4.12 TRANSPORTATION/TRAFFIC

This EIR section analyzes the potential for adverse impacts on existing transportation and traffic conditions resulting from implementation of the proposed project. The Initial Study/Notice of Preparation (IS/NOP [Appendix 1]) identified the potential for impacts associated with the following: increased number of vehicle trips and traffic congestion; exceeding established levels of service of the county congestion management agency; increased hazards due to design features; parking capacity; and the potential to conflict with adopted policies supporting alternative transportation. Issues scoped out from detailed analysis in the EIR include changes in air traffic patterns as a result of the proposed project and emergency access. Data used to prepare this section were taken from the City's General Plan Circulation Element and the Traffic Impact Analysis Report prepared for the project site (Appendix 10). Full bibliographic entries for all reference materials are provided in Section 4.12.5 (References), at the end of this section.

All comments received in response to the Initial Study/Notice of Preparation (IS/NOP) circulated for the proposed project were taken in to consideration during preparation of this Environmental Impact Report, and if relevant, have been addressed in this section or others within this document.

4.12.1 Environmental Setting

This section provides an assessment of existing conditions in the project study area, including a description of the street and highway system, traffic volumes on these facilities, and operating conditions of the selected intersections.

Regional Highway and Street Network

Freeways

The 5-acre proposed project is located approximately three miles north of the City of Huntington Beach's Downtown within an undeveloped 14-acre area southwest of the intersection of Goldenwest Street and Talbert Avenue. The project site is within the 356-acre Huntington Beach Central Park. The traffic study area is bounded by Slater Avenue on the north and Ellis Avenue to the south. Regional access to the study area is provided by Goldenwest Street, as it extends northerly to connect with the I-405 Freeway and southerly to connect with Pacific Coast Highway.

Local Access

Local streets that serve the project site include Goldenwest Street, Slater Avenue, Talbert Avenue, and Ellis Avenue.

The key local area streets serving the project site are described below:

- Goldenwest Street is currently a six (6) lane divided north-south roadway in the study area, although north of the intersection with Slater Avenue, it is five (5) lanes (3 southbound, 2 northbound). On the currently adopted General Plan, Goldenwest Street is classified as a six (6)

lane divided Major arterial street south of Talbert Avenue and a four (4) lane Primary arterial street north of Talbert Avenue.

- Slater Avenue exists as a four (4) lane divided east-west roadway throughout the study area. It is classified as a four (4) lane Secondary arterial street on the adopted General Plan.
- Talbert Avenue is a two (2) lane divided roadway providing access to the Huntington Central Park and Library. The west leg of Talbert Avenue will be the project site access. Talbert Avenue at Goldenwest Street is not shown on the City of Huntington Beach Circulation Plan.
- Ellis Avenue is currently a four (4) lane divided roadway east of Goldenwest Street. West of Goldenwest Street, Ellis Avenue has one lane westbound and two lanes eastbound. It is classified as a four (4) lane (divided) Primary arterial street in the currently adopted General Plan.

Existing Traffic Volumes and Intersection Conditions

The traffic impact analysis evaluated intersection operations from the three access roadways to the project site:

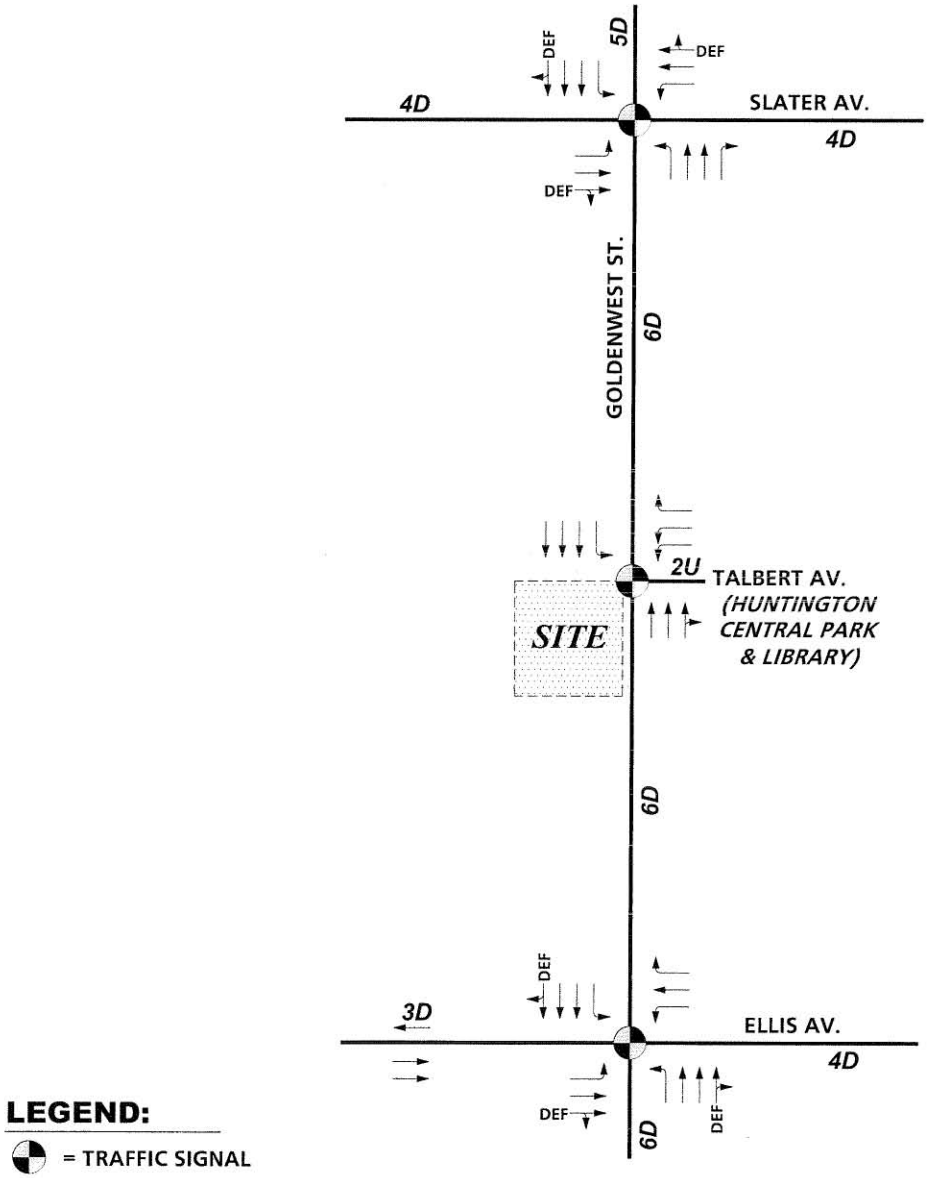
- Goldenwest Street at Slater Avenue
- Goldenwest Street at Talbert Avenue
- Goldenwest Street at Ellis Avenue

Figure 4.12-1 presents the existing through lanes for study area roadways and intersection lane configurations and controls at existing intersection analysis locations.

Existing average daily traffic (ADT) on these arterial highways in the study area is shown on Figure 4.12-2 for weekday, and Figure 4.12-3, for weekend conditions. The highest daily traffic volumes in the study area occur at Goldenwest Street, north of Slater Avenue, which carries traffic in excess of 33,000 vehicles per day (vpd) on weekdays. Other roadway segments carrying more than 15,000 vpd in the study area include Slater Avenue and the rest of Goldenwest Street. The weekday traffic volumes are generally higher than the weekend traffic volumes.

Existing peak hour traffic operations have been evaluated for the study area intersections. Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts conducted in June 2007. Figure 4.12-4 depicts the existing weekday AM peak hour traffic volumes and Figure 4.12-5 depicts the existing weekday PM peak hour traffic volumes. Figure 4.12-6 represents the existing weekend (mid-day) peak hour traffic volumes.

In conformance with City of Huntington Beach criteria, an Intersection Capacity Utilization (ICU) analysis has been performed at all three signalized study area intersections. ICU values are used to determine levels of service at study area intersection locations during their morning, evening and weekend peak periods. The results of the existing intersection analysis are summarized in Table 4.12-1 (Intersection Analysis for Weekday Calculation) and Table 4.12-2 (Intersection Analysis for Weekend Calculation), along with the existing intersection geometrics and traffic control devices at the analysis locations.



LEGEND:

- = TRAFFIC SIGNAL
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- DEF = DEFACTO RIGHT TURN LANE

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-1**
Existing Number of Through Lanes and Intersection Controls

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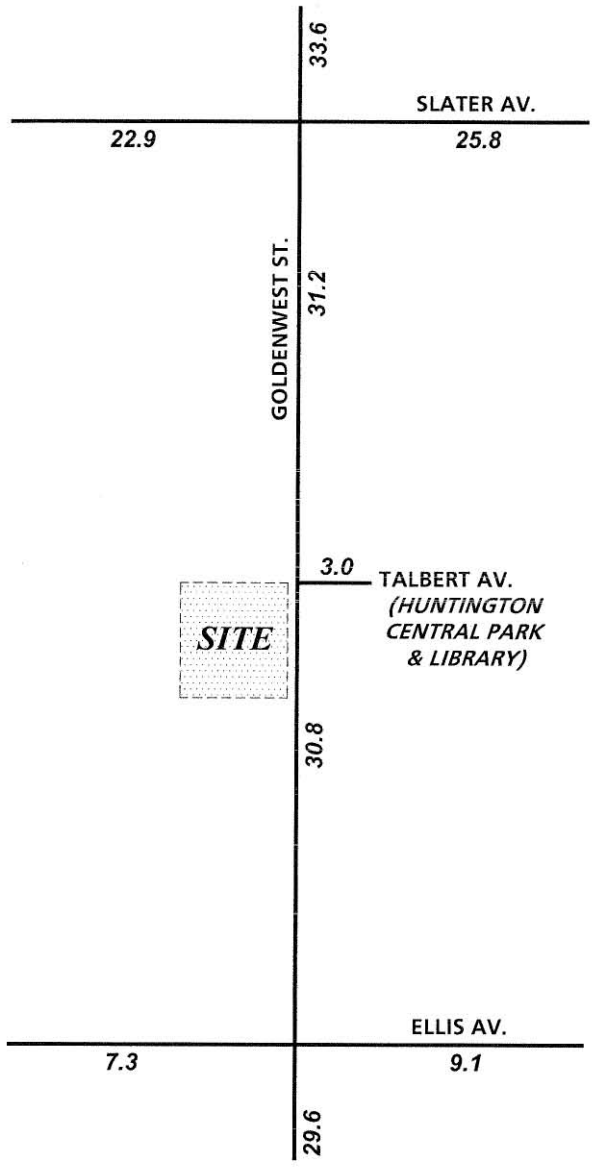


LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-2**

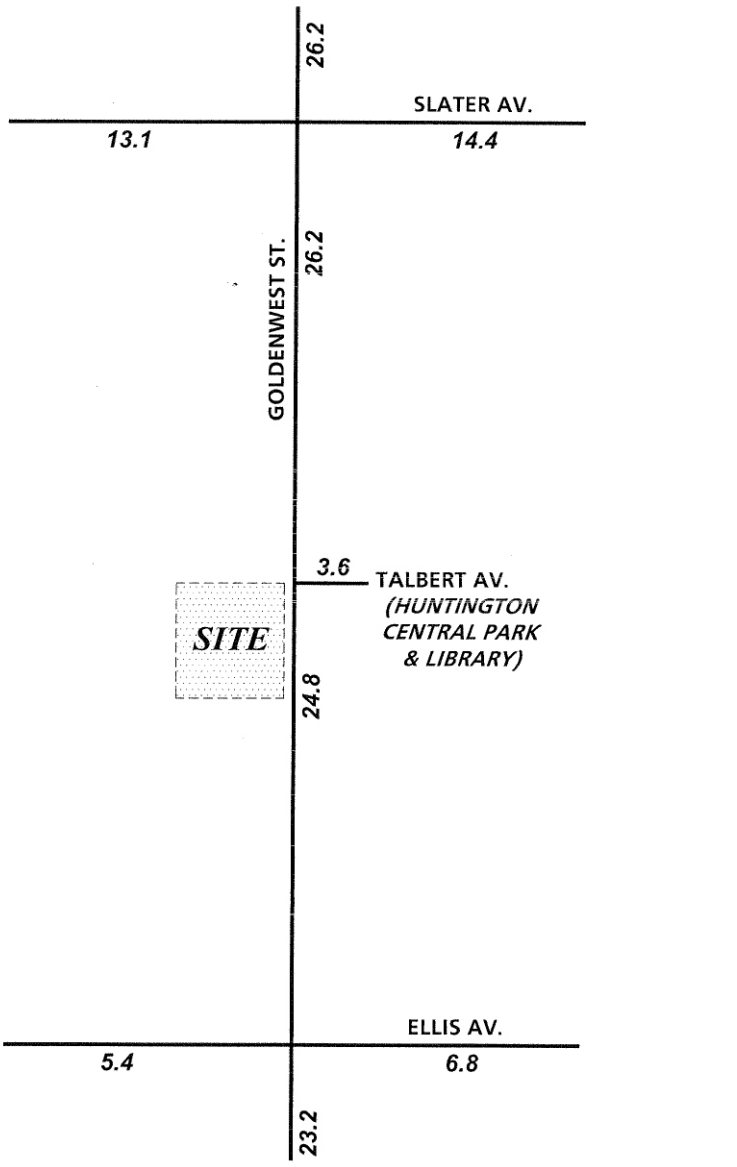
Weekday Existing Average Daily Traffic (ADT)

EIP ASSOCIATES
A division of PBS&J

D21314.00

Huntington Beach Senior Center EIR

06057 | JCS | 07



LEGEND:

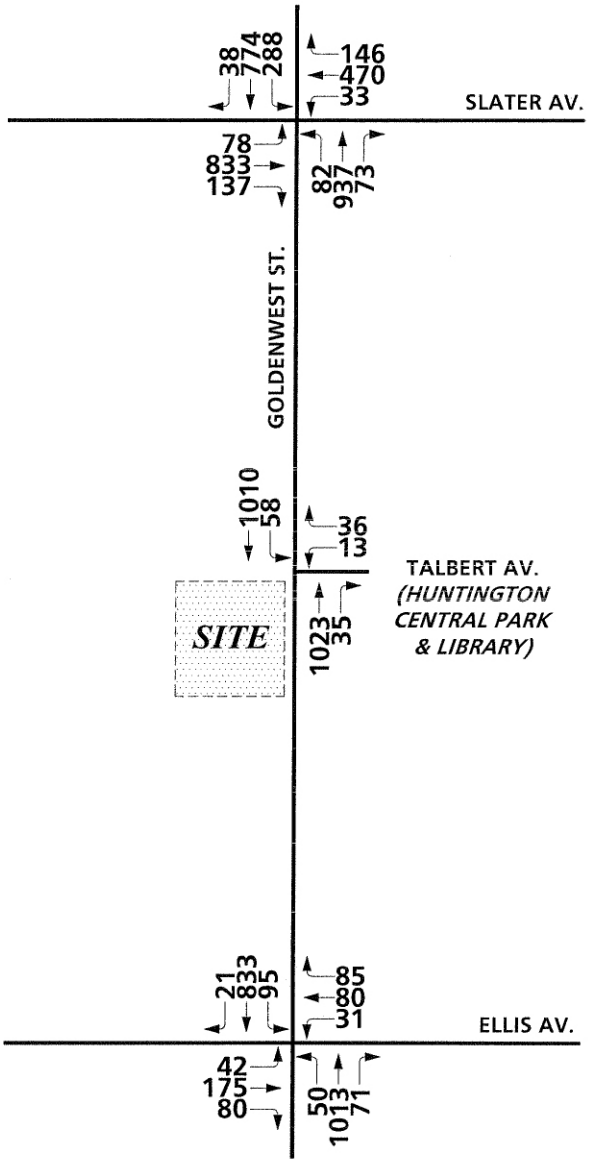
10.0 = VEHICLES PER DAY (1000'S)

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-3**

Weekend Existing Average Daily Traffic (ADT)



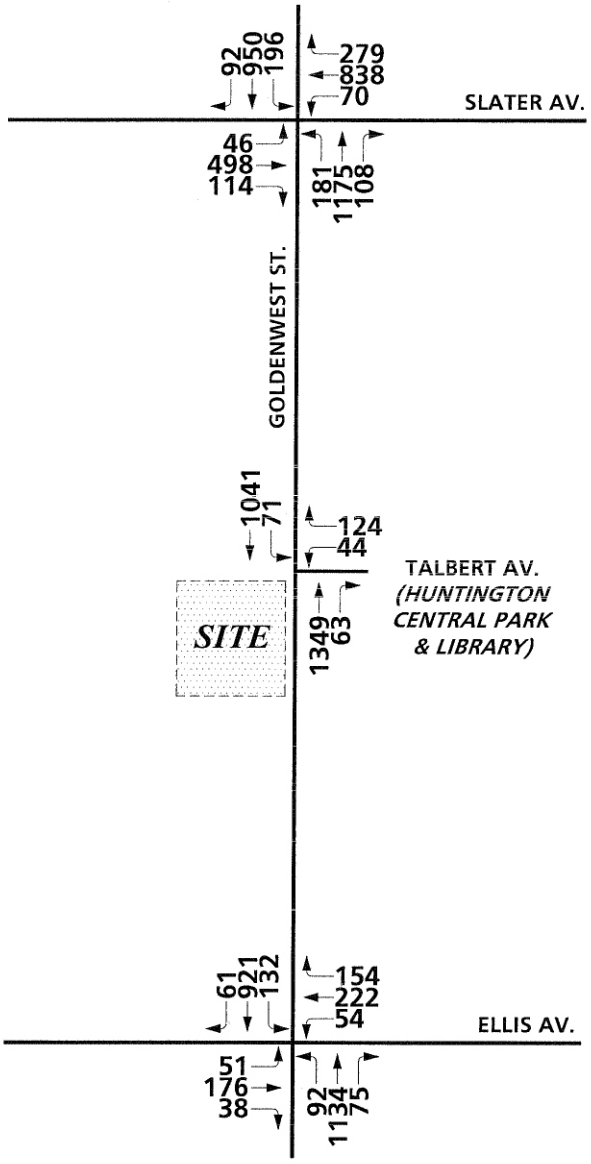
NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-4**

Weekday Existing AM Peak Hour Intersection Volumes

EIP ASSOCIATES
A division of PBS&J

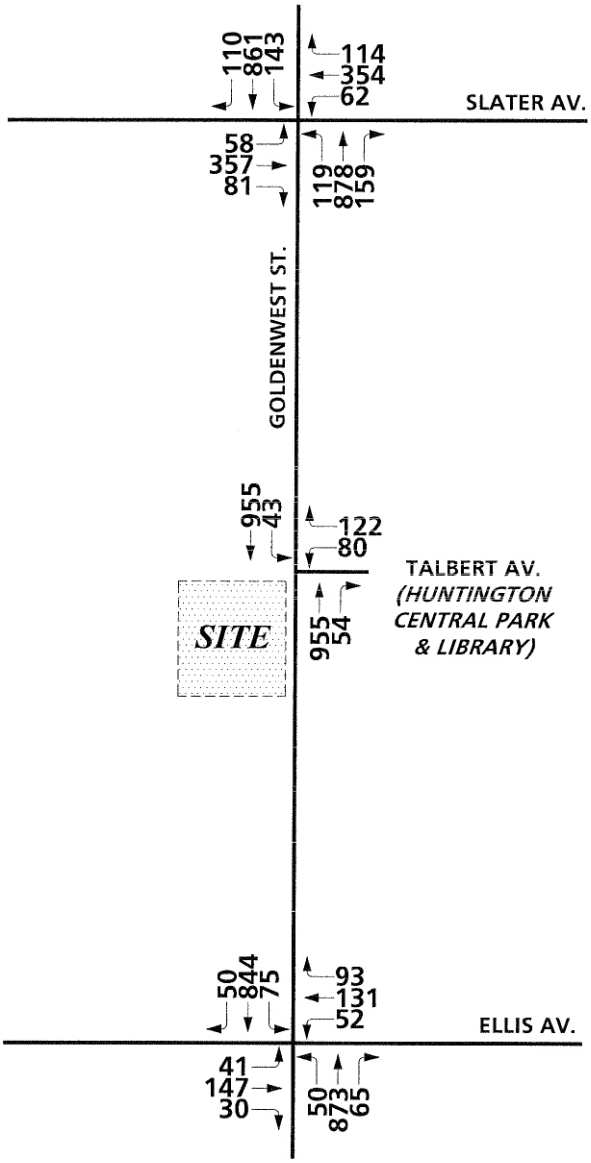


NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-5**

Weekday Existing PM Peak Hour Intersection Volumes



NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-6**

Weekend Existing Mid-Day Peak Hour Intersection Volumes

EIP ASSOCIATES
A division of PBS&J

Table 4.12-1 Intersection Analysis for Existing Weekday Conditions

Intersection Goldenwest St. (NS) at:	Traffic Control[c]	Intersection Approach Lanes[a]												Critical Vol/Capacity[b]		Level of Service	
		Northbound			Southbound			Eastbound			Westbound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Slater Avenue (EW)	TS	1	2	1	1	3	1	1	2	1	1	2	1	0.804	0.830	D	D
Talbert Avenue (EW)	TS	0	3	1	1	3	0	0	0	0	2	0	1	0.322	0.453	A	A
Ellis Avenue (EW)	TS	1	3	1	1	3	1	1	2	1	1	1	1	0.397	0.539	A	A

[a] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside through lanes.
L = Left, T = Through, R = Right. 1 = Improvement, > = Right Turn Overlap Phase, >> = Free Right Turn
[b] Critical volume/capacity ratio and level of service are calculated using the following analysis software: Traffix, Version 7.8 R5 (2007). Per the City of Huntington Beach standard, critical volume/capacity ratio and level of service are determined using the Intersection Capacity Utilization method for intersections with traffic signal control
[c] TS = Traffic Signal

Table 4.12-2 Intersection Analysis for Existing Weekend Conditions

Intersection Goldenwest St. (NS) at:	Traffic Control[c]	Intersection Approach Lanes[a]												Critical Vol/Capacity[b]	Level of Service
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Saturday	Saturday
Slater Avenue (EW)	TS	1	2	1	1	3	1	1	2	1	1	2	1	0.561	A
Talbert Avenue (EW)	TS	0	3	1	1	3	0	0	0	0	2	0	1	0.352	A
Ellis Avenue (EW)	TS	1	3	1	1	3	1	1	2	1	1	1	1	0.386	A

[a] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside through lanes.
L = Left, T = Through, R = Right. 1 = Improvement, > = Right Turn Overlap Phase, >> = Free Right Turn
[b] Critical volume/capacity ratio and level of service are calculated using the following analysis software: Traffix, Version 7.8 R5 (2007). Per the City of Huntington Beach standard, critical volume/capacity ratio and level of service are determined using the Intersection Capacity Utilization method for intersections with traffic signal control
[c] TS = Traffic Signal

For existing traffic conditions, all of the study area intersections experience acceptable traffic operations.

Transit Service

There is an OCTA bus stop located approximately 100 feet south of the intersection of Goldenwest Street at Talbert Avenue on the west side of Goldenwest Street.

4.12.2 Regulatory Framework

Federal

Americans with Disabilities (ADA) Act of 1990

Titles I, II, III and V of the ADA have been codified in Title 42 of the United States Code, beginning at section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and non-profit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Appendix A to Part 36 - Standards for Accessible Design

establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48" for the pedestrian travelway, a vibration-free zone for pedestrians, etc.

State

There are no state transportation regulations pertinent to the proposed project.

Local

General Plan Circulation Element

Goal CE 2 Provide a circulation system which supports existing, approved and planned land uses throughout the City while maintaining a desired level of service on all streets and at all intersections.

Objective CE 2.1 Comply with City's performance standards for acceptable levels of service.

Policy CE 2.1.1 Maintain a city-wide level of service (LOS) not to exceed LOS "D" for intersections during the peak hours.

Objective CE 2.3 Ensure that the location, intensity and timing of new development is consistent with the provision of adequate transportation infrastructure and standards as defined in the Land Use Element.

Policy CE 2.3.1 Require development projects to mitigate off-site traffic impacts and pedestrian, bicycle, and vehicular conflicts to the maximum extent feasible.

Policy CE 2.3.2 Limit driveway access points and require adequate driveway widths onto arterial roadways and require driveways be located to ensure the smooth and efficient flow of vehicles, bicycles, and pedestrians.

Policy CE 2.3.4 Require that new development mitigate its impact on City streets, including but not limited to, pedestrian, bicycle, and vehicular conflicts, to maintain adequate levels of service.

Objective CE 3.2 Encourage new development that promotes and expands the use of transit services.

Policy CE 3.2.1 Require developers to include transit facilities, such as park-and-ride sites, bus benches, shelters, pads or turn-outs in their development plans, where feasible as specified in the City's TDM ordinance.

Goal CE 4 Encourage and develop a transportation demand management (TDM) system to assist in mitigating traffic impacts and in maintaining a desired level of service on the circulation system.

Objective CE 4.1 Pursue transportation management strategies that can maximize vehicle occupancy, minimize average trip length, and reduce the number of vehicle trips.

Policy CE 4.1.3 Encourage the use of multiple-occupancy vehicle programs for shopping and other uses to reduce mid-day traffic.

Goal CE 5 Provide sufficient, well-designed, and convenient on and off-street parking facilities throughout the City.

Objective CE 5.1 Balance the supply with the demand for parking.

Policy CE 5.1.2 Provide safe and convenient parking that has minimal impacts on the natural environment, the community image, and the quality of life.

Goal CE 6 Provide a city-wide system of efficient and attractive pedestrian, equestrian, and waterway facilities for commuter, school, and recreational use.

Objective CE 6.1 Promote the safety of bicyclists and pedestrians by adhering to Caltrans and City-wide standards.

Policy CE 6.1.6 Maintain existing pedestrian facilities and require new development to provide pedestrian walkways and bicycle routes between developments, schools, and public facilities.

Policy CE 6.1.7 Require new development to provide accessible facilities to the elderly and disabled

Policy CE 6.1.10 Implement appropriate traffic devices and operational programs throughout the community to ensure that conflicts between pedestrians, bicycles, and vehicles are minimized and safety enhanced.

General Plan Growth Management Element

Goal 1 Reduce traffic congestion

Goal 2 Ensure that adequate transportation and public facilities and public services are provided for existing and future residents of the City.

Objective Provide a transportation system that ensures safe and efficient movement of people and goods.

Policy 5.3.4 Establish level of service (LOS) "D" as the minimum acceptable standard on arterial intersections except those intersections included on the Deficient Intersection List established by Public Works.

Goal 3 Provide a circulation system that meets the service demands of planned development and minimizes congestion.

Objective Establish minimum standards for traffic circulation and provide a means to ensure that those standards are met and maintained.

Policy 3.1.8 Promote traffic reduction strategies including alternate travel modes, alternate work hours, and a decrease in the number of vehicle trips throughout the city

Consistency Analysis

The project would take access as the new west leg of the intersection of Goldenwest Street at Talbert Avenue. The project driveway would be signal-controlled. The intersection would be designed to minimize confusion through signage, separation of turn lanes and other measures. Shuttle bus parking, sheltered drop off areas, and loading areas would be provided. The project would be designed consistent with the requirements of the ADA Act. As discussed in Section 4.12.3 (Project Impacts and Mitigation), the project would not result in any significant impacts that cannot be mitigated to less-than-significant levels. While the intersection of Goldenwest Street/Slater Avenue is projected to operate at LOS E during the AM peak hour with the proposed project, implementation of an additional northbound through lane at Goldenwest Street/Slater Avenue would return intersection operations to LOS C. The new traffic signal at Goldenwest Street/Talbert Avenue would facilitate access to the project site, and would be sufficient to serve the project. As discussed under Impact 4.12-6, below, the project access intersection will be designed to avoid conflicts with nearby roadway operations. Access to the existing OCTA bus stop will be designed to encourage use of public transit. Consequently, implementation of the proposed project would not conflict with the above-listed policies.

4.12.3 Project Impacts and Mitigation

Analytic Method

Intersection Analysis

ICU analysis has been performed at all three signalized study area intersections. ICU values are used to determine levels of service at study area intersection locations and provide a means to quantitatively estimate incremental traffic impacts. To calculate the ICU value for an intersection, the volume of traffic using the intersection is compared with the capacity of the intersection. The ICU is usually expressed as a decimal percent (e.g., 0.86). The decimal percent represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The ICU-based Level of Service is defined below:

Table 4.12-3 ICU Level of Service

Level of Service	*Intersection Capacity Utilization (ICU) Value*
A	0–0.60
B	0.61–0.70
C	0.71–0.80
D	0.81–0.90
E	0.91–1.00
F	> 1.00

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes slightly affected by interactions with others in the traffic stream.
- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

The definitions of level of service for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control.

Acceptable Level of Service (LOS) is LOS "D" as defined by City of Huntington Beach Traffic Study Guidelines (1996). Additionally, an intersection is impacted if the LOS is "E" or LOS "F" and the ICU value changes by 0.01 or more.

Project Traffic

The traffic related to the project has been calculated in accordance with the following accepted procedural steps:

- Trip Generation
- Trip Distribution
- Trip Assignment

These steps are described in detail below.

Project Trip Generation

Trip generation represents the amount of traffic attracted to and produced by a development. Because of the unique nature of a senior center, count data were collected at a similar facility in a nearby community (the Oasis Senior Center in Newport Beach). Peak hour trip rates have been calculated from the count data and the size of the center studied (22,500 square feet [sf]). Daily trip rates have been factored from the community center trip rate from the Institute of Transportation Engineers (ITE) informational report *Trip Generation* (7th Edition, 2003). The resulting trip generation rates are included in Table 4.12-4.

Table 4.12-4 Project Trip Generation Rates

Weekday Trip Generation Rates[a]

Land Use	Units[b]	Peak Hour						Daily[c]
		AM			PM			
		In	Out	Total	In	Out	Total	
Senior Center	TSF	1.33	6.09	7.42	0.89	2.44	3.33	75.45

Saturday Trip Generation Rates[a]

Land Use	Units[b]	Mid-day Peak Hour			Daily[c]
		In	Out	Total	
Senior Center—Saturday	TSF	0.4	4.53	4.93	35.05

[a] SOURCE: Oasis Senior Center Count Data
[b] TSF = thousand square feet
[c] Daily rates based on Institute of Transportation Engineers (ITE) peak to daily relationships for Community Centers

As shown in Table 4.12-5, the proposed senior center is projected to generate a total of approximately 3,395 trip-ends per day on a typical weekday. On a typical weekend, the project is projected to generate a total of 1,577 trip-ends per day.

Table 4.12-5 Project Trip Generation

Weekday Trip Generation Summary[a]

Land Use	Quantity	Units[b]	Peak Hour						Daily[c]
			AM			PM			
			In	Out	Total	In	Out	Total	
Senior Center	45.0	TSF	60	274	334	40	110	150	3,395

Saturday Trip Generation Summary[a]

Land Use	Quantity	Units[b]	Mid-day Peak Hour			Daily[c]
			In	Out	Total	
Senior Center—Saturday	45.0	TSF	18	204	222	1,577

[a] SOURCE: Oasis Senior Center Count Data
[b] TSF = thousand square feet
[c] Daily rates based on Institute of Transportation Engineers (ITE) peak to daily relationships for Community Centers

Project Trip Distribution

The trip distribution and assignment process represents the directional orientation of traffic to and from the project site. Trip distribution is influenced by existing travel patterns, the geographic location of the site, the location of residential areas (including senior housing where users of the proposed project might live), commercial and recreational opportunities, and the proximity of the regional freeway system. The anticipated project trip distribution has been developed based on these factors. The project trip distribution is shown on Figure 4.12-7. As shown on Figure 4.12-7, 20 percent of the project traffic is expected to travel to/from the east, 55 percent will travel to/from the west and south, and 25 percent will travel to/from the north.

Project Traffic

Near term project only daily traffic volumes are shown on Figure 4.12-8 and Figure 4.12-9 for weekday and weekend conditions, respectively. Roadways carrying the highest project traffic volumes on a typical weekday include Goldenwest Avenue (north and south of Talbert Avenue) and the project access west of Goldenwest Avenue (each with more than 1,000 vehicles per day for some segments). On a typical weekend, these facilities also carry the most traffic, with approximately 1,600 vehicles per day using the project access. Near term project only peak hour turning movement volumes are included on Figure 4.12-10 and Figure 4.12-11 for weekday AM and PM peak hour conditions and Figure 4.12-12 for mid-day weekend conditions.

Near Term (2012) Conditions

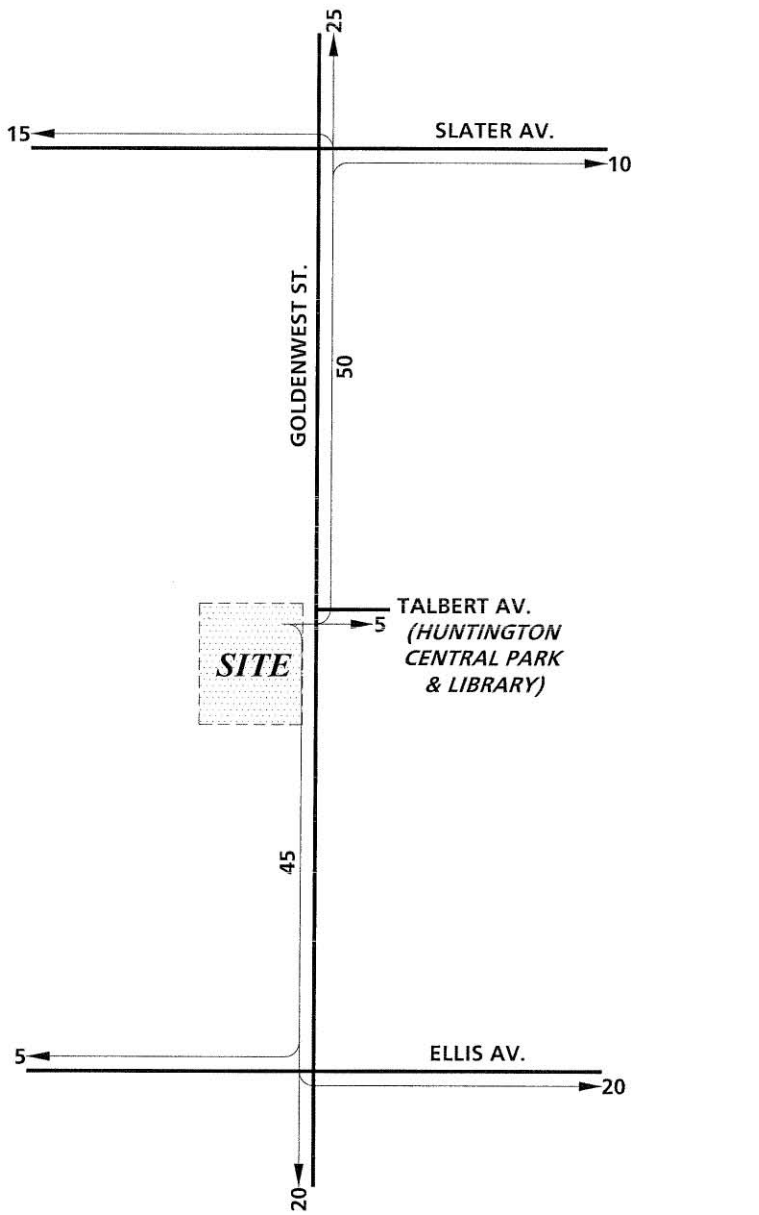
The near term analysis year for purposes of this study is 2012. It is expected that the project will be fully occupied by 2012. The near term roadway network assumptions are based on existing conditions. For without project conditions, the site continues to be vacant.

Future Traffic Volumes

Near term forecasts have been developed from existing daily traffic volumes. Ambient growth at a rate of 2 percent has been added to existing volumes. Other development growth is negligible (i.e., the ambient growth rate include the minimal amount of other development traffic in the study area), and other development identified by the City were too small or too far away to significantly impact the study area.

Near term without project daily traffic volumes are shown on Figure 4.12-13 and Figure 4.12-14 for weekday and weekend conditions, respectively. The highest study area volumes occur on Goldenwest Street, north of Slater Avenue. AM and PM peak hour (weekday) intersection volumes are shown on Figure 4.12-15 and Figure 4.12-16, respectively. Mid-day weekend intersection volumes are shown on Figure 4.12-17.

For near term with project conditions, the resulting daily traffic volumes are included in Figure 4.12-18 and Figure 4.12-19 for weekday and weekend conditions, respectively. AM and PM peak hour (weekday) intersection volumes are shown on Figure 4.12-20 and Figure 4.12-21, respectively. Mid-day weekend intersection volumes are shown on Figure 4.12-22.



LEGEND:

10 = PERCENT TO/FROM PROJECT

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

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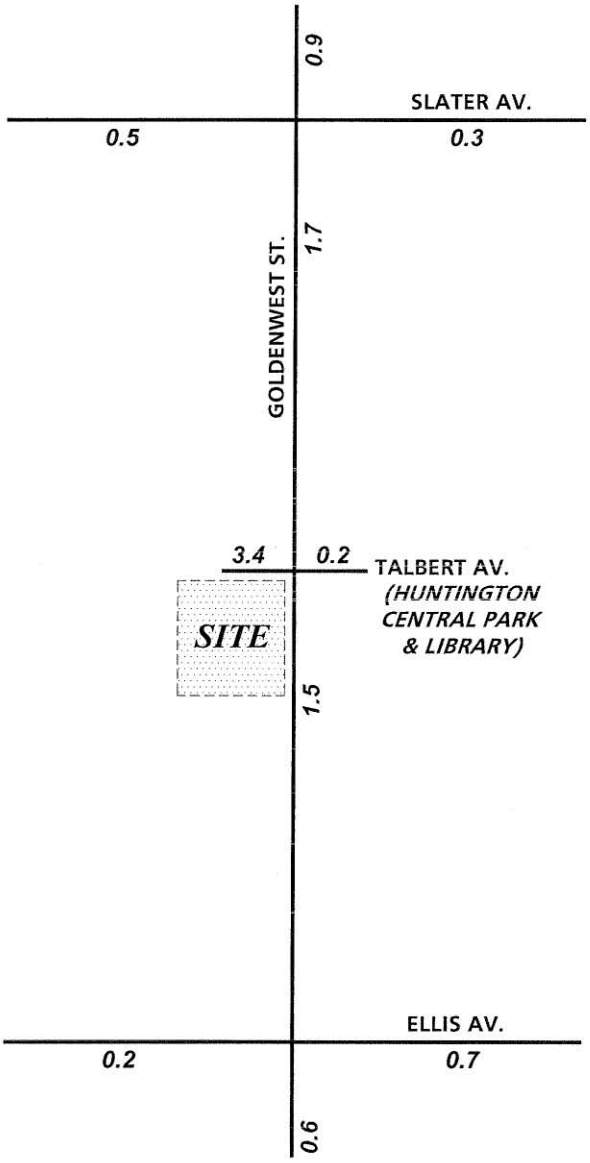
A division of PBS&J

FIGURE **4.12-7**
Project Trip Description



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-8**

Interim Year Project Only Average Daily Traffic (ADT) – Weekday

EIP ASSOCIATES
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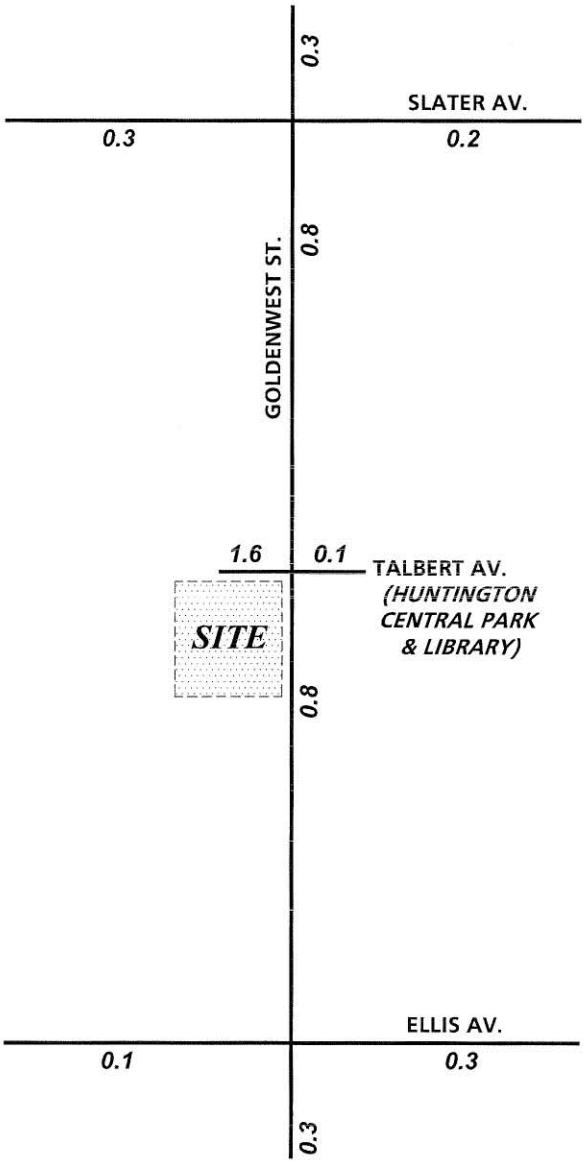

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-9**

Interim Year Project Only Average Daily Traffic (ADT) – Saturday

EIP ASSOCIATES
A division of PBS&J

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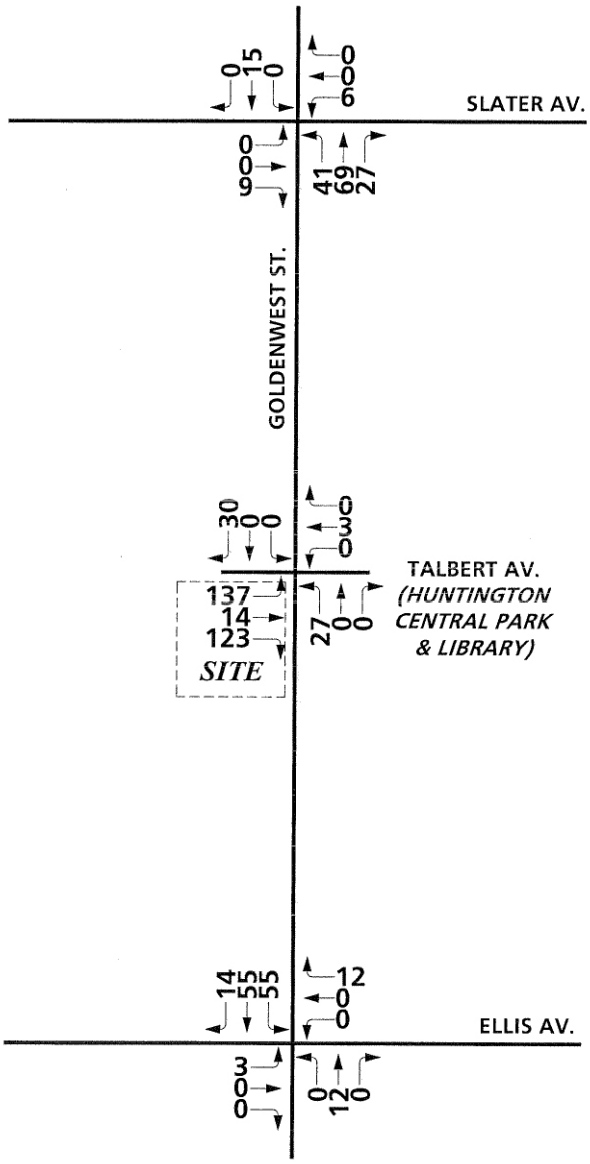

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-10**

Weekday Project Only AM Peak Hour Intersection Volumes

EIP ASSOCIATES
A division of PBS&J

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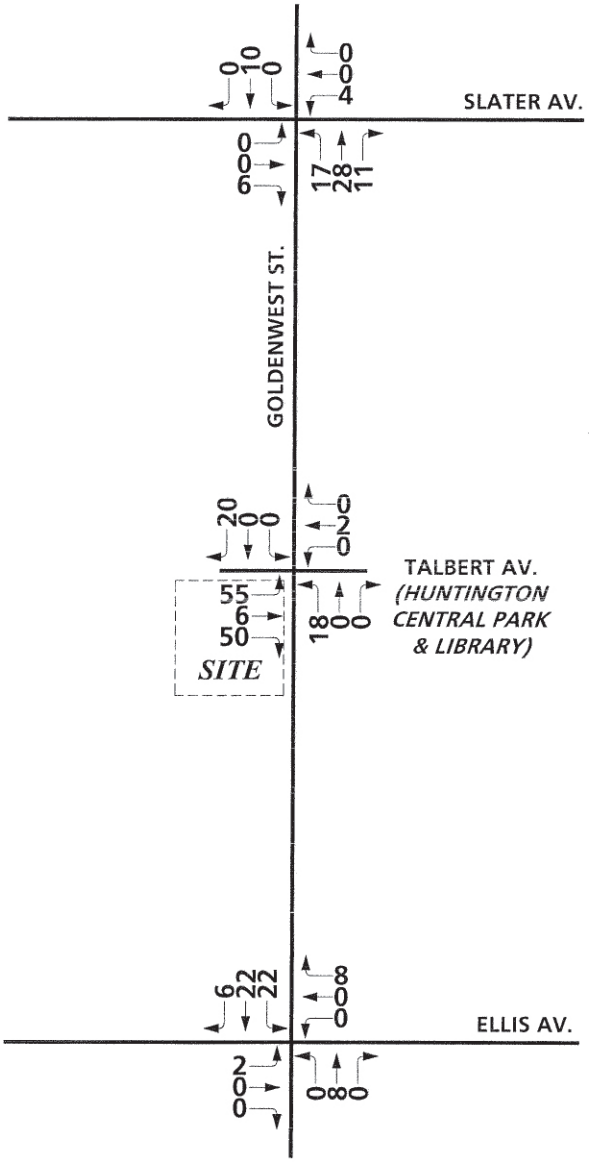


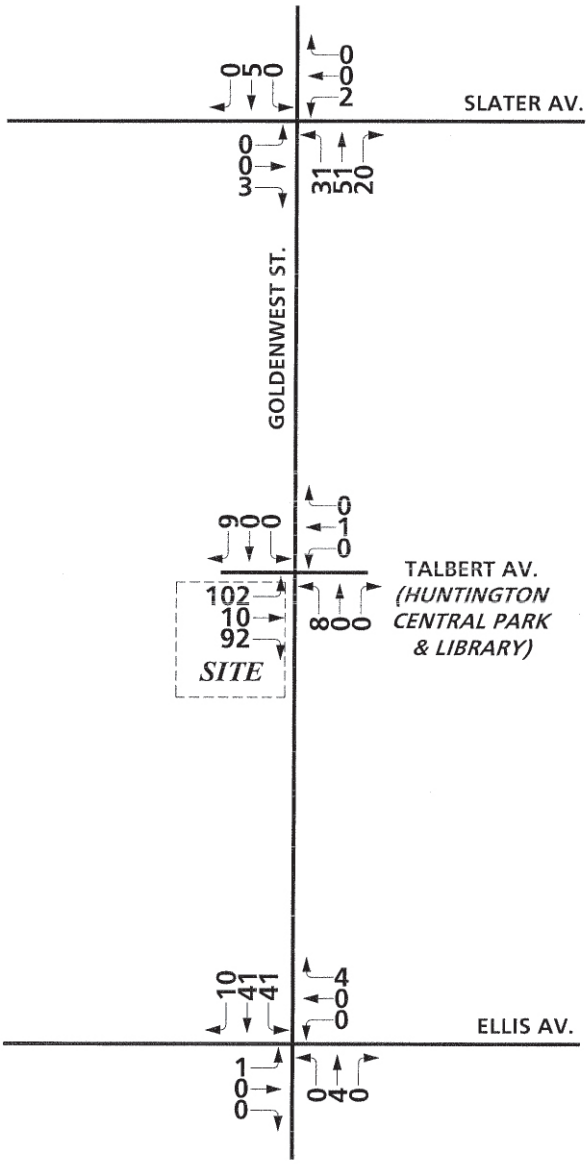
NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-11**

Weekday Project Only PM Peak Hour Intersection Volumes

EIP ASSOCIATES
A division of PBS&J



NORTH
NOT TO SCALE

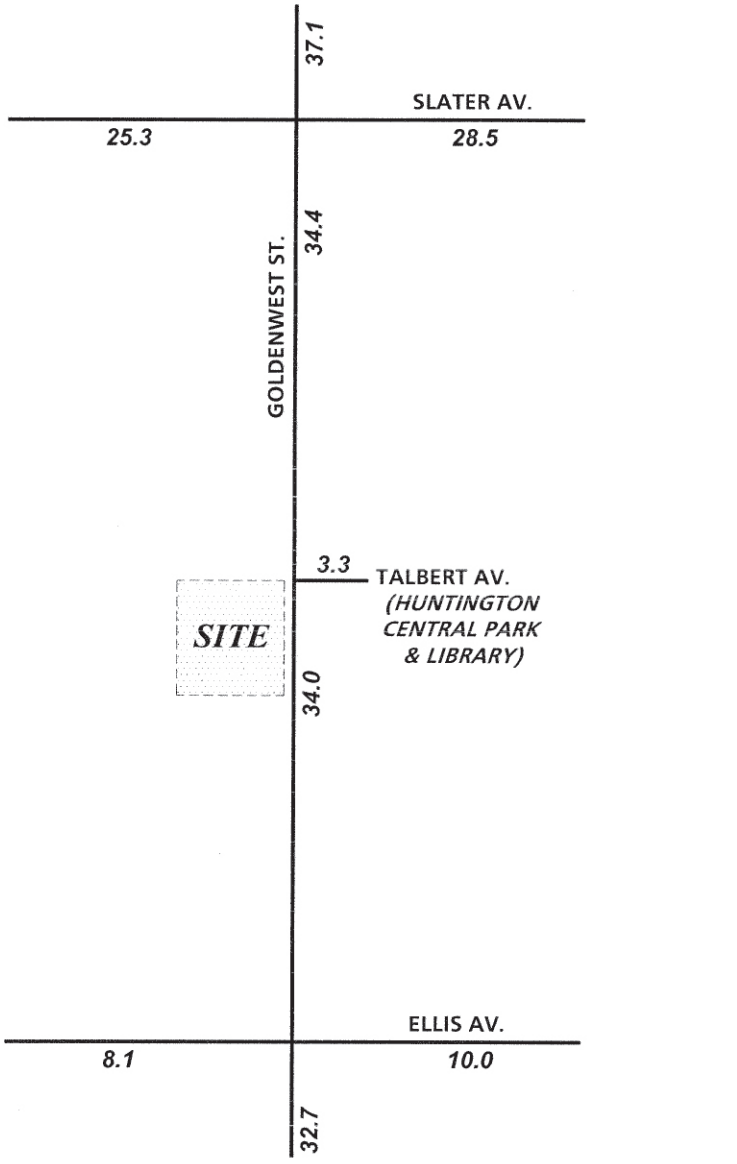
***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-12**

Weekend Project Only Mid-Day Peak Hour Intersection Volumes

EIP ASSOCIATES
A division of PBS&J

06057 | JCS | 07



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NORTH
NOT TO SCALE

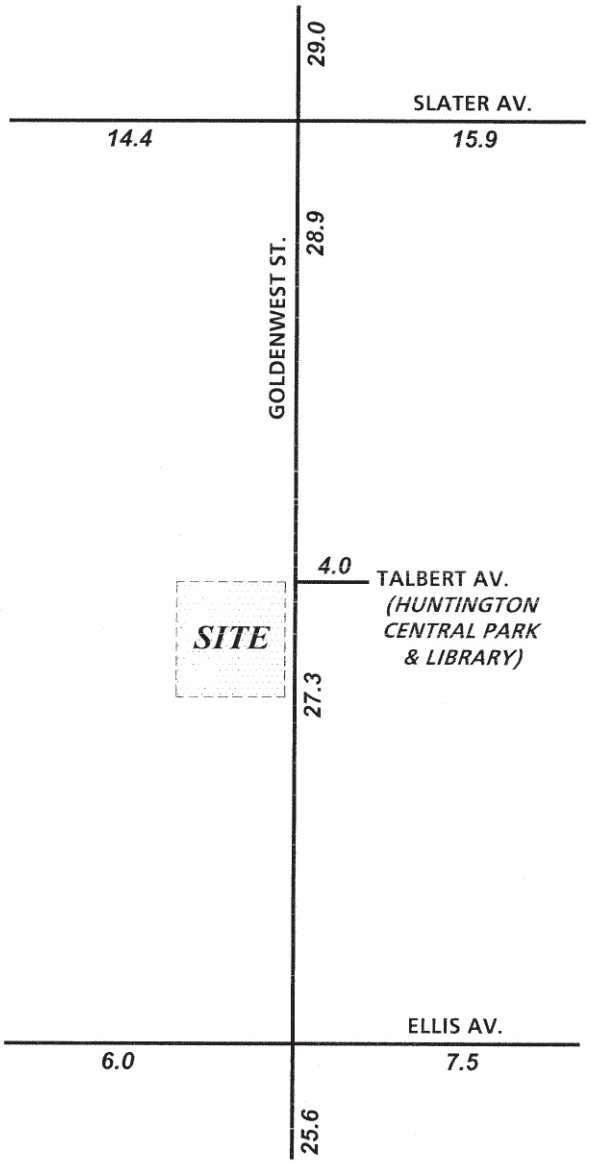
***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-13**

Weekday Interim Year without Project Average Daily Traffic (ADT)

EIP ASSOCIATES
A division of PBS&J

06057 | JCS | 07



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

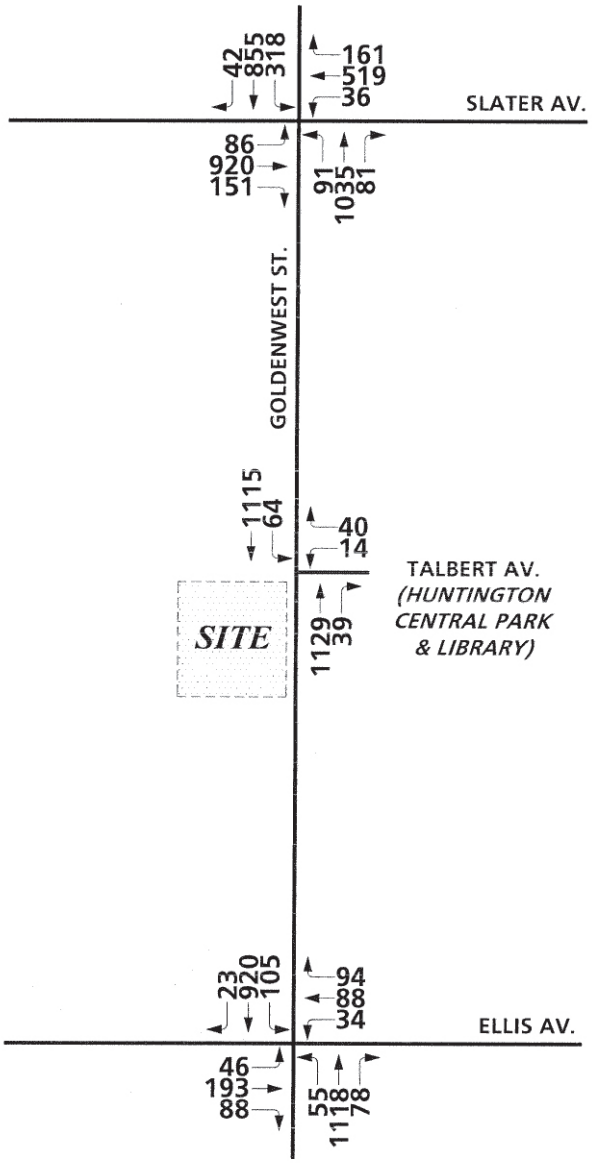
NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

EIP ASSOCIATES
A division of PBS&J

FIGURE **4.12-14**
Weekend Interim Year without Project Average Daily Traffic (ADT)

06057 | JCS | 07

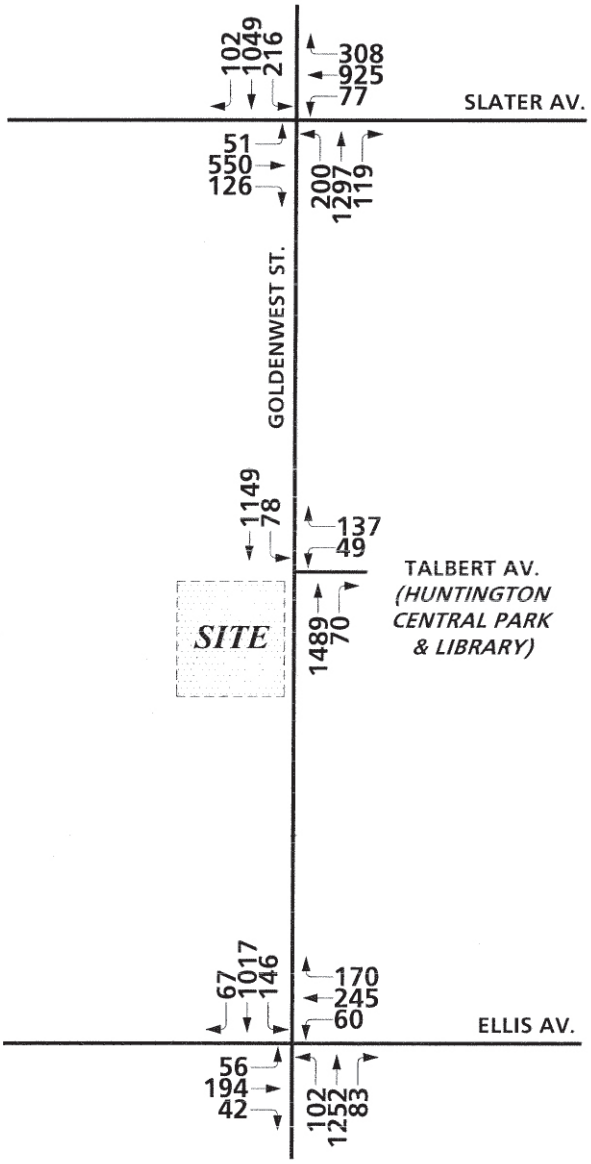


NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-15**

Weekday Near Term (2012) without Project AM Peak Hour Intersection Volumes



NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

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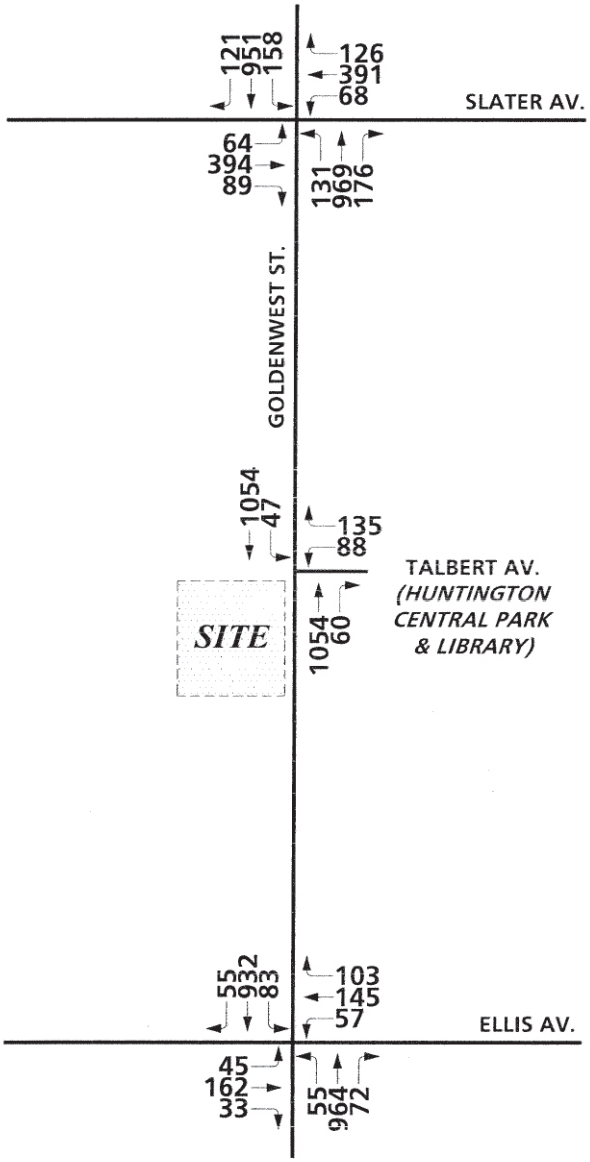
FIGURE **4.12-16**
Weekday Near Term (2012) without Project
PM Peak Hour Intersection Volumes

D21314.00

Huntington Beach Senior Center EIR

06057 | JCS | 07



NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

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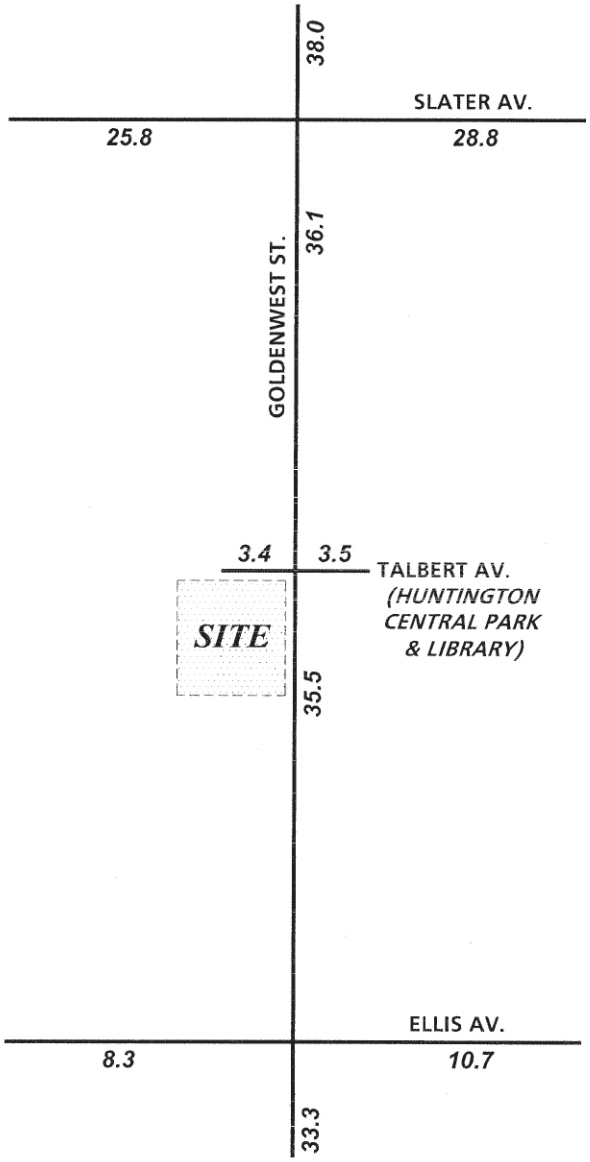
FIGURE **4.12-17**
Weekend Near Term (2012) without Project Mid-Day Peak Hour Intersection Volumes

D21314.00

Huntington Beach Senior Center EIR

06057 | JCS | 07



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-18**

Weekday Interim Year with Project Average Daily Traffic (ADT)

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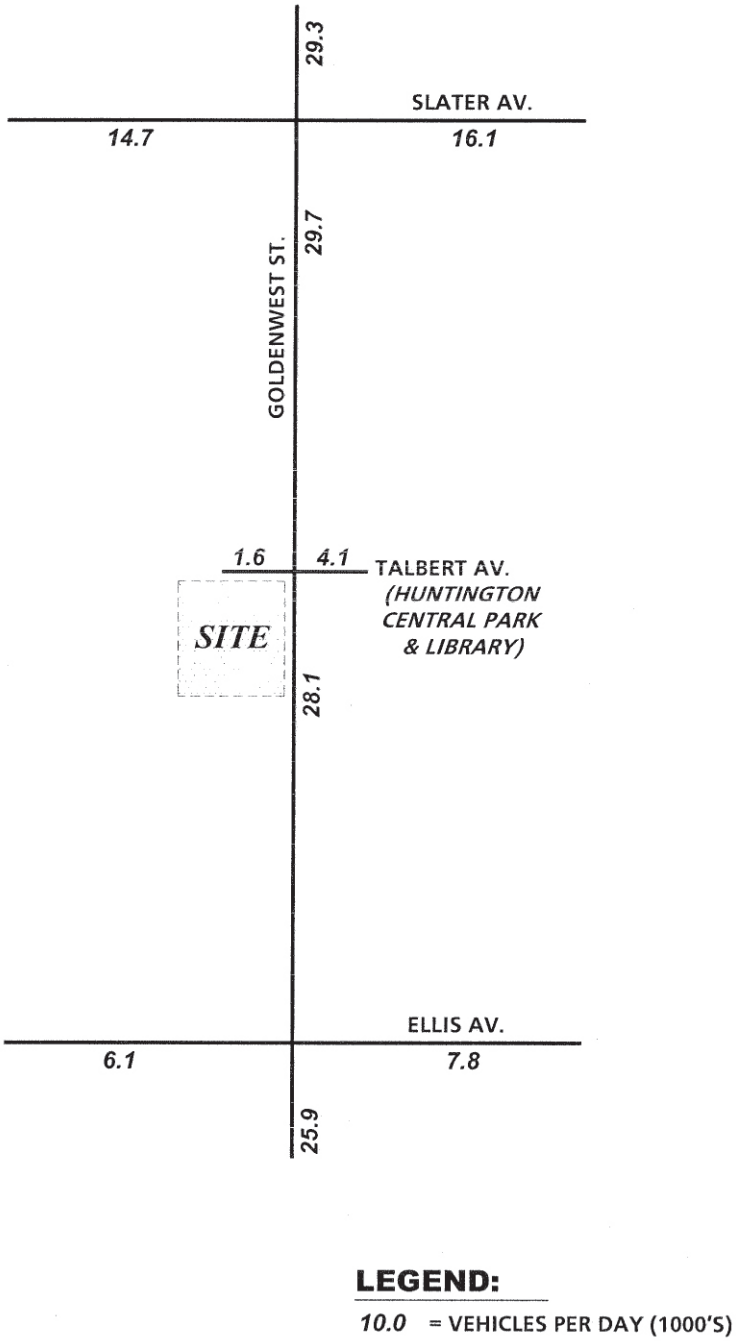
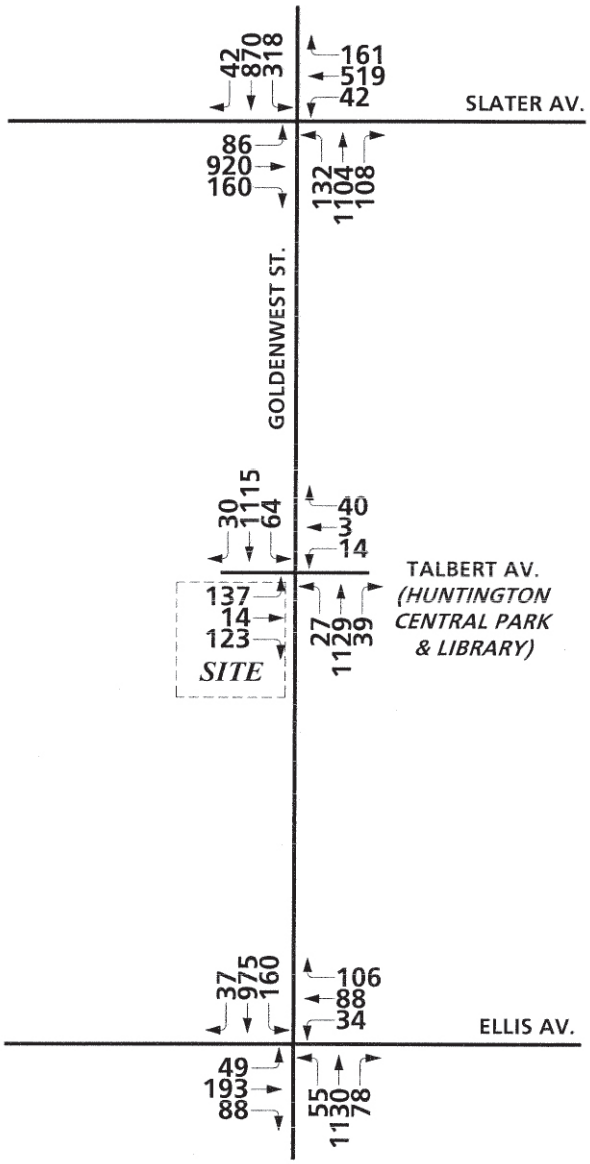


***Source*:** URBAN Crossroads, 2007.

FIGURE **4.12-19**

Weekend Interim Year with Project Average Daily Traffic (ADT)



***Source*:** URBAN Crossroads, 2007.

EIP ASSOCIATES
A division of PBS&J

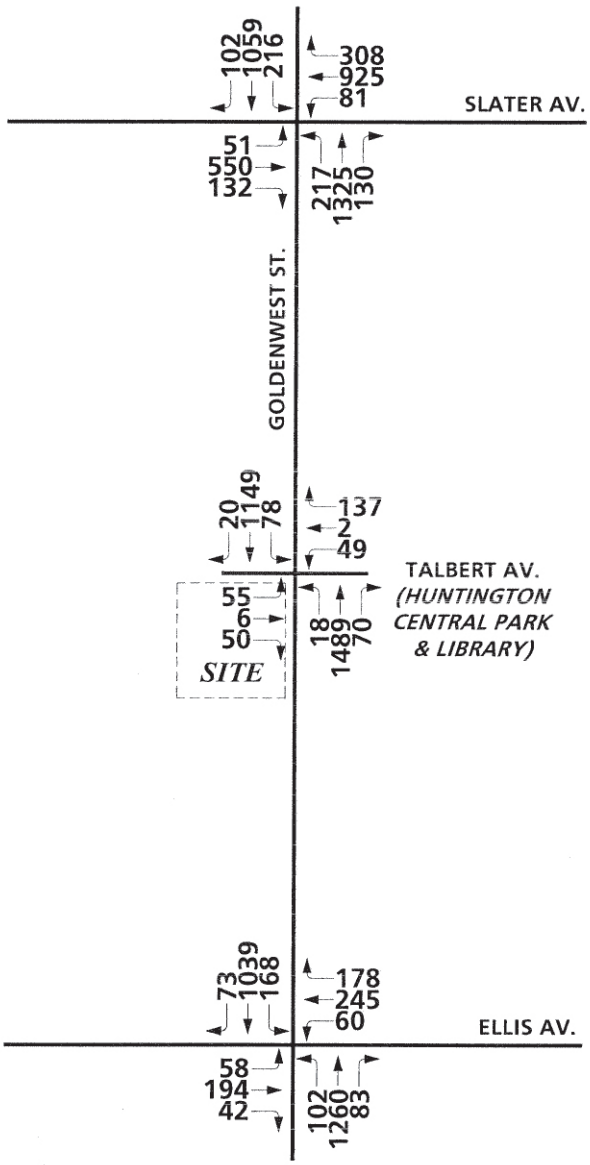
FIGURE **4.12-20**

Weekday Near Term (2012) with Project AM Peak Hour Intersection Volumes

D21314.00

Huntington Beach Senior Center EIR

06057 | JCS | 07



NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

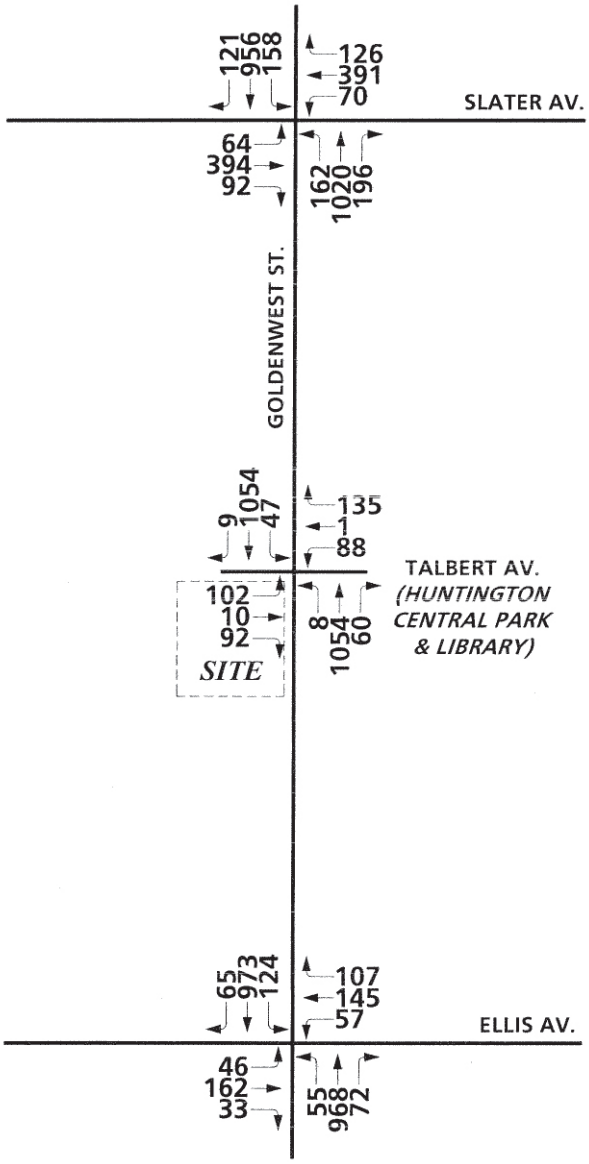
EIP ASSOCIATES
A division of PBS&J

FIGURE **4.12-21**
Weekday Near Term (2012) with Project
PM Peak Hour Intersection Volumes

D21314.00

Huntington Beach Senior Center EIR

06057 | JCS | 07



NORTH
NOT TO SCALE

***Source*:** URBAN Crossroads, 2007.

EIP ASSOCIATES
A division of PBS&J

FIGURE **4.12-22**
Weekend Near Term (2012) with Project Mid-Day Peak Hour Intersection Volumes

D21314.00

Huntington Beach Senior Center EIR

06057 | JCS | 07

Intersection Level of Service

Near term (2012) intersection levels of service for with and without project weekday conditions are shown in Table 4.12-6 (Intersection Analysis for Interim Year [2012], With and Without Project Weekday Conditions). All study area intersections except Goldenwest Street at Slater Avenue will experience acceptable levels of service with existing lanes. With improvements consisting of converting the northbound right turn lane to a third northbound through lane, acceptable LOS can be achieved at all study intersections. This improvement can be implemented within the existing curb-to-curb cross-section.

Table 4.12-6 Intersection Analysis for Interim Year (2012), With and Without Project Weekday Conditions

Intersection Goldenwest St. (NS) at:	Traffic Control[c]	Intersection Approach Lanes[a]												Critical Vol/Capacity[b]		Level of Service	
		Northbound			Southbound			Eastbound			Westbound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
With Project Conditions																	
Slater Avenue (EW)	TS	1	2	1	1	3	1	1	2	1	1	2	1	0.908	0.920	E	E
—with Improvements	TS	1	**3**	0	1	3	1	1	2	1	1	2	1	0.815	0.809	C	C
Talbert Avenue (EW)	TS	1	3	1	1	3	0	1	1	0	1	1	1	0.486	0.580	A	A
Ellis Avenue (EW)	TS	1	3	1	1	3	1	1	2	1	1	1	1	0.482	0.607	A	B
Without Project Conditions																	
Slater Avenue (EW)	TS	1	2	1	1	3	1	1	2	1	1	2	1	0.882	0.912	D	E
—with improvements	TS	1	**3**	0	1	3	1	1	2	1	1	2	1	0.791	0.801	C	C
Talbert Avenue (EW)	TS	0	3	1	1	3	0	0	0	0	2	0	1	0.350	0.495	A	A
Ellis Avenue (EW)	TS	1	3	1	1	3	1	1	2	1	1	1	1	0.433	0.590	A	A

[a] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside through lanes.
L = Left, T = Through, R = Right. **1** = Improvement, > = Right Turn Overlap Phase, >> = Free Right Turn

[b] Critical volume/capacity ratio and level of service are calculated using the following analysis software: Traffix, Version 7.8 R5 (2007). Per the City of Huntington Beach standard, critical volume/capacity ratio and level of service are determined using the Intersection Capacity Utilization method for intersections with traffic signal control

[c] TS = Traffic Signal

Near term (2012) intersection levels of service for with and without project weekend conditions are shown in Table 4.12-7 (Intersection Analysis for Interim Year [2012], With and Without Project Weekend Conditions). Although all intersections operate acceptably for weekend conditions (for both with and without project conditions), an analysis with improvements required for weekday conditions (as shown above in Table 4.12-6) has been performed and summarized on Table 4.12-7.

Table 4.12-7 Intersection Analysis for Interim Year (2012), With and Without Project Weekend Conditions

Intersection Goldenwest St. (NS) at:	Traffic Control[c]	Intersection Approach Lanes[a]												Critical Vol/Capacity[b]	Level of Service
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Saturday	Saturday
With Project Conditions															
Slater Avenue (EW)	TS	1	2	1	1	3	1	1	2	1	1	2	1	0.630	B
—with improvements	TS	1	**3**	0	1	3	1	1	2	1	1	2	1	0.564	A
Talbert Avenue (EW)	TS	1	3	1	1	3	0	1	1	0	1	1	1	0.497	A
Ellis Avenue (EW)	TS	1	3	1	1	3	1	1	2	1	1	1	1	0.448	A
Without Project Conditions															
Slater Avenue (EW)	TS	1	2	1	1	3	1	1	2	1	1	2	1	0.614	B
—with improvements	TS	1	**3**	0	1	3	1	1	2	1	1	2	1	0.549	A
Talbert Avenue (EW)	TS	0	3	1	1	3	0	0	0	0	2	0	1	0.384	A
Ellis Avenue (EW)	TS	1	3	1	1	3	1	1	2	1	1	2	1	0.421	A

[a] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside through lanes.
L = Left, T = Through, R = Right. **1** = Improvement, > = Right Turn Overlap Phase, >> = Free Right Turn

[b] Critical volume/capacity ratio and level of service are calculated using the following analysis software: Traffix, Version 7.8 R5 (2007). Per the City of Huntington Beach standard, critical volume/capacity ratio and level of service are determined using the Intersection Capacity Utilization method for intersections with traffic signal control

[c] TS = Traffic Signal

A project impact is defined as a change in ICU of 0.01 or greater, where deficient traffic operations are projected to occur. The project causes an increase of 0.026 (0.882 to 0.908) during the weekday AM peak hour, and an increase of 0.008 (0.912 to 0.920) during the weekday PM peak hour. The project therefore results in a potentially significant impact during the weekday AM peak hour only at the intersection of Goldenwest Street (NS) at Slater Avenue (EW).

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2007 CEQA Guidelines. For the purposes of this EIR, implementation of the proposed project may result in a potentially significant impact if the proposed project would cause either of the following results:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in locations that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses
- Result in inadequate emergency access
- Result in inadequate parking capacity

- Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)

For the purposes of this analysis, an acceptable level of service (LOS) is LOS D as defined by City of Huntington Beach Traffic Study Guidelines (1996). Therefore, any intersection operating at LOS E or F is considered deficient/unsatisfactory. In addition, an intersection is also considered impacted if the LOS is E or F and the ICU value changes by 0.01 or more.

Effects Not Found to Be Significant

Threshold	Would the proposed project result in a change in air traffic patterns, including either an increase in traffic levels or a change in locations that results in substantial safety risks?

The project site is not located within 2 miles of a public or private airstrip and does not propose any structures of substantial height to interfere with existing airspace or flight patterns. No impact would occur, and no further analysis of this issue is required in the EIR.

Threshold	Would the proposed project result in inadequate emergency access?

Emergency access to the site would be from the proposed main entry accessed from Goldenwest Street and Talbert Avenue. The on-site roadway infrastructure would be designed to assist emergency access. Emergency access to and within the project site would be designed to meet City of Huntington Beach Police Department and City of Huntington Beach Fire Department requirements, as well as the City's general emergency access requirements. No impact would occur, and no further analysis of this issue is required in the EIR.

Impacts and Mitigation

Threshold	Would the proposed project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Impact 4.12-1 **Construction of the proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system.**

Construction of the proposed project is anticipated to occur over approximately 20 months beginning in 2008. Grading is expected to generally consist of minor cut and fill operations to a depth of approximately 10 feet. After grading activities are completed, construction of wet and dry utilities would commence, and construction of curbs and gutters would follow. Construction of the senior center would occur in one phase, followed by construction of the open space and parking areas. It is anticipated that construction would be completed in 2010; however, full project occupancy is anticipated to occur by 2012.

It is not anticipated that construction activities would result in potential adverse impacts as only minor cut and fill would occur, and thus minimal truck trips would be associated with soil import/export activities. Additionally, construction traffic generally occurs prior to the peak period, consistent with the typical construction work day of 7 A.M. to 3 P.M.. Further, Goldenwest Street, the project frontage street, is a designated truck route in the City General Plan Circulation Element (Figure CE-7). Minimal truck trips could travel Goldenwest Street north to I-405 or south to Pacific Coast Highway. In addition, Talbert Avenue east of Gothard Street is also a designated truck route. Construction-related traffic impacts would be ***less-than-significant.*** No mitigation is required.

Threshold	Would the proposed project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (e.g., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Impact 4.12-2 **Under Year 2012 conditions, the proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system.**

As shown in Table 4.12-5, the proposed senior center is projected to generate a total of approximately 3,395 trip-ends per day on a typical weekday. In the AM peak hour the project is projected to generate approximately 334 vehicles per hour, while PM peak hour trip generation is estimated at approximately 150 vehicles per hour. On a typical Saturday, the project is projected to generate a total of 1,577 trip-ends per day, with 222 vehicles per hour during the peak hour.

A project impact is defined as a change in ICU of 0.01 or greater, where deficient traffic operations are projected to occur (i.e., LOS E or F). The project causes an increase of 0.026 during the AM peak hour, causing the level of service to change from LOS D to LOS E at the intersection of Goldenwest Street/Slater Avenue. The project therefore results in a potentially significant impact during the AM peak hour only at the intersection of Goldenwest Street (NS) at Slater Avenue (EW). However, as shown in Table 4.12-6 (Intersection Analysis for Interim Year (2012), With and Without Project Weekday Conditions), this intersection is anticipated to operate at LOS E conditions during the PM peak hour (without improvements) even without the proposed project. Nonetheless, because the project would contribute to the deficient traffic operations with a change in ICU of 0.01 or greater, implementation of mitigation measure MM 4.12-2 would be required to reduce this impact.

Typically, projects would be required to pay fair-share contributions to such ambient growth impacts (those that are not solely caused by the project). However, because the improvements are expected to have minimal cost, the following improvements shall be constructed by the project.

MM 4.12-2 *The project shall provide an additional northbound through lane at the intersection of Goldenwest Street and Slater Avenue. This can be provided by restriping the existing northbound right turn lane, without any physical roadway widening. In addition, approximately 300 feet of existing on-street parking from Ford Drive to Betty Drive will need to be removed in order to allow three through lanes northbound.*

The on-street parking that would be removed as part of mitigation measure MM 4.12-2 is the most convenient parking for the six homes that front Goldenwest Street. Primary resident parking is provided

for five of the six homes off the alley that parallels Goldenwest Street. The remaining home has driveway access from Goldenwest, and on-site parking. On-street parking is typically used by guests. Alternate on-street parking within acceptable walking distance (less than 500 feet) is available on nearby local streets, including Ford Drive, Mill Circle, and Betty Drive. The loss of approximately 12 on-street parking spaces on Goldenwest therefore represents a less-than-significant impact. Consequently, implementation of mitigation measure MM 4.12-2 would reduce this impact to a ***less-than-significant*** level.

Threshold	Would the proposed project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Impact 4.12-3 Implementation of the proposed project would not exceed standards established by the Orange County Transportation Authority.

The Orange County Transportation Authority is designated as the Congestion Management Agency (CMA) to oversee the Orange County Congestion Management Plan (CMP). The CMP requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System (HS). Per the CMP guidelines, this number is based on the desire to analyze any impacts that will be three percent or more of the existing CMP highway system facilities' capacity. The CMPHS includes specific roadways, which include State Highways and Smart Streets (formerly Super Streets), and CMP arterial monitoring locations/intersections. Therefore, the CMP traffic impact analysis (TIA) requirements relate to the potential impacts only on the specified CMPHS.

The proposed project is anticipated to generate approximately 3,395 trips per weekday, and 1,577 trips per weekend, which would appear to trigger the requirement of a CMP TIA. However, the next step in the CMP analysis is to determine whether or not the project has the potential to impact any CMP facilities with an increase of three percent or more. The project volumes and the project impact resulting in an increase in ICU of .026 in the AM peak hour are expected to dissipate prior to interaction with CMP intersections. Consequently, this impact would be ***less than significant***.

Threshold	Would the proposed project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?

Impact 4.12-4 The project would not substantially increase roadway hazards.

For the purposes of this analysis, hazards are defined as changes to circulation patterns that could result in unsafe driving or pedestrian conditions. Examples include inadequate vision or stopping distance, sharp roadway curves where there is an inability to see oncoming traffic, or vehicular/pedestrian traffic conflicts. This situation is made more sensitive by the nature of the proposed use, a senior center. The location of the senior center at the edge of the park provides an opportunity to incorporate the senior center use among other recreational uses. Design considerations have been identified for this environment where there are recreationists, pedestrians, and seniors, as well as substantial existing traffic volumes.

Safety and Driver Behavior

The driving behavior of an aging population has become a topic of increased visibility as the generation commonly known as "baby boomers" has begun to reach retirement age. Various organizations, including the American Association of Retired Persons (AARP), the Transportation Research Board (TRB), and the National Cooperative Highway Research Program (NCHRP) have published information on this topic in recent years.

In general, drivers' physical and mental skills diminish as the aging process occurs. A statistical correlation has been identified between accident rates and driver age, with both young (teenage) and older (over 70) drivers overrepresented in the accident statistics. Various practices can be implemented to reduce the potential for accidents involving older drivers. Recommended measures include increased letter sizes on signs to enhance legibility, as well as increased signal clearance intervals to accommodate reduced reaction and decision times on the part of older drivers.

Pedestrian Needs

Typical traffic signals are timed using a pedestrian walking speed of 4 feet per second (fps). In areas with a high concentration of senior citizens, a slower pedestrian walking speed (e.g., 2.8 fps) is recommended. Table 4.12-8 (Pedestrian Crossing Time Evaluation) shows the increase in loss time necessary to accommodate pedestrian activity, if such traffic signal timing were implemented for the proposed project. The minimum green time for pedestrians to cross Goldenwest Street at this walking speed is 44 seconds.

Table 4.12-8 Pedestrian Crossing Time Evaluation

Goldenwest Street Width (Curb-to-Curb)	104	Feet
Pedestrian Crossing Speed (Reduced)	2.8	Feet per Second
Required Crossing Time	37	Seconds
Initial Green Walk Time	7	Seconds
Total Required Time	44	Seconds
Assumed Cycle Length	120	Seconds
Percent of Cycle for Pedestrian Crossing	0.367	
Maximum Calculated ICU at Talbert Avenue	0.580	
ICU with Pedestrian All-Red Phase (Every Cycle)	0.947	
Resulting LOS (Pedestrians on Every Cycle)	"E"	
ICU with Pedestrian All-Red Phase (Every Other Cycle)	0.764	
Resulting LOS (Pedestrians on Every Other Cycle)	"C"	

SOURCE: Urban Crossroads, 2007. Huntington Beach Senior Center Traffic Impact Analysis, September 12.

The senior center would need to comply with the current regulations related to the Americans with Disabilities Act (ADA). Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48" for the pedestrian travelway, a vibration-free zone for pedestrians, among other things.

Atypical Design Features

Exiting the project site could result in potentially significant impacts related to vehicle safety. In order to address safety concerns related to exiting the project site, mitigation measures have been identified that would eliminate this potentially unsafe movement. These measures would also address the potential sight distance issue related to the uphill grade for southbound traffic on Goldenwest Street in this location. These mitigation measures would ensure that impacts remain less than significant.

MM 4.12-4 *The intersection of Goldenwest Street at Talbert Avenue shall be modified to include the project driveway as the west leg, with appropriate corresponding signal modifications and intersection lane improvements. The City Traffic Engineer shall determine the ultimate signal modifications that are most appropriate for the project site. Design recommendations include, but are not limited to, the following:*

- *Split phase operations for east-west movements*
- *Adequate pedestrian green to accommodate a slower walk speed (e.g., 2.8 feet per second)*
- *Address design site distance*
- *Increased letter sizes on roadway signs*
- *Increased signal clearance intervals*

The potential for roadway hazards also occurs as an inherent result of the placement of an additional access along public roadways. New intersections require adequate sight distance and intersection traffic control, to minimize potential hazards. In order to ensure safe construction of project intersections, the following code requirements would be required:

CR 4.12-4(a) *On-site traffic signing and striping shall be implemented in conjunction with detailed construction plans for the project site.*

CR 4.12-4(b) *Sight distance at each project access shall be reviewed with respect to standard Caltrans and City of Huntington Beach sight distance standards at the time of preparation of final grading, landscape and street improvement plans.*

Implementation of mitigation measure MM 4.12-4 and CR 4.12-4(a) and CR 4.12-4(b) would reduce potential impacts associated with roadway hazards to a ***less-than-significant*** level.

Threshold	Would the proposed project result in inadequate parking capacity?

Impact 4.12-5 **Implementation of the proposed project would not result in inadequate parking capacity.**

The proposed project would not result in inadequate parking capacity. The City parking requirement for this use classification is determined on a case by case basis and is specified by the Conditional Use Permit. LPA, the consultant for the Senior Center Feasibility Study, has extensive experience designing and constructing senior centers, and uses a standard of four to five spaces per 1,000 square feet of building space. Based upon these criteria, the proposed 45,000 sf Senior Center would need to provide between 180 to 225 spaces. For purposes of this analysis, Table 4.12-9 (Parking Calculation) uses the more conservative requirement of five spaces per 1,000 sf.

Table 4.12-9 Parking Calculation

Parking Requirement	*Calculation*	*No. of Spaces Required*	*No. of Spaces Provided*
5 parking spaces per 1,000 sf*	(45,000 sf/1,000) x 5	225	227
Additional parking provided			
Shuttle bus parking			6
Future/Overflow Parking			24
		Total Provided	*257*

* Based upon consultation between City and LPA, Inc.

A total of 225 parking spaces would be required for the proposed senior center, while the proposed project would actually provide 227 parking spaces in three main parking lots. Additionally, six shuttle bus stalls and an area for future parking expansion that would be able to accommodate an additional 24 spaces would also be provided. Consequently, the proposed project would provide more than adequate parking and this impact is considered ***less than significant***.

Threshold	Would the proposed project conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Impact 4.12-6 Implementation of the proposed project would not conflict with adopted policies supporting alternative transportation.

As discussed above, project implementation is anticipated to be consistent with local policies related to transportation, including the City of Huntington Beach General Plan Land Use and Transportation Elements.

As Goldenwest Street is elevated above the site, the proposed project would provide ADA ramp access from the site to the Talbert Street intersection, as well as from the OCTA bus stop located approximately 100 feet south of the Goldenwest Street/Talbert Avenue intersection. This would be in conformance with Policy CE 6.1.6., which requires new development to provide pedestrian walkways and bicycle routes between developments, schools, and public facilities. In addition, six shuttle bus stalls would be provided on site.

Due to project compatibility with adopted policies supporting alternative transportation, this impact would be ***less than significant***.

4.12.4 Cumulative Impacts

The cumulative analysis considers cumulative projects identified to occur within the vicinity of the project site, in addition to General Plan buildout conditions identified to year 2030. The project-specific traffic analysis considers trips generated by cumulative projects in its development of future baseline conditions. Therefore, the cumulative impact analysis is incorporated into the Year 2012 analysis presented in Section 4.12.3. As identified above, impacts would not be cumulatively considerable at study intersections.

4.12.5 References

City of Huntington Beach. 1996. *General Plan*, May 13.

Urban Crossroads, 2007. *Huntington Beach Senior Center Project, Traffic Impact Analysis, City of Huntington Beach, California*, September 12.