

Mitchell Park Library and Community Center Expansion

Transportation Impact Analysis

Prepared for
City of Palo Alto

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April 12, 2002

Intersection Operations Analysis

Due to the increase in traffic generated by the project, the need for exclusive left-turn lanes on Middlefield Road at the project driveway/Mayview Avenue was evaluated. The analysis results indicate that the current lane configuration on Middlefield Road with shared through/left-turn lane and permitted left turns would operate acceptably under project conditions with only short delays, reasonable queue lengths and no unusual safety hazard. Thus, separate left-turn pockets are not required on Middlefield Road.

The analysis indicates that the Middlefield Road driveway would operate acceptably with only a single lane in each direction. A driveway width of 26-30 feet is recommended.

Signal Warrant Analysis

The peak-hour volumes under project conditions at the project driveway intersection on E. Meadow Drive were evaluated to determine if the intersection would warrant signalization. The project volumes do not satisfy the peak-hour warrant. Therefore, the installation of a traffic signal at the unsignalized study intersection is not justified.

Project Roadway Analysis

The TIRE (Traffic Infusion on Residential Environments) analysis results for roadway segments are summarized in Table ES 2. Measured against the City of Palo Alto impact criteria, none of the study roadway segments would be significantly impacted by the project. All of the study roadway segments would operate at the same TIRE Index as under existing conditions. The estimated increase in roadway traffic volumes caused by the project will not be noticeable to the residents.

Transit, Bicycle and Pedestrian Analysis

The project site is well served by the existing transit routes in the vicinity. The Crosstown shuttle stops directly in front of the project site. Given the planned expansion of the Mitchell Park Library and Community Center and the popularity of the existing park facilities, it may be fitting to improve the amenities at this shuttle stop by providing a bench and/or shelter. One southbound through lane on Middlefield Road is blocked when the shuttle bus stops. This condition is acceptable given that the shuttle runs only twice per hour and through traffic would be able to proceed meanwhile in the second through lane. Thus, it is concluded that the proposed project would not have a significant adverse impact on transit service in the area.

Because a detailed site plan has not been finalized yet, an evaluation of pedestrian and bicycle circulation within the project site is not possible at this time. The ultimate site design should include pedestrian paths and bikeways that minimize conflicts with vehicular traffic, provide logical and direct pathways between building entrances, and connect building entrances and parking areas. Furthermore, pedestrian and bicycle pathways within the site should connect to the sidewalks and bike lanes on the adjacent public streets and the existing pathways through Mitchell Park. Bicycle parking should be provided according to zoning ordinance standards.

Parking Analysis

The project architects (Group 4 Architecture Research & Planning, Inc.) have estimated the parking requirements based on the City's zoning ordinance. Summing the requirements for the individual uses (120 spaces for the library, 135 spaces for the community center, 135 spaces for the park) yields a total of

Issues and Supporting Information Resources	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	1,3			X	

DISCUSSION:

The proposed expansion of the Mitchell Park Library and Community Center will relieve an existing overcrowded situation at both facilities. The new joint use facility will offer a greater potential for the integration of adjacent outdoor recreational uses with the Community Center programs. As the resource library for residents in the south section of Palo Alto, the new library will provide collections and programs to meet the projected population needs of this section of the City.

Mitigation Measures: None Required

O. TRANSPORTATION AND TRAFFIC

Issues and Supporting Information Resources	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	4			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	4			X	
c) Result in change in air traffic patterns, including either an increase in traffic levels or a	1				X

Bicycle and Pedestrian Analysis

A detailed site plan has not been finalized. The ultimate site design should include pedestrian paths and bikeways that minimize conflicts with vehicular traffic, provide logical and direct pathways between building entrances, and connect building entrances and parking areas. Furthermore, pedestrian and bicycle pathways within the site should connect to the sidewalks and bike lanes on the adjacent public streets and the existing pathways through Mitchell Park. Bicycle parking should be provided according to zoning ordinance standards.

Parking Analysis

The project architects (Group 4 Architecture Research & Planning, Inc.) have estimated the parking requirements based on the City's zoning ordinance. Summing the requirements for the individual uses (120 spaces for the library, 135 spaces for the community center, 135 spaces for the park) yields a total of 390 spaces. The peak parking demand was also estimated using survey data from the Main Library and Children's Library, and based on this data, a total of 448 parking spaces would be required to meet the peak parking demand for all uses at Mitchell Park. However, because Mitchell Park serves a different user group and the expanded library and community center will have unique operating characteristics not found at the other libraries within the City, the actual parking needs are uncertain. In such cases where insufficient data exists to establish the future parking needs, the City's Director of Planning and Community Environment may utilize Section 18.83.120(c) and Section 18.83.120(e) of the zoning ordinance to reduce (up to 20%) or defer (up to 50%) of the parking requirements.

The Comprehensive Plan, Policy L-76, encourages the evaluation of parking requirements and actual parking needs for specific uses and to develop a standard somewhere between average and peak conditions. Policy L-78 encourages development that creatively integrates parking into the project by providing for shared use of parking areas.

Impact:

The peak parking demand projected by the traffic analysis may create excess parking at the Mitchell Park site for the proposed new joint-use civic facility.

Mitigation Measures:

The City shall review the final conceptual plans, and based upon the specified program space of the civic facilities and the site plan provisions for bicycle, pedestrian and shuttle bus, allow a reduction of the parking requirement as provided for in the zoning ordinance, Section 18.83.120(c) or a possible deferment of parking space as provided for by Section 18.83.120(e).

Significance after Mitigation: Less than Significant

5. Conclusions

The potential impacts of the proposed expansion of the Mitchell Park Library and Community Center were evaluated in accordance with the standards set forth by the City of Palo Alto and the Congestion Management Program (CMP) of Santa Clara County. The study includes the analysis of weekday PM peak-hour traffic conditions for four intersections and two roadway segments.

The impacts of the project on intersections were identified on the basis of the following criteria: (1) the City of Palo Alto level of service standards and, (2) the Caltrans peak-hour volume signal warrant. Project impacts on roadway segments were identified based on the standards set forth by the City of Palo Alto. Other transportation facilities, including pedestrian and bicycle facilities, and transit service, were examined to determine if any adverse effects are possible.

The report also evaluates the parking requirements of the proposed project.

Project Impacts

It is recommended that the proposed project access on Middlefield Road be realigned to be directly opposite Mayview Avenue. The analysis of project traffic conditions reflects this change. Measured against the City of Palo Alto level of service standards, all the signalized study intersections would operate at acceptable levels (LOS D or better). None of the signalized study intersections would be significantly impacted by the project based on the City's impact criteria.

The current lane configuration on Middlefield Road with shared through/left-turn lane and permitted left turns would operate acceptably under project conditions with only short delays, reasonable queue lengths and no unusual safety hazard. Thus, separate left-turn pockets are not required on Middlefield Road.

The Middlefield Road driveway would operate acceptably with only a single lane in each direction. A driveway width of 26-30 feet is recommended.

The unsignalized study intersection at the project driveway on E. Meadow drive is expected to operate acceptably and does not warrant signalization.