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CITY OF SANTA ANA

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CONTRACT NUMBER: ML14012
CITY OF SANTA ANA
FACILITIES, FLEET, AND PARKS MAINTENANCE

FINAL REPORT
October 11, 2022

**Prepared for the Mobile Source Air Pollution Review Committee (MSRC) under
the AB2766 Discretionary Fund, Local Government Partnership Program**

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ACKNOWLEDGEMENTS

We are most grateful to our staff here at the City of Santa Ana who over the years has worked diligently in the execution of this agreement. We are also appreciative for the valuable assistance the Air Quality Management District (AQMD) and the Mobile Source Air Pollution Reduction Review Committee (MSRC) have provided the City throughout this project.

This report was submitted in fulfillment of ML 14012 and the Mobile Source Air Pollution Reduction Review Committee CLEAN TRANSPORTATION FUNDING, LOCAL GOVERNMENT MATCH 2014 PROGRAM TO FINANCE ALTERNATIVE FUEL INFRASTRUCTURE PROJECTS, by the CITY OF SANTA ANA under the partial sponsorship of the Mobile Source Air Pollution Reduction Review Committee (MSRC). Work was completed as of September 12, 2019.

The statement and conclusions in this report are those of the contractor and not necessarily those of the Mobile Source Air Pollution Reduction Review Committee (MSRC) or the South Coast Air Quality Management District (South Coast AQMD).

The mention of commercial products, their sources or their uses in connection with material reported herein is not to be construed as either an actual or implied endorsement of such products.

PROJECT DESCRIPTION

In February 2015, the City of Santa Ana's Facilities, Fleet and Central Stores (FFCS) was approved by the South Coast Air Quality Management District (AQMD) for a Clean Transportation, MSRC Local Government Match Program Contract, ML14012. The contact amount of \$244,000 in matching funds provided funding for the following clean air projects.

- \$210,000 to purchase seven (7) heavy-duty, on-road alternative fuel vehicles (AFVs), and
- \$34,000 to install six (6) Level II electric vehicle charging (EVC) stations

Both projects align with the City's strategic plan to increase the proportion of AFVs in its fleet, and develop alternative energy fueling facilities to support AFVs.

VEHICLES PURCHASED

In our initial contract, the City received approval for seven heavy-duty transit vehicles equipped with dedicated liquefied petroleum gas (LPG) engines. At the time, LPG fueling systems in vehicles the City needed were difficult to come by. The new fueling system and related outfitting equipment were still new to manufacture, which made delivery timelines on orders unpredictable. Prolong delivery schedules to fill orders made MSRC contract operating requirements and completion deadlines difficult to meet.

Therefore, in August 2021, and February 2022, the City requested, and received contract modifications to extend the contract term through October 12, 2022. Additionally, we requested the number of vehicles reduced from seven to one vehicle, and the engine fueling system changed from LPG to Compressed Natural Gas (CNG). A 2018 Freightliner, dump truck was purchased by the City in August 2017. Below are a few more details of the purchased vehicle:

Asset #	Vehicle Make	Year	Description	In Service Date	Miles	Engine Type
60106	FREIGHTLINER	2018	1145D - DUMP TRUCK	9/4/017	14,719	CUMMINS ISL 320HP - 1,000 LB FT

Placement of this AFV dump truck in service, prevented the release of 26 metric tons of carbon dioxide in our atmosphere (based on Fually.com’s average of 5 mpg for a similar gasoline-fueled vehicle, and EPA.gov’s Greenhouse Gas Equivalencies Calculator). Greenhouse gas emissions from a gasoline-powered dump truck would have been equivalent to almost 3,000 gallons of gasoline consumed over the five years of operation, or one average gas-powered passenger vehicle driven almost 65,000 miles, or 5.1 homes’ electricity use for one year. The addition of this vehicle, along with a number of CNG, LPG, and electric fueled vehicles placed in service since 2015, continues to take the City in the direction to reduce our community’s carbon footprint.

EV CHARGING STATIONS

Upon the award of \$34,000 from SCAQMD for the installation of six EV charging stations, City met with perspective consultants and contractors to educate staff in the fueling systems, related equipment, and maintenance of these systems. In 2017, FFCS selected an EVC contractor for installation, and an EVC operating maintenance contractor. Both contractors’ service agreements were approved by City Council on February 6, 2018, as well as the necessary City matching funds to complete the project. The following were the six proposed EVC stations and their locations:

- 2 - EVCs located at the Corporate Yard (General Parking & Service Port), 215 S. Center Street.

- 1 - EVC located in Downtown Santa Ana’s Santiago Arts District, 201 E. 3rd Street.
- 1 - EVC located at the Santa Ana Zoo, 1801 E. Chestnut Avenue
- 2- EVCs within City limits, no specific location(s)

The project to install these EVC stations had their distinct challenges. First, since five of the six charging stations needed to be accessible to the public, staff had a difficult time deciding on the “perfect” spots to install. Accessibility, utilization, and safety for customers and charging equipment were factors seriously considered and debated among staff in determining the placement of the EVCs. So much so, it resulted in no definitive plans to install chargers at the Corporate Yard locations as public access to many City facilities were restricted during the pandemic. Additionally, Southern California Edison deemed the Zoo’s power source insufficient to operate an electric charger. This resulted in the City placing the Santa Ana Zoo’s EVC installation on hold. Costly replacement of the Zoo’s power source was not budgeted at the time, and Edison’s timeline for replacement would have been extensive due to governments’ COVID-19 pandemic safety restrictions. These safety measures made: meeting or working on-site with staff, service providers, and contractors; having adequate staffing levels to keep projects on-track; procuring final construction approvals; and receiving orders for materials and supplies extremely challenging the first quarter of 2020. Such challenges, although improving over the past two years due to the lifting of safety measures, still impact monitoring and completing projects in a timely manner. Therefore, in August 2022, City again requested modification to ML 14012 to decrease the number of EVCs installed from six to two. Below are the two approved locations.

CHARGER LOCATION	ACTIVATION DATE	ADDRESS	TOTAL kWh	SAVINGS		SERVICE YRS
				GHG	GAS	
SA Regional Transp Ctr	9/20/2018	815 N Santiago St.	18,488.20	8,817.82	2,320.28	3.7
3rd/Bush SA Arts District	9/12/2019	201 E 3rd Street	21,881.37	12,406.04	2,746.11	3.0



← EV Charging Station at the Santa Ana Regional Transportation Center

EV Charging Station in the Arts District, Downtown Santa Ana→



Since their activations, the two EVCs have recorded usage of over 40,000 kilo-watt hours combined, saved the City from consuming over 5,000 gallons of gasoline, and resulted in savings of over 21,000 kilo-grams of Green House Gas emissions being released in our atmosphere.

PUBLIC OUTREACH

A requirement in contract ML 14012 is for the contractor to develop and implement a Public Outreach Plan. In 2013, the City developed a core public outreach plan for green initiatives. In the plan, City addressed informing the public of “green” eco-friendly infrastructure projects in the community, and the funding of these projects by funding agencies (such as AQMD) through taxes and fees. Upon SCAQMD’s approval of the plan, staff began its outreach within City Hall, and outside to the community. FFCS with the assistance of a consultant created and distributed informational pamphlets, flyers and articles on the City’s website (<https://www.santa-ana.org/santa-ana-green/>) and in newsletters. FFCS provides green initiative project updates to our various media outlets, both within our organization and throughout our community

ADDITIONAL CHALLENGES ENCOUNTERED

Aside from the challenges described previously under the AFV and EVC sections, was, and continue to be the numerous changes in management, management's direction, and turnover of support staff. Since awarded contract ML 14012, FFCS has seen numerous City Managers, Executive Directors, Division Managers and senior staff members leave. The division(s) also transitioned from Finance to Public Works in 2019, and in July 2022, switched-out our Central Stores and Corporate Yard divisions for Parks Maintenance. The departure of experienced staff members, along with the move from one agency to another, created difficulty in imparting MSRC contract knowledge and expertise, and accessing project file folders. Over the years, printed files were boxed and placed in various storage locations throughout the City, while electronic files were saved on agency and division specific drives. Agency specific drives are not accessible to other departments without proper approvals, and despite FFCS creating these file folders, we cannot retrieve them as we are now under a different agency. The COVID-19 State shutdown and protection protocols only amplified this challenge when staff transitioned to working remotely. This disconnect in accessing historical files was especially problematic in locating and documenting our public outreach efforts.

SUMMARY & CONCLUSIONS

In 2014, MSRC awarded in matching funds, the City of Santa Ana a contract for two clean air projects totaling \$244,000 from the South Coast Air Quality Management District. Since then, City staff has requested and received approvals to modify the agreements and have completed the following:

- Purchased one Alternative Fuel Vehicle, \$30,000 in matching funds, and

- Installed two Electric Vehicle Chargers for a combined match funding of \$11,220

Although, City staff experienced challenges in fulfilling MSRC ML14012 contract requirements, we became even more determined to complete it. The contract was a great opportunity for the City to receive financing assistance from SCAQMD to:

- Expand City's fleet inventory with alternative fueled service vehicles
- Provide alternative fueling infrastructure to fuel our AFV units, and
- Make available EVC stations for use by city personnel and the public

We are now setting our sights on completing our next two outstanding contracts, MSRC ML 11029 and ML 18046.

FFCS is grateful for the valued support provided by MSRC over the years. Their constant, responsive, understanding, and constructive guidance has been vital in keeping us on track and moving forward. We are inspired and eager to continue our work with SCAQMD on current and future MSRC funding opportunities that develop clean transportation programs and reduce vehicle emissions in our communities.