

TECHNICAL MEMORANDUM

Project: Westlake Avenue North On-Street Parking Study

Subject: Summary of Findings and
Recommended Parking Management Measures

Date: February 3, 2006

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Heffron Transportation, Inc. performed detailed parking inventories and parking utilization surveys in Spring and Summer 2005 along Westlake Avenue N from just north of Valley Street to just south of the Aurora Bridge. The purpose of these surveys was to document how often and for how long parking is used by area employees, customers, and residents. The data and analysis were presented in a Technical Memorandum *Westlake Avenue North On-Street Parking Study, Spring and Summer Results*, (Heffron Transportation, January 18, 2006).

Summary of Parking Survey Findings

Parking data were collected mid-week on May 24, 25, and 26, 2005 and mid-week on August 9, 10, and 22, 2005. Parking activity was surveyed by recording license plate numbers by stall at 30-minute intervals with one pass-through at 5:00 A.M. and then continuous data collection from 8:00 A.M. to 8:00 P.M. The data collection provided information on utilization, compliance by parking restriction type, and average parking duration. The study area was along Westlake Avenue N from the south end at Broad Street to the north at Discount Divers supply, under the Aurora Bridge. The inventory for the study area is summarized in Table 1. The map codes refer to segmented areas shown on the attached Figures 1A and 1B (attached).

Peak parking utilization is summarized in Table 2. Parking utilization measures the percentage of spaces that were occupied. This was measured every 30 minutes during each season surveyed. Detailed utilization charts by hour and season are summarized in the *Spring and Summer Results* technical memorandum. The practical capacity for parking is defined at 85% utilization, which provides a “cushion” in excess of necessary parking spaces to allow for the dynamics of vehicles parking (i.e., circulating in search of a space, and moving in and out of parking space). When occupancy exceeds the practical capacity, drivers will experience delays and frustration while searching for a parking space, as well as contribute to area traffic congestion while circling the block looking for parking. Practical capacity is used to determine the adequacy of a parking system. The City of Seattle considers utilizations above about 80% to be the threshold where additional parking management tools should be implemented. When utilization rates reach approximately 70%, the area is a candidate for additional parking management measures so that parking management tools are implemented before parking reaches capacity. Table 2 shows that most of the study area's south end had parking utilization rates that were above 90%; many areas are 100% utilized during the peak. The peak occurred midday in every area of the corridor; very high utilization rates occurred between 9:00 A.M. and 4:00 P.M. All areas had peak parking utilization rates above 70%. These high utilization rates likely deter short-term discretionary trips, such as customers to the area's retail businesses and restaurants.

Table 1. Westlake Avenue N Parking Inventory

Street Segment	Adjacent Activity	Map Code	One-Hour	Two-Hour	Un-restricted ²	Other ³	Total Space
Broad Street to Highland Drive	South Lake Union Park, tourism (Kenmore Air, Argosy)	A,B,C	--	57	123	3	183
Highland Drive to Discovery Yachts	Restaurant and office	D,E,F	6	61	162	9	238
Driveway at Discover Yachts to Newton Street	Office on both sides of Westlake, Sundance Sales, and parking in drive aisle	G,H,N	--	16	214	19	249
Newton Street to McGraw Street	Westlake Marina, China Harbor Restaurant, Landings, parking in drive aisle Apartments on west side	I,J,O	8	26	174	12	220
McGraw Street to Holiday Street	Yacht and marine supplies, house boats	K,L	--	--	181	9	190
Holiday Street to location of Discount Drivers Supply	Marine industrial, and retail	M	--	--	182	7	189
Total			14	160	1,036	59	1,269

Source: Heffron Transportation, Inc., and Operations Management Group, Inc. May 2005

1. *Parking inventory at 1:00 P.M. reflecting daytime hours.*
2. *Unrestricted spaces do not include spaces occupied by dumpsters.*
3. *Other spaces include load/unload, disabled parking spaces, and spaces occupied by dumpsters.*

Table 2. Westlake Avenue N – Peak Parking Utilization

Street Segment	Adjacent Activity	Subarea (Map Code)	Peak Utilization by Type of Parking		
			1-hour Parking	2-hour Parking	Unrestricted Parking
Broad Street to Highland Drive	South Lake Union Park, tourism (Kenmore Air, Argosy)	A,B,C	--	100%	100%
Highland Drive to Discovery Yachts	Restaurant and office	D,E,F	100%	100%	100%
Driveway at Discover Yachts to Newton Street	Office on both sides of Westlake, Sundance Sales, and parking in drive aisle	G,H,N	--	100%	96%
Newton Street to McGraw Street	Westlake Marina, Chinatown, Landings, parking in drive aisle Apartments on west side	I,J,O	100%	100%	92%
McGraw Street to Holiday Street	Yacht and marine supplies, house boats	K,L	--	--	77%
Holiday Street to location of Discount Drivers Supply	Marine industrial, and retail	M	--	--	70%

Source: Heffron Transportation, Inc., and Operations Management Group, Inc. May and August 2005

Table 3 summarizes the typical parking duration for areas along the corridor. The findings determined that the duration did not vary substantial for the different types of signed parking restrictions. There were many vehicles that parked for one or two hours that parked in unrestricted spaces, and many vehicles that parked over time limits in the one and two-hour parking spaces. The table below summarizes the average parking duration independent of the type of parking restriction.

Table 3. Westlake Avenue N - Parking Duration Summary

Street Segment	Adjacent Activity	Subarea (Map Code)	% of Vehicles Parked		
			< 2 Hours	2 – 4 Hours	> 4 Hours
Broad Street to Highland Drive	South Lake Union Park, tourism (Kenmore Air, Argosy)	A,B,C	55%	20%	25%
Highland Drive to Discovery Yachts	Restaurant and office	D,E,F	64%	16%	20%
Driveway at Discover Yachts to Newton Street	Office on both sides of Westlake, Sundance Sales, and parking in drive aisle	G,H,N	52%	16%	32%
Newton Street to McGraw Street	Westlake Marina, Chinatown, Landings, parking in drive aisle Apartments on west side	I,J,O	64%	15%	21%
McGraw Street to Holiday Street	Yacht and marine supplies, house boats	K,L	53%	16%	31%
Holiday Street to location of Discount Drivers Supply	Marine industrial, and retail	M	56%	19%	25%

Source: Heffron Transportation, Inc., and Operations Management Group, Inc. May and August 2005

Recommended Parking Management Measures

Based on the findings from the parking surveys, parking management is needed in the Westlake Avenue N corridor. Parking management should seek to accomplish the following:

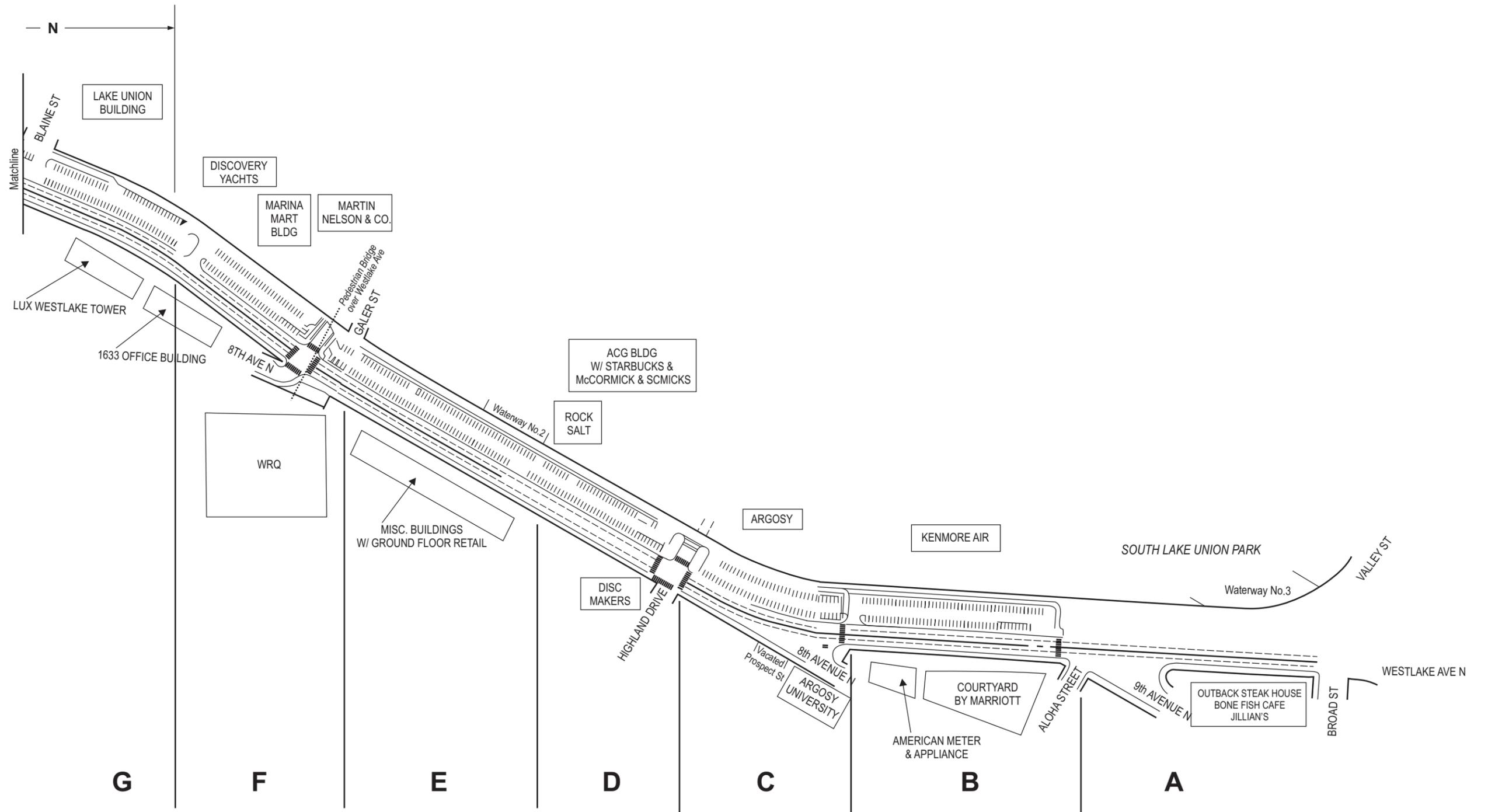
- Reduce parking utilization so that it is easier for employees and customers to find parking in this corridor. There are many areas where peak parking utilization now reaches 100%.
- Allow a mix of parking durations. The survey results show that a mix of short-term, medium, and long-term parking is needed in the corridor. In addition, there are recreational uses for which parking duration up to the City’s allowed maximum of 72 hours may be necessary.
- Accommodate residential parking needs. Most of these residential needs are clustered at the north end where there are houseboats on the east side of the corridor, and near Crockett Street where there are apartments on the west side of the corridor. Residential parking may also be needed for live-aboards in the area’s marinas.

To accomplish the above goals the following measures are recommended:

1. Implement paid parking along the corridor by installing parking pay stations. The technology could be the pay-and-display type system used elsewhere in the city or new pay-by-space machines. Pay-by-space technology, where patrons pay for their designated parking space at a kiosk, should be actively considered because of the ease of parking enforcement through this long and skinny corridor. The different payment technology would also prevent patrons from transferring their paid parking time from the likely lower per hour rate on Westlake Avenue North to other areas with higher parking per hour rates.
2. Impose parking fees that reflect market conditions in the corridor. The fee would apply to vehicles and motorcycles, but not to vehicles with disabled parking permits or loading activities (as in the rest of the city). Current off-street parking rates in the corridor range from \$5.00 to \$8.00 per day, the equivalent of a flat rate of about \$0.75 to \$1.00 per hour. Because this is different than City's established rate of \$1.50 per hour, changes in the Seattle Municipal Code to allow variable or lower rates may be required. A long-term rate that is higher than the existing off-street parking rate may help shift some employee parking to off-street lots, which would reduce parking utilization and make more parking available for short-term customer use. The City should monitor utilization and adjust the fee as needed to achieve approximately 85% optimum parking utilization (similar to discussions with respect to the South Lake Union On-street Parking Plan).
3. Work with area businesses to determine if select areas should retain a two-hour parking limits to serve customer needs.
4. Allow up to 72-hour parking for long-term recreational use. This parking should also be paid parking, and the rate should not be less than the cost for three days at the standard rate. These 3-day permits should not be transferable to other areas of the city. Changes to existing City code are likely required to allow 3-day permits.
5. Implement a restricted parking zone (RPZ) that allows residents to park in designated areas along the corridor without an hourly parking fee. The residential area adjacent to Westlake Avenue North is likely too small to be considered for an RPZ under the City's current requirements. Consequently, changes in the City's policies likely would be required to establish an RPZ in this mixed-use zone.
6. Increase Parking Enforcement Officers resources (PEOs) to enforce new parking management controls along the corridor.
7. Investigate street-use permitting associated with dumpsters in the corridor and their effect on parking utilization. If pay-by-space technology is used, the dumpsters should be located in designated areas, unlike the current condition where they are moved from space to space when unloaded.
8. Retain designated spaces for vehicles with disabled parking permits and load zones in their current locations.

MCH/mch

Attachments: Figure 1A and 1B – Study and Inventory Areas

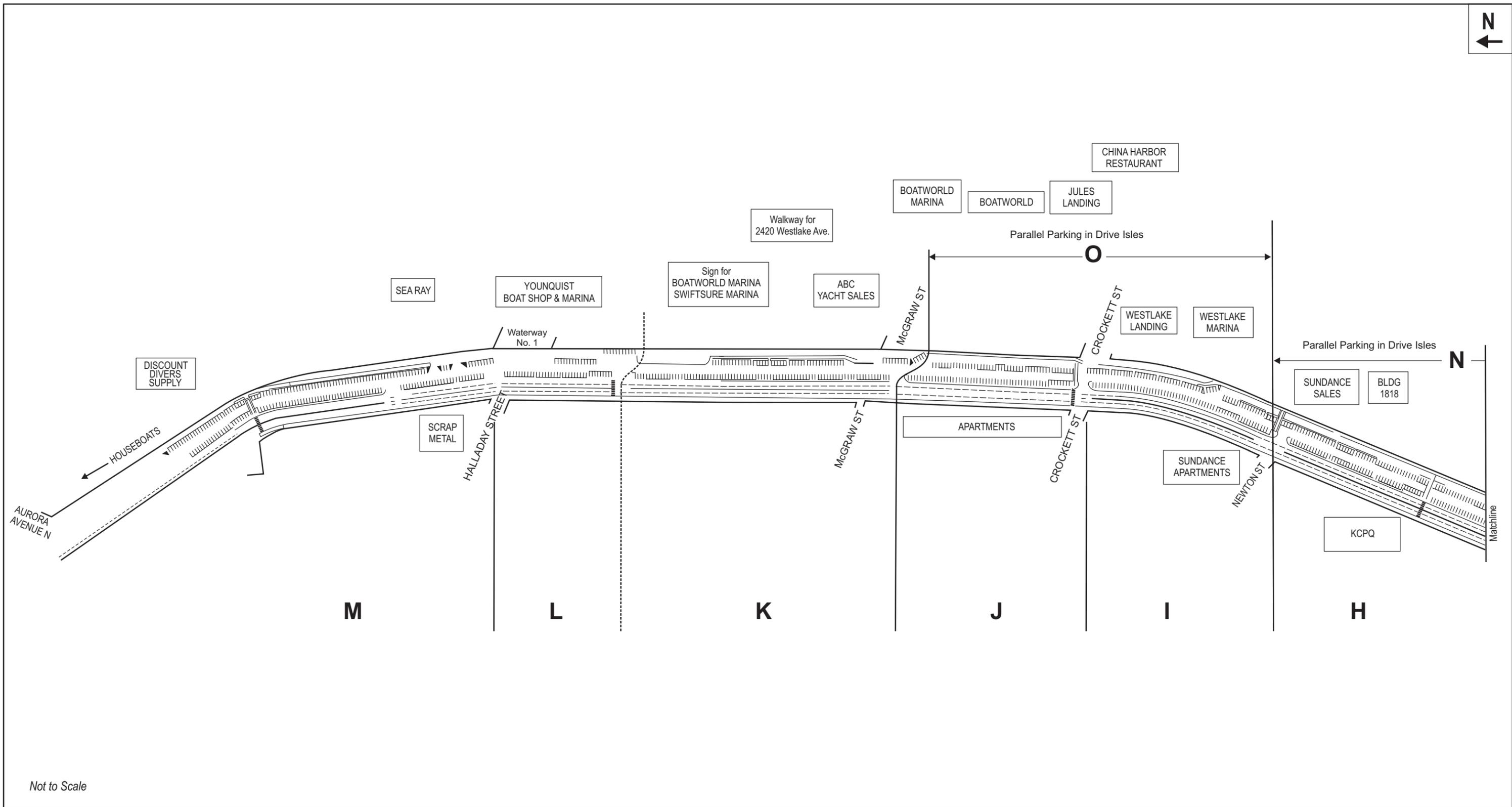


Not to Scale

**WESTLAKE AVENUE NORTH
PARKING STUDY**

Figure 1A
Study and Inventory Areas
South Half of Corridor





Not to Scale

WESTLAKE AVENUE NORTH PARKING STUDY

Figure 1B
Study and Inventory Areas
North Half of Corridor