Traffic Operations and Parking Assessment

Palisades Recreation Center

Washington, DC



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Transportation Planners and Engineers

Prepared by:



Transportation Planners and Engineers

1140 Connecticut Avenue NW Suite 600 Washington, DC 20036 Tel: 202.296.8625 Fax: 202.785.1276 3914 Centreville Road Suite 330 Chantilly, VA 20151 Tel: 703.787.9595 Fax: 703.787.9905

15125 Washington Street Suite 316 Haymarket, VA 20169 Tel: 571.248.0992

www.goroveslade.com

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1: INTRODUCTION

This report presents the findings of a traffic operations and parking assessment conducted for the District Department of Parks and Recreation in support of the Palisades Community Center located in the Palisades neighborhood of northwest Washington, DC. Figure 1 identifies the site location within the District. The recreation center's facilities occupy approximately 250,000 SF land and has a baseball field, soccer field, tennis courts, a basketball court, skateboard park, children's playground, and a multi-purpose building with service parking. The Palisades Recreation Center is accessed from Sherier Place NW between Edmunds Place and Dana Place, approximately one block southwest of MacArthur Boulevard and one block southeast of Arizona Avenue and is served by a 33-space parking lot. This assessment has been prepared to address parking and circulation concerns along Sherier Place and other streets adjacent to the Recreation Center, primarily on weekday evenings and on Saturdays, when the Recreation Center is most utilized.

This assessment also incorporates elements of the "Traffic and Parking Safety Review" conducted by the District Department of Transportation (DDOT) Traffic Engineering and Safety Team and dated June 24, 2015. This study reviewed the existing roadway conditions, accident data, circulation, and parking within the neighborhood immediately adjacent to the Recreation Center and offered recommendations to improve vehicular and pedestrian safety in the area. Observations of the parking and circulation conditions were conducted on a weekday evening and Saturday during the Spring of 2015 at the locations noted on in Figure 2 order to establish a basis for assessment of conditions associated with the Recreation Center. As a result, the purpose of this report is to:

- 1. Review the parking conditions on the streets surrounding the Recreation Center to determine the occupancies related to Recreation Center operations and the immediate neighborhood and any potential impacts to circulation that the on-street parking may propagate.
- 2. Provide information to the District Department of Transportation (DDOT) and other agencies on the existing conditions and potential causes to circulation and parking concerns within the neighborhood as related to the Recreation Center.
- 3. Determine if any modifications to the parking or overall circulation patterns could improve circulation and parking as related to the Recreation Center and make recommendations accordingly.

This report contains three sections as follows:

Street Parking Inventory Review

This section provides a summary of the on-street parking in the neighborhood surrounding the Palisades Recreation Center. The summary includes documentation of the on-street parking data collected (including onstreet parking supply and occupancy) as well as a review of the peak periods of demand on the streets surrounding the Recreation Center.

<u>Circulation and Capacity Analysis Assessment</u>

This section provides a summary of the circulation within the study area and an examination of the existing traffic volumes and associated capacity analysis. A review of potential modifications to the vehicular circulation within the neighborhood is also included and evaluated.

<u>Conclusions and Recommendations</u>

This section provides conclusions and recommendations based on the parking and vehicular circulation analyses examined in the previous sections.



Figure 1: Site Location



Figure 2: Study Area

2: ON-STREET PARKING ASSESSMENT

This section presents the findings of an on-street parking study, including a full inventory of available parking spaces and a parking occupancy count within walking distance of the Palisades Recreation Center. The purpose of this study was to determine the amount of parking supply and demand on streets within a short walking distance of the Recreation Center and to identify any trends or patterns associated with this parking demand.

The on-street parking study was conducted across an area considered to be within walking distance of the Palisades Recreation Center in an area along Sherier Place and MacArthur Boulevard from Arizona Avenue to Cushing Place and along Edmunds Place, Dana Place, and Cushing Place between Sherier Place and MacArthur Boulevard. An inventory of available on-street parking facilities was conducted that included tabulating the number of parking spaces by block face and identifying any relevant parking restrictions. The number of parking spaces inventoried within the study area totaled 270 parking spaces. The majority of the study area included Zone 3 Residential Parking Permit areas along Sherier Place, Edmunds Place, Dana Place, and Cushing Place and in some locations along MacArthur Boulevard. Other areas of MacArthur Boulevard included metered or one hour parking zones adjacent to commercial areas.

Parking occupancy data was collected on Tuesday, April 21, 2015 from 4:00 PM to 7:00 PM and on Saturday, April 18, 2015 from 9:00 AM to 5:00 PM to gather information on the parking occupancies of weekday evening conditions and Saturday midday conditions when Recreation Center visitors would most likely park on nearby streets. Table 1 gives a summary of the hourly utilization percentages for the weekday study period and Table 2 gives a summary of the hourly utilization percentages for the Saturday study period. It was determined that the weekday PM parking peak occurs from 7:00 to 8:00 PM with a parking utilization of 79 percent (or 213 vehicles occupying the 270 available spaces) and the Saturday parking peak occurs from 12:00 to 1:00 PM with a parking utilization of 95 percent (or 257 vehicles occupying the 270 available spaces).

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	4PM	5PM	6PM	7PM			
Occupancy	180	190	194	213			
Total Spaces	<u>270</u>	<u>270</u>	<u>270</u>	<u>270</u>			
Available	90	80	76	57			
Utilization	67%	70%	72%	79%			

Table 1: Weekday Parking Occupancy

Table 2: Saturday Parking Occupancy

	9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM
Occupancy	210	214	210	257	255	237	232	213	182
Total Spaces	<u>270</u>								
Available	60	56	60	13	15	33	38	57	88
Utilization	78%	79%	78%	95%	94%	88%	86%	79%	67%

The weekday and Saturday peak parking occupancies are shown on Figure 3 and Figure 4, respectively, and show that considerable usage of on-street parking was noted throughout the study area during the peak periods. This corresponded to usages of 50 percent and higher during the weekday peak period along most blocks in the study area with higher occupancies (75 percent and higher) along some blocks of Sherier Place, Dana Place, and MacArthur Boulevard. While occupancies were high on some blocks in the study area during the weekday peak, the overall parking availability remained generally good across the entire study area with 21 percent of the parking supply remaining available in the study area

during the peak period. Much greater usage was noted on Saturday with occupancies above 90 percent during the noon and 1:00 PM hours and occupancies remaining high (near or above 80 percent) for most hours of the study period (from 9:00 AM to 4:00 PM. During the peak hour of 12:00 PM to 1:00 PM, 95 percent of the on-street parking spaces in the study area were occupied with some availability noted along Sherier Place and MacArthur Boulevard, but otherwise high occupancies throughout the remainder of the study area.

In addition to recording general parking occupancies, observations of vehicle tags were made to determine if those vehicles that were parking in the study area were local (with DC RPP Zone 3 permits), from other areas in the District, or from outside of the District. During both peak periods, the majority of vehicles parking on-street within the study area (61 percent during the weekday peak and 54 percent during the Saturday peak) displayed RPP Zone 3 permits, indicating that they were either neighborhood or nearby residents. However, a considerable percentage of vehicles parked within the study area included vehicle tags that were from outside of the District of Columbia (30 percent or more during both peak periods). Combined with the 9 to 13 percent of other District vehicles parked in the area, approximately 40 to 45 percent of the vehicles parked in the study area could be accounted for by vehicles not registered in the immediately surrounding area. As a result, this indicates that while most of the vehicles parking in the area could be local in nature and belonging to neighborhood residents, vehicles coming to the neighborhood from other areas make up a considerable percentage of those that are parking on the streets surrounding the Recreation Center.

	No DC Tags	RPP Z3	RPP Other	Other DC Tags	Total			
Weekday Occupancy	64	129	19	1	213			
Utilization by Tag	30%	61%	9%	0%	100%			
Saturday Occupancy	85	139	33	0	257			
Utilization by Tag	33%	54%	13%	0%	100%			

Table 3: Peak	Hour Parking	Occupancy by	Vehicle Tag

Several options are available to manage the supply and demand of parking within the neighborhood. Options to manage the demand on the on-street parking are as follows:

- Control demand of visitors to Palisades Recreation Center by limiting event size and participants.
- Schedule Recreation Center games and events to allow time between events for parking turnover.
- Provide parking permits for games and events within the parking lot that are time-based to ensure turnover in the Recreation Center parking lot.

Options to manage the on-street parking supply near the Palisades Recreation Center are as follows:

- Implement Resident-Only Zone 3 RPP areas on one side of Sherier Place and/or other streets within the vicinity of the Recreation Center.
- Provide off-site parking lots for the Recreation Center, preferably within walking distance, and recommend and publicize these off-site parking lots for event and game participants and attendees.
- Restripe and/or reconfigure the existing Recreation Center parking lot.
- Promote MacArthur Boulevard as a suitable alternative for Recreation Center parking to reduce traffic congestion and to preserve Sherier Place parking for neighborhood residents.



Figure 3: Weekday Peak Parking Utilization (Tuesday)



Figure 4: Weekend Peak Parking Utilization (Saturday)

The DC Zoning Regulations have identified the following off-street parking requirements for recreational facilities in the District. These requirements include the following:

- 5 parking spaces for each ball field
- 5 parking spaces for each basketball court
- 1 parking space for every 2 tennis courts
- 1 parking space for each 2,000 s.f. of gross floor area for public recreation center and community use

The Palisades Recreation Center consists of one soccer field, one baseball field, 3 tennis courts, and an 8,000 s.f. recreation building. These existing uses would generate a zoning parking requirement of 16 parking spaces.

With the proposed development of a 13,000 s.f. recreation building, the total zoning parking requirement for the center would increase to 19 parking spaces. The existing parking supply within the parking lot of 33 parking spaces would meet the zoning parking requirement. Under the Draft Zoning Rewrite Regulations, which are being considered by the Zoning Commission, the zoning parking requirement would be 0.5 spaces per 1,000 s.f. of the recreation building, with no provisions for parking for individual fields and courts. The proposed building development would require 7 parking spaces as part of the Draft Zoning Rewrite Regulations, which would be met by the existing parking lot.

3. CIRCULATION AND CAPACITY ANALYSIS ASSESSMENT

This section of the report focuses on the vehicular circulation and the impacts that vehicular traffic has on the local transportation network. The Palisades Recreation Center is accessed from Sherier Place between Edmunds Place and Dana Place via a driveway serving a parking area. Access to Sherier Place is provided directly from Arizona Avenue and from MacArthur Boulevard via Edmunds Place, Dana Place, and Cushing Place. As noted on Figure 5, all of the streets within the study area provide two-way circulation with most intersections operating under stop control. A traffic signal at the MacArthur Boulevard/Dana Place allows traffic exiting the neighborhood onto MacArthur Boulevard a controlled location. All streets within the study area are approximately 30 feet in width (with the exception of MacArthur Boulevard) and allow for parking on either side in addition to two-way traffic. Speed limits in the study area are posted or are otherwise regulated at 25 miles per hour. While the presence of parking on either side of these approximately 30 foot two-way streets does provide for some traffic calming in and of itself, the narrow nature of the streets can also cause congestion. A summary of the roadway conditions as described in DDOT's June 24, 2015 *Traffic and Parking Safety Review* is noted below on Table 4. The following sections describe the assessment of the circulation and capacity of the roadways within the study area.

Road	Direction	Roadway Width	Traffic	Parking
Macarthur Boulevard, N.W.	East-West	80 ft. (20 ft. median)	Two-Way	On-Street, Both Sides
Sherier Place, N.W.	East-West	30 ft.	Two-Way	On-Street, Both Sides
Edmunds Place, N.W.	North-South	30 ft.	Two-Way	On-Street, Both Sides
Dana Place, N.W.	North-South	30 ft.	Two-Way	On-Street, Both Sides

Table 4: Roadway Information Summary

2015 Existing Conditions Data Collection

The existing conditions in and around the Recreation Center were evaluated in order to provide a foundation for assessing the transportation implications of the proposed development. This is determined by examining the peak traffic hours, which are directly associated with the peaking characteristics of the Recreation Center as well as the adjacent transportation system. These peaking characteristics are found through analysis of existing count data.

Typically, DDOT and National standards require that traffic counts be conducted on a weekday, not including Monday or Friday, when traffic conditions can be described as "typical". This includes the consideration for adjacent uses, such as retail, special events, and recreation facilities and for major traffic generators, such as the area public school system or any large public or private institutions. As is the case with the Palisades Recreation Center, weekend and other off-peak periods can also be reviewed if the study area includes other uses that may be more active during other time periods.

The traffic counts are used to determine the "peak hour" of traffic within the study area and during the study period. According to the <u>Highway Capacity Manual</u> (HCM) methodologies, a one-hour analysis period is preferred. Analysis periods that exceed one hour are not usually used because traffic conditions are typically not steady for long time periods and because the adverse impact of short peaks in traffic demand may not be detected in a long time period. The "peak hour" represents the worst-case scenario, when the system traffic volumes are the highest during the study period. The use of a peak hours are used to ensure that conclusions regarding adverse impacts and their respective mitigation measures would apply to the vast majority of time roadways are used in the study area. Although there may be times when volume flows exceed these conditions, such as during special events, holiday weekends, or other times depending on the study area and site location, it is the industry standard to design transportation infrastructure for the typical peak times.

In order to ensure that the data collected contains the peak hour, traffic counts are taken for a period of several hours during the study periods. The counts are then analyzed to determine the one hour during the study period that contains the highest cumulative directional traffic demands. From each peak period count, the "peak hours" are determined by summing up the four fifteen-minute consecutive time periods in the study area that experience the highest cumulative traffic volumes. These "peak hours" are analyzed for the system of intersections investigated, choosing the "peak hour" of the entire system instead of each individual intersection.

Following the above guidelines, traffic counts, including vehicular and pedestrian volumes, were conducted by Gorove/Slade at the key study intersections between the hours of 4:00 and 7:00 PM on Tuesday, April 21, 2015 and between 9:00 AM and 5:00 PM on Saturday, April 18, 2015. These count dates represents "typical" days when activities were occurring at the Palisades Recreation Center. These "typical" weekdays also represent time periods that include normal operation for other major traffic generators in the study area. The results of the traffic counts are included in the Technical Attachments. The peak hours for the system of intersections being studied occurred between 5:30 and 6:30 PM on the weekday and between 12:45 and 1:45 PM on Saturday. Peak hour traffic volumes for the existing conditions are shown on Figure 6 for the weekday and Saturday peak hours.

2015 Existing Conditions Capacity Analysis

Intersection capacity analyses were performed at the intersections contained within the study area during the weekday and Saturday peak hours. *Synchro, Version 7.0* was used to analyze the study intersections based on the <u>Highway Capacity</u> <u>Manual</u> (HCM) methodology. The results of the capacity analyses are expressed in level of service (LOS) and delay (seconds per vehicle) for each approach. A LOS grade is a letter grade based on the average delay (in seconds) experienced by

motorists traveling through an intersection. LOS results range from "A" being the best to "F" being the worst. LOS E is typically used as the acceptable LOS threshold in the District; however, LOS F is sometimes accepted in urbanized areas.

The LOS capacity analyses were based on: (1) the peak hour traffic volumes; (2) the lane use and traffic controls; and (3) the <u>Highway Capacity Manual</u> (HCM) methodologies (using *Synchro 7* software). The average delay of each approach and LOS is shown for the signalized intersections, in addition to the overall average delay and intersection LOS grade. The HCM does not give guidelines for calculating the average delay for a two-way stop-controlled intersection, as the approaches without stop signs would technically have no delay.

Table 4 shows the results of the capacity analyses, including LOS and average delay per vehicle (in seconds) for the Existing conditions. These results show that intersections within the study area generally operate well from a capacity analysis standpoint. However, some delays exist during the weekday afternoon period for vehicles exiting Edmunds Place onto MacArthur Boulevard as well as westbound vehicles on Sherier Place as they approach Arizona Avenue.

2015 Existing Conditions Circulation Assessment

While the capacity analysis results for the study area reveal overall reasonable conditions, observations of traffic flow through the neighborhood noted congestion on some of the streets that are used for circulation to and from the Recreation Center. As mentioned previously, all streets within the study area are approximately 30 feet in width (with the exception of MacArthur Boulevard) and allow for parking on either side in addition to two-way traffic. While the presence of parking on either side of these approximately 30 foot two-way streets does provide for some traffic calming, the narrow nature of the streets can also cause congestion. The parking maneuvers, the circulation of vehicles, and the narrow widths of all of the residential streets create congestion issues on the streets themselves, and not necessarily at the intersections serving the local neighborhood. The 30-foot width of streets cannot serve two travel lanes and two parking lanes efficiently because it is simply not wide enough. An optimal roadway cross-section that would allow for comfortable two-way traffic and two parking lanes consists of two 10-foot travel lanes and two 8-foot parking lanes, which results in 36 feet. This 36-foot width highlights that the existing roadway cross-sections are approximately 6 feet short to efficiently provide for two travel lanes and two parking lanes. In order to address this situation, there are a few options to consider that can be accommodated within the existing 30' roadway width:

- Remove parking on one side of Sherier Place (two 10' travel lanes and one 8' parking lane = 28')
- Convert Sherier Place to one-way (one 10' travel lane and two 8' parking lanes = 26')

Given the demand for on-street parking in the area, the one-way conversion of Sherier Place was examined.

Potential Sherier Place One-way Circulation

Given the circulation concerns that were noted along Sherier Place in conjunction with regular activities at the Palisades Recreation Center, an alternative scenario that converted the section of Sherier Place between Edmunds Place and Dana Place from two-way operations to a one-way eastbound operation was considered. As noted previously, the circulation of vehicles throughout the neighborhood looking for on-street parking on the more narrow two-way streets contributes to increased congestion within the neighborhood. By limiting the portion of Sherier Place between Edmunds Place and Dana Place to one-way eastbound operation, additional space for vehicular maneuvering on Sherier Place immediately adjacent to the Recreation Center entrance would be made. In addition, a more consistent counterclockwise circulation pattern for all vehicles would be instituted, allowing vehicles the opportunity to return to MacArthur Boulevard at the traffic signal at Dana Place and limiting through vehicles along Sherier Place that may affect the neighborhood. The revised circulation and traffic control based on this scenario is shown on Figure 7.

The existing traffic volumes shown on Figure 6 were adjusted to reflect the modified circulation pattern through the neighborhood and are depicted on Figure 8. As with the existing conditions capacity analysis, *Synchro, Version 7.0* was used to analyze the study intersections based on the <u>Highway Capacity Manual</u> (HCM) methodology with the results of the capacity analyses expressed in level of service (LOS) and delay (seconds per vehicle) for each approach and shown on Table 4. While the results show that overall conditions are similar to those presented with the existing alignment, due to the reduction of northbound vehicles on Edmunds Place at MacArthur Boulevard, improvements for vehicles on this movements were noted. No significant improvement was noted for westbound vehicles on Sherier Place at Arizona Avenue since the delays experienced at this location are primarily due to the concentration of through volumes on Arizona Avenue rather than the vehicular volumes exiting from Sherier Place.

2015 Existing Conditions Circulation Assessment

As with the existing conditions scenario, the capacity analysis results only show one portion of the overall results. As mentioned previously, by limiting the peak circulation area to a one-way orientation, additional space for vehicle maneuverability in this area will improve congestion. In addition, the introduction of a one-way eastbound segment would discourage any cut through traffic that may use Sherier Place westbound to access Arizona Avenue. Finally, the introduction of the one-way segment could lessen peak hour traffic volumes on that segment of Sherier Place by approximately 25 percent in either peak period.

		Existing Alignment			One Way Alignment				
Intersection	Movement	W	eekday PM Peak	5	Saturday Peak	W	eekday PM Peak	5	Saturday Peak
MacArthur Boulevard	WB Left	А	0.3	А	0.8	А	2.0	Α	2.1
and Edmunds Place NW	NB	Е	38.5	В	12.9	D	25.2	В	12.4
MacArthur Boulevard	EB	В	13.4	В	10.9	В	13.3	В	10.7
and Dana Place NW	WB	В	14.5	В	10.7	В	14.2	В	10.6
	NB	С	24.2	С	24.7	С	24.8	С	26.4
	SB	С	26.8	С	25.6	С	26.8	С	25.6
	Overall	В	15.1	В	12.5	В	15.1	В	13.2
MacArthur Boulevard	WB Left	А	0.4	Α	0.5	А	0.0	А	0.1
and Cushing Place NW	NB	С	16.7	В	12.0	С	16.6	В	11.9
Sherier Place and	EB Left	Α	2.0	А	2.9	Α	2.0	А	2.9
Cushing Place NW	SB	А	8.6	Α	8.5	А	8.6	Α	8.7
Sherier Place and	EB Left	А	4.1	А	3.5	А	4.9	А	4.8
Dana Place NW	SB	А	8.8	Α	8.8	А	9.6	Α	9.6
Sherier Place and	WB Left	Α	3.0	А	3.9				
Rec Center Driveway	NB	А	9.1	А	9.4	А	8.9	А	9.1
Sherier Place and	EB Left	А	1.5	А	0.8	А	1.5	А	0.8
Edmunds Place NW	SB	А	9.5	Α	9.1	А	9.4	А	9.0
Sherier Place and	EB	D	30.7	С	22.5	D	31.0	С	22.4
Arizona Avenue NW	WB	F	87.6	D	33.7	F	99.3	D	34.4
	NB Left	А	2.7	А	0.3	А	2.7	А	0.3
	SB Left	А	0.1	А	0.5	А	0.1	Α	0.5

Table 5: Peak Hour Capacity Analysis Results

Sherier Place west of Edmunds Place could see reductions in peak hour traffic volumes by approximately 25 percent in either peak period while Sherier Place east of Dana Place could see reductions of approximately 30 and 20 percent during

the weekday and Saturday peak periods, respectively. This improvement as well as the implementation of traffic calming measures, reduced speed limits, and the addition of more pedestrian facilities as recommended in DDOT's June 24, 2015 *Traffic and Parking Safety Review* would improve the circulation of vehicles and safety of pedestrians through the study area. The DDOT study does not specifically address any mitigation of the impacts related to the proposed Recreation Center, but focuses on recommendations to help address existing conditions within the neighborhood, especially factors related to pedestrian safety.

The drawbacks associated with converting Sherier Place one-way eastbound between Dana Place and Edmunds Place is that it restricts westbound circulation for residents that live east of Dana Place. In order for those residents to access Arizona Avenue, they would be forced to divert to MacArthur Boulevard. Similarly, residents living west of Dana Place would be forced to use MacArthur Boulevard to access their homes if they are coming from the east. This potential circulation change would need to be further studied to determine the impacts of the proposal when the Recreation Center is not active or busy. This potential circulation change was geared to address the specific impacts associated with the peak demand of the Recreation Center, but can have impacts on the surrounding residences when the center is not open or active. This limited study shows that this proposal can have the potential to address the heavy circulation flows associated with the Recreation Center.



Figure 5: Existing Lane Use and Traffic Control



Figure 6: Existing Peak Hour Traffic Volumes



Figure 7: Modified Lane Use and Traffic Control



Figure 8: Adjusted Existing Peak Hour Traffic Volumes

4. CONCLUSIONS AND RECOMMENDATIONS

This report has presented the findings of a Traffic Operations and Parking Assessment for the streets surrounding the Palisades Recreation Center. Based on the analyses presented in this report, the following is recommended:

- Parking
 - On-street parking on the streets surrounding the Recreation Center is well utilized during the weekday and Saturday peak periods with approximately 40 to 45 percent of vehicles parking noted as being from outside of the surrounding neighborhoods.
 - Several options are available to manage the supply and demand of parking within the neighborhood. Options to manage the demand on the on-street parking are as follows:
 - Control demand of visitors to Palisades Recreation Center by limiting event size and participants.
 - Schedule Recreation Center games and events to allow time between events for parking turnover.
 - Provide parking permits for games and events within the parking lot that are time-based to ensure turnover in the Recreation Center parking lot.
 - Options to manage the on-street parking supply near the Palisades Recreation Center are as follows:
 - Implement Resident-Only Zone 3 RPP areas on one side of Sherier Place and/or other streets within the vicinity of the Recreation Center.
 - Provide off-site parking lots for the Recreation Center, preferably within walking distance, and recommend and publicize these off-site parking lots for event and game participants and attendees.
 - Restripe and/or reconfigure the existing Recreation Center parking lot.
 - Promote MacArthur Boulevard as a suitable alternative for Recreation Center parking to reduce traffic congestion and to preserve Sherier Place parking for neighborhood residents.
 - Control demand of visitors to Palisades Recreation Center by limiting event size and participants.
 - Schedule Recreation Center games and events to allow time between events for parking turnover.
 - Provide parking permits for games and events within the parking lot that are time-based to ensure turnover in the Recreation Center parking lot.
- Traffic Operations and Circulation
 - The presence of parking on either side of these approximately 30 foot two-way streets does provide for some traffic calming in and of itself, but the narrow nature of the streets also causes congestion for circulating vehicles. The optimal cross-section for two travel lanes and two parking lanes is 36 feet.
 - In order to address this sub-standard cross-section, two options include:
 - Remove parking on one side of Sherier Place (two 10' travel lanes and one 8' parking lane = 28')
 - Convert Sherier Place to one-way (one 10' travel lane and two 8' parking lanes = 26')
 - The implementation of traffic calming measures, reduced speed limits, and the addition of more pedestrian facilities as recommended in DDOT's June 24, 2015 *Traffic and Parking Safety Review* would improve the circulation of vehicles and safety of pedestrians through the study area, but doesn't necessarily address the impacts related to the Recreation Center.
 - Conversion of Sherier Place between Edmunds Place and Dana Place from two-way operations to one-way eastbound operations would improve circulation and maneuverability of vehicles immediately adjacent to the

Recreation Center, especially during peak activity times at the center. This potential modification does have the potential to address congestion issues related to the Recreation Center, but would need to be further studied to determine circulation impacts and inconveniences during Recreation Center non-peak times.