

Appendix F:
Parking Study

CRANE TRANSPORTATION GROUP

CARTAN FIELD MASTER PLAN PARKING STUDY

I. INTRODUCTION

This report has been prepared at the request of the Town of Atherton to detail the expected parking usage at the proposed 168-space parking lot that will be provided within Cartan Field after completion of the proposed Athletic Field Master Plan. It will include redevelopment of existing facilities and addition of new sports activities. Facilities will be used by both Menlo College and Menlo School. This new parking lot will replace an existing 65-stall parking facility that serves current field activities.

II. SUMMARY OF FINDINGS

1. January 2013 parking surveys at the existing 65-space Cartan Field parking lot showed minimal use during a weekday afternoon and up to about 50 percent use during a Saturday afternoon. The parking lot on the south side of Alejandra avenue across from Cartan Field was 69 to 83 percent occupied during the weekday afternoon surveys, and 50 to 59 percent occupied during the Saturday afternoon surveys.
2. The Cartan Field Master Plan's proposed 168-space parking lot should be adequate to accommodate spectator and coach parking demand for all combinations of future Menlo School and Menlo College sporting events, with the exception of college football games on five fall Saturdays.

III. MASTER PLAN/PARKING LOT DESCRIPTION AND ACCESS

Cartan Field is located in the northwest corner of the El Camino Real/Alejandra Avenue intersection (see **Figure 1**). The Cartan Field Master Plan will provide the following redeveloped or new facilities at Cartan Field.

- College and school baseball diamonds will remain in their existing locations, but be completely rebuilt.
- The multipurpose football/soccer/lacrosse field will be moved closer to El Camino Real and new spectator seating provided.

- A new swim facility and reconstructed tennis courts will be built. This will move swimming and water polo practice and events from the college campus to Cartan Field.
- A 168-space paved parking lot will be provided along Cartan Field's El Camino Real frontage. It will be accessed via the driveway along Alejandra Avenue now serving the exiting 65-space lot (which will be eliminated) and via a right turn entry/exit connecting to southbound El Camino Real at the north end of the field (about midway between the Spruce Avenue and Watkins Avenue intersections). The El Camino Real driveway will only be opened for major events (such as Saturday Menlo College football games) (see **Figure 2**).

IV. EXISTING MENLO COLLEGE/CARTAN FIELD JANUARY PARKING DEMAND

Hourly parking surveys were conducted by Crane Transportation Group at Cartan Field, all Menlo College parking lots and all nearby on-street parking locations on Tuesday, January 15, 2013 and Saturday, January 12, 2013. (See **Figure 3** for count locations.) Tuesday counts extended from 3:00 to 7:00 PM, while Saturday counts extended from noon to 5:00 PM. Tuesday count results are presented in **Table 1**, while Saturday count results are presented in **Table 2**. Menlo College and Menlo School were in regular session during both survey days.

WINTER WEEKDAY PARKING SURVEY RESULTS

- There was minimal parking at the Cartan Field lot during the five survey hours (9 out of 65 spaces maximum use).
- The lot across Alejandra Avenue from Cartan Field was up to 83% occupied (at 3:00 PM, 149 of 181 spaces were occupied).
- The lot internal to the college campus accessed via the parking area across Alejandra Avenue from Cartan Field was 90%+ full during most surveys.
- There was minimal on-street parking use along the east side of El Camino Real opposite Cartan Field during all survey hours.

Table 1
Cartan Field Weekday Parking Surveys
Tuesday, January 15, 2013

PARKING LOCATION	TOTAL SPACES	VEHICLES PARKED				
		3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM
<i>Parking Lots</i>						
1** Cartan Field	65	8	9	3	0	0
2A Across Alejandra from Cartan	116	89(1)*	83(1)	74(1)	70(1)	65
2B Across Alejandra from Cartan	65	60(1)*	58(1)	57(1)	60	60
3	34	33(6)*	31(6)	31(4)	31(3)	29(2)
4	69	46(2)*	43(2)	46(1)	48	47
5	108	50(1)*	47	45	59	57
6	48	45	39	39(1)	45	42
7	62	56(2)*	34(2)	34(2)	40(1)	32(1)
<i>On Street</i>						
[A] Alejandra adj to Cartan Field (El Camino Real to Brittany Meadows)	0	0	0	0	0	0
[B] Alejandra across street from Cartan Field (El Camino Real to Wunderlich Field)	14	14	14	12	14	12
[C] Alejandra – north side west of Brittany Meadows	22	7	6	2	2	2
[D] Alejandra – south side west of Wunderlich Field	37	6	5	0	0	0
[E] Brittany Meadows-entire length of street	15 (ES) 30 (WS)	0 0	0 1 (WS)	0 0	0 0	0 0
[F] El Camino Real east side (Encinal to Stone Pine)	7	0	0	0	0	0
[G] El Camino Real east side (Stone Pine to Alejandra)	5	2	2	2	2	2
[H] El Camino Real east side (Alejandra to Buckhorn)	4	1	1	1	2	2
[I] El Camino Real east side (Spruce to Watkins)	4	0	0	0	0	0
[J] Isabella Ave. south side (El Camino to Winchester)	6	0	0	0	0	0
[K] Isabella Ave. north side (El Camino to Winchester)	5	1	0	0	0	0
[L] Isabella Ave. south side (Winchester to Spencer)	12	0	0	0	0	0
[M] Isabella Ave. north side (Winchester to Spencer)	7	2	2	0	0	0

* (X) = cars parked illegally

** See Figure 1 for parking lot locations.

Source: Crane Transportation Group

Table 2
Cartan Field Weekday Parking Surveys
Saturday, January 12, 2013

PARKING LOCATION	TOTAL SPACES	VEHICLES PARKED					
		NOON	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM
Parking Lots							
1** Cartan Field	65	15	32	38	29	10	3
2A Across Alejandra from Cartan	116	50	55	49	50	40	39
2B Across Alejandra from Cartan	65	55	52	51	54	49	48
3	34	24	25	29	26	29	29
4	69	37	42	39	29	30	25
5	108	21	19	20	16	18	18
6	48	44	44	44	44	31	17
7	62	28	34(2)*	39(3)*	28(2)*	27(1)	13
On Street							
[A] Alejandra adj to Cartan Field (El Camino Real to Brittany Meadows)	0	0	0	0	1	0	0
[B] Alejandra across street from Cartan Field (El Camino Real to Wunderlich Field)	14	12	14	14	13	14	12
[C] Alejandra – north side west of Brittany Meadows	22	1	1	1	1	1	1
[D] Alejandra – south side west of Wunderlich Field	37	1	0	0	1	1	0
[E] Brittany Meadows-entire length of street	15 (ES) 30 (WS)	0 0	0 0	0 0	0 0	0 0	0 0
[F] El Camino Real east side (Encinal to Stone Pine)	7	0	0	0	0	0	0
[G] El Camino Real east side (Stone Pine to Alejandra)	5	2	3	3	2	2	2
[H] El Camino Real east side (Alejandra to Buckhorn)	4	0	1	1	1	1	1
[I] El Camino Real east side (Spruce to Watkins)	4	0	0	0	0	0	0
[J] Isabella Ave. south side (El Camino to Winchester)	6	1	1	1	1	1	0
[K] Isabella Ave. north side (El Camino to Winchester)	5	0	0	0	0	2	0
[L] Isabella Ave. south side (Winchester to Spencer)	12	0	0	0	1	0	0
[M] Isabella Ave. north side (Winchester to Spencer)	7	0	1	0	0	0	0

* (X) = cars parked illegally

** See Figure 1 for parking lot locations.

Source: Crane Transportation Group

WINTER SATURDAY PARKING SURVEY RESULTS

- The Cartan Field lot was lightly used at noon as well as at 4:00 and 5:00 PM (\pm 20% or less of the spaces utilized). Maximum parking was at 2:00 PM with 56% or 38 spaces occupied.
- The lot across Alejandra Avenue from Cartan Field was 55-59% occupied from noon to 3:00 PM (with 100 to 107 spaces used) and then about 50% occupied at 4:00 and 5:00 PM (with about 90 spaces used).
- There was minimal on-street parking use along the east side of El Camino Real opposite Cartan Field during all survey hours.

V. EXISTING PARKING DEMAND DURING A FALL COLLEGE FOOTBALL GAME SATURDAY

Surveys were conducted on Saturday, November 10, 2012¹ of parking demand related to a Menlo College home football game that started at noon. Parking use was counted in the Cartan Field lot as well as in the parking lot on the south side of Alejandra Avenue opposite Cartan Field. The Cartan Field lot's 65 spaces were fully occupied by 11:20 AM, and the lot on the opposite side of Alejandra Avenue was fully occupied by 11:45 AM. Attendees also parked in the central campus lots accessed via the El Camino Real/Encinal Avenue intersection, at an office building lot on the east side of El Camino Real near Alejandra Avenue (1550 El Camino Real), and on-street.

V. EXPECTED INCREASE IN CARTAN FIELD PARKING DEMAND WITH PROPOSED PROJECT

Menlo School and Menlo College administrators have provided detailed projections of the increased parking demand that would be expected at the new 168-space Cartan Field parking lot after completion of the Master Plan. Results are presented for each school and college sports activity that now uses or will use Cartan Field parking. Findings are separated into the net new vehicle expected to access the college or school associated with increased game or sport spectator attendance, as well as the shifting in existing spectator and coach parking from other on-campus parking lots or from other parking areas near campus. **Tables 3 and 4** present the increased Cartan Field parking demand due to Menlo School and Menlo College activities, respectively. Also presented in each table are the season(s), days of the week and times during the day of individual sport increased parking demand.

¹ Traffic count of November 10, 2012 Menlo College football game at Cartan Field by Hexagon Transportation Consultants, November 16, 2012 Memo Report.

Table 3
Menlo School
Changes in Parking Demand & Traffic Activity at Cartan Field

Activity	Change in Parking Location	Change in # of Vehicles To/From Campus using Cartan Field Lot	# Vehicles Changing Parking Location on Campus to Cartan Field Lot	# Week-days	# Satur-days	Weekday Times		Saturday Times	
						In	Out	In	Out
HS Football Games-Fall (Spectator Parking)	No – Existing & Future at Cartan	+ 2	0	10	0	2:30-3PM	6-6:30PM	—	—
MS Baseball Games-Spring (Spectator Parking)	No – Existing at Cartan	+2	0	4	0	4:30-5PM	7-7:30PM	—	—
HS Baseball Games-Spring (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+3	0	24	6	2:30-3PM	6-6:30PM	10:30-11AM	2-2:30 PM
HS Summer Baseball Practice (Coaches Parking)	No – Not an Existing Activity	+10	0	18	0	3:30-4PM	7-7:30PM	—	—
HS Summer Baseball Games (Spectator/Coaches Parking)	No – Not an Existing Activity	+20	0	0	6	—	—	10:30-11AM	2-2:30 PM
HS F/S Soccer Games-Winter (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+2	0	11	5	3:30-4PM	6-6:30PM	12:30-1PM	3-3:30 PM
HS Varsity Soccer Games-Winter (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+2	0	11	5	2:30-3PM	5-5:30PM	10:30-11:00AM	1-1:30 PM
HS F/S Lacrosse Games-Spring (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+2	0	14	6	4:30-5PM	7-7:30PM	1:30-2PM	4-4:30 PM
HS Varsity Lacrosse Games-Spring (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+3	0	14	6	2:30-3PM	5:30-6PM	11:30AM-Noon	2:30-3 PM
HS Swim Meets-Spring (Spectator Parking)	No – Existing & Future at Cartan	+ 5	0	4	1	2:30-3PM	6-6:30PM	8:30-9AM	2-2:30 PM
HS Swim Practice-Spring (Coaches Parking)	Yes – Main Lot to Cartan	0	+ 3	70	4	2:30-3PM	6-6:30PM	8:30-9AM	11-11:30 AM
HS F/S Water Polo Games-Fall (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+2	0	12	0	4:30-5PM	7-7:30PM	—	—
HS Girls Water Polo Practice-Fall (Coaches Parking)	Yes – Main Lot to Cartan	0	+ 2	70	5	2:30-3PM	5-5:30PM	10:30-11AM	1-1:30 PM
HS Boys Water Polo Practice-Fall (Coaches Parking)	Yes – Main Lot to Cartan	0	+ 4	70	5	4:30-5PM	6:30-7PM	8:30-9AM	11-11:30 AM
HS Varsity Water Polo-Fall (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+2	0	8	4	2:30-3PM	5-5:30 PM	11AM(2) 9AM(2)	1PM(2) 5PM(2)
HS Track Meets-Spring Eliminated (Spectator Parking)	No – Existing at Cartan	(- 75)	0	3	0	2:30-3PM	6-6:30PM	—	—
HS Tennis Matches-Spring/Fall (Spectator/Coaches Parking)	No – Existing & Future at Cartan	+1	0	32	0	2:30-3PM	6-6:30PM	—	—

Table 4
Menlo College
Changes in Parking Demand & Traffic Activity at Cartan Field

Activity	Change in Parking Location	Change in # of Vehicles To/From Campus	# Vehicles Changing Parking Location on Campus	# Weekdays	# Saturdays	Weekday Times		Saturday Times	
						In	Out	In	Out
Baseball Games-Spring (Spectators)	Yes + New Cars to Cartan Field	+ 5	+50	11-13	9-11	3:30-4PM	6:30-7PM	11:00 AM-Noon	3:00-4PM
Football Games-Fall (Spectators)	Yes + New Cars to Cartan Field	+ 10	+100	0	5	games on weekends	games on weekends	10AM-Noon	4-5PM
Men's Soccer Games-Fall (Spectators)	Yes + New Cars to Cartan Field	+ 3	+30	2	5-7	3:30-4PM	6-6:30PM	2-3PM	5-6 PM*
Women's Soccer Games-Fall (Spectators)	Yes + New Cars to Cartan Field	+ 3	+30	2	5-7	3:30-4PM	6-6:30PM	Noon-1PM	3-4 PM*

* Women's and men's soccer games are typically on the same Saturdays (women start at 1 PM and men at 3 PM).

MENLO SCHOOL INCREASED CARTAN FIELD PARKING DEMAND

As shown in **Table 3** for Menlo School sporting activities, existing sport increases in parking demand would be small, with most new demand being five or fewer vehicles parking at Cartan Field. In addition, there would be very few instances of net new parking demand from new sports occurring at the same time. An overlap in coaches parking for girls and boys water polo practice would be the maximum net new increase in parking expected for existing activities (total 6 new vehicles parked for less than an hour, transferring from on-campus parking lots). On the other hand, three existing track meets, which have filled the existing Cartan Field parking lot, will be eliminated. Menlo School is proposing summer baseball practice on 18 weekdays and six games on six Saturdays. These will be new activities. The practice sessions are projected to result in 10 new vehicles parked, with the six games resulting in 20 new vehicles parked.

MENLO COLLEGE INCREASED CARTAN FIELD PARKING DEMAND

As shown in **Table 4**, Menlo College sporting activities would be expected to produce the largest increase in demand for parking at the new Cartan Field lot. The greatest demand would come during the five fall Saturday football games, when the lot would be full. About 100 vehicles now parking in other campus lots south of Alejandra Avenue or across El Camino Real should be attracted to the new facility. There also would be an expected natural increase in football spectators over time, which is projected to add another 10 vehicles entering the lot during the peak pre-game traffic hour.

College baseball games are projected to result in the second highest parking demand at the new Cartan Field lot, with up to 50 vehicles now parking in other campus lots south of Alejandra Avenue attracted to the new parking facility. An increase of about five net new spectator

vehicles would also be expected over time. There would be 11 to 13 baseball games during weekday afternoons (4:00 to 6:30 PM), with 9 to 11 games on spring Saturdays (from noon to 3:00 PM). The sport with the third highest parking demand would be either men's or women's soccer in the fall, with up to 30 vehicles now parking in other campus lots south of Alejandra Avenue attracted to the new parking facility. An increase of about three net new spectator vehicles would also be expected over time. There would be a total of two men's and two women's soccer games on weekday afternoons (4:00 to 6:00 PM), with 5 to 7 men's and 5 to 7 women's soccer games on Saturdays (1:00 to 3:00 PM for women's games and 3:00 to 5:00 PM for men's games). There would be an overlap in parking demand for the two games on Saturdays around 2:30 to 3:30 PM.

VI. MAXIMUM POST-PROJECT PARKING DEMAND IN NEW CARTAN FIELD LOT

Table 5 presents maximum expected parking demand at the proposed Cartan Field 168-space parking lot for spring and fall weekday afternoons and for Saturday sports activities. As shown, the only times that the new parking lot should be full, assuming the lot is reserved for spectators and coaches only, would be on the five fall Saturday afternoons with home college football games. Based upon event attendance projections by Menlo School and Menlo College, there should always be empty spaces available at the lot during spring, winter and fall weekdays and during all Saturdays other than in the fall when there are college football games in progress. Projections assume multiple sporting events are occurring during each non football game day, the 65 spaces being transferred from the existing lot to the new lot are now in full use and will continue to be in full use during multiple sporting events (a conservative assumption that they are all now in full use), and that spaces in the new lot will only be used by spectators and coaches.

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Table 5
Projected Parking Demand at New Cartan Field Parking Lot
(168 Total Spaces)

SPRING WEEKDAY

Activity	Parking Demand				
	3PM	4PM	5PM	6PM	7PM
Existing Usage*	20	65	65	65	10
College Baseball Game	10	55	55	55	10
HS Swim Meet	5	5	5	5	0
Total Spaces Used	35	125	125	125	20

FALL WEEKDAY

Activity	Parking Demand				
	3PM	4PM	5PM	6PM	7PM
Existing Usage*	30	65	65	65	10
College Men's or Women's Soccer	5	33	33	33	5
HS Boys Water Polo Practice	0	1	4	4	4
Total Spaces Used	35	99	102	102	19

SPRING SATURDAY

Activity	Parking Demand					
	Noon	1PM	2PM	3PM	4PM	5PM
Existing Usage*	30	65	65	65	65	65
College Men's Soccer	0	0	10	33	33	33
College Women's Soccer	10	33	33	33	10	0
HS Water Polo	2	2	0	0	0	0
Total Spaces Used	42	100	108	131	108	98

FALL COLLEGE FOOTBALL SATURDAY

Activity	Parking Demand					
	Noon	1PM	2PM	3PM	4PM	5PM
Existing Usage*	65	65	65	65	15	5
College Football Game	103	103	103	103	20	5
Total Spaces Used	168 (lot full)	168 (lot full)	168 (lot full)	168 (lot full)	35	10

* Existing 65 spaces projected to be fully used during games.

Source: Crane Transportation Group