C>

FINDINGS AND ANALYSIS

The residences lining Pelham Boulevard account for most of the parking volume throughout the study area. The presence of driveways, and alleyways with off-street parking, limits the need for parking on Pelham.

The overall data for all three study points of the day and all locations is in Table 2. Those sections of the study areas that are highlighted in **red** have the highest average of parked cars and trucks. Those highlighted in **blue** have the lowest.

Table 2:
Parked Motor Vehicles on Pelham Boulevard, by Location

West Side of Pelham Boulevard	East Side of Pelham Boulevard
River to Otis: Range: 0 to 7 Mean: 1.18 Percent of available: 7.4%	River to Otis: Range: 0 to 7 Mean: .47 Percent of available: 3.4%
Otis to Desnoyer: Range: 0 to 2 Mean: 0.06 Percent of available: 0.4%	Otis to Desnoyer: Range: 0 (no parking zone) Mean: 0 (no parking zone) Percent of available: N/A
Desnoyer to Beverly: Range: 0 to 1 Mean: 0.056 Percent of available: 0.3%	Desnoyer to Beverly: Range: 0 (no parking zone) Mean: 0 (no parking zone) Percent of available: N/A
Beverly to Doane: Range: 0 to 5 Mean: 1.70 Percent of available: 7.1%	Beverly to Doane: Range: 0 to 7 Mean: 1.80 Percent of available: 7.5%
Doane to St. Anthony: Range: 1 to 9 Mean: 4.13 Percent of available: 31%	Doane to St. Anthony: Range: 0 to 5 Mean: 1.3 Percent of available: 9.3%

Throughout the study area and duration, **there are, on average, seven motor vehicles parked on the West side of Pelham, and four motor vehicles parked on the East side. These eleven motor vehicles utilize 7.6% of the total 144 available parking spaces on Pelham Boulevard.** This suggests that Pelham is little used for parking.

The highest use is from Doane Avenue to St. Anthony Avenue, particularly on the west side of Pelham. At an average of 31% parking occupancy, it is substantially below capacity. In fact, during evenings the mean occupancy rate there is approximately 36%, still substantially below capacity.

Even an extreme calculation of potential parking on Pelham Boulevard reveals low usage. Using solely maximum observations (the upper range observations for each location and time of day), we observed a typical maximum of 24 cars on the West side, and 21 on the East side. These 45 cars (again, an infrequent extreme) would utilize only 31% of the available parking on Pelham. It is also important to remember that maximum range observations are at the opposite end of the means, further underlining the infrequency of higher parking uses.

Times of Day and Week

Table 3 (next page) presents data for each study period of the day: morning, afternoon, and evening, and by location. Data highlighted in **red** have the highest average of parked cars; those highlighted in **blue** have the lowest.

Throughout the study area, evenings had consistently higher volumes of motor vehicles parked on Pelham. We believe this is due to two reasons: First, events at Desnoyer Park accounted for higher parking volumes near the Park throughout the evening. The adjacent streets during these observed times were left empty and spaces on Pelham Boulevard seemed to be occupied for event parking. Second, evening counts captured the times when residents were likely settled at home for the night. We also note that the data did not show a significant difference between weekend and weekday counts.

Table 3:
Motor Vehicles Parked on Pelham Boulevard by Location and Time of Day

Morning Counts:	Afternoon Counts:	Evening Counts:
River to Otis West: Range: 0 to 4 Mean: 1.03	River to Otis West: Range: 0 to 3 Mean: .79	River to Otis West: Range: 0 to 7 Mean: 1.72
River to Otis East: Range: 0 to 3 Mean: .26	River to Otis East: Range: 0 to 3 Mean: .41	River to Otis East: Range: 0 to 7 Mean: .76
Otis to Desnoyer West: Range: 0 to 2 Mean: 0.06	Otis to Desnoyer West: Range: 0 to 1 Mean: .034	Otis to Desnoyer West: Range: 0 to 1 Mean: .090
Otis to Desnoyer East: Range: 0 Mean: 0	Otis to Desnoyer East: Range: 0 Mean: 0	Otis to Desnoyer East: Range: 0 Mean: 0
Desnoyer to Beverly West: Range: 0 to 1 Mean: 0.032	Desnoyer to Beverly West: Range: 0 to 1 Mean: .034	Desnoyer to Beverly West: Range: 0 to 1 Mean: .103
Desnoyer to Beverly East: Range: 0 Mean: 0	Desnoyer to Beverly East: Range: 0 Mean: 0	Desnoyer to Beverly East: Range: 0 Mean: 0
Beverly to Doane West: Range: 0 to 4 Mean: 1.20	Beverly to Doane West: Range: 0 to 5 Mean: 1.75	Beverly to Doane West: Range: 0 to 5 Mean: 2.14
Beverly to Doane East: Range: 0 to 4 Mean: 1.58	Beverly to Doane East: Range: 0 to 4 Mean: 1.38	Beverly to Doane East: Range: 0 to 7 Mean: 2.45
Doane to St. Anthony West: Range: 2 to 8 Mean: 3.94	Doane to St. Anthony West: Range: 1 to 8 Mean: 3.45	Doane to St. Anthony West: Range: 2 to 9 Mean: 5.03
Doane to St. Anthony East: Range: 0 to 2 Mean: 1	Doane to St. Anthony East: Range: 0 to 5 Mean: 1.42	Doane to St. Anthony East: Range: 0 to 3 Mean: 1.7

Doane Avenue to St. Anthony Avenue

This section of Pelham had consistently the greatest volume of motor vehicle parking; the highest means and ranges. Our belief is that most of the motor vehicles on this section of Pelham are residential.

Desnoyer Park Improvement Association President Drew Ross has speculated that parking on the west side of Pelham Boulevard from Doane Avenue to St. Anthony Avenue is explained by the inconvenience residents experience accessing their alleyways. Specifically they need to drive “around” St. Anthony Avenue to do so. This is visible in Illustration 3.

Illustration 3:
Circuitous alley access for Pelham residents on the west side,
from St. Anthony Avenue to Doane Avenue.



Source: Google Maps.

This circuitous alley access on the northern end of Pelham Boulevard makes street parking there a comparatively simpler maneuver. This may account for higher rates of parking in this location, as residents may decide not to access off-street parking via their alleyway.

CONCLUSION

The parking study revealed that the majority of blocks in the study area had ample available parking at all hours of the day. This finding of low use of parking on Pelham Boulevard affirms findings from data collected by the Friendly Streets Initiative in a survey of Desnoyer Park residents in 2013. When asked about problems on Pelham Boulevard, “Not enough on street parking” ranked next to last out of 13 categories (pp. 29-30, FSI/DPIA Report December 2013). The category that ranked last was “There are no problems on Pelham Boulevard.”

FUTURE RESEARCH

This parking study was conducted in the summer and therefore it does not account for potentially limited access to alleyways due to winter weather conditions. It is possible that winter weather can make alleyways less accessible, thereby potentially increasing the parking volume on Pelham in the winter time compared to summer. We recommend that a week-long count be conducted in the winter to gauge how the winter weather impacts the use of on-street parking along Pelham Boulevard. However, given the limited land uses in the area, and the consistency of parking patterns, we would not expect winter data to result in substantially higher parking on Pelham Boulevard, certainly not exceeding 50% of capacity and likely far less.

APPENDIX A: MOTOR VEHICLE PARKING DATA BY LOCATION AND TIME OF DAY

Morning	Afternoon	Evening
River to Otis West: Total spaces: 16 Mean Morning occupancy: 6.44%	River to Otis West: Total spaces: 16 Mean Afternoon percent occupied: 4.94%	River to Otis West: Total spaces: 16 Mean percent occupied: 10.75%
River to Otis East: Total spaces: 14 Mean Morning occupancy: 1.86%	River to Otis East: Total spaces: 14 Mean Afternoon percent occupied: 2.93%	River to Otis East: Total spaces: 14 Mean percent occupied: 5.43%
Otis to Desnoyer West: Total spaces: 16 Mean Morning occupancy: .38%	Otis to Desnoyer West: Total spaces: 16 Mean Afternoon percent occupied: .21%	Otis to Desnoyer West: Total spaces: 16 Mean percent occupied: .56%
Otis to Desnoyer East: No parking zone	Otis to Desnoyer East: No parking zone	Otis to Desnoyer East: No parking zone
Desnoyer to Beverly West: Total spaces: 22 Mean Morning occupancy: .15%	Desnoyer to Beverly West: Total spaces: 22 Mean Afternoon percent occupied: .15%	Desnoyer to Beverly West: Total spaces: 22 Mean percent occupied: .45%
Desnoyer to Beverly East: No parking zone	Desnoyer to Beverly East: No parking zone	Desnoyer to Beverly East: No parking zone
Beverly to Doane West: Total spaces: 24 Mean Morning occupancy: 5%	Beverly to Doane West: Total spaces: 24 Mean Afternoon percent occupied: 7.29%	Beverly to Doane West: Total spaces: 24 Mean percent occupied: 10.21%
Beverly to Doane East: Total spaces: 24 Mean Morning occupancy: 6.58%	Beverly to Doane East: Total Spaces: 24 Mean Afternoon percent occupied: 5.75%	Beverly to Doane East: Total spaces: 24 Mean percent occupied: 10.21%
Doane to St. Anthony West Total spaces: 14 Mean morning percent occupied: 28.14%	Doane to St. Anthony West: Total spaces: 14 Mean Afternoon percent occupied: 24.64%	Doane to St. Anthony West: Total spaces: 14 Mean percent occupied: 35.93 %
Doane to St. Anthony East Total spaces: 14 Mean morning percent occupied: 7.14%	Doane to St. Anthony East: Total spaces: 14 Mean Afternoon percent occupied: 10.14%	Doane to St. Anthony East: Total spaces: 14 Mean percent occupied: 12.2%

SOURCES

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http://www.ci.minneapolis.mn.us/www/groups/public/@cped/documents/webcontent/convert_258574.pdf

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