State of New Jersey
Department of Environmental Protection

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

PROJECT SOLICITATION

OVERALL GOAL

The State of New Jersey, as a potential beneficiary of the Trust established pursuant to the national Volkswagen settlement, intends to use its allocation from the mitigation trust to efficiently implement projects that reduce oxides of nitrogen (NOx) emissions in a cost effective and technically feasible manner. The implemented projects must meet the criteria of the Consent Decree. New Jersey is issuing this solicitation for project ideas to ensure a broad range of project ideas are considered. Additional opportunities will be provided for public input during the upcoming months.

Submissions must be received by January 31, 2018 and must contain all the information outlined in the "Project Proposals" section of this document.

ELIGIBLE PROJECTS

A general summary is below. Click here for comprehensive list and associated definitions.

Source Category	Emission Reduction Strategy	Allowed Expenditure Amount
1. Class 8 local freight trucks & port drayage trucks	Repower and replacement	Up to 40% for repower with diesel or alternative fuel or up to 75% (up to 100% if government owned) for repower with electric. Electric charging infrastructure costs are eligible expense. Up to 25% for replacement with diesel or alternative fuel or up to 75% (up to 100% if government owned) for electric replacement. Electric charging infrastructure costs are eligible expense.
2. Class 4-8 school bus, shuttle bus or transit bus	Repower and replacement	Same as row 1
3. Freight switching locomotives	Repower and replacement	Same as row 1
4. Ferries/Tugs	Repower	Same as row 1
5. Oceangoing vessels	Shorepower	Up to 25% for shore side infrastructure if non-government owned (up to 100% if government owned)

6. Class 4-7 local freight trucks	Repower and replacement	Same as row 1.
7. Airport ground support equipment	Repower and replacement	Up to 75% to repower or replace with electric (up to 100% if government owned). Electric charging infrastructure costs are eligible expense.
8. Forklifts and Port Cargo Handling Equipment	Repower and replacement	Up to 75% to repower or replace with electric (up to 100% if government owned). Electric charging infrastructure costs are eligible expense.
9. Electric vehicle charging stations or hydrogen fueling stations for light duty vehicles only		Up to 100% to purchase, install and maintain infrastructure if available to public at *government owned* property. Up to 80% to purchase, install and maintain infrastructure if available to public at *non-government owned* property. Up to 60% to purchase, install and maintain infrastructure at a workplace or multi-unit dwelling that is not available to the general public. Up to 33% to purchase, install and maintain infrastructure for publicly available hydrogen dispensing that is high volume or up to 25% for lower volume.

PROJECT PROPOSALS

Proposals must be submitted by close of business on January 31, 2018. Electronic submittals are preferred and should be sent to VWComments@dep.nj.gov however paper submittals will also be accepted and should be sent to:

NJDEP
Division of Air Quality
Mail code 401-02E
Trenton, NJ 08625-0420
Attn: VW Settlement

All proposals must contain the following information; incomplete applications will not be considered. If your project is selected, you may be contacted for additional detailed information. Send questions to VWComments@dep.nj.gov

To enter information electronically use Adobe Reader

CONTACT INFORMATION

Organization Name	Township of West Orange
Organization Address	66 Main Street
City, State Zip Code	West Orange, NJ 07052
Contact Person	Leonard R. Lepore, P.E.
Title/Position	Director of Public Works/Municipal Engineer
Phone	(973) 325-4160
E-mail	llepore@westorange.org

PROJECT NAME	West Orange Zero Emissions Shuttle Bus Acquisition

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1 ☐ **2** ☑ **3** ☐ **4** ☐ **5** ☐ **6** ☐ **7** ☐ **8** ☐ **9** ☐

PROJECT PRIORITY Priority # 1 of 1 proposals

If submitting more than one proposal, what is the sponsor's priority of this proposal?

PROJECT BUDGET $ 800,000.00

Provide total estimated project budget, include source and amount of cost share if applicable.

The total cost estimated for this project is $800,000 determined for price estimates for two zero emissions buses at $400,000 each.

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

Geographic area where emissions reductions will occur? The Oranges (West, East, South & Orange)

Estimated size of population benefitting from the emission reductions? 156,809

Estimated useful life of the project? 10 years

Number of engines/vehicles/vessels/equipment included in the project? 2

Estimated emission benefits should be expressed in tons per year (TPY) of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Estimated NOx benefits? 1.96 TPY

Methodology Used? CARB and EPA Emission Standards for HDCI Engines

Particulate matter (PM 2.5) benefits? 0.13 TPY

Methodology Used? CARB and EPA Emission Standards for HDCI Engines

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe.

This project will directly benefit The Oranges (West Orange, East Orange, South Orange, and Orange, NJ) and the surrounding communities whose residents are disproportionately impacted by air pollution. With a population of over 156,000 residents, this area is densely populated with(cont. supp. pg.1)

Project partners, if any?

The Township will partner with Mobility Coach, Inc. who will provide licensed bus operators. In addition, the Thomas A. Edison National Historic Site will provide EV recharging stations.

Explain how the project will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and for PM 2.5.

Since 1999, the Township has operated a successful and expanding jitney bus program that transports residents of the Township to and from nearby NJ Transit train stations in Orange, East Orange, and South Orange. The program started with two diesel buses and two routes. Today, it has grown to six routes and carries approximately 450 passengers per day during weekday morning and (cont. supp. pg.1)

Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones.

From the notice of award of funds from NJDEP, the Township will first advertise for bids for the two zero emissions electric shuttle buses. Within two months, the Township will award a contract to the lowest responsible bidder. The Township anticipates delivery of the buses approximately one year after award of the contract. Upon delivery of the buses, they will be placed into service immediately and replace an existing diesel engine powered bus.

Demonstrated success in implementing similar projects?

For nearly 20 years, the Township has operated a successful and expanding jitney bus program that transports residents of the Township to and from nearby NJ Transit train stations. The program started with two diesel buses and two routes and now has six routes and carries approximately 450 passengers a day during weekday morning and evening peak travel periods. The Township has demonstrated its commitment to implementing strategic long-term solutions that will allow for a (cont. supp. pg.1)

If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.

By implementing this project, the Township of West Orange will have two electric vehicles available in its municipal fleet. As previously mentioned, the Township will partner with the Thomas A. Edison National Historic Park to recharge the two zero emission all electric buses. The buses will be stored at the West Orange Public Works Building which is only one quarter mile from the historic park.

Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.

The Township of West Orange has not yet received any funds in relation to this project. If additional funds become available through other opportunities, the Township will pursue these for the jitney fleet. In addition, if the Township's electric service company is making funds available or providing incentives for purchasing energy for the recharging stations, the Township will pursue these funds if possible.

Please provide any additional information that supports this project.

Electric vehicles have proven to help reduce greenhouse gas emissions and, as a result, improve air quality. The Township hopes there will be an increased demand for electric vehicles in the Township's fleet, as well as for individual residents. This project is intended to act as a catalyst for additional electric vehicles to be used for municipal owned automobiles, which will ultimately result in the advancement of energy conservation and efficiency initiatives within the municipality.

Two additional pages have been provided as supplemental space to answer any of the questions above.

Disproportionate impact (cont): heavily travelled routes such as interstate 280, which creates a high level of vehicle traffic and congestion on a daily basis. As a result, residents are exposed to greater amounts of air pollution. Particularly in the downtown area, there are high levels of vehicle traffic, idling, noise pollution and carbon emissions on a daily basis. In addition, according to the “The Guardian” article from September 2017, in the United States, African Americans are more likely to be exposed to pollution on a daily basis. In the surrounding communities of East Orange and Orange, there is a large population of African American residents, 88.5% and 71.8% respectively (2010 Census).

According to the EPA's EJSCREEN: Environmental Justice Screening and Mapping Tool, these municipalities rank in the 84th percentile for particulate matter (PM2.5), in the 84th percentile for National Scale Air Toxics Assessment Air (NATA) Toxics Cancer Risk in the state, and in the 92nd percentile for higher traffic proximity and volume for the state. As residents are exposed to higher levels of air pollution than the surrounding areas, replacing two diesel buses in the jitney fleet will help to lessen these harmful emissions. This project will also have a significant impact on West Orange’s ability to conserve and more efficiently utilize energy.

Cost effective and Feasible Emission Reductions (cont): evening peak travel periods. All buses were initially diesel powered, but four years ago the Township replaced four of the buses with less polluting gasoline models. We hope to replace the last two diesel buses with zero emission vehicles (ZEV) to help combat the disproportionate impact of air pollution experience in our region.

With six different routes that run throughout the Township and shuttle service Monday through Friday, having two alternative fuel vehicles in this fleet will greatly help to reduce emissions. The Township is proposing to replace two diesel buses (model years 2006 and 2009) with two 100% electric buses to be used on two of the Jitney routes that run throughout the Township. This will have a significant impact on the Township’s ability to conserve and more efficiently utilize energy. Based on the project cost of $800,000 over a 10-year lifespan, or $80,000 per year, the cost effectiveness of this project is $40,816.33 to remove one ton of NOx and $615,374.62 to remove one ton of PM 2.5. Financial assistance to purchase these two electric buses will provide a green energy option for the residents of West Orange during their commute. Electric vehicles have proven to help reduce greenhouse gas emissions and, as a result, improve air quality. The Township hopes there will be an increased demand for additional municipally-owned electric vehicles which will ultimately result in the advancement of energy conservation and efficiency initiatives within the municipality. As the buses requested are ZEVs, these reductions are feasible and attainable for the Township with this project.

Demonstrated success (cont): sustainable future for the residents of West Orange. With numerous projects with the mission to “go green,” this project will expand these efforts into providing sustainable transportation options. West Orange is committed to making the Township and region a healthy and sustainable place. By utilizing various strategies that reduce greenhouse gas emissions, effectively managing water and energy resources and

creating more livable communities, the Township hopes to become a model community for sustainable practices. This will help to advance the Township's energy efficiency efforts and make West Orange a more sustainable community to live and work. Electric vehicles have proven to help reduce greenhouse gas emissions and, as a result, improve air quality. This project will act as a catalyst for the Township to purchase additional municipal electric vehicles in the future, which will ultimately result in the advancement of energy conservation and efficiency initiatives within the municipality.

Additional Information: The Township of West Orange has a population of 46,207 (2010 Census) and an area of 12.2 square miles. Much of the Township's population is within a short walk to one of the jitney routes. In some cases, the proximity of the population to the route eliminates the need for a personal vehicle to commute to a rail station. For some, the location of the jitney has even eliminated one personal vehicle from a household with two adult wage earners. This results in less traffic congestion and less vehicular pollution. Over the past four years, four of the diesel-powered buses were replaced with gasoline powered vehicles which have less NOx and less PM emissions than the diesel-powered buses. The two diesel buses to be replaced with ZEV electric powered buses are: a 2006 Ford powered by a 6.0-liter V-8 325 bhp engine and a 2009 Ford powered by 6.0-liter V-8 350 bhp engine. Based on the annual hours of operation, these two buses produce 1.96 tons of NOx annually and 0.13 tons of PM 2.5 annually. The two diesel buses to be replaced operate Jitney Route 4 (Mt. Pleasant Ave and Main St. corridor) and Jitney Route 6 (Pleasant Valley Way, Eagle Rock Ave and Main St. corridor). Main Street is the location of the Thomas A. Edison National Historic Site and the location of the former Edison Industries. The former Edison Battery Building is a Redevelopment Project that will transform the use from industrial to residential use with 344 residential rental units. The Township sees no better way to transport residents of the former Edison Battery Building than with a ZEV bus.

The quantity of NOx and PM emissions were calculated as follows:
Formula for NOx emissions: Annual Emissions of NOx = Emissions Factor NOx x brake horse power x annual hours

2006 Ford 325 bhp diesel V-8 engine
Annual Emissions of NOx = (2.0g/bhp x hr.) x 325 bhp x 1,657.5 hr./year) = 1,077,050 grams= 2,375 lbs.= 1.19 tons
2009 Ford 250 bhp diesel V-8 engine
Annual Emissions of NOx = (1.2g/bhp x hr.) x 350 bhp x 1,657.5 hr./year) = 695,940 grams= 1,534 lbs.= 0.77 tons
Total Annual Emissions of NOx both vehicles = 1.96 tons
Formula for PM 2.5 emissions:
Annual Emissions of PM 2.5 = Emissions Factor PM 2.5 x brake horse power x annual hours

2006 Ford 325 bhp diesel V-8 engine
Annual Emissions of PM 2.5 = (0.1g/bhp x hr.) x 325 bhp x 1,657.5 hr./year) = 53,869 grams= 118.76 lbs.= 0.06 tons
2009 Ford 250 bhp diesel V-8 engine
Annual Emissions of PM 2.5 = (0.1g/bhp x hr.) x 350 bhp x 1,657.5 hr./year) = 58,012.5 grams= 127.90 lbs.= 0.07 tons
Total Annual Emissions of PM 2.5 both vehicles = 0.13 tons
Source: US EPA and California Emission Standards for Heavy Duty CI Engines

A
Abington Road ---------- S 5
Afterglow Avenue ------ U 6
Ahern Way ------------ Q 1
Ahr Drive ------------ H 4
Alan Street ---------- Q 8
Alberon Road --------- N 3
Alden Street --------- N 9-10
Alisa Drive ---------- P 4
Allsop Court --------- Q 1
Amelia Street -------- Q 9
Amos Street ---------- Q 7-8
Araneo Drive --------- N 6
Ardmore Road --------- K 8
Arverne Road --------- H 4-5
Ash Avenue ----------- D-E 6
Ashland Avenue ------- L-M-N 9
Ashley Road ---------- O-P 8
Ashwood Terrace ------ P 9
Aspen Road ----------- C-D 3

B
Babcock Place -------- N 9
Bachman Terrace ------ Q-R 4
Bakley Terrace ------- R-S 2
Barbara Avenue ------- U 3
Barone Road ---------- H-J 5
Barringer Court ------ F 5
Barry Drive ---------- Q 4
Barton Drive --------- Q 1
Bauer Drive ---------- P 4
Baxter Lane ---------- J 2
Bayowski Road -------- S 2
Beacon Place --------- D 2
Beasley Street ------- Q 4
Beaumont Terrace ----- J 7
Beech Road ----------- C 3
Beechwood Terrace ---- Q 3
Belgrade Terrace ----- H-J 7
Belle Terre Road ----- N 3
Belleview Terrace ---- Q 7
Benvenue Avenue ------ H 6
Beverly Road --------- J 8
Birch Street --------- H 8
Birchwood Avenue ----- H 5
Blackburne Terrace --- O-P-Q 5
Blackstock Road ------ G 3
Bloomfield Way ------- O 8
Blueberry Bend ------- M 6
Boland Drive --------- O-P 6
Bongart Drive -------- R 1
Bradford Avenue ------ J 7
Bradley Terrace ------ M 7
Brennan Drive -------- K-L 8-9
Bromley Drive -------- R 4
Brook Drive ---------- J 7
Brook End Drive ------ F 4
Brook Lane ----------- M 9
Brook Place ---------- M 4
Brookside Road ------- L-M 7-8
Brookwood Road ------- E 7
Bryn Mawr Road ------- S 5
Buchanan Court ------- B 2
Buckingham Road ------ N 4
Burnett Terrace ------ F 6-7
Byrne Road ----------- M 7

C
Cadmus Court --------- R 1
Caldwell Terrace ----- P 5
Calvin Terrace ------- P 8
Cannon Street -------- R 4-5
Carlson Road --------- L 2
Carol Drive ---------- Q 8
Carolina Avenue ------ L 3
Carter Road ---------- J 8
Carteret Street ------ O-P 4
Cary Street ---------- J 9
Cassien Terrace ------ P 5
Cecil Lane Place ----- O 3-4
Cedar Avenue --------- F 1-2-3
Central Avenue ------- J 9
Central Place -------- F 8
Cerone Court --------- M 6
Cerutti Court -------- N 6
Charles Street ------- M 9
Cherry Lane ---------- B-C-D 4
Cherry Street -------- P 9
Cherrywood Circle ---- E 6
Cheshire Terrace ----- M 4
Chestnut Road -------- G 4
Chestnut Street ------ P 9-10
Clarken Drive -------- O 4-5
Clearview Terrace ---- L-M 7
Cleveland Terrace ---- O 3
Cliff Street --------- Q-R 2
Clonavor Road -------- E 8
Club Boulevard ------- H 7
Cobane Terrace ------- H-J 7
Coccio Lane ---------- M 6
Coggins Lane --------- S 2
Collamore Circle ----- H 7
Collamore Terrace ---- H-J 7
Colonial Woods Drive --- L-N 2
Colony Court --------- J 7
Colony Drive East ---- J 7
Colony Drive West ---- J 7
Colton Circle -------- B 2
Columbia Street ------ N-O 10
Condit Lane ---------- O 10
Condit Terrace ------- L 8-9
Conforti Avenue ------ P-Q 4
Connel Drive --------- G 3
Coolidge Avenue ------ N 3
Cornell Street ------- J 4
Crescenzi Court ------ N 6
Crest Drive ---------- R-S 7
Crest-View ----------- J 6
Crestmont Road ------- L 1
Crestwood Drive ------ Q 3
Cross Street --------- H 9
Crystal Avenue ------- P 5
Cullen Drive --------- M 2
Cummings Circle ------ R 3
Cunnigham Drive ------ U 3
Currey Lane ---------- S 2
Curtis Avenue -------- O 3

D
Dale Drive ----------- P 3
Dartmouth Road ------- G-H 7
Davey Drive ---------- R-S 1-2
Dawes Avenue --------- N 3-4
Dawson Avenue -------- O 3
Dean Street ---------- J 9
Deerfield Drive ------ S 5
DeRose Court --------- N 6
Devon Drive ---------- E-F 7
Devonshire Terrace --- M 5
Devore Drive --------- N 4
DeZenzo Road --------- M 6
Digaetano Terrace ---- M 6
Dockery Drive -------- O 4
Dogwood Drive -------- C-D 2
Dogwood Road --------- C-D 2
Donlavage Way -------- G-H 2
Dunn Road ------------ Q 4

E
Eagle Ridge Way ------ O 6
Eagle Rock Avenue ---- P-Q 1-8
Eagle Street --------- R 4
Eagle Terrace -------- P 7
Edgar Road ----------- J 4-5
Edgehill Court ------- N 9
Edgehill Road -------- M-N 9
Edgemont Road -------- Q 2
Edgewood Ave North --- H-J 5
Edgewood Avenue ------ G-H 5
Edisonia Terrace ----- N 9
Efstis Court --------- F 2
Elf Road ------------- G 5
Elliot Place --------- H 8
Ellis Street --------- R 4
Ellison Avenue ------- L 2
Elm Court Way -------- N 8
Elm Street ----------- P 8-9
Elmwood Avenue ------- M 3
Erwin Place ---------- N 9
Essex Terrace -------- G 7
Executive Drive ------ N 5

F
Faas Court ----------- H-J 4
Fairmount Terrace ---- Q 7-8
Fairview Avenue ------ H 4-5
Fairway Avenue ------- U 3
Fairway Drive -------- L 7-8
Fern Drive (unofficial rd) ---- A 2
Fernwood Circle ------ E 6
Ferris Drive --------- P 2
Fitzrandolph Road ---- P-Q 5
Florence Place ------- F 7
Flynn Terrace -------- O 4
Forest Avenue -------- R-S 4
Forest Drive --------- U 3
Forest Hill Road ----- G 7-8
Forest Way ----------- M 8
Fowler Drive --------- S 2
Franklin Avenue ------ O-P-Q 9
Franklin Terrace ----- E 8
Fredericks Street ---- G 2
Freeman Place -------- F-G 8
Freeman Street ------- H 9
Fremont Street ------- Q 9
Fundus Road ---------- P-Q 5

G
Galloway Court ------- H-J 4
Garden Drive (unofficial) ---- A-B 2
Garfield Avenue ------ M 3, N-O 3
Gaston Street -------- K-L 9
Gavin Road ----------- J 5
Gerdes Avenue -------- U 3
Gilbert Place -------- H 7
Giordano Drive ------- M 6
Glebe Street --------- J 9
Glen Avenue ---------- N-O 7-8
Glen Road ------------ J 8
Glen View Drive ------ D 2
Glennon Place -------- O 9
Glenside Drive ------- K-L 7
Grand View Avenue ---- J 7
Grant Terrace -------- Q 8
Greentree Road ------- K-L 8
Greenwood Avenue ----- Q 3
Gregory Avenue ------- E..L 7,-M 7
Gregory Place -------- H 7
Guerino Drive -------- N 6

H
Hage Terrace --------- G 2
Haggerty Drive ------- E-F 2
Haller Road ---------- Q 3
Hansen Road ---------- B 2-3
Harper Street -------- S 4
Harriet Street ------- Q-R 7
Harrington Terrace --- P 5
Harrison Avenue ------ P-Q 8-9
Hart Drive ----------- B 3
Hartshorn Terrace ---- P 4-5
Harvard Terrace ------ F-G 8
Hazel Avenue --------- H 8-9
Helen Avenue --------- F 7
Henrietta Drive ------ D 5
Henry Street --------- Q 4
Hepworth Court ------- H 6
Hepworth Place ------- H-J 6
Herbert Terrace ------ D-E 2
Hickory Road --------- C-D 3
High Street ---------- O-P-Q 10
Highland Boulevard --- H 5
Highland Place ------- L-M 7
Highwood Road -------- K-L 7
Hillcrest Ave -------- E 6
Hillside Avenue ------ H 8
Hillside Terrace ----- E 8
Himsl Court ---------- F 2
Holmes Street -------- Q 4
Holly Drive (unofficial rd) --- B 2
Honeysuckle Avenue --- N 8-9
Hooper Avenue -------- O 4
Hoover Avenue -------- O 3
Howell Drive --------- T-U 2
Hundt Place ---------- J 3
Hunterdon Road ------- L-M 1
Hutton Avenue -------- K 7, K 8-9

J
Jagger Court --------- R 1-2
James Court ---------- Q 8
Januson Court -------- R 5
John Street ---------- O 9-10
Johnson Road --------- P-Q 5
Jones Place ---------- M 7
Joyce Street --------- J 9

K
Karam Circle --------- B-C 3
Kayser Lane ---------- B 3
Keimel Court --------- E 2
Kelly Drive ---------- G...K 2
Kenz Terrace --------- R 4
King Road ------------ M 1
Kingsley Street ------ J-K 9
Kingwood Road -------- G 5
Kinzel Lane ---------- R 2
Kirk Street ---------- Q 8-9
Kitchener Avenue ----- N 3
Kling Street --------- O 9
Knollwood Drive ------ E 6
Knutsen Drive -------- S 2
Koewing Place -------- J 7
Korwel Circle -------- D 3
Korwel Circle East --- D 3
Korwel Circle West --- D 3
Korwel Court --------- E 3
Kovach Court --------- G-H 2
Kunz Lane(Private Dr) -- J 2
Kuzik Drive ---------- S 1

L
Lafayette Street ----- J 9
Laird Drive ---------- L 9
Lakeside Avenue ------ N 9-10
Lakeview Drive ------- P 3
Lancaster Terrace ---- M-N 4
Lapis Circle --------- S 1
Larkin Circle -------- B 3
Laurel Avenue -------- P-Q 1
Lawrence Avenue ------ F 7-8
Leonardo Drive ------- M-N 6
Lessing Court -------- H 4-5
Lessing Road --------- H 4-5
Liberty Street ------- N-O 10
Lincoln Avenue ------- N-O 2-3
Linden Avenue -------- K 8
Linden Court --------- K 8
Lindsley Avenue ------ L 8-9
Llewellyn Avenue ----- O 9
Llewellyn Place ------ M 9
Lonergan Lane -------- J 1
Long Branch Way ------ O-P 7
Longview Street ------ K-L 8
Lorelei Road --------- M 3
Lowell Avenue -------- F 7, G 7
Lowell Place --------- F 7
Luddington Road ------ E 7-8
Luddington Terrace --- E 7
Luft Lane ------------ S 1
Luth Terrace --------- H 2
Lynwood Way ---------- O 7-8

M
Main Street ---------- L-P 9-10
Manchester Road ------ M 4
Manger Road ---------- L-M 3
Mann Avenue ---------- Q 4
Maple Avenue --------- D-E 5-6
Maple Street --------- P-Q 8-9
Marcella Avenue ------ M 6
Marcy Place ---------- O 4
Margulis Court ------- J 5
Marie Terrace -------- R 3
Marion Drive --------- M 5
Marmon Terrace ------- R 3
Marshall Street ------ Q 4
Masson Place --------- F 4
Mayfair Drive -------- S-T 3
McChesney Court ------ B-C 3
McClellan Terrace ---- K 8
McCluskey Court ------ S 4
McCune Court --------- R 5
McGuire Drive -------- M 2
McGuirk Lane --------- R 3
McKinley Avenue ------ O 8-9
McKinley Place ------- O 8-9
McManus Court -------- R 4
McNeal Court --------- R 5
Meade Street --------- O 10
Meeker Street -------- F 8
Mellon Avenue -------- O 2-3, O 3
Melrose Place -------- E 7
Merklin Avenue ------- L 2
Merrywood Drive ------ L 8
Metzger Drive -------- E 2
Meyer Court ---------- C 2
Midro Way ------------ S 3
Mississippi Avenue --- P-Q 8
Mitchell Street ------ H 7-8-9
Montrose Avenue West --- E 8
Moore Terrace -------- Q 7-8
Moran Road ----------- R 3
Morris Road ---------- L-M 2
Mountain Ave --------- Q-R 7
Mountain Ave (Llewellyn Pk) --- M...P 7
Mountain Drive ------- K 6
Mountain View Street --- L 8
Mountain Way --------- E-F 7
Mountain Way South --- E 6
Mt. Pleasant Avenue -- K...M 1...9
Mt. Pleasant Place --- M 4
Mt. Vernon Avenue ---- N 3
Mullarkey Drive ------ S 3
Murphy Court --------- H 5
Murray Street -------- R 7
Musano Court --------- N 6

N
Nance Road ----------- L-N 1
Nassau Street -------- G 8
Nelson Court --------- H 4
Nestro Road ---------- S 3
Nicholas Avenue ------ R-S 4-5, R 5
Normandy Terrace ----- M-N 4
North Cobane Terrace --- K 7
North Edgewood Ave --- H-J 5
North Koewing Place -- K 7
Northfield Avenue ---- D-K 1-9
Nottingham Road ------ M-N 4
Nutman Place --------- J 9
Nutwold Avenue ------- Q 7
Nymph Road ----------- G 5

O
Oak Avenue ----------- D-E 5
Oak Bend ------------- M-N 8
Oak Crest Road ------- C-D 3
Oak Terrace ---------- Q-R 3
Oakridge Road -------- H-J 8
O'Connor Circle ------ P 6
Old Indian Road ------ J 4-5-6
Old Northfield Ave --- K 9
Old Salem Road ------- G 5
Old Short Hills Road --- A-D 2
Orange Heights Ave --- G 7-8
Orange Place --------- P 9
Osborne Place -------- J 9
Oval Road ------------ Q 1-2
Overlook Avenue ------ E-F 7
Oxford Place --------- P 9
Oxford Terrace ------- F-G 8

P
Paris Circle --------- C 3
Park Avenue ---------- M 9
Park Drive North ----- P 8
Park Drive South ----- P 8
Park Drive West ------ P 8
Park Place ----------- L 9
Park Terrace --------- O 8-9
Park Way ------------- M-N-O 7-9
Parkside Avenue ------ Q 8
Parson Drive --------- K 3
Peiker Way ----------- H 1-2
Pembroke Terrace ----- M-N 4
Pen Bryn Road -------- P-Q 7
Perkins Drive -------- B 3
Phyllis Road --------- P-Q 4
Pillot Place --------- J 9
Pine Road ------------ P 1
Pine Street ---------- H 8
Pitney Street -------- P 3
Pleasant Valley Way --- E...U 3-4
Pool Drive (unofficial rd) ---- A-B 2
Porter Road ---------- P 3
Powell Drive --------- G 3
Pring Court ---------- S 2
Prospect Avenue ------ H...U 5-6
Prospect Place ------- O 9

Q
Quarry Terrace ------- R 2
Querques Lane -------- M 6
Quinby Place --------- J 9

R
Rainbow Terrace ------ P-Q 7
Ralph Road ----------- L 2
Rand Drive ----------- L 3
Randolph Place ------- L 8
Rappleye Court ------- R 1-2
Raynor Road ---------- H 6
Redwood Avenue ------- R-S 4-5
Reger Lane ----------- S 1
Reid Street ---------- D-E 6
Ridge Avenue --------- O-P 9-10
Ridge Road ----------- J-K-L 6
Ridgehurst Road ------ O 9
Ridgeview Avenue ----- F 8
Ridgeway Avenue ------ H-J 5-6
Ridgeway Court ------- H 5
Riggs Place ---------- J 9
Robert Court --------- Q 8
Robertson Road ------- P-Q 5
Rock Spring Avenue --- F-G 5
Rock Spring Road ----- H 6
Rocky Way ------------ P 7
Rodman Place --------- G 4
Roehm Court ---------- J 3
Rollinson Street ----- H-J-K 8
Ronald Terrace ------- R 4
Rooney Circle -------- O 5
Roosevelt Avenue ----- M-N 3, N-O 3
Rose Terrace --------- J 9
Rosemont Court ------- T 3
Rosemont Drive ------- T 3
Rosemont Lane -------- T 3
Rosemont Terrace ----- T 3
Rosney Terrace ------- P 5
Route I-280 ---------- K..O 1..10
Rutgers Street ------- J 4

S
Salem Place ---------- G 5
Samuel Street -------- Q 9
Sayers Place --------- O 9
Schindler Terrace ---- E 2
Schmitt Road --------- R 3, S 3
Seaman Road ---------- S 5
Seward Street -------- O 9
Shady Glen ----------- K 7
Sheffield Terrace ---- G 7, G 7
Shelley Terrace ------ M 3
Shepard Terrace ------ N 9
Sheridan Avenue ------ F-G 4
Sherwood Place ------- Q 3
Shiel Court ---------- M 2
Short Drive (unofficial rd) --- A-B 3
Shrump Place --------- Q-R 3
Sichel Court --------- E 2
Silver Spring Road --- F 8
Skyline Drive -------- K 3
Slayback Terrace ----- T 2
Smith Manor Blvd ----- P-Q 6-7
South Valley Road ---- E-F-G 8
Spring Hill Drive ---- E-F 6
Spring Street -------- M 10
St. Cloud Avenue ----- F...J 4
St. Cloud Place ------ H 6
Standish Avenue ------ M-N 10
Stanford Avenue ------ P 3
Stanford Court ------- P 3
Stanley Road --------- S 5
Steven Terrace ------- R 4
Stiles Court --------- N 6
Stockman Street ------ H 9
Stone Drive ---------- G 3
Stuart Terrace ------- O 8
Suburban Drive ------- O 4
Sullivan Drive ------- S 1-2, R-S 3
Summit Street -------- K 3
Sunnyside Road ------- O 3
Sussex Road ---------- M 2
Suzan Court ---------- Q 8
Swaine Place --------- K 9
Swayze Street -------- P 3
Sylvan Place --------- E-F 6
Syme Ave ------------- J 5

T
Tappan Terrace ------- M 1-2
Tenney Court --------- H 4
Tenney Road ---------- H 3
Terrace Avenue ------- Q-R 5, R-S 5
Thorn Terrace -------- P 4
Tompkins Street ------ H 9
Tornillo Road -------- H 3
Trefoil Pass --------- M 8
Tremont Avenue ------- F 8
Tulip Avenue --------- M 7-8-9

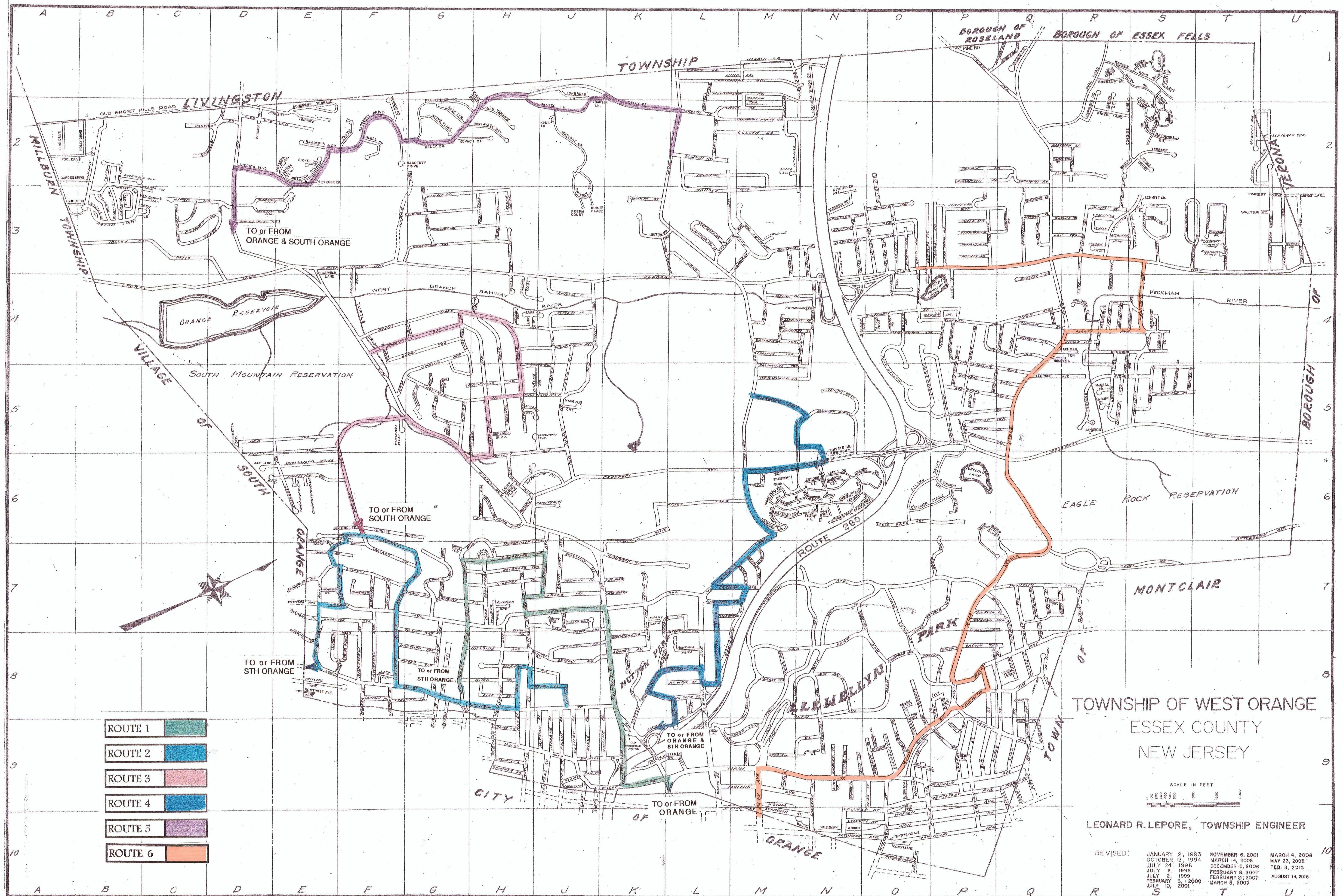
U
Undercliff Terrace --- H-J 7
Undercliff Terrace S. --- F-G 6
Underwood Drive ------ G 3
Union Street --------- G 8
Upper Entrance ------- N 6

V
Vacca Drive ---------- N 6
Valley Road ---------- H-J 9
Valley View Drive ---- B-C-D 3
Valley View Street --- Q-R 2
Valley Way ----------- P-Q 8
Virginia Avenue ------ Q 8-9
Vizcaya Boulevard ---- D-E 2
Vosseler Court ------- H 7
Vosseler Terrace ----- H 7

W
Wadams Court --------- F 2
Waddington Ave ------- J 4
Wakeman Street ------- Q-R 2
Waldeck Court -------- R 4
Walker Court --------- F 8
Walker Road ---------- F-G 7-8
Walter Street -------- U 3
Warner Road ---------- R-S 1
Warnick Lane --------- E 4
Warren Road ---------- M 1
Washington Street ---- O 9-10
Watchung Avenue ------ N-O-P 10
Watson Avenue -------- O-P-Q 9-10
Weber Road ----------- H 3
Wedgewood Drive ------ M 5
Wellington Avenue ---- H 8
Wessman Drive -------- O 4
West Road ------------ H 6
West View Road ------- G 5
Westminster Terrace -- M 4
Westover Terrace ----- L 1-2
Westwood Drive North --- L 3
Westwood Drive South --- L 3
Whalen Court --------- P 6
Wheatland Avenue ----- G 7-8
Wheeler Street ------- K-L 9
Whitbay Drive -------- J 2-3
White Street --------- L 9
Whitman Street ------- P 3
Whittingham Place ---- K 9
Whittlesey Avenue ---- O-P 9
Wildwood Avenue ------ L-M 8-9
Wiley Terrace -------- H 5
Wilfred Street ------- Q 8
William Street ------- O 9
Wilson Terrace ------- P 8
Winding Way ---------- G 7
Winfield Street ------ Q 9
Witte Place ---------- G 2
Woodhull Avenue ------ P-Q 5
Woodland Avenue ------ S 4-5
Woods End Road ------- D 3
Woodside Terrace ----- Q 7
Wyoming Avenue ------- E 7

Y
Yale Terrace --------- F-G 7-8

Zeppi Lane ----------- M 6



Leonard Lepore

From: Matt Fittante <mfittante@rohrerbus.com>
Sent: Thursday, January 18, 2018 9:31 AM
To: Leonard Lepore
Subject: Electric Bus

Leonard,

The View Electric bus would range between $365,000 and $450,000 depending how it is equipped. Below is a link to the Motiv website that has some limited information about their systems. Please feel free to send me questions you have on either the Hometown or Motiv products and I will try to get some answers.

https://www.motivps.com/motivps/

Thank you,

Matt Fittante
Account Representative
Central & Northern New Jersey
ROHRER
Direct 732.261.6643
MFittante@Rohrerbus.com
www.RohrerBus.com

OUR TECHNOLOGY

Motiv's All-Electric Powertrain uses an innovative architecture that is scalable and modular, which allows us to use the same core components in vehicles ranging from a Type A School Bus to a Delivery Truck. Our ruggedized automotive grade power electronics allow us to independently manage off the shelf commercial battery packs, electric motors, and auxiliary systems on any commercial chassis which is unmatched in flexibility.

Our software modules allow us to remotely provide system upgrades, diagnostics, and schedule preventative maintenance. The combined effect of these components is a future-proof design which can integrate new battery packs, motors, and accessories on different new chassis.

We have proved the flexibility of this system by running two battery chemistries on the same vehicle, something no other technology provider has done. Applications using the Motiv All-Electric Powertrain include zero-emission school buses, shuttle buses, delivery trucks, and work trucks.

CONTACT US FOR MORE INFO

300,000 miles

Motiv-powered, all-electric vehicles have driven over 300,000 miles and counting!

OUR MOTIV-ATION

IMPROVING FLEET CARBON EMISSIONS

Transportation exhaust is one of the nation's most pervasive sources of toxic air pollution. Diesel exhaust is some of the worst, and in the past diesel trucks and buses have been the most difficult to electrify. The sheer weight of many trucks has historically made developing EV options for the nation's fleets an arduous process. But at Motiv, we thrive on tough complicated problems, especially ones that have the potential to improve the lives of generations to come.

THE SECRET LIFE OF SOOT

America's eight million fossil fueled buses and trucks on the road today emit a wide variety of pollutants. The **EPA estimates** that diesel exhaust from all sources leads to "21,000 premature deaths each year and create(s) a cancer risk that is **seven times greater** than the combined risk of all 181 other air toxins tracked by the EPA." Most recently, scientists have learned that the oxidation of soot particles in the atmosphere can increase the toxicity of soot in the lungs. For more watch this short video, **The Secret Life of Soot.**

VEHICLE APPLICATIONS

Motiv is committed to freeing fleets from their dependency on fossil fuels. Motiv's Patented All-Electric Powertrain replaces the diesel or gasoline engine in a standard medium to heavy-duty truck or bus chassis. The resulting zero-emission, all-electric vehicle has the same performance and functionality without the

pollution, noise, heat, and vibration of diesel or gasoline powered vehicles. This eliminates emissions, creates a healthier environment for riders, and reduces driver fatigue without compromising the route or vehicle performance.

WHY ELECTRIFY?

Approximately a third of these eight million fossil fueled trucks and buses in the US are ideal for electrification. These vehicles drive planned local routes less than 100 miles a day with a lot of starts and stops and park in a depot at night, which typically have the infrastructure necessary for charging the vehicles. These vehicles range from shuttle buses and delivery trucks, to school buses, municipal fleet work trucks, and more.

Today, fleets face many elements pushing them towards alternative fuels, including emissions regulations, oil dependence and price volatility, national security, and growing public opinion on environmental concerns. The thousands of electric trucks already on the road, show EVs are an economically and environmentally responsible solution for a variety of transportation needs. Motiv is uniquely positioned to push this trend forward.

Ford E-450

TYPE A SCHOOL BUS

SHUTTLE BUS

WORK TRUCK

BOX TRUCK

Ford F-59