



TRANSPORTATION
CORRIDOR AGENCIES

July 2011

Economic Benefit Analysis: 241 Completion Project



This publication was prepared by:

Beacon Economics, LLC

Christopher Thornberg, Founding Partner
5777 W. Century Blvd., Suite 895
Los Angeles, California 90045
310.571.3399
Chris@BeaconEcon.com

Jordan Levine, Director of Economic Research
5777 W. Century Blvd., Suite 895
Los Angeles, California 90045
424.646.4656
Jordan@BeaconEcon.com

And by:

Morris Chow
Research Associate
Beacon Economics

For further information about Beacon Economics, please contact:

Victoria Pike Bond
Director of Communications
Beacon Economics
415.457.6030
Victoria@BeaconEcon.com

Or visit our website at www.BeaconEcon.com.

Reproduction of this document or any portion therein is prohibited without the expressed written permission of Beacon Economics.
Copyright ©2011 by Beacon Economics LLC.

Executive Summary

The Transportation Corridor Agencies (TCA) are two joint powers authorities formed by the California legislature in 1986 to plan, finance, construct and operate Orange County's 67-mile public toll road system. Fifty-one miles of the system are complete, including the 73 Toll Road (San Joaquin Hills Transportation Corridor Agency), 133, 261 and 241 Toll Roads (Foothill/Eastern Transportation Corridor Agency). Elected officials from surrounding cities and county supervisorial districts are appointed to serve on each agency's Board of Directors.

Public oversight ensures that the interests of local communities and drivers are served and that TCA continues to meet the region's growing need for congestion-free transportation alternatives. The Foothill/Eastern Transportation Corridor Agency has been working since the late 1980s to complete the state and federal environmental process for the final 16-miles of the system—the completion of the 241 Toll Road into San Diego County.

Beacon Economics has done an economic analysis of the 241 completion project and found that it will provide a significant economic impact to the County of Orange and the rest of California. Specifically, our impact study has found that:

- This project will create more than 13,600 jobs in Orange County and generate more than 3,800 jobs throughout the remainder of California through leakage.
- The \$1.7 billion project will generate \$3.1 billion in economic output throughout the state. \$2.3 billion will accrue in Orange County from the beginning of the project through its completion. The 241 completion project will also generate more than \$718 million in economic output in the remainder of California.
- \$1.3 billion in value added will be created in Orange County by the \$1.7 billion investment to complete the 241 Toll Road.
- We estimate that more than \$121 million in tax revenues will go to state and local government as a result of the 241 completion project.

Economic Impact Summary

| | Orange County | Remainder of California | Total |
|---------------------------------|------------------|-------------------------------|---------|
| Jobs | 13,663 | 3,878 | 17,541 |
| Output (\$ Millions) | 2,336.4 | 718.1 | 3,054.5 |
| Earnings (\$ Millions) | 862.7 | 231.2 | 1,094.0 |
| State/Local Taxes (\$ Millions) | 121.5 | 38.1 | 159.5 |

Source: IMPLAN, Calculations by Beacon Economics

Scope of Work

TCA has contracted with Beacon Economics to conduct an economic impact analysis of the 241 completion project. The purpose of this report is to provide TCA with a better understanding of the benefits that are likely to accrue to Orange County and the state from the infrastructure investment described below. The impact to the economy is generated through several channels. First, spending related to the 241 completion project would create economic output in Orange County. Second, the project would also support employment, particularly in the construction sector. Finally, the project would also generate tax revenues for state and local government.

About the Project

The 241 completion project is the final piece of Orange County's 67-mile toll road system. The 241 Toll Road currently ends at Oso Parkway in Rancho Santa Margarita. The project would extend the 241 Toll Road from Oso Parkway to Interstate 5 south of San Clemente in San Diego County. As with the current 51 miles of toll roads in Orange County, the final 16 miles of the 241 Toll Road would be part of the California highway system, but operated as a toll facility by the Transportation Corridor Agencies.

The purpose of this project is to improve the transportation infrastructure system in Orange County. Interstate 5 is currently the only direct route between Orange and San Diego counties. The completion of the 241 Toll Road would provide an alternative to the over-burdened I-5, which is projected to become more congested due in part to population growth in Southern California. Without the completed toll road, travel from the San Diego/Orange County border to Mission Viejo is projected to take one hour in 2025. With the toll road, travel time is projected to be 25 minutes on I-5 and 16 minutes on the 241 Toll Road. Completing the toll road would also provide the redundancy needed in the event of an emergency.

The 241 completion project is also critical for goods movement from the Port of Los Angeles and Port of Long Beach to destinations across America. Over 10,000 trucks use I-5 every day, a number expected to increase as Southern California port activity grows.



Impact Overview and Methodology

This report analyzes the direct and indirect economic impacts that will stem from the planned completion of the 241 Toll Road. To estimate the economic impact of the 241 completion project, Beacon Economics used Version 3 of the IMPLAN modeling system. This is an input-output model that can be used to estimate the short-run impact of changes in the economy through the use of multiplier analysis.

Impact studies operate under the basic assumption that any increase in spending has three effects: First, there is a direct effect on the industry itself, resulting from the additional output of goods or services. Second, there is a chain of indirect effects on all the industries whose outputs are used by the industry under observation. These are the impacts generated by a business' supply chain. Third, there are induced effects that arise when employment increases and household spending patterns are expanded. These impacts are the result of the additional income that is earned in the course of producing this output, both by employees in the target industry and in those supplying it.

There are several components to the overall economic impact. First, there is an effect on value added—the net increase in the overall value of the local economy. Value added is the total increase in an industry's output less the cost of any intermediate inputs, and it is commonly used to measure an industry's contribution to local gross product. Value added consists primarily of labor income, but also includes indirect business taxes and other property income. Second, there is an impact on local employment, with the single-largest share of jobs created in the industry itself, and the others spread throughout the study area's economy. Third, is the increase in output, where the difference between value added and output is that the former concentrates on various earnings, while the latter includes the costs of intermediate inputs.

Economic Impact Highlights

The 241 completion project will generate almost \$3.1 billion in economic output throughout California:

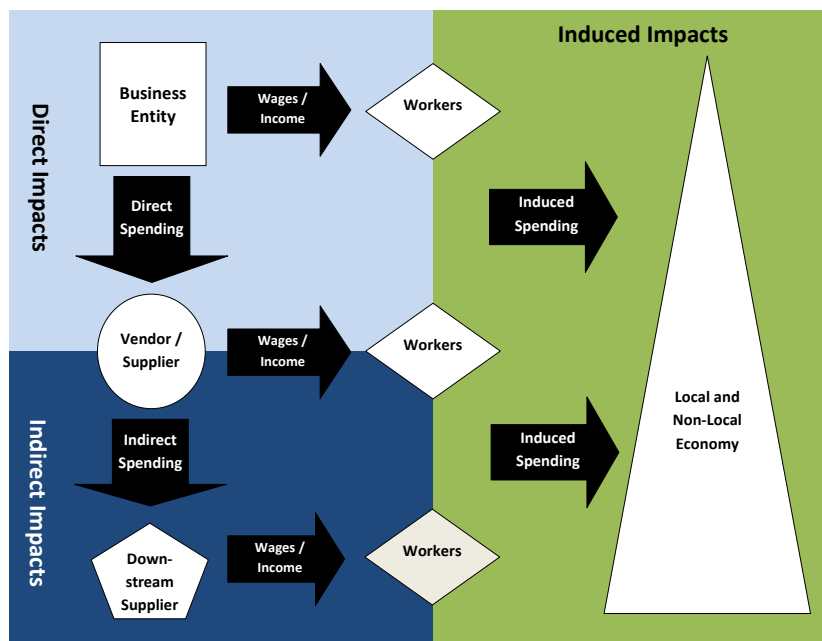
- \$1.7 billion will be spent on the 241 completion project.
- Direct spending on the project will generate over \$2.3 billion in Orange County.
- The completion project will also generate more than \$718 million in economic output in the remainder of California.

This project will also generate significant additional employment opportunities throughout the state:

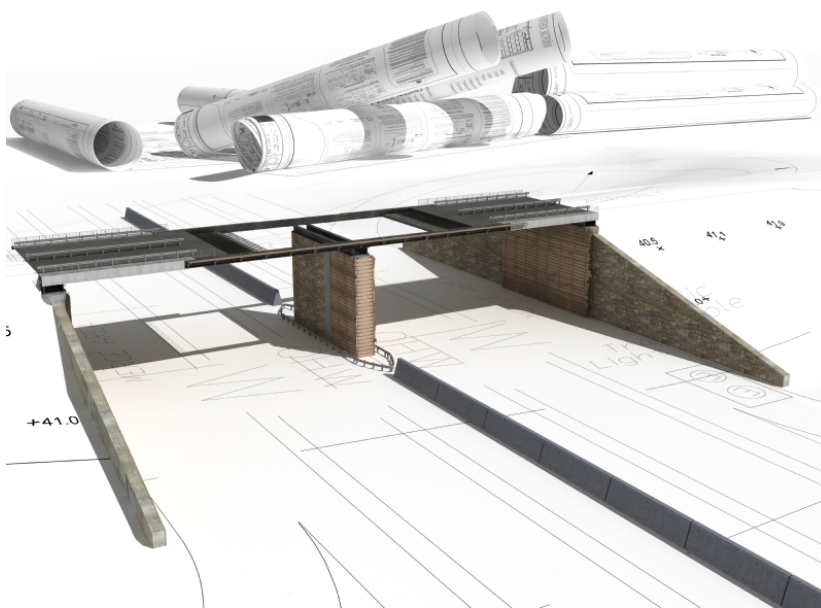
- The 241 completion project will create more than 13,600 jobs in Orange County through the end of the project.
- The 241 completion project will also create more than 3,800 jobs throughout the remainder of California.

State and local government will also benefit from nearly \$121 million in additional revenues per year. Another \$38 million in tax revenues will be earned by state and local governments in the rest of the state.

It is also important to note that capital investments made on different types of projects can lead to different multipliers. Why? A sector can have a large multiplier if it induces economic activity in industries whose employees have a high propensity to spend from take-home pay. Also, if the sector does not import many materials from abroad or from out of state, then its multiplier effect on the local economy will be high. In essence, some of the spending in the local economy may “leak out” into other states and countries. If raw materials are imported, then a change in a local sector's level of production will result in a commensurate change in economic activity abroad. The same is true if a California business buys inputs from firms in different states.



Thus, our analysis here covers the main areas of economic impact that will accrue at the county level due to the planned \$1.7 billion investment to complete the 241 Toll Road. First, the direct employment, output, and value added effects for Orange County after accounting for "leakage" out of the county. Second, we estimate the indirect effects on all the industries whose outputs are used by the proposed project as well as the induced effects arising when employment increases and household spending patterns are expanded. Finally, to measure the "leakage" out of Orange County that accrued to another part of the state, we estimate the indirect effects of the 241 completion project on the remainder of California.



Planned Investment

It is estimated that a total of \$1.7 billion will be spent on the 241 completion project, including costs that have already been expended as well as future expenditures. The project's expenditures are broken out into a variety of categories. According to estimates from TCA, the capital costs, which include the cost of constructing the 241 completion project, will comprise 60 percent of the \$1.7 billion in expenditures. Other costs, including right of way, construction management, planning and engineering services, and agency staffing fees account for the remaining 40 percent of the spending. Expenditures are further broken out into three time periods to distinguish between past, present, and future spending. These planned expenditures are shown in the table below.

241 Completion Project Expenditures (\$ thousands)

| Category | 2009 and Prior | 2010-11 | 2012 and Beyond | Total |
|------------------------------|----------------|-------------|-----------------|----------------|
| Design and Build Contract | 57.1 | 0.9 | 950.1 | 1,008.1 |
| Environmental and Mitigation | 143.7 | 1.7 | 137.9 | 283.3 |
| Contingency | 0.0 | 1.0 | 111.9 | 112.9 |
| Engineering | 41.4 | 6.6 | 43.0 | 91.0 |
| Insurance and Toll Equipment | 0.0 | 0.0 | 58.9 | 58.9 |
| Right of Way | 13.4 | 0.0 | 42.9 | 56.3 |
| Administration and Legal | 22.8 | 5.5 | 27.9 | 56.2 |
| Construction Management | 0.5 | 0.0 | 51.2 | 51.7 |
| Utility Relocation | 1.2 | 0.0 | 13.0 | 14.2 |
| Total | 280.1 | 15.7 | 1,436.8 | 1,732.6 |

Source: Foothill/Eastern Transportation Corridor Agency

It should be noted that \$56 million of the planned expenditures on the 241 completion project are for right-of-way. This is primarily land and right-of-way services, and is akin to an asset purchase. Realistically, this is a transfer of ownership from one party to another, and as such it does not generate any significant economic impact for Orange County. Additionally, \$113 million is allocated for contingency purposes. This spending has the potential to generate an economic impact for Orange County if it were used. But because it is unclear how these funds will be spent, or whether they will be spent at all, it is not possible to allocate this amount to any particular category. Thus, our impact analysis detailed herein excludes a total of \$169 million in right-of-way and contingency expenditures.

Economic Impact

Based on these data, we have found that the completion of the 241 Toll Road will provide a significant economic impact to the County of Orange as well as the remainder of California. Specifically, we estimate that this project will create over 13,600 jobs in Orange County between commencement of the project prior to 2009 and completion of the work. This includes 8,600 jobs directly created as a result of the construction work, and 4,900 jobs created through indirect and induced effects of the project. Of these 4,900 jobs, 2,800 will be created by indirect effects on all the industries whose outputs are used in the construction of the 241 Toll Road. Another 2,100 jobs will be created when employment increases and household spending patterns are expanded as a result of the project. In addition to the jobs created within Orange County, this project will generate another 3,800 jobs throughout the remainder of California through leakage, as some of the \$1.7 billion investment will go toward goods and services located outside of the county.

We have determined that this \$1.7 billion project will generate \$3.1 billion in economic output throughout the state. \$2.3 billion will be generated through direct spending on the construction in Orange County between now and the completion of the project, which will in turn generate more than \$773 million in indirect and induced output from the projects' consumption of goods and services sourced from within the county. The 241 completion project will also generate \$718 million in economic output in the remainder of California. It should be noted that the indirect and induced effects of this project in the remainder of California are very large, and in some cases are even larger than the secondary impacts within Orange County. This points to the fact that much of the materials and services that will be used as a result of the completion will be sourced from outside of Orange County but within California.

The \$3.1 billion in economic output created by the 241 completion project will lead to a significant increase in value added. Value added consists of employee compensation, proprietor income for self-employed and unincorporated businesses, corporate profits, rent payments and dividend income. Based upon our analysis, nearly \$1.7 billion in value added will be created by the \$1.7 billion investment. This includes \$850 million in direct value added to Orange County as a result of the project as well as \$458 million in indirect and induced value added locally. Again, a sizable share (\$371 million) of the additional value added will accrue to regions outside of Orange County due to leakage.

Not only does the 241 completion project create a sizable effect on value added in Orange County and California, it should be noted that a majority of this value added is comprised of additional labor income. To illustrate, \$863 million of the additional \$1.3 billion, or two-thirds, in value added is additional income earned by employees and proprietors' within Orange County. The same is true in the remainder of California, where 62 percent of the additional value added is in the form of additional labor income.

Economic Impact Summary

| | Orange County | Remainder of California | Total |
|---------------------------------|------------------|-------------------------------|---------|
| Jobs | 13,663 | 3,878 | 17,541 |
| Output (\$ Millions) | 2,336.4 | 718.1 | 3,054.5 |
| Earnings (\$ Millions) | 862.7 | 231.2 | 1,094.0 |
| State/Local Taxes (\$ Millions) | 121.5 | 38.1 | 159.5 |

Source: IMPLAN, Calculations by Beacon Economics

Finally, this project will generate additional tax revenues in Orange County and throughout the rest of the state. We estimate that close to \$121 million in tax revenues will go to state and local government between now and the completion of the project. This consists of taxes on employee compensation, indirect business taxes, taxes paid by households, and by corporations. An additional \$38 million in tax revenues will be earned by state and local governments in the rest of the state.

In sum, the 241 completion project will have a significant impact on the local and statewide economy. In addition to the reduced congestion and time savings, the work itself will help the Orange County economy climb out of this recession. Not only will the 241 completion project create a relatively large number of jobs, the region will see additional value added and income for its residents, and local governments can expect more tax revenues as a result.

Conclusion

This report finds that the 241 completion project would generate over \$2.3 billion in economic output and support 13,663 jobs in Orange County. Labor income would increase by \$862.7 million. The benefits of the project would not be limited to Orange County. The rest of the state would also benefit from spillover impacts generated by the 241 completion project. The remainder of California would see an increase in economic output of \$718.1 million. 3,878 jobs would be supported, resulting in \$231.2 million in additional labor income. California and local governments would benefit from \$159.5 million in tax revenues.

Detailed Results

Economic Impact of 241 Completion Project

Impact on Orange County

| | 2009 and Prior | 2010-11 | 2012 and Beyond | Total Impact |
|-------------------------------------|----------------|--------------|-----------------|-----------------|
| Employment | | | | |
| Direct | 1,370 | 81 | 7,202 | 8,653 |
| Indirect | 475 | 25 | 2,366 | 2,866 |
| Induced | 355 | 24 | 1,746 | 2,124 |
| Multiplier | 1.61 | 1.60 | 1.57 | 1.58 |
| Total | 2,200 | 130 | 11,314 | 13,644 |
| Output | | | | |
| Direct | \$266,596,004 | \$14,708,300 | \$1,282,094,303 | \$1,563,398,607 |
| Indirect | \$77,650,567 | \$4,014,940 | \$355,769,038 | \$437,434,545 |
| Induced | \$56,090,313 | \$3,764,840 | \$275,720,413 | \$335,575,566 |
| Multiplier | 1.50 | 1.53 | 1.49 | 1.49 |
| Total | \$400,336,884 | \$22,488,080 | \$1,913,583,754 | \$2,336,408,718 |
| Value Added | | | | |
| Direct | \$138,629,857 | \$8,398,564 | \$703,089,156 | \$850,117,577 |
| Indirect | \$43,844,515 | \$2,359,890 | \$208,953,846 | \$255,158,251 |
| Induced | \$33,916,232 | \$2,276,948 | \$166,727,203 | \$202,920,383 |
| Multiplier | 1.56 | 1.55 | 1.53 | 1.54 |
| Total | \$216,390,604 | \$13,035,401 | \$1,078,770,205 | \$1,308,196,210 |
| Labor Income | | | | |
| Direct | \$99,534,410 | \$7,129,064 | \$495,373,678 | \$602,037,151 |
| Indirect | \$27,028,299 | \$1,404,941 | \$127,469,095 | \$155,902,336 |
| Induced | \$17,516,966 | \$1,175,528 | \$86,095,991 | \$104,788,486 |
| Multiplier | 1.45 | 1.36 | 1.43 | 1.43 |
| Total | \$144,079,676 | \$9,709,533 | \$708,938,764 | \$862,727,973 |
| State and Local Tax Revenues | | | | |
| Employee Compensation | \$411,109 | \$25,869 | \$1,922,603 | \$2,359,582 |
| Indirect Business Tax | \$11,839,721 | \$537,398 | \$51,408,668 | \$63,785,784 |
| Households | \$6,003,029 | \$406,699 | \$29,655,406 | \$36,065,134 |
| Corporations | \$3,031,716 | \$139,887 | \$16,075,967 | \$19,247,570 |
| Total | \$21,285,575 | \$1,109,853 | \$99,062,644 | \$121,458,070 |

Source: IMPLAN, Calculations by Beacon Economics

Economic Impact of 241 Completion Project**Impact on Remainder of California**

| | 2009 and Prior | 2010-11 | 2012 and Beyond | Total Impact |
|-------------------------------------|----------------|-------------|-----------------|---------------|
| Employment | | | | |
| Direct | 0 | 0 | 0 | 0 |
| Indirect | 456 | 21 | 2,046 | 2,523 |
| Induced | 243 | 13 | 1,099 | 1,355 |
| Multiplier | 0.51 | 0.41 | 0.44 | 0.45 |
| Total | 699 | 33 | 3,146 | 3,878 |
| Output | | | | |
| Direct | \$- | \$- | \$- | \$- |
| Indirect | \$91,277,123 | \$3,925,745 | \$384,827,213 | \$480,030,077 |
| Induced | \$42,481,807 | \$2,253,113 | \$193,368,247 | \$238,103,162 |
| Multiplier | 0.50 | 0.42 | 0.45 | 0.46 |
| Total | \$133,758,929 | \$6,178,858 | \$578,195,459 | \$718,133,240 |
| Value Added | | | | |
| Direct | \$- | \$- | \$- | \$- |
| Indirect | \$44,957,374 | \$2,016,754 | \$193,224,949 | \$240,199,075 |
| Induced | \$23,303,046 | \$1,224,350 | \$105,774,828 | \$130,302,222 |
| Multiplier | 0.49 | 0.39 | 0.43 | 0.44 |
| Total | \$68,260,420 | \$3,241,104 | \$298,999,778 | \$370,501,297 |
| Labor Income | | | | |
| Direct | \$- | \$- | \$- | \$- |
| Indirect | \$29,038,509 | \$1,290,761 | \$125,744,999 | \$156,074,268 |
| Induced | \$13,407,329 | \$712,007 | \$61,054,265 | \$75,173,600 |
| Multiplier | 0.43 | 0.28 | 0.38 | 0.38 |
| Total | \$42,445,838 | \$2,002,768 | \$186,799,264 | \$231,247,867 |
| State and Local Tax Revenues | | | | |
| Employee Compensation | \$191,261 | \$8,894 | \$834,038 | \$1,034,193 |
| Indirect Business Tax | \$4,110,438 | \$187,726 | \$17,544,453 | \$21,842,617 |
| Households | \$1,702,479 | \$80,410 | \$7,497,099 | \$9,279,988 |
| Corporations | \$1,094,838 | \$53,086 | \$4,777,838 | \$5,925,761 |
| Total | \$7,099,016 | \$330,116 | \$30,653,428 | \$38,082,559 |

Source: IMPLAN, Calculations by Beacon Economics

About Beacon Economics

Beacon Economics is an independent economic research and consulting firm with offices in Los Angeles and the San Francisco Bay Area. We deliver economic analysis and data sites that help our clients make informed, strategic decisions about investment, growth, revenue, policy, and other critical economic and financial issues. Our nationally recognized forecasters were among the first to predict the collapse of the housing market and foretell the onset and depth of the economic downturn that followed. Our core areas of expertise include economic and revenue forecasting, market and industry analysis, economic impact studies, economic policy analysis, and international trade analysis.

Services

- Economic & Revenue Forecasting
- Business, Industry, & Market Analysis
- Economic Development Analysis
- Ports & Infrastructure Analysis
- Public Speaking
- Expert Testimony

Contact

- **Sherif Hanna**
Managing Partner
(424) 646-4656
Sherif@BeaconEcon.com
- **Victoria Pike Bond**
Director of Communications
(415) 457-6030
Victoria@BeaconEcon.com