July 17, 2024
NVTA Agenda Item 12.4
Continued From: New
Action Requested: APPROVE

NAPA VALLEY TRANSPORTATION AUTHORITY

COVER MEMO

SUBJECT

Transportation Fund for Clean Air (TFCA) 40% Fund Program Project List for Fiscal Years Ending (FYE) in 2025-27

STAFF RECOMMENDATION

That the Napa Valley Transportation Authority (NVTA) Board approve the Transportation Fund for Clean Air (TFCA) 40% Fund Program Project List for Fiscal Year Ending (FYE) in 2025-27.

EXECUTIVE SUMMARY

On February 21, 2024 the NVTA Board approved the expenditure plan for the TFCA 40% Program funds and opened the call for projects for Fiscal Years 2025-2027. The Napa Valley Transportation Authority submitted a project for FYE 2025. No other project applications were submitted for FYE 2026 and 2027 by the deadline of March 22, 2024. The deadline for project submission was extended through May 17th. Four additional applications were received from the City of Napa, the City of St. Helena, and the City of American Canyon.

Staff is proposing to fully fund all projects over fiscal years 2025-27. Projects have undergone a cost-effective analysis and are eligible to receive funds. Funds in the first program year, 2025 are established, the second two years, 2026 and 2027 are estimated. If the fund estimates are higher than expected, additional funds can be programmed to eligible projects. Approved projects must be submitted to the Bay Area Air Quality Management District (BAAQMD) by November 1 each year to meet the programming deadline. If funds are not programmed by the Air District deadline, funds may be reprogrammed to another county.

FISCAL IMPACT

TFCA eligible projects totaling approximately $560,166 (including administrative costs) will be funded with FYE 2025-27 TFCA Program Manager Funds.

July 17, 2024
Agenda Item 12.4
Continued From: New
Action Requested: APPROVE

NAPA VALLEY TRANSPORTATION AUTHORITY
Board Agenda Memo

TO: Board of Directors

FROM: Kate Miller, Executive Director

REPORT BY: Diana Meehan, Principal Planner
(707) 259-8327 / Email: dmeehan@nvta.ca.gov

SUBJECT: Transportation Fund for Clean Air (TFCA) 40% Fund Program Project List for Fiscal Years Ending (FYE) in 2025-27

RECOMMENDATION

That the Napa Valley Transportation Authority (NVTA) Board approve the Transportation Fund for Clean Air (TFCA) 40% Fund Program Project List for Fiscal Years Ending (FYE) in 2025-27.

COMMITTEE RECOMMENDATION

The Technical Advisory Committee (TAC) recommended that the NVTA Board adopt the TFCA 40% Fund Program Projects List for Fiscal Years Ending (FYE) 2025-27 at its July 11, 2024 meeting.

BACKGROUND

The Transportation Fund for Clean Air (TFCA) is a grant program, funded by a $4 surcharge on motor vehicles registered in the Bay Area. This generates approximately $22 million per year in revenues. The purpose of the TFCA program is to provide grants to implement the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions, and thereby improve air quality. Forty percent of the DMV funds generated in Napa are returned to the NVTA for distribution to local projects. The remaining sixty percent is allocated by the BAAQMD under the Regional Program. Projects must have an air quality benefit and be cost effective. Air District rules and statutes only allow funds to be retained for two years unless an extension is requested.

NVTA adopts a list of projects annually to be funded by the TFCA 40% program funds. The Air District now allows for funding larger bikeways or trip reduction projects over a three-year period, provided cost-effectiveness can be met for the total amount requested. No larger project requests were submitted in this cycle. If TFCA funds are not programmed annually, Napa County may lose them to another county. Staff is proposing

to fully fund all projects over fiscal years 2025-2027 as shown in Table 1 below. If revenues come in higher than estimated, additional projects may be funded. Projects have undergone a cost-effective analysis and are deemed eligible to receive funds. Approved projects must be submitted to the BAAQMD by November 1 annually to meet the programming deadlines. If funds are not programmed by the BAAQMD deadline, funds may be reprogrammed to another county.

The TFCA program can fund a wide range of project types, including the construction of new bicycle lanes; shuttle and feeder bus services to mass transit stations; ridesharing programs to encourage carpool and transit use; bicycle facility improvements such as bicycle racks and lockers; electric vehicles and electric vehicle infrastructure projects. NVTA staff requests jurisdictions keep a list of potential projects that may qualify for TFCA funds in preparation for any additional revenues that become available.

Table 1: Proposed FYE 2025-2027 TFCA 40% Program Project List*

FYE 2025-2027 TFCA Revenues and Expenditures	**Program Amount Year 1**	**Program Amount Year 2 (Est.)**	**Program Amount Year 3 (Est.)**
Administration Costs for FYE 2025-27	$10,166	$11,000	$12,000
40% Funds Available for Programming	$196,000	$175,000	$175,000
Total Revenue	**$206,166**	**$ 186,000**	**$ 187,000**
Projects			
NVTA Maintenance Facility Charging Stations	$125,000		
City of St. Helena Charging Stations		$75,000	
City of Napa SRTS Pedestrian Improvements	$71,000		
City of American Canyon EV Charging Stations-Phase I		$104,000	
City of American Canyon EV Charging Stations – Phase II			$175,000
TOTAL	**$206,166**	**$179,000**	**$175,000**

*FYE 2025-27 funds must be programmed no later than November 1, 2024-2026.

ALTERNATIVES

The Board could decide not to approve the FYE 2025-27 TFCA projects and Napa County funds may be lost to another county.

STRATEGIC GOALS MET BY THIS PROPOSAL

Goal 5: Minimize the energy and other resources required to move people and goods.

TFCA funding is intended to reduce harmful auto emissions. The projects funded by this program are intended to encourage non-auto modal transportation.

ATTACHMENT

(1) FYE 2025-27 TFCA Applications

Project Information Form

A. Project Number: 25NAP01

B. Project Title: Vine Maint. Facility EV Chargers

C. Project Category (project will be evaluated under this category): Alternative Fuel Infrastructure

D. TFCA County Program Manager Funds Allocated: $ 125,000

E. TFCA Regional Funds Awarded (if applicable): $0

F. Total TFCA Funds Allocated (sum of C and D): $ 125,000

G. Total Project Cost: $ 125,000

H. Project Description:
Napa Valley Transportation Authority (NVTA) will utilize TFCA funds to purchase and install five (5) Level 2 ChargePoint electric vehicle charging stations, with a combined total of 8 ports, at the newly completed VINE Bus Maintenance Facility at 96 Sheehy Court, Napa, CA. Chargers will allow drivers, maintenance employees, and other users of the facility to charge personal electric vehicles. In anticipation of this project, significant electrical work including running of conduit to charging station locations was completed as part of the maintenance facility construction. We anticipate that pending award of funding, installation would be complete within 12 months.

I. Final Report Content: Final Report form and final Cost Effectiveness Worksheet
Clean Air Vehicles

J. Attach a completed Cost-Effectiveness Worksheet and any other information used to evaluate the proposed project.
Attached.

K. Has or will this project receive any other TFCA funds, such as Regional Funds?
No.

L. Confirm that the project is not required by regulation, contract, or policy.
Not Required.

M. Comments (if any):
No Comments.

N. Please indicate if the project is located in a SB535 Disadvantaged Community and/or AB1550 Low-income Community (Please use the map to find your project's location:
Project is not in a qualifying community/location.

Section 2. Project Category Specific Questions

O. If a **ridesharing, first- and last-mile connections service, pilot trip reduction, transit information, telecommuting or infrastructure improvement project,** explain how the number of vehicle trips that will be reduced by the project was estimated, and provide supporting information and data to justify the estimate.
N/A

P. If an **alternative fuel vehicle** project, provide the following information: N/A
   a. Vehicle type (e.g., plug-in hybrid-electric, fuel cell vehicles)
   b. Gross Vehicle Weight Rating
   c. New vehicle or replacement project? A project is a replacement project if the existing vehicle is operational and will be scrapped for the sole purpose of the project.
   d. If this is a new vehicle project, explain how the anticipated usage (miles per year) for the vehicles were estimated.

Q. If a **first- and last-mile connections service** project, confirm that the service will comply with all the following requirements:

☐ Service connects directly to a transit station and a distinct commercial or employment location.
☐ Service schedule coordinates with the mass transit's schedule.
☐ Service is available for use by all members of the public.
☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

R. If a **pilot trip reduction** project, confirm that the project complies with all the following requirements:

☐ Project will reduce single-occupancy vehicle trips and result in a reduction in emissions of criteria pollutants.
☐ Service is available for use by all members of the public.
☐ Applicant provided a written plan showing how the service will be financed in the future and require minimal, if any, TFCA funds to maintain its operation by the end of the third year.
☐ If the local transit provider is not a partner, the applicant demonstrated that they have attempted to have the service provided by the local transit agency. The transit provider was given the first right of refusal and determined that the proposed project does not conflict with existing service.
☐ Applicant provided data and/or other evidence demonstrating the public's need for the service, such as a demand assessment survey and letters of support from potential users.
☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

S. If a **bicycle parking** project, answer the following questions:
   a. What plan is the project referenced in?
   b. Will the project be publicly accessible and available for use by all members of the public?

T. If a **bikeway** project, answer the following questions:
   a. What plan is the project referenced in?
   b. Will the project be publicly accessible and available for use by all members of the public?
   c. If applicable, will the project be consistent with design standards published in the California Highway Design Manual or conform to the provisions of the Protected Bikeway Act of 2014?
   d. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

U. If a **bike share** project, confirm that the project complies with all the following requirements:

☐ Project either increases the fleet size of existing service areas or expands existing service areas to include new Bay Area communities.

☐ Project completed and approved an environmental plan and a suitability study demonstrating the viability of bicycle sharing.

- Project has shared membership and/or is interoperable with the Bay Area Bike Share (BABS) project when they are placed into service. Please select the choice that best describes the project:
    - ☐ Interoperable with BABS
    - ☐ Exempt from requirement for the following reason(s):
        - ☐ i. Projects that do not require membership or any fees for use;
        - ☐ ii. Projects that were provided funding under MTC's Bike Share Capital Program to start a new or expand an existing bike share program; or
        - ☐ iii. Projects that attempted to coordinate with, but were refused by, the current BABS operator to have shared membership or be interoperable with BABS. Applicants must provide documentation showing proof of refusal.

V. If an **infrastructure improvement for trip reduction** project, answer the following questions:

a. What plan is the project referenced in?
b. Which transportation control measure from the most recently adopted Air District plan is the project implementing?
c. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

W. If an **alternative fuel infrastructure** project, confirm that the project complies with all the following requirements:

☒ Project must be designed, installed, and maintained as required by the existing recognized codes and standards and as approved by the local/state authority.

☒ Project funds awarded will not be used to pay for fuel, electricity operation, or maintenance costs.

- Please clarify the infrastructure project's primary purpose (select all that apply):
    - ☒ charge vehicles 14,000 lbs and less
    - ☐ charge vehicles 14,001 lbs and more
    - ☐ serve private fleet
    - ☒ available for public use
    - ☐ other (please specify): _____

ELECTRIC VEHICLE (EV) INFRASTRUCTURE PROJECTS

FYE 2025 TFCA 40% Fund Worksheet

Version 2025, Updated 1/9/2024

General Information Tab: Complete areas shaded in yellow.

Project Number (25XXXYY)	25NAP01
Project Title	VINE Maint. Facility EV Chargers
Project Type Code (e.g., 7a)	12b
County (2-3 character abbreviation)	Nap
Worksheet Calculated By	Patrick Band
Date of Submission	3/22/2024
Project Sponsor	
Project Sponsor Organization	Napa Valley Transportation Authority
Public Agency? (Y or N)	Y
Contact Name	Rebecca Schenck
Email Address	RSchenck@nvta.ca.gov
Phone Number	(707) 259-8636
Mailing Address	625 Burnell St
City	Napa
State	CA
Zip	94559
Project Schedule	
Project Start Date	12/1/2024
Project Completion Date	7/31/2025
Final Report to CMA	9/31/2025

ELECTRIC VEHICLES (EV) INFRASTRUCTURE PROJECTS

FYE 2025 TFCA 40% Fund Worksheet

Updated 1/9/2024

Project Number	25NAP01
Project Descriptio	VINE Maint. Facility EV Chargers

Cost-Effectiveness Inputs	
# Years Effective	3
Total TFCA Funding	$ 125,000
Total Project Cost	$ 125,000

Calculations Tab: Complete areas shaded in yellow only

Emissions Reduction Calculations

Step 1 - Emissions of displaced conventional vehicles

Charger Information								Emission Factors of plug-in hybried or electric vehicle (g/mile)					Emission Factors of displaced vehicle (g/mile)				
Charger ID	Description	Type	Rate (KW)	Make	Model	Annual Usage (kWh)	Annual EV miles	ROG	NOx	PM10 Exhaust	PM10 Other	CO2	ROG	NOx	PM10 Exhaust	PM10 Other	CO2
Vine Maintenance A	Dual Port	Level 2 (high)	7.2	ChargePoint	4021	63,072	211,922	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
Vine Maintenance B	Dual Port	Level 2 (high)	7.2	ChargePoint	4021	63,072	211,922	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
Vine Maintenance C	Dual Port	Level 2 (high)	7.2	ChargePoint	4021	63,072	211,922	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
Vine Maintenance D	Single Port	Level 2 (high)	7.2	ChargePoint	4011	31,536	105,961	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
Vine Maintenance E	Single Port	Level 2 (high)	7.2	ChargePoint	4011	31,536	105,961	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
		TOTALS				**252,288**	**847,688**										

Cost-Effectiveness Results	Annual	Lifetime	
1. ROG Emissions Reduced	0.0489	0.1468	Tons
2. NOx Emissions Reduced	0.0830	0.2489	Tons
3. PM Emissions Reduced	0.0060	0.0180	Tons
4. Weighted PM Emissions Reduced	0.0313	0.0938	Weighted Tons
5. CO2 Emissions Reduced	251.1385	753.4154	Tons
6. Total Criterial Emission Reductions	0.1379	0.4137	Tons
7. TFCA Unweighted Cost Effectiveness		$ 302,140	/ton
8. TFCA Weighted Cost Effectiveness		**$ 255,373**	**/weighted ton**

Continued from above table

Emissions Reduction Calculations				
Step 1 - Emissions of discplaced conventional vehicles				
Emission Reductions (g/yr)				
ROG	NOx	PM10 Exhaust	PM10 Other	CO2
11,099.82	18,815.18	301.46	1,059.94	56,957,261
11,099.82	18,815.18	301.46	1,059.94	56,957,261
11,099.82	18,815.18	301.46	1,059.94	56,957,261
5,549.91	9,407.59	150.73	529.97	28,478,631
5,549.91	9,407.59	150.73	529.97	28,478,631
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
44,399	**75,261**	**1,206**	**4,240**	**227,829,045**

Notes & Assumptions

Provide all assumptions, rationales, and references for figures used in calculations.

Conversion Factors

Grams per Ton	907185	grams/ton'
Miles / kWh	3.36	miles/kWh
ROG split	86%	From EMFAC 2014 CY2017 MDYR2017 vehicles, split of ROG and NOx emissions
NOX split	14%	

Charging Station Type

Charging Station: Also known as electric vehicle supply equipment (EVSE), consists of the conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of delivering energy from the premises wiring to the electric vehicle. (http://www.psrc.org/assets/3729/A_NEC_625_2008.pdf). Charging stations fall into one of these three types:

Level 1 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 1 charging stations use a 120V AC connection
Level 2 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 2 charging stations require a 208/240V AC connection.
DC Fast : A charging station that uses an external charger, and supplies electricity in the form of direct current, typically at a rate of 40KW or higher.

Inputs	Assumptions
Cost Effectiveness Inputs, # Years Effectiveness	3 years is recommended - Not to exceed 4 years
Charger ID (Column A)	Five Chargers to be installed, identified as A through E, at the VINE Maintanance Facility, located at 96 Sheehy Court, Napa, CA.
Description (Column B)	Napa Valley Transportation Authority (NVTA) will utilize TFCA funds to purchase and install five (5) Level 2 ChargePoint electric vehicle charging stations, with a combined total of 8 ports, at the newly completed VINE Bus Maintenance Facility at 96 Sheehy Court, Napa, CA. Chargers will allow drivers, maintenance employees, and other users of the facility to charge personal electric vehicles. In anticipation of this project, significant electrical work
Type (Column C)	All chargers will be Level 2.
Rate (KW) (Column D)	7.2
Total TFCA Funding (O3)	Total TFCA funds requested are $125,000. Requested amount for charger purchase alone (excluding installation and related costs) are $36,000, consistent with Guidelines of $6,000 for single-port and $8,000 for double-port chargers.
Annual Usage (kWh) (Column G)	(Rate kW) x (charger's estimated hours of usage per day) x (365 days per year) x (quantity of chargers).

ELECTRIC VEHICLE (EV) INFRASTRUCTURE PROJECTS
FYE 2025 TFCA 40% Fund Worksheet
Version 2025, Updated 1/9/2024

General Information Tab: Complete areas shaded in yellow.

Project Number (25XXXYY)	26NAP01
Project Title	City of St. Helena EV Chargers at City Hall
Project Type Code (e.g., 7a)	12b
County (2-3 character abbreviation)	Nap
Worksheet Calculated By	Andrew Bradley
Date of Submission	5/3/2024
Project Sponsor	
Project Sponsor Organization	City of St. Helena
Public Agency? (Y or N)	Y
Contact Name	Andrew Bradley
Email Address	abradley@cityofsthlena.org
Phone Number	(707) 968-2635
Mailing Address	1088 College Ave
City	St. Helena
State	CA
Zip	94574
Project Schedule	
Project Start Date	12/1/2025
Project Completion Date	7/31/2026
Final Report to CMA	9/31/2026

ELECTRIC VEHICLES (EV) INFRASTRUCTURE PROJECTS

FYE 2025 TFCA 40% Fund Worksheet
Updated 1/9/2024

Calculations Tab: Complete areas shaded in yellow only

Project Number	26NAP01
Project Description	City of St. Helena EV Chargers at City Hall

Cost-Effectiveness Inputs	
# Years Effective	3
Total TFCA Funding	$ 75,000
Total Project Cost	$ 115,300

Emissions Reduction Calculations

Step 1 - Emissions of displaced conventional vehicles

Charger Information								Emission Factors of plug-in hybried or electric vehicle (g/mile)					Emission Factors of displaced vehicle (g/mile)				
Charger ID	Description	Type	Rate (KW)	Make	Model	Annual Usage (kWh)	Annual EV miles	ROG	NOx	PM10 Exhaust	PM10 Other	CO2	ROG	NOx	PM10 Exhaust	PM10 Other	CO2
St. Helena City Hall 1 and 2	Dual Port	Level 2 (high)	7.2	TBD	TBD	62,400	209,664	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
St. Helena City Hall 3 and 4	Dual Port	Level 2 (high)	7.2	TBD	TBD	62,400	209,664	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
St. Helena City Hall 5 and 6	Dual Port	Level 2 (high)	7.2	TBD	TBD	62,400	209,664	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
St. Helena City Hall 7	Single Port	Level 2 (high)	7.2	TBD	TBD	31,200	104,832	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
St. Helena City Hall 8	Single Port	Level 2 (high)	7.2	TBD	TBD	31,200	104,832	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
St. Helena City Hall 9	Single Port	Level 2 (high)	7.2	TBD	TBD	31,200	104,832	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
St. Helena City Hall 10	Single Port	Level 2 (high)	7.2	TBD	TBD	31,200	104,832	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
TOTALS						**312,000**	**1,048,320**										

Cost-Effectiveness Results	Annual	Lifetime	
1. ROG Emissions Reduced	0.0605	0.1816	Tons
2. NOx Emissions Reduced	0.1026	0.3078	Tons
3. PM Emissions Reduced	0.0074	0.0223	Tons
4. Weighted PM Emissions Reduced	0.0387	0.1160	Weighted Tons
5. CO2 Emissions Reduced	310.5784	931.7352	Tons
6. Total Criterial Emission Reductions	0.1705	0.5116	Tons
7. TFCA Unweighted Cost Effectiveness		$ 146,589	/ton
8. TFCA Weighted Cost Effectiveness		**$ 123,899**	**/weighted ton**

Continued from above table

Emissions Reduction Calculations				
Step 1 - Emissions of discplaced conventional vehicles				
Emission Reductions (g/yr)				
ROG	NOx	PM10 Exhaust	PM10 Other	CO2
10,981.56	18,614.71	298.24	1,048.65	56,350,411
10,981.56	18,614.71	298.24	1,048.65	56,350,411
10,981.56	18,614.71	298.24	1,048.65	56,350,411
5,490.78	9,307.36	149.12	524.32	28,175,205
5,490.78	9,307.36	149.12	524.32	28,175,205
5,490.78	9,307.36	149.12	524.32	28,175,205
5,490.78	9,307.36	149.12	524.32	28,175,205
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
54,908	**93,074**	**1,491**	**5,243**	**281,752,053**

Notes & Assumptions

Provide all assumptions, rationales, and references for figures used in calculations.

Conversion Factors

Grams per Ton	907185	grams/ton'
Miles / kWh	3.36	miles/kWh
ROG split	86%	From EMFAC 2014 CY2017 MDYR2017 vehicles, split of ROG and NOx emissions
NOX split	14%	

Charging Station Type

Charging Station: Also known as electric vehicle supply equipment (EVSE), consists of the conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of delivering energy from the premises wiring to the electric vehicle. (http://www.psrc.org/assets/3729/A_NEC_625_2008.pdf). Charging stations fall into one of these three types:

Level 1 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 1 charging stations use a 120V AC connection
Level 2 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 2 charging stations require a 208/240V AC connection.
DC Fast : A charging station that uses an external charger, and supplies electricity in the form of direct current, typically at a rate of 40KW or higher.

Inputs	Assumptions
Cost Effectiveness Inputs, # Years Effectiveness	3 years is recommended - Not to exceed 4 years
Charger ID (Column A)	10 Chargers to be installed at City Hall for the City of St. Helena, located at 1088 College Avenue, St. Hleena, CA 94574.
Description (Column B)	The City of St. Helena is working to transition much of its fleet (including Public Works and Police Department) to fully EV or hybrid vehicles. This project will utilize TFCA funds to purchase and install ten (10) Level 2 electric vehicle charging stations/ports. This would bring the total number of Level 2 charging stations/ports to 16 for official City vehicles, City staff, and community use at 1088 College Avenue, St. Helena, CA 94574. Adding this new EV infrastructure will provide the community and staff with more options to charge, currently during many times of the day the current chargers are in use by the public and/or City staff (not City owned vehicles), while also making it possible for the City to continue to transition its fleet to EV/hybrid vehicles, knowing that there will be more EV chargers available. In anticipation of this project, significant design work has already been completed through MCE. Additional work to run conduit, etc. for the increased electrical load would be done within this project scope. We anticipate that pending award of funding, installation will be complete within 12 to 24 months. The City has not spec'd out the specific chargers it would like to use, but would lead towards an option that met the North American Charging System (NACS)
Type (Column C)	All chargers will be Level 2.
Rate (KW) (Column D)	7.2
Total TFCA Funding (O3)	Total TFCA funds requested are $75,000. Requested amount for charger purchase alone (excluding installation and related costs) are $37,800, consistent with Guidelines of $6,000 for single-port and $8,000 for double-port chargers.
Annual Usage (kWh) (Column G)	(Rate kW) x (charger's estimated hours of usage per day) x (365 days per year) x (quantity of chargers).

Project Information Form

A. **Project Number: 26NAP01** (SH103129-23-1533)

B. **Project Title:** City of St. Helena EV Chargers at City Hall

C. **Project Category (project will be evaluated under this category):** Alternative Fuel Infrastructure

D. **TFCA County Program Manager Funds Allocated:** $75,000

E. **TFCA Regional Funds Awarded (if applicable):** $0

F. **Total TFCA Funds Allocated (sum of C and D):** $75,000

G. **Total Project Cost:** $115,300

H. Project Description:

The City of St. Helena is working to transition much of its fleet (including Public Works and Police Department) to fully EV or hybrid vehicles. This project will utilize TFCA funds to purchase and install ten (10) Level 2 electric vehicle charging stations/ports. This would bring the total number of Level 2 charging stations/ports to 16 for official City vehicles, City staff, and community use at 1088 College Avenue, St. Helena, CA 94574. Adding this new EV infrastructure will provide the community and staff with more options to charge, currently during many times of the day the current chargers are in use by the public and/or City staff (not City owned vehicles), while also making it possible for the City to continue to transition its fleet to EV/hybrid vehicles, knowing that there will be more EV chargers available. In anticipation of this project, significant design work has already been completed through MCE. Additional work to run conduit, etc. for the increased electrical load would be done within this project scope. We anticipate that pending award of funding, installation will be complete within 12 to 24 months.

The City has not spec'd out the specific chargers it would like to use, but would lead towards an option that met the North American Charging System (NACS)

<u>Special Considerations:</u>

The City of St. Helena currently rents the facility at 1088 College Avenue from Napa Valley College. We are in a five-year lease and have the option to renew for an additional two years. There may be other renewal options in the future as well. In any transition it would be expected that EV infrastructure would remain for public use.

The City currently has three EV's, all are used by the St. Helena Police Department. Use of the chargers would primarily be first come, first served. The property currently has EV charging for six vehicles, this project would add an additional 10 chargers. If needed, we would prioritize the current six for fleet use, leaving the new 10 chargers to be used on a first come, first served (non-reserved) basis by the community, City staff, and City vehicles.

1088 College Avenue is located adjacent to an apartment complex that primarily serves lower income individuals, and the Vineyard Valley senior living community. Many residents of these complexes already take advantage of our six chargers as both facilities do not have EV infrastructure

for public use at this time. Adding additional EV infrastructure to 1088 College Avenue could help inspire the purchase of more EV vehicles by residents in these communities since they would know there is public charging infrastructure within walking distance of their homes.

I. Final Report Content: Final Report form and final Cost Effectiveness Worksheet

Clean Air Vehicles

***J.* Attach a completed Cost-Effectiveness Worksheet and any other information used to evaluate the proposed project.**

Attached.

K. Has or will this project receive any other TFCA funds, such as Regional Funds?

No.

L. Confirm that the project is not required by regulation, contract, or policy.

Not Required.

M. Comments (if any):

No Comments.

N. Please indicate if the project is located in a SB535 Disadvantaged Community and/or AB1550 Low-income Community (Please use the map to find your project's location:

Project is not in a qualifying community/location.

<u>Section 2. Project Category Specific Questions</u>

O. If a ridesharing, first- and last-mile connections service, pilot trip reduction, transit information, telecommuting or infrastructure improvement project, explain how the number of vehicle trips that will be reduced by the project was estimated, and provide supporting information and data to justify the estimate.

N/A

P. If an alternative fuel vehicle project, provide the following information: N/A

a. Vehicle type (e.g., plug-in hybrid-electric, fuel cell vehicles)
b. Gross Vehicle Weight Rating
c. New vehicle or replacement project? A project is a replacement project if the existing vehicle is operational and will be scrapped for the sole purpose of the project.
d. If this is a new vehicle project, explain how the anticipated usage (miles per year) for the vehicles were estimated.

Q. If a first- and last-mile connections service project, confirm that the service will comply with all the following requirements: N/A

☐ Service connects directly to a transit station and a distinct commercial or employment location.
☐ Service schedule coordinates with the mass transit's schedule.
☐ Service is available for use by all members of the public.
☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

R. If a pilot trip reduction project, confirm that the project complies with all the following requirements: N/A

☐ Project will reduce single-occupancy vehicle trips and result in a reduction in emissions of criteria pollutants.
☐ Service is available for use by all members of the public.

☐ Applicant provided a written plan showing how the service will be financed in the future and require minimal, if any, TFCA funds to maintain its operation by the end of the third year.

☐ If the local transit provider is not a partner, the applicant demonstrated that they have attempted to have the service provided by the local transit agency. The transit provider was given the first right of refusal and determined that the proposed project does not conflict with existing service.

☐ Applicant provided data and/or other evidence demonstrating the public's need for the service, such as a demand assessment survey and letters of support from potential users.

☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

S. If a bicycle parking project, answer the following questions: N/A

a. What plan is the project referenced in?
b. Will the project be publicly accessible and available for use by all members of the public?

T. If a bikeway project, answer the following questions: N/A

a. What plan is the project referenced in?
b. Will the project be publicly accessible and available for use by all members of the public?
c. If applicable, will the project be consistent with design standards published in the California Highway Design Manual or conform to the provisions of the Protected Bikeway Act of 2014?
d. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

U. If a bike share project, confirm that the project complies with all the following requirements: N/A

☐ Project either increases the fleet size of existing service areas or expands existing service areas to include new Bay Area communities.

☐ Project completed and approved an environmental plan and a suitability study demonstrating the viability of bicycle sharing.

- Project has shared membership and/or is interoperable with the Bay Area Bike Share (BABS) project when they are placed into service. Please select the choice that best describes the project:
    - ☐ Interoperable with BABS
    - ☐ Exempt from requirement for the following reason(s):
        - ☐ i. Projects that do not require membership or any fees for use;
        - ☐ ii. Projects that were provided funding under MTC's Bike Share Capital Program to start a new or expand an existing bike share program; or
        - ☐ iii. Projects that attempted to coordinate with, but were refused by, the current BABS operator to have shared membership or be interoperable with BABS. Applicants must provide documentation showing proof of refusal.

V. **If an infrastructure improvement for trip reduction project, answer the following questions:** N/A

a. What plan is the project referenced in?
b. Which transportation control measure from the most recently adopted Air District plan is the project implementing?

c. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

W. If an **alternative fuel infrastructure** project, confirm that the project complies with all the following requirements:

☒ Project must be designed, installed, and maintained as required by the existing recognized codes and standards and as approved by the local/state authority.

☒ Project funds awarded will not be used to pay for fuel, electricity operation, or maintenance costs.

- Please clarify the infrastructure project's primary purpose (select all that apply):
  - ☒ charge vehicles 14,000 lbs and less
  - ☐ charge vehicles 14,001 lbs and more
  - ☒ serve private fleet (City vehicles)
  - ☒ available for public use
  - ☐ other (please specify): _____

RIDESHARING, BICYCLE, SHUTTLE, AND SMART GROWTH PROJECTS
FYE 2025 TFCA 40% Fund Worksheet

Version 2025, Updated 1/9/2024

General Information Tab: Complete areas shaded in yellow.

Project Number (25XXXYY)	25NAP02
Project Title	SRTS Pedestrian Improvements
Project Type Code (e.g., 7a)	9b
County (2-3 character abbreviation)	NAP
Worksheet Calculated By	Lorien Clark
Date of Submission	5/17/2024
Project Sponsor	
Project Sponsor Organization	City of Napa
Public Agency? (Y or N)	Y
Contact Name	Lorien Clark
Email Address	leclark@cityofnapa.org
Phone Number	707-257-9398
Mailing Address	P.O. Box 660
City	Napa
State	CA
Zip	94559
Project Schedule	
Project Start Date	7/1/2025
Project Completion Date	11/15/2025
Final Report to CMA	5/31/2026

RIDESHARING, BICYCLE, SHUTTLE, AND SMART GROWTH PROJECTS
FYE 2025 TFCA 40% Fund Worksheet

Version 2025, Updated 1/9/24

40% Proj.#:	25NAP02
Route Name:	Various

Calculations Tab: Complete areas shaded in yellow only.

SAMPLE ENTRIES ARE SHOWN IN LIGHT BLUE

Cost Effectiveness Inputs	
Project Operational Start Year:	2025
# Years Effectiveness:	10
Project Operational End Year:	2035
Total Cost for route:	100,000
Total Cost for route 40%:	
Total Cost for route 60%:	NA
Total TFCA Cost for route:	$71,000.00

Emission Reduction Calculations

Step 1 - Emissions for Eliminated Trips

A	B	C	D	E	F	G	H	I
# Trips/Day (1-way)	Days/Yr	Trip Length (1-way)	VMT	ROG Emissions (gr/yr)	NOx Emissions (gr/yr)	Exhaust &Trip End PM10 Emissions (gr/yr) *	Other PM10 Emissions (gr/yr) *	CO2 Emissions (gr/yr)
100	240	16	304294	24,350	15,894	529	74,781	69,362,972
102	180	1	18,324	4,914	1,824	105	4,503	4,981,999
			0	0	0	0	0	0
			0	0	0	0	0	0
			0	0	0	0	0	0
		Total	18,324	4,914	1,824	105	4,503	4,981,999

Step 2 - Emissions for New Trips to Access Transit/Ridesharing

50	250	3	304294	22,001	15,303	479	74,781	68,814,435
			0	0	0	0	0	0
			0	0	0	0	0	0
		Total	0	0	0	0	0	0

Step 3A - Emissions for Shuttle/Vanpool Vehicles up to GVW of 14,000 lbs.

A	B	C	D	E	F	G	H	I	J	K	L	M	N
		0.1	See Emission Factors Tab										
# Vehicles, Model Year	Emission Std.	Vehicle GVW	ROG Factor (gr/mi)	NOx Factor (g/mi)	Exhaust PM10 Factor (g/mi)	**Total** PM10 Factor (g/mi)	CO2 Factor (g/mi) (See CO2 Table for LD and LHD)	Total Annual VMT (sum all vehicles)	ROG Emissions (gr/yr)	NOx Emissions (gr/yr)	Exhaust PM10 Emissions (gr/yr)	Other PM10 Emissions (gr/yr)	CO2 Emissions (gr/yr)
2, 2005	LEV	10,001-14,000	0.23	0.40	0.12	0.32	860	8000	1,840	3,200	960	1,600	6,880,000
									0	0	0	0	0
									0	0	0	0	0
							Total	0	0	0	0	0	0

Step 3B - Emissions for Buses

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
			See Emission Factors Tab													
Vehicle Ref #	Engine Year, Make, & Model	Odometer reading	ROG Factor (gr/mi)	ROG DR (g/10k miles)	NOx Factor (g/mi)	Nox DR (g/10k miles	Exhaust PM10 Factor (g/mi)	Exhaust PM DR (g/10k miles)	**Other** PM10 Factor (g/mi)	CO2 Factor (g/mi)	Total Annual VMT (sum all vehicles)	ROG Emissions (gr/yr)	NOx Emissions (gr/yr)	Exhaust PM10 Emissions (gr/yr)	Other PM10 Emissions (gr/yr)	CO2 Emissions (gr/yr)
												0.00	0	0	0	0
												0.00	0	0	0	0
												0.00	0	0	0	0
										Total	0	0	0	0	0	0

Cost Effectiveness Results	Annual	Lifetime	
1. VMT Reduced	18,324.00	183,240.00	Miles
2. Trips Reduced	18,324.00	183,240.00	Trips
3. ROG Emissions Reduced	0.0054	0.054	Tons
4. NOx Emissions Reduced	0.0020	0.020	Tons
5. PM Emissions Reduced	0.0051	0.051	Tons
6. PM Weighted Emissions Reduced	0.0073	0.073	Tons
7. CO2 Emissions Reduced	5.4916	54.916	Tons
8. Emission Reductions (ROG, NOx & PM)	0.0125	0.125	Tons
9. TFCA Project Cost - Cost Effectiveness (ROG, Nox & PM)		567,666.94	/Ton
10. TFCA Project Cost - Cost Effectiveness (ROG, NOx & Weighted PM). **THIS VALUE MUST MEET POLICY REQUIREMENTS.**		**$482,610**	**/Ton**

Notes & Assumptions

Provide all assumptions, rationales, and references for figures used in calculations.

Two key components in calculating cost-effectiveness are the number of vehicle trips eliminated per day and the trip length.
A frequently used proxy is the % of survey respondents who report they would have driven alone if not for the service being provided.
If survey data is not available, alternative **supporting documentation must be provided to justify the inputs used in the CE calculations**.

Trips Eliminated Per Day
This is number of trips by participants that would have driven as a single occupant vehicle if not for the service; **it is not the same as the total number of riders or participants**.

Trip Length
Only use the trip length of the **vehicle trip avoided** by only the riders or participants that would otherwise have driven alone.

Policy 11. Duplication
MTC's regional ridehsaring program provides funding to counties. This funding may contain TFCA funding, which, if used in combination with TFCA funding, may violate Policy 11. Duplication.

Project Assumptions:
Years of Effectiveness = 10

Rationales:
Per the County Program Manager Fund Expenditure Plan Guidance for FYE 2025 for the Infrastructure Improvements for Trip Reduction category

School Trips:
Trip Length (1-way) = 1 mile
Days/Year = 180
trips/day (1-way) = 101.8

Location: El Capitan Wy/Beckworth Dr Intersection adjacent to Bel Aire Park Elementary School (Census Tract 2006.01)
Bel Aire Park Elementary School has 413 students
Project assumes a 2% walk mode shift*
calculation:
413 x 2% = 8.26 (two-way trips) = 16.52 (one-way trips)

Location: Oxford St/Briarwood St Intersection adjacent to Northwood Elementary School (Census Tract 2007.07)
Northwood Elementary School has 370 students
Project assumes a 2% walk mode shift*
calculation:
370 x 2% = 7.4 (two-way trips) = 14.8 (one-way trips)

Location: Park Ave/Santa Clara St Intersection adjacent to Napa High School (Census Tract 2005.01)
Napa High School has 1,762 students
Project assumes a 2% walk mode shift*
calculation:
1,762 x 2% = 35.24 (two-way trips) = 70.48 (one-way trips)

calculation:
16.52 (one-way trips) + 14.8 (one-way trips) + 70.48 (one-way trips) = 101.8 (one-way trips)

*The intersection of Oxford St/Briarwood St is located within a locally identified Community of Concern (Census Tract 2007.07), which was included in the Napa Valley Community Based Transportation Plan (CBTP). Community outreach conducted as part of the CBTP identified that nearly 20% of comments received indicated a desire for increased pedestrian safety and improved pedestrian access to schools and transit stops. Additionally, as part of community outreach conducted within the City of Napa for the City of Napa Local Roadway Safety Plan, 23% of comments received identified bicycle/pedestrian safety as a top concern. Thus, there is high-demand for pedestrian improvements in the project area which supports the mode shift assumptions used. Safe Routes to School Walk Audit Reports were conducted for each of the above listed schools, and those reports identified crossing improvements at the proposed project locations as recommended improvements to increase safe routes to school access for these three schools. Furthermore, parent surveys conducted in Napa County schools in Spring of 2021 identified "street crossings/intersections" and "not enough sidewalks" as two of the main reasons parents were not comfortable with their children walking to/from school. The surveys also identified that 75% of parents surveyed would like their children to be able to walk or bike to/from school. 92% would feel more comfortable about allowing their children to walk or bike to/from school with increased visibility and safety of crosswalks and 90% would feel more comfortable about allowing their children to walk or bike to/from school if missing or broken sidewalks were fixed. The results of these parent surveys show strong support for pedestrian improvements near school sites and supports the mode shift rates used.

40% FUND APPLICATION

Project Information Form

A. Project Number: **25NAP02**
B. Project Title: **SRTS Pedestrian Improvements**
C. Project Category (project will be evaluated under this category): **9b.**
D. TFCA County Program Manager Funds Allocated: **$71,000**
E. TFCA Regional Funds Awarded (if applicable): $_____
F. Total TFCA Funds Allocated (sum of C and D): **$71,000**
G. Total Project Cost: **$100,000**
H. Project Description:

The City of Napa will use TFCA funds to design and construct pedestrian infrastructure improvements at existing uncontrolled crossing locations near schools. Locations include the intersection of El Capitan Wy/Beckworth Dr adjacent to Bel Aire Park Elementary School, the intersection of Oxford St/Briarwood St adjacent to Northwood Elementary School, and the intersection of Park Ave/Santa Clara St adjacent to Napa High School. The pedestrian improvements include, but are not limited to, Rectangular Rapid Flashing Beacons (RRFBs) and enhanced pedestrian signage and striping.

The intersection of Oxford St/Briarwood St is located within a locally identified Community of Concern (Census Tract 2007.07), which was included in the Napa Valley Community Based Transportation Plan (CBTP). Community outreach conducted as part of the CBTP identified that nearly 20% of comments received indicated a desire for increased pedestrian safety and improved pedestrian access to schools and transit stops.

The location of Park Ave/Santa Clara St adjacent to Napa High School is located within an AB1550 Low-Income Community (Census Tract 2005.01).

Bel Aire Park Elementary School, Northwood Elementary School, and Napa High School are all public schools within the Napa Valley Unified School District. Bel Aire Park Elementary School has a student body of 413, Northwood Elementary School has a student body of 370, and Napa High School has a student body of 1,762.

I. Final Report Content: Final Report form and final Cost Effectiveness Worksheet
The "Trip Reduction" final Report form will be completed and submitted after project completion.

J. Attach a completed Cost-Effectiveness Worksheet and any other information used to evaluate the proposed project.
See attached for the project's completed Cost-Effectiveness Worksheet.

K. Has or will this project receive any other TFCA funds, such as Regional Funds?
No

L. Confirm that the project is not required by regulation, contract, or policy.
N/A

M. Comments (if any):
The intersection of Oxford St/Briarwood St is located within a locally identified Community of Concern (Census Tract 2007.07), which was included in the Napa Valley Community Based Transportation Plan (CBTP). Community outreach conducted as part of the CBTP identified that nearly 20% of comments received indicated a desire for increased pedestrian safety and improved pedestrian access to schools and transit stops. Additionally, as part of community outreach conducted within the City of Napa for the City of Napa Local Roadway Safety Plan, 23% of comments received identified bicycle/pedestrian safety as a top concern. Thus, there is high-demand for pedestrian improvements in the project area which supports the mode shift assumptions used.

Safe Routes to School Walk Audit Reports were conducted for each of the above listed schools, and those reports identified crossing improvements at the proposed project locations as recommended improvements to increase safe routes to school access for these three schools. Furthermore, parent surveys conducted in Napa County schools in Spring of 2021 identified "street crossings/intersections" and "not enough sidewalks" as two of the main reasons parents were not comfortable with their children walking to/from school. The surveys also identified that 75% of parents surveyed would like their children to be able to walk or bike to/from school. 92% would feel more comfortable about allowing their children to walk or bike to/from school with increased visibility and safety of crosswalks and 90% would feel more comfortable about allowing their children to walk or bike to/from school if missing or broken sidewalks were fixed. The results of these parent surveys show strong support for pedestrian improvements near school sites and supports the mode shift rates used.

N. Please indicate if the project is located in a SB535 Disadvantaged Community and/or AB1550 Low-income Community (Please use the map to find your project's location: https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm)
The improvement at Park Ave/Santa Clara St adjacent to Napa High School is located within an AB1550 Low-income Community (Census Tract 2007.04).

Section 2. Project Category Specific Questions

O. If a **ridesharing, first- and last-mile connections service, pilot trip reduction, transit information, telecommuting or infrastructure improvement project,** explain how the number of vehicle trips that will be reduced by the project was estimated, and provide supporting information and data to justify the estimate.

The project assumed 101.8 one-way school trips. The following supporting information and data was used to justify those estimates:

School Trips:

- ***Location: El Capitan Wy/Beckworth Dr Intersection adjacent to Bel Aire Park Elementary School (Census Tract 2006.01)***

    - ***Bel Aire Park Elementary School has 413 students***
    - ***Project assumes a 2% walk mode shift****
    - ***calculation: 413 x 2% = 8.26 (two-way trips) = 16.52 (one-way trips)***
- ***Location: Oxford St/Briarwood St adjacent to Northwood Elementary School (Census Tract 2007.07)***
    - ***Northwood Elementary School has 370 students***
    - ***Project assumes a 2% walk mode shift****
    - ***calculation: 370 x 2% = 7.4 (two-way trips) = 14.8 (one-way trips)***
- ***Location: Park Avenue/Santa Clara St Intersection adjacent to Napa High School (Census Tract 2005.01)***
    - ***Napa High School has 1,762 students***
    - ***Project assumes a 2% walk mode shift****
    - ***calculation: 1,762 x 2% = 35.24 (two-way trips) = 70.48 (one-way trips)***
- ***Calculation: 16.52 (one-way trips) + 14.8 (one-way trips) + 70.48 (one-way trips) = 101.8 (one-way trips)***

****The intersection of Oxford St/Briarwood St is located within a locally identified Community of Concern (Census Tract 2007.07), which was included in the Napa Valley Community Based Transportation Plan (CBTP). Community outreach conducted as part of the CBTP identified that nearly 20% of comments received indicated a desire for increased pedestrian safety and improved pedestrian access to schools and transit stops. Additionally, as part of community outreach conducted within the City of Napa for the City of Napa Local Roadway Safety Plan, 23% of comments received identified bicycle/pedestrian safety as a top concern. Thus, there is high-demand for pedestrian improvements in the project area which supports the mode shift assumptions used. Safe Routes to School Walk Audit Reports were conducted for each of the above listed schools, and those reports identified crossing improvements at the proposed project locations as recommended improvements to increase safe routes to school access for these three schools. Furthermore, parent surveys conducted in Napa County schools in Spring of 2021 identified "street crossings/intersections" and "not enough sidewalks" as two of the main reasons parents were not comfortable with their children walking to/from school. The surveys also identified that 75% of parents surveyed would like their children to be able to walk or bike to/from school. 92% would feel more comfortable about allowing their children to walk or bike to/from school with increased visibility and safety of crosswalks and 90% would feel more comfortable about allowing their children to walk or bike to/from school if missing or broken sidewalks were fixed. The results of these parent surveys show strong support for pedestrian improvements near school sites and supports the mode shift rates used.***

P. If an **alternative fuel vehicle** project, provide the following information:
    a. Vehicle type (e.g., plug-in hybrid-electric, fuel cell vehicles)
    b. Gross Vehicle Weight Rating
    c. New vehicle or replacement project? A project is a replacement project if the existing vehicle is operational and will be scrapped for the sole purpose of the project.
    d. If this is a new vehicle project, explain how the anticipated usage (miles per year) for the vehicles were estimated.

N/A

Q. If a **first- and last-mile connections service** project, confirm that the service will comply with all the following requirements:

☐ Service connects directly to a transit station and a distinct commercial or employment location.

☐ Service schedule coordinates with the mass transit's schedule.

☐ Service is available for use by all members of the public.

☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

N/A

R. If a **pilot trip reduction** project, confirm that the project complies with all the following requirements:

☐ Project will reduce single-occupancy vehicle trips and result in a reduction in emissions of criteria pollutants.

☐ Service is available for use by all members of the public.

☐ Applicant provided a written plan showing how the service will be financed in the future and require minimal, if any, TFCA funds to maintain its operation by the end of the third year.

☐ If the local transit provider is not a partner, the applicant demonstrated that they have attempted to have the service provided by the local transit agency. The transit provider was given the first right of refusal and determined that the proposed project does not conflict with existing service.

☐ Applicant provided data and/or other evidence demonstrating the public's need for the service, such as a demand assessment survey and letters of support from potential users.

☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

N/A

S. If a **bicycle parking** project, answer the following questions:

a. What plan is the project referenced in?
b. Will the project be publicly accessible and available for use by all members of the public?

N/A

T. If a **bikeway** project, answer the following questions:

a. What plan is the project referenced in?
b. Will the project be publicly accessible and available for use by all members of the public?
c. If applicable, will the project be consistent with design standards published in the California Highway Design Manual or conform to the provisions of the Protected Bikeway Act of 2014?
d. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

N/A

U. If a **bike share** project, confirm that the project complies with all the following requirements:

☐ Project either increases the fleet size of existing service areas or expands existing service areas to include new Bay Area communities.

☐ Project completed and approved an environmental plan and a suitability study demonstrating the viability of bicycle sharing.

- Project has shared membership and/or is interoperable with the Bay Area Bike Share (BABS) project when they are placed into service. Please select the choice that best describes the project:
    - ☐ Interoperable with BABS
    - ☐ Exempt from requirement for the following reason(s):
        - ☐ i. Projects that do not require membership or any fees for use;
        - ☐ ii. Projects that were provided funding under MTC's Bike Share Capital Program to start a new or expand an existing bike share program; or
        - ☐ iii. Projects that attempted to coordinate with, but were refused by, the current BABS operator to have shared membership or be interoperable with BABS. Applicants must provide documentation showing proof of refusal.

N/A

V. If an **infrastructure improvement for trip reduction** project, answer the following questions:

a. What plan is the project referenced in?
Napa Countywide Pedestrian Plan and City of Napa Pedestrian Plan

b. Which transportation control measure from the most recently adopted Air District plan is the project implementing?
TR9 – Bicycle and Pedestrian Access and Facilities

c. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?
Project is exempt.

W. If an **alternative fuel infrastructure** project, confirm that the project complies with all the following requirements:

☐ Project must be designed, installed, and maintained as required by the existing recognized codes and standards and as approved by the local/state authority.

☐ Project funds awarded will not be used to pay for fuel, electricity operation, or maintenance costs.

- Please clarify the infrastructure project's primary purpose (select all that apply):
    - ☐ charge vehicles 14,000 lbs and less
    - ☐ charge vehicles 14,001 lbs and more
    - ☐ serve private fleet
    - ☐ available for public use

☐ other (please specify): _____
N/A

40% FUND APPLICATION

Project Information Form

A. Project Number: 26NAP02
B. Project Title: EV Solar Chargers-Phase I
Project Category (project will be evaluated under this category): 12b
C. TFCA County Program Manager Funds Allocated: $104,000
D. TFCA Regional Funds Awarded (if applicable): $0
E. Total TFCA Funds Allocated (sum of C and D): $104,000
F. Total Project Cost: $122,000
G. Project Description:
Project Sponsor will use TFCA funds to purchase and install three new dual port solar off-grid EV charging stations at:

- 4381 Broadway Street (City Hall)

This site is open and available to the public 24 hours and 7 days a week so the assumption is 24 hour use 365 days per year unless for the rare closure. The 4381 Broadway Street (City Hall) has two existing dual port charging stations and they are heavily used throughout the week demonstrating a significant need for additional charging stations.

H. Final Report Content: Final Report form and final Cost Effectiveness Worksheet
Reference the appropriate Final Report form that will be completed and submitted after project completion. See www.baaqmd.gov/tfca4pm for a listing of the following reporting forms:

- *Trip Reduction*
- *Clean Air Vehicles*
- *Bicycle Projects*
- *Arterial Management Projects*
- *Repower and Retrofit*

I. Attach a completed Cost-Effectiveness Worksheet and any other information used to evaluate the proposed project. N/A
J. Has or will this project receive any other TFCA funds, such as Regional Funds? No
K. Confirm that the project is not required by regulation, contract, or policy. No
L. Comments (if any): N/A
M. Please indicate if the project is located in a SB535 Disadvantaged Community and/or AB1550 Low-income Community (Please use the map to find your project's location: No https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm)

Section 2. Project Category Specific Questions

N. If a **ridesharing, first- and last-mile connections service, pilot trip reduction, transit information, telecommuting or infrastructure improvement project,** explain how the number of vehicle trips that will be reduced by the project was estimated, and provide supporting information and data to justify the estimate. N/A
O. If an **alternative fuel vehicle** project, provide the following information: N/A

a. Vehicle type (e.g., plug-in hybrid-electric, fuel cell vehicles)
b. Gross Vehicle Weight Rating
c. New vehicle or replacement project? A project is a replacement project if the existing vehicle is operational and will be scrapped for the sole purpose of the project.
d. If this is a new vehicle project, explain how the anticipated usage (miles per year) for the vehicles were estimated.

P. If a **first- and last-mile connections service** project, confirm that the service will comply with all the following requirements: N/A

☐ Service connects directly to a transit station and a distinct commercial or employment location.
☐ Service schedule coordinates with the mass transit's schedule.
☐ Service is available for use by all members of the public.
☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

Q. If a **pilot trip reduction** project, confirm that the project complies with all the following requirements: N/A

☐ Project will reduce single-occupancy vehicle trips and result in a reduction in emissions of criteria pollutants.
☐ Service is available for use by all members of the public.
☐ Applicant provided a written plan showing how the service will be financed in the future and require minimal, if any, TFCA funds to maintain its operation by the end of the third year.
☐ If the local transit provider is not a partner, the applicant demonstrated that they have attempted to have the service provided by the local transit agency. The transit provider was given the first right of refusal and determined that the proposed project does not conflict with existing service.
☐ Applicant provided data and/or other evidence demonstrating the public's need for the service, such as a demand assessment survey and letters of support from potential users.
☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

R. If a **bicycle parking** project, answer the following questions: N/A
a. What plan is the project referenced in?
b. Will the project be publicly accessible and available for use by all members of the public?

S. If a **bikeway** project, answer the following questions: N/A
a. What plan is the project referenced in?
b. Will the project be publicly accessible and available for use by all members of the public?
c. If applicable, will the project be consistent with design standards published in the California Highway Design Manual or conform to the provisions of the Protected Bikeway Act of 2014?
d. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

T. If a **bike share** project, confirm that the project complies with all the following requirements: N/A

☐ Project either increases the fleet size of existing service areas or expands existing service areas to include new Bay Area communities.

☐ Project completed and approved an environmental plan and a suitability study demonstrating the viability of bicycle sharing.

- Project has shared membership and/or is interoperable with the Bay Area Bike Share (BABS) project when they are placed into service. Please select the choice that best describes the project:
    - ☐ Interoperable with BABS
    - ☐ Exempt from requirement for the following reason(s):
        - ☐ i. Projects that do not require membership or any fees for use;
        - ☐ ii. Projects that were provided funding under MTC's Bike Share Capital Program to start a new or expand an existing bike share program; or
        - ☐ iii. Projects that attempted to coordinate with, but were refused by, the current BABS operator to have shared membership or be interoperable with BABS. Applicants must provide documentation showing proof of refusal.

U. If an **infrastructure improvement for trip reduction** project, answer the following questions: N/A

a. What plan is the project referenced in?
b. Which transportation control measure from the most recently adopted Air District plan is the project implementing?
c. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

V. If an **alternative fuel infrastructure** project, confirm that the project complies with all the following requirements:

☒ Project must be designed, installed, and maintained as required by the existing recognized codes and standards and as approved by the local/state authority.

☒ Project funds awarded will not be used to pay for fuel, electricity operation, or maintenance costs.

- Please clarify the infrastructure project's primary purpose (select all that apply):
    - ☒ charge vehicles 14,000 lbs and less
    - ☐ charge vehicles 14,001 lbs and more
    - ☒ serve private fleet
    - ☒ available for public use
    - ☐ other (please specify): _____

ELECTRIC VEHICLE (EV) INFRASTRUCTURE PROJECTS
FYE 2025 TFCA 40% Fund Worksheet
Version 2025, Updated 1/9/2024

General Information Tab: Complete areas shaded in yellow.

Project Number (25XXXYY)	
Project Title	Solar EV Chargers-Phase I
Project Type Code (e.g., 7a)	12b
County (2-3 character abbreviation)	Nap
Worksheet Calculated By	Erica Ahmann Smithies
Date of Submission	5/17/2024
Project Sponsor	
Project Sponsor Organization	City of American Canyon
Public Agency? (Y or N)	Y
Contact Name	Erica Ahmann Smithies
Email Address	esmithies@cityofamericancanyon.org
Phone Number	707-647-4366
Mailing Address	4381 Broadway Street, Suite 201
City	American Canyon
State	CA
Zip	94503
Project Schedule	
Project Start Date	7/1/2025
Project Completion Date	5/1/2027
Final Report to CMA	6/30/2027

ELECTRIC VEHICLES (EV) INFRASTRUCTURE PROJECTS

FYE 2025 TFCA 40% Fund Worksheet

Updated 1/9/2024

Project Number	26NAP02
Project Descriptio	Solar EV Chargers-Phase I

Cost-Effectiveness Inputs	
# Years Effective	4
Total TFCA Funding	$ 104,000
Total Project Cost	$ 122,000

Calculations Tab: Complete areas shaded in yellow only

Emissions Reduction Calculations

Step 1 - Emissions of displaced conventional vehicles

Charger Information								Emission Factors of plug-in hybried or electric vehicle (g/mile)					Emission Factors of displaced vehicle (g/mile)				
Charger ID	Description	Type	Rate (KW)	Make	Model	Annual Usage (kWh)	Annual EV miles	ROG	NOx	PM10 Exhaust	PM10 Other	CO2	ROG	NOx	PM10 Exhaust	PM10 Other	CO2
City Hall	Dual Port	Level 2 (high)	6	Chargepoint	4013	105,120	353,203	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
		TOTALS				**105,120**	**353,203**										

Cost-Effectiveness Results	Annual	Lifetime	
1. ROG Emissions Reduced	0.0204	0.0816	Tons
2. NOx Emissions Reduced	0.0346	0.1383	Tons
3. PM Emissions Reduced	0.0025	0.0100	Tons
4. Weighted PM Emissions Reduced	0.0130	0.0521	Weighted Tons
5. CO2 Emissions Reduced	104.6410	418.5641	Tons
6. Total Criterial Emission Reductions	0.0575	0.2298	Tons
7. TFCA Unweighted Cost Effectiveness		$ 452,485	/ton
8. TFCA Weighted Cost Effectiveness		**$ 382,447**	**/weighted ton**

Continued from above table

Emissions Reduction Calculations				
Step 1 - Emissions of discplaced conventional vehicles				
Emission Reductions (g/yr)				
ROG	NOx	PM10 Exhaust	PM10 Other	CO2
18,499.70	31,358.63	502.43	1,766.57	94,928,769
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
18,500	**31,359**	**502**	**1,767**	**94,928,769**

Notes & Assumptions

Provide all assumptions, rationales, and references for figures used in calculations.

Conversion Factors

Grams per Ton	907185	grams/ton'
Miles / kWh	3.36	miles/kWh
ROG split	86%	From EMFAC 2014 CY2017 MDYR2017 vehicles, split of ROG and NOx emissions
NOX split	14%	

Charging Station Type

Charging Station: Also known as electric vehicle supply equipment (EVSE), consists of the conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of delivering energy from the premises wiring to the electric vehicle. (http://www.psrc.org/assets/3729/A_NEC_625_2008.pdf). Charging stations fall into one of these three types:

Level 1 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 1 charging stations use a 120V AC connection
Level 2 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 2 charging stations require a 208/240V AC connection.
DC Fast : A charging station that uses an external charger, and supplies electricity in the form of direct current, typically at a rate of 40KW or higher.

Inputs	Assumptions
Cost Effectiveness Inputs, # Years Effectiveness	3 years is recommended - Not to exceed 4 years
Charger ID (Column A)	Location 4381 Broadway-City Hall
Description (Column B)	The City is planning to install a dual port charging stations at 4381 Broadway, City Hall. The City is looking to deploy Chargepoint utilizing the off-grid solar power charing system manufactured by Beam. Quick deployment and can be operational upon arrival in 90-120 days .
Type (Column C)	Level 2
Rate (KW) (Column D)	6kW (Beam Solar Charger)
Total TFCA Funding (O3)	$101,900
Annual Usage (kWh) (Column G)	(Rate kW) x (charger's estimated hours of usage per day) x (365 days per year) x (quantity of chargers). This site is open and available to the public 24/7 so the assumption is 24 hr use 365 days/year. The City has also been replacing fleet vehicles with hybrids and EV for the past 4 years and will also be utilizing some of the connections.

40% FUND APPLICATION

Project Information Form

A. Project Number: 27NAP01
B. Project Title: EV Solar Chargers-Phase II
Project Category (project will be evaluated under this category): 12b
C. TFCA County Program Manager Funds Allocated: $175,000
D. TFCA Regional Funds Awarded (if applicable): $0
E. Total TFCA Funds Allocated (sum of C and D): $175,000
F. Total Project Cost: $250,000
G. Project Description:
Project Sponsor will use TFCA funds to purchase and install two new dual port solar off-grid EV charging stations at:

- 7000 Newell Drive (Newell Open Space)
- 100 Benton Way (Phillips West Aquatics Center)

These sites are open and available to the public 24 hours and 7 days a week so the assumption is 24 hour use 365 days per year unless for the rare closure. City Hall has two existing dual port charging stations and they are heavily used throughout the week demonstrating the need for additional charging stations in the community.

H. Final Report Content: Final Report form and final Cost Effectiveness Worksheet
Reference the appropriate Final Report form that will be completed and submitted after project completion. See www.baaqmd.gov/tfca4pm for a listing of the following reporting forms:
- *Trip Reduction*
- *Clean Air Vehicles*
- *Bicycle Projects*
- *Arterial Management Projects*
- *Repower and Retrofit*

I. Attach a completed Cost-Effectiveness Worksheet and any other information used to evaluate the proposed project. N/A
J. Has or will this project receive any other TFCA funds, such as Regional Funds? No
K. Confirm that the project is not required by regulation, contract, or policy. No
L. Comments (if any): N/A
M. Please indicate if the project is located in a SB535 Disadvantaged Community and/or AB1550 Low-income Community (Please use the map to find your project's location: No https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm)

Section 2. Project Category Specific Questions

N. If a **ridesharing, first- and last-mile connections service, pilot trip reduction, transit information, telecommuting or infrastructure improvement project,** explain how the

number of vehicle trips that will be reduced by the project was estimated, and provide supporting information and data to justify the estimate. N/A

O. If an **alternative fuel vehicle** project, provide the following information: N/A
   a. Vehicle type (e.g., plug-in hybrid-electric, fuel cell vehicles)
   b. Gross Vehicle Weight Rating
   c. New vehicle or replacement project? A project is a replacement project if the existing vehicle is operational and will be scrapped for the sole purpose of the project.
   d. If this is a new vehicle project, explain how the anticipated usage (miles per year) for the vehicles were estimated.

P. If a **first- and last-mile connections service** project, confirm that the service will comply with all the following requirements: N/A

☐ Service connects directly to a transit station and a distinct commercial or employment location.
☐ Service schedule coordinates with the mass transit's schedule.
☐ Service is available for use by all members of the public.
☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

Q. If a **pilot trip reduction** project, confirm that the project complies with all the following requirements: N/A

☐ Project will reduce single-occupancy vehicle trips and result in a reduction in emissions of criteria pollutants.
☐ Service is available for use by all members of the public.
☐ Applicant provided a written plan showing how the service will be financed in the future and require minimal, if any, TFCA funds to maintain its operation by the end of the third year.
☐ If the local transit provider is not a partner, the applicant demonstrated that they have attempted to have the service provided by the local transit agency. The transit provider was given the first right of refusal and determined that the proposed project does not conflict with existing service.
☐ Applicant provided data and/or other evidence demonstrating the public's need for the service, such as a demand assessment survey and letters of support from potential users.
☐ Service is at least 70% unique and operates where no other service was provided within the past three years.

R. If a **bicycle parking** project, answer the following questions: N/A
   a. What plan is the project referenced in?
   b. Will the project be publicly accessible and available for use by all members of the public?

S. If a **bikeway** project, answer the following questions: N/A
   a. What plan is the project referenced in?
   b. Will the project be publicly accessible and available for use by all members of the public?
   c. If applicable, will the project be consistent with design standards published in the California Highway Design Manual or conform to the provisions of the Protected Bikeway Act of 2014?

d. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

T. If a **bike share** project, confirm that the project complies with all the following requirements: N/A

☐ Project either increases the fleet size of existing service areas or expands existing service areas to include new Bay Area communities.

☐ Project completed and approved an environmental plan and a suitability study demonstrating the viability of bicycle sharing.

- Project has shared membership and/or is interoperable with the Bay Area Bike Share (BABS) project when they are placed into service. Please select the choice that best describes the project:
  - ☐ Interoperable with BABS
  - ☐ Exempt from requirement for the following reason(s):
    - ☐ i. Projects that do not require membership or any fees for use;
    - ☐ ii. Projects that were provided funding under MTC's Bike Share Capital Program to start a new or expand an existing bike share program; or
    - ☐ iii. Projects that attempted to coordinate with, but were refused by, the current BABS operator to have shared membership or be interoperable with BABS. Applicants must provide documentation showing proof of refusal.

U. If an **infrastructure improvement for trip reduction** project, answer the following questions: N/A

a. What plan is the project referenced in?
b. Which transportation control measure from the most recently adopted Air District plan is the project implementing?
c. Has the project completed all applicable environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement?

V. If an **alternative fuel infrastructure** project, confirm that the project complies with all the following requirements:

☒ Project must be designed, installed, and maintained as required by the existing recognized codes and standards and as approved by the local/state authority.

☒ Project funds awarded will not be used to pay for fuel, electricity operation, or maintenance costs.

- Please clarify the infrastructure project's primary purpose (select all that apply):
  - ☒ charge vehicles 14,000 lbs and less
  - ☐ charge vehicles 14,001 lbs and more
  - ☒ serve private fleet
  - ☒ available for public use
  - ☐ other (please specify): _____

ELECTRIC VEHICLE (EV) INFRASTRUCTURE PROJECTS
FYE 2025 TFCA 40% Fund Worksheet
Version 2025, Updated 1/9/2024

General Information Tab: Complete areas shaded in yellow.

Project Number (25XXXYY)	
Project Title	Solar EV Chargers-Phase II
Project Type Code (e.g., 7a)	12b
County (2-3 character abbreviation)	Nap
Worksheet Calculated By	Erica Ahmann Smithies
Date of Submission	5/17/2024
Project Sponsor	
Project Sponsor Organization	City of American Canyon
Public Agency? (Y or N)	Y
Contact Name	Erica Ahmann Smithies
Email Address	esmithies@cityofamericancanyon.org
Phone Number	707-647-4366
Mailing Address	4381 Broadway Street, Suite 201
City	American Canyon
State	CA
Zip	94503
Project Schedule	
Project Start Date	7/1/2026
Project Completion Date	5/1/2027
Final Report to CMA	6/30/2027

ELECTRIC VEHICLES (EV) INFRASTRUCTURE PROJECTS

FYE 2025 TFCA 40% Fund Worksheet

Updated 1/9/2024

Project Number	27NAP01
Project Descriptio	Solar EV Chargers-Phase II

Cost-Effectiveness Inputs	
# Years Effective	3
Total TFCA Funding	$ 175,000
Total Project Cost	$ 250,000

Calculations Tab: Complete areas shaded in yellow only

Emissions Reduction Calculations

Step 1 - Emissions of displaced conventional vehicles

Charger Information								Emission Factors of plug-in hybried or electric vehicle (g/mile)					Emission Factors of displaced vehicle (g/mile)				
Charger ID	Description	Type	Rate (KW)	Make	Model	Annual Usage (kWh)	Annual EV miles	ROG	NOx	PM10 Exhaust	PM10 Other	CO2	ROG	NOx	PM10 Exhaust	PM10 Other	CO2
Newell Open Space	Dual Port	Level 2 (high)	6	Chargepoint	4013	105,120	353,203	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
Phillip West Aquatics Center	Dual Port	Level 2 (high)	6	Chargepoint	4013	105,120	353,203	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
						-	-	0.01	0.00	0.00	0.01	40.87	0.06	0.09	0.00	0.02	309.63
		TOTALS				**210,240**	**706,406**										

Cost-Effectiveness Results	Annual	Lifetime	
1. ROG Emissions Reduced	0.0408	0.1224	Tons
2. NOx Emissions Reduced	0.0691	0.2074	Tons
3. PM Emissions Reduced	0.0050	0.0150	Tons
4. Weighted PM Emissions Reduced	0.0260	0.0781	Weighted Tons
5. CO2 Emissions Reduced	209.2821	627.8462	Tons
6. Total Criterial Emission Reductions	0.1149	0.3448	Tons
7. TFCA Unweighted Cost Effectiveness		$ 507,595	/ton
8. TFCA Weighted Cost Effectiveness		**$ 429,027**	**/weighted ton**

Continued from above table

Emissions Reduction Calculations				
Step 1 - Emissions of discplaced conventional vehicles				
Emission Reductions (g/yr)				
ROG	NOx	PM10 Exhaust	PM10 Other	CO2
18,499.70	31,358.63	502.43	1,766.57	94,928,769
18,499.70	31,358.63	502.43	1,766.57	94,928,769
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
36,999	**62,717**	**1,005**	**3,533**	**189,857,537**

Notes & Assumptions

Provide all assumptions, rationales, and references for figures used in calculations.

Conversion Factors

Grams per Ton	907185	grams/ton'
Miles / kWh	3.36	miles/kWh
ROG split	86%	From EMFAC 2014 CY2017 MDYR2017 vehicles, split of ROG and NOx emissions
NOX split	14%	

Charging Station Type

Charging Station: Also known as electric vehicle supply equipment (EVSE), consists of the conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of delivering energy from the premises wiring to the electric vehicle. (http://www.psrc.org/assets/3729/A_NEC_625_2008.pdf). Charging stations fall into one of these three types:

Level 1 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 1 charging stations use a 120V AC connection
Level 2 : A charging station that supplies electricity to a EV's onboard charger in the form of alternating current. Level 2 charging stations require a 208/240V AC connection.
DC Fast : A charging station that uses an external charger, and supplies electricity in the form of direct current, typically at a rate of 40KW or higher.

Inputs	Assumptions
Cost Effectiveness Inputs, # Years Effectiveness	3 years is recommended - Not to exceed 4 years
Charger ID (Column A)	Location 1) Newell Open Space Parking Lot; Location 2) 100 Benton Way (Aquatics Center)
Description (Column B)	The City is planning to install dual port charging stations at the two locations identified above. The City will deploy Chargepoint utilizing the off-grid solar power charing system manufactured by Beam. Quick deployment and can be operational upon arrival in 90-120 days .
Type (Column C)	Level 2
Rate (KW) (Column D)	6kW (Beam Solar Charger)
Total TFCA Funding (O3)	$175,000
Annual Usage (kWh) (Column G)	(Rate kW) x (charger's estimated hours of usage per day) x (365 days per year) x (quantity of chargers). Both sites are open and available to the public 24/7 so the assumption is 24 hr use 365 days/year. The City has also been replacing fleet vehicles with hybrids and EV for the past 4 years and will also be utilizing some of the connections.