

# ECONOMIC IMPACT OF THE LA28 CONSTRUCTION SHUTDOWN

How the numbers were built, and how to check them

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## WHAT THIS MEMO IS

You asked what the shutdown costs if construction stops the way you described: a third of Los Angeles County shut from June 1, everything shut from July 11 to August 28 because a jobsite cannot be turned off and back on, then back to a third until September 1. This memo walks through that calculation one step at a time. Every number below traces to a published source, listed at the end. Where I had to assume something, it is flagged.

**BOTTOM LINE:** the shutdown removes roughly \$2.1 to \$2.4 billion of construction work from the five-county Los Angeles region over the three months, which carries about \$4.3 to \$5.0 billion of total economic activity and idles the equivalent of 42,000 to 48,000 jobs. Roughly 9,000 highway workers have their jobsite stopped outright. Riverside and San Bernardino counties, a third of the regional industry, are not affected at all as things stand today.

## TERMS USED IN THIS MEMO

Plain-language definitions of everything that follows. Nothing here is a term of art I invented; they are all either Caltrans's words or standard industry usage.

| Term                      | What it means                                                                                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caltrans District         | Caltrans splits the state into twelve districts. District 7 is Los Angeles and Ventura. District 8 is Riverside and San Bernardino. District 11 is San Diego and Imperial. District 12 is Orange.                                                           |
| Games Route Network (GRN) | The specific list of highway segments Caltrans has written into its contract specifications where no work at all is allowed from June 1 to September 1, 2028. Nineteen segments across three districts.                                                     |
| Tier 1                    | The Games Route Network restriction. No work and no highway closures of any kind, for 93 days straight.                                                                                                                                                     |
| Tier 2                    | A second and different restriction that exists only in District 7. It covers every highway in Los Angeles and Ventura counties that is not in the Games Route Network, and bars work in the traveled way on two windows, July 11 to 31 and August 14 to 28. |
| Traveled way              | The lanes vehicles actually drive in, as opposed to the shoulder, the median, or the rest of the right of way.                                                                                                                                              |
| Centerline mile           | One mile of road, counted once no matter how many lanes it has. A ten-lane freeway and a two-lane road each count as one centerline mile per mile of length.                                                                                                |
| Lane mile                 | One mile of one lane. A mile of ten-lane freeway is ten lane miles. This is the better measure of how much pavement, and therefore how much construction work, is involved.                                                                                 |
| Postmile                  | Caltrans's own mile-marker system. Every point on a state highway has one, so the difference between two postmiles is the exact distance between them by Caltrans's own reckoning. This is how the 19 segments were measured.                               |
| Loss factor               | The share of a county's three months of construction work that stops. It combines how much of the network is shut with how long it is shut.                                                                                                                 |
| Weighting                 | Counties are different sizes, so their loss factors cannot simply be averaged. Each county's factor is scaled by how big its construction industry is before being added into the regional total.                                                           |
| Multiplier (2.06)         | ARTBA's finding that every \$1 of transportation construction supports \$2.06 of economic activity once suppliers, subcontractors and worker spending are counted.                                                                                          |
| Direct jobs               | Workers on the jobsite plus the supply chain behind them: suppliers, subcontractors, materials producers, trucking, equipment and design firms. ARTBA counts 76,000 in the region.                                                                          |
| Economy-wide jobs         | Direct jobs plus the jobs supported elsewhere when those workers spend their wages. ARTBA counts 120,000 in                                                                                                                                                 |

| Term                        | What it means                                                                                                                                                          |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | the region.                                                                                                                                                            |
| Job-equivalents idled       | Not a headcount. It is the amount of work-time lost, expressed as the number of full-time jobs that would account for it across the three months.                      |
| Workers whose jobsite stops | A headcount. How many people are on a project that gets shut down at some point, regardless of for how long.                                                           |
| Demobilize and remobilize   | Shutting a jobsite down (releasing crews, subcontractors and equipment, securing the site, striking traffic control) and then setting all of it up again.              |
| Summer share (40%)          | The assumption that roughly 40% of a year's highway construction happens in the summer months. It is what turns ARTBA's annual \$15 billion into a three-month figure. |
| BLS                         | U.S. Bureau of Labor Statistics, the federal source for the county employment counts Dr. Black supplied.                                                               |

## STEP 1 • WHAT IS SHUT DOWN

Three Caltrans districts have each written a version of the same restriction into their contract specifications. Together they define a "Games Route Network" of 19 highway segments where no work of any kind is allowed from June 1 to September 1, 2028.

I measured every segment using Caltrans's own postmile database rather than by drawing on a map. For each segment I looked up the odometer reading at both ends and took the difference. That is the same measuring system Caltrans uses in its own reporting, so the numbers are directly comparable to its published totals.

| Where the Games Route Network runs | Miles        | County freeway miles | Share |
|------------------------------------|--------------|----------------------|-------|
| Los Angeles County                 | 162.8        | 512.8                | 31.8% |
| Orange County                      | 57.9         | 190.1                | 30.5% |
| San Diego County                   | 2.3          | 354.1                | 0.7%  |
| Ventura County                     | 0.0          | 79.7                 | 0%    |
| San Bernardino County              | 0.0          | 458.7                | 0%    |
| <b>TOTAL</b>                       | <b>223.0</b> |                      |       |

Two counties you asked about have no Games Route Network mileage at all. Ventura is in District 7 but no segment runs there. San Bernardino is in District 8, which has issued no provision of any kind.

**Check on this step:** the county figures add to 223.05 against a postmile total of 223.04. Separately, when I pulled every state route in Los Angeles County the same way, it came to 836.74 miles against Caltrans's published 836.56, a difference of two tenths of a mile.

## STEP 2 • WHEN IT IS SHUT DOWN

District 7 has a second restriction, Tier 2, covering every other highway in Los Angeles and Ventura counties on two windows: July 11 to 31 and August 14 to 28. The gap between them is thirteen days, which is too short to demobilize a jobsite and bring it back, so in practice the stoppage runs continuously from July 11 to August 28. That gives three periods.

| Period                   | Days      | What is shut in Los Angeles County |
|--------------------------|-----------|------------------------------------|
| June 1 to July 10        | 40        | Games Route Network only           |
| July 11 to August 28     | 49        | Everything                         |
| August 29 to September 1 | 4         | Games Route Network only           |
| <b>TOTAL</b>             | <b>93</b> |                                    |

## STEP 3 • HOW MUCH ROAD THAT IS

Two ways of counting. Centerline miles count a road once no matter how wide it is. Lane miles count each lane separately, which is the better measure of how much pavement, and therefore how much construction work, is involved. A mile of the 405 is one centerline mile and about fourteen lane miles.

| What is shut                                   | Where       | Centerline miles | Lane miles   |
|------------------------------------------------|-------------|------------------|--------------|
| Tier 1, the Games Route Network, 93 days       | Los Angeles | 162.8            | 1,874        |
|                                                | Orange      | 57.9             | 733          |
|                                                | San Diego   | 2.3              | 14           |
| Tier 1 subtotal                                |             | 223.0            | 2,621        |
| Tier 2, everything else in District 7, 49 days | Los Angeles | 673.8            | 4,416        |
|                                                | Ventura     | 262.7            | 1,001        |
| Tier 2 subtotal                                |             | 936.5            | 5,417        |
| <b>TOTAL SHUT AT SOME POINT</b>                |             | <b>1,159.5</b>   | <b>8,039</b> |

Caltrans maintains 15,017 centerline miles and 52,164 lane miles of state highway statewide. So the shutdown reaches 7.7% of the state highway system by centerline and 15.4% by lane miles. The lane-mile share is twice the centerline share because the roads involved are the widest in California: the average state highway statewide carries 3.5 lanes, the Games Route Network carries 11.8.

One qualifier on the Tier 2 rows. Tier 1 bars all work of any kind. Tier 2 bars work in the traveled way, so a job on those miles that never touches a lane could in principle continue. In practice almost no highway job qualifies, because staging, deliveries and traffic control all run through the traveled way, which is why the mileage is counted here.

**Check on this step:** centerline miles come from Caltrans directly, the Games Route Network from its postmile database and the county totals from its published road data, so 162.8 plus 673.8 equals 836.6, which is Caltrans's own figure for Los Angeles County. Lane miles are counted from mapped lane data because Caltrans does not publish lane miles by county. That method was tested against the one lane-mile figure Caltrans does publish, 15,340.74 for the Interstate system, and returned between 14,346 and 16,109 depending on how carpool lanes are handled. Treat the lane-mile column as accurate to within a few percent, not to the mile.

## STEP 4 • HOW MUCH OF EACH COUNTY IS LOST

For each county I worked out what share of its three months of construction disappears. This is a weighted average across the three periods above.

### Los Angeles County

$(40 \text{ days} \times 33\%) + (49 \text{ days} \times 100\%) + (4 \text{ days} \times 33\%) = 63.5$  equivalent shutdown days out of 93, which is 68%. Using the strict centerline share of 31.8% gives 67.7%; using lane miles at 36.7% gives 70.0%. The answer barely moves, so 68% is safe.

### Orange County

District 12 issued no Tier 2, so nothing outside the Games Route Network is touched. But the network covers 30.5% of the county's freeway centerline miles and 46.3% of its lane miles, and it is shut for all 93 days without a break. Factor: 30.5% to 46.3%.

### Ventura County

No Games Route Network at all, so nothing happens until July 11. Then Tier 2 shuts 100% of the county for 49 days. 49 divided by 93 is 52.7%. Ventura takes a larger percentage hit than Orange, purely from being in District 7.

### Riverside and San Bernardino Counties

District 8 has issued nothing. Factor: zero.

**A CORRECTION I MADE:** my first pass mixed measuring systems, using a centerline share for Los Angeles and a lane-mile share for Orange. Redone consistently, the regional factor is 36.1% on centerline miles and 40.4% on lane miles. Every dollar figure below is shown as that range rather than as a single number.

## STEP 5 • WHAT IT COSTS, REGIONALLY

ARTBA puts transportation construction in the five-county Los Angeles region at **\$15 billion a year**. Applying the industry's figure that roughly 40% of annual work happens in the summer months gives **\$6.0 billion** for June through August. That is where the \$6 billion comes from. It is not printed in the ARTBA report; it is \$15 billion multiplied by 40%.

This memo reports the hit at the regional level only. ARTBA does not publish the \$15 billion by county, and Dr. Black has said she cannot estimate the impact of the Games Route Network specifically without a list of the projects on it. Splitting the money between counties would mean inventing a split, so the county figures below are limited to what can be counted: miles, days and workers.

#### Where the 35 to 40% comes from

Step 4 gave each county its own loss factor. Those cannot simply be averaged, because the counties are not the same size: Los Angeles has 6,569 highway workers and Ventura has 844. So each county's factor is weighted by how big its industry is, and the weighted pieces are added together.

**Read the table across.** Column 3 is how big that county is as a share of the regional industry. Column 4 is the share of that county's own construction that stops, taken from Step 4. Multiply those two and you get column 5, that county's contribution to the regional total. Add column 5 down and you have the answer.

| County         | Workers       | Share of the regional industry | Share of that county's own work that stops | Contribution to the regional total |
|----------------|---------------|--------------------------------|--------------------------------------------|------------------------------------|
| Los Angeles    | 6,569         | 40.0%                          | 70.0%                                      | 28.0%                              |
| Orange         | 3,423         | 20.8%                          | 46.3%                                      | 9.6%                               |
| Ventura        | 844           | 5.1%                           | 52.7%                                      | 2.7%                               |
| Riverside      | 3,478         | 21.2%                          | 0%                                         | 0                                  |
| San Bernardino | 2,107         | 12.8%                          | 0%                                         | 0                                  |
| <b>REGION</b>  | <b>16,421</b> | <b>100%</b>                    |                                            | <b>40.4%</b>                       |

That is one route to the answer. I ran three others, weighting by freeway lane miles instead of employment, and running each weighting against both the centerline and the lane-mile share of the network. All four land close together, which is why the figure is given as a range rather than a single number.

| Weighting method   | Mileage basis    | Regional share of work lost |
|--------------------|------------------|-----------------------------|
| Highway employment | Centerline miles | 36.1%                       |
| Highway employment | Lane miles       | 40.4%                       |
| Freeway lane miles | Centerline miles | 35.0%                       |
| Freeway lane miles | Lane miles       | 38.1%                       |
| RANGE              |                  | 35% to 40%                  |

**WHY THAT NUMBER IS NOT HIGHER:** Riverside and San Bernardino together hold 5,585 highway workers, 34% of the regional industry, and their loss factor is zero because District 8 has issued no provision. Those two counties pull the regional average down by about a third all on their own. The 35 to 40% is not a measure of how hard the shutdown hits where it lands. It is that number averaged together with two large counties where nothing happens at all.

#### The number for the three counties that are actually affected

Leaving Riverside and San Bernardino out and weighting only Los Angeles, Orange and Ventura against each other gives 54.8% on the centerline basis and 61.2% on the lane-mile basis. Those three counties lose 55 to 61% of their summer construction work.

Both figures are correct and they answer different questions. Use 55 to 61% when the question is what happens to the counties under the restriction. Use 35 to 40% when the question is specifically about the five-county market ARTBA measured, and expect the follow-up that two of those five counties are untouched.

Each line below has its own three-month base, and each base is multiplied by the same 35 to 40%. Only the first line is a share of the \$6 billion. The others start from a different number, shown in the second column.

| The regional hit, June 1 to Sept 1, 2028 | Three-month base | How the base is built           | Base x 35% | Base x 40% |
|------------------------------------------|------------------|---------------------------------|------------|------------|
| Construction work lost                   | \$6.00B          | \$15B a year x 40% summer       | \$2.10B    | \$2.42B    |
| Total economic activity lost             | \$12.36B         | \$6.00B x ARTBA multiplier 2.06 | \$4.33B    | \$4.99B    |

| The regional hit, June 1 to Sept 1, 2028 | Three-month base | How the base is built      | Base x 35% | Base x 40% |
|------------------------------------------|------------------|----------------------------|------------|------------|
| Wages lost                               | \$3.56B          | \$8.9B a year x 40% summer | \$1.25B    | \$1.44B    |
| Jobs idled, contractor payrolls          | 16,421           | BLS county table           | 5,749      | 6,630      |
| Jobs idled, direct incl. supply chain    | 76,000           | ARTBA                      | 26,608     | 30,684     |
| Jobs idled, economy-wide                 | 120,000          | ARTBA                      | 42,013     | 48,449     |

**Watch the second row.** The \$4.33 to \$4.99 billion is 35 to 40% of \$12.36 billion, not of \$6 billion. The \$6 billion is the construction work itself; the \$12.36 billion is the economic activity that work supports once ARTBA's 2.06 multiplier is applied. You get to the same place either way: \$2.42B of lost construction times 2.06 is \$4.99B.

## STEP 6 • HOW MANY JOBS

There are two different job numbers and they should never be mixed. The first is how many workers have their jobsite stopped. The second is how much work-time is lost across the quarter, expressed as full-time jobs.

| County         | Highway workers (BLS 2024) | Loss factor      | Workers whose jobsite stops |
|----------------|----------------------------|------------------|-----------------------------|
| Los Angeles    | 6,569                      | 67.7 to 70.0%    | 6,569 (all of them)         |
| Orange         | 3,423                      | 30.5 to 46.3%    | 1,585                       |
| Ventura        | 844                        | 52.7%            | 844 (all of them)           |
| Riverside      | 3,478                      | 0%               | 0                           |
| San Bernardino | 2,107                      | 0%               | 0                           |
| <b>TOTAL</b>   | <b>16,421</b>              | <b>35 to 40%</b> | <b>8,998</b>                |

Those columns count only workers on contractor payrolls. ARTBA counts the wider workforce, and scaling by the same regional factor gives:

- **26,600 to 30,700 direct jobs** including suppliers, subcontractors, materials producers, trucking and design firms. ARTBA puts this group at 76,000 for the region.
- **42,000 to 48,400 jobs economy-wide** once household spending by those workers is counted. ARTBA puts this group at 120,000.
- **\$1.25 to \$1.44 billion in lost wages** from ARTBA's \$8.9 billion of annual wages, taking the summer share.

**THE POINT FOR RIVERSIDE AND SAN BERNARDINO:** those two counties hold 5,585 highway workers and \$2.04 billion of the summer construction base, a third of the regional industry, and are untouched today. If District 8 issues the same provision, the regional loss factor rises from roughly 40% to about 60% and total economic activity lost passes \$7 billion.

## WHAT COULD MOVE THESE NUMBERS

Four assumptions carry the result. In rough order of how much they matter:

- **The 40% summer factor.** Every dollar figure scales directly off it, and it is not in the ARTBA report. If work were spread evenly through the year, the summer base would be \$3.75 billion instead of \$6.0 billion and the loss would fall to about \$1.4 billion of construction. Southern California does not have a construction season the way colder states do, so this is the number an opposing economist goes after first. Worth asking Dr. Black to put it in the report.
- **The 47-mile reading of Interstate 5.** The District 11 provision says "Orange County Line to Basilone Road" without saying which Orange County line. Read as the Los Angeles line, it is 47 miles and drives Orange County to 46.3% of lane miles. Read as the San Diego line, it is 2.2 miles and Orange County drops to roughly 8%.
- **Using mileage as a stand-in for spending.** I assume construction dollars are spread in proportion to highway mileage. They are not, exactly. Big projects cluster.
- **No project list.** Dr. Black's position is that the specific impact of losing work on the Games Route Network cannot be estimated without knowing which projects are on it. This memo works from miles as a stand-in. Compiling the list of projects scheduled on those 19 segments for summer 2028 is what would turn this into a number ARTBA could stand behind.

## SOURCES

| Number                                                                      | Where it comes from                                                                                                                             |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 19 segments, 223.0 miles, and every route limit                             | Caltrans LA28 Nonstandard Special Provisions replacing Section 12-4.02C(3)(e): District 7 (February 2026), District 11 (July 2025), District 12 |
| Segment lengths                                                             | Caltrans SHN Postmiles GIS service, odometer difference at each endpoint                                                                        |
| County and statewide freeway miles                                          | Caltrans, California Public Road Data 2024, Table 7 (by county) and Table 2 (statewide)                                                         |
| State highway totals by county                                              | Caltrans, California Public Road Data 2024, Table 5                                                                                             |
| Lane counts                                                                 | OpenStreetMap, calibrated against Caltrans's published Interstate lane miles                                                                    |
| \$15 billion, 2.06 multiplier, 120,000 and 76,000 jobs, \$8.9 billion wages | ARTBA for SCCA, Economic Impact of the Transportation Construction Industry in the Greater Los Angeles Region, June 2026 draft                  |
| Highway employment by county                                                | 2024 Bureau of Labor Statistics, as supplied by SCCA                                                                                            |
| Games dates                                                                 | LA28: Olympics July 14 to 30, Paralympics August 15 to 27, 2028                                                                                 |
| 16,421 jobs figure and its provenance                                       | Dr. Alison Black, ARTBA, email to Todd, August 2026, supplying the BLS county table                                                             |
| 40% summer share                                                            | Not sourced. Industry assumption used by SCCA.                                                                                                  |

## HOW TO CHECK MY WORK

- **The day counts.** June 1 to July 10 is 40 days, July 11 to August 28 is 49, August 29 to September 1 is 4. They add to 93, which is June 1 to September 1 counting both ends.
- **The Los Angeles factor.** 40 times 0.33 is 13.2. Plus 49. Plus 4 times 0.33, which is 1.32. That is 63.52. Divided by 93 is 68.3%.
- **The regional factor.** Multiply each county's share of the industry by its loss factor and add them:  $(40.0\% \times 68\%) + (20.8\% \times 46\%) + (5.1\% \times 53\%) + \text{zero} + \text{zero}$ , which lands near 40%. Weighting by freeway lane miles instead gives 38%.
- **The dollars.** \$6.0 billion times 35 to 40% is \$2.10 to \$2.42 billion of construction. Times ARTBA's 2.06 is \$4.33 to \$4.99 billion of total activity.
- **The mileage.** Every route limit in the maps and this memo is quoted word for word from the Caltrans provisions. Any of the 19 can be looked up in Caltrans's postmile tool.

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**Two validation checks worth knowing about.** First, pulling every state route in Los Angeles County from Caltrans data totalled 836.74 miles against Caltrans's own published 836.56. Second, computing California's Interstate lane miles by my method gave 14,346 excluding separately mapped carpool lanes and 16,109 including them, against Caltrans's published 15,341, so the true figure sits between my two versions and the method is good to about six percent either way.