City of Huntington Beach Planning and Building Department
STUDY SESSION REPORT

TO: Planning Commission
FROM: Scott Hess, AICP, Director of Planning and Building
BY: Tess Nguyen, Associate Planner TN
DATE: June 8, 2010

SUBJECT: **ENTITLEMENT PLAN AMENDMENT NO. 09-009 (AMENDMENT TO CONDITIONAL USE PERMIT NO. 08-013 AND VARIANCE NO. 08-007), TENTATIVE PARCEL MAP NO. 09-079, CONDITIONAL USE PERMIT NO. 10-005, VARIANCE NO. 10-001 (BEACH PROMENADE COMMERCIAL CENTER PHASE 2)**

APPLICANT: Bill Holman, WDH Consulting Services, 21190 Beach Boulevard, Huntington Beach CA 92648

PROPERTY OWNERS: Bijian Sassounian, 21190 Beach Boulevard, Huntington Beach CA 92648
James Diebold, PNS Stores, Inc., 300 Philipi Road, Columbus OH 43228
Phillip Silver, Sigma Enterprises, Inc., 111 S Kraemer Blvd #C, Brea CA 92821

LOCATION: 21022-21190 Beach Boulevard, 92648 (southeast corner of Beach Boulevard and Atlanta Avenue)

PROJECT REQUEST AND SPECIAL CONSIDERATIONS

The applicant, Bill Holman of WDH Consulting Services, is requesting to amend Conditional Use Permit (CUP) No. 08-013 and Variance (VAR) No. 08-007 and permit the remodel and expansion of the existing commercial shopping center. The project consists of the following entitlement requests:

- Entitlement Plan Amendment No. 09-009 request:
  - Amend CUP No. 08-013 and VAR No. 08-007 to allow minor architectural changes to three existing buildings (Buildings A, E, and F), expand the existing center by 2.68 acres by including the vacated frontage road and adjacent property, add new square footage (see options below) to include three new pads for future buildings (Buildings G, H, and I), add 900 sq. ft. of outdoor dining area for Building A, and convert 12,000 sq. ft. of retail uses (9,200 sq. ft. into eating/drinking establishment uses and 2,800 sq. ft. into office uses).

  - *Option A*: Add 25,981 sq. ft. (9,821 sq. ft. of retail uses, 16,160 sq. ft. of eating/drinking establishment uses) to the shopping center, including three new pads for future buildings (Buildings G, H, and I).

- *Option B*: Add 32,764 sq. ft. (15,604 sq. ft. of retail uses, 17,160 sq. ft. of eating/drinking establishment uses) to the shopping center, including three new pads for future buildings (Buildings G, H, and I).

♦ Tentative Parcel Map No. 09-079 request:
- Incorporate the vacated frontage road and adjacent property to enlarge the site from 6.74 acres to 9.42 acres, reconfigure some parcels, and create three new parcels for future building pads.

♦ Conditional Use Permit No. 10-005 request:
- Permit a parking reduction for the existing and proposed mix of uses within the shopping center pursuant to a parking demand analysis prepared by a registered traffic/parking engineer (See Attachment Nos. 4 & 5). The parking reduction analysis is based on the following two options:

- *Option A*: Allow 539 parking spaces in lieu of the minimum required 604 parking spaces (65 space reduction) for the proposed mix of land uses.

- *Option B*: Allow 526 parking spaces in lieu of the minimum required 644 parking spaces (118 space reduction) for the proposed mix of land uses.

♦ Variance No. 10-001 request:
- Permit the proposed new Buildings G, H, and I to be setback a minimum 5 ft. from the Beach Boulevard property line in lieu of the required 25 ft.

- Allow 900 sq. ft. of outdoor restaurant seating for Building A at a zero foot setback in lieu of the fully landscaped 10-foot setback along Atlanta Avenue.

The project site is a 9.42-acre site, located on the southeast corner of Beach Boulevard and Atlanta Avenue, in the Commercial General (CG) Zone. The 6.74-acre portion of the site is a developed commercial property known as the Beach Promenade shopping center. The 2.68-acre portion is currently a frontage road and vacant land which will be incorporated into the project site. The site currently has six buildings totaling 85,107 sq. ft. of floor area with 274 parking spaces. In May 2009, Conditional Use Permit No. 08-013 and Variance No. 08-007 were approved by the City Council to allow the following: 1) the addition of 5,870 sq. ft. to an existing 85,107 sq. ft. shopping center (90,977 sq. ft. total); 2) the exterior remodel of the shopping center; and 3) 340 parking spaces in lieu of the minimum required 380 parking spaces (40 space reduction). The surrounding neighborhood is developed with residential uses, as described in the table below.

CURRENT LAND USE, HISTORY OF SITE, ZONING, AND GENERAL PLAN DESIGNATIONS

LOCATION	GENERAL PLAN	ZONING	LAND USE
Subject Property:	CG-F1 (Commercial General—0.35 Max. Floor Area Ratio)	CG (Commercial General)	Shopping Center
North (across Atlanta Avenue), South, and West (across Beach Boulevard) of Subject Property:	RM-15 (Residential Medium Density—15 Dwelling Units per Acre)	RM (Residential Medium Density)	Multi-Family Residential Uses
East of Subject Property: (across the flood channel)	RMH-25 (Residential Medium High Density—25 Dwelling Units per Acre)	RMH (Residential Medium High Density)	Multi-Family Residential Uses

The project, as proposed, complies with applicable provisions of the General Plan and Commercial General zoning designation, including building height, floor area ratio, and landscaping. With the building addition and conversion of retail uses, the parking requirement for the shopping center is more than the parking proposed. To address the proposed parking reduction, the applicant is requesting a Conditional Use Permit to allow a parking reduction for the addition and use conversion to the shopping center. Below are a summary of the parking reduction request and a summary of the proposed mix of uses.

SUMMARY OF PARKING REDUCTION REQUEST					
	APPROVED PHASE 1	PROPOSED—OPTION A PHASE 2		PROPOSED—OPTION B PHASE 2	
	Total	**Addition**	**Total**	**Addition**	**Total**
Shopping Center (sq. ft.)	90,977	25,981	116,958	32,764	123,741
Parking Proposed	340 spaces[1]	199 spaces	539 spaces	186 spaces	526 spaces
Parking Required	340 spaces[1]	264 spaces	604 spaces[2]	304 spaces	644 spaces[2]
Parking Reduction	40 spaces	65 spaces		118 spaces	

[1] *Variance No. 08-007, approved in 2009, allowed 340 parking spaces in lieu of the minimum required 380 parking spaces (a 40 space reduction).*

[2] *The current parking requirements are applied for additions.*

SUMMARY OF PROPOSED MIX OF USES							
	APPROVED PHASE 1	PROPOSED –OPTION A PHASE 2			PROPOSED—OPTION B PHASE 2		
Buildings	**Retail**	**Retail**	**Eating/ Drinking**	**Office**	**Retail**	**Eating/ Drinking**	**Office**
Building A*	12,000		9,200	2,800		9,200	2,800
Building B	8,160	8,160			8,160		
Building C	26,340	26,340			26,340		
Building D	7,000	7,000			7,000		
Building E	23,437	19,962			30,870		
Building F	14,040	15,170			11,045		
Building G			9,000			9,000	
Building H			4,260			4,260	
Building I		12,166	2,900		11,166	3,900	
Subtotal	**90,977**	**88,798**	**25,360**	**2,800**	**94,581**	**26,360**	**2,800**
TOTAL	**90,977 sq. ft.**	**116,958 sq. ft.**			**123,741 sq. ft.**		

**Building A includes 900 sq. ft. of outdoor dining area*

The front setback for buildings along Beach Boulevard is required to be a minimum of 50 ft. or 25 ft. if the setback area is entirely landscaped. The new buildings (Buildings G, H, and I) are proposed to be setback a minimum of 5 ft. from Beach Boulevard. The Beach and Edinger Corridors Specific Plan (BESP), approved by the City Council in March 2010, requires the minimum setback of 5 ft. for buildings within the Neighborhood Center segment facing Beach Boulevard. To achieve greater consistency with the building setback requirements of the BESP, the applicant is requesting a Variance to allow for a minimum of 5 ft. setback in lieu of the required 25 ft. for Buildings G, H, and I with the setback area entirely landscaped. In addition, the minimum required building setback for Atlanta Avenue is 10 ft., which needs to be entirely landscaped. However, the applicant is proposing to have 900 sq. ft. of outdoor dining area for Building A in lieu of landscaping within the required 10-ft. Atlanta Avenue setback. The proposed outdoor dining area within the Atlanta Avenue setback would activate the street scene and encourage more pedestrian-oriented activities along the street, promoting one the objectives of the BESP to have convenient neighborhood serving retail uses and small-scale restaurants and cafes.

APPLICATION PROCESS AND TIMELINES

DATE OF COMPLETE APPLICATION:

February 19, 2010

MANDATORY PROCESSING DATE(S):

July 19, 2010 (including a 90-day extension)

Entitlement Plan Amendment No. 09-009 and Tentative Parcel Map No. 09-079 were filed on August 19, 2009. Conditional Use Permit No. 10-005 and Variance No. 10-001 were filed on January 26, 2010. The application was deemed complete on February 19, 2010. The applicant requested a 90-day extension to the mandatory processing time to allow for the completion of the Access and Parking Analysis. The applicant is tentatively scheduled for public hearing before the Planning Commission on June 22, 2010.

CEQA ANALYSIS/REVIEW

The proposed project is Categorically Exempt pursuant to Section 15332, Class 32, of the California Environmental Quality Act, which exempts projects characterized by the following in-fill development conditions: 1) the project is consistent with applicable general plan designation and all applicable general plan policies as well with applicable zoning designation and regulations; 2) the proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses; 3) the project site has no value as habitat for endangered, rare or threatened species; 4) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; 5) The site can be adequately served by all required utilities and public services.

COMMENTS FROM CITY DEPARTMENTS AND OTHER PUBLIC AGENCIES

The project is located in the Huntington Beach Redevelopment Project, Main-Pier Subarea. The Departments of Building & Safety, Fire, Economic Development, Planning, Police, and Pubic Works have reviewed the application and identified applicable code requirements (Attachment No. 6).

PUBLIC MEETINGS, COMMENTS AND CONCERNS

There have been no public meetings regarding this request. To date, there have been no comments from the public regarding this request.

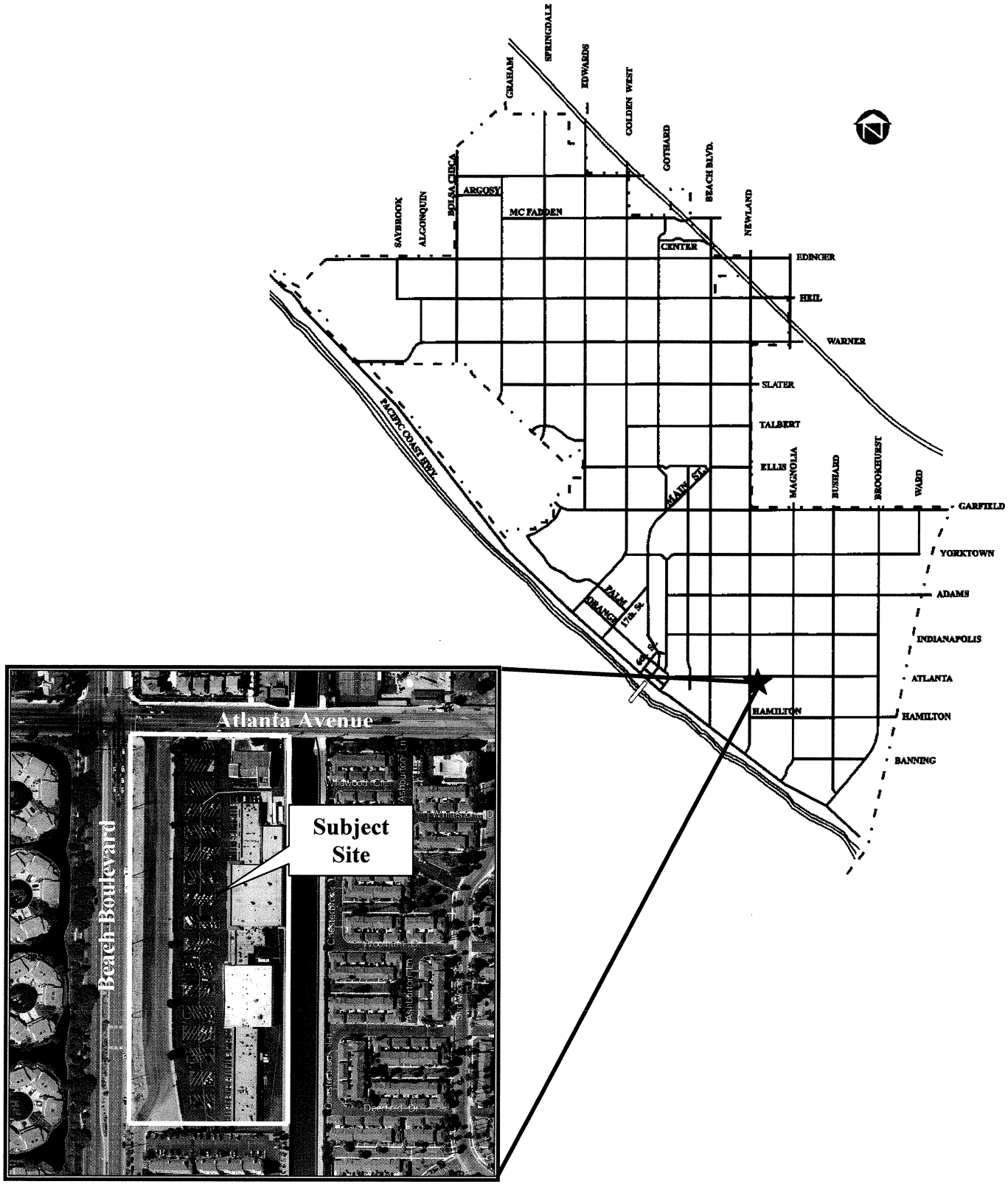
PLANNING ISSUES

The primary issues for the Planning Commission to consider for the proposed project are:

- Consistency with the goals, objectives, and policies of the General Plan;
- Compliance of the proposed project with applicable Huntington Beach Zoning and Subdivision Ordinance requirements;
- Compatibility of the proposed project with surrounding land uses;
- The request to deviate from minimum setback requirements consistent with the newly adopted Beach and Edinger Corridors Specific Plan;
- The adequacy and reduction to off-street parking requirements based on a parking demand analysis.

ATTACHMENTS:

1. Vicinity Map
2. Project Narrative dated and received May 17, 2010
3. Site Plans and Tentative Parcel Map dated and received January 20, 2010 and May 18, 2010
4. Access and Parking Analysis prepared by LSA Associates, Inc. received March 17, 2010
5. Supplement to the Access and Parking Analysis prepared by LSA Associates, Inc. received May 14, 2010
6. Code Requirements Letter (for informational purposes only), dated February 23, 2010



VICINITY MAP

ENTITLEMENT PLAN AMENDMENT NO. 09-009/ TENTATIVE PARCEL MAP NO. 09-079/ CONDITIONAL USE PERMIT NO. 10-005 / VARIANCE NO. 10-001 (BEACH PROMENADE – 21022-21190 BEACH BOULEVARD)

ATTACHMENT NO. 1.1

BEACH PROMENADE PHASE 2 EXPANSION NARRATIVE
revised May 12, 2010

Location: 21022-21190 Beach Boulevard
Southeast corner of Beach Boulevard and Atlanta Avenue

Request: Approval of an Entitlement Plan Amendment to approved CUP No. 2008-013 and Variance No. 2008-007, which permitted a remodel and minor expansion of an existing retail center. The requested EPA involves several changes to the approved building modifications approved as part of CUP 2008-013 to accommodate a different tenant mix, and a major revision to the approved site plan to expand the shopping center from 6.74 acres to 9.42 acres (a 2.68-acre addition) to include three new pads for future retail buildings G, H and I, and associated access, parking and landscaping improvements.

A Tentative Parcel Map is also proposed to incorporate and consolidate the vacated frontage road and adjacent property, reconfigure existing parcels within a portion of the center and create new legal parcels for the three future building pads (see detailed narrative for TPM below). Minor changes to the approved architectural elevations for existing Buildings A, E & F are also requested based on a change in tenants.

A variance is also requested to allow a minimum five (5) foot building setback for future Buildings G, H and I in lieu of 25 feet, and to allow outdoor seating within the building setback on the north side of Building A. The CUP also includes a request for approval of a reduction in required parking for the amended site plan alternatives.

Zoning and General Plan: The property is zoned Commercial General (CG). The General Plan designation for the site is Commercial General with Density F1 (.35 F.A.R.).

Site Area: 9.42 net acres

Project Description: CUP No. 2008-13 was approved by the City Council on May 4, 2009 for a minor expansion and fascia remodel of the Beach Promenade Shopping Center, encompassing six buildings totaling 90,977 square feet and 340 parking spaces on 6.74 acres of land. After further discussion and negotiations with City staff and direction from City Council, Applicant now proposes to further expand the shopping center by acquiring the City-owned frontage road (to be vacated) and merging it with additional property owned by the Applicant. The expanded project area will allow for further additions of parking and landscaping improvements and creation of three new building pads for future retail and restaurant buildings. Minor revisions to the approved modifications to three existing buildings are also requested based on revised tenant requirements. The Applicant is requesting approval of two alternate site plan configurations to accommodate either a 20,000 sf market anchor or a 31,000 sf market/drug anchor. Below is a summary of the approved project and the proposed EPA alternatives.

	Approved CUP 2008-13		Proposed EPA Site Plan Alternate A		Proposed EPA Site Plan Alternate B	
	Proposed Use	Size (square feet)	Proposed Use	Size (square feet)	Proposed Use	Size (square feet)
Building A	Drug Store	12,000	Eating/Drinking	9,200	Eating/Drinking	9,200
			Outdoor Dining*	900*	Outdoor Dining*	900*
			Office	2,800	Office	2,800
Building B	Retail	8,160	Retail	8,160	Retail	8,160
Building C	Dept. Store	26,340	Dept. Store	26,340	Dept. Store	26,340
Building D	Retail	7,000	Retail	7,000	Retail	7,000
Building E	Market	23,437	Market/Retail	19,962	Market/Drug	30,870
Building F	Retail	14,040	Retail	15,170	Retail	11,045

ATTACHMENT NO. 2.1

Building G			Eating/Drinking	9,000	Eating/Drinking	9,000
Building H			Eating/Drinking	4,260	Eating/Drinking	4,260
Building I			Retail	12,166	Retail	11,166
			Eating/Drinking	2,900	Eating/Drinking	3,900
TOTAL		90,977		116,958		123,741
Subtotal E/D		0		26,260		27,260
* square footage not included in building totals, but included in Eating/Drinking subtotals						

Parking: The existing and proposed parking counts are summarized in the attached table:

Existing Center		Approved CUP 2008-013		Proposed Alternate A		Proposed Alternate B	
			Change		Change		Change
Site Area	6.74 acres	6.74 acres	none	9.42 acres	39.8%	9.42 acres	39.8%
Bldg. Area	85,107 sf	90,977 sf	6.9% to Existing SF	117,858 sf	29.5% to Approved SF	124,641 sf	37.0% to Approved SF
Parking	274 spaces	340 spaces	24.1% to Existing #	539 spaces	58.5% to Approved #	526 spaces	54.7% to Approved #
Parking Provided	3.2 spaces / 1,000 sf	3.7 spaces / 1,000 sf		4.6 spaces / 1,000 sf		4.2 spaces / 1,000 sf	

A shared parking analysis of Alternates A and B has been prepared by LSA Associates, Inc., to determine the maximum recommended allocation of eating and drinking uses within the new or expanded buildings based on existing and proposed new uses in the expanded center. Based on this analysis and use allocations, both alternates provide a surplus of one parking space compared to demand.

Access:

A new major access drive will be provided directly to Beach Boulevard to greatly improve access to the existing center and expansion area. The new major access has been designed to code and is located further south than on the approved CUP site plan so as to accommodate a proposed cut in the Beach Boulevard median for a new southbound left turn pocket. One secondary right-in, right-out driveway is proposed onto Beach Boulevard south of the primary entry to accommodate exiting market delivery trucks. A third access is proposed at the south end of the site, which will also connect to the existing frontage road at the Breakers apartments to provide for delivery truck ingress and egress, emergency vehicle access and direct access to the shopping center from the apartments. The existing westerly driveway access off Atlanta Avenue will be widened and enhanced. The existing frontage road and its connection to Atlanta Avenue will be eliminated to significantly reduce multiple conflicting turn movements to and from Atlanta Avenue. Pedestrian and wheelchair access is provided by means of sidewalks throughout the center.

Surrounding Uses

North: Medium density residential, single family homes across Atlanta Avenue
East: Flood control channel and medium density residential townhomes
South: Medium-high density residential apartments
West: Medium density residential townhomes across Beach Boulevard

Variance Request

A variance is being requested to permit proposed new Buildings G, H and I to be set back a minimum of five (5) feet from the Beach Boulevard property line in lieu of 25 feet required by Section 211.06(E). The five feet, when added to the 13-foot landscape/sidewalk corridor provided within Caltrans' right of way, will provide a minimum of 18 feet setback from curb to building. This variance will enable outdoor courtyards, seating and dining areas to be provided to the interior of the shopping center instead of along Beach Boulevard, consistent with City Design Guidelines. A variance is also requested to permit outdoor seating for the Building A restaurant within a portion of the 10-foot setback along Atlanta Avenue. The patio cannot be located elsewhere because of the existing ATM drive through on the south side of the building.

TENTATIVE PARCEL MAP NO. 2009-079
NARRATIVE

Tentative Parcel Map No. 2009-079 is a request to consolidate three existing privately owned commercial parcels totaling 3.20 acres with a 2.07-acre vacated City frontage road and resubdivide the consolidated area into five legal parcels for the purpose of expanding an existing shopping center and creating pads for three new future commercial buildings.

The existing shopping center consists of nine parcels under four separate ownerships. All parcels within the existing center are subject to recorded covenants, restrictions and easements which provide for reciprocal access, parking and utility easements over all of the common areas for the mutual benefit of all owners. Five of the existing parcels within the shopping center take access from the frontage road to be vacated. In order to maintain legal access to a public street, Beach Boulevard, the existing covenants, restrictions and easements are proposed to be amended to incorporate, apply and extend to, the newly created parcels within the parcel map.

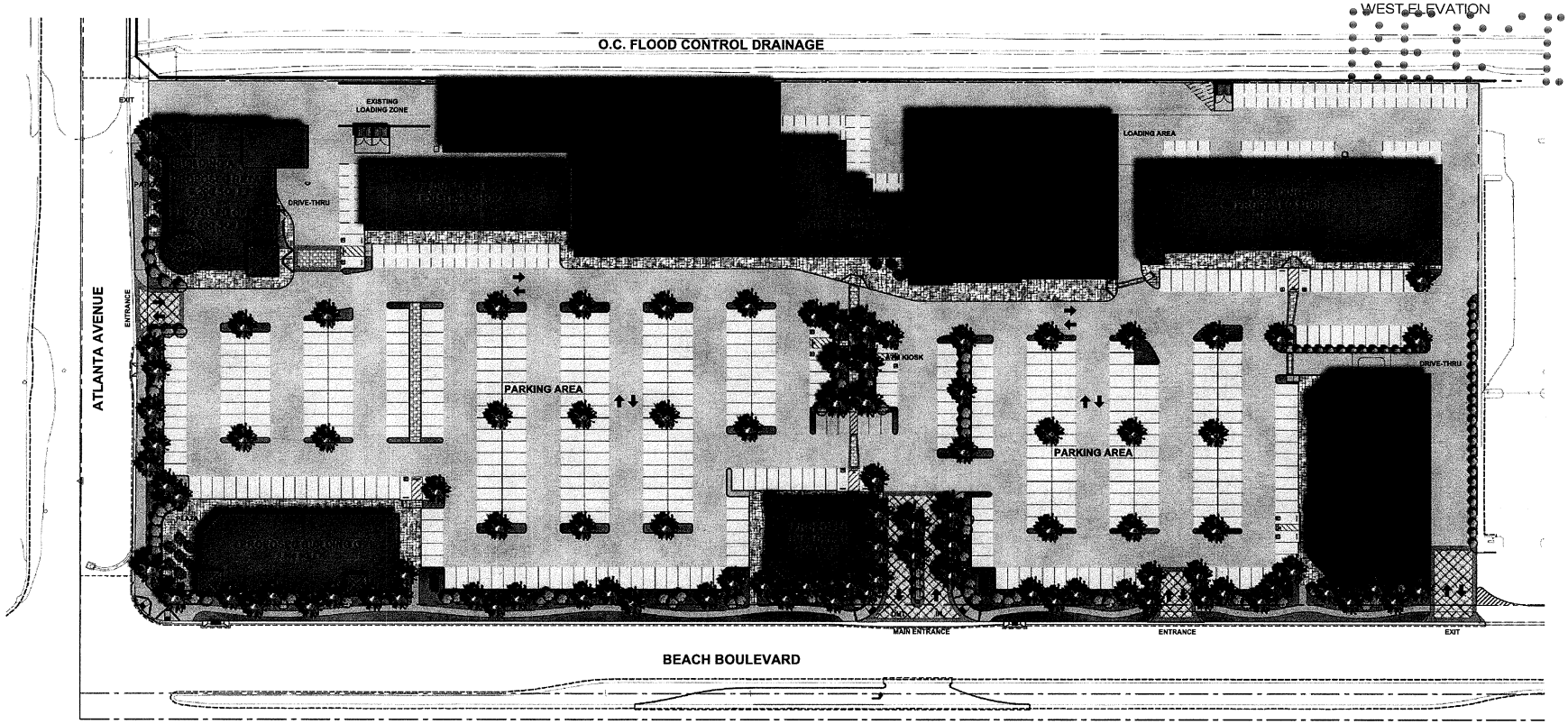
The following utility improvements are proposed with approval of the proposed parcel map and expansion of the shopping center per Entitlement Plan Amendment No. 2009-009:

- Water – an existing 8-inch City water line located along the east side of the existing frontage road will be abandoned (after new connections are made). Existing water services, meters and fire hydrants served from this line will be relocated to the existing 8-inch City water main on the east side of Beach Boulevard. New water services to Building Pads G, H and I located on Parcels 1, 2 and 4, respectively, of the parcel map will be taken off this line as well.
- Sewer – the existing shopping center is served by a private 8-inch sewer line running from south to north through the center of the parking lot. New sewer laterals to Building Pads G, H and I will be extended from this line.
- Storm Drain – the existing shopping center is served by a private 18"-21" storm drain running from south to north through the center of the parking lot. In addition, a private 30" storm drain is located in the frontage strip between the frontage road and Beach Boulevard. Both storm drain lines will be used to accommodate drainage from the expanded parking lot.
- Power – the existing center has three transformers fed from two locations. The primary feed comes from an overhead pole on Beach Boulevard just north of the proposed new major entry. This feed is currently being relocated underground as part of a Rule 20 project and will continue to feed existing Buildings D, E and F and new Building Pads G, H and I. A second feed to existing Buildings A, B and C comes from an offsite overhead pole on Atlanta Avenue located just east of the northeast corner of the center.
- Natural Gas – The existing center is fed from a three-inch gas main running parallel to and just west of the frontage road. Portions or all of this line that conflict with proposed Building Pads G, H and I will need to be relocated; services to existing and new buildings will be coordinated as part of final design.
- Telephone – the existing center is fed through an underground conduit system from an overhead pole on Atlanta Avenue. Services to existing and new buildings will be coordinated as part of final design.
- Cable Television – there is no cable television service to the existing center.

All utility improvements will be installed in accordance with the construction phasing schedule (submitted separately).

ATTACHMENT NO. 2.3

WEST ELEVATION



BUILDING	AREA CALCULATION	
BUILDING A	PROPOSED RETAIL	9,200 SF
BUILDING A	PROPOSED OFFICE	2,800 SF
BUILDING B	EXISTING SHOPS	8,160 SF
BUILDING C	EXISTING RETAIL	26,340 SF
BUILDING D	EXISTING SHOPS	7,000 SF
BUILDING E	PROPOSED MARKET/DRUG/RETAIL	19,962 SF
BUILDING F	EXISTING SHOPS	15,170 SF
BUILDING G	PROPOSED BUILDING	9,000 SF
BUILDING H	PROPOSED BUILDING	4,260 SF
BUILDING I	PROPOSED BUILDING	15,066 SF
	TOTAL	116,958 SF

PARKING	
PARKING PROVIDED	539 SPACES (4.6/1000SF)

NORTH

scale: 1" = 30'-0"

0 30 60 90 120

SITE PLAN - OPTION A
BEACH PROMENADE
HUNTINGTON BEACH, CALIFORNIA

DEVELOPER
SASSOUNIAN DEVELOPMENT COMPANY
21190 Beach Boulevard, Huntington Beach, CA 90505

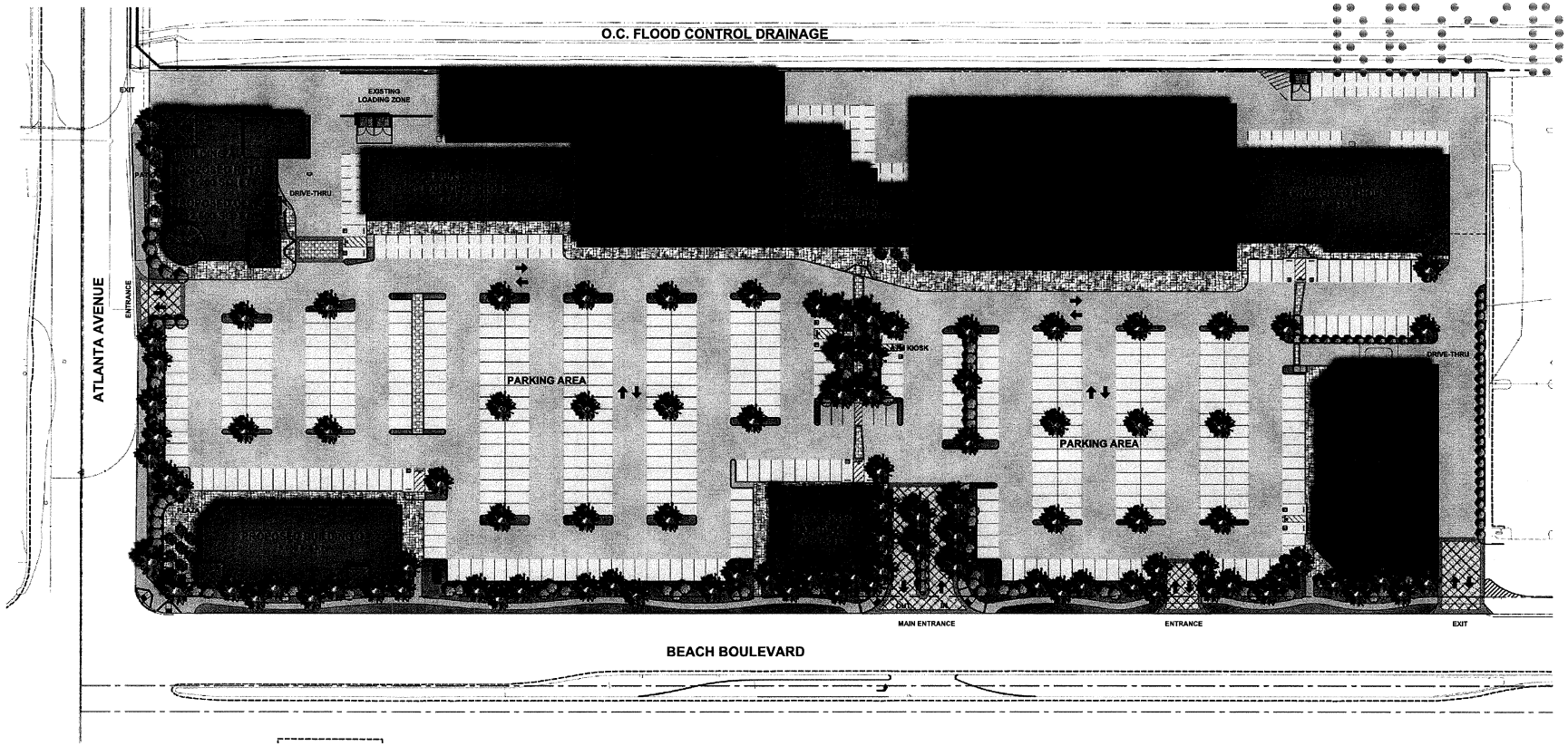
Withee Malcolm Architects, LLP
2251 W. 190th Street
Torrance, Ca 90504
Tel. (310) 217-8885
Fax (310) 217-0426

JOB NO. A6077
DATE: 04.22.2010

Option A

ATTACHMENT NO. 3.1

05-18-10



BUILDING	AREA CALCULATION	
BUILDING A	PROPOSED RETAIL	9,200 SF
BUILDING A	PROPOSED OFFICE	2,800 SF
BUILDING B	EXISTING SHOPS	8,160 SF
BUILDING C	EXISTING RETAIL	26,340 SF
BUILDING D	EXISTING SHOPS	7,000 SF
BUILDING E	PROPOSED MARKET/DRUG/RETAIL	30,870 SF
BUILDING F	EXISTING SHOPS	11,045 SF
BUILDING G	PROPOSED BUILDING	9,000 SF
BUILDING H	PROPOSED BUILDING	4,260 SF
BUILDING I	PROPOSED BUILDING	15,066 SF
	TOTAL	123,741 SF

PARKING	
PARKING PROVIDED	526 SPACES (4.2/1000SF)

NORTH

scale: 1" = 30'-0"
0 30 60 90 120

SITE PLAN - OPTION B
BEACH PROMENADE
HUNTINGTON BEACH, CALIFORNIA

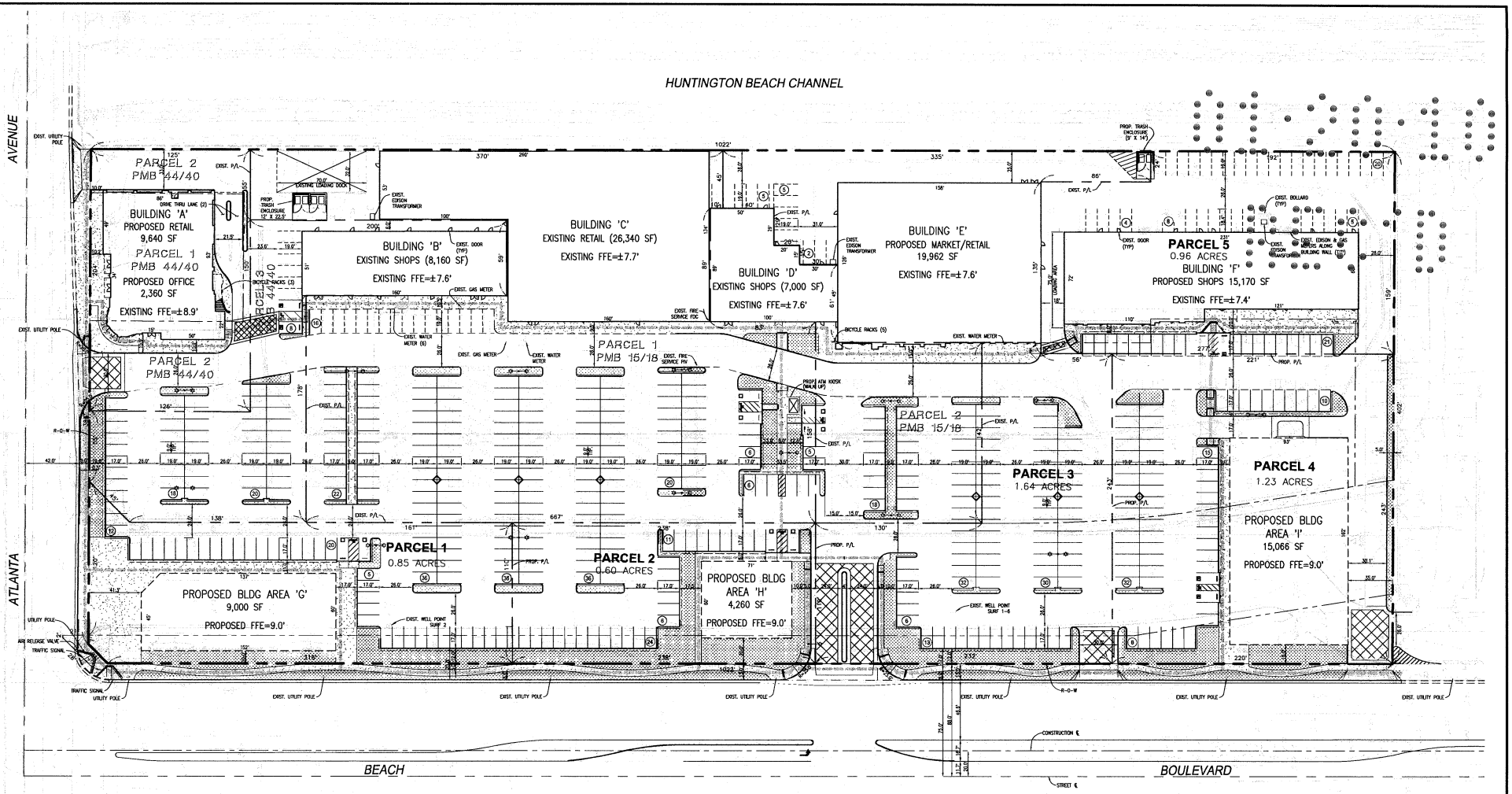
DEVELOPER
SASSOUNIAN DEVELOPMENT COMPANY
21190 Beach Boulevard, Huntington Beach, CA 90505

Withee Malcolm Architects, LLP
2251 W. 190th Street
Torrance, Ca 90504
Tel. (310) 217-8885
Fax (310) 217-0426

JOB NO. A6077
DATE: 04.22.2010

Option B

ATTACHMENT NO. 3.2



LEGEND

- ▭— – INDICATES WATER SERVICE W/METER
- ⋈ – INDICATES FIRE HYDRANT
- ⊶ – INDICATES REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE OR DOUBLE CHECK DETECTOR ASSEMBLY
- – INDICATES FIRE DEPARTMENT CONNECTION
- ⊗ – INDICATES WATER VALVE
- ☼ – INDICATES STREET LIGHT
- – INDICATES LANDSCAPING
- – INDICATES HARDSCAPING
- – INDICATES ADA PATH OF TRAVEL
- ——— – INDICATES RIGHT-OF-WAY/ PROPERTY LINE
- ——— – INDICATES PROPERTY LINE TO REMAIN/ NEW
- ——— – INDICATES PROPERTY LINE TO BE REMOVED

BUILDING DATA

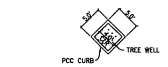
BUILDING 'A': PROPOSED RETAIL	9,640 SF
BUILDING 'A': PROPOSED OFFICE	2,360 SF
BUILDING 'B': EXISTING SHOPS	8,160 SF
BUILDING 'C': EXISTING RETAIL	26,340 SF
BUILDING 'D': EXISTING SHOPS	7,000 SF
BUILDING 'E': PROPOSED MARKET/RETAIL	19,962 SF
BUILDING 'F': EXISTING SHOPS	15,170 SF
PROPOSED BUILDING AREA 'G'	9,000 SF
PROPOSED BUILDING AREA 'H'	4,260 SF
PROPOSED BUILDING AREA 'I'	15,066 SF
TOTAL	116,958 SF

PARKING DATA

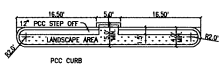
STANDARD PARKING STALLS PROVIDED	525
HANDICAP PARKING STALLS PROVIDED	14
TOTAL PARKING STALLS PROVIDED	539

ONSITE AREA CALCULATIONS

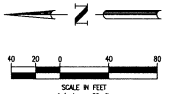
TOTAL PROPERTY AREA	410,198 SF
LANDSCAPE AREA	24,358 SF
HARDSCAPE AREA	25,473 SF
DECORATIVE AREA	7,577 SF
OVERHANG AREA	3,492 SF
AREA (LANDSCAPE + HARDSCAPE + DECORATIVE – OVERHANG)	53,916 SF
AREA/TOTAL AREA X 100%	13.1%



TYPICAL TREE WELL DETAILS
NOT TO SCALE



TYPICAL MEDIAN DETAILS
NOT TO SCALE



WALDEN & ASSOCIATES
CIVIL ENGINEERS · LAND SURVEYORS · PLANNERS
3242 WHITE ROAD, SUITE B · IRVINE, CA 92614-6256
(949) 660-0110 FAX: 660-0418

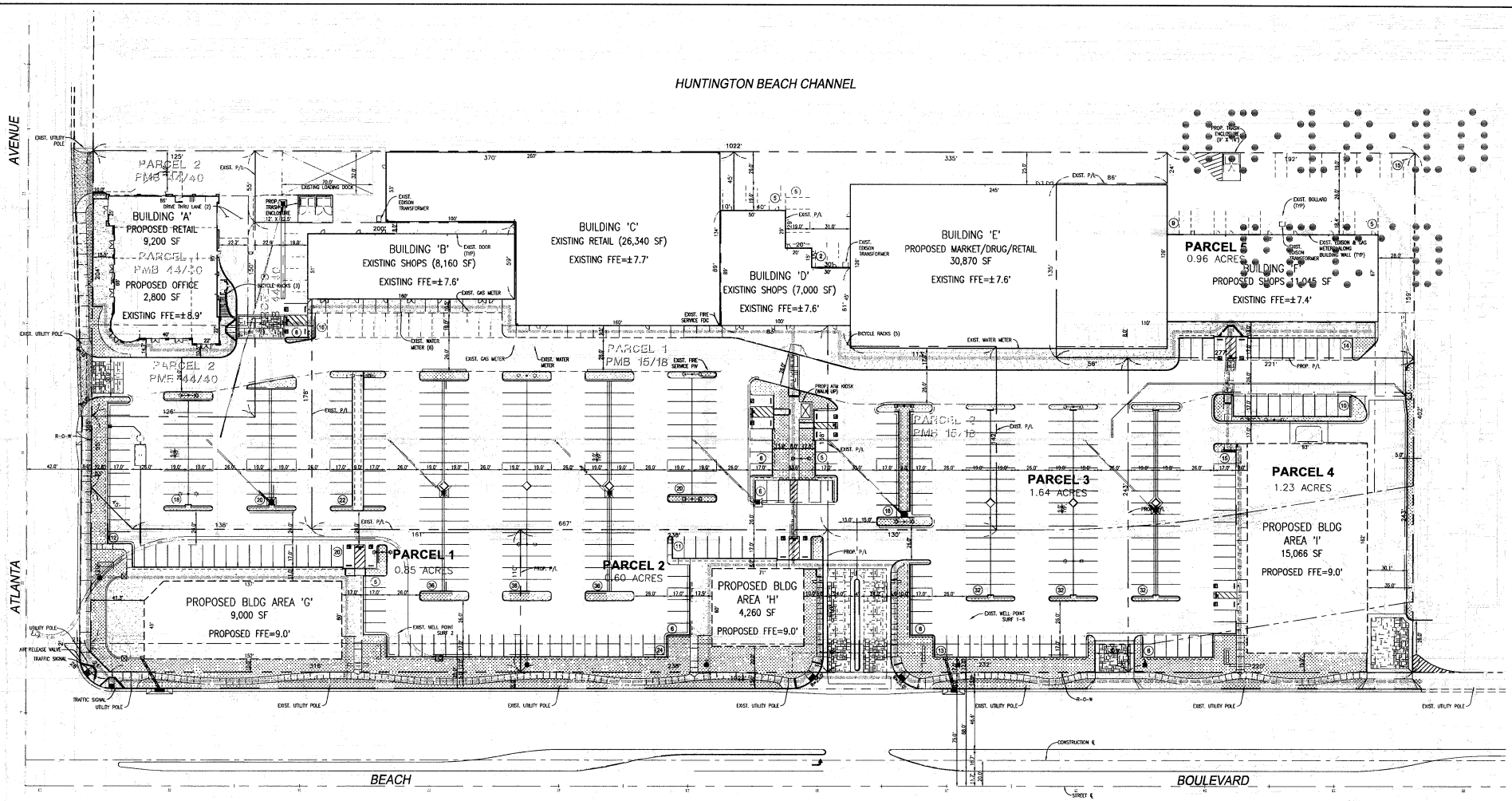
PRELIMINARY SITE PLAN
EPA 2009-009
FOR
BEACH PROMENADE
BEACH BOULEVARD AND ATLANTA AVENUE
HUNTINGTON BEACH, CA

JOB NUMBER 1623-478-002
DATE: 12-08-2009
DRAWN: MFP/SK
CHECKED: SK/DB
SHEET C-1 OF 4

G:\projects\1623 Beach Promenade\DWG\EPA 2009-009\1623 PRELIMINARY SITE C1.dwg, Draft Plot: 12/9/2009 12:31:49 PM

ATTACHMENT NO. 3.2

Option A



LEGEND

- ▭ — INDICATES WATER SERVICE W/METER
- ⋈ — INDICATES FIRE HYDRANT
- ○=○ — INDICATES REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE OR DOUBLE CHECK DETECTOR ASSEMBLY
- ● — INDICATES FIRE DEPARTMENT CONNECTION
- ⊗ — INDICATES WATER VALVE
- ☼ — INDICATES STREET LIGHT
- ⬚ — INDICATES LANDSCAPING
- □ — INDICATES HARDSCAPING
- ▭ — INDICATES ADA PATH OF TRAVEL
- ——— — INDICATES RIGHT-OF-WAY/ PROPERTY LINE
- ——— — INDICATES PROPERTY LINE TO REMAIN/ NEW
- ——— — INDICATES PROPERTY LINE TO BE REMOVED

BUILDING DATA

BUILDING 'A': PROPOSED RETAIL	9,200 SF
BUILDING 'A': PROPOSED OFFICE	2,800 SF
BUILDING 'B': EXISTING SHOPS	8,160 SF
BUILDING 'C': EXISTING RETAIL	26,340 SF
BUILDING 'D': EXISTING SHOPS	7,000 SF
BUILDING 'E': PROPOSED MARKET/DRUG/RETAIL	30,870 SF
BUILDING 'F': EXISTING SHOPS	11,045 SF
PROPOSED BUILDING AREA 'G'	9,000 SF
PROPOSED BUILDING AREA 'H'	4,260 SF
PROPOSED BUILDING AREA 'I'	15,066 SF
TOTAL	123,741 SF

PARKING DATA

STANDARD PARKING STALLS PROVIDED	512
HANDICAP PARKING STALLS PROVIDED	14
TOTAL PARKING STALLS PROVIDED	526

ONSITE AREA CALCULATIONS

TOTAL PROPERTY AREA	410,198 SF
LANDSCAPE AREA	23,824 SF
HARDSCAPE AREA	26,007 SF
DECORATIVE AREA	7,577 SF
OVERHANG AREA	3,366 SF
AREA (LANDSCAPE + HARDSCAPE + DECORATIVE - OVERHANG)	53,916 SF
AREA/TOTAL AREA X 100%	13.1%

TYPICAL TREE WELL DETAILS
NO TO SCALE

TYPICAL MEDIAN DETAILS
NOT TO SCALE

SCALE IN FEET
1 inch = 30 ft.

WALDEN & ASSOCIATES
CIVIL ENGINEERS · LAND SURVEYORS · PLANNERS
2151 WHITE ROAD, SUITE B · IRVINE, CA 92614-6234
(949) 660-9128 FAX: 660-0418

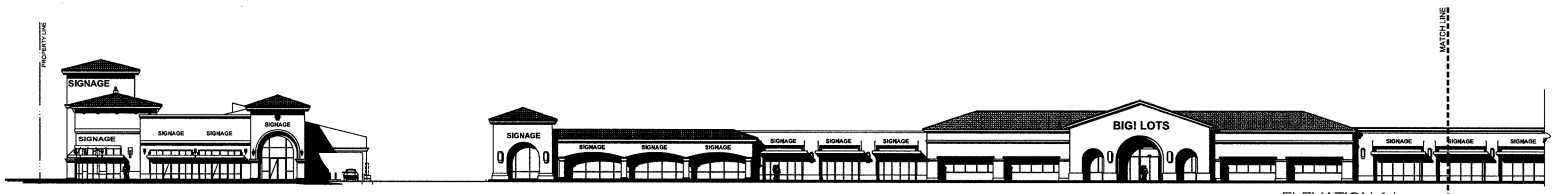
PRELIMINARY SITE PLAN
ALTERNATE 'B' MARKET/DRUG OPTION
FOR
BEACH PROMENADE
BEACH BOULEVARD AND ATLANTA AVENUE
HUNTINGTON BEACH, CA

JOB NUMBER	1023-478-002
DATE:	04-19-2010
DRAWN:	BK
CHECKED:	SK/DB
SHEET	1
OF	1

ATTACHMENT NO. 24

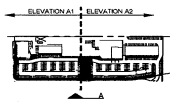
Option B

ELEVATION A
SCALE: 1/32"=1'-0"



ELEVATION A1

ELEVATION A2



NORTH SITE PLAN KEY

Sassounian Development Co.
21190 Beach Boulevard
Huntington Beach, CA 92648
sassounian@aol.com

BEACH PROMENADE

HUNTINGTON BEACH, CA

EXTERIOR ELEVATIONS

Withee Malcolm Architects, LLP
2251 W. 190th Street
Torrance, Ca 90504
Tel. (310) 217-9885
Fax (310) 217-0425

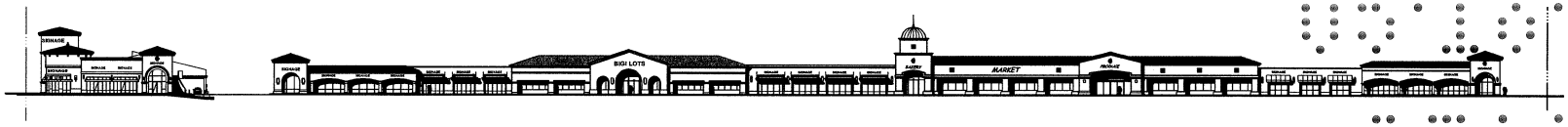
JOB NO.: A6077.200
SCALE: 1/16"=1'-0"
DATE: 02.17.2009

scale: 1/16" = 1'-0"
0 16 32 48 64

01-20-10
#3.5

ATTACHMENT NO. 3.5

Option A



ELEVATION A
SCALE: 1/32" = 1'-0"

ELEVATION A1

ELEVATION A2

Sassounian Development Company
21190 Beach Boulevard
Huntington Beach, CA 92648
sassounian@aol.com

BEACH PROMENADE

HUNTINGTON BEACH, CA

EXTERIOR ELEVATIONS

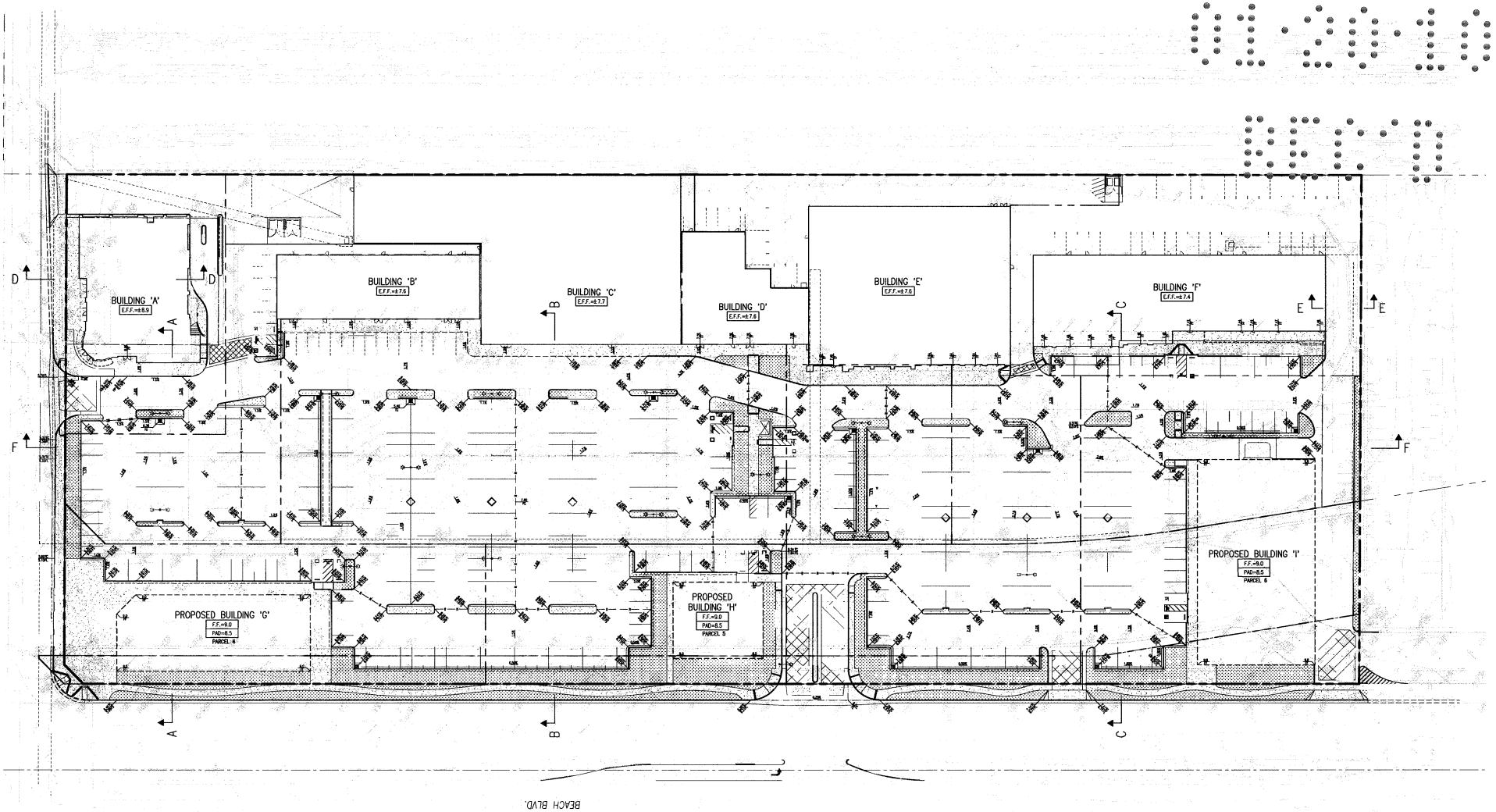
Withee Malcolm Architects, LLP
2251 W. 190th Street
Torrance, Ca 90504
Tel. (310) 217-8885
Fax (310) 217-0425

JOB NO.: A6077.200
SCALE: 1/16"=1'-0"
DATE: 04.27.2010

scale: 1/16" = 1'-0"
0 16 32 48 64

Option B

ATTACHMENT NO. 3.6



ATTACHMENT NO. 27

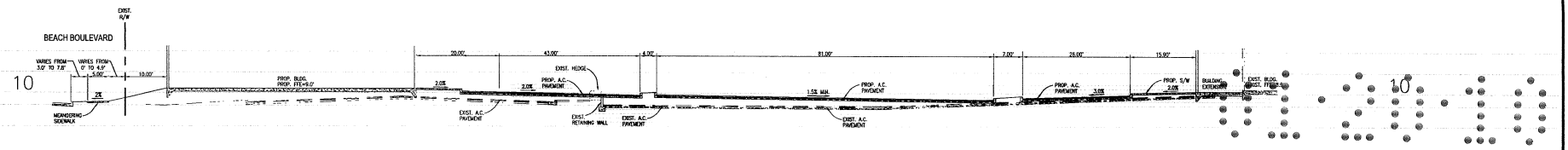
SCALE IN FEET
1 inch = 30 ft.

WALDEN & ASSOCIATES
CIVIL ENGINEERS - LAND SURVEYORS - PLANNERS
3952 MACRAES ROAD, SUITE 200 • NEWPORT, CA. 92660-2026
(949) 660-0110 FAX: 660-0418

PRELIMINARY GRADING PLAN
EPA 2009-009
FOR
BEACH PROMENADE
BEACH BOULEVARD AND ATLANTA AVENUE
HUNTINGTON BEACH, CA

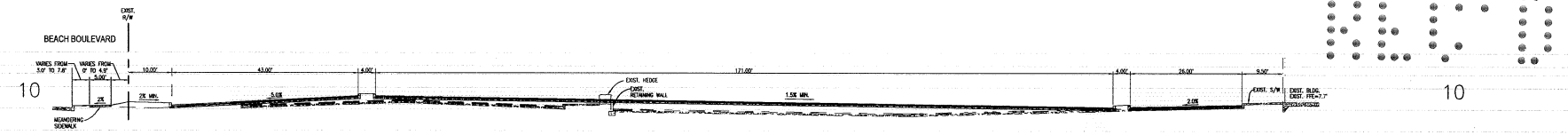
JOB NUMBER	1623-476-002
DATE	12-08-2009
DRAWN	MFP/SK
CHECKED	SK/DB
SHEET	C-2
OF	4

G:\projdata\1623 Beach Promenade\DWG\EPA 2009-009\1623 PRELIMINARY GRADING C2.dwg, Draft Plot, 12/9/2009 10:28:38 AM



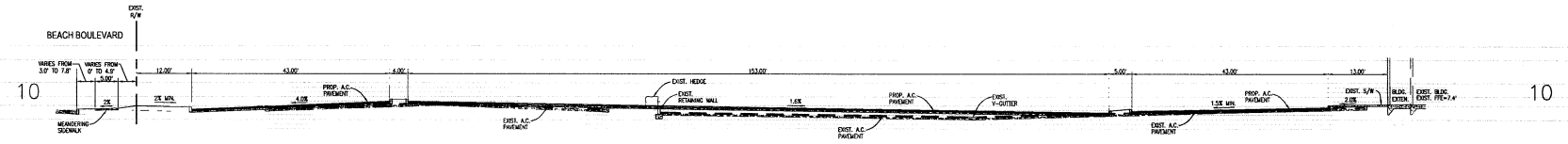
SECTION "A–A"

SCALE: 1"=10'



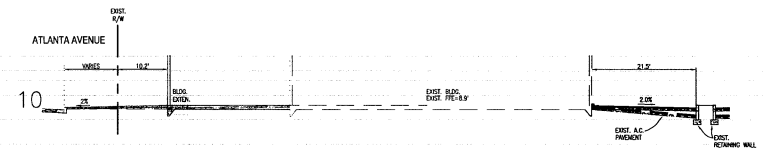
SECTION "B–B"

SCALE: 1"=10'



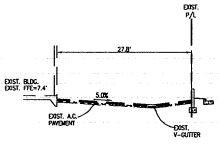
SECTION "C–C"

SCALE: 1"=10'



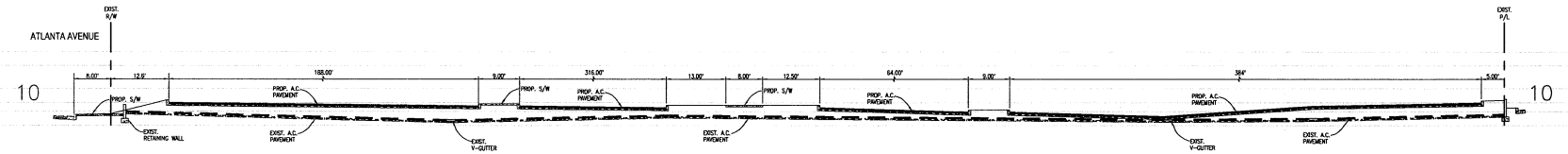
SECTION "D–D"

SCALE: 1"=10'



SECTION "E–E"

SCALE: 1"=10'



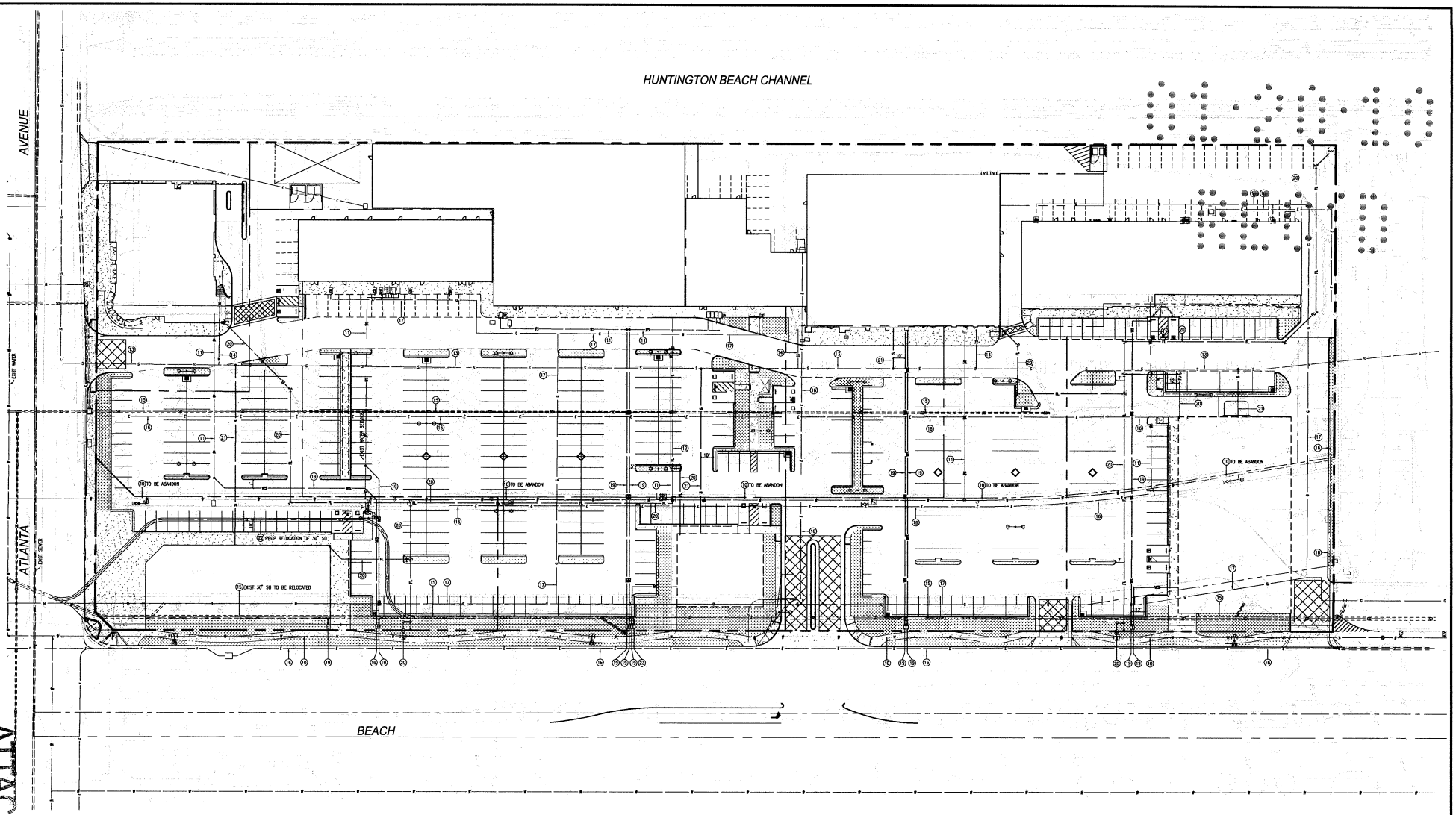
SECTION "F–F"

SCALE: 1"=10'

ATTACHMENT NO. 3.8

WALDEN & ASSOCIATES CIVIL ENGINEERS · LAND SURVEYORS · PLANNERS 2552 WHITE ROAD, SUITE B · IRVINE, CA 92614-6236 (949) 660-0110 FAX: 660-0418	**PRELIMINARY SECTIONS** EPA 2009-009 FOR **BEACH PROMENADE** **BEACH BOULEVARD AND ATLANTA AVENUE** HUNTINGTON BEACH, CA
JOB NUMBER 1623-478-002 DATE: 12-08-2009 DRAWN: MTP CHECKED: SKDB SHEET C-3 OF 4	

ATTACHMENT NO. 3, 4



LEGEND

- — INDICATES WATER SERVICE W/METER
- — INDICATES FIRE HYDRANT
- — INDICATES REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE OR DOUBLE DETECTOR CHECK ASSEMBLY
- — INDICATES FIRE DEPARTMENT CONNECTION
- — INDICATES WATER VALVE
- — INDICATES STREET LIGHT
- —W— — INDICATES WATER MAIN
- —WS— — INDICATES WATER SERVICE
- —FL— — INDICATES FIRE LINE
- —S— — INDICATES SEWER
- —SD— — INDICATES STORM DRAIN
- —G— — INDICATES GAS
- —E— — INDICATES ELECTRICAL
- —T— — INDICATES TELEPHONE
- ——— — INDICATES RIGHT-OF-WAY/ PROPERTY LINE
- ——— — INDICATES PROPERTY LINE TO REMAIN/ NEW
- ——— — INDICATES PROPERTY LINE TO BE REMOVED
- • — INDICATES POINT OF CONNECTION

UTILITY NOTES:

(10) EXISTING WATER MAIN
(11) EXISTING WATER SERVICE
(12) EXISTING FIRE LINE
(13) EXISTING SEWER MAIN
(14) EXISTING SEWER LATERAL
(15) EXISTING STORM DRAIN
(16) EXISTING ELECTRICAL
(17) EXISTING GAS
(18) EXISTING TELEPHONE
(19) PROPOSED WATER SERVICE
(20) PROPOSED FIRE LINE
(21) PROPOSED SEWER LATERAL
(22) PROPOSED STORM DRAIN
(23) PROPOSED IRRIGATION SERVICE

N

40 20 0 40 80
SCALE IN FEET
1 inch = 30 ft.

WALDEN & ASSOCIATES
CIVIL ENGINEERS - LAND SURVEYORS - PLANNERS
2152 WHITE RD, SUITE D• IRVINE, CA 92614-6226
(949) 660-0110 FAX: 660-0618

PRELIMINARY UTILITY PLAN
EPA 2009-009
FOR
BEACH PROMENADE
BEACH BOULEVARD AND ATLANTA AVENUE
HUNTINGTON BEACH, CA

JOB NUMBER	1623-478-002
DATE:	12-08-2009
DRAWN:	GK
CHECKED:	DB
SHEET	C-4 OF 4

G:\projects\1623 Beach Promenade\DWG\EPA 2009-009\1623 PRELIMINARY UTILITY C4.dwg, Daff Plot: 12/8/2009 10:23:27 AM

TENTATIVE

PARCEL MAP NO. 2009-122

IN THE CITY OF HUNTINGTON BEACH, COUNTY OF ORANGE
STATE OF CALIFORNIA

A.P. NO.: 148-210-15, 19 & 24
AREA: 5.28 ACRES
AUGUST 2009

SCALE IN FEET
1 inch =50 ft.

LEGAL DESCRIPTION:
PARCEL 3, AS SHOWN ON THE MAP FILED IN BOOK 15, PAGE 18 OF PARCEL MAPS, AND PARCEL 2, AS SHOWN ON THE MAP FILED IN BOOK 25, PAGE 27 OF PARCEL MAPS AND PARCEL 2 OF PARCEL MAP NO. 84-590, AS SHOWN ON THE MAP FILED IN BOOK 202, PAGES 48-50 INCLUSIVE OF PARCEL MAPS, ALL RECORDS OF THE COUNTY RECORDER OF ORANGE COUNTY, CALIFORNIA, TOGETHER WITH THE GRANT DEED RECORDED JULY 11, 1968 IN BOOK 7985 PAGE 572 OF OFFICIAL RECORDS.

OWNERS:
BREAKER CENTER
21190 BEACH BOULEVARD
HUNTINGTON BEACH, CA 92648
714-374-5678

BIJAN SASSOUNIAN
21190 BEACH BOULEVARD
HUNTINGTON BEACH, CA 92648
714-374-5678

CITY OF HUNTINGTON BEACH
2000 MAIN STREET
HUNTINGTON BEACH, CA 92648

SUBDIVIDER:
BEACH PROMENADE, LLC,
A CALIFORNIA LIMITED LIABILITY CO.
21190 BEACH BOULEVARD
HUNTINGTON BEACH, CA 92648
714-374-5678

MAP PREPARER:
WALDEN & ASSOCIATES
2552 WHITE RD., SUITE B
IRVINE, CA 92614
949-660-0110
JEFFREY A. WALDEN, P.L.S. 7914

NOTES:
1. NUMBER OF PARCELS: 5
2. EXISTING ZONING: CG - GENERAL COMMERCIAL
3. EXISTING USE: COMMERCIAL
4. UTILITY PURVEYORS:
   WATER: CITY OF HUNTINGTON BEACH (PUBLIC)
   SEWER: CITY OF HUNTINGTON BEACH
   GAS: SOUTHERN CALIFORNIA GAS COMPANY
   ELECTRIC: SOUTHERN CALIFORNIA EDISON COMPANY
   TELEPHONE: VERIZON OF CALIFORNIA
5. FLOOD ZONE: ZONE "AE" AS SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT, PER FEMA FLOOD INSURANCE RATE MAP NUMBER 06059C0263H, REVISED FEBRUARY 18, 2004.
6. PARCEL OWNED BY THE CITY OF HUNTINGTON BEACH (FRONTAGE ROAD) TO BE ABANDONED/VACATED ON FINAL PARCEL MAP BY THE CITY OF HUNTINGTON BEACH.

EASEMENT NOTES:
- (A) INDICATES AN EASEMENT FOR UNDERGROUND LINES, CONDUITS INCLUDING ABOVE-GROUND APPURTENANT FIXTURES AND INCIDENTAL PURPOSES IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY, RECORDED SEPTEMBER 26, 1968, IN BOOK 8734, PAGE 18 OF OFFICIAL RECORDS.
- (B) INDICATES AN EASEMENT FOR UNDERGROUND LINES, CONDUITS INCLUDING ABOVE-GROUND APPURTENANT FIXTURES AND INCIDENTAL PURPOSES IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY, RECORDED SEPTEMBER 5, 1973, IN BOOK 10866, PAGE 297 OF OFFICIAL RECORDS.
- (C) INDICATES AN EASEMENT FOR PIPE LINES, TELEGRAPH AND TELEPHONE LINES AND INCIDENTAL PURPOSES, IN FAVOR OF STANDARD OIL COMPANY RECORDED FEBRUARY 15, 1925 IN BOOK 452, PAGE 343 OF DEEDS AND FEBRUARY 16, 1925 IN BOOK 50, PAGE 95 OF LEASES. PORTION OF SAID EASEMENTS WERE QUITCLAIMED BY INSTRUMENT RECORDED JULY 20, 1964 IN BOOK 7140, PAGE 132, OFFICIAL RECORDS.
- (D) INDICATES AN EASEMENT FOR PIPE LINES, CONDUITS AND INCIDENTAL PURPOSES, IN FAVOR OF STANDARD OIL COMPANY OF CALIFORNIA, RECORDED AUGUST 19, 1964 IN BOOK 7185, PAGE 412, OFFICIAL RECORDS.
- (E) INDICATES AN EASEMENT FOR USE, MAINTENANCE, FACILITIES AND APPURTANCES FOR THE TRANSMISSION OF ELECTRIC ENERGY FOR COMMUNICATION AND OTHER PURPOSES, IN FAVOR OF GENERAL TELEPHONE COMPANY OF CALIFORNIA, RECORDED NOVEMBER 13, 1964 IN BOOK 7300, PAGE 957, OFFICIAL RECORDS.
- (F) INDICATES AN EASEMENT FOR POLE LINES, CONDUITS AND INCIDENTAL PURPOSES IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY, RECORDED SEPTEMBER 29, 1965 IN BOOK 7684, PAGE 645 OFFICIAL RECORDS.
- (G) INDICATES AREA TO BE DEDICATED TO THE CITY OF HUNTINGTON BEACH FOR PUBLIC STREET AND UTILITY PURPOSES PER FINAL PARCEL MAP.

HUNTINGTON BEACH CHANNEL

ATLANTA AVENUE

BEACH BOULEVARD

PARCEL 1
PMB 44/40

PARCEL 2
PMB 44/40

PARCEL 3
PMB 15/18

PARCEL 1
0.85 ACRES

PARCEL 2
0.60 ACRES

PARCEL 3
.64 ACRES

PARCEL 4
1.23 ACRES

PARCEL 5
0.96 ACRES

EXISTING BUILDING TO REMAIN

POSSIBLE WELL POINT FOR SURF 2 PER HBFD

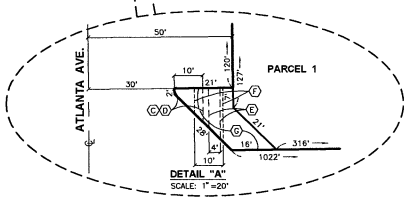
POSSIBLE WELL POINT FOR SURF 2 PER GEOVISION

POSSIBLE WELL POINT FOR SURF 1-6 PER GEOVISION

POSSIBLE WELL POINT FOR SURF 1-6 PER HBFD

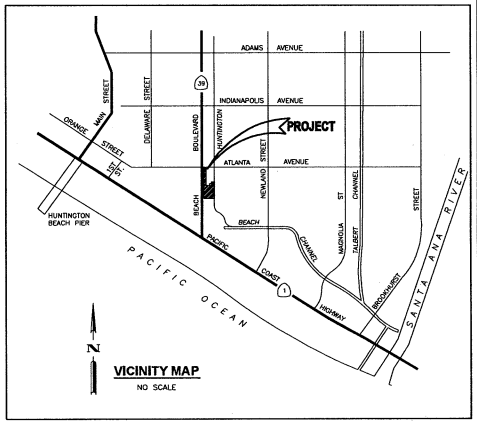
POSSIBLE WELL POINT FOR SURF 1-6 PER LOG

POSSIBLE WELL POINT FOR SURF 2 PER LOG



LEGEND:

TE - TRASH ENCLOSURE	- HANDICAP PARKING
ASPH - ASPHALT CONCRETE	- TREE
CONC. - CONCRETE	- PALM TREE
TRANS. - TRANSFORMER	- WALL
—(G)— - EXISTING GAS LINE	- RETAINING WALL
—(W)— - EXISTING WATER LINE	- STREET LIGHT
—(S)— - EXISTING SEWER LINE	- PARKING LOT LIGHT
—(SD)— - EXISTING STORM LINE	- POWER POLE
—(ELEC)— - EXISTING ELECTRICAL LINE	- GUY WIRE
—(TEL)— - EXISTING TELEPHONE LINE	- CABLE TV PULL BOX
- WATER VALVE	- PULL BOX
- METER	- TELEPHONE PEDESTAL
- FIRE HYDRANT	- SIGN
- IRRIGATION CONTROL VALVE	- OIL WELL
- MANHOLE	- INDICATES PROJECT BOUNDARY
- GAS METER	



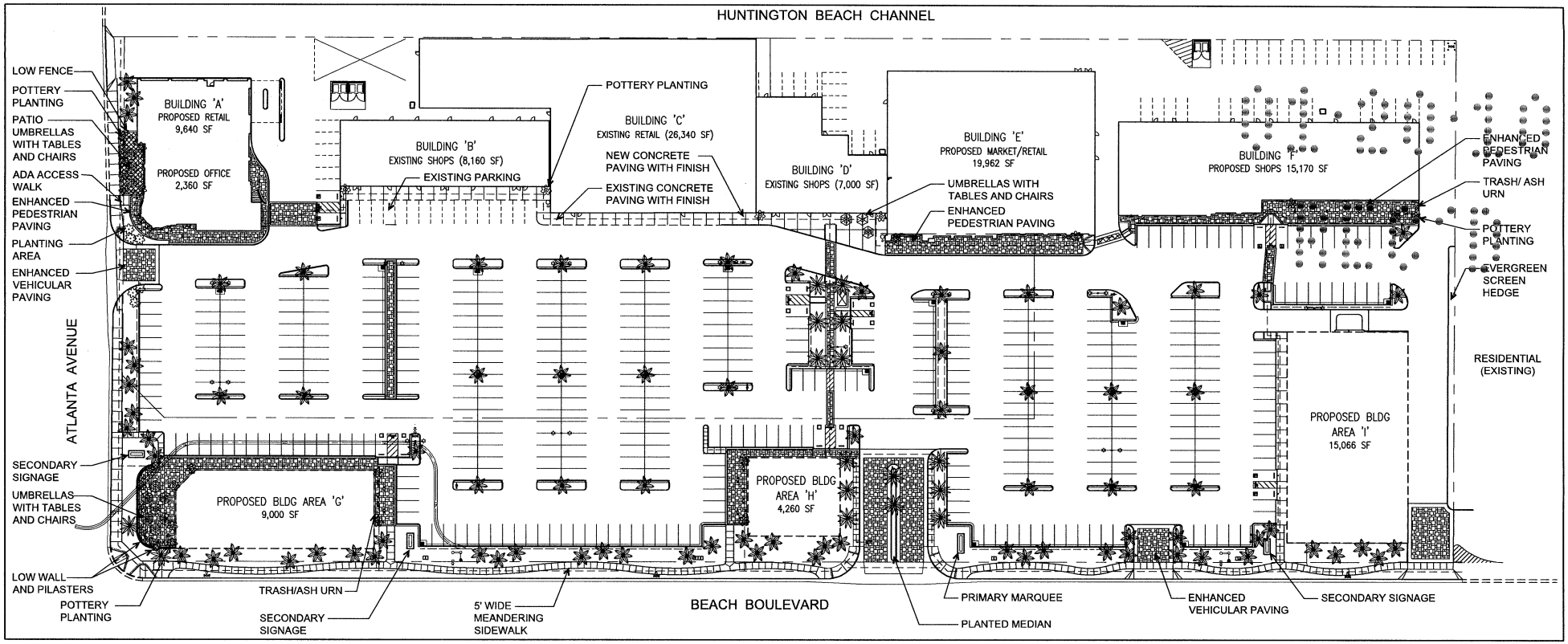
VICINITY MAP
NO SCALE

WALDEN & ASSOCIATES
CIVIL ENGINEERS
LAND SURVEYORS
PLANNERS
2552 WHITE ROAD, SUITE B, IRVINE, CA 92614
(949) 660-0110 FAX: 660-0418

TENTATIVE PARCEL MAP
NO. 2009-122
BEACH PROMENADE, LLC
HUNTINGTON BEACH, CALIFORNIA

JOB NUMBER	1623-476-001
DATE	08/12/09
DRAWN:	B.W.
CHECKED:	J.W.
SHEET	1 OF 1

ATTACHMENT NO. 3.10



PLANT PALETTE

FOCAL PALM TREES

Botanical Name	Common Name
Phoenix dactylifera 'Medjool'	Phoenix dactylifera
Washingtonia robusta	Mexican Fan Palm

PERIMETER AND PARKING LOT PALM TREES

Botanical Name	Common Name
Arcontophoenix cunninghamiana	King Palm
Syagrus romanzoffianum	Queen Palm
Washingtonia filifera	California Fan Palm
Washingtonia robusta	Mexican Fan Palm

PALM TREES FOR POTTERY

Botanical Name	Common Name
Cordyline indivisa	Blue Dracaena
Cordyline stricta	Palm Lily
Cycas revoluta	Sago Palm
Howea forsteriana	Kentia Palm
Phoenix roebelenii	Pygmy Date Palm
Rhapis excelsa	Lady Palm
Rhapis humilis	Rattan Palm

SHRUB LIST

Botanical Name	Common Name
Agapanthus africanus	Lily of the Nile
Agave americana ' Variegata'	Century Plant
Aloe species	Aloe
Anigozanthos flavidus	Kangaroo Paw
Asparagus densiflorus 'Sprengeri'	Asparagus Fern
Azalea species	Azalea
Bougainvillea species	Bougainvillea
Buxus macrophylla japonica	Japanese Boxwood
Camellia japonica	Japanese Camellia
Carissa macrocarpa	Natal Plum
Coprosma X kirkii	Creeping Mirror Plant
Coprosma repens	Mirror Plant
Cordyline australis	Australian dracaena
Cuphea hyssopifolia	False Heather
Dicksonia antarctica	Tasmanian Tree Fern
Dodonaea viscosa	Hopseed Bush
Galvezia species	Snapdragon
Hemerocallis varieties	Daylily
Lavandula species	Lavender
Leptospermum laevigatum	Australian Tea Tree
Ligustrum japonicam	Japanese Privet
Liriope muscari	Big Blue Lily Turf
Myrtus communis	True Myrtle
Nandina domestica	Heavinly Bamboo
Osteospermum fruticosum	Trailing African Daisy
Pelargonium species	Geranium
Phormium varieties	Flax
Pittosporum tobira	Tobira
Prunus caroliniana	Carolina Laurel Cherry
Rhaphiolepis species	Indian Hawthorn
Rosmarinus species	Rosemary
Sedum morganianum	Donkey Tail
Sedum rubrotinctum	Pork and Beans
Strelitzia nicolai	Giant Bird of Paradise
Strelitzia reginae	Bird of Paradise
Trachelospermum asiaticum	Yellow Star Jasmine
Trachelospermum jasminoides	Star Jasmine
Verbena species	Verbena
Viburnum tinus	Laurestinus Viburnum
Westringia fruticosa	Victorian Rosemary
Xylosma congestum	Xylosma
Yucca species	Yucca

GROUNDCOVER LIST

Botanical Name	Common Name
Ajuga reptans	Carpet Bugle
Aptenia cordifolia	Hearts and Flowers
Cephalophyllum 'Red Spike'	Red Spike Iceplant
Coprosma pumila 'Verde Vista'	Creeping Coprosma
Dianthus plumarius	Cottage Pink
Dichondra micrantha	Dichondra
Echeveria elegans 'Rose'	Rose Hen and Chicks
Festuca glauca	Blue Fescue
Festuca rubra	Red Fescue
Ficus pumila	Creeping Fig
Fragaria chiloensis	Beach Strawberry
Gazania species	Gazania
Heuchera species	Coral Bells
Ophiopogon japonicus	Mondo Grass
Scaevola 'Mauve Clusters'	Fan Flower
Senecio mandraliscae	Kleinia
Soleirolia soleirolli	Baby's Tears
Sutera cordata	White Baccopa
Vinca minor	Dwarf Periwinkle
Zoysia matrella	Turf Manila Grass

IRRIGATION NOTE:

ALL LANDSCAPED AREAS WILL BE PERMANENTLY IRRIGATED USING AN AUTOMATIC, UNDERGROUND IRRIGATION SYSTEM. THE IRRIGATION SYSTEM WILL BE SEPARATED INTO SEVERAL SYSTEMS BASED ON WATER REQUIREMENTS OF EACH HYDROZONE. HYDROZONE SEPARATIONS WILL BE BASED ON SUN ORIENTATION AND WATER REQUIREMENTS OF THE PLANT MATERIAL.

THE IRRIGATION SYSTEM SHALL PROVIDE 100% HEAD TO HEAD COVERAGE USING A VARIETY OF LOW PRECIPITATION NOZZLES. AREAS WHERE DRIP IRRIGATION CAN BE UTILIZED SHALL MATCH PRECIPITATION RATE, UTILIZE LOW GALLONAGE SPRINKER HEADS, BUBBLERS, AND TIMING DEVICES. TIMING DEVICES SHALL INCLUDE SOIL MOISTURE SENSORS AND RAIN SENSING OVERRIDE DEVICES. WHERE SPRAY HEADS ARE REQUIRED, SPRINKLER POP-UP HEIGHTS SHALL RANGE FROM 6" IN TURF AREAS AND 12" HIGH IN SHRUB/GROUNDCOVER BEDS. THE IRRIGATION SYSTEM SHALL BE CAPABLE OF OPERATING AUTOMATICALLY BY INCORPORATING AN ELECTRIC CONTROLLER AND LOW VOLTAGE ELECTRIC REMOTE CONTROL VALVES. QUICK COUPLING VALVES SHALL BE STRATEGICALLY LOCATED TO PROVIDE SUPPLEMENTAL WATER TO PLANT MATERIAL AND WASH DOWN PURPOSE. ALL REMOTE CONTROL AND QUICK COUPLING VALVES SHALL BE LOCATED AND INSTALLED WITHIN THE SHRUB BEDS WHEREVER POSSIBLE.

ATTACHMENT NO. 2.11

BEACH PROMENADE

SASSOUNIAN DEVELOPMENT CO.

Conceptual Landscape Plan

NORTH

SCALE: 1"=30'-0"

Ø 15' 30' 60'

FORMA

Jan. 18, 2010

ACCESS ANALYSIS

BEACH PROMENADE

HUNTINGTON BEACH, CALIFORNIA

This access analysis has been prepared under the Supervision of Pritam Deshmukh, T.E.

Signed _____

REGISTERED PROFESSIONAL ENGINEER
PRITAM DESHMUKH
No. 70075
Exp. 9/30/10
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
PRITAM DESHMUKH
No. 2463
Exp. 6/30/10
TRAFFIC
STATE OF CALIFORNIA

LSA

March 2010

ATTACHMENT NO. 4.1

ACCESS ANALYSIS

BEACH PROMENADE

HUNTINGTON BEACH, CALIFORNIA

Submitted to:

Beach Promenade, LLC
21190 Beach Boulevard
Huntington Beach, California 92648

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. WDZ0901

LSA

March 2010

ATTACHMENT NO. 4.2

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ATTACHMENT NO. 4.3

INTRODUCTION

The purpose of this Access Analysis is to identify the potential circulation impacts associated with the addition of approximately 31,851 square feet (sf) at the Beach Promenade retail center, located on the east side of Beach Boulevard south of Atlanta Avenue in the City of Huntington Beach (City). The existing center includes 85,107 sf of shopping center uses. With the proposed project, the center will include a total of 116,958 sf. Figure 1 shows the location of the project and the study area intersections analyzed in the report. The project also includes changes in vehicular access to the site, including the vacation of the existing frontage road and the addition of three driveways from the site onto Beach Boulevard.

Issues addressed in this analysis include the operation of the project driveways and adjacent signalized intersection with the proposed access modifications and the adequacy of the proposed parking supply with the additional proposed retail and restaurant square footage.

PROJECT DESCRIPTION

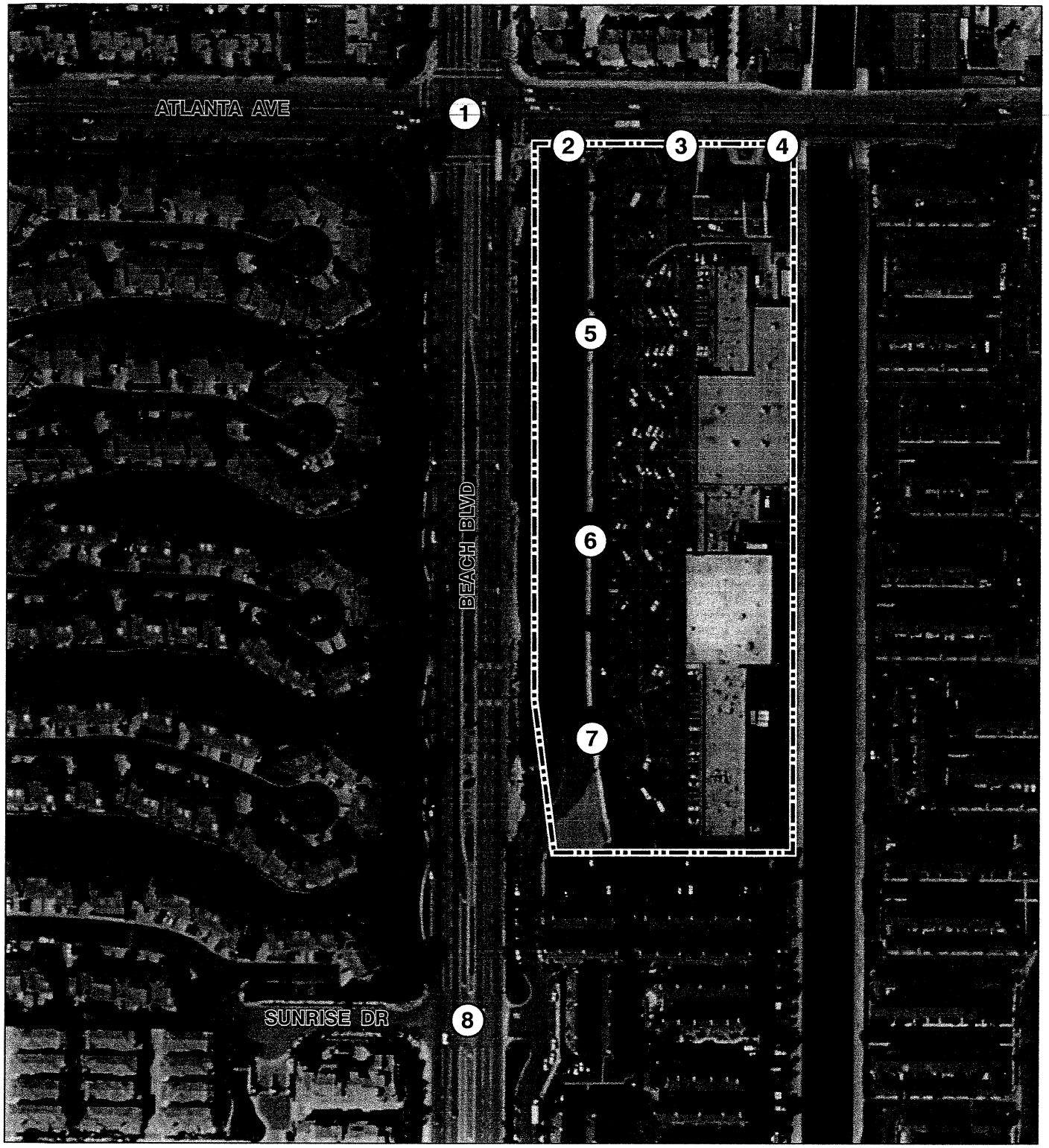
In May 2009, Conditional Use Permit (CUP) 2008-13 was approved by the City Council for the remodeling and expansion of the Beach Promenade retail center to include a total of 90,977 sf (i.e., 5,870 sf added to the existing center). The project is now being expanded further to include acquisition and vacation of the adjacent frontage road and the construction of 25,981 sf of retail/ restaurant use in addition to the previously approved 90,977 sf, resulting in a total of 116,958 sf of retail/restaurant use. Access to the project site is currently provided via two full-access driveways along Atlanta Avenue and three full-access driveways along the frontage road parallel to Beach Boulevard. The project proposes to retain the two full-access driveways along Atlanta Avenue and provide direct access onto Beach Boulevard via two right-in/right-out-only driveways and one unsignalized full-access driveway. The project site plan is illustrated in Figure 2.

METHODOLOGY

The purpose of the access analysis is to assess the operation of the project driveways and the adjacent signalized intersection of Beach Boulevard/Atlanta Avenue with implementation of the proposed project. As such, the study area is comprised of the following intersections:

Study Area Intersections

1. Beach Boulevard/Atlanta Avenue
2. Frontage road/Atlanta Avenue (removed in the plus project scenario)
3. West Driveway/Atlanta Avenue (Intersection #2 in plus project scenario)
4. East Driveway/Atlanta Avenue (Intersection #3 in plus project scenario)
4. (new) Beach Boulevard/Main (full access) Driveway
5. North Driveway/frontage road (removed in the plus project scenario)
5. (new) Beach Boulevard/Center (right-in/right-out) Driveway



LSA

LEGEND

- Project Boundary

(1) - Study Area Intersections

N

0 100 200

FEET

SOURCE: Google Earth

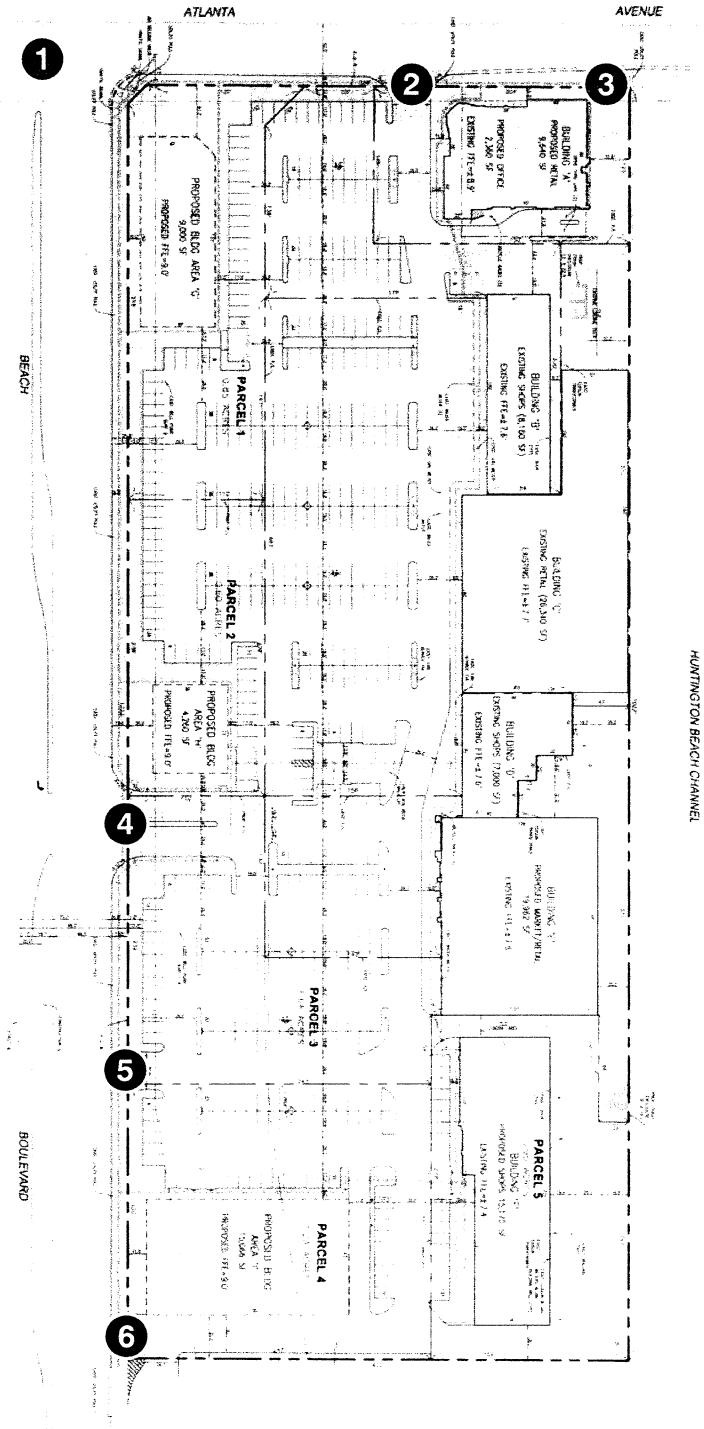
I:\WDZ0901\G\Location&Ints-1.cdr (9/29/09)

FIGURE 1

Beach Promenade

Project Site Location and
Existing Study Area Intersections

ATTACHMENT NO. 4.5



LSA

FIGURE 2

LEGEND

1 - Study Area Intersection

Not Shown - 7 Beach Boulevard/Sunrise Drive

N

0 60 120

FEET

SOURCE: Walden & Associates

I:\WDZ0901\G\Site Plan.cdr (12/21/09)

Beach Promenade

Proposed Site Plan

ATTACHMENT NO. 4.6

6. Center Driveway/frontage road (removed in the plus project scenario)
6. (new) Beach Boulevard/South (right-in/right-out) Driveway
7. South Driveway/frontage road (removed in the plus project scenario)
8. Beach Boulevard/Sunrise Drive (this intersection is No. 7 in the plus project scenario)

The location of the study area intersections is shown in Figure 1.

It should be noted that Beach Boulevard is a Caltrans facility (State Route 39 [SR-39]) and is designated in the Orange County Congestion Management Program (CMP) as part of the CMP Highway System.

Intersection Level of Service Methodology (City). Traffix Version 8.0 software was used to determine the intersection capacity utilization (ICU) at the signalized intersection of Beach Boulevard/Atlanta Avenue. This methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. For purposes of this analysis, a saturation flow rate of 1,700 vehicles per hour per lane (veh/hr/ln) was used per the City's Guidelines. The resulting ICU is expressed in terms of level of service (LOS), where LOS A represents free-flow activity, and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. The table below describes the conditions that would be experienced with LOS A through F.

LOS	Description
A	The v/c ratio ranges from 0.0 to 0.60. At this LOS, traffic volumes are low and speed is not restricted by other vehicles. All signal cycles clear with no vehicles waiting through more than one original cycle.
B	The v/c ratio ranges from 0.61 to 0.70. At this LOS, traffic volumes begin to be affected by other traffic. Between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.
C	The v/c ratio ranges from 0.71 to 0.80. At this LOS, operating speeds and maneuverability are closely controlled by other traffic. Between 11 and 30 percent of the cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.
D	The v/c ratio ranges from 0.81 to 0.90. At this LOS, traffic will operate at tolerable operating speeds, although with restricted maneuverability.
E	The v/c ratio ranges from 0.91 to 1.00. Traffic will experience restricted speeds, vehicles will frequently have to wait through two or more cycles at signalized intersections, and any additional traffic will result in breakdown of the traffic carrying ability of the system.
F	Long queues at traffic signals, unstable flow, stoppages of long duration with traffic volumes, and traffic speed can drop to zero. Traffic volumes will be less than the volume which occurs at LOS E.

ATTACHMENT NO. 4.7

The relationship between LOS and the ICU value (i.e., v/c ratio) is as follows:

Level of Service	Intersection Capacity Utilization
A	≤ 0.600
B	0.601–0.700
C	0.701–0.800
D	0.801–0.900
E	0.901–1.000
F	> 1.000

The City considers LOS D to be the upper limit of satisfactory operations for signalized intersections. Mitigation is required for any signalized intersection where project traffic causes the LOS to deteriorate from LOS D to LOS E or F. The City has no adopted LOS criteria for unsignalized intersections.

Intersection Level of Service Methodology (Caltrans). Because Beach Boulevard (State Route 39 [SR-39]) is a California Department of Transportation (Caltrans) facility, the intersection LOS was also determined using the 2000 *Highway Capacity Manual* (HCM 2000) analysis methodologies, consistent with Caltrans guidelines. For the signalized HCM methodology, the LOS is presented in terms of average intersection delay for all approaches. For the unsignalized HCM methodology at two-way stop-controlled intersections (such as the project driveways), the LOS is presented in terms of highest approach delay of the minor street in seconds per vehicle. It should be noted that the application of the unsignalized HCM 2000 methodology to two-way stop-controlled intersections can result in unsatisfactory conditions in the stop-controlled direction, while the uncontrolled direction operates with little or no delay. The resulting delay is expressed in terms of LOS, where LOS A represents free-flow activity, and LOS F represents overcapacity operation. For signalized intersections, the relationship between LOS and average delay per vehicle is shown below:

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec)	Signalized Intersection Average Delay per Vehicle (sec)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

sec = second

According to the Caltrans *Guide for the Preparation of Traffic Impact Studies*, "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS." The City uses LOS D to be the upper limit of satisfactory operations. In order to maintain acceptable operations while maintaining consistency with Caltrans and City thresholds, LOS D has been used as the LOS standard

ATTACHMENT NO. 4.8

in this analysis. Mitigation is required for any signalized intersection where project traffic causes the LOS to deteriorate from LOS D to LOS E or F.

EXISTING CONDITIONS

Existing Circulation System

The existing intersection geometrics and traffic control at study area intersections are illustrated in Figure 3. Key roadways in the vicinity of the proposed project are as follows:

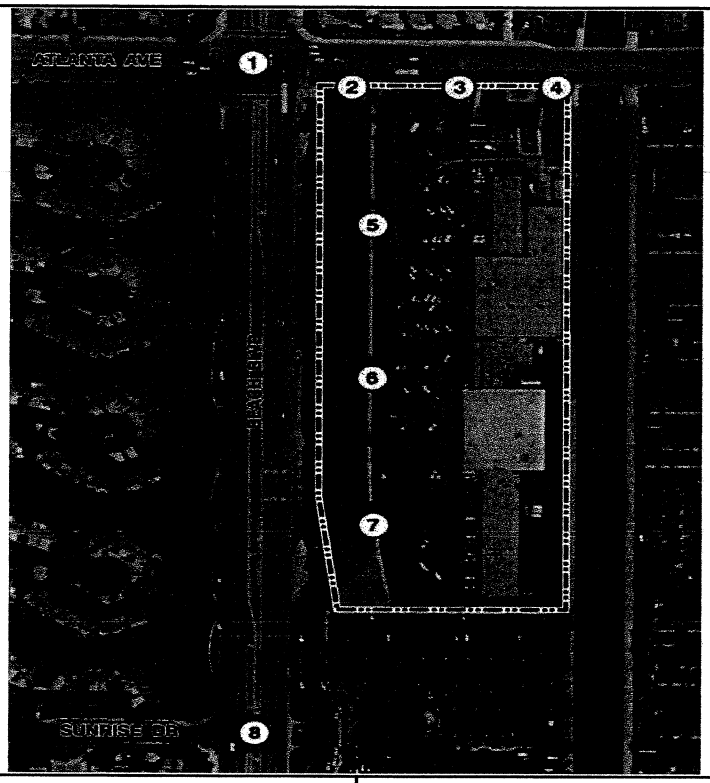
- **Beach Boulevard.** Beach Boulevard is a north-south arterial that provides access to the project site. Adjacent to the project site, it is classified as a Major Arterial in the City's General Plan. The posted speed limit in the vicinity of the project is 50 miles per hour (mph). Beach Boulevard is a six-lane divided roadway.
- **Atlanta Avenue.** Atlanta Avenue is a four-lane divided east-west arterial located along the north boundary of the project site. It is classified as a Primary Arterial in the City's General Plan. The speed limit on Atlanta Avenue adjacent to the project is 40 mph.
- **East and West Shopping Center Driveway/Atlanta Avenue.** Both East and West Driveways along Atlanta Avenue allow direct access to the project site. A stop sign is provided in the northbound direction to control the single lane minor street movement. A shared through-right-turn lane is provided for vehicles traveling east, and a continuous left-turn lane is provided for vehicles traveling westbound along Atlanta Avenue.
- **North, Center, and South Shopping Center Driveway/Frontage Road.** In the existing condition, there is a frontage road located east of Beach Boulevard along the west edge of the existing shopping center. Three driveways along the frontage road allow direct access to the project site. Although stop signs are not provided at the shopping center driveways, the shopping center driveways are analyzed assuming stop control in the westbound direction, as vehicles exiting the shopping center tend to stop or yield to traffic on the frontage road.. A shared through-right-turn lane is provided for vehicles traveling north, and a shared through-left-turn lane is provided for vehicles traveling south along the frontage road.

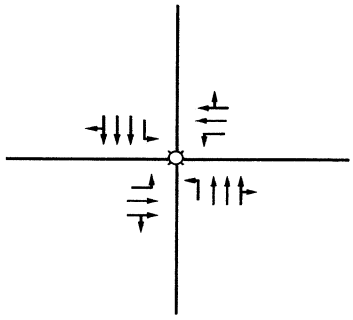
Existing Traffic Volumes and LOS Analysis

Peak-hour intersection turn volumes at study area intersections were collected by Southland Car Counters on Tuesday, July 15, and Wednesday, July 16, 2008. Figure 4 presents the existing a.m. and p.m. peak-hour turn movement volumes for study area intersections. Appendix A provides the existing traffic count data.

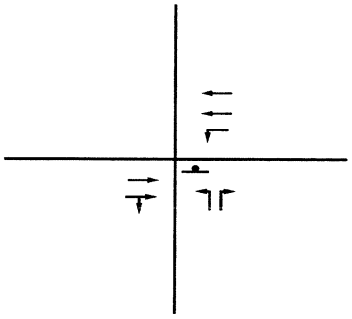
Table A summarizes the results of the existing a.m. and p.m. peak-hour LOS analysis for the study area intersections. The existing LOS calculation worksheets are included in Appendix B. As Table A indicates, all study area intersections operate at an acceptable LOS (LOS D or better) during the peak hours based on both the ICU and HCM methods.

ATTACHMENT NO. 4.9

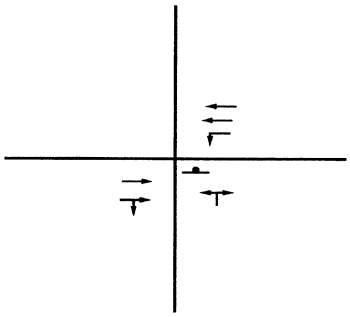




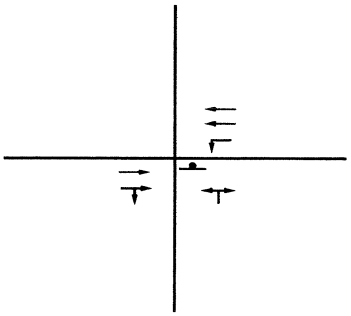
1 Beach Boulevard/Atlanta Avenue



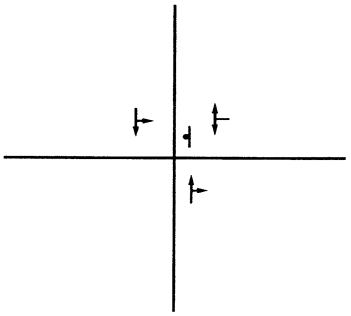
2 Frontage Road/Atlanta Avenue



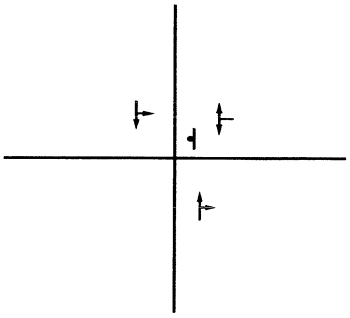
3 West Shopping Center Driveway/Atlanta Avenue



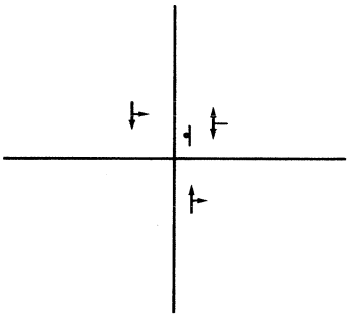
4 East Shopping Center Driveway/Atlanta Avenue



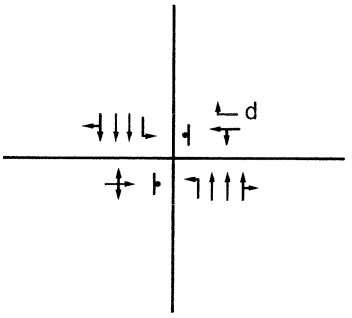
5 North Shopping Center Driveway/Frontage Road



6 Center Shopping Center Driveway/Frontage Road



7 South Shopping Center Driveway/Frontage Road



8 Beach Boulevard/Sunrise Drive

LSA

FIGURE 3

Legend

¤ Signal — Stop Sign

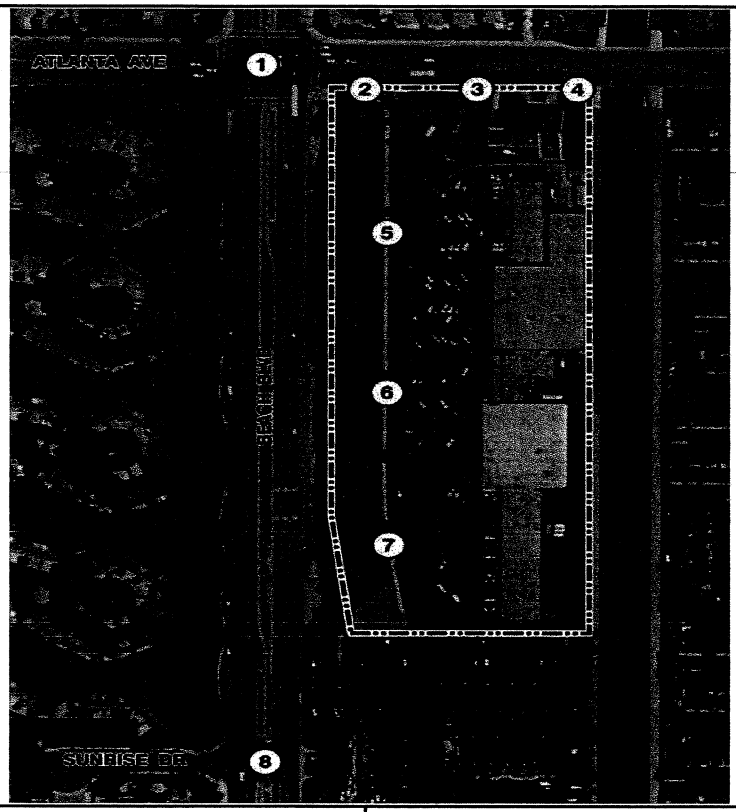
d De Facto Lane

Beach Promenade

Existing Lane Geometrics and Traffic Control Devices

P:\WDZ0901\November 2009 Revision\Graphics\Fig 3 - geometrics.xls\Figure

ATTACHMENT NO. 4-10



78/65 ↓ 556/563 ↓ 205/270 ↘
96/100 ↱
339/578 ←
63/41 ↰
171/155 ↴
291/319 →
28/16 ↴
12/107 ↰ 391/882 ↑ 55/73 ↱

1 Beach Boulevard/Atlanta Avenue

507/709 ←
7/20 ↰
523/616 →
18/46 ↴
7/17 ↰ 30/30 ↱

2 Frontage Road/Atlanta Avenue

486/674 ←
23/70 ↰
523/592 →
24/50 ↴
12/51 ↰ 11/58 ↱

3 West Shopping Center Driveway/Atlanta Avenue

500/729 ←
532/648 →
9/9 ↰ 11/8 ↱

4 East Shopping Center Driveway/Atlanta Avenue

18/54 ↓ 7/12 ↳
2/8 ↱
3/2 ↰
35/39 → 2/3 ↱

5 North Shopping Center Driveway/Frontage Road

13/32 ↓ 8/24 ↳
8/10 ↱
0/3 ↰
29/32 → 4/6 ↱

6 Center Shopping Center Driveway/Frontage Road

9/19 ↓ 4/16 ↳
3/14 ↱
5/17 ↰
30/24 → 5/12 ↱

7 South Shopping Center Driveway/Frontage Road

5/47 ↲ 550/512 ↓ 10/50 ↳
22/18 ↱
0/3 ←
12/14 ↰
40/14 ↴
31/10 ↴
16/13 ↰ 318/815 → 5/26 ↱

8 Beach Blvd./Sunrise Drive

LSA

FIGURE 4

123/456 AM/PM Volumes

Beach Promenade

Existing Peak Hour Traffic Volumes

P:\WDZ0901\November 2009 Revision\Graphics\Fig 4 - existing.xls\Figure

ATTACHMENT NO. 4-11

Table A: Existing Level of Service Summary

Intersection	Existing			
	AM Peak Hour		PM Peak Hour	
	ICU/Delay	LOS	ICU/Delay	LOS
1. Beach Boulevard/Atlanta Avenue				
City Methodology (ICU)	0.56	A	0.77	C
Caltrans Methodology (HCM)	37.3 sec	D	44.1 sec	D
2. Frontage Road/Atlanta Avenue	10.0 sec	B	12.9 sec	B
3. West Driveway/Atlanta Avenue	10.8 sec	B	13.3 sec	B
4. East Driveway/Atlanta Avenue	10.6 sec	B	11.2 sec	B
5. Frontage Road/North Driveway	8.8 sec	A	8.7 sec	A
6. Frontage Road/Center Driveway	8.5 sec	A	8.7 sec	A
7. Frontage Road/South Driveway	8.7 sec	A	8.9 sec	A
8. Beach Boulevard/Sunrise Drive	16.6 sec	C	25.5 sec	D

HCM = Highway Capacity Manual
ICU = intersection capacity utilization
LOS = level of service
sec = second

PROJECT CONDITIONS

Trip Generation

The existing trip generation of the shopping center was determined using the existing traffic counts taken at the project driveways on July 15 and 16, 2008. The existing inbound and outbound traffic volumes were compared to the existing occupied square footage of the shopping center to determine the trip rate of the shopping center.

The project proposes to add 6,766 sf of retail and 25,085 ft of restaurant use. Because restaurant land uses generate more trips per square footage than shopping centers, trips for the proposed new restaurant square footage were generated using the trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation*, 8th Edition. These rates are more conservative than the observed shopping center trip rate.

As shown in Table B, buildout of the project site has the potential to generate approximately 471 trips in the a.m. peak hour and 739 trips in the p.m. peak hour. The net new trip generation of the site would be 302 a.m. peak-hour and 314 p.m. peak-hour vehicle trips.

ATTACHMENT NO. 4.12

Table B: Project Trip Generation Summary

Land Use	Size	Unit	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Rates								
Shopping Center (observed rate) [1]		TSF	1.04	0.94	1.98	2.63	2.37	5.00
Shopping Center (ITE rate) [2]		TSF	0.61	0.39	1.00	1.83	1.90	3.73
Restaurant [2]		TSF	5.99	5.53	11.52	6.58	4.57	11.15
Trip Generation								
Occupied Square Footage (includes 10,000 sf Restaurant[3])	73.327	TSF	76	69	145	193	174	367
Vacant Square Footage	11.780	TSF	12	11	23	31	28	59
Total Existing	***85.107***	***TSF***	***89***	***80***	***169***	***224***	***202***	***426***
Proposed								
Retail[4]	6.766	TSF	7	6	13	18	16	34
Restaurant	25.085	TSF	150	139	289	165	115	280
Total Proposed	***31.851***	***TSF***	***157***	***145***	***302***	***183***	***131***	***314***
Total Trip Generation	**116.958**	**TSF**	**246**	**225**	**471**	**407**	**332**	**739**

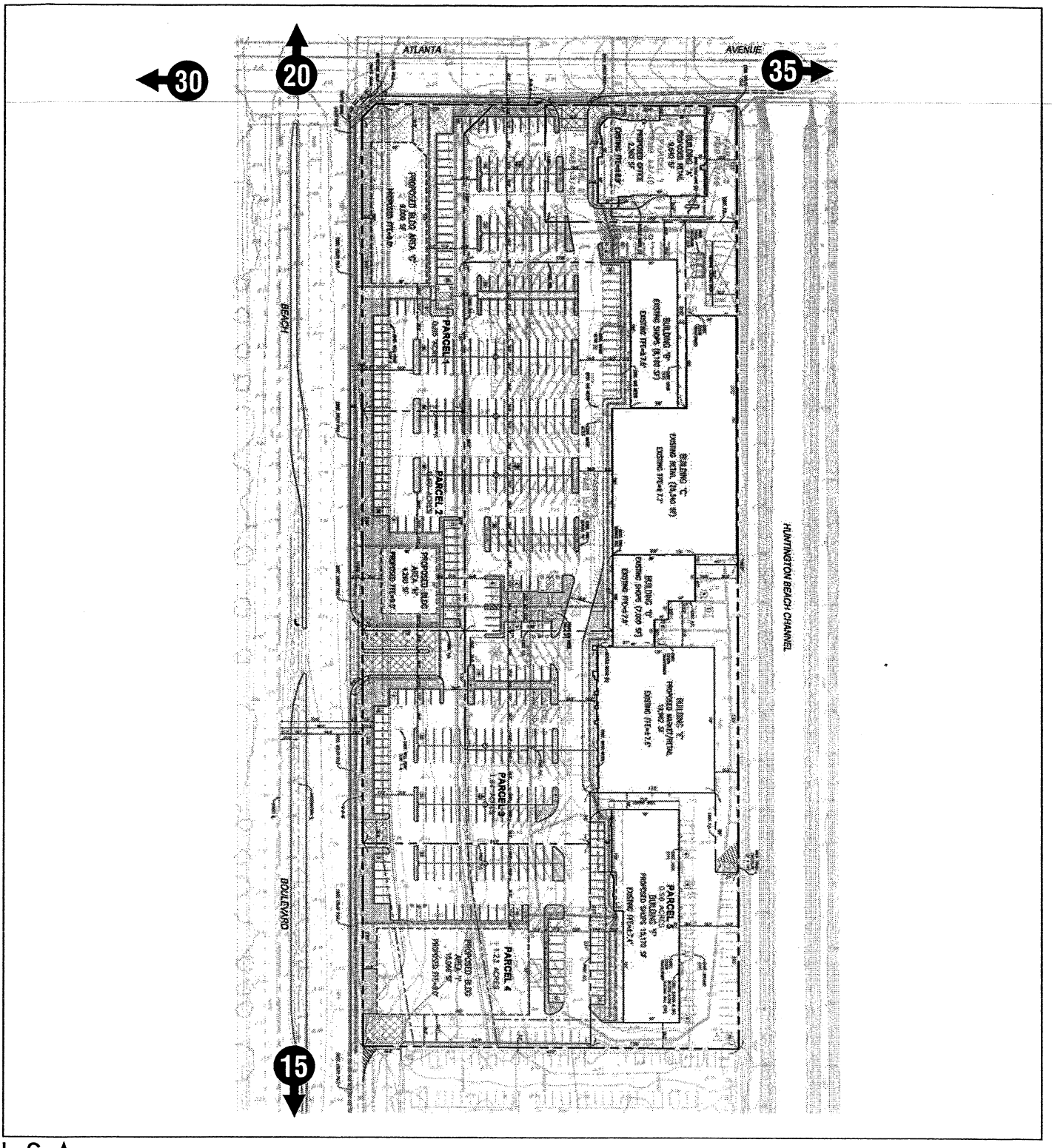
[1] Trip rate based on existing traffic counts taken at project driveways on July 15 and 16, 2008.
[2] Trip rate from Institute of Transportation Engineers, *Trip Generation*, 8th Edition.
[3] Includes Las Barcas (2,500 sf), Sushi Adami and Randazzo Italian Restaurant (2,500 sf), and Tumbleweeds Bar and Grill (5,000 sf).
[4] Trip generation for the proposed retail was calculated using observed trip rates, as they are more conservative than ITE trip rates.

ITE = Institute of Transportation Engineers
sf = square feet
TSF = thousand square feet

Trip Distribution and Assignment

Project trip distribution was determined by examining the existing distribution of project trips at the driveways and the land use patterns in the area surrounding the project. It is estimated that approximately 15 percent of the project trips will be destined to the south and 20 percent to the north via Beach Boulevard; 35 percent will destined to the east and 30 percent to the west via Atlanta Avenue. The trip distribution is illustrated in Figure 5. The proposed vacation of the frontage road and changes in project access would result in redistribution of trips locally around the project. For example, it is anticipated that with the project, a lower percentage of the total trip generation would make a northbound left turn onto Atlanta Avenue. Rather, these vehicles would utilize the proposed Beach Boulevard driveways. In order to capture the changes in trip distribution, trips generated by the existing retail center were subtracted from the existing traffic volumes, and the total trip generation of the project (including existing trips) were distributed to the study intersections and driveways using the trip distribution shown in Figure 5. The project traffic volumes are shown in Figure 6.

ATTACHMENT NO. 4.13



LSA

LEGEND

10 - Regional Trip Distribution Percentage

FIGURE 5

N

0 60 120

FEET

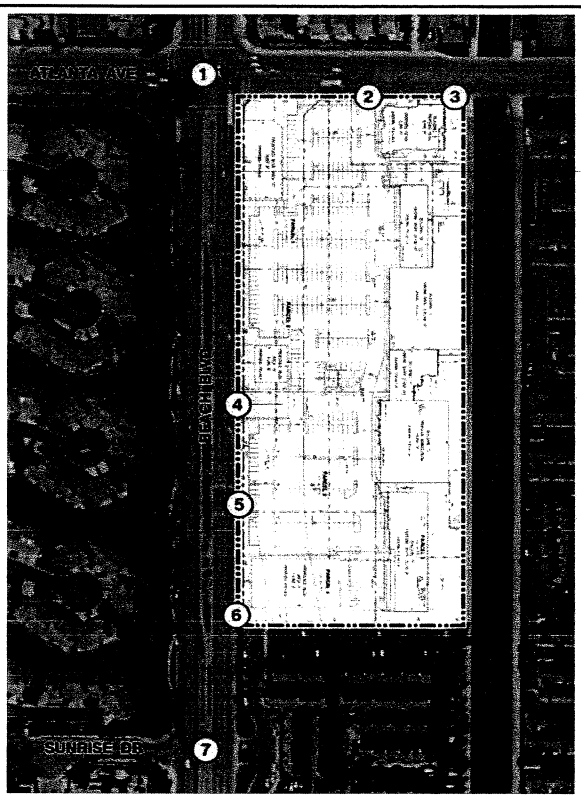
SOURCE: Walden & Associates

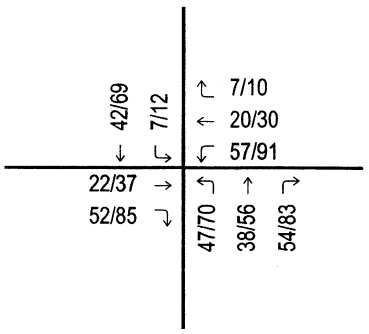
Beach Promenade

Trip Distribution Percentages

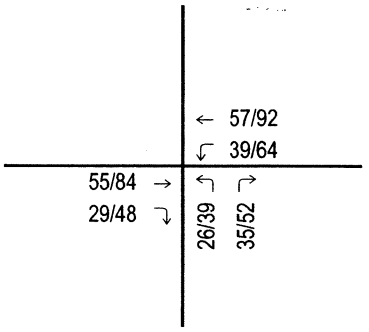
I:\WDZ0801\G\Trip Dist Perc.cdr (12/15/09)

ATTACHMENT NO. 4.14

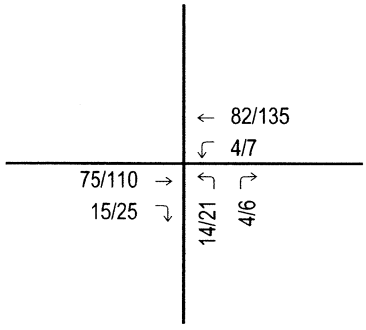




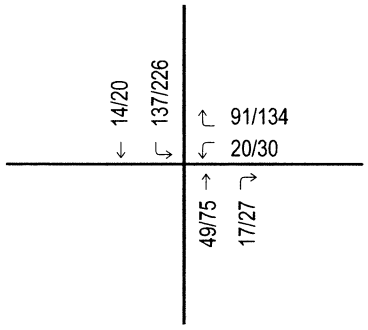
1 Beach Boulevard/Atlanta Avenue



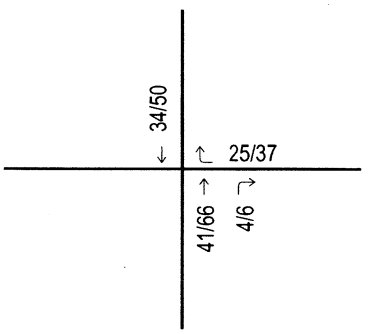
2 West Shopping Center Driveway/Atlanta Avenue



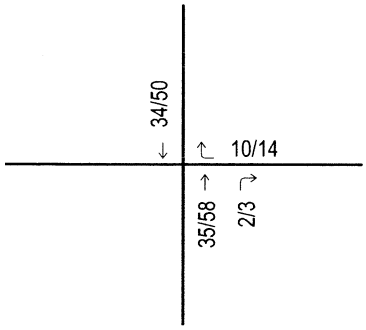
3 East Shopping Center Driveway/Atlanta Avenue



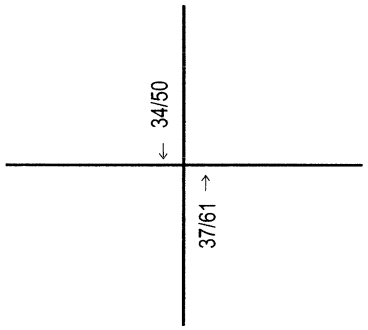
4 Main Shopping Center Driveway/Beach Boulevard



5 Center Shopping Center Driveway/Beach Boulevard



6 South Shopping Center Driveway/Beach Boulevard



7 Beach Blvd./Sunrise Drive

LSA

FIGURE 6

123/456 AM/PM Volumes

Beach Promenade
Project Traffic Volumes

P:\WDZ0901\November 2009 Revision\Graphics\Fig 6 - project traffic volumes.xls\Figure

ATTACHMENT NO. 4.15

EXISTING PLUS PROJECT CONDITIONS

As discussed in the project description, the project would add 25,981 sf to the 90,977 sf of approved shopping center land use (or 31,851 sf more than the existing center. The project would also result in the vacation of the frontage road along the west side of the existing property. The shopping center would be extended to Beach Boulevard on the west, and three new driveways from Beach Boulevard to the shopping center would be provided.

To determine the existing plus project conditions, traffic generated by the existing shopping center was subtracted from the existing traffic counts, and the project trips generated by the proposed project were added. This method accounts for the redistribution of trips around the project site that would result when access onto Beach Boulevard is provided. Figure 7 shows the resulting existing plus project a.m. and p.m. peak-hour traffic volumes. It should be noted that the traffic volumes shown in Figure 7 also include the application of a peak-hour factor (PHF). The PHF accounts for the fact that traffic is not evenly distributed throughout the peak hour, and adjusts the volumes so that the conditions during the peak 15-minute period are accounted for in the LOS analysis. The existing plus project peak-hour LOS analysis is presented in Table C. The LOS worksheets are provided in Appendix B.

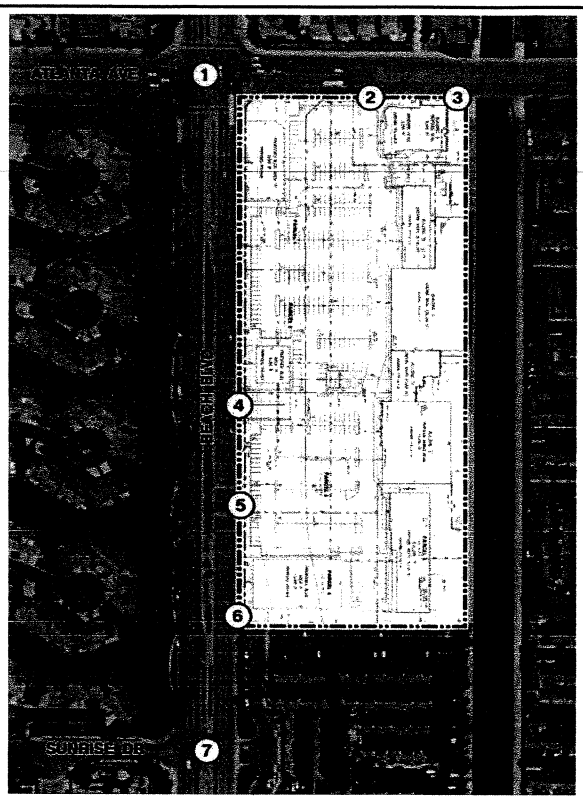
Table C: Existing Plus Project LOS Summary

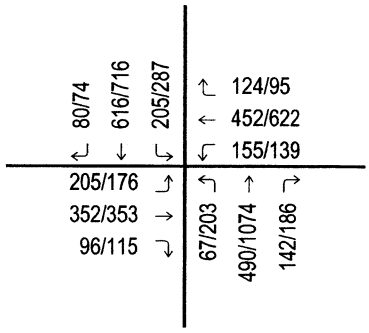
Intersection	Existing				Existing Plus Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	ICU/Delay	LOS	ICU/Delay	LOS	ICU/Delay	LOS	ICU/Delay	LOS
1. Beach Blvd./Atlanta Ave.								
City Methodology (ICU)	0.56	A	0.77	C	0.59	A	0.78	C
Caltrans Methodology (HCM)	37.3 sec	D	44.1 sec	D	45.0 sec	D	51.3 sec	D
2. West Driveway/Atlanta Ave.	10.8 sec	B	13.3 sec	B	11.5 sec	B	13.9 sec	B
3. East Driveway/Atlanta Ave.	10.6 sec	B	11.2 sec	B	12.5 sec	B	14.5 sec	B
4. Beach Blvd./Main Driveway	-	-	-	-	15.0 sec	C	188.9 sec	F
5. Beach Blvd./Center Driveway	-	-	-	-	9.7 sec	A	12.1 sec	B
6. Beach Blvd./South Driveway	-	-	-	-	9.6 sec	A	11.7 sec	B
7. Beach Blvd./Sunrise Drive	16.6 sec	C	25.5 sec	D	22.9 sec	C	30.9 sec	D

HCM = Highway Capacity Manual
ICU = intersection capacity utilization
LOS = level of service
sec = second
Shading indicates unsatisfactory level of service.

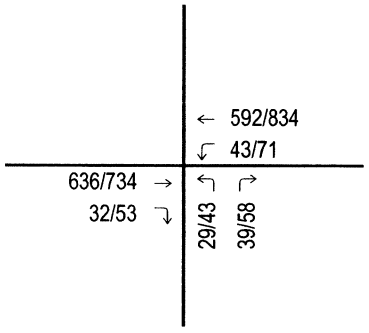
As Table C indicates, with implementation of the proposed project, all study area intersections are forecast to operate at acceptable LOS (LOS D or better) during peak hours, with the exception of Beach Boulevard/Main Driveway. The LOS F operations at the Main Driveway are caused by the delay experienced in the stop-controlled direction. Vehicles would need to wait for more than 50 seconds when turning left out of the project site. This is primarily due to the high northbound traffic volumes on Beach Boulevard. The increased delay at this movement would result in an average queue length of 126 ft (or approximately five vehicles) waiting to exit the shopping center during the p.m. peak hour. There is approximately 110 ft of on-site queuing distance before the first intersecting drive aisle; therefore, during the p.m. peak hour, the queue may extend into the intersecting drive aisle by

ATTACHMENT NO. 4-16

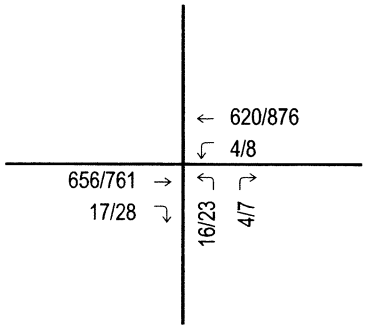




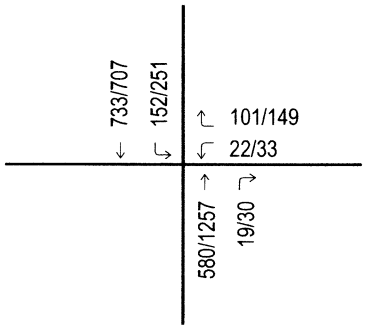
1 Beach Boulevard/Atlanta Avenue



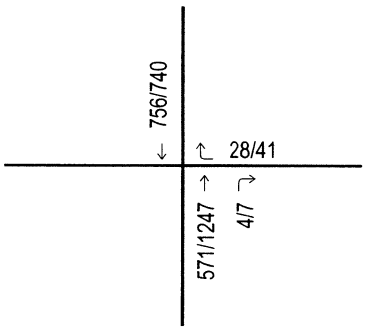
2 West Shopping Center Driveway/Atlanta Avenue



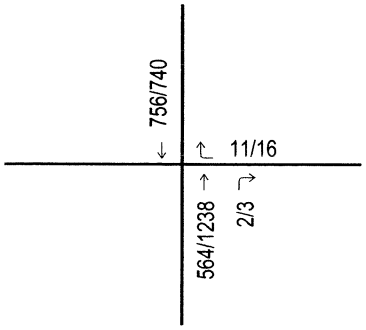
3 East Shopping Center Driveway/Atlanta Avenue



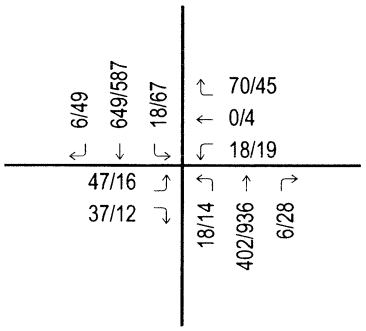
4 Main Shopping Center Driveway/Beach Boulevard



5 Center Shopping Center Driveway/Beach Boulevard



6 South Shopping Center Driveway/Beach Boulevard



7 Beach Blvd./Sunrise Drive

LSA

FIGURE 7

123/456 AM/PM Volumes

Beach Promenade
Existing with Proposed Project

P:\WDZ0901\November 2009 Revision\Graphics\Fig 7 - existing plus project.xls\Figure

ATTACHMENT NO. 4.17

approximately one-half vehicle length. It should be noted that most vehicles utilizing this intersection (i.e., vehicles proceeding north and south on Beach Boulevard or turning right into or out of the project site) would experience minimal or no delay at this location. The deficient LOS on the stop-controlled approach would not affect the overall operation of Beach Boulevard.

SITE ACCESS ANALYSIS

The project site plan is shown in previously referenced Figure 2. The project proposes to extend the shopping center west to Beach Boulevard. In addition to the two existing driveways on Atlanta Avenue, three driveways are proposed from Beach Boulevard to the shopping center. Two of the Beach Boulevard driveways would provide right-in/right-out turn movements only. The northernmost driveway would provide full access to the site from Beach Boulevard. The project frontage on Beach Boulevard is approximately 1,400 feet (ft) long with the three driveways located approximately 860 ft, 1,125 ft, and 1,400 ft from Atlanta Avenue, respectively. The Main Driveway, which provides full access, is proposed to be located approximately 860 ft south of Atlanta Avenue. The two southern right-in/right-out driveways (Beach Boulevard/Center Driveway and Beach Boulevard/South Driveway) would work in tandem to provide truck access to the site.

Passenger vehicles would enter and exit the site from Beach Boulevard via each of the three proposed driveways. The two southern most driveways, however, are intended to provide ingress/egress for large delivery trucks destined to the loading area located between Buildings E and F. Trucks would enter the site via the Beach Boulevard/South Driveway, proceed behind Building F to the loading area located between Building E and Building F, and then exit the site via the Beach Boulevard/Center Driveway, which is located approximately 265 ft south of the Main Driveway. In the existing condition, the site layout does not provide adequate turning radii for delivery vehicles to access the loading area without circling around Building F, making these two southern driveways a necessity to accommodate deliveries to the existing retail center. This configuration will also serve to separate delivery trucks from passenger vehicle trips, as most passenger vehicles are expected to utilize the Main Driveway and all delivery trucks on Beach Boulevard will be required to utilize the two southern driveways.

Access to the project is also provided via the existing West and East Driveways onto Atlanta Avenue. These driveways are located approximately 240 ft and 400 ft east of Beach Boulevard, respectively. With the construction of the proposed project, the existing frontage road, which is located approximately 80 ft east of Beach Boulevard, would be vacated. A separate analysis was prepared to assess the impacts of vacation of the existing Frontage Road.

As shown in Table B, the project has the potential to generate over 300 trips during the a.m. and p.m. peak hour. This would be a significant number of trips added to the Atlanta Avenue driveways if additional access to the site is not provided. To provide additional access to the project, the project site plan includes access onto Beach Boulevard. Northbound traffic on Beach Boulevard could turn right into the site via any of the three driveways while southbound traffic could turn left into the site via the Main Driveway.

This study is based on the addition of project traffic volumes to existing traffic volumes. Although the existing plus project condition shows that provision of the proposed project driveways onto Beach Boulevard would not significantly impact the operation of Beach Boulevard or the adjacent

intersection, it is possible that future traffic volumes in the vicinity could be higher than existing and the driveways could impact Beach Boulevard in a future condition. The traffic volumes on Beach Boulevard at the project driveway locations are taken from the Beach Boulevard/Atlanta Avenue traffic count taken on July 16, 2008. It should be noted that a Traffic Impact Analysis (TIA) was recently prepared by Kimley-Horn and Associates, Inc. for the Downtown Specific Plan Update. Traffic counts for this study were taken at Beach Boulevard/Atlanta Avenue on July 30, 2008. The Downtown Specific Plan TIA also includes forecast 2030 traffic volumes for the intersection of Beach Boulevard/Atlanta Avenue. Table D provides a comparison of the vehicles on Beach Boulevard south of Atlanta Avenue based on the Beach Boulevard/Atlanta Avenue traffic counts and forecasts.

Table D: P.M. Peak-Hour Traffic Volumes on Beach Boulevard

Source of Traffic Data	Traffic Volume
July 16, 2008 Traffic Count	1,682
July 30, 2008 Traffic Count (from Downtown Specific Plan TIA)	1,590
Year 2030 Forecast (from Downtown Specific Plan TIA)	1,784

TIA = Traffic Impact Analysis

As shown in Table D, the July 16, 2008, traffic count on which this analysis is based is higher than a count taken at the same location 2 weeks later. Furthermore, the year 2030 forecast traffic volume is not significantly higher (approximately 100 vehicles on a six-lane roadway) than the traffic volumes experienced in the existing condition. As a result, the traffic conditions on Beach Boulevard are not expected to change significantly in the vicinity of the project in the next 20 years. It should be noted that the traffic count at Beach Boulevard/Sunrise Drive just south of the project was taken on September 1, 2009. This traffic count shows 1,456 vehicles on Beach Boulevard in the vicinity of the project, over 200 vehicles lower than counted on July 16, 2008. As a result, the traffic counts are deemed conservative and provide a true picture of traffic conditions on Beach Boulevard.

Signal Warrant Analysis

To determine whether a traffic signal would be warranted at the proposed full-access driveway to Beach Boulevard, LSA conducted a traffic signal warrant analysis based on the provisions of both the 2006 California Manual on Uniform Traffic Control Devices (MUTCD) and the 2003 MUTCD, Chapter 4C – Traffic Control Signal Needs Study. These resources provide eight signal warrants that should be examined when determining the need for a traffic signal. The eight warrants were reviewed, and it was determined that Warrant 3 – Peak Hour was applicable for further analysis. The warrant analysis was conducted for the p.m. peak hour, as this is the period with the highest traffic volume on Beach Boulevard.

Warrant 3 – Peak Hour. Warrant 3 states that a traffic control signal shall be considered if all three of the following criteria of Condition A are met: (1) the total stopped time delay experienced by traffic on the one minor street approach controlled by a stop sign exceeds 4 vehicle-hours; (2) the volume on the same minor street approach equals or exceeds 100 vehicles per hour (vph) for one moving lane of traffic; and (3) the total volume serviced during the hour equals or exceeds 800 vph

ATTACHMENT NO. 4-19

for intersections with four or more approaches. The total stopped time delay on the minor street approach at the Beach Boulevard/Main Driveway intersection would be approximately 1.45 vehicle-hours (179.6 seconds times 29 vehicles) during the p.m. peak hour; therefore, Condition A of Warrant 3 is not met for Beach Boulevard/Main Driveway.

Condition B of Warrant 3 states that a traffic control signal shall be considered if the plotted point representing the vehicles per hour on the major street and the corresponding vehicles per hour on the higher-volume minor street approach for 1 hour fall above the applicable curve in Figure 13 of the MUTCD. Figure 8 shows Condition B of the peak-hour traffic signal warrant. The westbound left-turn volumes of the minor street (Main Driveway) are less than 100 vph during the p.m. peak hour. Therefore, Condition B of Warrant 3 is not met for Beach Boulevard/Main Driveway and Warrant 3 would not be satisfied. As a result, a traffic signal would not be recommended based on peak-hour traffic conditions.

Left-Turn In-Only Alternative

Although the full-access driveway on Beach Boulevard would not significantly affect the operation of Beach Boulevard, in order to reduce on-site delay associated with turning left out of the site, the Main Driveway on Beach Boulevard could be restricted to left-turn in-only operation. Vehicles traveling southbound on Beach Boulevard would be able to make a left-turn into the project site; however, outbound vehicles would only be allowed to make a right-turn from the Main Driveway onto Beach Boulevard. Vehicles traveling south would either need to turn left from one of the Atlanta Avenue driveways and then immediately turn left on Beach Boulevard, or would turn right onto Beach Boulevard and make a U-turn at Atlanta Avenue.

To quantify the change in delay that might be experienced at the study area intersections with a left-out prohibition at the Main Driveway, outbound left-turning trips at the Main Driveway were redistributed and an LOS analysis was prepared. The a.m. and p.m. peak-hour traffic volumes with the Left-Turn In-Only Alternative are shown in Figure 9. The LOS analysis is provided in Table E.

Table E: LOS with Left-Turn In-Only on Beach Boulevard

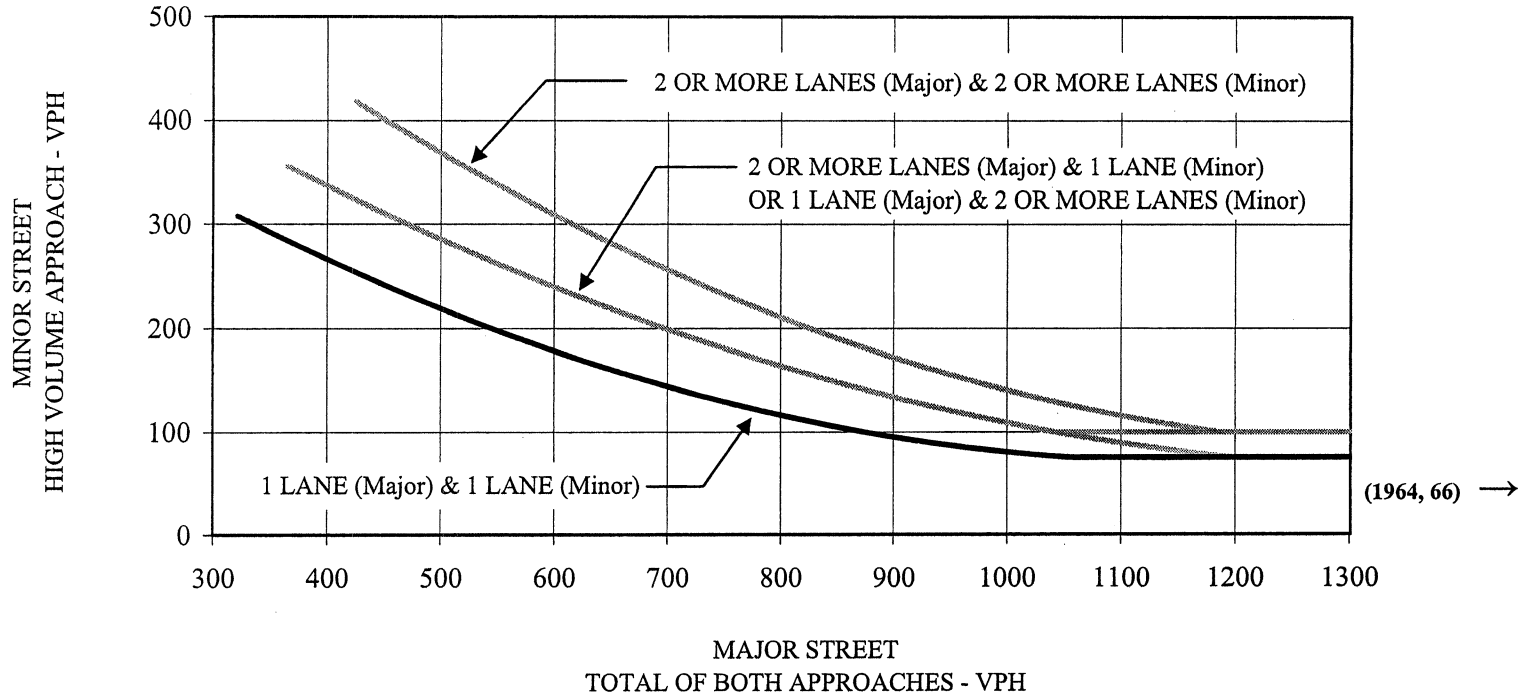
Intersection	With Full-Access Driveway				With Left-Turn In-Only			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1. Beach Blvd./Atlanta Ave.								
City Methodology (ICU)	0.59	A	0.78	C	0.57	A	0.78	C
Caltrans Methodology (HCM)	45.0 sec	D	51.3 sec	D	45.5 sec	D	51.9 sec	D
2. West Driveway/Atlanta Ave.	11.5 sec	B	13.9 sec	B	12.0 sec	B	14.9 sec	B
3. East Driveway/Atlanta Ave.	12.5 sec	B	14.5 sec	B	12.7 sec	B	15.0 sec	B
4. Beach Blvd./Main Driveway	15.0 sec	C	188.9 sec	F	10.5 sec	B	15.4 sec	C
5. Beach Blvd./Center Driveway	9.7 sec	A	12.1 sec	B	9.7 sec	A	12.1 sec	B
6. Beach Blvd./South Driveway	9.6 sec	A	11.7 sec	B	9.6 sec	A	11.7 sec	B
7. Beach Blvd./Sunrise Drive	22.9 sec	C	30.9 sec	D	22.9 sec	C	30.9 sec	D

LOS = level of service
sec = seconds
Shading indicates unsatisfactory LOS.

ATTACHMENT NO. 4.20

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

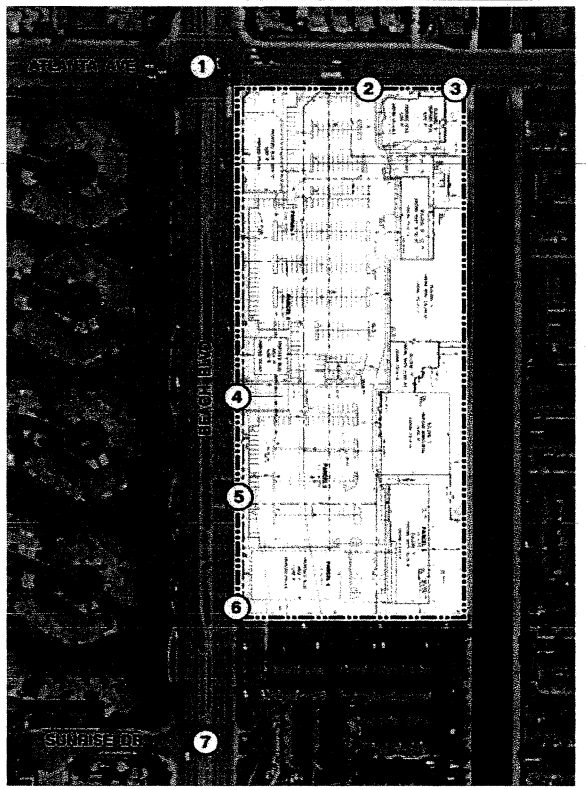
FIGURE 8

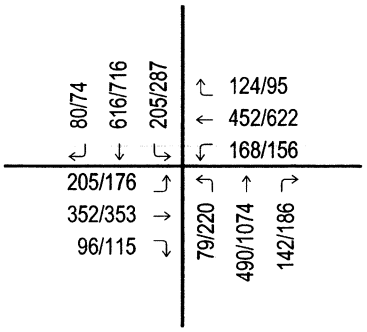
Beach Promenade
Beach Boulevard/Main Driveway
P.M. Peak Hour Signal Warrant Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

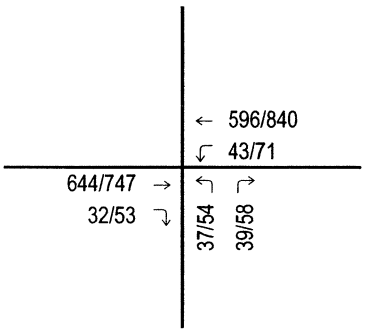
P:\WDZ0901\November 2009 Revision\Graphics\Fig 8 - Signal Warrant Analysis.xls (12/17/2009)

ATTACHMENT NO. 4-21

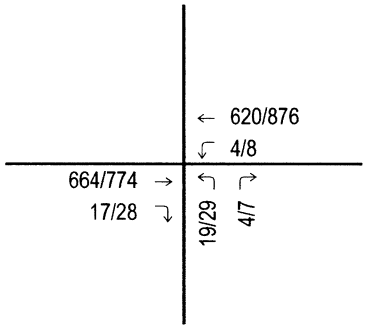




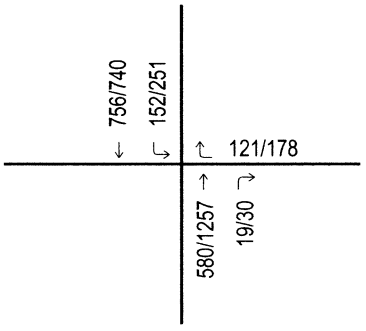
1 Beach Boulevard/Atlanta Avenue



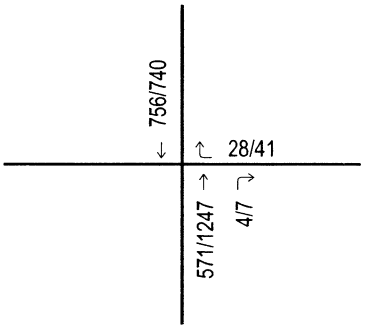
2 West Shopping Center Driveway/Atlanta Avenue



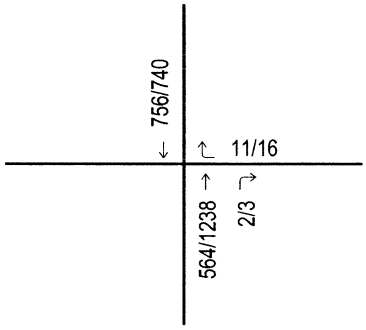
3 East Shopping Center Driveway/Atlanta Avenue



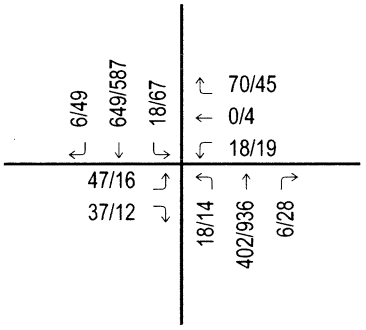
4 Main Shopping Center Driveway/Beach Boulevard



5 Center Shopping Center Driveway/Beach Boulevard



6 South Shopping Center Driveway/Beach Boulevard



7 Beach Blvd./Sunrise Drive

LSA

FIGURE 9

123/456 AM/PM Volumes

Beach Promenade

Existing with Project (Left-In Only Alternative)

P:\WDZ0901\November 2009 Revision\Graphics\Fig 9 - existing plus project (left in).xls\Figure

ATTACHMENT NO. 4.22

As shown in Table E, the delay at Beach Boulevard/Main Driveway would improve when outgoing left turns are prohibited. This is because the delay directly associated with waiting to turn southbound onto Beach Boulevard is removed.

Right-In/Right-Out Alternative

To identify the potential benefits of a new full-access driveway, a Right-In/Right-Out (RIRO) alternative has been evaluated, in addition to the Left-Turn In-Only Alternative. In this alternative, no left turns would be allowed into or out of the main driveway from Beach Boulevard. Vehicles traveling southbound on Beach Boulevard would make a left turn on Atlanta Avenue and then a right turn into the site. Outbound vehicles could only make a right turn from the Main Driveway onto Beach Boulevard. Vehicles traveling south from the project would either need to turn left from one of the Atlanta Avenue driveways and then immediately turn left on Beach Boulevard, or would turn right onto Beach Boulevard and make a U-turn at Atlanta Avenue.

To quantify the change in delay that might be experienced at the study area intersections with the RIRO Alternative, inbound and outbound left-turning trips at the Main Driveway were redistributed, and an LOS analysis was prepared. The a.m. and p.m. peak-hour traffic volumes with the RIRO Alternative are shown in Figure 10. The LOS analysis is provided in Table F.

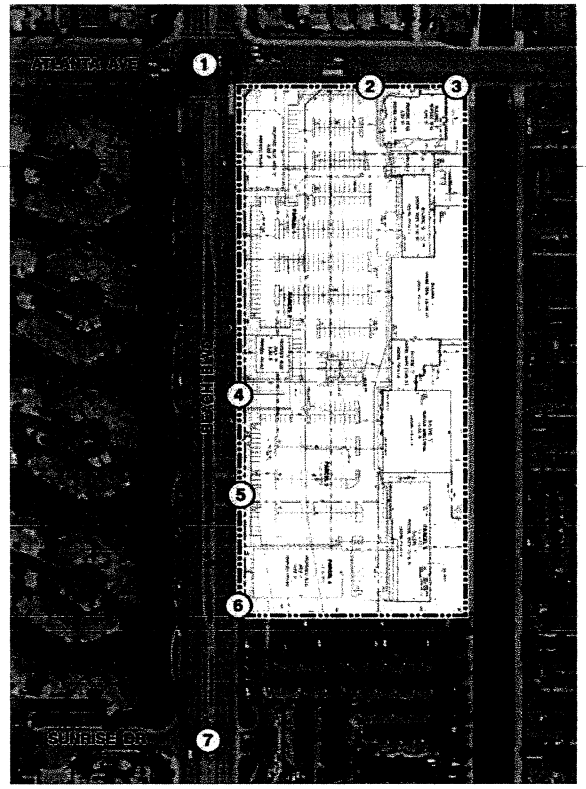
Table F: LOS with RIRO Alternative

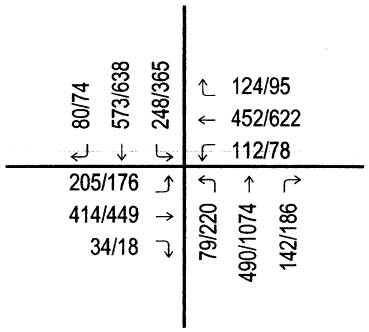
Intersection	With Full-Access Driveway				Right-In/Right-Out Only			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1. Beach Blvd./Atlanta Ave.								
City Methodology (ICU)	0.59	A	0.78	C	0.59	A	0.83	D
Caltrans Methodology (HCM)	45.0 sec	D	51.3 sec	D	45.5 sec	D	56.8 sec	E
2. West Driveway/Atlanta Ave.	11.5 sec	B	13.9 sec	B	12.7 sec	B	17.7 sec	C
3. East Driveway/Atlanta Ave.	12.5 sec	B	14.5 sec	B	12.8 sec	B	15.1 sec	C
4. Beach Blvd./Main Driveway	15.0 sec	C	188.9 sec	F	10.5 sec	B	15.4 sec	C
5. Beach Blvd./Center Driveway	9.7 sec	A	12.1 sec	B	9.7 sec	A	12.1 sec	B
6. Beach Blvd./South Driveway	9.6 sec	A	11.7 sec	B	9.6 sec	A	11.7 sec	B
7. Beach Blvd./Sunrise Drive	22.9 sec	C	30.9 sec	D	22.9 sec	C	30.9 sec	D

LOS = level of service
sec = seconds
Shading indicates unsatisfactory LOS.

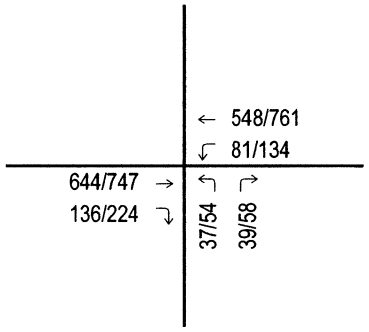
As shown in Table F, with the RIRO Alternative, the LOS F condition at the Main Driveway would be eliminated. However, in this alternative the intersection of Beach Boulevard/Atlanta Avenue would operate with unsatisfactory LOS during the p.m. peak hour, primarily due to the addition of traffic to the southbound left-turn and northbound U-turn movements. In the proposed project, the unsatisfactory LOS condition would be contained on the project site, and vehicles might experience delay when exiting the site onto Beach Boulevard. However, with the RIRO Alternative, the intersection of Beach Boulevard/Atlanta Avenue would be significantly impacted.

ATTACHMENT NO. 4.23

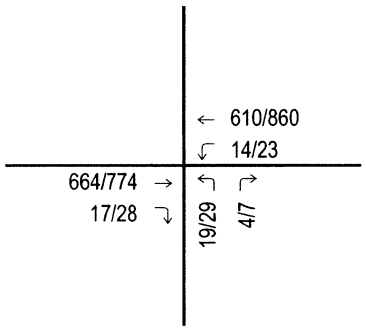




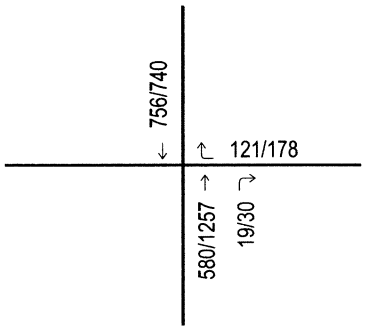
1 Beach Boulevard/Atlanta Avenue



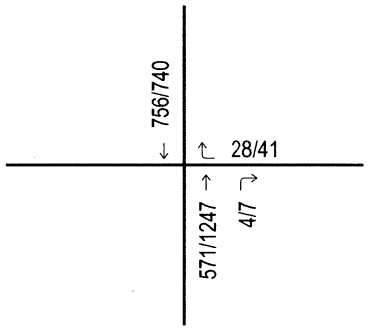
2 West Shopping Center Driveway/Atlanta Avenue



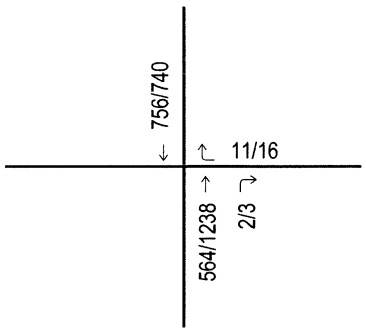
3 East Shopping Center Driveway/Atlanta Avenue



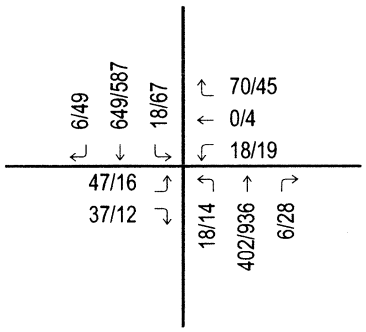
4 Main Shopping Center Driveway/Beach Boulevard



5 Center Shopping Center Driveway/Beach Boulevard



6 South Shopping Center Driveway/Beach Boulevard



7 Beach Blvd./Sunrise Drive

LSA

FIGURE 10

123/456 AM/PM Volumes

Beach Promenade

Existing with Project (Right-in/Right-out Alternative)

P:\WDZ0901\November 2009 Revision\Graphics\Fig 10 - existing plus project (RIRO).xls\Figure

ATTACHMENT NO. 4.24

PARKING ANALYSIS

Currently, there are 274 parking spaces on the project site. The proposed project would increase the existing parking by 265 spaces, to 539 spaces. In the existing condition, the 274 parking spaces provide a parking ratio of 3.2 spaces per thousand square feet (TSF). In the proposed project, the parking ratio will be increased to 4.6 spaces/TSF (539 parking spaces).

According to Section 231 of the City of Huntington Beach Zoning Code, the existing 85,107 sf shopping center would require one space per 200 sf, or 426 parking spaces, which is 152 parking spaces more than is currently provided. To determine the actual parking demand of the existing center, parking surveys were conducted on two weekdays (July 15 and 16, 2008) and one weekend day (July 19, 2008). The parking survey data is provided in Appendix C. As shown in the survey data, the maximum parking demand was observed on Saturday, July 19, during the 3:00 p.m. hour, when there were 112 parked vehicles. Application of the observed parking demand to the existing occupied square footage (73,327 sf) results in an observed parking rate of 1.53 spaces/TSF.

The proposed project will upgrade the existing retail space and the parking area circulation with the intention of attracting additional retail tenants and customers to the center. It is likely that the proposed grocery store would generate a higher parking demand than the existing center. The Zoning Code does not provide specific rates for grocery stores; therefore, per the Zoning Code, this use would be generated at the rate of 1 space per 200 sf [or 5 spaces/TSF]. LSA has consulted parking rates in the Institute of Transportation Engineers, *Parking Generation*, 3rd Edition. According to this source, grocery stores generally generate a parking demand of 6.72 spaces/TSF.

In order to provide adequate parking for the proposed project, it is recommended that all new uses provide parking at the rate required by the City Zoning Code, except for the proposed grocery store, which should provide 6.72 spaces/TSF, as recommended in *Parking Generation.*

The total parking demand of the site was determined using the observed parking rate for all existing retail use and the rates from Zoning Code and *Parking Generation* for proposed new land uses. It should be noted that of the 73,327 sf that is currently occupied, 13,896 sf will be changed to a new use as part of the project. As such, the parking rate of 1.53 spaces/TSF only applies to 59,431 sf that will not change. The parking demand calculation is shown in Table G.

As shown in Table G, the forecast parking demand of the project is 602 spaces. The parking supply of 539 spaces would provide 63 fewer parking spaces than indicated in Table G.

The parking calculations shown in Table G present a worst-case scenario, as the parking demand for restaurant uses was based on the assumption that all restaurant use would be greater than 12 seats. The parking rate for this type of restaurant use is double the requirement of a restaurant with less than 12 seats. It is also possible that as the center is built out and occupied, some of the uses may "share" parking. For example, patrons who stop by the market on their way home may also patronize a quick-service restaurant or dry cleaner at the center. As future buildings on Pads G, H, and I are occupied, there will be the opportunity to observe the parking utilization and make changes to the restaurant or tenant type if necessary.

Table G: Parking Demand Calculation

Land Use	Size (TSF)	Parking Rate		Parking Demand
Existing Land Use				
Retail	25.174			
Office	2.360			
Drugstore	19.962			
Restaurant (Less than 12 Seats)	3.685			
Restaurant (Greater than 12 Seats)	8.250			
Total[1]	59.431	1.53	sp/TSF	91
Proposed Land Use				
Proposed additional Retail[2]	0.255	5	sp/TSF	2
Proposed Market[3]	19.962	6.72	sp/TSF	135
Proposed Restaurant[2] (Greater than 12 Seats)	37.310	10	sp/TSF	374
Total	**116.958**			**602**

[1] Based on observed parking surveys conducted at the existing center on July 15 and 16, 2008.
[2] Parking rate from City of Huntington Beach Zoning Ordinance.
[3] Institute of Transportation Engineers, *Parking Generation*, 3rd Edition. Land Use Code 850 - Supermarket.
TSF = thousand square feet

MITIGATION MEASURES

No significant impacts to vehicular circulation have been identified. Therefore, no mitigation measures are required.

CONCLUSIONS

- Based on the results of this analysis, the addition of 25,981 sf of retail and restaurant use to the approved 90,977 sf of retail uses at the Beach Promenade retail center can be implemented without significantly impacting the surrounding roadway system. Evaluation of intersection LOS shows that the addition of the project traffic to the redistributed baseline traffic volumes will not impact the intersection of Beach Boulevard/Atlanta Avenue or Beach Boulevard/Sunrise Drive according to the City's performance criteria.
- The proposed full-access driveway onto Beach Boulevard would not result in increased delay or congestion on Beach Boulevard.
- The forecast parking demand of the project is 602 spaces. The proposed project would provide 539 spaces. The parking supply of 539 spaces would provide 63 fewer parking spaces than required to meet the forecast parking demand.
- No significant project impacts have been identified; therefore, no mitigation measures are required.

ATTACHMENT NO. 4.26

APPENDIX A

EXISTING TRAFFIC VOLUME COUNTS

ATTACHMENT NO. 4.27

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Beach Blvd DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta Ave DAY: WEDNESDAY PROJECT# 08-1176-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	40	8	36	132	6	15	51	2	12	72	15	390
7:15 AM	0	62	12	33	141	16	22	64	12	5	72	35	474
7:30 AM	2	84	4	46	134	16	36	83	9	17	76	30	537
7:45 AM	4	101	10	49	152	21	19	73	9	16	81	37	572
8:00 AM	3	94	11	50	148	16	48	82	6	17	88	12	575
8:15 AM	2	89	13	57	132	25	55	66	7	16	78	20	560
8:30 AM	3	107	21	49	124	16	49	70	6	14	92	27	578
8:45 AM	4	91	14	62	119	26	42	57	5	17	67	14	518
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 19	NT 668	NR 93	SL 382	ST 1082	SR 142	EL 286	ET 546	ER 56	WL 114	WT 626	WR 190	TOTAL 4204

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	12	391	55	205	556	78	171	291	28	63	339	96	2285
PEAK HR. FACTOR:		0.874			0.945			0.901			0.929		0.988

CONTROL: Signalized

ATTACHMENT NO. 4-28

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Beach Blvd DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta Ave DAY: WEDNESDAY PROJECT# 08-1176-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	8	156	22	54	122	19	31	56	4	7	108	12	599
4:15 PM	13	198	15	62	111	20	36	72	3	7	120	21	678
4:30 PM	16	202	17	70	143	20	48	80	1	10	128	28	763
4:45 PM	19	211	17	74	135	20	38	82	5	7	159	16	783
5:00 PM	21	216	26	72	157	22	41	85	2	6	149	31	828
5:15 PM	33	214	13	69	136	15	35	84	2	12	133	29	775
5:30 PM	34	241	17	55	135	8	41	68	7	16	137	24	783
5:45 PM	14	227	12	52	129	20	29	61	9	12	127	15	707
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 158	NT 1665	NR 139	SL 508	ST 1068	SR 144	EL 299	ET 588	ER 33	WL 77	WT 1061	WR 176	TOTAL 5916

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	107	882	73	270	563	65	155	319	16	41	578	100	3169
PEAK HR. FACTOR:		0.909			0.894			0.957			0.966		0.957

CONTROL: Signalized

ATTACHMENT NO. 4.29

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Beach Blvd (Frontage Rd) DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta Ave DAY: WEDNESDAY PROJECT# 08-1176-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0		4					91	2	1	78		176
7:15 AM	2		11					118	2	1	102		236
7:30 AM	1		6					117	1	1	118		244
7:45 AM	1		10					129	1	0	133		274
8:00 AM	0		7					104	6	4	131		252
8:15 AM	3		5					149	4	1	131		293
8:30 AM	2		8					141	7	2	112		272
8:45 AM	3		7					131	1	0	113		255
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	12	0	58	0	0	0	0	980	24	10	918	0	2002

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	6	0	30	0	0	0	0	523	18	7	507	0	1091
PEAK HR. FACTOR:		0.818			0.000			0.884			0.952		0.931

CONTROL: 1-Way stop NB

ATTACHMENT NO. 4.30

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Beach Blvd (Frontage Rd) DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta Ave DAY: WEDNESDAY PROJECT# 08-1176-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	1		10					129	11	2	129		282
4:15 PM	8		8					121	11	3	127		278
4:30 PM	3		6					152	17	6	168		352
4:45 PM	2		5					140	11	4	149		311
5:00 PM	4		6					188	12	1	178		389
5:15 PM	7		12					162	8	3	181		373
5:30 PM	3		8					140	14	7	163		335
5:45 PM	3		4					126	12	9	187		341
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	31	0	59	0	0	0	0	1158	96	35	1282	0	2661

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	17	0	30	0	0	0	0	616	46	20	709	0	1438
PEAK HR. FACTOR:		0.618			0.000			0.828			0.930		0.924

CONTROL: 1-Way stop NB

ATTACHMENT NO. 4.31

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoping Center Dwy Along Atlanta (West) DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta DAY: WEDNESDAY PROJECT# 08-1176-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1		0					97	4	2	89		193
7:15 AM	0		1					129	4	2	107		243
7:30 AM	3		1					121	2	2	117		246
7:45 AM	1		0					131	1	4	118		255
8:00 AM	4		1					107	5	6	117		240
8:15 AM	2		3					143	6	6	139		299
8:30 AM	5		4					140	8	5	110		272
8:45 AM	1		3					133	5	6	120		268
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 17	NT 0	NR 13	SL 0	ST 0	SR 0	EL 0	ET 1001	ER 35	WL 33	WT 917	WR 0	TOTAL 2016

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	12	0	11	0	0	0	0	523	24	23	486	0	1079
PEAK HR. FACTOR:		0.639			0.000			0.918			0.878		0.902

CONTROL: 1 WAY STOP (N)

ATTACHMENT NO. 4.32

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoping Center Dwy Along Atlanta (West) DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta DAY: WEDNESDAY PROJECT# 08-1176-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	6		11					127	5	17	132		298
4:15 PM	9		13					139	7	23	144		335
4:30 PM	7		11					143	12	13	150		336
4:45 PM	6		19					134	9	15	140		323
5:00 PM	13		16					175	12	26	169		411
5:15 PM	12		14					150	18	13	179		386
5:30 PM	13		15					139	8	16	161		352
5:45 PM	13		13					128	12	15	165		346
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	79	0	112	0	0	0	0	1135	83	138	1240	0	2787

PM Peak Hr Begins at: 500 PM

PEAK													
VOLUMES =	51	0	58	0	0	0	0	592	50	70	674	0	1495
PEAK HR. FACTOR:		0.940			0.000			0.858			0.954		0.909

CONTROL: 1 WAY STOP (N)

ATTACHMENT NO. 4.33

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoping Center Dwy Along Atlanta (east) DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta DAY: WEDNESDAY PROJECT# 08-1176-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	2		3					96			88		189
7:15 AM	1		0					130			108		239
7:30 AM	0		2					121			119		242
7:45 AM	4		1					131			117		253
8:00 AM	1		1					108			122		232
8:15 AM	2		3					145			144		294
8:30 AM	4		3					143			111		261
8:45 AM	2		4					136			123		265
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 16	NT 0	NR 17	SL 0	ST 0	SR 0	EL 0	ET 1010	ER 0	WL 0	WT 932	WR 0	TOTAL 1975

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	9	0	11	0	0	0	0	532	0	0	500	0	1052
PEAK HR. FACTOR:		0.714			0.000			0.917			0.868		0.895

CONTROL: 1 WAY STOP(N)

ATTACHMENT NO. 4.34

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoping Center Dwy Along Atlanta (east) DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Atlanta DAY: WEDNESDAY PROJECT# 08-1176-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	3		5					138			149		295
4:15 PM	1		3					152			168		324
4:30 PM	2		5					151			173		331
4:45 PM	2		2					153			156		313
5:00 PM	2		4					190			189		385
5:15 PM	2		3					163			194		362
5:30 PM	1		1					154			170		326
5:45 PM	4		0					141			176		321
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 17	NT 0	NR 23	SL 0	ST 0	SR 0	EL 0	ET 1242	ER 0	WL 0	WT 1375	WR 0	TOTAL 2657

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	9	0	8	0	0	0	0	648	0	0	729	0	1394
PEAK HR. FACTOR:		0.708			0.000			0.853			0.939		0.905

CONTROL: 1 WAY STOP(N)

ATTACHMENT NO. 4.35

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shopping Center Dwy Along Frontage Rd
DATE: 07/16/2008
LOCATION: City of Huntington Beach

E-W STREET: Full Access Dwy (North)
DAY: WEDNESDAY
PROJECT# 08-1176-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:		1	0	0	1					0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		6	1	1	1					1		0	10
7:15 AM		12	0	0	3					0		0	15
7:30 AM		7	0	0	2					0		0	9
7:45 AM		8	0	1	0					0		0	9
8:00 AM		9	0	1	5					0		0	15
8:15 AM		6	1	2	4					1		1	15
8:30 AM		10	1	3	6					2		1	23
8:45 AM		8	0	0	4					0		2	14
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	66	3	8	25	0	0	0	0	4	0	4	110

AM Peak Hr Begins at: 745 AM (to balance with Frontage Road/Beach Blvd.)

PEAK VOLUMES =													
	0	33	2	7	15	0	0	0	0	3	0	2	62
PEAK HR. FACTOR:		0.795			0.694			0.000			0.583		0.728

CONTROL: 1-Way stop WB

ATTACHMENT NO. 4.36

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shopping Center Dwy Along Frontage Rd
DATE: 07/16/2008
LOCATION: City of Huntington Beach

E-W STREET: Full Access Dwy (North)
DAY: WEDNESDAY
PROJECT# 08-1176-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:		1	0	0	1					0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		4	0	5	8					0	4		21
4:15 PM		15	1	2	9					0	3		30
4:30 PM		7	0	6	17					0	0		30
4:45 PM		4	0	1	16					1	4		26
5:00 PM		8	1	2	10					1	1		23
5:15 PM		17	1	2	10					0	6		36
5:30 PM		9	1	5	22					0	1		38
5:45 PM		8	0	3	16					1	0		28
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	72	4	26	108	0	0	0	0	3	0	19	232

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =													
	0	42	3	12	58	0	0	0	0	2	0	8	125
PEAK HR. FACTOR:		0.625			0.648			0.000			0.417		0.822

CONTROL: 1-Way stop WB

ATTACHMENT NO. 4.37

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shopping Center Along Beach Frontage rd DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Full Access Dwy (Middle) DAY: WEDNESDAY PROJECT# 08-1176-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:		1	0	0	1					0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		5	0	0	2					0		2	9
7:15 AM		11	1	1	2					0		1	16
7:30 AM		4	0	0	2					0		2	8
7:45 AM		7	0	0	0					0		1	8
8:00 AM		6	1	4	1					0		2	14
8:15 AM		5	2	2	2					0		3	14
8:30 AM		9	1	2	7					0		2	21
8:45 AM		7	1	1	3					0		1	13
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	54	6	10	19	0	0	0	0	0	0	14	103

AM Peak Hr Begins at: 745 AM (to balance with Frontage Road/Beach Blvd.)

PEAK VOLUMES =													
	0	27	4	8	10	0	0	0	0	0	0	8	57
PEAK HR. FACTOR:		0.800			0.611			0.000			0.667		0.738

CONTROL: 1-Way stop WB

ATTACHMENT NO. 4.38

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shopping Center Along Beach Frontage rd DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Full Access Dwy (Middle) DAY: WEDNESDAY PROJECT# 08-1176-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:		1	0	0	1					0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		3	0	4	3					2		4	16
4:15 PM		7	3	4	5					1		7	27
4:30 PM		7	3	7	10					1		5	33
4:45 PM		2	1	8	8					1		3	23
5:00 PM		7	2	6	6					1		2	24
5:15 PM		11	2	7	2					0		3	25
5:30 PM		7	2	8	13					0		4	34
5:45 PM		7	0	3	16					2		1	29
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 51	NR 13	SL 47	ST 63	SR 0	EL 0	ET 0	ER 0	WL 8	WT 0	WR 29	TOTAL 211

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	0	32	6	24	37	0	0	0	0	3	0	10	112
PEAK HR. FACTOR:		0.731			0.726			0.000			0.813		0.824

CONTROL: 1-Way stop WB

ATTACHMENT NO. 4.39

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shopping Center Along Beach Frontage rd DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Full Access Dwy (South) DAY: WEDNESDAY PROJECT# 08-1176-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:		1	0	0	1					0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		4	0	1	1					0		1	7
7:15 AM		11	0	0	2					0		1	14
7:30 AM		4	2	0	2					0		0	8
7:45 AM		7	1	0	0					0		0	8
8:00 AM		6	1	1	0					2		2	12
8:15 AM		8	1	0	2					2		0	13
8:30 AM		9	2	3	4					1		1	20
8:45 AM		6	2	0	3					0		1	12
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	55	9	5	14	0	0	0	0	5	0	6	94

AM Peak Hr Begins at: 745 AM (to balance with Frontage Road/Beach Blvd.)

PEAK VOLUMES =	0	30	5	4	6	0	0	0	0	5	0	3	53
PEAK HR. FACTOR:		0.795			0.464			0.000			0.563		0.713

CONTROL:

ATTACHMENT NO. 4.40

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shopping Center Along Beach Frontage rd DATE: 07/16/2008 LOCATION: City of Huntington Beach

E-W STREET: Full Access Dwy (South) DAY: WEDNESDAY PROJECT# 08-1176-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:		1	0	0	1					0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		3	1	2	2					4		0	12
4:15 PM		6	2	0	5					3		4	20
4:30 PM		6	2	6	4					2		4	24
4:45 PM		3	4	7	4					6		0	24
5:00 PM		5	3	4	3					5		4	24
5:15 PM		10	0	1	1					3		3	18
5:30 PM		5	5	8	6					3		3	30
5:45 PM		4	4	3	15					6		4	36
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	42	21	31	40	0	0	0	0	32	0	22	188

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	0	24	12	16	25	0	0	0	0	17	0	14	108
PEAK HR. FACTOR:		0.900			0.569			0.000			0.775		0.750

CONTROL:

ATTACHMENT NO. 4-41

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Beach Blvd DATE: 9/1/2009 LOCATION: City of Huntington Beach

E-W STREET: Sunrise Dr DAY: TUESDAY PROJECT# 09-1119-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	3	43	1	0	99	3	6		7	3		4	169
7:15 AM	2	51	0	2	122	1	4		5	5		12	204
7:30 AM	4	68	1	2	153	2	8		6	7		6	257
7:45 AM	3	92	1	2	129	0	7		9	1		5	249
8:00 AM	6	85	0	2	129	1	11		9	3		5	251
8:15 AM	3	73	3	4	139	2	14		7	1		6	252
8:30 AM	6	91	2	5	113	3	4		7	5		3	239
8:45 AM	4	83	1	4	120	2	7		8	4		4	237
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 31	NT 586	NR 9	SL 21	ST 1004	SR 14	EL 61	ET 0	ER 58	WL 29	WT 0	WR 45	TOTAL 1858

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	16	318	5	10	550	5	40	0	31	12	0	22	1009
PEAK HR. FACTOR:		0.883			0.900			0.845			0.654		0.982

CONTROL: 2-Way Stop EB & WB

ATTACHMENT NO. 4-42

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	295	28	63	339	96	12	391	55	207	556	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3494		1770	3422		1770	4991		1770	4991	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3494		1770	3422		1770	4991		1770	4991	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	321	30	68	368	104	13	425	60	225	604	85
RTOR Reduction (vph)	0	5	0	0	23	0	0	13	0	0	11	0
Lane Group Flow (vph)	186	346	0	68	449	0	13	472	0	225	678	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.6	27.7		8.8	21.9		3.0	47.8		19.7	64.5	
Effective Green, g (s)	14.6	27.7		8.8	21.9		3.0	47.8		19.7	64.5	
Actuated g/C Ratio	0.12	0.23		0.07	0.18		0.02	0.40		0.16	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	807		130	625		44	1988		291	2683	
v/s Ratio Prot	c0.11	0.10		0.04	c0.13		0.01	0.09		c0.13	c0.14	
v/s Ratio Perm												
v/c Ratio	0.87	0.43		0.52	0.72		0.30	0.24		0.77	0.25	
Uniform Delay, d1	51.7	39.4		53.6	46.2		57.5	24.0		48.0	14.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	28.4	0.4		3.8	4.0		3.7	0.3		12.0	0.2	
Delay (s)	80.1	39.8		57.3	50.1		61.2	24.3		60.0	15.1	
Level of Service	F	D		E	D		E	C		E	B	
Approach Delay (s)		53.7			51.0			25.2			26.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

ATTACHMENT NO. 4.43

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	523	18	7	507	7	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	568	20	8	551	8	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	100					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			588		777	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			377		582	57
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	96
cM capacity (veh/h)			1083		405	917

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	379	209	118	220	220	8	33
Volume Left	0	0	8	0	0	8	0
Volume Right	0	20	0	0	0	0	33
cSH	1700	1700	1083	1700	1700	405	917
Volume to Capacity	0.22	0.12	0.01	0.13	0.13	0.02	0.04
Queue Length 95th (ft)	0	0	1	0	0	1	3
Control Delay (s)	0.0	0.0	0.6	0.0	0.0	14.1	9.1
Lane LOS			A			B	A
Approach Delay (s)	0.0		0.1			10.0	
Approach LOS						B	

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

ATTACHMENT NO. 4.44

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	523	24	23	486	12	11
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	568	26	25	528	13	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)	390					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			595		896	297
vC1, stage 1 conf vol					582	
vC2, stage 2 conf vol					314	
vCu, unblocked vol			415		738	95
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			98		97	99
cM capacity (veh/h)			1061		520	877

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	379	216	25	264	264	25
Volume Left	0	0	25	0	0	13
Volume Right	0	26	0	0	0	12
cSH	1700	1700	1061	1700	1700	646
Volume to Capacity	0.22	0.13	0.02	0.16	0.16	0.04
Queue Length 95th (ft)	0	0	2	0	0	3
Control Delay (s)	0.0	0.0	8.5	0.0	0.0	10.8
Lane LOS			A			B
Approach Delay (s)	0.0		0.4			10.8
Approach LOS						B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

ATTACHMENT NO. 4.45

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	532	0	0	500	9	11
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	578	0	0	543	10	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	590					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			578		850	289
vC1, stage 1 conf vol					578	
vC2, stage 2 conf vol					272	
vCu, unblocked vol			437		724	131
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1058		527	845

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	386	193	0	272	272	22
Volume Left	0	0	0	0	0	10
Volume Right	0	0	0	0	0	12
cSH	1700	1700	1700	1700	1700	665
Volume to Capacity	0.23	0.11	0.00	0.16	0.16	0.03
Queue Length 95th (ft)	0	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.6
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.6
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		

ATTACHMENT NO. 4.46

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	2	35	2	7	18
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	2	38	2	8	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	74	39			40	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	74	39			40	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	925	1032			1569	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	40	27
Volume Left	3	0	8
Volume Right	2	2	0
cSH	965	1700	1569
Volume to Capacity	0.01	0.02	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.8	0.0	2.1
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	2.1
Approach LOS	A		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		

ATTACHMENT NO. 4.47

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	8	29	4	8	13
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	9	32	4	9	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	65	34			36	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	65	34			36	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	935	1040			1575	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	36	23
Volume Left	0	0	9
Volume Right	9	4	0
cSH	1040	1700	1575
Volume to Capacity	0.01	0.02	0.01
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.5	0.0	2.8
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	2.8
Approach LOS	A		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	17.8%	ICU Level of Service	A
Analysis Period (min)	15		

ATTACHMENT NO. 4.48

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	3	30	5	4	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	3	33	5	4	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	54	35			38	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	54	35			38	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	952	1037			1572	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	38	14
Volume Left	5	0	4
Volume Right	3	5	0
cSH	982	1700	1572
Volume to Capacity	0.01	0.02	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.7	0.0	2.3
Lane LOS	A		A
Approach Delay (s)	8.7	0.0	2.3
Approach LOS	A		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		

ATTACHMENT NO. 4.49