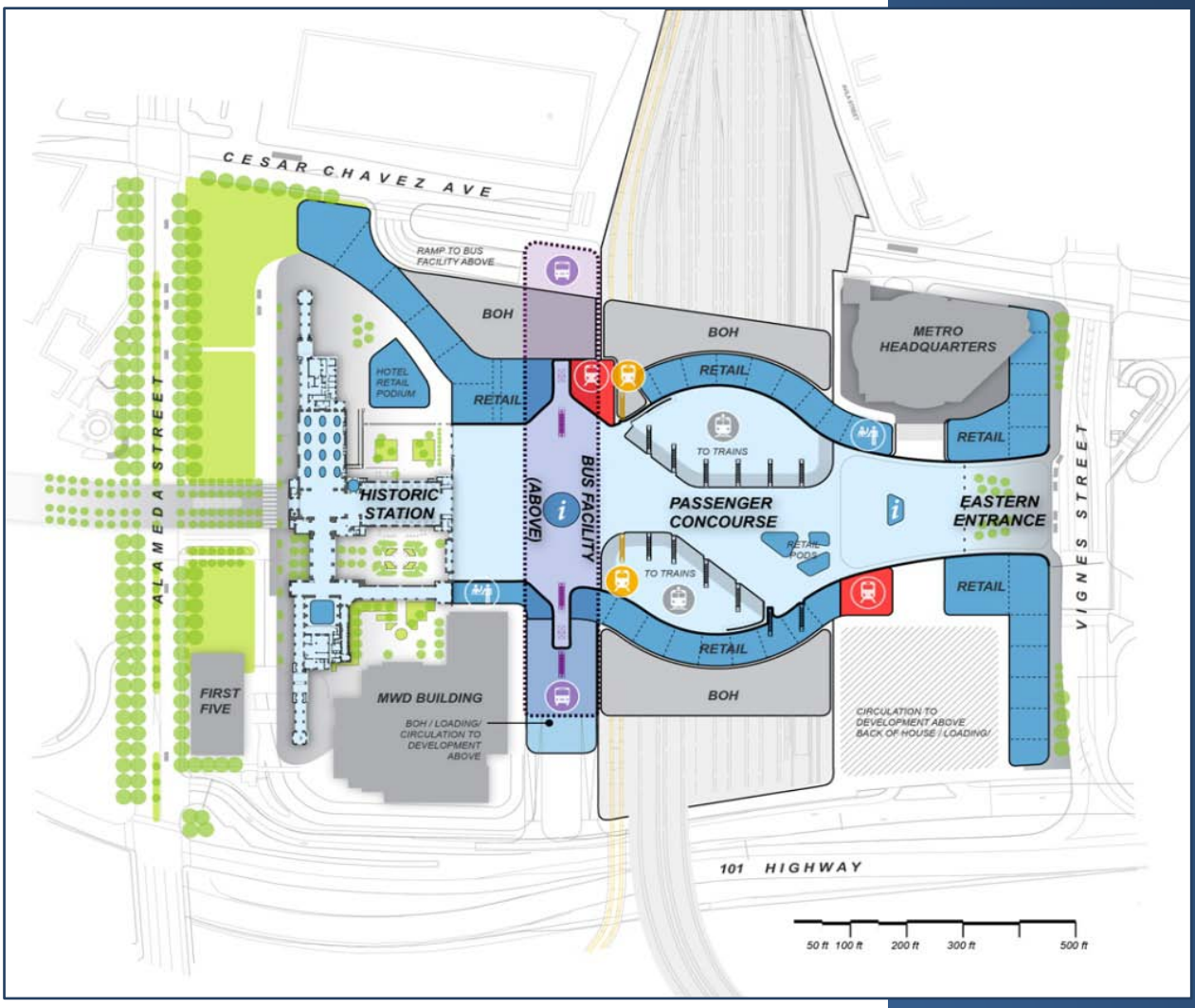

LOS ANGELES UNION STATION MASTER PLAN:

AN ECONOMIC IMPACT ANALYSIS

FINAL REPORT

INSTITUTE FOR APPLIED ECONOMICS
Los Angeles County Economic Development Corporation

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SEPTEMBER 2014

This research was commissioned by the Los Angeles County Metropolitan Transportation Authority.

The LAEDC Institute for Applied Economics provides objective economic and policy research for public agencies and private firms. The Institute focuses on economic impact studies, regional industry analyses, economic forecasts and issue studies, particularly in workforce development, transportation, infrastructure and environmental policy.

Executive Summary

Serving more than 60,000 commuters each day, Union Station is the largest railroad passenger terminal in the western United States and the main transit hub in the Southern California region, connecting passengers to destinations throughout the region.

To meet expected growth, the Los Angeles County Metropolitan Transportation Authority (Metro) has developed the Union Station Master Plan (USMP). The Plan's goals are to improve current transit operations, accommodate future transit growth, revitalize unused and underutilized spaces in the historic station, implement entitled development opportunities, and improve connectivity to surrounding neighborhoods, between transit modes and through the station. The Plan contains two main components: (1) transit improvements and (2) commercial development, with two programming scenarios envisioned.

The LAEDC Institute for Applied Economics (IAE) has been retained to quantify the economic impact of both the construction and ongoing operations phases of the Union Station Master Plan. The findings are summarized below.

Project Development Impacts

Exhibit ES-1 summarizes the total economic impacts of investment and expenditures related to public transit improvements, some of which are to be funded by Metro and its local, state and federal funding partners ("Transit") and others whose costs can be shared through public-private partnerships ("Shared Costs").

It is estimated that investments in transit improvements will generate economic output of $2.8 billion in Los Angeles County and support 16,890 jobs with a labor income (wages and benefits) of $1.1 billion.

Exhibit ES-1
Union Station Master Plan – Transit Improvements
Total Economic and Fiscal Impact
(Los Angeles County)

	Transit	Shared Costs	Total
Development Costs ($ millions)	$ 1,308.5	$ 402.8	$ 1,711.3
Total Economic Impact:			
Employment	12,710	4,180	16,890
Direct	*7,160*	*2,400*	*9,560*
Indirect	*2,510*	*780*	*3,290*
Induced	*3,040*	*1,000*	*4,040*
Labor income ($ millions)	$ 834.1	$ 274.0	$ 1,108.1
Output ($ millions)	2,105.9	670.9	2,776.8
Total Fiscal Impact:			
State / local taxes ($ millions)	$ 75.8	$ 25.0	$ 100.8
Federal taxes ($ millions)	157.7	51.7	209.4

Source: Estimates by LAEDC

Exhibit ES-2 summarizes the total economic impact of the commerical development component of the Union Station Mast Plan. Two private development scenarios are considered, each offering more than 3 million gross square feet of real estate in a combination of programming uses including residential, commercial, hotel and retail spaces.

Exhibit ES-2
Union Station Master Plan – Commercial Development
Total Economic and Fiscal Impact
(Los Angeles County)

	Development Option 1: Mixed	Development Option 2: Market Case
Development Costs ($ millions)	$ 1,292.0	$ 1,318.7
Total Economic Impact:		
Employment	13,620	13,830
Direct	*7,520*	*7,570*
Indirect	*2,800*	*2,910*
Induced	*3,300*	*3,350*
Labor income ($ millions)	$ 906.6	$ 919.7
Output ($ millions)	2,231.5	2,277.6
Total Fiscal Impact:		
State and local taxes ($ millions)	$ 88.3	$ 91.2
Federal taxes ($ millions)	170.8	173.6

Source: Estimates by LAEDC

Commercial development of Option 1 is projected to generate 13,620 jobs with labor income of $906.6 million, adding $2.2 billion in economic output in Los Angeles County. Development Option 2 is projected to generate 13,830 jobs with labor income of $919.7 million, adding $2.3 billion in economic output in the county.

In addition, this economic activity is projected to generate tax revenues to public agencies of between $88.3 million and $91.2 million in state and local taxes, and between $170.8 million and $173.6 million in federal taxes.

Annual Ongoing Activity Impacts

Once completed, the commercial development at Union Station will have a recurring impact on the regional economy. These benefits will be generated from residential expenditures on rent and parking, purchases made at onsite retail and restaurant establishments, and the operations of the hotel. Additionally, the new residential households will make purchases at local businesses. The total economic impact under the two development scenarios is shown in Exhibit ES-3.

Exhibit ES-3
Union Station Master Plan
Total Economic and Fiscal Impact of Ongoing Operations
(Los Angeles County)

	Development Option 1: Mixed	Development Option 2: Market Case
Direct Annual Revenues ($ millions)	$ 437.0	$ 492.7
New Resident Spending ($ millions)	29.8	43.6
Total Economic Impact:		
Employment (jobs)	6,160	5,560
Direct	*3,780*	*3,460*
Indirect	*960*	*850*
Induced	*1,420*	*1,250*
Labor income ($ millions)	$ 391.1	$ 345.5
Output ($ millions)	$ 742.8	$ 675.3
Total Fiscal Impact ($ millions):		
Federal tax revenues	$ 75.2	$ 67.7
State and local tax revenues	53.1	50.9

Source: Estimates by LAEDC

It is estimated that under Development Option 1, ongoing activities at Union Station will generate annual economic output of $742.8 million in Los Angeles County and support 6,160 jobs with labor income of $391.1 million annually, while under Development Option 2, $675.3 million will be generated, supporting 5,560 jobs with labor income of $345.5 million annually.

Additionally, it is estimated that $53.1 million in state and local taxes will be generated annually under Option 1 and $50.9 million annually under Option 2 in Los Angeles County because of activities occurring at the Union Station Master Plan. ❖

1 Introduction

Los Angeles Union Station is the iconic 75 year old transit hub for the County of Los Angeles and neighboring counties in the Southern California Region. The 161,000 square foot terminal transportation facility has been on the National Register of Historic Places since 1980 and was restored in 1992.

Amtrak, Metrolink and Metro rail and bus services operate at the station, enhancing the importance of Union Station in assembling and connecting travelers throughout the Southern California region.

In April 2011, the Los Angeles Metropolitan Transportation Authority (Metro) acquired Los Angeles Union Station which includes about 47 acres and city approved entitlements to build 5.9 million square feet of new development. Metro has developed the Union Station Master Plan (USMP) to guide and improve current transit operations, accommodate future transit growth, revitalize unused and underutilized spaces in the historic station, implement entitled development opportunities, and improve connectivity to surrounding neighborhoods, between transit nodes and through the station. The plan will help meet future passenger growth estimated to increase from 60,000 to over 100,000 per day by 2020.

The Union Station Master Plan encompasses several goals:

- Celebrate the history of Union Station
- Improve the passenger experience
- Create a great destination
- Prepare for high speed rail
- Facilitate joint development of commercial space

Implementation of the Union Station Master Plan will entail significant investment and expenditure of public and private capital which will generate sizeable impacts in the regional economy. The LAEDC Institute for Applied Economics (IAE) has been retained to quantify the economic impacts that would result from the development of the Union Station Master Plan and from its future annual operating activity.

Economic Impact Analysis

Economic impact analysis is used to estimate the overall economic activity, including spill-over and multiplier impacts, which occurs as a result of a particular business, event or geography.

The economic activity related to the new construction and the expected ongoing operations of the Union Station Master Plan is the hundreds of millions of dollars of goods and services purchased from local vendors and the wages and benefits paid to local workers.

This initial injection of funds within the county circulates to the business owners and employees that supply the materials, goods and services needed for the development. These contractors, businesses and households continue the economic ripple effect by hiring workers and buying goods and services to facilitate their business.

During the development and construction phase, millions of dollars will be spent for the wages and benefits of construction employees. These workers, as well as employees of all suppliers, will spend a portion of their wages on household consumer goods such as

groceries, rent, vehicle expenses, healthcare, entertainment, and so on. Once the development is completed and occupied, commercial activity and new residential households will spend millions of dollars annually in the course of their day-to-day activities. This recirculation of the original expenditures multiplies their impact through these indirect and induced effects.

The extent to which the initial expenditures multiply is estimated using economic models that depict the relationships between industries (such as the construction industry and its suppliers) and among economic agents (such as firms and their employees).

These models are built upon expenditure patterns that are reported to the U.S. Bureau of Labor Statistics, the U.S. Census Bureau and the Bureau of Economic Analysis of the U.S. Department of Commerce. Data is regionalized so that it reflects and incorporates local conditions such as prevailing wages rates, expenditure patterns, and resource availability and costs.

The magnitude of the multiplying effect differs from one region to another depending on the extent to which the local region can fill the demand for all rounds of supplying materials, goods and services. For example, the automobile manufacturing industry has high multipliers in Detroit and Indiana since these regions have deep and wide supplier networks, while the same industry multiplier in Phoenix is quite small. In another example, the jobs multiplier for the construction industry is higher in, say, Arkansas, than in California because the same amount of spending will purchase fewer workers in Los Angeles than in Little Rock.

Multipliers can also differ from year to year as relative material and labor costs change and as the production "recipe" of industries change. For example, the IT revolution significantly reduced the job multiplier of many industries (such as manufacturing, accounting, architecture and publishing) as computers replaced administrative and production workers.

Approach and Methodology

Economic impact analysis typically begins with an increase in final demand for an industry's output, such as a purchase of legal services, or rent and utilities. The analysis used herein is to use the projected development budgets for the separate phases of the property, combined with the estimated revenues of all operations once the property is occupied. Data was provided by Metro and supplemented with regional and local data and analysis to provide revenue estimates (where these were not provided by the client).

The total estimated economic impact includes *direct*, *indirect* and *induced* effects. *Direct activity* includes the materials purchased and the employees hired by the Metro and its construction contractors. Included are operations staff such as management, human resources and maintenance, and construction workers such as laborers, electricians and other trades. *Indirect effects* include those expenditures which stem from purchases made by the contractors and their suppliers. *Induced effects* are those generated by the household spending of employees whose wages are sustained by both direct and indirect spending, such as those on groceries, rent, vehicle expenses, healthcare, entertainment, and so on.

Indirect and induced impacts are estimated using models developed with software and data from the IMPLAN Group, LLC. The economic region of interest is Los Angeles County, under the assumption that most of the suppliers and workers are located within the county.

The metrics used to define the value of the economic impact include employment, labor income and the value of output. *Employment* includes full-time, part-time, permanent and seasonal employees and the self-employed, and is measured on a job-count basis regardless of the number of hours worked. *Labor income* includes all income received by both payroll employees and the self-employed, including wages and benefits, such as health insurance and pension plan contributions. *Output* is the value of the goods and services produced. For most industries, this is simply the revenues generated through sales; for others, in particular retail industries, output is the value of the services supplied. Unless noted otherwise, estimates for labor income and output are expressed in 2014 dollars.

It should be noted that a development of this size will have significant impacts. The added residential property will be occupied by new residents, and commercial properties will house businesses and retail activities. The extent to which these activities are *new* rather than a *relocation* of existing activities from other areas of the study area is not known. Given expected population growth over the lengthy development period, it is reasonable to assume that the addition of households represents new activity, but this may not be an appropriate assumption for the incremental commercial and retail activities. The economic and fiscal impact results should therefore be interpreted as those that are *attributable* to the new development rather than assuming the new development will *generate* such net new activities. ❖

2 Union Station Master Plan Development

The economic activity directly related to the development of the property is analyzed in this section. This development is delineated in two parts: (1) the investments made in public transit improvements, and (2) commercial and residential development on the site.

Transit Improvements

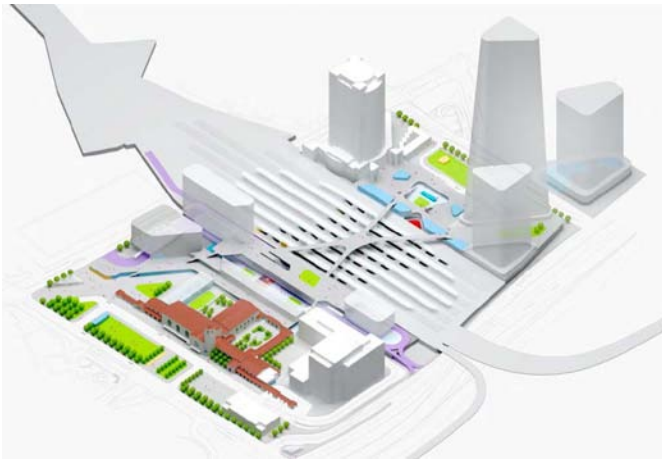
A primary objective of the Union Station Master Plan is to optimize transit operations now and in the future. The plan centers on three transport components: (1) relocation of Patsouras Bus Plaza to create a co-located bus facility serving local and regional buses and shuttles; (2) a multi-modal concourse to support increased passenger circulation; and (3) an illustrative approach to the integration of a High Speed Rail (HSR) station serving Union Station (noting, however, that the ultimate location of a HSR station will require further study by the California High Speed Rail Authority).

Overall transportation-related development costs, exclusive of private commercial development, are projected to be $1.7 billion. Of this total, $1.3 billion are considered public expenditures or "Transit Costs" and will likely be funded by Metro and its local, state and federal funding partners. The remaining $403 million are for projects whose costs may be shared with private investors and funded through public-private partnerships under cost-sharing arrangements ("Shared Costs").

The total economic impact of the two separate funding approaches for the construction phase of transit improvements are shown in Exhibit 2-1.

It is estimated that project development related to transit improvements will generate 12,710 jobs with labor income of $834.1 million and will add $2.1 billion in economic output in the county. Moreover, this economic activity is projected to generate $75.8 million in state and local taxes and $157.7 million in federal taxes.

Project developments that will be funded through public-private partnerships are projected to generate



4,180 jobs with labor income of $274.0 million, and add $670.9 million in economic output in Los Angeles County.

Exhibit 2-1
Union Station Master Plan – Transit Improvements
Total Economic and Fiscal Impact
(Los Angeles County)

	Transit	Shared Costs	Total
Development Costs ($ millions)	$ 1,308.5	$ 402.8	$ 1,711.3
Total Economic Impact:			
Employment	12,710	4,180	16,890
Direct	*7,160*	*2,400*	*9,560*
Indirect	*2,510*	*780*	*3,290*
Induced	*3,040*	*1,000*	*4,040*
Labor income ($ millions)	$ 834.1	$ 274.0	$ 1,108.1
Output ($ millions)	2,105.9	670.9	2,776.8
Total Fiscal Impact:			
State / local taxes ($ millions)	$ 75.8	$ 25.0	$ 100.8
Federal taxes ($ millions)	157.7	51.7	209.4

Source: Estimates by LAEDC

These transit improvements will be implemented in a series of phases as funding becomes available. Development costs and economic impact estimates by phase and by funding source are shown in Exhibits 2-2 through 2-4 on the following page.

Exhibit 2-2
Union Station Master Plan
Total Economic and Fiscal Impact by Phase

	Phase 1	2A	2B	2C	2D	2E	2F	Project Total
Development Costs ($ millions)	19.4	509.6	770.0	11.7	285.9	113.5	1.2	1,711.3
Total Economic Impact:								
Employment	210	5,070	7,140	120	3,080	1,240	20	16,880
Direct	*120*	*2,820*	*4,070*	*70*	*1,770*	*700*	*10*	*9,560*
Indirect	*40*	*1,040*	*1,360*	*20*	*580*	*240*	*5*	*3,290*
Induced	*50*	*1,210*	*1,710*	*30*	*740*	*300*	*5*	*4,030*
Labor income ($ millions)	13.5	332.7	469.2	8.1	202.3	81.4	0.8	1,108.1
Output ($ millions)	32.1	858.4	1,164.1	19.9	498.9	201.3	2.1	2,776.8
Total Fiscal Impact:								
State and local taxes ($ millions)	1.2	30.2	42.7	0.7	18.4	7.4	0.1	100.8
Federal taxes ($ millions)	2.6	63.2	88.4	1.5	38.1	15.3	0.2	209.4

Source: Estimates by LAEDC

Exhibit 2-3
Union Station Master Plan – Transit Costs
Total Economic and Fiscal Impact of by Phase

	Phase 1	2A	2B	2C	2D	2E	2F	Project Total (Transit)
Development Costs ($ millions)	19.4	488.2	562.8	11.7	150.9	74.4	1.2	1,308.5
Total Economic Impact:								
Employment	210	5,040	4,910	120	1,610	800	20	12,710
Direct	*120*	*2,800*	*2,780*	*70*	*930*	*450*	*10*	*7,160*
Indirect	*40*	*1,040*	*950*	*20*	*300*	*160*	*5*	*2,510*
Induced	*50*	*1,200*	*1,180*	*30*	*380*	*190*	*5*	*3,040*
Labor income ($ millions)	13.5	330.2	332.7	8.1	105.7	53.0	0.8	834.1
Output ($ millions)	32.1	853.2	704.0	19.9	261.5	133.0	2.1	2,105.9
Total Fiscal Impact:								
State and local taxes ($ millions)	1.2	30.0	29.3	0.7	9.6	4.8	0.1	75.8
Federal taxes ($ millions)	2.6	62.8	60.8	1.5	19.9	10.0	0.2	157.7

Source: Estimates by LAEDC

Exhibit 2-4
Union Station Master Plan – Shared Costs
Total Economic and Fiscal Impact of by Phase

	Phase 1	2A	2B	2C	2D	2E	2F	Project Total (Shared)
Development Costs ($ millions)	-	21.4	207.2	-	135.0	39.1	-	402.8
Total Economic Impact:								
Employment	-	35	2,230	-	1,470	430	-	4,180
Direct	*-*	*20*	*1,290*	*-*	*840*	*250*	*-*	*2,400*
Indirect	*-*	*6*	*410*	*-*	*280*	*80*	*-*	*780*
Induced	*-*	*9*	*530*	*-*	*350*	*100*	*-*	*1,000*
Labor income ($ millions)	-	2.5	146.6	-	96.5	28.4	-	274.0
Output ($ millions)	-	5.3	360.0	-	237.3	68.3	-	670.9
Total Fiscal Impact:								
State and local taxes ($ millions)	-	0.2	13.4	-	8.8	2.6	-	25.0
Federal taxes ($ millions)	-	0.5	27.6	-	18.2	5.4	-	51.7

Source: Estimates by LAEDC

Commercial Development

The Master Plan studied two mixed-use development scenarios for commercial development at the Union Station site, each offering more than 3 million gross square feet of new development space. The first scenario ("Mixed") provides approximately 260 hotel rooms, 290 residential units and over 700 live/work units, in addition to commercial, retail and education space. The second scenario ("Market Case") offers 175 hotel rooms and more than 1,800 residential units. A summary of the development program by land uses and square footage for each scenario is shown in Exhibit 2-5.

Exhibit 2-5
Union Station Master Plan
Commercial Development Project Summary

Land Use (Sq ft)	Development Option 1: Mixed	Development Option 2: Market Case
Residential	271,000	1,600,000
Hotel	207,000	140,000
Office	1,255,000	1,194,000
Retail	144,000	150,000
Live/Work	1,002,000	-
Education	206,000	206,000
Cultural	36,000	-
TOTAL	3,121,000	3,290,000

Source: Metro

Although the programming differs between the two scenarios, the projected development costs are similar at approximately $1.3 billion for each. Hence, the total economic impact of the construction phase of each commercial development scenarios is also similar (Exhibit 2-6).

The commercial development under Development Option 1 is projected to generate 13,620 jobs with labor income of $906.6 million and to add $2.2 billion in economic output in Los Angeles County. Development Option 2 is projected to generate 13,830 jobs with labor income of $919.7 million, adding $2.3 billion in economic output in the county.

This economic activity is projected to generate between $88.3 million and $91.2 million in state and local taxes, and between $170.8 million and $173.6 million in federal taxes.

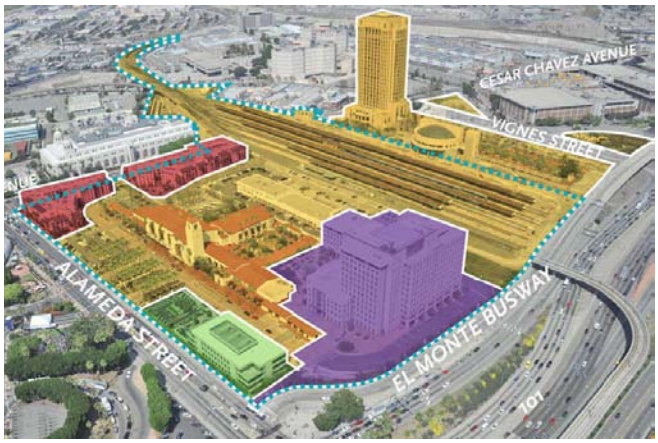
Exhibit 2-6
Union Station Master Plan – Commercial Development
Total Economic and Fiscal Impact
(Los Angeles County)

	Development Option 1: Mixed	Development Option 2: Market Case
Development Costs ($ millions)	$ 1,292.0	$ 1,318.7
Total Economic Impact:		
Employment	13,620	13,830
Direct	*7,520*	*7,570*
Indirect	*2,800*	*2,910*
Induced	*3,300*	*3,350*
Labor income ($ millions)	$ 906.6	$ 919.7
Output ($ millions)	2,231.5	2,277.6
Total Fiscal Impact:		
State and local taxes ($ millions)	$ 88.3	$ 91.2
Federal taxes ($ millions)	170.8	173.6

Source: Estimates by LAEDC

3 Future Ongoing Activity at Union Station

The realization of commercial development at Union Station will generate a recurring impact on the regional economy once construction is completed and the residential and commercial space is occupied. Annual revenue related to the development will be comprised of resident expenditures on rent and parking, purchases made at onsite retail and restaurant establishments, and the operations of the hotel. Additionally, the new residential households will make purchases at local businesses.



Operational Business Activity

Business activity related to ongoing operations of the commercial development at Union Station include residential rent revenue, retail activity, hotel revenues, resident and visitor parking revenue and the activity occurring in commercial space.

Robert Charles Lesser & Co. (RCLCO), a real estate advisory company, prepared a financial analysis of the proposed real estate programs of each development scenario. This analysis was used to estimate the revenues from the proposed private development and its projected future activity, including projections of residential and commercial rents, hotel revenues and parking and other revenues.

Residential rent revenue constitutes the payments that will be made by tenants to property owners. Hotel income will include room rentals and other miscellaneous revenues related to the lodging facility. Parking revenues will be collected from visitors, residents and hotel guests.

Revenue generated from proposed commercial activity from office uses and educational services were derived using employment density estimates from the U.S. Energy Information Administration's Commercial Buildings Energy Consumption Survey (CBECS), which provides employment densities (employees per square foot) by building type. These densities were used to estimate projected employment of commercial and educational uses of the property. Revenue estimates were then derived using average labor productivity data by industry for Los Angeles County. Although commercial rents and rents generated from education uses were estimated by RCLCO, to avoid double-counting these were not included in the analysis since they would be accounted for in the estimated revenues earned by commercial activities using other means.

Using these methods, annual revenues of the ongoing activities at the Union Station, once completed, are estimated and summarized in Exhibit 3-1.

Exhibit 3-1
Union Station Master Plan
Annual Direct Activity from Ongoing Operations

	Area (gross sq.ft.)	Estimated Annual Revenue
Development Option 1: Mixed		
Residential rental	1,273,000	$ 43,194,630
Hotel	207,000	27,615,350
Retail	144,000	58,320,000
Commercial[1]	1,255,000	293,260,000
Education[1]	206,000	6,360,000
Parking		8,225,360
Total		$ 436,975,340
Development Option 2: Market Case		
Residential rental	1,600,000	$ 61,441,790
Hotel	140,000	18,731,340
Retail	150,000	70,392,500
Commercial[1]	1,194,000	253,780,000
Education[1]	206,000	6,360,000
Parking		7,056,320
Total		$ 417,761,950

[1] Estimates of commercial and educational services revenues are based on employment densities and labor productivity
Source: Metro; Robert Charles Lesser & Co.; Estimates by LAEDC

It is estimated that annual revenues earned at the Union Station Master Plan properties will reach $437.0 million under Development Option 1 and $417.8 million under Development Option 2. The majority of the ongoing revenues will be generated from private activity occurring in the commercial space made available by the Union Station Master Plan.

New Resident Spending

In addition to the new ongoing commercial activity occurring at Union Station, an additional impact on the local economy will derive from the local spending of resident households occupying the new residential units.

To quantify this impact, the annual income and spending patterns for new households is estimated. Next, a calculation of the expenditures that would likely occur at businesses located within Los Angeles County is made.

Projected monthly rental and sales revenue for the residential units were provided in the financial model developed by RCLCO. The expected build out of the Union Station Master Plan provides 1,000 additional housing units under the Mixed Development Option, and 1,817 additional housing units under the Market Case Development option.

It is assumed that all units will be rented to households with spending patterns typical to residents of Los Angeles County. It is also assumed that the residential towers will attain a 92.7 percent occupancy rate based on the 2007-2001 five-year rental vacancy rate historical data from the U.S. Census Bureau's *American Community Survey* for the 90012 zip code area. A higher occupancy rate would translate into higher local spending and larger impacts; the inverse would be true for a lower occupancy rate.

Using expected rents, the income levels of future tenants are calculated. Using data from the *American Community Survey,* the percentage of income typically dedicated to housing costs are derived. According to this source, the percentage of pre-tax income dedicated to rental payments is at least 35 percent for households located in the downtown 90012 zip code area of Los Angeles. Therefore, based on rental payments as a percentage of total income, the average annual pre-tax income for households living in USMP residences will exceed $90,000. The aggregate annual income of all new residents will total between $115 million and $160 million.

To estimate the local expenditures of typical Los Angeles County households, household spending patterns reported in the U.S. Department of Commerce, Bureau of Labor Statistics 2012-13 *Consumer Expenditure Survey* are applied to the household incomes implied by the rents.

The consumer survey disaggregates household spending by various categories, including housing, transportation, food, health care, etc. It is assumed that only the following categories represent local retail spending: food away from home, alcoholic beverages, housekeeping supplies, apparel and services, public transportation, personal care products and services, reading, tobacco products and smoking supplies, and a portion of entertainment spending.

The average household in the Los Angeles Metropolitan Statistical Area earns $69,562 in pre-tax earnings, of which 23 percent or $15,885 is spent on goods and services that are likely to be purchased near one's place of residence. The remaining 77 percent of household spending is directed to housing, transportation costs (other than local), health care, personal insurance, pensions and taxes.

Using this information, the projected total annual local retail spending of the new residents in the USMP residences is estimated. These estimates, by spending category, are shown in Exhibit 3-2.

Exhibit 3-2
Unions Station Master Plan
Projected Annual Local Spending by New Resident Households

	Development Option 1: Mixed	Development Option 2: Market Case
Alcoholic beverages	$ 1,269,780	$ 1,806,170
Apparel and services	3,569,700	5,437,670
Entertainment	3,922,730	6,018,430
Food at home	8,983,740	12,778,740
Food away from home	6,558,110	9,328,450
Supplies	1,205,480	1,849,500
Miscellaneous	1,505,990	2,304,620
Personal care products and services	1,326,910	1,932,050
Public transportation	1,026,060	1,535,120
Reading	203,850	273,640
Tobacco products	254,080	381,690
Subtotal	$ 29,826,440	$ 43,646,080
Total New Household Spending	$ 73,023,800	$ 105,091,300

Source: Estimates by LAEDC

It is estimated that between $29.8 million and $43.6 million will be spent at local businesses by new households living in the residential units of the Union Station Master Plan.

These estimates are likely to understate the level of local expenditures since the estimates assume a linear relationship between spending patterns and incomes (that is, as household income rises, each category continues to receive the same proportion of total household spending). However, demand for certain goods and services can vary with income. Households with higher incomes (and thus more disposable cash) typically spend more on items such as restaurant meals as a proportion of their income.

Economic and Fiscal Impact

Given these projected revenues, the total annual economic impact in Los Angeles County of the ongoing activity occurring at Union Station Master Plan properties is shown in Exhibit 3-3.

Exhibit 3-3
Union Station Master Plan
Total Economic and Fiscal Impact of Ongoing Operations
(Los Angeles County)

	Development Option 1: Mixed	Development Option 2: Market Case
Direct Annual Revenues ($ millions)	$ 437.0	$ 492.7
New Resident Spending ($ millions)	29.8	43.6
Total Economic Impact:		
Employment (jobs)	6,160	5,560
Direct	*3,780*	*3,460*
Indirect	*960*	*850*
Induced	*1,420*	*1,250*
Labor income ($ millions)	$ 391.1	$ 345.5
Output ($ millions)	$ 742.8	$ 675.3
Total Fiscal Impact ($ millions):		
Federal tax revenues	$ 75.2	$ 67.7
State and local tax revenues	53.1	50.9

Source: Estimates by LAEDC

It is estimated that under Development Option 1, ongoing activities at Union Station will generate annual economic output of $742.8 million in Los Angeles County and support 6,160 jobs with labor income of $391.1 million annually, while under Development Option 2, $675.3 million will be generated, supporting 5,560 jobs with labor income of $345.5 million annually.

Additionally, it is estimated that $53.1 million in state and local taxes will be generated annually under Option 1 and $50.9 million annually under Option 2 in Los Angeles County because of activities occurring at the Union Station Master Plan. The disaggregation of taxes by type and by level of government is shown in Exhibit 3-4.

Exhibit 3-4
Union Station Master Plan
Detailed Annual Fiscal Impact of Ongoing Operations

	Development Option 1: Mixed	Development Option 2: Market Case
By Type of Tax ($ millions):		
Personal income taxes	$ 37.5	$ 33.2
Social insurance	38.7	34.1
Sales and excise taxes	13.1	12.4
Property taxes	24.9	24.9
Corporate profits taxes	7.3	7.7
Motor vehicle license	0.6	0.6
Other taxes and fees paid by businesses	2.4	2.3
Other taxes and fees paid by households	1.5	1.3
Total	$ 126.3	$ 116.6

Source: Estimates by LAEDC

Personal income taxes and social insurance payments will be the largest sources of fiscal revenues to state and federal governments, accounting for approximately 60 percent of all tax revenues. Sales and excise taxes, which include transient occupancy taxes earned from the new hotel property, will reach $13.1 million annually under Development Option 1 and $12.4 million under Development Option 2.

As a development project, the new properties of the Union Station Master Plan will also generate increased property taxes, which are included in the property tax estimates in the exhibit. It is assumed that the assessed value of the property will rise by at least the value of the development, but this may understate the actual future reassessment and therefore this category of tax revenue.

Other sources of tax revenues include taxes on corporate profits, motor vehicle license and other taxes and fees paid by businesses and households. ❖

Study Authors

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Dr. Cooper leads the LAEDC Institute for Applied Economics whose work involves research in regional issues such as economic impact studies, regional industry analysis and forecasts, workforce development analysis and policy studies. Her fields of expertise include development economics, environmental economics, regional analysis and urban sustainability.

Prior to joining the LAEDC, Dr. Cooper was co-founder of a start-up company in Hong Kong concentrating on equity transactions software and computer accessories manufacturing, which expanded production into the special economic zone of Shenzhen, China and distributed products throughout the United States and Asia. With her business partner, she also established the first authorized Apple Computer retailer in China. She has been a lecturer at California State University, Long Beach and at the Pepperdine Graziadio School of Business and Management.

Dr. Cooper is a citizen of the United States and Canada. She earned a Bachelor of Arts in Economics from Carleton University in Ottawa, Canada, and a Ph.D. in Economics from the University of Southern California. With funding from the National Science Foundation, she earned a Graduate Certificate in Environmental Sciences, Policy and Engineering. Her current research includes industry cluster performance in the regional economy, commuting and job allocation patterns and workforce development issues.

Shannon M. Sedgwick
Economist

In her current capacity as an Economist at the LAEDC, Ms. Sedgwick develops subject-specific information and data interpretation for economic impact, demographic, transportation, industry and issue studies. She performs research, data collection and organization, analysis and report preparation. Her work focuses on demographics, industry clusters and occupational analysis. Ms. Sedgwick is also proficient at conducting geospatial analysis and has experience working with IMPLAN.

Ms. Sedgwick joined the LAEDC team in June of 2008 as an Economic Research Assistant with the Kyser Center for Economic Research. In that role she assisted both Economic Research and the Consulting Practice of the LAEDC with data collection and research, managing multiple data sets covering the State of California, Southern California and its counties. She was responsible for the *Business Scan* a collection of Los Angeles County economic indicators; the annual *L.A. Stats*, the most frequently requested statistics for Los Angeles region; and was a regular contributor to the weekly economic newsletter, *e-Edge.*

Before joining the LAEDC, Ms. Sedgwick managed an industrial and steel supply company located in the Inland Empire. There she identified and targeted a diverse customer base, and analyzed product and customer patterns in the local industrial market to successfully increase revenues.

A Southern California native, Ms. Sedgwick received her Bachelor of Arts in Economics from the University of Southern California (USC) with a minor in Architecture. She has been a member of the national and the Los Angeles Chapter of the National Association for Business Economics (NABE) since 2008.

Somjita Mitra, Ph.D.
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Somjita Mitra joined the LAEDC Institute for Applied Economics as an Economist in June 2013. She is involved in planning, designing and conducting research and analysis for consulting clients and local businesses and governments, as well as for LAEDC's internal departments. Her focus is in regional analysis, economic impact studies and the industrial and occupational structure of local economies.

Before joining the LAEDC, Dr. Mitra was an Economist for a local economic research and litigation consulting company evaluating economic damages, estimating lost profits, identifying key economic issues and developing necessary analytical and empirical frameworks. Prior to this, Dr. Mitra was Project Director for a consumer research firm in Los Angeles where she managed projects that identified and analyzed key market issues for local firms as well as multinational corporations.

Dr. Mitra received her Bachelor of Arts in Economics and Political Science from the University of California, Los Angeles and her Master of Arts in Politics, Economics and Business as well as her Ph.D. in Economics from Claremont Graduate University. Dr. Mitra enjoys volunteering in the local community and is actively involved in both women's welfare and animal rescue organizations. ❖

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