

# The future of America's worst freeway

After decades of gridlock, there's a new vision for Los Angeles' congested 405



<u>Planes, trains, and climate change</u> is Mashable's ongoing series about the dramatic impacts transportation has on the planet's warming, and our lives.

On June 17, 1994, some 20 police cars chased O.J. Simpson's white Ford Bronco down Los Angeles' 405 freeway. It proved to be an especially bizarre pursuit, set in motion after the Los Angeles Police Department told Simpson to surrender in connection with the murder of two stabbing victims, one of whom was his ex-wife. The Bronco, driven by Simpson's friend while the football star hunkered down in back, traveled almost leisurely down the emptied lanes, as if it were cruising along a residential boulevard. Helicopters buzzed overhead, Angelenos peered down from fenced overpasses, and the rest of the world watched the slow-motion chase on television.

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Amid the evening rush hour, great lengths of the highway were free of gridlock as officers cleared the lanes. It was a rare sight. In any given year, the 405 is either one of the worst or literally the worst trafficked highway in the U.S. It takes extraordinary circumstances to relieve this notorious concrete behemoth of overcrowding.

"It's the most congested artery in America," Los Angeles Mayor Eric Garcetti told me, as he fittingly rolled slowly through traffic on another infamous LA freeway, the 110.

"I don't know if I've been on it and there wasn't traffic — it can be pretty dreadful," added David Brodsly, who wrote a philosophical take on the 405 and its concrete siblings in 1981, titled *L.A. Freeway: An Appreciative Essay*.

Yet, after decades of deadlock, the 405 may be able to shed its infamous reputation. Or, at least, there's cautious hope for the long-beleaguered, 72-mile highway. Garcetti revealed "L.A.'s Green New Deal" in April — an aggressive plan to confront the planet's accelerating climate change by slashing the city's carbon emissions. The farreaching vision intends not just to electrify Los Angeles' polluting vehicles, but to dramatically ramp up public transit across the West's largest metropolis, a sprawl blanketed in asphalt and peppered with palm trees.



The clogged 405.

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Garcetti's Green New Deal calls for unprecedented change, a transportation revolution that will make some traffic-jaded Angelenos roll their eyes. No one thinks clearing out the 405 will be easy. "What a challenge," emphasized Brodsly, with an emphatic sigh.

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The plan expects that by 2035, half of all trips through the city will take place in — gasp — something other than a single occupancy car. And, critically, the cars left on the road will no longer puff air pollution nor the potent heat-trapping gas carbon dioxide from their tailpipes. In fact, many cars may not have tailpipes at all. By 2025, Garcetti wants a quarter of all vehicles to run on electricity or zero-emission fuels. By 2035, he expects this number to leap to 80 percent.



## "It's the most congested artery in America."



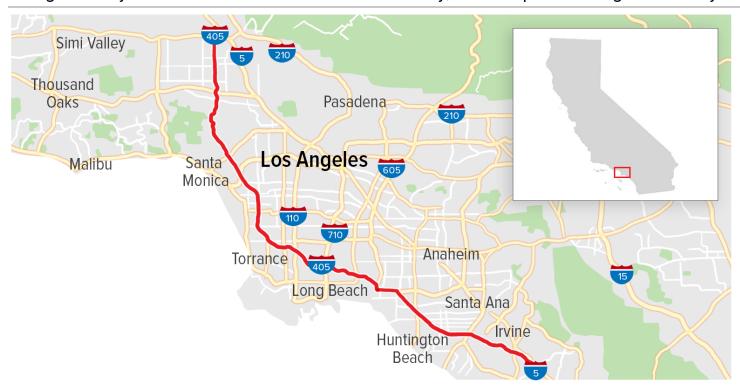
Ambitious may be an understatement. Yet, "if we don't try, we'll never get there," said Elizabeth Deakin, professor emerita of city and regional planning and urban design at the University of California, Berkeley.

Fortunately for the 405 and its begrudging patrons, Garcetti's scheme is getting a potent kick. In 2028, the Olympic games are coming back to Los Angeles. When the 34th Olympiad begins, the city intends to showcase a modernized, electrified transportation system, so city dwellers and visitors alike won't need to drive themselves to the Games — in terrible traffic. Instead, they'll use rail, subways, and

electrified buses. "We can use the Olympics as a sense of urgency," said Matt Peterson, the mayor's former chief sustainability officer and now president of Los Angeles Cleantech Incubator, an organization promoting a climate-friendly city.

## The 405

The 72-mile long Interstate 405, also known as the "San Diego Freeway," travels from Orange County northwards to the San Fernando Valley, at the top of Los Angeles County.



**Mashable** 

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But getting Angelenos to ditch their automobiles has historically been a grand failure. And, as you'll see, the greatest hurdle of all might not be initially getting cars off the 10-lane roadway.

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It will be keeping the majority of them off, for good.

"If that freeway becomes free flowing, it is an invitation to use it," warned Brian Taylor, a transportation expert at the University of California, Los Angeles and director of the school's Institute of Transportation Studies.

Adding more lanes won't help, either. A \$1.1 billion widening project that led to two so-called "carmageddons" from the traffic hell during construction has caused even more congestion, five years later.

### CRUISING THE 405 IN 2035

I asked Garcetti what he, realistically, envisioned the 405 looking like in 2035, the year LA's Green New Deal anticipates that eight of every 10 cars will be running on electricity, or some clean energy.

"Very few people will drive themselves over the 405," the mayor said.

In Los Angeles, where the first freeways were born amid a booming post-war economy, this is a revolutionary idea. Driving on the freeway is an unwritten freedom, valued like the First Amendment.

"We have a belief that once people have a car they should be able to drive anywhere they want, any time they want," said Taylor, noting that this creed is simply at odds with places like LA that are overrun with cars.

Garcetti plots to end the tradition of rush hour on the 405 (as well as the 110, 10, 101, and beyond). For starters, many LA denizens won't be on the freeway at all in 2035, he said. They'll be speeding either under it, above it, or beside it. That's because Garcetti wants Angelenos to travel more like New Yorkers — on rapid transit trains. (But, perhaps, with trains that aren't <u>fraught with unconscionable delays</u>.)

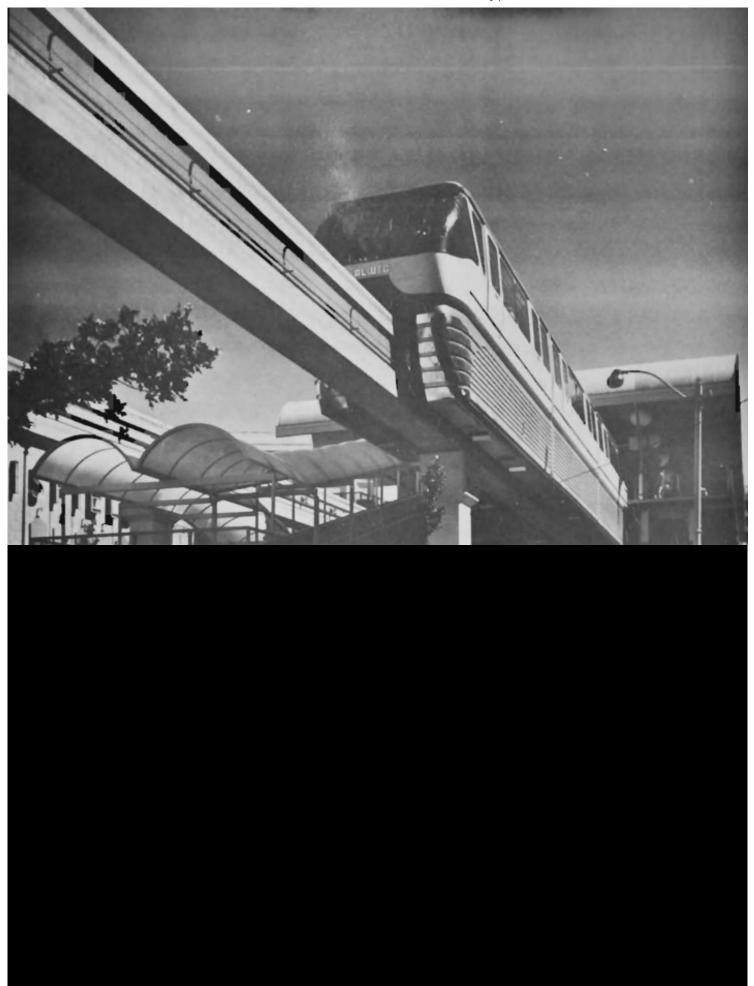
"Rail can be the backbone for the public transit," said Daniel Sperling, the director of the Institute of Transportation Studies at the University of California, Davis. And there will be pools of cash to make that happen. In 2016, Angelenos — perhaps exasperated with traffic — <u>voted overwhelmingly</u> to jack up the city's sales tax to raise money for enormous transportation projects. Past rail expansions haven't made a dent in LA's traffic woes, but this would be the first that constructs fast-moving trains along the 405 corridor. The project, known as Measure M, is a significant player in Garcetti's green plan, and provides some \$9.5 billion to build rapid transit along a big swath of the 405.

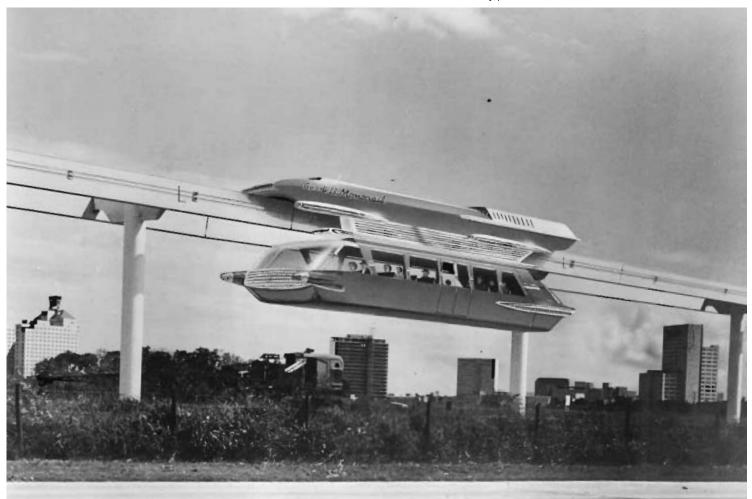
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It might not be any old train, either, said Garcetti.

It could very well be an elevated, space-age monorail, similar to the sleek trams zooming over Disneyland — but capable of traversing much more, like steep hills. "The monorail has really advanced since the Disneyland days," the mayor said.

A monorail visionary, Sixten Holmquist, built Disneyland's first monorail in the 1960s. He also <u>marketed a grandiose monorail system</u> to Los Angeles. But six decades ago, the city didn't bite. Instead, LA embraced the novelty of the "freeway" over cuttingedge trains.





Top: An early-1960s conception of Sixten Holmquist's monorail. | Bottom: A 1962 LA monorail proposal from Goodell Monorail Systems, Inc.

LA County Metropolitan Transportation Authority Library Archives

When it comes to promoting monorails, Garcetti is in good futuristic company. Sci-fi legend Ray Bradbury strongly endorsed the LA monorail in 2006, writing in the Los Angeles Times that "the freeway is the past, the monorail is our future, above and beyond." Drab subways, anyhow, are for cities with cold, unpleasant winters like "Toronto, New York, London, Paris, Moscow and Tokyo," noted Bradbury. But "in LA our weather is sublime, and people are accustomed to traveling in the open air and enjoying the sunshine, not in closed cars under the ground." Indeed, the views of sundrenched LA backed by the dominant, granite San Gabriel Mountains, could be glorious from the rails.

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"At the end of the day, people like to see a beautiful city," agreed Garcetti, but added, to temper too much delight, that the city is still weighing the best rapid transit plan.

Of course, there will always be some (or many) vehicles still buzzing along the 405. That's as sure as gravity. And that's where the impact of LA's Green New Deal, which endorses electric vehicles, could be most immediately apparent on the freeways.

"It's going to be so much quieter in LA," said Peterson, the cleantech chief. "[Electric vehicles] are nothing like the cacophony of internal combustion engines."

The first transformations of the 405 won't begin with any futuristic trains — or decongestion. It almost certainly will start with the electrification of cars on the notoriously polluted highway. Though just 1.4 percent of vehicles in LA run on electricity today, Californians' have welcomed battery-powered cars, and <u>lead the nation</u> in electric vehicle adoption. While electric cars are generally more expensive than the average gas guzzler, that may not be the case for much longer. Prices are expected to equal their combustion-engine counterparts <u>by 2022</u> as electric battery

costs dip and more car companies offer long-range electric vehicles. To charge these vehicles, the green plan calls for installing 28,000 electric-charging stations around LA by the Olympics, as a way to encourage Angelenos to trade in the drudgery of gas stations, brown smog, and trips to the oil change shop for electric cars. This includes some 20 grand "plazas" for plugging in your ride.

Crucially, sedans, SUVs, and compact cars won't be the only vehicles running on electricity, instead of fuel fracked from the Earth. Much of LA's air pollution and greenhouse gases get heaved from the loud, heavy trucks chugging to and from the mega shipping ports of Los Angeles, which are the largest and most valuable in the nation. By 2035, Garcetti's scheme calls for the big machines that haul our foreignmade iPhones and toasters to run on electricity — in part by giving these modernized rigs the best curb or delivery space.

But in 15 or 20 years, it's possible that some vehicles driving over the 405 might not have drivers — or even steering wheels.



The meeting of the 405 and 105 freeways.

Sure, there's lots of inflated and tiresome hype about self-driving vehicles today, but Garcetti thinks that by 2035, government-regulated driverless cars will be on the road. Autonomous cars aren't exactly around the corner, but perhaps they'll arrive (and be sanctioned by the National Highway Traffic Safety Administration) in the 2030s. Imagine a Lyft rideshare at midnight, but no driver with dark circles around their eyes, quaffing Red Bull. "We're on a pathway to automated vehicles without talking about it," said UC Berkeley's Deakin. She pointed to ever-evolving, subtle changes in automobiles, like new cars that beep when you veer off the center lane, come

equipped with automatic braking, and the reality that few of us rely on our own navigational skills. We drive where the GPS tells us to drive.

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Should the driverless revolution come to pass, this doesn't mean that riding on the 405 will mean hitting incredibly fast speeds with computers at the wheel. Driverless cars might travel even slower.

Today, the speed limit on the 405 is <u>65 mph</u>, but people ignore it and drive much faster.

Unlike a human, a programmed, driverless car can be designed to follow the rules — unless speed limits went up. Yet, bumping up speeds opens a whole new can of worms, and potential for calamities and collisions.

Though, with machines at the controls, perhaps the 405 won't be beleaguered by silly, traffic-stopping fender benders, an inevitability of human error. "You won't have a

human factor of someone slamming on their brakes because they dropped their coffee," noted Deakin.

## AN UNAVOIDABLE TRUTH

In the end, the cure for what ails the clogged 405 might be sparked by LA's Green New Deal and backed with billions of dollars. But this great vision won't be the ultimate remedy.

The most irrational, unreliable element in the transportation equation must be tamed: people. We won't stop driving.

"We've built an enormous commuter rail system," said Taylor, noting that Angelenos have voted not once, but four times to hike the sales tax to pay for these projects over the past four decades. The sad result? "Public transit use is plummeting," noted Taylor. Meanwhile, he said, "auto ownership is going up dramatically."

Nationally, the problem isn't just that more Americans are buying more cars. It's that we're driving in them by ourselves. In the last half-century, the average occupancy in U.S. vehicles dropped from nearly 2 down to 1.4, explained UC Davis' Sperling.

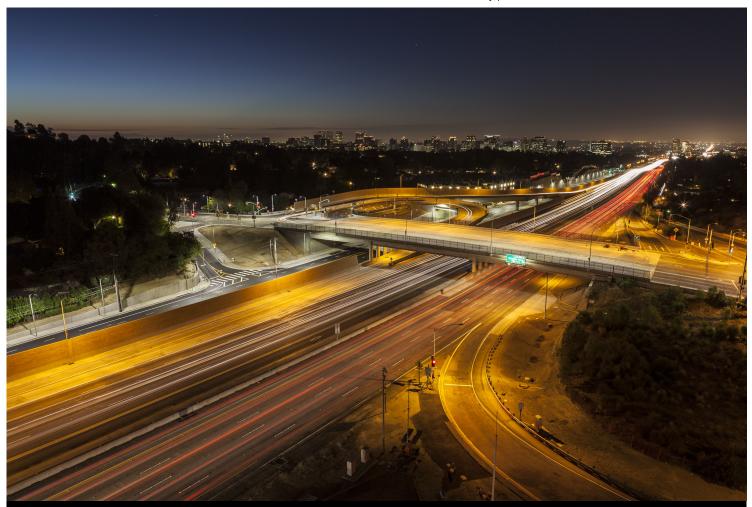
"More and more people are driving alone," he said.

Consequently, even a shiny, new monorail and a massively expanded fleet of reliable, interconnected electric trains and buses might not be enough to entice Angelenos to

ditch their cars. Sure, in an overcrowded city, using public transit when you can is the	
societally right, "green," and sensible thing to do. But when it comes to altering deeply	
ingrained driving habits, betting on the good or reasonable side of human nature is a	
bad gamble, said Taylor.	

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"There must be consequences to driving," he emphasized.



The 405 meets Sunset Boulevard.

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Fixing the 405 means people must pay to use it. And it could even be timed, like getting a ticket at the deli: not everyone can get their ham at once. Or metered like electricity. But this will almost certainly be met with opposition. "Once people have structured their lives around making trips in private vehicles, it's understandable that people greet efforts to limit that with hostility and suspicion," said Taylor.

Already, the county agency that runs the metro <u>has decided to consider the idea</u>. "There's serious talk about congestion pricing in LA," said Sperling.



## "There must be consequences to driving."



There's a number of ways to make it work. If you drive to the airport alone, you'll pay a fee, but not with multiple passengers in tow, Sperling offered. Perhaps simply driving on all LA freeways will have a similar scheme.

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When the last Olympic Games were played in Los Angeles, 35 years ago, Brodsly, the author, remembers that the freeways were shockingly empty. There was a strong catalyst. "Everyone was worried about traffic," he said. "There were motivations that resulted in behavioral change."

But with the end of the Olympics came the return of traffic, population growth, and urban renewal in a basin walled in by mountains. "That's always been the curse of Los Angeles," said Brodsly. "It's very, very successful. And it's always found the limits of space."

Without charging to use the 405, the next 35 years could look the same. "We'll have debilitating congestion," said Taylor.

## **FREEDOM**

There was no celebration when President Dwight D. Eisenhower, with the stroke of a pen, brought the Interstate Highway System into existence in 1956. Suffering from intolerable stomach pains, Eisenhower signed the Federal-Aid Highway Act in the hospital without pomp. But his Secretary of Commerce, Sinclair Weeks, soon called it "the greatest public-works program in the history of the world."

Indeed, there are few things as public and freeing as the now 46,876 mile-long Interstate Highway System, of which the 405 is but an exceptionally clogged vein. The asphalt program, originally described as "socialist" by critics, can take anyone nearly anywhere in the U.S. And similar to barreling down the I-40 through the high desert of New Mexico, there's apparently still a flair of independence that comes with ranging alone through the snaking interstates of Los Angeles.

"The thing that always struck me is, notwithstanding the misery of the [405], the freeway continues to be as miserably clogged as it is," said Brodsly. "Obviously there's something going on there."

"There's something about being alone in cars," he added. "There's an attraction."



A vintage illustration of a 1953 highway exchange.

GraphicaArtis / Getty Images

The Green New Deal isn't promoting that people stop driving. It just wants them to make fewer driving trips, alone, in Los Angeles — if there's good public transit available. The greatest American ideal — freedom — is intrinsically chained to driving. That can't be broken.

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"I would say travel conveys a lot of social and economic benefit," said Taylor. "We know, for example, that people who make more trips have a higher life satisfaction."

Angelenos will travel up and down the 405 forever. It remains to be seen how, exactly, that travel will take place. Regardless, the route has become ingrained in Los Angeles' soul. It's part of us, our past, and future, whether we'd like to believe it, or not.

"I'm on it once or twice a week," the mayor said. "My parents live off the 405. The 101 and 405 are basically the first cousins I met."

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