CMAQ/TAP Cost Change Request Form

Project Identification

TIP ID	**01-94-0092**	Sponsor	**Chicago DOT**
Project Location Description		**Streets for Cycling**	

Currently Programmed Funding – Before cost change(s)

Phase	Programmed FFY	Programmed Total Cost ($000's)	Programmed Federal Cost ($000's)	Programmed Federal Share (%)	Federal Fund Source	Match Fund Source	Phase Accomplished*
ENG1/2 Phase V-2	2019	1,500.00	1,200.0	80	CMAQ	City/TIF	☐
ENG1/2 Phase V-3	2019	1,250.00	1,000.0	80	CMAQ	City/TIF	☐
ENG1/2 2016-17	MYB	2,582.50	2,066.0	80	CMAQ	City/TIF	☐
IMP 2014-16	MYB	17,228.25	13,782.6	80	CMAQ	City/TIF	☐
IMP 2016-2017	MYB	6,270.00	5,016.0	80	CMAQ	City/TIF	☐
Total		**28,830.75**	**23,064.6**				

Actual/Estimated Costs and Schedule – Including cost change(s)

Phase	Starting FFY	Current Total Cost ($000's)	Current Federal Cost ($000's)	Current Federal Share (%)	Federal Fund Source	Local Match Fund Source	federal authorization date**
ENG1/2 Phase VI	2019	1,500.00	1,200.0	80	CMAQ	City/TIF	8/2019
ENG Phase VII	2019	3,000.00	2,400.0	80	CMAQ	City/TIF	8/2019
ENG1/2 Phase VIII	2020	1,000.00	800.0	80	CMAQ	City/TIF	1/2020
IMP	MYB	23,330.75	18,664.6	80	CMAQ	City/TIF	TBD
Total		**28,830.75**	**23,064.6**				

Requested Cost Changes (+/-)

Check all that apply: ☐ Cost Increase ☒ Transfer of Funds ☒ Reinstatement of Deferred Funds

Phase	Starting FFY	Additional Total Cost ($000's)	Additional Federal CMAQ Funds ($000's)	Revised Federal Share (%)	Transfer to/from phase(s)
ENG1/2 Phase VI	2019	0	0	80	
ENG/IMP Phase VII	2019	+1,750	+1,400	80	$ From ENG 2016-17 and IMP 2014-16
ENG1/2 Phase VIII	2020	-1,582.5	-1266	80	To VII
IMP 2014-16	MYB	-17,228.25	-13,782.6	80	+To other lines
IMP	MYB	+17,060.755	+13,648.6	80	From 2014-16
Total		**0**	**0**	**80**	

Reason for Request

Check here if the reason is a scope change ☐ and complete a Scope Change Request form.

Rearranging and relabeling among phases

Phase VII - UIGA being drafted, we are finalizing the scope/fee with the consultant now.

Phase VIII - Task Order Proposal Request in July/August 2019; No Job number yet.

State and Federal Project Information

Select One.

☐ State/Federal Project or Grant Numbers Provided Below
☐ Most recently *approved* PPI Form Attached
☐ Local Agency Agreement Attached

Phase	State Job Number X-00-000-00	Federal Project Number XXX-0000(000)	FTA Grant Number IL-XX-XXXX-XX
ENG1	P- ***No Change***		
ENG 2	D-		
CONST	C-		
ENG			
IMP			

Additional Comments

Per discussions with IDOT staff, Phase VII contract will go through the IDOT Planning Office instead of traditional ENG1/ENG2 process. Phase I/II through District 1

CMAQ/TAP Cost Change Request Form

Project Identification

TIP ID	**01-02-0030**	Sponsor	**CDOT**
Project Location Description		State/Lake Station	

Currently Programmed Funding – Before cost change(s)

Phase	Programmed FFY	Programmed Total Cost ($000's)	Programmed Federal Cost ($000's)	Programmed Federal Share (%)	Federal Fund Source	Match Fund Source	Phase Accomplished*
ENG1							☐
ENG 2	Various past	5500	5500	100	CMAQ	TDC	☐
ROW							☐
CONST	2022 TBD	59,930* 59,430	59930* 59430	100 100	CMAQ (Pending CMAQ application)	TDC	☐
CE		Included in CONST					
Total		**124,860**	**124,860**	**100**			

Actual/Estimated Costs and Schedule – Including cost change(s)

Phase	Starting FFY	Current Total Cost ($000's)	Current Federal Cost ($000's)	Current Federal Share (%)	Federal Fund Source	Local Match Fund Source	Actual or Anticipated federal authorization date**
ENG1							
ENG 2	Various past 2019/20	5,500 5,500	5,500 5,500	100 100	CMAQ CMAQ	TDC TDC	
ROW							
CONST	2022 TBD	59,930* 59,430	59930* 59430	100 100	CMAQ (Pending CMAQ application)	TDC	
CE		Included in CONST					
Total							

Requested Cost Changes (+/-)

Check all that apply: ☒ Cost Increase ☐ Transfer of Funds ☐ Reinstatement of Deferred Funds

Phase	Starting FFY	Additional Total Cost ($000's)	Additional Federal CMAQ Funds($000's)	Revised Federal Share (%)	Transfer to/from phase(s)
ENG1					
ENG 2	2019/2020	+5,500	+5,500		New
ROW					
CONST					
CE					
Total		**+5,500**	**+5,500**		

Reason for Request

Check here if the reason is a scope change ☐ and complete a Scope Change Request form.

The consultant estimate for services is higher than currently programmed, at $9,991,000. This is because we are honoring CTA's request to fully consider additional design alternatives, including those that would dramatically improve connections to the Red Line station at Lake and the Blue Line Station at Clark/Lake. This is ready to award upon confirmation of funding availability.

The $11M total also includes an additional $1,009,000 is included for project oversight and review.

The design scope document assumes the current construction budget holds.

State and Federal Project Information

Select One.

☒ State/Federal Project or Grant Numbers Provided Below
☐ Most recently *approved* PPI Form Attached
☐ Local Agency Agreement Attached

Phase	State Job Number X-00-000-00	Federal Project Number XXX-0000(000)	FTA Grant Number IL-XX-XXXX-XX
ENG1	P-		
ENG 2	D-		IL-2016-002
ROW	R-		
CONST	C-		

Additional Comments

CDOT is reviewing funding availability to salvage from Washington/Wabash as the project approaches closeout, but the precise amount is not yet known.

We request that the committee's approval of this cost increase to also authorize CMAP staff – as an administrative action – the option to include funds transferred from Washington/Wabash for a portion of the cost increase, then reduce the new funds by the same amount.

*The pending CMAQ application incorrectly listed the currently programmed funds by $500K, but the number in the CMAQ application and TIP should prevail.

CMAQ/TAP Schedule Change Request Form

Project Identification

TIP ID	01-03-0004	Sponsor	City of Chicago
Project Location Description		Roosevelt Rd from Western Ave to US 41/Lake Shore Dr	

Currently Programmed Schedule

Phase	Programmed FFY
ENG1	2010
ENG2	2013
ROW	
CONST	MYB

Requested Schedule

Phase	Starting FFY	Actual or Anticipated Authorization Date
ENG1	2010	
ENG2	2013	
ROW		
CONST	2019 or 2020	8/28/2019

Reason for Request

Check here if the reason is a scope change ☐ and complete a Scope Change Request form.

The project will achieve project readiness this month. Approval at this meeting would allow authorization to occur before the end of FFY19 if processed quickly at IDOT. Otherwise, it will go in the first weeks of FFY20.

Additional Comments

The draft UIGA and final PSEs both went to IDOT on 6/7/19 for review. The City executed UIGA will go on or before 7/29/19 as per the project delivery schedule.

CMAQ/TAP Cost Change Request Form

Project Identification

TIP ID	**03-14-0017**	Sponsor	**Village of Schaumburg**
Project Location Description		Woodfield Road at IL 53	

Currently Programmed Funding – Before cost change(s)

Phase	Programmed FFY	Programmed Total Cost ($000's)	Programmed Federal Cost ($000's)	Programmed Federal Share (%)	Federal Fund Source	Match Fund Source	Phase Accomplished*
ENG1	N/A	147	0	0	N/A	Village	☒
ENG 2	2016	551	275	50	STP	Village	☒
ROW	2017	250	125	50	STP	Village	☒
CONST	2019	4,536	3,450	76	STP	Village and State	☒
CONST	2019	2,633	2,106	80	CMAQ	Village and State	☒
CONST	2019	365	0	0	N/A	Village	☒
CE	2019	688	550	80	STP	Village and State	
Total		**9,170**	**6,506**				

Actual/Estimated Costs and Schedule – Including cost change(s)

Phase	Starting FFY	Current Total Cost ($000's)	Current Federal Cost ($000's)	Current Federal Share (%)	Federal Fund Source	Local Match Fund Source	Actual or Anticipated federal authorization date**
ENG1	N/A	147	0	0	N/A	Village	N/A
ENG 2	2016	527	264	50	STP	Village	9/2/16
ROW	2017	214	107	50	STP	Village	9/21/17
CONST	2019	4,312	3,450	80	STP	Village and State	3/19
CONST	2019	3,319	2,655	80	CMAQ	Village and State	3/19
CONST	2019	413	0	0	N/A	Village	3/19
CE	2019	688	550	80	STP	Village and State	3/19/19
Total		**9,620**	**7,026**				

Requested Cost Changes (+/-)

Check all that apply: ☒ Cost Increase ☐ Transfer of Funds ☐ Reinstatement of Deferred Funds

Phase	Starting FFY	Additional Total Cost ($000's)	Additional Federal CMAQ Funds($000's)	Revised Federal Share (%)	Transfer to/from phase(s)
ENG1	N/A	0	0		
ENG 2	2016	-24	0		
ROW	2017	-36	0		
CONST	2019	-224	0		
CONST	2019	686	549	80	
CONST	2019	48	0		
CE	2019	0	0		
Total		**450**	**549**		

Reason for Request

Check here if the reason is a scope change ☐ and complete a Scope Change Request form.

Bid prices exceeded the latest Engineer's Estimate.

State and Federal Project Information

Select One.

☐ State/Federal Project or Grant Numbers Provided Below
☒ Most recently *approved* PPI Form Attached
☐ Local Agency Agreement Attached

Phase	State Job Number X-00-000-00	Federal Project Number XXX-0000(000)	FTA Grant Number IL-XX-XXXX-XX
ENG1	P-		
ENG 2	D-91-023-16	M-4003(569)	
ROW	R-91-002-16	JI6X(647)	
CONST	C-91-023-16	9F21(896)	
ENG			
IMP			

Additional Comments

VILLAGE OF CHICAGO RIDGE

10455 S. RIDGELAND AVE. • CHICAGO RIDGE, ILLINOIS 60415 • (708) 425-7700

CHARLES E. TOKAR
PRESIDENT

BARBARA M. HARRISON
VILLAGE CLERK

TRUSTEES:
EDMUND M. KOWALSKI
LISEL KWARTNIK
JOHN "JACK" LIND
WILLIAM R. McFARLAND
ROGER W. MESLAR
DEBBY PYZNARSKI

June 26, 2019

Chicago Metropolitan Agency for Planning
Department of Policy and Programming
233 South Wacker Drive, Suite 800
Chicago, Illinois 60606

Attention: Jen Maddux

Subject: **Request for Additional CMAQ Funds**
Village of Chicago Ridge - Ridgeland Avenue Access to Transit Project
Section No. 14-00052-00-MS
TIP ID: 06-16-0010

Dear Ms. Maddux,

As part of a Congestion Mitigation and Air Quality (CMAQ) grant to improve access to transit, the Village of Chicago Ridge will be undertaking the subject project to make improvements to Ridgeland Avenue (Cook County right-of-way) and the pedestrian crossing near the intersection of Ridgeland Avenue and the Metra Station. The project will increase pedestrian safety and accessibility throughout the Ridgeland Avenue corridor from 102nd Place to 111th Street. The CMAQ grant is providing 80% federal funding and the remaining 20% and any non-eligible items will be covered by the Village.

In July of 2017, a request was granted to the Village to increase the construction cost for this project due to the cost of the infrastructure being installed by Metra for their pedestrian gates and platform diversion. Despite the increase in the construction cost, the budget for construction observation remained the same.

Final plans and specifications are now complete, and the project is targeting a November 2019 IDOT letting. Numerous construction disciplines are required to complete the scope of this contract. It is anticipated that different contractors will be required for the roadway lighting, traffic signal work, excavation, concrete and asphalt construction, and landscaping. Currently, $55,716 (federal participation) is allocated for construction engineering. Including the local match, the total construction engineering budget ($69,645) only represents 4.4% of the construction estimate. The amount of construction engineering funds is insufficient for a federal project of this scope and the varying disciplines involved.

On behalf of the Village of Chicago Ridge, I would request that this project be considered for additional CMAQ funds for construction engineering. The Village has received a qualified proposal to complete this engineering for $124,500. This request is for an additional $43,884 to increase the federal participation for construction engineering from $55,716 to $99,600. The revised budget would represent 7.9% of the construction estimate which is within an acceptable range for this type of work. Below please find a table summarizing the requested changes.

	Original Project Costs		**Revised Project Costs**	
	Project Costs (CMAQ Eligible Items)	CMAQ Funds (80%)	Project Costs (CMAQ Eligible Items)	CMAQ Funds (80%)
Construction Engineering	$69,645	$55,716	$124,500	$99,600

Please do not hesitate to contact me at (708) 425-7700 or our Village Engineer Andrew Pufundt with Christopher B. Burke Engineering, Ltd. at (847) 823-0500 if you have any questions.

Sincerely,

Charles E. Tokar, J.D., MPA
Village President

cc: Kelsey Mulhausen – Southwest Conference of Mayors (w/encl.)
Andrew Pufundt – CBBEL (w/encl.)

CMAQ/TAP Cost Change Request Form

Project Identification

TIP ID	**09-16-0005**	Sponsor	**Forest Preserve District of Kane County**
Project Location Description		Fox River Trail Under the UPRR	

Currently Programmed Funding – Before cost change(s)

Phase	Programmed FFY	Programmed Total Cost ($000's)	Programmed Federal Cost ($000's)	Programmed Federal Share (%)	Federal Fund Source	Match Fund Source	Phase Accomplished*
ENG1	2015		0	0		Gen-OP	☒
ENG 2	2016	136.173	108.938	80	TAP	Gen-OP	☒
ROW	N/A	N/A	N/A	N/A	N/A	N/A	☐
CONST	2019	2843.580	1885.267	80	TAP	Gen-OP	☐
CE		289.371	200.000	80	TAP	Gen-OP	
Total		**3269.124**	**2194.205**				

Actual/Estimated Costs and Schedule – Including cost change(s)

Phase	Starting FFY	Current Total Cost ($000's)	Current Federal Cost ($000's)	Current Federal Share (%)	Federal Fund Source	Local Match Fund Source	Actual or Anticipated federal authorization date**
ENG1	2014		0	0		Gen-OP	
ENG 2	2016	336.685	269.348	80	TAP	Gen-OP	
ROW	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CONST	2019	3593.622	2874.898	80	TAP	Gen-OP	
CE		289.371	231.496	80	TAP	Gen-OP	
Total		**4219.678**	**3375.742**				

Requested Cost Changes (+/-)

Check all that apply: ☒ Cost Increase ☐ Transfer of Funds ☐ Reinstatement of Deferred Funds

Phase	Starting FFY	Additional Total Cost ($000's)	Additional Federal CMAQ Funds($000's)	Revised Federal Share (%)	Transfer to/from phase(s)
ENG1					
ENG 2	2016	200.512	160.410	80	
ROW					
CONST	2019	750.042	989.631	80	
CE		0	31.496	80	
Total		**950.554**	**1181.537**		

Reason for Request

Check here if the reason is a scope change ☐ and complete a Scope Change Request form.

The complexity of constructing the tunnel under the railroad was underestimated during the preliminary design phase. The project required more coordination with the railroad and included unforeseen fees for railroad review of plans and requirements for plans which were beyond typical plan preparation in P2 design. The construction bids opened at the June 14th IDOT letting were 25% over the engineer's estimate.

State and Federal Project Information

Select One.

☒ State/Federal Project or Grant Numbers Provided Below
☐ Most recently *approved* PPI Form Attached
☐ Local Agency Agreement Attached

Phase	State Job Number X-00-000-00	Federal Project Number XXX-0000(000)	FTA Grant Number IL-XX-XXXX-XX
ENG1	P-		
ENG 2	D-91-222-16	TE-01D1(040)	
ROW	R-		
CONST	C-91-222-16	IXET(751)	
ENG			
IMP			

Additional Comments

The project team has kept CMAP informed of issues faced during P2 engineering and the uncertainty of the IDOT bid opening on June 14th. Because this is an unusual and complex project, located in a forest preserve, the local agency and the consultants had limited resources to assist them in estimating the project cost and primarily relied upon a similar tunnel project in Glen Ellyn to determine the cost estimate for the project. Unfortunately, the bids were 25% higher than estimated. This bridge that connected the Fox River Trail and the Illinois Prairie Path was destroyed by flooding over a decade ago. Re-establishing this connection provides a vital link for the Fox River Trail and the Illinois Prairie Path and completing the project that is 7 yrs. in the making is of the highest priority for the Forest Preserve District of Kane County. We respectfully request additional Phase 2 engineering funding to cover all the additional costs associated with the complex plan preparations required to secure UPRR and ICC approvals and additional construction and construction engineering funding to bring the "shovel ready" project back to an 80/20 split.

CMAQ/TAP Scope Change Request Form

Project Identification

TIP ID	13-14-0001	Sponsor	Illinois EPA
Project Location Description		Regionwide	

Revised Project Scope

Illinois EPA is proposing to revise the scope for the Chicago Area Green Fleet Grant Program (Program) to more closely align with the current Volkswagen Mitigation (VW) funding offered to grantees for similar types of new vehicle or equipment projects. Currently, the Program provides funding for 50% of the incremental cost of a new natural gas or propane on-road vehicle compared to its conventional counterpart or 50% of the cost of converting a conventional on-road vehicle to natural gas or propane with a USEPA or CARB-certified conversion system. Funding is capped at $10,000 per Class 1-3 vehicle and $20,000 per Class 4-8 vehicle. Furthermore, the Program provides funding for 50% of the incremental cost for the purchase of new off-road equipment that operates with natural gas, propane, or electricity, as compared to the cost of the same diesel model of equipment. Funding for new alternate fuel off-road equipment purchases is capped at $100,000 per unit. The Program is open to both government and non-government applicants in which the vehicles or equipment are located and operated in the Chicago area.

Illinois EPA is requesting that the Program scope be changed as follows:

Government Applicants (e.g., transit agencies, local governments): Reimbursement of up to 75% of the base cost of the purchase of a new natural gas or propane vehicle, or up to 75% of the cost of converting a conventional vehicle to natural gas or propane. In addition, reimbursement of up to 75% of the base cost of a new natural gas, propane, or electric off-road equipment unit.

Non-Government Applicants: Reimbursement of up to 50% of the base cost of the purchase of a new natural gas or propane vehicle, or up to 50% of the cost of converting a conventional vehicle to natural gas or propane. In addition, reimbursement of up to 50% of the base cost of a new natural gas, propane, or electric off-road equipment unit.

The current per vehicle funding caps of $10,000 and $20,000 and the off-road equipment funding cap of $100,000 are proposed to be removed, as these were based on incremental vehicle and equipment costs. Furthermore, as with the VW and DERA requirements, the selected applicants will have to scrap similar older, in-service conventional vehicles or equipment for projects involving the purchase of new vehicles or equipment. The current Program does not have a scrappage component, and requiring the scrapping of an older vehicle or equipment unit for each funded new vehicle or equipment purchase will increase the air quality benefits in the Chicago area.

Changes to Location/Limits (if applicable)

☐ Map Attached

Name of Street or Facility to be Improved	Marked Route #	
North/West Reference Point/Cross St/Intersection	Marked Route #	Municipality & County
South/East Reference Point/Cross St/Intersection	Marked Route #	Municipality & County
Other Project Location Information		

Changes to Emissions Benefit Analysis (not required of TAP projects)

☐The proposed scope change will not affect the emissions benefits of the project.
☒The proposed scope change will affect the emissions benefits of the project – continue to next page.

Cost/Schedule Changes

☐ The scope change will result in a cost change. A Cost Change Request form was submitted.
☐ The scope change will result in a schedule change. A Schedule Change Request form was submitted.

Additional Comments

Rationale: Illinois EPA's VW funding provides government applicants up to 75% in grant awards and non-government applicants up to 50% in grant awards for the replacement of an older, diesel vehicle with new cleaner diesel, alternate fuel, and electric Class 4-8 trucks and buses. The VW funds require scrapping an older, existing vehicle in the fleet for each funded vehicle. Illinois EPA's project scope change proposal for the Program would provide the same funding level for new natural gas and propane vehicle purchases as the VW funding. For government applicants, the conversion incentive would increase from 50% to 75% grant reimbursement for the cost of converting a conventional vehicle to natural gas or propane. However, for non-government applicants, the conversion incentive would remain at 50%. Without increasing the grant incentives for the Program to align with the VW funding, it is likely that applicants would be applying for the greater incentives offered by the VW funds and not have interest in applying for the Illinois EPA's CMAQ funding for these types of projects.

This proposed project scope change will affect only the additional $7 million CMAQ award for the Program. Illinois EPA has expended most of its initial $3 million award. A Buy America Waiver request was submitted to FHWA in April 2018 for the $7 million award, but FHWA has not yet provided the waiver. Therefore, Illinois EPA has been unable to expend any of this award due to the FHWA's continued inaction on the waiver request. In addition, Illinois EPA's intergovernmental agreement with IDOT for the Program expires on June 30, 2022. If the requested Buy America Waiver is issued prior to 2022, Illinois EPA will need to quickly expend the $7 million for the Program to achieve the desired emissions reductions in the Chicago area. By providing greater grant incentives that closely align with the VW funds, Illinois EPA will be better able to expend this CMAQ funding on cleaner vehicles and equipment to improve air quality in the Chicago area.

Changes to Emissions Benefit Analysis – Direct Emissions Reduction

DIRECT EMISSIONS REDUCTION
Complete Multiple copies of this table – One for each group of vehicles (type, engine, technology, etc.).

Vehicle Type: (select one)	☐ School Bus ☒ Transit Bus ☐ Refuse Hauler ☐ Short Haul ☐ Long Haul ☐ Delivery Truck ☐ Emergency Vehicle ☐ On-Highway ☐ City/County Vehicle ☐ Passenger Locomotive ☐ Switch Engine ☐ Other: _____
Vehicle Size: (check one)	☐ Class 2b (8,501 - 10,000 lbs.) ☐ Class 3 (10,001 - 14,000 lbs.) ☐ Class 4 (14,001 - 16,000 lbs.) ☐ Class 5 (16,001 - 19,500 lbs.) ☐ Class 6 (19,501 - 26,000 lbs.) ☐ Class 7 (26,001 - 33,000 lbs.) ☐ Class 8a (33,001 - 60,000 lbs.) ☐ Class 8b (60,001 and over) ☐ School Bus ☒ Transit Bus
Horsepower (check one)	☐ 0 ☐ 1 ☐ 3 ☐ 6 ☐ 11 ☐ 16 ☐ 25 ☐ 40 ☐ 50 ☐ 75 ☐ 175 ☐ 300 ☐ 600 ☐ 750 ☐ 1000 ☐ 1200 ☐ 2000 ☐ 3000
Current Fuel Type: (check one)	☐ LPG ☐ LNG ☐ CNG ☐ Biodiesel 100 ☐ Biodiesel 20 ☐ Biodiesel 10 ☐ Biodiesel 5 ☐ E85 ☐ Diesel, 3,400 ppm sulfur ☐ Diesel, 500 ppm sulfur ☒ Diesel, 15 ppm sulfur ☐ Emulsion
Model Year (all vehicles in a group should have the same model year): 2005	
Before project: Fuel Consumed (gallons per year of current fuel type for all vehicles in the group combined): 169,400 gallons	
After project: Fuel Consumed (gallons per year of current fuel type for all vehicles in the group combined): 135,520 gallons	
Before project Annual Vehicle Miles/vehicle in group: 44,782 miles Annual Idling Hours/vehicle in group: 650 hours	
After project Annual Vehicle Miles/vehicle in group: 44,782 miles Annual Idling Hours/vehicle in group: 650 hours	

Technology to be Applied	# veh	Technology to be Applied	# veh
Diesel Oxidation Catalyst		Recalibration	
Diesel Oxidation Catalyst + Closed Crankcase Ventilation		Exhaust Gas Recirculation + Diesel Particulate Filter	
Diesel Particulate Filter		Selective Catalytic Reduction	
Hybrid Electric Replacement with Diesel Particulate Filter		Emissions Control Devices	
Partial Flow Filter		Other	
Compressed Natural Gas (CNG) Replacement	14	Engine Repower	
Lean NOx Catalyst/Diesel Particulate Filter		Engine Replacement	

Post-Implementation Fuel Type (select one):	☐ LPG ☐ LNG ☒ CNG ☐ Biodiesel 100 ☐ Biodiesel 20 ☐ Biodiesel 10 ☐ Biodiesel 5 ☐ E85 ☐ Diesel, 3,400 ppm sulfur ☐ Diesel, 500 ppm sulfur ☐ Diesel, 15 ppm sulfur (non-road only) ☐ Emulsion ☐ Electricity
Diesel Vehicle Replacement Applicants Expected remaining life of vehicles being replaced (years): 3	
Total Number of Vehicles (all groups combined): 14 vehicles	

Changes to Emissions Benefit Analysis – Direct Emissions Reduction

DIRECT EMISSIONS REDUCTION
Complete Multiple copies of this table – One for each group of vehicles (type, engine, technology, etc.).

Vehicle Type: (select one)	☐ School Bus ☐ Transit Bus ☐ Refuse Hauler ☐ Short Haul ☐ Long Haul ☐ Delivery Truck ☐ Emergency Vehicle ☐ On-Highway ☒ City/County Vehicle ☐ Passenger Locomotive ☐ Switch Engine ☐ Other: _____
Vehicle Size: (check one)	☐ Class 2b (8,501 - 10,000 lbs.) ☐ Class 3 (10,001 - 14,000 lbs.) ☐ Class 4 (14,001 - 16,000 lbs.) ☒ Class 5 (16,001 - 19,500 lbs.) ☐ Class 6 (19,501 - 26,000 lbs.) ☐ Class 7 (26,001 - 33,000 lbs.) ☐ Class 8a (33,001 - 60,000 lbs.) ☐ Class 8b (60,001 and over) ☐ School Bus ☐ Transit Bus
Horsepower (check one)	☐ 0 ☐ 1 ☐ 3 ☐ 6 ☐ 11 ☐ 16 ☐ 25 ☐ 40 ☐ 50 ☐ 75 ☐ 175 ☐ 300 ☐ 600 ☐ 750 ☐ 1000 ☐ 1200 ☐ 2000 ☐ 3000
Current Fuel Type: (check one)	☐ LPG ☐ LNG ☐ CNG ☐ Biodiesel 100 ☐ Biodiesel 20 ☐ Biodiesel 10 ☐ Biodiesel 5 ☐ E85 ☐ Diesel, 3,400 ppm sulfur ☐ Diesel, 500 ppm sulfur ☒ Diesel, 15 ppm sulfur ☐ Emulsion
Model Year (all vehicles in a group should have the same model year): 2006	
Before project: Fuel Consumed (gallons per year of current fuel type for all vehicles in the group combined): 43,890 gallons	
After project: Fuel Consumed (gallons per year of current fuel type for all vehicles in the group combined): 35,112 gallons	
Before project Annual Vehicle Miles/vehicle in group: 14,962 miles Annual Idling Hours/vehicle in group: 240 hours	
After project Annual Vehicle Miles/vehicle in group: 14,962 miles Annual Idling Hours/vehicle in group: 240 hours	

Technology to be Applied	# veh	Technology to be Applied	# veh
Diesel Oxidation Catalyst		Recalibration	
Diesel Oxidation Catalyst + Closed Crankcase Ventilation		Exhaust Gas Recirculation + Diesel Particulate Filter	
Diesel Particulate Filter		Selective Catalytic Reduction	
Hybrid Electric Replacement with Diesel Particulate Filter		Emissions Control Devices	
Partial Flow Filter		Liquefied Petroleum Gas (LPG) Replacement	20
Compressed Natural Gas (CNG) Replacement	10	Engine Repower	
Lean NOx Catalyst/Diesel Particulate Filter		Engine Replacement	

Post-Implementation Fuel Type (select one):	☒ LPG ☐ LNG ☒ CNG ☐ Biodiesel 100 ☐ Biodiesel 20 ☐ Biodiesel 10 ☐ Biodiesel 5 ☐ E85 ☐ Diesel, 3,400 ppm sulfur ☐ Diesel, 500 ppm sulfur ☐ Diesel, 15 ppm sulfur (non-road only) ☐ Emulsion ☐ Electricity
Diesel Vehicle Replacement Applicants Expected remaining life of vehicles being replaced (years): 3	
Total Number of Vehicles (all groups combined): 30 vehicles	

Changes to Emissions Benefit Analysis – Direct Emissions Reduction

DIRECT EMISSIONS REDUCTION

Complete Multiple copies of this table – One for each group of vehicles (type, engine, technology, etc.).

Vehicle Type: (select one)	☐ School Bus ☐ Transit Bus ☐ Refuse Hauler ☐ Short Haul ☐ Long Haul ☐ Delivery Truck ☐ Emergency Vehicle ☐ On-Highway ☐ City/County Vehicle ☐ Passenger Locomotive ☐ Switch Engine ☒ Other: Electric Rail Yard Hostlers
Vehicle Size: (check one)	☐ Class 2b (8,501 - 10,000 lbs.) ☐ Class 3 (10,001 - 14,000 lbs.) ☐ Class 4 (14,001 - 16,000 lbs.) ☐ Class 5 (16,001 - 19,500 lbs.) ☐ Class 6 (19,501 - 26,000 lbs.) ☐ Class 7 (26,001 - 33,000 lbs.) ☒ Class 8a (33,001 - 60,000 lbs.) ☐ Class 8b (60,001 and over) ☐ School Bus ☐ Transit Bus
Horsepower (check one)	☐ 0 ☐ 1 ☐ 3 ☐ 6 ☐ 11 ☐ 16 ☐ 25 ☐ 40 ☐ 50 ☐ 75 ☒ 175 ☐ 300 ☐ 600 ☐ 750 ☐ 1000 ☐ 1200 ☐ 2000 ☐ 3000
Current Fuel Type: (check one)	☐ LPG ☐ LNG ☐ CNG ☐ Biodiesel 100 ☐ Biodiesel 20 ☒ Biodiesel 10 ☐ Biodiesel 5 ☐ E85 ☐ Diesel, 3,400 ppm sulfur ☐ Diesel, 500 ppm sulfur ☒ Diesel, 15 ppm sulfur ☐ Emulsion
Model Year (all vehicles in a group should have the same model year): 1997	
Before project: Fuel Consumed (gallons per year of current fuel type for all vehicles in the group combined): 18,000 gallons for 2 diesel railyard hostlers (terminal tractors)	
After project: Fuel Consumed (gallons per year of current fuel type for all vehicles in the group combined): 0 fossil fuel gallons for 2 electric railyard yard hostlers (terminal tractors)	
Before project Annual Vehicle Miles/vehicle in group: miles Annual USAGE Hours/vehicle in group: 6,000 annual usage hours per diesel terminal tractor Annual IDLING Hours/vehicle in group: 1,800 annual idling hours per diesel terminal tractor	
After project Annual Vehicle Miles/vehicle in group: _miles Annual Idling Hours/vehicle in group: 0 hours per electric yard hostler (tractor)	

Technology to be Applied	# veh	Technology to be Applied	# veh
Diesel Oxidation Catalyst		Recalibration	
Diesel Oxidation Catalyst + Closed Crankcase Ventilation		Exhaust Gas Recirculation + Diesel Particulate Filter	
Diesel Particulate Filter		Selective Catalytic Reduction	
Hybrid Electric Replacement with Diesel Particulate Filter		Emissions Control Devices	
Partial Flow Filter		Liquefied Petroleum Gas (LPG) Replacement	
Compressed Natural Gas (CNG) Replacement		Engine Repower	
Lean NOx Catalyst/Diesel Particulate Filter		Replacement with electric yard hostlers (terminal tractors)	2

Post-Implementation Fuel Type (select one):	☐ LPG ☐ LNG ☐ CNG ☐ Biodiesel 100 ☐ Biodiesel 20 ☐ Biodiesel 10 ☐ Biodiesel 5 ☐ E85 ☐ Diesel, 3,400 ppm sulfur ☐ Diesel, 500 ppm sulfur ☐ Diesel, 15 ppm sulfur (non-road only) ☐ Emulsion ☒ Electricity
Diesel Vehicle Replacement Applicants Expected remaining life of vehicles being replaced (years): 1	
Total Number of Vehicles (all groups combined): 2 vehicles	