



— **2017 OUTSTANDING** —

Local Streets and Roads Awards Program



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California State Association of Counties®
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County Engineers Association of California

OVERALL WINNER

Salton City Roadways

County of Imperial



The County of Imperial is committed to improving the overall quality of its road system in the most cost-effective, environmentally beneficial and safest manner.

In keeping with the county's commitment, the Salton City Roadways project employed a sustainable engineering approach that strengthens or recycles existing on-site materials instead of the more costly and more environmentally detrimental remove and replace construction method.

Utilizing Caltrans methodology and designing with gravel equivalency/gravel factors, existing asphalt and base/subgrade materials were recycled and strengthened on-site. The project featured cement stabilization of the subgrades to provide a stabilizable base section for pavement application. Existing asphalt was recycled using cold central plant recycling (CCPR) to create a newly paved base course asphalt section, which was subsequently capped with thinner hot mix asphalt (HMA) overlay.

On this 2.8-mile project, the newly designed structural section was composed of 2 inches of HMA over 3.5 inches of CCPR, over 8 inches and 12 inches of cement stabilized subgrade soils. In addition, road shoulders were paved with 2 inches of CCPR.

This project achieved the following impressive environmental benefits:

- » 67 percent recycled asphalt pavement (RAP) usage, recycling 11,043 tons of existing asphalt assets;
- » Conservation of 24,774 tons of non-renewable aggregate resources;
- » Landfill avoidance of 13,594 cubic yards of subgrade soils;
- » Elimination of 4,701 heavily loaded trucks exporting and importing materials to the project site, along with their associated wear and tear on roads, traffic congestion, fuel, oil, energy usage; and
- » Greenhouse gas emissions cost savings of over \$1 million.

The Salton City Roadways project is an example of how the expertise of public works engineers helps solve the financial and environmental challenges agencies and owners face with asphalt pavement infrastructure.



EFFICIENT AND SUSTAINABLE ROAD MAINTENANCE, CONSTRUCTION AND RECONSTRUCTION PROJECTS

WINNER

Eastern Avenue Pavement Rehabilitation Project

City of Commerce

Eastern Avenue is a major corridor in the City of Commerce with heavy vehicle and truck traffic, connecting to the I-5 freeway.

Not a traditional pavement rehabilitation design and construction project, the work on Eastern Avenue involved extensive coordination with local businesses to ensure the roadway remained open and took into account the impact on the community. The city executed the project with a limited budget and condensed timeframe using an environmentally sustainable and cost-effective approach. Originally estimated to cost Commerce \$2.3 million, the project ultimately totaled \$1.5 million by using reclaimed asphalt concrete pavement instead of traditional techniques for the project. Saved resources were then invested in additional street rehabilitation projects that improved quality of life for residents.

This approach is not only environmentally sustainable but also provides excellent bonding qualities, and increases the roadway's overall quality, durability and visual aesthetics. The project utilized approximately 18,000 square yards of



18-inch full depth reclaimed asphalt concrete pavement with 4 percent concrete. The project also used 18,000 square yards of 3-inch cold central-plant recycled (CCPR) reclaimed asphalt concrete pavement. The project was completed cost effectively, within a tight schedule and with minimal impact to the community. Commerce now plans to use similar approaches for future projects.

FINALISTS

» **\$19 Million FY 2016 Pavement Maintenance & Rehabilitation Project** *(City of Hayward):*

Constructed in 2016, the pavement maintenance and rehabilitation project is a prime example of how the City of Hayward efficiently and effectively invests in its road infrastructure. Staff made pavement improvements to over 330 street segments; conducted preventative maintenance on approximately 220 street segments and close to 850,000 square yards of pavement; and reconstructed and rehabilitated approximately 110 street segments and 821,634 square yards of pavement. Using environmentally friendly techniques and products, the city reduced its carbon footprint for pavement projects and increased Hayward's pavement condition index (PCI) from 66 to 70. These techniques included micro-surfacing, cold-in-place recycling (CIR) with a hot mix asphalt overlay and hot-in-place recycling with a hot mix asphalt overlay.



» **Studebaker Road Improvement Project**

(City of Long Beach): The City of Long Beach launched a pilot project on Studebaker Road to conduct roadway maintenance with more sustainable and environmentally friendly construction methods. The roadway rehabilitation project included removing and replacing the upper 4.5 inches of asphalt on Studebaker Road between Spring Street and Wardlow Road. Existing pavement was rehabilitated by using cold-in-place recycling (CIR) to a depth of 3 inches with the addition of 1.5 inches of asphalt rubber hot mix using traditional paving methods. Long Beach replaced four travel lanes with a median for a distance of 0.5 miles, repairing a total 2.5 lane-miles. Using sustainable methods, the city reduced costs by 30 percent and sped up project completion by 25 percent.



» **Pavement Accelerated Repair Implementation Strategy Program** *(City of Redlands):*

The City of Redlands implemented its Pavement Accelerated Repair Implementation Strategy (PARIS) program to assess and resurface two-thirds of city streets over a five-year period resulting in an increase in the city's average pavement condition index (PCI) to approximately 80. PARIS is based on Redland's Pavement Management Program, which is used to evaluate the physical condition of city streets and to determine the remaining life of streets. The scope of street repairs will include pulverization, grind and overlay and slurry seal. In addition, striping, curbs, gutters and cross gutters are being replaced or repaired where affected by paving work. The project comprises 378 lane-miles of local streets, 129 lane-miles of minor streets and 133 lane-miles of major streets.



COMPLETE STREETS PROJECTS

WINNER

Old Redwood Highway Improvement Project

Town of Windsor

Private commercial and residential developer Bell Village, the developer of Oakmont Senior Living, initiated the Old Redwood Highway improvement project, which is a model of a successful public-private partnership with benefits for the greater local community.

Oakmont agreed to make improvements to the entire width of the Old Redwood Highway for the full length of the project. The Town of Windsor agreed to reimburse Oakmont for the non-project side of the highway improvements in the form of development impact fee credits. Prior to the project, the Old Redwood Highway was a two-lane road lacking sidewalks, marked street crossings at intersections, intermittent or discontinuous bike lanes and minimal street lighting. Still two lanes, the Old Redwood Highway now features green bike lanes, extra wide sidewalks, two roundabout-controlled intersections, LED streetlights, reverse angle parking, elevated walkways to protect the root structure of some of the heritage oak trees, stormwater drainage units and two pedestrian activated rectangular rapid flashing beacon warning systems at crosswalks.



This complete street project's innovative features significantly improve safety and access for the pedestrians, bicycles and vehicles, which will benefit residents and visitors well into the future.

FINALISTS

- » **Armorlite Drive Enhancements** (*City of San Marcos*): The City of San Marcos invested in Armorlite Drive to transform it into a multi-modal complete street. These improvements include enhanced walkways, bike racks, street furnishings, tree wells, parking, pedestrian lighting, bioswales for stormwater treatment, and a Class 1 bike path. The project implemented traffic calming measures that include reduced travel lane widths, on-street parking, median, bike lanes, and mid-block pedestrian crossings with rapid flashing beacons.



- » **Village Parkway North Extension Project** (*City of West Sacramento*): West Sacramento has implemented numerous roadway improvements in recent years that enhance multi-modal transportation. The Village Parkway North Extension opened in 2016 to improve transportation options to the Southport District and the rest of the city's southern area that previously lacked enough connection options to the northern part of the city, as well as recreational, employment and commercial destinations. The city's north-east connection along the waterfront supports multi-modal commute patterns, positively impacts freeway access and has promoted interest in mixed-use development along the Sacramento River.



- » **State Route 32 Widening and Multi-Modal Improvement Projects, Phases 1 and 2** (*City of Chico*): The State Route 32 Widening and Multi-Modal Improvements Project Phases 1 and 2 is an excellent example of improving traffic operations and capacity, while enhancing safe and viable transportation alternatives to help meet statewide climate change goals. Located in Chico's urban core, the roadway was widened from two to four lanes to improve the transportation corridor's functionality with ADA compliant pedestrian ramps, crossings and sidewalks, and enhancing transit and adjacent park-and-ride facilities that service the multi-functional transportation hub.



SAFETY OR INTELLIGENT TRANSPORTATION SYSTEM PROJECTS

WINNER

Mira Mesa Phase 1 Adaptive Traffic Control System

City of San Diego

Activated in summer 2016, Mira Mesa Phase 1 adaptive traffic control system is the City of San Diego's most complex system deployment designed to improve traffic flow, reduce travel times, lower greenhouse gas emissions and enhance safety in a traffic-congested area.

InSync, the most adaptive traffic control system on the market, was already in use for nine intersections on Lusk Boulevard where the technology reduced travel times by 24 percent, stops by 61 percent and fuel consumption by 24 percent. These results led the city to install InSync at an additional 11 intersections, including three controlled by Caltrans, for the Mira Mesa Phase 1 project. The Mira Mesa project posed greater challenges to the city than its previous work on Lusk Boulevard. Traffic is approximately four times heavier in this community and the project included the installation of a high-traffic intersection with frequent railroad pre-emptions during peak hours. The city also needed to coordinate with another agency, Caltrans, to complete the work and install a faster larger ethernet to handle the technology. High-capacity ethernet radios with HD video transfer capabilities were used to bridge communication gaps between several signals.

Completed by San Diego's Special Projects Team in less than two months, Mira Mesa Phase 1 is an example of inter-agency cooperation that established a future framework for City of San Diego/Caltrans projects.



FINALISTS

» State Route 89 Mousehole Pedestrian and Bicycle Improvement Project (Town of Truckee):

Planned for 20 years, the State Route 89 Mousehole Pedestrian and Bicycle Improvement Project comprises a 12-foot wide, 120-foot long pedestrian and bicycle tunnel 22 feet under the Union Pacific Railway. It also features Class I bike/pedestrian paths that connect to paths to the north and south, a transit shelter, and



several drainage improvements. The project not only improved safety for pedestrians, cyclists and motorists, but also reduces congestion and greenhouse gas emissions by promoting multi-modal transportation. Construction included ground freezing, jacking, track monitoring (to check for settlement), and on-site casting of the concrete box that met the requirements of both Caltrans and Union Pacific Railway.

» **Donlon Road Realignment** (*County of Ventura*):

After 30 years of traffic congestion and accidents, the Donlon Road realignment has improved safety and travel times to enter and exit Ventura County's historic Somis neighborhood and access State Route 118. Previously the heavy commuter route featured two intersections offset just 150 feet apart, which prevented adequate left turn pockets. The existing traffic signal had to be phased separately for each leg, creating mile-long rush hour traffic ques. Ventura County expanded the Donlon Road Realignment project to include upgrading and widening the State Route 118 corridor to meet state standards and realigned Donlon Road to meet the signalized intersection. State Route 118 now features long left turn lanes in both directions, a new traffic signal and 8-foot wide paved shoulders.



EFFICIENT AND SUSTAINABLE BRIDGE MAINTENANCE, CONSTRUCTION AND RECONSTRUCTION PROJECTS

WINNER

Bridge Capacity System

County of Los Angeles

Collaborating with Caltrans and the Federal Highway Administration (FHWA), the County of Los Angeles Department of Public Works developed an innovative, cost-effective and user-friendly program for regulatory agencies in California to process oversize overweight transportation (OOT) permits.

The partnering agencies created the web-based bridge capacity system (BCS) to address a large-scale unmet need for a streamlined review process. BCS provides local regulatory agencies an efficient process to comply with OOT permit



requirements that protect existing bridges, ensure public safety, and improve the sustainability of local bridges. Its functionality can verify inputted weights of a permit vehicle against the load carrying capacity of all bridges on a route and check bridge clearances to prevent truck collisions with superstructures. Staff of any engineering experience can conduct a highly technical review in a quick and effective manner. The BCS functionality helps reduce the probability of over usage to preserve and protect our local bridges for commuter safety and the program collects data from the most highly crossed bridges to analyze mitigation and funding needs for future bridge maintenance. Once fully implemented, BCS will serve as a tool for other permit-issuing local agencies.

FINALISTS

» **East Campbell Avenue Portals Project**

(City of Campbell): The East Campbell Avenue Portals Project transformed East Campbell Avenue under the State Route 17 overcrossing from a dark, uncomfortable pathway with narrow sidewalks and bike lanes to a welcoming multi-modal facility with widened bicycle lanes and separated pedestrian portals on both sides of Campbell Avenue. The project removed curtain abutment walls and installed new retaining and tie-back walls to provide 26-foot wide portal openings behind existing abutment walls. Public benefits include improved bicycle and pedestrian connectivity for residents through the underpass; public art, terraced landscaping, and ornate columns; more comfortable walkway separated from moving traffic and running between the Historic Downtown/Downtown Campbell Light Rail Station and the Pruneyard Shopping Center and residences on Union Avenue and east of Bascom Avenue. The Portals Project has opened up a new, functional, and beautiful entrance to Downtown Campbell.



» **East Fork over North Fork San Gabriel River Bridge Retrofit**

(County of Los Angeles): The County of Los Angeles seismically retrofitted the East Fork Bridge over the North Fork San Gabriel River. Originally built in 1949, the 642-foot long, steel truss bridge provides access to county firefighting facilities and recreational amenities. The county sought to respect the environment to ensure that the project did not impact the surrounding area and wildlife while addressing the high seismicity of the site. Instead of strengthening bridge members and the foundation, engineers developed a retrofit plan to reduce the seismic forces by altering the bridge's structural response. Existing bridge bearings were replaced with seismic isolation bearings that allowed the bridge to behave more flexibly during an earthquake. The innovative use of seismic isolation bearings, combined with selective member strengthening and extensive scaffolding constructed from atop the bridge and hung from bridge members, proved to be a cost-effective and environmentally friendly solution that eliminated the need for a foundation retrofit, and avoided any construction work in the environmentally sensitive riverbed.





SPONSORED BY THE CALIFORNIA STATE ASSOCIATION OF COUNTIES*, THE LEAGUE OF CALIFORNIA CITIES*, AND THE COUNTY ENGINEERS ASSOCIATION OF CALIFORNIA, THE OUTSTANDING LOCAL STREETS AND ROADS AWARDS HONORS CITIES AND COUNTIES THAT ARE EMPLOYING PROJECTS, PROGRAMS, PRACTICES, AND INNOVATIVE TECHNOLOGIES AND MATERIALS TO ACHIEVE PRESERVATION, SAFETY AND SUSTAINABILITY GOALS FOR THE STATEWIDE LOCAL STREET AND ROAD SYSTEM. THESE PRESTIGIOUS AWARDS BOTH RECOGNIZE AND RAISE AWARENESS OF THE EXCEPTIONAL ACHIEVEMENTS MADE BY CALIFORNIA'S CITIES AND COUNTIES TO PRESERVE AND PROTECT THE PUBLIC INVESTMENT IN THE LOCAL STREET AND ROAD SYSTEM. HONORED PROJECTS SERVE AS BEST PRACTICES THAT CAN BE REPLICATED IN OTHER CALIFORNIA COMMUNITIES.

Forward-thinking cities and counties have made extraordinary investments to preserve and improve the existing local transportation system. Through these exemplary efforts, cities and counties are improving system efficiency and safety for all users including motor vehicle drivers, bicyclists, and pedestrians; and ultimately reducing greenhouse gas emissions, helping counties, cities, regional agencies, and the state meet statewide greenhouse gas reduction climate goals.

A safe, well-maintained, and environmentally friendly local transportation system significantly saves cities, counties, and taxpayers, money in the long-term.



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