



REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: FEBRUARY 9, 2021

TITLE: IRVINE BUSINESS COMPLEX TRAFFIC IMPROVEMENT FEE PROGRAM UPDATE AND PROJECT PRIORITIZATION

Jaimee Bourgeois

Director of Public Works and Transportation

DocuSigned by:

Marianna Marysheva

Interim City Manager

RECOMMENDED ACTION

1. Conduct Public Hearing.
2. Approve the 2020 Irvine Business Complex Traffic Improvement Fee Program Update with exclusion of the Red Hill Avenue Widening project.
3. Direct staff to process an amendment to the County of Orange Master Plan of Arterial Highways to downgrade Red Hill Avenue between MacArthur Boulevard and Main Street from a six-lane major arterial highway to a four-lane primary arterial highway.
4. Introduce for first reading and read by title only - AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING A ZONE CHANGE TO THE ZONING ORDINANCE (00827079-PZC) CHAPTER 9-36 OF THE IRVINE ZONING ORDINANCE TO CHANGE THE FREQUENCY OF THE REQUIRED UPDATES TO THE IRVINE BUSINESS COMPLEX RESIDENTIAL/MIXED USE VISION PLAN TRAFFIC STUDY FROM EVERY TWO YEARS TO THREE; FILED BY THE CITY OF IRVINE PUBLIC WORKS AND TRANSPORTATION DEPARTMENT
5. Approve the proposed prioritization of Irvine Business Complex transportation mitigation improvements.

EXECUTIVE SUMMARY

As required under Zoning Ordinance Section 9-36-14, staff has prepared an update to the Irvine Business Complex (IBC) Traffic Improvement Fee Program, which includes preparation of a traffic study to identify transportation improvements and preparation of a fee nexus study to determine the fees to be charged for future development in the IBC.

On August 6, 2019, the Transportation Commission received the latest IBC Vision Plan Traffic Study Update, which identified an updated list of transportation improvements. The Transportation Commission voted 5-0 to direct staff to proceed with the preparation of the traffic fee nexus study update, with the exclusion of the Red Hill Avenue Widening

improvement from four to six lanes, between MacArthur Boulevard and Main Street, which is the only remaining General Plan improvement yet to be built within the IBC.

The 2020 Update to the IBC Vision Plan Traffic Fee Nexus Study (Attachment 1) is based on the updated list of transportation improvements, program costs, existing fund balance, and remaining land use intensities subject to fees. The IBC traffic fees were calculated for two scenarios: 1) with the widening of Red Hill Avenue, consistent with the City's General Plan and the Orange County Master Plan of Arterial Highways (MPAH); and 2) without the widening of Red Hill Avenue, consistent with the direction given by the Transportation Commission.

When the Red Hill Avenue Widening improvement is considered in the costs, the IBC traffic fees are generally two percent lower than the current fees, with the exception of retail and office uses that result in a four percent increase from current fees. When the Red Hill Avenue Widening improvement is not considered in the costs, the proposed IBC transportation fees are generally 30 percent lower than the current fees, with the exception of retail and office uses that result in a 26 percent decrease from current fees. If approved by City Council, the proposed fees would be effective on the date of the approval and for the remaining Fiscal Year (FY) 2020-21.

City staff is also seeking direction to proceed with processing an amendment to the County of Orange MPAH, which also requires an amendment to the City's General Plan Circulation Element, to downgrade the segment of Red Hill Avenue between MacArthur Boulevard and Main Street, maintaining the existing four-lane configuration.

The City of Irvine Zoning Ordinance currently requires the preparation of an IBC traffic study and associated fee nexus study every two years to evaluate the on-going implementation of the IBC Vision Plan, and to update the associated improvement list and resulting fees; however, staff recommends that the frequency be modified to every three years, based on actual preparation time required (Attachments 2 and 3). Benefits of extending the frequency include cost savings and the allowance for staff to spend more time implementing the improvements.

As was requested by City Council during the previous review of the Traffic Improvement Fee Program Update, staff prepared a prioritization of the IBC improvements, which will assist with determining the order of implementation (Attachment 4). This was determined based on an assigned score for constructability, year of impact, location, and benefit cost ratio (Attachment 5).

The recommended actions would allow staff to proceed with: 1) implementation of the updated fees, based on the scenario without the Red Hill Avenue Widening improvement; 2) initiation of the amendment to the County's MPAH to maintain four lanes on Red Hill Avenue between MacArthur Avenue and Main Street; 3) preparation of the IBC Traffic Study Update every three years instead of every two years; and 4) implementation of the IBC transportation improvements using the prioritization list as guidance.

COMMISSION/BOARD/COMMITTEE RECOMMENDATION

This item was presented to the Transportation Commission on November 17, 2020, and received unanimous support. Discussion included the MPAH amendment process to maintain Red Hill Avenue as four lanes between Main Street and MacArthur Boulevard, as well as the history and status of the Alton Parkway/State Route 55 Overcrossing project.

This item was presented to the Finance Commission on December 7, 2020, and received unanimous support. Discussion included the Red Hill Avenue Widening improvement and the frequency of the traffic study update.

This item was presented to the Planning Commission on January 7, 2021, and received unanimous support. Discussion included Red Hill Avenue Widening improvement, the Alton Parkway/State Route 55 Overcrossing project, and IBC fees.

ANALYSIS

Background

As part of the 2010 adoption of the IBC Vision Plan Environmental Impact Report (EIR), City Council also adopted Zoning Ordinance Section 9-36-14, requiring that transportation improvements be re-evaluated every five years. This process includes preparation of a traffic study to identify roadway improvements to maintain acceptable levels of service (LOS) followed by a fee nexus study to determine the fees to be collected by future development in the IBC to fund up to 90 percent of the improvements. The first five-year traffic study and fee nexus study were initiated in 2015. On November 10, 2015, City Council amended the frequency of the updates from five years to two years, with the intended goal of better understanding how quickly development was occurring in the IBC, and what transportation improvement changes might be needed to support that development.

The traffic study and fee nexus study updates were reviewed by City Council on September 12, 2017. City Council unanimously approved to limit the increase in fees to the Construction Cost Index (CCI) and to reach out to representatives from the City of Santa Ana to determine its interest in moving forward or removing the Alton Parkway Overcrossing Project at State Route 55, a project that is funded 50 percent by each agency per the 1992 Agreement between the cities of Santa Ana and Irvine. Staff discussed with City of Santa Ana following City Council action in 2017 and has also recently reaffirmed City of Santa Ana's interest in constructing the Alton Parkway/State Route 55 Overcrossing. While final design is complete, City of Santa Ana has not yet secured their share of funds for construction.

Although not a part of the formal action, City Council discussion also included a suggestion to limit Red Hill Avenue to its existing four-lane configuration. The 2010 IBC Vision Plan included the assumption that Red Hill Avenue would be widened from the existing four lanes to the ultimate six lanes between MacArthur Boulevard and Main Street, consistent with the City's General Plan Circulation Element and County's MPAH.

2020 Update to the Traffic Improvement Fees

For this current update, the IBC Traffic Study was completed in 2019 and presented to the Transportation Commission on August 6, 2019. A sensitivity analysis was conducted to identify what alternative improvements might be needed as a result of removing the Alton Parkway Overcrossing and Red Hill Avenue Widening. The Transportation Commission voted 5-0 to direct staff to proceed with preparation of the IBC Vision Plan Traffic Fee Nexus Study with the exclusion of the Red Hill Avenue widening from four to six lanes. Because of Santa Ana's commitment to complete the Alton Parkway/State Route 55 Overcrossing, this improvement was determined to be retained. As such, the 2020 Update to the IBC Vision Plan Traffic Fee Nexus Study (Attachment 1) identifies the fees for two scenarios: 1) With the Red Hill Avenue Widening, consistent with the City's General Plan and the County's MPAH; and 2) Without the Red Hill Avenue Widening, consistent with the direction given by the Transportation Commission.

The 2020 Update to the IBC Vision Plan Traffic Fee Nexus Study is consistent with the principles and commitment of the IBC Vision Plan and maintains a consistent nexus between future development in the IBC and the transportation system improvements necessary to support that development. The objective of this study is to update development fees to financially support the implementation of identified improvements to the transportation system within, and adjacent to, the IBC, in order to accommodate full build-out of the IBC Vision Plan.

Table 1 provides a breakdown of the costs and existing funds available that are a part of the IBC fee calculation both with and without the Red Hill Avenue Widening improvement, including:

Improvement Costs: These costs are based on detailed cost estimates for specific fair-share improvements identified in the latest IBC Traffic Study Update and obligations to fund specific improvements within adjacent jurisdictions as necessary to implement the build-out of the IBC Vision Plan. In addition, a remaining General Plan improvement, namely Red Hill Avenue Widening, is included. The program assumes that the development fees may fund up to 90 percent of identified improvement costs. Consistent with City practice, the remaining 10 percent of project costs is covered by outside funding sources, including federal, state, and county programs, or System Development Charge fees. In addition, funds already spent to progress the current improvements, as part of the City's Capital Improvement Program, are accounted for.

The widening of Red Hill Avenue is estimated at \$21.6 million. The removal of the Red Hill Avenue Widening improvement results in two additional intersection improvements in the City of Santa Ana, estimated at \$7.1 million. Thus, the removal of the Red Hill Avenue Widening improvement results in a net reduction of \$14.5 million in the IBC Vision Plan Improvement Cost. As shown in Table 1, the funding needed to complete all improvements is \$102.3 million with Red Hill Avenue Widening and \$87.8 million without Red Hill Avenue Widening.

Existing IBC Traffic Funds Available: The current fund balance is \$64.5 million.

Other IBC Vision Plan Traffic Fee Program Costs: Consistent with the prior fee nexus studies, costs associated with Transportation Management Systems are included and are estimated at \$7 million over a 20-year period based on iShuttle operation costs. Based on historical costs, the Program Administration costs are estimated at \$5.75 million over a 20-year period for the preparation of traffic studies, nexus studies, annual fee updates, and planning studies. Administration costs also include costs associated with monitoring and updating the IBC database; interdepartmental and interagency coordination, reassessment of land use assumptions and reassessment of the Vision Plan and improvement list as required. Contingency costs (a standard practice in the industry to cover inflation rates and unforeseen costs) over the 20-year period are estimated at five percent of the effective total costs of improvements.

Table 1. 2020 Updated IBC Vision Plan Traffic Fee Program Breakdown

	With Red Hill Avenue Widening	Without Red Hill Avenue Widening
Improvement Costs		
Improvements from IBC Traffic Study Update		
<i>Irvine (90% of estimate assumed)</i>	\$29,129,400	\$29,129,400
<i>Improvements in Costa Mesa</i>	\$50,850	\$50,850
<i>Caltrans District 12¹</i>	\$5,605,059	\$5,605,059
IBC Traffic Study Update Improvement Costs	\$34,785,309	\$34,785,309
Remaining Existing General Plan Improvements		
<i>Irvine (90% of estimate assumed)</i>	\$21,648,600	\$0
<i>Improvements in Santa Ana</i>	\$46,834,800	\$53,936,700
Remaining Existing General Plan Improvement Costs	\$68,483,400	\$53,936,700
CIP Expenditures to Date	(\$958,854)	(\$958,854)
Subtotal: Improvement Costs	\$102,309,855	\$87,763,155
Existing IBC Traffic Funds Available		
Current IBC Traffic Fund Balance²	(\$64,530,966)	(\$64,530,966)
Other IBC Vision Plan Traffic Fee Program Costs		
<i>Transportation Management Systems</i>	\$7,000,000	\$7,000,000
<i>IBC Program Administration</i>	\$5,750,000	\$5,750,000
<i>Contingency (5% of total fee)</i>	\$1,888,944	\$1,161,609
Subtotal: Other Program Costs	\$14,638,944	\$13,911,609
Total IBC Fees Required³	\$52,417,833	\$37,143,798

Source: IBC 2018 TIA Update for Development of Improvement Costs; City of Irvine for Fund Balances

¹ Caltrans D12 agreement with City of Irvine (\$7,025,962 minus \$1,420,903 set aside as Caltrans Subfund)

² Includes remaining balance from 1992 IBC Traffic Fee Program Fund Balance, current IBC Vision Plan Traffic Fee Program Fund Balance, and Caltrans subfund minus funds allocated to Culver/Alton CIP improvement (contract underway)

³ All intensity related to the Park Place existing development agreement has been paid and that intensity related to the Central Park West DA is subject to the fee.

With the current IBC Traffic Improvement Program fund balance and estimated program costs considered, the total future IBC fees required to implement the program would be \$52.4 million with the Red Hill Avenue Widening and \$37.1 million without the Red Hill

Avenue Widening. The total fees required are then divided among the remaining land use intensities subject to the fee, to determine the traffic fee per land use type based on each land use type's assumed traffic contribution.

Table 2 summarizes a fee comparison between 2010 traffic fees when the IBC Vision Plan was adopted, current fees, and proposed 2020 fees. Since the adoption of the 2010 IBC Vision Plan, the IBC traffic fees have been adjusted each year based on the California CCI. The proposed 2020 fees reflect the recently amended Retail Development Intensity Value rates, approved by City Council on March 24, 2020.

The proposed fees with Red Hill Avenue Widening are generally two percent lower than the current fees, with the exception of retail and office uses, that result in a four percent increase from current fees. The proposed fees without Red Hill Avenue Widening are generally 30 percent lower than the current fees, with the exception of retail and office uses, that result in a 26 percent decrease from current fees. The new fees would go into effect at the time of approval by the City Council and for the remainder of FY 2020-21.

Table 2. IBC Traffic Fee Comparison

Land Use	Unit	2010	Existing Fee ³	2020 Proposed With Red Hill Widening ⁴	Difference between 2020 Proposed (With Red Hill Widening) and Existing	2020 Proposed Without Red Hill Widening	Difference between 2020 Proposed (Without Red Hill Widening) and Existing
Total Residential ¹	DU	\$1,862	\$2,534	\$2,491	-1.7%	\$1,765	-30.3%
Extended Stay	Rooms	\$1,503	\$2,045	\$2,012	-1.6%	\$1,426	-30.3%
Hotel	Rooms	\$2,435	\$3,313	\$3,258	-1.7%	\$2,309	-30.3%
Retail Mix	Sq. Ft.	\$5.45	\$7.42	\$7.75	+4.4%	\$5.49	-26.0%
Office	Sq. Ft.	\$5.45	\$7.42	\$7.75	+4.4%	\$5.49	-26.0%
Industrial Mix ²	Sq. Ft.	\$1.50	2.05	\$2.01	-1.8%	\$1.43	-30.4%
Mini Warehouse	Sq. Ft.	\$0.97	\$1.32	\$1.29	-2.0%	\$0.92	-30.6%

Source: City of Irvine

¹ Includes Density Bonus Units charged fees consistent with Base Units

² Includes manufacturing and warehouse SF

³ Current Fee since July 1, 2019. An adjustment was not made on July 1, 2020.

⁴ Effective FY 2020-21

Red Hill Avenue – Amendment to the MPAH

The Orange County Transportation Authority identifies Red Hill Avenue as ultimately a six-lane major arterial highway on the County of Orange's MPAH map. The City must process an MPAH amendment to downgrade Red Hill Avenue between MacArthur Boulevard and Main Street, from a six-lane major arterial highway to a four-lane arterial highway. As part of the amendment process, the City would enter into a cooperative

agreement with the affected agencies to address the improvements that result from the removal of the Red Hill Avenue Widening improvement.

Frequency of IBC Vision Plan Updates

The City of Irvine Zoning Ordinance Section 9-36-14 requires the preparation of a comprehensive traffic study every two years to evaluate the on-going implementation of the IBC Vision Plan and to update the transportation improvement list. The current two-year period for preparation of a comprehensive traffic study update and traffic fee nexus study update, including appropriate Transportation Commission review and City Council approval of updated fees, is challenging to implement. An amendment to the zoning ordinance to revise the frequency of the comprehensive studies, from every two years to every three years, would allow staff more time to implement the findings from the study (see Attachments 2 and 3). Additionally, the contract cost of preparing a traffic study and nexus study is approximately \$500,000. Extending the frequency of the studies to every three years would reduce the overall contract costs over a 20-year period.

Prioritization of Updated IBC Transportation Improvements

During the prior review of the fee nexus study update, City Council requested a project prioritization. As such, staff has prepared one for the current update. Scores were calculated based on a number of factors, with a high priority weighting assigned based on the cost compared to the benefits. The factors included:

- Constructability – ease of implementation considering right-of-way, cost, coordination, etc. with scores ranging from 1 to 3
- Impact/Warrant Year – the time the mitigation is required (in the near-term, build-out or cumulative build-out) with scores ranging from 1 to 3
- Location – within the IBC, adjacent to the IBC, or non-adjacent to the IBC with scores ranging from 1 to 3
- Benefit Cost Ratio – how the benefits of the project compare to the cost, as indicated in the attached “IBC 2017-2019 Traffic Study Update Cost Analysis” prepared July 2019 by WSP (Attachment 5) with scores ranging from 1 to 5

To identify priorities, improvements were given points based on each of the four categories listed above, and those projects with the highest scores were considered the highest priority. The final ranking is shown in Attachment 4. The three highest prioritized projects include the Jamboree Road at Michelson Drive Pedestrian Bridge, improvements at Culver Drive at the Interstate 405 (I-405) Northbound Ramps, and Dyer Road Widening.

FINANCIAL IMPACT

In terms of financial impact to the City of Irvine, the IBC Traffic Improvement Fee Program will cover fair-share obligations for improvements located in adjacent jurisdictions and up to 90 percent of costs for improvements within the City of Irvine. The City will pursue funding

from outside funding sources such as federal, state, and county grants for the remaining 10 percent (or more) of improvement costs. Based on a longstanding record of successfully securing outside funding at this level, it is not expected that the City will bear a financial responsibility for construction of these improvements. In the event that this is not the case, the City will be responsible for identifying remaining funds to implement the updated IBC transportation improvements.

In terms of financial impact to developers within the IBC, when the widening of Red Hill Avenue is not considered, the proposed IBC traffic fees are generally 30 percent lower than the current fees, with the exception of retail and office uses that result in a 26 percent decrease from current fees.

REPORT PREPARED BY

Lisa Thai, Supervising Transportation Analyst

ATTACHMENTS

1. 2020 Update to the Irvine Business Complex Vision Plan Traffic Fee Nexus Study
2. Proposed Revision to Zoning Ordinance (Redline)
3. Ordinance
4. Prioritization Table
5. Cost Analysis Study



2020 Update to: Irvine Business Complex Vision Plan Traffic Fee Nexus Study TRAFFIC FEE NEXUS STUDY FINAL September 2020



Submitted to:





DOCUMENT VERSION CONTROL

DOCUMENT NAME	SUBMITTAL DATE	VERSION NO.
DRAFT	May 21,2020	1
DRAFT	July 24, 2020	1.1
DRAFT FINAL	September 11, 2020	1.2

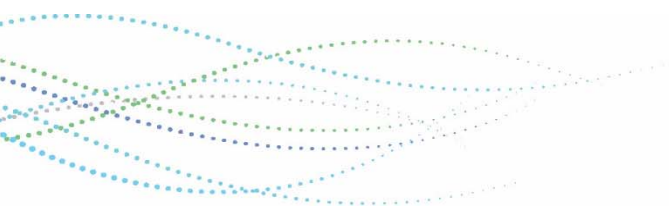




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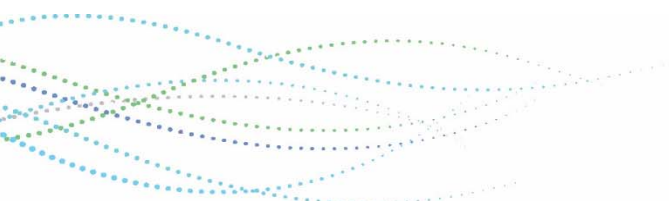
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EXECUTIVE SUMMARY

This 2020 Update to the Irvine Business Complex Vision Plan Traffic Fee Nexus Study (2020 IBC Traffic Fee Nexus Update) is consistent with the principles of the Irvine Business Complex (IBC) Vision Plan and maintains a consistent nexus between future development in the IBC and the transportation system improvements necessary to support that development. The objective of this study is to update development fees to financially support the implementation of identified improvements to the transportation system within and adjacent to the IBC in order to accommodate full buildout of the Vision Plan.

Pursuant to the requirements of the California Mitigation Fee Act (AB 1600), this update ensures that it complies with the nexus determination requirement to:

- Identify the purpose of the fee;
- Identify the use to be funded by the fee;
- Determine the reasonable relationship between:
 - The use of the fee and the type of development paying the fee;
 - The need for the traffic improvements and the types of development on which the fee is imposed; and
 - The amount of the fee and the cost of the public facilities or portion of the public facilities (in this case, traffic improvements) attributable to the development.

The 2020 IBC Traffic Fee Nexus Update complies with all State legislative nexus requirements.

Table ES-1 summarizes the costs included in the 2020 IBC Traffic Fee Nexus Update. These costs are based on a combination of detailed cost estimates for specific fair-share improvements identified in the accompanying 2018¹(*2018 IBC Traffic Study Update*), obligations to fund specific improvements within adjacent jurisdictions as necessary to implement the buildout of the IBC Vision Plan, and a continuing obligation to fund certain improvements identified in a prior fee program for the IBC adopted in 1992. Additionally, the costs include specific tasks required to implement and maintain the fee program consistent with the requirements of the IBC Vision Plan General Plan Amendment/Zoning Ordinance.

On September 12, 2017, City Council reviewed the 2015 Nexus Study Update and discussed the consideration of the removal of Alton/SR-55 overcrossing and Red Hill Avenue Widening projects. As part of the 2018 IBC Traffic Study Update, a sensitivity analysis was conducted to determine the potential impacts associated with the removal of these projects. On August 6, 2019, the 2018 IBC Traffic Study Update and the results of the sensitivity analysis were presented to the Transportation Commission. The Alton/SR-55 overcrossing improvement costs remain in the IBC Vision Plan Traffic Fee based on an existing agreement with the City of Santa Ana. Recent discussions with City of Santa Ana staff confirm that Santa Ana has completed final design and continues to seek additional funds to implement this improvement. The Transportation Commission was in support of the removal of Red Hill Avenue Widening improvement, which would result in two additional intersection impacts in the City of Santa Ana. This nexus study identifies the fees associated with and without the Red Hill Avenue Widening improvements.

The proposed fee program assumes that development fees will fund up to 90 percent of identified

¹ Irvine Business Complex Vision Plan, 2018 Two Year Traffic Study Update, Iteris, 2018



improvement costs. It is assumed that the remaining 10 percent or more of the project costs will be covered by outside funding sources including federal, state, and county programs.

Table ES-2 summarizes a fee comparison between 2010, current 2019, and proposed 2020 fees. Since the adoption of the 2010 IBC Vision Plan, the IBC fees have been adjusted each year based on the California Construction Cost Index (CCI). Based on this update, the proposed fees with Red Hill Avenue Widening are generally 2% lower than the prevailing 2019 fees with the exception of Retail and Office, which are 4% higher than 2019 fees. The proposed fees without the Red Hill Avenue Widening are generally 30% lower than the prevailing 2019 fees with the exception of Retail and Office, which are 26% lower than 2019 fees.



Table ES-1- 2020 Updated IBC Vision Plan Traffic Fee Program Breakdown

Needs for IBC Vision Plan Traffic Improvements	With Red Hill Avenue Widening		Without Red Hill Avenue Widening	
Improvement Costs - Buildout				
Based on 2018 IBC Traffic Study Update				
<i>Irvine (90% of estimate assumed)</i>	\$29,129,400		\$29,129,400	
<i>Improvements in Costa Mesa</i>	\$50,850		\$50,850	
<i>Caltrans District 12¹</i>	\$5,605,059		\$5,605,059	
2018 IBC Traffic Study Update Improvements	\$34,785,309	\$34,785,309	\$34,785,309	\$34,785,309
<i>Remaining Existing General Plan Improvements</i>				
<i>Irvine (90% of estimate assumed)</i>	\$21,648,600		\$0	
<i>Improvements in Santa Ana</i>	\$46,834,800		\$53,936,700	
2018 Update - Remaining Existing General Plan Improvements	\$68,483,400	\$68,483,400	\$53,936,700	\$53,936,700
CIP Expenditure		(\$958,854)		(\$958,854)
Subtotal: 2018 Update IBC Vision Plan Improvement Cost		\$ 102,309,855		\$ 87,763,155
Existing IBC Traffic Funds Available				
Current IBC Traffic Fund Balance ²	\$64,530,966		\$64,530,966	
Subtotal: Existing IBC Funds to be applied to the 2018 Fee Program	(\$64,530,966)	(\$64,530,966)	(\$64,530,966)	(\$64,530,966)
Subtotal: (Effective) 2018 Updated IBC Vision Plan Improvement Cost		\$37,778,889		\$23,232,189
Other IBC Vision Plan Traffic Fee Program Costs				
<i>Transportation Management Systems</i>	\$7,000,000		\$7,000,000	
<i>IBC Program Administration</i>	\$5,750,000		\$5,750,000	
<i>Contingency (5% of total fee)</i>	\$1,888,944		\$1,161,609	
Subtotal: Additional Costs to the IBC Fee Program	\$14,638,944	\$14,638,944	\$13,911,609	\$13,911,609
Subtotal³: Total IBC Fees Required		\$52,417,833		\$37,143,798

Source: IBC 2018 TIA Update for Development of Improvement Costs; City of Irvine for Fund Balances

¹ Caltrans D12 agreement with City of Irvine (\$7,025,962 minus \$1,420,903 set aside as Caltrans Subfund)

² Includes remaining balance from 1992 IBC Traffic Fee Program Fund Balance, current IBC Vision Plan Traffic Fee Program Fund Balance, and Caltrans subfund minus funds allocated to Culver/Alton CIP improvement (contract underway)

³ All intensity related to the Park Place existing development agreement has been paid and the remaining unpaid intensity related to the Central Park West DA is subject to the fee



Table ES-2- IBC Fee Comparison

IBC Traffic Fee Increase							
Land Use	Unit	2010	2019 Fee ³	2020 Proposed With Red Hill Widening ⁴	Difference between 2020 Proposed (With Red Hill Widening) and 2019	2020 Proposed Without Red Hill Widening	Difference between 2020 Proposed (Without Red Hill Widening) and 2019
Total Residential ¹	DU	\$1,862	\$2,534	\$2,491	-1.7%	\$1,765	-30.3%
Extended Stay	Rooms	\$1,503	\$2,045	\$2,012	-1.6%	\$1,426	-30.3%
Hotel	Rooms	\$2,435	\$3,313	\$3,258	-1.7%	\$2,309	-30.3%
Retail Mix	Sq. Ft.	\$5.45	\$7.42	\$7.75	4.4%	\$5.49	-26.0%
Office	Sq. Ft.	\$5.45	\$7.42	\$7.75	4.4%	\$5.49	-26.0%
Industrial Mix ²	Sq. Ft.	\$1.50	2.05	\$2.01	-1.8%	\$1.43	-30.4%
Mini Warehouse	Sq. Ft.	\$0.97	\$1.32	\$1.29	-2.0%	\$0.92	-30.6%

Source: City of Irvine

¹ Includes Density Bonus Units charged fees consistent with Base Units

² Includes manufacturing and warehouse SF

³ Current Fee

⁴ Effective FY 2020-21



1 INTRODUCTION

1.1 Background

The City of Irvine established an Irvine Business Complex (IBC) Nexus Fee Program in 1992 (henceforth to be referred to as the 1992 Fee Program) to support the City's adoption of the more traffic intensive 1990 IBC Rezone General Plan Amendment (GPA) and Zone Code. The intent of the 1992 Fee Program was to support the implementation of specific improvements identified in a subsequent Environmental Impact Report (henceforth to be referred to as the 1992 EIR) prepared in conjunction with the 1992 rezoning actions. This approach is consistent with the City's General Plan Roadway Development Objective B-1 to "Plan, provide and maintain an integrated vehicular circulation system to accommodate projected local and regional needs."

In 2010, the City prepared the IBC Vision Plan (henceforth to be referred to as the Vision Plan), a GPA and Zone Change project to accommodate the ongoing shift in development patterns to improve the jobs-housing balance and reduce vehicle miles travelled. In recent years, as development patterns within the IBC showed an increased demand for residential uses and a decreased demand for manufacturing and warehouse uses, The Vision Plan project, together with its accompanying EIR (Vision Plan EIR) were approved/certified by the Irvine City Council on July 13, 2010.

As part of the Vision Plan approval, the Zoning Ordinance was updated to require the City to reevaluate traffic conditions (and traffic improvements), by way of a five-year traffic study update. In October 2015, the reevaluation was amended to every two years. In 2015, a traffic study (henceforth to be referred to as 2015 IBC Traffic Study Update) was prepared to fulfil the requirements of the Zoning Ordinance. Based on the findings of the 2015 IBC Traffic Study Update, a new set of transportation improvements were identified. An updated nexus fee study was then prepared (henceforth to be referred to as 2015 IBC Traffic Fee Nexus Update) and the fee structure and the nexus associated with the findings of the 2015 IBC Traffic Study Update was revised to accommodate the identified set of transportation improvements. The updated set of improvements were adopted in early 2018 as part of the updated fees. In 2018, a two-year traffic study (henceforth to be referred to as 2018 IBC Traffic Study Update) was completed and the transportation improvements were again updated. Similar to the 2015 update, in this 2020 IBC Traffic Nexus Study Update, the fee structure and the nexus associated with the findings of the 2018 IBC Traffic Study Update have been revised to accommodate the identified set of transportation improvements.

On September 12, 2017, City Council reviewed the 2015 Nexus Study Update and discussed the consideration of the removal of Alton/SR-55 overcrossing and Red Hill Avenue Widening projects. As part of the 2018 IBC Traffic Study Update, a sensitivity analysis was conducted to determine the potential impacts associated with the removal of these projects. On August 6, 2019, the 2018 IBC Traffic Study Update and the results of the sensitivity analysis were presented to the Transportation Commission. The Alton/SR-55 overcrossing improvement costs remain in the IBC Vision Plan Traffic Fee based on an existing agreement with the City of Santa Ana. Recent discussions with City of Santa Ana staff confirm that Santa Ana has completed final design and continues to seek additional funds to implement this improvement. The Transportation Commission was in support of the removal of Red Hill Avenue Widening improvement, which would result in two additional intersection impacts in the City of Santa Ana. This nexus study identifies the fees associated with and without the Red Hill Avenue Widening improvements.



Subsequent to the completion of the Vision Plan, the City of Irvine entered into contractual agreements with the potentially affected jurisdictions/agencies (Caltrans District 12 and cities of Newport Beach, Santa Ana, Costa Mesa, and Tustin). Thus, for this 2020 IBC Traffic Fee Nexus Update, only the fees associated with the findings of the 2018 IBC Traffic Study Update, were updated. The associated fair-shares and the nexus remained consistent with the 2010 Vision Plan Traffic Fee Nexus Study (henceforth to be referred as Vision Plan Traffic Fee Nexus Study). This 2020 update takes a “snapshot” of the development activity from the inception of the Vision Plan in 2010 to August 13, 2018, to evaluate the changes in land uses and traffic patterns, and subsequent improvement needs, resulting in the development of a proposed fee to be implemented effective within fiscal year 2020-2021.

In 2010, the Vision Plan established two overlay zoning districts:

- Urban Neighborhood, in which residential mixed use was encouraged; and
- Business Complex, in which the existing allowable mix of non-residential uses was maintained.

The Vision Plan allowed for the buildout of 15,000 residential base dwelling units (DU) within the Urban Neighborhood Overlay Zone District, with a potential maximum of 2,038 additional density bonus units, pursuant to state law. In order to achieve the maximum residential development intensity contemplated under the Vision Plan, the Plan adopted a “flexible zoning” mechanism under which non-residential development intensity could be exchanged for residential development intensity, thus achieving the maximum 15,000 DU (plus 2,038 DU pursuant to state law), by “offsetting” reduction of non-residential development intensity.

Based on approvals since 2010, the total number of density bonus units pursuant to state law assumed for this two-year update is reduced to 1,820 DU, down from the theoretical assumption of 2,038 DU in 2010. The accompanying 2018 IBC Traffic Study Update provided an assessment of existing, interim-year and buildout year with and without the updated land use conditions.

1.2 Purpose of the 2020 Update to the Vision Plan Nexus Study

Pursuant to requirements of the California Environmental Quality Act (CEQA) in effect at the time, the City Council, as part of their approval of the Vision Plan in 2010, determined to make the City responsible to mitigate, where feasible, the impacts to the transportation system attributable to buildout of the Vision Plan. This 2020 IBC Traffic Fee Nexus Update is consistent with the principles of the Vision Plan Traffic Fee Nexus Study and maintains a consistent nexus between future development in the IBC and the transportation system improvements necessary to support that development. Through equitable developer fees, the objective of this update is to financially support the implementation of identified improvements to the transportation system within and adjacent to the IBC in order to accommodate full buildout of the Vision Plan. This is consistent with the City’s Traffic Study Guidelines (adopted June 2020) and per the performance criteria for each affected agency (Caltrans District 12 and cities of Newport Beach, Costa Mesa, Santa Ana, and Tustin).

California’s Mitigation Fee Act (AB 1600, Cal. Gov. Code §§ 66000-66009) creates the legal framework for



local governments to assess new fees toward future development. Such fees require new development to pay its fair-share of the infrastructure cost necessary to serve new residents and businesses. AB 1600 stipulates that a local government must take the following steps to establish a nexus between a proposed fee and project impacts:

- Identify the purpose of the fee;
- Identify the use to be funded by the fee;
- Determine the reasonable relationship between:
 - The use of the fee and the type of development paying the fee;
 - The need for the traffic improvements and the types of development on which the fee is imposed; and
 - The amount of the fee and the cost of the public facilities or portion of the public facilities (in this case, traffic improvements) attributable to the development.

These principles closely emulate two landmark US Supreme Court rulings that provide guidance on the application of impact fees. The first case, *Nollan v. California Coastal Commission* (1987) 107 S.Ct. 3141, established that local governments are not prohibited from imposing impact fees or dedications as conditions of project approval provided the local government establishes the existence of a "nexus" or link between the exaction and the interest being advanced by that exaction. The *Nollan* ruling clarifies that once the adverse impacts of development have been quantified, the local government must then document the relationship between the project and the need for the conditions that mitigate those impacts. The ruling further clarifies that an exaction may be imposed on a development even if the development project itself will not benefit provided the exaction is necessitated by the project's impacts on identifiable public resources.

The second case, *Dolan v. City of Tigard* (1994) 114 S.Ct. 2309, held that in addition to the *Nollan* standard of an essential nexus, there must be a "rough proportionality" between proposed exactions and the project impacts that the exactions are intended to provide benefit. As part of the *Dolan* ruling, the US Supreme Court advised that "a term such as "rough proportionality" best encapsulates what we hold to be the requirements of the Fifth Amendment. No precise mathematical calculation is required, but the city (or other local government) must make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development."

The combined effect of both rulings resulted in the requirement that public exactions must be carefully documented and supported. This requirement was reiterated by the provisions of the State of California Mitigation Fee Act and subsequent rulings in the California Supreme Court (*Ehrlich v. City of Culver City* (1996) 12 C4th 854) and the California Court of Appeal (*Loyola Marymount University v. Los Angeles Unified School District* (1996) 45 Cal.App.4th 1256).

The Vision Plan Traffic Fee Nexus Study satisfied the requirements of the State of California Mitigation Fee Act. Thus, this update is not intended to re-analyze the nexus or the purpose, but is to review and revise the fee program based on the needs determined by the 2018 IBC Traffic Study Update.

The 2018 IBC Traffic Study Update analyzed the project study area presented in **Figure 1.1**. All improvements identified under the interim year and buildout conditions are located within this defined project study area. Consistent with the methodology used in the 2010 IBC Vision Plan Traffic Study, the 2018 IBC Traffic Study



Update identified specific improvements that improve unacceptable level of service (LOS) E and F to acceptable LOS of A-D, per the City's Traffic Study Guidelines (adopted June 2020) and per the performance criteria for each affected agency (Caltrans District 12 and cities of Newport Beach, Costa Mesa, Santa Ana, and Tustin).

For locations within the City of Irvine, up to 90 percent of the improvement costs are included in the fee program. For locations not under the City of Irvine's jurisdiction, a fair-share methodology is applied that considers fair-shares of improvement costs. The proportionate fair-shares of improvement costs in the City of Costa Mesa and Santa Ana, associated with remaining improvements from the City of Irvine's General Plan, are included in the Fee Program. A 2011 amended agreement with the City of Santa Ana, replacing the 1992 agreement between the two cities, identified specific improvements for which the City of Irvine is either partially or fully responsible for certain improvement and those associated improvement costs were included in this update. In 2009 and 2010, respectively, the City of Newport Beach and the City of Tustin entered into settlement agreements with the City of Irvine, where City of Irvine made a one-time lump-sum payment to each of the cities, as its fair-share contribution towards transportation improvements and absolved itself from any future financial or implementation obligation related to the Vision Plan buildout.

Based on the findings from the 2018 IBC Traffic Study Update and existing agreements between the City of Irvine and the affected jurisdictions and agencies, **Figure 1.1** identifies the improvement locations and provides a brief description of each improvement. Additionally, based on the results of the sensitivity analysis, the removal of Red Hill Widening results in two additional impacts in the City of Santa Ana, #719 Flower Street at Segerstrom and #720 Flower Street at MacArthur.

Costs of improvements included in the fee program are based on 2018 dollars developed from the CCI, and recent relevant projects unit cost estimates for construction materials and labor, and right-of-way cost estimates. This is further discussed in *Section 2*, IBC Vision Plan – 2020 Update Traffic Fee Program Cost. *Section 3*, Fee Methodology, walks the reader through a step by step process of developing the proposed fee effective FY2020-21. *Section 4*, Establishing Nexus discusses in details of the nexus between a proposed fee and project impacts, and *Section 5*, Conclusion summarizes the findings of this update and provides recommendations.

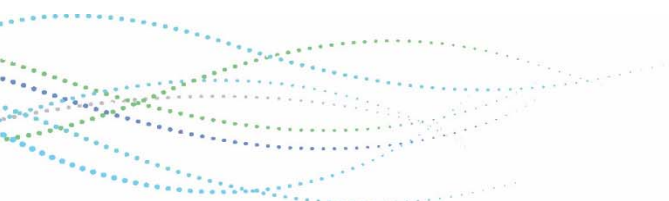
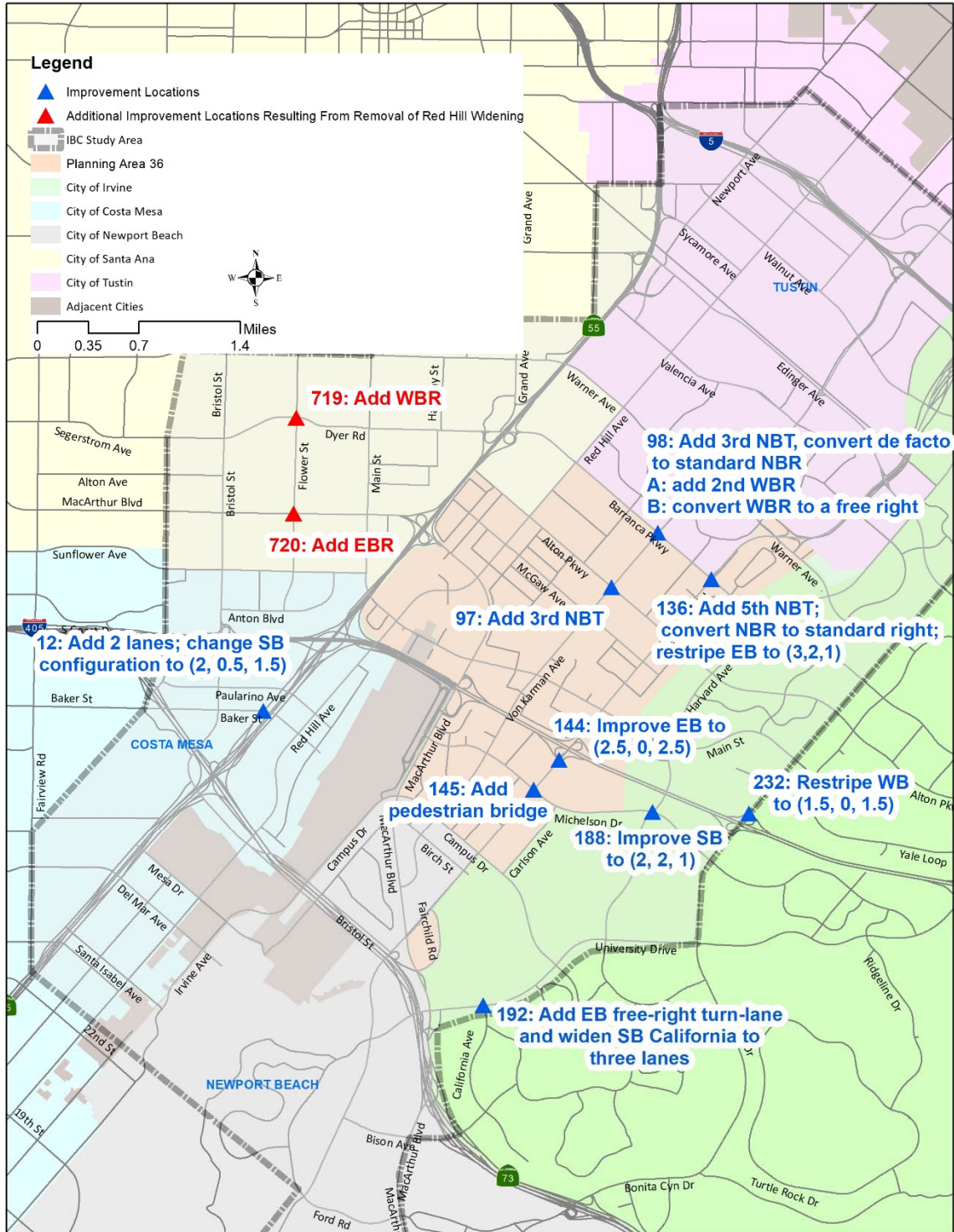




Figure 1-1: IBC Traffic Study – 2018 Update – Location of Improvements



Source: IBC 2018 TIA Update



2 IBC VISION PLAN – 2020 UPDATE TO TRAFFIC FEE PROGRAM COST

The 2020 IBC Traffic Fee Nexus Update includes costs required to implement physical improvements that achieve the following:

- Improve deficiencies identified through the 2018 IBC Traffic Study Update;
- Satisfy agreements with adjacent jurisdictions that require the construction of specific roadway improvements to diminish the impacts of the Vision Plan development on the roadway system; and
- Upgrade the roadway network to be consistent with the buildout of the City's General Plan Circulation Element.

Costs were developed as part of the 2018 IBC Traffic Study Update. All costs comply with the City's policies and estimates based on the most recent aerial photography available, field reviews for determination of feasibility, recent unit costs from local projects, and CCI updates. For all improvements located within the City of Irvine, 90 percent of total costs are included in this update. It is assumed that the remaining 10 percent or more will come from outside funding sources, such as federal, state and county grants.

Consistent with the Vision Plan Traffic Fee Nexus Study, this update includes costs related to the management and implementation of the IBC Vision Plan Traffic Fee Program. These costs include implementing Transportation Management Strategies (TMS) to reduce vehicle volumes and associated impacts, IBC Vision Plan Traffic Fee Program administration and construction contingency costs. Incorporated into the mix are the fund amounts that are currently available in the fee program, which includes specific amounts that are earmarked for Caltrans projects identified in the City's Capital Improvement Program (CIP) and Development Agreements (DAs) that are not subject to any fee update.

Table 2.1 presents the fees required by the traffic fee program to implement the IBC Vision Plan.



Table 2.1: 2020 Updated IBC Vision Plan Traffic Fee Program Breakdown

Needs for IBC Vision Plan Traffic Improvements	With Red Hill Avenue Widening		Without Red Hill Avenue Widening	
Improvement Costs - Buildout				
Based on 2018 IBC Traffic Study Update				
<i>Irvine (90% of estimate assumed)</i>	\$29,129,400		\$29,129,400	
<i>Improvements in Costa Mesa</i>	\$50,850		\$50,850	
<i>Caltrans District 12¹</i>	\$5,605,059		\$5,605,059	
2018 IBC Traffic Study Update Improvements	\$34,785,309	\$34,785,309	\$34,785,309	\$34,785,309
<i>Remaining Existing General Plan Improvements</i>				
<i>Irvine (90% of estimate assumed)</i>	\$21,648,600		\$0	
<i>Improvements in Santa Ana</i>	\$46,834,800		\$53,936,700	
2018 Update - Remaining Existing General Plan Improvements	\$68,483,400	\$68,483,400	\$53,936,700	\$53,936,700
CIP Expenditure		(\$958,854)		(\$958,854)
Subtotal: 2018 Update IBC Vision Plan Improvement Cost		\$102,309,855		\$ 87,763,155
Existing IBC Traffic Funds Available				
Current IBC Traffic Fund Balance ²	\$64,530,966		\$64,530,966	
Subtotal: Existing IBC Funds to be applied to the 2018 Fee Program	(\$64,530,966)	(\$64,530,966)	(\$64,530,966)	(\$64,530,966)
Subtotal: (Effective) 2018 Updated IBC Vision Plan Improvement Cost		\$37,778,889		\$23,232,189
Other IBC Vision Plan Traffic Fee Program Costs				
<i>Transportation Management Systems</i>	\$7,000,000		\$7,000,000	
<i>IBC Program Administration</i>	\$5,750,000		\$5,750,000	
<i>Contingency (5% of total fee)</i>	\$1,888,944		\$1,161,609	
Subtotal: Additional Costs to the IBC Fee Program	\$14,638,944	\$14,638,944	\$13,911,609	\$13,911,609
Subtotal³: Total IBC Fees Required		\$52,417,833		\$37,143,798

Source: IBC 2018 TIA Update for Development of Improvement Costs; City of Irvine for Fund Balances

¹ Caltrans D12 agreement with City of Irvine (\$7,025,962 minus \$1,420,903 set aside as Caltrans Subfund)

² Includes remaining balance from 1992 IBC Traffic Fee Program Fund Balance, current IBC Vision Plan Traffic Fee Program Fund Balance, and Caltrans Subfund minus funds allocated to Culver/Alton CIP improvement (contract underway) improvement (contract underway)

³ All intensity related to the Park Place existing development agreement has been paid and the remaining unpaid intensity related to the Central Park West DA is subject to the fee



2.1 Agreement with the City of Newport Beach

Following the development of the Vision Plan, the City of Irvine entered a settlement agreement with the City of Newport Beach. Based on this agreement, executed on November 24, 2009, the City of Irvine paid a one-time sum of \$3,650,000 to the City of Newport Beach to be used exclusively for the engineering, design, and construction of Jamboree Corridor improvements and other traffic improvements located within the Vision Plan study area. Details of this agreement are presented in **Appendix A**. At the time of the agreement, the Cities of Irvine and Newport Beach agreed that the amount of \$3,650,000 constituted a fair-share obligation for the City of Irvine toward improvements in Newport Beach necessitated by the development of the Vision Plan. The agreement was drawn up on the premise that the City of Irvine will not be financially responsible for any mitigation caused by the buildout of the Vision Plan, provided the residential unit cap of 15,000 DUs (plus 2,038 DUs pursuant to state law) is not exceeded. Therefore, no mitigation improvement costs were identified within the City of Newport Beach for inclusion in this fee update.

2.2 Agreement with the City of Tustin

On July 13, 2010, following the development of the Vision Plan and through consultation with the City of Tustin, an agreement was executed between the Cities of Tustin and Irvine. The agreement stipulated that in lieu of City of Irvine's fair-share of the estimated costs of traffic improvements located within the City of Tustin and identified as mitigation measures required for buildout of the Vision Plan, the City of Irvine would contribute 12 percent of the construction contract award amount or \$4,500,000, whichever was greater, and up to a maximum of \$6,500,000, for the Tustin Ranch Road extension roadway improvement between Walnut Avenue and Warner Avenue, including the grade separation and loop at Edinger Avenue. The improvements at Tustin Ranch Road, including the grade separation is completed at the time of this update, however, the loop at Edinger Avenue is pending completion. Irvine's final contribution towards improvements in Tustin was \$4.5 million. **Appendix B** presents the 2010 Settlement Agreement between the City of Irvine and the City of Tustin. The agreement was drawn up on the premise that the City of Irvine will not be financially responsible for any mitigation caused by the buildout of the Vision Plan, provided the residential unit cap of 15,000 DUs (plus 2,038 DUs pursuant to state law) is not exceeded. Therefore, no mitigation improvement costs other than costs for specific improvement locations shared with Irvine, were identified within the City of Tustin for inclusion in this fee update.

2.3 Agreement with City of Santa Ana

A 1992 agreement between the City of Irvine and the City of Santa Ana resulted from the 1992 EIR approval that identified Irvine as the responsible party for the following improvements:

- Full financial responsibility for the costs to widen Dyer Road from a six-lane divided arterial to an eight-lane divided arterial between Red Hill Avenue and the SR-55 northbound on-ramp, including the intersection of Red Hill Avenue at Dyer Road/Barranca Parkway. Consistent with all improvements for which the City of Irvine has sole financial responsibility, up to 90 percent of total costs for this improvement is included in the 2020 IBC Traffic Fee Nexus Update.
- 50 percent of the costs to build the Alton Parkway Overcrossing at SR-55 in the City of Santa Ana.

The need for these improvements, and the allocation of responsibility to fund the improvements, was created in part by the development contemplated in the 1992 IBC Zoning, and as such the improvements



were included in the 1992 Fee Program. An amendment to the 1992 agreement was negotiated and signed between the cities on March 21, 2011 following the approval of the IBC Vision Plan. The agreement redefined the Alton Parkway Interchange at SR-55 as Alton Parkway Overcrossing at SR-55 and maintained the financial responsibility of the City of Irvine on the two above mentioned projects consistent with the 1992 agreement. **Appendix C** presents detail of the 1992 Settlement Agreement and the subsequent amendment.

Preliminary engineering cost estimates indicate that the Dyer Road widening is expected to cost \$18,047,000. The total cost of the redefined Alton Parkway Overcrossing at SR-55 is estimated at \$61,185,000. This cost includes the following list of additional improvements identified as mitigation in an updated traffic study completed in 2010:

- Intersection #44: Red Hill Avenue at Alton Parkway;
- Signalization of the intersection of Halladay Street at Alton Parkway; and
- Signalization of the intersection of Daimler Street at Alton Parkway

For this update 90 percent of the cost of Dyer Road widening (\$16,242,300) is included in the fee update. Pursuant to the City of Irvine and City of Santa Ana agreement, 50 percent of the Alton Parkway Overcrossing at SR-55 project (\$30,592,500) is included in this update. Hence, the 2020 IBC Traffic Fee Nexus Update includes a total of \$46,834,800 as IBC funds that would be required to implement improvements within the City of Santa Ana.

It should be noted that through the review of updated improvements identified in the 2018 IBC Vision Plan Traffic Study Update, it was recommended by the City's Transportation Commission that the Red Hill Avenue Widening improvement be removed from the list of improvements. Based on the results of the sensitivity analysis, the removal of Red Hill Avenue Widening Improvement results in two intersection impacts in the City of Santa Ana. The combined cost of these two improvements are estimated at \$7,101,900. Therefore, the 2020 IBC Traffic Fee Nexus Update includes a total of \$53,936,700 (inclusive of the \$7,101,900) as IBC funds would be required to implement improvements within the City of Santa Ana when the Red Hill Widening Improvements are removed.

Detailed layout and cost estimate worksheets for each improvement can be found in the 2018 IBC Traffic Study Update Report.

2.4 Agreement with City of Costa Mesa

Based on the existing agreement between the Cities of Irvine and Costa Mesa, executed in 1993 and presented in **Appendix D**, the fair-share contribution towards one improvement included in this update is SR-55 Frontage Road SB Ramps at Baker Street that identifies a fair-share contribution of 5 percent. City of Irvine's fair-share for implementing improvements at this location is \$50,850 (5 percent of \$1,017,000).

Detailed layout and cost estimate worksheets for each improvement can be found in the 2018 IBC Traffic Study Update.

2.5 Agreement with Caltrans District 12

Following the development of the Vision Plan and through consultation with Caltrans District 12 (Caltrans),



on January 25, 2011, the City of Irvine and Caltrans entered into an agreement that identified feasible strategies that Caltrans would employ as mitigation for traffic impacts caused by the project on Caltrans facilities. Based on the findings from the Vision Plan Traffic Fee Nexus Study, it was determined that the fair-share cost of implementing these improvements would be \$7,025,962 and it would constitute the City of Irvine's fair-share obligation as identified in the agreement. **Appendix E** presents the 2011 Traffic Mitigation Agreement between City of Irvine and Caltrans. Since the completion of the Vision Plan, the City of Irvine has collected and earmarked \$1,420,903 as payment towards Caltrans agreement. Hence, this 2020 IBC Traffic Fee Nexus Update rolls over \$5,605,059 (\$7,025,962 less \$1,420,903) from the Vision Plan Traffic Fee Nexus Study, as part of the funding need for implementing improvements associated with the buildout of the Vision Plan.

2.6 Transportation Improvements within the City of Irvine

2.6.1 Based on the 2018 IBC Traffic Study Update

The 2018 IBC Traffic Study Update identified the following seven deficient intersection locations within the City of Irvine for which improvements were identified:

- Intersection #97: Von Karman Avenue/Tustin Ranch Road at Barranca Parkway;
- Intersection #98: Von Karman Avenue at Alton Parkway;
- Intersection #145: Jamboree Road at Michelson Drive;
- Intersection #188: Harvard Avenue at Michelson Drive;
- Intersection #232: Culver Drive at I-405 NB Ramps;
- Intersection #136: Jamboree Road at Barranca Parkway;
- Intersection #192: California at University.

2.6.2 Existing General Plan Improvements

The remaining Existing General Plan improvement not yet built in the IBC is the widening of Red Hill Avenue between Main Street and MacArthur Boulevard from four lanes to six lanes. Originally identified in the 1992 EIR and 1992 Fee Program as an improvement that widens the arterial from its existing four lanes to an eight-lane facility, the Vision Plan determined that widening of this segment of Red Hill Avenue from four lanes to six lanes provided adequate traffic circulation to accommodate project buildout. The 2018 IBC Traffic Study Update concurs with that finding and this widening improvement to six lanes is consistent with the City's General Plan Circulation Element updated as part of the Vision Plan effort. The 90 percent cost for this improvement is \$21,648,600 (or up to 90 percent of the total cost of \$24,054,000) is included in the fee program. It should be noted that through the review of updated improvements identified in the 2018 IBC Vision Plan Traffic Study Update, it was recommended by the City's Transportation Commission that the Red Hill Avenue Widening improvement be removed from the list of improvements. Based on the results of the sensitivity analysis, the removal of Red Hill Avenue Widening Improvement results in two intersection impacts in the City of Santa Ana. The combined cost of these two improvements are estimated at \$7,101,900.

Consistent with the Vision Plan Traffic Fee Nexus Study, this update also assumes up to 90 percent of the total cost of improvements within the City of Irvine (\$32,366,000) or \$29,129,400. It is assumed that the 10 percent or more of the improvement cost may be funded with outside funding sources such as federal, state and/or county grants. Detailed layout and cost estimate worksheets for each improvement can be found in



the 2018 Traffic Study Update Report.

2.7 Existing IBC Fund Balance

The current IBC Traffic Fee Program fund balance is the combination of the remaining funds from the 1992 Traffic Fee Program, balance of funds collected through the Vision Plan implementation since 2010, and earmarked funds (\$1,420,903 – refer Section 2.5) allocated for Caltrans improvements per the settlement agreement with Caltrans. At the time of this update (i.e., snapshot date of April 30, 2020), the overall combined IBC Vision Plan Traffic Fee Program funds were \$64,530,966.

2.8 Other IBC Vision Plan Traffic Fee Program Costs

Consistent with the Vision Plan Traffic Fee Nexus Study, costs associated with Transportation Management Systems (TMS) are included in this update and will be reevaluated as part of the next update. The TMS costs are estimated \$7 million over a 20-year period based on iShuttle Operation Cost. As documented in the Vision Plan EIR, Project Design Feature (PDF 13-1) addresses the goals and objectives of the TMS as follows:

- Monitor travel demand at employment sites and provide reports on trip generation to the City;
- Offer employers and property owners assistance with transportation services on a voluntary basis;
- Deliver transportation services to commuters including
 - a) ride-matching, transit/Metrolink information,
 - b) inform commuters of incentives that may be available from public agencies, c) formation of vanpools;
- Represent the IBC in local transportation matters; and
- Oversee and fund the implementation and expansion of the iShuttle.

Based on historical costs, the Program Administration costs are estimated at \$5.75 million over a 20-year period to cover staff and consultant time for administering traffic studies, nexus studies, annual fee updates, planning studies, monitoring/updating the IBC database, inter-departmental and inter-agency coordination, reassessment of land use assumptions and reassessment of the Vision Plan and improvement list as required.

Contingency costs (a standard practice in the industry to cover inflation rates and unforeseen costs) over the 20-year period are estimated at 5 percent of the effective total costs of improvements, for an amount of approximately \$1.9 million (with Red Hill Avenue Widening) or \$1.2 million (without Red Hill Avenue Widening improvement).

The summation of these other IBC Vision Plan Traffic Fee Program costs for this update equates to \$14,638,944 with Red Hill Widening or \$13,911,609 without Red Hill Widening.

2.9 Development Agreement Cost Reduction

Development Agreements (DAs) currently exist between the City and the following five developments located in the IBC:

- Park Place;
- Central Park West;
- Hines;



- Avalon Apartments; and
- Alton Condominiums

The DAs specify the fees that were locked-in at the time of approval of each specific project. At the time of this update, the remaining unbuilt development intensity associated with these DAs is 9,870 square feet of non-residential development in Park Place and 285 residential units in Central Park West. The Park Place intensity has been paid, and the Central Park West DA expired in September 2019; therefore, the unbuilt 285 units related to Central Park West are now subject to IBC fees.



3 FEE METHODOLOGY

The methodology used for this fee update is consistent with the Vision Plan Traffic Fee Nexus Study and each step for fee calculations is discussed in detail in the following sections.

3.1 Step 1: Identify Traffic Improvements and the IBC Fair-share

The improvements identified in the 2018 IBC Traffic Study Update to be included for the 2020 IBC Traffic Fee Nexus Update, are presented in **Table 3.1**. Improvements in Newport Beach and Tustin, with whom the City of Irvine has separate agreements are excluded from **Table 3.1**. As discussed previously in Section 2.3 and Section 2.4, select improvements in Santa Ana and Costa Mesa are included.

Table 3.1: Updated IBC Vision Plan Improvement List

ID	Intersection / Arterial Location	Jurisdiction	With Red Hill Widening	Without Red Hill Widening
			Improvement Strategy	Improvement Strategy
12	SR-55 Frontage Road SB at Baker Street	Costa Mesa	Change SB configuration to (2, 0.5, 1.5)	Change SB configuration to (2, 0.5, 1.5)
97/98*	#97 Von Karman Avenue/Tustin Ranch Road at Barranca Parkway/ #98 Von Karman Avenue at Alton Parkway ¹	Irvine/Tustin	Add 3rd NBT at both intersections and convert de facto to standard NBR and convert WBR to a free right or add 2nd WBR at Von Karman/Barranca	Add 3rd NBT at both intersections and convert de facto to standard NBR and convert WBR to a free right or add 2nd WBR at Von Karman/Barranca
145	Jamboree Road at Michelson Drive	Irvine	Pedestrian Bridge	Pedestrian Bridge
188	Harvard Avenue at Michelson Drive	Irvine	Improve SB to (2,2,1)	Improve SB to (2,2,1)
232	Culver Drive at I-405 NB Ramps	Irvine	Restripe WB to (1.5,0,1.5)	Restripe WB to (1.5,0,1.5)
136	Jamboree Road at Barranca Parkway	Irvine/Tustin	Add 5th NBT convert NBR to standard NBR and restripe EB to (3,2,1) (improvements associated with CIP)	Add 5th NBT convert NBR to standard NBR and restripe EB to (3,2,1) (improvements associated with CIP)
192	California at University	Irvine	Add EB free-right turn-lane and widen SB California to three lanes	Add EB free-right turn-lane and widen SB California to three lanes
719	Flower Street at Segerstrom	Santa Ana	N/A	Add WBR
720	Flower Street at MacArthur	Santa Ana	N/A	Add EBR
A	Red Hill Avenue between Main Street and Mac Arthur Boulevard	Irvine	Widen from 4 lanes to 6 lanes.	N/A
B	Alton Overcrossing at SR-55	Santa Ana ²	Includes #44 Red Hill Ave at Alton Parkway (add 1 NBR, 1 SBR, 2nd EBL, and 2nd WBL) associated w/ Alton Overcrossing, signalization of Daimler at Alton and Halliday Street at Alton	Includes #44 Red Hill Ave at Alton Parkway (add 1 NBR, 1 SBR, 2nd EBL, and 2nd WBL) associated w/ Alton Overcrossing, signalization of Daimler at Alton and Halliday Street at Alton
C	Dyer Road widening between SR-55 NB on ramp and Red Hill Avenue (Phase 2)	Santa Ana ²	Widen from 6 to 8 lanes	Widen from 6 to 8 lanes

¹Due to close proximity of improvements, for cost development, these two locations were combined and treated as one contiguous corridor on Von Karman Avenue between Alton Parkway and Barranca Parkway/Tustin Ranch Road.

²Agreement with Santa Ana.



3.2 Step 2: Estimate Total Cost to Implement 2018 IBC Improvement List

In order to implement the improvements identified in the 2018 IBC Traffic Study Update, a total cost of \$52,417,833 (With Red Hill Avenue Widening) or \$37,143,798 (Without Red Hill Avenue Widening (see **Table 2.1**) must be programmed into this fee update effort. This cost includes the cost of the improvements, roll over from the Caltrans agreement (see *Section 2.5*), deduction of the available fund balance from the IBC Traffic Fee Program (see **Table 2.2**), and project soft costs (see *Section 2.8*).

Based on the preliminary engineering and cost estimates, the cost of the needed improvements is \$102,309,856 (with Red Hill Avenue Widening) or \$87,763,155 (without Red Hill Avenue Widening) and includes the following:

- Up to 90 percent of costs related to improvements within City of Irvine and Santa Ana (widening of Dyer Road per agreement between City of Santa Ana and Irvine);
- Fair-share obligation to improvements in Santa Ana and Costa Mesa;
- Roll over of fair-share obligations pursuant to the Caltrans agreement from 2010; and.
- Reduction of improvement costs to reflect project expenditures.

Table 3.2 presents the list of improvement locations, along with project cost for each, City of Irvine's share and cost of improvements included in the 2020 IBC Vision Plan Traffic Fee Nexus Update.

Preliminary engineering layouts and detailed cost estimates were developed for each improvement in the 2018 IBC Traffic Study Update. All improvement strategies were vetted through a review process with City of Irvine planning and engineering staff and were determined to be feasible. The *2018 IBC Traffic Study Update* discusses in detail the methodology for developing cost estimates.



Table 3.2: Updated IBC Vision Plan Improvement List and Associated Cost for Fee Calculation

ID	Intersection / Arterial Location	Jurisdiction	Cost	Fair Share	Cost included for Fee Calculation- With Red Hill Widening	Cost included for Fee Calculation- Without Red Hill Widening
12	SR-55 Frontage Road SB at Baker Street ⁴	Costa Mesa	\$1,017,000	5%	\$50,850	\$50,850
97/98 ⁵	#97 Von Karman Avenue/Tustin Ranch Road at Barranca Parkway/ #98 Von Karman Avenue at Alton Parkway ¹	Irvine/Tustin	\$11,082,000	90%	\$9,973,800	\$9,973,800
145	Jamboree Road at Michelson Drive ¹	Irvine	\$8,237,000	90%	\$7,413,300	\$7,413,300
188	Harvard Avenue at Michelson Drive ¹	Irvine	\$3,438,000	90%	\$3,094,200	\$3,094,200
232	Culver Drive at I-405 NB Ramps ¹	Irvine	\$269,000	90%	\$242,100	\$242,100
136	Jamboree Road at Barranca Parkway ¹	Irvine/Tustin	\$6,570,000	90%	\$5,913,000	\$5,913,000
192	California at University ¹	Irvine	\$2,770,000	90%	\$2,493,000	\$2,493,000
719	Flower Street at Segerstrom	Santa Ana	\$4,507,000	90%	N/A	\$4,056,300
720	Flower Street at MacArthur	Santa Ana	\$3,384,000	90%	N/A	\$3,045,600
A	Red Hill Avenue between Main Street and MacArthur Boulevard ²	Irvine	\$24,054,000	90%	\$21,648,600	\$0
B	Alton Overcrossing at SR-55 ³	Santa Ana	\$61,185,000	50%	\$30,592,500	\$30,592,500
C	Dyer Road widening between SR-55 NB on ramp and Red Hill Avenue ³	Santa Ana	\$18,047,000	90%	\$16,242,300	\$16,242,300
Cost of Improvements					\$97,663,650	\$83,116,950
Caltrans agreement roll over ⁶					\$5,605,059	\$5,605,059
CIP expenditure to date					(\$958,854)	(\$958,854)
2020 Update IBC Vision Plan Improvement Cost					\$102,309,855	\$87,763,155

Source: IBC 2018 TIA Update

¹ Irvine improvements - funding of 90% through IBC Traffic Fee Program funds

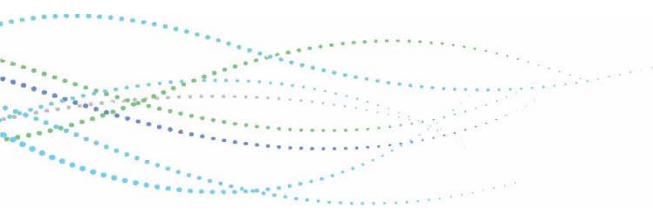
² Irvine improvements - remaining Irvine General Plan improvement to be funded at 90% through IBC Traffic Fee Program funds unless otherwise directed by the City Council

³ Santa Ana improvements – full responsibility for Dyer and 50% financial responsibility for Alton/SR-55 Overcrossing per agreement

⁴ Costa Mesa improvements - fair share financial responsibility

⁵ Due to close proximity of improvements, for cost development, these two locations were combined and treated as one contiguous corridor on Von Karman Avenue between Alton Parkway and Barranca Parkway

⁶ Caltrans D12 agreement with City of Irvine (\$7,025,962 minus \$1,420,903 set aside as Caltrans Subfund)





3.3 Step 3: Identify Remaining IBC Traffic Fund Revenues and Soft Costs to Determine Total Fee for 2020 Update

Other IBC Traffic Fee Program costs, estimated at \$14,638,944 (with Red Hill Avenue Widening) or \$13,911,609 (without Red Hill Avenue Widening) and discussed in detail in *Section 2.8* were added to the difference between improvement cost needs and the existing available IBC Traffic Fee Program Fund balance \$64,530,966. **Table 3.3** summarizes the value for each of the items that determine the final amount of \$52,417,833 that must be programmed into this fee update effort with the Red Hill Avenue Widening and \$37,143,798 without the Red Hill Avenue Widening.

Table 3.3: Summary of IBC Traffic Fee Update Cost Elements

Items	Cost - With Red Hill Widening	Cost - Without Red Hill Widening
2018 Update IBC Vision Plan Improvement Cost ¹	\$102,309,855	\$87,763,155
Existing IBC Traffic Fee Program Funds (amount to be subtracted)	(\$64,530,966)	(\$64,530,966)
(Effective) 2018 Updated IBC Vision Plan Improvement Cost	\$37,778,889	\$23,232,189
Other IBC Traffic Fee Program (Transportation Management Systems, IBC Program Administration, Contingency)	\$14,638,944	\$13,911,609
Total Amount to be programmed for the 2018 Fee Update	\$52,417,833	\$37,143,798

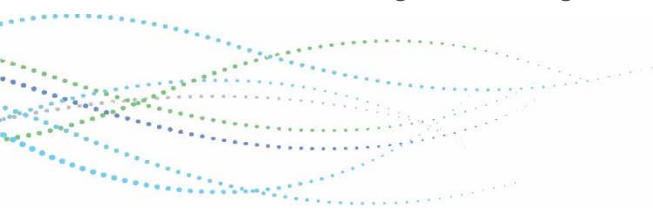
¹ Includes Caltrans roll over and expended CIP funds; Source: City of Irvine

3.4 Step 4: Estimate the Remaining Development Subject to 2020 Traffic Fee Update

Based on a thorough review of the City of Irvine IBC database records and Development Agreements (DAs), the remaining developable land uses under the Vision Plan buildout condition were quantified to define appropriate land use fees to fund the transportation improvements identified for this update.

Existing land uses as of the August 13, 2018 snapshot and forecast Vision Plan Buildout land uses were applied in the determination of the land use specific traffic impact fees. Consistent with the underlying approach behind the development of the Vision Plan, increases in residential density throughout the IBC result in an overall reduction of non-residential uses (i.e., manufacturing, warehouse and mini-warehouse uses). The Vision Plan approved a residential cap of 15,000 base units plus a maximum potential of 2,038 density bonus units pursuant to state legislation. Based on approvals since 2010 and consistent with the 2018 IBC Traffic Study Update, the total number of density bonus units equals 1,820 DU, less than the 2,038 DU maximum, bringing the total number of DUs to 16,820 DUs, instead of 17,038 DUs assumed in 2010. The 2020 Traffic Fee Nexus Update also assumes that all remaining density bonus units will be charged fees consistent with the market-value base units.

In determining the remaining development subject to traffic impact fees, previous DAs and prepaid fees were





considered. In 2005, the City of Irvine included an option for developers to prepay fees for projects under consideration to avoid updated fee adjustments that might occur subsequent to the 2005 update. Developers took advantage of this option and fees were paid for DUs and office equivalency square footage (SF). While there may be prepayment for specific projects that did not move forward based on the past fluctuating economic climate, the prepayment remains valid for future development projects for those identified parcels. As a result, these units and office equivalency SF were excluded from this update.

3.4.1 Dwelling Unit Distribution 2018 Update

This section presents the status of the maximum allowable dwelling units (DUs) within IBC. The land use assumption for the 2018 IBC Traffic Study Update assumes a total of 9,427 DUs (8,760 base DUs plus 707 density bonus DUs) on the ground in 2018, and 16,820 DUs (15,000 base DUs plus 1,820 density bonus DUs) in Buildout Year. **Table 3.4** presents the IBC dwelling unit summary. At the time of this update, 225 DUs (167 base DUs and 58 density bonus DUs) did not have a status reported, i.e. were not under construction nor approved or pending. The table indicates that for much of the remaining IBC DUs, fees were prepaid, hence only a few residential developments remain that will be subject to the updated fees developed as part of this update effort.

Table 3.4: IBC Dwelling Unit Summary

Base Units	Density Bonus Units	Total	Details
15,000	1,820	16,820	Revised Maximum allowable DUs allowed for IBC Vision Plan Traffic Program
8,720	707	9,427	DUs on the ground in 2018
6,113	1,055	7,168	Total DUs: under construction/approved/pending
167	58	225	DUs not associated with known projects ¹

¹ As of the snapshot date of August 13, 2018 Source: City of Irvine

Table 3.5 presents the breakdown of land use quantities that will be subject to the updated fee, and **Appendix F** presents details of developments by parcel.

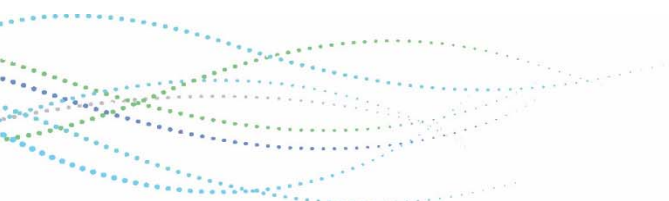




Table 3.5: Future Land Use Intensity Subject to the Updated Traffic Fee

	Base (DU)	Density Bonus ¹ (DU)	TOTAL (DU)	Extended Stay (Rooms)	Hotel (Rooms)	Retail Mix (Sq. ft.)	Office (Sq. ft.)	Industrial Mix (Sq. ft.)	Mini Ware- House (Sq. ft.)
2015 Baseline (for reference)	6,676	384	7,060	474	2,322	1,384,000	26,639,000	13,934,000	379,000
2018 Baseline (on the ground conditions) ²	8,720	707	9,427	1,156	2,511	1,314,000	28,369,942	13,040,000	1,430,000
Buildout Cumulative with Project	15,000	1,820	16,820	1,422	3,078	1,785,000	33,795,000	12,536,000	1,228,000
Remaining Development (2018 to Buildout)	6,280	1,113	7,393	266	567	471,000	5,425,058	-504,000	-202,000
Central Park West and Park Place Development (Remaining intensity that is not subject to updated fee per their individual DAs)	1,091	0	1,091	0	0	8,732	1,138	0	0
ADJUSTED Remaining Development between 2018 and 2035	5,189	1,113	6,302	266	567	462,268	5,423,920	-503,899	-201,849
<i>Other Developments with prepaid fees as of August 13, 2018 and paid fees between 08/13/18 and April 30, 2020</i>	<i>2,804</i>	<i>513</i>	<i>3,317</i>	<i>0</i>	<i>0</i>	<i>1,558</i>	<i>173,548</i>	<i>71,790</i>	<i>180,775</i>
REMAINING DEVELOPMENT SUBJECT TO UPDATED TRAFFIC FEE	2,385	600	2,985	266	567	460,710	5,250,372	-575,689	-382,624

Source: City of Irvine

¹ Density Bonus Units will be charged fees consistent with the market value

² Quantities includes land use that was on the ground prior to 2018

The remaining quantities of land use subject to the updated fees were determined based on the following procedures, with an example provided in **Table 3.6** relating to the residential base units:

1. Calculate difference in land use quantities between 2018 Baseline and Buildout Year.
2. Calculate land use quantities for Central Park West and Park Place DAs (see *Section 2.9* for discussion) to be subtracted from the first procedure above.
3. Calculate quantities of land use from other developments where the developer has prepaid IBC fees within the “snapshot” period for this update, for subtraction from the second procedure above. For the developments where fees were paid after the August 13, 2018 snapshot date, the quantities were not included in the remaining quantities for the calculation, but these developments will not be subject to additional fees.
 - Any quantities designated as “existing” in **Table 3.5** and **Table 3.6** were not subtracted because they were included in the quantities that represent 2018 Baseline on the ground conditions.



Table 3.6: Procedures to Determine Land Use Subject to Updated Fee

Procedure	Land Use Description	Quantities	Calculation
1	Residential Land Use considered for 2018 Baseline	9,427 DU	
	Residential Land Use considered for Buildout	16,820 DU	16,820 – 9,427 = 7,393 DU
2	<p>Development Agreements</p> <p>(note: “existing” quantities were not subtracted because these are already included in the 2018 on the ground conditions (Baseline))</p> <p><u>Central Park West: 1,275</u></p> <p><i>Existing: 686 (not included in this calculation)</i></p> <p><i>Permits Issued/Under Construction: 304</i></p> <p><i>Approved: 285 (Fees not paid)</i></p>	(304) + (787+0) =1,091 DU	
	<p><u>Park Place: 3,450</u></p> <p><i>Existing: 2,663 (not included in this calculation)</i></p> <p><i>Permits Issued/Under Construction: 787</i></p> <p><i>Approved: 0</i></p>		7,393 – 1,091 = 6,302 DU
3	<p>Other Developments</p> <p>(note: “existing” quantities were not subtracted because these are already included in the 2018 on the ground conditions (Baseline); developments that paid fees after the 08/13/18 snapshot date were not subtracted)</p> <p><i>Approved (fees paid prior to 2010): 0</i></p> <p><i>Existing: 9,427 (not included in the calculation)</i></p> <p><i>Permits Issued/Under Construction (Fees Paid): 2,542</i></p> <p><i>Approved (Fees Paid): 0</i></p> <p><i>Demolished/Pending Demo(Fees not paid): 0</i></p> <p><i>In Process / Pending (Fees not Paid): 0</i></p> <p><i>Approved (Fees Paid after 08/13/18): 775</i></p> <p><i>Approved (Fees not paid): 0</i></p>	0+2,542+0+0+0+775 =3,317 DU	6,302– 3,317 = 2,985 DU

Source: City of Irvine

3.5 Step 5: Estimate of Total Development Intensity Value (DIV)

Since 1992, the IBC study area has had provisions in place to allow for Transfers of Development Rights (TDRs) through the creation of a Development Intensity Value (DIV) budget system in which an allocation of AM, PM, and ADT DIVs are assigned to each property in the IBC. These DIVs must be transferred in blocks (AM, PM, and ADT) to other properties through a conditional use permit process and accompanying traffic study. The total DIVs associated with the remaining development required for full buildout of the Vision Plan was calculated by applying the IBC trip generation rates to the land use quantities.

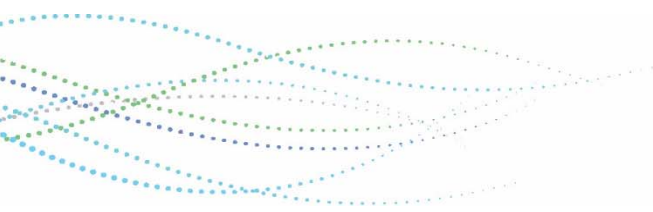




Table 3.7 presents the established DIV rates applied in this update and is consistent with those used for the Vision Plan Traffic Fee Nexus Study. Based on the remaining development subject to the updated traffic fee determined in *Section 3.4, Step 4*, multiplied by the IBC DIV rates, the total DIVs equate to 10,940 (refer to **Table 3.8**). Consistent with the methodology used for the Vision Plan Traffic Fee Nexus Study and previous IBC fee reports, the PM peak hour DIV rates were applied for all land uses because for a majority of the land uses, the PM peak hour rate is the maximum DIV rate. The PM peak hour rates represent the maximum DIV rate for all IBC land use categories with the exception of industrial and mini-warehouse uses; however for those uses, the DIV rates are significantly less in comparison to the other land uses. It should be noted that the retail DIV rate was updated in an effort to advance retail development and was approved by the City Council on March 24, 2020. Table 3.7 reflects the updated retail DIV rate.

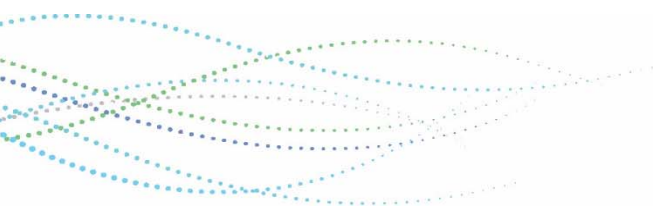
Table 3.7: IBC Land Use DIV Rates

Trip Rate	Residential (per DU)	Extended Stay (per Room)	Hotel (per Room)	Retail Mix (per sq. ft.)	Office (per sq. ft.)	Industrial Mix (per sq. ft.)	Mini Warehouse (per sq. ft.)
PM Peak Hour	0.52	0.42	0.68	0.00432	0.00138	0.00042	0.00027

Source: City of Irvine Zoning Ordinance, Section 9-36-8

The Vision Plan utilizes a flexible zoning concept, meaning that to account for the planned increase in residential units under the Vision Plan, quantities of planned land uses from other categories such as manufacturing and their associated development intensity would be reduced. This is the reason for the negative quantities (see row “Remaining Development (2018 to Buildout)”) identified in **Table 3.5** and **Table 3.8**. If the quantities of land uses that were assumed to be developed under the IBC Vision Plan do not develop as planned, the PM peak hour trips associated with those land uses will be available for use for other types of development.

The Vision Plan is an overlay zone that allows for flexibility in land use development. Once the development intensity available in the IBC (identified in Chapter 9-36 of the Zoning Ordinance) is exhausted, no additional development can take place without a General Plan Amendment that intensifies the IBC planning area. The City of Irvine continues to monitor the development patterns in the IBC annually to evaluate how the Vision Plan is taking shape, to ensure that there is sufficient development intensity for the maximum assumed residential and mixed-use development. Subsequent to this update, the reassessment of the IBC Vision Plan Traffic Study is expected to be conducted every two years, unless directed otherwise by the City Council to reassess at a different frequency.





3.6 Step 6: Normalization of Retail and Office Land Uses

In accordance with established precedent in the City and consistent with the mixed-use vision, to encourage additional commercial and retail development in the IBC, the office and retail mix land uses have been normalized in the calculation of remaining developments subject to fee. Because the retail mix land use PM peak hour trip rate is significantly higher (over 3 times higher – 0.00432 for retail mix; 0.00138 for office) than the office land use, the fees for retail mix development are normalized, creating a fee structure in which retail mix and office square footage cost is equivalent. **Table 3.8** identifies the normalization of DIVs and land use for office and commercial land uses.

Table 3.8: IBC Total DIVs

Land Use	Unit	Remaining Development Subject to Updated Fee	DIVs (rounded)	Remaining Development Subject to Updated Fee (normalized quantities)	Normalized DIVs (rounded)
Residential ¹	DU	2,985	1,552	2,985	1,552
Extended Stay	Rooms	266	112	266	112
Hotel	Rooms	567	386	567	386
Retail Mix	Sq. Ft.	460,710	1,990	2,855,541	4,618
Office	Sq. Ft.	5,250,372	7,246	2,855,541	4,618
Industrial Mix ²	Sq. Ft.	-575,689	-242	-575,689	-242
Mini-Warehouse	Sq. Ft.	-382,624	-103	-382,624	-103
TOTAL DIVs			10,940		10,940

Source: City of Irvine

¹ Includes Base and Density Bonus Units, since Density Bonus Units will be charged as market (Base) units

3.7 Step 7: Estimate Cost per DIV

The cost associated per DIV to implement the Vision Plan improvements was calculated by dividing the total program cost by the total number of normalized DIVs that must participate in the funding program. **Table 3.9** shows the cost per DIV will be \$4,791.32 With the Red Hill Avenue improvement and \$3,395.18 Without the Red Hill Avenue improvement. **Table 3.10** presents the maximum development fees for each land use category through application of the cost per DIV to the normalized DIVs associated with each category.

Table 3.9: Cost Estimate per DIV

	With Red Hill Widening	Without Red Hill Widening
Total Traffic Fee Program Cost	\$52,417,833	\$37,143,798
Total number of DIVs generated	10,940	10,940
Cost per DIV	\$4,791.32	\$3,395.18



Table 3.10: Traffic Fee Estimates for each Land Use Category

Land Use	Unit	Remaining Development Subject to Updated Fee (normalized quantities) ¹	With Red Hill Widening			Without Red Hill Widening		
			Cost per DIV (rounded)	Normalized DIVs (rounded)	Development Fees (Maximum)	Cost per DIV (rounded)	Normalized DIVs (rounded)	Development Fees (Maximum)
Residential ²	DU	2,985	\$4,791	1,552	\$7,437,088.76	\$3,395	1,552	\$5,269,995.11
Extended Stay	Rooms	266	\$4,791	112	\$535,286.40	\$3,395	112	\$379,309.27
Hotel	Rooms	567	\$4,791	386	\$1,847,341.80	\$3,395	386	\$1,309,044.78
Retail Mix	Sq. Ft.	2,855,541	\$4,791	4,618	\$22,125,795.58	\$3,395	4,618	\$15,678,558.94
Office	Sq. Ft.	2,855,541	\$4,791	4,618	\$22,125,795.58	\$3,395	4,618	\$15,678,558.94
Industrial Mix ³	Sq. Ft.	-575,689	\$4,791	-242	(\$1,158,490.58)	\$3,395	-242	(\$820,917.96)
Mini Warehouse	Sq. Ft.	-382,624	\$4,791	-103	(\$494,984.11)	\$3,395	-103	(\$350,750.67)
TOTAL				10,940	\$52,417,833		10,940	\$37,143,798

Source: Iteris

¹ From Table 3.8.

² Includes Base and Density Bonus Units, since Density Bonus Units will be charged as market (Base) units

³ Includes manufacturing and warehouse sq. ft.



3.8 Step 8: Estimate Cost per Development Unit

To establish the cost per development unit, the maximum fees associated with each land use determined in Section 3.7, Step 7 are divided by the quantity associated with each land use category. **Table 3.11** represents the fee per measurable unit for each land use category.

Table 3.11: Traffic Fee Summary

Land Use	Unit	Remaining Development Subject to Updated Fee	Remaining Development Subject to Updated Fee (normalized quantities)	With Red Hill Widening		Without Red Hill Widening	
				Development Fees (Maximum)	Updated Fee ³	Development Fees (Maximum)	Updated Fee ³
Residential ¹	DU	2,985	2,985	\$7,437,089	\$2,491.49	\$5,269,995	\$1,765.49
Extended Stay	Room	266	266	\$535,286	\$2,012.35	\$379,309	\$1,425.97
Hotel	Room	567	567	\$1,847,342	\$3,258.10	\$1,309,045	\$2,308.72
Retail Mix	Sq. Ft.	460,710	2,855,541	\$22,125,796	\$7.75	\$15,678,559	\$5.49
Office	Sq. Ft.	5,250,372	2,855,541	\$22,125,796	\$7.75	\$15,678,559	\$5.49
Industrial Mix ²	Sq. Ft.	-575,689	-575,689	(\$1,158,491)	\$2.01	(\$820,918)	\$1.43
Mini-Warehouse	Sq. Ft.	-382,624	-382,624	(\$494,984)	\$1.29	(\$350,751)	\$0.92
				\$52,417,833		\$37,143,798	

¹Includes Density Bonus Units that will be charged fees at the same rate as Base Units

²Includes manufacturing and warehouse SF

³ Effective FY 2019-2020

Table 3.12 presents a fee comparison between 2010, current 2019 and proposed 2020 fees. Since the adopted of the 2010 IBC Vision Plan, the IBC fees have been adjusted each year based on CCI.

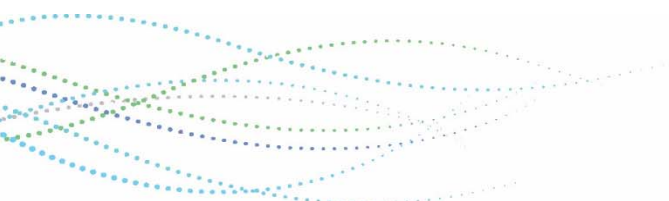




Table 3.12: IBC Fee Comparison

IBC Traffic Fee Increase							
Land Use	Unit	2010	2019 Fee ³	2020 Proposed With Red Hill Widening ⁴	Difference between 2020 Proposed (With Red Hill Widening) and 2019	2020 Proposed Without Red Hill Widening	Difference between 2020 Proposed (Without Red Hill Widening) and 2019
Total Residential ¹	DU	\$1,862	\$2,534	\$2,491	-1.7%	\$1,765	-30.3%
Extended Stay	Rooms	\$1,503	\$2,045	\$2,012	-1.6%	\$1,426	-30.3%
Hotel	Rooms	\$2,435	\$3,313	\$3,258	-1.7%	\$2,309	-30.3%
Retail Mix	Sq. Ft.	\$5.45	\$7.42	\$7.75	4.4%	\$5.49	-26.0%
Office	Sq. Ft.	\$5.45	\$7.42	\$7.75	4.4%	\$5.49	-26.0%
Industrial Mix ²	Sq. Ft.	\$1.50	2.05	\$2.01	-1.8%	\$1.43	-30.4%
Mini Warehouse	Sq. Ft.	\$0.97	\$1.32	\$1.29	-2.0%	\$0.92	-30.6%

Source: City of Irvine

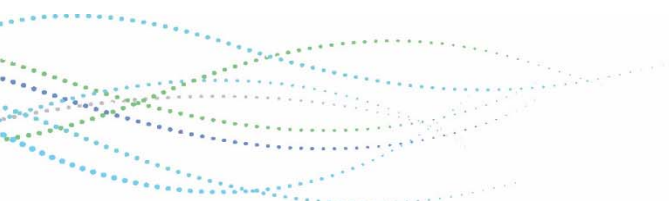
¹ Includes Density Bonus Units charged fees consistent with Base Units

² Includes manufacturing and warehouse SF

³ Current Fee

⁴ Effective FY 2020-21

Table 3.12 shows the 2020 proposed fee compared the current prevailing fee from 2019. Based on this update, the proposed fees with Red Hill Avenue Widening are around 2% lower than the prevailing 2019 for most of the land uses fees with the exception of Retail and Office, which are 4% % higher than the 2019 fees. The proposed fees without the Red Hill Avenue Widening are around 30% lower than the prevailing 2019 fees with the exception of Retail and Office, which are 26% lower than 2019 fees.





4 ESTABLISHING NEXUS

Section 1, Introduction discussed the requirement for a fair-share nexus between the mitigation requirements of the EIR and the traffic fees associated with the necessary mitigation improvements. The introduction further indicated a requirement to substantiate this nexus based on the adopted State legislation to ensure that fees collected are associated with development impacts and the physical improvements. The following statements fulfill the nexus requirements.

4.1 Identify the Purpose of the Impact Fee

The purpose of the 2020 IBC Traffic Fee Nexus Update is to:

- Clearly identify a fee rate to mitigate project related impacts within the IBC study area to an acceptable level of service.
- Mitigate the traffic impacts of new development within the IBC Vision Plan area under the expected buildout commensurate with the EIR Traffic Impact Mitigation Measures under CEQA and other agreements through which a fair-share of improvement costs have been contractually identified in an arm's length negotiation.

The 2018 IBC Traffic Study Update, which is the basis for the 2020 IBC Traffic Fee Nexus Update, evaluated the circulation system of the IBC study area under With and Without Project conditions. The study accounted for approved and pending projects within the IBC study area and forecast regional growth in both Interim and Buildout conditions. The Without Project conditions for each scenario assumed existing 2018 on-the ground development. The With Project conditions for each scenario included expected development within the IBC area, including the addition of residential DUs through the conversion of non-residential office equivalency square footage as identified in the traffic study.

Utilizing the intersection capacity utilization (ICU) analysis that measures peak hour intersection capacity and performance to assess impacts, the 2018 IBC Traffic Study Update identified project improvements at locations within and outside the City of Irvine, based on the City's TIA guidelines (2004) and those set by each of the affected jurisdiction/agencies (Caltrans and the cities of Newport Beach, Tustin, Santa Ana, Costa Mesa). For details on project-related thresholds, refer to the 2018 IBC Traffic Study Update. The Vision Plan is responsible for improving identified locations to an acceptable level of service or to existing conditions performance levels. All future development under the Vision Plan will contribute to future circulation system improvements identified in the traffic study and will pay for the necessary improvements to deliver an acceptable level of service.

4.2 Identify the Use of the Impact Fee

The use of the proposed fee is the following:

- To fund the Vision Plan circulation improvements within the City of Irvine.
- To fund improvements to the State Highway System that will contribute to enhanced operations.
- To compensate adjacent jurisdictions for traffic improvements needed as a result of implementation of the Vision Plan.

The traffic fee will be used to implement improvements resulting from the buildout of the Vision Plan both within Irvine and in neighboring jurisdictions/agencies. The fee will be used to pay for improvements that



accommodate residential and non-residential intensity increases within the IBC.

4.3 Determine Reasonableness Relationships

As discussed in *Section 1.3, Purpose of the 2020 Update to the Vision Plan Nexus Study*, California's Mitigation Fee Act creates the legal framework for local governments to assess new fees toward future development to pay its fair-share of the infrastructure cost necessary to serve new residents and businesses. AB 1600 stipulates that a local government must establish a "nexus" or reasonable relationship between a proposed fee and the impacts attributable to the developments paying the fee:

4.3.1 Reasonableness Between Use of Fee and the Type of Development on which the Fee is Imposed

- IBC fees will be applied directly to the funding needs for each identified improvement within the City of Irvine and towards any pending financial obligation determined through existing agreements with adjacent jurisdictions regarding Vision Plan traffic improvements.
- IBC fees are collected from new development within the IBC that directly increases traffic on IBC study area roadways and impacts the circulation system component identified in the 2018 IBC Traffic Study Update.
- The 2018 IBC Traffic Study Update identifies the additional traffic volumes generated by new IBC development.
- Project-related fair-shares developed as part of the 2020 IBC Traffic Fee Nexus Update document the proportional responsibility of the project to funding requirements.
- The fees will be used to construct the improvements that will enable the circulation system to function at acceptable levels of service in Irvine and to pre-project conditions in adjacent jurisdictions.

4.3.2 Reasonableness Between Need for the Improvements and the Type of Development on which Fee is Imposed

- As the IBC continues to develop, increasing traffic will necessitate improvements throughout the study area to maintain efficient circulation.
- Without implementation of project-related improvements, the circulation system will continue to deteriorate as new development compounds traffic operations deficiencies on the roadway network.
- The fee collected is based on the forecasted number of trips the proposed development will generate at buildout. The need for the improvements is based on the analysis presented in the 2018 IBC Traffic Study Update. The fee is associated directly with new development within the IBC and the number of total peak hour trips that the new development is expected to generate. As the Vision Plan area develops, fees will be collected and improvements constructed to keep pace with new development, providing a circulation system throughout the IBC that operates at an acceptable level of service.

4.3.3 Reasonableness Between Amount of the Fee and Cost of Public Good (IBC Transportation Needs) attributable to the Type of Development

- Development fees have been defined based on funding of the City of Irvine's fair-share responsibility of the Vision Plan improvements outside the City within the Vision Plan study area, and up to 90 percent of the City of Irvine's responsibility for improvements within the City of Irvine. It is assumed that outside funding sources, including federal, state and county grants, can supplement the



remaining 10 percent or more of development fees to implement improvements within the City of Irvine.

- The fee is supported by all new development at a rate that reflects the relative effect of that development.
- The amount of the fee is directly related to the level of development associated with each new IBC project. The calculation of the fee is based upon the recognition that differing types of developments generate differing amounts of trips. The fee is based on the forecasted number of peak trips generated by the proposed development projects.



5 CONCLUSION

This 2020 IBC Traffic Fee Nexus Update has been prepared to reiterate the “nexus” for the development fees needed to fund necessary improvements to the circulation system. The updated traffic fee rates will be effective in the upcoming FY 2020-21. As noted in the Vision Plan EIR, there are overriding considerations for jurisdictional circulation system improvements outside the City of Irvine. As these improvements are not under the City of Irvine’s jurisdiction, the City cannot guarantee that these improvements are implemented. However, it is the responsibility to contribute fair-share to the improvements through traffic impact fees in order to fund the improvements within these adjacent jurisdictions. During the development of the IBC Vision Plan, the City reached agreements with Newport Beach, Tustin and Caltrans, and amended an existing agreement with Santa Ana regarding its financial responsibilities to mitigate traffic impacts in each jurisdiction due to the buildout of the Vision Plan.

Since 2010, through the agreements with the Cities of Newport Beach and Tustin, the City of Irvine paid Tustin and Newport Beach a combined amount of \$8.15 million as its fair-share, and thereby, has been absolved from any future fair- share contribution provided the City does not exceed its maximum cap on residential units of 15,000 base dwelling units (plus 1,820 density bonus dwelling units pursuant to state law.) For Caltrans, the City of Irvine is obligated to provide, through IBC fee collection, a total amount of \$7,025,962, when the agency proceeds with the implementation of improvements at its impacted facilities. Currently, the IBC fund has earmarked \$1,420,903 of collected fees towards that payment. Based on the amended agreement with Santa Ana, the City of Irvine is obligated to contribute \$46,834,800 towards two improvements in Santa Ana (widening of Dyer Road and Alton Parkway Overcrossing at SR-55). The agreement with Costa Mesa was not revised and the City of Irvine, through the proposed fee, will collect an amount of \$50,850 to contribute towards the improvement at SR-55 Frontage Road SB Ramps at Baker Street.

Based on this update, the proposed fees with Red Hill Avenue Widening are generally 2% lower than the prevailing 2019 fees with the exception of Retail and Office, which are 4% higher than 2019 fees. The proposed fees without the Red Hill Avenue Widening are generally 30% lower than the prevailing 2019 fees with the exception of Retail and Office, which are 26% lower than 2019 fees.



6 REFERENCES

- City of Irvine General Plan—2006
- City of Tustin General Plan—2008
- City of Costa Mesa General Plan—2000
- City of Newport Beach General Plan—2006
- Irvine City Council Ordinance No. 03-08, April 2003
- National Cooperative Highway Research Program Report 255, Transportation Research Board.
- ICU Worksheets Methodology, Austin-Foust Associates, Inc.
- Irvine Business Complex General Plan Amendment and Rezoning Project Environmental Impact Report, Robert Bein, William Frost and Associates, October 1992
- North Irvine Transportation Mitigation (NITM) Program Nexus Study Five Year Review, Parsons Brinckerhoff, July 2008
- Irvine Business Complex Vision Plan Traffic Study, March 2010 Parson Brinkerhoff
- 2012 Citywide Circulation Phasing Report, Iteris, 2013
- Irvine Business Complex Vision Plan Traffic Study, January 13 2016, Iteris
- IBC Vision Plan 2018 Traffic Study Update, June 2019, Iteris



7 GLOSSARY OF TRANSPORTATION TERMS

Common Abbreviations

ADT	Average Daily Traffic
Caltrans	The California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
ITAM	Irvine Traffic Analysis Model
OCTA	Orange County Transportation Authority
V/C	Volume/Capacity Ratio
VMT	Vehicle Miles Traveled

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

MIXED USE DEVELOPMENT: The practice of allowing more than one type of land use in a building or set of buildings. In planning terms, this can mean some combination of residential, commercial, industrial, office, institutional, or other land uses.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

ORANGE COUNTY TRANSPORTATION ANALYSIS MODEL (OCTAM): The regional model developed and maintained by OCTA that is the parent model to the City of Irvine subarea model, ITAM.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PEAK HOUR FACTOR: the period during which peak hour traffic volume is at its highest. Peak Hour factor is determined by calculating the hourly volume divided by the peak rate of flow within the hour, which is the highest 15 minute interval multiplied by four.

SIGNIFICANT IMPACT (CEQA): Projects can cause significant impacts by direct physical changes to the environment or by triggering reasonably foreseeable indirect physical changes. Physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. You must determine whether the cumulative impact is significant, as well as whether an individual effect is “cumulatively considerable.” This means “the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” (CEQA Guidelines Section 15064(h)(1)).

TRANSIT ORIENTED DEVELOPMENT: A mixed-use residential or commercial area designed to maximize access to public transport, and often incorporates features to encourage transit ridership.

TRIP GENERATION RATE: The quality of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.



8 APPENDICES

Appendix A: Agreement with Newport Beach

SETTLEMENT AGREEMENT AND MUTUAL RELEASE OF CLAIMS

This Settlement Agreement and Mutual Release of Claims ("Agreement and Release") is made and entered into as of November 24, 2009 (the "Effective Date") by and between the CITY OF NEWPORT BEACH ("Newport Beach"), a California municipal corporation, and the CITY OF IRVINE ("Irvine"), a California municipal corporation. Newport Beach and Irvine are sometimes referred to in this Agreement and Release individually as a "Party" and collectively as the "Parties."

Recitals

A. Newport Beach is a petitioner and plaintiff in the below-described legal actions commenced and pending against Irvine, which are sometimes referred to collectively as the "Actions."

1. On April 26, 2007, Newport Beach and the City of Tustin ("Tustin") filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and West Millennium Homes)*, bearing Case No. 07CC01264. This action challenges Irvine's approval of the 82-unit Martin Street condominium project, situated within the Irvine Business Complex ("IBC"), and Irvine's certification of an environmental impact report in connection with the project approval. The trial court entered judgment in favor of Newport Beach and Tustin and against Irvine, and subsequently awarded attorneys' fees in favor of Newport Beach and Tustin and against Irvine. Irvine has appealed the judgment and the award of attorneys' fees (Court of Appeal Case Nos. G040749 and G041113).

2. On April 26, 2007, Newport Beach and Tustin filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures, Avalonbay Communities, Inc. and Alton Associates)*, bearing Case No. 07CC01265. This action challenges Irvine's approval of the 170-unit 2851 Alton condominium project, situated within the IBC, and Irvine's certification of an environmental impact report in connection with the project approval. The trial court entered judgment in favor of Newport Beach and Tustin and against Irvine, and subsequently awarded attorneys' fees in favor of Newport Beach and Tustin and against Irvine. Irvine has appealed the judgment and the award of attorneys' fees (Court of Appeal Case Nos. G040757 and G041107). Real party in interest Alton Associates has also appealed the judgment (Court of Appeal Case No. G040759) ("Alton Associates Appeal").

3. On December 12, 2008, Newport Beach and Tustin filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and Hines)*, bearing Case No. 30-2008-00228855-CU-WM-CXC. This action challenges Irvine's approval of a multi-phase project consisting of up to 785,000 square feet of office space and 15,500 square feet of retail/restaurant space, situated within the IBC, and Irvine's certification of an environmental impact report in connection with the project approval. This action is still pending in the Superior Court and no final disposition has occurred.

4. On April 29, 2009, Newport Beach and Tustin filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al.*, bearing Case No. 30-2009-00264696-CU-WM-CXC. This action challenges Irvine's approval of a Zoning Code Technical Update, including a new Accessory Retail Business designation as a permitted use within the IBC, and Irvine's determination that the approval was exempt from review under the California Environmental Quality Act ("CEQA"), codified as Public Resources Code section 21000 *et seq.* This action is still pending in the Superior Court and no final disposition has occurred.

B. The Parties mutually desire to enter into this Agreement and Release to achieve a full and complete resolution of all claims arising from or relating to the disputes between them concerning the Actions and the subject matters raised and implicated by the Actions.

NOW, THEREFORE, in consideration of the facts recited above, and the covenants, conditions and promises set forth below, the Parties agree as follows:

Agreement and Release

1. **Recitals Incorporated.** The Foregoing Recitals are incorporated herein and made a part of this Agreement and Release.

2. **Dismissal of Trial Court Actions.** Within ten (10) business days of the Effective Date of this Agreement and Release, Newport Beach shall personally deliver to Irvine's counsel properly completed and executed Requests for Dismissal with prejudice of the entire action as to Newport Beach only for the Actions entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and Hines)*, bearing Case No. 30-2008-00228855-CU-WM-CXC, and *City of Newport Beach and City of Tustin v. City of Irvine, et al.*, bearing Case No. 30-2009-00264696-CU-WM-CXC, as further described in paragraphs A.3 and A.4 above.

3. **Dismissal of Court of Appeal Actions.**

A. **Irvine Appeals.** Within five (5) business days of the Effective Date of this Agreement and Release, Newport Beach and Irvine shall file a Stipulated Request for Dismissal of the appeals as to Newport Beach only for the Actions entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and West Millennium Homes)* and *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures, Avalonbay Communities, Inc. and Alton Associates)*, as further described in paragraphs A.1 and A.2 above. Each Stipulated Request for Dismissal shall provide that upon remand of such portion of the Action to the Superior Court following issuance of a remittitur, Newport Beach and Irvine will file a stipulation for the vacation of the judgments and orders that are the subject of the appeal and for the dismissal with prejudice of the entire action as to Newport Beach only. Such stipulation shall also include an agreement that Newport Beach and Irvine shall each bear its own attorneys' fees and costs, and that for purposes of Newport Beach's attorneys' fees and costs, such amount would be fifty percent (50%) of the total amount of fees and costs, whether or not awarded, incurred by Newport Beach and Tustin jointly up to the date of the entry of dismissal.

B. Alton Associates Appeal. If Alton Associates agrees, within five (5) business days of the Effective Date of this Agreement and Release, or as soon thereafter as reasonably practicable, Newport Beach, Alton Associates and Irvine shall file a Stipulated Request for Dismissal of the appeal as to Newport Beach only for the Alton Associates Appeal. The Stipulated Request for Dismissal shall provide that upon remand of such portion of the Alton Associates Appeal to the Superior Court following issuance of a remittitur, Newport Beach, Alton Associates and Irvine will file a stipulation for the vacation of the judgment and orders that are the subject of the Alton Associates Appeal and for the dismissal with prejudice of the entire action as to Newport Beach only. Alton Associates must agree to bear its own attorneys' fees and costs in the action and the appeal. This Agreement and Release is conditioned upon the agreement of Alton Associates to take the action reflected in this paragraph. If Alton Associates does not agree to take this action, this Agreement and Release is void and without force or effect.

C. Forbearance. In addition to the obligations set forth above in this paragraph, Newport Beach shall not take or cause to be taken any actions to enforce or facilitate the enforcement of the judgments and orders issued in any of the Actions.

4. **Agreement Not To Bring Further Challenges; Agreement to Cooperate.** The Parties, and each of them, shall not initiate, join, participate in, provide funding to or assist any third party in the initiation or participation in, any legal or administrative action or proceeding challenging any of the following:

A. The approval of land use and development entitlements (including but not limited to tentative and final subdivision maps, conditional use permits, lot line adjustments, and grading and building plans and permits) for any development project in the other Party's city, so long as the project substantially conforms to the other Party's applicable General Plan, inclusive of any current formally submitted proposed amendments to Newport Beach's General Plan and the currently forecast development in Irvine's draft IBC Vision Plan. While not restricting Irvine's discretion to adopt a final IBC Vision Plan, the agreement by Newport Beach to not challenge the IBC Vision Plan as set out on this paragraph 4 is conditioned upon Irvine's adoption of the IBC Vision Plan alternative that provides for no greater than 15,000 residential dwelling units, excluding those units allowed as a matter of state law mandates (e.g., density bonus requirements), within the IBC.

B. The final approval of Irvine's IBC Vision Plan (including but not limited to the substance, merits, nature, scope, methodology, assumptions, analyses or conclusions) so long as such final plan substantially conforms to Irvine's draft IBC Vision Plan. In this regard, the Parties acknowledge and agree that the draft IBC Vision Plan may be modified as necessary to reflect the land use changes generally described in Exhibit A to that certain Settlement Agreement and Mutual Release between Allergan, Inc. and Irvine and the City Council of the City of Irvine, dated on or about August 18, 2009 ("Allergan Settlement Agreement"), a copy of which is appended as Exhibit "1" to this Agreement and Release and is hereby incorporated by this reference, and further acknowledge and agree that such land use changes are generally consistent with Irvine's draft IBC Vision Plan. While not restricting Irvine's discretion to adopt a final IBC Vision Plan, the agreement by Newport Beach to not challenge the IBC Vision Plan

as set out on this paragraph 4 is conditioned upon Irvine's modification of the IBC Vision Plan in a manner consistent with the Allegan Settlement Agreement.

C. The final approval of any current formally submitted proposed amendments to Newport Beach's General Plan and further including a technical modification of the Newport Beach General Plan for development in the Airport Business District to allow for the park in the Conexant project to be bounded on two sides by a public road.

D. Adjustments to the IBC Transportation Development Fee Program, provided that such adjustments are not in conflict or inconsistent with the provisions of or any obligations under this Agreement and Release.

E. Approval or implementation of any transit and/or transportation improvements supporting development activities in the IBC substantially conforming to the IBC Vision Plan.

F. Any determination under CEQA with respect to any of the foregoing.

The Parties, and each of them, further agree to cooperate in timely seeking and providing comments, both verbal and in writing, to each other on any proposed changes in their respective planning documents prior to any such change being presented to the respective decision-making body.

5. **Payment of Traffic/Transportation Impact Mitigation Fees.** Within twenty (20) business days of the Effective Date of this Agreement and Release, Irvine shall pay Newport Beach, and Newport Beach agrees to accept and expend, the sum of Three Million Six Hundred Fifty Thousand Dollars (\$3,650,000.00) to be used exclusively for the engineering, design and appropriately-timed construction of traffic and transportation improvements situated within the City of Newport Beach portion of the Traffic Study Area that was utilized in the previously circulated Draft Environmental Impact Report for the IBC Vision Plan ("Traffic Study Area"), such expenditures to be as deemed appropriate by Newport Beach in its sole discretion to improve traffic conditions in the Traffic Study Area as necessitated by development in the IBC. A map depicting and describing the Traffic Study Area is appended as Exhibit "2" to this Agreement and Release and is hereby incorporated by this reference. The Parties acknowledge and agree that Irvine's contribution of the sum set forth above shall and does constitute Irvine's fair share obligation toward traffic and transportation improvements within the City of Newport Beach arising from or related to development in the IBC contemplated by and in substantial conformance to the IBC Vision Plan so long as Irvine adopts the alternative that provides for no greater than 15,000 residential dwelling units, excluding those units allowed as a matter of state law mandates (e.g., density bonus requirements), within the IBC. The Parties further acknowledge and agree that Irvine's contribution of the sum set forth above shall and does fully discharge Irvine's obligation to pay a fair share toward all traffic and transportation improvements situated within the City of Newport Beach necessitated by any past project approvals and future project approvals contemplated by and in substantial conformance to the IBC Vision Plan so long as Irvine adopts the alternative that provides for no greater than 15,000 residential dwelling units, excluding those units allowed as a matter of state law mandates (e.g.,

density bonus requirements) within the IBC, and so long the IBC Vision Plan is modified to be consistent with the Allergan Settlement Agreement.

6. **Irvine Support of Newport Beach Park.** Irvine will support the efforts of Newport Beach to obtain and improve a park site on property currently owned by the University of California, Irvine as more specifically described in Exhibit "3" appended hereto and hereby incorporated by this reference. Newport Beach acknowledges and agrees that absent a further agreement to the contrary, Irvine shall have no financial or programmatic responsibility for any such park. Newport Beach, in its sole discretion and upon such terms and conditions as it deems appropriate or necessary, may hereafter consider entering into a joint use agreement with Irvine for any such park. Newport Beach does not and shall not have any obligation to enter into a joint use agreement with Irvine for any such park.

7. **Release of Claims.**

A. Each Party, including its mayors, councilmembers, officers, employees, agents, assigns and attorneys, hereby releases and forever discharges the other Party, including its mayors, councilmembers, officers, employees, agents, assigns and attorneys, from any and all claims, demands, causes of action, obligations, damages, injuries, attorneys' fees, costs, and liabilities of any nature whatsoever, whether or not now known, suspected or claimed, which the Party ever had, now has or may claim to have against the other Party (whether directly or indirectly), by reason of any act or omission concerning any matter, event, incident, encounter, cause, or thing relating to or arising out of the events that underlie and are the subject of the Actions, and any claims asserted or which could be or could have been asserted in the Actions.

B. Each Party acknowledges that it may later discover facts different from or in addition to those it now knows or believes to be true with respect to the claims, demands, causes of action, obligations, damages, and liabilities of any nature whatsoever that are the subject of the releases set forth in this Agreement and Release. The Parties expressly agree to assume the risk of the possible discovery of additional or different facts, and agree that this Agreement and Release shall be and remain effective in all respects regardless of such additional or different facts.

C. The releases set forth above are general releases of all claims, demands, causes of action, obligations, damages, and liabilities of any nature whatsoever that are described in those releases and are intended to encompass all known and unknown, foreseen and unforeseen claims which Newport Beach and Irvine may have against each other relating to or arising out of the events that underlie and are the subject of the Actions, except for any claims that may arise from the terms of this Agreement and Release.

D. By releasing and forever discharging claims both known and unknown as hereinabove provided, the Parties, and each of them, expressly waive and relinquish all rights and benefits they may have under section 1542 of the Civil Code of the State of California, which reads as follows:

"[General Release -- Claims Extinguished.] A general release does not extend to claims which the creditor does not know or suspect to

exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor."

E. It is agreed and understood that these releases do not affect the rights or actions available to the City of Tustin, if there are any, to pursue its pending actions or future actions. It is further agreed and understood that Agreement and Release is not intended, nor is it to be construed, to expand the rights of Tustin with regard to the collection of attorneys' fees and costs that have previously been awarded in the Actions in favor of Tustin and any further attorneys' fees and costs incurred but not yet awarded.

8. **Responsibility for Attorneys' Fees, Costs and Litigation Expenses.** Newport Beach and Irvine each shall be wholly responsible for the payment of their respective attorneys' fees, cost and litigation expenses incurred in the Actions.

9. **No Other Pending Actions.** The Parties each warrant and represent that they have not filed any complaints or claims (other than the Actions referenced above) against each other with any local, state or federal agency or court, and that they will not do so at any time hereafter with respect to the event that underlie and are the subject of the Actions, the claims that were asserted or that could be or could have been asserted in the Actions, or any claims arising out of the Actions.

10. **No Assignment of Claims.** The Parties each warrant and represent that they have made no assignment, and will make no assignment, of any claim, cause of action, right of action or any right of any kind whatsoever, embodied in any of the claims and allegations referred to herein, and that no other person or entity of any kind had or has any interest in any of the demands, obligations, actions, causes of action, debts liabilities, rights, contracts, damages, attorneys' fees, costs, expenses, losses or claims referred to herein. Each Party hereby agrees to indemnify, defend and hold harmless the other Party as against any claim based on or arising out of any assignment, transfer or sale in violation of the foregoing warranty.

11. **Non-Admission of Liability.** The Parties acknowledge and agree that this Agreement and Release is a settlement of disputed claims. Neither the fact that the Parties have settled nor the terms of this Agreement and Release shall be construed in any manner as an admission of any liability by Irvine or any affiliated person or entity, all of whom consistently have taken the position that they have no liability whatsoever to Newport Beach.

12. **Successors and Assigns.** This Agreement and Release, and all of the terms and provisions hereof, shall be binding upon and shall inure to the benefit of the Parties and their respective successors, assigns and legal representatives.

13. **Knowing and Voluntary.** The Parties each specifically represent that prior to signing this Agreement and Release, they have been provided a reasonable period of time within which to consider whether to accept this Agreement and Release. The Parties each represent that they have each carefully read and fully understand all of the provisions of this Agreement, and that they are voluntarily, knowingly, and without coercion entering into this Agreement and Release based upon their own judgment.

14. **Assistance of Counsel.** The Parties each specifically represent that they have consulted to their satisfaction with and received independent advice from their respective counsel prior to executing this Agreement and Release concerning the terms and conditions of this Agreement and Release.

15. **Enforcement Costs.** Should any legal action be required to enforce the terms of this Agreement and Release, the prevailing Party shall be entitled to reasonable attorneys' fees and costs in addition to any other relief to which that Party may be entitled.

16. **Severability.** Should any portion, word, clause, phrase, sentence or paragraph of this Agreement and Release be declared void or unenforceable, such portion shall be considered independent and severable from the remainder, the validity of which shall remain unaffected.

17. **Construction.** The Parties acknowledge that this Agreement and Release was jointly prepared by them, by and through their respective legal counsel, and any uncertainty or ambiguity existing herein shall not be interpreted against any of the Parties, but otherwise shall be interpreted according to the application of the rules on interpretation of contracts.

18. **Waiver.** Failure to insist on compliance with any term, covenant or condition contained in this Agreement and Release shall not be deemed a waiver of that term, covenant or condition, nor shall any waiver or relinquishment of any right or power contained in this Agreement and Release at any one time or more times be deemed a waiver or relinquishment of any right or power at any other time or times.

19. **Governing Law and Venue.** This Agreement and Release is made and entered into in the State of California, and shall in all respects be interpreted, enforced and governed under the laws of said State without giving effect to conflicts of laws principles. Venue for any action to enforce this Agreement and Release shall be in the Orange County Superior Court, notwithstanding the provisions of Code of Civil Procedure section 394.

20. **Notices.** All notices and other communications provided or permitted hereunder shall be made personal delivery or pre-paid first class mail, as follows:

If to Newport Beach: City of Newport Beach
 Attention: City Manager
 3300 Newport Boulevard
 Post Office Box 1768
 Newport Beach, CA 92658-8915

with a copy to: City of Newport Beach
 Office of the City Attorney
 3300 Newport Boulevard
 Post Office Box 1768
 Newport Beach, CA 92658-8915

If to Irvine:

City of Irvine
Attention: City Manager
One Civic Center Plaza
Post Office Box 19575
Irvine, CA 92623-9575

With a copy to:

Rutan & Tucker, LLP
Attention: City Attorney, City of Irvine
611 Anton Boulevard, Suite 1400
Costa Mesa, CA 92626

All such notices and communications shall be deemed to have been given when delivered, if personally delivered; and two business days after being deposited in the United States mail, postage prepaid.

21. **Entire Agreement.** This Agreement and Release constitutes the entire agreement between the Parties who have executed it and supersedes any and all other agreements, understandings, negotiations, or discussions, either oral or in writing, express or implied, between the Parties to this Agreement and Release. The Parties to this Agreement and Release each acknowledge that no representations, inducements, promises, agreements or warranties, oral or otherwise, have been made by them, or anyone acting on their behalf, which are not embodied in this Agreement and Release, that they have not executed this Agreement and Release in reliance on any such representation, inducement, promise, agreement or warranty, and that no representation, inducement, promise, agreement or warranty not contained in this Agreement and Release including, but not limited to, any purported supplements, modifications, waivers or terminations of this Agreement and Release shall be valid or binding, unless executed in writing by all of the Parties to this Agreement and Release.

22. **Further Assurances; Mutual Cooperation.** The Parties shall perform such further acts, including execution of documents, as are necessary to effectuate the intent of this Agreement and Release. The Parties shall cooperate to ensure that the steps necessary to implement this Agreement and Release are carried out.

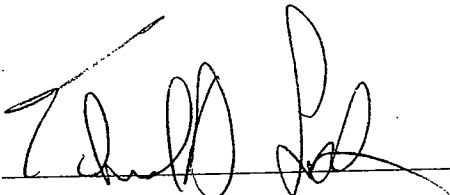
23. **No Third Party Beneficiaries.** The Parties recognize and agree that the real parties in interest in the Actions will receive benefits incidental to this Agreement and Release, including but not limited to the vacation of Superior Court orders concerning the issuance of land use entitlement approvals and the award of attorneys' fees. The Parties intend and agree that no third parties, including such real parties in interest, shall have any rights to enforce any provision of or any obligation created by this Agreement and Release.

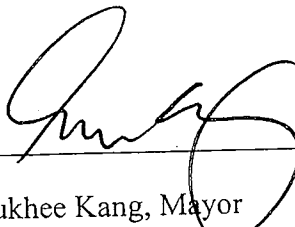
24. **Representation of Authority to Execute.** Each of the persons executing this Agreement and Release represents and warrants that he or she is duly and fully authorized and empowered to execute this Agreement and Release on behalf of and to bind the Party so indicated below.

IN WITNESS WHEREOF, the undersigned have executed this Settlement Agreement and Mutual Release of Claims on the dates set forth below.

CITY OF NEWPORT BEACH

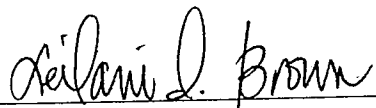
CITY OF IRVINE

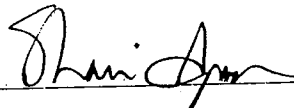
By: 
Edward D. Selich, Mayor

By: 
Sukhee Kang, Mayor

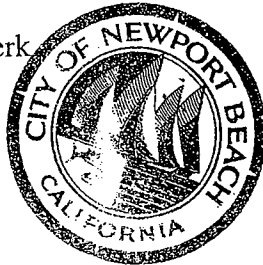
Dated: November 24, 2009

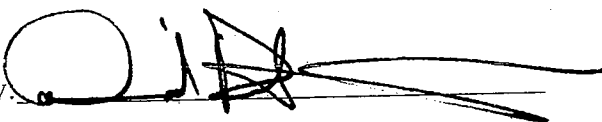
Dated: November 24, 2009


Attest: 
Leilani I. Brown, City Clerk

Attest: 
Sharie Apodaca, City Clerk

APPROVED AS TO FORM:



By: 
David R. Hunt
City Attorney, City of Newport Beach

By: 
Philip D. Kohn
City Attorney, City of Irvine



Appendix B: Agreement with Tustin

SETTLEMENT AGREEMENT AND MUTUAL RELEASE OF CLAIMS

This Settlement Agreement and Mutual Release of Claims (“Agreement and Release”) is made and entered into as of July 13, 2010 (the “Effective Date”) by and between the CITY OF TUSTIN (“Newport Beach”), a California municipal corporation, and the CITY OF IRVINE (“Irvine”), a California municipal corporation. Tustin and Irvine are sometimes referred to in this Agreement and Release individually as a “Party” and collectively as the “Parties.”

Recitals

A. Tustin is a petitioner and plaintiff in the below-described legal actions commenced and pending against Irvine, which are sometimes referred to collectively as the “Actions.”

1. On April 26, 2007, Tustin and the City of Newport Beach (“Newport Beach”) filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and West Millennium Homes)*, bearing Case No. 07CC01264. This action challenges Irvine’s approval of the 82-unit Martin Street condominium project, situated within the Irvine Business Complex (“IBC”), and Irvine’s certification of an environmental impact report in connection with the project approval. The trial court entered judgment in favor of Tustin and Newport Beach and against Irvine, and subsequently awarded attorneys’ fees in favor of Tustin and Newport Beach and against Irvine. Irvine has appealed the judgment and the award of attorneys’ fees (Court of Appeal Case Nos. G040749 and G041113).

2. On April 26, 2007, Tustin and Newport Beach filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures, Avalonbay Communities, Inc. and Alton Associates)*, bearing Case No. 07CC01265. This action challenges Irvine’s approval of the 170-unit 2851 Alton condominium project, situated within the IBC, and Irvine’s certification of an environmental impact report in connection with the project approval. The trial court entered judgment in favor of Tustin and Newport Beach and against Irvine, and subsequently awarded attorneys’ fees in favor of Tustin and Newport Beach and against Irvine. Irvine has appealed the judgment and the award of attorneys’ fees (Court of Appeal Case Nos. G040757 and G041107). Real party in interest Alton Associates has also appealed the judgment (Court of Appeal Case No. G040759) (“Alton Associates Appeal”).

3. On December 12, 2008, Tustin and Newport Beach filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and Hines)*, bearing Case No. 30-2008-00228855-CU-WM-CXC. This action challenges Irvine’s approval of a multi-phase project consisting of up to 785,000 square feet of office space and 15,500 square feet of retail/restaurant space, situated within the IBC, and Irvine’s certification of an environmental impact report in connection with the project approval. This action is still pending in the Superior Court and no final disposition has occurred.

4. On April 29, 2009, Tustin and Newport Beach filed an action in the Orange County Superior Court entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al.*, bearing Case No. 30-2009-00264696-CU-WM-CXC. This action challenges Irvine's approval of a Zoning Code Technical Update, including a new Accessory Retail Business designation as a permitted use within the IBC, and Irvine's determination that the approval was exempt from review under the California Environmental Quality Act ("CEQA"), codified as Public Resources Code section 21000 *et seq.* This action is still pending in the Superior Court and no final disposition has occurred.

B. The Parties mutually desire to enter into this Agreement and Release to achieve a full and complete resolution of all claims arising from or relating to the disputes between them concerning the Actions and the subject matters raised and implicated by the Actions.

NOW, THEREFORE, in consideration of the facts recited above, and the covenants, conditions and promises set forth below, the Parties agree as follows:

Agreement and Release

1. **Recitals Incorporated.** The Foregoing Recitals are incorporated herein and made a part of this Agreement and Release.

2. **Dismissal of Trial Court Actions.** Within ten (10) business days of the Effective Date of this Agreement and Release, Tustin shall personally deliver to Irvine's counsel properly completed and executed Requests for Dismissal with prejudice of the entire action as to Tustin only for the Actions entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and Hines)*, bearing Case No. 30-2008-00228855-CU-WM-CXC, and *City of Newport Beach and City of Tustin v. City of Irvine, et al.*, bearing Case No. 30-2009-00264696-CU-WM-CXC, as further described in paragraphs A.3 and A.4 above. The Parties acknowledge that Newport Beach previously filed Requests for Dismissal of the subject actions as to Newport Beach only, which dismissals were entered, and that the dismissals as to Tustin will result in dismissal of the subject actions in their entirety.

3. **Dismissal of Court of Appeal Actions.**

A. **Irvine Appeals.** Within five (5) business days of the Effective Date of this Agreement and Release, Tustin and Irvine shall file a Stipulated Request for Dismissal of the appeals as to Tustin only for the Actions entitled *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures and West Millennium Homes)* and *City of Newport Beach and City of Tustin v. City of Irvine, et al. (Starpointe Ventures, Avalonbay Communities, Inc. and Alton Associates)*, as further described in paragraphs A.1 and A.2 above. Each Stipulated Request for Dismissal shall provide that upon remand of such portion of the Action to the Superior Court following issuance of a remittitur, Tustin and Irvine will file a stipulation for the vacation of the judgments and orders that are the subject of the appeal and for the dismissal with prejudice of the entire action as to Tustin only. Such stipulation shall also include an agreement that Tustin and Irvine shall each bear its own attorneys' fees and costs. The Parties acknowledge that Newport Beach and Irvine previously filed such a Stipulated Request for Dismissal of the appeals as to Newport Beach only and upon remittitur filed a stipulation for the

vacation of the judgments and orders that were the subject of the appeal and for the dismissal with prejudice of the entire action as to Newport Beach, which dismissals were entered, and that the dismissals as to Tustin contemplated by this paragraph 3.A will result in dismissal of the subject actions in their entirety.

B. Alton Associates Appeal. If Alton Associates agrees, within five (5) business days of the Effective Date of this Agreement and Release, or as soon thereafter as reasonably practicable, Tustin, Alton Associates and Irvine shall file a Stipulated Request for Dismissal of the appeal as to Tustin only for the Alton Associates Appeal. The Stipulated Request for Dismissal shall provide that upon remand of such portion of the Alton Associates Appeal to the Superior Court following issuance of a remittitur, Tustin, Alton Associates and Irvine will file a stipulation for the vacation of the judgment and orders that are the subject of the Alton Associates Appeal and for the dismissal with prejudice of the entire action as to Tustin only. Alton Associates must agree to bear its own attorneys' fees and costs in the action and the appeal. This Agreement and Release is conditioned upon the agreement of Alton Associates to take the action reflected in this paragraph. If Alton Associates does not agree to take this action, this Agreement and Release is void and without force or effect. The Parties acknowledge that Newport Beach, Alton Associates and Irvine previously filed such a Stipulated Request for Dismissal of the appeal as to Newport Beach only and upon remittitur filed a stipulation for the vacation of the judgment and orders that were the subject of the appeal and for the dismissal with prejudice of the entire action as to Newport Beach, which dismissal were entered, and that the dismissal as to Tustin contemplated by this paragraph 3.B will result in dismissal of the subject action in its entirety.

C. Forbearance. In addition to the obligations set forth above in this paragraph, Tustin shall not take or cause to be taken any actions to enforce or facilitate the enforcement of the judgments and orders issued in any of the Actions.

4. **Agreement Not To Bring Further Challenges; Agreement to Cooperate**. The Parties, and each of them, shall not initiate, join, participate in, provide funding to or assist any third party in the initiation or participation in, any legal or administrative action or proceeding challenging any of the following:

A. The approval of land use and development entitlements (including but not limited to tentative and final subdivision maps, conditional use permits, lot line adjustments, and grading and building plans, permits, community facilities district and/or assessment district proceedings, including any necessary subsequent environmental documentation for any and all implementation actions) for any development project in the other Party's city, so long as the project substantially conforms to the Average Daily Trip (ADTs) development maximum thresholds in each other Party's current respective General Plan, zoning documents and other applicable planning documents, inclusive of the MCAS Tustin Specific Plan (approved on or about February 3, 2003), any previously adopted amendments and any current formally submitted proposed amendments to Tustin's General Plan, or is exempt from environmental review under state law, and the currently forecast development in Irvine's draft IBC Vision Plan, and inclusive of ADTs for maximum development identified in the applicable planning documents. While not restricting Irvine's discretion to adopt a final IBC Vision Plan, the agreement by Tustin to not challenge the IBC Vision Plan as set out on this paragraph 4 is

conditioned upon Irvine's adoption of the IBC Vision Plan alternative as provided in Section 4.B below.

B. The final approval of Irvine's IBC Vision Plan (including but not limited to the substance, merits, nature, scope, methodology, assumptions, analyses or conclusions) so long as such final plan substantially conforms to Irvine's draft IBC Vision Plan. In this regard, the Parties acknowledge and agree that the draft IBC Vision Plan may be modified as necessary to reflect the land use changes generally described in Exhibit A to that certain Settlement Agreement and Mutual Release between Allergan, Inc. and Irvine and the City Council of the City of Irvine, dated on or about August 18, 2009 ("Allergan Settlement Agreement"), a copy of which is appended as Exhibit "1" to this Agreement and Release and is hereby incorporated by this reference, and further acknowledge and agree that such land use changes are generally consistent with Irvine's draft IBC Vision Plan. While not restricting Irvine's discretion to adopt a final IBC Vision Plan, the agreement by Tustin to not challenge the IBC Vision Plan as set out on this paragraph 4 is conditioned upon Irvine's modification of the IBC Vision Plan in a manner consistent with the Allegan Settlement Agreement.

C. The certified Final Environmental Information Statement/Environmental Impact Report for the Tustin Legacy project, including without limitation the incorporated Supplemental Environmental Information Statement/Environmental Impact report for the Tustin Ranch Road project and the Addendum for Zone Change (Specific Plan Amendment) 05-022 and the Master Developer Disposition and Development Agreement and Development Plan (approved on or about June 5, 2007), together with a possible Addendum to the Final EIS/EIR for the Tustin Legacy project for modification or deletion of transportation/circulation projects and mitigation measures (collectively, "the Final EIS/EIR for Tustin Legacy") in order to implement the terms of this Agreement.

D. Adjustments to the IBC Transportation Development Fee Program or the Tustin Legacy Backbone Infrastructure Program, provided that such adjustments are not in conflict or inconsistent with the provisions of or any obligations under this Agreement and Release.

E. Approval or implementation of any transit and/or transportation improvements supporting development activities in the IBC substantially conforming to the IBC Vision Plan or for the Tustin Legacy project.

F. Any determination under CEQA with respect to any of the foregoing.

The Parties, and each of them, further agree to cooperate in timely seeking and providing comments, both verbal and in writing, to each other on any proposed changes in their respective planning documents prior to any such change being presented to the respective decision-making body.

5. **Prior Agreement Regarding Red Hill Avenue Improvements.** On or about November 16, 1992, Tustin and Irvine entered into that certain Agreement Regarding Implementation, Timing and Funding of Transportation/Circulation Mitigation for the Irvine Business Complex Project ("1992 Agreement"). Tustin and Irvine agree that Irvine hereafter

shall not have, and shall be relieved of and discharged from, any responsibilities or obligations to perform under or pursuant to the 1992 Agreement, and that all of the terms and provisions of the 1992 Agreement shall be and are terminated in their entirety and of no further force or effect. The parties acknowledge and agree that the construction of the Red Hill Avenue Improvements as provided in the 1992 Agreement are unnecessary and not required by the IBC Vision Plan as a mitigation measure.

6. **Prior Agreement Regarding Tustin Legacy Mitigation Measures.** On or about February 22, 2001, Tustin and Irvine entered into that certain Agreement Between the City of Irvine and the City of Tustin Regarding the Implementation, Timing and Funding of Transportation/Circulation Mitigation for the MCAS Tustin Project (“2001 Agreement”). Tustin hereafter shall not have, and shall be relieved of and discharged from, any responsibilities or obligations to perform under or pursuant to the 2001 Agreement, and that all of the terms and provisions of the 2001 Agreement shall be and are terminated in their entirety and of no further force or effect, and no additional mitigation requirements are required within the City of Irvine under the Tustin adopted Final EIS/EIR for the Tustin Legacy project. In 2005, Tustin, Irvine and Lennar Homes of California, Inc. entered into a Joint Community Facilities Agreement as it related to the use by Tustin of net bond proceeds generated by Irvine Community Facilities District 2005-02 (Columbus Grove) for certain of the mitigation measures required in the 2001 Agreement (“2005 Agreement”). Tustin and Irvine agree that Irvine shall be entitled to accept and use the remaining estimated balance of \$1.9 million in the Tustin Account (as defined in the 2005 Agreement) in such manner and for such purposes authorized under CFD 2005-02, as Irvine determines in its sole and absolute discretion.

7. **Payment for Tustin Ranch Road Improvements.** In lieu of Irvine’s fair share of the estimated costs of those traffic and transportation improvements located within Tustin identified as mitigation measures in and arising from the IBC Vision Plan, Irvine shall contribute 12% of the construction contract award amount or \$4.5 million, whichever is greater, up to a maximum of \$6.5 million, for the Tustin Ranch Road Extension roadway improvements from Walnut Avenue to Warner Avenue, including the grade separation and loop at Edinger Avenue. Irvine shall pay this sum to Tustin within twenty (20) business days of the date Tustin awards a construction contract for all segments of the project. In the event that Tustin has not awarded such a construction contract by July 1, 2015, Tustin may use Irvine’s contribution to jointly fund such interim improvements for Tustin Ranch Road from Walnut Avenue to Warner Avenue as are mutually agreeable and beneficial to both cities. Irvine’s contribution obligation will expire, and Tustin shall reimburse Irvine any contribution made, in the event that Tustin Ranch Road between Walnut Avenue and Warner Avenue is not fully constructed and open to traffic by July 1, 2025. The Parties acknowledge and agree that Irvine’s agreement to contribute funds as set forth above shall and does constitute Irvine’s fair share obligation toward traffic and transportation improvements within the City of Tustin arising from or related to development in the IBC contemplated by and in substantial conformance to the IBC Vision Plan. Further, Tustin and Irvine agree to cooperatively advocate any applications for regional, state, or federal funding for the Tustin Ranch Road Extension roadway improvements.

8. Release of Claims.

A. Each Party, including its mayors, councilmembers, officers, employees, agents, assigns and attorneys, hereby releases and forever discharges the other Party, including its mayors, councilmembers, officers, employees, agents, assigns and attorneys, from any and all claims, demands, causes of action, obligations, damages, injuries, attorneys' fees, costs, and liabilities of any nature whatsoever, whether or not now known, suspected or claimed, which the Party ever had, now has or may claim to have against the other Party (whether directly or indirectly), by reason of any act or omission concerning any matter, event, incident, encounter, cause, or thing relating to or arising out of the events that underlie and are the subject of the Actions, and any claims asserted or which could be or could have been asserted in the Actions.

B. Each Party acknowledges that it may later discover facts different from or in addition to those it now knows or believes to be true with respect to the claims, demands, causes of action, obligations, damages, and liabilities of any nature whatsoever that are the subject of the releases set forth in this Agreement and Release. The Parties expressly agree to assume the risk of the possible discovery of additional or different facts, and agree that this Agreement and Release shall be and remain effective in all respects regardless of such additional or different facts.

C. The releases set forth above are general releases of all claims, demands, causes of action, obligations, damages, and liabilities of any nature whatsoever that are described in those releases and are intended to encompass all known and unknown, foreseen and unforeseen claims that Tustin and Irvine may have against each other relating to or arising out of the events that underlie and are the subject of the Actions, except for any claims that may arise from the terms of this Agreement and Release.

D. By releasing and forever discharging claims both known and unknown as hereinabove provided, the Parties, and each of them, expressly waive and relinquish all rights and benefits they may have under section 1542 of the Civil Code of the State of California, which reads as follows:

"[General Release -- Claims Extinguished.] A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor."

9. Responsibility for Attorneys' Fees, Costs and Litigation Expenses. Tustin and Irvine each shall be wholly responsible for the payment of their respective attorneys' fees, cost and litigation expenses incurred in the Actions.

10. No Other Pending Actions. The Parties each warrant and represent that they have not filed any complaints or claims (other than the Actions referenced above) against each other with any local, state or federal agency or court, and that they will not do so at any time hereafter with respect to the event that underlie and are the subject of the Actions, the claims that

were asserted or that could be or could have been asserted in the Actions, or any claims arising out of the Actions.

11. **No Assignment of Claims.** The Parties each warrant and represent that they have made no assignment, and will make no assignment, of any claim, cause of action, right of action or any right of any kind whatsoever, embodied in any of the claims and allegations referred to herein, and that no other person or entity of any kind had or has any interest in any of the demands, obligations, actions, causes of action, debts liabilities, rights, contracts, damages, attorneys' fees, costs, expenses, losses or claims referred to herein. Each Party hereby agrees to indemnify, defend and hold harmless the other Party as against any claim based on or arising out of any assignment, transfer or sale in violation of the foregoing warranty.

12. **Non-Admission of Liability.** The Parties acknowledge and agree that this Agreement and Release is a settlement of disputed claims. Neither the fact that the Parties have settled nor the terms of this Agreement and Release shall be construed in any manner as an admission of any liability by Irvine or any affiliated person or entity, all of whom consistently have taken the position that they have no liability whatsoever to Newport Beach.

13. **Successors and Assigns.** This Agreement and Release, and all of the terms and provisions hereof, shall be binding upon and shall inure to the benefit of the Parties and their respective successors, assigns and legal representatives.

14. **Knowing and Voluntary.** The Parties each specifically represent that prior to signing this Agreement and Release, they have been provided a reasonable period of time within which to consider whether to accept this Agreement and Release. The Parties each represent that they have each carefully read and fully understand all of the provisions of this Agreement, and that they are voluntarily, knowingly, and without coercion entering into this Agreement and Release based upon their own judgment.

15. **Assistance of Counsel.** The Parties each specifically represent that they have consulted to their satisfaction with and received independent advice from their respective counsel prior to executing this Agreement and Release concerning the terms and conditions of this Agreement and Release.

16. **Enforcement Costs.** Should any legal action be required to enforce the terms of this Agreement and Release, the prevailing Party shall be entitled to reasonable attorneys' fees and costs in addition to any other relief to which that Party may be entitled.

17. **Severability.** Should any portion, word, clause, phrase, sentence or paragraph of this Agreement and Release be declared void or unenforceable, such portion shall be considered independent and severable from the remainder, the validity of which shall remain unaffected.

18. **Construction.** The Parties acknowledge that this Agreement and Release was jointly prepared by them, by and through their respective legal counsel, and any uncertainty or ambiguity existing herein shall not be interpreted against any of the Parties, but otherwise shall be interpreted according to the application of the rules on interpretation of contracts.

19. **Waiver.** Failure to insist on compliance with any term, covenant or condition contained in this Agreement and Release shall not be deemed a waiver of that term, covenant or condition, nor shall any waiver or relinquishment of any right or power contained in this Agreement and Release at any one time or more times be deemed a waiver or relinquishment of any right or power at any other time or times.

20. **Governing Law and Venue.** This Agreement and Release is made and entered into in the State of California, and shall in all respects be interpreted, enforced and governed under the laws of said State without giving effect to conflicts of laws principles. Venue for any action to enforce this Agreement and Release shall be in the Orange County Superior Court, notwithstanding the provisions of Code of Civil Procedure section 394.

21. **Notices.** All notices and other communications provided or permitted hereunder shall be made personal delivery or pre-paid first class mail, as follows:

If to Tustin: City of Tustin
Attention: City Manager
300 Centennial Way
Tustin, CA 92780

with a copy to: Woodruff, Spradlin & Smart
Attention: City Attorney, City of Tustin
555 Anton Boulevard, Suite 1200
Costa Mesa, CA 92626

If to Irvine: City of Irvine
Attention: City Manager
One Civic Center Plaza
Post Office Box 19575
Irvine, CA 92623-9575

With a copy to: Rutan & Tucker, LLP
Attention: City Attorney, City of Irvine
611 Anton Boulevard, Suite 1400
Costa Mesa, CA 92626

All such notices and communications shall be deemed to have been given when delivered, if personally delivered; and two business days after being deposited in the United States mail, postage prepaid.

22. **Entire Agreement.** This Agreement and Release constitutes the entire agreement between the Parties who have executed it and supersedes any and all other agreements, understandings, negotiations, or discussions, either oral or in writing, express or implied, between the Parties to this Agreement and Release. The Parties to this Agreement and Release each acknowledge that no representations, inducements, promises, agreements or warranties, oral or otherwise, have been made by them, or anyone acting on their behalf, which are not embodied in this Agreement and Release, that they have not executed this Agreement and Release in

reliance on any such representation, inducement, promise, agreement or warranty, and that no representation, inducement, promise, agreement or warranty not contained in this Agreement and Release including, but not limited to, any purported supplements, modifications, waivers or terminations of this Agreement and Release shall be valid or binding, unless executed in writing by all of the Parties to this Agreement and Release.

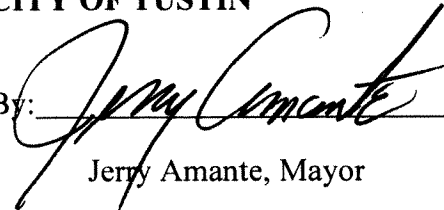
23. **Further Assurances; Mutual Cooperation.** The Parties shall perform such further acts, including execution of documents, as are necessary to effectuate the intent of this Agreement and Release. The Parties shall cooperate to ensure that the steps necessary to implement this Agreement and Release are carried out.

24. **No Third Party Beneficiaries.** The Parties recognize and agree that the real parties in interest in the Actions will receive benefits incidental to this Agreement and Release, including but not limited to the vacation of Superior Court orders concerning the issuance of land use entitlement approvals and the award of attorneys' fees. The Parties intend and agree that no third parties, including such real parties in interest, shall have any rights to enforce any provision of or any obligation created by this Agreement and Release.


25. **Representation of Authority to Execute.** Each of the persons executing this Agreement and Release represents and warrants that he or she is duly and fully authorized and empowered to execute this Agreement and Release on behalf of and to bind the Party so indicated below.

IN WITNESS WHEREOF, the undersigned have executed this Settlement Agreement and Mutual Release of Claims on the dates set forth below.

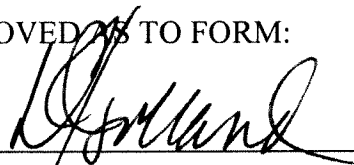
CITY OF TUSTIN

By: 
Jerry Amante, Mayor

Dated: July 12, 2010

Attest: 
Pamela Stoker, City Clerk

APPROVED AS TO FORM:

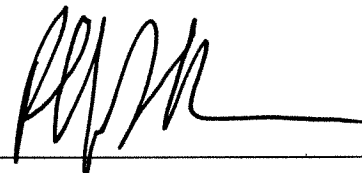
By: 
Douglas C. Holland
City Attorney, City of Tustin

CITY OF IRVINE

By: _____
Sukhee Kang, Mayor

Dated: July __, 2010

Attest: _____
Sharie Apodaca, City Clerk

By: 
Philip D. Kohn
City Attorney, City of Irvine

reliance on any such representation, inducement, promise, agreement or warranty, and that no representation, inducement, promise, agreement or warranty not contained in this Agreement and Release including, but not limited to, any purported supplements, modifications, waivers or terminations of this Agreement and Release shall be valid or binding, unless executed in writing by all of the Parties to this Agreement and Release.

23. **Further Assurances; Mutual Cooperation.** The Parties shall perform such further acts, including execution of documents, as are necessary to effectuate the intent of this Agreement and Release. The Parties shall cooperate to ensure that the steps necessary to implement this Agreement and Release are carried out.

24. **No Third Party Beneficiaries.** The Parties recognize and agree that the real parties in interest in the Actions will receive benefits incidental to this Agreement and Release, including but not limited to the vacation of Superior Court orders concerning the issuance of land use entitlement approvals and the award of attorneys' fees. The Parties intend and agree that no third parties, including such real parties in interest, shall have any rights to enforce any provision of or any obligation created by this Agreement and Release.

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IN WITNESS WHEREOF, the undersigned have executed this Settlement Agreement and Mutual Release of Claims on the dates set forth below.

CITY OF TUSTIN

By: _____

Jerry Amante, Mayor

Dated: July __, 2010

Attest: _____

Pamela Stoker, City Clerk

APPROVED AS TO FORM:

By: _____

Douglas C. Holland
City Attorney, City of Tustin

CITY OF IRVINE

By: _____

Sukhee Kang, Mayor

Dated: July 12, 2010

Attest: _____

Sharie Apodaca, City Clerk

By: _____

Philip D. Kohn
City Attorney, City of Irvine



Appendix C: Agreement with Santa Ana

AMENDMENT TO AND RESTATEMENT OF THE
1992 AGREEMENT BETWEEN THE CITIES OF SANTA ANA AND IRVINE

THIS AGREEMENT ("Agreement") entered into and shall be effective on this 21st day of MARCH, 2011 by and between the City of Santa Ana, hereinafter referred to as "Santa Ana," and the City of Irvine, hereinafter referred to as "Irvine." Santa Ana and Irvine are collectively referred to as the "Parties." This AGREEMENT replaces and supersedes in its entirety that certain agreement dated November 24, 1992 by and between the Parties titled "Implementation of Roadway and Interchange Mitigation Program for EIR 88-ZC-0087" ("1992 Agreement."). A true and correct copy of the 1992 Agreement is attached hereto as Exhibit "A."

RECITALS

- A. WHEREAS, on July 13, 2010 Irvine certified an Environmental Impact Report for certain General Plan Amendments and Zone Changes that are collectively known as the "IBC Vision Plan." That same evening, Irvine approved the General Plan Amendment for the IBC Vision Plan, and conducted a first reading for the Zone Change for the IBC Vision Plan. On July 27, 2010, Irvine conducted a second reading for the Zone Change for the IBC Vision Plan. The IBC Vision Plan is hereinafter referred to as the "Project." The Project is generally bounded by the former Tustin Marine Corps Air Station (MCAS) to the north, the San Diego Creek channel to the east, John Wayne Airport and Campus Drive to the south and State Route 55 (SR-55) to the west. The Project is bordered by the cities of Newport Beach, Santa Ana, Costa Mesa and Tustin. The Project includes and/or contemplates (i) an increase in total units in the Irvine Business Complex ("IBC") from 9,401 units to 15,000 units, and (ii) a reduction of 2,715,062 square feet of nonresidential development (measured in office equivalency). In addition, a total of 1,191 density bonus units could be allowed (and are therefore assumed as part of the Project) in accordance with state law, resulting in a total of 16,191 units; and

B. WHEREAS, a Traffic Impact Study (TIS) has been prepared for the Project that identifies Project-related impacts and corresponding pro-rata funding fair-shares for the following intersections and roadway segment in Santa Ana:

- Bristol Street at Segerstrom Intersection – 12.7%
- Main Street at Dyer Road Intersection – 21%
- Grand Avenue at Warner Avenue Intersection – 15.8%
- MacArthur Boulevard widening from Main Street to SR55 – 31.1%

Each intersection and roadway segment listed above shall hereinafter be referred to as “Project Impact” and collectively be referred to as “Project Impacts,” and the corresponding pro-rata funding fair-shares shall hereinafter be referred to as “Improvement Fair Share Contributions”; and

C. WHEREAS, Santa Ana currently has no fee program designed to collect fees for the mitigation of any of the Project Impacts; and

D. WHEREAS, the Project involves the same land area – the IBC – that was the subject of certain Irvine General Plan Amendment and Irvine Zoning Code Amendments project, together with a mitigation fee program and an Environmental Impact Report (“IBC EIR”), for which approvals and certifications were completed by 1992 (collectively, the “1992 Entitlements”); and

E. WHEREAS, in connection with the 1992 Entitlements, the Parties entered into the 1992 Agreement, which outlines the Parties’ roles and responsibilities in implementing certain transportation improvements identified in the 1992 Entitlements; and

F. WHEREAS, the 1992 Agreement may be amended upon the mutual consent of both Parties; and

G. WHEREAS, this Agreement is intended to, and does, restate in full and supersede the 1992 Agreement.

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereby amend and restate in full the 1992 Agreement in full as follows:

- 1 Limit on new development in the IBC The parties hereto agree that Irvine will not issue building permits for development in the IBC which would cause the total development in the IBC (existing development plus development occurring after the date of this Agreement) to exceed 51,000,000 square feet of office equivalency development (as defined in the Irvine Zoning Code) until after the following street improvements, located in the City of Santa Ana, have been completed:

- (a) The widening of Dyer Road to eight (8) lanes from a point commencing just east of the SR-55 freeway northbound direct connector on-ramp to and including the Redhill - Dyer/Barranca Avenue intersection, as provided in the IBC EIR mitigation measures, hereinafter referred to as the "Roadway Improvement".

- (b) An Alton Avenue overcrossing of the SR-55 Freeway, hereinafter referred to as the "Overcrossing Improvement".

If, notwithstanding Irvine's agreement to limit the issuance of building permits as set forth hereinabove, the total development in the IBC exceeds 51,000,000 square feet prior to the completion of the Roadway Improvement and Overcrossing Improvement;

- A. Irvine shall pay to Santa Ana Irvine's share of the Total Costs (as defined in Section 2 herein below) of the Overcrossing Improvement, to the extent such Total Cost remain unpaid. Any amounts received by Santa Ana pursuant to this paragraph shall be expended by Santa Ana in accordance with Section 3 herein below. As of the date of this agreement, Irvine has issued building permits in the IBC for 41,671,636 square feet of office equivalency development.

- B. Irvine shall deposit the Total Costs (as defined in Section 2 herein below)

of the Roadway Improvement, to the extent such Total Costs remain outstanding, in an interest bearing account in a financial institution acceptable to both Irvine and Santa Ana. Irvine shall not withdraw any of the principal of such amount except in connection with the design and construction of the Roadway Improvement, including but not limited to alignment studies, necessary environmental documentation, land acquisition costs, costs of design and construction, and administrative staff costs related to the Roadway Improvements.

2. Responsibilities of the Parties

- A. "Total Costs" defined. The term "Total Costs" means all costs incurred in the design and construction of an improvement (i.e., the Roadway Improvement or the Overcrossing Improvement), including, but not limited to, costs of preparation of environmental documentation, costs of land acquisition (including any costs incurred in any eminent domain action), costs of design and construction, and Santa Ana's administrative staff costs, so long as such administrative staff costs related to Roadway Improvement do not exceed 5% of the Total Costs (excluding administrative staff costs) of the improvement ("Improvement Work").
- B. To assist in minimizing Total Costs of Roadway Improvement, Santa Ana shall consider and process for approval a reduction of otherwise required landscape setbacks during the right of way acquisition phase of the project if, absent such reduction, the taking of buildings would be necessary to construct the Roadway Improvement. Irvine will mitigate parking losses incurred by any parcels affected by partial acquisitions by the addition of onsite parking spaces through reconfiguration of the site, or by acquisition and development of adjacent real estate for parking. All parking mitigation plans will be subject to the approval of Santa Ana.
- C. "Lead Agency" defined. As used herein, the term "Lead Agency" means the city (Irvine or Santa Ana) which is responsible for undertaking the

Improvement Work, either through its own employees or through independent contractors, except as otherwise provided herein below.

- D. Funding responsibilities. Irvine shall be responsible for 100% the Total Cost of the Roadway Improvement, less any portion the Total Costs of the Roadway Improvement for which any entity other than Santa Ana assumes responsibility. Irvine will support City of Santa Ana's effort in obtaining local, state and federal grants for the Overcrossing Improvement. Irvine and Santa Ana shall each be responsible for 50% of the Total Costs of the Overcrossing Improvement; provided, however, that if any entity(ies) and/or grant funds other than Irvine or Santa Ana contribute(s) to the Total Costs of the Overcrossing Improvement ("Third Party Contribution(s)"), Irvine's and Santa Ana's contribution shall each be reduced in an amount equal to 50% of said Third Party Contribution(s). Nothing herein shall be construed to restrict the ability of Irvine and/or Santa Ana to obtain funds to meet their funding responsibilities hereunder through the imposition of development fees or such other revenue measures (collectively "Development Fees") as may be deemed appropriate by Irvine and/or Santa Ana, and said Development Fees shall not be deemed to be Third Party Contributions.

Irvine shall have no responsibility to contribute in any way to the mitigation of the Project Impacts (as defined in Recital B above), whether through the payment of the Improvement Fair Share Contribution (as defined in Recital B above) or otherwise. Responsibility for mitigation of the Project Impacts shall belong to Santa Ana or such other entities (other than Irvine) as may assume responsibility to mitigate the Project Impacts.

- E. Lead Agency Responsibilities. Except as otherwise provided in Section 3 of this Agreement, Irvine shall be the Lead Agency for the Roadway Improvement, provided, however, that to the extent that Irvine is unable to acquire land necessary for the Roadway Improvement due to Irvine's inability to apply its powers

of eminent domain to properties located within Santa Ana, Santa Ana shall assume Lead Agency responsibilities with respect to such land acquisition. All design plans and environmental documentation for the Roadway Improvement that is prepared by or on behalf of Irvine as Lead Agency shall be subject to approval by Santa Ana, which approval shall not be unreasonably withheld or delayed; provided, however, that Santa Ana may require all design plans to conform to Santa Ana design standards in effect at the time such plans are submitted.

Santa Ana shall be the Lead Agency with regard to the Overcrossing Improvement. All alignment and design plans and environmental documentation for the Overcrossing Improvement that are prepared by or on behalf of Santa as Lead Agency shall be subject to approval by Irvine, which approval shall not be unreasonably withheld or delayed.

Santa Ana shall indemnify, defend and hold Irvine, its City Council members, officers, officials, employees, agents and representatives harmless from and against any and all actions, claims, demands, judgments, attorneys fees, costs, damage to persons or property, penalties, obligations, expenses or liabilities that may be asserted or claimed by any person or entity arising out of the negligent acts or omissions of Santa Ana in connection with the design, construction or maintenance of the Roadway Improvement or Overcrossing Improvement.

Irvine shall indemnify, defend and hold Santa Ana, its City Council members, officers, officials, employees, agents and representatives harmless from and against any and all actions, claims, demands, judgments, attorneys fees, costs, damage to persons or property, penalties, obligations, expenses or liabilities that may be asserted or claimed by any person or entity arising out of the negligent acts or omissions of Irvine in connection with the design, construction or maintenance of the Roadway Improvement or Overcrossing Improvement; provided, however, that upon completion of the Roadway Improvement, and upon satisfactory completion of inspection by appropriate personnel

for the City of Santa Ana, Irvine shall dedicate or convey the Roadway Improvement in its entirety to Santa Ana (to the extent necessary), and shall thereafter have no further liability or responsibility to Santa Ana in connection with the Improvement Work on the Roadway Improvement. However, Irvine shall cooperate with Santa Ana in the prosecution of any required construction defect claims in regard to the Roadway Improvements.

- F. Payment of costs. Irvine shall reimburse Santa Ana for any portion of the Total Costs of the Roadway Improvement incurred by Santa Ana if Santa Ana acts as Lead Agency, subject to the restrictions and limitations contained in this Agreement, as follows:

Santa Ana shall invoice Irvine not more than once monthly for costs incurred since the previous invoice. Each invoice shall be accompanied by a detailed statement of the nature of the costs incurred. Each proper invoice shall be paid by Irvine within thirty (30) days of receipt. The parties agree to meet and confer in good faith to resolve any dispute over any invoice or the need and necessity of any costs incurred. With regard to any action in eminent domain undertaken by Santa Ana in the implementation of this Agreement, Santa Ana may require commercially reasonable advance payments from Irvine at such times as Santa Ana determines to be appropriate to discharge its responsibilities in such action. The provisions of this paragraph may be modified by the mutual agreement of the City Managers of Irvine and Santa Ana.

- G. Monitoring of Building Permits. Irvine shall monitor the extent of development authorized by the issuance of building permits in the IBC and submit annual reports to Santa Ana. The Annual Report shall indicate the gross square feet of development authorized by building permits issued for development in the IBC.

H. Cooperation. The Parties shall cooperate in the implementation of this Agreement. In particular, Irvine will: (i) retain the Overcrossing Improvement and the Roadway Improvement in the County's Master Plan of Arterial Highways (MPAH), (ii) support Santa Ana in any application for grant funding for the Overcrossing Improvement, and (iii) support Santa Ana in requesting that Orange County Transportation Authority (OCTA) include the Overcrossing Improvement as part of the SR55 freeway widening project. Similarly, Santa Ana will: (i) support Irvine in any application for grant funding for the Roadway Improvement.

3. Payment by Irvine to Santa Ana of Irvine's share:

- A. Overcrossing Improvement. If Santa Ana does not have available funds necessary to enable it to perform its funding obligation for the Overcrossing Improvement at such time as Irvine is prepared to provide funds for the completion of the Overcrossing Improvements, the City Managers of Irvine and Santa Ana shall defer the construction of the Overcrossing Improvement to a mutually agreeable date, provided, however, in the event that parties can not mutually agree upon a deferred date, Irvine may choose to pay Santa Ana the amount of its obligations for the completion of the Overcrossing Improvement in order to be relieved and would in that event, notwithstanding any other provision of this Agreement, be permitted to issue building permits for development in excess of 51,000,000 square feet in the IBC,
- B. Amount of payments. The payment due to Santa Ana from Irvine pursuant to this section shall be the estimated Total Cost of the Overcrossing Improvement as agreed between Irvine and Santa Ana, to the extent of the work that remains to be done, at the time payment is made.
- C. Use of funds by Santa Ana. Any funds received by Santa Ana from Irvine pursuant to this section for the Overcrossing Improvement shall be maintained in a separate fund by Santa Ana, which fund shall be used solely for the completion of the Overcrossing Improvement.

4. Amendment of Santa Ana General Plan. Santa Ana shall process a General Plan Amendment, as necessary to accommodate the Roadway Improvement (the "GPA"). The Parties acknowledge that as part of the GPA, Santa Ana may alter its current designations for Dyer Road outside the area of the Roadway Improvement. Irvine shall not object to any portion of the GPA that is consistent with this Paragraph 4. Until Santa Ana amends its General Plan to accommodate the Roadway Improvement, or certifies to Irvine that the Santa Ana General Plan accommodates the Roadway Improvement, Irvine shall have no obligation to fund the Roadway Improvement.

5. Covenant Not to Sue. Each Party, and its respective agents, officers, employees, representatives and assigns hereby agrees and covenants that this Agreement forever satisfies any past, present, or future claims which the Party, and its agents, officers, employees, representatives or assigns had, has or may have against the other Party or its agents, officers, employees, representatives, and assigns arising out of the IBC Vision Plan, the 1992 Entitlements and the 1992 Agreement. Each Party hereto covenants not to file any future legal actions of whatever kind or nature against the other Party regarding any claim in connection with the IBC Vision Plan, the 1992 Entitlements and the 1992 Agreement, whether such claim is known or unknown, suspected or unsuspected, fixed or contingent.

6. Waiver of Civil Code Section 1542. With regard to matters arising from or related to IBC Vision Plan, the 1992 Entitlements and/or the 1992 Agreement, each of the Parties hereto expressly waives any and all rights that they may have under Civil Code section 1542 ("Section 1542") or any Federal or State statutory right, rules or principles of common law or equity or those of any other jurisdiction, government or political subdivision thereof, similar to Section 1542 ("Similar Provision"). Thus, no Party hereto may invoke the benefit of Section 1542 or any Similar Provision in order to prosecute or assert in any manner any claim released hereunder that arises from or relates to the IBC Vision Plan, the 1992 Entitlements and/or the 1992 Agreement. Section 1542 provides that: "a general

release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially effected his settlement with the debtor. "

Santa Ana Initials:

BR

Irvine initials:

SK

7. Integration. This Agreement represents the entire understanding of the Parties hereto. No prior or contemporaneous oral or written understanding shall be of any force or effect with respect to those matters covered in this Agreement. This Agreement may not be altered, amended, or modified except by mutual consent of the Parties hereto through a written instrument.
8. California Law. This Agreement shall be construed and interpreted both as to its validity and as to the performance of the Parties in accordance with the laws of the State of California.
9. Execution and Counterparts. This Agreement may be executed and delivered in any number of counterparts or copies ("Counterpart") by the Parties hereto.
10. Authority to Execute. Each person executing this Agreement on behalf of a Party hereto warrant that he or she is duly authorized to execute this Agreement on behalf of said Party and that by so executing this Agreement, each Party formally binds itself to the provisions of this Agreement. Each person executing this Agreement further acknowledges that he or she has obtained all necessary and legally required approvals for entry into this Agreement from legislative or governing boards and that such legislative or governing board has adopted a resolution, motion, ordinance or other action pursuant to State law and its own bylaws or ordinances for approval of this Agreement.
11. Notices. Every notice, demand, request, annual report, or other document or instrument delivered pursuant to this Agreement shall be in writing and shall either be personally delivered, sent by Federal Express or other reputable overnight courier, sent by facsimile transmission with the original subsequently

delivered by any other means authorized herein, or sent by certified United States mail, postage prepaid, return receipt requested, to the address set forth below for the applicable Party, or such other address as Parties may designate from time to time:

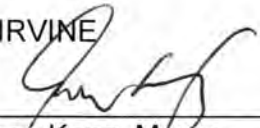
To the City: City of Irvine
City Hall
One Civic Center Plaza
P.O. Box 19575
Irvine, CA 92713
Attn: City Manager
cc: Director of Community Development
Director of Public Works
Telephone: (714) 724-6000
Fax: (714) 724-6075

To the City: City of Santa Ana
20 Civic Center Plaza
P.O. Box 1988
Santa Ana, CA 92702
Attn: City Manager
cc: Executive Director of Planning and Building
Executive Director of Public Works
Telephone: (714) 647-6900
Fax: (714) 647-6951


12. Severability. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
13. Amendment and Restatement: This Agreement amends and restates, and thereby supersedes in full, the 1992 Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment To and Restatement Of the 1992 Agreement as set forth below.

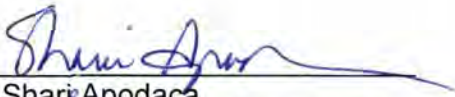
"Irvine"
CITY OF IRVINE

By: 
Sukhee Kang, Mayor

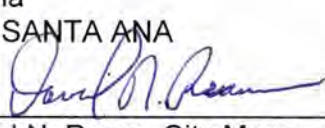
APPROVED AS TO FORM:

By: 
Philip D. Kohn
City Attorney

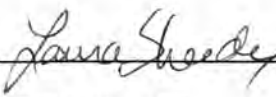
ATTEST:

By: 
Shari Apodaca
City Clerk of the City of Irvine

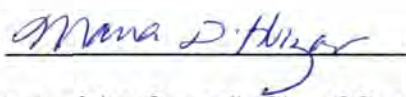
"Santa Ana"
CITY OF SANTA ANA

By: 
David N. Ream, City Manager

APPROVED AS TO FORM:

By: 
Laura Shockey
City Attorney

ATTEST:

By: 
Maria D. Hines
Clerk of the Council, City of Santa Ana

A 02 .5

REL: 11/20/92

AGREEMENT

This Agreement for IMPLEMENTING ROADWAY AND INTERCHANGE MITIGATION PROGRAM ("Agreement") is made and entered into as of this 24th day of November, 1992 (the "Effective Date"), by and between the City of Irvine, a California charter city ("Irvine") and the City of Santa Ana, a California municipal corporation ("Santa Ana") (collectively referred to as the "Parties").

R E C I T A L S

A. Irvine has certified Environmental Impact Report 88-ER-0087 (the "IBC EIR"), as adequate and complete and adopted General Plan Amendment No. 7234-GA, and Zoning Amendment 88-ZC-0135 (collectively the "IBC Rezoning") to amend the land use designation and zoning in that portion of the City known as the Irvine Business Complex (the "IBC"), more specifically defined as that area depicted on Exhibit "A," attached hereto and incorporated herein by this reference.

B. The IBC EIR analyzes the IBC Rezoning and concludes that the mitigation measures contained therein will adequately accommodate the traffic impacts which are anticipated to be generated by the IBC Rezoning.

C. Certain mitigation measures discussed in the IBC EIR and adopted as part of the IBC Rezoning are Roadway and Interchange Improvements which are to be constructed within the municipal boundaries of Santa Ana.

2750

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties hereto agree as follows:

1. Limit on new development in the IBC.

The parties hereto agree and stipulate that, as of the date of this Agreement, Irvine has approximately 39,846,000 square feet of development within the IBC. Except as otherwise provided in this Agreement, Irvine agrees that it will not issue building permits for development in the IBC which would cause the total development in the IBC (presently existing development plus development occurring after the date of this Agreement) to exceed 51,000,000 square feet until after the following street improvements, located in the City of Santa Ana, have been completed:

- (a) The widening of Dyer Road to eight (8) lanes from a point commencing just east of the SR-55 freeway northbound direct connector on-ramp to and including the Redhill-Dyer/Barranca Avenue intersection, as provided in the IBC EIR mitigation measures (numbers 1.a. and 2.p.) (the "Roadway Improvements").
- (b) An Alton Avenue overcrossing of the SR-55 freeway with high occupancy vehicle northbound and southbound drop ramps, as provided in the IBC EIR mitigation measures (numbers 1.d and 3.b.) (the "Interchange Improvements").

Irvine further agrees that in the event that, notwithstanding Irvine's agreement to limit the issuance of building permits as abovesaid, the total development in the IBC does exceed 51,000,000 square feet prior to the completion of the Roadway Improvements and

the Interchange Improvements:

- (a) Irvine shall be liable to Santa Ana for Irvine's share of the Total Costs (as defined in Section 2 hereinbelow) of the Interchange Improvements, to the extent such Total Costs remain outstanding, and shall pay such amount to Santa Ana. Any amounts received by Santa Ana pursuant to this paragraph for the Interchange Improvements shall be expended by Santa Ana in accordance with Section 3 hereinbelow.
- (b) Irvine shall deposit the Total Costs (as defined in Section 2 hereinbelow) of the Roadway Improvements, to the extent such Total Costs remain outstanding, in an interest bearing account in a financial institution acceptable to both Irvine and Santa Ana. Irvine shall not withdraw any of the principal of such amount except in connection with the design and construction of the Roadway Improvements, including but not limited to alignment studies and any environmental documentation which may be necessary in addition to the IBC EIR, costs of land acquisition (including any costs incurred in any eminent domain action), costs of design and construction, and administrative staff costs related to the Roadway Improvements. Any and all interest earned on the amounts deposited in such account shall be paid to Santa Ana.

Notwithstanding anything to the contrary in the IBC EIR or in the environmental findings approved by Irvine in its approval of

the IBC Rezoning, the parties hereto agree that the completion of the Roadway Improvements and the Interchange Improvements in accordance with this Agreement (and subject to the exceptions set forth in this Agreement) are appropriate and necessary mitigation measures for the IBC Rezoning under the California Environmental Quality Act.

2. Responsibilities of the Parties.

a. "Total Costs" defined. As used with reference to the Roadway Improvements and/or the Interchange Improvements, the term "Total Costs" means all costs incurred in the completion of those improvements, including, but not limited to, costs of preparation of alignment studies and any environmental documentation which may be necessary in addition to the IBC EIR, costs of land acquisition (including any costs incurred in any eminent domain action), costs of design and construction, and administrative staff costs.

b. "Lead Agency" defined. As used herein, the term "Lead Agency" means the city (Irvine or Santa Ana) which is responsible for undertaking the work necessary to complete the Roadway Improvements and/or the Interchange Improvements, including, but not limited to, preparation of alignment studies and any environmental documentation which may be necessary in addition to the IBC EIR, land acquisition, and design and construction, either through its own employees or through independent contractors, except as otherwise provided hereinbelow.

c. Funding responsibilities. Irvine shall be

responsible for 100% of the Total Costs of the Roadway improvements, exclusive of any portion thereof as to which any governmental entity other than Santa Ana may assume responsibility. Irvine and Santa Ana shall each be responsible for 50% of the Total Costs of the Interchange Improvements, exclusive of any portion thereof as to which any governmental entity other than Irvine or Santa Ana may assume responsibility. Nothing herein shall be construed to restrict the ability of either city to obtain funds to meet its funding responsibilities hereunder through the imposition of development fees or such other revenue measures as may be deemed appropriate by that city.

d. Lead Agency responsibilities. Except as otherwise provided in paragraph b of Section 3 of this Agreement, Irvine shall be the Lead Agency for the Roadway Improvements, provided, however, that to the extent that Irvine is unable to acquire land necessary for the Roadway Improvements due to Irvine's inability to exercise powers of eminent domain in the jurisdiction of the City of Santa Ana, Santa Ana shall assume Lead Agency responsibilities with respect to such land acquisition. Santa Ana shall be the Lead Agency with regard to the Interchange Improvements. All alignment and design plans and environmental documentation prepared by or on behalf of Irvine as Lead Agency shall be subject to approval by Santa Ana, which approval shall not be unreasonably withheld or delayed; provided, however, that Santa Ana may require all design plans to conform to Santa Ana design standards in effect at the time such plans are submitted.

Santa Ana shall indemnify, defend and hold Irvine, its councilmembers, officers, officials, employees, agents and representatives harmless from and against any and all actions, claims, demands, judgments, attorneys fees, costs, damage to persons or property, penalties, obligations, expenses or liabilities that may be asserted or claimed by any person or entity arising out of the negligent acts or omissions of Santa Ana in connection with the design, construction or maintenance of the Roadway Improvements or Intersection Improvements.

Irvine shall indemnify, defend and hold Santa Ana, its councilmembers, officers, officials, employees, agents and representatives harmless from and against any and all actions, claims, demands, judgments, attorneys fees, costs, damage to persons or property, penalties, obligations, expenses or liabilities that may be asserted or claimed by any person or entity arising out of the negligent acts or omissions of Irvine in connection with the design, construction or maintenance of the Roadway Improvements or Intersection Improvements.

e. Payment of costs. For any portion of Total Costs incurred by Santa Ana as Lead Agency, Irvine shall pay to Santa Ana Irvine's funding obligation for such costs, as determined pursuant to paragraph a of this section, as follows: Santa Ana shall invoice Irvine not more than once monthly for costs incurred since the previous invoice. Each invoice shall be accompanied by a detailed statement of the nature of the costs incurred. Each proper invoice shall be paid by Irvine within thirty (30) days of

receipt. The parties agree to meet in good faith to resolve any dispute over any invoice or the need and necessity of any costs incurred. With regard to any action in eminent domain action undertaken by Santa Ana in the implementation of this Agreement, Santa Ana may require payments from Irvine at such times as Santa Ana determines to be appropriate to discharge its responsibilities in such action. The provisions of this paragraph may be modified and/or elaborated by the mutual agreement of the City Managers of Irvine and Santa Ana.

f. Monitoring of building permits. Irvine shall monitor the extent of development authorized by the issuance of building permits in the IBC and submit quarterly reports to Santa Ana commencing on or about the first week of January, 1993 (the "Quarterly Report"). The Quarterly Report shall indicate the gross square feet of development authorized by building permits issued for development in the IBC.

g. Cooperation. The parties hereto agree to cooperate in the implementation of this Agreement. In particular, but without limitation, Santa Ana and Irvine shall exercise good faith in cooperating with the California Department of Transportation ("Caltrans") in negotiating and entering into all necessary cooperative agreements for the funding, design, and construction of the Interchange Improvements.

3. Payment by Irvine to Santa Ana of Irvine's share.

a. The Interchange Improvements. In the event that (1) Santa Ana does not have available funds necessary to

enable it to perform its funding obligation for the Interchange Improvements at such time as Irvine is prepared to provide funds for the completion of its funding obligations for the Interchange Improvements, or (2) Caltrans has not taken any and all actions required by it to permit the construction of the Interchange Improvements at such time as Irvine is prepared to provide funds for the completion of its funding obligations for the Interchange Improvements, the City Managers of Irvine and Santa Ana shall defer the construction of the Interchange Improvements to a mutually agreeable date; provided, however, that in the event the parties cannot mutually agree upon a deferred date, Irvine shall pay to Santa Ana the amount of its funding obligation for the Interchange Improvements, and Irvine shall thereupon be relieved of any further responsibility for the completion of the Interchange Improvements pursuant to Section 1 of this Agreement, and the completion of the Interchange Improvements shall no longer be condition precedent to the issuance of building permits for development in excess of 51,000,000 square feet in the IBC.

b. Amount of payments. The amount of the payment due to Santa Ana from Irvine pursuant to this Section shall be the estimated Total Cost of the Interchange Improvements, to the extent of the work that remains to be done, at the time payment is made.

c. Use of funds by Santa Ana. Any funds received by Santa Ana from Irvine pursuant to this Section for the Interchange Improvements shall be used for the completion of the Interchange Improvements.

4. Amendment of Santa Ana General Plan.

Within two years of the execution of this Agreement, Santa Ana shall, if necessary, take action to amend its General Plan to accommodate the Interchange Improvements contemplated by this Agreement. In the event of any litigation challenging the amendment of Santa Ana's general plan to accommodate the Interchange Improvements, the abovesaid time period shall be extended for such time as may be necessary to resolve such litigation. Irvine shall not object to that portion of the Santa Ana General Plan amendment relating to the Interchange Improvements. In the event that, after the expiration of the abovesaid time period, Santa Ana has not amended its General Plan to accommodate the Interchange Improvements at such time as Irvine is prepared to provide funds for the completion of its funding obligations for the Interchange Improvements, then the completion of the Interchange Improvements shall no longer be a condition precedent to the issuance of building permits for development in excess of 51,000,000 square feet in the IBC. Unless and until Santa Ana amends its General Plan to accommodate the Interchange Improvements, or certifies to Irvine that the Santa Ana General Plan accommodates the Interchange Improvements, Irvine shall have no obligation to fund the Interchange Improvements.

Within two years of the execution of this Agreement, Santa Ana shall take an action to amend its General Plan to accommodate the Roadway Improvement contemplated by this Agreement. In the event of any litigation challenging the amendment of Santa

Ana's general plan to accommodate the Roadway Improvement, the abovesaid time period shall be extended for such time as may be necessary to resolve such litigation. Irvine shall not object to that portion of the Santa Ana General Plan amendment relating to the Roadway Improvements or to any Santa Ana General Plan designation of any portion of Dyer Road outside of the area of the Roadway Improvements adopted to effectuate this Agreement. In the event that, after the expiration of the abovesaid time period, Santa Ana has not amended its General Plan to accommodate the Roadway Improvements at such time as Irvine is prepared to acquire land for the Roadway Improvements, then Irvine shall no longer have any obligation under this Agreement to construct or fund the Roadway Improvements.

5. Participation in Five-City Study.

Irvine shall not request Santa Ana's participation in the Five-City study referenced in IBC EIR Condition No. 8 and IBC Mitigation Monitoring and Reporting Checklist Mitigation Measure No. 7A.

6. Payment for Main Street Widening.

Irvine shall not request that Santa Ana contribute any funds whatsoever for the widening of Main Street to six (6) lanes between Sunflower Avenue and San Diego Creek.

7. Covenant Not to Sue.

Each Party, and its respective agents, officers, employees, representatives and assigns hereby agrees and covenants that this Agreement forever satisfies any past, present, or future

claims which the Party, and its agents, officers, employees, representatives or assigns had, has or may have against the other Party or its agents, officers, employees, representatives, and assigns arising out of the IBC Rezoning and/or the preparation and certification of the IBC EIR. As a result, each Party hereto covenants not to file any future legal actions of whatever kind or nature against the other Party regarding any claim in connection with the IBC Rezoning or the IBC EIR whether such claim is known or unknown, suspected or unsuspected, fixed or contingent.

8. Waiver of Civil Code Section 1542.

Each of the Parties hereto expressly waives any and all rights under Section 1542 of the California Civil Code or any Federal or State statutory right, rules or principles of common law or equity or those of any other jurisdiction, government or political subdivision thereof, similar to Civil Code Section 1542 (hereinafter referred to "Similar Provision"). Thus, no Party hereto may invoke the benefit of Section 1542 or any Similar Provision in order to prosecute or assert in any manner any claim released hereunder. Section 1542 provides that:

"a general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially effected his settlement with the debtor."

9. Integration.

This Agreement represents the entire understanding of the Parties hereto. No prior or contemporaneous oral or written

understanding shall be of any force or effect with respect to those matters covered in this Agreement. This Agreement may not be altered, amended, or modified except by mutual consent of the Parties hereto through a written instrument.

10. Attorneys Fees.

In the event that any Party hereto should bring any action, suit or other proceeding to remedy, prevent, or obtain relief from a breach of this Agreement or arising out of a breach of this Agreement, or contesting the validity of this Agreement or attempting to rescind, negate, modify, or reform this Agreement, or any of the terms or provisions of this Agreement, the prevailing Party shall recover from such Party those reasonable attorneys fees and costs, including expert fees, incurred in each and every such action, suit, or other proceeding, including any and all appeals or petitions therefrom.

11. California Law.

This Agreement shall be construed and interpreted both as to validity and performance of the Parties in accordance with the laws of the State of California.

12. Execution and Counterparts.

This Agreement may be executed and delivered in any number of counterparts or copies ("Counterpart") by the Parties hereto.

13. Authority to Execute.

The persons executing this Agreement on behalf of the Parties hereto warrant that they are duly authorized to execute

this Agreement on behalf of said Parties and that by so executing this Agreement, the Parties hereto are formally bound to the provisions of this Agreement. Each person further acknowledges that he or she has obtained all necessary and legally required approvals for entry into this Agreement from legislative or governing boards and that it has adopted a resolution, motion, ordinance or other action pursuant to State law and its own bylaws or ordinances for approval of this Agreement.

14. Notices.

Every notice, demand, request, or other document or instrument delivered pursuant to this Agreement shall be in writing and shall either be personally delivered, sent by Federal Express or other reputable over-night courier, sent by facsimile transmission with the original subsequently delivered by any other means authorized herein, or sent by certified United States mail, postage prepaid, return receipt requested, to the address set forth below for the applicable Party, or such other address as Parties may designate from time to time:

To the City: City of Irvine
City Hall
One Civic Center Plaza
P.O. Box 19575
Irvine, CA 92713
Attn: City Manager
cc: Director of Community Development
Telephone: (714) 724-6000
Fax: (714) 724-6075

To the City: City of Santa Ana
20 Civic Center Plaza
P.O. Box 1988
Santa Ana, CA 92702
Attn: City Manager
cc: Executive Director of Planning and
Building
Telephone: (714) 647-6900
Fax: (714) 647-6951

15. Severability clause.

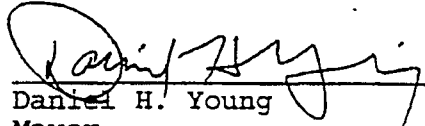
The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

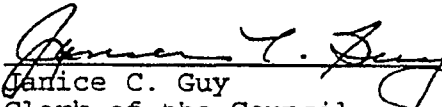
IN WITNESS WHEREOF, the Parties have executed this Agreement on the date appearing next to their signatures.

Dated: 12/23/92

CITY OF SANTA ANA

ATTEST:

by 
Daniel H. Young
Mayor

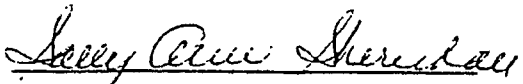

Janice C. Guy
Clerk of the Council

APPROVED AS TO FORM:


Edward J. Cooper
City Attorney

CITY OF IRVINE

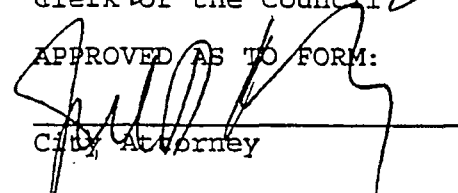
Dated: 11-24-92

by 
Mayor

ATTEST:


Clerk of the Council

APPROVED AS TO FORM:


City Attorney

Approved as to content


City Manager



Appendix D: Agreement with Costa Mesa

AGREEMENT

This Agreement for IMPLEMENTING THE IBC ROADWAY MITIGATION AND MONITORING PROGRAM ("Agreement") is made and entered into as of this 4th day of January, 1993 (the "Effective Date"), by and between the City of Irvine, a California charter city ("Irvine") and the City of Costa Mesa, a California municipal corporation ("Costa Mesa") (collectively referred to as the "Parties").

R E C I T A L S

A. Irvine has certified Environmental Impact Report 88-ER-0087 (the "IBC EIR"), as adequate and complete and adopted General Plan Amendment No. 7234-GA, and Zoning Amendment 88-ZC-0135 (collectively the "IBC Rezoning") to amend the land use designation and zoning in that portion of the City known as the Irvine Business Complex (the "IBC"), more specifically defined as that area depicted on Exhibit "A," attached hereto and incorporated herein by this referenced.

B. The IBC EIR analyzes the IBC Rezoning and concludes that the traffic mitigation measures contained therein (the "IBC Traffic Mitigation Measures") will adequately accommodate the traffic impacts which are anticipated to be generated by the IBC Rezoning.

C. The Parties hereto wish to monitor the traffic generated as a result of the IBC Rezoning to allow them to make timely decisions on the funding and implementation of the IBC Traffic Mitigation Measures.

C O V E N A N T S:

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties hereto agree as follows:

1. Mitigation Monitoring Program.

Irvine shall monitor the implementation of the IBC Traffic Mitigation Measures in the manner provided for in the mitigation monitoring program adopted by Irvine pursuant to City Council Resolution No. 92-162 (the "Mitigation Monitoring Program").

2. Implementation of the Development Deferral Program.

Irvine shall implement the development deferral program contained within in Appendix "B" of the IBC EIR (the "DDP") in either situation provided below:

(a) Irvine shall implement the DDP if the Mitigation Monitoring Program discloses that traffic generated by the IBC Rezoning has caused any arterial within Costa Mesa to exceed that arterial's applicable level of service ("LOS"). For the purpose of this Agreement an arterial's applicable LOS shall be that minimum LOS adopted for that arterial in the Circulation Element of the Costa Mesa General Plan as of the Effective Date. The DDP will remain in effect until such time as Irvine has devised and funded a mitigation measure which will reduce the IBC generated traffic on the arterial to the arterial's applicable LOS; or

(b) Irvine shall implement the DDP if, within three years prior to the scheduled

implementation of any IBC Traffic Mitigation Measure within Costa Mesa, Irvine determines that it will not have sufficient funds to actually construct that mitigation measure. The DDP will remain in effect until Irvine determines that it can fund the previously approved mitigation measure, or it devises a substitute mitigation measure acceptable to Costa Mesa and determines that the substitute mitigation measure can be funded.

3. Additional Mitigation.

In the event that the Mitigation Monitoring Program discloses that traffic generated as a result of the IBC Rezoning is having significant impact within Costa Mesa in excess of the traffic impacts discussed in the IBC EIR, Irvine and Costa Mesa shall meet and confer on the appropriate method to mitigate that significant impact (the "Supplemental Mitigation Measure(s)"). Irvine shall contribute its proportionate fair share of the cost of implementing the Supplemental Mitigation Measure(s). Irvine's proportionate fair share of the cost of the Supplemental Mitigation Measure(s) shall be based upon that percentage of IBC generated traffic which is actually attributable to the need for implementation of the Supplemental Mitigation Measure(s).

4. Analysis of Traffic Study Assumptions.

The City of Irvine will, at its own cost, hire a consultant to independently:

- a. Conduct a traffic analysis of IBC EIR traffic assumptions after the completion of construction following issuance of building permits for 46 million gross square feet (approximately 40 million gross square feet existing today).
- b. More specifically, all EIR traffic assumptions affecting the City of Costa Mesa will be analyzed which may include factors such as trip rates, TDM rates, and occupancy.

5. Covenant Not to Sue.

Each Party, and its respective agents, officers, employees, representatives, and assigns hereby agrees and covenants that this Agreement forever satisfies any past, present, or future claims which the Party, and its agents, officers, employees, representatives or assigns had, has or may have against the other Party or its agents, officers, employees, representatives, and assigns arising out of the IBC Rezoning and/or the preparation and certification of the IBC EIR. As a result, each Party hereto covenants not to file any future legal actions of whatever kind or nature against the other party regarding any claim in connection with the IBC Rezoning or the IBC EIR whether such claim is known or unknown, suspected or unsuspected, fixed or contingent.

6. Waiver of Civil Code Section 1542.

Each of the Parties hereto expressly waives any and all rights under Section 1542 of the California Civil Code or any Federal or State statutory right, rules or principles of common law

or equity or those of any other jurisdiction, government or political subdivision thereof, similar to Civil Code Section 1542 (hereinafter referred to "Similar Provision"). Thus, no Party hereto may invoke the benefit of Section 1542 or any Similar Provision in order to prosecute or assert in any manner any claim released hereunder. Section 1542 provides that:

"a general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially effected his settlement with the debtor."

7. Integration.

This Agreement represents the entire understanding of the Parties hereto. No prior or contemporaneous oral or written understanding shall be of any force or effect with respect to those matters covered in this Agreement. Except as set forth in Sections 2(e) and 3(a) above, this Agreement may not be altered, amended, or modified except by mutual consent of the Parties hereto through a written instrument.

8. Attorneys Fees.

In the event that any Party hereto should bring any action, suit or other proceeding to remedy, prevent, or obtain relief from a breach of this Agreement or arising out of a breach of this Agreement, or contesting the validity of this Agreement or attempting to rescind, negate, modify, or reform this Agreement or any of the terms or provisions of this Agreement, the prevailing Party shall recover from such Party those reasonable attorneys fees and costs, including expert fees, incurred in each and every such

action, suit, or other proceeding, including any and all appeals or petitions therefrom.

9. California Law.

This Agreement shall be construed and interpreted both as to validity and performance of the Parties in accordance with the laws of the State of California.

10. Execution and Counterparts.

This agreement may be executed and delivered in any number of counterparts or copies ("Counterpart") by the Parties hereto.

11. Authority to Execute.

The persons executing this Agreement on behalf of the Parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said Parties and that by so executing this Agreement, the Parties hereto are formally bound to the provisions of this Agreement. Each person further acknowledges that he or she has obtained all necessary and legally required approvals for entry into this Agreement from legislative or governing boards and that it has adopted a resolution, motion, ordinance or other action pursuant to State law and its own bylaws or ordinances for approval of this Agreement.

12. Notices.

Every notice, demand, request, or other document or instrument delivered pursuant to this Agreement shall be in writing and shall either be personally delivered, sent by Federal Express or other reputable over-night courier, sent by facsimile transmission with the original subsequently delivered by any other

means authorized herein, or sent by certified United States mail, postage prepaid, return receipt requested, to the address set forth below for the applicable Party, or such other address as Parties may designate from time to time:

To Irvine: City of Irvine
City Hall
One Civic Center Plaza
P.O. Box 19575
Irvine, CA 92713
Attn: City Manager
cc: Director of Community Development
Telephone: (714) 724-6000
Fax: (714) 724-6075

To Costa Mesa: City of Costa Mesa
77 Fair Drive
P.O. Box 1200
Costa Mesa, CA 92626
Attn: City Manager
cc: Executive Director of Planning and Building
Telephone: (714) 754-5327
Fax: (714)

13. Severability clause.

The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement by their signature as appearing below.

CITY OF COSTA MESA

ATTEST:

Eileen P. Phinney
Clerk of the Council

by 
Mayor

APPROVED AS TO FORM:

Thomas Kathel 11-18-92
City Attorney

CITY OF IRVINE

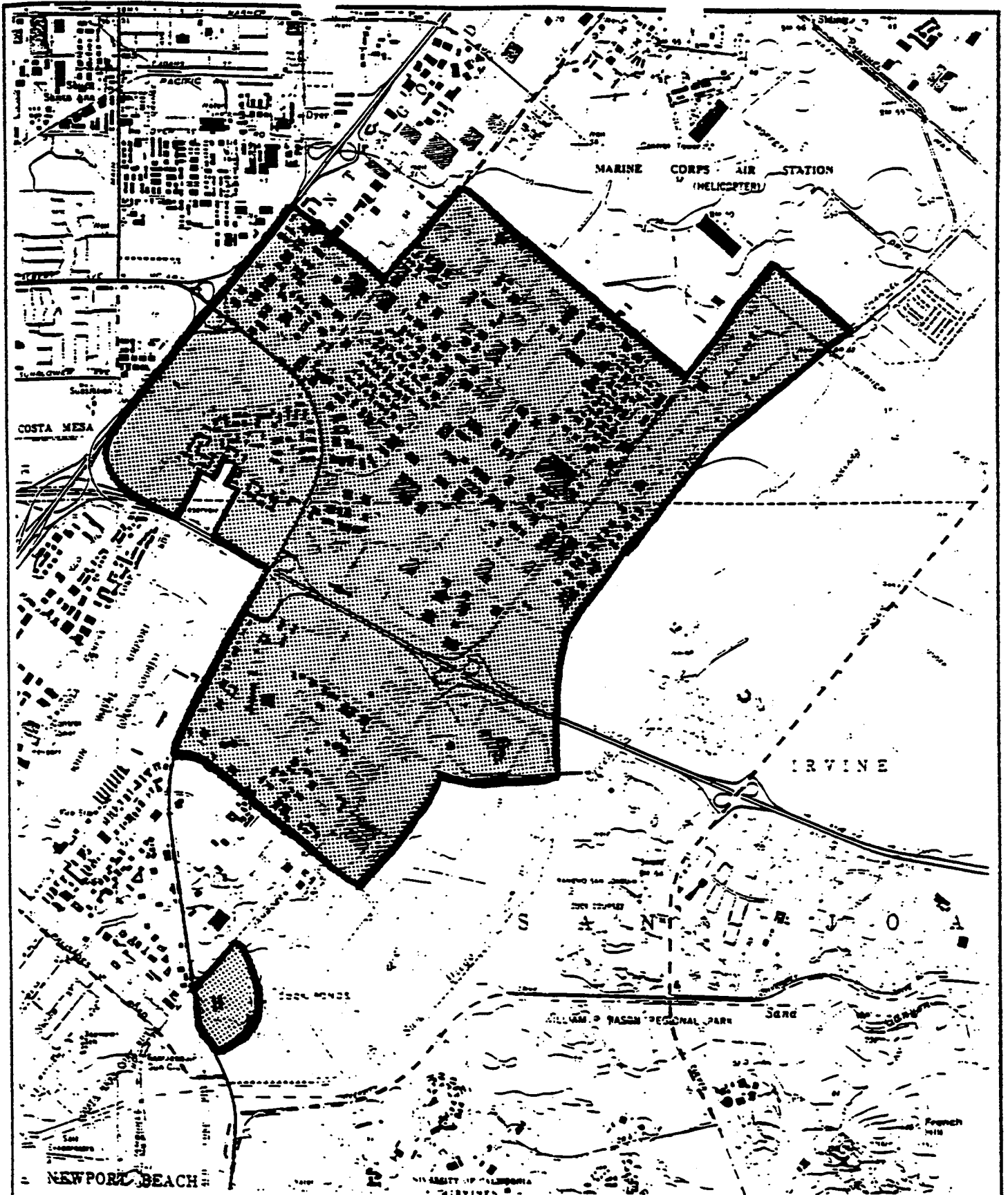
ATTEST:

Lacey C. Lacey
Clerk of the Council

by Lacey Ann Sherman
Mayor

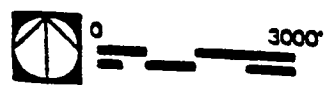
APPROVED AS TO FORM:

[Signature]
City Attorney



Source: U.S.G.S. Topographic Map
Tustin Quadrangle, Revised 1981

NEWPORT BEACH
Project Site



ATTACHMENT A

IRVINE BUSINESS COMPLEX
Site Vicinity Map



Appendix E: Agreement with Caltrans

TRAFFIC MITIGATION AGREEMENT

THIS AGREEMENT entered into and shall be effective on this 25th day of January, 2011 by and between the State of California, acting by and through its Department of Transportation, hereinafter referred to as "Department," and the City of Irvine, hereinafter referred to as "Agency." The Department and Agency are collectively referred to as the "Parties."

RECITALS

- A. WHEREAS, on July 13, 2010 Agency certified the Final Environmental Impact Report (FEIR) for certain General Plan Amendments and Zone Change that are collectively known as the Irvine Business Complex (IBC) Vision Plan. That same evening, the Agency approved the General Plan Amendment for the IBC Vision Plan, and conducted the first reading for the Zone Change for the IBC Vision Plan. On July 27, 2010, the Agency conducted the second reading for the Zone Change for the IBC Vision Plan. The IBC Vision Plan is hereinafter referred to as the "Proposed Land Use Project." The Proposed Land Use Project is generally bounded by the former Tustin Marine Corps Air Station (MCAS) to the north, the San Diego Creek channel to the east, John Wayne Airport and Campus Drive to the south and State Route 55 (SR-55) to the west. The Proposed Land Use Project is bordered by the cities of Newport Beach, Santa Ana, Costa Mesa and Tustin. The Proposed Land Use Project allow for and/or contemplates (i) an increase in total units in the IBC from 9,401 units to 15,000 units, and (ii) a reduction of 2,715,062 square feet of nonresidential development (measured in office equivalency). In addition, a total of 2,038 density bonus units could be allowed (and are therefore assumed as part of the project) in accordance with state law, for a total of 17,038 units; and
- B. WHEREAS, Mitigation Measure 13-4 of the FEIR ("MM 13-4") requires that an agreement between Parties be executed to address fair-share funding responsibilities for certain improvements within the jurisdiction and control of Department that will ultimately offset impacts to the State Highway System (SHS) as a result of the Proposed Land Use Project; and
- C. WHEREAS, as set forth in the letters dated October 21, 2009 (Exhibit A) and November 12, 2009 (Exhibit B), each attached hereto and incorporated herein by reference, the Parties agree on the methodology used to (i) identify impacts to the SHS as a result of the Proposed Land Use Project and (ii) establish Agency's pro-rata share of funding responsibilities to offset and mitigate for impacts to the SHS as a result of the Proposed Land Use Project; and

D. WHEREAS, a Traffic Impact Study (TIS) identifies various impacts to the SHS as a result of the Proposed Land Use Project. The SHS facilities that the TIS identifies as being impacted by the Proposed Land Use Project are listed below. Each listed facility shall be referred to as an “Individual SHS Project”. Each Individual SHS Project displays Agency’s corresponding pro-rata funding percentage of the mitigation responsibility, based on the methodology described in Exhibit A and Exhibit B:

- Northbound Interstate (I)-5 mainline: Jamboree to Newport (1.8% fair-share)
- Northbound I-5 mainline: Newport to State Route (SR)-55 (1.7% fair-share)
- Southbound I-5 mainline: Jamboree to Tustin Ranch (2.3% fair-share)
- Southbound I-5 mainline: Tustin Ranch to Red Hill (2.3% fair-share)
- Southbound I-5 connector: SR-55 to southbound I-5 (2.3% fair-share)
- Northbound I-405 mainline: Jamboree to MacArthur (2.2% fair-share)
- Northbound I-405 off-ramp: Culver (1.8% fair-share)
- Northbound I-405 off-ramp: MacArthur (7.3% fair-share)
- Northbound I-405 on-ramp: MacArthur (3.8% fair-share)
- Southbound I-405 mainline: Jamboree to MacArthur (2.9% fair-share)
- Southbound I-405 off-ramp: Jamboree (21.6% fair-share)
- Southbound I-405 on-ramp loop: Bristol (7.5% fair-share)
- Southbound I-405 connector: I-405 to southbound SR-55 (3.3% fair-share)
- Northbound SR-55 mainline: I-405 to MacArthur (3.3% fair-share)
- Northbound SR-55 mainline: MacArthur to Dyer (3.0% fair-share)
- Northbound SR-55 mainline: Dyer to Edinger (2.7% fair-share)
- Northbound SR-55 off-ramp: Baker (1.1% fair-share)
- Northbound SR-55 direct on-ramp: Dyer (3.6% fair-share)
- Southbound SR-55 mainline: I-405 to MacArthur (4.8% fair-share)
- Southbound SR-55 mainline: MacArthur to Dyer (4.1% fair-share)
- Southbound SR-55 on-ramp: Baker (3.1% fair-share)
- Southbound SR-55 loop on-ramp: MacArthur (8.0% fair-share)
- Northbound SR-73 on-ramp: Campus (6.1% fair-share)
- Southbound SR-73 off-ramp: Jamboree (4.0% fair-share); and

E. WHEREAS, the Parties have agreed upon a feasible improvement at each Individual SHS Project location that provides adequate mitigation of the associated Proposed Land Use Project impacts; and

F. WHEREAS, the Parties have agreed that Agency’s total funding commitment to offset the Proposed Land use Project impacts on SHS facilities will not exceed the amount of \$7,025,962 (Total Fair-Share Contribution), as more particularly set forth in Exhibit C attached hereto; and

- G. WHEREAS, Agency intends to adopt a fee program imposed on future development within the IBC (“IBC Transportation Fee Program” or “Program”) that, among other things, will collect the Total Fair Share Contribution; and
- H. WHEREAS, the Total Fair Share Contribution constitutes a percentage of the total amount forecasted to be collected through the IBC Transportation Fee Program; and
- I. WHEREAS, Agency will segregate, and devote solely to the payment of the Total Fair Share Contribution in accordance with this Agreement, a percentage of the incoming Program funds equivalent to the ratio of the Total Fair Share Contribution to the remainder of the Program funds (\$7,025,962 / Total Fee Program Amount at Time of Segregation) of every dollar collected through the IBC Transportation Fee Program (the “Segregated Amount”). This ratio will be adjusted as funds are expended from either the Segregated Amount and/or the remainder of the Program funds; and
- J. WHEREAS, the Parties have agreed that Agency will not contribute any funding towards improvement of the Individual SHS Project identified as Northbound I-405 off-ramp at Culver because the Agency will mitigate this location as an intersection impact identified in the FEIR and TIS; and
- K. WHEREAS, Agency now desires to fulfill the requirements of MM 13-4.

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

AGREEMENT

- 1. Parties agree that Agency’s total fair share contributions toward Individual SHS Projects shall not exceed the Total Fair-Share Contribution amount. For so long as Agency’s cumulative contributions toward the Individual SHS Projects remains below Agency’s Total Fair-Share Contribution amount, Agency shall be required to pay its fair share contribution, up to the then existing total of the Segregated Amount, to each Individual SHS Project.
- 2. Subject to the conditions and limitations on the amount and timing of funding set forth in this Agreement, the Parties agree to execute a separate Contribution Cooperative Agreement authorizing the transfer of funds for each and every Individual SHS Project at least 180 days prior to scheduled date of commencement of construction. So long as the Contribution Cooperative Agreement(s) is(are) fully consistent with the terms of this Agreement, Agency authorizes the City Manager to execute Contribution Cooperative Agreement(s) on behalf of Agency.

3. Parties agree to include the following general conditions when developing each Contribution Cooperative Agreement: (i) provide Agency with 60 calendar days to pay invoice, once it has been received, (ii) each invoice from Department will bill in the form of a lump sum, (iii) if, at the time the Contribution Cooperative Agreement is being prepared, the Segregated Amount held by Agency is less than the anticipated fair share contribution for an Individual SHS Project, the Contribution Cooperative Agreement will consider alternative billing arrangements such that Agency may remit to Department additional Segregated Amounts within a reasonable time as additional fees under the IBC Transportation Fee Program are paid to the Agency, and (iv) if, following Agency's payment of a fair share contribution toward an Individual SHS Project, Department's plans for construction of said Individual SHS Project are terminated or delayed for a period exceeding one year, Department shall refund Agency's fair share contribution toward said individual SHS Project; provided however, that said refund shall be without prejudice to Department's ability to re-invoice Agency for a fair share contribution to said Individual SHS Project if and when construction plans for said project are re-activated.
4. If Agency's fair share contribution to an Individual SHS Project would cause Agency's cumulative contributions under this Agreement to exceed the Total Fair Share Contribution amount, then Agency shall only be responsible to pay such amount as would result in the cumulative contributions under this Agreement equaling the Total Fair Share Contribution amount.
5. If, by December 31, 2040, the Department fails to utilize any portion of Agency's Total Fair-Share Contribution, those remaining funds shall be released from the commitments of this Agreement.
6. Agency's Total Fair-Share Contribution shall fully satisfy Agency's obligation to participate in the mitigation of traffic impacts per MM 13-4 of the FEIR. Agency will not be required to fund any additional improvements that may arise from the Proposed Land Use Project.
7. Department shall use the Total Fair-Share Contribution, and each and every portion thereof, for the purpose of mitigating impacts to the SHS as a result of the Proposed Land Use Project. Department may allocate a portion of funds towards improvements that have not yet been identified, but would provide equal or greater mitigation value than one or more of the Individual SHS Project(s), identified in Exhibit C of this Agreement, to offset the Proposed Land Use Project impacts.
8. Department shall advertise, award and administer (AAA) the construction contract for each and every project that utilizes Total Fair-Share Contribution funds.
9. Department shall not use Total Fair-Share Contribution funds for projects off the SHS, unless a cooperative agreement ("Cooperative Agreement") is first developed and executed by the Parties that (i) clearly demonstrates a nexus, (ii) transfers AAA responsibilities, (iii) addresses maintenance responsibilities, and (iv) provides all

necessary and standard language including indemnification, document retention, wage requirements, and other associated commitments.

10. This Agreement shall expire upon the earliest of the following occurrences: (i) when Department has expended the entire Total Fair-Share Contribution; (ii) when all unspent Total Fair-Share Contribution funds are returned to Agency; or (iii) on December 31, 2040.
11. All notices, transmittals of documentation and other writings required or permitted to be delivered or transmitted to either of the Parties under this Agreement shall be personally served or deposited in a United States mail depository, first class postage prepaid, and addressed as follows:

If to the Agency: City of Irvine
 One Civic Center Plaza
 P.O. Box 19575
 Irvine, CA 92623
 Attention: City Manager

If to the Department: California Department of Transportation
 District 12
 3347 Michelson Drive, Suite 100
 Irvine, CA 92612
 Attention: Deputy District Director, Transportation
 Planning and Local Assistance

All such notices and communications shall be deemed to have been duly given when delivered by hand, if personally delivered. Except where service is by registered or certified mail, return receipt requested, service of any instrument or writing shall be deemed completed forty-eight (48) hours after deposit in the United States mail depository.

12. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, other than the Parties hereto and their respective authorized successors and assigns, any legal or equitable right, remedy or claim under or in respect to this Agreement or any of the provisions contained herein. This Agreement and each and every condition and provision hereof are intended to be for the sole and exclusive benefit of the Agency and the Department, and their respective authorized successors and assigns, and for the benefit of no other person or entity.
13. This Agreement shall be governed by and construed in accordance with the laws of the State of California, and any dispute arising from or related to the interpretation or performance of this agreement shall be commenced in the Superior Court of the State of California, County of Orange.


14. No failure on the part of either Party hereto to insist upon or demand the strict performance by the other Party of any covenant, term, condition or promise of this Agreement, or to exercise any right or remedy as a result of any breach of the Agreement, shall constitute a continuing waiver of any such breach or of any such covenant, term, condition, promise, right or remedy. No waiver of any breach shall in any way affect, alter or modify this Agreement, but each and every covenant, term, condition and promise of this Agreement shall continue in full force and effect. No single or partial exercise of any right, remedy, power or privilege under this Agreement shall preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege under this Agreement.
15. Nothing in this Agreement shall be construed to make the Parties joint ventures or partners, or to create any relationship of principal and agent, and the Parties specifically disavow any such relationship between one another.
16. This Agreement has been negotiated at arms' length between persons sophisticated and knowledgeable in the matters addressed herein, and both Parties have had the opportunity to consult with legal counsel of such party's choosing regarding this Agreement. Accordingly, any rule of law (including California Civil Code § 1654) or legal decision that would require interpretation of this Agreement against the drafter hereof is not applicable and is waived.
17. This Agreement is intended by the Parties as a final expression of their agreement and is intended to be a complete and exclusive statement of the agreement and understanding of the Parties hereto in respect to the subject matter contained herein. There are no restrictions, promises, warranties or undertakings relating to the subject matter of this Agreement, other than those set forth or referred to in this Agreement.
18. Each officer of the Department and the Agency affixing his or her signature below thereby warrants and represents that he or she has the full legal authority to bind his or her respective party to all of the terms, conditions and provisions of this Agreement; that his or her respective party has the full legal right, power, capacity and authority to enter into this Agreement and perform all the obligations herein; and that no other approvals or consents are necessary in connection therewith.
19. Neither this Agreement nor any provision hereof may be changed, waived, discharged or terminated, except upon the duly authorized execution of a subsequent agreement in writing executed by all of the Parties.
20. Neither Agency nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by Department and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon Department under this Agreement. Department and/or its agents shall fully defend, indemnify and save harmless Agency and all of its officers and employees from all claims, suits, or actions of every name, kind and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or

other theories or assertions of liability occurring by reason of anything done or omitted to be done by Department and/or its agents under this Agreement.


21. Neither Department nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by Agency and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon Agency under this Agreement. Agency and/or its agents shall defend, indemnify and save harmless Department and all of its officers and employees from all claims, suits, or actions or every name, kind and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by Agency and/or its agents under this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as set forth below.

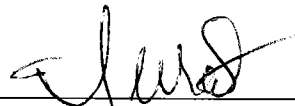
CALIFORNIA DEPARTMENT OF
TRANSPORTATION

By: 
Cindy Quon
Director, District 12

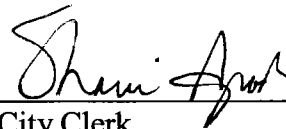
CITY OF IRVINE

By: 
Sukhee Kang
Mayor

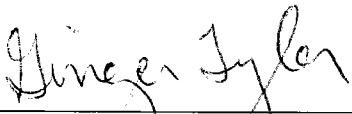
APPROVED AS TO FORM AND
PROCEDURE:

By: 
Deputy Attorney,
Department of Transportation

ATTEST:

By: 
City Clerk

APPROVED AS TO FINANCIAL TERMS
AND POLICIES:

By: 
Headquarters Accounting Administrator,

APPROVED AS TO FORM:

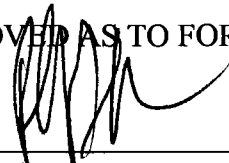
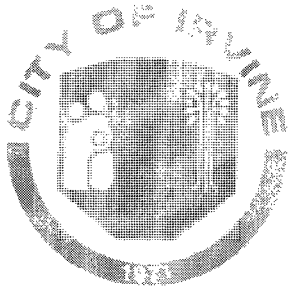
By: 
City Attorney

Exhibit A

(October 21, 2009 letter)



Public Works Department

www.ci.irvine.ca.us

City of Irvine, 100 Center Plaza, P.O. Box 14875, Irvine, California 92614-0875

(949) 724-6000

October 21, 2009

Ryan Chamberlain
Caltrans District 12
3337 Michelson Drive Suite 380
Irvine, CA 92612-8894

Dear Mr. Chamberlain:

This letter is to follow up on our recent follow up discussions regarding the proposed methodology used for analyzing the traffic impacts of the proposed project in the IBC Vision Plan ("Project") on the Caltrans facilities in the project study area. Based on our discussion and follow up phone call, the city is proposing to use the following two-tiered approach, revised traffic analysis methodology and the indicated fair share formula instead of previously indicated methodology documented in our October 15, 2009 letter:

1. Evaluate freeway mainline segments and ramps based on peak hour V/C ratios. If the V/C ratio indicates LOS F for a given freeway mainline segment or ramp, then the Highway Capacity Manual (HCM) methodology indicated below as the second step of this two tiered approach is not needed for that freeway mainline segment or ramp.
2. Apply the HCM methodology to determine the LOS. This second step will only be taken for a freeway mainline segment if the V/C ratio analysis indicates that the mainline segment operates at LOS D/E cusp (0.89) and if the Project contributes greater than 200 vehicle trips per hour (based on the comparison of no-project and with-project V/C ratios) to a freeway mainline segment. This second step will only be taken for a ramp if the V/C ratio analysis indicates that the ramp operates at LOS D/E cusp (0.89) and the Project contributes greater than 30 vehicle trips per hour to a ramp.

Traffic Analysis Methodology

Level of Service (LOS) Targets:

Freeway Mainline Segments: A significant impact occurs when:

- a. The segment LOS is better than D/E cusp (<0.89) without the project and the project adds additional trips that degrades the segment beyond the LOS D/E

cusps and the project contributes more than 200 vehicles per hour once beyond the D/E cusp, or

- b. The segment is at LOS D/E cusp or worse (≥ 0.89) before project and the project contributes greater than 200 vehicle trips per hour.

Off-Ramps and On-Ramps: A significant impact occurs when:

- a. The ramp LOS is better than D/E cusp (< 0.89) without the project and the project adds additional trips that degrades the segment beyond the LOS D/E cusp and the project contributes more than 30 vehicles per hour once beyond the D/E cusp, or
- b. The ramp is at LOS D/E cusp or worse (≥ 0.89) without the project and the project contributes greater than 30 vehicle trips per hour.

Ramp Intersections:

- Both the Intersection Capacity Utilization (ICU) analysis methodology and the HCM intersection analysis methodology will be applied to determine intersection levels of service. The performance criteria at the ramp intersections will be based on the performance criteria of the City in which the intersection is located. A significant impact occurs when a given ramp intersection is at an unacceptable LOS (based on either the ICU or HCM analysis results) and the project contribution exceeds impact threshold applied by the City in which the intersection is located, based on the comparison of no-project and with-project ICU values.

Equitable Share Responsibility

Consistent with recently approved traffic studies for General Plan Amendment and Zone Changes relating to Planning Areas 1, 5B, 6, 8, 9, 18, 33, 34, 39 and 40, and Orange County Great Park, the City will conduct the equitable share responsibility toward feasible improvements for freeway segments and ramps based on the following formula:

$$\text{Equitable Share Responsibility} = \frac{\text{Future with Project} - \text{Future No Project}}{\text{Future with Project}}$$

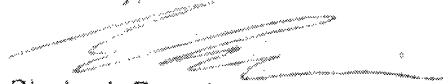
The additional trips added that bring any segment to the D/E cusp would not need to be considered when calculating fair share responsibility toward feasible improvements. Only those additional trips added once beyond the D/E cusp would be used for the equitable share calculations.

Upon the completion of our traffic analysis, we will work closely with your staff to identify feasible improvements for the impacted facilities. We appreciate your time in

October 21, 2009
Fair Share Calculation
Page 3

working closely with us on the proposed methodologies. Please feel free to contact me at (949) 724-7526 if you have any questions regarding this letter.

Sincerely,



Shohreh Dupuis
Manager of Transit and Transportation

cc: Christopher Herre, Caltrans District 12
James Pinheiro, Caltrans District 12
Jose Hernandez, Caltrans District 12
Charlie Larwood, OCTA

Exhibit B

(November 12, 2009 letter)

DEPARTMENT OF TRANSPORTATION

District 12
3337 Michelson Drive, Suite 380
Irvine, CA 92612-8894
Tel: (949) 724-2267
Fax: (949) 724-2592



*Flex your power!
Be energy efficient!*

November 12, 2009

Shohreh Dupuis
City of Irvine
Public Works Department
One Civic Center Plaza
Irvine, California 92623

File: IGR/CEQA
SCH #: 2007011024
Log #: 1817Q
I-405, I-5, SR-55,
SR-73, SR-261

Subject: Irvine Business Complex Vision Plan and Mixed Use Overlay Zoning Code

Dear Ms. Dupuis:

Thank you for providing us with the updated information on the two-tier approach and significance threshold for the Traffic Impact Study and the methodology for fair share calculation for the subject project.

The Department of Transportation (Department), District 12 is offering the following comments:

1. The Department agrees with the two tier traffic analysis approach provided the following assumptions are correct.
 - A. Freeway mainline segments and ramps will be evaluated using ICU methodology to calculate peak hour V/C ratios. If the V/C indicates LOS F for a given freeway mainline segment or ramp, HCM methodology would not need to be applied to that freeway mainline segment or ramp.
 - B. HCM analysis would be performed when:
 - a. A mainline segment operates at LOS D/E cusp (0.89) or worse, but better than LOS E/F cusp (1.00), and the project contributes greater than 200 vehicles per hour (based on the comparison of no-project and with project V/C ratios) to that mainline segment; or
 - b. A ramp operates at LOS D/E cusp (0.89) or worse, but better than LOS E/F cusp (1.00), and the project contributes greater than 30 vehicles per hour (based on the comparison of no-project and with project V/C ratios) to that ramp.

On LOS Targets:

2. The Departments agrees with that freeway mainline segments, ramps, and ramp intersections thresholds outlined in your October 21, 2009 letter. Should a significant impact occur to any State-owned facilities, measures to reduce impacts should be included in the CEQA analysis. We encourage the City to meet with our Local Development/Intergovernmental branch to discuss potential mitigation measure that could be used for this project.

On Equitable Share Responsibility

3. The Department concurs that the formula provided in your letter dated October 21, 2009 should be used to calculate fair share contributions for this project. The additional trips added that bring any segment to the D/E cusp would not need to be considered when calculating fair share responsibility toward feasible improvements. Only those additional trips added once beyond the D/E cusp would be used for the equitable share calculations.

Thank you again for the information provided and we look forward to continuing working with the City to finalize the traffic analysis, potential fair share calculation and feasible improvements identification. If you have any questions or need to contact us, please do not hesitate to call me at (949) 724-2899.

Sincerely,



RYAN CHAMBERLAIN

Deputy District Director, Planning

cc: James Pinheiro, Deputy District Director – Maintenance/Operations
Chris Herre, Branch Chief, Local Development/Intergovernmental Review

Exhibit C

(Improvement Funds)

Potential Projects to Mitigate IBC Vision Plan's Traffic Impacts to State Facilities

Impacts					Potential Mitigation Projects				Cost Estimate	City Fairshare	City Comment
Route	Direction	Facility Type	Location	P2030 Project Fair Share	Description	Location	Agency	Notes			
I-5	NB	Mainline	Jamboree to Newport	1.8%	Add 1 GP lane between Jamboree and Newport Blvd	Jamboree to Newport Blvd		Project would mitigate impacts at Jamboree to Tustin Ranch, Tustin Ranch to Redhill, and Redhill to Newport. Percentage represents the average of 1.8%, 1.9% and 1.8% for those 3 segments respectively (M2 project)	\$20,400,000	\$374,000	
			Newport to SR-55	1.7%	Widen connector to two lanes; An additional GP lane on SR-55 to 17th St.	NB I-5 to NB SR-55 connector	OCTA SR-55 feasibility study		\$7,200,000	\$122,400	
	SB	Mainline	Jamboree to Tustin Ranch	2.3%	Add a second aux lane	Tustin Ranch - Jamboree		Caltrans PSR, also including widening SB I-5 off-ramp at Jamboree	\$2,924,000	\$67,252	
			Tustin Ranch to Red Hill	2.3%	Add 1GP lane between Tustin and Jamboree	Tustin Ranch - Jamboree		M2 project	\$6,720,000	\$154,560	
		Fwy Connector	2.3%	Fwy-to-Fwy connector ramp metering	SB SR-55 to SB I-5 connector			\$850,000	\$19,550		
I-405	NB	Mainline	Jamboree to MacArthur	2.2%	Add a second aux lane	Jamboree to MacArthur			\$9,000,000	\$198,000	No City fair-share contribution towards aux lane project from Jeffrey to Culver. However, City is committed to implementing intersection improvements at a cost of \$359,000.
		Off-ramp	Culver off-ramp	1.8%	Add aux lane from Jeffrey to Culver, provide 2 lane exit and an additional right-turn lane at intersection				\$15,900,000	\$0	
		On-ramp	MacArthur off-ramp	7.3%	Add a second exit ramp	MacArthur off-ramp			\$1,250,000	\$91,250	
	SB	On-ramp	MacArthur on-ramp	3.8%	Widen ramps to 4 lanes at entrance that merge to 3 lane at ramp meter	MacArthur on-ramp			\$2,250,000	\$85,500	
		Mainline	Jamboree to MacArthur	2.9%	Add 2nd aux lane from MacArthur to Jamboree	Jamboree to MacArthur			\$9,000,000	\$261,000	
		Off-ramp	Jamboree off-ramp	21.6%	Widen intersection to provide 2 left turn and 3 right turn lanes with 500 ft storage	Jamboree off-ramp			\$1,500,000	\$324,000	
		On-ramp	Bristol Loop on-ramp	7.5%	Extend left lane to ramp meter and upgrade ramp metering signal hardware	Bristol loop on-ramp			\$2,100,000	\$157,500	
Fwy Connector		3.3%	Fwy-to-Fwy connector ramp metering	SB I-405 to NB SR-55 connector			\$850,000	\$28,050			
SR-55	NB	Mainline	I-405 to MacArthur	3.3%	Add one GP lane and one Aux lane	I-405 to MacArthur		M2 project	\$23,863,636	\$787,500	
			MacArthur to Dyer	3.0%	Add one GP lane and one Aux lane	MacArthur to Dyer		M2 project	\$21,477,273	\$644,318	
			Dyer to Edinger	2.7%	Add one GP lane and one Aux lane	Dyer loop on-ramp to Edinger		M2 project	\$38,181,818	\$1,030,909	
		Off-ramp	Baker St off-ramp	1.1%	Add a right turn lane at intersection	Baker St. Off-ramp			\$500,000	\$5,500	
		On-ramp	Dyer Rd Direct on-ramp	3.8%	Increase storage capacity at on-ramps	Dyer Rd Direct On-ramp			\$1,300,000	\$46,800	
	SB	Mainline	I-405 to MacArthur	4.8%	Add one GP lane and one Aux lane	MacArthur to I-405		M2 project	\$23,863,636	\$1,145,465	
			MacArthur to Dyer	4.1%	Add one GP lane and one Aux lane	MacArthur to Dyer		M2 project	\$21,477,273	\$880,568	
		On-ramp	Baker St. on-ramp	3.1%	Increase storage capacity at on-ramps between merging point and ramp meter	Baker St. On-ramp			\$1,000,000	\$31,000	
			MacArthur loop on-ramp	8.0%	Widen on-ramps	MacArthur to I-405	Santa Ana / Caltrans	Santa Ana is finalizing a PR with Caltrans Design Branch	\$4,225,000	\$338,000	
SR-73	NB	On-ramp	Campus Dr. on-ramp	6.1%	Widen on-ramp to 3 lanes and upgrade ramp metering signal and hardware	Campus Dr. on-ramp			\$1,850,000	\$112,850	
	SB	Off-ramp	Jamboree off-ramp	4.0%	Add a 3rd lane from past gore point to join with left lane pocket at Jamboree	Jamboree off-ramp			\$3,000,000	\$120,000	
									\$220,682,636	\$7,025,962	3.18%

Total Fair Share Contribution towards freeway facility improvements \$7,025,962

Sec. 9-36-14. - IBC Traffic Improvement Fee Program.

- A. *Intent.* The intent of the 2010 IBC Traffic Improvement Fee program is to provide partial funding for the implementation of the areawide circulation mitigation program identified in the Final Program Environmental Impact Report, for the Irvine Business Complex Vision Plan/Mixed-Use Overlay Zoning Code.
- B. *Basis for the fee program.*
1. This fee program is based upon demonstrated projected development and its anticipated circulation impacts. As such, development which necessitates circulation mitigation measures beyond those identified for existing development and future development with vesting approvals (as defined in Section 9-36-14.E) shall pay the current fee in effect at the time of building permit issuance.
 2. The IBC Traffic Improvement Fee Program establishes variable fees per unit of development for specific land uses, which in turn correspond to the trip generation of each land use. Fair share cost is derived by dividing the total cost of the required circulation improvements for future development into the total number of trips assumed to be generated by projects that are subject to this fee program. The cost per trip is then converted into cost per unit of development for the corresponding land use. (Refer to the IBC circulation improvements funding program for matrices showing the fee calculations.)
- C. *Boundaries of the final fee district.* All property within the Irvine Business Complex (Planning Area 36) as shown in Section 9-36-2 of this zoning ordinance is included in the final fee district.
- D. *Final fee schedule.*
1. Section 9-36-5 of this zoning ordinance specifies the maximum amount of development intensity values (vehicular trips from the 1992 IBC EIR) allowed to be generated as a result of the build-out of the Irvine Business Complex. As part of the traffic study prepared for the 2010 IBC Vision Plan project, a study was performed which identifies the traffic impacts of future development within IBC. The traffic study also identifies specific circulation improvements necessary to mitigate the impacts of the projected future development and the cost of the implementation of such improvements.

2. A final fee schedule based upon the nexus analysis and the estimated cost of improvements shall be established by resolution of the City Council.

E. *Applicability.*

1. The 2010 IBC Traffic Improvement Fee Program shall apply to all development for which building permits are issued subsequent to the adoption of the 2010 IBC Vision Plan project, regardless of when the development case was approved. These provisions apply to permits for new structures, and additions of square footage to existing structures.
2. Development agreements, and projects for which building permit applications approved prior to the effective date of these regulations, are exempt from the requirements of this fee program.

F. *Timing of compliance.*

1. All development projects within the Irvine Business Complex for which building permits are issued after the effective date of the 2010 IBC zoning ordinance shall comply with the requirements of the 2010 IBC Transportation Improvement Fee Program. Fees required by this section shall be paid prior to the issuance of any building permits or as specified by procedures adopted by the City Council and in effect at the time building permits are issued.
2. Applicants can elect to pre-pay the IBC Traffic Improvement Fees for their projects at any time prior to the issuance of building permits; however, payment of fees solely does not constitute final approval or vesting entitlement for the project.

- G. *Construction of areawide improvements in lieu of payment of fees.* Where an applicant is required to pay fees for areawide improvements (improvements which serve the IBC or mitigate impacts to the IBC) under the provisions of these regulations, with the approval of the Directors of Public Works and Community Development, the applicant may construct improvements which are included in the 2010 IBC Vision Plan final program EIR and equivalent in cost to the fees owed. The applicant shall submit an estimate of the construction cost for each improvement it proposes to construct. The Director of Public Works shall verify the estimated construction cost, or make any necessary revisions thereto. The value of the proposed improvements must equal or exceed the required fee in order for the Director of Public Works to approve the applicant's request to substitute construction of improvements for payment of fees.

- H. *Exemptions from fees.* The following types of land uses shall be exempt from payment of fees for circulation improvements:
1. Square footage within a building used to provide recreation or services exclusively to employees who work within the building. The uses shall benefit the employees, and, by providing recreation or services on-site, have the potential to reduce the number of trips employees make to other locations. Examples of such uses include cafeterias, exercise facilities, and employee credit unions. Determination of whether or not a proposed use qualifies for this exemption shall be made by the Director of Community Development. This exemption can only be granted if the property owner enters into an agreement with the City and recorded against the property, ensuring that the square footage remains in the exempt use.
 2. Square footage within the principal building(s) on a site or in a separate building(s) used for resident, employee or customer parking. This exemption does not apply to areas within a building(s) used for vehicle storage.
- I. *Adjustments to fees.* The Director of Public Works shall, on July 1st of each year, apply an adjustment to the Irvine Business Complex (IBC) development fee rates according to the following methodology:
1. *Adjustment in construction cost.* The development fee program shall be evaluated annually in comparison with the California Highway Construction Cost Index (CCI) as published by Caltrans. The fee rates shall be adjusted to reflect fluctuations in the CCI.
 2. *Adjustment in land cost.* In addition to the annual adjustment in construction costs, the fee rates shall be adjusted to account for the projected land acquisition costs for the right-of-way necessary to construct the roadway improvements. A land value appraisal assessment will be conducted every three years. The fees shall be adjusted to reflect the latest land cost estimates based on the findings of the appraisal assessment. The land cost adjustment shall be applied every three years. There will be no adjustment rate utilized in years in which no land value appraisals are conducted. As part of this review, the Director of Public Works shall also review the IBC development fees to ensure that the fees would not, over time, exceed the reasonable cost of constructing the required improvements.
 3. *Calculation of fees.* An average of the past five years of fees will be utilized to

determine the current year fee.

4. *Changes to fee methodology.* At its first meeting in June of each year, the Planning Commission shall be informed of adjustments to fee rates in June of each year. Any change to the methodology for annual adjustment of fees for the IBC Traffic Improvement Fee program shall be approved by a resolution of the City Council.

J. *Creation of IBC fee account.*

1. The City shall establish an IBC Circulation Improvement Fee Account immediately after the adoption of the 2010 IBC Vision Plan/Overlay Zoning Code project.
2. The City of Irvine shall maintain the funds in this account separate from other funds of the City of Irvine. Fees collected pursuant to this fee program shall be deposited at the time collected into the IBC circulation fee account; and both the fees and the accrued interest shall be expended only for the implementation (i.e., project reports, design, construction) of the IBC circulation improvements as specified in the IBC Vision Plan/Overlay Zoning Code EIR, and any amendments and revisions thereto.
3. On an annual basis, the Manager of Fiscal Services shall present a report on the status of the IBC circulation fee program to the City Council. The report shall provide information on the fee account revenues, expenditures and the projected fee revenues and expenditure.

K. *IBC Traffic Study Update.* Every ~~two~~^{three} years following the certification of the Final EIR for the 2010 Vision Plan project, the City shall undertake an updated comprehensive traffic study for the IBC, to evaluate the implementation of the original traffic study and update mitigation as needed. The study shall review both interim and buildout year scenarios.

L. *Requirements for provision of local improvements.* In addition to the responsibility to participate in funding the areawide improvements, applicants may be required to construct local improvements if such improvements as identified in the conditions of approval are deemed necessary by the Director of Public Works and Community Development.

1. *Review and determination process.* In conjunction with applications for development proposals, the applicant may be required to provide a traffic analysis to identify any local improvements necessary to address the traffic

impacts of the project. If as a result of this analysis the Director of Public Works and Community Development determine that local improvements are needed, the applicant shall be required to provide these improvements as a condition of approval of the development project.

2. *Payment of fees in lieu of construction of local improvements.* Applicants may pay fees in lieu of construction of required local improvements subject to the approval of the Director of Public Works and Community Development. The in-lieu fee shall be equal to the construction cost of the required improvements.
3. *Timing of compliance.* Prior to the issuance of building permits, the applicant shall submit an estimate of the construction cost for each required improvement. The Director of Public Works shall verify the estimated construction cost, or shall revise the estimate. The fees paid by the applicant shall equal the cost accepted by the Director of Public Works.

(Ord. No. 10-07, § 9(Exh. B), 7-27-10; Ord. No. 15-11, 11-10-15)

CITY COUNCIL ORDINANCE NO. 21-XX

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF IRVINE, CALIFORNIA, APPROVING A ZONE CHANGE TO THE ZONING ORDINANCE (00827079-PZC) CHAPTER 9-36 OF THE IRVINE ZONING ORDINANCE TO CHANGE THE FREQUENCY OF THE REQUIRED UPDATES TO THE IRVINE BUSINESS COMPLEX RESIDENTIAL/MIXED USE VISION PLAN TRAFFIC STUDY FROM EVERY TWO YEARS TO THREE; FILED BY THE CITY OF IRVINE PUBLIC WORKS AND TRANSPORTATION DEPARTMENT

WHEREAS, the City of Irvine has an adopted Zoning Ordinance; and

WHEREAS, the City of Irvine Public Works and Transportation Department has initiated Zoning Ordinance Amendment 00827079-PZC; and

WHEREAS, Zone Change 00827079-PZC will improve the functionality of the Zoning Ordinance by amending the frequency of the required updates to the Irvine Business Complex Residential/Mixed Use Vision Plan Traffic Study contained in the Zoning Ordinance; and

WHEREAS, Zone Change 00827079-PZC is considered a “project” as defined by the California Environmental Quality Act (CEQA); and

WHEREAS, Pursuant to Section 4 of the City of Irvine CEQA procedures and Article 5 of the CEQA Guidelines, the proposed project is covered by the General Rule Exemption [Section 15061(b)(3) of the CEQA Guidelines], for projects where it can be seen with certainty that the activity in question will have no significant effect on the environment; and

WHEREAS, the Transportation Commission of the City of Irvine considered information presented by staff and other interested parties at a duly noticed public meeting held on November 17, 2020; and

WHEREAS, the Finance Commission of the City of Irvine considered information presented by staff and other interested parties at a duly noticed public meeting held on December 7, 2020; and

WHEREAS, the Planning Commission of the City of Irvine considered information presented by staff and other interested parties at a duly noticed public meeting held on January 7, 2021; and

WHEREAS, the City Council of the City of Irvine considered information presented by the Public Works and Transportation Department and other interested parties at a public hearing held on February 9, 2021; and

CC ORDINANCE 21-XX

NOW, THEREFORE, the City Council of the City of Irvine DOES HEREBY ORDAIN as follows:

SECTION 1. That the above recitals are true and correct and are incorporated herein.

SECTION 2. Pursuant to Section 4 of the City of Irvine CEQA procedures and Article 5 of the CEQA Guidelines, the proposed project is covered by the General Rule Exemption [Section 15061(b)(3)]; for projects where it can be seen with certainty that the activity in question will have no significant effect on the environment.

SECTION 3. The City Council finds that the findings required by Section 2-38-7 of the City of Irvine Zoning Code for adoption of a zone change have been made as follows:

A. The proposed zone change is consistent with the City of Irvine General Plan.

The purpose of the Zone Change is to update the frequency of the required updates to the Irvine Business Complex Residential/Mixed Use Vision Plan Traffic Study.

B. The proposed zone change is consistent with any applicable concept plan.

There is no concept plan associated with this project.

C. The proposed zone change meets all the requirements set for within Division 8 for the dedication of permanent open space through a specified phased implementation program for affected planning areas and zoning districts.

The project is not subject to this provision of the code.

D. The proposed zone change is in the best interest of the public health, safety, and welfare of the community.

The zone change is consistent with all applicable provisions of the Zoning Code and is determined to be in the best interest of the health, safety, and welfare of the community through ongoing evaluation of traffic impacts.

E. Based upon information available at the time of approval, adequate sewer and water lines, utilities, sewage treatment capacity, drainage facilities, police protection, fire protection/emergency medical care, vehicular circulation and school facilities will be available to serve the area affected by the proposed zone change when development occurs.

The project is not subject to this provision of the code.

F. If the proposed zone change affects land located within the coastal zone, the proposed zone change will comply with the provisions of the land use plan of the certified local coastal program.

The project is not subject to this provision of the code.

SECTION 4. The City Clerk shall certify to the passage and adoption of this Ordinance and this Ordinance shall be published as required by law and shall take effect as provided by law.

SECTION 5. All ordinances and provisions of the Irvine Municipal Code and sections thereof inconsistent herewith shall be hereby repealed to the extent of such inconsistency and no further.

SECTION 6. If any section, subsection, sentence, clause, or phrase of the proposed regulations for any reason held to be unconstitutional or otherwise invalid, such invalidity shall not affect the validity of this Ordinance or any of the remaining portions hereof. The City Council hereby declares that it would have passed this Ordinance, and each section, subsection, subdivision, sentence, clause, or phrase hereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, or phrases be declared unconstitutional or otherwise invalid.

NOW, THEREFORE, based on the above findings, the City Council of the City of Irvine DOES HEREBY ORDAIN Zone Change 00827079-PZC, amending the Zoning Ordinance's applicable text, figures and tables as outlined in Exhibit A.

PASSED AND ADOPTED by the City Council of the City of Irvine at a regular meeting held on the _____ day of _____, 2021.

MAYOR OF THE CITY OF IRVINE

ATTEST:

INTERIM CITY CLERK OF THE CITY OF IRVINE

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF IRVINE)

I, CARL PETERSEN, Interim City Clerk of the City of Irvine, HEREBY DO CERTIFY that the foregoing Ordinance was introduced for first reading on the 9th day of February, 2021 and duly adopted a regular meeting of the City Council of the City of Irvine, held on the ____ day of _____, 2021.

AYES: COUNCILMEMBERS:

NOES: COUNCILMEMBERS:

ABSENT: COUNCILMEMBERS:

ABSTAIN: COUNCILMEMBERS:

INTERIM CITY CLERK OF THE CITY OF IRVINE

EXHIBIT A

Proposed Zoning Ordinance Amendment

Section 9-36-14. IBC Traffic Improvement Fee Program

K. IBC Traffic Study Update. Every three years following the certification of the Final EIR for the 2010 Vision Plan project, the City shall undertake an updated comprehensive traffic study for the IBC, to evaluate the implementation of the original traffic study and update mitigation as needed. The study shall review both interim and buildout year scenarios.

IBC Project Prioritization Ranking

Intersection	Jurisdiction	Mitigation (as identified in 2019 Study)	Mitigation Cost	Constructability	Impact / Warrant Year	Location	Cost Benefit	Score
Jamboree Road at Michelson Drive Pedestrian Bridge	Irvine	Pedestrian bridge to improve signal operations	\$ 8,237,000	3	2	3	4	12
Culver Drive at I-405 NB Ramps	Irvine	Re-stripe to provide one left-turn lane, one shared lane, and one right-turn lane	\$ 269,000	3	2	1	6	12
Dyer Road Roadway Widening	Santa Ana	Widen roadway from six to eight lanes	\$ 18,047,000	2	2	2	5	11
Von Karman Avenue - From Alton Hill to Barranca Parkway (Option A)	Irvine / Tustin	Add third northbound through-lane, add northbound right-turn lane and westbound right at Barranca Parkway only	\$ 10,001,000	1	3	3	3	10
Harvard Avenue at Michelson Drive	Irvine	Improve southbound leg to provide two left-turn, two through, and one right-turn lane	\$ 3,438,000	3	2	2	3	10
Alton Parkway Overcrossing (50% shared with Santa Ana)*	Santa Ana	Construct new roadway overcrossing over SR-55	\$ 30,592,500	2	2	2	4	10
California Avenue at University Drive	Irvine	Add eastbound free right-turn lane and southbound third receiving lane	\$ 2,770,000	3	1	1	5	10
SR-55 Frontage Road at Baker Street (5% to CM)**	Costa Mesa	Improve southbound leg to provide two left turns, one shared through and right, and one right turn lane	\$ 1,017,000	1	2	1	5	9
Jamboree Road at Barranca Parkway	Irvine / Tustin	Add a fifth northbound through-lane (convert free to standard right-turn lane) and re-stripe eastbound approach	\$ 6,570,000	2	3	3	1	9
Von Karman Avenue - From Alton Hill to Barranca Hill (Option B)	Irvine / Tustin	Add third northbound through-lane, add northbound right-turn lane, and convert to free westbound-right at Barranca Parkway	\$ 11,082,000	1	3	3	1	8
Red Hill Avenue (between Main and MacArthur)***	Irvine	Widen from four to six lanes	\$ 24,054,000	2	2	3	1	8

Scoring Definitions and Terms

Constructability - ease of implementation, ranked from 1 for difficult, to 3 for those more easily constructed. Considered right-of-way, cost, coordination, etc.

Impact Year - 3 points if impacted in interim year, 2 points in build-out year, 1 point if cumulative build-out year

Location - points to improve the "core" IBC area - 3 points for intersections within the IBC, 2 points for those adjacent to IBC, and 1 point for those non-adjacent

Cost Benefit - from "Cost Analysis" report by WSP, 1 point for 0-0.5, 2 points for 0.5-1, 3 points for 1.0-1.5, 4 points for 1.5-2, 5 points for 2-10, 6 points for 10+

* Cost Analysis for Alton Parkway Overcrossing based only on the 50% Irvine contribution, not the entire project cost

** Cost Analysis for SR-55 Frontage Road intersection based on entire cost and entire benefit, as proportional benefits and costs are expected to Irvine

*** Removal of the Red Hill Avenue widening will result in the addition of two alternate improvements in the City of Santa Ana



IBC 2017-19 Traffic Study Update Cost Analysis

October 30, 2020

Submitted by:



Submitted to:

City of Irvine



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EXECUTIVE SUMMARY

The City of Irvine has identified 11 transportation mitigations in the Irvine Business Complex (IBC) for evaluation and prioritization. This analysis provides an objective, quantitative assessment of the costs and benefits of each proposed mitigation, to help the city prioritize these investments. Using a benefit-cost analysis (BCA), the cost of each mitigation was compared to its resulting benefits, stemming from driver travel time savings and safety improvements. There may be other benefits associated with these projects that have not been captured by the limited scope of this analysis. The mitigations studied in this analysis represent several different types of mitigations, and the data available about these types differed. Consequently, different methodologies for evaluating the change in travel time were utilized.

The analysis is structured to generate two primary outputs or metrics that allow for comparisons across the different project types: 1) the **Benefit Cost Ratio (BCR)**, which is simply the sum of the monetary discounted benefits of the mitigation divided by its estimated discounted cost, to show if each mitigation's benefits exceed or fall short of its costs. A BCR above 1.0 indicates that the mitigation's benefits exceed its costs; 2) the **Net Present Value (NPV)**, which compares the long-term annual net benefits (benefits minus costs) over time after discounting to present dollar values to account for the time value of money. The NPV sheds light on the overall dollar magnitude of cash flows over time in today's dollar terms. An NPV above 0 indicates that the mitigation's benefits exceed its costs over time.

Table 1 provides the total benefits, costs, BCR and NPV of each mitigation, sorted by BCR.

Table 1: Summary of Mitigations and Results (2019\$, 4% discount rate, sorted by BCR)

MITIGATION	MITIGATION TYPE	BENEFITS	COSTS	BENEFIT COST RATIO	NET PRESENT VALUE
Culver Dr at I-405 NB Ramps	Intersection Improvement	\$6,956,583	\$269,280	25.83	\$6,687,303
SR-55 Frontage Road SB at Baker Street	Intersection Improvement	\$5,089,348	\$1,017,150	5.00	\$4,072,198
California Ave at University Dr	Intersection Improvement	\$12,057,832	\$2,770,150	4.35	\$9,287,682
Dyer Roadway Widening	Road Widening	\$59,677,705	\$18,046,585	3.31	\$41,631,120
Alton Pkwy/SR 55 Overcrossing	Overcrossing	\$56,027,330	\$30,592,475 (City of Irvine)	1.82	\$25,434,855
			\$61,184,950 (Total Project)	0.92	(\$5,157,620)
Jamboree Rd at Michelson Bridge	Intersection Improvement	\$13,962,388	1.70	1.70	\$5,725,388
Harvard Ave at Michelson Dr	Pedestrian Bridge	\$4,373,559	\$3,438,300	1.27	\$935,259
Von Karman Ave from Alton Pkwy to Barranca Pkwy – Option A	Intersection Improvement	\$10,732,376	\$10,000,640	1.07	\$731,736
Von Karman Ave from Alton Pkwy to Barranca Pkwy – Option B	Intersection Improvement	\$10,732,376	\$11,081,600	0.97	(\$349,224)
Jamboree Rd at Barranca Pkwy	Intersection Improvement	\$3,216,947	\$6,570,000	0.49	(\$3,353,053)
Red Hill Widening	Road Widening	\$7,948,054	\$24,053,600	0.33	(\$16,105,546)

The results show a very wide range of BCRs, from as high as 25.83 for the Culver Drive at I-405 Northbound Ramp improvements to as low as 0.33 for the Red Hill Widening. For the Culver Drive project, the notably high BCR is a result of significant travel time savings predicted and very low costs. In contrast, the low result for the Red Hill Widening reflects among the highest project costs and relatively low benefits. Though the results shed light on those projects most likely to provide the greatest benefits relative to their costs, the fact that some projects have BCRs below one does not necessarily indicate that they are bad projects. However, the results do suggest that caution is warranted and that these projects may be of a lower priority.

BACKGROUND AND OBJECTIVES

The IBC is undergoing a dramatic, long-term redevelopment from what was once a predominantly commercial landscape to a higher density mix of uses, including significant multifamily residential development and new commercial uses. As this transformation continues, the inventory of total residential units will increase from 9,427 units to 16,820 units (includes 1,820 density bonus units) at buildout.

While the vision for IBC will ultimately strengthen the Irvine economy and diversify its housing stock and labor force, the pace and concentration of growth is stressing the existing transportation network with additional volume. Several intersections and arterial segments are reaching their capacity and need major investments to maintain and improve existing and near-term levels of service (LOS). Several specific mitigation measures have been identified; however, not all can be completed at once, so a cost analysis is being conducted to assist in prioritization.

It is within this context that the City of Irvine needs an objective, quantitative analysis of the benefits of each mitigation measure relative to each measure's cost. This report lays out such an approach and summarizes the results, providing an objective comparison of each investment to help the City maximize its returns.

PROPOSED MITIGATIONS

The City of Irvine has identified 11 mitigations for evaluation, including 7 intersection improvements, 2 roadway widenings, 1 new pedestrian bridge, and 1 new roadway overcrossing. Three of these mitigations—the Alton/SR-55 Overcrossing, the Red Hill Avenue Widening, and the Dyer Road Widening—have already been incorporated into the baseline traffic models upon which the other mitigations were developed. Thus, if any of these mitigations did not go forward, the impacts of the other mitigations described may vary from what is anticipated in this report.

SR-55 FRONTAGE ROAD SOUTHBOUND AT BAKER STREET

SR-55 Frontage Road meets Baker Street in Costa Mesa at a signalized intersection, with the southbound approach containing one through lane and one right-or-through lane. This mitigation would change the configuration to instead have two left-turn lanes, one right-or-through lane, and one right-turn lane.

VON KARMAN FROM ALTON PARKWAY TO BARRANCA PARKWAY (OPTIONS A + B)

Von Karman Avenue between Alton Parkway and Barranca Parkway currently has two through lanes and a bike lane in each direction. This project would add a third northbound through lane beginning south of Alton and continuing through Barranca. At this point, Von Karman becomes Tustin Ranch Road, which already contains three northbound lanes.

This project would make additional changes to the intersection of Von Karman/Tustin Ranch Road and Barranca. Two different options are considered. At the signalized intersection with Barranca, Von Karman has two left-turn lanes in addition to the two northbound through lanes. Barranca Parkway east of Von Karman has four westbound through lanes, two left-turn lanes, and one right-turn lane. Both Option A and Option B would convert the de facto right-turn lane on Von Karman to a standard right, in addition to adding the third northbound through lane. Option A would also add a second right-turn lane on westbound Barranca. Option B would instead convert the existing right-turn lane on westbound Barranca to a free right-turn lane.

CALIFORNIA AVENUE AT UNIVERSITY DRIVE

Eastbound University Drive currently has two through lanes and one right-turn lane as it approaches California Avenue, which has two southbound through lanes and a bike lane. The improvement would change University Drive's right-turn lane to a free right-turn lane.

HARVARD AVENUE AT MICHELSON DRIVE

Southbound Harvard Avenue currently has two through lanes, one left-turn lane, and one right-turn lane as it approaches Michelson. This mitigation would add a second left-turn lane and a bike lane, which would carry through south of the intersection.

CULVER DRIVE AT I-405 NORTHBOUND RAMPS

The northbound off-ramp for I-405 toward Culver Drive currently has three lanes – one right-turn only, and two left-turn only lanes. This mitigation would restripe the ramp to make the middle lane a shared left/right turn lane.

JAMBOREE ROAD AT BARRANCA PARKWAY

Eastbound Barranca Parkway currently has two left-turn lanes, one shared left/through lane, two through lanes, and one right-turn lane as it approaches Jamboree Road. This mitigation would change the eastbound shared left/through lane to a dedicated left lane. Northbound Jamboree Road has two left-turn lanes, four through lanes, and one free right-turn lane. This mitigation would add one through lane (which would continue north of Barranca) and convert the free right to a standard right-turn lane.

JAMBOREE ROAD AT MICHELSON DRIVE BRIDGE

This mitigation would add a 12-foot pedestrian bridge across Jamboree Road north of the intersection with Michelson.

ALTON PARKWAY / SR-55 OVERCROSSING

Alton Parkway does not currently intersect with SR-55, but rather ends at Daimler Street to the west. This project, which is assumed as part of the buildout scenario for all other mitigations, would extend Alton Parkway as a four-lane overcrossing over SR-55, linking the Cities of Santa Ana and Irvine.

RED HILL AVENUE WIDENING FROM MAIN STREET AND MACARTHUR BOULEVARD

Red Hill Avenue has four through lanes (two in each direction), plus left-turn lanes at intersections. The mitigation would add one through lane in each direction, resulting in six total through lanes.

DYER ROAD WIDENING FROM RED HILL AVENUE TO SR-55 NORTHBOUND RAMPS

Dyer Road currently has six through lanes (three in each direction) as well as left-turn lanes at Pullman Street. The mitigation would add a through lane in each direction; the new westbound lane would become a free right approaching the SR-55 Northbound ramp.

BENEFIT-COST METHODOLOGY

To compare the various IBC transportation mitigations under consideration, WSP built an Excel-based model that generates a benefit-cost ratio and net present value for all mitigations. For each mitigation, the model compares a no build/baseline scenario, in which the mitigation is not undertaken, to a build alternative in which the designated improvements are made. This framework attempts to capture the net welfare change created by a mitigation, including cost savings and increases in welfare (benefits), as well as disbenefits where costs can be identified (e.g., mitigation capital costs), and welfare reductions where some groups are expected to be made worse off as a result of the proposed mitigation.

GENERAL ASSUMPTIONS

Implementation of the mitigations is anticipated to begin in 2020. The anticipated implementation period is between three to twenty years. The order and timing of the individual projects is unknown at this time. Thus, the analysis assumes that all projects would be completed in 2021 for comparison purposes. The evaluation period extends an additional 20 years beyond this time, through 2041, to account for operational benefits.

Dollar figures in this analysis are expressed in constant 2019 dollars (2019\$). For instances in which benefit valuations were expressed in dollar values in historical years, they were adjusted for inflation adjustment using data from the Bureau of Economic Analysis' National Income and Product Accounts.

Values in this report are presented in undiscounted terms and using a “discount rate.” The discount rate is used in economic analysis to compare future benefits to present values, and represents the fact that a dollar today is worth more than a dollar next year. This is because today’s dollar can be used productively in the ensuing years, yielding a greater value. Discounting future costs and benefits provides their “present value,” which is used for comparison purposes. The real discount rate used for this analysis is four percent.

MITIGATION COSTS

The cost portion of each equation is calculated based on estimated up-front capital costs. Any differences in ongoing maintenance costs are not considered. These cost estimates were provided by the City of Irvine, and are reflected by mitigation in Table 2.

Table 2: Mitigation Costs

MITIGATION	CAPITAL COSTS
SR-55 Frontage Road SB at Baker Street	\$1,017,150
Von Karman Ave from Alton Pkwy to Barranca Pkwy – Option A	\$10,000,640
Von Karman Ave from Alton Pkwy to Barranca Pkwy – Option B	\$11,081,600
California Ave at University Dr	\$2,770,150
Harvard Ave at Michelson Dr	\$3,438,300
Culver Dr at I-405 NB Ramps	\$269,280
Jamboree Rd at Barranca Pkwy	\$6,570,000
Jamboree Rd at Michelson Bridge	\$8,237,000
Alton Pkwy/SR 55 Overcrossing	\$30,592,475 (City of Irvine) \$61,184,950 (Total Project)
Red Hill Widening	\$24,053,600
Dyer Roadway Widening	\$18,046,585

Source: IBC Vision Plan 2018 Traffic Study Update, June 2019

The total cost of the Alton Parkway / SR-55 Overcrossing is \$61.2 million, but the City of Irvine will split this cost with the City of Santa Ana. As such, the City of Irvine’s share of this mitigation cost is \$30.2 million. Benefit-cost calculations for both the full cost and 50-percent share are included in the results.

MITIGATION BENEFITS

The analysis focuses on two types of benefits: travel time savings and safety benefits (measured as collision reduction). There may be other benefits associated with these projects that have not been captured by the limited scope of this analysis.

TRAVEL TIME SAVINGS

The primary purpose of the mitigations studied is to improve traffic movements, thereby reducing travel time. The mitigations studied in this analysis represent several different types of mitigations, and the data available about these types differed. Consequently, different methodologies for evaluating the change in travel time were utilized.

METHODOLOGY FOR STANDARD INTERSECTION MITIGATIONS

For most intersection improvements, time savings were calculated by comparing information on peak hour volumes and intersection capacity utilization (ICU) under the build and no build scenarios. ICU represents the sum of the volume-to-capacity (V/C) ratios of the critical movements at the intersection (the movements contributing to delay). The build scenario in this analysis reflects the ICU information contained in the “Buildout with Update Mitigation” from Appendix J of the IBC Vision Plan 2018 Traffic Study Update, while the no build scenario reflects the “Buildout with Update” from Appendix E of the same document. The “Buildout with Update” in these cases refers to buildout of the Irvine Business Complex and the presumed volumes associated with it. Assumed volumes and ICU ratios utilized are shown in Table 3.

Table 3: Volume and ICU by Mitigation Area – Intersection Mitigations

MITIGATION	AM VOLUME	AM ICU – NO BUILD	AM ICU – BUILD	PM VOLUME	PM ICU – NO BUILD	PM ICU – BUILD
SR-55 Frontage Road SB at Baker St	2,311	0.92	0.75	1,336	0.80	0.80
Von Karman Ave at Alton Pkwy	2,628	0.92	0.92	2,859	1.02	0.86
Von Karman Ave/Tustin Ranch Rd at Barranca Pkwy - Options A & B	3,389	0.89	0.89	4,274	1.19	0.97
California Ave at University Dr	2,565	0.97	0.67	2,424	0.81	0.81
Harvard Ave at Michelson Dr	2,044	0.75	0.75	2,509	0.91	0.81
Culver Dr at I-405 NB Ramps	2,860	0.71	0.71	3,911	0.92	0.82
Jamboree Rd at Barranca Pkwy	5,637	0.94	0.95	6,943	1.11	0.97

Source: IBC Vision Plan 2018 Traffic Study Update, April 2019 (Appendices E and J)

ICU information was converted to average delay per vehicle in accordance with Table 4. For example, California Avenue at University Drive is expected to have an ICU of 0.97 in the AM peak under the no build scenario. This falls in the LOS E category, indicating vehicles experience between 55 and 80 seconds of delay at this intersection. The delay per vehicle is assumed to fall proportionally within this range, such that an ICU of 0.97, which is toward the upper end of the ICU range for LOS E, represents 73 seconds of delay. In contrast, if the proposed mitigations were built, the ICU would be reduced to 0.67, falling within LOS B, and indicating approximately 17 seconds of delay for the average driver. The per-vehicle time savings with the mitigation is thus 56 seconds (73 seconds minus 17 seconds).

Table 4: Relationship between Level of Service, Capacity Utilization, and Delay per Vehicle

LEVEL OF SERVICE	ICU	DELAY PER VEHICLE (SECONDS)
LOS A	0 – 0.6	0 – 10
LOS B	0.61 – 0.7	10 – 20
LOS C	0.71 – 0.8	20 – 35
LOS D	0.81 – 0.9	35 – 55
LOS E	0.91 – 1	55 – 80
LOS F	> 1	> 80

Source: City of Irvine Traffic Analysis Guidelines, 2004; and FHWA, Signalized Intersections: Informational Guide, Table 33

Per vehicle time savings are converted to hours and then multiplied by the peak hour volume¹ and a vehicle occupancy factor of 1.25² to arrive at a total hourly benefit across all users. Continuing with the example of California Avenue at University Drive, the total hourly benefit is approximately 50 hours (56 seconds of delay divided by 3600 seconds per hour times 2,565 vehicles times 1.25 persons per vehicle).

The mitigations are assumed to relieve congestion during the AM and/or PM peak hour at the full benefit described above. It is further assumed that the benefits remain strong but not at their full force in peak-adjacent hours (one hour before and after each peak) – the peak hour benefits are multiplied by a factor of 80 percent to account for this reduced benefit in the peak-adjacent hours. In the remaining hours of the day, and on weekends, it is assumed that traffic is not sufficiently high to experience the benefits of the mitigation, and thus no benefit is projected for these times. Accordingly, peak hour benefits are converted to annual benefits by adding the AM and PM peak hour benefits to the peak-adjacent hour benefits, and multiplying this sum by an annualization factor of 260 days.

METHODOLOGY FOR PEDESTRIAN BRIDGE MITIGATION - JAMBOREE ROAD AT MICHELSON DRIVE BRIDGE

The proposed mitigation for Jamboree Road at Michelson Drive is a pedestrian bridge, which will have impacts that cannot be quantified in the manner described above. First, there is an impact on the approximately 600 pedestrians that use the intersection daily. Today, these pedestrians must push the walk button, and may wait up to 90 seconds before being permitted to cross. On average, it is assumed that these pedestrians would save 45 seconds by using the pedestrian bridge.

In addition, drivers using the intersection would no longer have to wait for pedestrians to cross Jamboree. Jamboree Road at Michelson Drive is a highly-utilized intersection, with approximately 92,000 daily vehicles estimated to cross the impacted area. However, based on the frequency and length of pedestrian crossings relative to the standard signal timing, only one-sixth of these vehicles are assumed to benefit from the improvement. These 15,300 vehicles are estimated to save approximately 20 seconds as a result of reduced cross-traffic signal time. Through traffic on Michelson is assumed to be low enough that vehicles will be able to cross within the available time, and will not suffer time penalties from the improvement.

METHODOLOGY FOR NEW SEGMENTS - ALTON / SR-55 OVERCROSSING

Unlike the other projects included in this analysis, which involve an existing intersection or roadway segment and contemplate changes to it, the Alton / SR-55 Overcrossing proposes a brand-new segment. If the segment were not built as proposed, the traffic anticipated on the Overcrossing would instead flow to other nearby roadways. To calculate the benefits of the Alton / SR-55 Overcrossing, it is therefore necessary to compare traffic conditions on these alternative roadways with and without the Overcrossing. This information is not included in the IBC Vision Plan 2018 Traffic Study Update, which assumes the existence of the Overcrossing. However, a sensitivity analysis was completed comparing volumes and V/C ratios on several streets³ with and without the Alton / SR-55 Overcrossing project and the Red Hill Widening project.⁴

Volume-to-capacity information for each segment in the sensitivity analysis was converted to average vehicle speed under the build and no build scenarios in accordance with Table 5. That is, a V/C ratio of 0.61-0.7 was assumed to have a speed of 28 to 35 mph (with the exact speed in proportion to where within the range the V/C ratio falls). Travel time for each scenario was then calculated based on these speeds and the length of each segment. The difference between the travel time in the build and no build scenarios represents the travel time savings. The changes in travel time for all segments were summed to arrive at the total peak hour travel time savings. These peak hour time savings were extrapolated to other hours of the day and annualized in the same manner as for the standard intersection mitigations.

¹ Peak hour volume reflects the volume associated with critical intersection movements only.

² Vehicle occupancy factor recommended by Caltrans in Cal-B/C v. 6.2.

³ These segments are: Alton (Daimler to Red Hill); Alton (Red Hill to Von Karman); Alton (Von Karman to Jamboree); Dyer (Halladay to SR-55 SB); Dyer (SR-55 SB to SR-55 NB); Dyer (SR-55 NB to Pullman); Barranca (Pullman to Red Hill); Barranca (Red Hill to Armstrong); Barranca (Armstrong to Von Karman); MacArthur (Main to SR-55 SB); MacArthur (Fitch to Red Hill); Red Hill (Dyer/Barranca to Deere); Red Hill (Deere to Alton); Red Hill (Alton to McGaw); and Red Hill (McGaw to MacArthur)

⁴ These two projects were studied together and thus cannot be separated within this analysis. However, the relatively low congestion levels on Red Hill suggest that any impacts are primarily driven by the Alton / SR-55 Overcrossing.

Table 5: Relationship between Level of Service, Volume-to-Capacity, and Speed

LEVEL OF SERVICE	V/C	SPEED (MILES PER HOUR)
LOS A	0 – 0.6	35 – 45
LOS B	0.61 – 0.7	28 – 35
LOS C	0.71 – 0.8	22 – 28
LOS D	0.81 – 0.9	17 – 22
LOS E	0.91 – 1	13 – 17
LOS F	> 1	< 13

Source: City of Irvine Traffic Analysis Guidelines, 2004; and Transportation Research Board, Highway Capacity Manual, Special Report 209

METHODOLOGY FOR WIDENINGS - RED HILL AVENUE AND DYER ROAD

Volumes for Red Hill Avenue from MacArthur Boulevard to Main Street and for Dyer Road from Red Hill Avenue to SR-55 Northbound ramps are based on the average daily traffic (ADT) volumes in the “Buildout Cumulative with Update” scenario reported for key segments in Table 5.10 in the IBC Vision Plan 2018 Traffic Study Update.⁵

The volume-to-capacity ratio for each of these roadway segments is also taken from Table 5.10 of the IBC Vision Plan, based on the proposed buildout of six lanes for Red Hill and eight lanes for Dyer. These ratios are used for the build scenario, and recalculated for the no build scenario based on a four-lane Red Hill Avenue and a six-lane Dyer Road.

Like in the methodology for new segments, V/C ratios are converted to average vehicle speeds based on the values provided above in Table 5, and then translated into travel time based on segment length. The average travel time for the build scenario is subtracted from the travel time for the no build scenario to arrive at the average time savings per vehicle.

To ensure comparability between the Red Hill and Dyer widenings and the other proposed mitigations, daily volumes are converted to peak hour volumes using standard relationships between peak hour and daily traffic, such that 8 percent of ADT is assumed to be the AM peak volume, and 10 percent of ADT is assumed to be the PM peak volume. These peak-hour volumes are multiplied by the per vehicle time savings and the 1.25 vehicle occupancy factor to arrive at the peak hour benefit. These peak hour benefits were extrapolated to other hours of the day and annualized in the same manner as for the standard intersection mitigations.

See Table 6 for volumes and volume-to-capacity ratios utilized for this analysis.

Table 6: Volume and V/C by Mitigation Area - Widenings

MITIGATION	AVERAGE DAILY TRAFFIC	AM PEAK HOUR VOLUME	PM PEAK HOUR VOLUME	V/C - NO BUILD	V/C - BUILD
Red Hill Widening	20,000	1,600	2,000	0.63	0.37
Dyer Roadway Widening	61,900	4,952	6,190	1.10	0.83

Source: IBC Vision Plan 2018 Traffic Study Update, April 2019, Table 5.10; and WSP analysis

RESULTS

Across all proposed mitigations, the benefits are assumed to remain consistent for each year of the analysis period. Annual travel time savings are monetized using an average value of travel time of \$21.40 per hour,⁶ which is applied to the time savings values calculated using the methods described above.

Table 7 presents the annual time savings in hours and dollars, as well as the total monetary value over the 20-year analysis period. The latter is presented in undiscounted terms, and discounted at 4 percent to account for the time value of money.

⁵ For Red Hill Avenue, the numbers used in this analysis reflect the average of the segments from MacArthur Boulevard to Skypark and from Skypark to Main Street. For Dyer Road, the numbers used in this analysis reflect the values from SR-55 Northbound to Pullman Street.

⁶ Derived using information for Orange County (escalated to 2019\$\$) and following USDOT’s Revised Department Guidance on Valuation of Travel Time in Economic Analysis (2016).

Table 7: Travel Time Savings

MITIGATION	ANNUAL TIME SAVINGS (HOURS)	ANNUAL TIME SAVINGS (UNDISC. \$2019)	TOTAL TIME SAVINGS (UNDISC. \$2019)	TOTAL TIME SAVINGS (DISC. \$2019)
SR-55 Frontage Road SB at Baker Street	17,629	\$377,280	\$7,545,601	\$5,089,348
Von Karman Ave at Alton Pkwy	27,682	\$592,405	\$11,848,098	\$7,991,292
Von Karman Ave/Tustin Ranch Rd at Barranca Pkwy - Options A & B	9,405	\$201,273	\$4,025,468	\$2,715,093
California Ave at University Dr	41,768	\$893,863	\$17,877,258	\$12,057,832
Harvard Ave at Michelson Dr	15,091	\$322,957	\$6,459,146	\$4,356,557
Culver Dr at I-405 NB Ramps	24,097	\$515,701	\$10,314,013	\$6,956,583
Jamboree Rd at Barranca Pkwy	11,143	\$238,476	\$4,769,529	\$3,216,947
Jamboree Rd at Michelson Bridge	69,836	\$1,494,523	\$29,890,461	\$20,160,483
Alton/ SR 55 Overcrossing	194,078	\$4,153,379	\$83,067,587	\$56,027,330
Red Hill Widening	25,472	\$545,117	\$10,902,332	\$7,353,392
Dyer Roadway Widening	210,036	\$4,494,903	\$89,898,064	\$60,634,342

Source: WSP Analysis

SAFETY BENEFITS

METHODOLOGY

Though none of the proposed mitigations were selected due to safety concerns, some of the improvements are expected to have a minor impact on crash rates. To calculate these impacts, the analysis reviewed crash data from 2014 – 2019 at relevant intersections and identified those crashes that may be less likely given the proposed mitigation. In parallel, an appropriate crash modification factor (CMF) for each mitigation project was selected from the CMF Clearinghouse, a database of studies on how roadway improvements impact crash rates. For each mitigation project, the relevant CMF was applied to the crash data to calculate the total predicted reduction in collisions by severity.

Table 8: Crash Modification Factors and Baseline Crashes

MITIGATION	PRIMARY MODIFICATION	CMF	BASELINE CRASHES
SR-55 Frontage Road SB at Baker St	Add left-turn lane to one approach of four-leg signalized intersection	0.90	0
Von Karman Ave at Alton Pkwy	Add lane	0.78	1 (CoP) 1 (PDO)
Von Karman Ave/Tustin Ranch Rd at Barranca Pkwy - Options A & B	Add lane	0.78	3 (PDO)
California Ave at University Dr	Add lane	0.78	0
Harvard Ave at Michelson Dr	Add left-turn lane to one approach of four-leg signalized intersection	0.90	2 (CoP) 2 (PDO)
Culver Dr at I-405 NB Ramps	N/A	N/A	0
Jamboree Rd at Barranca Pkwy	Add lane	0.78	0
Jamboree Rd at Michelson Bridge	Pedestrian Bridge	0.50	1 (Severe)
Alton/ SR 55 Overcrossing	N/A	N/A	0
Red Hill Widening	Widen from 4 to 6 lanes	0.85	3 (OVI) 6 (CoP) 4 (PDO)
Dyer Roadway Widening	Widen from 6 to 8 lanes	1.40 ⁷	2 (OVI) 1 (CoP)

PDO = Property Damage Only; CoP = Complaint of Pain; OVI = Other Visible Injury

Source: CMF Clearinghouse; Collision data provided by City of Irvine Department of Transportation

⁷ This CMF is based on widening a highway, not an arterial, and thus may not be perfectly analogous. However, it was the most similar CMF available.

RESULTS

Change in the number of collisions was monetized using standardized values provided by the USDOT for different levels of injury.⁸ Table 9 presents the crash reduction benefits in number of collisions avoided and equivalent dollars, as well as the total monetary value over the analysis period.

Table 9: Safety Benefits

MITIGATION	TOTAL COLLISIONS/ INJURIES AVOIDED	TOTAL CRASH REDUCTION SAVINGS (UNDISC. \$2019)	TOTAL CRASH REDUCTION SAVINGS (DISC. \$2019)
SR-55 Frontage Road SB at Baker Street	-	\$0	\$0
Von Karman Ave at Alton Pkwy	1.62	\$27,729	\$18,702
Von Karman Ave/Tustin Ranch Rd at Barranca Pkwy - Options A & B	2.44	\$10,807	\$7,289
California Ave at University Dr	-	\$0	\$0
Harvard Ave at Michelson Dr	1.48	\$25,208	\$17,002
Culver Dr at I-405 NB Ramps	-	\$0	\$0
Jamboree Rd at Barranca Pkwy	-	\$0	\$0
Jamboree Rd at Michelson Bridge	1.85	\$4,861,820	\$3,279,195
Alton/ SR 55 Overcrossing	-	\$0	\$0
Red Hill Widening	7.20	\$881,662	\$594,662
Dyer Roadway Widening	(4.43)	(\$1,418,335)	(\$956,637)

Source: WSP Analysis

⁸ \$4,435 for Property Damage Only, \$29,700 for "Complaint of Pain", \$465,300 for "Other Visible Injury", \$2,633,500 for "Severe Injury", and \$9,900,300 for "Fatality" (these values have been escalated from 2017 dollars to 2019 dollars).

RESULTS

The benefit-cost analysis converts potential gains (benefits) and losses (costs) from each mitigation into monetary units and compares them. The following common benefit-cost evaluation measures are included in this analysis:

- **Benefit Cost Ratio (BCR):** The evaluation also estimates the benefit-cost ratio; the present value of incremental benefits is divided by the present value of incremental costs to yield the benefit-cost ratio. The BCR expresses the relationship of discounted benefits to discounted costs as a measure of the extent to which a mitigation’s benefits either exceed or fall short of the costs. A BCR above 1 indicates that the mitigation’s benefits exceed its costs.
- **Net Present Value (NPV):** NPV compares the net benefits (benefits minus costs) after being discounted to present values using the real discount rate assumption of 4 percent. The NPV provides a perspective on the overall dollar magnitude of cash flows over time in today’s dollar terms. An NPV above 0 indicates that the mitigation’s benefits exceed its costs.

Table 10 presents the evaluation results for each of the contemplated IBC mitigations. All benefits and costs were estimated in constant 2019 dollars over an evaluation period extending 20 years beyond completion. Results are presented as present values, discounted at 4 percent, and are organized from highest to lowest BCR.

Table 10: Benefit Cost Analysis Results

MITIGATION	BENEFITS	COSTS	BENEFIT COST RATIO	NET PRESENT VALUE
Culver Dr at I-405 NB Ramps	\$6,956,583	\$269,280	25.83	\$6,687,303
SR-55 Frontage Road SB at Baker Street	\$5,089,348	\$1,017,150	5.00	\$4,072,198
California Ave at University Dr	\$12,057,832	\$2,770,150	4.35	\$9,287,682
Dyer Roadway Widening	\$59,677,705	\$18,046,585	3.31	\$41,631,120
Alton/ SR 55 Overcrossing	\$56,027,330	\$30,592,475 (City of Irvine)	1.82	25,434,855
		\$61,184,950 (Total Project)	0.92	(\$5,157,620)
Jamboree Rd at Michelson Bridge	\$13,962,388	\$8,237,000	1.70	\$5,725,388
Harvard Ave at Michelson Dr	\$4,373,559	\$3,438,300	1.27	\$935,259
Von Karman Ave from Alton Pkwy to Barranca Pkwy – Option A	\$10,732,376	\$10,000,640	1.07	\$731,736
Von Karman Ave from Alton Pkwy to Barranca Pkwy – Option B	\$10,732,376	\$11,081,600	0.97	(\$349,224)
Jamboree Rd at Barranca Pkwy	\$3,216,947	\$6,570,000	0.49	(\$3,353,053)
Red Hill Widening	\$7,948,054	\$24,053,600	0.33	(\$16,105,546)

Source: WSP Analysis

The projects range from a BCR of 25.8 to 0.33, and from an NPV of nearly \$42 million to negative \$16 million. Of the 11 projects evaluated, seven have benefits that exceed the costs, while four have costs that exceed their benefits. The fact that some projects have BCRs below one does not necessarily indicate that they are bad projects; there may be other benefits that have not been captured by the limited scope of this analysis. However, the results do suggest that caution is warranted and that these projects may be of a lower priority.

The results of the **Red Hill Widening** analysis suggest that the traffic volumes and congestion projected for the roadway do not alone justify the high project costs. Similarly, the proposed improvements to **Jamboree Road at Barranca Parkway** improvements are insufficient to achieve a positive NPV.

This study evaluated two versions of the **Von Karman improvements from Alton to Barranca**. The benefits of these alternatives are calculated to be the same across both options, but the costs of Option A are lower than Option B. Based on this cost differential, Option A achieves a positive NPV, while the NPV for Option B is slightly negative. Option A is thus the higher performing choice.

Of the projects that perform favorably, the **Culver Drive at I-405 Ramp** mitigation has the highest BCR by a large margin, due to high congestion relief and very low costs (the lowest across all projects); these results suggest this mitigation as a natural early action. In terms of NPV, the **Dyer Road Widening** performs strongest, despite its high costs and a predicted increase in traffic collisions due to the widening. This can be attributed to congestion relief of more than one minute per vehicle, alongside a high volume of impacted vehicles. The **Alton / SR-55 Overcrossing** has among the highest benefits of all projects, and when

weighed against the costs to the City of Irvine, the project performs very well, having the second highest NPV. However, if the total project costs are included, these outweigh the benefits.

The pedestrian bridge at **Jamboree and Michelson** also performs favorably, and is one of the few mitigations with major safety benefits, in additions to time savings. Other mitigations that perform well, primarily due to a significant reduction in LOS and resulting travel times, are **California Avenue at University Drive**, **SR-55 Frontage Road Southbound at Baker Street**, and **Harvard Avenue at Michelson Drive**.