



Memorandum

Date: February 5, 2019

To: Mr. Mike Lisenbee, David J. Powers and Associates, Inc.

From: Gary Black
Trisha Dudala

Subject: Parking Analysis for the Joint VMSC and YMCA in Redwood City, California

Hexagon Transportation Consultants, Inc. has completed a parking analysis for the proposed joint Veterans Memorial Building/Senior Center (VMSC) facility and YMCA facility on the 5.4-acre project site located at 1455 Madison Avenue within the Red Morton Community Park in Redwood City. The project site consists of the existing approximately 34,560 square-foot VMSC facility (which includes three buildings: a senior center with theater, resource building, and wellness center and offices), 17,175 square-foot Sid Herkner Pool facility, 3,500 square-foot NFL Alumni Building, surface parking, and landscaping (see Figure 1). The project proposes to demolish the existing buildings and surface parking lot on-site and construct a new VMSC and YMCA. The YMCA would relocate its operations from its existing Sequoia YMCA facility at Palm Park (located at 1445 Hudson Street, approximately 0.65 miles east of the project site) to the VMSC site. The proposed project would be implemented in two phases: Phase 1 would consist of the construction of the approximately 45,000 square-foot VMSC building on the eastern portion of the site, and Phase 2 would consist of the construction of the 35,000 square-foot YMCA on the western portion of the site. A site plan of the proposed project under full-buildout is shown on Figure 2.

Proposed On-site Parking

A surface parking lot for Phase 1 of the project is proposed east of the VMSC building and would have 57 vehicle parking spaces and 42 bicycle parking spaces.

Phase 2 would provide a new surface parking lot north of the proposed YMCA and a larger surface parking lot west of the YMCA. The surface parking lots would provide a total of 226 vehicle parking spaces and 11 motorcycle parking spaces. A total of 18 bicycle parking spaces are proposed at the front (north side) of the YMCA building.

After full build-out of the project, there would be a total of 283 vehicular parking spaces, 11 motorcycle parking spaces, and 60 bicycle parking spaces to accommodate the parking needs of both the VMSC and YMCA facilities.

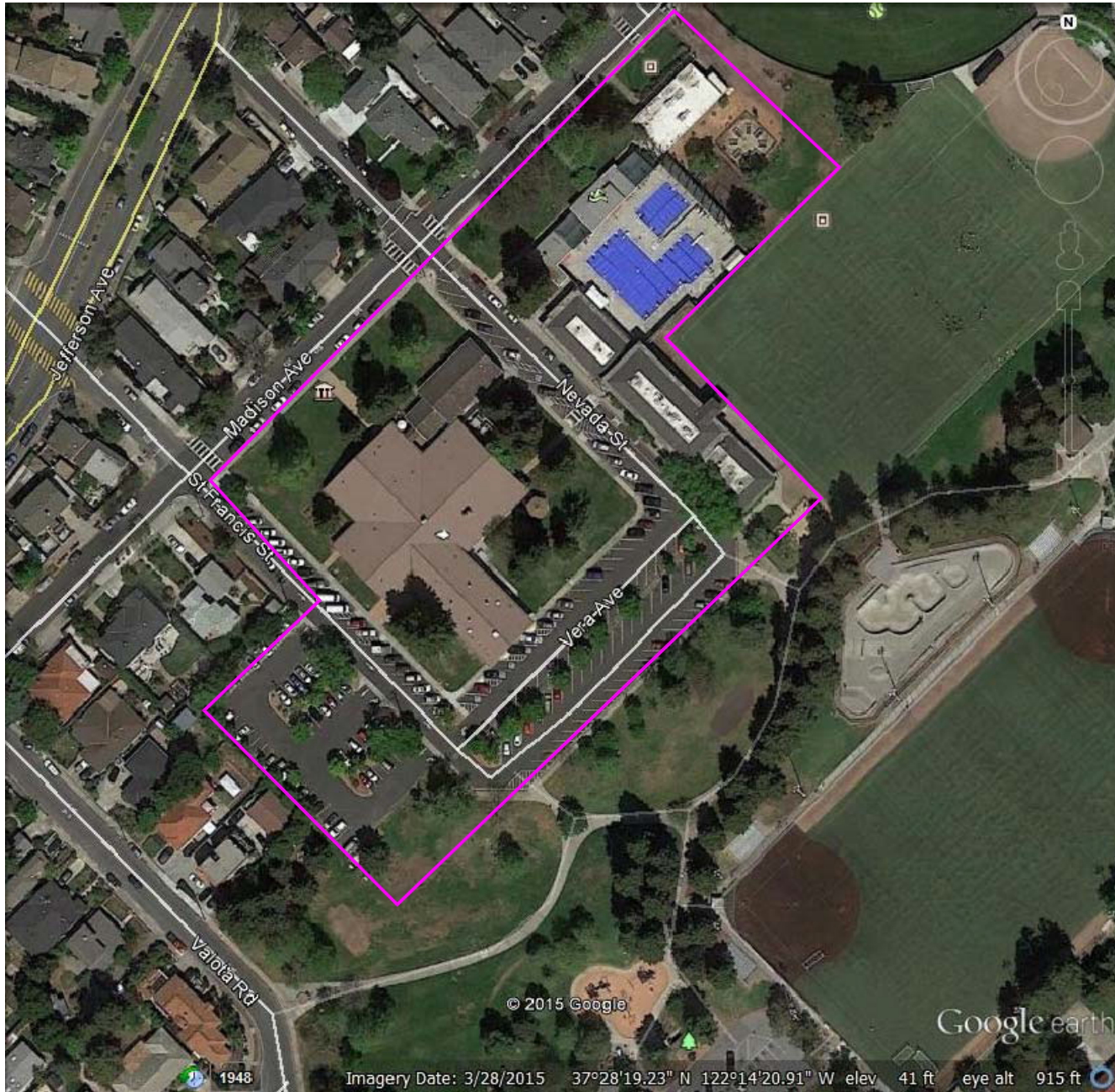


Figure 1
Proposed Project Site

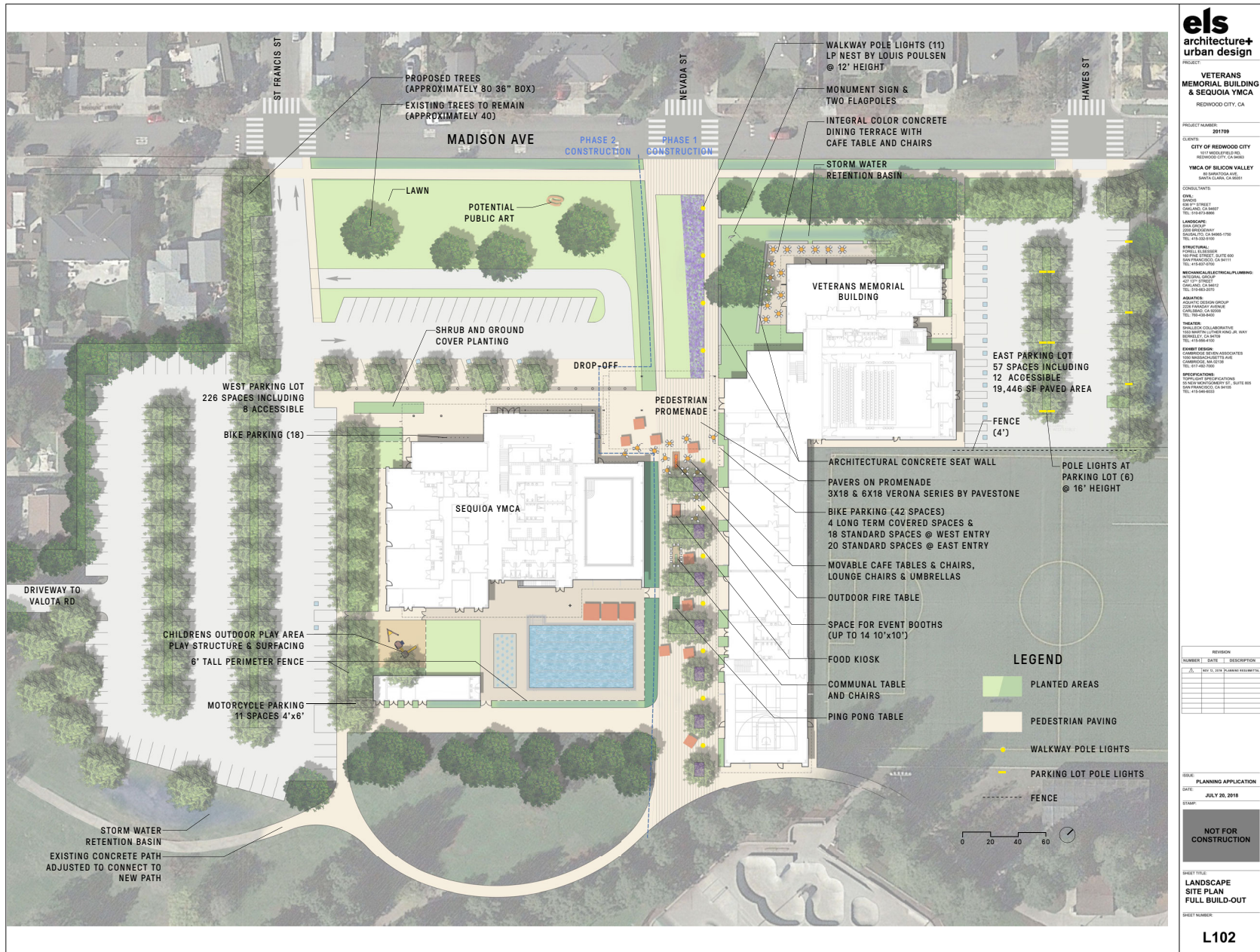


Figure 2
Project Site Plan

Parking Analysis

The Redwood City Zoning Code's requirements for parking do not specifically mention the type of land use that this project represents. Thus, it is not clear what the City's parking requirement for the project would be. It should be noted that the Senior Center operates two vans to provide transportation for patrons who are unable to drive, which reduces the amount of parking needed for the Senior Center component of the project.

An analysis of current parking demand was conducted at both the parking lots that surround the existing Senior Center in Red Morton Park and the Sequoia YMCA on Hudson Street. Parking counts were conducted on Saturday, April 1, 2017 and Tuesday, April 4, 2017 at both locations.

VMSC

At the parking areas surrounding the existing Senior Center, hourly counts of occupied parking spaces were conducted between 9:00 AM and 6:00 PM (9 hours). Unlike the counts conducted for trip generation purposes, the count included all parked vehicles, regardless of whether the vehicle's occupants were going to the Senior Center or one of the many other facilities in Red Morton Park. The count included all of the parking spaces on and adjacent to the loop formed by St. Francis Street, Vera Avenue, and Nevada Street around the existing Senior Center building. The parking areas in this study are within the project site outlined on Figure 1.

The peak weekday parking demand at the Senior Center parking areas occurred at 11:00 AM, with 118 parked vehicles (see Table 1). The peak Saturday parking demand occurred at 12 noon, with 174 parked vehicles. The parking survey data are attached.

The project would construct a new 45,000 square foot modern VMSC building that would replace approximately 55,235 square feet of existing uses (including the senior center, Herkner pool and the NFL building). Programs that seniors are receiving right now will continue at the new VMSC. Since the existing parking counts reflect parking demand generated by the existing VMSC building and many other facilities in Red Morton Park, it is likely that the parking demand for the new VMSC building would be less than what is observed for the existing site. However, for a conservative analysis it is assumed that the parking demand for the new VMSC building would be the same as the parking demand generated by the existing uses on site. Based on the parking survey, it is assumed that the peak parking demand for the new VMSC facility would be 118 vehicles during weekdays and 174 vehicles on weekends.

Sequoia YMCA

The hourly counts of parked cars at the Sequoia YMCA were conducted between 8:00 AM and 7:00 PM (11 hours) on both Saturday and Tuesday. The count included the parking areas in front of, next to, and in back of the YMCA building, as well as the three on-street parking spaces directly in front of the building. The peak weekday parking demand at the YMCA occurred at both 9:00 AM and 10:00 AM, with 64 parked vehicles at both times. This count represents 100% occupancy of all available spaces at the YMCA, with no vacant spaces available. In fact, four cars parked on-street in front of the building, where typically only three would be able to park. The peak Saturday parking demand occurred at 10:00 AM, with 62 parked vehicles (59 on-site and three on the street in front of the building). There was only a single unoccupied space at that time.

In general, it is not desirable to have 100% occupancy of a parking area, because it means that a new arrival has nowhere to park and would need to search for parking in the nearby residential neighborhood. The parking counts at the YMCA suggest that there is more parking demand than the existing facility is able to accommodate during at least a couple of hours in the morning on both weekdays and Saturdays. If someone parked a block or two away from the building and then walked to the YMCA, they would not be captured in this count. Further, if someone would like to attend an activity at the YMCA during the morning but chooses not to because they believe parking would be a hassle, the count would obviously not reflect such latent demand.

Table 1 – Estimated Parking Demand

Facility	Size	Peak Parking Demand			
		Weekday (occ. spaces)	Rate (per k.s.f.)	Weekend (occ. Spaces)	Rate (per k.s.f.)
Observed Parking Demand					
Senior Center/Red Morton Park ¹		118	-	174	-
Existing YMCA ¹	25.1 ksf	64	2.55	62	2.47
Proposed YMCA Expansion ²	9.9 ksf	26	2.55	25	2.47
Future Parking Demand, based on counts		208		261	
Increased YMCA Rate					
Senior Center/Red Morton Park ¹		118	-	174	-
Existing YMCA ³	25.1 ksf	75	3.00	75	3.00
Proposed YMCA Expansion ²	9.9 ksf	30	3.00	30	3.00
Future Parking Demand, higher YMCA rate		223		279	
Total Parking Needed for 90% Occupancy		248		310	
Notes:					
¹ Parking demand for the Senior Center and Existing YMCA based on parking counts conducted in April 2017.					
² Parking rate for expansion assumes the same parking rate as the existing YMCA.					
³ Parking rate of 3.0 is based on evidence of unmet parking demand at existing YMCA facility.					

In order to estimate parking demand at the proposed joint facility, the peak demand at each of the existing parking areas has been added together (see Table 1). It is assumed that the parking demand for the new VMSC building would not exceed the collective parking demand generated by the existing uses one site (the VMSC, Herkner Pool, NFL building and other facilities in Red Morton Park). Parking rates for the new YMCA facility were calculated by dividing the observed demand by the square footage of the existing facility (25,100 square feet). This rate was applied to the additional square footage (9,900 square) related to the expansion. As shown on Table 1, this results in a future estimated parking demand of 208 spaces on weekdays and 261 spaces on a Saturday. This estimate should be considered the low end of the likely demand, since it is clear that there is unmet demand for parking at the YMCA.

Although the magnitude of the unmet parking demand is difficult to quantify without survey data from YMCA patrons and the community, Hexagon developed a parking demand estimate based on a rate of 3.0 spaces per 1,000 square feet. Since the observed demand was approximately 2.5 spaces per 1,000 square feet on both the Tuesday and Saturday surveyed, a rate of 3.0 is 20% higher than the full occupancy that was observed. Applying this rate to the expansion results in a future parking demand of 223 spaces on weekdays and 279 spaces on a Saturday. The project proposes to provide a total of 283 vehicular parking spaces, which would meet this parking demand.

Parking facilities function best when they are about 90% occupied or less. A 90% occupancy rate means that new arrivals can be assured of finding a vacant space without a long search up and down drive aisles. This improves circulation within the parking areas because drivers need not block drive aisles while waiting for another driver to back out of a space or circle the same area looking for a recently vacated space. A 90% occupancy rate for the proposed facility would result in a need for 248 parking spaces on a weekday and 310 spaces on a Saturday. The parking demand for 310 spaces on a Saturday exceeds the proposed number of on-site parking by 27 spaces. In the event that parking demand exceeds 90% of the parking supply, some employees could be assigned to park at the Community Activities Building (CAB) or the Army National Guard facility. Also, the project will be required to implement a Travel Demand Management (TDM) Plan that would reduce the parking needs of the project. It is estimated that the parking demand could be reduced by at least 5%. In light of these factors, Hexagon finds that the proposed parking supply would be adequate.

Saturday - April 1, 2017

	Senior Center Lot	Senior Center On-Street Madison	YMCA Lots	YMCA On-Street - Only directly in front of YMCA	YMCA - % estimate that went to park
8AM			33	3	0
9AM	101	22	57	3	0
10AM	140	22	59	3	0
11AM	149	22	9	3	0
Noon	153	21	43	3	0
1PM	149	20	21	2	0
2PM	107	21	25	1	0
3PM	77	15	22	1	0
4PM	54	8	21	1	0
5PM	45	8	13	1	0
6PM	56	12	10	1	1
7PM			0	1	0

Tuesday - April 4, 2017

	Senior Center Lot	Senior Center On-Street Madison	YMCA Lots	YMCA On-Street - Only directly in front of YMCA	YMCA - % estimate that went to park
8AM			45	2	0
9AM	60	7	60	4	0
10AM	106	9	60	4	0
11AM	106	12	43	4	0
Noon	91	14	36	3	0
1PM	65	11	37	1	0
2PM	70	12	38	2	0
3PM	72	11	21	2	0
4PM	58	13	31	3	0
5PM	59	14	39	3	0
6PM	65	10	47	2	0
7PM			58	3	0