



New York City Department of Transportation

Request for Information Regarding  
Red Bus Lane Treatments in New York City

April 26, 2010

*Updated May 27, 2010*

## **1. RFI Purpose**

This Request for Information (RFI) has been issued to inform interested parties that the New York City Department of Transportation (DOT) intends to identify a set of best practices for the installation and maintenance of red-colored bus lanes in the City of New York. DOT is seeking to identify the most durable and cost-effective red bus lane treatments for different roadway types, including existing asphalt, new asphalt, existing concrete, and new concrete. To that end, this RFI seeks information on red lane products from their manufacturers, including product specifications, installation guidelines, and cost and durability data. In addition to the RFI, DOT may conduct laboratory and field tests of various red lane products and is seeking to identify manufacturers who are interested in participating in such tests. If DOT decides to pursue a laboratory or field test, manufacturers would be invited to participate, subject to the conditions outlined in Section 3.

## **2. Background**

### **2.1 The Joint NYCT-DOT BRT Program**

Bus Rapid Transit (BRT) is a cost-effective approach that cities around the world have used to make riding the bus more like riding fixed rail transit. BRT combines a package of features, including off-board fare payment, bus lanes, traffic signal priority, enhanced stations, real time bus arrival information, low-floor buses, and branding to improve bus performance.

MTA New York City Transit (NYCT) and DOT are currently moving forward with five BRT routes in New York City. One route, called the Bx12 Select Bus Service (SBS), began service on Fordham Road in the Bronx in the summer of 2008, and has significantly reduced travel times and increased ridership. DOT has also implemented preliminary bus lane improvements along 34<sup>th</sup> Street in Manhattan, leading to improved bus speed and reliability. DOT and NYCT are exploring the potential for additional routes beyond the five pilot corridors.

For more information on BRT in New York City, visit: <http://www.nyc.gov/brt>

### **2.2 Experience with Red Bus Lanes**

As part of Select Bus Service (SBS) on Fordham Road in the Bronx and 34<sup>th</sup> Street in Manhattan, DOT has installed high-visibility red bus lanes, the first such lanes in New York City. When DOT began considering red bus lanes as part of the bus rapid transit program, the agency sought to identify a red lane product that fulfilled the following criteria:

- High visibility: the product provided a clear visual signal to drivers;
- Durability: the product would last at least 3 years in a good to fair condition;
- Safety: the product provided adequate skid resistance for vehicles;

- Low cost: the product had a low life-cycle cost;
- Ease of installation: product installation was technically feasible within an urban environment and did not require prolonged lane closure; and
- Ease of patching: the product color and look could easily be matched by utility companies that were repaving utility cuts.

Based on an informal review and evaluation of available products, DOT decided to use a high-durability paint for its red lane applications on Fordham Road and 34<sup>th</sup> Street.

The red treatment has proved more effective than standard bus lane markings in deterring illegal use of the lanes and has resulted in increased bus speeds and service reliability. Based on this success, DOT plans to install additional red lanes as part of future BRT routes, including the First Avenue/Second Avenue corridor in Manhattan and the Nostrand Avenue/Rogers Avenue corridor in Brooklyn, and on other key bus lane segments. The durability of the red lanes, however, has been poor in some cases, particularly on concrete roadways and on older asphalt. These durability issues are outlined in greater detail in Appendix A.

### **3. RFI Description**

In an effort to identify more durable red lane treatment options, DOT is planning to evaluate different red lane products and processes and to identify best practices for future red lane installations. Rather than identify one product for all circumstances, DOT is seeking to identify the best product type or process for each road surface type that is common in New York City, including existing asphalt, new asphalt, existing concrete, and new concrete. The project includes two phases: red lane product and process identification and, if pursued, laboratory and field testing.

#### **3.1 Product Research**

In addition to the RFI, DOT will review available research and data on red lane products and processes. The chart on the next page provides a preliminary list of the types of products and processes DOT will likely evaluate. Future research and the results of the RFI may lead to the identification of additional product types.

### Surface Types and Treatment Options Chart

Surface	Potential Treatment Options
Existing asphalt	<ul style="list-style-type: none"> <li>• Paint</li> <li>• Epoxy and aggregate surfacing</li> <li>• Micro-surfacing</li> <li>• Pre-treatment options: power washing, primers, and sealants</li> <li>• Others products and processes</li> </ul>
New asphalt	<ul style="list-style-type: none"> <li>• Paint</li> <li>• Epoxy and aggregate surfacing</li> <li>• Micro-surfacing</li> <li>• Tinted asphalt</li> <li>• Pre-treatment options: power washing, primers, and sealants</li> <li>• Others products and processes</li> </ul>
Existing concrete	<ul style="list-style-type: none"> <li>• Paint</li> <li>• Epoxy and aggregate surfacing</li> <li>• Micro-surfacing</li> <li>• Pre-treatment options: power washing, primers, and sealants</li> <li>• Others products and processes</li> </ul>
New concrete	<ul style="list-style-type: none"> <li>• Paint</li> <li>• Epoxy and aggregate surface</li> <li>• Micro-surfacing</li> <li>• Tinted concrete</li> <li>• Pre-treatment options: power washing, primers, and sealants</li> <li>• Others products and processes</li> </ul>

### 3.2 Laboratory and Field Testing

After reviewing the RFI submissions and conducting its own research, DOT may choose to conduct a laboratory test and/or a field test of select products and processes. If DOT decides to conduct a laboratory test, the agency would invite select manufacturers to provide a sample of their product for testing at no cost to DOT (a minimum sample of product necessary to cover 35 square feet may be requested). DOT would then conduct a formal analysis of the durability of a range of products using various laboratory techniques. If DOT decides to conduct a field test, DOT would invite select manufacturers to install a section of red bus lane on a New York City street designated by DOT. Manufacturers would be responsible for installing the section of red lane at their own cost (a minimum test strip of 12' by 80' may be requested). DOT would provide basic logistical support to those firms selected to participate in the field test. DOT would then conduct a formal analysis of the durability of a range of products over the course of several months. Submission of a RFI response by a respondent does not guarantee an invitation to participate in either a lab test or field test. Manufacturers selected to

participate in the field test would be required to sign an on-site release and indemnification form (see Appendix B).

### **3.3 Best Practices**

Based in part on the results of its research and the field and laboratory tests, if conducted, DOT will then develop a set of best practices for the installation and maintenance of red bus lanes in New York City to guide future red lane projects.

## **4. Questions for Respondents**

Respondents to the RFI are requested to submit a proposed red lane treatment approach for one or more of the following surface types: existing asphalt, new asphalt, existing concrete, and new concrete. This approach should include product type, installation guidelines and options, and maintenance guidelines. Respondents are requested to explain how their treatment approach meets the criteria laid out in section 2.2 and, if applicable, addresses one or more of the challenges encountered by DOT in its previous red bus lane projects (see Appendix A). Respondents should also discuss how installation of their treatment is feasible within New York City's demanding operating environment. Additional questions may be presented to respondents by DOT.

In their response, respondents should address the items listed below in Sections 4.1 through 4.7:

### **4.1 Product Information:**

- Product(s) name(s)
- Product description
- Intended surface type(s) for each product
- Product color options
- Standard product specification sheet(s)
- Photographs of installed product

### **4.2 Installation Method:**

- Recommended pre-treatment process (if any)
- Outdoor temperature requirements for installation (if any)
- Recommended manual installation process options (if any)
- Recommended mechanized installation process options (if any)
- Curing/drying time required for product to set (if any)
- Photographs of installation process (if available)
- Other technical specifications related to installation (if any)

### 4.3 Examples of Product Installation:

- Relevant examples in the United States or abroad of product installation in a high traffic environment (if any)
- Photographs of relevant examples (if available)
- References (at least 3): contact name and information for at least three clients which have installed this product in a similar environment

### 4.4 Maintenance:

- Recommended maintenance practices to improve product longevity and appearance (if any)

### 4.5 Durability Data:

- Summary of research, reports, or data on product durability (if any)
- Impact of snow plowing and road salt on product
- Estimated useful life of the product in a high traffic application in New York City\*

*\* This estimate will be used by DOT for research purposes only and will not constitute a product guarantee on the part of the respondent.*

### 4.6 Skid Resistance. Respondents should provide the following information:

- Discussion of the products skid resistance properties and its appropriateness for use in a bus lane

### 4.7 Product Cost. Respondents should provide the following information:

- Estimated material cost (per square foot)\*
- Estimated installation cost in New York City (per square foot)\*

*\* These estimates will be used by DOT for research purposes only and will not constitute an offer of a guaranteed price on the part of the respondent.*

## 5. Submission Requirements

All submittals (Submittals) must be in writing and in electronic PDF format (CD ROM) and delivered **by-hand or by a nationally recognized express mail carrier** to DOT at the address designated in Section 5.2 below. Submittals should be organized into two parts as listed in Sections 5.1.1 and 5.1.2 below.

### 5.1 Response

5.1.1 Respondent's Information (maximum of 5 pages)

- Provide contact information, including, the legal name of your firm or entity, business address, name of contact, telephone, email and Federal Tax Identification number (EIN).
- Provide a summary of your firm's background and experience related to red bus lane treatments. Please do not submit standard marketing materials.

5.1.2 Respondent's Product or Process (maximum of 20 pages)

- Describe your product or process, identify the surface type or types it is appropriate for, and describe how it will meet the criteria laid out in section 2.2. Discuss how your product may address one or more of the challenges identified in Appendix A. Provide the data requested in sections 4.1 to 4.7.

## 5.2. Submission Details

Please submit five hard copies of your submission, printed on both sides (double-sided) on paper with no less than 20% post-consumer material content, and a PDF version of your submission on CD-ROM by June 11, 2010 at 4:00 p.m. Eastern Standard Time (EST), to:

New York City Department of Transportation  
55 Water Street, 9<sup>th</sup> Floor  
New York, NY 10041  
Attn: Will Carry, Division of Planning & Sustainability

*\* Please note: the deadline for submissions has been extended from June 2 to June 11, 2010.*

## 5.3 Inquiries

Any inquiries concerning this RFI should be directed by e-mail, under the subject line "Red Bus Lane Treatment RFI Q&A", to [RedLaneRFI@dot.nyc.gov](mailto:RedLaneRFI@dot.nyc.gov). All questions must be submitted no later than May 28, 2010 at 4:00 p.m. EST. DOT will post these answers on their website at <http://www.nyc.gov/html/dot/html/about/rfpintro.shtml>.

*\* Please note: the deadline for questions has been extended from May 19 to May 28, 2010.*

## 6. Additional Information

**6.1** This RFI is not intended as a formal offering for the award of a contract or for participation in any future solicitation.

- 6.2** DOT, the City and their officials, officers, agents and employees make no representation or warranty and assume no responsibility for the accuracy of the information set forth in this RFI.
- 6.3** No information contained in submissions shall be deemed confidential and such information may be shared with others as deemed appropriate by DOT. Therefore, please do not submit any information that may be deemed proprietary in nature.
- 6.4** Neither DOT nor the City shall be liable for any costs incurred by any respondent in the preparation, submittal, presentation or revision of its submission. Neither DOT nor the City shall be obligated to pay and shall not pay any costs in connection with the preparation of such submissions.
- 6.5** All submissions shall become the property of DOT and the City and shall not be returned.
- 6.6** DOT at its sole discretion reserves, without limitation, the right to:
- 6.6.1 Withdraw the RFI at any time;
  - 6.6.2 To discuss various red lane approaches with one or more respondents (including parties not responding to the RFI);
  - 6.6.3 Use the ideas and/or submissions in any manner deemed to be in the best interests of DOT and the City, including but not limited to soliciting competitive submissions relating to such ideas or proposals and/or undertake the prescribed work in a manner other than that which is set forth herein; and
  - 6.6.4 Change any terms of the RFI.



Appendix A:  
New York City's Experience with  
Red Bus Lanes

DOT has used a high-durability paint for its red lane applications on Fordham Road and 34<sup>th</sup> Street. Our experience with this approach has revealed several challenges:

***Concrete Adherence***

The red lane paint does not adhere well to concrete and rapidly peels off within a matter of months. This occurs on scarified concrete and smooth concrete roadways and on concrete bus pads. This problem is consistent with the challenges DOT encounters installing thermoplastic road markings on concrete roadways such as First Avenue. This issue has arisen on the concrete sections of Fordham Road and on the concrete bus pads on Fordham and on 34<sup>th</sup> Street.

**West 207<sup>th</sup> Ave & 10<sup>th</sup> Ave Bus Pad (Dec 2009)**



**Fordham Plaza Concrete Road (Dec 2009)**



***Existing Asphalt Adherence***

The red lane paint does not adhere well to older asphalt—particularly asphalt that is cracked, patched, or uneven—and degrades to a poor condition within a year. After a few months, the treatment is still visibly red, but is often aesthetically unpleasing with sections of peeling and discoloration (see below). Part of this problem may be due to the limited pre-treatment of the asphalt, which did not include power washing or crack repair.

**Fordham Rd. and Jerome Ave (Dec. 2009)**



***Station Area Deterioration***

The red paint is subject to particularly harsh wear and tear at bus stations, where buses stop and start and the surface is subject to prolonged heat exposure from bus engines. Bus station areas on both 34<sup>th</sup> Street and Fordham Road have deteriorated significantly faster than the non-station sections of the red lanes.

**34<sup>th</sup> Street and Seventh Ave. Penn Station EB Bus Stop (Dec. 2009)**



***Curb Edge Deterioration***

Curbs are another problem area for the red paint treatment, as water flowing to gutters leads to a rapid peeling of the surface. The build up of dust and grime along the curb also fades the pigmentation of the curb area in comparison to the rest of the lane. Illegal curb dumping of waste, including cooking oil and other solvents, also accelerates red lane deterioration. Curb edge deterioration is evident along both the 34<sup>th</sup> Street and Fordham Road lanes.

**34<sup>th</sup> Street bus lane (Dec 2009)**



***Dirty Look and Fading***

Even on lane sections that have demonstrated superior durability, such as the lanes along 34<sup>th</sup> Street, the red paint can develop a dirty appearance over time. Dirt, grease marks, gum, tire marks, and scrapes and scratches can give the red lanes a dingy look (see below). The 34<sup>th</sup> Street red lanes have also begun to show signs of peeling, although to a far lesser extent than Fordham Road.

**34<sup>th</sup> Street bus lane (Dec 2009)**



***Utility Cut Matching***

Utility cuts are also a persistent challenge in maintaining a uniform look for the red lanes. In some cases, it appears contractors have not applied the required number of coats of paint, leading to rapid fading of the red lanes. In other cases, no restoration has been attempted at all.

**34<sup>th</sup> Street bus lane at Madison Ave – Faded ConEd resurfacing (Dec 2009)**



**34<sup>th</sup> Street bus lane at Harold Square – Poorly patched utility cut (Dec 2009)**



Appendix B:  
On-Site Release and  
Indemnification Form



**NEW YORK CITY DEPARTMENT OF TRANSPORTATION**

**RELEASE**

I, \_\_\_\_\_ in consideration for the permission granted to me by the City of New York and the New York City Department of Transportation ("DOT"), to enter upon its property and/or premises located at any area designated by DOT for the purpose of conducting any work related to the field testing of the proposed bus lane treatments during the period of \_\_\_\_\_, agree to the following:

1. To enter upon the aforementioned property and/or premises at my own risk.

2. To be fully liable for, indemnify, defend and hold harmless the City of New York and DOT, its officers, agents, servants, representatives employees, attorneys, consultants and independent contractors ("Indemnitees") from any and all liabilities, suits, obligations, fines, damages, penalties, claims, charges and expenses (including, without limitation, attorneys' fees and disbursements) ("Damages") that may be imposed upon or incurred by or asserted against any of the Indemnitees arising out of or related to my presence or the presence of my agents, representatives, servants, employees or independent contractors during the agreed upon time and for the agreed upon purpose whether or not such damages are due to the negligence of the City or otherwise; provided, however, that the foregoing liability and indemnity obligation shall not apply to any Damages to the extent arising out of any willful misconduct or gross negligence of the City, its officers, employees, servants, agents, attorneys, consultants or independent contractors. Further, it is a condition of this Agreement that the City assumes no liability for liabilities, suits, obligations, fines, damages, penalties, claims, costs, charges and expenses (including, without limitation, reasonable attorneys' fees and disbursements) to either Persons or property on account of the same, except as expressly provided herein..

3. To forever release and discharge the City of New York and DOT, its officers, agents, servants, representatives or employees from any and all claims, demands, rights of action or causes of action, present or future, whether same be known or unknown, anticipated or unanticipated, resulting from my presence or the presence of my agents, representatives, servants, employees or independent contractors during the agreed upon time and for the agreed upon purpose.

4. On behalf of myself, my heirs, executors or administrators, to forever refrain from instituting, prosecuting or maintaining any action, suit or proceeding, at law or otherwise against the City of New York and DOT, its agents, servants, representatives or employees based upon any injuries which I may suffer, including death or damages, both personal or to property, whether same be known or unknown, anticipated or unanticipated, resulting from my presence on the aforementioned property and/or premises during the agreed upon time and for the agreed upon purpose.

I hereby voluntarily sign this instrument with no promise or representation made by the City of New York and DOT, its officers, agents, servants, representatives or employees other than the consideration stated herein.

Dated: \_\_\_\_\_

Signature: \_\_\_\_\_

**ACKNOWLEDGMENT**

State of New York )  
County of \_\_\_\_\_ ) ss.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_ to me known and known to me to be the person who executed the foregoing instrument, who being by me duly sworn did depose and say that he/she resides at \_\_\_\_\_ and that he/she is the person described in and who executed the foregoing instrument.

\_\_\_\_\_  
NOTARY PUBLIC