

FR17 Contracts # 138

EPD CONTRACT ROUTING SLIP

AIR BRANCH

Route Through	Initials	Date
1 Sakina Strozier	SS	6/21/16
2 James Boylan	SS JB	6/21/16
3 Dika Kuoh	DK	6/21/16
4 Karen Hays	KH	6/21/16
5 Aubrey Hendrix	AH	6-22-16
6 Erin Ruoff	ER	6-22-16
7 Lauren Curry	LC	7-20-16
8 Director	[Signature]	7/20/16

Signature Required On:

Contract

To Be Signed By: Director

Cover Letter

To Be Signed By: Director

Attachments (Describe)

To Be Signed By: Director

Award:

Draft (**Review and Approval Needed**)

New (attach 2 originals)

Renewal (Attach copy of original)

Amendment (Attach copy of original)

I verify that the proper procurement procedures have been followed in executing the attached contract.

Signed: [Signature], Contract Administrator Date: 6/21/16

Remarks:

Norfolk Southern CMAQ contract for locomotive conversions.
GA Dept of Transportaion pass through grant

Return To: Sakina Strozier

Telephone: 404-362-2749

Georgia Department of Natural Resources
Environmental Protection Division

2 Martin Luther King Jr. Drive, Suite 1456, Atlanta, Georgia 30334
Judson H. Turner, Director
(404) 656-4713

April 28, 2016

MEMORANDUM

TO: Sakina Strozier (Administrative & Financial Mgmt. Unit Manager) *6/16/16 SS*

THROUGH: Pam Earl (Mobile & Area Program Manager) *5/6/16*
Kelley Nardell-Powell (Communication and Emissions Control Unit Manager) *KANP 5/2*

FROM: Richard McDonald (Environmental Engineer) *RM*

SUBJECT: NS Contract for \$4,841,821 in CMAQ Funds
5 Switcher-Duty Locomotive Conversions into 2 mother-slug sets and 1
switcher- duty locomotive.
The locomotives will operate in the metro Atlanta, Georgia CMAQ area
Funding: GDOT Contract 0009205 (\$12 Million)

Attached are two contracts signed by Norfolk Southern (NS) to convert five locomotives into two mother-slug locomotive sets and one clean switcher-duty locomotive using \$4,841,821 from CMAQ funding source 0009205. The GDOT 0009205 CMAQ funding source has a total of \$12 Million available and committed to projects with CSX, NS and Argos in order to reduce emissions in and around Atlanta rail yards. Please send the contracts to the Director's Office for signature. After signature, please retain one of the final contracts for EPD's records and send the other to Norfolk Southern.

Contract Routing Form

Contractor

Name Norfolk Southern Railway Company
 Address1 1200 Peachtree Street, N.E.
 Address2 _____
 City, State ZIP Atlanta, Georgia 30309
 NIGP Code _____
 FEI # _____ SS# _____

New / Original Contract



Existing Contract Number _____

Amount of Original Contract \$ 4,841,821.00

Amount of Amendment \$ _____

Term of Contract From: execution To: 12/31/2017

Description CMAQ Macon Railroad-Related Switch-Duty Locomotive Conversion

Origin 773 Fund 10100

Amount	Account	Department #	Funding Source	Sub Class	BY	Project#	OPB Program #	Code (if applicable)
\$4,841,821.00	707013	4620774000	30053	315	2017	46207924212	3420302	

What type of contract is this? _____

Is this contract to be encumbered? Yes

Funds for this contract are budgeted: (please check one)

In the original Annual Operating Budget No

In an amendment already submitted to the Budget Office No

In a future amendment to be submitted to the Budget Office Yes

Has the contract template been changed? If so, did Legal approve the ch _____

Sakina Strozier / 404-362-2749

Contract Administrator / Phone #

Division Director

June 21, 2016

Date

7/20/16

Date

DNR Contract # _____ P. O. # _____

CONTRACT

Between

Georgia Department of Natural Resources,

Environmental Protection Division

And

Norfolk Southern Railway Company

For

CMAQ Railroad-Related Emission Reductions Grant Program:

Switch-Duty Locomotive Conversions in Atlanta, Georgia

This **CONTRACT** is made effective as of the 20th day of July 2016.

This **CONTRACT** is by and between the Georgia Department of Natural Resources, Environmental Protection Division, (the "Division"), and Norfolk Southern Railway Company (the "CONTRACTOR").

WITNESSETH

WHEREAS, the Division is established as an agency of State Government pursuant to the laws enacted by the Georgia General Assembly; and

WHEREAS, the Division is responsible for programs and activities that are designed to protect and enhance air quality; and

WHEREAS, particulate matter (PM) and nitrogen oxide (NOx) emissions are key pollutants that contribute to poor air quality in Georgia; and

WHEREAS, locomotive diesel engines are large sources of PM and NOx emissions; and

WHEREAS, advanced technologies and techniques are not required but can be voluntarily applied to greatly reduce locomotive emissions and/or reduce fuel use; and

WHEREAS, the Division received Federal funding in the amount of twelve million dollars (\$12,000,000) through the Georgia Department of Transportation from the Congestion Mitigation and Air Quality Improvement (CMAQ) Program to reduce PM2.5 in the Atlanta nonattainment area through the reduction of locomotive emissions; and

WHEREAS, the Georgia Department of Natural Resources Board approved eligibility and selection criteria for selecting the locomotive emission reduction projects, and the criteria is included in the EPD Grants Program Chapter 391-3-21-.14; and

WHEREAS, the Division issued the request for applications (RFA) on January 5, 2015, with a due date of March 2, 2015; and

WHEREAS, the CONTRACTOR submitted an application describing a project that has been selected to be funded according to terms and conditions of this CONTRACT; and

WHEREAS, the Division and the CONTRACTOR desire to cooperatively enter into a contractual arrangement to reduce emissions from locomotives used for switching in Atlanta for the purpose of improving air quality in Georgia using CMAQ funding; and

WHEREAS, this CONTRACT is subject to all applicable provisions of implementing guidance for the CMAQ program, which is provided to the state through the Federal Intermodal Surface Transportation and Efficiency Act (ISTEA) and Federal Transportation Equity Act for the 21st Century (TEA-21) and continues to be provided under the Safe Accountable Flexible Efficiency Transportation Equity Act: A Legacy for Users (SAFTEA-LU) for projects that improve air quality and congestion.

NOW, THEREFORE, the Division wishes to contract with the CONTRACTOR to convert locomotives to low emission technology for the purpose of reducing air pollution as designated in CONTRACTOR's Application as attached hereto as Exhibit B (the "Application"). In consideration of the mutual promises and terms and conditions set forth herein, the Parties hereto do mutually agree as follows:

1. Scope of Services

- A. The CONTRACTOR shall do, perform, and carry out in a safe, efficient and workmanlike manner, the following services pertaining to Railroad-Related Emission Reductions in support of the Division's current and future programs: The services shall include those items described below in Section 1.B as further described in the attached Exhibit A (collectively, the "Project").
- B. CONTRACTOR shall convert five (5) TIER 0 or lower locomotives ("Original Locomotives") with at least five (5) years expected remaining life to (i) two (2) mother/slug sets, where the "mother" locomotive will meet EPA TIER 3 Line Haul Duty Standards and EPA TIER 2 Switcher Duty Cycle Standards or better (i.e., lower emissions) and (ii) one (1) clean locomotive meeting EPA TIER 3 Line Haul Duty Standard and EPA TIER 2 Switcher Duty Cycle Standard or better (i.e., lower emissions) (collectively, the "Converted Locomotives") as further described in the Application.
- C. The CONTRACTOR shall fully cooperate with audits or information requests by the Division to the extent such requests are intended to verify that the conditions of CMAQ and this CONTRACT are met, including without limitation the report schedule described herein. Upon request, the CONTRACTOR shall cooperate in any governmental audit to assess how grant funding was used for the Project. The CONTRACTOR shall provide copies of procurement contracts

and subcontracts used in connection with the Project if requested by the Division. The CONTRACTOR shall provide Project-related records if requested by the Division. The CONTRACTOR and its employees shall fully cooperate with investigation directly related to activities and transactions regarding CMAQ grant project funding for this Project. Notwithstanding any of the foregoing, CONTRACTOR shall have no obligation to conduct extra-operational studies or investigations or to generate data not generated in the normal course of business other than what is required for reporting in order to provide information requested by the Division under this CONTRACT. Further, the Division acknowledges the reporting limitations as set forth in the Application. The result(s) of a governmental audit or investigation shall be made available to the public, but CONTRACTOR may seek to withhold company confidential or business proprietary information from public availability.

- D. The CONTRACTOR shall maintain the Converted Locomotives sufficiently to assure each Converted Locomotive remains operational for a period of ten years from the date after that Converted Locomotive is retrofitted (the "Operating Period") and shall operate the Converted Locomotives at least 80% of each Converted Locomotive's operational hours in and around the Atlanta Terminal, as described in the Application and in accordance with the attached Exhibit A: Scope of Work. The Division understands that the CONTRACTOR does not permanently assign locomotives to a particular yard, and actual locomotives required for switching will vary from day to day depending upon rail traffic volume and locations, and depending on the availability of locomotives to meet operational needs. The ten-year period for each Converted Locomotive will start on the date that the Converted Locomotive is placed into revenue service. The CONTRACTOR shall not sell any Converted Locomotive until the Operating Period has passed or the Converted Locomotive has been determined to be damaged beyond repair or permanently inoperable.

2. Reporting.

- A. The CONTRACTOR shall submit required reports to the Division, as specified in Exhibit A hereto, by electronic mail (e-mail) and shall provide two copies of the reports in the e-mail with one in Microsoft Word format and the second in a PDF format. The CONTRACTOR shall submit a hard copy of the report upon the Division's request.
- B. The CONTRACTOR shall promptly report any credible evidence that a principal, employee, agent, sub-contractor, CONTRACTOR, or other person has submitted false claims under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving funds provided under this grant funding.

3. Method of Payment.

- A. The funding provided by the Division shall not exceed four million eight hundred forty-one thousand eight hundred twenty-one dollars (\$4,841,821.00). The CONTRACTOR shall provide 30% or more of the total project cost in matching funds. The CONTRACTOR will assure and document that the total project match contribution does not drop below thirty percent (30%) at any time during the project. In order to use all the funding available through this contract, the CONTRACTOR shall provide at least two million seventy-five thousand sixty-six dollars (\$2,075,066.00).
- B. The Division will withhold a final payment of nine hundred sixty-eight thousand three hundred sixty-four dollars (\$968,364) until the Division verifies through onsite inspection(s) each locomotive conversion has been completed consistent with Exhibit A hereto. As a minimum, the Division will verify the Converted Locomotive has an updated emissions label that clearly identifies the new emissions limits consistent with the designated TIER level in the Exhibit A hereto.
- C. The CONTRACTOR may invoice the Division upon completing any task as detailed in the project schedule submitted as part of meeting Part A in the Scope of Work

(Exhibit A). The CONTRACTOR shall invoice no more than 70% of the total Project expenses to assure the CONTRACTOR has fulfilled the minimum in-kind match of 30% at all times. Invoices must be numbered consecutively and submitted quarterly, containing a detailed description of the labor, material, and equipment costs and any other expenses incurred. The invoice must explicitly state the eligible match paid by the CONTRACTOR for these expenses.

- D. With each invoice, the CONTRACTOR shall provide an updated list of all Project tasks along with itemized expenses incurred, the eligible match portion paid, any portions already paid by the grant, and the requested grant distribution. The CONTRACTOR shall prominently display the in-kind match percentage on the invoice that accounts for the requested distribution and all previous distributions associated with the Project.
- E. If the United States Department of Transportation or Georgia Department of Transportation requires the Division to return any portion of the project funds due to the CONTRACTOR'S failure to satisfactorily complete any portion of this CONTRACT, the CONTRACTOR shall correspondingly return governmental project funds paid as a part of this CONTRACT to the Division.

4. Term and Termination.

- A. Term. The "Term" of this CONTRACT will begin on the date noted on page one (hereinafter referred to as "Effective Date") and continue through December 31, 2017, unless terminated earlier under the provisions of this CONTRACT.
- B. Termination for Cause. If, through any cause other than force majeure, the CONTRACTOR shall fail to fulfill in a timely and proper manner its obligations under this CONTRACT, or if the CONTRACTOR shall violate any of the covenants, agreements, or stipulations of this CONTRACT, the DIVISION shall thereupon have the right to terminate this Contract by giving written notice to the

CONTRACTOR of such termination and specifying the effective date thereof, at least 30 days before the effective date of such termination.

- C. The Division and the CONTRACTOR may renew this CONTRACT prior to its expiration upon terms, conditions, and compensations agreeable to both Parties.

5. Additional Terms and Conditions.

Additional terms and conditions governing this CONTRACT are listed below.

- A. The Parties will identify the project as –Norfolk Southern Railway Company Atlanta, GA Locomotive Conversions and send written communications under this CONTRACT to the respective liaisons at the addresses as identified below:

The Division

Richard P. McDonald
Mobile and Area Program
4244 International Parkway Suite 136
Atlanta, GA 30354
richard.mcdonald@dnr.ga.gov
404-362-6594

The Contractor

Mark F. Duve (Technical)
C. Douglas Corbin (Contracts)
Norfolk Southern Railway Company
1200 Peachtree Street NE
Atlanta, GA 30309-3579
Mark.Duve@nscorp.com 404-582-6743
Doug.Corbin@nscorp.com 404-582-6730

B. Drug-Free Workplace

- 1) The CONTRACTOR hereby certifies that:
 - (a) A drug-free workplace will be provided for employees during the performance of this CONTRACT; and
 - (b) It will secure from any subcontractor hired to work in a drug-free workplace the following written certification: "As part of the subcontracting agreement with (Contractor's Name), (Subcontractor's Name) certifies to the CONTRACTOR that a drug-free workplace will be provided for the subcontractor's employees during the performance of this CONTRACT pursuant to paragraph 7 of subsection B of Code Section 50-24-3."

- 2) The CONTRACTOR may be suspended, terminated, or debarred if it is determined that:
 - (a) The CONTRACTOR has made false certification hereinabove; or
 - (b) The CONTRACTOR has violated such certification by failure to carry out the requirements of O.C.G.A. 50-24-3.
- C. **Obligations Owed to Third Parties.** The CONTRACTOR represents and warrants that all obligations owed to third parties with respect to the activities contemplated to be undertaken by the CONTRACTOR pursuant to the CONTRACT are or will be fully satisfied by the CONTRACTOR so that the Division will not have any obligations with respect thereto.
- D. **Funding.** Notwithstanding any other provision of this CONTRACT, the CONTRACTOR hereto acknowledges that the Division, as an agency of the State of Georgia, is prohibited from pledging the State's credit. In the event that the source of payment no longer exists or is insufficient with respect to the Services, this CONTRACT shall terminate without further obligation of either Party as of that moment. The Division shall remain obligated to pay for Services performed and accepted by the Division prior to such termination. The DIVISION shall provide notice to the CONTRACTOR as soon as it becomes aware that the source of payment no longer exists or is insufficient with respect to the services. The determination of the Division of the events stated above shall be conclusive.
- E. Any suit brought to enforce this CONTRACT or to determine any dispute under this CONTRACT may be brought only in the Superior Court of Fulton County, Georgia. The Parties agree to submit to the personal jurisdiction of the Superior Court of Fulton County.
- F. **Trafficking Victims Protection Act of 2000 Prohibition Statement –** The Contractor will not engage or allow employees, subcontractors, or subcontractor employees to engage in severe forms of trafficking in persons during the period of time that the award is in effect: procure a commercial sex act during the

period of time the award is in effect; or use forced labor in the performance of this contract.

- G. This CONTRACT constitutes the entire agreement between the Parties with respect to the subject matter of this CONTRACT and may be altered or amended only by a subsequent written agreement signed by each of the Parties hereto. This CONTRACT supersedes all prior agreements, negotiations, and communications of whatever type, whether written or oral, between the parties hereto with respect to the subject matter of this CONTRACT. No waiver of any of the provisions of this CONTRACT shall be binding unless executed in writing by the Party making the waiver. No waiver of one provision shall constitute a waiver of any other provision nor shall any be deemed a continuing waiver.
- H. The headings of the paragraphs and subparagraphs hereof are for descriptive purposes only and do not modify or qualify any of the rights or obligations set forth in this CONTRACT.
- I. The CONTRACTOR will maintain an active and current registration in the Central Contractor Registration (www.ccr.gov) during this project.
- J. Single Audit Act. In accordance with OMB Circular A-133, the recipient hereby agrees to obtain a single audit from an independent auditor, if it expends \$750,000 or more in total Federal funds in any fiscal year. Within nine months after the end of a recipient's fiscal year or thirty days after receiving the report from the auditor, the recipient shall submit the SF-SAC and a Single Audit Report Package to the Division. More information can be found at <http://harvester.census.gov/fac/>.
- K. The CONTRACTOR agrees that all work performed under this CONTRACT will comply fully with applicable administrative and other requirements established by applicable Federal and state laws, regulations and guidelines. The CONTRACTOR shall comply with all requirements or regulations of the Division

that are currently applicable or become applicable during the term of this CONTRACT.

6. Georgia Security and Immigration Compliance Act of 2006.

- A. Pursuant to the Georgia Security and Immigration Compliance Act of 2006, the CONTRACTOR understands and agrees that compliance with the requirements of O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 are conditions of this CONTRACT. The CONTRACTOR hereby warrants compliance with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act, O.C.G.A. § 13-10-90 *et. seq.*, by registering at <https://www.vis-dhs.com/EmployerRegistration> and verifying information of all new employees; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at rule 300-10-1-.01 *et. seq.* The CONTRACTOR'S fully-executed affidavit is attached hereto as Exhibit D and is incorporated into this CONTRACT by reference herein.
- B. The CONTRACTOR warrants that, in the event the CONTRACTOR employs or contracts with any subcontractor(s) in connection with this CONTRACT, the CONTRACTOR shall include a similar provision in all written agreements with any such subcontractor(s). The CONTRACTOR agrees to maintain records of any such written subcontractor agreements and submit to the Division upon request.

7. New Restrictions On Lobbying as set forth in Title 40 CFR Part 34. Funding provided in this CONTRACT are appropriated Federal funds in the form of a grant from the Congestion Mitigation and Air Quality Improvement (CMAQ) program.

- A. No appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the

awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- B. Each person who requests or receives from an agency a Federal contract, grant, loan, or cooperative agreement shall file with that agency a certification, set forth in Exhibit E, that the person has not made, and will not make, any payment prohibited by paragraph A of this section.
- C. Each person who requests or receives from an agency a Federal contract, grant, loan, or a cooperative agreement shall file with that agency a disclosure form, set forth Exhibit E, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under paragraph A of this section if paid for with appropriated funds.
- D. The Disclosure of Lobbying Activities and the Certification Regarding Lobbying forms must be completed, signed and returned with this CONTRACT in order for the CONTRACT to be valid. These forms are included in Exhibits E and F.

IN WITNESS WHEREOF, the Division and the CONTRACTOR have executed this CONTRACT to be given effect as of the date first above written.

ATTEST:

Eli Ruddy

Department of Natural Resources
Environmental Protection Division

BY: *Richard E. Dunn*

Richard E. Dunn, Director

ATTEST:

Amy S. Todd

Norfolk Southern Railway Company

BY: *C. Douglas Corbin*

Name: *C. Douglas Corbin*

Title: *AVP - Mechanical*

Exhibit A

Norfolk Southern Railway Company Scope of Work for Switch-Duty Locomotive Conversions in Atlanta, Georgia

Scope of Work

Unless terminated early under provisions of the CONTRACT, CONTRACTOR will perform tasks identified in Paragraph A. below to convert locomotives described in Paragraphs B. below consistent with the Contractor's Application to reduce emissions from locomotives used for switching in Atlanta for purposes of improving air quality in Georgia. These tasks include:

- A. Within 45 days of execution of the CONTRACT, CONTRACTOR shall provide to the Division an updated project schedule with specific dates for completing each Project-related task that will assure the project is completed within the contract period. The CONTRACTOR will be able to seek reimbursement for each completed task consistent with the provision of the CONTRACT. Each task needs to be clearly identified in a way to assure all related charges for that task are discrete and not intermixed with other tasks. Each task associated with seeking reimbursement must have easily-identifiable cost elements including, but not limited to, labor, materials and equipment that will be incurred by the CONTRACTOR as a result of completing that task.
- B. CONTRACTOR shall convert five (5) TIER 0 or lower locomotives ("Original Locomotives") with at least five (5) years expected remaining life into (i) two (2) mother/slug sets, where the "mother" locomotive will meet EPA TIER 3 Line Haul Duty Standards and EPA TIER 2 Switcher Duty Cycle Standards or better (i.e., lower emissions) and (ii) one (1) clean locomotive meeting EPA TIER 3 Line Haul Duty Standards and EPA TIER 2 Switcher Duty Cycle Standards or better (i.e., lower emissions) (collectively, the "Converted Locomotives") as further described in the Application.
- C. The CONTRACTOR shall maintain the Converted Locomotives sufficiently to assure each Converted Locomotive remains operational for a period of ten years from the date after each Converted Locomotive is retrofitted (the "Operating Period") and shall operate the Converted Locomotives at least 80% of each Converted Locomotive's operational hours in and around the Atlanta Terminal as described in Contractor's Application. The Operating Period and number of operational hours may be modified if the Converted Locomotive is damaged such that the CONTRACTOR and the DIVISION mutually agree that it can be removed from service, in which event, CONTRACTOR shall be deemed to have satisfied its obligations under this CONTRACT with respect to such Converted Locomotive(s). The CONTRACTOR shall inform the Division of all Converted Locomotives that are removed from the fleet due to damage or inoperability. The Division acknowledges that the Converted Locomotives may leave the Atlanta terminal for 92-day Federal Railroad Administration inspections and maintenance, for Positive Train Control installation, or for other logistical contingencies without triggering

a notice requirement provided that these instances are subsequently included as operational patterns in the running reports required by Paragraph G. The Division understands that the CONTRACTOR does not permanently assign locomotives to a particular yard, and actual locomotives required for switching will vary from day to day depending upon rail traffic volume and locations, and depending on the availability of locomotives to meet operational needs. The ten-year period for each Converted Locomotive will start on the date that the Converted Locomotive is placed into revenue service. The CONTRACTOR shall not sell any Converted Locomotive until the Operating Period has passed or the Converted Locomotive has been determined to be damaged beyond repair or permanently inoperable.

- D. If the diesel locomotive engine is replaced as part of the locomotive conversion, the CONTRACTOR shall provide evidence that the old diesel engine has been permanently taken out of service or rebuilt to meet emission standards required for new engines. This may be accomplished by providing pictures and video evidence of the process of destroying or rebuilding the old diesel engine. The evidence needs to include a recording of the engine ID. Another option is to have the Division witness the old diesel engine destruction, which can be accommodated if the destruction occurs in Georgia.
- E. Initial Report: Before converting the Original Locomotives, the CONTRACTOR shall submit an initial report containing the following information:
- (1) Work scope consistent with the CONTRACT and the Application.
 - (2) Initial estimated emissions reductions. This estimate may use data as provided in the Contractor's Application if there have been no changes in emission levels of the Original Locomotives and the estimated emissions for the Converted Locomotives from the Application. The designated TIER level may be used to estimate emissions from a Converted Locomotive.
- F. Post Conversion Report: The CONTRACTOR shall submit a post conversion report within one month (30 days) after the Converted Locomotive is placed into service in the Atlanta Terminal. The report shall contain the following:
- (1) Final estimate of emissions reductions. Provide an explanation if the initial and final emissions reductions estimates are different.
 - (2) Locomotive ID numbers for the Original Locomotives and the Converted Locomotives.
 - (3) Pictures showing major components installed during the conversion.
 - (4) Pictures of the completed Converted Locomotives and emissions labels.
 - (5) Certification/assurance that emissions critical components were properly installed on the Converted Locomotives and are in working condition.
 - (6) If the proposed time for completing the conversion is exceeded, an explanation of the delay.
 - (7) If the diesel locomotive engine is replaced as part of the locomotive conversion, the CONTRACTOR shall submit evidence that the old diesel engine has been permanently taken out of service or rebuilt consistent with Paragraph D.
- G. Running reports will be submitted every six months for the first two years (commencing within six months after submission of the post conversion report) and annually for eight

years thereafter. These reports may be combined for the locomotives converted under this CONTRACT. The running reports will contain the following information:

- (1) Estimated emissions and fuel consumption, which may include estimates or calculations based on known information including data from the Contractor's Application.
- (2) Description or confirmation of general operating patterns of the Converted Locomotives.
- (3) Certification or assurance of proper operation and maintenance of the Converted Locomotives, in particular, the emissions critical components.

- H. The CONTRACTOR shall submit any reports to the Division by electronic mail (e-mail) and shall provide two copies of the reports in the e-mail with one in Microsoft Word format and the second in a PDF format. The CONTRACTOR shall submit a hard copy of the report upon the Division's request.
- I. Notwithstanding anything to the contrary herein, in the CONTRACTOR's Application or in the Request for Applications, CONTRACTOR shall have no obligation to conduct extra-operational studies or investigations or to generate data not generated in the normal course of business in order to compile the reports above or any other information requested by the Division under this CONTRACT. Further, the Division acknowledges the reporting limitations as set forth in the Contractor's Application, and CONTRACTOR shall not be required to prepare or submit any data or information that is contrary to those limitations. For example, fuel usage of a locomotive could be based on general fuel data rather than locomotive specific data. Another example is that a duty cycle for a locomotive can be highly variable and difficult to consistently predict. The CONTRACTOR will use estimates for such determinations and may use best available information, which may include engineering estimates based on knowledge and experience of such operations.
- J. CONTRACT funds will cover up to 70% of the total cost of the Project and will be distributed to the CONTRACTOR incrementally (not more than once per annual quarter) following completion of conversion task(s), provided the match has been satisfied for the incremental distribution.
- K. The CONTRACTOR shall only invoice the Division for expenses eligible for award funding. As part of the invoice, the CONTRACTOR shall certify each task that has been completed. Upon completion of the Project, the CONTRACTOR shall submit a final invoice requesting up to the remaining funds for any unpaid task expenses provided that the total grant distribution for this project does not exceed the maximum allowed under the CONTRACT. The final invoice shall provide all the information as requested in Method of Payment section of the CONTRACT.
- L. The CONTRACTOR shall only invoice the Division for eligible expense resulting from the Converted Locomotive conversions as part of completing tasks as described in Part A.
- M. The CONTRACTOR may not seek reimbursement or cost share consideration for certain ineligible costs, which would include management or similar fees used to accumulate and

reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs.

- N. The CONTRACTOR may not seek fees for consultants in excess of five hundred eighty-seven dollars and twenty cents (\$587.20) per day nor seventy-three dollars and forty cents (\$73.40) per hour.

Exhibit B
Contractor's Application

See Attached (For Electronic Copy, Double Click Below)



Adobe Acrobat
Document

Application Cover Page

Company Name **Norfolk Southern Railway Company**

Contact Information – Technical

Name **Mark F. Duve**
 Mailing Address **Mechanical Department – Box 184**
1200 Peachtree Street NE
Atlanta, GA 30309-3579
 Phone Number **404-582-6743**
 E-mail **Mark.Duve@nscorp.com**

Contact Information – Contracts

Name **C. Douglas Corbin**
 Mailing Address **Mechanical Department – Box 184**
1200 Peachtree Street NE
Atlanta, GA 30309-3579
 Phone Number **404-582-6730**
 E-mail **Doug.Corbin@nscorp.com**

Contact Information – Additional Contact (optional)

Name _____
 Mailing Address _____

 Phone Number _____
 E-mail _____

Application Summary

Total number of conversions	Twelve
Total funding requested	\$11,900,000
Total match proposed	\$5,100,000
Total project cost	\$17,000,000

Authorized Official

Name and Title **C. Douglas Corbin, Assistant Vice President - Mechanical**

I certify to the best of my knowledge that the information provided in this application is accurate. I agree that all of the minimum requirements have been or will be met. Additionally, I understand the obligations constraints associated with this proposal. I understand that completing this form simply enters me into the Genset Locomotive Conversion funding competition and my final decision to accept the grant funding, if I were to be selected, would occur later.

Signature: *C. Douglas Corbin* Date: 3-1-2015

2. Locomotive Railyard/Location and Operation.

i. Rail yard Location and Area of Operation

Norfolk Southern Railway Company (“Norfolk Southern”) proposes to convert seven (7) 4 axle switcher locomotives and five (5) SD40 series switcher locomotives to five (5) mother/slug sets and one (1) single SD33ECO and one (1) GP33ECO conversion locomotives using advanced 12-710ECO engines manufactured by Electro Motive Diesel (EMD), with emissions achieving the Environmental Protection Agency’s (EPA) Tier 3 standards. The mother/slug configuration consists of a single engine with four traction motors on one locomotive platform (the “mother”) and a second platform with four additional traction motors but without an engine (the “slug”). The single engine therefore powers eight traction motors on two platforms, thus providing high initial tractive effort to move the train. The three mother/slug combinations that will be placed into operation in the Atlanta nonattainment area under this funding arrangement will effectively perform the work of six earlier locomotives, given horsepower and tractive efforts of various locomotive models. The 3 mother/slug sets and 5 SD conversions will be operated in yard and local service in and around Norfolk Southern’s Atlanta Terminal, which is made up of the Inman, East Point, South Yard, and Forest Park rail yards, all of which are located in the Metropolitan Atlanta area, and includes local service to customers in that region. All of the locomotives covered by this project will be operated within the counties that the GA Environmental Protection Division (GA EPD) has categorized as Atlanta PM_{2.5} “urban core” non-attainment. See attached map in the Appendix.

ii. Converted Locomotives

For required operating flexibility, Norfolk Southern dedicates locomotives to divisions, and the actual assignment of the locomotives within the division will vary over time. Often, locomotives will also move between divisions as operations warrant. For instance, by way of example only, a locomotive initially operating in yard and local service out of the Atlanta Terminal may work in one of the terminal rail yards until maintenance is required. That locomotive could then be transferred to a location where such maintenance could occur, and may be replaced by another locomotive. When the original locomotive that was operating in and around the Atlanta Terminal leaves the maintenance shop, it may be reassigned to another yard in need of a locomotive for various reasons, which may include business level increases or necessary maintenance of another locomotive. As such, locomotives are truly mobile assets and are not dedicated to a single yard or region for their service lives.¹ It is for this reason that Norfolk Southern at this time cannot provide a list of locomotives that are permanently assigned to the Atlanta Terminal as candidates for conversion. However, the list provided below

¹ Norfolk Southern notes that certain locomotives have been or are being converted under a prior CMAQ grant and such locomotives are dedicated to the area for which the grant was awarded, including locomotives in the Atlanta Terminal.

shows locomotives that Norfolk Southern considers as potential candidates that can be converted for this application.

(a) Number	(a)Serial#	(b)Model	(c)Year	(d)Tier	(e) Last Rebuild	(f)Remaining Years of Service
523	46118	D8-32B	1989	0	1/2006	15
524	46119	D8-32B	1989	0	12/2006	15
527	46122	D8-32B	1989	0	3/2006	15
529	46124	D8-32B	1989	0	10/2006	15
531	46126	D8-32B	1989	0	7/2006	15
5802	786251-34	GP50	1980	0	6/2004	15
5803	786251-14	GP50	1980	0	7/2004	15
5806	786251-26	GP50	1980	0	10/2004	15
5808	786251-47	GP38-3	1980	0	11/2004	15
3292	776082-5	SD40-2	1978	0	8/2005	15
3296	776082-9	SD40-2	1978	0	4/2005	15
3297	776082-10	SD40-2	1978	0	9/2007	15

Norfolk Southern reserves the right to replace the specific locomotives above with similar model, build date and emissions tier, if it is found at the time of conversion the locomotives are not suitable for conversion due to accident damage, severe rust damage or any other issue that may cause the conversion of the specified locomotive to exceed the estimated cost.

Although the models and numbers may vary depending on what is actually operating in and around the Atlanta Terminal at the time of the award, Norfolk Southern anticipates emissions benefits on the same order of magnitude as these replacements, and for purposes of this application, uses these models for those emissions calculations.

g. Locations of Locomotive Operation

Currently, Norfolk Southern has approximately 45 locomotives operating in switcher service at the Atlanta Terminal. There is no locomotive that is assigned to a particular rail yard or section of a rail yard. All yard and local locomotives operating in the Atlanta Terminal can operate anywhere within the terminal as the Atlanta Terminal is made up of four yards and the tracks between them, as well as tracks leading to local industries. The yards are (1) Inman, located between Perry Blvd NW and Marietta Road NW, Atlanta, Fulton County, GA; (2) South Yard, located south of Abernathy Blvd and west of I75/I85, Atlanta Fulton, County, GA; (3) East Point, located south of the Langford Parkway and parallel to Main Street

(US 29) in East Point, Fulton, County, GA; and (4) Forest Park, located north of the Forest Parkway and East of Old Dixie Road (US 41 and 19) in Forest Park, Clayton County, GA.

These switcher locomotives operate in yard and local service to transfer rail cars or cuts of cars between trains within a yard or between the four yards that make up the terminal and other nearby yards in the Atlanta area, or to transfer rail cars or cuts of cars to or from local industries in the vicinity of the yard. The yards, as well as the local industries to which the switcher locomotives may move freight, are within the Atlanta non-attainment “urban core” counties listed in the Request for Applications issued by GA EPD. It is estimated that the converted locomotives will be in the Atlanta Terminal at least 80% of the time with the remaining 20% out for servicing.

h. Duty Cycle Information

Generally speaking, the switcher locomotives operating out of the Atlanta Terminal sort cars from track to track, assemble blocks of rail cars into trains and transfer blocks of rail cars to and from local rail yards or local industries in the Atlanta area, as described above in section (2)(g). The duty cycle of a typical yard switcher at the Atlanta Terminal varies throughout the year and from year to year as the amount of rail traffic varies. For evaluation purposes, a sample of event recorder data was downloaded from ten locomotives that have operated within the Atlanta Terminal in local switching service in the Atlanta non-attainment area.² In light of the mobile and variable nature of the switcher locomotives and yard and local operations, this sample set may not be representative of operations at any particular time or during any particular season. We suggest that the EPA default values indeed may provide better estimates because they are an average of typical switcher operations. From this very limited dataset, and for evaluation purposes only, a sample description of normal and occasional operation cycles for locomotives operating in the Atlanta area has been developed as follows.

² Given the labor intensive nature of obtaining this data for the sample set used in this application, and the very limited value of such data for extrapolating operational patterns or characteristics, Norfolk Southern does not anticipate obtaining this type of event recorder data on an ongoing basis for the converted locomotives.

Throttle Notch	Percentage in Notch
Dynamic Brake:	0.31%
Idle:	80.30%
Notch 1:	8.20%
Notch 2:	5.87%
Notch 3:	2.65%
Notch 4:	1.73%
Notch 5:	0.56%
Notch 6:	0.19%
Notch 7:	0.07%
Notch 8:	0.12%

This duty cycle does not account for the time the locomotive is shut down for servicing or during other shutdown times when the locomotive is not operational. It is expected that when in service, the converted locomotives will have a different set of operational cycles due in part to the automatic engine start/stop. In addition, the mother/slug locomotives will be equipped with an electric layover heating system that utilizes wayside power via a cable connection, which may further reduce idle time up to 20%.

i. **Kit Procedure for Conversion**

The installation of the kit entails stripping the locomotive to its under frame, modifying the under frame to accept the new engine, installing the new engine, modifying the alternator to accept the new engine, modifying the locomotive body to accept the new engine and cooling system, replacing the electrical control cabinet and rewiring the locomotive. Norfolk Southern plans to apply the EMD 710ECO kit at its Juniata Locomotive Shop located in Altoona, PA. Norfolk Southern has experience in applying mother/slug kits on other locomotives that were funded under American Recovery and Reinvestment Act Funding for the National Clean Diesel Funding Assistance Program (EPA-ARRA-OAR-OTAQ-09-06), and Congestion and Mitigation Air Quality grants for 26 GP33ECO locomotives and 13 slugs that were provided by GA Department of Transportation, and Illinois Department of Transportation.

The manufacturing of the slug is similar to the repower of an existing locomotive with the exception of instead of replacing the engine, a concrete block is installed where the engine would be and the fuel, oil and cooling systems are permanently removed.

j. Total Cost per Mother/Slug and Conversions

The approximate estimated cost for each of the conversions is as follows:

3000 HP GP33ECO Mother

\$1,259,000 Mother/Slug Kit

\$ 791,000 Norfolk Southern Material & Labor

\$2,050,000 Cost per Completed Mother/Slug Set

3000 HP SD33ECO Mother

\$1,150,000 Mother (for yard only slug)

\$ 900,000 Norfolk Southern Material & Labor

\$2,050,000

Four Axle Slug

\$120,000 Electrical Kit

\$ 473,000 Norfolk Southern Provided Material

\$593,000 Cost per Completed GP33ECO Mother only

Six Axle Slug

\$184,000 Slug Kit (for cableless slug)

\$241,000 Norfolk Southern Labor

\$435,500,000

Therefore, the total estimated cost for the proposed program is \$17,000,000.

k. Years of Proposed Commitment to the Atlanta Terminal.

Norfolk Southern proposes to operate the mother/slug sets and SD conversions funded by this project in and around the Atlanta Terminal, as discussed in (2)(g) above, for a period of 10 years after each locomotive is retrofitted.

l. Proposed Percent of Annual Operating Time Commitment to Atlanta Terminal

Norfolk Southern anticipates operating each of the mother/slug sets and conversions funded by this project in and around the Atlanta Terminal, as discussed in (2)(g), at least 80% of each locomotive's operational hours. Norfolk Southern recommends this 80% regional operation due to the likelihood that the units will leave the Atlanta non-attainment area for 92-day Federal Railroad Administration inspections and other maintenance or for other logistical contingencies.

m. Estimate of Annual Fuel Use Before and After Conversion.

Norfolk Southern does not have the ability to measure the fuel used in any one particular locomotive. Nor can it create that ability for this project. Rather, it measures fuel use on a system-wide basis. For this reason, this application relies on expert opinion to estimate approximate fuel use for a typical locomotive in switcher service in the Atlanta region. The Manager of Fueling Operations at Norfolk Southern has provided an estimate, based on his knowledge of and experience with locomotives and fueling operations. Based on this opinion, for purposes of this application and any subsequent reporting required by a grant of funds for this project, Norfolk Southern will use an average of approximately one thousand gallons of fuel per traditional switcher locomotive per week. Norfolk Southern will use a manufacturer's estimate of fuel usage for the converted mother/slugs sets in any reporting required by a funding arrangement for this project.

The locomotives that would be removed from switcher service in and around the Atlanta Terminal as part of this project do not have automatic engine start/stop and rely solely on the train crews to shut down the locomotives when the engines are not required for operational reasons. Past studies have shown that automatic engine start/ stop can reduce idle time by approximately 63% on an EPA switch duty cycle. Applying the results of this study to the Atlanta duty cycle as described in section (2)(h) above would be a conservative approach, since the EPA switch duty cycle has considerably less time in idle. In addition to the fuel savings generated from shutdown of the mother locomotive engines due to the automatic start/stop feature, the mother locomotives reduce emissions by reducing idle time per engine as well as emissions in idle, and by using Tier 3 engines.

n. Calculated Project Emissions

The estimated annual project emissions reductions are as follows:

Total Estimated Project Emissions Reductions (tons)		
	NOX	PM
Total Annual Emissions Reductions	84.43	3.56
Total 10 Year Project Reduction	844.3	35.60

These total projected emissions reduction represents the sum of the locomotive replacement calculations provided below:

Emissions Reduction for Pairs of GP Series Locomotives replaced by 3000 HP 710ECO Mother/Slugs						
	BSFC (bhp-hr/gal)	Activity Factor (gal/yr)	Emission Factors (g/bhp-hr) per locomotive		Calculated Annual Emissions (tons/yr)	
			NOx	PM	NOx	PM
Baseline GP38-2	12.12	52,000	17.12	0.48	11.89	0.33
3000 HP 710 ECO	14.28	41,600	9.79	0.09	6.41	0.06
Reduction per mother/slug					17.37	0.60
Annual reduction for 3 sets					51.12	1.81
10-Year Total Reduction					512.19	18.09

Emissions Reduction for single GP38 Series Locomotives replaced by Single 3000 HP 710ECO						
	BSFC (bhp-hr/gal)	Activity Factor (gal/yr)	Emission Factors (g/bhp-hr) per locomotive		Calculated Annual Emissions (tons/yr)	
			NOx	PM	NOx	PM
Baseline GP38-2	12.12	52,000	17.12	0.48	11.89	0.33
3000 HP 710 ECO	14.28	41,600	9.79	0.09	6.41	0.06
Reduction per Conversion					5.48	0.27
Annual reduction for 3 sets					5.48	0.27
10-Year Total Reduction					54.80	2.71

Emissions Reduction for SD40-2s Replaced with SD33ECO Mother/Slugs						
	BSFC (bhp-hr/gal)	Activity Factor (gal/yr)	Emission Factors (g/bhp-hr) per locomotive		Calculated Annual Emissions (tons/yr)	
			NOx	PM	NOx	PM
Baseline SD40-2	11.19	52,000	18.1	0.52	11.61	0.33
3000 HP 710ECO	14.28	41,600	9.79	0.09	6.41	0.06
Emission Reductions		Reduction per mother/slug			16.81	0.61
		Annual reduction for 2 sets			22.63	1.21
		10-Year Total Reduction			226.30	12.13

Emissions Reduction for SD40-2s converted to Single SD33ECO						
	BSFC (bhp-hr/gal)	Activity Factor (gal/yr)	Emission Factors (g/bhp-hr) per locomotive		Calculated Annual Emissions (tons/yr)	
			NOx	PM	NOx	PM
Baseline SD40-2	11.19	52,000	18.1	0.52	11.61	0.33
3000 HP 710ECO	14.28	41,600	9.79	0.09	6.41	0.06
Emission Reductions		Reduction per Conversion			5.20	0.27
		Annual reduction for single set			5.20	0.27
		10-Year Total Reduction			52.00	2.71

Notes:

1. The baseline locomotives are US EPA Tier 0 compliant.
2. The DCBSFC is based upon the sample Atlanta Terminal duty cycle as described in section (2)(ii)(h).

iii. **Timeline**

The proposed schedule to implement the mother/slug program is provided in the table below. Once CMAQ funding is approved, Norfolk Southern will order the required equipment. Each retrofit will take approximately 6 months from the date

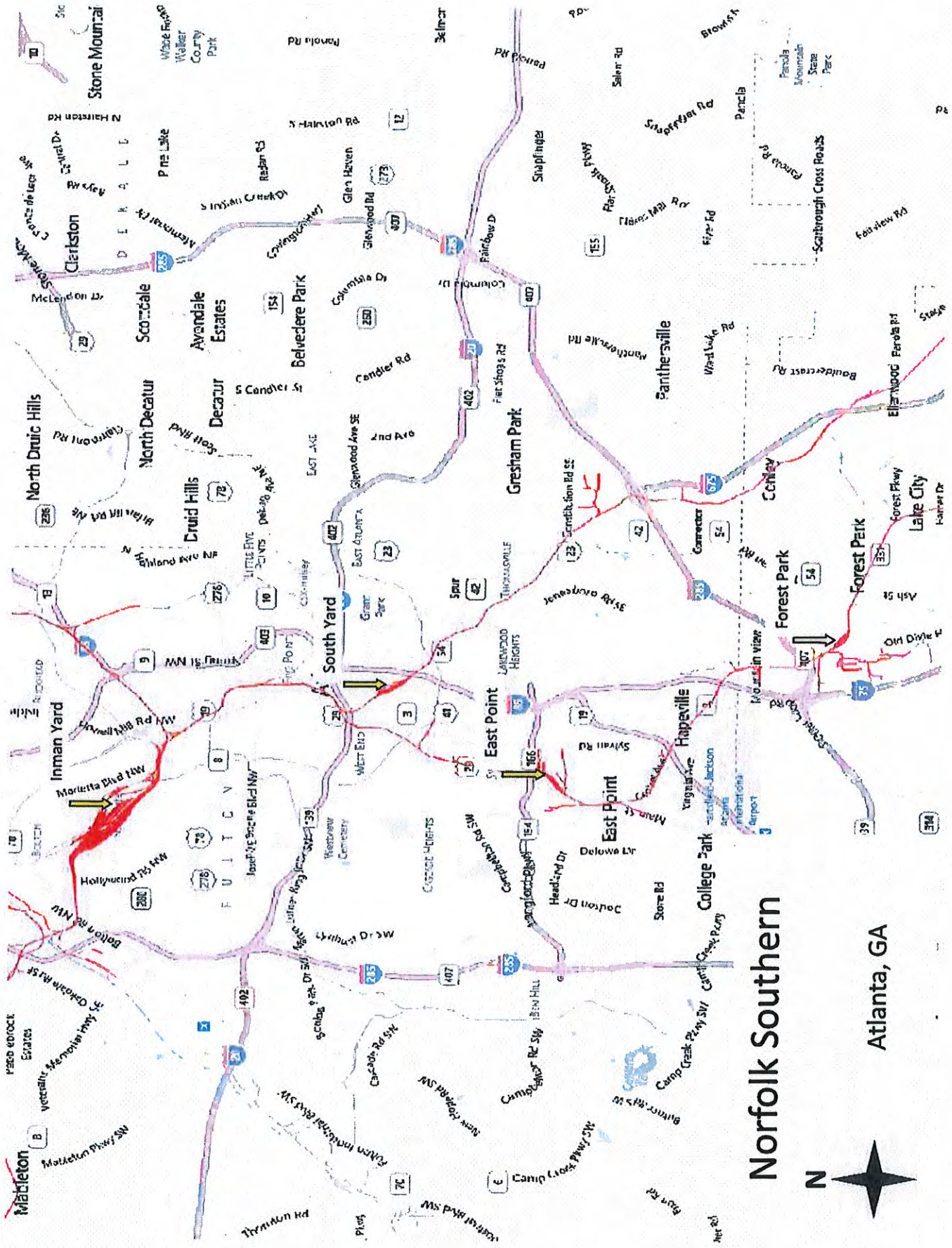
of commencement of that installation. As such, provided the GA EPD approves the project as proposed, the nine switcher locomotives and three slugs will be retrofitted and emissions reductions will be achieved by approximately July 31, 2016. If the project approval or execution of a funding contract is delayed beyond the schedule contemplated by the GA EPD Request for Applications as shown in the timeline below, the dates for completion of the mother/slug conversions necessarily will be delayed commensurately.

Date	Activity
May 2015	Finalize funding contract
May 2015	Order conversion equipment from OEM
January 2016	Begin strip and prepare first 2 units
February 2016	Receive first 2 Conversion kits
March 2016	Complete mother/slug set 1
April 2016	Complete mother/slug sets 2
May 2016	Complete mother/slug set 3
June 2016	Complete mother/slug sets 4 and 5
July 2016	Complete Single GP33ECO and SD33ECO conversions

The above schedule is based upon an eight month lead time for the first 710ECO mother/slug conversion kit. All mother/slug sets are anticipated to be placed in service out of the Atlanta Terminal within approximately two weeks after final testing is complete.

3) Other Information and Comments

Norfolk Southern has obtained activity data using a sample set from event recorders on a one-time basis. Given that the exact units to be taken out of service may or may not have been operating within the Atlanta region for significant times prior to their removal from service, the activity data for the baseline case will be as discussed in this application and will not be comprised of additional event recorder data from particular units. Likewise, Norfolk Southern will use the fuel estimates provided herein for the baseline case, and will use a manufacturer's estimate of fuel usage for the converted locomotives in any reporting required by a funding arrangement for this project. Again, Norfolk Southern does not have the means to measure actual fuel use per locomotive – even for the converted locomotives – and cannot justify the capital cost associated with the necessary infrastructure that would be required to gain this ability. Further, in the event less funding is awarded than what is requested in this proposal, Norfolk Southern reserves the right to select the mix of locomotives that will be replaced or converted with such funding.



Norfolk Southern

Atlanta, GA



Exhibit C
Request for Applications (RFA)

See Attached (For Electronic Copy, Double Click Below)



Adobe Acrobat
Document

Request for Applications
Railroad-Related Emission Reductions Grant Program
Switch-Duty Locomotive Conversions in Atlanta, Georgia

Released January 5, 2015
Application due by March 2, 2015

GA Environmental Protection Division
Air Protection Branch
Planning and Support Program

The Georgia Environmental Protection Division (EPD) is requesting proposals to convert traditional locomotives performing switch duties in the Atlanta PM_{2.5} 'urban core' nonattainment counties, including Clayton, Cobb, DeKalb, Fulton, and Gwinnett Counties, to 'Genset' locomotives or other alternative low-emission locomotives to be used for switching. 'Genset' is a term used in the marketplace to describe a modern locomotive that meets EPA's stringent standards and can employ one or more engines. 'Switch-duties' include moving railcars around to assemble and disassemble trains, primarily within railyard limits. Priority will be given to switch-duty locomotives operating closest to the EPD Fire Station #8 air quality monitor located at 1711 Marietta Blvd in Fulton County (Figures 1 and 2).

Up to \$36 million in funding has been awarded for these conversions by the Georgia Department of Transportation to the GA EPD through the U.S. Department of Transportation's Congestion Mitigation and Air Quality (CMAQ) Program. This Request for Applications pertains to \$11,999,500 available from fiscal year 2012. These funds will cover up to 70% of the cost of converting older, more emissive locomotives currently performing switch duties to lower emitting locomotives, requiring a minimum 30% match. Conversions must be completed by July 31, 2016.

Project Goals

The major goals of this project are (1) to protect human health in the Atlanta area by reducing exposure to diesel combustion emissions and subsequent secondary air pollutants, especially PM_{2.5} (particulate matter of 2.5 microns in diameter and smaller), and (2) to facilitate attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). The development of agreements associated with this project will incorporate any guidance received from the US EPA regarding necessary actions to ensure the applicability of the emission reductions resulting from this project to the Atlanta PM_{2.5} State Implementation Plan (SIP). The SIP is submitted to the US EPA by the State of Georgia to demonstrate its air quality management plan to attain and maintain the NAAQS.

Project Overview

Eligibility and Project Requirements

Owners of traditional diesel switch-duty locomotives operating in Clayton, Cobb, DeKalb, Fulton, and Gwinnett Counties are eligible for this funding assistance. Priority will be given to high-emitting locomotives operating as switchers and closest to the EPD Fire Station #8 air quality monitor in Fulton County. Locomotives eligible for conversion include unregulated (pre-1973) or Tier 0 (1973-2001) diesel switchers that are currently in service and would have remained in service in the proposed railyard for at least five years from the application date. If EPD and the Grantee mutually agree that a switch locomotive operating outside of the proposed railyard is a more beneficial candidate for conversion than any locomotive operating as a switcher in the railyard, the alternative locomotive may be converted and used to replace a switch locomotive normally operating in the Atlanta urban core counties, provided the locomotive conversion will result in the same or greater PM_{2.5} and NO_x emission reductions as if the switcher to be replaced were converted. In addition, if EPD and the Grantee mutually agree, the Grantee will be allowed to convert or replace a different locomotive from that identified in the application subject to, at a minimum, achieving the emission reductions presented in the application.

Emissions benefits must be calculated as the emission difference between the new converted locomotive(s) and the replaced or converted locomotive(s) previously operating in the designated Atlanta urban core railyard. This project must result in emission reductions that would otherwise not occur in the Atlanta area for the remaining useful life of the converted or replaced equipment in the designated Atlanta urban core railyard (e.g., the project cannot be applied to increase a fleet size and emission reductions must be greater than what would have occurred due to fleet turnover and phased in regulatory emission limits in the Atlanta urban core railyard.) If a locomotive is repowered, the original locomotive engine must be permanently retired or rebuilt to meet emission standards required for new engines. All project funding and match contributions must be for locomotive conversions or replacements that explicitly improve air quality for the Atlanta urban core counties only. Rebuilding a locomotive engine to meet new emission standards does not qualify for funding from this project and is not eligible as part of the required match unless that engine is used to explicitly convert another switcher locomotive as part of the project that meets all the emission requirements set forth by this RFA Atlanta PM_{2.5} 'urban core' nonattainment counties.

Proposals must commit the converted locomotive to at least 80% of their operating time within a designated distance of the proposed railyard(s) for a minimum of 10 years (or a similar commitment schedule) unless the locomotive becomes inoperable and is unable to be repaired or replaced with comparable equipment.

Grant funds will cover up to 70% of the total locomotive conversion cost and will be distributed to the grantee incrementally (not more than once per annual quarter) following completion of conversion task(s), provided the match has been satisfied for the incremental distribution. Payments shall be made after invoices are approved by the EPD.

Selection Criteria

Projects will be ranked on a 100-point system with the following criteria:

1. The proposed railyard location. Highest points will be given to switch-duty locomotives operating near the Fire Station 8 Monitor, with points decreasing with distance. – 50 points
2. Cost effectiveness of the project based on (a) the emission levels of the engines to be converted/replaced (Tier level or direct measurements), (b) the operating cycle of the locomotive to be converted/replaced, (c) the estimated length of remaining service of the locomotive to be converted /replaced, (d) the emission levels of the converted locomotive, (e) the proposed amount of time of operation and average duty cycle of the converted locomotive (possibly the same as (b)), and (f) the number of years (minimum 10) that the converted locomotive will remain in the Atlanta Urban Core area. When calculating cost effectiveness, only funds to be awarded under this grant will be included. – 50 points

EPD may fund individual projects less than the requested amounts if the total amount of the proposals exceeds available funds as follows: If one proposal is received that meets all project criteria, that proposal will be funded at 100% of the available funds. If two eligible proposals are received, the 2nd highest scoring proposal will be funded at the lower of a) the amount of the proposal or b) a percentage of the available funds determined as follows: percent of available funds awarded = $20\% + (\text{total score}/4)\%$ with the remainder awarded to the highest scoring proposal. If three or more eligible proposals are received, the 3rd highest scoring proposal will be funded at the lower of a) the amount of the proposal or b) 10% of available funds, the 2nd highest scoring proposal will be funded at a lower of a) the amount of the proposal or b) a percentage of the available funds determined as follows: percent of available funds awarded = $15\% + (\text{total score}/4)\%$, and the remainder awarded to the highest scoring proposal.

If the amount of funding provided to individual projects is less than that project's respective proposal, EPD may specify which switcher engines are to be converted based on criteria 2 listed above for each switcher converted. If two or more proposals are received, EPD may adjust the amount of funding awarded to the 2nd and, if applicable, 3rd highest scoring proposal so that the amount of funding awarded plus the amount of match money provided by the grant recipient is sufficient for the complete conversion of the number of locomotives included in the award.

Penalties and/or contingencies for not meeting the terms of the contract will be specified in the funding contract in accordance with applicable requirements.

In the event that the applicant is offered funding less than the applicant proposed, and the applicant determines in its sole discretion that such allocation of funding is inadequate for its budgeting and finance purposes, then the applicant may withdraw its application in whole and reject any offer of funds without recourse from EPD. In addition, in the event the funding contract offered to the applicant includes provisions or incorporates documents that contain provisions with which the grantee does not agree, then grantee may withdraw its application in whole and reject any offered funds without recourse from EPD.

Reporting Requirements

Reporting requirements for each converted locomotive will include:

- (1) an initial report before the locomotive is converted,
- (2) a report within one month after completion of the conversion(s),
- (3) a report each 6 months for the first two years of operation of the converted locomotive, and
- (4) a report once per year for the remaining period of commitment.

The reports will include the following components (details are given below):

- (1) Initial report:
 - a. Activity, emissions, and fuel use information for the locomotive to be converted/replaced. The initial report may use data from the application if it meets all reporting criteria.
- (2) Post conversion report:
 - a. A description of expected emission levels based on the equipment installed.
 - b. Certification/assurance that the equipment was properly installed and is in working condition.
 - c. A description of the provisions that ensure enforcement of warranty claims against vendors if problems arise.
 - d. If the proposed time for completing the conversion is exceeded, provide a description and explanation of the delay.
- (3) 6 months descriptive operation reports (4 reports; one each 6 months for the first 2 years of operation):
 - a. Activity, emissions, and fuel use information for the converted/replaced locomotive.
 - b. Description or confirmation of operating patterns.
 - c. Certification/assurance of proper operation and maintenance of the locomotive and emissions control equipment.
- (4) Annual normal operation reports:
 - a. Activity, emissions, and fuel use information.
 - b. Description or confirmation of operating patterns.
 - c. Certification/assurance of proper operation and maintenance of the locomotive and emissions control equipment.

Application Components

The application should address each of the following items. Please contact the EPD at the address below for clarification if needed.

1. Applicant and Project Overview, to be submitted on the Application Cover Page. Includes:
 - i) Company name.
 - ii) Primary technical contact.
 - iii) Primary contractual contact.
 - iv) Additional contact.
 - v) Total number of conversions proposed.
 - vi) Total funding requested.
 - vii) Total match proposed.
 - viii) Total project cost.
 - ix) Signature of authorized official and date of submittal.
2. Locomotive, Railyard/location, and Operation:
 - i) Railyard location(s) and area of operation(s), include a map shows track locations relative to Fire Station 8 Monitor. List the distance from Fire Station 8 Monitor to the typical location that the switcher locomotive will operate. Describe if more than one railyard or area will be assigned.

- ii) Please give the following information for each locomotive to be converted, as applicable. If information pertains to more than one proposed conversion, provide the information for each locomotive to be converted.
- (a) Locomotive identifier, including both the manufacturer's serial number and the owner assigned identifier
 - (b) Model/type
 - (c) Year of engine manufacture
 - (d) Tier certification
 - (e) Last date of rebuild
 - (f) Expected remaining years of service
 - (g) Estimates of location(s) of operation and percent of time at each location. Include daily, weekly, and seasonal schedules if applicable, or other expected use both inside (at least 80%) and outside (up to 20%) of the designated operating distances (such as scheduled maintenance in outside locations). Describe if locomotive will be used in specific areas of yard(s).
 - (h) Description of normal and occasional operation cycles/duties, with a description of how the duty cycle (weekday/weekend, seasonal) and actual fuel use will be measured or calculated and reported. Do not use the EPA default switch locomotive duty cycle and annual switch fuel use estimates. If more than one measurement/calculation option is available, describe options with the benefits and detriments of using each method.
 - (i) Kit or procedure for conversion (description of equipment and process, particularly as related to emissions reduction such as use of Tier 4 nonroad engines or diesel particulate filters.)
 - (j) Cost of conversion, including labor and materials
 - (k) Years of proposed commitment to specified railyard(s) or areas
 - (l) Proposed percent of annual operating time commitment to specified railyard(s) or areas
 - (m) Estimate of annual fuel use before and after conversion (may be in terms of percentage of expected reduction or direct measurement). If funded, more specific fuel use measurements may be required. Please give an explanation of how the current estimate is made and what can be done in the future.
 - (n) Calculated estimate of annual NOx and PM2.5 emissions before and after conversion
 - (o) Description of any additional emission reductions or other benefits.
- iii) Timeline detailing the schedule and maximum time period needed for converting the locomotive(s), including when locomotive(s) will be removed, when and if replacements are brought in and removed, and when the locomotive will be completed and in use. If the timeline is dependent on number of conversions awarded, provide other potential timelines. Detail if lower than average emitting replacements can/will be utilized.
3. Please list any other comments, information, or descriptions that may be useful in analysis of this proposal, including a description of the activity and fuel use data you can provide in the required reports.

Please submit the application electronically in either MS Word or as an Adobe pdf, and send a signed hardcopy through certified or tracked mail. Any expense incurred to prepare the application is not reimbursable and is the responsibility of the applicant. In addition, operating expenses, fuel costs,

projects required by any law or other agreements, administrative costs, or work done or purchases prior to selection are not reimbursable and are the responsibility of the applicant.

For more information and/or to submit proposals, please contact:

Richard McDonald
GA Environmental Protection Division
Air Protection Branch
4244 International Parkway
Atlanta, GA 30354

404-362-6594
richard.mcdonald@dnr.state.ga.us

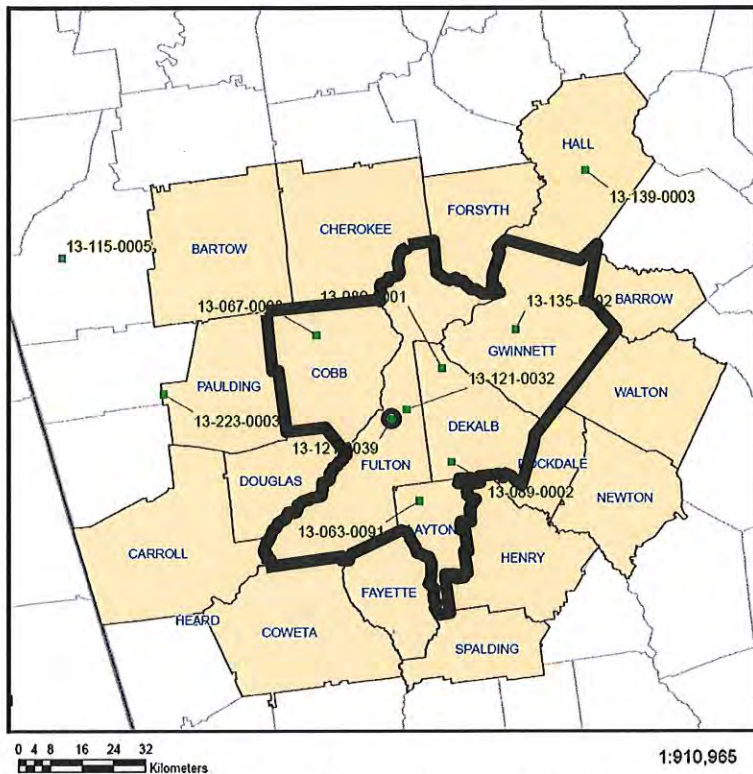


Figure 1. Atlanta PM2.5 Nonattainment Counties are shaded and the 'Urban Core' Counties are outlined in black. PM2.5 Monitor locations are shown with green squares and the Fire Station #8 monitor is circled.

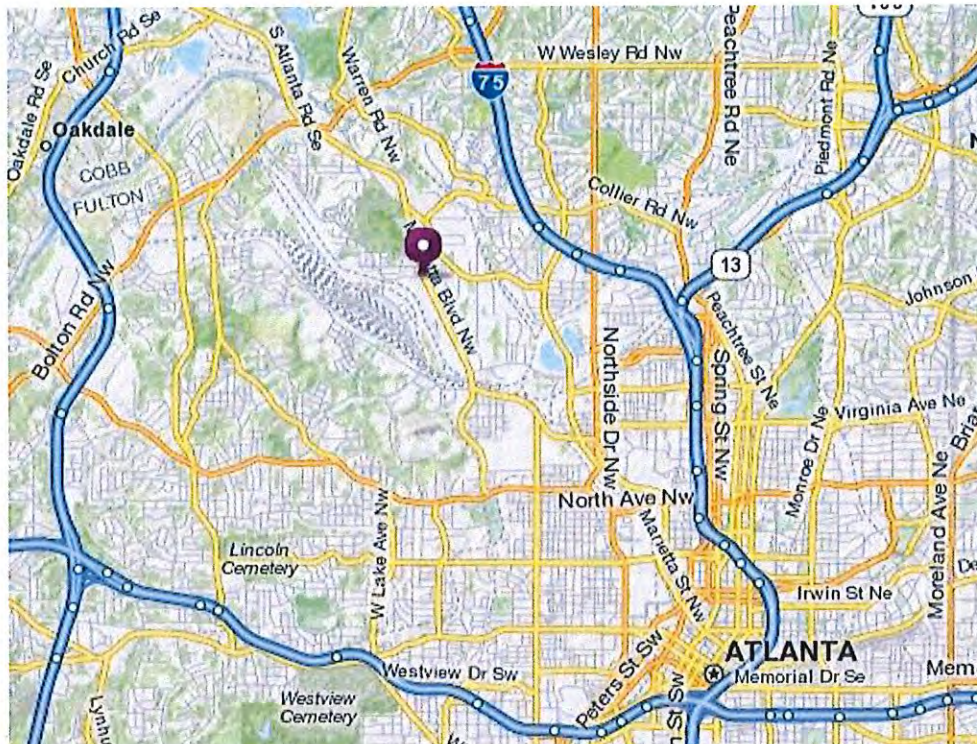


Figure 2. Detailed location of the Fire Station #8 air quality monitor and nearby railyards (1711 Marietta Blvd, Atlanta, GA 30318). Monitor indicated by purple marker.

Switch-Duty Locomotive Conversions in Atlanta, Georgia

GA Environmental Protection Division

Air Protection Branch

Application Cover Page

Company Name

Contact Information – Technical

Name
Mailing Address

Phone Number
E-mail

Contact Information – Contracts

Name
Mailing Address

Phone Number
E-mail

Contact Information – Additional Contact (optional)

Name
Mailing Address

Phone Number
E-mail

Application Summary

Total number of conversions
Total funding requested
Total match proposed
Total project cost

Authorized Official

Name and Title

I certify to the best of my knowledge that the information provided in this application is accurate. I agree that all of the minimum requirements have been or will be met. Additionally, I understand the obligations constraints associated with this proposal. I understand that completing this form simply enters me into the Genset Locomotive Conversion funding competition and my final decision to accept the grant funding, if I were to be selected, would occur later.

Signature: _____ Date: _____

Exhibit D

CONTRACTOR's affidavits required by the Georgia Security and Immigration Compliance Act of 2006 rules and regulations issued by the Georgia Department of Labor set forth at rule 300-10-1-.01 *et. Seq*

See Attached (For Electronic Copy, Double Click Below)



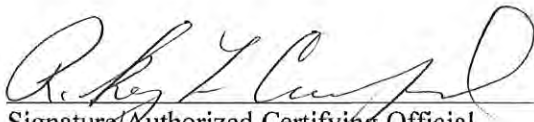
CERTIFICATION REGARDING LOBBYING

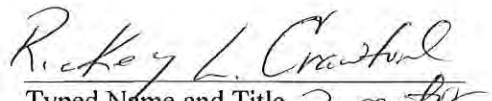
Certification For Contracts, Grants, Loans, And Cooperative Agreements

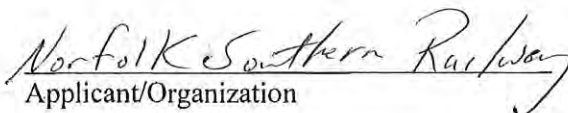
The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.


Signature/Authorized Certifying Official


Typed Name and Title *Director*


Applicant/Organization


Date Signed

STATE OF GEORGIA
_____ COUNTY

CONTRACTOR AFFIDAVIT AND AGREEMENT

COMES NOW before me, the undersigned officer duly authorized to administer oaths, the undersigned contractor, who, after being duly sworn, states as follows:

1.

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02, stating affirmatively that the individual, firm, or corporation which is contracting with the Georgia Department of Natural Resources has registered with and is participating in a federal work authorization program* in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02.

2.

The undersigned contractor further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to the contract with the Georgia Department of Natural Resources of which this affidavit is a part, the undersigned contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 through the subcontractor's execution of the subcontractor affidavit required by Georgia Department of Labor Rule 300-10-1-.08 or a substantially similar subcontractor affidavit. The undersigned contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Georgia Department of Natural Resources at the time the subcontractor(s) is retained to perform such service.

160328
EEV / Basic Pilot Program User Identification Number

FURTHER AFFIANT SAYETH NOT.

C. Douglas Corbin
BY: Authorized Officer or Agent

4-25-16
Date

C. Douglas Corbin
Contractor Name

AVP - Mechanical
Title of Authorized Officer or Agent of Contractor

C. Douglas Corbin

Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me

This 25th day of April, 2016

Amy S. Dodd
Notary Public



My commission expires: 4/30/17

* Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603. As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <input checked="" type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known: <i>Norfolk Southern Railway</i> <i>One Commercial Place</i> <i>Norfolk VA</i> Congressional District, if known: 4c		5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known:
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$ _____	
10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI): <i>N/A</i>	b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.		
Signature: <i>Rukey L. Crawford</i> Print Name: <u>Rukey L. Crawford</u> Title: <u>Director - Public Projects</u> Telephone No.: <u>202 675 8231</u> Date: <u>4/14/2014</u>		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)
Federal Use Only:		