



UNIVERSITY OF MARYLAND

Department of Procurement and Supply

2113-R Chesapeake Building
College park, MD 20742-3111
301-405-5837 - FAX 301-314-9565

18 December 2007

Inrix Incorporated
4055 Lake Washington Blvd, N.E.
Suite 200
Kirkland, WA 98033
ATTN: Mr. Bryan Mistele, President/CEO

Reference: University of Maryland Contract N136906

Dear Mr.Mistele:

For your records, provided in attachment, the University is forwarding One (1) copy of fully executed University of Maryland Contract N136906 for Traffic Data and Associated Services along the I-95 Corridor.

Please note that the actual award is for Zero (0) dollars. All tasking and funding allocation will be effected via separate and distinct delivery orders.

Please ensure that the University Contract Number N136906 is referenced in all correspondence and invoicing.

For any matters of a contractual nature with regard to this contract, please feel free to contact the undersigned via 301-405-5829.

We thank you for your help and support during our Proposal process, and look forward to a most fruitful contractual relationship.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce D. Brewer", written over a large, stylized scribble.

Bruce D. Brewer
Coordinator, Purchasing &
Contract Administration
University of Maryland
301-405-5829

**PART I – THE SCHEDULE
SECTION A-1 – SOLICITATION / CONTRACT FORM**

1. CONTRACT NUMBER	2. SOLICITATION NUMBER 82085N	3. TYPE OF SOLICITATION NEGOTIATED (RFP)	4. DATE ISSUED 04/27/07	5. REQUISITION NUMBER R07615
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6. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742	7. ADDRESS PROPOSAL TO University of Maryland Department of Procurement & Supply Attn.: RFP Number82085N 2113-R Chesapeake Building College Park, Maryland 20742-3111
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SOLICITATION

8. Sealed proposals in original plus number of copies specified in Section A-2, Subsection D for furnishing the supplies or services in the Schedule will be received at the location specified in Item 7 (if no location is specified in Item 7, then the location specified in Item 6) until the date and time specified in Section A-2, Subsection E.

CAUTION – LATE Submissions, Modifications, and Withdrawals; see Section A-2, Subsection F entitled "Late Proposals". All offers are subject to all terms and conditions contained in this solicitation.

9. FOR INFORMATION CALL	A. NAME Bruce D. Brewer	B. TELEPHONE (NO COLLECT CALLS)		C. E-MAIL ADDRESS bbrewer@umd.edu	D. FAX NUMBER 301-314-9565
		AREA CODE 301	NUMBER 405-5829		

OFFER (Must be fully completed by Contractor)

10. In compliance with the above, the undersigned agrees, if this offer is accepted within the time period specified in Section A-2, Subsection G, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the Schedule.

11. ACKNOWLEDGEMENT OF AMENDMENTS

The Contractor acknowledges receipt of all amendments to the SOLICITATION.


YES – X Amendments have been received

This contract incorporates the Solicitation/Request for Proposal and any amendments thereto, as well as Contractor's proposal and amendments thereto. In the event of a discrepancy between the terms of this contract, including amendments and modifications made thereto, and Contractor's proposal and amendments thereto, the discrepancy shall be resolved by giving precedence in the following order:

- a) This Contract, including the Solicitation/Request for Proposal and amendments and modifications made thereto
- b) Contractor's proposal, including amendments and modifications made to the proposal.

This contract, including the documents incorporated by reference and any negotiated changes prior to contract award, contains the entire agreement of the parties and supersedes all prior agreements and understandings, oral or otherwise, between the parties.

12. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	13. CONTRACTOR REMIT-TO ADDRESS Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033	14. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Print or Type) Bryan Mistele, President and CEO
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15. TELEPHONE NUMBER			16. SIGNATURE 	17. OFFER DATE June 22, 2007
AREA CODE 425	NUMBER 284-3801	EXT. NA		

AWARD (To be completed by University)

18. ACCEPTED AS TO ITEMS LABELED	19. AMOUNT	20. FRS ACCOUNT NUMBER
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21. ADMINISTERED BY (If other than Item 6)

22. NAME OF PROCUREMENT OFFICER (Type or Print)	23. UNIVERSITY OF MARYLAND (Signature of Procurement Officer)	24. AWARD DATE
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IMPORTANT – Award will be made on this Form or by other authorized official written notice.

Continuation of Section A-1: Changes

Changes – RFP 82085N / Contract No. _____

By mutual agreement of the parties, per the below listed E-Mail revisions, between Rick Shuman of Inrix Corporation and Bruce Brewer of the University of Maryland, the following changes are hereby incorporated into RFP / Contract _____:

- (1) E- Mail and Attachment Dated 11/15/07 providing Certification of Corporation Registration and Tax Payment.
- (2) E-Mail and Attachment Dated 11/15/07 Providing the attached Revised Attachment D MBE Subcontractor Project Participation Statement of Intent to Subcontract.
- (3) E-Mail and Attachment (s) dated 11/14/07 conveying MBE Attachment C, and the Attachment D which was superseded by Change 2/E-Mail and Attachment dated 11/15/07.
- (4) E-Mail and Attachment Dated 10/16/07 for Inrix Clarification Response 2.
- (5) E-Mail and Attachment Dated 09/10/07 for Inrix Clarification Response 1.

THESE CHANGES ARE HEREBY INCORPORATED INTO AND MADE A PART OF CONTRACT NO. _____.

Rick Schuman

From: Rick Schuman
Sent: Thursday, November 15, 2007 6:53 PM
To: Bruce Brewer
Subject: Certification of Corporation Registration
Attachments: CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT.pdf

Bruce:

Per the requirements of the RFP and the Notice of Intent to Award letter, attached is our completed resident agent registration. I have also included the recently completed form from the Maryland Department of Assessments and Taxation confirming our registration. Please confirm receipt and that we have satisfactorily completed this action.

Regards,

Rick

Rick Schuman | Vice President, Public Sector, Inrix | w 407-298-4346 | c 407-572-5584 | rick@inrix.com | www.inrix.com

K. CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT

I FURTHER AFFIRM THAT: *INRIX, INC.*

(1) The business named above is a (domestic ___) (foreign *X*) corporation registered in accordance with the Corporations and Associations Article, Annotated Code of Maryland, and that it is in good standing and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation, and that the name and address of its resident agent filed with the State Department of Assessments and Taxation is:

Name: *CSC – Lawyers Incorporating Service Company*

Address: *7 St. Paul Street, Suite 1660*

Baltimore, MD 21202

(2) Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

State of Maryland
Department of
Assessments and Taxation

Charter Division



Martin O'Malley
Governor

C. John Sullivan, Jr.
Director

Paul B. Anderson
Administrator

Date: 11/14/2007

CORPORATION SERVICE COMPANY
STE 1660
7 ST. PAUL STREET
BALTIMORE MD 21202

THIS LETTER IS TO CONFIRM ACCEPTANCE OF THE FOLLOWING FILING:

ENTITY NAME : INRIX, INC.
DEPARTMENT ID : F12231593
TYPE OF REQUEST : QUALIFICATION
DATE FILED : 11-13-2007
TIME FILED : 11:17 AM
RECORDING FEE : \$100.00
EXPEDITED FEE : \$50.00
FILING NUMBER : 1000361995555517
CUSTOMER ID : 0002047146
WORK ORDER NUMBER : 0001490184

PLEASE VERIFY THE INFORMATION CONTAINED IN THIS LETTER. NOTIFY THIS DEPARTMENT IN WRITING IF ANY INFORMATION IS INCORRECT. INCLUDE THE CUSTOMER ID AND THE WORK ORDER NUMBER ON ANY INQUIRIES. EVERY YEAR THIS ENTITY MUST FILE A PERSONAL PROPERTY RETURN IN ORDER TO MAINTAIN ITS EXISTENCE EVEN IF IT DOES NOT OWN PERSONAL PROPERTY. A BLANK RETURN WILL BE MAILED BY FEBRUARY OF THE YEAR FOR WHICH THE RETURN IS DUE.

Charter Division
Baltimore Metro Area (410) 767-1350
Outside Metro Area (888) 246-5941

Rick Schuman

From: Rick Schuman
Sent: Thursday, November 15, 2007 8:21 AM
To: 'Victoria Leatherwood'
Cc: Bruce Brewer
Subject: RE: [Fwd: [Fwd: Official Transmittal of MBE Forms for RFP 82085N]]
Attachments: RFP 82085N Awardee MBE Documentation Attachment D.pdf

Bruce/Victoria – the proposed addition is fine with Inrix and PBS&J. Attached is the revised attachment D for resubmittal. Thank you for your prompt attention and let us know if there is anything else we can do to help.

Regards,

Rick

Rick Schuman | Vice President, Public Sector, Inrix | w 407-298-4346 | c 407-572-5584 | rick@inrix.com | www.inrix.com

From: Victoria Leatherwood [mailto:[vleather@umd.edu](mailto: vleather@umd.edu)]
Sent: Thursday, November 15, 2007 11:11 AM
To: Rick Schuman
Cc: Bruce Brewer
Subject: [Fwd: [Fwd: Official Transmittal of MBE Forms for RFP 82085N]]

Hi Rick,

Thanks for your quick response. I have reviewed the Outreach statement and the Intent to subcontract, I have the following comments. The Outreach attachment C is fine.

You did an excellent job of summarizing the kind of work that will be subcontracted and the arrangement with PBS&J in the MBE Attachment D Intent to Subcontract. Although this contract is IDIQ, I request the agreed upon subcontract \$ be clarified. Consider a statement such as "Agreed upon Subcontract \$ Amount: 25% of consulting services over the life of the project, with the goal of reaching 25% each fiscal year if scope allows." If that statement is agreeable to you, please resubmit MBE Attachment D Intent to Subcontract signed by both parties. I am available to discuss.

Thanks,
 Victoria Leatherwood, Administrator
 University of Maryland
 Small and Minority Business Programs
 (301) 405-5850

----- Original Message -----

Subject:[Fwd: Official Transmittal of MBE Forms for RFP 82085N]
Date:Thu, 15 Nov 2007 05:21:38 -0500
From:Bruce Brewer <bbrewer@umd.edu>
To:Victoria Leatherwood <Vleather@umd.edu>

Good Morning Dear Lady:

2/25/2008

Please find attached the completed forms for the INRIX Subcontracting goal under RFP 82085N for Traffic Flow Data services goal.

Thanks as always for your help and support.

Sincerely

Bruce

----- Original Message -----

Subject: Official Transmittal of MBE Forms for RFP 82085N
Date: Wed, 14 Nov 2007 13:00:18 -0800
From: Rick Schuman <Rick@inrix.com>
To: Bruce Brewer <bbrewer@umd.edu>

Bruce -

The discussion with Victoria Leatherwood was quite helpful. Based on her guidance, we have completed the MBE forms Attachment C and D per the requirements of the RFP that we need to submit within 10 business days of being notified as the "aparent awardee." Please confirm receipt and let us know if anything is amiss on the forms.

Thank you.

Regards,

Rick

Rick Schuman | Vice President, Public Sector, Inrix | w 407-298-4346 | c 407-572-5584 | rick@inrix.com | www.inrix.com
<<file:///C:/Documents%20and%20Settings/rick/Application%20Data/Microsoft%20Signatures/www.inrix.com>>

MBE Attachment D

MBE SUBCONTRACTOR PROJECT PARTICIPATION STATEMENT OF INTENT TO SUBCONTRACT

SUBMIT ONE FORM FOR EACH CERTIFIED MBE LISTED IN THE MBE PARTICIPATION SCHEDULE


Provided that Inrix, Inc. is awarded the contract in conjunction with
Prime Contractor Name
Traffic Data and Associated Services Along the I-95 Corridor, Solicitation No. 82085N, it and
Project Name
Enterprise Information Solutions, Inc., MDOT Certification No. 91-221, intend
Subcontractor Name
to enter into a contract by which Subcontractor shall: (describe work, include NAICS/SIC codes)

As this project is an IDIQ contract, it is not clear the specific tasks, fees, or schedules associated with activities. Per the proposal, EnterInfo will provide "a wide-range of GIS, software development and system integration expertise and will provide ATMS and ATIS systems integration support, develop publicly accessible websites, and develop decision support tools for Coalition member agencies." The NAICS codes applicable are 541512 (Computer System Design Services) and 541519 (Other Computer Related Services). Note: Inrix, Inc. will enter into a subcontract with PBS&J to manage all consulting services for this project; EnterInfo will subcontract with PBS&J just as all other consulting team members will do.

Agreed upon Subcontract \$ Amount: *25% of consulting services over the life of the project, with the goal of reaching 25% each fiscal year if scope allows*

- No bonds are required of Subcontractor
- The following amount and type of bonds are required of Subcontractor:


Signature of Authorized Representative
of Prime Contractor
Bryan P. Mistele, President and CEO
Printed Name, Title
4055 Lake Washington Boulevard NE, Suite
200, Kirkland, WA 98033
Address
425-284-3801
Phone
425-384-3879
Fax
bryan@inrix.com
E-Mail
November 15, 2007
Date


Signature of Authorized Representative
of Subcontractor
Andy Shaw, CEO
Printed Name, Title
9891 Broken Land Parkway, Suite 300
Columbia, MD 21046
Address
410-381-7898
Phone
410-381-7835
Fax
ashaw@enterinfo.com
E-Mail
November 15, 2007
Date

Submit this Intent to Contract within 10 Working Days of Notification of Apparent Awardee

Rick Schuman

From: Rick Schuman
Sent: Wednesday, November 14, 2007 1:00 PM
To: 'Bruce Brewer'
Subject: Official Transmittal of MBE Forms for RFP 82085N
Attachments: RFP 82085N Awardee MBE Documentation Attachment C.pdf; RFP 82085N Awardee MBE Documentation Attachment D.pdf

Bruce –

The discussion with Victoria Leatherwood was quite helpful. Based on her guidance, we have completed the MBE forms Attachment C and D per the requirements of the RFP that we need to submit within 10 business days of being notified as the “aparent awardee.” Please confirm receipt and let us know if anything is amiss on the forms.

Thank you.

Regards,

Rick

Rick Schuman | Vice President, Public Sector, Inrix | w 407-298-4346 | c 407-572-5584 | rick@inrix.com | www.inrix.com

MBE Attachment C

OUTREACH EFFORTS COMPLIANCE STATEMENT

In conjunction with the bid or offer submitted in response to Project Name *Traffic Data and Associated Services Along the I-95 Corridor*, Solicitation No. *82085N*, I state the following:

1. Bidder/ Offeror identified opportunities to subcontract in these specific work categories:

The NAICS codes applicable are 541512 (Computer System Design Services) and 541519 (Other Computer Related Services).

2. Attached to this form are copies of written solicitations (with bidding instructions) used to solicit certified MBEs for these subcontract opportunities.

No written solicitations occurred. See #3 on this form for details of MBE firm identification/selection process.


3. Bidder/Offeror made the following attempts to contact personally the solicited MBEs:
- The MDOT MBE/DBE On-line Directory was reviewed.
 - An initial, comprehensive, list of firms certified with MDOT meeting the necessary skill sets (system integration, GIS experience, website and database development) was developed.
 - The initial list of firms was pared-down to a short-list based on discussions and communications within the assembled project team based on work experience, product delivery, and reputation of the firms.
 - Discussions were held with the president of Enterprise Information Solutions, Inc (EnterInfo) regarding their interest in the project.
 - References were checked along with EnterInfo's capacity to perform the work.
 - EnterInfo was selected as the MBE.

4. Bidder/Offeror assisted MBEs to fulfill or to seek waiver of bonding requirements. (DESCRIBE EFFORTS)

This project does not involve bonding requirements.

5. Bidder/Offeror **did**/did not attend the pre-bid conference
 No pre-bid conference was held.

Inrix, Inc.
Bidder/Offeror Firm Name


Signature of Authorized Representative

November 15, 2007
Date

Bryan P. Mistele, President and CEO
Printed Name, Title

Submit this Outreach Statement within 10 Working Days of Notification of Apparent Awardee

MBE Attachment D

MBE SUBCONTRACTOR PROJECT PARTICIPATION STATEMENT OF INTENT TO SUBCONTRACT

SUBMIT ONE FORM FOR EACH CERTIFIED MBE LISTED IN THE MBE PARTICIPATION SCHEDULE

Provided that **Inrix, Inc.** is awarded the contract in conjunction with
Prime Contractor Name
Traffic Data and Associated Services Along the I-95 Corridor, Solicitation No. **82085N**, it and
Project Name
Enterprise Information Solutions, Inc., MDOT Certification No. **91-221**, intend
Subcontractor Name
to enter into a contract by which Subcontractor shall: (describe work, include NAICS/SIC codes)

As this project is an IDIQ contract, it is not clear the specific tasks, fees, or schedules associated with activities. Per the proposal, EnterInfo will provide "a wide-range of GIS, software development and system integration expertise and will provide ATMS and ATIS systems integration support, develop publicly accessible websites, and develop decision support tools for Coalition member agencies." The NAICS codes applicable are 541512 (Computer System Design Services) and 541519 (Other Computer Related Services). Note: Inrix, Inc. will enter into a subcontract with PBS&J to manage all consulting services for this project; EnterInfo will subcontract with PBS&J just as all other consulting team members will do.

Agreed upon Subcontract \$ Amount **TBD**

Revised Per
Email 11-15-07

- No bonds are required of Subcontractor
- The following amount and type of bonds are required of Subcontractor:

Bryan P. Mistele
Signature of Authorized Representative
of Prime Contractor
Bryan P. Mistele, President and CEO
Printed Name, Title
4055 Lake Washington Boulevard NE, Suite
200, Kirkland, WA 98033
Address
425-284-3801
Phone
425-384-3879
Fax
bryan@inrix.com
E-Mail
November 15, 2007
Date

Andy Shaw
Signature of Authorized Representative
of Subcontractor
Andy Shaw, CEO
Printed Name, Title
9891 Broken Land Parkway, Suite 300
Columbia, MD 21046
Address
410-381-7898
Phone
410-381-7835
Fax
ashaw@enterinfo.com
E-Mail
November 15, 2007
Date

Submit this Intent to Contract within 10 Working Days of Notification of Apparent Awardee

Rick Schuman

From: Rick Schuman
Sent: Monday, September 10, 2007 11:25 AM
To: 'Bruce Brewer'
Subject: RE: Request for Clarification for the Inrix Proposal under RFP 82085N/Traffic Flow Data.
Attachments: Request for Clarification - INRIX Submittal _9-10-07_.pdf

Importance: High

Bruce:

Attached is our submittal to the request for clarification. Please acknowledge receipt of this email and please let me know if we can be of further assistance.

Regards,

Rick

Rick Schuman | Vice President, Public Sector, Inrix | w 407-298-4346 | c 407-572-5584 | rick@inrix.com | www.inrix.com

From: Bruce Brewer [mailto:bbrewer@umd.edu]
Sent: Wednesday, September 05, 2007 8:54 AM
To: Rick Schuman
Subject: Request for Clarification for the Inrix Proposal under RFP 82085N/Traffic Flow Data.

Good Morning Mr. Schuman:

The Technical Evaluation Team have been reviewing the Inrix Proposal Submission, and request clarification for the following points.

Responses may be returned via E-Mail, and are due no later than Close-of-Business Monday, 10 September 2007.

The points of clarification are as follows:

Proposal reference: Page 2 of transmittal letter – “We understand and accept the data ownership and data licensing provisions of the RFP without exception. In fact, we are willing to discuss liberalizing the usage conditions further as we believe strongly that our clients should have the ability to utilize our data to the maximum extent possible”

Clarification requested:

What is meant by ‘liberalizing usage conditions’? Will this impact cost? Please be more specific regarding the conditions you are willing to liberalize.

Proposal reference: Page 3-12, Item 9 “Average latencies: Probe ‘read’ to Inrix = 1.5 minutes: process data = 0.5 minute: publish (presently every 5 minutes) average latency = 2.5 minutes): total current average data latency = 4.5 minutes”

Clarification requested:

The definition of latency as defined in the response to item 9, page 3-12 of the proposal is from generation of probe message to receipt of update from data feed. The definition of latency provided in the RFP in section 1.5.9 on or about page 17 is the difference in time between traffic perturbation and when it is reflected in the data stream. Please clarify your response accordingly.

Proposal reference: Page 1-4 "... more than 650,000 commercial fleet, delivery and taxi vehicles; toll tag data; and occupancy and speed measurements from several ..."

Clarification requested:

What sources of toll-tag data are included in Inrix's offering? Are any of these included in this project (within the corridor)? Is TRANSCOM toll-tag data utilized?

Proposal reference: Page 3-12, item 5 "... at present we have not stratified our tests by speed ranges, though this is easily achievable. Our results by and large have met this level of accuracy requirement and ..."

Clarification requested:

Please clarify.

Proposal reference: Page 3-2, DTS Traffic Systems

Clarification requested:

Please clarify DTS's role or contribution to the proposal.

Proposal reference: Pages 3-2 and 3-3 also 3-23, True Position

Clarification requested:

Is the small scale test referenced on page 3-3 included in the cost of the base proposal, or is it an additional cost? If the small scale test is successful, will there be additional cost for implementation of the True Position concept over other geographical areas, or will such costs be reflected in the existing cost model? Are Cell Phone carrier agreements in place, if not what is the status of these agreements? If such agreements exist, what is their geographic coverage? What are the existing and planned contractual relationships, if any, between True Position, Inrix, T-mobile, and AT&T as they relate to work on the proposed project?

Proposal reference: Page 3-12, Item 4

Clarification requested:

Please clarify. What, if any, of the traffic data referenced in the response to item 4 is included in the cost of the base proposal? Are there extra costs involved with provision of the extra information? If so, are these reflected in the cost proposal?

Proposal reference: Page 3-47, 48

Clarification requested:

Do any of the pending patents (and the possibility of not acquiring the patent) affect INRIX's ability to deliver the products associated with the contract? Do any of these contribute to the risk potential of the project?

Proposal reference: Page 3-8, "Additionally, the INRIX Smart Dust Network aggregates real-time incidents and hundreds of market-specific criteria that affect traffic – such as construction and road closures, sporting and entertainments events, school schedules and weather forecasts."

Clarification requested:

How is event information cited on page 3-8 collected? Is such information critical to the performance of the Smart Dust network? Is the collection of any of this data expected to be the responsibility of the Coalition and its members?

Proposal reference: Page 3-8, sidebars

Clarification requested:

Clarify the cited >80% road sensor data statistic. Does this reflect 80% of sensors, organizations, or other? To what extent is INRIX's ability to provide quality data dependent upon coalition member's publicly available data, or public systems? What if these sources of data are unavailable? Is the proposal in any way dependent upon increased access to coalition member's incident and traffic data over and above current relationships?

Proposal reference: Page 3-29, "... or some equivalent system up to 1000 miles in coverage."

Clarification requested:

Where will the 1000 miles of arterial coverage be located? How will it be determined? If, after three years, the coalition decides to continue contracting for traffic data, will the 1000 miles of arterial coverage be included in the base contract price for years 4 through 10, or excluded? Do you agree that the traffic data collected on the 1000 miles of arterials be subject to the same Data Ownership provisions as the data purchased by the Coalition?

Thank you in advance for your interest in our effort, and support in our Proposal Process.

Sincerely,

Bruce



Request for Clarification (RFP #82085N)
Traffic Data and Associated Services along the I-95 Corridor

Issued: September 5, 2007
Due: September 10, 2007

Submitted by: INRIX[®] Inc.

Contact Information: Rick Schuman
Vice President, Public Sector
9832 Montclair Circle
Apopka, FL 32703
Email: rick@inrix.com
Phone: 407-298-4346



INRIX[®] is pleased to submit clarifications as requested by email on September 5, 2007. Through our responses ([in blue](#)), we wish to reiterate our desire to support the Coalition and its member agencies by offering the best data available with extensive usage flexibility in a long-term partnership that maximizes the cost-benefit of this project to the agencies.

In reviewing the questions, there is a general point we wish to emphasize that may help address possible confusion in parts of our proposal.

Our “Respondent Comments” in the Traffic Data Requirements table¹ are provided based entirely upon INRIX[®]’s Smart Dust Network, Traffic Fusion Engine and Partner Portal “as is.” This means that our cost proposal fully includes the elements necessary to meet the requirements as described to implement and operate the baseline system for the initial three year operational period, and the basis for costing the base system and rate schedule for coverage and time beyond the initial three years. Thus, within the submitted fee, the Coalition will benefit from continued platform improvements and growth in probe data as described in our proposal.

However, INRIX[®] also recognizes that there are several ways in which the Coalition, or specific member agencies, may wish to improve our service. Examples include covering more roads, improving the quality of the data further, improving data quality in lower volume periods, etc. Thus, we have included several additional Enhanced Source Data Options² for consideration. If we are selected, these options – with committed pricing included in the cost proposal – become available to the Coalition and its member agencies. Decisions to utilize – or not – these options will be up to the Coalition. Given the IDIQ nature of the contract, this approach offers great flexibility for the future. It is important to note that INRIX[®] has not added any fees onto the pricing submitted for these enhanced sources; all fees will go directly to these partners.

Please note that INRIX considers all clarifications are confidential in cases when the “Proposal reference” section is subject to confidentiality claims as listed on page 4-1 of our proposal.

¹ Section 3.1 of the RFP, pages 3-12 through 3-14 of our proposal

² Described beginning on page 3-20 of our proposal

Proposal reference: Page 2 of transmittal letter – “We understand and accept the data ownership and data licensing provisions of the RFP without exception. In fact, we are willing to discuss liberalizing the usage conditions further as we believe strongly that our clients should have the ability to utilize our data to the maximum extent possible”

Clarification requested:

What is meant by ‘liberalizing usage conditions’? Will this impact cost? Please be more specific regarding the conditions you are willing to liberalize.

INRIX® Clarification:

In our response to the Coalition’s 2nd Request for Information leading up to this RFP, we provided detailed feedback on the then draft IPR statement (our response is attached on the following page for further detail). The language in Section 6.0 of the RFP regarding data ownership and licensing is similar to the draft IPR statement, so the detail and philosophy of our RFI #2 response apply for our proposal as well.

The specific area we would be willing to liberalize is section 6.2 where there are references to road segment length, speed/travel time ranges, update refresh periods. While we would like to maintain safeguards to prevent automated redistribution of our data to commercial entities, such as the media, we would support removal of all limitations on data usage for all Coalition and member organization assets (signs, HAR, 511, web sites, etc.).

As purchasers of data, we see no reason why the Coalition and its members should – or need to – accept terms that prevent the most robust and effective usage of the data you have paid for, and we believe any reference to reducing the granularity or precision of the data, or increasing its latency, for presentation to the traveling public can be eliminated without harming our ability to conduct business with other customers. These changes – whether they are made or not – have no impact on our submitted cost.

INRIX® Response to draft IPR statement in RFI #2***Can your company support the provision of the IPR statement?***

In general, yes we can support the IPR statement, with some suggested clarifications. Philosophically, the only limitations we feel are necessary regarding ownership and use of the data is twofold:

1. Prohibit resale or automated redistribution of data from the Coalition and/or its full member organizations to other public or private entities; and
2. Ensure copyright language is developed and used where practical and appropriate by the Coalition and its full members (e.g., web sites, RSS feeds, email alerts, etc.) to prohibit “screen scraping” or other techniques by which parties other than the Coalition or its full members could attempt to re-purpose the data to circumvent use restrictions. (Note: While we would hope the Coalition and its full members would monitor for such occurrences, the primary goal is to make clear to those considering circumventing the project’s data license that it is illegal, thus allowing the Coalition, its members, or INRIX® to pursue perpetrators, ideally reducing/eliminating such occurrences.)

Are there portions of the statement which provide risk to the Contractor by diminishing opportunity to resell traffic data in commercial markets?

Not given our business model and plans, subject to the suggested clarifications above.

Are there portions of the IPR that are overly restrictive and could be loosened with negligible impact on either the Contractor or the cost of the proposal?

Yes. We see no reason to restrict the Coalition or full member organization’s use of the data provided by this project as is suggested with the bulleted restrictions proposed. As a purchaser of data, we see no reason why the project’s investors should – or need to – accept terms that prevent the most robust and effective usage of the data you have paid for.

For information provided freely to the public, could the number of thresholds be increased to four or five with minimal impact?

Per our previous comment, this question is no longer meaningful.

***Are there further restrictions upon the data which your company would require?
Please comment on any concerns, and provide input for any IPR issues that are not covered.***

None aside from the general prohibition on re-purposing data outside of the Coalition and its full members outlined above.

Note: If other submittals to this RFI indicate that such restrictions as proposed in this RFI are maintained, and the published RFP retains such restrictions, then we strongly recommend some sort of scoring or evaluation criteria be included that gives “extra credit” for proposals that offer relaxing of the terms. We feel that broad vs. restricted usage is a key potential proposal differentiator and would be worth great value to the Coalition and its members, and needs to be recognized accordingly.

Proposal reference: Page 3-12, Item 9 [REDACTED]

[REDACTED] total current average data latency = 4.5 minutes”

Clarification requested:

The definition of latency as defined in the response to item 9, page 3-12 of the proposal is from generation of probe message to receipt of update from data feed. The definition of latency provided in the RFP in section 1.5.9 on or about page 17 is the difference in time between traffic perturbation and when it is reflected in the data stream. Please clarify your response accordingly.

INRIX® Clarification:

Our response was aimed at showing that on average, the time it takes in our service today for source data to move from a vehicle to the customer is 4.5 minutes. Given that the requirement is to detect a traffic perturbation in 8 minutes, we are comfortable that our data as it is provided today can meet this requirement. [REDACTED]

[REDACTED]

With our data density, reporting frequencies, processing efficiency and projected improvements in publishing frequency, we fully expect to easily meet the 8 minute maximum latency requirement, and possibly meet the 5 minute maximum latency requirement, from the outset of the project, with continued improvements possible throughout the operational phase.

Proposal reference: Page 1-4 “... more than 650,000 commercial fleet, delivery and taxi vehicles; toll tag data; and occupancy and speed measurements from several ...”

Clarification requested:

What sources of toll-tag data are included in INRIX[®]'s offering? Are any of these included in this project (within the corridor)? Is TRANSCOM toll-tag data utilized?

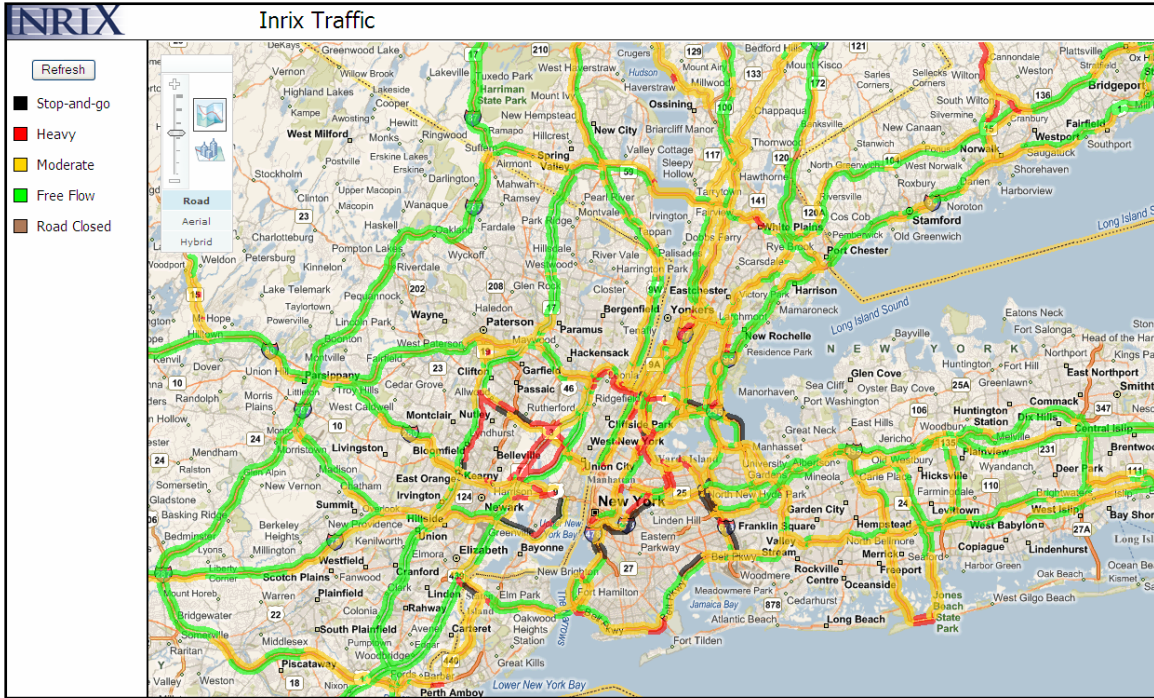
INRIX[®] Clarification:

At present, we include toll-tag data from the San Francisco Bay Area in the INRIX[®] Smart Dust Network. This interface is nearly identical to the TRANSCOM interface as they were both developed by the same integrator. Currently, we do not integrate toll-tag data from any portions of the corridor, including TRANSCOM. However, our system can support it and we would be willing to consider doing so.

In late 2006, INRIX[®] evaluated TRANSCOM's available data and determined that while useful, there were more cost-effective ways to scale our coverage in the New York Metropolitan area. The cost to access the data from TRANSCOM was determined to be prohibitive given that only some of the roads we cover in the region have TRANSCOM coverage, that this coverage has widely varying segment lengths (longer segments increase likelihood of latency) and that we would receive no contractual assurance of data feed reliability. Our decision at the time was to focus more on investments that yielded broader national and regional data. (See map on following page for current NYC area coverage.)

In developing this proposal, we re-examined that decision, but again reached the same conclusion: that our investments are better utilized if they yield broader corridor and/or NYC area wide quality improvements. In fact, since the proposal has been submitted, we executed an agreement that made several thousand more vehicles in the NYC area exclusive probe vehicles to INRIX[®], at a fraction of the fees required to gain access from TRANSCOM and with significantly richer data on the covered roads.

To be clear, technically, our infrastructure supports the integration of toll-tag data from within the corridor and we would welcome detailed discussions with agencies to incorporate such data. To date, the only discussion has been with TRANSCOM and it is a business decision (value for money) to not yet integrate the data. This could of course change over time as factors evolve, such as TRANSCOM's data increases in value and/or coverage, the costs sought for the data moderate, and terms associated with data access more evenly match typical commercial terms that accompany these types of contracts. Our mission is to provide our customers the best data for their investments and will fully recognize that the data available to us is not stagnant.



Current New York City Metropolitan Area Roadway Coverage

Proposal reference: Page 3-12, item 5 "... at present we have not stratified our tests by speed ranges, though this is easily achievable. Our results by and large have met this level of accuracy requirement and ..."

Clarification requested:

Please clarify.

INRIX® Clarification:

The RFP contains the requirement of 10 MPH average absolute error (or root mean square error) for each of 4 speed ranges. We also use the root mean square error method in our own ground truth drive testing. A "drive test" usually involves 3-5 drivers driving a metropolitan market for 3-5 days spanning early morning to evening, which generates data that is compared to the information being provided for that market in our Partner Portal.

To date, in addition to generating an overall regional RMS error measure for each drive test, we calculate results based on locations (e.g., specific TMC segment for the whole drive testing period) and by time of day (e.g., all data points gathered during 3-4p.m. for the whole drive testing period during the drive test). We have not subdivided the data to do analysis in different congestion conditions (e.g., 0-30 MPH vs. over 60 MPH). In some recent testing, we are using a customer proprietary approach that assesses our ability to identify when congested conditions are occurring, perhaps the closest testing we have done that attempts to determine performance variations at different states of congestion. These results, which unfortunately are client proprietary, give us confidence that we will be able to meet the specific requirements the RFP for the entire baseline coverage area. As the source data increases over the 9-12 months between now and system evaluation, our results will only get better when comparing Coalition sponsored 2008 analysis as it compares with 2006 and 2007 INRIX® testing.

Proposal reference: Page 3-2, DTS Traffic Systems

Clarification requested:

Please clarify DTS's role or contribution to the proposal.

INRIX[®] Clarification:

On Page 3-2, our proposal states: "This proposal makes available DTS's expertise in converting or creating traffic count stations that can also generate real-time source data to be used in the project. DTS is offering the exact pay item prices, terms and conditions that currently govern its statewide traffic data services contract with VDOT to the Coalition and its member agencies, allowing – at Coalition/agency option – agencies the potential of establishing or converting sites to dual traffic counting and real-time usage."

More detail is provided on Page 3-22 of our proposal: "Digital Traffic Systems (DTS) currently operates and maintains VDOT's and maintains FDOT's traffic count stations under long-term contracts. Further DTS has led the implementation in roughly 100 of VDOT's 400 count stations of dual use equipment, allowing for the stations to continue to provide traffic count data but also to serve as real-time sensors for traffic operations functions. Through this proposal, INRIX[®] is offering to all member agencies the ability to tap the resources of DTS for the same terms under which DTS is contracted by VDOT at present. This would allow any agency at their option to evolve any number of their traffic count stations – or even create stations from scratch – that can provide source data to INRIX[®] and data directly to the agency."

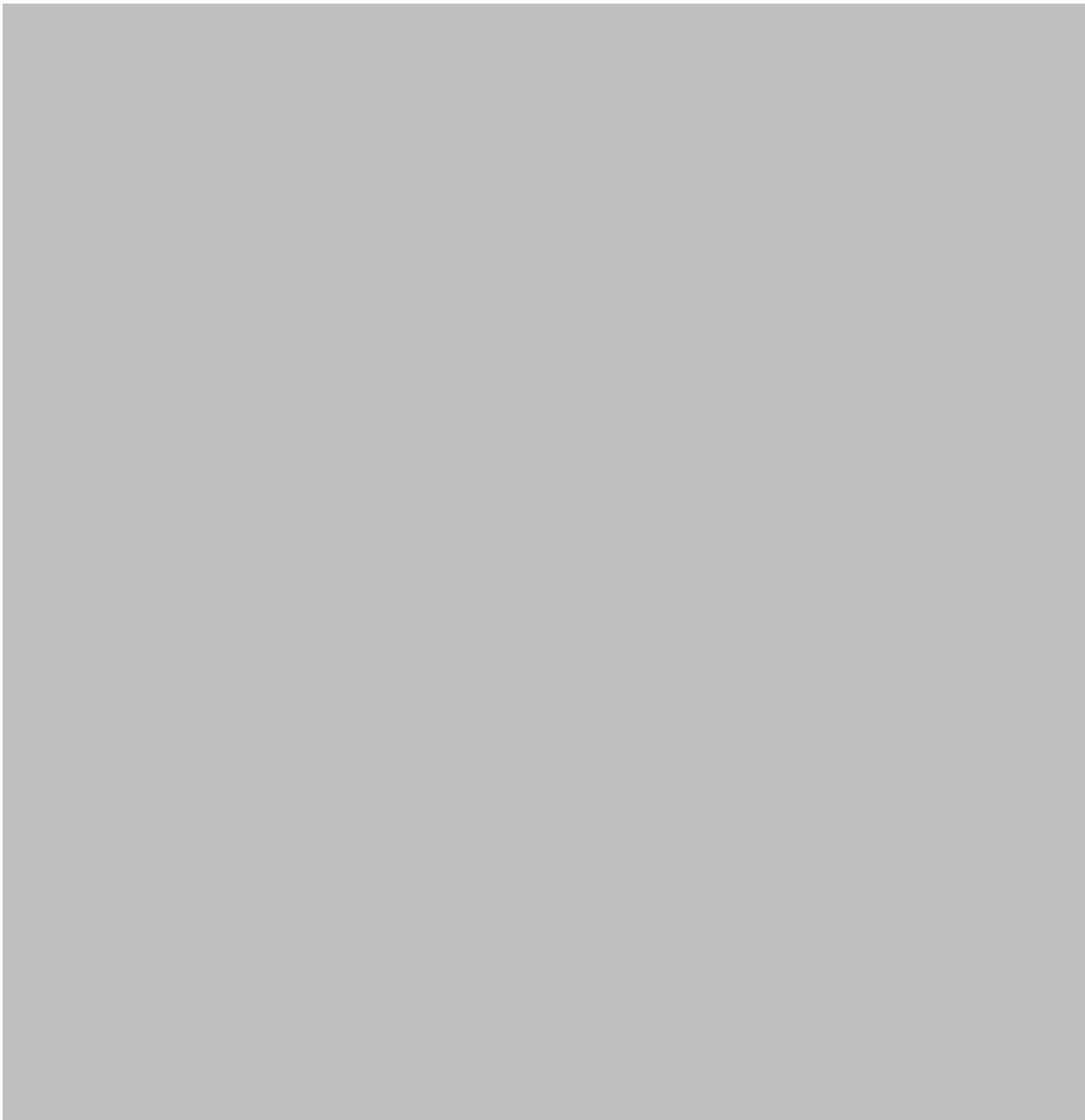
Utilizing DTS' capabilities is one of our unique enhanced data source options we offer in the proposal. Their participation is not required for INRIX[®] to successfully complete the core requirements of this RFP. We are offering DTS capabilities to provide support in response to Indefinite Delivery, Indefinite Quantity (IDIQ) tasks orders which can build and expand data collection networks and to perform associated support services. Tasks can include but not be limited to: (1) applications and installation of dual use traffic data collection technologies, (2) Traffic Data Collection Timeliness and accuracy of data including calibration, (3) Maintenance and support of the Integration of data from existing compatible sources, (4) Participation and technology tradeoffs of innovative, non-invasive detection technology (including but not limited to video detection), while taking advantage of existing data where available, (5) Traffic signalization experience, (6) Active involvement in the commercial viability of the data (include traffic video distribution systems) for repackaging the information for commercial markets and (7) Specialty Consulting services for data integration and application support.

Proposal reference: Pages 3-2 and 3-3 also 3-23, True Position

Clarification requested:

Is the small scale test referenced on page 3-3 included in the cost of the base proposal, or is it an additional cost? If the small scale test is successful, will there be additional cost for implementation of the True Position concept over other geographical areas, or will such costs be reflected in the existing cost model? Are Cell Phone carrier agreements in place, if not what is the status of these agreements? If such agreements exist, what is their geographic coverage? What are the existing and planned contractual relationships, if any, between True Position, INRIX, T-mobile, and AT&T as they relate to work on the proposed project?

INRIX® Clarification:



Proposal reference: Page 3-12, Item 4

Clarification requested:

Please clarify. What, if any, of the traffic data referenced in the response to item 4 is included in the cost of the base proposal? Are there extra costs involved with provision of the extra information? If so, are these reflected in the cost proposal?

INRIX® Clarification:

None of these additional files are included in the cost of the base proposal. Given the page limitations and the focus on travel time and speed data of the RFP, we did not include detailed information about our other feeds.

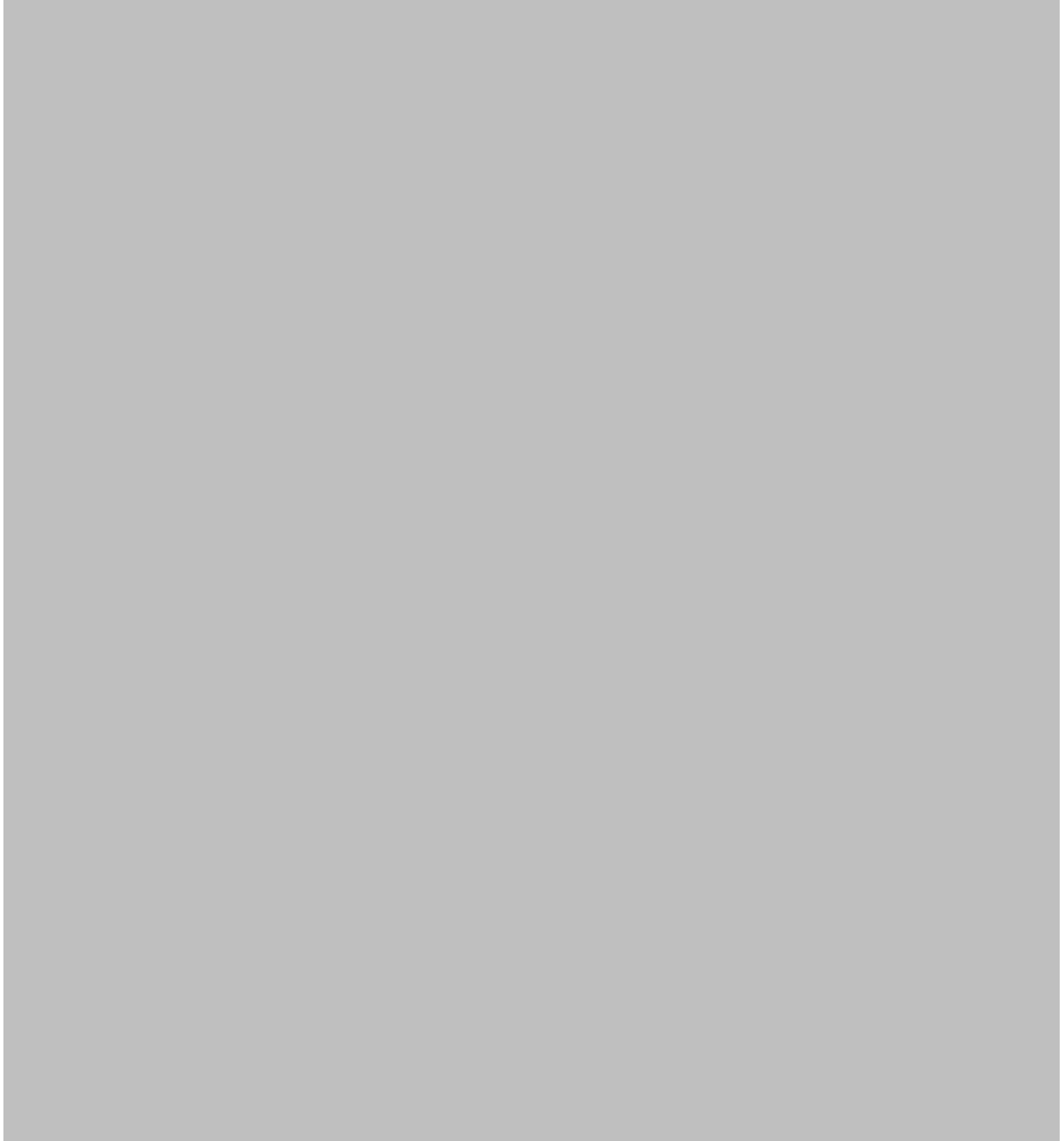
There are a large number of potential approaches to obtain and utilize the additional flow, incident and event data we have available and it does not lend itself to creating “list prices” that will ultimately not prove meaningful. Our expectation was that during the early stages of the project, we would communicate our full portfolio of additional offerings, allowing the Coalition and/or its member agencies to request more details for specific feeds and geography at any point during the contract period. We would then respond to those requests.

Proposal reference: Page 3-47, 48

Clarification requested:

Do any of the pending patents (and the possibility of not acquiring the patent) affect INRIX's ability to deliver the products associated with the contract? Do any of these contribute to the risk potential of the project?

INRIX® Clarification:



Proposal reference: Page 3-8, “Additionally, the INRIX Smart Dust Network aggregates real-time incidents and hundreds of market-specific criteria that affect traffic – such as construction and road closures, sporting and entertainments events, school schedules and weather forecasts.”

Clarification requested:

How is event information cited on page 3-8 collected? Is such information critical to the performance of the Smart Dust network? Is the collection of any of this data expected to be the responsibility of the Coalition and its members?

INRIX® Clarification:

INRIX® employs its own full-time team which is focused on collecting the event information discussed in the proposal. Our team has direct relationships with the venues, school districts, sporting leagues and other bodies that organize, coordinate and schedule events of various types across the country, allowing INRIX® to independently build and maintain unparalleled accuracy, recency and detail in the information it provides and uses.

Much of the information aggregated as part of the Smart Dust Network (events, school schedules, legislative calendars, real-time and forecast weather etc.) provide material lift to the accuracy of INRIX® predictive traffic products, however they do not impact the accuracy of INRIX® real time traffic flow information. [REDACTED]

There are no additional Coalition or member responsibilities to support this data collection effort.



Proposal reference: Page 3-8, sidebars

Clarification requested:

Clarify the cited >80% road sensor data statistic. Does this reflect 80% of sensors, organizations, or other? To what extent is INRIX's ability to provide quality data dependent upon coalition member's publicly available data, or public systems? What if these sources of data are unavailable? Is the proposal in any way dependent upon increased access to coalition member's incident and traffic data over and above current relationships?

INRIX® Clarification:

This is an estimate of the number of nationwide real-time "ITS" sensors (as opposed to traffic count stations that are not real-time in nearly all cases) that have the ability to provide data outside their closed freeway management system to service providers such as INRIX®. The point to emphasize is that on a national scale, while we are prohibited from having access to the ITIP/TTID sensors, the scale of publicly available sensor data dwarfs the proprietary sensor networks in operation.

INRIX®'s ability to deliver quality data, while helped by access to coalition member's publicly available data, it is not dependent upon this access. We have carefully constructed – and continue to build – our Smart Dust Network to minimize dependencies on individual suppliers of source data, be it an agency or a specific GPS probe fleet. While we clearly desire to maintain – and expand with other member agencies if possible – access to agency provided source data, we are not dependent upon this data to meet the project's requirements.

Proposal reference: Page 3-29, "... or some equivalent system up to 1000 miles in coverage."

Clarification requested:

Where will the 1000 miles of arterial coverage be located? How will it be determined? If, after three years, the coalition decides to continue contracting for traffic data, will the 1000 miles of arterial coverage be included in the base contract price for years 4 through 10, or excluded? Do you agree that the traffic data collected on the 1000 miles of arterials be subject to the same Data Ownership provisions as the data purchased by the Coalition?

INRIX® Clarification:

Item 11 in the Traffic Data Requirements Table (Section 3.1) of the RFP alludes to the fact that road coverage might change from those defined as the core system in the RFP. We wanted to make clear in our proposal that we are prepared to offer coverage of either the arterials as defined in the core system – or a similar scale deployment to be determined by the Coalition through the completion of the initial task order beginning the project.

To best describe the business terms for years 4 through 10, we are including material inserted into the cost proposal's cost model section:

Arterial/alternate route coverage will be provided at no cost initially in the core system (or a resulting system of analogous size) for the base period. If arterial/alternate route coverage is included in years 4-10, a rational per mile price will be established based upon negotiation with the Coalition, although it will not exceed the freeway mileage per year price (the rationale for this is that INRIX® and the Coalition are not currently in a position to value the quality of arterial data provided, and the relative importance of source data – if any – to be provided by the Coalition's member agencies to create the service such as signal system data, etc.).

We agree that the same data ownership provisions will govern both limited access and arterial data.

Rick Schuman

From: Rick Schuman
Sent: Tuesday, October 16, 2007 12:11 PM
To: 'Bruce Brewer'
Subject: RE: Request for Financial Clarification for RFP 82085N Traffic Flow Data.
Attachments: Request for Clarification #2 - INRIX Submittal 10-16-07.pdf

Bruce:

Attached are our clarifications to your questions below. Please don't hesitate to contact me if you need further explanation on this submittal or with any other areas of our proposal.

Please confirm receipt. Thanks!

Sincerely,

Rick

Rick Schuman | Vice President, Public Sector, Inrix | w 407-298-4346 | c 407-572-5584 | rick@inrix.com | www.inrix.com

From: Bruce Brewer [mailto:bbrewer@umd.edu]
Sent: Friday, October 12, 2007 11:01 AM
To: Rick Schuman
Subject: Request for Financial Clarification for RFP 82085N Traffic Flow Data.

Good Morning Rick:

The Financial Evaluation team have requested a clarification to the Inrix Financial Proposal. A response is requested no-later than close-of-business, Tuesday, 16 October 2007. The clarification requested is as follows:

Reference in Financial Proposal:

The first page of the pricing proposal lists mobilization and subscription rates for "mandatory coverage in the core system, 1531 centerline miles"..... "Arterial/alternate route coverage will be provided at no cost initially in the core system (or a resulting system of analogous size of roughly 900 centerline miles) for the base period. If arterial/alternate route coverage is included in years 4-10, a rational per mile price will be established based upon negotiation with the Coalition, although it will not exceed the freeway mileage per year price."

Clarification Requested:

For the Base Three Year Period

Understanding that the Coalition will be implementing its traffic monitoring system through work orders, and that Coalition members or the Coalition itself may extend coverage beyond that listed in the core region defined in coverage maps subject to available funding and the desires of its members, what pricing for arterials (meaning roadways with other than grade separated intersections) is available in the base three year period? Please answer the questions for the following scenarios, or provide enough information such that the pricing can be assessed by the Coalition.

Assume that a member state such wishes to procure additional coverage within the base three year period. The additional coverage consists of 500 miles of freeway, and 200 miles of arterial grade roadways (as defined above). This is over and above the base system. The cost for the 500 miles of additional freeway coverage is documented in the price proposal. The cost for the 200 miles of arterials is not. For this scenario:

Is the arterial coverage in the base contract years provided at no cost as long as the ratio between the total freeway miles and arterial miles procured across the entire contract remains less than or equal to the ratio in the core coverage area?

(Assuming the answer to the previous question is 'yes') If the desired coverage for arterials exceeds the limit, what pricing will Inrix guarantee for arterials during the base three year period?

For the optional 7 years contract period (years 4 through 10)

Understanding that arterial data will be provided as no cost initially due to uncertainties in quality, please answer the following questions concerning procurement of arterial data in years 4 through 10:

If the quality of data on arterials is shown to be equal to or greater than that specified in the contract for mandatory coverage areas, will the cost for arterials be equal to that quoted for freeways?

If the quality of data on arterials is shown to be less than that specified in the contract for mandatory coverage areas, but still useful to the Coalition and its members, can Inrix provide a pricing schedule, or cost model for the out years of the contract?

Short of any additional information, pricing for arterials will be assumed equal to that of freeways for proposal evaluation purposes.

Thank you for your help and support. We look forward to reviewing your response.

Sincerely,

Bruce



**Request for Clarification #2 (RFP #82085N)
Traffic Data and Associated Services along the I-95 Corridor¹**

Issued: October 12, 2007

Due: October 16, 2007

Submitted by: INRIX[®] Inc.

Contact Information: Rick Schuman
Vice President, Public Sector
9832 Montclair Circle
Apopka, FL 32703
Email: rick@inrix.com
Phone: 407-298-4346



INRIX[®] is pleased to submit clarifications as requested by email on October 12, 2007 related to pricing of arterial data. We recognize the desire of the Financial Evaluation Team to model fees related to arterial data. However, there are numerous factors that make giving simple, concise answers to any of these questions difficult.

Information submitted in the Technical Proposal is germane to understand our clarifications. Page 3-25 of the Technical Proposal describes our assessment of arterial data provision in the context of the RFP requirements and the state of technology:

INRIX has had perhaps the most experience with attempting to provide quality data, from probe-based sources, for arterials of any traffic data provider. Our current conclusion is that only in cases where substantial traffic flow and low signal density exists can reasonably reliable data be provided. Further, as explained in more detail in the risk analysis, INRIX does not believe that any single technology approach – including probe vehicle data – can yield reliable arterial data at the same quality levels as on freeways, certainly not in an operational environment across the corridor early in the project. Since the RFP does not distinguish requirements based on arterial vs. freeway (rather based on flow rates), our proposal does not commit to meeting the defined quality levels for arterials coverage.

However, INRIX is as interested as the Coalition – as are most of our current customers – in calculating and delivering high quality data for arterials. Thus, we have proposed an approach to both help advance the start-of-the-art regarding arterial and alternate route data provision as well as give the Coalition and INRIX the opportunity to build from today towards the desired future. As such, we propose to work with the Coalition to establish an arterial/alternate route applied research and testing initiative as part of this project with the Coalition. To show our commitment to this initiative, we will make data available in our feed, in the format described in item 1, on the arterials defined in the core system (or some equivalent system up to 1000 miles in coverage) for the three-year base operating period as our contribution to the initiative.

¹ Please note that INRIX considers this submittal confidential as these clarifications relate to a section of the proposal subject to confidentiality claims as listed on page 4-1 of the technical proposal.

In the intervening period since proposal submittal, INRX has continued our research and development efforts related to arterials and remain convinced that no probe-only based technology approach (cellular or GPS-based) will achieve the quality levels described in the RFP in the near-term, and that any commitments by other bidders to do so and pricing to support it is little more than conjecture and guesswork, essentially telling the evaluators what you wish to hear.

Clarifications

In our proposal, this is what we committed to regarding arterial pricing:

- Up to 1000 centerline miles of data on arterials/alternate routes, at no cost for the three-year base period (the technical and cost proposals had slightly different amounts – to clarify, INRIX will provide up to 1000 miles at no cost).
- Arterial/Alternate route coverage will not exceed the freeway mileage price per year in years 4-10.

Reflecting upon the Coalition questions we are extending our commitments to include:

- Any additional arterial coverage desired in years 1-3, beyond the 1000 centerline miles being provided at no cost, will not exceed the freeway mileage price per year and would be quoted and negotiated on a case-by-case basis.
- INRIX commits to working with the Coalition to establish a detailed arterial price schedule as soon as practical after the contract starts (see below).
- Until such a pricing schedule can be established, the principal of case-by-case quotation and negotiation, not to exceed freeway mileage pricing, would govern whether in years 1-3 or 4-10.

As highlighted in the technical proposal, the rationale behind providing up to 1000 miles of arterial data at no cost through the base period of the contract is to facilitate the establishment of an environment where data needs, data quality, role of government provided signal system data, the costs and the value of arterial data can be better understood by all parties. INRIX is willing to contribute this substantial coverage to support mutual learning. What we hope results, in short order (ideally in the first year of operations), is a collective agreement on the details necessary to facilitate the creation of arterial “list” pricing, including:

- One or more categories of arterial data requirements that meet member needs and are realistically achievable in an operating environment.
- The role of signal system data in creating or improving arterial data; the likelihood of such data becoming available; and the cost impact (hopefully, savings to the Coalition and/or agencies seeking arterial coverage).
- The impact on quality and cost of different types of arterial coverage (e.g., is high traffic dense urban arterial data the same in terms of quality and cost as low traffic alternate routes in rural areas?)

- Cost impact of different size arterial coverage – there is a potential that the size and geography of an arterial network could reduce the effort, and hence the per mile price, of coverage added in a task order.

If INRIX is selected as the contractor, we hope the Coalition will identify coverage for the first “1000 miles” that will allow us to collectively address these wide ranging issues expeditiously to establish an updated arterial pricing schedule that will govern the remainder of the contract. If there is additional arterial coverage sought prior to the establishment of updated arterial pricing, we would strongly encourage these to be negotiated on a case-by-case basis, with the freeway pricing the maximum per mile price to be quoted. With such a wide range of possible tasking, and an equally wide range of potentially acceptable levels of data quality, we recommend this approach to maximize flexibility in the near-term. While it is our hope and belief that pricing can be reduced with the updated arterial pricing, we believe it is too risky for both the Coalition and INRIX to establish an a priori per mile price without substantially more collective experience. The chances of under or overpricing coverage is very high – and either result does not support a long-range partnership that will be key to the success of this project.

We are concerned that the last statement in the Request for Clarifications, “Short of any additional information, pricing for arterials will be assumed equal to that of freeways for proposal evaluation purposes,” will result in our proposal being judged at a higher price point than will reflect reality. As a rule of thumb, we are hopeful of being able to reduce the arterial data costs on average to 2/3’s the cost of freeway pricing. But as mentioned, we cannot commit, due to the aforementioned myriad of factors in building quality arterial data – and don’t believe it is in the best interests of the Coalition, its member agencies or INRIX – to lock in such pricing.

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A001	2. DATE ISSUED 06/08/07	3. NUMBER OF PAGES 13
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4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)
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6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR	7A. AMENDMENT OF SOLICITATION NUMBER <p style="text-align: center;">82085N</p>
	7B. DATED <p style="text-align: center;">04/27/07</p>

8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning _____ copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

9.1 This Amendment Serves To:

- 9.1.1 Provide an updated Excel price-proposal spreadsheet.
- 9.1.2 This Amendment serves to convey the Questions received from vendors, and Answers.
- 9.1.3 This Amendment Serves to convey a PDF file of Attendees at the Pre Proposal Conference.
- 9.1.4 This Amendment Serves to convey a PDF file of the report "Cellular Probe Data Evaluation Case Study: The Baltimore Multimodal Traveler Information System (MMTIS).
- 9.1.5 This Amendment Serves to convey a MS Word listing of all vendors receiving the RFP.
- 9.1.6 This Amendment Serves to Modify reporting requirements as defined in the Minority Business Enterprise (MBE) Participation, Page 69, "Contract Administration Requirements" as follows:
 On a Monthly Basis, the Contractor is required to provide the Procurement Officer as defined in Section G/Contract Administration Data, Paragraph 5 "Notices", an MBE Subcontractor Activity report defining:
 (1) The dollar expenditure of all Service Task Orders for the reporting month, (2) the MBE subcontract dollar expenditure for the reporting month, (3) a total contract aggregate dollar expenditure of all Service Task Orders, and (4) a total contract dollar amount of all MBE subcontract funding under the contract.

9.2 The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.

9.3 By Signing this Amendment, the contractor accepts the incorporation of these revisions.

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print)		11A. NAME OF PROCUREMENT OFFICER (Type or Print)
10B. CONTRACTOR SIGNATURE	10C. DATE SIGNED	Bruce D. Brewer
(Signature of Person Authorized to Sign)		

**Questions and Answers
RFP 82085N for
Traffic Data and Associated Services
Along the I-95 Corridor**

Question 1: Do MBE forms count toward the technical proposal page limit?

Response: *No. Any forms, disclosures, or affidavits required in Part IV – “Representations and Instructions” of the RFP are to be included as part of the Contractor’s financial proposal and do not count against the 75 page limit of the technical proposal.*

Question 2: When submitting alternate proposals, may information from the base proposal be included by reference in order to avoid duplicating material?

Response: *Yes. When submitting Alternate proposals, vendors are encouraged to reference material rather than repeat it in each alternate proposal submitted. Each alternate proposal is subject to the same 75 page limit imposed for technical proposals. This 75 page limit for an alternate proposal includes the page count of any material referenced. (ie: the contractor’s base submission is 75 pages.... Of this 75 pages, 35 is included in the alternate by reference, the maximum page count for additional material in an alternate proposal would be 40 pages)...*

Question 3: Does the 500 vehicles per hour flow threshold referenced in item 7 of the Real Time Traffic Data Requirements refer to a unidirectional or bidirectional flow criteria?

Response: *Unidirectional.*

Question 4 Section A-2, Subsection C states, “Requests for clarification or additional information must be made in writing to the Procurement Officer and received at the Issuing Office no later than Friday, 25 May 2007 C.O.B..” Does this prohibit communication with personnel from states and other entities that are members of the I-95 Corridor Coalition (some of whom may serve on the evaluation panel)?

Response: *Requests for additional information or clarification concerning this RFP must be conveyed to the issuing office, as such, communications with coalition members relative to this RFP are prohibited. The RFP encourages the reuse of existing data. To this end, communications with Coalition members for the purpose of negotiating access to existing data within their purview are not restricted, and communications with coalition members for business not relating to this RFP are also not restricted.*

Question 5: The coverage maps of the corridor provided at <http://www.purchase.umd.edu/> depict a shaded buffer region used to define the extent of coverage for some of the roadways. What size are these buffers?

Response: *The maps depict six roadway classes within the I-95 corridor. The classes are as follows: (1) I-95, (2) beltways, (3) freeways parallel to the corridor, (4) arterials parallel to the corridor, (5) freeways that cross-link the corridor, and (6) arterials that cross-link the corridor.*

The shaded regions on the maps depict a five (5) mile buffer around the combined set of road categories 1 through 4. Road categories 5 and 6 are terminated either at state boundaries, identifiable intersections, or intersection with this 5 mile buffer. The use of the 5 mile buffer to terminate category 5 and 6 roads is most evident along rural portions of the corridor in southern states.

NOTE: *The buffer region displayed on the New Jersey map includes road categories 5 and 6 as well. This is an irregularity in the map graphics only; the boundary used to terminate road classes 5 and 6 remains a 5 mile buffer around road classes 1 through 4.*

Question 6 : The mileage listed for the various road categories in the legend on the full corridor map does not equal the sum of the mileage listed on the individual state maps. Which is correct?

Response: *The mileage listed on the individual state maps is correct. A corrected full corridor map has been uploaded to the web site.*

Question 7: The RFP references "period of low flow" as being volumes of 500 or less vehicles per hour, is that volume count for a single direction or travel or for both directions of travel at a given location?

Response: *See the response to question 3.*

Question 8: The mileage totals for the summary map and those from the individual states don't seem to add up. Could you explain, or revise if inaccurate?

Response: *Please see the response to Question 6.*

Question 9 Is there a detailed table available as a companion to the map? This would help precisely identify the termini of the identified roads.

Response: *See the responses to questions 5 and 6*

Question 10: What is the source of the validation data against which our data is measured?

Response: *See the response to question 13.*

Question 11: How will you guarantee or assure the accuracy of the validation data?

Response: *See response to question 13.*

Question 12: Will we have the opportunity to examine and use the validation data before we are evaluated?

Response: *See response to question 13.*

Question 13: How will you respond to a situation where our data is more accurate than the validation data?

Response to questions 10 through 13:

The method of validation and source of validation data has not been determined. Traditional methods have relied primarily on floating car studies. Floating car studies may be cost prohibitive due to the extent of coverage. Validation data may come from numerous sources. Evaluation will take into account the inherent variability and accuracy of the source of the validation data. The validation procedure and data source, will be open and disclosed to the contractor for review and comment.

Question 14: Within a task order, do you anticipate paying both a subscription fee and hourly labor rates or will a task order for data just have a subscription fee?

Response: *As this contract is constructed, Task Orders are required for both Data, and Ancillary Services. Based on the requirements of the Coalition, work performed under this contract could include providing (1) Data only, (2) Services only, and (3) a combination of Data and Services. In the occasion of the third option, separate task orders will be submitted to the contractor, one for Data and one for Ancillary Services. Payment for Data will be based on the price model for traffic data. Payment for Ancillary Services is based on the hourly labor rates.*

Question 15: Has TRANSCOM data been evaluated to determine if it meets the requirements of the Coalition?

Response: *No.*

Question 16: Will we have the opportunity to review, comment, and/or approve the validation exercise methodology?

Response: *The validation procedure will be open and disclosed to the contractor for review and comment. The validation methodology is NOT contingent on the contractor's approval.*

Question 17: Can the University guarantee payment in NET 30 or does payment depend up review and approval by individual coalition members?

Response: *The University has been designated as the official representative of the Coalition with regard to this effort. Payments for Data will not be subject to review and/or approval by the individual coalition members. Invoicing will be submitted to, and paid by the University as one payment under Net 30 terms.*

However, as Service requirements are idiosyncratic to a particular coalition member, even though invoicing will continue to be effected through the University, payment will be dependent upon acceptance of the service/deliverable by the requesting coalition member prior to effect of payment.

Question 18: Over the next 10 years, new technical advances may change the techniques that we use in performing traffic monitoring. When these techniques become available, may we adopt those techniques without renegotiating pricing?

Response: *Yes. A contract will be awarded for the provision of traffic data subject to requirements for accuracy, timeliness, and standard reporting formats. Any method or technique that conforms to the requirements of the contract may be adopted.*

Question 19: What is the definition of a “proper invoice” as referenced on page 43 of the RFP?

Response: *Section I Contract Clauses, Clause 16, “Payment of University Obligations”, line 2, “the University’s receipt of a proper invoice” refers to Section G/Contract Administration Data, Paragraph 2/Invoicing where the conditions for a “proper invoice” are defined (Page 35 of the RFP).*

Question 20: Under what conditions would the University order the suspension of work as referenced on page 43 of the RFP?

Response: *Suspension could be effected under many scenario’s, the primary could be (1) general non-performance under the contract, (2) the quality of data being provided under this contract, (2) lack of funding appropriation. However, suspension is not limited to these three (3) facets only.*

Question 21: If work is terminated by the University, would it be the intent of the University to ask for title to any of the components used to deliver traffic data to the University?

Response: *The intent of this effort is to procure traffic data. As noted in question 23 below, the Data is regarded as the intellectual property of the Contractor, and not considered “Works”. However, any deliverables created under the Services facet of this contract would transfer to the University.*

Question 22: May the contractor change Internet Service Providers without the consent of the University?

Response: *The contractor has full liberty to manage the data collection, processing, and delivery in their own best interest provided that the requirements of the contract are met. If changing Internet Service Providers has no bearing on the fulfillment of the contractual obligations, then University consent is not needed. Any change, including changing Internet Service Providers, that would cause disruption or degradation of service requires University consent.*

Question 23: Will the University stipulate that it is procuring a service and that this service is NOT considered a “work for hire”?

Response: *The University is procuring traffic-flow data as a “subscription” service. The University recognizes that this data is proprietary to the Contractor providing the data and is not considered a “work for hire”, and title to the data is retained by the Contractor.*

However, under the Ancillary Services facet of this contract, any deliverables developed as a result of a delivery order on behalf of the Coalition (reports, software, web-sites, etc) would constitute a “work for hire”, and as such, title would pass to the University.

Question 24: Section 6.1 of the RFP appears to contradict Contract Clause 42. Will the University please confirm that the contractor retains ownership of the data and that Section 6.1 of the RFP supersedes Contract Clause 42?

Response: *Please see the response to Question 23.*

Question 25: The file will not let me insert the hourly rates for consulting services for base year 1 (all other yellow boxes seem to be fine)

Response: *This has been corrected in the pricing sheet conveyed with the Question and Answers Amendment A001.*

Question 26: The total labor field doesn't seem to include the totals from base years 1-3, but rather only the clerical support cell from each year.

Response: *This has been corrected in the pricing sheet conveyed with the Question and Answers Amendment A001.*

Question 27: Use of Agency ROW- Is data from existing sensors available and OK to use?

Response: *Data from existing sensors may be used. The University does not provide or make available any data. Section C, sub-sections 7.2 and 7.3 apply to existing sources of sensor data.*

Question 28: What is the total and annual budget?

Response: *The Coalition anticipates a total three year budget of approximately 3.7 million dollars.*

Question 29: What state or incorporated entity is the direct recipient of the FHWA funds?

Response: *For this Effort, The State of Maryland is the recipient of the FHWA funds. This does not mean that other Coalition member States might not also use their FHWA funds in the execution of tasking under a resulting contract*

Question 30: Who is on the evaluation team?

Response: *The identities of the members of the Evaluation Team is not available to vendors participating in this RFP process. See also the response to question 4.*

Question 31: RFP says that the technical proposal has greater weight than price- how much greater?

Response: *The University does not assess a fixed “Weight” factor. The award of the contract will be based on best value to the Coalition according to the evaluation criteria described in section L.*

Question 32: Any amendments to date?

Response: *No prior amendments have been issued.*

Question 33: Please confirm that the delivery of data is a services contract and that data brought to project is not UMD intellectual property within the meaning of contract clause 37 (page 51 of the RFP) and not UMD data within paragraph 42 (page 53 of the RFP).

Response: *See response to question 23. Real time traffic data provided by the vendor is not considered a “work for hire” within the meaning of contract clause 37. Contract clause 42 governs data provided by the University to the vendor. Real time traffic data provided by the vendor does not originate from the University, and is therefore not UMD data.*

Question 34: Please provide a link to the validation tests that were done for MMTIS that will be used to measure data quality.

Response: *Provided herewith in attachment is the requested MMTIS Validation test report “Cellular Probe Data Evaluation Case Study: The Baltimore Multimodal Traveler Information System (MMTIS)”.*

Question 35: Once a proper invoice is submitted for work completed, how quickly will payment be made?

Response: *See the response to Question 17.*

Question 36: Can you give us specific endpoints for the desired coverage in the Core Area?

Response: *See the response to question 5.*

Question 37: The file will not let me insert the hourly rates for consulting services for the base year 1 (all other yellow boxes seem fine).

Response: *This has been corrected in the Pricing Sheet provided with Amendment A001.*

Question 38: The total labor field doesn't seem to include the totals from base years 1-3, but rather only the clerical support cell from each year.

Response: *This has been corrected in the Pricing Sheet provided with Amendment A001.*

Question 39: In light of the IDIQ nature of the Services facet, how will contractors enter an estimated dollar value on the provided MBE forms?

Response: *In their proposal response, Contractors shall define the MBE subcontracting commitment as a percentage of services only.*

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A001	2. DATE ISSUED 06/08/07	3. NUMBER OF PAGES 13
4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)	
6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc., 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER 82085N	
	7B. DATED 04/27/07	

8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning **1** copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

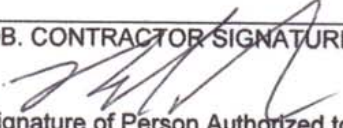
9.1 This Amendment Serves To:

- 9.1.1 Provide an updated Excel price-proposal spreadsheet.
- 9.1.2 This Amendment serves to convey the Questions received from vendors, and Answers.
- 9.1.3 This Amendment Serves to convey a PDF file of Attendees at the Pre Proposal Conference.
- 9.1.4 This Amendment Serves to convey a PDF file of the report "Cellular Probe Data Evaluation Case Study: The Baltimore Multimodal Traveler Information System (MMTIS).
- 9.1.5 This Amendment Serves to convey a MS Word listing of all vendors receiving the RFP.
- 9.1.6 This Amendment Serves to Modify reporting requirements as defined in the Minority Business Enterprise (MBE) Participation, Page 69, "Contract Administration Requirements" as follows:
On a Monthly Basis, the Contractor is required to provide the Procurement Officer as defined in Section G/Contract Administration Data, Paragraph 5 "Notices", an MBE Subcontractor Activity report defining: (1) The dollar expenditure of all Service Task Orders for the reporting month, (2) the MBE subcontract dollar expenditure for the reporting month, (3) a total contract aggregate dollar expenditure of all Service Task Orders, and (4) a total contract dollar amount of all MBE subcontract funding under the contract.

9.2 **The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**

9.3 **By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, Vice President, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) Bruce D. Brewer
10B. CONTRACTOR SIGNATURE  (Signature of Person Authorized to Sign)	10C. DATE SIGNED 6/8/07

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A002	2. DATE ISSUED 06/13/07	3. NUMBER OF PAGES 12
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4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)
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6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR	7A. AMENDMENT OF SOLICITATION NUMBER <p style="text-align: center;">82085N</p>
	7B. DATED <p style="text-align: center;">04/27/07</p>

8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning _____ copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

- 9.1 This Amendment Serves To Convey additional Questions/Answers submitted by the required date on the RFP, but inadvertently excluded in the A001 Response. The Additional Questions/Responses concern numbers 40 – 43. Responses under Questions 1 – 39 are repeated unaltered.**
- 9.2 Contractor's MBE Attachment B provided with their proposal shall denote the Subcontractors the Contractor intends to utilize in attaining the overall goal of 25%. Amendment A002 (1) deletes the requirement to assign an independent goal to each subcontractor proposed, and (2) provides revised MBE Attachment B forms.**
- 9.2 The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**
- 9.3 By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print)	11A. NAME OF PROCUREMENT OFFICER (Type or Print) <p style="text-align: center;">Bruce D. Brewer</p>
10B. CONTRACTOR SIGNATURE (Signature of Person Authorized to Sign)	10C. DATE SIGNED

**Questions and Answers
RFP 82085N for
Traffic Data and Associated Services
Along the I-95 Corridor**

Question 1: Do MBE forms count toward the technical proposal page limit?

Response: *No. Any forms, disclosures, or affidavits required in Part IV – “Representations and Instructions” of the RFP are to be included as part of the Contractor’s financial proposal and do not count against the 75 page limit of the technical proposal.*

Question 2: When submitting alternate proposals, may information from the base proposal be included by reference in order to avoid duplicating material?

Response: *Yes. When submitting Alternate proposals, vendors are encouraged to reference material rather than repeat it in each alternate proposal submitted. Each alternate proposal is subject to the same 75 page limit imposed for technical proposals. This 75 page limit for an alternate proposal includes the page count of any material referenced. (ie: the contractor’s base submission is 75 pages.... Of this 75 pages, 35 is included in the alternate by reference, the maximum page count for additional material in an alternate proposal would be 40 pages)...*

Question 3: Does the 500 vehicles per hour flow threshold referenced in item 7 of the Real Time Traffic Data Requirements refer to a unidirectional or bidirectional flow criteria?

Response: *Unidirectional.*

Question 4 Section A-2, Subsection C states, “Requests for clarification or additional information must be made in writing to the Procurement Officer and received at the Issuing Office no later than Friday, 25 May 2007 C.O.B..” Does this prohibit communication with personnel from states and other entities that are members of the I-95 Corridor Coalition (some of whom may serve on the evaluation panel)?

Response: *Requests for additional information or clarification concerning this RFP must be conveyed to the issuing office, as such, communications with coalition members relative to this RFP are prohibited. The RFP encourages the reuse of existing data. To this end, communications with Coalition members for the purpose of negotiating access to existing data within their purview are not restricted, and communications with coalition members for business not relating to this RFP are also not restricted.*

Question 5: The coverage maps of the corridor provided at <http://www.purchase.umd.edu/> depict a shaded buffer region used to define the extent of coverage for some of the roadways. What size are these buffers?

Response: *The maps depict six roadway classes within the I-95 corridor. The classes are as follows: (1) I-95, (2) beltways, (3) freeways parallel to the corridor, (4) arterials parallel to the corridor, (5) freeways that cross-link the corridor, and (6) arterials that cross-link the corridor.*

The shaded regions on the maps depict a five (5) mile buffer around the combined set of road categories 1 through 4. Road categories 5 and 6 are terminated either at state boundaries, identifiable intersections, or intersection with this 5 mile buffer. The use of the 5 mile buffer to terminate category 5 and 6 roads is most evident along rural portions of the corridor in southern states.

NOTE: *The buffer region displayed on the New Jersey map includes road categories 5 and 6 as well. This is an irregularity in the map graphics only; the boundary used to terminate road classes 5 and 6 remains a 5 mile buffer around road classes 1 through 4.*

Question 6 : The mileage listed for the various road categories in the legend on the full corridor map does not equal the sum of the mileage listed on the individual state maps. Which is correct?

Response: *The mileage listed on the individual state maps is correct. A corrected full corridor map has been uploaded to the web site.*

Question 7: The RFP references "period of low flow" as being volumes of 500 or less vehicles per hour, is that volume count for a single direction or travel or for both directions of travel at a given location?

Response: *See the response to question 3.*

Question 8: The mileage totals for the summary map and those from the individual states don't seem to add up. Could you explain, or revise if inaccurate?

Response: *Please see the response to Question 6.*

Question 9 Is there a detailed table available as a companion to the map? This would help precisely identify the termini of the identified roads.

Response: *See the responses to questions 5 and 6*

Question 10: What is the source of the validation data against which our data is measured?

Response: *See the response to question 13.*

Question 11: How will you guarantee or assure the accuracy of the validation data?

Response: *See response to question 13.*

Question 12: Will we have the opportunity to examine and use the validation data before we are evaluated?

Response: *See response to question 13.*

Question 13: How will you respond to a situation where our data is more accurate than the validation data?

Response to questions 10 through 13:

The method of validation and source of validation data has not been determined. Traditional methods have relied primarily on floating car studies. Floating car studies may be cost prohibitive due to the extent of coverage. Validation data may come from numerous sources. Evaluation will take into account the inherent variability and accuracy of the source of the validation data. The validation procedure and data source, will be open and disclosed to the contractor for review and comment.

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Response: *The identities of the members of the Evaluation Team is not available to vendors participating in this RFP process. See also the response to question 4.*

Question 31: RFP says that the technical proposal has greater weight than price- how much greater?

Response: *The University does not assess a fixed “Weight” factor. The award of the contract will be based on best value to the Coalition according to the evaluation criteria described in section L.*

Question 32: Any amendments to date?

Response: *No prior amendments have been issued.*

Question 33: Please confirm that the delivery of data is a services contract and that data brought to project is not UMD intellectual property within the meaning of contract clause 37 (page 51 of the RFP) and not UMD data within paragraph 42 (page 53 of the RFP).

Response: *See response to question 23. Real time traffic data provided by the vendor is not considered a “work for hire” within the meaning of contract clause 37. Contract clause 42 governs data provided by the University to the vendor. Real time traffic data provided by the vendor does not originate from the University, and is therefore not UMD data.*

Question 34: Please provide a link to the validation tests that were done for MMTIS that will be used to measure data quality.

Response: *Provided herewith in attachment is the requested MMTIS Validation test report “Cellular Probe Data Evaluation Case Study: The Baltimore Multimodal Traveler Information System (MMTIS)”.*

Question 35: Once a proper invoice is submitted for work completed, how quickly will payment be made?

Response: *See the response to Question 17.*

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Response: *See the response to question 5.*

Question 37: The file will not let me insert the hourly rates for consulting services for the base year 1 (all other yellow boxes seem fine).

Response: *This has been corrected in the Pricing Sheet provided with Amendment A001.*

Question 38: The total labor field doesn't seem to include the totals from base years 1-3, but rather only the clerical support cell from each year.

Response: *This has been corrected in the Pricing Sheet provided with Amendment A001.*

Question 39: In light of the IDIQ nature of the Services facet, how will contractors enter an estimated dollar value on the provided MBE forms?

Response: *In their proposal response, Contractors shall define the MBE subcontracting commitment as a percentage of services only.*

Question 40 Currently there is no validated report that proves any non-intrusive FCD system can meet the required latency of the RFP. Since the only validated reports to show non-intrusive FCD successful solution in the US are those conducted with Cellint's technology in Kansas City and Atlanta, we request that the Coalition to revise the accuracy criteria so that such systems can meet these requirements. In accordance with the above, the following changes to the RFP are requested (see changes in red):

Question 40-1 *The Vendor poses the following revisions to RFP Text.* Page 22, Paragraph 3.1 (**Real-Time Traffic Data Requirements**), section 9 at the table should be changed to: Maximum data latency shall be less than or equal to eight (8) minutes on average.

Response: *The RFP text remains unaltered. Amendment M002 adds the following clarification: Latency specifications refer to average latency.*

Question 40-2 *The Vendor poses the following revisions to RFP Text* The same change should apply to section 10: Maximum data latency shall be less than or equal to eight (5) minutes on average.

Response: *The RFP text remains unaltered. Amendment M002 adds the following clarification: See the answer to Question 40 and 40-1*

Question 40-3 *The Vendor poses the following revisions to RFP Text* Page 24, Paragraph 3.1 (**Real-Time Traffic Data Requirements**), section 21 at the table should be changed to: " Periods of low flow (<1000 VPH) in a direction are excluded."

Response: *The vehicle flow threshold remains unaltered. Page 24, Paragraph 3.1, Item 7 is amended to read. "Accuracy requirements will not be in effect during time periods when travel demand is less than 500 VPH in a single direction." See also the response to Question 40-4*

Question 40-4 *The Vendor poses the following revisions to RFP Text* It is further emphasized, that no cellular based solution can deliver the required latency at late night times, even if there are more than the required vehicles per hour, due to low phone usage. Since there is no other non intrusive FCD technology that can provide such latency (including GPS based solutions, which have several times longer latency even during day time), we request that the RFP be changed by adding a general statement in Page 26, Paragraph 3.1 (**Real-Time Traffic Data Requirements**), saying that "all accuracy criteria requirements exclude late night time, between 11:00 pm to 6:00 am".

Response: *The RFP text remains unaltered. Amendment M002 adds the following clarification: If a vendors approach or technology excludes certain time frames or particular conditions as expressed in Question 40-3 and 40-4, but otherwise meets the core quality specifications as set forth in the RFP, note any such exception in the response to the referenced specification. Evaluation of proposals will be based on demonstrated ability. If a limitation or exception to the stated quality specifications is endemic to the community, then such limitations will not be factors in evaluating competing proposals.*

Question 41: Testing Method: Currently there is no specific method mentioned in the RFP for measuring latency of detecting speed changes. Following the discussion at the briefing meeting last week, it is recommended that such method will be inserted to the RFP, so no vendor will be able to use "vague" definition, regarding whether or not it can meet the required latency criteria.

The Vendor recommends the following: The following statement should be added to the RFP on page 47 section 17: "It is the intention of the university to test the latency performance is several ways, one of which will be conducted by comparing the FCD data to local speed sensors at various points over the monitored roadways. Significant speed changes will be identified by each sensor and its exact time will be compared to the time of the speed change on a short section around that sensor, reported by the FCD solution. The difference between these 2 measurements should comply with the required latency."

Response: *The RFP text remains unaltered. Amendment A002 adds the following clarification: See response to Questions 10-13. Validation of latency requirements will be handled in a similar way.*

Question 42: Mileage: In page 42, Paragraph 10, it is stated that quantities estimates are not binding. However, it is clear that the price per mile for small mileage is not the same as large mileage. Can the Coalition specify the number of miles that would be in its minimum coverage?

Response: *See response to Question 28 for the anticipated size of program over three years. The cost model provided by the vendor may be indexed to size of system, or any other objective parameter as deemed appropriate by the vendor.*

Question 43: Arterials: Since sporadic momentary local speeds, such as provided by GPS aggregators, can't measure accurate traffic data on arterials (for the same reason that road sensors are limited in this sense), and arterials are not a mandatory request in this RFP, Does it mean that the coalition is not requiring coverage on arterials? How does this mesh with the thick coverage shown on the maps?

Response: *It is the intent of the Coalition to provide comprehensive coverage across all defined roadway types for a portion of the corridor, rather than coverage of just freeways for the entire corridor. The highly desirable designation of arterials and state highways recognizes that traffic data of the quality specified may not be available for arterials. If such is the case, vendors should indicate in the proposal the degree to which the data quality requirements can be met on lesser roadway classes. For example, if arterial data can be obtained, but only at 20% accuracy and at 10 minute latency, the proposal should so state the specifications to which the vendor shall be held accountable.*

MBE PARTICIPATION SCHEDULE A001

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

Prime Contractor (Firm Name, Address, Phone)	Project Name: Traffic Data and Associated Services Along the I-95 Corridor
Solicitation Number 82085N	Total Contract Amount \$
List Information for Each Certified MBE Subcontractor/Supplier on this Project	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed	

USE ATTACHMENT B CONTINUATION PAGE AS NEEDED

SUMMARY

TOTAL MBE PARTICIPATION: _____%

Bidder/Offeror Firm Name

Signature of Authorized Representative

Date

Printed Name, Title

Submit this MBE Participation Schedule with Bid or Offer

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A002	2. DATE ISSUED 06/13/07	3. NUMBER OF PAGES 12
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4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)
---	---

6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER <p style="text-align: center;">82085N</p> 7B. DATED <p style="text-align: center;">04/27/07</p>
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8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning 1 copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

- 9.1 **This Amendment Serves To Convey additional Questions/Answers submitted by the required date on the RFP, but inadvertently excluded in the A001 Response. The Additional Questions/Responses concern numbers 40 – 43. Responses under Questions 1 – 39 are repeated unaltered.**
- 9.2 **Contractor's MBE Attachment B provided with their proposal shall denote the Subcontractors the Contractor intends to utilize in attaining the overall goal of 25%. Amendment A002 (1) deletes the requirement to assign an independent goal to each subcontractor proposed, and (2) provides revised MBE Attachment B forms.**
- 9.2 **The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**
- 9.3 **By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, VP, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) <p style="text-align: center;">Bruce D. Brewer</p>	
10B. CONTRACTOR SIGNATURE  (Signature of Person Authorized to Sign)	10C. DATE SIGNED <p style="text-align: center;">6/15/07</p>	

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A003	2. DATE ISSUED 06/15/07	3. NUMBER OF PAGES 1
4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)	
6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER 82085N	
	7B. DATED 04/27/07	

8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning **1** copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

- 9.1 This Amendment Serves To Convey one additional Questions/Answer deemed by the Committee to be of significant value to warrant distribution.**
- 9.2 Please Clarify the following:**
- 9.1.1 Question: That on Page 36, Section G, Subsection 3/Schedule of Payments, Note 2 under Paragraph 2.5, "Mobility" should be "Mobilization", and clarify it to mean that there is a cap on the total mobilization costs equal to 20% of the annual fee,**
- 9.1.2 Response: The word "Mobility" as referenced in 9.1.1 is revised to read "mobilization". And, the, 20% cap remains unchanged.**
- 9.3 The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**
- 9.4 By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, VP, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) Bruce D. Brewer
10B. CONTRACTOR SIGNATURE (Signature of Person Authorized to Sign)	10C. DATE SIGNED

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A003	2. DATE ISSUED 06/15/07	3. NUMBER OF PAGES 1
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6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER <p style="text-align: center;">82085N</p> 7B. DATED <p style="text-align: center;">04/27/07</p>
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The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning **1 copy(ies)** of the amendment to the Issuing Office identified in Item 4.
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- 9.1.2 Response: The word "Mobility" as referenced in 9.1.1 is revised to read "mobilization". And, the, 20% cap remains unchanged.**
- 9.3 The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**
- 9.4 By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, VP, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) <p style="text-align: center;">Bruce D. Brewer</p>	
10B. CONTRACTOR SIGNATURE  (Signature of Person Authorized to Sign)	10C. DATE SIGNED 6/18/07	

University of Maryland College Park



Request for Proposal (RFP) No. 82085N For Traffic Data and Associated Services along the I-95 Corridor

Issue Date:	Friday 27 April 2007
Pre-Proposal Conference	Thursday 17 May 2007 10:00 AM
Deadline for Questions:	Friday 25 May 2007 C.O.B.
Proposal Due Date:	Friday 22 June 2007 4:00 P.M. EDT

WARNING: Contractors who have received this document from a source other than the Issuing Office should immediately contact the Issuing Office and provide their name and mailing address in order that amendments to the RFP or other communications can be sent to them. Contractors who fail to notify the Issuing Office with this information assume complete responsibility in the event that they do not receive communications from the Issuing Office prior to the closing date.

Contractors are cautioned not to make changes to any of the terms and conditions in this solicitation. Doing so may render a Contractor's proposal unacceptable and subject to rejection. Questions and comments may be addressed to the point of contact identified in Section A-1, Item 9 of this document.

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**PART I – THE SCHEDULE
SECTION A-1 – SOLICITATION / CONTRACT FORM**

1. CONTRACT NUMBER	2. SOLICITATION NUMBER 82085N	3. TYPE OF SOLICITATION NEGOTIATED (RFP)	4. DATE ISSUED 04/27/07	5. REQUISITION NUMBER R07615
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6. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742	7. ADDRESS PROPOSAL TO University of Maryland Department of Procurement & Supply Attn.: RFP Number82085N 2113-R Chesapeake Building College Park, Maryland 20742-3111
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SOLICITATION

8. Sealed proposals in original plus number of copies specified in Section A-2, Subsection D for furnishing the supplies or services in the Schedule will be received at the location specified in Item 7 (if no location is specified in Item 7, then the location specified in Item 6) until the date and time specified in Section A-2, Subsection E.

CAUTION – LATE Submissions, Modifications, and Withdrawals; see Section A-2, Subsection F entitled "Late Proposals". All offers are subject to all terms and conditions contained in this solicitation.

9. FOR INFORMATION CALL	A. NAME Bruce D. Brewer	B. TELEPHONE (NO COLLECT CALLS)		C. E-MAIL ADDRESS bbrewer@umd.edu	D. FAX NUMBER 301-314-9565
		AREA CODE 301	NUMBER 405-5829		

OFFER (Must be fully completed by Contractor)

10. In compliance with the above, the undersigned agrees, if this offer is accepted within the time period specified in Section A-2, Subsection G, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the Schedule.

11. ACKNOWLEDGEMENT OF AMENDMENTS
The Contractor acknowledges receipt of all amendments to the SOLICITATION.

This contract incorporates the Solicitation/Request for Proposal and any amendments thereto, as well as Contractor's proposal and amendments thereto. In the event of a discrepancy between the terms of this contract, including amendments and modifications made thereto, and Contractor's proposal and amendments thereto, the discrepancy shall be resolved by giving precedence in the following order:

- a) This Contract, including the Solicitation/Request for Proposal and amendments and modifications made thereto
- b) Contractor's proposal, including amendments and modifications made to the proposal.

This contract, including the documents incorporated by reference and any negotiated changes prior to contract award, contains the entire agreement of the parties and supersedes all prior agreements and understandings, oral or otherwise, between the parties.

12. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR	13. CONTRACTOR REMIT-TO ADDRESS	14. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Print or Type)
--	---------------------------------	---

15. TELEPHONE NUMBER	16. SIGNATURE	17. OFFER DATE
AREA CODE	NUMBER	EXT.

AWARD (To be completed by University)

18. ACCEPTED AS TO ITEMS LABELED	19. AMOUNT	20. FRS ACCOUNT NUMBER
----------------------------------	------------	------------------------

21. ADMINISTERED BY (If other than Item 6)
--

22. NAME OF PROCUREMENT OFFICER (Type or Print)	23. UNIVERSITY OF MARYLAND (Signature of Procurement Officer)	24. AWARD DATE
--	--	----------------

IMPORTANT – Award will be made on this Form or by other authorized official written notice.

Section A-2 -- Instructions, Conditions and Notices to Contractors

The University of Maryland, on behalf of the I-95 Corridor Coalition, is issuing this RFP to engage one or more Contractors to provide real-time traffic data to the Coalition and its members as well as consulting services related to the expansion and use of the data being furnished. It is the intent of the Coalition to provide funding support and coordination with its members for the purpose of developing a regional traffic monitoring system. A three year project is anticipated, with a contract life in excess of three years in-place to provide the flexibility to continue services, if desired, by the Coalition members.

Section A-2 provides guidance to Contractors for responding to this RFP. See **Section C**, beginning on page 12, for a full description of the procurement objective, scope of work, and technical requirements.

A. ISSUING OFFICE

The sole point of contact at the University of Maryland, College Park (hereinafter “University” or “University of Maryland”) for purposes of this Request for Proposal (RFP) is the Issuing Office. The location of the Issuing Office is contained in Part I, Section A-1, Item 6 of this document. Point of contact information is listed in Part I, Section A-1, Items 9(a) through 9(d) of this document.

B. PRE-PROPOSAL CONFERENCE

A pre-proposal conference will be held on Thursday, 17 May 2007 at 10:00 A. M. The conference location will be:

University of Maryland
Department of Procurement and Supply
Chesapeake Building, Room 2113-U
College Park, MD 20742

Firms should estimate a duration of One (1) to Two (2) Hours. Contractors who are attending the pre-proposal conference are requested to bring written copies of any questions they may have to the conference. Answers will be provided in accordance with paragraph 2 of Section A-2,C below.

In order to help plan meeting room size, any Contractor planning to send a representative should contact the Issuing Office at least three (3) working days prior to the conference. While attendance at the pre-proposal conference is not mandatory, all interested Contractors are encouraged to attend to be able to better prepare acceptable proposals. Contractors desiring to send more than two representatives to the pre-proposal conference must obtain the prior approval of the Procurement Officer.

C. QUESTIONS

Each Contractor is responsible for reading carefully and understanding fully the terms and conditions of this RFP. All contact between Contractors and the University will be formally made at scheduled meetings or in writing through the Issuing Office. Requests for clarification or additional information must be made in writing to the Procurement Officer and received at the Issuing Office no later than **Friday, 25 May 2007 C.O.B.** Such requests should contain the following: **“QUESTIONS: RFP #82085N”**. Only written communications relative to the procurement shall be considered. Hard copy, facsimile and electronic mail are acceptable methods for submission of questions. It is incumbent upon the Contractor to verify University receipt of their questions.

All questions will be answered in writing. Both questions and answers will be distributed, without identification of the inquirer(s), to all Contractors who are on record with the Procurement Officer as having received this RFP. No oral communications can be relied upon for proposal purposes.

To the extent that a question causes a change to any part of this RFP, an amendment shall be issued addressing such.

D. SUBMISSION OF PROPOSALS

Proposals must be:

- (1) submitted in the format set forth herein,
- (2) made in the official name of the firm or individual under which Contractor's business is conducted (including the official business address),
- (3) signed by a person duly authorized to commit Contractor to the proposal,
- (4) submitted in envelopes clearly marked with the assigned RFP number,
- (5) separated into Technical and Financial volumes, and
- (6) addressed to the Procurement Officer identified in Section A-1, Item 9 and sent to the address shown in Section A-1, Item 7.

The **Contractor must submit one original (marked "original") and 13 copies** of the Technical volume plus one original and 13 copies of the Financial volume sealed under separate cover. Additionally, Contractor must submit **one (1) master compact disc (CD) containing the entire technical proposal**, along with authorization for the University to duplicate and distribute up to 20 additional copies for evaluation purposes. Commingling of technical and financial information or failure to submit the two volumes **separately** and sealed may result in the proposal being deemed **NON-ACCEPTABLE** and thereby rejected. The volumes, which contain original documents, should be clearly identified as the **ORIGINAL Technical or the ORIGINAL Financial Volume**. The University reserves the right to photocopy additional copies of any or all parts of the proposal for the evaluation and selection process.

E. CLOSING DATE

Proposals must arrive at the location identified in Section A, Item 7 of this document on or before **Friday, 22 June 2007, 4:00 p.m. EST/EDT** as applicable, in the format set forth herein.

Contractors mailing proposals should allow sufficient mail delivery time to insure timely receipt by the Issuing Office. Proposals, amendments to proposals or requests for withdrawal of proposals arriving after the closing time and date shall not be considered. There shall be no public opening of the proposals. The names of Contractors will not be released until after award.

F. LATE PROPOSALS

Any proposal, request for withdrawal, or modification of a proposal including a Best and Final Offer (BAFO) that is not received at the designated location, time and date set forth herein will be considered late and shall not be considered. Delivery of the proposal to the specified location by the prescribed time and date is the sole responsibility of the Contractor. Exceptions may be authorized, at the sole discretion of the Procurement Officer, when the reason for the late proposal, late request for withdrawal, late modification of a proposal or BAFO is due to the action or inaction of the University. A record of the late proposal, request for withdrawal, modification of a proposal or BAFO shall be made in the appropriate procurement file.

G. DURATION OF PROPOSAL OFFER

Proposals shall be valid for a minimum of 120 days following the closing date of this RFP. If an award is not made during that period, the proposal shall automatically extend for another 120 days, unless the Contractor gives specific written notice to the Procurement Officer at least 15 days before the expiration of the then current 120 day period. Proposals shall automatically renew for an additional 120 days until such time as an award is made or proper written notice is given to the University of Contractor's intent to withdraw its proposal. By submission of a proposal, Contractor guarantees that its offer shall be firm for the period specified above.

H. AMENDMENTS TO THE RFP

If it becomes necessary to revise any part of this RFP, notice of the revision will be given in the form of an amendment to Contractors who are on record with the Procurement Officer as having received this RFP. All amendments shall become a part of this RFP. Each Contractor must acknowledge receipt of amendments, and the failure of a Contractor to acknowledge any amendment shall not relieve the Contractor of the responsibility for complying with the terms thereof.

I. SITE VISIT

Prior to, or at any time during the proposal evaluation or contract period, the University through their respective authorized representatives, have the right at all reasonable times to make site visits for the purpose of performing a site inspection or reviewing the project accomplishments and management control systems and to provide technical assistance and guidance as may be required. If any site visit is made on the premises of the Contractor, a team member, or a subcontractor performing work under the Contract, the Contractor's parties will be required to provide all reasonable facilities and assistance for the safety and convenience of the University and Coalition representatives in the performance of their duties.

J. ALTERNATE PROPOSALS

In the mutual interest of receiving the best proposal, the University will consider alternate price and technical proposals. In order to submit an alternate proposal, however, a Contractor must also submit a proposal in the exact format required herein.

K. ECONOMY OF PREPARATION

Each proposal should be prepared simply and economically, providing a straightforward, concise description of the Contractor's offer and capabilities to satisfy the requirements of this RFP. Emphasis should be on completeness and clarity of content.

L. UNABLE TO PROPOSE

If Contractor is unable or unwilling to submit a proposal in response to the requirements, Contractor must indicate such in writing to the Procurement Officer on or before the proposal due date. Hard copy, facsimile and electronic mail are acceptable. Please include a brief explanation of the rationale for non-submission of a proposal.

M. PUBLIC INFORMATION ACT NOTICE

Contractors shall specifically identify those portions of their proposals that they deem to contain confidential, proprietary information or trade secrets and shall provide specific justification, with respect to each separate portion identified, why such materials, upon request, should not be disclosed by the State under the Access to Public Records Act, State Government Article, Title 10, Subtitle 6, Annotated Code of Maryland.

In order for such claims of confidentiality to be considered, Contractors must clearly identify and provide individual justification for each and every section that is claimed to contain confidential, proprietary information or trade secrets. It is **NOT** sufficient to preface your proposal with a proprietary statement or to use a page header or footer that arbitrarily marks some or all pages as confidential. General claims of confidentiality or similar blanket designations shall not be effective.

N. TWO-VOLUME PROPOSAL

The selection procedure for this procurement requires an independent evaluation of the technical and financial proposals. This separation allows for evaluation of technical proposals on their technical merit only. Consequently, the Contractor shall submit their proposal in two separately sealed volumes as indicated below. No pricing information is to be included in the technical proposal.

See Part IV, Section L for additional details pertaining to the evaluation process.

1. VOLUME I - TECHNICAL

This volume should be prepared in a clear and concise manner with pages numbered. The technical volume shall not contain any price information. If such is included in the technical volume, it may not be evaluated by the financial evaluation committee. Volume I must contain the following sections:

a. EXECUTIVE / MANAGEMENT SUMMARY

The Executive/Management Summary should contain a **brief** synopsis of how the Contractor's proposal meets the needs of the University. This summary shall include reference to the duration of the proposal, verification of compliance with Maryland law and performance capability.

b. REFERENCES

Contractors must provide at least two references that validate the Contractor's ability to provide real-time traffic data as per the requirements set forth herein. Cited references must be able to confirm, without reservation, the Contractor's ability to perform as mandated in this solicitation. For each reference, the Contractor shall provide, at a minimum:

- the name of the company or institution,
- name of primary contact,
- telephone number,
- e-mail address and;
- a description of the project/service/relationship with said reference.

The University reserves the right to take any or all of the following actions: to reject a proposal based on an unsatisfactory reference, to contact any person or persons associated with the referenced site, to request additional references, to contact organizations known to have used in the past or currently using the services supplied by the Contractor or the Contractor's subcontractors, to contact independent consulting firms for additional information about the Contractor or

the Contractor's subcontractors and to visit any or all of the reference sites for demonstrations.

c. THE TECHNICAL PROPOSAL

The information/items specified herein must be addressed in the technical proposal.

The proposal must expressly indicate that it satisfies each point of the RFP requirements and specifications contained in Section C, sub section 3.1. Simple YES or NO responses to stated requirements are insufficient. Rather, the Contractor must describe in detail how the proposed products and/or services meet or exceed the stated requirements. Additionally, the Contractor must explain any exception or deviation from the requirements. Subsection 3.1 uses priority and response codes that serve as a guide as the responder. The requirements and specifications in subsection 3.1 are structured in a matrix format. Contractors are to respond to the requirements and specifications using the same matrix format shown. Responses requiring supporting information may be entered directly into the matrix or shall reference the information located elsewhere in the RFP response including the Executive / Management Summary. Provide, if available, full objective evidence of the Contractors ability to meet the data quality requirements such as independent verifications, validations, studies or reports.

The proposal must indicate that it can provide the extent of consulting services as requested in section C, subsection 3.2. Again, use the matrix format provided in subsection 3.2.

Provide a full risk analysis as requested in section C, subsection 3.3.

Using the roadway network depicted in the attached maps, referred to as the baseline system, indicate the following:

- Any variations or limitations between the proposed coverage and the baseline system.
- Any regions within the baseline system for which real-time traffic data cannot be provided.
- If coverage is dependent on type of roadway, volume of traffic, density of traffic lights, length of roadway segment, proximity to communications infrastructure, or any other attribute, provide a full explanation.

Multiple technical proposals (corresponding to varying degrees of meeting *highly desirable* and *desirable* requirements) may be submitted. Each proposal must be

completed as specified. Corresponding price proposals must be submitted for each technical proposal.

Contractors are urged to read the specifications very carefully and to submit their questions, in writing, by the due date for questions. Misinterpretation of specifications by the Contractor shall not relieve the Contractor of responsibility to accurately address the requirements of this RFP or to perform the contract, if awarded.

d. TOTAL PAGE COUNT

The total page count of Volume I shall not exceed 75 pages. Each double-sided page shall count as TWO pages. Except as stated below in this paragraph, Volume I shall be presented in 12 point font or larger. The 75-page limit does not include bibliographical summaries and any resumes. The 75-page limit also includes all figures, tables, appendices and all other ancillary materials. Subject to the exception stated in the next sentence, the dimensions of each page shall be no greater than 8 ½ by 11 inches. Up to 10 of the 75 maximum pages in Volume I may be “fold-out” pages having dimensions not exceeding 11 inches by 18 inches – provided that any such larger pages are bound into Volume I. Footnotes, legends or labels associated with the tables or diagrams, and other information which is ancillary to the main text, may be presented in a font size smaller than 12 point font – provided that any such smaller font is fully legible. (Biographical summaries and resumes are not considered ancillary material and must therefore be presented in 12 point font or larger.)

2. VOLUME II - FINANCIAL

This volume consists of and must contain the following items. Contractors shall not include any technical information or specifications in the financial volume. If such are included in the financial volume, they may not be evaluated by the technical evaluation committee.

a. SIGNED ORIGINALS OF SECTION A-1

Contractors must complete Items 11, 12, 13, 14, 15, 16 and 17 of the Solicitation / Contract Form (Section A-1) of this document and include TWO signed originals as part of Contractor's financial proposal in the original Financial Volume. Failure to submit these signed documents may cause the Contractor's proposal to be rejected, at the sole discretion of the University.

b. PRICING SECTION

This volume shall be in accordance with Section B – Pricing.

c. PROPOSAL AFFIDAVIT

Contractors must complete and sign the Proposal Affidavit. A copy of this Proposal Affidavit is included in Section K.

**d. CONFLICT OF INTEREST AFFIDAVIT AND
DISCLOSURE**

Contractors must complete and sign this affidavit. A copy of this affidavit is included in Section K.

e. FEDERALLY-FUNDED AFFIDAVIT

This requirement is funded by a federal grant and must include a completed and signed Contract -Funded Affidavit for Anti-Lobbying Certification, Debarment Certification and Clean Air and Water Certification. A copy of this affidavit is included in Section J.

f. FINANCIAL VIABILITY

The University reserves the right to require, during proposal evaluation, that the Contractor provide a copy of its most current Annual Report or audited Statement of Financial Condition to include a Balance Sheet, Income Statement and Cash Flow Statement or other acceptable financial information. These documents may be relied on in any determination regarding Contractor financial responsibility.

h. NOTICES INFORMATION

Contractors must complete Section G.5 and submit this information as part of their financial proposal.

O. CANCELLATION OF THE RFP

The University may cancel this RFP, in whole or in part, or reject all proposals submitted in response to the RFP when such action is determined to be fiscally advantageous to the University and/or the State or otherwise in the best interest of the University and/or the State.

P. ORAL PRESENTATIONS

Contractors may be required to make individual presentations to the Evaluation Committee, or its designated representatives, in order to clarify their proposals. If the University determines that such presentation is needed, the Issuing Office will schedule a time and place for oral presentations. Contractor is required to make the oral presentation within 10 workdays after request by the University. Each Contractor should be prepared to discuss and substantiate any of the areas of the proposal submitted, as well as its

qualifications to furnish the specified products and services. Notwithstanding the possibility of a request for an oral presentation, Contractors shall not rely on the possibility of such a request and shall submit a complete and comprehensive written response to this solicitation.

Q. SOLICITATION, PROPOSAL ACCEPTANCE, AWARD AND DISCUSSIONS

This RFP creates no obligation on the part of the University to award a contract or to compensate Contractors for proposal preparation expenses. The University reserves the unilateral right to cancel this solicitation at any time and to accept or reject any and all proposals, in whole or in part, received in response to this RFP; the unilateral right to award a contract in whole or in part; to award a contract to one or more Contractor(s); to waive or permit cure of minor irregularities; and to conduct discussions with Contractors in any manner necessary to serve the best interest of the University.

Discussions may be conducted with those Contractors who submit proposals initially judged by the Procurement Officer to be reasonably susceptible of being selected for award. However, the University reserves the right to award a contract based upon the proposals received without further discussions.

R. EVIDENCE OF RESPONSIBILITY

Prior to the award of a contract pursuant to this RFP, the Procurement Officer may require Contractor to submit such additional information bearing upon Contractor's ability to perform the contract as the Procurement Officer deems appropriate. The Procurement Officer may also consider any information otherwise available concerning the financial, technical, and other qualifications or abilities of the Contractor.

S. ELECTRONIC FUNDS TRANSFER (EFT) – (Applies to contracts expected to exceed \$200,000)

By submitting a response to this solicitation, the Offeror agrees to accept payments by electronic funds transfer (EFT) unless the State Comptroller's Office grants an exemption. The selected Offeror shall register using the COT/GAD X-10 Vendor Electronic Funds Registration Request Form, which may be found on the following website: <http://compnet.comp.state.md.us/gad/vendorinfo/eft/default.asp>

Any request for exemption must be submitted to the State Comptroller's Office for approval at the address specified on the COT/GAD X-10 form and must include the business identification information as stated on the form and include the reason for the exemption.

See Payment of University Obligations clause in PART II, Contract Clauses, Section I for additional information.

T. FORMATION OF AGREEMENT/CONTRACT WITH SUCCESSFUL CONTRACTOR

This Contract shall also include any other forms or documents deemed necessary by the Procurement Officer.

This RFP and any resulting contract shall be governed by the University System of Maryland Procurement Policies and Procedures and University of Maryland Procurement Policies and Procedures. These policies and procedures may be viewed at the following web site: www.purchase.umd.edu. From the main menu, select the category "Policies and Procedures."

U. DEBRIEFING OF UNSUCCESSFUL PROPOSERS

A debriefing of an unsuccessful proposer shall be conducted upon written request submitted to the Procurement Officer within ten (10) days of the date on which the proposer knew, or should have known, its proposal was unsuccessful. The debriefing shall be limited to a discussion of the Proposer's unsuccessful proposal. The debriefing will be oral and shall provide information on areas in which the proposal was deemed weak or insufficient. The debriefing may NOT include discussion of a competing offeror's proposal or discussion, thoughts, notes or ranking from an individual evaluation committee member. A summarization of the procurement officer's rationale for the selection may be given. Debriefings shall be conducted at the earliest feasible time.

V. CONTRACT IMPLEMENTATION MEETING

Contractor receiving an award under this solicitation may be required to attend a Contract Implementation Meeting to be held after contract award, as scheduled by the Procurement Officer. The location and agenda for this meeting will be communicated to the Contractor by the Procurement Officer.

Section B – Pricing

The Contractor shall furnish all the necessary data, facilities, materials, and personnel and shall perform program management, administrative and technical support services necessary under this Contract. Such services shall be rendered to the University of Maryland (UMD or University) through the issuance of firm fixed price task orders based on (1) real-time traffic data as based on the cost model extrapolation for the scope defined in the individual task order, and (2) fully loaded firm fixed price labor hour rates and estimated labor mix/hour allocation as under this indefinite delivery/indefinite quantity (IDIQ) Contract.

Under this IDIQ contract, Contractor shall be paid **only** for data contracted, and/or approved task order actual hours worked at the fully loaded firm fixed hourly labor rates contained herein. The labor rates contained in the pricing sheet shall apply to all hours worked, including overtime hours. Estimates in the pricing sheet are provided for evaluation purposes only.

For the purpose of consistency, firms shall submit their proposal for pricing for the Contract utilizing the Excel pricing sheet provided with this Request for Proposals. The Contractor shall enter the required information in the blocks highlighted in “Yellow” only. The price proposal form shall be fully incorporated as part of the Contractor’s response, and any resulting contract. Evaluation will be based on firm fixed price data subscription rates (as established by the sample data region), and fully burdened hourly labor rates (as multiplied by the estimated hours provided by the University) totaled over each year/term of the ten (10) year contract. Evaluation will be based on information entered on the Excel price proposal form.

Fully loaded or fully burdened rates means all salary, fringe, overhead, and fee shall be included in the hourly rates proposed.

Real-Time Traffic Data Services for the Core System

The Contractors Price Proposal shall provide the following itemization for the **core system** for the anticipated initial three-year funding and subsequent option years:

- Startup/mobilization fees (if applicable)
- Data subscription fee for the base contract term years 1 through 3.
- Data subscription fees for continuing coverage for contract years four (4) through ten (10).

Cost Model for Traffic Data Services to be used as Contract Pricing

Contractor shall provide a full cost model to procure real-time traffic data. The cost model shall provide any startup/mobilization fees and data subscription fees. The cost model shall provide any adjustments for contract years. The cost model must be of sufficient clarity such that the University has a complete and clear understanding of how the Contractor will cost task orders for building and expansion of the system. Any data used in the cost model must be fully referenced. For example, if the cost model is based

on Vehicle Miles Traveled (VMT), the model should cite the official source of official source of VMT data. The cost model must be consistent with the estimated cost of the Core System. Prices calculated from the model will be the contract prices.

Consulting Services

The basis for this contract is primarily the provision of data services. Consulting Services will be provided solely on an indefinite-delivery, indefinite-quantity basis for the convenience of the Coalition. The University and the Coalition guarantees no minimum nor maximum hours of utilization for these services. As such, (1) the estimated number of hours for each labor category noted in this request for proposals are for evaluation purposes only, (2) hourly rates are requested in the event that such services will be required. The Contractor's Price Proposal shall provide fully loaded hourly rates for all labor categories needed to supply required consulting services. These consulting services may be requested at the option of the I-95 Corridor Coalition or its member organizations. Examples of requests for consulting services include assistance with the design of increases in coverage, assistance with techniques to access the traffic monitoring database, interfaces between the contractor's database and existing control centers, development of websites, etc. Proposals shall include qualification descriptions and fully burdened hourly rates for each labor category noted below.

- Project Manager
- Senior Engineer / Analyst
- Engineer/Analyst
- Junior Engineer/Analyst
- Senior Programmer
- Programmer
- Junior Programmer
- Systems Engineer
- Database management specialist
- Clerical / Administrative Support

In addition to the base year fully burdened hourly rates for each labor category noted above, the contractor shall provide escalated hourly rates for each category for contract years two (2) and three (3), and each optional renewal period four (4) through ten (10).

Multiple price proposals, corresponding to multiple technical proposals, may be submitted. Each technical/price proposal must be completed as specified herein.

Section C – Description/Specifications/Statement of Work

1.0 I-95 CORRIDOR COALITION BACKGROUND

1.1 Partnership

The Coalition is a partnership of state departments of transportation, regional and local transportation agencies, toll authorities, and related organizations, including law enforcement, transit, port and rail organizations from Maine to Florida (including the District of Columbia), with affiliate members in Canada. I-95 Corridor Coalition members work together to reduce congestion, increase safety/security and to assure that the entire transportation network supports economic vitality throughout the region. The Coalition pursues a wide range of projects and activities related to providing reliable and timely travel information, coordination of incident response and freight movement within the Corridor and across different modes of travel, and electronic systems to make payment of tolls and transit fares easier. Recognizing that the efficiency of passenger and freight movement through the region is not limited to one mode or facility, the work of the Coalition encompasses all modes and highway facilities, with an emphasis on facilitating long distance transportation that traverses state jurisdictional boundaries. By leveraging resources, sharing information and coordinating programs, the Coalition adds value to the individual member organization's activities, and provides a synergy for more dynamic and seamless transportation solutions throughout the Corridor.

1.2 History

The Coalition began as an informal group of transportation professionals working together in the early 1990's to more effectively manage major highway incidents that impacted travel across jurisdictional boundaries. In 1993, the Coalition was formally established to enhance transportation mobility, safety and efficiency in the regions. Under the last two Federal-aid highway program authorization acts, the Transportation Equity Act for the 21st Century (TEA-21) in 1998 and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU) in 2005, the Coalition received federal funds to support its continuing efforts.

Over the years, the Coalition's program evolved from studying and testing intelligent transportation systems (ITS) technologies to a broader perspective that embraced integrated deployments and coordinated system operations and management. The Coalition's perspective evolved from a concentration on highways to one that encompasses all modes of travel and focuses on the efficient transfer of people and goods between modes.

Moving forward, the Coalition will become more engaged with its members and with the private sector to identify solutions to critical bottlenecks, including the challenging issue of financing these improvements. The Coalition will also become more engaged in deploying and operating its information sharing system, engaging the resources of its

members and the private sector in providing as much quality and real-time information to as many people as possible through numerous delivery methods.

1.3 Members

The Coalition brings to the table the key decision and policy makers that have or will influence the operation of the Corridor including:

- State and Local Departments of Transportation,
- Transportation Authorities,
- Transit and Rail Agencies,
- Port Authorities
- Motor Vehicle Agencies,
- State Police/Law Enforcement,
- Regional Transportation Organizations
- Metropolitan Planning Organizations
- US Department of Transportation,
- Canadian Provinces Departments of Transportations
- Intercity Passenger and Freight Transportation Providers, and
- Transportation Industry Associations.

Geographic membership in the Coalition currently includes the boundaries of:

- Maine
- New Hampshire
- Vermont
- Massachusetts
- Rhode Island
- Connecticut
- New York
- New Jersey
- Pennsylvania
- Delaware
- Maryland
- District of Columbia
- Virginia
- North Carolina
- South Carolina
- Georgia
- Florida
- New Brunswick and Quebec (Canada) – Affiliate members

1.4 Additional Information

Detailed information about the I-95 Corridor Coalition can be found at the following web site: www.i95coalition.org.

1.5 Definitions

- 1.5.1 **Absolute Speed Error** is the absolute value of the difference between the mean speed reported from the data service and the mean speed provided by validation procedures for a specified time period or polling interval.
- 1.5.2 **Baseline System**: The network of roadways for the sixteen states in the Coalition and the District of Columbia as depicted in the attached maps.
- 1.5.3 **Coalition**: A partnership of major public and private transportation agencies, toll authorities, and industry associations, serving the corridor of the United States from Maine to Florida.
- 1.5.4 **Confidential Information**: Confidential Information means University Data and other information, whether in written, oral, graphic, electronic or physical form, including but not limited to scientific knowledge, know-how, processes, inventions, techniques, formulae, data, plans, and business practices, that are not generally known to the public and that, if tangible, is clearly marked by the disclosing party as Confidential Information at the time of disclosure and which, if oral, is summarized and identified in a writing as Confidential Information that is submitted to the receiving party within ten (10) days of initial disclosure.
- 1.5.5 **Coalition Member Organizations**: For the purpose of this RFP, member organization is defined as an organization that either owns or operates a major regional transportation system within the geographical boundary defined by the Coalition's sixteen (16) states and the District of Columbia, or is an agency of the United States Department of Transportation (U.S. DOT), or is a transportation planning agency/organization within the geographical boundary defined by the Coalition's sixteen (16) states and the District of Columbia; and that has been accepted for membership in the I-95 Corridor Coalition.
- 1.5.6 **Core System**: The subset of roadways in the baseline system residing in the spatial extents of North Carolina, Virginia, Maryland, Delaware, Pennsylvania, and New Jersey
- 1.5.7 **Data availability**: as the percentage of measurement intervals (combination of space and time) when traffic data estimates are delivered.
- 1.5.8 **Error bias**: The average speed error (not the absolute value) in each speed range.

- 1.5.9 **Latency**: Latency is the difference between the time the traffic flow is perturbed as a result on an incident and the time that the change in speed is reported in the traffic data.
- 1.5.10 **Link definition**: Link Definition is based on logical breaks in facilities where one would expect the potential for differing traffic conditions, such as at an interchange or major at-grade intersection
- 1.5.11 **Proposer**: The legal entity submitting a proposal under this Request for Proposals to whom a contract award can be effected.
- 1.5.12 **Reliability**: the ability of the system to produce traffic data estimates consistently for each link at all times.
- 1.5.13 **Speed**: For the purposes of this RFP, speed is explicitly defined as the space mean speed over the specified segment or link.
- 1.5.14 **University**: The University as noted in this Document, shall mean the University of Maryland, College Park.
- 1.5.15 **University Data**: All data, unless otherwise excluded, residing on or flowing through servers used by or in the conduct of, the effort described in the Scope of Work,

2.0 Objective of this Procurement

The mission of the I-95 Corridor Coalition is to “work together to improve Multimodal transportation services in the region through information sharing and coordinated management and operations.” In order to achieve this mission, the Coalition is supporting a regional traffic monitoring system that acts as a continuous source of real-time transportation system status information within the Corridor. A regional traffic monitoring system will serve as a rich source of traveler information and will provide invaluable inputs to existing and future management tools such as the Integrated Corridor Analysis Tool (ICAT) systems and the Information Systems Network (ISN), whose effectiveness is completely dependent on the quality of the data being supplied.

As a result, it is the intent of the Coalition to provide funding support and coordination with its members for the purpose of developing a common set of procedures for data acquisition and dissemination. Successful offerors will be responsible for providing real-time traffic data and supporting consulting services in support of the mission of developing a regional traffic monitoring system. **A three year initial project is anticipated, with a contract life in excess of three years in-place to provide the flexibility to continue, if desired, by the Coalition members.**

The University of Maryland, on behalf of the Coalition, is issuing this RFP to engage one or more Contractors to provide real-time traffic data to the Coalition and its members as well as consulting services related to the expansion and use of the data being furnished. The Contractor will report to the University's Center for Advanced Transportation Technology Point-of-Contact (UMD-POC), working in conjunction with the Coalition Executive Director and Coalition staff.

To this end, the University intends to award one or more Indefinite Delivery, Indefinite Quantity (IDIQ) contract(s) under which task orders will be issued to authorize work.

The scope of work includes the following array of services:

- **Provide real-time traffic data** for roadways as defined by this request for proposals and selected by the Coalition. Roadways in this category are designated the baseline system. The Coalition desires to contract for traffic data only. Equipment, software, hardware or other infrastructure associated with the collection of travel-time data is the responsibility of the contractor.

Real-time traffic data will support the development of seamless networks of corridor-wide traveler information systems and facilitate and support the coordination and implementation of interagency efforts in response to major incidents and special events of regional significance. Timeliness and accuracy of data are paramount to the success of these efforts.

Data quality will be validated by an independent contractor.

The provision of the baseline real-time traffic data includes archiving services and a web-based monitoring application for use by the Coalition (only) to view the traffic data from system. Traffic data is to be delivered as a subscription service to the Coalition and its members using standard formats and packaging.

Probe-based technologies are encouraged and preferred. Integration of data from existing compatible sources is encouraged. It is the intent of the Coalition to encourage innovative, non-invasive detection technology, while taking advantage of existing data where available. Technical approaches requiring access to agency right of way are unacceptable.

- **Consulting services may be requested by the Coalition and its members.** These services will all be related to the planning, design, display, implementation, processing or testing of traffic monitoring data.

3.0 Contracting Approach & Work Scope

Services shall be rendered to the University through the issuance of firm fixed-priced task orders utilizing the rates contained in Section B of this indefinite delivery/indefinite quantity (IDIQ) Contract.

This Contract provides for real-time traffic data for the I-95 Corridor Coalition and its members, as well as associated consulting services.

3.1 Real-Time Traffic Data Requirements

The following section contains the baseline system specifications in the form of a response matrix. Priority codes are given for each specification in the matrix. The definition of each priority code is defined below. Respondents are to provide information requested in their proposal in the matrix, as noted. If additional space is required for further explanation or supporting material is appended, directly reference the additional or supporting information within the corresponding cell within the matrix (for example: “see Attachment XX for a detailed explanation”), and the attachment should also explicitly refer to the section in the matrix to which it applies.

In the Contractor’s technical response, the following matrix columns should be completed for each listed item:

1. *Response Code* – Employ the response codes noted below, defining compliance with the requirement.
2. *Respondent Comments* – Explain how the Contractor’s solution meets the requirement and identify any exceptions taken to the requirements.

Priority Codes:

I: Information

M/C: Mandatory Specification – Vendor Concurrence Required

M/E: Mandatory Specification – Process Explanation or Supporting Information Required

HD/C: Highly Desirable Specification – Vendor Concurrence

HD/E: Highly Desirable Specification – Process Explanation or Supporting Information Required

D/C: Desirable or Optional Specification – Vendor Concurrence

D/E: Desirable or Optional Specification – Process Explanation or Supporting Information Required

Response Codes:

E: Your proposal exceeds the stated requirement. Please provide a detailed explanation.

F: Your proposal fully complies with the stated requirement. Please provide a detailed explanation.

P: Your proposal partially complies with the stated requirement. Please provide a detailed explanation.

N: Your proposal does not comply with the stated requirement.

Item	Description	Priority	Response Code	Respondent Comments
REAL-TIME TRAFFIC DATA REQUIREMENTS				
Data Elements				
1	Mean travel time and speed (units for travel time shall be seconds to the nearest whole second and the units for speed shall be miles per hour to the nearest integer)	M/E		
2	Status flag to indicate normal operations, periods of low-traffic flow, inoperable status or unavailable data, etc. The categories for the status flag will be dependent on the type of technology used to generate traffic data. Vendor should specify flags appropriate to methodology.	M/E		
3	Quality indicator – provide a numerical score that reflects the confidence in the estimate of the mean travel time and speed. The intent is to provide a measure similar in concept to the standard error in the estimate of the mean. The method used to generate a numerical score for quality will be dependent on the type of technology and type of processing. Vendor should provide explanation of the quality metric.	D/E		
4	Other traffic data valuable for roadway operations. This may include but is not limited to such metrics as volume, occupancy, event data, and incident data.	D/E		
Data Quality				
5	<p>Average Absolute Speed Error The absolute speed error is defined as the absolute value of the difference between the mean speed reported from the data service and the mean speed provided by validation procedures for a specified time period or polling interval. Given that monitored links will be of different lengths, quality requirements based on speed rather than travel time will normalize the effect of varying link lengths.</p> <p>Speed data shall have a maximum average absolute error of 10 MPH in each of the following speed ranges: 0-30 MPH, 30-45 MPH, 45-60 MPH and > 60 MPH.</p> <p><u>Calculation Method</u></p>	M/E		

	<p>Let: A_{ij} = Speed data for link i at time j from the data service. B_{ij} = Corresponding speed from the validation data Average absolute error = $\text{mean}(\text{abs}(A_{ij} - B_{ij}))$.</p> <p>Speed range is dependent on the validation data (B_{ij}).</p> <p>Example: A source of validation data exists for various routes and for various times interval within the I-95 corridor. Speed data from the validation data source will be grouped according to the speed ranges given above. All validation speed data points within the 0-30 MPH range will be compared with the respective speed data reported by the data service and a single average absolute error will be calculated for the 0-30 MPH speed range. Similarly, for each of the remaining speed ranges, a single average absolute error metric will be calculated based on the difference between the validation data in that range and the corresponding speed from the data service.</p>			
6	<p>Speed Error Bias Error bias is defined as the average speed error (not the absolute value) in each speed range. Speed data shall have a maximum average error of +/- 5 MPH in each of the following speed ranges: 0-30 MPH, 30-45 MPH, 45-60 MPH and > 60 MPH.</p> <p><u>Calculation Method</u> Let: A_{ij} = Speed data for link i at time j from the data service. B_{ij} = Corresponding speed from the validation data Average error = $\text{mean}(A_{ij} - B_{ij})$</p> <p>Speed range is dependent on the value B_{ij}. The calculation is similar to that of Average Absolute Speed Error, but without the absolute value operator.</p>	M/E		
7	Accuracy requirements will be in effect for vehicle flows exceeding 500 VPH.	M/C		
Temporal Reporting				
8	Traffic data shall be provided 24 hours per day, 7 days per week. Allowance will be made for up to 40 hours of scheduled system maintenance per year	M/C		

	during off-peak hours.			
9	Maximum data latency shall be less than or equal to eight (8) minutes.	M/E		
10	Maximum data latency shall be less than or equal to five (5) minutes.	HD/E		
Spatial Reporting				
11	<p>Maps depicting the roadways within the corridor for which realtime traffic data are included in Section J. Offerors should use these maps as a basis for developing technical proposals. These maps represent a consensus vision of the network of roadways that define the corridor. Actual implementation will be done on a task order by task order basis in consultation with the respective road authorities. During implementation the selection of routes may differ from those depicted in the maps.</p> <p>Vendors should use roadway network depicted in the maps, referred to as the baseline system, as the basis of their technical proposals. Using the maps as a guide indicate the following:</p> <ul style="list-style-type: none"> • Variations or limitations between the proposed coverage and that identified on the coverage maps. • Any regions on the baseline system for which real-time traffic data cannot be provided. <p>Price proposals will be based on a subset of routes in the baseline system bounded by the geographic extents of North Carolina, Virginia, Maryland, Delaware, Pennsylvania, and New Jersey. This subset of routes, referred to as the core system, is the anticipated location for the initial three year project. For the core system provide the following:</p> <ul style="list-style-type: none"> • Startup costs, and subscription fees for three years of service. <p>[NOTE : The baseline system and core system are provided to assist in the development and evaluation of proposals. Actual roadways and system extents will be specified in task orders. As part of the price proposal, vendors must provide a cost model to be used as contract prices in developing task orders to acquire traffic data.]</p>	M/E		
Route types for which traffic data is to be provided include:				
12	I-95	M/C		

13	Other limited-access, multi-lane facilities such as other interstate highways, freeways, beltways, and by-passes	M/C														
14	Arterials and state highways	HD														
15	Ramps and interchange turning movements	D/E														
16	HOV and other lane specific modes	D/E														
Link Definitions:																
17	<p>Segmentation of the road network is the responsibility of the vendor and shall be performed in cooperation with the University. Link definition should be based on logical breaks in facilities where one would expect the potential for differing traffic conditions, such as at an interchange or major at-grade intersections. The following chart indicates the anticipated segment lengths for various road classifications.</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th colspan="2" style="text-align: center;"><u>Link length guidelines</u></th> </tr> <tr> <th></th> <th style="text-align: center;">URBAN</th> <th style="text-align: center;">RURAL</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">FREEWAYS</td> <td style="text-align: center;">1-3 miles</td> <td style="text-align: center;">3-10 miles</td> </tr> <tr> <td style="text-align: left;">ARTERIALS</td> <td style="text-align: center;">0.5-3 miles</td> <td style="text-align: center;">2-5 miles</td> </tr> </tbody> </table>		<u>Link length guidelines</u>			URBAN	RURAL	FREEWAYS	1-3 miles	3-10 miles	ARTERIALS	0.5-3 miles	2-5 miles	I/C		
	<u>Link length guidelines</u>															
	URBAN	RURAL														
FREEWAYS	1-3 miles	3-10 miles														
ARTERIALS	0.5-3 miles	2-5 miles														
18	Ramps and interchange turning movements (if provided) will be reported as separate links.	D/C														
19	HOV and other lane specific modes (if provided) will be reported as separate links.	D/C														
20	Link definitions shall, at a minimum, contain beginning and ending latitude, longitude, heading, common name or route number, and a unique identifier. Use applicable TMDD standards or comparable open and published data standards.	M/E														
Availability and Reliability																
21	<p><u>Reliability:</u> Reliability refers to the ability of the system to produce traffic data estimates consistently for each link at all times. Data reliability is measured simply as the percentage of measurement intervals (combination of space and time) when traffic data estimates are delivered.</p> <p>Note: Valid traffic data estimates occur only when sufficient base level data exists to support an estimate of the mean travel time or mean speed for a</p>	M/E														

	particular time period. Estimates based purely on imputation (for example, the historical average) are not considered a valid estimate in terms of the availability requirement. Periods of low flow (<500 VPH) are excluded. Traffic data shall be provided for at least 95% of all links at all required time reporting intervals (see Temporal Reporting requirements).			
22	<u>Availability:</u> Data subscription services shall maintain at least 99% availability, determined as percent uptime of the data service excluding any scheduled system maintenance. Scheduled maintenance shall be limited to 40 hours per year and only during non-peak hours.	M/C		
Data Formatting, Packaging and Access				
23	Data shall be provided as XML-formatted content and made available through a web-based subscription service. The service will allow for appropriate access permissions to limit distribution only to authorized subscribers. The service shall allow for selective content subscription so that various states and road authorities may subscribe only to the geographic area of interest.	M/E		
24	Data shall be updated whenever the mean speed changes by 3 MPH or greater, the travel time changes by 5% or greater, or the status flag changes OR a full data set shall be supplied at least once every five (5) minutes. In either case the latency requirements of the data prevail (Items 9 & 10 under temporal reporting).	M/E		
25	The format of the data will conform to applicable TMDD standards or other comparable open and published standards. Vendors should provide a precise description of the processes and timing associated with their provision of the data.	M/E		
26	Hardware, software and network capacity shall be sufficient to initially support up to 40 concurrent data subscriptions, with the capability to scale to 200 data subscriptions as needed. It is the responsibility of the contractor to provide sufficient capacity to service all subscription demands.	M/E		
27	Offerors shall provide an archiving service for all data provided to the Coalition.	M/E		
Website for Monitoring Traffic Data				

28	Offerors shall provide a web-based tool to view real-time traffic data by the Coalition and its members (not the general public). The monitoring service is for use only by the Coalition. The web site will be password protected.	M/E		
29	The website shall have the capacity to initially support up to 200 concurrent users with the ability to scale to 1000 concurrent users as needed.	M/C		
30	Data from the real-time traffic service can be viewed in real-time via the website.	M/C		
31	Archived traffic data can be accessed via the website.	M/C		
32	Routes and data can be selected and viewed in an electronic map-based interface.	D/E		

3.2 Consulting Services Requirements

Offerors shall provide consulting services to assist with integrating real-time traffic data into ATMS, ATIS and other ITS applications for the Coalition and its members, and to enhance and or extend the real-time traffic data services. Consulting Services will be provided solely on an indefinite-delivery, indefinite-quantity basis for the convenience of the Coalition. The University and the Coalition guarantees no minimum nor maximum hours of utilization for these services. Such services may encompass but are not limited to:

Item	Description	Priority	Response Code	Respondent Comments
CONSULTING SERVICES				
1	Providing data feeds in other formats such as streaming XML, FTP, SFTP, CORBA, SOAP and JMS as needed to support ATMS, ATIS and other ITS applications within the Coalition.	M/E		
2	Provide other formats, such as various implementations of TMDD standards, Alert-C, ISO and SAE standards as needed to support ATMS and ATIS (and other ITS applications) within the Coalition.	M/E		
3	Develop alternate link data formats in order to integrate data into existing ITS applications	M/E		
4	Extend capability of web-based monitoring system	M/C		
5	Re-segment portions of the highway link network to adapt to physical changes and institutional needs	M/C		

6	Provide a publicly accessible web site for viewing traffic data	D/E		
7	Assist the Coalition and its members with integrating traffic data into ATMS and ATIS systems	M/C		
8	Develop traffic forecasting capability	D/E		
9	Develop decision support tools	D/E		

3.3 Risk Analysis

Reliance on Outside Contractors:

If successful delivery of traffic information is dependent on contractual agreements between the vendor and an outside contractor, provide evidence of sustainable relationship such as copies of agreement or commitment letters. Also describe contingency measures that are planned if partners are lost. [M/E]

Offerers shall supply a project risk analysis as part of the technical proposal. The analysis shall identify ways in which the Coalition may decrease or mitigate project risk, ways that the contractor can decrease or mitigate project risk, identify risks that increase cost, and identify project requirements that are outside of the capabilities of available technology. [M/E]

4.0 TASK ORDER PROCEDURE

In accord with the IDIQ nature of this Contract, All effort/funding shall be committed and payments effected, under individual firm-fixed-price task orders. Each task order will initiate the provision of deliverables (data or services) as defined in the individual task order. Subsequent increases/ decreases in capability will be implemented via subsequent task order. The duration of a given task order will reflect available funding at the time of award.

4.1 Task Order Proposal Requests

The work will be conducted by the Contractor on an as-requested basis within the scope of this Contract. The exact nature and extent of the Contractor's work under this Contract will be based on written Task Order Proposal Requests (TOPR) developed or reviewed by the UMD-POC working in conjunction with Coalition staff, who will forward a copy of each written TOPR to the Contractor. Each TOPR will include, at a minimum, the following:

- (1) Name and signature of the UMD-POC (or designee);
- (2) Due date and time for University's receipt of a task order proposal, and number of required copies of each proposal;
- (3) Description of the work required;
- (4) The UMD-POC's estimated maximum fee (for data services) and maximum number of labor hours (for consulting services) and other resources required;
- (5) Deliverable requirements;
- (6) The UMD-POC's desired delivery/performance schedule;
- (7) Quality assurance standards, as appropriate; and
- (8) Travel authorized.

4.2 Task Order Proposals

Within the timeframe requested in the TOPR from the UMD-POC, the Contractor shall submit to the UMD-POC and Coalition Staff, a Task Order Proposal that addresses items (1) through (7) below. Based on mutual agreement of the Task scope, schedule, deliverables, and price estimates provided by the Contractor, the UMD-POC will complete items (8) through (12) authorizing the Contractor to proceed with conducting the work.

- (1) Scope of Work that includes a description of the technical approach for performing the work and providing the requested deliverables.
- (2) Period of Performance and Schedule of Work, including an estimated date of commencement of the work and dates indicating delivery of all deliverables.
- (3) Pricing Estimates For:
 - Estimated upfront and ongoing subscription fees for traffic data (for traffic data task orders.)
 - Estimated labor required, defining the labor categories, estimated number of hours for each category, including subcontractors, proposed to effect the TOPR SOW.
 - All rates (for data and labor) must be in accordance with Section B of this Contract.
- (4) Travel, equipment and materials estimates.
- (5) Total estimated price for completion of the task order.
- (6) Name and signature of the individual authorized to sign for the Contractor.
- (7) Contract Number, Task Order Number, and effective date.
- (8) The total firm fixed price excluding reimbursables in (9) below for the Task Order as negotiated and agreed to by the parties.
- (9) Travel, equipment, and materials authorized, to be reimbursed at cost with no markup allowed.
- (10) Any other necessary information.
- (11) Name and signature of the UMD-POC or designee.

Any dispute concerning the task order or any claim by the Contractor shall be handled in accordance with the Disputes clause contained in Section I of this contract.

4.3 Additional Task Order Provisions

The University may modify task orders in the same manner as they are issued. A modification request will be developed by the University and forwarded to the contractor. The contractor will propose a task order to address the modifications and all associated costs in accordance with subsection 4.2 above.

In the event that task orders extend beyond the Contract's period of performance, the Contract will remain in effect to accommodate the completion of the task order(s).

In the event that there is a conflict between the requirements of the Contract or the Task Order Scope of Work, the Contract shall prevail.

5.0 DELIVERABLES

- 5.1 Specifications for delivery of traffic data associated with any work order are delineated by the requirements established in section C3 above AND by
- 5.2 any further requirements as specified in the task order.
- 5.3 Deliverables for consultant services will be delineated in each task order.

6.0 DATA OWNERSHIP AND DATA LICENSING

It is the intent of this contract to secure for the Coalition, its member organizations, and their officially designated representatives full rights to the traffic data to use in support of internal organization operations, and sufficient rights to the traffic data to disseminate traveler information to the public consistent with the organizations' traffic management and operations responsibilities. Paragraphs 6.1 through 6.6 further define the rights and uses. The Contractor's proposal should affirm the Contractor's ability to support the data rights presented herein. The Contractor may define additional restrictions to safeguard the commercial value of the Contractor's traffic data, but any such restrictions should not impede the use of the data for the envisioned purposes. Any restrictions imposed by the Contractor will be assessed in the technical evaluation of proposals.

6.1 The Contractor shall retain ownership of all traffic data provided to the I-95 Corridor Coalition as a result of this contract. The Coalition, its member organizations, and their officially designated representatives shall have the right to use the traffic data provided under this contract for transportation planning and operational analyses, service and data quality validation analyses, and all other internal organization applications. This includes the right to archive all the traffic data and use it for internal organization purposes for an unlimited period of time in the future.

6.2 Real-time traffic data delivered by the Contractor may be provided by the Coalition, its member organizations, and their officially designated representatives to external users, subject to the following restrictions:

- Information shall be disseminated to the public using dynamic message signs (also known as variable message signs), portable message signs, highway advisory radio, 511 information systems, the media, and organization-supported websites and web services.
- With the exception of Coalition and member organization websites and web services and the media, all data disseminated to the public shall be restricted to the presentation of travel times and speeds for road sections between interchanges, major intersections, major landmarks, and major destinations. The minimum length of such sections shall generally be greater than four miles, with exceptions provided for bridges, tunnels and other unusual road network topography. The minimum data update period shall be five minutes.

- Speed and travel time information disseminated to the public through Coalition and member websites and web services and the media shall be spatially restricted to road sections between interchanges, major intersections, major landmarks, and major destinations. The minimum length of such sections shall generally be greater than four miles, with exceptions provided for bridges, tunnels and other unusual road network topography. Speed and travel time information conveyed via websites and web services shall be presented using three levels with thresholds established by the agency. The minimum data update period shall be five minutes.

6.3 The Coalition, its member organizations, and their officially designated representatives shall have the right to create visualizations and summary statistics of the archived traffic data (i.e., maps, graphs, charts, tables, etc.) for presentation and distribution to the general public. The University and Coalition will cooperate with the Contractor and make reasonable efforts to protect against the unlicensed distribution of data. However, neither the University nor the Coalition will assume any liability for unlicensed use of the data by third parties or unlicensed access to the data by third parties.

6.4 Contracting organizations, including universities, providing services on behalf of the Coalition or its member organizations, shall be subject to the same rights and restrictions given herein, but limited to the context of the contracted service. This includes organizations engaged by or acting on behalf of the Coalition to evaluate the accuracy, latency, and other parameters of the traffic data. Any contracting organizations, including any universities, desiring access to the traffic data for purposes not funded or sanctioned by the Coalition or its member organizations, must negotiate with the Contractor for access and rights to the traffic data.

6.5 Nothing in this contract shall preclude the Coalition, its member organizations, or their officially designated representatives from displaying or otherwise presenting any information to external users that has been obtained from other sources or other organizations that are not a party to this contract. Nothing in this contract shall preclude the Coalition and member organizations from displaying or otherwise presenting any information that is deemed essential to the safety of the traveling public.

6.6 Data provided by the Contractor may be incorporated into the Coalition's Integrated Corridor Analysis Tool (ICAT). ICAT is a geographic information system- (GIS) based transportation network for the 16 state Coalition region and linked databases of information about the region's roads, traffic volumes, and travel patterns. The dissemination of ICAT data may include summaries of historic traffic data with minimum summary periods of fifteen minutes and spatial resolutions that include road sections between interchanges, major intersections, major landmarks, and major destinations. The minimum length of such sections will generally be greater than four miles, with exceptions provided for bridges, tunnels and other unusual road network topography.

7.0 DATA AVAILABLE FROM EXISTING SOURCES

7.1 A number of projects are already in existence within the I-95 corridor that provide (or are capable of providing) real-time traffic data similar to that requested in the RFP for portions of the requested coverage area. If offerors determine it is in their best interest to supplement their baseline offering with this data, offerors may want to consider initiating discussions with these supplementary data sources with the intent of integrating their data into the offeror's response. Systems that have been identified within the Corridor include:

TRANSCOM is a coalition of 16 transportation and public safety agencies in the New York - New Jersey - Connecticut metropolitan region. It was created in 1986 to provide a cooperative, coordinated approach to regional transportation management. TRANSCOM operates a system that assesses travel times based on EZ-Pass Electronic Toll Collection tags. Started in 1993, the original deployment covered 22 miles of roadway. Since the inception, the TRANSMIT network has grown to some 500 miles of toll and non-toll roadways instrumented in NY State & NJ. Additional sites have been designed for the NY State Thruway, Northern State Parkway, NJ Turnpike, Garden State Parkway, I-287 and other limited access highways in both states.

Contact: Tom Batz
Manager, Technical Development
batz@xcm.org
201-963-4033

7.2 It will be up to the individual responders to contact these sources with the intent of negotiating suitable agreements. Inclusion of such data is at the sole discretion of the offeror.

7.3 If any such data sources are used, it is the responsibility of the offeror to establish compliance of this data to the requirements and specifications of the contract including provisions of quality, intellectual property, and risk assessment. The University does not assume any responsibility or liability for this supplemental data, nor does the University certify that any of these sources meet the requirements and specifications spelled out herein.

8.0 SERVICE DELIVERY TIMEFRAMES, FEES, AND SCHEDULE

Contractor will have six (6) months from the time that a task order for realtime traffic data is authorized to begin providing real-time traffic data to the Coalition consistent with the requirements in Section C of this contract.

Section D - Packaging and Marking

The packaging of realtime traffic data is subject to the applicable requirements given in Section C, subsection 3.1. Packaging and marking requirements for deliverables associated with any optional consulting services will be defined in the task order process.

Section E - Inspection and Acceptance

It is the intent of the Coalition to employ an independent contractor to validate that accuracy, latency and availability requirements have been achieved. The Coalition intends to perform its initial validation within three months of the initiation of traffic data service and then perform a validation at a minimum of annually thereafter. The Coalition reserves the right to validate the traffic data service at any time and without warning or notice to the contractor.

In the event that any validation exercise indicates that the traffic data does not meet minimum requirements as given herein, the University shall have the right to renegotiate coverage, costs, and/or requirements or terminate the task order or contract agreement with no further financial obligation to the Contractor.

Section F - Deliveries or Performance

Deliveries and performance specifications of realtime traffic data is subject to the applicable requirements given in Section C, subsection 3.1. Deliveries and performance requirements for deliverables associated with any optional consulting services will be defined in the task order process.

Section G - Contract Administration Data

1. Roles of the University of Maryland Program Manager and Procurement Officer

The Procurement Officer is the University of Maryland's authorized representative for all pre-contract matters related to this contract. Additionally, throughout the duration of the contract, the Procurement Officer shall be the only individual with authority to modify any provisions of this contract including, without limitation, the statement of work, pricing or any other sections.

The University of Maryland Program Manager Mr. Philip Tarnoff at 301-403-4619 and designated staff shall be the principal interface on behalf of the University of Maryland for post-award technical matters, and shall have the authority to explain and provide further details regarding the University of Maryland's expectations concerning the work to be performed hereunder and/or the items to be provided herein. The Program Manager and designated staff shall have no authority to modify any provisions of this contract.

2. Invoicing

The Contractor shall provide the following invoicing services. Invoices shall reflect the price structure as defined in Section B/Pricing, and Section G, Subsection 3 below.

Throughout the duration of any resultant contract, the Contractor shall provide one paper copy of each invoice. The paper invoice must contain the following minimum information:

- a. Invoice Number
- b. Invoice Date
- c. The word ORIGINAL printed on the original copy of the document.
- d. The full company or corporate name and address; payment address if it differs from corporate address.
- e. The full nine (9) digit Federal Tax Identification number (for U.S. Contractors only) or Social Security Number.
- f. Purchase order number and/or contract number.

Direct invoices to the following address:

University of Maryland
Attn.: Accounts Payable Department
Chesapeake Building – Room 3101
College Park, MD 20742

Any invoice that is unclear, illegible or does not conform to these specific requirements shall be returned to the Contractor for re-issuance.

3. Schedule of Payments

3.1 The essence of this contract is the provision of data. Task orders will authorize the provision of real-time traffic data for specific roadways in a geographical area for a specified period of time. This coverage will include a certain defined linear

bidirectional mileage. The defined mileage will form a component of the payment terms.

- 3.2 Payment for any mobilization costs will be due upon authorization of the task order. Data subscription fees will be invoiced at the end of the calendar month for which the data was provided. Each monthly payment will be based on an agreed upon monthly data fee (I) and adjusted by the product of the percentage uptime of the system (T) and the percent of mileage for which data was delivered (M) in the following manner:

Monthly data fee = I

Percentage of uptime of the data service (availability) = T %

Percentage of total mileage reported through the data service (reliability) = M %

Payment = I*T*M

Notes:

1. Periods of low traffic flow (defined earlier) will be excluded from the coverage area calculation as appropriate.
2. The mobility payment shall not exceed 20% of the equivalent annual payment

For example:

The negotiated mileage to be covered is 1,000 miles for a monthly fee of \$50k. The data service availability was 98% of the time. Then:

$T = 0.98$

For this time when data was available for the 1,000 miles, if 100 miles of data was not provided for half of the month, then:

The average coverage is reduced by $100/1000*0.5 = 5\%$, thus $M = 0.95$

Hence: Payment = I*T*M = $50,000*0.98*0.95 = \$46,550$

4. Assignment

No part of the work specified herein may be assigned or transferred to another Contractor without the prior written authorization of the Procurement Officer.

5. Notices

Notices under this contract shall be in writing and shall be considered effective upon personal delivery to the individual listed below or five calendar days after deposit in any U.S. mailbox, first class and addressed to the other party as follows:

For the University of Maryland:

Bruce D. Brewer
Procurement & Supply
University of Maryland
2113R Chesapeake Building
College Park, MD 20742-3111
Telephone: 301-405-5829
Facsimile: 301-314-9565
Email: **bbrewer@umd.edu**

For Contractor: (please complete the following)

Telephone: _____

Facsimile: _____

Email: _____

Section H - Special Contract Requirements

1. Term of Contract

The contract term shall commence on the date the contract is signed on behalf of the University or such later date as the University directs. The contract term shall terminate Three (3) years after the beginning date unless extended or sooner terminated in accordance with the contract.

At the sole option of the University, the contract may be renewed for up to seven (7) additional separately exercisable one (1) year terms under the same terms and conditions, with prices as quoted in Section B and accepted by the University of Maryland.

2. Insurance Requirements

The Contractor shall defend, indemnify and save harmless the University System of Maryland, its officers, employees and agents, from any and all claims, liability, losses and causes of actions which may arise out of the errors, omissions and performance or non-performance by the Contractor, employees or agents, of the work covered by this contract. The University shall not assume any obligation to indemnify, hold harmless or pay attorneys' fees that may arise from or in any way be associated with the performance or operation of this agreement.

The Contractor shall secure, pay the premiums for, and keep in force until the expiration of this contract, including any renewal thereof, adequate insurance as provided below, such insurance to specifically include liability assumed by the Contractor under this contract. The amounts of insurance coverage specified below shall be the minimum amount of available insurance to satisfy claims; a policy which allows the costs associated with investigating, management or defense of any claim, or any other cost incurred by the insured or the insurance carrier, to be deducted from the policy limits is not acceptable.

- a. Commercial General Liability Insurance including all extensions-
\$1,000,000 each occurrence;
\$1,000,000 personal injury;
\$1,000,000 products/completed operations;
\$1,000,000 general aggregated
- b. Workmen's Compensation Insurance and Unemployment Insurance as required by the laws of the State of Maryland. Contractors that do not maintain an office in Maryland are to provide Workmen's Compensation Insurance and Unemployment Insurance to the levels required by the laws of the State where they conduct their business.
- c. Reserved
- d. If automotive equipment is used in the operation, automobile bodily injury liability insurance with limits of not less than \$1,000,000 for each person and \$2,000,000 for each accident, and property damage liability insurance, with a limit of not less than \$2,000,000 for each accident.
- e. Reserved

All policies for liability protection, bodily injury or property damage must specifically and expressly name the University System of Maryland as an insured with respect to operations under the contract and premises occupied by the Contractor. With respect to the Contractor's liability for bodily injury or property damage under the items above, such insurance shall cover and not exclude Contractor's liability for injury to the property of the University System and to the persons or property of employees, students, faculty members, agents, officers, regents, invitees or guests of the University System.

Each insurance policy shall contain the following endorsement: "It is understood and agreed that the Insurance Company shall notify the Procurement Officer in writing forty-five (45) days in advance of the effective date of any reduction in or cancellation of this policy." A certificate of each policy of insurance shall be furnished to the Procurement Officer. With the exception of Workmen's Compensation, upon the request of the Procurement Officer a certified true copy of each policy of insurance, including the above endorsement manually countersigned by an authorized representative of the insurance company, shall be furnished. A certificate of insurance for Workmen's Compensation together with a properly executed endorsement for cancellation notice must always be furnished. The requested Certificates and Policies shall be delivered as directed by the Procurement Officer. Notices of policy changes shall be furnished to the Procurement Officer.

All required insurance coverages must be acquired from insurers registered to do business in the State of Maryland and acceptable to the University. The insurers must have a policyholders' rating of "A-" or better, and a financial size of "Class VII" or better in the latest edition of Best's Insurance Reports.

3. Parking

If at any time Contractor shall be on the premises of the University of Maryland, then Contractor is responsible for acquiring a valid University of Maryland parking permit, obeying all parking regulations, and paying all fines assessed for violations of parking regulations. Contractor is responsible for ensuring this clause is included in Contractor's agreements with subcontractors.

4. Minority and Disadvantaged Business Enterprise (MBE) Notice

MBE firms are encouraged to respond to this solicitation.

5. Order of Precedence (within this contract)

In the event of a discrepancy within Sections A through L of this contract, such discrepancy shall be resolved by giving precedence in the following order:

- a) Section H – Special Contract Requirements
- b) Section C – Description/Specifications/Statement of Work
- c) Remaining Sections of Part I (Sections A, B, D, E, F and G)
- d) Part II – Contract Clauses (Section I)
- e) Part III – List of Documents, Exhibits and Other Attachments (Section J)
- f) Part IV – Representations and Instructions (Section K and Section L)

6. Bid Security or Performance Bond Requirements

Not Applicable

PART II - CONTRACT CLAUSES

Section I - Contract Clauses

1. Scope of Work

The Scope of Work is defined in Section C of this document.

2. Compensation and Method of Payment

Total compensation is shown in Section A, Item 20 of this document. Method of payment is defined in Section G, Subsections 2 and 3 of this document.

3. Contract Term

The contract term is defined in Section H, Subsection 1 of this document.

4. Reserved

5. Reserved

6. Reserved

7. Independent Contractor

It is understood and agreed that the Contractor is an independent contractor of the University and not an employee. The University shall not withhold income taxes, social security, or any other sums from the payments made to the Contractor hereafter. If the Contractor employs additional persons in the performance of this contract, those persons shall in no way be considered employees of the University, but rather they shall be employees or contractors of the Contractor, and the Contractor bears full responsibility for compensating those persons.

8. Truth-In-Negotiation Certification

The Contractor by submitting cost or price information, including wage rates or other actual unit costs, certifies to the best of its knowledge, information and belief, that:

- a. The wage rates and other factual unit costs supporting the firm's compensation, as set forth in the proposal, are accurate, complete and current as of the contract date;
- b. If any of the items of compensation were increased due to the furnishing of inaccurate, incomplete or non-current wage rates or other units of costs, the State is entitled to an adjustment in all appropriate items of compensation, including profit or fee, to exclude any significant sum by which the price was increased because of the defective data. The University's right to adjustment includes the right to a price adjustment for defects in costs or pricing data submitted by a prospective or actual subcontractor; and
- c. If additions are made to the original price of the contract, such additions may be adjusted to exclude any significant sums where it is determined the price has been increased due to inaccurate, incomplete or non-current wage rates and other factual costs.

9. Multi-Year Contracts Contingent Upon Appropriations

If the General Assembly fails to appropriate funds or if funds are not otherwise made available for continued performance for any fiscal period of this Contract succeeding the first fiscal period, this Contract shall be canceled automatically as of the beginning of the fiscal year for which funds were not appropriated or otherwise made available; provided, however, that this will not affect either the

University's rights or the Contractor's rights under any termination section in this Contract. The effect of termination of the Contract hereunder will be to discharge both the Contractor and the University from future performance of the Contract, but not from their rights and obligations existing at the time of termination. The Contractor shall be reimbursed for the reasonable value of any non-recurring costs incurred but not amortized in the price of the Contract. The University shall notify the Contractor as soon as it has knowledge that funds may not be available for the continuation of this Contract for each succeeding fiscal period beyond the first.

10. Variations in Estimated Quantities

The pricing shall remain firm and fixed at the dollar amounts or discount levels indicated in Section B for the duration of the contract. Quantity estimates are provided for informational purposes only and the University shall not be held to them. Any variation between actual quantities purchased hereunder and estimated quantities provided shall not entitle the Contractor to any type of equitable adjustment.

11. Reserved

12. Specifications

All materials, equipment, supplies or services shall conform to Federal and State laws and regulations, and to the specifications contained herein.

13. Cost and Price Certification

By submitting cost or price information the Contractor certifies that, to the best of its knowledge, the information submitted is accurate, complete, and current as of a mutually determined specified date prior to the conclusion of any price discussions or negotiations for:

- a. A negotiated contract, if the total contract price is expected to exceed \$100,000 or a smaller amount set by the Procurement Officer; or
- b. A change order or contract modification, expected to exceed \$100,000, or a smaller amount set by the Procurement Officer.

The price under this contract and any change order or modification hereunder, including profit or fee, shall be adjusted to exclude any significant price increases occurring because the Contractor furnished cost or price information which, as of the date agreed upon between the parties, was inaccurate, incomplete, or not current.

14. Delays and Extensions of Time

(1) The Contractor agrees to perform the work continuously and diligently and no charges or claims for damages shall be made by it for any delays or hindrances, from any cause whatsoever, during the progress of any portion of the work specified in this contract.

(2) Time extensions will be granted only for excusable delays that arise from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the State in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the State, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of either the Contractor or the subcontractors or suppliers.

15. Suspension of Work

The Procurement Officer unilaterally may order the Contractor in writing to suspend, delay or interrupt all or any part of the work for such period of time as he or she may determine to be appropriate for the convenience of the University.

16. Payment of University Obligations

Payments to the Contractor pursuant to this contract shall be made no later than thirty (30) days after the University's receipt of a proper invoice from the Contractor. Charges for late payment of invoices, other than as prescribed by Title 15, Subtitle 1, of the State Finance and Procurement Article, Annotated Code of Maryland, are prohibited. Electronic funds transfer (EFT) will be used by the State to pay Contractor(s) for Contracts with a value over \$200,000 and any other State payments due Contractor(s) unless the State Comptroller's Office grants Contractor(s) an exemption.

17. Delivery and Acceptance

Delivery shall be made in accordance with the solicitation specifications. The University, in its sole discretion, may extend the time of performance for excusable delays due to unforeseeable causes beyond the Contractor's control. The University unilaterally may order in writing the suspension, delay, or interruption of performance hereunder. The University reserves the right to test any materials, equipment, supplies or services delivered to determine if the specifications have been met. The materials listed in the bid or proposal shall be delivered FOB the point or points specified prior to, or on the date specified in the bid or proposal. Any material or service that is defective or fails to meet the terms of the solicitation specifications will be rejected. Rejected materials or services shall be promptly replaced or re-performed, at the direction of the University. The University reserves the right to purchase replacement materials or services in the open market. Contractors failing to promptly replace materials or re-perform services lawfully rejected shall be liable for any excess price paid for the replacement, plus applicable expenses, if any.

18. Non-Hiring of Officials and Employees

No official or employee of the State of Maryland whose duties as such official or employee include matters relating to or affecting the subject matter of this contract, shall, during the pendency and term of this contract and while serving as an official or employee of the State become or be an employee of the contractor or any entity that is a subcontractor on this contract.

19. Nondiscrimination in Employment

The Contractor agrees: (a) not to discriminate in any manner against an employee or applicant for employment because of race, color, religion, creed, age, sex, marital status, national origin, ancestry, sexual orientation (added effective October 1, 2001) or physical or mental handicap unrelated in nature and extent so as reasonably to preclude the performance of such employment; (b) to include a provision similar to that contained in subsection (a), above, in any subcontract except a subcontract for standard commercial supplies or raw material; and (c) to post in conspicuous places accessible to employees and applicants for employment, notices setting forth the substance of this section.

20. Financial Disclosure

The Contractor shall comply with State Finance and Procurement Article, §13-221, Annotated Code of Maryland, which requires that every business that enters into contracts, leases or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate \$100,000 or more, shall, within 30 days of the time when the aggregate value of these contracts,

leases or other agreements reaches \$100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

NOTE: The financial disclosure form is available under "Public Disclosures" on the following web site:

www.sos.state.md.us

21. Political Contribution Disclosure

The Contractor shall comply with the provisions of Article 33, Sections 14-101 through 14-104, Annotated Code of Maryland, which require that every person that enters into contracts, leases, or other agreements with the State, a county, a municipal corporation or other political subdivision of the State, or their agencies, during a calendar year in which the person receives in the aggregate \$100,000 or more, shall file with the State Administrative Board of Election laws a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election. The statement shall be filed with the State Administrative Board of Election Laws:

(1) prior to purchase, completion or execution of any sale or any lease or contract by the University, and shall cover the preceding two calendar years; and

(2) if the contribution is made after the completion of a sale or purchase, or execution of a lease or contract, then, twice a year, throughout the contract term, on (1) February 5, to cover the 6-month period ending January 31; and (2) August 5, to cover the 6 month period ending July 31.

NOTE: The political contribution disclosure form is available as "Title 14" under "Campaign Finance and Campaign Fund Reporting" under the "Forms" heading of the following web site:

www.elections.state.md.us

22. Disputes

(1) This contract is subject to the University System of Maryland (USM) Procurement Policies and Procedures, and the University of Maryland Procurement Policies and Procedures.

(2) Except as otherwise provided by law, all disputes arising under or as a result of a breach of this contract that are not disposed of by mutual agreement shall be resolved in accordance with this section.

(3) As used herein, "claim" means a written demand or assertion by one of the parties seeking, as a legal right, the payment of money, adjustment or interpretation of contract terms, or other relief, arising under or relating to this contract. A voucher, invoice, or request for payment that is not in dispute when submitted is not a claim under this section. However, if the submission subsequently is not acted upon in a reasonable time, or is disputed as to liability or amount, it may be converted to a claim for the purpose of this section.

(4) Within thirty days of when the basis of the claim is known or should have been known, whichever is earlier, the claim shall be made in writing and submitted to the Procurement Officer for decision in consultation with the Office of the Attorney General, as appropriate.

(5) When a claim cannot be resolved by mutual agreement, the Contractor shall submit a written request for final decision to the Procurement Officer. The written request shall set forth all the facts surrounding the controversy.

(6) The Contractor, at the discretion of the Procurement Officer, may be afforded an opportunity to be heard and to offer evidence in support of his claim.

(7) The Procurement Officer shall render a written decision on all claims within 180 days of receipt of the Contractor's written claim, unless the Procurement Officer determines that a longer period is necessary to resolve the claim. If a decision is not issued within 180 days, the Procurement Officer shall notify the Contractor of the time within which a decision shall be rendered and the reasons for such time extension. The decision shall be furnished to the Contractor, by certified mail, return receipt requested, or by any other method that provides evidence of receipt. The Procurement Officer's decision shall be deemed the final action of the University.

(8) The Procurement Officer's decision shall be final and conclusive unless the Contractor mails or otherwise files a written appeal with the Maryland State Board of Contract Appeals within 30 days of receipt of the decision.

(9) Pending resolution of a claim, the Contractor shall proceed diligently with the performance of the contract in accordance with the Procurement Officer's decision.

23. Termination for Convenience

(1) The performance of work under this contract may be terminated by the University in whole or in part, in accordance with this section, whenever the University shall determine that such termination is in the best interest of the University or the State. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work is terminated and the time when such termination becomes effective.

(2) After receipt of a Notice of Termination, and except as otherwise directed by the Procurement Officer, the Contractor shall:

(a) stop work as specified in the Notice of Termination;

(b) place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of the portion of the work under the contract as is not terminated;

(c) terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;

(d) assign to the University, in the manner, at times, and to the extent directed by the Procurement Officer, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the University shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

(e) settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Procurement Officer, to the extent he may require, which approval or ratification shall be final for all the purposes of this section;

(f) transfer title and deliver to the University, in the manner, at the times, and to the extent, if any, directed by the Procurement Officer,

(i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and

(ii) the completed or partially completed plans, drawings, information, and other property which, if the contract had been completed, would have been required to be furnished to the University;

(g) use its best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Procurement Officer, any property of the types referred to in (f) above; provided, however, that the Contractor

(i) may not be required to extend credit to any purchaser, and

(ii) may acquire any such property under the conditions prescribed by and at a price or prices approved by the Procurement Officer; and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the University to the Contractor under this contract or shall otherwise be credited to the price or cost of the work covered by this contract or paid in such other manner as the Procurement Officer may direct;

(h) complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and

(i) take any action that may be necessary, or as the Procurement Officer may direct, for the protection and preservation of the property related to this contract which is in the possession of the Contractor and in which the University has or may acquire an interest. The Contractor shall submit to the Procurement Officer a list, certified as to quantity and quality, of any or all items of termination inventory not

previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Procurement Officer, and may request the University to remove them or enter into a storage agreement covering them. Not later than fifteen (15) days thereafter, the University shall accept title to these items and remove them or enter into a storage agreement covering the same; provided, that the list submitted shall be subject to verification by the Procurement Officer upon removal of the items, or if the items are stored, within forty-five (45) days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made before final settlement.

(3) After receipt of a Notice of Termination, the Contractor shall submit to the Procurement Officer his termination claim, in the form and with certification prescribed by the Procurement Officer. This claim shall be submitted promptly but in no event later than one (1) year from the effective date of termination, unless one or more extensions in writing are granted by the Procurement Officer, upon request of the Contractor made in writing within the one-year period or authorized extension thereof. However, if the Procurement Officer determines that the facts justify such action, he may receive and act upon any such termination claim at any time after the one-year period or any extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Procurement Officer may determine the claim at any time after the one-year period or any extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Procurement Officer may determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

(4) Subject to the provisions of paragraph (3), the Contractor and the Procurement Officer may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this section, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. The contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in paragraph (5) of this section, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the Procurement Officer to agree upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this section, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts that may be agreed upon to be paid to the Contractor pursuant to this paragraph.

(5) In the event of the failure of the Contractor and the Procurement Officer to agree as provided in paragraph (4) upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this section, the Procurement Officer shall pay to the Contractor the amounts determined by the Procurement Officer as follows, but without duplication of any amounts agreed upon in accordance with paragraph (4):

(a) for completed supplies or services accepted by the University (or sold or acquired as provided in paragraph (2) (g) above) and for which payment has not theretofore been made, a sum equivalent to the aggregate price for the supplies or services computed in accordance with the price or prices specified in the contract, appropriately adjusted for any saving of freight or other charges;

(b) the total of-

(i) the costs incurred in the performance of the work terminated, including initial costs and preparatory expense allocable thereto, but exclusive of any costs attributable to supplies or services paid or to be paid for under paragraph (5)(a) hereof;

(ii) the cost of settling and paying claims arising out of the termination of work under subcontracts or orders, as provided in paragraph (2) (e) above, which are properly chargeable to the terminated portion of the contract (exclusive of amounts paid or payable on account of supplies or

materials delivered or services furnished by subcontractors or Contractors before the effective date of the Notice of Termination, which amounts shall be included in the costs payable under (g) above); and

(iii) a sum, as profit on (i) above, determined by the Procurement Officer to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, no profit shall be included or allowed under this subdivision (iii) and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and

(c) the reasonable cost of settlement accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract and for the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to this contract.

The total sum to be paid to the Contractor under (a) and (b) of this paragraph shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. Except for normal spoilage, and except to the extent that the University shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor as provided in (5) (a) and (b) (i) above, the fair value, as determined by the Procurement Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the University or to a buyer pursuant to paragraph (2) (g).

(6) Costs claimed, agreed to, or determined pursuant to (3), (4), (5) and (11) hereof shall be in accordance with USM Procurement Policies and Procedures in effect on the date of this contract.

(7) The Contractor shall have the right of appeal, under the section of this contract entitled "Disputes," from any determination made by the Procurement Officer under paragraph (3), (5), or (9) hereof, except that if the Contractor has failed to submit his claim within the time provided in paragraph (3) or (9) hereof, and has failed to request extension of the time, he shall have no right of appeal. In any case where the Procurement Officer has made a determination of the amount due under paragraph (3), (5), or (9) hereof, the University shall pay to the Contractor the following: (a) if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Procurement Officer, or (b) if an appeal has been taken, the amount finally determined on such appeal.

(8) In arriving at the amount due the Contractor under this section there shall be deducted (a) all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this contract, (b) any claim which the University may have against the Contractor in connection with this contract, and (c) the agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold, pursuant to the provisions of this section, and not otherwise recovered by or credited to the University.

(9) If the termination hereunder be partial, the Contractor may file with the Procurement Officer a claim for an equitable adjustment of the price or prices specified in the contract relating to the continued portion of the contract (the portion not terminated by the Notice of Termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices. Any claim by the Contractor for an equitable adjustment under this section shall be asserted within ninety (90) days from the effective date of the termination notice, unless an extension is granted in writing by the Procurement Officer.

(10) The University may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this contract whenever in the opinion of the Procurement Officer the aggregate of such payments shall be within the amount to which the Contractor shall be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this section, such excess shall be payable by the Contractor to the University upon demand,

together with interest computed at the prime rate established by the State Treasurer for the period from the date such excess payment is received by the Contractor to the date on which such excess is repaid to the State; provided, however, that no interest shall be charged with respect to any such excess payment attributable to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition, or a later date as determined by the Procurement Officer by reason of the circumstances.

(11) Unless otherwise provided for in this contract, or by applicable statute, the Contractor shall, from the effective date of termination until the expiration of three years after final settlement under this contract, preserve and make available to the University at all reasonable times at the office of the Contractor but without direct charge to the University, all his books, records, documents and other evidence bearing on the costs and expenses of the Contractor under this contract and relating to the work terminated hereunder, or, to the extent approved by the Procurement Officer, reproductions thereof.

24. Termination for Default

(1) The University may, subject to the provisions of paragraph (3) below, by written notice of default to the Contractor, terminate the contract in whole or in part in any one of the following circumstances: (a) If the Contractor fails to perform within the time specified herein or any extension thereof, or (b) If the Contractor fails to perform any of the other provisions of this contract, or so fails to make progress as to endanger performance of this contract in accordance with its terms, and in either of these two circumstances does not cure such failure within a period of 10 days (or such longer period as the Procurement Officer may authorize in writing) after receipt of notice from the Procurement Officer specifying such failure.

(2) In the event the University terminates this contract in whole or in part as provided in paragraph (1) of this section, the University may procure substitute performance upon terms and in whatever manner the Procurement Officer may deem appropriate, and the Contractor shall be liable to the University for any excess costs for substitute performance; provided, that the Contractor shall continue the performance of this contract to the extent not terminated under the provisions of this section.

(3) Except with respect to defaults of subcontractors, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises out of causes beyond the control and without the fault or negligence of the Contractor. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the University in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform shall be beyond the control and without the fault or negligence of the Contractor. If the failure to perform is caused by the default of a subcontractor, and if the default arises out of causes beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either of them, the Contractor shall not be liable for any excess costs for failure to perform unless substitute performance for the subcontractor was obtainable from another source in sufficient time to permit the Contractor to meet the performance schedule.

(4) If, after notice of termination of this contract under the provisions of this section, it is determined for any reason that the Contractor was not in default under the provisions of this section, or that the default was excusable under the provisions of this section, the rights and obligations of the parties shall, if the contract contains a section providing for termination for convenience of the University, be the same as if the notice of termination had been issued pursuant to such section. If, after notice of termination of this contract under the provisions of this section, it is determined for any reason that the Contractor was not in default under the provisions of this section, and if this contract does not contain a section providing for termination for convenience of the University, the contract shall be equitably

adjusted to compensate for such termination and the contract modified accordingly; failure to agree to any such adjustment shall be a claim as defined in the section of this contract entitled "Disputes".

(5) If this contract is terminated as provided in paragraph (1) of this section, the University, in addition to any other rights provided in this section, may require the Contractor to transfer title and deliver to the University, in the manner, at the times, and to the extent, if any, directed by the Procurement Officer, (a) the fabricated or unfabricated parts, work in progress, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and (b) the completed or partially completed plans, drawings, information, and other property which, if the contract had been completed, would have been required to be furnished to the University; and the Contractor shall, upon direction of the Procurement Officer, protect and preserve property in the possession of the Contractor in which the University has an interest. Payment for completed supplies delivered to and accepted by the University shall be at the contract price. Payment for manufacturing materials delivered to and accepted by the University and for the protection and preservation of property shall be in an amount agreed upon by the Contractor and Procurement Officer; failure to agree to such amount shall be a claim as defined in the section of this contract entitled "Disputes". The University may withhold from amounts otherwise due the Contractor hereunder such sum as the Procurement Officer determines to be necessary to protect the University against loss because of outstanding liens or claims of former lien holders.

(6) The rights and remedies of the University provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(7) As used in paragraph (3) of this section, the terms, "subcontractor" and "subcontractors" mean subcontractor(s) at any tier.

25. Arrearages

By submitting a response to this solicitation, the proposer represents that it is not in arrears in the payment of any obligation due and owing the State of Maryland, including the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of the contract if selected for contract award.

The proposer is also informed that the Comptroller (per State Finance and Procurement Article §7-222) may not, except under the conditions specified therein, issue a warrant for payment to a person if the person owes \$50 or more to the State, a unit of the State government, or any governmental entity under the control of the State. Therefore, applications for payment submitted by a contractor and approved by the University for payment may not be processed by the Comptroller for payment to the contractor if an arrearage in excess of \$50 exists.

26. Compliance with Laws

The Contractor hereby represents and warrants that: **A.** It is qualified to do business in the state of Maryland and that it will take such actions as, from time to time hereafter, may be necessary to remain so qualified; **B.** It shall comply with all federal, State and local laws, regulations, and ordinances applicable to its activities and obligations under this contract; and **C.** it shall obtain, at its expense, all licenses, permits, insurance and governmental approvals, if any, necessary to the performance of its obligations under this contract.

27. Retention of Records

The Contractor shall retain and maintain all records and documents relating to this contract for three years after final payment by the University hereunder or any applicable statute of limitation, whichever is longer,

and shall make them available for inspection and audit by authorized representatives of the University, including the Procurement Officer or his designee, at all reasonable times.

28. Tax Exemption

The State is generally exempt from Federal Excise Taxes, Maryland Sales and Use Taxes, District of Columbia Sales Taxes and Transportation Taxes. Exemption certificates shall be completed upon request. Where a Contractor is required to furnish and install material in the construction or improvement of real property in performance of a contract, the Contractor shall pay the Maryland Sales Tax and the exemption does not apply.

29. Registration

Pursuant to §7-201 et seq. of the Corporation and Associations Article of the Annotated Code of Maryland, corporations not incorporated in the State of Maryland shall be registered with the State Department of Assessments and Taxation, 301 West Preston Street, Baltimore, Maryland 21201 before doing any interstate or foreign business in this State. Before doing any intrastate business in this State, a foreign corporation shall register with the Department of Assessments and Taxation.

NOTE: The registration form is available as "Combined Registration Application" under the "Businesses" heading of the following web site: www.marylandtaxes.com.

Questions about this requirement may be sent to the Department of Assessment and Taxation at Charterhelp@dat.state.md.us and a response should be forthcoming within 24 hours.

30. EPA Compliance

Materials, supplies, equipment or services shall comply in all respects with the Federal Noise Control Act of 1972, where applicable.

31. Occupational Safety and Health Act

All materials, supplies, equipment, or services supplied as a result of this contract shall comply with the applicable U.S. and Maryland Occupational Safety and Health Act standards.

32. Maryland Law Prevails

The provisions of this contract shall be governed by the laws of Maryland

33. Software Licensing

Licensor represents and warrants that the software, as delivered to the University, does not contain any program code, virus, worm, trap door, back door, timer, or clock that would erase data or programming or otherwise cause the software to become inoperable, inaccessible, or incapable of being used in accordance with its user manuals, either automatically, upon the occurrence of Licensor-selected conditions, or manually on the command of Licensor.

34. MUCITA

The Maryland Uniform Computer Information Transactions Act (MUCITA), Maryland Code Annotated [Commercial Law] 21-101 through 21-816, does not govern this Agreement, except to the extent that section 21-104(2) of the Act applies. The parties further agree that this Agreement shall be governed by the common law of Maryland relating to written agreements and Maryland statutes other than MUCITA which may apply.

35. Applicability of Federal Laws

If Federal contract and/or grant funds are utilized in any manner in the performance of this contract, then the University reserves the right to bind Contractor to all applicable clauses of the Federal Acquisition Regulation (FAR) and other FAR supplements, as well as all applicable provisions of the Office of Management and Budget (OMB) Circular A-110. Contractor agrees to promptly complete and return to the University any related forms and/or affidavits as may be required.

36. Protests and Claims

Any protest regarding the award of this contract or claim arising out of this contract shall be administered in accordance with the University System of Maryland Procurement Policies and Procedures, Section X - Protests and Claims. Detail is available by accessing the following web site: www.purchase.umd.edu. Click on this web site, then select the category "Policies and Procedures," followed by "USM Procurement Policies and Procedures."

37. Intellectual Property

Work for Hire. Contractor understands and agrees that any and all materials and deliverables that are subject to copyright protection that are developed in connection with the performance of this contract (Works) shall constitute a work for hire as that term is defined in the Copyright Act of 1976, as amended. As a result, all right, title and interest in and to all such Works, unless otherwise excluded, shall belong jointly to the University and the Maryland State Highway Administration, including without limitation all copyrights and other intellectual property rights therein. If for any reason a Work is not deemed to be a work for hire, Contractor hereby grants, transfers, sells and assigns, free of charge, exclusively to the University and the Maryland State Highway Administration, all title, rights and interest in and to said Work, including all copyrights and other intellectual property rights. The Contractor further agrees to execute and deliver to the University a confirmatory grant and assignment of all rights in and to Works and to execute any other proper document the University deems necessary to ensure the complete and effective transfer of all rights in Works to the University.

University and Maryland State Highway Administration Ownership of Deliverables and Related Materials. In accordance with the preceding paragraph, Works developed for the University in connection with this contract are the exclusive property of the University and the Maryland State Highway Administration. Contractor agrees to deliver all Works to the University upon completion of the order. Works include but are not limited to editorial drafts, original copy, photographs, proofs, corrected proofs, camera-ready boards and similar editorial materials and all negatives, flats, engravings, photostats, drawings and other production materials executable code, source code, fixes, patches, updates, upgrades, documentation embedded or otherwise, original copy, and other production materials. Contractor shall be responsible for delivering all Works to the University no later than fifteen (15) working days from the date of final contract deliverables. In the event the Contractor fails to return all such materials by this deadline and the University or Maryland State Highway Administration desires to use Works again, Contractor shall provide the University with equivalent materials, at its own expense, or reimburse the University, in full, for the cost of developing equivalent materials.

Intellectual Property Warranty and Indemnification. The Contractor represents and warrants that any materials or deliverables, including all Works, provided under this contract are either original, not encumbered and do not infringe upon the copyright, trademark, patent or other intellectual property rights of any third party, or are in the public domain. If deliverables, materials or Works provided hereunder become the subject of a claim, suit or allegation of copyright, trademark or patent

infringement, University shall have the right, in its sole discretion, to require Contractor to produce, at Contractor's own expense, new non-infringing materials, deliverables or Works as a means of remedying any claim of infringement in addition to any other remedy available to the University under law or equity. Contractor further agrees to indemnify and hold harmless the University, its officers, employees and agents from and against any and all claims, actions, costs, judgments or damages of any type alleging or threatening that any materials, deliverables, supplies, equipment, services or Works provided under this contract infringe the copyright, trademark, patent or other intellectual property or proprietary rights of any third party (Third Party Claims of Infringement). If a Third Party Claim of Infringement is threatened or made before Contractor receives payment under this contract, University shall be entitled, upon written notice to Contractor, to withhold some or all of such payment.

38. Reserved

39. Eligibility to Purchase

By submitting a proposal, Contractor agrees to extend the proposed price structure and discounts to all University System of Maryland campuses and facilities within the state of Maryland.

40. Proposal Affidavit

The enclosed Proposal Affidavit shall be completed and submitted to the Procurement Officer as part of Contractor's proposal.

41. Changes

The Procurement Officer may at any time, by written order, make unilateral changes within the general scope of this contract in any one or more of the following:

- (1) Description of services to be performed.
- (2) Time of performance (i.e., hours of the day, days of the week, etc.).
- (3) Place of performance of the services.
- (4) Drawings, designs, or specifications when any supplies to be furnished are to be specially manufactured for the University in accordance with the drawings, designs, or specifications.
- (5) Method of shipment or packing of supplies.
- (6) Place of delivery.

The section entitled "Delays and Extensions of Time" prohibits the Contractor from making charges or claims for damages for any delays or hindrances from any cause whatsoever during the progress of any portion of the work specified in this Contract. If a change, as allowed above, causes an increase or decrease in the cost of the work which is not time-related, the University shall make an equitable adjustment in the contract price and shall modify the contract.

The Contractor must assert its right to an adjustment under this section within 30 days from the date of receipt of the written order. Any request for an adjustment must be submitted in writing to the Procurement Officer.

Failure to agree to any adjustment shall be a dispute under the Disputes section. However, nothing in this section shall excuse the Contractor from proceeding with the contract as changed.

42. Protection of University Data

UNIVERSITY DATA: All data residing on or flowing through servers used by or in the conduct of, the effort described in the Scope of Work, shall remain the property of University and shall be considered confidential or proprietary, as defined in section 2.0 below.

- 1.0 University Data: .University will provide VENDOR access to University Data subject to the following terms and conditions:
 - 1.1 University grants VENDOR a nonexclusive, nontransferable right and license to access and use University Data solely to fulfill its obligations with respect to implementation and conduct of the scope of work herein defined.
 - 1.2 The license granted to VENDOR does not grant VENDOR any rights to copy, distribute, transfer, license, or sell University Data to any third parties or to use University Data for any purpose not directly related to this Contract.
 - 1.3 VENDOR agrees to limit access to University Data to those of its officers, agents and/or employees who are assigned to work on this Contract and who require access to University Data in order to fulfill VENDOR'S obligations hereunder.
 - 1.4 Under no circumstances will VENDOR disclose University Data, in whole or in part, to any person or entity except as authorized under this Contract.
 - 1.5 VENDOR acknowledges receipt of and agrees to comply with the Policy On Confidentiality And Disclosure Of Student Records (III-6.30: Approved by the Board of Regents, January 11, 1990) and University of Maryland Policy and Procedures on the Disclosure of Student Educational Records (III-6.30(A): Pres. 1991, 1996, 1997, III-6.30A), as amended from time to time, and available on line respectively at <http://www.usmh.usmd.edu/Leadership/BoardOfRegents/Bylaws/SectionIII/III630.html> and <http://www.inform.umd.edu/CampusInfo/Departments/PRES/policies/iii630a.html> and incorporated as part of this agreement.
 - 1.6 VENDOR shall fully and promptly comply with regulations that may be promulgated by the State or Federal governments concerning the privacy of University Data that VENDOR uses and accesses pursuant to this Contract.
 - 1.7 VENDOR shall notify University of any breach in the security of University Data immediately upon becoming aware of such breach. Notice shall be issued simultaneously to the University Program Manager and University Procurement Officer, in writing, and shall describe the date, nature and scope of the breach, the causes of the breach, and all steps VENDOR has taken as of the date of the notice to remedy the breach. VENDOR will use its best efforts and cooperate fully with University to respond to any such breach.
 - 1.8 University Data is deemed to be Confidential and Proprietary Information for purposes of Section 1.0.
- 2.0 Confidential Information

- 2.1 Definition. Confidential Information means University Data and other information, whether in written, oral, graphic, electronic or physical form, including but not limited to scientific knowledge, know-how, processes, inventions, techniques, formulae, data, plans, and business practices, that are not generally known to the public and that, if tangible, is clearly marked by the disclosing party as Confidential Information at the time of disclosure and which, if oral, is summarized and identified in a writing as Confidential Information that is submitted to the receiving party within ten (10) days of initial disclosure.
- 2.2 Exclusions. Confidential Information does not include information that:
- 2.2.1 is developed by a receiving party independently and without the benefit of Confidential Information disclosed by the disclosing party;
 - 2.2.2 a receiving party lawfully obtains from a third party without restriction;
 - 2.2.3 is or becomes publicly available through no wrongful act of a receiving party;
 - 2.2.4 is known to the receiving party prior to receipt from the disclosing party;
 - 2.2.5 a receiving party is obligated to produce to comply with applicable laws or regulations, including the Maryland Public Information Act, or pursuant to an order of a court of competent jurisdiction or a valid administrative or congressional subpoena, provided the party receiving such order notifies the disclosing party prior to such disclosure so it may take appropriate action.
- 2.3 Obligations. In addition to the obligations of Vendor with respect to University Data under section 1 above, a receiving party shall use reasonable efforts to protect the confidentiality of Confidential Information it receives under this Contract ,specifically, a receiving party will disclose Confidential Information it receives to only to those of its officers, agents and employees who are working on this Contract and have a need to know. A receiving party shall obtain the agreement of those to whom Confidential Information is disclosed to abide by the obligations set forth in this section. The receiving party will not disclose Confidential Information to any third parties without the prior written approval of the disclosing party. The obligations of confidentiality with respect to Product Deliverables and University Data shall remain in effect until they lose their status as Confidential Information. The obligations of confidentiality with respect to all other Confidential Information received under this Contract shall expire three (3) years after the expiration of the Term.

43. Entire Agreement

- A. The contract constitutes the entire agreement between the parties hereto and other communications between the parties prior to the execution of the Contract, whether written or oral, with reference to the subject matter of the contract, are superseded by the agreements contained herein. The Contract may not be modified, amended, changed or altered except by written instrument executed and approved by the Procurement Officer.
- B. Except as otherwise provided by law, any action permitted or required under the contract documents to be taken by the procurement officer, may be taken by his duly authorized representative.

PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

Section J - List of Attachments

1. Baseline System Maps will be found on the University of Maryland Department of Procurement and Supply Website www.purchase.umd.edu, under RFP (Request for Proposals) 82085N/ Traffic Flow Data.

PART IV - REPRESENTATIONS AND INSTRUCTIONS

Section K - Representations, Certifications, and Other Statements of Contractors

UNIVERSITY OF MARYLAND PROPOSAL AFFIDAVIT

A. AUTHORIZED REPRESENTATIVE

I HEREBY AFFIRM THAT:

I am the (title) _____ and the duly authorized representative of (business) _____ and that I possess the legal authority to make this Affidavit on behalf of myself and the business for which I am acting.

B. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, §6-220, Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business):

C. AFFIRMATION REGARDING OTHER CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

(1) Been convicted under state or federal statute of:

(a) A criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or

(b) Fraud, embezzlement, theft, forgery, falsification or destruction of records or receiving stolen property;

(2) Been convicted of any criminal violation of a state or federal antitrust statute;

(3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. §1961 et seq., or the Mail Fraud Act, 18 U.S.C. §1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;

(4) Been convicted of a violation of the State Minority Business Enterprise Law, §14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(5) Been convicted of a violation of §11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsections (1)—(5) above;

(7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract; or

(8) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in §§B and C(1)—(7) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment):

D. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension).

E. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

(1) The business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and

(2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (you must indicate the reasons why the affirmations cannot be given without qualification):

F. SUB-CONTRACT AFFIRMATION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

G. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business has:

(1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

(2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or offeror or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

H. FINANCIAL DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate \$100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches \$100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

I. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, §§14-101—14-108, Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State, during a calendar year in which the person receives in the aggregate \$100,000 or more shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election.

J. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)

I CERTIFY THAT:

(1) Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.

(2) By submission of its bid or offer, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:

- (a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;
- (b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;
- (c) Prohibit its employees from working under the influence of drugs or alcohol;
- (d) Not hire or assign to work on the contract anyone whom the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;
- (e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;
- (f) Establish drug and alcohol abuse awareness programs to inform its employees about:
 - (i) The dangers of drug and alcohol abuse in the workplace;
 - (ii) The business' policy of maintaining a drug and alcohol free workplace;
 - (iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and
 - (iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;
- (g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §J(2)(b), above;
- (h) Notify its employees in the statement required by §J(2)(b), above, that as a condition of continued employment on the contract, the employee shall:
 - (i) Abide by the terms of the statement; and
 - (ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;
- (i) Notify the procurement officer within 10 days after receiving notice under §J(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;

(j) Within 30 days after receiving notice under §J(2)(h)(ii), above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:

(i) Take appropriate personnel action against an employee, up to and including termination; or

(ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and

(k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of §J(2)(a)—(j), above.

(3) If the business is an individual, the individual shall certify and agree as set forth in §J(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.

(4) I acknowledge and agree that:

(a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;

(b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and

(c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.

K. CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT

I FURTHER AFFIRM THAT:

(1) The business named above is a (domestic ___) (foreign ___) corporation registered in accordance with the Corporations and Associations Article, Annotated Code of Maryland, and that it is in good standing and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation, and that the name and address of its resident agent filed with the State Department of Assessments and Taxation is: Name: Address: ___ .

(If not applicable, so state).

(2) Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

L. CONTINGENT FEES

I FURTHER AFFIRM THAT:

The business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the business, to solicit or secure the Contract, and that the business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on the making of the Contract.

M. Repealed.

N. ACKNOWLEDGEMENT

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: _____ By: __ (Authorized Representative and Affiant) __

Contractor's Federal Employer Identification Number (FEIN): _____

CONFLICT OF INTEREST INFORMATION

- A. Each solicitation that will result in the selection of a Contractor who will assist a unit in the formation, evaluation, selection, award, or execution of a State contract shall provide notice of the requirement of this regulation.
- B. "Conflict of interest" means that, because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.
- C. "Person" has the meaning stated in COMAR 21.01.02.01B (64) and includes a bidder, offeror, Contractor, consultant or subcontractor or subconsultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a bid or offer is made.
- D. If the Procurement Officer makes a determination prior to award that facts or circumstances exist giving rise or which could in the future give rise to a conflict in interest, the procurement officer may reject a bid or offer under COMAR 21.06.02.03B.
- E. After award the State may terminate the contract, in whole or in part, if it deems such termination necessary to avoid an actual or potential conflict of interest. If the Contractor knew or reasonably could have been expected to know of an actual or potential conflict of interest prior to or after award and did not disclose it or misrepresented relevant information to the Procurement Officer, the State may terminate the contract for default, institute proceedings to debar the Contractor from further State contracts, or pursue such other remedies as may be permitted by law or the contract.
- F. A conflict of interest may be waived if the Procurement Officer, with approval of the agency head or designee, determines that waiver is in the best interest of the State. The determination shall state the reasons for the waiver and any controls that avoid, mitigate, or neutralize the conflict of interest.
- G. Each bidder or offeror responding to a solicitation that will result in the selection of a Contractor who will assist a unit in the formation, evaluation, selection, award, or execution of another State contract shall provide the affidavit and disclosures set forth in Subsection H of this regulation to the Procurement Officer with the bid or offer and such other times as may be required by the Procurement Officer.
- H. The affidavits and disclosures required by Subsection G of this regulation shall be in substantially the same form as follows:

CONFLICT OF INTEREST AFFIDAVIT AND DISCLOSURE

A. "Conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

B. "Person" has the meaning stated in COMAR 21.01.02.01B(64) and includes a bidder, offeror, Contractor, consultant, or subcontractor or subconsultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a bid or offer is made.

C. The bidder or offeror warrants that, except as disclosed in D below, there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a conflict of interest.

D. The following facts or circumstances give rise or could in the future give rise to a conflict of interest (explains in detail--attach sheets if necessary):

E. The bidder or offeror agrees that if an actual or potential conflict of interest arises after the date of this affidavit, the bidder or offeror will immediately make a full disclosure in writing to the Procurement Officer of all relevant facts and circumstances. This disclosure shall include a description of actions which the bidder or offeror has taken and proposes to take to avoid, mitigate, or neutralize the actual or potential conflict of interest. If the contract has been awarded and performance of the contract has begun, the Contractor shall continue performance until notified by the Procurement Officer of any contrary action to be taken.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Date: _____ By: _____
(Authorized Representative and Affiant)

ATTACHMENT C6

CONTRACT-FUNDED AFFIDAVIT FOR ANTI-LOBBYING CERTIFICATION, DEBARMENT CERTIFICATION, AND CLEAN AIR AND WATER CERTIFICATION

Contractors should review the instructions for certification included in the regulations before completing this form. Signature on this form denotes compliance with certification requirements under Federal Acquisition Regulation (FAR). The certifications shall be treated as material representations of fact upon which reliance will be placed by the University of Maryland in making a determination to award the order.

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

(a) 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 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 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) 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 office 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 instruction.

(c) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients 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.

2. DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

The undersigned certifies to the best of his knowledge and belief, that the company and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any offenses enumerated in paragraph (I)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

3. CLEAN AIR AND WATER. The undersigned certifies that

(a) Any facility to be used in the performance of this proposed contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

(b) The undersigned will immediately notify the University buyer, before award, of the receipt of any communications from the Administrator, or a designee, of the EPA, indicating that any facility that the undersigned proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The undersigned will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

I understand that a false statement on this certification may be grounds for rejection of this bid or proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Name of Contractor

Signature of Authorized Representative

Date

Printed Name and Title of Authorized Representative

[] I am unable to certify to the above statements. My explanation is attached.

MINORITY BUSINESS ENTERPRISE (MBE) PARTICIPATION

A. Minority Business Enterprise (MBE) Participation

PURPOSE

Contractor shall structure its procedures for the performance of the work required in this contract to attempt to achieve the Minority Business Enterprise (MBE) goal stated in the solicitation. MBE performance must be in accordance with this Exhibit, as authorized by Code of Maryland Regulations (COMAR) 21.11.03. Contractor agrees to exercise all good faith efforts to carry out the requirements set forth in this Exhibit.

MBE GOALS AND SUB GOALS

An overall Maryland MBE subcontract participation goal of 25% percent of the total contract Service Delivery Order dollar amount(s), including any future contract modifications, has been established for this procurement. Individual coalition member states may require contractors to register with their respective Minority/Small Business entities, and provide reporting for tasks defined to these states.

By submitting a response to this solicitation, the bidder or offeror agrees that this dollar amount of the contract will be performed by MBEs, certified by the Maryland Department of Transportation (MDOT), as specified. **ONLY MDOT certified MBEs may be included in the MBE Participation Schedule. No other MBE certifications are acceptable.**

- ◆ A prime contractor — including an MBE prime contractor — must accomplish an amount of work not less than the MBE subcontract goal with certified MBE subcontractors.
- ◆ A prime contractor comprising a joint venture that includes MBE partner(s) must accomplish the MBE subcontract goal with certified MBE subcontractors.

If an MDOT certified MBE firm included in the MBE Participation Schedule becomes unavailable at any time before execution of the contract, the contractor shall notify the Procurement Officer in writing immediately, describing the desired change and the contractor's efforts to substitute another MDOT certified MBE to perform the work. After the date of contract execution, any desired changes must have the prior written approval of the Agency Head, and the Procurement Officer must issue a formal contract modification authorizing the change.

SOLICITATION AND CONTRACT FORMATION

- ◆ A bidder or offeror must include with its bid or offer:
 - (1) A completed Certified MBE Utilization and Fair Solicitation Affidavit (MBE Attachment A) whereby the bidder or offeror acknowledges the certified MBE participation goal, commits to make a good faith effort to achieve the goal, and affirms that MBE subcontractors were treated fairly in the solicitation process.
 - (2) A completed MBE Participation Schedule (MBE Attachment B) whereby the bidder or offeror responds to the expected degree of MBE participation as stated in the solicitation, by identifying the specific commitment of certified MBEs at the time of submission. The bidder or offeror shall specify the price and/or the percentage of contract value associated with each MBE subcontractor identified on the MBE Participation Schedule.

If a bidder or offeror fails to submit MBE Attachment A and MBE Attachment B with the bid or offer as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

- ◆ Within 10 working days from notification that it is the apparent awardee or from the date of the actual award, whichever is earlier, the apparent awardee must provide the following documentation to the Procurement Officer.
 - (1) Outreach Efforts Compliance Statement (MBE Attachment C)
 - (2) MBE Subcontractor Project Participation Statement of Intent to Subcontract (MBE Attachment D)
 - (3) If the apparent awardee believes a waiver (in whole or in part) of the overall MBE goal or of any sub goal is necessary, it must submit a fully documented MBE Waiver Request (MBE Attachment E) and MBE Unavailability Form (MBE Attachment F) that comply with COMAR 21.11.03.11.
 - (4) Any other documentation required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal.

If the apparent awardee fails to return each completed document within the required time, the Procurement Officer may determine that the apparent awardee is not responsible and therefore not eligible for contract award. If the contract has already been awarded, the award is voidable.

CONTRACT ADMINISTRATION REQUIREMENTS

Contractor shall:

1. Include in its agreements with its certified MBE subcontractors a requirement that those subcontractors (when actively employed on the project) submit monthly to the MBE Liaison a MBE Subcontractor Monthly Payment Report*. **The Prime Contractor is responsible for assuring that the MBE Subcontractors submit this report.**
2. Submit monthly to the MBE Liaison a Prime Contractor MBE Monthly Payment Report*, including any unpaid invoices over 30 days old received from any certified MBE subcontractor, and the reason payment has not been made.
3. Maintain such records as are necessary to confirm compliance with its MBE participation obligations. These records must indicate the identity of certified minority and non-minority subcontractors employed on the contract, the type of work performed by each, and the actual dollar value of work performed. Subcontract agreements documenting the work performed by all minority and non-minority subcontractors must be retained by the Contractor and furnished to the Procurement Officer on request.
4. Consent to provide such documentation as reasonably requested and to provide right-of-entry at reasonable times for purposes of the State's representatives verifying compliance with the MBE participation obligations. Contractor must retain all records concerning minority and non-minority subcontractor participation and make them available for State inspection for three years after final completion of the contract.
5. At the option of the procurement agency, upon completion of the contract and before final payment and/or release of retainage, submit a final report in affidavit form and under penalty of perjury, of all payments made to, or withheld from MBE subcontractors.

MBE ATTACHMENTS

Submit with Bid or Offer

- A. Certified MBE Utilization and Fair Solicitation Affidavit
- B. MBE Participation Schedule

Submit within 10 Working Days of Notification of Apparent Awardee

- C. Outreach Efforts Compliance Statement
- D. MBE Subcontractor Project Participation Statement of Intent to Subcontract
- E. MBE Waiver Request (if applicable)
- F. MBE Unavailability Form (if applicable)

*Monthly Payment Reports that are required by Prime Contractor and MBE Subcontractor(s) will be provided to Prime Contractor upon or following contract award as attachments G (MBE Subcontractor Monthly Payment Report) and H (Prime Contractor MBE Monthly Payment Report).

Contractor Assistance

Contractors seeking personal assistance in locating minority business enterprises or to answer questions about the MBE requirement in this solicitation are encouraged to contact:

Ms. Victoria Leatherwood
MBE Liaison Officer
University of Maryland
Department of Procurement and Supply
2113- R Chesapeake Building
College Park, Maryland 20742
Telephone: (301) 405-5850
Fax: (301) 314-9565
E-Mail: vleather@umd.edu

Contractors who have questions concerning the MBE certification process, need assistance with State of Maryland MBE Directory searches, or have questions about specific vendor information, may also contact:

Maryland Department of Transportation
Minority and Disadvantaged Business Enterprise (MBE) Program
7201 Corporate Center
Hanover, MD 21076
In State: (410) 865-1269
Toll Free: 1-800-544-6056

On-line assistance in locating minority business enterprises:

The State of Maryland Minority Business Enterprise Directory published by the Maryland Department of Transportation at www.marylandtransportation.com is updated nightly. To utilize the search feature, click on the category “Minority/Disadvantaged Business Enterprise” followed by “MBE/DBE Directory.”

MBEs Recently Used by the University of Maryland System is generally updated monthly at www.purchase.umd.edu. The University System of Maryland encourages the utilization of all qualified MDOT certified MBEs. This list was created to answer the prime contractor’s inquiry regarding who has done business with the University of Maryland. It is for information only and is not an endorsement or recommendation. To utilize the search feature, click on the category “Minority Business Program,” followed by “MBE Vendors Recently Used”

**CERTIFIED MBE UTILIZATION AND FAIR SOLICITATION
AFFIDAVIT**

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the procurement officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

In conjunction with the bid or offer submitted in response to Project Name _____, Solicitation No. _____, I affirm the following:

1. I acknowledge the overall certified Minority Business Enterprise (MBE) participation goal of ____ percent and, if specified in the solicitation, sub goals of ____ percent for MBEs classified as African American-owned and ____ percent for MBEs classified as women-owned. I have made a good faith effort to achieve this goal.

OR

After having made a good faith effort to achieve the MBE participation goal, I conclude I am unable to achieve it. Instead, I intend to achieve MBE participation of _____ percent and request a waiver of the remainder of the goal. Within 10 business days of receiving notice that our firm is the apparent low bidder or the apparent awardee, I will submit a written waiver request that complies with COMAR 21.11.03.11. I acknowledge that the MBE subcontractors/suppliers listed in the MBE Participation Schedule will be used to accomplish the percentage of MBE participation that I intend to achieve.

2. I have identified the specific commitment of certified MBEs by completing and submitting an MBE Participation Schedule with the bid or proposal.
3. I understand that if I am notified that I am the apparent awardee, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier.
 - Outreach Efforts Compliance Statement (Attachment C)
 - MBE Subcontractor Project Participation Statement of Intent to Subcontract (Attachment D)
 - MBE Waiver Request (if applicable) (Attachment E)
 - MBE Unavailability Form (if applicable) (Attachment F)
 - Any other documentation required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal.

I acknowledge that if I fail to return each completed document within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has already been awarded and the required documentation is not submitted, the award is voidable.

- 4. In the solicitation of subcontract quotations or offers, MBE subcontractors were provided not less than the same information and amount of time to respond, as were non-MBE subcontractors.

I solemnly affirm under the penalties of perjury that the contents of this paper are true to the best of my knowledge, information, and belief.

Bidder/Offeror Firm Name

Signature of Authorized Representative

Address

Printed Name, Title

City, State, Zip

Phone

Fax

E-Mail

Date

Submit this MBE Affidavit with Bid or Offer

MBE PARTICIPATION SCHEDULE

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

Prime Contractor (Firm Name, Address, Phone)	Project Name
Solicitation Number	Total Contract Amount \$
List Information for Each Certified MBE Subcontractor/Supplier on this Project	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	

USE ATTACHMENT B CONTINUATION PAGE AS NEEDED

SUMMARY

TOTAL MBE PARTICIPATION: _____ % \$ _____

Bidder/Offeror Firm Name

Signature of Authorized Representative

Date

Printed Name, Title

Submit this MBE Participation Schedule with Bid or Offer

MBE PARTICIPATION SCHEDULE (continued)

List Information for Each Certified MBE Subcontractor/Supplier on this Project	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	
Minority Firm Name	MBE Certification Number & Classification
Work to be Performed/NAICS or SIC Codes	
Dollar Amount or Percentage of Total Contract	

MBE Attachment C

OUTREACH EFFORTS COMPLIANCE STATEMENT

In conjunction with the bid or offer submitted in response to Project Name _____, Solicitation No. _____, I state the following:

1. Bidder/ Offeror identified opportunities to subcontract in these specific work categories:

2. Attached to this form are copies of written solicitations (with bidding instructions) used to solicit certified MBEs for these subcontract opportunities.

3. Bidder/Offeror made the following attempts to contact personally the solicited MBEs:

4. Bidder/Offeror assisted MBEs to fulfill or to seek waiver of bonding requirements.
(DESCRIBE EFFORTS)

 This project does not involve bonding requirements.

5. Bidder/Offeror did/did not attend the pre-bid conference
 No pre-bid conference was held.

Bidder/Offeror Firm Name

Signature of Authorized Representative

Date

Printed Name, Title

Submit this Outreach Statement within 10 Working Days of Notification of Apparent Awardee

MBE Attachment D

MBE SUBCONTRACTOR PROJECT PARTICIPATION STATEMENT OF INTENT TO SUBCONTRACT

SUBMIT ONE FORM FOR EACH CERTIFIED MBE LISTED IN THE MBE PARTICIPATION SCHEDULE

Provided that _____ is awarded the contract in
Prime Contractor Name
conjunction with _____, Solicitation No. _____, it and
Project Name
_____, MDOT Certification No. _____, intend
Subcontractor Name
to enter into a contract by which Subcontractor shall: (describe work, include NAICS/SIC codes)

Agreed upon Subcontract \$ Amount _____

- No bonds are required of Subcontractor
- The following amount and type of bonds are required of Subcontractor:

Signature of Authorized Representative
of Prime Contractor

Signature of Authorized Representative
of Subcontractor

Printed Name, Title

Printed Name, Title

Address

Address

Phone

Phone

Fax

Fax

E-Mail

E-Mail

Date

Date

Submit this Intent to Contract within 10 Working Days of Notification of Apparent Awardee

MBE WAIVER REQUEST

PROJECT NAME _____ SOLICITATION NO. _____

If, for any reason, the apparent successful bidder or offeror is unable to achieve the contract goal for each certified MBE classification specified as having a subcontract goal or the overall MBE contract goal, the bidder or offeror may request, in writing, a waiver to include the following:

1. Attach a detailed statement of the efforts made to select portions of the work proposed to be performed by certified MBEs, including the work to be performed by each MBE classification if any MBE sub goal has been specified, in order to increase the likelihood of achieving the stated goal;
2. Attach a detailed statement of the efforts made to contact and negotiate with certified MBEs, and if appropriate, by certified MBE classification, including:
 - a. The names, addresses, dates, telephone numbers, MDOT MBE Certification No., and classification of certified MBEs contacted, and
 - b. A description of the information provided to certified MBEs regarding the plans, specifications, and anticipated time schedule for portions of the work to be performed;
3. As to each certified MBE that placed a subcontract quotation or offer that the apparent successful bidder or offeror considers not to be acceptable, attach a detailed statement of the reasons for this conclusion;
4. If applicable, include an MBE Unavailability Form (Attachment F) for each unavailable MBE firm offered an opportunity to bid on the above project, include the reasons they are unavailable and, if possible, the MBE firm's signature.
5. Include Attachment C which is the record of the apparent successful bidder's or offeror's compliance with the outreach.
6. If the request for a waiver is for a certain MBE classification with an overall MBE goal, the bidder or offeror shall demonstrate reasonable efforts to meet the overall MBE goal with other MBE classification or classifications.

Overall MBE goal ____% I request a waiver in the amount of ____% and commit to achieving a ____% overall MBE goal.

If applicable, sub goal of ____% women-owned businesses. I request a waiver in the amount of ____% and commit to achieving a ____% women-owned MBE goal.

If applicable, sub goal of ____% African American-owned businesses. I request a waiver in the amount of ____% and commit to achieving a ____% African American-owned MBE goal.

Bidder/Offeror Firm Name

Signature of Authorized Representative

Date

Printed Name, Title

If Applicable, Submit this MBE Waiver Request within 10 Working Days of Notification of Apparent Awardee

MBE UNAVAILABILITY FORM

_____ PRIME CONTRACTOR	
_____ PROJECT NAME	_____ SOLICITATION NO.
CONTACTED CERTIFIED MINORITY BUSINESS	
_____ MBE FIRM	_____ MDOT MBE NO.
SEEKING TO OBTAIN A BID FOR	
_____ WORK/SERVICES NEEDED	_____ NAICS OR SIC CODES
SAID MBE FIRM, TO THE BEST OF MY KNOWLEDGE AND BELIEF, IS UNAVAILABLE FOR WORK/SERVICES IN RELATION TO THE ABOVE PROJECT, OR IS UNABLE TO PREPARE A BID FOR THE FOLLOWING REASON(S):	
_____ REASON(S)	_____ MBE FIRM NAME
_____ REASON(S)	_____ IF POSSIBLE, SIGNATURE OF MBE FIRM AUTHORIZED REPRESENTATIVE
	_____ PRINTED NAME & TITLE
	_____ DATE
I HEREBY CERTIFY THAT THE ABOVE MINORITY BUSINESS ENTERPRISE WAS OFFERED AN OPPORTUNITY TO BID ON THE ABOVE PROJECT BY THE ABOVE PRIME CONTRACTOR. THIS STATEMENT IS A TRUE ACCOUNT OF WHY THE ABOVE MBE FIRM DID NOT SUBMIT A BID ON THE ABOVE PROJECT	
_____ PRIME CONTRACTOR FIRM NAME	
_____ SIGNATURE OF AUTHORIZED REPRESENTATIVE	_____ DATE
_____ PRINTED NAME & TITLE	

If Applicable, Submit this Unavailability Form with any MBE Waiver Request, for Each MBE that is Not Available to Perform, within 10 Working Days of Notification of Apparent Awardee

Section L - Evaluation Factors for Award

A. EVALUATION COMMITTEES

The Procurement Officer shall establish separate technical and financial evaluation committees to review and rate the proposals. The financial evaluation committee may be composed of the Procurement Officer and any other individuals appointed by the Procurement Officer. The technical evaluation committee shall be composed of other individuals appointed by the Procurement Officer.

B. ACCEPTABILITY OF PROPOSALS:

The Procurement Officer shall determine which contractors have met the basic requirements of the RFP. Failure to comply with any mandatory requirement will normally disqualify a contractor's proposal. The Procurement Officer shall have the sole authority to determine whether any deviation from the requirements of this RFP is substantial in nature. The Procurement Officer may waive or permit to be cured minor irregularities or minor informalities in proposals that are immaterial or inconsequential in nature, whenever it is determined to be in the University's best interest. In addition, the Procurement Officer may reject in whole or in part any and all proposals if such is in the University's interest, and may reject proposals that are outside the competitive range financially, without performing a technical evaluation. The University may accept other than the lowest priced offer. The Procurement Officer may conduct discussions with contractors in any manner deemed necessary to best serve the interests of the University. The Procurement Officer may limit the competitive range to firms highly rated technically by the University for purposes of efficiency. The University reserves the right to make an award to more than one contractor or to split an award among contractors.

C. TECHNICAL EVALUATION:

The technical evaluation committee shall conduct its evaluation of the technical merit of the proposals in accordance with the requirements and specifications of the solicitation. The Contractor must satisfy and explicitly respond to ALL of the requirements and specifications, including a detailed explanation of how each item listed in the requirements and specifications is to be met. The last phase of this technical evaluation will be the ranking by the Committee of each qualified proposal on technical merit.

The criteria that will be used by the committee for the technical evaluation of proposals for this procurement are listed below in decreasing order of importance.

1. Demonstration of a full understanding of the RFP, and the ability to meet all mandatory requirements for the provision of real-time traffic data. This includes technical requirements designated as mandatory (M) and all other non-technical requirements including support of the Data Ownership and Data Licensing provisions (section C, subsection 6).
2. Demonstration of ability to meet the highly desirable (HD) technical requirements for the provision of real-time traffic data.

[Note: "Demonstration of ability" encompasses information provided in the proposals as well as record of past performance. Past Performance which will be determined by references including but not limited to: the quality of product delivered, ability to meet the specifications as defined, offeror's record for on-time delivery, technical quality, cost control, demonstrated

corrective actions, etc. as required under Section A-2 “Instructions, Conditions and Notices to Contractors”, Section N-1B “References”.]

3. Demonstration of the extent to which project risk can be minimized and/or mitigated. (Section C, Subsection 3.3)
4. Demonstration of ability to meet the RFP desirable technical requirements (D) for the provision of real-time traffic data.
5. Demonstrate the ability to provide consulting services including availability of relevant off-the-shelf products.

The terms "must" or "shall" are used throughout this document to indicate mandatory requirements. The terms “Mandatory,” “Highly-Desirable” and “Desirable” (abbreviated as M, HD, and D, respectively) are used to describe technical specifications in section C. The Contractor's proposal is to clearly state that it meets all mandatory requirements and specifications; that is, that the Contractor is fully capable of delivering the items and providing the services as specified in this RFP. The Contractor's proposal is to state clearly the degree to which it can meet any highly desirable and desirable technical requirements. Each Contractor must provide a written detailed response to each requirement and specification. Responses to technical specifications in section C, subsection 3.1 and 3.2 are to use a similar matrix format.

Misinterpretation of requirements and specifications by the Contractor shall not relieve the Contractor of responsibility to accurately address the requirements of the RFP or to perform the contract, if awarded.

The Committee may request site visits for the purpose of evaluating proposals and/or Contractor's responsibility. The Committee may request additional technical assistance from any source. Industry standard references may be used during the evaluation process.

D. FINANCIAL EVALUATION:

The separate financial volume will be distributed to the financial evaluation committee. This information will then be used to establish a financial ranking.

Evaluation of pricing proposals will be performed based on pricing estimates delivered for the core system. The pricing model provided by the vendor will be analyzed with respect to the core system for accuracy and consistency.

Cost proposals for Consulting Services are ancillary to the contract. Pricing of Consulting Services will be evaluated for reasonableness.

E. BASIS OF AWARD:

Financial rankings of proposals will be combined with the corresponding technical ranking to determine a final ranking for each proposal. **Technical merit will have greater weight than price.** Price proposals will increase in importance for proposals of equal or near equal technical rank. The Procurement Officer will recommend contract award to the responsible contractor or contractors whose

proposal is (are) determined to provide overall best value to the University, considering the evaluation factors in this RFP, and price.

F. NEGOTIATION:

The University has the right to accept the best proposal as submitted, without discussion or negotiation. Contractors should therefore not rely on having a chance to discuss, negotiate and adjust their proposals.

Contractors who submit proposals initially judged by the Procurement Officer to be reasonably susceptible of being selected for award may be asked to discuss their proposals with the University to facilitate arrival at a contract most advantageous to the University. If the Procurement Officer determines that discussion is in the best interest of the University, the Procurement Officer will advise contractors in the competitive range to submit a best and final offer for consideration after discussions are held.

However, discussions may not be conducted if the Procurement Officer determines either that discussions are not in the best interests of the University or that discussions need not be conducted: (a) with respect to prices that are fixed by law or regulation, although consideration shall be given to competitive terms and conditions; (b) because the time of delivery or performance does not permit discussions; or (c) because it can be demonstrated clearly from the existence of adequate competition or accurate prior price experience with the particular item that acceptance of an initial offer without negotiation would result in a fair and reasonable price.



Request for Clarification (RFP #82085N)
Traffic Data and Associated Services along the I-95 Corridor

Issued: September 5, 2007
Due: September 10, 2007

Submitted by: INRIX[®] Inc.

Contact Information: Rick Schuman
Vice President, Public Sector
9832 Montclair Circle
Apopka, FL 32703
Email: rick@inrix.com
Phone: 407-298-4346



INRIX[®] is pleased to submit clarifications as requested by email on September 5, 2007. Through our responses ([in blue](#)), we wish to reiterate our desire to support the Coalition and its member agencies by offering the best data available with extensive usage flexibility in a long-term partnership that maximizes the cost-benefit of this project to the agencies.

In reviewing the questions, there is a general point we wish to emphasize that may help address possible confusion in parts of our proposal.

Our “Respondent Comments” in the Traffic Data Requirements table¹ are provided based entirely upon INRIX[®]’s Smart Dust Network, Traffic Fusion Engine and Partner Portal “as is.” This means that our cost proposal fully includes the elements necessary to meet the requirements as described to implement and operate the baseline system for the initial three year operational period, and the basis for costing the base system and rate schedule for coverage and time beyond the initial three years. Thus, within the submitted fee, the Coalition will benefit from continued platform improvements and growth in probe data as described in our proposal.

However, INRIX[®] also recognizes that there are several ways in which the Coalition, or specific member agencies, may wish to improve our service. Examples include covering more roads, improving the quality of the data further, improving data quality in lower volume periods, etc. Thus, we have included several additional Enhanced Source Data Options² for consideration. If we are selected, these options – with committed pricing included in the cost proposal – become available to the Coalition and its member agencies. Decisions to utilize – or not – these options will be up to the Coalition. Given the IDIQ nature of the contract, this approach offers great flexibility for the future. It is important to note that INRIX[®] has not added any fees onto the pricing submitted for these enhanced sources; all fees will go directly to these partners.

Please note that INRIX considers all clarifications are confidential in cases when the “Proposal reference” section is subject to confidentiality claims as listed on page 4-1 of our proposal.

¹ Section 3.1 of the RFP, pages 3-12 through 3-14 of our proposal

² Described beginning on page 3-20 of our proposal

Proposal reference: Page 2 of transmittal letter – “We understand and accept the data ownership and data licensing provisions of the RFP without exception. In fact, we are willing to discuss liberalizing the usage conditions further as we believe strongly that our clients should have the ability to utilize our data to the maximum extent possible”

Clarification requested:

What is meant by ‘liberalizing usage conditions’? Will this impact cost? Please be more specific regarding the conditions you are willing to liberalize.

INRIX® Clarification:

In our response to the Coalition’s 2nd Request for Information leading up to this RFP, we provided detailed feedback on the then draft IPR statement (our response is attached on the following page for further detail). The language in Section 6.0 of the RFP regarding data ownership and licensing is similar to the draft IPR statement, so the detail and philosophy of our RFI #2 response apply for our proposal as well.

The specific area we would be willing to liberalize is section 6.2 where there are references to road segment length, speed/travel time ranges, update refresh periods. While we would like to maintain safeguards to prevent automated redistribution of our data to commercial entities, such as the media, we would support removal of all limitations on data usage for all Coalition and member organization assets (signs, HAR, 511, web sites, etc.).

As purchasers of data, we see no reason why the Coalition and its members should – or need to – accept terms that prevent the most robust and effective usage of the data you have paid for, and we believe any reference to reducing the granularity or precision of the data, or increasing its latency, for presentation to the traveling public can be eliminated without harming our ability to conduct business with other customers. These changes – whether they are made or not – have no impact on our submitted cost.

INRIX® Response to draft IPR statement in RFI #2***Can your company support the provision of the IPR statement?***

In general, yes we can support the IPR statement, with some suggested clarifications. Philosophically, the only limitations we feel are necessary regarding ownership and use of the data is twofold:

1. Prohibit resale or automated redistribution of data from the Coalition and/or its full member organizations to other public or private entities; and
2. Ensure copyright language is developed and used where practical and appropriate by the Coalition and its full members (e.g., web sites, RSS feeds, email alerts, etc.) to prohibit “screen scraping” or other techniques by which parties other than the Coalition or its full members could attempt to re-purpose the data to circumvent use restrictions. (Note: While we would hope the Coalition and its full members would monitor for such occurrences, the primary goal is to make clear to those considering circumventing the project’s data license that it is illegal, thus allowing the Coalition, its members, or INRIX® to pursue perpetrators, ideally reducing/eliminating such occurrences.)

Are there portions of the statement which provide risk to the Contractor by diminishing opportunity to resell traffic data in commercial markets?

Not given our business model and plans, subject to the suggested clarifications above.

Are there portions of the IPR that are overly restrictive and could be loosened with negligible impact on either the Contractor or the cost of the proposal?

Yes. We see no reason to restrict the Coalition or full member organization’s use of the data provided by this project as is suggested with the bulleted restrictions proposed. As a purchaser of data, we see no reason why the project’s investors should – or need to – accept terms that prevent the most robust and effective usage of the data you have paid for.

For information provided freely to the public, could the number of thresholds be increased to four or five with minimal impact?

Per our previous comment, this question is no longer meaningful.

***Are there further restrictions upon the data which your company would require?
Please comment on any concerns, and provide input for any IPR issues that are not covered.***

None aside from the general prohibition on re-purposing data outside of the Coalition and its full members outlined above.

Note: If other submittals to this RFI indicate that such restrictions as proposed in this RFI are maintained, and the published RFP retains such restrictions, then we strongly recommend some sort of scoring or evaluation criteria be included that gives “extra credit” for proposals that offer relaxing of the terms. We feel that broad vs. restricted usage is a key potential proposal differentiator and would be worth great value to the Coalition and its members, and needs to be recognized accordingly.

Proposal reference: Page 3-12, Item 9 [REDACTED]

[REDACTED] total current average data latency = 4.5 minutes”

Clarification requested:

The definition of latency as defined in the response to item 9, page 3-12 of the proposal is from generation of probe message to receipt of update from data feed. The definition of latency provided in the RFP in section 1.5.9 on or about page 17 is the difference in time between traffic perturbation and when it is reflected in the data stream. Please clarify your response accordingly.

INRIX® Clarification:

Our response was aimed at showing that on average, the time it takes in our service today for source data to move from a vehicle to the customer is 4.5 minutes. Given that the requirement is to detect a traffic perturbation in 8 minutes, we are comfortable that our data as it is provided today can meet this requirement. [REDACTED]

[REDACTED] With our data density, reporting frequencies, processing efficiency and projected improvements in publishing frequency, we fully expect to easily meet the 8 minute maximum latency requirement, and possibly meet the 5 minute maximum latency requirement, from the outset of the project, with continued improvements possible throughout the operational phase.

Proposal reference: Page 1-4 “... more than 650,000 commercial fleet, delivery and taxi vehicles; toll tag data; and occupancy and speed measurements from several ...”

Clarification requested:

What sources of toll-tag data are included in INRIX[®]'s offering? Are any of these included in this project (within the corridor)? Is TRANSCOM toll-tag data utilized?

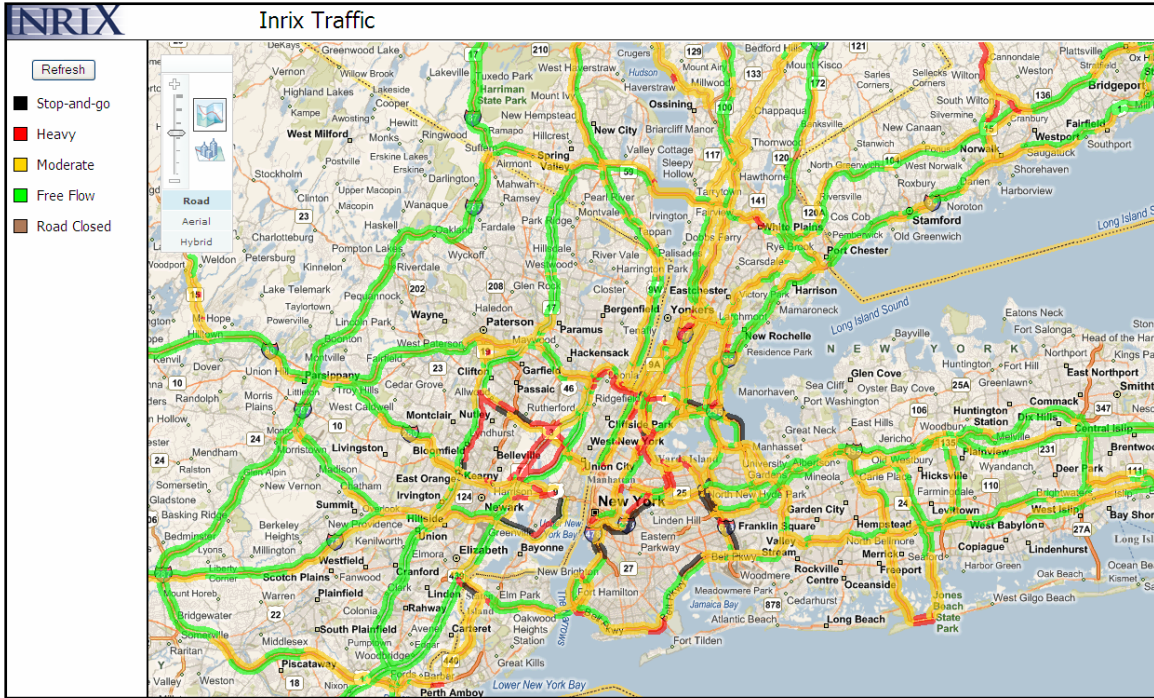
INRIX[®] Clarification:

At present, we include toll-tag data from the San Francisco Bay Area in the INRIX[®] Smart Dust Network. This interface is nearly identical to the TRANSCOM interface as they were both developed by the same integrator. Currently, we do not integrate toll-tag data from any portions of the corridor, including TRANSCOM. However, our system can support it and we would be willing to consider doing so.

In late 2006, INRIX[®] evaluated TRANSCOM's available data and determined that while useful, there were more cost-effective ways to scale our coverage in the New York Metropolitan area. The cost to access the data from TRANSCOM was determined to be prohibitive given that only some of the roads we cover in the region have TRANSCOM coverage, that this coverage has widely varying segment lengths (longer segments increase likelihood of latency) and that we would receive no contractual assurance of data feed reliability. Our decision at the time was to focus more on investments that yielded broader national and regional data. (See map on following page for current NYC area coverage.)

In developing this proposal, we re-examined that decision, but again reached the same conclusion: that our investments are better utilized if they yield broader corridor and/or NYC area wide quality improvements. In fact, since the proposal has been submitted, we executed an agreement that made several thousand more vehicles in the NYC area exclusive probe vehicles to INRIX[®], at a fraction of the fees required to gain access from TRANSCOM and with significantly richer data on the covered roads.

To be clear, technically, our infrastructure supports the integration of toll-tag data from within the corridor and we would welcome detailed discussions with agencies to incorporate such data. To date, the only discussion has been with TRANSCOM and it is a business decision (value for money) to not yet integrate the data. This could of course change over time as factors evolve, such as TRANSCOM's data increases in value and/or coverage, the costs sought for the data moderate, and terms associated with data access more evenly match typical commercial terms that accompany these types of contracts. Our mission is to provide our customers the best data for their investments and will fully recognize that the data available to us is not stagnant.



Current New York City Metropolitan Area Roadway Coverage

Proposal reference: Page 3-12, item 5 "... at present we have not stratified our tests by speed ranges, though this is easily achievable. Our results by and large have met this level of accuracy requirement and ..."

Clarification requested:

Please clarify.

INRIX® Clarification:

The RFP contains the requirement of 10 MPH average absolute error (or root mean square error) for each of 4 speed ranges. We also use the root mean square error method in our own ground truth drive testing. A "drive test" usually involves 3-5 drivers driving a metropolitan market for 3-5 days spanning early morning to evening, which generates data that is compared to the information being provided for that market in our Partner Portal.

To date, in addition to generating an overall regional RMS error measure for each drive test, we calculate results based on locations (e.g., specific TMC segment for the whole drive testing period) and by time of day (e.g., all data points gathered during 3-4p.m. for the whole drive testing period during the drive test). We have not subdivided the data to do analysis in different congestion conditions (e.g., 0-30 MPH vs. over 60 MPH). In some recent testing, we are using a customer proprietary approach that assesses our ability to identify when congested conditions are occurring, perhaps the closest testing we have done that attempts to determine performance variations at different states of congestion. These results, which unfortunately are client proprietary, give us confidence that we will be able to meet the specific requirements the RFP for the entire baseline coverage area. As the source data increases over the 9-12 months between now and system evaluation, our results will only get better when comparing Coalition sponsored 2008 analysis as it compares with 2006 and 2007 INRIX® testing.

Proposal reference: Page 3-2, DTS Traffic Systems

Clarification requested:

Please clarify DTS's role or contribution to the proposal.

INRIX[®] Clarification:

On Page 3-2, our proposal states: "This proposal makes available DTS's expertise in converting or creating traffic count stations that can also generate real-time source data to be used in the project. DTS is offering the exact pay item prices, terms and conditions that currently govern its statewide traffic data services contract with VDOT to the Coalition and its member agencies, allowing – at Coalition/agency option – agencies the potential of establishing or converting sites to dual traffic counting and real-time usage."

More detail is provided on Page 3-22 of our proposal: "Digital Traffic Systems (DTS) currently operates and maintains VDOT's and maintains FDOT's traffic count stations under long-term contracts. Further DTS has led the implementation in roughly 100 of VDOT's 400 count stations of dual use equipment, allowing for the stations to continue to provide traffic count data but also to serve as real-time sensors for traffic operations functions. Through this proposal, INRIX[®] is offering to all member agencies the ability to tap the resources of DTS for the same terms under which DTS is contracted by VDOT at present. This would allow any agency at their option to evolve any number of their traffic count stations – or even create stations from scratch – that can provide source data to INRIX[®] and data directly to the agency."

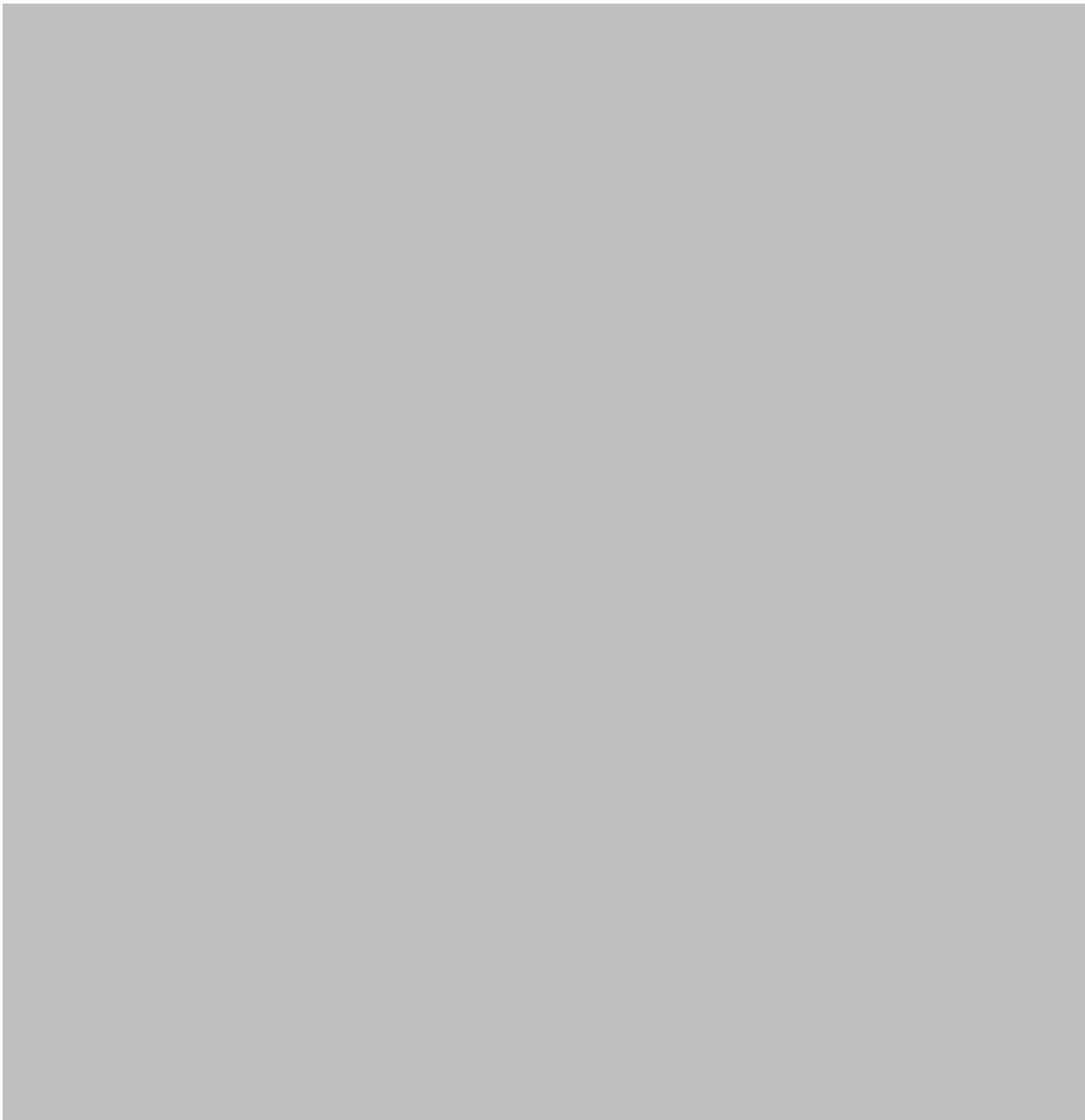
Utilizing DTS' capabilities is one of our unique enhanced data source options we offer in the proposal. Their participation is not required for INRIX[®] to successfully complete the core requirements of this RFP. We are offering DTS capabilities to provide support in response to Indefinite Delivery, Indefinite Quantity (IDIQ) tasks orders which can build and expand data collection networks and to perform associated support services. Tasks can include but not be limited to: (1) applications and installation of dual use traffic data collection technologies, (2) Traffic Data Collection Timeliness and accuracy of data including calibration, (3) Maintenance and support of the Integration of data from existing compatible sources, (4) Participation and technology tradeoffs of innovative, non-invasive detection technology (including but not limited to video detection), while taking advantage of existing data where available, (5) Traffic signalization experience, (6) Active involvement in the commercial viability of the data (include traffic video distribution systems) for repackaging the information for commercial markets and (7) Specialty Consulting services for data integration and application support.

Proposal reference: Pages 3-2 and 3-3 also 3-23, True Position

Clarification requested:

Is the small scale test referenced on page 3-3 included in the cost of the base proposal, or is it an additional cost? If the small scale test is successful, will there be additional cost for implementation of the True Position concept over other geographical areas, or will such costs be reflected in the existing cost model? Are Cell Phone carrier agreements in place, if not what is the status of these agreements? If such agreements exist, what is their geographic coverage? What are the existing and planned contractual relationships, if any, between True Position, INRIX, T-mobile, and AT&T as they relate to work on the proposed project?

INRIX® Clarification:



Proposal reference: Page 3-12, Item 4

Clarification requested:

Please clarify. What, if any, of the traffic data referenced in the response to item 4 is included in the cost of the base proposal? Are there extra costs involved with provision of the extra information? If so, are these reflected in the cost proposal?

INRIX® Clarification:

None of these additional files are included in the cost of the base proposal. Given the page limitations and the focus on travel time and speed data of the RFP, we did not include detailed information about our other feeds.

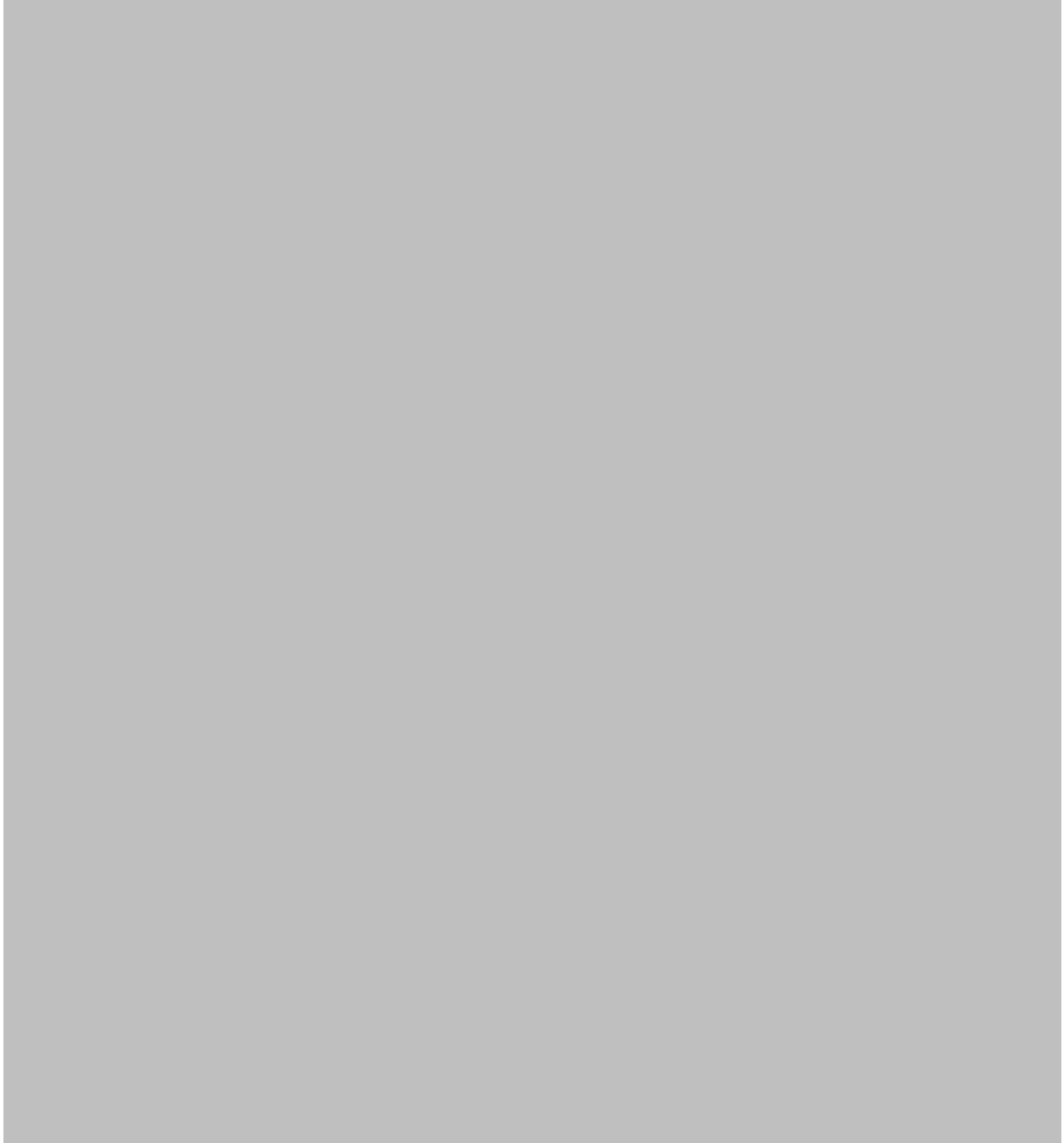
There are a large number of potential approaches to obtain and utilize the additional flow, incident and event data we have available and it does not lend itself to creating “list prices” that will ultimately not prove meaningful. Our expectation was that during the early stages of the project, we would communicate our full portfolio of additional offerings, allowing the Coalition and/or its member agencies to request more details for specific feeds and geography at any point during the contract period. We would then respond to those requests.

Proposal reference: Page 3-47, 48

Clarification requested:

Do any of the pending patents (and the possibility of not acquiring the patent) affect INRIX's ability to deliver the products associated with the contract? Do any of these contribute to the risk potential of the project?

INRIX® Clarification:



Proposal reference: Page 3-8, “Additionally, the INRIX Smart Dust Network aggregates real-time incidents and hundreds of market-specific criteria that affect traffic – such as construction and road closures, sporting and entertainments events, school schedules and weather forecasts.”

Clarification requested:

How is event information cited on page 3-8 collected? Is such information critical to the performance of the Smart Dust network? Is the collection of any of this data expected to be the responsibility of the Coalition and its members?

INRIX® Clarification:

INRIX® employs its own full-time team which is focused on collecting the event information discussed in the proposal. Our team has direct relationships with the venues, school districts, sporting leagues and other bodies that organize, coordinate and schedule events of various types across the country, allowing INRIX® to independently build and maintain unparalleled accuracy, recency and detail in the information it provides and uses.

Much of the information aggregated as part of the Smart Dust Network (events, school schedules, legislative calendars, real-time and forecast weather etc.) provide material lift to the accuracy of INRIX® predictive traffic products, however they do not impact the accuracy of INRIX® real time traffic flow information. [REDACTED]

There are no additional Coalition or member responsibilities to support this data collection effort.



Proposal reference: Page 3-8, sidebars

Clarification requested:

Clarify the cited >80% road sensor data statistic. Does this reflect 80% of sensors, organizations, or other? To what extent is INRIX's ability to provide quality data dependent upon coalition member's publicly available data, or public systems? What if these sources of data are unavailable? Is the proposal in any way dependent upon increased access to coalition member's incident and traffic data over and above current relationships?

INRIX® Clarification:

This is an estimate of the number of nationwide real-time "ITS" sensors (as opposed to traffic count stations that are not real-time in nearly all cases) that have the ability to provide data outside their closed freeway management system to service providers such as INRIX®. The point to emphasize is that on a national scale, while we are prohibited from having access to the ITIP/TTID sensors, the scale of publicly available sensor data dwarfs the proprietary sensor networks in operation.

INRIX®'s ability to deliver quality data, while helped by access to coalition member's publicly available data, it is not dependent upon this access. We have carefully constructed – and continue to build – our Smart Dust Network to minimize dependencies on individual suppliers of source data, be it an agency or a specific GPS probe fleet. While we clearly desire to maintain – and expand with other member agencies if possible – access to agency provided source data, we are not dependent upon this data to meet the project's requirements.

Proposal reference: Page 3-29, "... or some equivalent system up to 1000 miles in coverage."

Clarification requested:

Where will the 1000 miles of arterial coverage be located? How will it be determined? If, after three years, the coalition decides to continue contracting for traffic data, will the 1000 miles of arterial coverage be included in the base contract price for years 4 through 10, or excluded? Do you agree that the traffic data collected on the 1000 miles of arterials be subject to the same Data Ownership provisions as the data purchased by the Coalition?

INRIX® Clarification:

Item 11 in the Traffic Data Requirements Table (Section 3.1) of the RFP alludes to the fact that road coverage might change from those defined as the core system in the RFP. We wanted to make clear in our proposal that we are prepared to offer coverage of either the arterials as defined in the core system – or a similar scale deployment to be determined by the Coalition through the completion of the initial task order beginning the project.

To best describe the business terms for years 4 through 10, we are including material inserted into the cost proposal's cost model section:

Arterial/alternate route coverage will be provided at no cost initially in the core system (or a resulting system of analogous size) for the base period. If arterial/alternate route coverage is included in years 4-10, a rational per mile price will be established based upon negotiation with the Coalition, although it will not exceed the freeway mileage per year price (the rationale for this is that INRIX® and the Coalition are not currently in a position to value the quality of arterial data provided, and the relative importance of source data – if any – to be provided by the Coalition's member agencies to create the service such as signal system data, etc.).

We agree that the same data ownership provisions will govern both limited access and arterial data.

Rick Schuman

From: Rick Schuman
Sent: Monday, September 10, 2007 11:25 AM
To: 'Bruce Brewer'
Subject: RE: Request for Clarification for the Inrix Proposal under RFP 82085N/Traffic Flow Data.
Attachments: Request for Clarification - INRIX Submittal _9-10-07_.pdf

Importance: High

Bruce:

Attached is our submittal to the request for clarification. Please acknowledge receipt of this email and please let me know if we can be of further assistance.

Regards,

Rick

Rick Schuman | Vice President, Public Sector, Inrix | w 407-298-4346 | c 407-572-5584 | rick@inrix.com | www.inrix.com

From: Bruce Brewer [mailto:bbrewer@umd.edu]
Sent: Wednesday, September 05, 2007 8:54 AM
To: Rick Schuman
Subject: Request for Clarification for the Inrix Proposal under RFP 82085N/Traffic Flow Data.

Good Morning Mr. Schuman:

The Technical Evaluation Team have been reviewing the Inrix Proposal Submission, and request clarification for the following points.

Responses may be returned via E-Mail, and are due no later than Close-of-Business Monday, 10 September 2007.

The points of clarification are as follows:

Proposal reference: Page 2 of transmittal letter – “We understand and accept the data ownership and data licensing provisions of the RFP without exception. In fact, we are willing to discuss liberalizing the usage conditions further as we believe strongly that our clients should have the ability to utilize our data to the maximum extent possible”

Clarification requested:

What is meant by ‘liberalizing usage conditions’? Will this impact cost? Please be more specific regarding the conditions you are willing to liberalize.

Proposal reference: Page 3-12, Item 9 “Average latencies: Probe ‘read’ to Inrix = 1.5 minutes: process data = 0.5 minute: publish (presently every 5 minutes) average latency = 2.5 minutes): total current average data latency = 4.5 minutes”

Clarification requested:

The definition of latency as defined in the response to item 9, page 3-12 of the proposal is from generation of probe message to receipt of update from data feed. The definition of latency provided in the RFP in section 1.5.9 on or about page 17 is the difference in time between traffic perturbation and when it is reflected in the data stream. Please clarify your response accordingly.

Proposal reference: Page 1-4 "... more than 650,000 commercial fleet, delivery and taxi vehicles; toll tag data; and occupancy and speed measurements from several ..."

Clarification requested:

What sources of toll-tag data are included in Inrix's offering? Are any of these included in this project (within the corridor)? Is TRANSCOM toll-tag data utilized?

Proposal reference: Page 3-12, item 5 "... at present we have not stratified our tests by speed ranges, though this is easily achievable. Our results by and large have met this level of accuracy requirement and ..."

Clarification requested:

Please clarify.

Proposal reference: Page 3-2, DTS Traffic Systems

Clarification requested:

Please clarify DTS's role or contribution to the proposal.

Proposal reference: Pages 3-2 and 3-3 also 3-23, True Position

Clarification requested:

Is the small scale test referenced on page 3-3 included in the cost of the base proposal, or is it an additional cost? If the small scale test is successful, will there be additional cost for implementation of the True Position concept over other geographical areas, or will such costs be reflected in the existing cost model? Are Cell Phone carrier agreements in place, if not what is the status of these agreements? If such agreements exist, what is their geographic coverage? What are the existing and planned contractual relationships, if any, between True Position, Inrix, T-mobile, and AT&T as they relate to work on the proposed project?

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Clarification requested:

Please clarify. What, if any, of the traffic data referenced in the response to item 4 is included in the cost of the base proposal? Are there extra costs involved with provision of the extra information? If so, are these reflected in the cost proposal?

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Clarification requested:

Do any of the pending patents (and the possibility of not acquiring the patent) affect INRIX's ability to deliver the products associated with the contract? Do any of these contribute to the risk potential of the project?

Proposal reference: Page 3-8, "Additionally, the INRIX Smart Dust Network aggregates real-time incidents and hundreds of market-specific criteria that affect traffic – such as construction and road closures, sporting and entertainments events, school schedules and weather forecasts."

Clarification requested:

How is event information cited on page 3-8 collected? Is such information critical to the performance of the Smart Dust network? Is the collection of any of this data expected to be the responsibility of the Coalition and its members?

Proposal reference: Page 3-8, sidebars

Clarification requested:

Clarify the cited >80% road sensor data statistic. Does this reflect 80% of sensors, organizations, or other? To what extent is INRIX's ability to provide quality data dependent upon coalition member's publicly available data, or public systems? What if these sources of data are unavailable? Is the proposal in any way dependent upon increased access to coalition member's incident and traffic data over and above current relationships?

Proposal reference: Page 3-29, "... or some equivalent system up to 1000 miles in coverage."

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Where will the 1000 miles of arterial coverage be located? How will it be determined? If, after three years, the coalition decides to continue contracting for traffic data, will the 1000 miles of arterial coverage be included in the base contract price for years 4 through 10, or excluded? Do you agree that the traffic data collected on the 1000 miles of arterials be subject to the same Data Ownership provisions as the data purchased by the Coalition?

Thank you in advance for your interest in our effort, and support in our Proposal Process.

Sincerely,

Bruce

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A001	2. DATE ISSUED 06/08/07	3. NUMBER OF PAGES 13
4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)	
6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc., 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER 82085N	
	7B. DATED 04/27/07	

8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning 1 copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

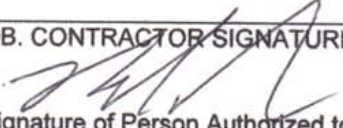
9.1 This Amendment Serves To:

- 9.1.1 Provide an updated Excel price-proposal spreadsheet.
- 9.1.2 This Amendment serves to convey the Questions received from vendors, and Answers.
- 9.1.3 This Amendment Serves to convey a PDF file of Attendees at the Pre Proposal Conference.
- 9.1.4 This Amendment Serves to convey a PDF file of the report "Cellular Probe Data Evaluation Case Study: The Baltimore Multimodal Traveler Information System (MMTIS).
- 9.1.5 This Amendment Serves to convey a MS Word listing of all vendors receiving the RFP.
- 9.1.6 This Amendment Serves to Modify reporting requirements as defined in the Minority Business Enterprise (MBE) Participation, Page 69, "Contract Administration Requirements" as follows:
On a Monthly Basis, the Contractor is required to provide the Procurement Officer as defined in Section G/Contract Administration Data, Paragraph 5 "Notices", an MBE Subcontractor Activity report defining: (1) The dollar expenditure of all Service Task Orders for the reporting month, (2) the MBE subcontract dollar expenditure for the reporting month, (3) a total contract aggregate dollar expenditure of all Service Task Orders, and (4) a total contract dollar amount of all MBE subcontract funding under the contract.

9.2 **The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**

9.3 **By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, Vice President, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) Bruce D. Brewer
10B. CONTRACTOR SIGNATURE  (Signature of Person Authorized to Sign)	10C. DATE SIGNED 6/8/07

Traffic Data and Associated Services along the I-95 Corridor

Volume I - Technical



RFP 82085N

Prepared for:



INRIX



Inrix, Inc.
4055 Lake Washington Blvd NE, Suite 200
Kirkland, WA 98033
Phone: (425) 284-3800, Fax: (425) 284-3879

June 22, 2007

Bruce D. Brewer
University of Maryland
Department of Procurement & Supply
2113-R Chesapeake Building
College Park, Maryland 20742-3111

Re: Request for Proposal for Traffic Data and Associated Services along the I-95 Corridor (RFP No. 82085N)

Dear Mr. Brewer:

As co-Founder, President and Chief Executive Officer of INRIX, I am extremely pleased to submit our response to your request for proposals to provide traffic data and associated services for the I-95 Corridor Coalition.

After careful consideration of the University's and the Coalition's needs, objectives, and challenges, associated with the implementation and operation of a regional traffic monitoring system, INRIX has assembled an approach to completely meet your near-term needs while providing a uniquely capable and flexible platform for the expansion and evolution contemplated and required by the Coalition over what could be a 10-year contract lifespan. Further, we have assembled a talented and experienced consulting services team – led by industry leader PBS&J – to provide the Coalition and its member agencies with capabilities, resources and options to take full advantage of the unprecedented data made available by our proposal.

Our proposal is rooted in several key themes:

- √ **Full limited access highway coverage from project inception.** We will meet all mandatory requirements for the baseline system within the published project budget from the very beginning of operations – 6 months from notice to proceed – including covering all freeways specified. We currently provide real-time data to dozens of customers for over 75% of the identified freeway mileage (including over 80% in the core states).
- √ **Our architecture is designed for enhancement and expansion.** The INRIX Smart Dust Network and INRIX Traffic Fusion Engine provide a unique platform for scaleable and cost-effective improvement and expansion to achieve many of the highly desired and desired elements in the RFP, specifically including growing coverage into state highways and arterials and to other regions of the Coalition. In addition to expanding our access to traditional road sensor data, we continue to add dozens of new commercial vehicle data suppliers to the Smart Dust Network, featuring accurate, real-time information from taxis, service delivery vans, airport shuttle services, long haul trucks, and other vehicles. Over the past year alone, we have more than tripled the overall number of data points entering the INRIX Traffic Fusion Engine from probe vehicles each day, with additional growth already in the pipeline.

- √ **Risk management is inherent with INRIX.** Our business model is predicated upon the reliable supply of the most cost-effective quality data possible. We are neither overly dependent on a single source data supplier nor rely upon unproven technology to deliver our services. Further, our proposal is not contingent upon the implementation of risky or costly approaches that have yet to be proven to work on a scale anywhere close to the size of the baseline system identified by the Coalition.
- √ **Demonstrated experience delivering real-time data on a national scale.** We deliver data today in our production environment on a national scale to dozens of customers under operational service level agreements. We have the infrastructure in place and demonstrate this on a daily basis.
- √ **Liberal data usage terms.** We understand and accept the data ownership and data licensing provisions of the RFP without exception. In fact, we are willing to discuss liberalizing the usage conditions further as we believe strongly that our clients should have the ability to utilize our data to the maximum extent possible (in most cases this will not impair our ability to conduct business with other clients).

I want to reiterate our excitement at the prospect of working for the Coalition and its member agencies on this signature project. We applaud the Coalition for having the vision to create such a bold and important program and strongly believe the timing is perfect for such a strategic initiative. The Coalition has clearly stated its objective is an operational system, not a pilot or test deployment. As the operator of the nation's largest real-time traffic data service, we agree with the Coalition and have proven that operational services on this scale are both possible and affordable. Our data can immediately support your efforts with the ISN, ICAT and the Corridors of the Future initiatives, and like the Coalition, we look forward to illustrating the value of the availability of quality data across a large region.

Through this proposal, we will show how we are uniquely suited to support you in this endeavor, with our ability to offer complete, high quality data in the near-term as well as a platform for improvement, expansion and growth, all in a risk-managed and cost-effective business model. As requested, all prices and offerings in this proposal are valid for 120 days from the date of June 22, 2007, and this is the only proposal being submitted by or including INRIX.

Rick Schuman, our Vice President, Public Sector, is our primary point of contact for the project. Rick has lived up and down the entire I-95 corridor for nearly 25 years and has ample knowledge of the region, the Coalition and its members and in many ways has prepared his entire life to lead this project. Rick can be reached at 407-298-4346 or rick@inrix.com. Rick, myself and the entire INRIX team look forward to working with the Coalition on this project; we know that the Coalition views this as a signature project and to be very clear, so will we.

Sincerely,

Inrix, Inc.



Bryan Mistele

President & CEO

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RFP 82085N
Traffic Data and Associated Services
along the I-95 Corridor



Volume I - Technical

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Section 2	References
Section 3	Technical Proposal <ul style="list-style-type: none">— <i>INRIX Team Overview</i>— <i>Real-Time Traffic Data Approach and Requirements Satisfaction</i>— <i>Consulting Services Approach and Requirements Satisfaction</i>— <i>Risk Analysis</i>
Section 4	Confidentiality Claims

Executive Summary

INRIX is extremely excited at the prospect of supporting the University of Maryland, the I-95 Corridor Coalition and its member agencies in the implementation, operations and expansion of a real-time regional traffic monitoring service. As this summary will explain in brief, INRIX and its partners can meet the ambitious mandatory requirements of the RFP in the near-term while also offering unmatched flexibility and capabilities to fully exploit the traffic data provided and to intelligently and cost-effectively expand coverage as clearly desired:



Our Team

- √ Data Services
 - Prime Contractor: INRIX
 - Enhancement Options: SpeedInfo, DTS, TruePosition
- √ Consulting Services
 - Lead Consultant: PBS&J
 - Team Members: EnterInfo (Maryland MBE), Open Roads Consulting, Berkeley Transportation Systems (BTS), University of Washington’s Transportation Research Center, Tele Atlas

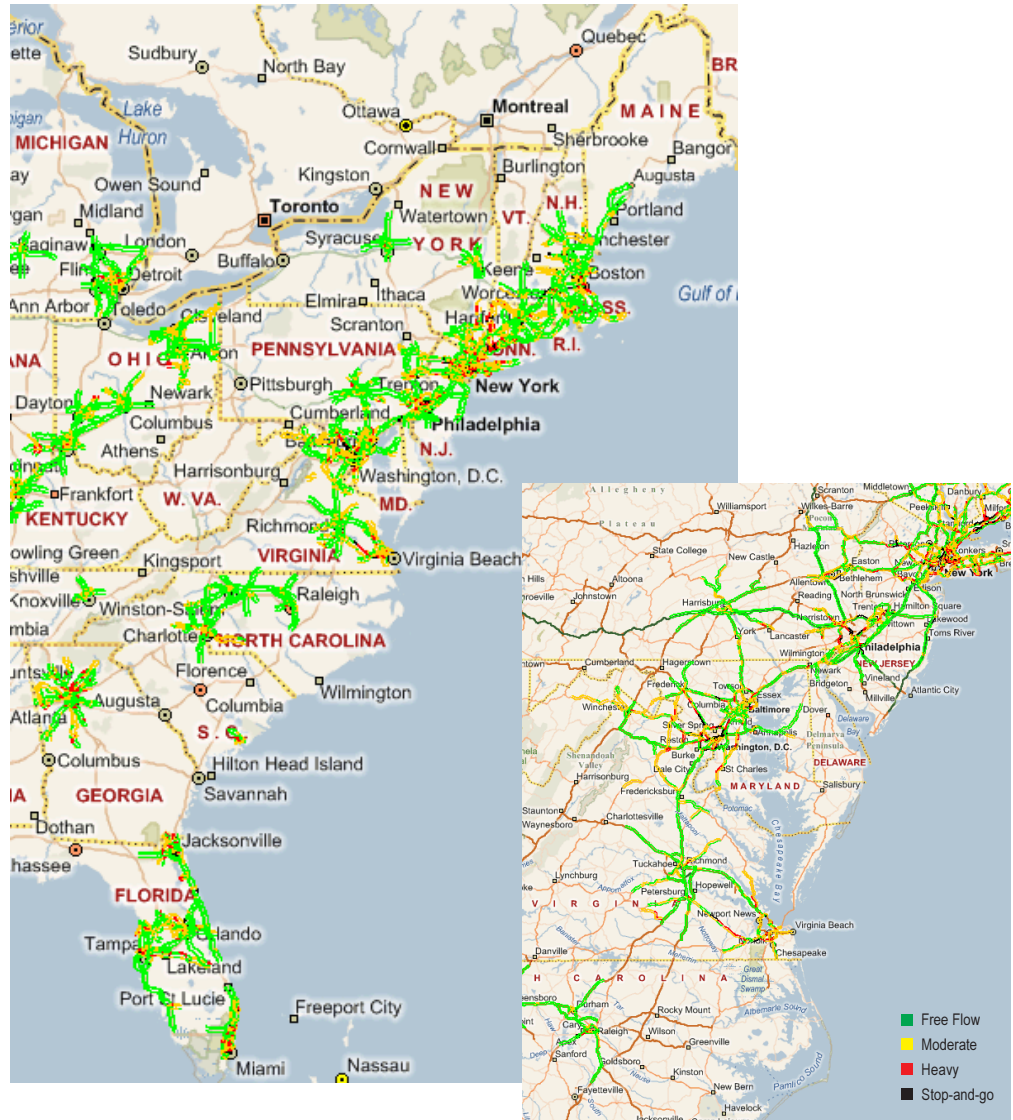
Our Offering

- √ INRIX’s basic architecture and current/planned source data can cover all freeway baseline mileage in accordance with the requirements within 6 months of contract initiation. We currently provide real-time average speeds for 75% of the baseline system’s freeway mileage and over 80% of the core system’s freeway mileage (see map on page 1-2).
- √ INRIX accepts the data ownership and data licensing provisions of the RFP without exception. Further, we are willing to discuss liberalizing the usage conditions further as we believe strongly that our clients should have the ability to utilize our data to the maximum extent possible.
- √ To expedite the availability of quality data on arterials and alternate routes, INRIX would like to establish an arterial/alternate route applied

Key Points of INRIX Proposal

- ◆ Best real-time data available approach; not married to a specific source data technology
- ◆ Largest probe vehicle network in the U.S.; data growing at 8-10% per month
- ◆ Architecture that blends all available source data to create fused data in real-time
- ◆ Infrastructure already in place to support project across full baseline system
- ◆ Innovative and scalable options for enhancing source data, now and in the future
- ◆ Consulting team experience matches Coalition’s needs
- ◆ INRIX is entirely focused on traffic data and very committed to making this project a success

Current INRIX Real-Time Speed Coverage in Coalition States



research and testing initiative as part of this project with the Coalition and will make our data available at no cost for up to 1000 miles of arterial coverage for the three-year base operating period as our contribution to the initiative.

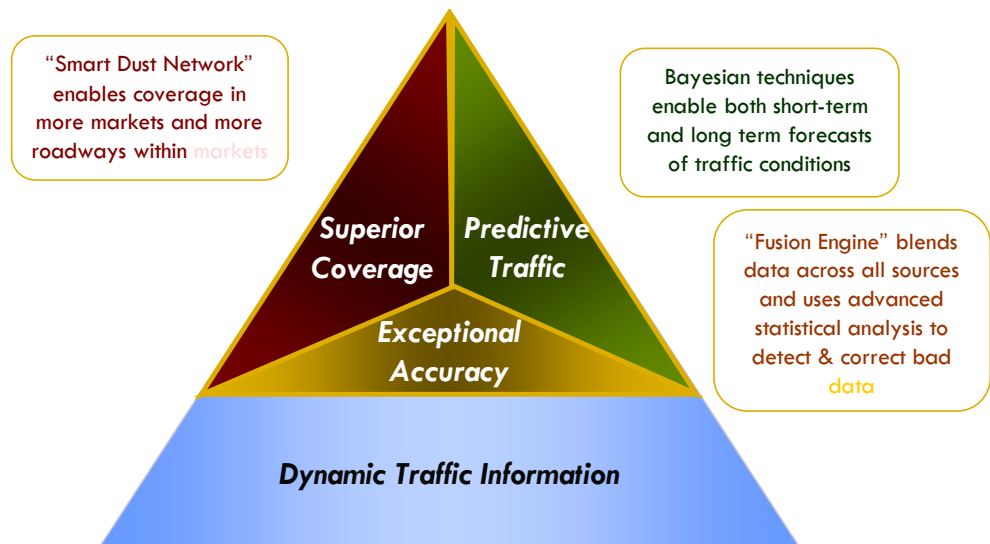
- ✓ INRIX will deliver, for each road segment (defined using industry standard TMC location codes), current speed, travel time, average speed, and the 85th percentile reference speed, updated at least every 5 minutes with latency on average of 4.5 minutes.
- ✓ INRIX is including three innovative *optional* offerings to enhance source data via task orders. Note that each would be structured to input additional data into the INRIX Traffic Fusion Engine and INRIX, recognizing the value these enhanced data options could bring to the project, will not mark-up costs of these options:
 - SpeedInfo self-contained radar sensors, turn-keyed and paid for through a reasonable monthly per sensor service fee;

- DTS and its unique experience developed with VDOT – to convert traditional traffic count stations to also support real-time reporting needs – making available its services at the same price and terms as the current VDOT contract to all agencies wishing to convert any number of count stations to dual use capability; and
 - TruePosition is prepared to conduct a small, cost-effective trial in Wilmington, DE to leverage E-911 development equipment, already in place in a commercial wireless network, to provide additional source data.
- √ Fully capable consulting team with strong Maryland MBE to assist in deriving full utility from available data
 - √ After initial deployment is complete, INRIX will conduct a public RFI process in conjunction with the Coalition to seek proposals for additional methods of cost-effective source data generation.

Our Approach

INRIX is the exclusive beneficiary of years of research and millions of dollars of development by Microsoft Research into the statistical inference of traffic patterns, predictive analysis and mobile-based visualizations of real time systems. INRIX has built upon Microsoft’s patented, proprietary technologies to enable the delivery of next generation traffic information services.

INRIX differentiates itself in the Traffic Data space along three main points. The INRIX “Smart Dust Network” enables us to provide the broadest traffic **coverage** possible. Our painstaking attention to detail that drives the INRIX “Traffic Fusion Engine” enables us to provide the **highest accuracy** and best quality traffic data available. We continually **innovate** in the traffic area,



Traffic Incidents, Real-time & Predictive Flow, Comparative Speeds, Time Estimation, Congestion, Key Route Traffic, Historical & Reference Average Speeds, Dynamic Fuel Prices

leveraging our latest patented analytical techniques possible to provide dynamic traffic predictions of future conditions (while predictions are not a part of the requirements for this project, the techniques developed for creating predictions also helps the Fusion Engine’s ability to process, filter and interpret source data in real-time).

The INRIX “Smart Dust Network” is the first nationwide traffic solution to go beyond the limitations of road sensors and provide accurate real-time and predictive traffic speed information for major freeways and highways in every major metropolitan area in the U.S. INRIX acquires real-time and historical sensor data from hundreds of public and private sources including anonymous, real-time GPS probe data from more than 650,000 commercial fleet, delivery and taxi vehicles; toll tag data; and occupancy and speed measurements from several Department of Transportation sensor networks (including several Coalition agencies). Additionally, the INRIX Smart Dust Network aggregates real-time incidents and hundreds of market-specific criteria that affect traffic – such as construction and road closures, sporting and entertainment events, school schedules and weather forecasts.

The INRIX Traffic Fusion engine is the realization of INRIX’s unique ability to combine traffic flow and incident information from multiple data sources. The Fusion Engine exploits the techniques of Collaborative Filtering – the automatic validation of data from disparate sources that are in statistical agreement. The INRIX Traffic Fusion Engine utilizes sophisticated Bayesian modeling and proprietary error detection and correction to process the real-time, historical and predictive information aggregated by the INRIX Smart Dust Network. INRIX Traffic Solutions are then distributed to customers via XML services and applications.

Our Philosophy

At INRIX, we consider ourselves first and foremost a traffic content fusion company. We are committed to providing our business and commercial customers – our focus is not to serve the general public directly – with the best information possible. We know this means that we must continue to innovate regarding source data. We have no allegiance to any specific source data approach, just that they work, are cost-effective and do not create excessive risk for our clients or INRIX.

We understand that neither we nor the Coalition can stand still over the next 3-10 years. We expect change and anticipate evolution in our data suppliers, our platform, and our consulting team. To illustrate our ability to adapt, next month we will be releasing our eighth major upgrade to our Traffic Fusion Engine in roughly two years. While we are convinced we have put together the most compelling team and approach possible looking forward, we are fully prepared to evolve as the Coalition’s needs do.

Also, we understand that success isn’t about the data, but about the uses and applications of the data. INRIX, and PBS&J, are committed to assisting the

“We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten.”

– Bill Gates

Coalition and its member agencies – as we do with our other clients – in developing compelling uses for the data we provide.

As requested, all prices and offerings in this proposal are valid for 120 days from the date of June 22, 2007. This is the only proposal being submitted by or including INRIX.

We are fully aware that this project is a keystone project for the Coalition. It would clearly be a keystone project for INRIX as well, and you will have the full resources of a focused, dedicated company (and team) ensuring the project is a success.

References

INRIX has over 30 end user clients who provide services to consumers and business customers. INRIX traffic data, similar to what is desired by the Coalition, is being utilized in some of the nation's leading in-vehicle navigation systems, portable navigation devices, mobile phone based navigation services and internet portals. The following references highlight some of the diverse customer base we presently service with real-time data analogous to what is being sought by the RFP, both in terms of content and demonstrating the scale of operational infrastructure required to deliver the services.



Clear Channel's Total Traffic Network

In November 2005, INRIX announced an agreement with Clear Channel's Total Traffic Network, a division of Clear Channel Radio providing INRIX's traffic flow information to its customer base, including broadcasters and real-time traffic navigation systems. Clear Channel Radio is the first broadcaster to launch a ground-breaking programming and technology service delivering real-time traffic data directly to vehicles, using its own network of reporters, traffic cameras, helicopters and airplanes – Total Traffic Network. Clear Channel's Total Traffic Network now serves more than 125 metropolitan markets in three countries, including the United States, Mexico and New Zealand. Total Traffic Network delivers real-time traffic data via in-car or portable navigation systems, broadcast media, wireless and Internet-based services. For more information, see www.realtimetraffic.net. The growing list of customers currently using Total Traffic Network's real-time reports include BMW NA, MINI USA, Garmin International, Nextel, Verizon Wireless, Kenwood Electronics, Tom Tom Navigator, Navigon, Delphi, Microsoft, GPS, MSN Autos, MapPoint, Cingular, ATX, AAA, Rand McNally, Weatherbug, Siemens VDO, Mio Technology, and Cobra Electronics.

Company	<i>Clear Channel Radio, Total Traffic Network</i>
Primary Contact	<i>Len Konecny, Vice President, Business Development</i>
Telephone Number	<i>(404) 870-5084</i>
Email Address	<i>lenkonecny@clearchannel.com</i>



Tele Atlas

In April of 2006, INRIX announced an agreement with Tele Atlas to take over the traffic operations of the Tele Atlas Traffic product line. With Tele Atlas Traffic originally being a competitive business to INRIX, this announcement was a significant testament to the rapid evolution and quality of INRIX traffic and services. Through the merging of operations, INRIX inherited approximately 12 customers including TomTom, Cingular, Microsoft, VDOT (511) and NCDOT (511). In addition to the merging of operations, Tele Atlas is productizing traffic solutions and has the rights to resell INRIX Traffic to

their worldwide map customer base. As the 2nd largest digital map provider in the world, Tele Atlas maps are omnipresent, and are embedded within most of the leading providers of map based services including large internet portals (Google, Yahoo etc), Portable Navigation Companies (TomTom, Dash etc), and Automotive (BMW, GM, DaimlerChrysler etc). Traded on the Frankfurt Stock Exchange among others, Tele Atlas has more than \$300M in annual sales.

Company	<i>Tele Atlas</i>
Primary Contact	<i>Hardie Morgan, Chief Financial Officer</i>
Telephone Number	<i>(281) 300-5146</i>
Email Address	<i>hardie.morgan@teletlas.com</i>



TeleNav

In January 2007, Telenav announced a relationship with INRIX to provide “Telenav Traffic” featuring traffic enabled-routing with their market leading navigation application for mobile handsets. Telenav is the first company to provide GPS navigation service with traffic rerouting on consumer mobile phones and is the leading navigation application provider to Sprint/Nextel. Currently, their traffic-enabled application is available on 4 Blackberry handsets including the Pearl, 3 Motorola phones including both the RAZR and SLVR, 4 Sanyo phones, 2 Samsung phones, and 1 LG phone. Since January, Telenav has trademarked one click rerouting and their application even updates estimated time of arrival based on the traffic provided by INRIX. Founded in 1999, Telenav has gone through hyper growth and the current subscriber base is estimated at over 1 million subscribers. In addition to Sprint, Telenav’s platinum customer list includes AT&T (Cingular), Alltel, Boost, Rogers Wireless, and Qwest.



Company	<i>TeleNav Inc.</i>
Primary Contact	<i>Sal Dhanani, Co-Founder and Director of Marketing</i>
Telephone Number	<i>(206) 686-9393</i>
Email Address	<i>salman@telenav.com</i>



Wisconsin DOT

In January 2007, Wisconsin DOT executed an agreement with Short Elliot Hendrickson, with INRIX as the leading subcontractor, to provide real-time traffic flow conditions along the two major corridors between Milwaukee and Green Bay (US 41 and I-43) spanning nearly 250 centerline miles. The project, with requirements similar to the Coalition’s RFP, is INRIX’s first inter-city corridor coverage in a non-metropolitan area as well as our first specifically to support a public agency, and is proceeding as scheduled with real-time data now available for acceptance testing by Wisconsin DOT. Several elements of

this project are similar to how our data would be accessed and utilized by the Coalition, including the use of TMC location codes to define and reference road segments, partner portal access, and the need for operations center integration. Further our experience in developing project documentation to aid a state DOT in accessing and integrating our data as well as creating and executing a system acceptance test will benefit both INRIX and the Coalition and expedite project implementation.

Agency	<i>Wisconsin DOT</i>
Primary Contact	<i>Dean Beekman, Freeway Operations Engineer</i>
Telephone Number	<i>(414) 227-4154</i>
Email Address	<i>dean.beekman@dot.state.wi.us</i>

Consulting Services References

The RFP specifically requests references for data service provision. If the Coalition desires references for our consulting services team led by PBS&J, we will be happy to provide them.

Technical Proposal

This section provides an overview of the team INRIX has assembled to serve the University and Coalition, the approach being proposed, how both the team and the approach address the Coalition's requirements, and how risk is sufficiently understood and managed.

This section is divided into four subsections:

- √ INRIX Team Overview
- √ Real-Time Traffic Data Approach and Requirements Satisfaction
- √ Consulting Services Approach and Requirements Satisfaction
- √ Risk Analysis

INRIX Team Overview



INRIX will serve as the Prime Contractor and provide traffic data for the project. INRIX (www.inrix.com) is the leading provider of accurate real-time, historical and predictive traffic information nationwide, providing partners and customers with the highest quality data and broadest coverage available for traveler information and operations applications. INRIX Traffic Services leverage sophisticated statistical analysis techniques, originally developed by Microsoft Research, to aggregate and enhance traffic-related information from hundreds of public and private sources, going well beyond the limitations of static road sensor networks, historical-based models and cellular data aggregators, to offer customers the most sophisticated understanding of the unique system-wide traffic patterns. INRIX, based in the Seattle area, was founded in July, 2004 and is a venture funded Delaware Corporation.

INRIX will be joined at the outset of the project by three firms offering enhanced source data options for the Coalition and its member agencies:



- ◆ **SpeedInfo** provides the most cost efficient and highly accurate sensor solution for measuring traffic flow in the country. The company's technology combines its wireless network design expertise with solar-powered Doppler radar. The autonomous speed sensors are attached to existing infrastructure such as light or sign poles, and real-time traffic flow data is then sent via the AT&T® Wireless network. SpeedInfo (www.speedinfo.com) creates, enhances, and then distributes the data providing an accurate-to-the-minute review of traffic congestion with a focus on flow rather than just incident detection. With nearly a thousand sensors installed and operational – including over one hundred in Coalition states – SpeedInfo sensors are currently in use improving information for traffic engineering, relieving traffic congestion and empowering drivers with real-time information in many

of America's largest metropolitan areas. Headquartered in San Jose, California, SpeedInfo is a venture funded small business enterprise. *This proposal makes available – as an option – SpeedInfo's sensor as a turnkey solution for a low per monthly fee per sensor, enabling the deployment of sensors in quantities and locations deemed desirable by the Coalition and/or its member agencies to expand source data in specific locations.*



- ◆ **Digital Traffic Systems, Inc. (DTS)** is an infrastructure services company that focuses on the specialized installation of sensor and display technologies to provide timely information for use in transportation, safety, security, enforcement and public applications. Formed in 1999 to provide traffic data solutions for the transportation industry, DTS (www.dtsits.com) has evolved into a comprehensive infrastructure services company with a full range of sensor and integrated technology solutions. DTS is currently responsible for the service, installation, maintenance and repair of more than 400 statewide traffic monitoring sites under contract to Virginia DOT (with nearly 100 sites having been upgraded by DTS to support real-time data transmission as well) and the installation, maintenance and repair of more than 350 statewide traffic telemetry systems under contract to Florida DOT. Headquartered in Albuquerque, New Mexico, DTS maintains operations in New Mexico, Virginia and Florida. Plans are in place for the company's selective expansion throughout the nation. *This proposal makes available DTS's expertise in converting or creating traffic count stations that can also generate real-time source data to be used in the project. DTS is offering the exact pay item prices, terms and conditions that currently govern its statewide traffic data services contract with VDOT to the Coalition and its member agencies, allowing – at Coalition/agency option – agencies the potential of establishing or converting sites to dual traffic counting and real-time usage.*



- ◆ **TruePosition** is the largest company solely dedicated to location-based technologies and services in the world. With more than 15 years of experience and unrivaled technical expertise, TruePosition works with operators on a global basis and provides technology and applications to over 270 million end-user devices. TruePosition has designed and installed, on a nationwide basis, wireless location systems (WLS) for AT&T and T-Mobile to meet the FCC's E911 mandate. These two WLSs possess the potential to provide much more location capacity than that required for E911. Thus, this excess capacity in over 75,000 base stations could be utilized to provide real-time traffic monitoring of large geographic areas to augment, and greatly enhance, current traffic monitoring equipment. TruePosition, headquartered in Pennsylvania, is a subsidiary of Liberty Media Corporation, whose businesses include some of the world's most recognized brands, including Discovery Channel, Animal Planet, DIRECTV, QVC, Starz, and IAC/InterActive Corp. *This proposal contains an option to conduct, in the pre-operational*

stage of the project, a small scale test in the Wilmington, Delaware area to assess the potential – technically and from a business perspective – to utilize infrastructure already existing nationwide within major wireless networks to increase source data in a cost-effective manner. While many wireless network approaches are being marketed, working with TruePosition gives INRIX and the Coalition a unique opportunity to leverage an existing infrastructure first via a low-cost trial.



PBS&J will serve as the lead consultant on the project. PBS&J (www.pbsj.com) is an employee-owned firm that provides infrastructure planning, engineering, environmental, construction management, architecture, and program management services to public and private clients, and is a national leader in travel information and data collection services and software program management. The firm is ranked by Engineering News-Record as 25th among the nation's top consulting firms. PBS&J has almost 3,900 employees located in more than 75 offices throughout the U.S., roughly half of which reside in the Coalition states. INRIX will turn over day-to-day management of the consulting services project elements to PBS&J.

INRIX and PBS&J have assembled a first rate team that collectively gives the Coalition and its member agencies several new experienced and capable options when considering a new task.



- ◆ **Open Roads Consulting (ORC)** is an innovative technology company specializing in software development and system integration solutions for the intelligent transportation systems and physical security communities. ORC (www.openroadsconsulting.com) develops Advanced Traffic Management System (ATMS) software for traffic 24x7 traffic management centers, data archive management systems and performs regional and statewide integration. ORC thrives on challenges, which is why it pioneered the ability for Virginia DOT to receive and ingest Virginia State Police computer aided dispatch data allowing it to be filtered and then distributed through the statewide 511 system, VDOT TOCs, local 911 centers and more. ORC, a woman-owned business enterprise (WBE) based in Chesapeake Virginia, is well versed in using all applicable industry and ITS Standards, including national ITS Architecture standards, such as IEEE 1512, TMDD and NTCIP, or cross-industry standards like CAP and EXDL, or Internet standards like FTP, AJAX and SOAP. *Open Roads Consulting offers the Coalition a variety of potential solutions through its extensive experience with alternative data feeds and communications formats, along with the expertise to fully integrate new data into existing ATMS software and ATIS systems. They also add to the considerable depth across the team in data archiving and decision support tools.*



- ◆ **EnterInfo** is a leading consulting and software development firm, and a MDOT registered Maryland-based minority business enterprise (MBE). EnterInfo (www.enterinfo.com) specializes in Internet-based

GIS implementations, website design, GUI development, GIS-T applications, database design and support, and systems integration and testing. As an innovator in its field, EnterInfo has a history of developing unique tools and solutions for public agencies to better serve the public. These key unique solutions include the USDOT Best Transportation Website (CHART), the award winning Maryland SHA Highway Management Information System, the first real-time web-based snowplow tracking system accessible by the public and the first statewide real-time crime reporting system (Delaware). *EnterInfo provides a wide-range of GIS, software development and system integration expertise and will provide ATMS and ATIS systems integration support, develop publicly accessible websites, and develop decision support tools for Coalition member agencies.*

Berkeley Transportation Systems

- ◆ **Berkeley Transportation Systems** is a national leader in performance monitoring for transportation agencies and the developer of PeMS (Performance Measurement System), which is used extensively by Caltrans to archive, analyze and monitor their traffic flow data and sensor performance. By applying a business intelligence approach, BTS (www.bt-systems.com) helps public agencies save time and money by leveraging existing ITS investments and automating transportation system monitoring, allowing agencies to make better and faster decisions about resource allocation and operational approaches. *BTS has extensive experience in wide-area data collection, archiving, reporting, and performance measures along with developing decision support tools that could be used by the Coalition member agencies to fully utilize the traffic flow data provided under this contract.*



- ◆ **Tele Atlas** delivers the digital maps and dynamic content that power some of the world’s most essential navigation and location-based services. Founded in 1984, the company provides maps covering 64 countries around the world and uses a sophisticated network of professional drivers, mobile mapping vans and more than 50,000 data resources to deliver highly accurate and up-to-date digital maps. Tele Atlas (www.teleatlas.com) has approximately 2,400 full-time staff and contract cartographers in offices across Europe, the U.S., Canada and Asia. Tele Atlas data helps 41 of the 50 states manage their critical infrastructure services, and the vast majority of public safety agencies using commercial data rely on Tele Atlas. *Tele Atlas staff provide half the support to the North American Location Code Alliance the implements TMC codes for North America, and it is this staff expertise that will be available to the Coalition to assist with road segmentation issues.*



- ◆ **Washington State Transportation Research Center – TRAC** is a joint endeavor between the Washington State Department of Transportation (WSDOT) and the state’s two largest research universities, the University of Washington (UW) and Washington State University (WSU). The results of TRAC’s research and applied science efforts and

collaborations are innovative solutions to pressing problems in transportation system design, construction, operations, and maintenance. In particular, TRAC – UW (<http://depts.washington.edu/trac/>), under the direction of Mark Hallenbeck, is known as a national leader in traffic congestion monitoring, travel time research, performance measures, and decision support tools. *Mr. Hallenbeck and his staff will lend their considerable expertise as an advisor to the Coalition on matters of data collection, its use, how it meets with FHWA and AASHTO recommended approaches and guidelines, as well as practical experience on the quality and value of various traffic data types in certain settings (i.e., arterial vs. freeway).*

INRIX Project Staff

Rick Schuman, Vice President: Lead project manager for this project, Rick lives in the Orlando, Florida area, has spent nearly 25 years living along all parts of the I-95 corridor, and in previous positions, consulted for several Coalition members in the areas of data collection and traveler information. Rick is responsible for public sector business development and sales at INRIX. Prior to joining INRIX, Rick was a Vice President at PBS&J, where he led the creation of the nation’s first consulting practice focused specifically on travel information, real-time transportation data collection and analysis.

Since this is a signature project, Rick will be supported by additional key INRIX executives and staff including these individuals:

- ◆ **Craig Chapman, Chief Technology Officer:** The co-founder of INRIX, Craig is an accomplished development engineer and architect with 30 years experience developing advanced software systems and managing teams of software and hardware engineers. Prior to INRIX, Craig was an executive at Microsoft serving as the Development Manager for the Automotive Business Unit.
- ◆ **Alex Meyer, Vice President of Operations:** Alex is responsible for all production operations, customer and partner support, and internal IT at INRIX. Alex has over 19 years experience establishing and managing technology and customer support organizations. Previously, Alex was a VP at AT&T Wireless where he managed all aspects of numerous functions encompassing acquisition integration, retail sales and supply chain systems, fraud and revenue assurance systems, and network usage delivery systems.
- ◆ **Kush Parikh, Vice President of Business Development:** Kush is responsible for business development and strategic partnerships at INRIX, including managing the source data portfolio. Kush has over 10 years of experience in the high tech sector, specifically in sales, product marketing, and business management in emerging markets. Kush most recently managed the Mobile TV Business Unit at Texas Instruments.

- ◆ **Oliver Downs, Principal Scientist:** Oliver brings ten years of experience in advanced Bayesian predictive modeling, machine learning algorithm design and is a pioneer in the field of quantum-inspired optimization algorithms. A graduate of Princeton University, and the University of Cambridge, UK, Oliver specializes in applying abstract analytical ideas from mathematical, physical and statistical science to problems in the real world. Prior to INRIX, Oliver consulted for various customers, including Microsoft Research, MSN, Barnes & Noble, and the Seattle Times.

Consulting Services Project Staff

Our consulting resources are primarily based in the Coalition states and have strong familiarity with the region, the Coalition and its member agencies.

Todd Kell, the team's consulting project manager, resides in Richmond, previously worked for Virginia DOT and served on and consulted for the Traveler Information Program Track of the Coalition. Importantly, Rick and Todd have worked closely together for several years and the Coalition can expect a well functioning team.

More information regarding the consulting services team is provided in the *Consulting Services Approach and Requirements Satisfaction* subsection later in this section.

Real-Time Traffic Data Approach and Requirements Satisfaction

This subsection presents our point-by-point response to the specific RFP requirements contained in the Real-Time Traffic Data Requirements table, as well as supplemental and background information on the INRIX Platform and detailed information germane to specific item numbers in the data requirements table.

To fully understand this response, in addition to the definitions contained in section 1.5 of the RFP, the following definitions are needed:

Source Data: Raw information such as probe vehicle data records or sensor data that is provided to INRIX as part of the INRIX Smart Dust Network.

INRIX Smart Dust Network: The collection of source data INRIX utilizes for processing via the Traffic Fusion Engine.

INRIX Traffic Fusion Engine: The platform utilizing sophisticated Bayesian modeling and proprietary error detection and correction to process the real-time, historical and predictive information aggregated by the INRIX Smart Dust Network.

Highlights and themes of the INRIX response include:

- √ This proposal meets or exceeds the mandatory requirements in the RFP.
- √ INRIX’s current/planned source data and fusion engine can cover all freeway baseline mileage in accordance with the requirements within 6 months of contract initiation. We currently provide real-time average speeds for 75% of the baseline system’s freeway mileage and over 80% of the core system’s freeway mileage as shown in the table below.

State	Current Inrix Coverage (Miles)	Required Coverage (Miles)	% Currently Covered
Core System	1244	1531	81.3%
New Jersey	460	473	97.3%
Pennsylvania	153	156	98.1%
Delaware	46	46	100.0%
Maryland (DC)	314	314	100.0%
Virginia	252	295	85.4%
North Carolina	19	247	7.7%
Baseline, not Core	1931	2654	72.8%
Maine	126	357	35.3%
New Hampshire	102	102	100.0%
Massachusetts	366	366	100.0%
Rhode Island	74	74	100.0%
Connecticut	401	416	96.4%
New York	264	264	100.0%
South Carolina	0	220	0.0%
Georgia	0	127	0.0%
Florida	598	728	82.1%
Total	3175	4185	75.9%

Note: Inrix coverage estimated based on maps, may not be precise; Required coverage reflects information included in RFP maps.

- √ INRIX will provide current speed, travel time, average speed, and the 85th percentile reference speed for each road segment (defined using industry standard TMC location codes) updated at least every 5 minutes with latency on average of 4.5 minutes.
- √ This proposal offers multiple, exclusive, approaches as options to allow Coalition member agencies to increase their ability to generate sensor data to increase source data available for use.
- √ To expedite quality data on arterials and alternate routes, we would like to establish an arterial/alternate route applied research and testing initiative as part of this project with the Coalition, and will make our data available at no cost for up to 1000 miles of arterial coverage for the three-year base operating period as our contribution to the initiative.
- √ INRIX accepts the data ownership and data licensing provisions of the RFP without exception and is willing to discuss liberalizing the usage conditions further as we believe strongly that our clients should have the ability to utilize our data to the maximum extent possible.

- √ After initial deployment is complete, INRIX will conduct a public RFI process in conjunction with the Coalition to seek proposals for additional methods of cost-effective source data generation.

The INRIX Platform Overview

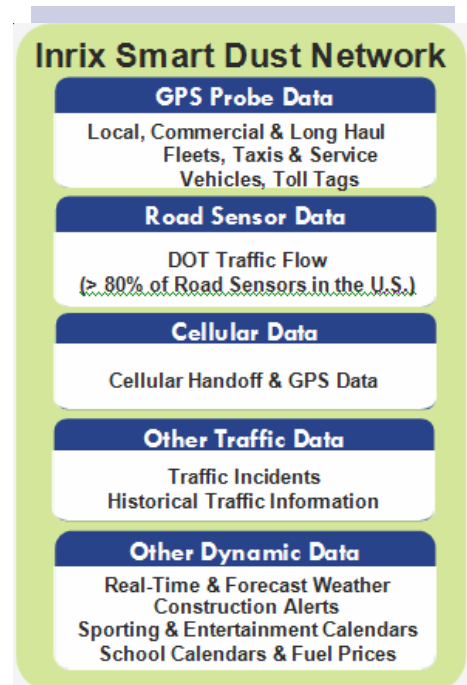
To understand how INRIX is positioned to deliver this project as envisioned by the Coalition, some background on the INRIX technology platform is useful prior to examining the Real-Time Traffic Data Requirements Table. There are three key elements to INRIX Real-Time data delivery:

INRIX Smart Dust Network

The INRIX Smart Dust Network is the first nationwide traffic solution to go beyond the limitations of road sensors and provide accurate real-time and predictive traffic speed information for major freeways, highways, arterials and side streets in every major metropolitan area in the U.S.

The INRIX Smart Dust Network represents a traffic technology breakthrough that dramatically improves the accuracy, quality and coverage of traffic information. INRIX acquires real-time and historical sensor data from hundreds of public and private sources including anonymous, real-time GPS probe data from more than 650,000 commercial fleet, delivery and taxi vehicles; toll tag data; and occupancy and speed measurements from Department of Transportation sensor networks. Additionally, the INRIX Smart Dust Network aggregates real-time incidents and hundreds of market-specific criteria that affect traffic – such as construction and road closures, sporting and entertainment events, school schedules and weather forecasts.

While some traffic solutions only offer highway-level coverage and are dependent upon extremely expensive and often unreliable road sensor networks for information, the INRIX Smart Dust Network provides high-quality real-time and predictive traffic



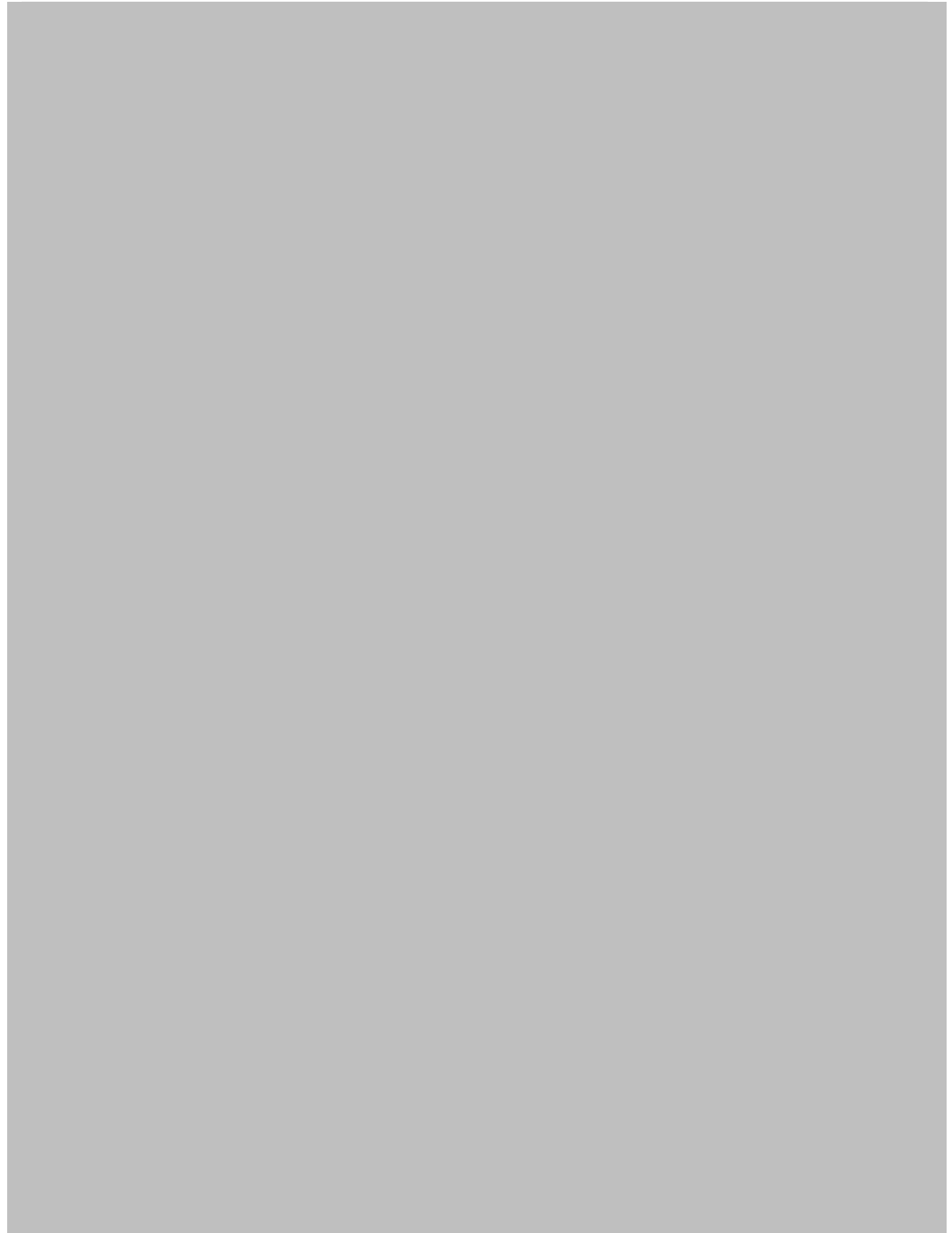
INRIX sources data from public and private physical sensor networks in 20 markets across the US, resulting in a total of 15,000 sensors providing real-time data on average every 5 minutes, and in some cases every 30 seconds.

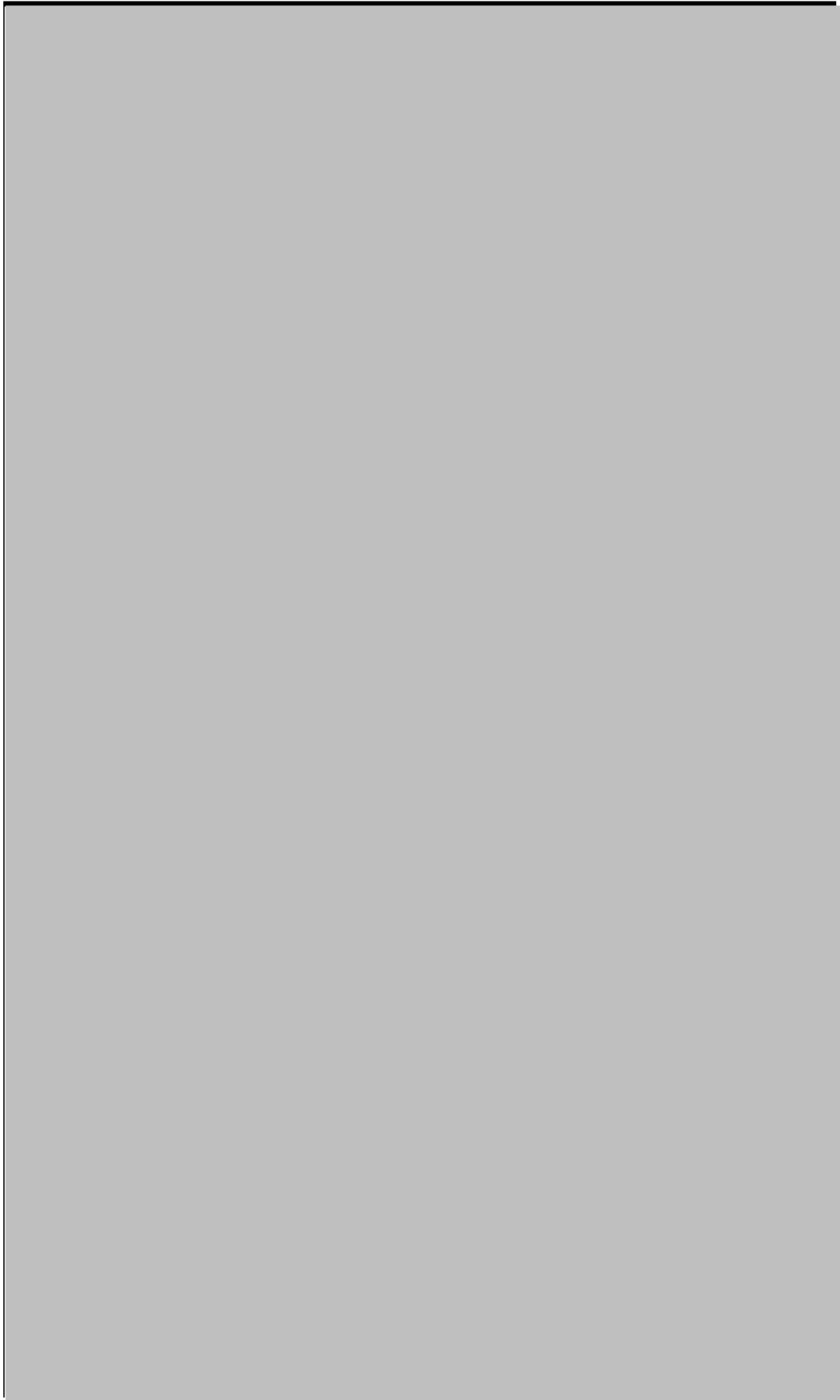
The physical sensor data is combined with data from INRIX’s network of more than 650,000 GPS-enabled probe vehicles, comprising a targeted portfolio of local service fleets,

information in cities and states where accurate traffic data was not previously available such as Miami, Las Vegas, New York, Tampa, San Antonio and Providence. Extensive recent ground-truth testing of the INRIX Smart Dust Network proved an 8–15% accuracy advantage over traditional embedded road sensors.

The INRIX Smart Dust Network comprises a multitude of distinct dynamic data sources, which INRIX is uniquely able to combine using its Traffic Fusion Engine, producing the most accurate real-time and predictive traffic data available.

INRIX Traffic Fusion Engine





INRIX Partner Portal

INRIX provides access to real-time data generated by the INRIX Traffic Fusion Engine to customers through the INRIX Partner Portal (partner.inrix.com). Access is controlled by username and password, with access rights defined by customer contract. The Portal also includes a document center containing information necessary to interpret the data feeds available through the Partner Portal.



Real-Time Traffic Data Requirements Table

The table on the following pages contains the traffic data requirements and INRIX's response to the requirements following the instructions set forth in the RFP. Where appropriate and necessary, additional supporting information is provided after the table, with references in the table indicating the location of the information.

Real-Time Traffic Data Requirements

Item	Description	Priority	Response Code	Respondent Comments
REAL-TIME TRAFFIC DATA REQUIREMENTS				
Data Elements				
1	Mean travel time and speed (units for travel time shall be seconds to the nearest whole second and the units for speed shall be miles per hour to the nearest integer)	M/E	E	Will provide mean travel time, speed, average travel time for given hour and day of the week, and [REDACTED] reference speed for each reporting segment; allowing for "fall back" data in periods of low flow and comparative calculations to be computed by Coalition/member agency applications.
2	Status flag to indicate normal operations, periods of low-traffic flow, inoperable status or unavailable data, etc. The categories for the status flag will be dependent on the type of technology used to generate traffic data. Vendor should specify flags appropriate to methodology.	M/E	F	Using XML schema, absence of real-time speed, travel time for a reporting segment will indicate low flow or unavailable data; overall market files will be time stamped to enable interfaced systems to determine when systemic file availability issues have arisen.
3	Quality indicator – provide a numerical score that reflects the confidence in the estimate of the mean travel time and speed. The intent is to provide a measure similar in concept to the standard error in the estimate of the mean. The method used to generate a numerical score for quality will be dependent on the type of technology and type of processing. Vendor should provide explanation of the quality metric.	D/E	F	INRIX currently does not include quality indicator as part of the data feed, but would include this at the request of the coalition. We could easily create a z-score for the specified confidence interval as part of the XML schema.
4	Other traffic data valuable for roadway operations. This may include but is not limited to such metrics as volume, occupancy, event data, and incident data.	D/E	P	Several additional flow related, incident and event related files are available for possible inclusion into the data service as described in the narrative.
Data Quality				
5	<p>Average Absolute Speed Error The absolute speed error is defined as the absolute value of the difference between the mean speed reported from the data service and the mean speed provided by validation procedures for a specified time period or polling interval. Given that monitored links will be of different lengths, quality requirements based on speed rather than travel time will normalize the effect of varying link lengths.</p> <p>Speed data shall have a maximum average absolute error of 10 MPH in each of the following speed ranges: 0-30 MPH, 30-45 MPH, 45-60 MPH and > 60 MPH.</p> <p><u>Calculation Method</u> Let: A_{ij} = Speed data for link i at time j from the data service. B_{ij} = Corresponding speed from the validation data Average absolute error = $\text{mean}(\text{abs}(A_{ij} - B_{ij}))$.</p> <p>Speed range is dependent on the validation data (B_{ij}).</p> <p>Example: A source of validation data exists for various routes and for various times interval within the I-95 corridor. Speed data from the validation data source will be grouped according to the speed ranges given above. All validation speed data points within the 0-30 MPH range will be compared with the respective speed data reported by the data service and a single average absolute error will be calculated for the 0-30 MPH speed range. Similarly, for each of the remaining speed ranges, a single average absolute error metric will be calculated based on the difference between the validation data in that range and the corresponding speed from the data service.</p>	M/E	F	INRIX has conducted dozens of its own ground truth drive tests utilizing root mean squared error as the primary metric to determine if a tested market (and specific road) is ready for operational release. Our techniques and tools allow us to stratify by time of day and road segment; at present we have not stratified our tests by speed ranges, though that is easily achievable. Our results by and large have met this level of accuracy requirement and we only expect our results to improve between now and mid 2008 with growth in source data quantity and continued improvements in our fusion engine. INRIX offers to process the ground truth drive test data using its established analysis tools to assist in testing if desired by the Coalition.
6	<p>Speed Error Bias Error bias is defined as the average speed error (not the absolute value) in each speed range. Speed data shall have a maximum average error of +/- 5 MPH in each of the following speed ranges: 0-30 MPH, 30-45 MPH, 45-60 MPH and > 60 MPH.</p> <p><u>Calculation Method</u> Let: A_{ij} = Speed data for link i at time j from the data service. B_{ij} = Corresponding speed from the validation data Average error = $\text{mean}(A_{ij} - B_{ij})$</p> <p>Speed range is dependent on the value B_{ij}. The calculation is similar to that of Average Absolute Speed Error, but without the absolute value operator.</p>	M/E	F	INRIX does not currently calculate error bias; this is primarily because in our data analysis of root mean square error, we have not seen a noticeable bias of results toward over or under-reporting of speed; we fully expect to meet the requirement as defined in the RFP.
7	Accuracy requirements will be in effect for vehicle flows exceeding 500 VPH.	M/C	Concur	INRIX understands that it will be evaluated only in conditions when more than 500 vehicles per hour are traveling in a given direction at a location.
Temporal Reporting				
8	Traffic data shall be provided 24 hours per day, 7 days per week. Allowance will be made for up to 40 hours of scheduled system maintenance per year during off-peak hours.	M/C	F	INRIX currently provides real-time data to customers 24x7.
9	Maximum data latency shall be less than or equal to eight (8) minutes.	M/E	F	[REDACTED] total current average data latency = 4.5 minutes.
10	Maximum data latency shall be less than or equal to five (5) minutes.	HD/E	P	[REDACTED]

Real-Time Traffic Data Requirements (2)

Item	Description	Priority	Response Code	Respondent Comments										
Spatial Reporting														
11	<p>Maps depicting the roadways within the corridor for which realtime traffic data are included in Section J. Offerors should use these maps as a basis for developing technical proposals. These maps represent a consensus vision of the network of roadways that define the corridor. Actual implementation will be done on a task order by task order basis in consultation with the respective road authorities. During implementation the selection of routes may differ from those depicted in the maps.</p> <p>Vendors should use roadway network depicted in the maps, referred to as the baseline system, as the basis of their technical proposals. Using the maps as a guide indicate the following:</p> <ul style="list-style-type: none"> Variations or limitations between the proposed coverage and that identified on the coverage maps. Any regions on the baseline system for which real-time traffic data cannot be provided. <p>Price proposals will be based on a subset of routes in the baseline system bounded by the geographic extents of North Carolina, Virginia, Maryland, Delaware, Pennsylvania, and New Jersey. This subset of routes, referred to as the core system, is the anticipated location for the initial three year project. For the core system provide the following:</p> <ul style="list-style-type: none"> Start-up costs, and subscription fees for three years of service. <p>[NOTE : The baseline system and core system are provided to assist in the development and evaluation of proposals. Actual roadways and system extents will be specified in task orders. As part of the price proposal, vendors must provide a cost model to be used as contract prices in developing task orders to acquire traffic data.]</p> <p>Route types for which traffic data is to be provided include:</p>	M/E	E	<p>INRIX is capable of providing data per the requirements defined in this table for all freeways defined in the baseline service. INRIX currently provides real-time speed data for over 80% of the 1500+ miles identified as core system freeways and over 75% of the 4000+ miles of the baseline system freeways (see map x-x). The balance of the freeway system defined in an initial task order would be completely covered when the initial operational period begins (it is likely that these roadways will be covered by INRIX by mid-2008 regardless of this procurement).</p> <p>Further, INRIX provides real-time data for over 10,000 centerline miles of roadway in the Corridor Coalition states (see map x-x); any/all of these facilities are available to the Coalition for inclusion in their coverage as desired.</p>										
12	I-95	M/C	F	Can fully cover - cover 1100+ miles currently.										
13	Other limited-access, multi-lane facilities such as other interstate highways, freeways, beltways, and by-passes	M/C	F	Can fully cover - currently cover roughly 2,000 of the 2,200 miles of the baseline systems non I-95 freeways.										
14	Arterials and state highways	HD	P	Can provide best data available for core system arterials (or equivalent size coverage) for free for the first three years - do not expect probe data of any kind to immediately meet data quality requirements herein. See text on page 3-x for further explanation.										
15	Ramps and interchange turning movements	D/E	P	North American Location Code Alliance expanding TMC location codes to freeway to freeway ramps in 2008-9; will enable analysis, then coverage would be possible where sufficient data exists.										
16	HOV and other lane specific modes	D/E	P	The INRIX architecture accommodates the provision of HOV/special lane information provision. Unclear when and where sufficient data density will be available to support. Inrix will examine once the initial coverage is up and running.										
Link Definitions:														
17	<p>Segmentation of the road network is the responsibility of the vendor and shall be performed in cooperation with the University. Link definition should be based on logical breaks in facilities where one would expect the potential for differing traffic conditions, such as at an interchange or major at-grade intersections. The following chart indicates the anticipated segment lengths for various road classifications.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Link length guidelines</th> </tr> </thead> <tbody> <tr> <td>URBAN</td> <td>1-3 miles</td> </tr> <tr> <td>RURAL</td> <td>3-10 miles</td> </tr> <tr> <td>FREEWAYS</td> <td>0.5-3 miles</td> </tr> <tr> <td>ARTERIALS</td> <td>2-5 miles</td> </tr> </tbody> </table>	Link length guidelines		URBAN	1-3 miles	RURAL	3-10 miles	FREEWAYS	0.5-3 miles	ARTERIALS	2-5 miles	I/C	F	INRIX utilizes TMC location codes developed and maintained by the North America Location Code Alliance; these codes identify interchanges and the segments between them for freeways and major intersections and the segments between them for arterials. All freeways in the baseline system are or will be covered by end of 2007; analysis is ongoing of identified arterials, coverage will be added as soon as possible if arterials selected by the Coalition for coverage do not yet have TMC codes. INRIX will provide translation tables to the Coalition to allow for integration of data into systems not using Tele Atlas or Navteq maps (which have built in support for the TMC code tables). See page 3-x for more detailed background information.
Link length guidelines														
URBAN	1-3 miles													
RURAL	3-10 miles													
FREEWAYS	0.5-3 miles													
ARTERIALS	2-5 miles													
18	Ramps and interchange turning movements (if provided) will be reported as separate links.	D/C	P	The INRIX architecture accommodates the provision of ramp level information. TMC codes available for grade separated lanes now; other HOV/special use lanes will be coded in 2008. See #15.										
19	HOV and other lane specific modes (if provided) will be reported as separate links.	D/C	P	TMC location codes currently support grade separated HOV/managed lanes. The North America Location Code Alliance plans to establish coverage for non-grade separated HOV/managed lanes by mid 2008. Segment lengths will be similar to parallel general purpose lane segments.										
20	Link definitions shall, at a minimum, contain beginning and ending latitude, longitude, heading, common name or route number, and a unique identifier. Use applicable TMDD standards or comparable open and published data standards.	M/E	E	TMC location tables contain all information listed, as well as cross street(s), city, county, state and other informational elements.										

Real-Time Traffic Data Requirements (3)

Item	Description	Priority	Response Code	Respondent Comments
Availability and Reliability				
	<p><u>Reliability:</u> Reliability refers to the ability of the system to produce traffic data estimates consistently for each link at all times. Data reliability is measured simply as the percentage of measurement intervals (combination of space and time) when traffic data estimates are delivered.</p> <p><u>Note:</u> Valid traffic data estimates occur only when sufficient base level data exists to support an estimate of the mean travel time or mean speed for a particular time period. Estimates based purely on imputation (for example, the historical average) are not considered a valid estimate in terms of the availability requirement. Periods of low flow (<500 VPH) are excluded.</p> <p>Traffic data shall be provided for at least 95% of all links at all required time reporting intervals (see Temporal Reporting requirements).</p>			A qualitative review suggests to us that for the baseline system for which we currently provide real-time coverage, during non-overnight hours, we have valid traffic data estimates at or near the 95% level as specified. Currently, data is often imputed for periods of low flow to enable applications using INRIX data to compute travel times (for the Coalition, this will be addressed by inclusion of an average and reference speed directly into the feed). Although in most cases, we do not have access to volume information and we cannot be certain, we assume the periods in which we created imputed values would nearly always fall into "periods of low flow" as defined by this RFP and not included in the 95% requirement. With INRIX data points increasing 8-10% each, we only expect our ability to meet this requirement to improve.
21		M/E	F	
22	<p><u>Availability:</u> Data subscription services shall maintain at least 99% availability, determined as percent uptime of the data service excluding any scheduled system maintenance. Scheduled maintenance shall be limited to 40 hours per year and only during non-peak hours.</p>	M/C	E	INRIX's overall operational availability systemwide (all files, all customers) through the first five months of 2007 was 99.90%, including scheduled maintenance.
Data Formatting, Packaging and Access				
23	Data shall be provided as XML-formatted content and made available through a web-based subscription service. The service will allow for appropriate access permissions to limit distribution only to authorized subscribers. The service shall allow for selective content subscription so that various states and road authorities may subscribe only to the geographic area of interest.	M/E	F	INRIX serves its customers through its Partner Portal precisely how this requirement is written, via passwords and access control.
24	Data shall be updated whenever the mean speed changes by 3 MPH or greater, the travel time changes by 5% or greater, or the status flag changes OR a full data set shall be supplied at least once every five (5) minutes. In either case the latency requirements of the data prevail (Items 9 & 10 under temporal reporting).	M/E	F/E	Current approach updates files available through our partner portal every 5 minutes; likely to evolve in the next 6-9 months to a web service model where the update rate for files can change to suit user needs; underlying data calculated every minute is the lowest update rate possible.
25	The format of the data will conform to applicable TMDD standards or other comparable open and published standards. Vendors should provide a precise description of the processes and timing associated with their provision of the data.	M/E	F	INRIX utilizes simple XML file structures to provide data based on a published interface and a documented open schema. See page 3-x for more details.
26	Hardware, software and network capacity shall be sufficient to initially support up to 40 concurrent data subscriptions, with the capability to scale to 200 data subscriptions as needed. It is the responsibility of the contractor to provide sufficient capacity to service all subscription demands.	M/E	F	INRIX has a First Class network infrastructure with hosting provided by a Tier 1 data provider. Our platforms have been built to scale quickly to meet rising capacity and bandwidth needs, and can support multiple thousands of data subscriptions and can scale to 100's of thousands if required.
27	Offerors shall provide an archiving service for all data provided to the Coalition.	M/E	F	INRIX currently archives all raw input data along with months of processed output traffic data. The infrastructure is set up to scale and will support as much archival data as the Coalition will require.
Website for Monitoring Traffic Data				
28	Offerors shall provide a web-based tool to view real-time traffic data by the Coalition and its members (not the general public). The monitoring service is for use only by the Coalition. The web site will be password protected.	M/E	E	Have two internally utilized options, one of which will serve as the basis for the web site, to be selected in consultation with the Coalition as to its preference. See page 3-x for details. Web site will the ability to view all roads in the areas in which INRIX is providing data to the Coalition, even if the Coalition is not paying for the data feed for those roads.
29	The website shall have the capacity to initially support up to 200 concurrent users with the ability to scale to 1000 concurrent users as needed.	M/C	F	INRIX has a First Class network infrastructure with hosting provided by a Tier 1 data provider. Our capacity and bandwidth can support multiple thousands of data subscriptions and can scale to 100's of thousands if required.
30	Data from the real-time traffic service can be viewed in real-time via the website.	M/C	F/E	Currently, INRIX has a partner portal through which all feeds are accessible and a real-time client that ingests that feed to show traffic conditions in 94 markets across the United States. This Client also can view additional data such as incidents, and in major metropolitan markets predictions, key routes and historical conditions (15 minute intervals) for an average of two weeks.
31	Archived traffic data can be accessed via the website.	M/C	F	In addition to the web client described in #30, INRIX will make a web based query tool available to the Coalition to facilitate the access to large amounts of data in a user-friendly manner.
32	Routes and data can be selected and viewed in an electronic map-based interface.	D/E	F	INRIX current web client enables specific subsegments of coverage to be viewed either by market or key route. This could easily be scaled to display whatever the Coalition's requirements are.

Real-Time Traffic Data Requirements Table — Supporting Information

Item 1: Mean Travel Time and Speed

INRIX has evolved and continues to evolve the data it provides to its customers. Over the next several months, INRIX plans to implement a “flexible feeds” approach to serving up our data to customers, in addition to our standard XML data feed approach. The Coalition will benefit from this platform enhancement as it will easily enable us to provide speed, travel time, average speed (based on the current hour and day of the week), and an overall 85th percentile speed based upon our terabytes of historical source data. This approach enables the Coalition to benefit from both our real-time services and the vast historical archive we have created. Below is an example of our current XML file for average speeds (note that color is provided to paint maps for customers who don’t wish to do their own calculations).



Item 4: Other Traffic Data

INRIX supplies several different types of feeds, including incidents, key routes and predictions. The figure associated with the INRIX Partner Portal description earlier in this section shows the types of “flow” data files we presently provide. The figure on the next page illustrates the types of incident data we make available (note that we provide these by time zones, so presently the entire I-95 corridor is contained in the “eastern” file). The table following it shows the status of the various types of current feeds we provide by metropolitan market.

Further, if the Coalition or a member agency taps DTS to assist in creating dual use traffic count stations, the raw data would likely include typical sensor data beyond speeds (volume, occupancy, etc.) and could be made available directly to the relevant agency along with providing additional source data for INRIX.

Inrix Product Discovery

Select a region to view incident data:

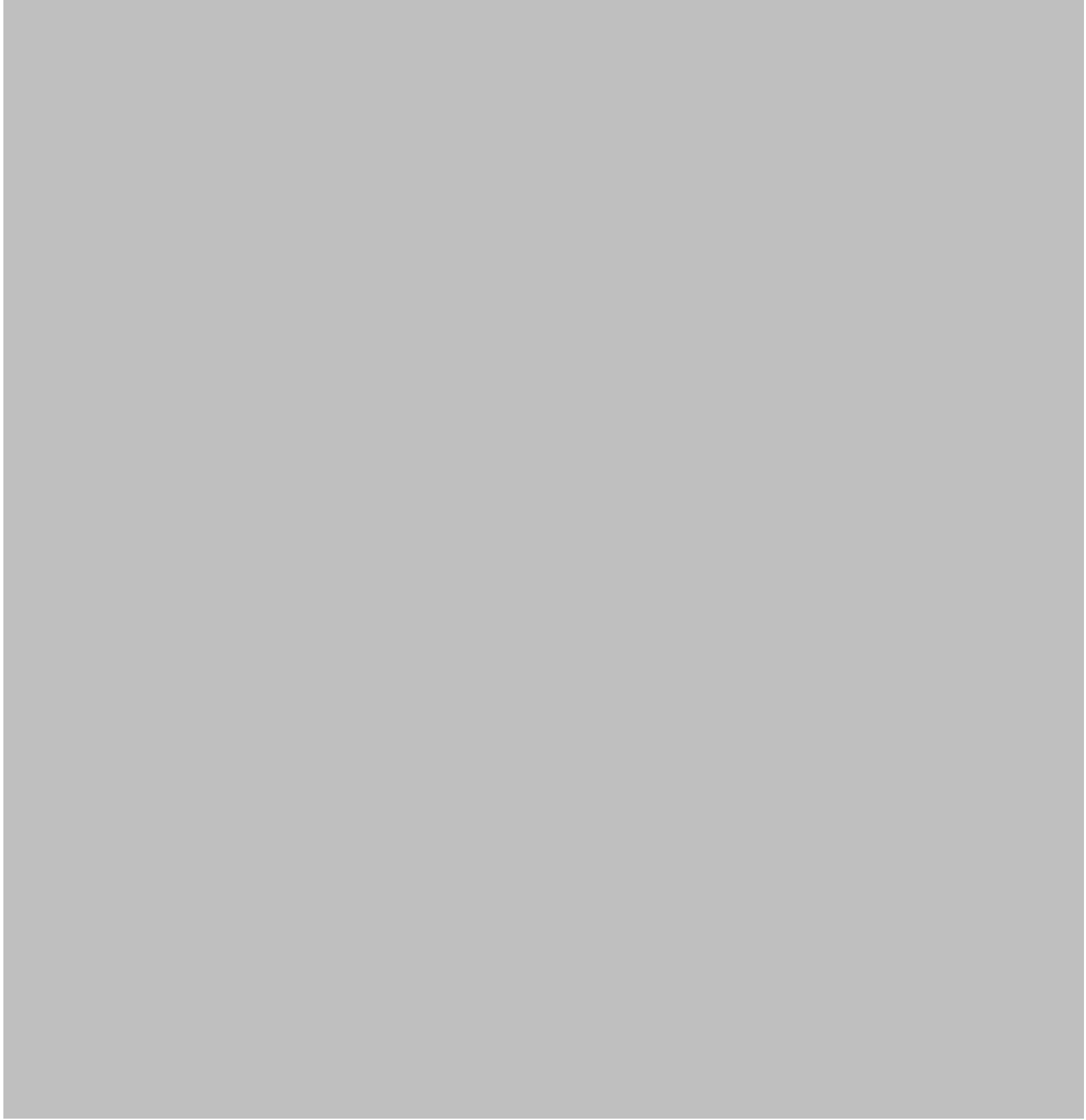
Traffic Flow Data

Regional Incident Data

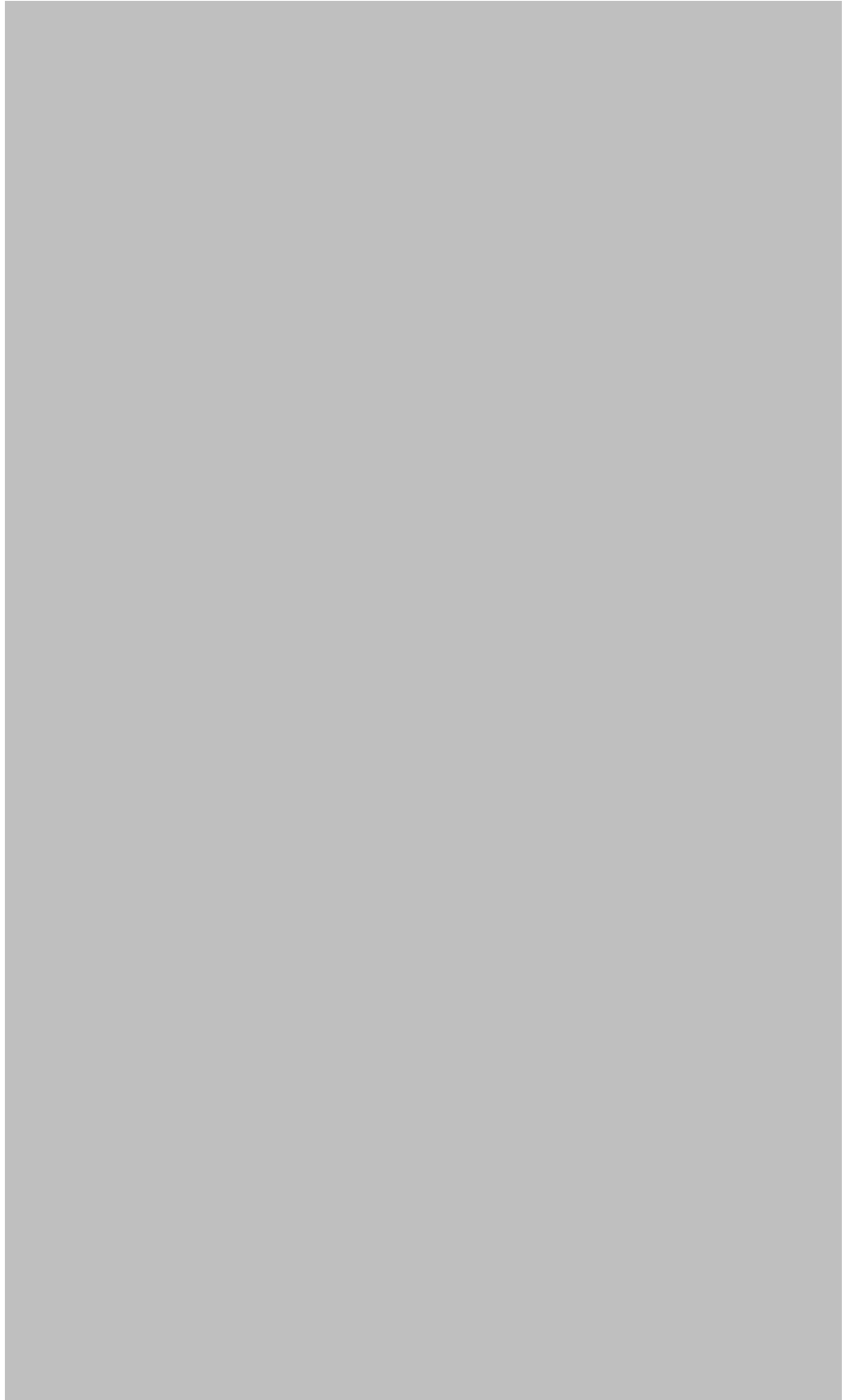
Fuel Prices



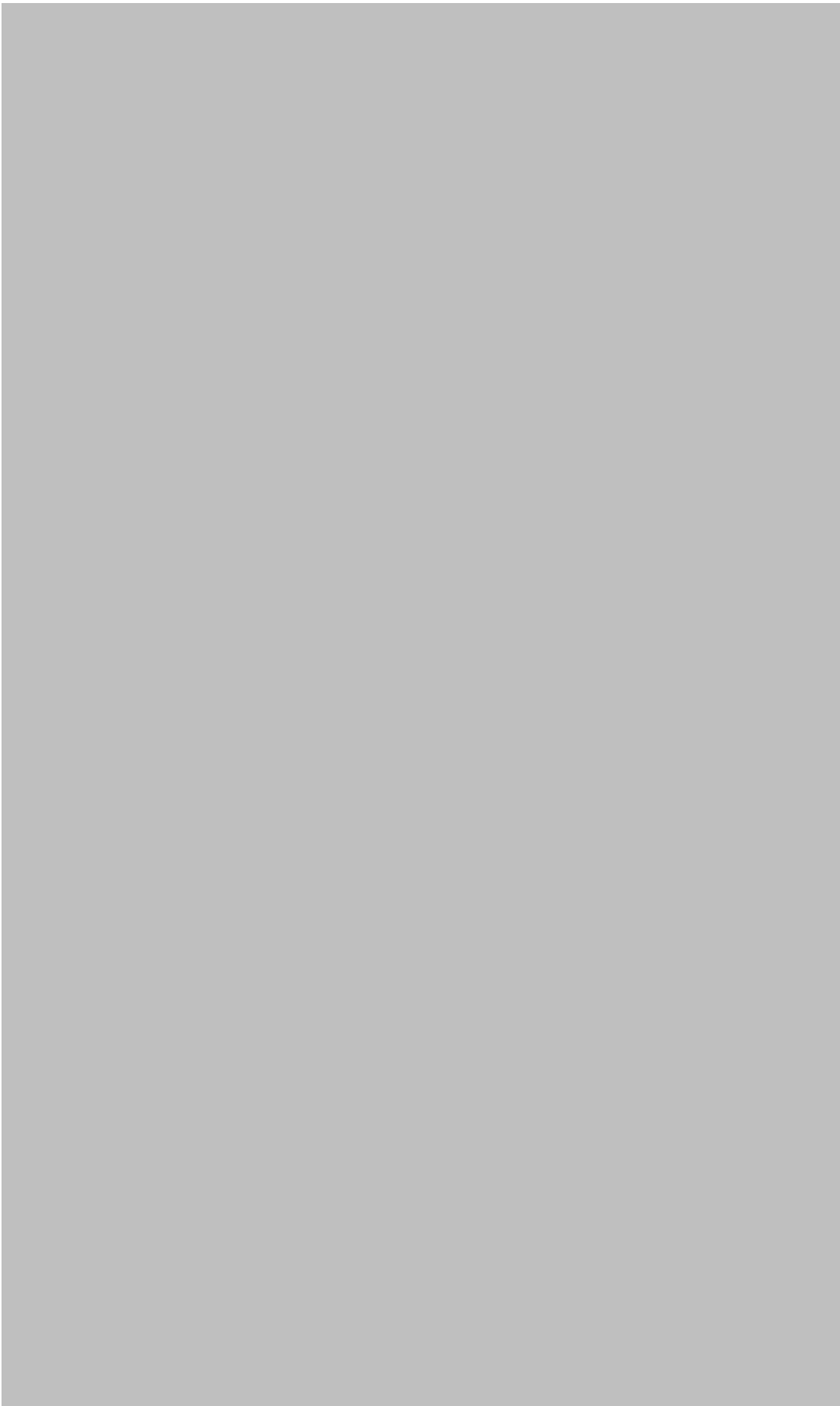
PARTNER PORTAL SUPPORT
For e-mail support, email support@inrix.com.
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Item 5: Data Quality





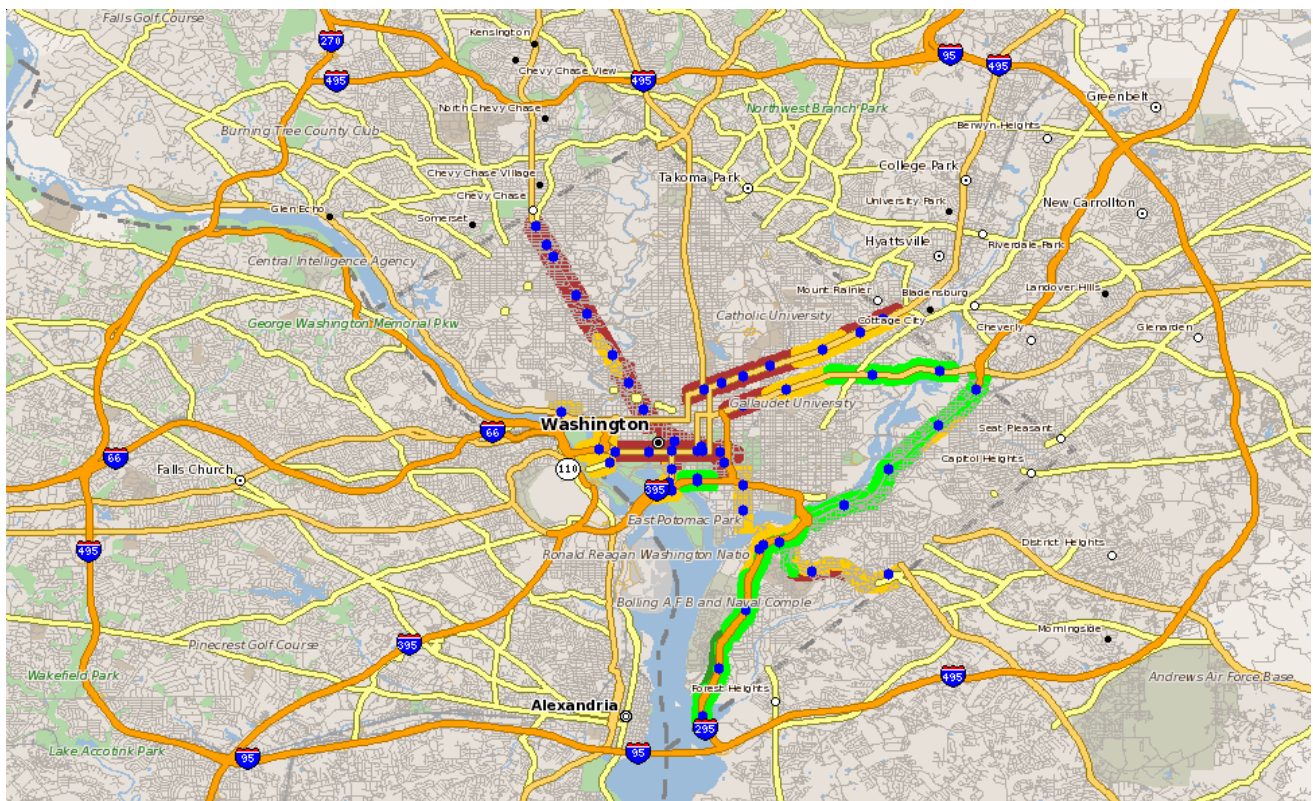


Enhanced Source Data Options

This proposal includes three innovative optional offerings to enhance source data via task orders. Two of these options provide cost-effective methods of expanding sensor based data collection along roads as desired. The third option offers a new innovative twist on the examination of cellular network data as source data. Each option is offered to the Coalition exclusively through the INRIX proposal and no mark-ups to the costs provided have been nor will be added by INRIX.

- ◆ **SpeedInfo's** DVSS-100 Doppler Vehicle Speed Sensor is a fully self contained, roadside mounted, vehicle speed measurement sensor. This non-intrusive, high performance speed sensor shatters existing sensor performance and cost points. In addition to low unit cost, the sensor is extremely robust and will perform maintenance free for years. The sensor is battery powered, solar charged, and mounts quickly on existing poles or overpasses. The DVSS-100 uses a 24.125 GHz Doppler microwave transceiver that is coupled to a Digital Signal Processor, to measure and calculate vehicle speed. The DVSS-100 is capable of determining average or composite vehicle speed for a multiple lane freeway or highway. Speed information is backhauled to SpeedInfo's data server over a GSM cellular data link.

Over 500 sensors are deployed and operational across the United States, and the number is growing rapidly. Over 100 of these sensors are deployed and providing data to I-95 Corridor member agencies DCDOT and NCDOT (see maps below).



http://www.ncdot.org/traffictravel/

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Traveler Information Management System

HOME CONTACT US SEARCH NCDOT NC-GOV Help | Login

Links

- 511
- About ITS
- Emergency Info
- FAQ
- Maps
- Public Service Announcements
- Tourism
- Ferry Info
- Train Info
- Travel Info for Other States
- Construction Progress Report

Triangle Region

Select by Region: Triangle Route: County:

Traffic Incidents Adverse Weather

I-95: MM 81; I-40
I-95 North Bound
 Average Speed: 65 MPH at 5:59 PM
I-95 South Bound
 Average Speed: 65 MPH at 5:59 PM

Highway: I-95
 From: 1. Exit 81, I-40
 To: 5. Exit 107, US 301, Kenly, NC

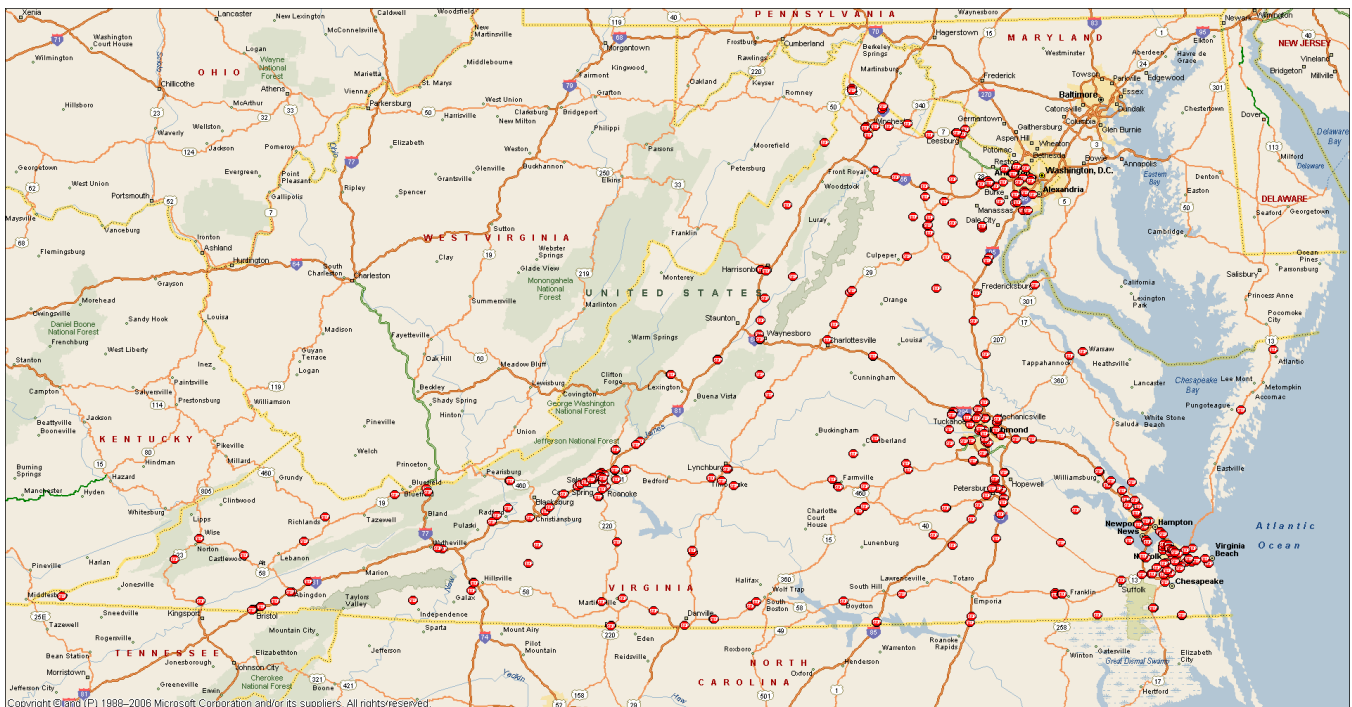
Average Travel Time:
 North Bound: 23 minutes (26 miles)
 South Bound: 24 minutes (26 miles)

Traffic Conditions:
 Draw Lines
 Show Traffic Sensors
 Show Traffic Cameras
 Clear: 55+ MPH
 Slow: 30+ MPH
 Congested: < 30 MPH
 Data Unavailable: [Black Box]

6/19/2007 6:00:23 PM

Through this proposal, INRIX is making SpeedInfo's data service exclusively available to the Coalition and its member agencies as an option under a monthly service fee per sensor under terms defined in Volume II of this proposal. This approach is structured such that any member agency during the life of the contract could choose to add any number of sensors to place at locations on existing poles of its choosing. SpeedInfo will install the sensors, typically within four months of notice to proceed, and operate and maintain the sensors for the period specified in the task order. The data will be provided to INRIX as source data and could also be provided directly to the funding agency via SpeedInfo's XML client. INRIX has already established an interface to ingest the data from SpeedInfo's XML server for any amount of sensors ultimately deployed.

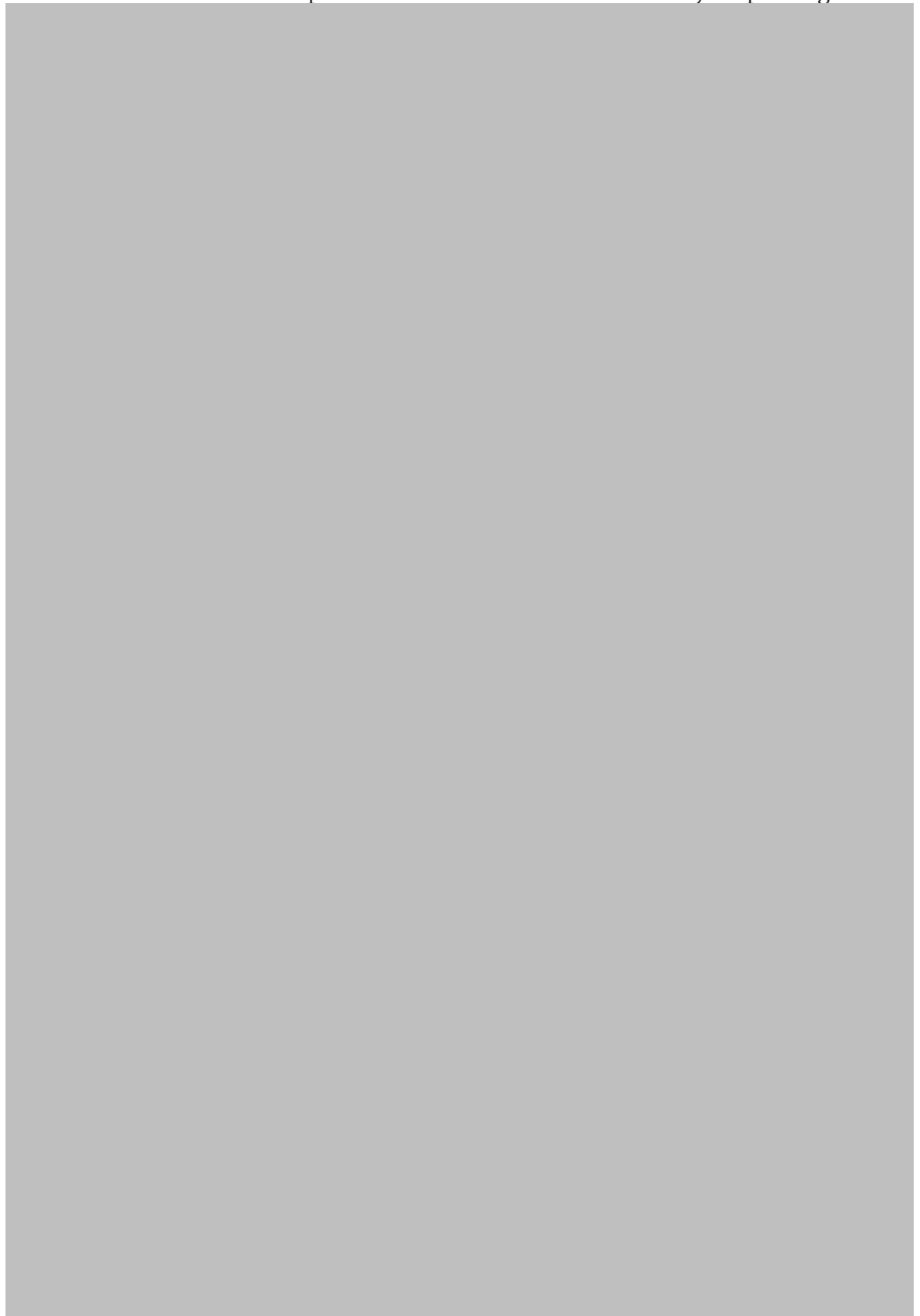
- ◆ **Digital Traffic Systems (DTS)** currently operates and maintains VDOT's and maintains FDOT's traffic count stations under long-term contracts. Further DTS has led the implementation in roughly 100 of VDOT's 400 count stations of dual use equipment (see map for count stations), allowing for the stations to continue to provide traffic count data but also to serve as real-time sensors for traffic operations functions. Through this proposal, INRIX is offering to all member agencies the ability to tap the resources of DTS for the same terms under which DTS is contracted by VDOT at present. This would allow any agency at their option to evolve any number of their traffic count stations – or even create stations from scratch – that can provide source data to INRIX and data directly to the agency.



This approach also leverages the significant investment in contracting that VDOT and DTS have expended to create a standard price this and makes available the leading resource as far as overall knowledge of traffic count station programs corridor wide to aid any agency considering moving in this direction. In fact, several scenarios based on DTS's knowledge, experience and pricing have been scoped and included in the financial proposal to illustrate the kinds of tasking agencies with various types of equipment may pursue.

Further, DTS has also demonstrated its ability to improve the quality of the provided data. Since DTS first began its contract for VDOT, data quality has improved from only 75% of sites yielding acceptable data to more than 95% of the sites generating acceptable data. Thus access to DTS could prove a win-win for both the operations and planning sections of an agency. With each member agency of the Coalition having dozens, if not hundreds of similar count stations in operation, this

option opens up yet another avenue to obtain more source data to increase the overall quality of data provided, particular in inter-urban areas where issues such as power and communications connectivity are pressing.





RFI(s) for New Data Sources

Like the Coalition, INRIX has an interest in continuing to expand and improve our source data. Upon completion of the initial operational capability in mid 2008, INRIX will initiate a public RFI process to broadly seek proposals for additional methods of source data generation. INRIX will work closely with the Coalition in this process to determine what, if any, sources merit further consideration and the appropriate approach to assess then ultimately incorporate data (e.g., INRIX invests, Coalition invests, combination, etc.). If successful, this process would be repeated going forward.

Item 11 — Roadway Coverage

A strength of INRIX's approach is that it is highly scaleable both in terms of data and coverage. Our approach to data allows us to gain access to data essentially across the U.S. when a source data contract is completed. Our platform is based upon commercial maps and designed for scalability so that we can easily expand the amount of roads we snap source data to while not impacting the operational performance of the service.

It is this combination of factors that has allowed us to cover 75% of the entire baseline freeway system as of today and allows us to propose covering any or all of those roads in the initial development of the service. The fold-out map on the next page illustrates in greater detail INRIX's current real time speed coverage.

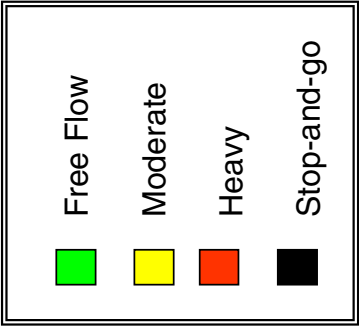
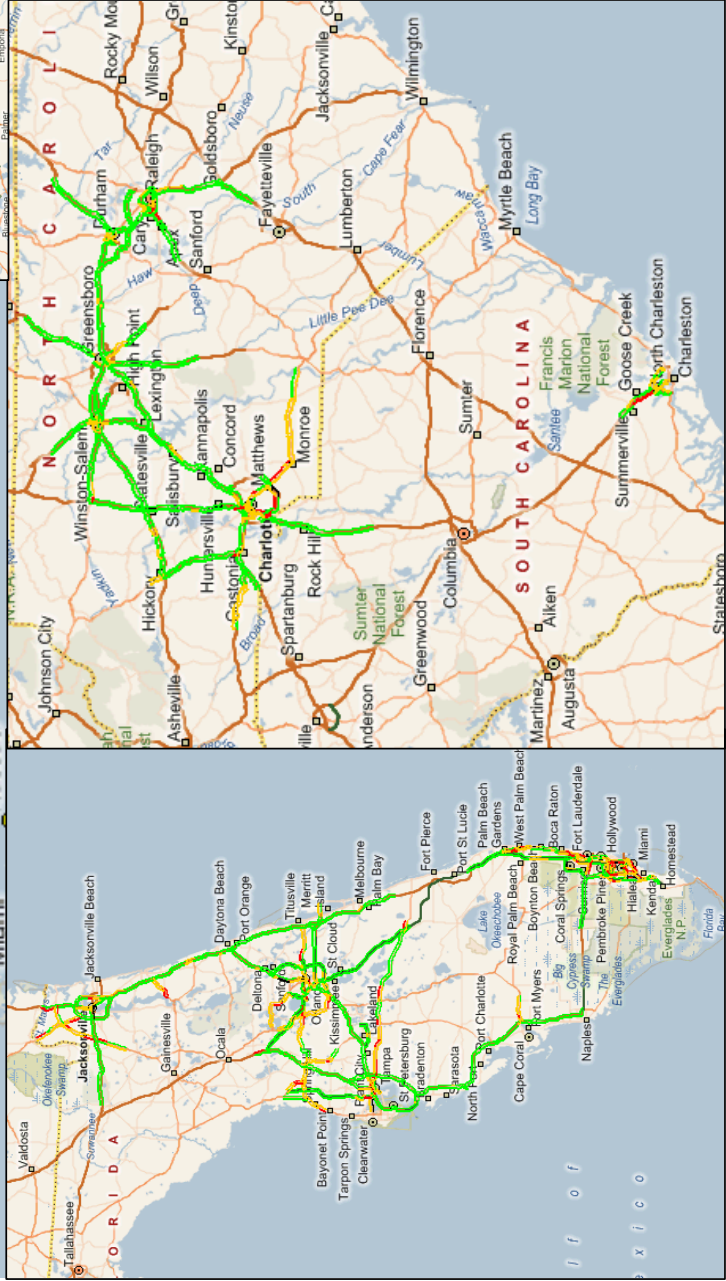
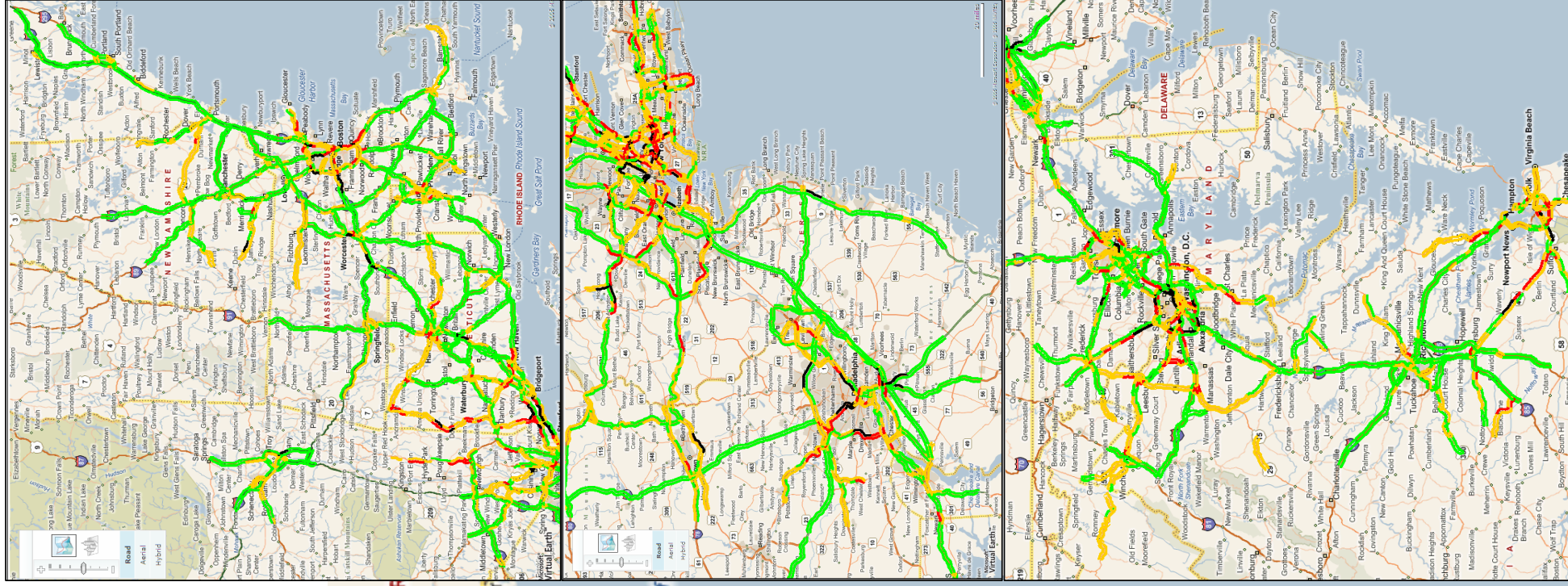
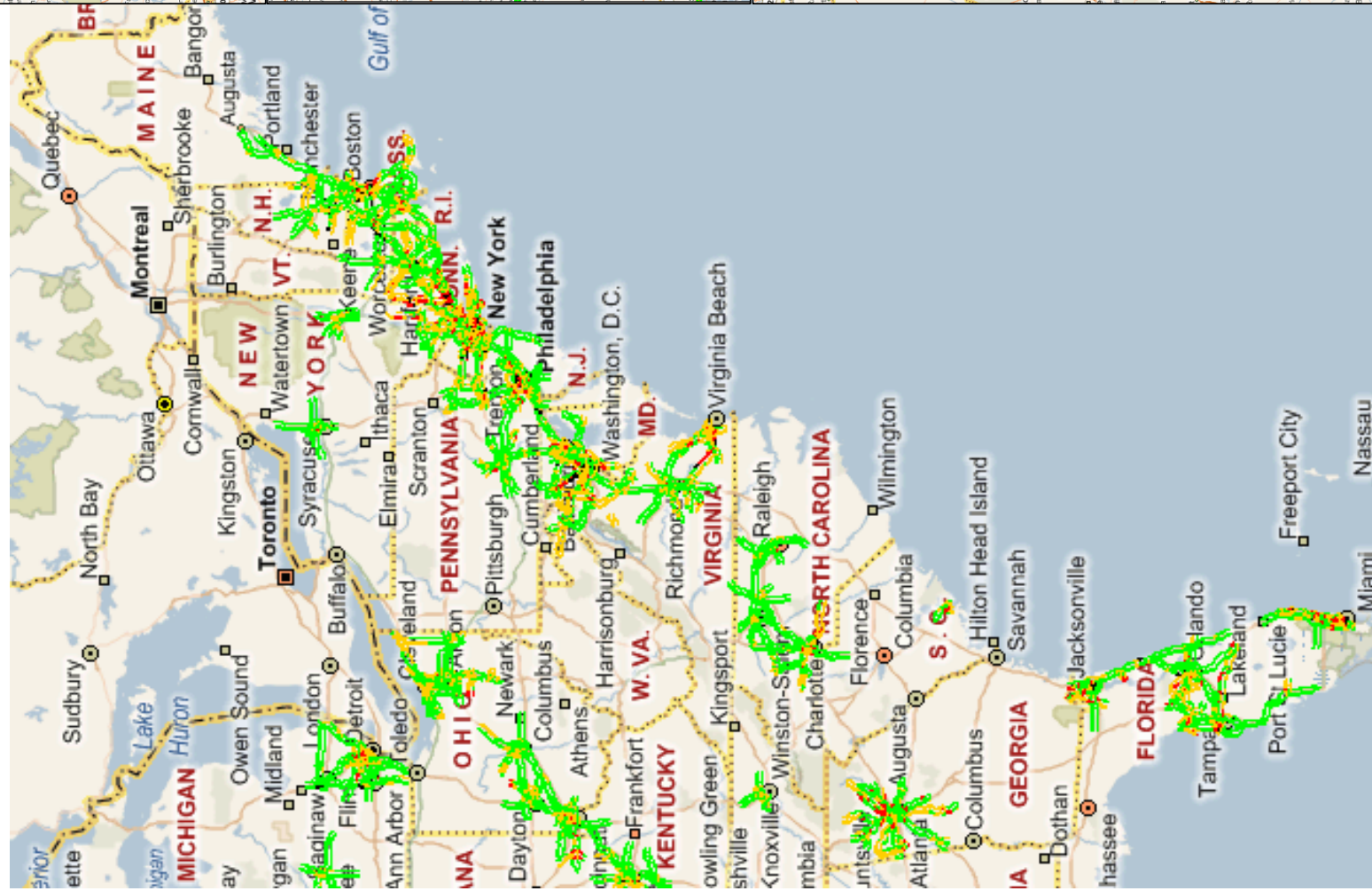
INRIX and Tele Atlas (a member of the North America Location Code Alliance) have performed an extensive review of the maps provided with the RFP both in terms of coverage and location code availability. For the core system, all identified freeways and arterials were researched. For the baseline system, the identified freeways were researched. Note that the distances might not match precisely between these spreadsheets (Core System Coverage Analysis on page 3-27 and Baseline System Coverage Analysis on page 3-28) and the mileage summaries on the maps.

Item 14 — Arterials and State Highways

INRIX has had perhaps the most experience with attempting to provide quality data, from probe-based sources, for arterials of any traffic data provider. Our current conclusion is that only in cases where substantial traffic flow and low signal density exists can reasonably reliable data be provided. Further, as explained in more detail in the risk analysis, INRIX does not believe that any single technology approach – including probe vehicle data – can yield reliable arterial data at the same quality levels as on freeways, certainly not in an operational environment across the corridor in early in the project. Since the RFP does not distinguish requirements based on arterial vs. freeway (rather based on flow rates), our proposal does not commit to meeting the defined quality levels for arterials coverage.

However, INRIX is as interested as the Coalition – as are most of our current customers – in calculating and delivering high quality data for arterials. Thus, we have proposed an approach to both help advance the start-of-the-art regarding arterial and alternate route data provision as well as give the Coalition

INRIX's Current Real Time Speed Coverage



Core System Coverage Analysis

State	Road	From	To	Mileage by Type (Est.)				Inrix Coverage Status	TMC Code Status	Notes	
				I-95	Beltways	Parallel Freeways	Parallel Arterials				Intersecting Freeways
New Jersey	I-95/New Jersey Turnpike	MP 0 - DE state line	MP 116	121				✓	✓		
	I-95/NJ Turnpike (Western Spur)	I-95/NJTP Eastern Spur	I-95/NJTP Eastern Spur	11				✓	✓		
	I-95 (Mercer County)	MP 0 - PA State Line	I-295	9				✓	✓		
	I-287/Route 440	NY State Line	NY State Line	65	7			✓	✓		
	Route 444/GS Parkway	I-95/NJTP	NY State Line		46			✓	✓		
	Route 9W/Palisades Pkwy	I-95	NY State Line		11			✓	✓		
	I-295	DE State line	I-95 (Mercer County)		68			✓	✓		
	I-80	MM 38	I-95		30			✓	✓		
	I-280	I-80	I-95/NJTP		18			✓	✓		
	I-78	MM 26	NY State Line		40			✓	✓		
	I-278	US 1	NY State Line		2			✓	✓		
	I-195	I-295	MM 11		11			✓	✓		
	I-276 (NJTP Extension)	PA State Line	NJTP		7			✓	✓		
	Route 90	PA State Line	Route 73		3			○	○		
	Route 42 (N-S Freeway)	PA State Line	Atlantic City Expwy		10			✓	✓		
	US 322	PA State Line	Route 555		22			⊗	⊗	Not limited access entire route (cover PA line to I-195 - approx 4 mi)	
	US 1	PA State Line	I-287		33			○	○		
	Route 73	Route 90	Route 544					○	○		
	New Jersey Totals				141	65	132	93	143	11	Inrix Coverage = 460 freeway miles out of 481
Pennsylvania	I-95	DE State line	NJ State Line	51				✓	✓		
	I-476	I-95	I-276		21			✓	✓		
	PA Turnpike/I-76/I-276	Route 100/Pottstown Pike	NJ State Line		47			✓	✓		
	I-76 (Schuylkill Expwy)	PA TPKE/I-276	NJ State Line		25			✓	✓		
	I-676 (Vine Street Expwy)	I-76	NJ State Line		7			✓	✓		
	US 322 (West of I-95)	US 1	I-95		7			○	○	Most of facility not limited access	
	US 322 (East of I-95)	I-95	NJ State Line		2			✓	✓		
	US 202	US 202	NJ State Line		50			⊗	⊗	Cover NJ line to Route 63 - approx 15 miles; not all limited access	
	Route 100 (Pottstown Pike)	US 202	I-76		26			○	○	Most of road is limited access (cover from 202byp to I-76; ~ 19 mi)	
	Route 63	US 1	PA TPKE/I-76		7			○	○	South of Route 30 mostly limited access	
	Route 30 (Exton Bypass)	Route 100/Pottstown Pike	US 202					✓	✓	Fully limited access	
	Pennsylvania Totals				51	0	21	83	88	5	Inrix Coverage = 153 freeway miles out of 160
Delaware	I-95	MD State Line	PA State Line	23				✓	✓		
	I-495	I-95/I-295	I-95		11			✓	✓		
	I-295	I-95	NJ State Line		6			✓	✓		
	Route 1	US 13	I-95			5		✓	✓		
	US 13/US40	MD State Line	11th St, Wilmington			18		○	○		
	US 301/Route 896	Bethel Church Road	Route 273 (Newark)					○	○		
	Delaware Totals				23	0	17	18	5	10	Inrix Coverage = 45 freeway miles out of 45
	Maryland/ District of Columbia	I-95	VA State line	DE State Line	109				✓	✓	
		I-695	Full	Full	52				✓	✓	
		I-495	VA State line	I-95		16			✓	✓	
		I-895	Full	Full		15			✓	✓	
		Route 295/I-295	I-95	I-95		39			✓	✓	
I-70		US 29	I-695			5		✓	✓		
I-195		US 29	Full			5		✓	✓		
Route 100		US 29	MD 10			18		✓	✓		
I-87		MD Bus 3	I-695			5		✓	✓		
Route 32		Burns Crossing Rd	MD 108			19		✓	✓		
Route 50		DC State Line	MD 197			12		✓	✓		
US 40		I-695	DE State Line			45		○	○		
US 1		I-495	I-695			21		○	○		
US 29		DC Line	I-70			25		⊗	⊗	Cover from I-70 to MD 32 (9 miles)	
US 279		US 40	DE State Line					○	○		
Route 22		MD 156	Aberdeen Proving Ground					○	○		
Route 24		Trimble Rd, Edgewood	MD 22			8		○	○		
Route 150		Presidents St, Baltimore	Middle River			12		○	○		
Route 175		US 29	US 1			5		○	○		
Route 198		MD 650	Route 32			14		○	○		
Route 214		I-295	MD 193					○	○		
Route 4		I-295	Ritchie Marlboro Rd					○	○		
Maryland/DC Totals				109	68	54	91	64	72	Inrix Coverage = 295 freeway miles out of 295	
Virginia		I-95	NC State Line	MD State Line	172				⊗	⊗	Cover all but MM 0 to MM 17
	I-495	I-95	MD State Line		14			✓	✓		
	I-295	I-64	DC Line		53			⊗	⊗	Real-time coverage gap to be filled in late 2007	
	I-395	I-95	MM 205			10		✓	✓		
	I-64	MM 173	Full			32		✓	✓		
	I-895	Full	Full			8		○	○		
	US 1	I-95 (MM 81)	DC Line			95		○	○		
	US 301	NC State Line	I-95 (MM 45)			45		⊗	⊗		
	Route 234	VA 640	US 1					○	○		
	US 17	VA 616; US 1	I-95; Bus US 17					○	○		
	Bus US 17	VA 3	US 17					○	○	Two sections; NW and SE of F'burg	
	Route 3	Gordon Rd	Forest Lane Rd			5		○	○		
	Route 207	US 1	Panola Rd			9		○	○		
	Route 30	US 1	US 301			6		○	○		
	Route 54	US 1	US 301			6		○	○		
	Route 10	Route 106	Route 150			24		○	○		
	US 360	VA 150	Pole Green Rd			19		⊗	⊗		
	Route 144	I-95	I-295					○	○		
	US 58	TBD	Airport					○	○	Need TMC expansion east of I-95	
Virginia Totals				172	67	0	140	50	106	Inrix Coverage = 252 freeway miles out of 289	
North Carolina	I-95	SC State Line	VA State Line	187				⊗	⊗	Cover MM 65 to MM 81	
	US 64	Route 1003	Bus/Alt US 64			11		○	○		
	US 264	Route 581	Route 111/222			24		○	○		
	I-40	Route 242 (MM 325)	Route 96 (MM 334)			9		⊗	⊗	Cover MM 325 to MM 328	
	I-295	US 401	I-95			7		○	○	Full TMC coverage Fall 2007	
	Route 87	South of I-95	Bus 401			9		○	○		
	US 301	SC State Line	VA State Line			187		○	○	Part of it is I-95 (Between MM 10 and MM 22)	
	Route 48	Route 903	US 301			10		○	○		
	Route 46	Route 48	US 301			6		○	○		
	US 158	Route 48	US 301			5		○	○		
	Route 903	Route 48	US 301			10		○	○		
	Route 481	Route 4	US 301			9		○	○		
	Route 33	Route 4	US 301			5		○	○		
	Route 48	I-95 (@ MM 145)	Route 4 (@ MM 145)			4		○	○		
	US 70	Bus US 70	Alt US 70			7		○	○		
	Bus US 70 (or Bypass?)	US 70	US 70			10		○	○		
	US 421	US 301	I-95			1		○	○		
	Route 24	Fort Bragg	I-95			10		○	○		
	Route 59	I-95	US 401			8		○	○		
Route 20	I-95	US 301			1		○	○			
Route 130	US 301	I-95					○	○			
North Carolina Totals				187	0	0	187	60	97	Inrix Coverage = 19 freeway miles out of 247	

Note: Mileage numbers may not match exactly the maps provided - best efforts we used to create this table, but the maps were occasionally ambiguous

✓ = Complete Inrix real-time coverage; complete TMC code coverage
 ⊗ = Partial Inrix real-time coverage; Partial TMC code coverage
 ○ = No Inrix real-time coverage; No TMC code coverage

Baseline System Coverage Analysis

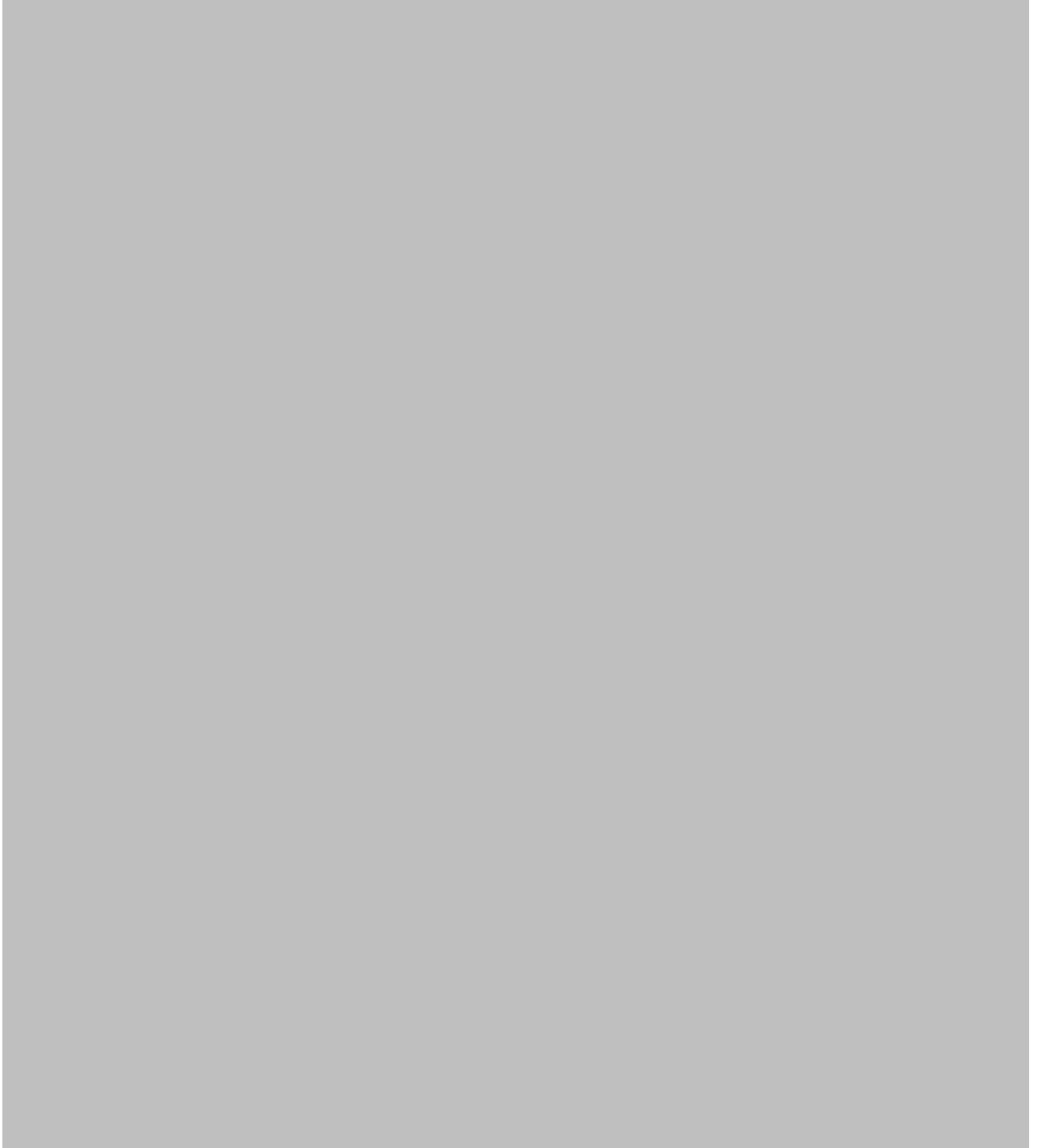


State	Road	Mileage by Type (Est.)				Inrix Coverage Status	TMC Coverage Status	Notes	
		Beltways	Parallel Freeways	Intersecting Freeways					
Maine	I-95	303				⊙	✓	Cover MM 0 to MM 90 approx (and Falmouth spur - 5M) - 95 total	
	I-295		52			⊙	✓	Cover MM 0 to MM 31	
	I-195			2		○	✓		
Maine Totals		303	0	52	2			Inrix Coverage = 126 freeway miles out of 357	
New Hampshire	I-95	16				✓	✓		
	I-93		22			✓	✓		
	Route 101		33			✓	✓		
New Hampshire	Route 3		20			✓	✓		
	I-293			11		✓	✓		
	New Hampshire Totals	16	0	75	11			Inrix Coverage = 102 freeway miles out of 102	
Massachusetts	I-95	88				✓	✓		
	I-495		88			✓	✓		
	Route 3		20			✓	✓		
	I-290		19			✓	✓		
	I-190		19			✓	✓		
	I-395		12			✓	✓		
	I-90		59			✓	✓		
	I-84		8			✓	✓		
	I-93			46		✓	✓		
	I-295		4			✓	✓		
Route 213				3	✓	✓			
Massachusetts Totals		88	92	137	49			Inrix Coverage = 366 freeway miles out of 366	
Rhode Island	I-95	44				✓	✓		
	I-295		23			✓	✓		
	Route 10		5			✓	✓		
Rhode Island	Route 37			2		✓	✓		
	Rhode Island Totals	44	23	5	2			Inrix Coverage = 74 freeway miles out of 74	
	I-95	111				✓	✓		
Connecticut	I-395		55			✓	✓		
	I-84		98			✓	✓		
	I-91		38			✓	✓		
	Route 9			12		✓	✓		
	Route 15		83			⊙	✓	All but 15 miles (arterial cross section south of Hartford) covered	
	I-691			9		✓	✓		
	US 72			8		✓	✓		
	Route 6			5		✓	✓		
	Connecticut Totals		111	0	274	34			Inrix Coverage = 401 freeway miles out of 416
	New York	I-95	24				✓	✓	
I-84			35			✓	✓		
I-87			68			✓	✓		
I-287			11			✓	✓		
Garden State Pkwy			2			✓	✓		
Palisades Pkwy			8			✓	✓		
I-684			28			✓	✓		
Hutchison Pkwy			19			✓	✓		
I-295			9			✓	✓		
I-678			14			✓	✓		
New York	I-278		34			✓	✓		
	I-495		11			✓	✓		
	Belt Pkwy		16			✓	✓		
	New York Totals		24	0	255	0			Inrix Coverage = 264 freeway miles out of 264
	I-95	198				○	✓		
	I-20			8		○	✓		
	I-26			14		○	✓		
	South Carolina Totals		198	0	0	22			Inrix Coverage = 0 freeway miles out of 220
	I-95	112				○	✓		
	I-16				15	○	✓		
Georgia Totals		112	0	0	15			Inrix Coverage = 0 freeway miles out of 127 Cover all but MM 88 to MM 160	
Florida	I-95	383				⊙	✓		
	I-10					✓	✓		
	I-295		35			✓	✓		
	Route 9A		25			✓	✓		
	Route 10			8		○	✓		
	Route 202			12		○	✓		
	Route 528			15		✓	✓		
	FL Turnpike		109			⊙	✓	All but MM 116 to MM 152	
	Sawgrass (869)		23			✓	✓		
	I-75			22		✓	✓		
Florida	I-595			13		✓	✓		
	HEFT (821)		48			✓	✓		
	Palmetto (826)		24			✓	✓		
	Dolphin (836)			16		✓	✓		
	FL 924			8		✓	✓		
	FL 874			6		✓	✓		
	I-195			3		○	✓		
	Florida Totals		383	60	210	97			Inrix Coverage = 598 freeway miles out of 728

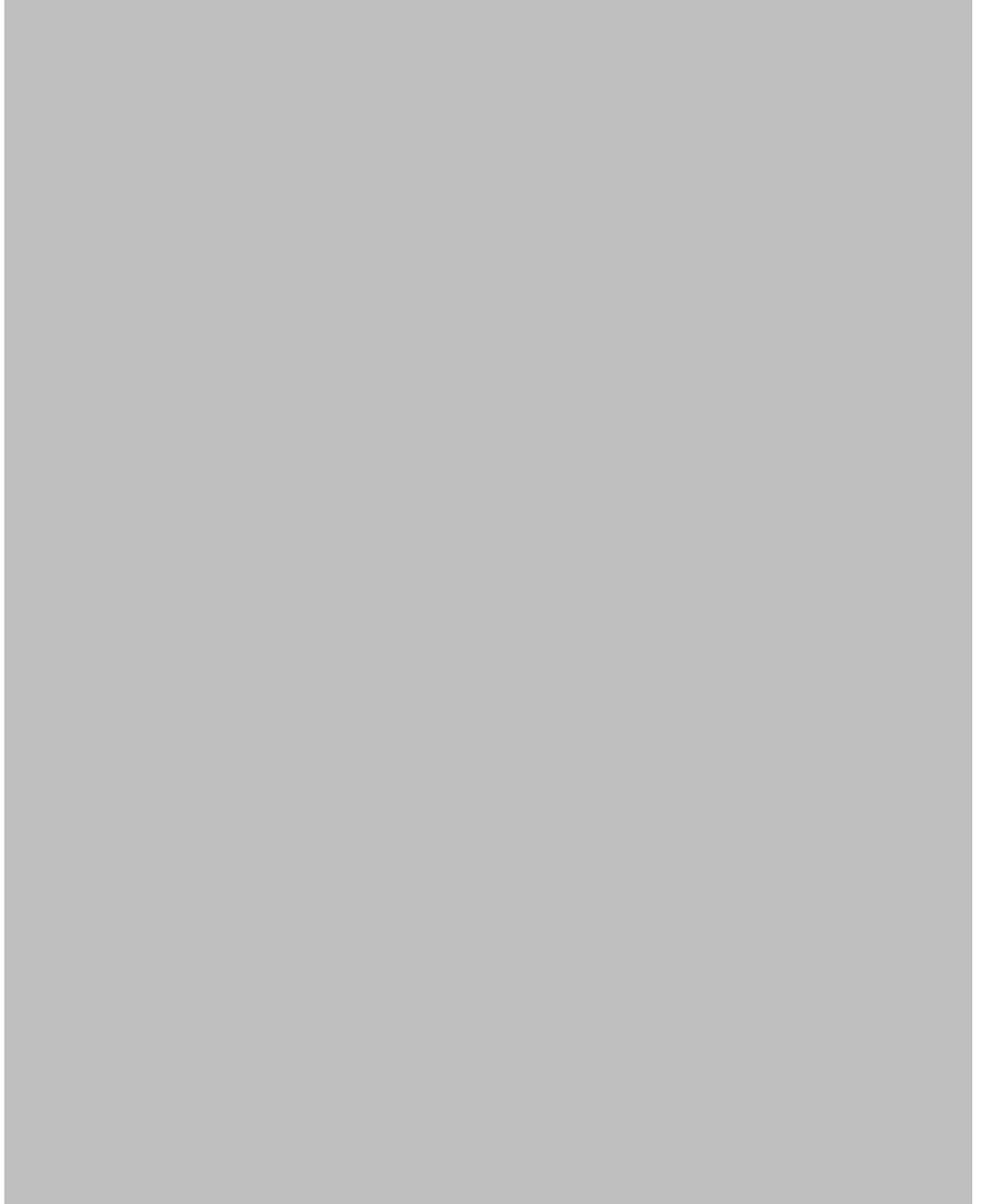
✓ = Complete Inrix real-time coverage; complete TMC code coverage
 ⊙ = Partial Inrix real-time coverage; Partial TMC code coverage
 ○ = No Inrix real-time coverage; No TMC code coverage

and INRIX the opportunity to build from today towards the desired future. As such, we propose to work with the Coalition to establish an arterial/alternate route applied research and testing initiative as part of this project with the Coalition. To show our commitment to this initiative, we will make data available in our feed, in the format described in item 1, on the arterials defined in the core system (or some equivalent system up to 1000 miles in coverage) for the three-year base operating period as our contribution to the initiative.

Item 17 – Link Segments

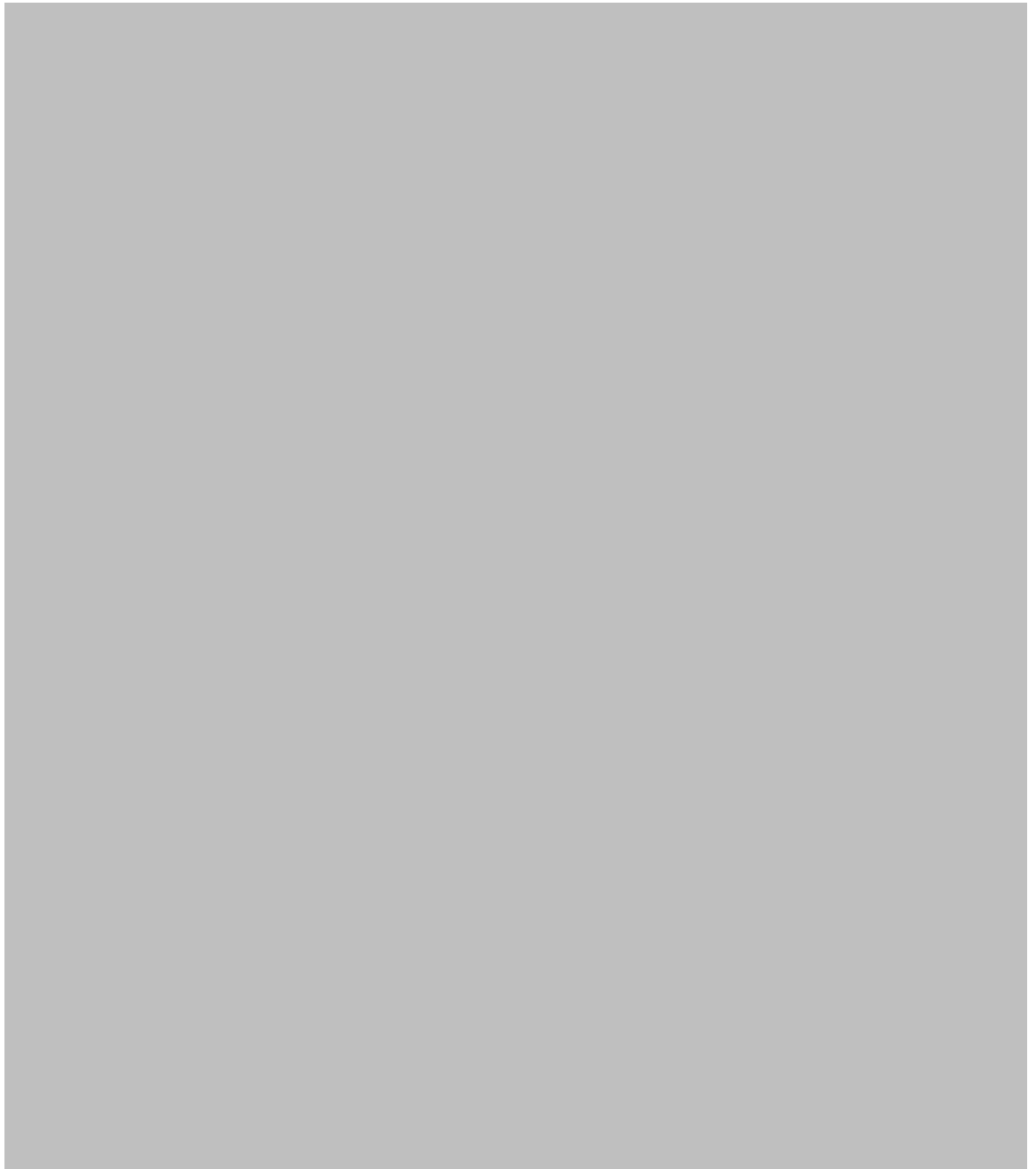


Item 20 – Link Segment Definition



Item 22 – Availability





Item 28 – Website

INRIX will utilize one or both of two options as the basis for meeting the web site requirements of the RFP. One approach is based upon an expansion of the site that has been used to illustrate our flow data coverage throughout the proposal. The other option is a web client we currently utilize internally to QC data, to demonstrate our data and possible applications and the Clear Channel’s Total Traffic Network’s field offices utilize to compare flow data and incident reports.

The following screen captures illustrate some of the features of the current web client.

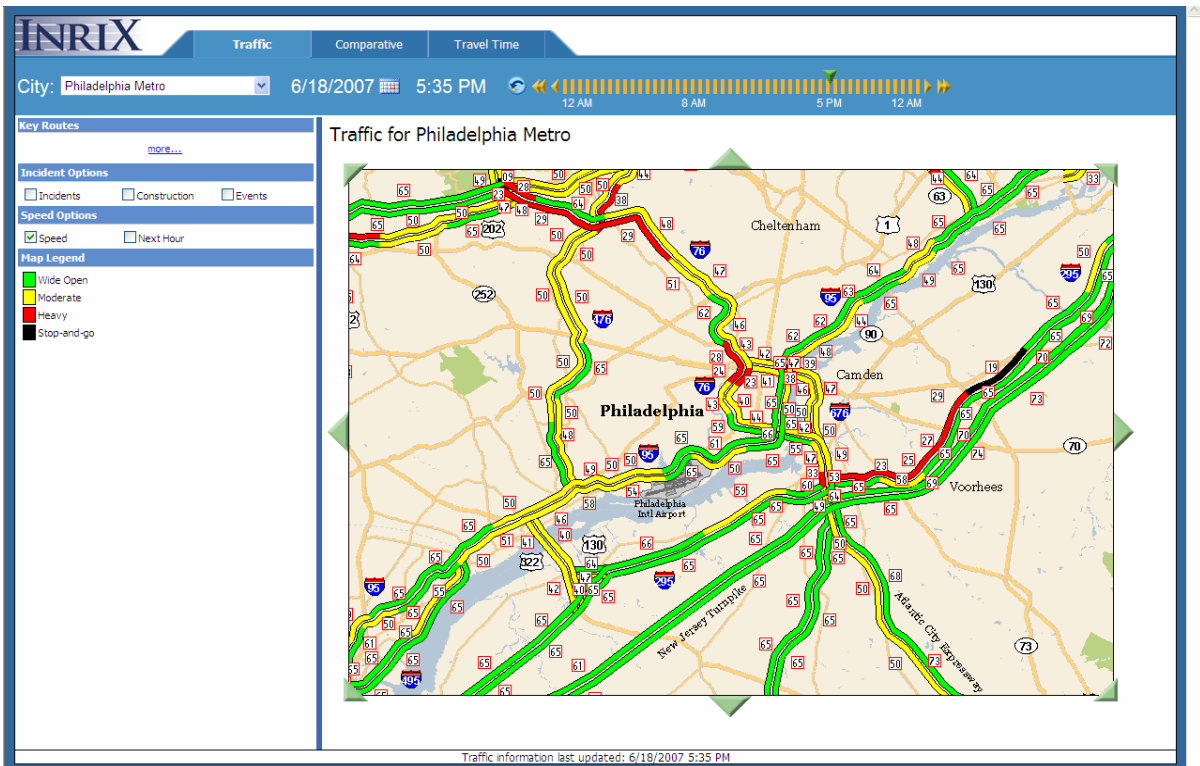
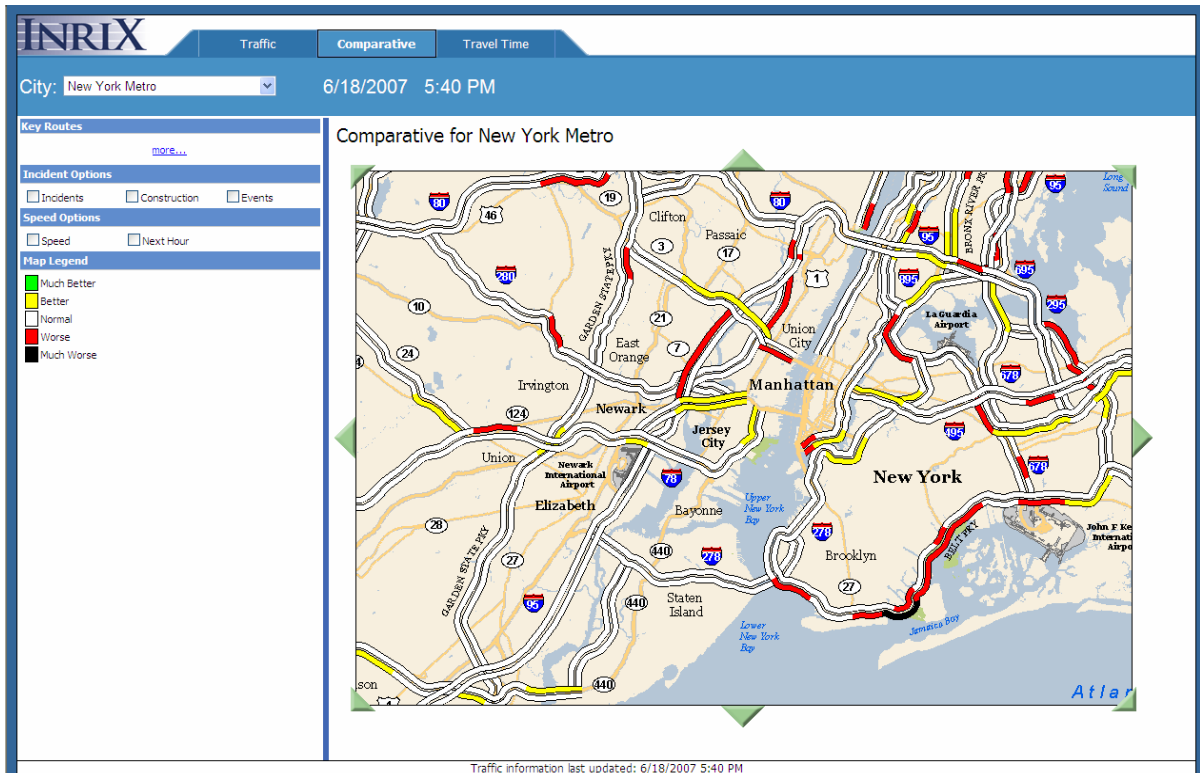


Image 1 – Current flow data. Notice the reported speed can toggle on or off.

Image 2 – Comparative with expected conditions. Speed toggle shows +/- speed change versus expected conditions.



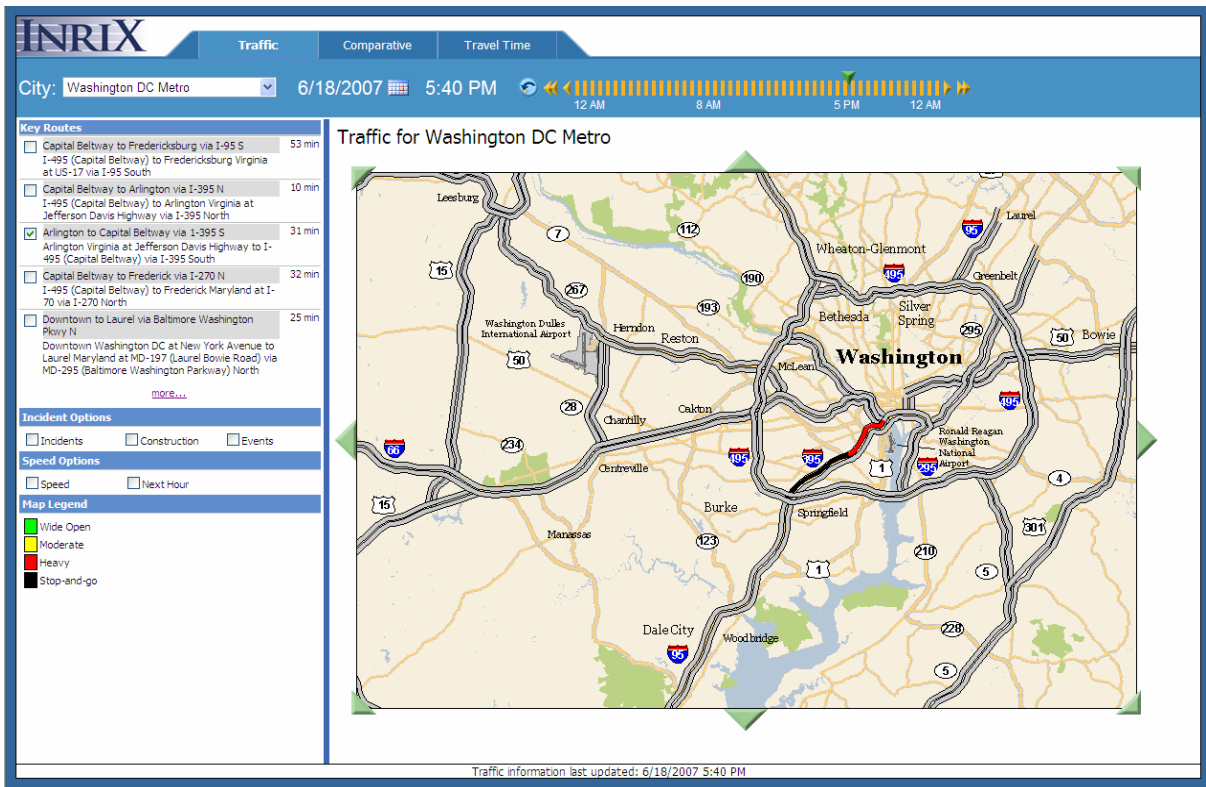


Image 3 – Key Route travel times. Note the route selected to the left.





Consulting Services Approach and Requirements Satisfaction

As mentioned previously in this document, PBS&J will serve as the lead consultant on the project and will manage the day-to-day tasks that may develop over the life of the contract. The PBS&J-led team of consultants was assembled to provide fresh resources, new ideas and capabilities to the Coalition, while also bringing a deep knowledge of, and experience with, some of the Coalition's member agencies.

PBS&J has a long history in managing task order-driven IDIQ and on-call contracts with numerous state and federal clients. While each project of this type is unique, they all have commonalities that allow PBS&J's experience, management and administrative approach to work well together.

A diversity of firms, talents and resources are what the Coalition will gain with the group assembled by INRIX. The consulting team's general roles and duties are expected to be, but not limited to, the following:

PBS&J –

- √ Consultant services management
- √ 511 and ATIS integration experience (PBS&J developed and operates the 511 systems in North Carolina and Virginia)
- √ Experience in almost every stated requirement

Open Roads Consulting –

- √ Integration of feeds
- √ ATMS and ATIS experience

EnterInfo –

- √ System integration and testing
- √ GIS
- √ Website development

Berkeley Transportation Systems –

- √ Decision support systems
- √ Traffic forecasting

Tele Atlas –

- √ Highway link network/ international expert
- √ GIS

TRAC –

- √ Overall traffic data and travel time advisor/ national expert
- √ Decision support
- √ Performance measures

The table on the following page contains the Consulting Services Requirements and the INRIX team's ability to meet the requirements.

A more detailed list of key staff and their expertise as it pertains to the stated consulting services requirements can be found in the *Consulting Services – Key Staff Areas of Expertise* table on a following page. As that table shows, every requirement is covered by this small representative group of key staff, while the depth and experience of each firm is available to the Coalition and the member agencies. Resumes of the key staff are also included at the end of this section of the document.

The *Consulting Services – Key Staff Areas of Expertise* table also clearly shows the areas of technical overlap that the team has. It is important to understand that the overlap is intentional for two reasons:

- √ None of the consulting services team members have been guaranteed any specific type of work or specific percentage by INRIX or PBS&J (aside from meeting and exceeding the MBE/ DBE goal of 25%), and
- √ Overlap in expertise allows PBS&J to work with the Coalition and its members to find the best fit (staff, experience, location, familiarity, etc) for the task at hand, versus assigning the only team member with relevant experience.

In addition, the INRIX-led team is willing to add subcontractors over the life of the project to meet specific needs (technology, institutional, etc.) not initially considered by the Coalition or the University of Maryland when developing the request for proposal.

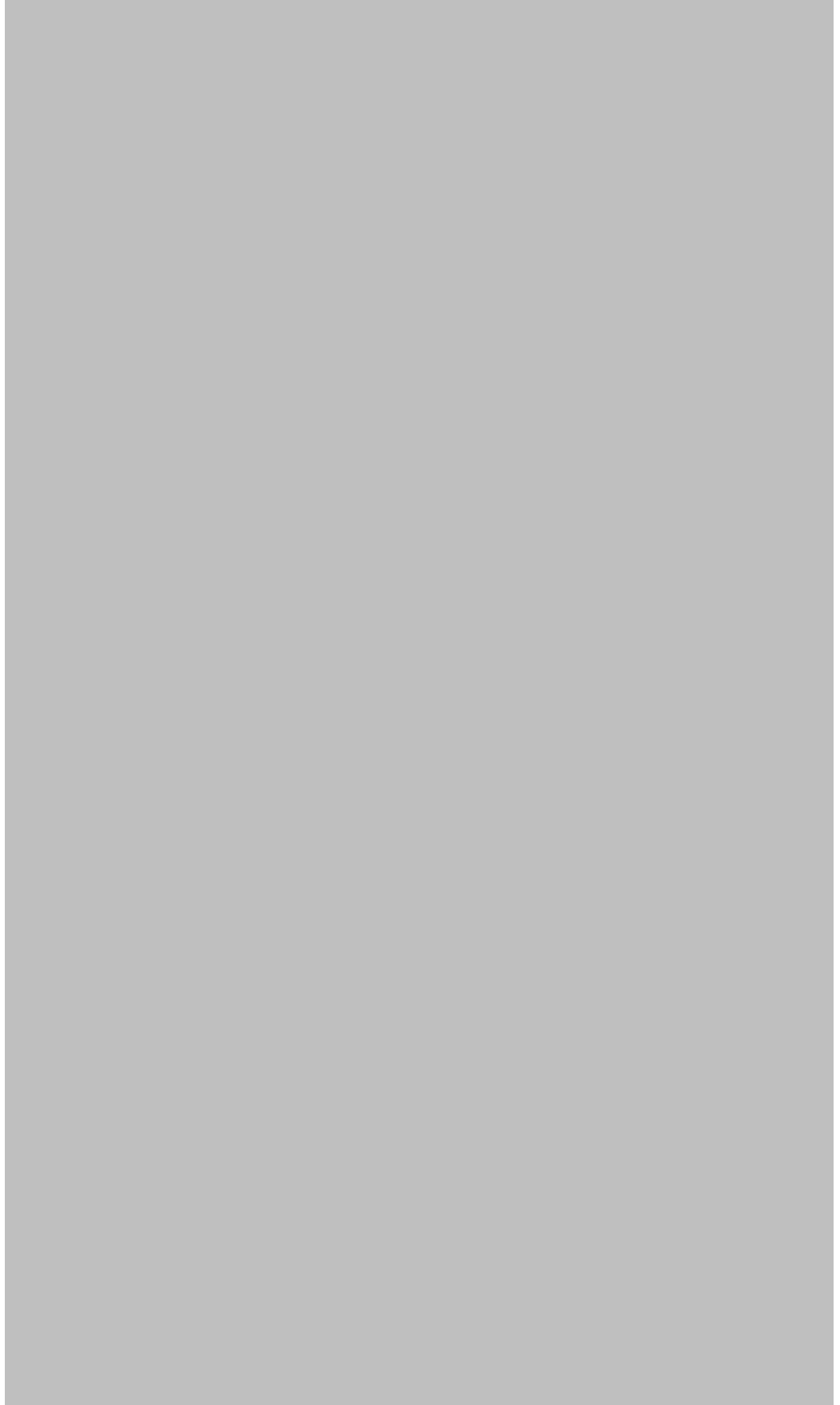
Consulting Services Requirements

Item	Description	Priority	Response Code	Respondent Comments
CONSULTING SERVICES				
1	Providing data feeds in other formats such as streaming XML, FTP, SFTP, CORBA, SOAP and JMS as needed to support ATMS, ATIS and other ITS applications within the Coalition.	M/E	E	The Consulting Services team has a experience working with all of the stated data feed formats and applying solutions to support ATMS, ATIS and other ITS applications. Experience in this area includes the NCDOT 511 system, ATMS software development and integration for VDOT. See the Consulting Services - Key Staff Areas of Expertise table on the following page for experience by key staff person.
2	Provide other formats, such as various implementations of TMDD standards, Alert-C, ISO and SAE standards as needed to support ATMS and ATIS (and other ITS applications) within the Coalition.	M/E	E	The Team has a experience working with all of the stated standards and formats as many of these are used in both the public sector as well as the mapping, auto and navigation industries, which the team has extensive experience working with. See the Consulting Services - Key Staff Areas of Expertise table on the following page for experience by key staff person.
3	Develop alternate link data formats in order to integrate data into existing ITS applications	M/E	E	The development of these alternate formats can be spread across firms, but would most likely be led by Open Roads Consulting
4	Extend capability of web-based monitoring system	M/C	E	Extending this capability is something that BTS performs on a daily basis and would likely be supported by ORC or EnterInfo as all have good experience in this area.
5	Re-segment portions of the highway link network to adapt to physical changes and institutional needs	M/C	E	Highway link re-segmenting is something that Tele Atlas and Open Roads Consulting handle on a daily basis on both international and regional levels. As a leader in the electronic mapping industry, and a participant in the North America Location Code Alliance, this is the primary reason Tele Atlas is on the team.
6	Provide a publicly accessible web site for viewing traffic data	D/E	E	The Inrix Team is very skilled in developing publicly accessible websites for viewing traffic and travel data, which includes the CHART website developed for MSHA by EnterInfo.
7	Assist the Coalition and its members with integrating traffic data into ATMS and ATIS systems	M/C	E	The Inrix Team concurs with this requirement and believes that integrating data into existing critical software at DOTs is a key component of the services offered. Both ORC and EnterInfo have extensive experience as ATMS software developers and system integrators, plus PBS&J has experience integrating speed and travel time information existing 511 systems in the Corridor
8	Develop traffic forecasting capability	D/E	E	This capability exists within the team and would be led by BTS based on their experience along the I-5 corridor.
9	Develop decision support tools	D/E	E	Decision support tools is something almost every team member has developed for previous clients and properly setting them up along with relevant performance measures is the key to a useful tool.

Consulting Services – Key Staff Areas of Expertise

Staff	Project role	Company	General support				Providing data feeds in other formats to support ATMS, ATIS and other ITS applications						Provide other formats to support ATMS, ATIS and other ITS applications				Link data formats	Web-based monitoring	Highway link network	Web site	Data integration	System and support development	
			511 and ATIS development	ATMS development	GIS	Performance measures	Streaming XML	FTP	SFTP	CORBA	SOAP	JMS	TMDD standards	Alert-C	ISO	SAE standards	Develop alternate link data formats in order to integrate data into existing ITS applications	Extend capability of Web-based monitoring system	Re-segment portions of the highway link network to adapt to physical changes and institutional needs	Provide publicly accessible Web site for viewing traffic data	Assist with integrating traffic data into ATMS and ATIS systems	Develop traffic forecasting capability	Develop decision support tools
Bhandari, Mamta	Sr. Engineer/Analyst	PBS&J	•			•									•		•						
Bonds, John	Systems Engineer	PBS&J	•	•		•	•	•				•			•	•					•	•	•
Kell, W. Todd	Project Manager	PBS&J	•		•																		
Morgan, Benjamin	Database Specialist	PBS&J	•	•		•	•	•				•	•	•		•			•		•		•
Gaarder, Erik	Sr. Engineer/Analyst	PBS&J	•			•									•								•
Press, Bill	Sr. Engineer/Analyst	PBS&J			•																		
Robison, David	Sr. Programmer	ORCI	•	•	•	•	•	•	•	•	•		•				•	•		•			•
Clark, Jonathan	Programmer	ORCI		•			•	•	•	•										•			
Horner, John	Sr. Engineer/Analyst	ORCI		•			•	•	•	•	•					•			•		•		•
Skiffington, Daniel	Jr. Programmer	ORCI		•	•	•		•	•	•	•					•		•		•			
Dong, Jason	Sr. Engineer/ Analyst	EnterInfo	•	•	•											•	•		•	•			•
Leung, Roger	Sr. Engineer/ Analyst	EnterInfo		•	•														•	•			•
Choi, Willie	Programmer	EnterInfo			•														•	•			•
Zhong, Lei	Sr. Programmer	EnterInfo			•														•	•			•
Sung, Weilin	Programmer	EnterInfo			•														•	•			•
Yang, Bo	Database Specialist	EnterInfo			•														•	•			•
Hranac, Rob	Systems Engineer	BTS			•	•											•					•	•
Kwon, Jaimyoung	Sr. Engineer/ Analyst	BTS				•											•			•		•	•
Morris, Bill	D'base Specialist	BTS				•									•	•			•		•		•
Petty, Karl	Systems Engineer	BTS				•										•			•		•		•
Shieh, Eric	Programmer	BTS			•	•										•			•				
Lipkin, Paul	Sr. Engineer/ Analyst	Tele Atlas			•									•				•					
Hallenbeck, Mark	Sr. Engineer/ Analyst	TRAC-UW				•															•		•

Risk Analysis

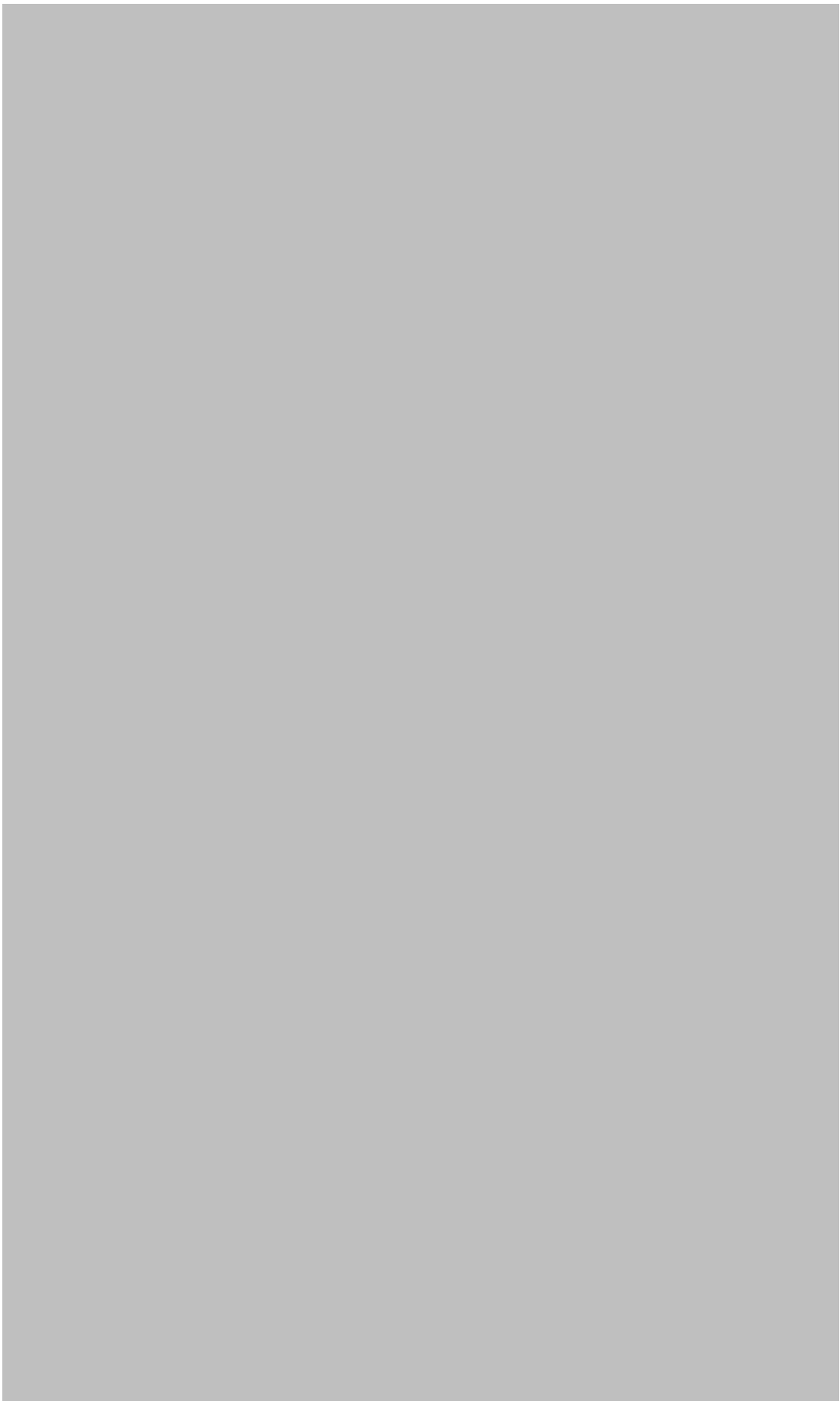




















Mamta Bhandari

Senior Project Manager Analyst

PBS&J

Education

B.S., Finance, Bombay University,
India, 1995

M.B.A., Finance, Bombay
University, India, 1997

Certifications

Project Management Professional
(PMP)

Ms. Bhandari has 9 years of overall experience with over 6 years as a project manager, concurrently managing multi-functional global teams on several complex projects. Her focus during the last 5 years has been delivering speech recognition/IVR systems for several statewide departments of transportation and other travel industry clients. She has been involved in managing client relations, developing detailed project and resource plans, tracking and communicating progress, and anticipating and resolving project issues throughout the project life cycle. She also has experience in creating service delivery organizations - building high-performing delivery teams and business processes from the ground up. She has earned a project management professional (PMP) certification from the Project Management Institute (PMI).

North Carolina 511 Travel Information Telephony System, Raleigh, North Carolina (North Carolina Department of Transportation (NCDOT)).

ITS Specialist. This project for the NCDOT involves the operation of the statewide 511 phone service for North Carolina from 2004-2008. The system was previously developed and implemented by PBS&J. Responsibilities include the phone system, marketing efforts, focus groups and user surveys, integration of public and private sector data, system documentation and testing, and performance monitoring. Ms. Bhandari assists in the day-to-day client management and maintenance and operational aspects for the NCDOT 511 system. Last year she was involved with the overall redesign, including front end and back end aspects of the NCDOT 511 system, to meet client needs and industry best practices. She also worked on developing a detailed test strategy, including a test plan, test scripts, and issue reporting documents for testing the redesigned application.

Virginia 511 Implementation and Operations, Richmond, Virginia (Virginia Department of Transportation (VDOT)). ITS Specialist. This project for VDOT involves the design and operation of Virginia's statewide 511 phone service and web site through August 2007. Responsibilities include all carrier coordination, marketing, the phone system, Web site, public- and private sector data integration, establishing a creative business approach to delivering travel services, system documentation and testing, and performance monitoring. Ms. Bhandari assists in the day-to-day client management and maintenance and operational aspects for the VA 511 system.

Virginia 511 Implementation and Operations, Richmond, Virginia (Virginia Department of Transportation (VDOT)). Project Manager and ITS Specialist. This project for VDOT involves the redesign of the VADOT 511 system and the operation of the phone service and Web site through August 2009. The redesign is being undertaken to improve the front end, back end and coverage aspects of the system. PBS&J previously developed and managed the implementation of this system, which was launched in 2004. Responsibilities include public- and private sector data integration, voice user interface redesign, enhancing roadway

coverage, system documentation and testing, performance monitoring, all carrier coordination, and marketing. Ms. Bhandari assists in the day-to-day client and team management for redesigning and operating the VA 511 system.

Districtwide Traffic Operations (2004-2009), Districtwide, Florida (Florida Department of Transportation (FDOT), District Five). ITS Specialist. This \$3 million, 5-year contract with FDOT District Five, involved continuing traffic operations services for projects on the 2,100 miles of state highway in the nine central Florida counties. Services were provided on a task-order basis, often in response to citizen complaints and requests from local government agencies, include signal warrant studies, intersection analysis, corridor studies, traffic signal design, intelligent transportation systems (ITS) planning and design, traffic signal inspection, traffic data collection, and arterial traffic signal retiming. Ms. Bhandari is responsible for reviewing and testing additional functionality added to the FDOT 511 system for providing personalized traveler information to callers. She assists with ongoing system changes to improve overall system usability.

Statewide Intelligent Transportation System General Consultant Services (2006-2009), Statewide, Florida (Florida Department of Transportation (FDOT), ITS Office). ITS Specialist. This multiyear, intelligent transportation systems (ITS) general consultant services contract with the Florida Department of Transportation Central District, involves providing technical, management, and administrative tasks related to the planning, architecture and standards development, integration, operations, maintenance, telecommunications, and mainstreaming of ITS throughout Florida. This contract also consists of the preparation of design criteria packages for ITS implementation, deployment, and integration of more than 2,200 miles of ITS on the limited-access corridors in Florida. The major initiatives along these corridors include providing coordinated operations for all modes; active facilities management involving freeway-management systems, incident management, evacuation coordination, smart work zones, commercial vehicle-information systems, and commercial vehicle information systems and networks (CVISN)-related projects; and information sharing in the form of central data warehousing and advanced traveler information systems (ATIS). Ms. Bhandari worked with seven district FDOT teams and the central office to help define detailed functional requirements for a Statewide 511 ATIS system. She lead the effort of gathering and standardizing information on roadway and segment coverage offered by the six existing 511 systems in the state of Florida. She also worked with the FDOT district teams to understand and document lessons learned from planning, developing, testing, tuning and deploying present and past 511 systems.

Professional Development

Project Management, Business Management, Financial Planning, Client Management, System/Application Development, Quality Assurance

John M. Bonds

Senior ITS Specialist

PBS&J

Education

M.S., Aeronautical Engineering,
USN Post Graduate School,
1970

B.S., Aerospace Engineering,
University of Michigan, 1968

As a senior intelligent transportation systems (ITS) specialist in the ITS division, Mr. Bonds combines his broad management and engineering experience in high-technology systems with recent applications experience in advanced public transportation systems (APTS), advanced traveler information systems (ATIS), advanced transportation management systems (ATMS) and electronic payment systems (EPS). Mr. Bonds is a system engineer with more than 34 years of experience in all aspects of system development from concept to site acceptance testing. He specializes in systems architecture definition and system design and specification, with a focus on requirements allocation and traceability to the National ITS Architecture.

Prior to joining PBS&J, Mr. Bonds worked in the defense industry to design and specify high-technology electronic systems, from radar warning receivers for combat jets to highly classified signals intelligence collection systems for the U.S. government.

In addition to his recent ITS experience, Mr. Bonds is experienced in designing, specifying, integrating, and testing high-technology systems ranging from automated flight planning systems to highly classified signal intercept and analysis systems.

Mr. Bonds' representative experience includes the following:

Intelligent Transportation Systems

Smartlink, ATMS/ATIS , North Carolina Department of Transportation (NCDOT).

Mr. Bonds is creating the functional architecture and writing the specifications for a statewide advanced traffic management system that integrates with an advanced traveler information system. The functional specification will be combined with a scope of services document to create a procurement package for NCDOT.

Statewide Transportation Management Center Software Library System

(SunGuide), Florida Department of Transportation (FDOT). Mr. Bonds led the development of a statewide software system used to command and control regional transportation management centers. He wrote system specifications, scope of services documents, and assisted in the competitive procurement of the system. He wrote the test plans and procedures for the independent verification and validation (IV&V). He continues to support the project by providing system engineering services for system upgrades and enhancements.

Southwest Florida 511 System, FDOT. Mr. Bonds designed the functional and physical architecture for the interim ATIS for three counties in Florida. He wrote the interface specification between the data fusion system and the interactive

voice response (IVR) system. He went on to manage the integration and testing of the system and conducted final acceptance testing for FDOT.

511 System, NCDOT. Mr. Bonds provides support for system operations by capturing and analyzing data feeds when there are problems and by documenting the system architecture and interfaces.

511 System, VDOT. Mr. Bonds conducted a formal acceptance test of the system. He wrote the test plan and test procedures, led the team that performed the test, and submitted a formal test report. He continues to support operations when there are problems and suggests ways to make the system more reliable.

“Plan One” Toll System Development, FDOT, Florida's Turnpike Enterprise (FTE). Mr. Bonds managed the system engineering process used to develop system requirements for the toll replacement project.

Orlando Regional Alliance for Next Generation Electronic Payment Systems (EPS) (ORANGES), Central Florida Regional Transportation Authority (LYNX), Orlando, Florida. Mr. Bonds served as systems engineer and chief test engineer for this project, and managed the federal field operational test (FOT) of a multi-issuer, multi-application smart card. He was responsible for documenting the system interfaces and integrating and testing the system prior to field deployment. Mr. Bonds also wrote the interface control document (ICD), test plan, test procedures, various user guides, and supervised the factory and field testing of the system.

Statewide ITS Engineering Management Plan, FDOT. Mr. Bonds served as project manager and chief engineer for the development of a standard system engineering process for the State of Florida.

AZTech II Model Deployment Initiative (MDI), Maricopa County Department of Transportation (MCDOT), Arizona. Mr. Bonds was responsible for the interface documentation and specification of the add-on traveler information capability for wireless application protocol (WAP)-enabled telephones.

Smart Fleet System Concept of Operations (CONOPS), LYNX, Florida. Mr. Bonds developed the CONOPS document detailing an integrated voice and data communications network, sharing automated vehicle location (AVL) data with fixed route transit and para-transit services. Smart bus capabilities included smart card; schedule adherence monitoring in real time, both on-board the bus and at a central dispatch site; emergency communications back-up; automatic passenger counting and real time overload reporting; engine performance monitoring in real time; next bus announcements at bus stops; and traveler information. CONOPS led to a system specification, test plan, implementation plan, and a request for proposal (RFP).

City of Corpus Christi Integrated Communications Network (COAST), Texas.

Using shared fiber-optic cables, the Texas Department of Transportation (TxDOT) and the City of Corpus Christi will share camera surveillance video, dynamic message signs, and traffic and weather incident data among COAST partners. Mr. Bonds developed the concept of operations for this network.

Professional Affiliations

California Alliance for Advanced Transportation Systems (CAATS)
Intelligent Transportation Society of America (ITSA)

W. Todd Kell, AICP

*Associate Vice President, Program Manager
PBS&J*

Education

M.S., City Planning, Georgia
Institute of Technology, 1994
B.S., Political Science, James
Madison University, 1990
Career Discovery Program,
Harvard University Graduate
School of Design, Urban
Planning and Design, 1989

Certifications

American Institute of Certified
Planners (AICP), #013661

Professional Affiliations

American Planning Association
(APA)
Intelligent Transportation Society
of America (ITSA)
ITS Virginia Board of Directors
(2001–2006)
ITS Virginia Executive Board (2006
– present)
Virginia Planning Association

Mr. Kell is the east region program manager for PBS&J's intelligent transportation systems (ITS) division, and is based out of the Richmond, Virginia, office. He has 13 years of experience in ITS technologies, transportation planning, transit operations analysis and planning, and multimodal cost analysis. His current focus is on the planning, development, and deployment of advanced traveler information systems (ATIS) and 511 systems, and innovative business models.

Prior to joining PBS&J, Mr. Kell was the travel information program manager at the Virginia Department of Transportation (VDOT). Prior to this position, he was a senior transportation planner with TransCore/SAIC for 6 years.

Mr. Kell's project experience includes:

Northern Region Operations Variable Message Sign Travel Time Preliminary Investigation, VDOT, Virginia. Mr. Kell is serving as the project manager for the investigation and feasibility of using existing and acquired data to disseminate travel time information via variable message signs in northern Virginia. This effort also involves the development of a grant application to the Federal Highway Administration (FHWA) for implementation funding.

Re-design of the NC 511 Travel Information Telephony System, North Carolina DOT (NCDOT), Raleigh, North Carolina. Mr. Kell served as the project manager for the design, development and deployment of the re-designed statewide 511 system for NCDOT. The system was launched in January 2007 on time and under budget.

VA 511 Statewide Travel Information System, VDOT, Richmond, Virginia. Mr. Kell is the project manager for the development, deployment, operation, maintenance and marketing of a statewide 511 telephone and Web service for VDOT. His duties include overseeing the development of multiple data source interfaces, data integration, telephony coordination, Web site development, telecommunications carrier coordination, performance monitoring, all project documentation, and general program management. The statewide system was publicly launched in February 2005 and PBS&J is under contract to operate it through July 2009.

NC 511 Travel Information Telephony System, NCDOT, Raleigh, North Carolina. Mr. Kell served as the project manager for the development, deployment, operation, and maintenance of a statewide 511 system for NCDOT. His duties included overseeing the development of multiple data source interfaces, data integration, telephony coordination, all project documentation, and general program management. The system was publicly launched in August 2004 and continues operation today.

511 Traveler Information Services, 511 Deployment Coalition, Washington, D.C. Mr. Kell assists PBS&J's program management support to the 511 Deployment Coalition, a partnership of the American Association of State Highway and Transportation Officials (AASHTO), ITS America, the American Public Transportation Association (APTA), and USDOT, which was established in 2000 to coordinate the deployment of 511 telephone-based traveler information services. Mr. Kell was the primary author of the *511 Implementation and Operational Guidelines*, Version 2.0.

511 Virginia Decision Support Assistance, VDOT, Richmond, Virginia. Mr. Kell served as an on-call resource providing support for operating and short-term planning efforts related to the 511 Virginia system along the I-81 corridor.

Baton Rouge 511 Design and Implementation Plan, Louisiana DOTD (LADOTD), Baton Rouge, Louisiana. Mr. Kell served as project engineer for the development of a 511 implementation plan for the Baton Rouge area. The project was conducted in three phases: (1) stakeholder engagement and project research, (2) vision development, and (3) conceptual system design.

Mississippi Statewide 511 Implementation Plan, Mississippi DOT (MDOT), Jackson, Mississippi. Mr. Kell served as project engineer for the development of a 511 implementation plan for the state of Mississippi. The project was conducted in three phases: (1) stakeholder engagement and project research, (2) vision development, and (3) conceptual system design. MDOT is using this plan to secure funding from the Mississippi Transportation Commission.

While at VDOT, Mr. Kell led the Department's efforts in advanced traveler information systems, including "511 Virginia" and "Partners In Motion." He also focused on the development of statewide policies, such as VDOT's *Guidelines on Access to Smart Traffic Center Data and Video Imagery*, and has years of experience cultivating public-private partnerships across the state. Mr. Kell was an active participant in the National 511 Deployment Coalition Working Group, where he headed the committee that developed and delivered the *Deployment Assistance Report #1: Business Models and Costs* released in 2002.

Prior to his duties at VDOT, Mr. Kell was a senior transportation planner at TransCore/SAIC, where he served as the firm's deputy project manager on the Washington, D.C. area ATIS project, "Partners In Motion." He also played integral roles in other projects of regional significance including the multimodal analysis of the I-270 corridor in Maryland; alternatives analysis of the unused freight railroad right-of-way between Bethesda and Silver Spring, Maryland, for the Georgetown Branch Transitway/Trail MIS/DEIS; and the present and future transit needs analysis of a 20+ mile segment of U.S. 1 in Fairfax and Prince William counties, Virginia.

Mr. Kell also served as support staff on the ATIS program track for the I-95 Corridor Coalition where he helped foster interstate communication and knowledge of traveler information systems from Virginia to Maine.

Presentations

511 National Conference, Instructor, “101 Training Session” – 2006, 2003

ITS Tri-Chapter Meeting and Exposition – 2005

ITS America Annual Meeting and Exposition – 2005, 2004, 2003

ITS Virginia Annual Conference and Exhibit – 2007, 2004, 2003, 2002, 2001

ITS Wisconsin Annual Meeting – 2004

ITS Maryland Annual Conference – 2003, 2002

Virginia Sheriff’s Association Conference – 2006

National Rest Area Conference – 2002

Virginia Assoc. of Planning District Commissions Summer Conference – 2002

Annual Community Transportation Association of America Conference – 1999

Courses/Seminars

National Highway Institute – Overview of Systems Engineering (6/02)

National Transit Institute – Major Investment Study Training Course (4/98)

Honors and Awards

VDOT Commissioner’s Award for Excellence recipient, 2002

Governor’s Award nominee, 2002

Traveler Information Systems Scan Tour of Europe (Team Member) – Fall 2001

Benjamin R. Morgan

ITS Specialist

PBS&J

Education

B.S., Electrical Engineering,
University of Virginia, 2003

Professional Affiliations

Intelligent Transportation Society
of Virginia (ITSVA)

Mr. Morgan is a senior analyst with the travel network information division and is based out of PBS&J's Richmond, Virginia, office. His current focus is on the planning, development, and deployment of advanced traveler information systems (ATIS) and 511 systems. He is currently working with the North Carolina 511 rebuild team and supporting the Virginia 511 system.

Mr. Morgan's project experience includes:

VA 511 Statewide Travel Information System, Virginia Department of Transportation (VDOT), Richmond, Virginia. Mr. Morgan is the lead system designer and developer for the next generation 511 Virginia system. Duties on this project have included the development of critical design documents, software development in a wide variety of languages and protocols (XML, ASP.NET, XHTML, VB.NET, C#, SOAP, VXML, JavaScript, Java, SQLServer) and working with IVR developers to achieve project goals. The system is scheduled to launch in July 2007.

NC Smartlink Upgrade Project Manager Services, Raleigh, North Carolina. Mr. Morgan is supporting the project team tasked with managing NCDOT's effort to integrate the State's ATIS resources into a single ATMS. Responsibilities include requirements development and management, system test planning and technical evaluation of various project aspects.

NC 511 Statewide Travel Information System Year 4 Rebuild, North Carolina Department of Transportation (NCDOT), Raleigh, North Carolina. Mr. Morgan filled a leading roll in all phases of developing the North Carolina 511 Travel Information System. The rebuilt system launched in January 2007.

Mr. Morgan has conducted extensive ATIS technology research in support of several projects, including:

- 511 Coalition Nationwide Effective Practices Report.
- Florida Statewide Advanced Travel Information Services Integration.
- VoIP Emerging Technology Report for 511 Coalition.
- Orlando-Orange County Expressway Authority (OOCEA) Data Server Project Personalized Travel Alert Research.

Mr. Morgan previously worked for the State Corporation Commission of Virginia as a utility engineer. In this role Mr. Morgan was responsible for insuring Virginia's utility operators designed, maintained and operated jurisdictional utility systems in accordance with the Code of Federal Regulations. Mr. Morgan was also his division's lead for adoption of new technology in support of daily processes and enhanced performance.

Mr. Morgan also has worked in the University of Virginia's Human Motion Analysis and Biomechanics Laboratory, working in the area of dynamic system response.

Mr. Morgan held the position of technical specialist with the Center for Law and Military Operations at the Judge Advocate General's school in Charlottesville, Virginia. Mr. Morgan was responsible for the maintenance, design and improvement of multiple databases for deployed Judge Advocates worldwide, as well as consulting on the Center's positions and strategies with regard to emerging technologies.

Mr. Morgan is a former member of the United States Marine Corps with an honorable discharge.

Erik H. Gaarder

Project Manager

PBS&J

Education

B.S., Mechanical Engineering,
Worcester Polytechnic
Institute, 1990

M.S., Mechanical Engineering,
University of Illinois, 1993

MBA, Business Administration
(Marketing and Corporate
Strategy), University of
Michigan, 2004

Certifications

PMP (Project Management
Professional), April 10, 2006
PMP# 32578

Mr. Gaarder serves as a project manager in PBS&J's intelligent transportation systems division. He has 14 years of experience in project management, new product and business development, process improvement, and operations. He is a creative problem solver with excellent communication, project management, team building, and leadership skills. Mr. Gaarder's current general responsibilities at PBS&J include monitoring/managing project production for compliance with schedule, budget, and quality objectives. He also guides, reviews, supervises, and/or coordinates the work of multidisciplinary project teams.

Mr. Gaarder's PBS&J experience includes:

Statewide Advanced Traveler Information System, Florida (Statewide). This project is for the Florida Department of Transportation (FDOT) Central Office Intelligent Transportation System (ITS) Section and involves the development of Florida's Statewide Traveler Information System to be implemented in calendar year 2008, which will upgrade and integrate the existing regional traveler information services implemented by the FDOT districts. Mr. Gaarder serves as project manager and has led a 40+ project team of consultants and clients through the first stage delivery of Florida's next generation advanced traveler information system (ATIS).

- Conducted nationwide market and technology study to identify best practices, evolving technology trends, and environmental factors.
- Researched end-user needs and preferences, ran an online survey, and interviewed key stakeholders to define customer proposition.
- Led workshops and facilitated meetings with the eight Florida transportation districts to achieve consensus and finalize concept design.
- Led translation of concept design into business and technical requirements and developed request for quote/invitation to negotiate.

Before joining PBS&J, Mr. Gaarder's experience included:

Visteon Corporation, Senior Systems Engineer, Michigan.

- Led product and requirements definition in pursuit and delivery of telematics and multimedia business (revenues exceeding \$100 million/year).
- Pursued new business opportunities in 42-volt/14-volt automotive systems. Conducted market assessments, competitive analyses, and led trade studies to rationalize design alternatives, concluding in viable current business.
- Led international team in the development of new product development processes for the software and systems engineering community (> 500 engineers). Achieved CMMI (Capability Maturity Model Integrated) Level 2 and on track for Level 3.

Ford Motor Company, Production/Maintenance Supervisor, Michigan

- Supervised team of 40 production employees for automotive parts assembly plant and oversaw production of more than \$50 million/year.
- Supervised 30 skilled trades (electricians, plumbers, millwrights, mechanics, etc.) and coordinated the maintenance of equipment worth more than \$80 million.
- Responsible for safety, quality, delivery, cost, and morale.
- Negotiated and resolved concerns with union leaders.
- Implemented visual factory and self-directed work teams to achieve flawless production launch of a new ignition coil; received corporate quality award.

Quality Manager (International Assignment), Sao Paulo, Brazil

- Launched 110,000-square-foot manufacturing facility in Brazil. Recruited, trained, and supervised team that created and implemented the plant quality system.
- Achieved ISO 9000 and Ford Q1 quality certification in 15 months (nine months ahead of schedule).
- Oversaw installation and approval of \$10 million worth of equipment.
- Led customer support during validation of four new products (fuel pump, starter motor, throttle body, and air fuel charging assembly). Received Corporate Customer Driven Quality Award for resolving Taubate Engine Plant testing issue.
- Collaborated with marketing to perform competitor analysis of automotive components.

Professional Affiliations

Intelligent Transportation Society of America (ITS America)

INCOSE (International Council on Systems Engineering)

American Society of Mechanical Engineers (ASME)

PMI (Project Management Institute)

William J. Press, GISP

Program Manager

PBS&J

Education

M.S., Geography, University of
Massachusetts, 1991

B.S., Geography, University of
Maryland, 1986

Certifications

Certified Geographic Information
System Professional (GISP),
00023454, 04/25/06

Software

GIS, CADD, Access, Visio

Mr. Press oversees geographic information systems (GIS) operations for PBS&J's mid-Atlantic region and is responsible for project deliveries, quality assurance, and professional development for a staff of 20 GIS analysts and developers. He has over 20 years experience in all phases of the GIS project life cycle, including database design, data conversion, quality assurance/quality control, needs analysis, application development, map production, project management, and technical presentations. His GIS project implementations have included environmental resource inventories, NPDES inspection, asset management, water/wastewater distribution networks, property analysis, facilities planning, emergency preparedness, environmental impact modeling, and mobile GIS applications.

Little Patuxent Water Filtration Plant, Howard County, Maryland. Project manager overseeing development of an ESRI ArcIMS application linking aerial imagery and structure layers with as-built and archival drawings of plant buildings and infrastructure. Responsibilities included requirements documentation, QC of as-built drawing database entries, testing of security protocols, and demonstration of application capabilities to internal and external clients.

Air Force Materiel Command (AFMC) – MicroPAVER Interface, U.S. Air Force, Dayton, Ohio. Project manager overseeing development of an ESRI ArcGIS Server application linking aerial imagery and pavement layers (runways, taxiways, parking) with AFMC's MicroPAVER database. MicroPAVER incorporates over 50 attributes that track pavement condition, aircraft type, and frequency of use to assign a priority index ranking for each Air Force base. Responsibilities include requirements documentation, preparation of geodatabase layers and raster catalogs, evaluation of mapping and reporting tools, and demonstration of application capabilities to internal and external clients.

Intercounty Connector (ICC) Environmental Impact Analysis, Maryland State Highway Administration (SHA). GIS task manager, 2003 - 2006. Integrated and standardized preliminary engineering drawings (MicroStation) and environmental resource inventory datasets (GIS) to calculate potential impacts from all proposed alternatives and options. Compiled GIS polygons representing limits of disturbance (LOD) from source DGN polylines. Prepared geoprocessing analysis routines with ESRI's ModelBuilder to overlay LODs with parks, historic sites, wetlands, streams, and other resource layers. Exported impact tables into Access databases to streamline integration with reports, presentation maps, and document figures. Prepared suitability tables and maps highlighting potential parkland replacement sites and identifying environmental stewardship opportunities.

ICC Project File Management System (PFS), SHA. Project Manager, 2003 - 2006. Developed a Microsoft Access database to index all correspondence, agency memoranda, and technical documents associated with current ICC study. Implemented tracking tools for the ongoing compilation of Administrative Record documents that SHA's attorneys will use for any lawsuits brought against the ICC. Enhanced PFS database design to store over 3,000 comments received during the DEIS public hearing review period. Developed tracking tools and user interface screens to assign technical responses to all public hearing comments. Designed input forms, table links, and modules to enable multi-user edits and updates. Provided database administration, technical support, and training to project team staff on-site at SHA and at remote offices. Exported data tables for migration of Access database to online, multi-user interface. Designed SQL queries and customized report layouts to streamline production of FEIS public comment reports.

NPDES Stormwater Outfall Inspection, SHA. GIS task manager, 2004 - 2006. Developed a customized ArcPad GIS application to streamline field-based inspections of SHA-owned outfalls with entry of NPDES asset management database records. Designed an ESRI geodatabase to integrate inspection data, produce status maps, and generate summary reports.

Total Maximum Daily Load (TMDL) Analysis and Mapping, Statewide, SHA. Created GIS models linking EPA's stream impairment databases with hydrographic features from USGS's National Hydrography Dataset (NHD). Integrated NHD geodatabases to prepare detailed maps of TMDL levels associated with impaired basins. Designed ESRI geodatabase to guide long-term data development and monitoring efforts and to ensure compatibility with future Oracle databases.

GIS Assessor Tools, Washington D.C. Real Property Tax Administration. Project manager, 2001 - 2002. Coordinated the development of GIS applications and datasets to integrate triennial assessment processes with automated land records databases. Created new geodatabase design of assessment tables and relationships using Visio 2000 UML CASE Tools. Produced GIS applications requirements document to guide development of customized ArcView applications linking the District's GIS geodatabase with the Assessor's Computer Assisted Mass Appraisal (CAMA) database. The resulting applications allowed the Assessor's Office to meet deadlines for creating annual assessments and for beginning the phase-out of the triennial schedule.

District-wide GIS Data Collection, Washington, DC Office of the Chief Technology Officer (OTCO). Coordinated the collection of emergency management data from source agencies into the district's central GIS database. Facilitated monthly, inter-departmental emergency data collection task force meetings.

GIS Data Migration and Application Development, Washington, DC Office of Planning (DCOP). Onsite GIS project manager responsible for managing departmentwide GIS implementation, including deployment of mapping and data loading utilities, migration of older datasets to geodatabase format, and development of new applications and datasets to support DCOP initiatives. Served as liaison between DCOP and OCTO GIS.

US 301 Corridor Study, Charles and Prince George's Counties, Maryland. GIS technical lead for a corridor study that examined proposed alignment alternatives and improvements to US 301 in Charles and Prince George's Counties. Integrated GIS tax maps and databases to identify potentially impacted properties for each roadway alternative. Generated owner notification letters for impacted properties and prepared public presentation maps highlighting roadway alternatives and impacts.

US 13/113 Corridor Transportation Study, Delaware, DelDOT. GIS technical lead for a corridor transportation study that examined proposed bypass alternatives and access improvements to US 13 and US 113 in Kent and Sussex Counties. Responsibilities included integration of GIS, CADD and aerial imagery datasets to calculate potential environmental and socio-economic impacts and to prepare public meeting presentation graphics.

Montgomery County Department of Transportation Planning, GIS-T Study. Project manager, 2000 - 2001. Provided full range of client consulting services including GIS needs assessment, strategic plan, database design, data migration plan, application design, and training documentation. Developed project schedule and managed budget and staffing resources.

GIS System Design and Implementation, Town of Greenwich, Connecticut. On-site GIS coordinator responsible for database design, software installation, and quality control application development. Chaired monthly GIS coordination meetings with town stakeholders and data conversion contractors. The database design was for all planimetric and cadastral databases in advance of a \$1 million data conversion effort. To protect the town's data conversion investment, a series of custom ArcInfo and ArcView QC applications were developed to validate digital data deliveries against the accepted database designs. Prepared QC summary reports to document data acceptance or rejection.

GIS Data Management Prototype, Sultanate of Oman. Onsite systems analyst responsible for development of a GIS prototype for basemap and land records maintenance within the National Ministry of Housing. Compiled a seamless digital basemap from four disparate sources including AutoCAD drawings, ArcInfo coverages, non-georeferenced scanned maps, and COGO property boundary files. Developed Arc Macro Language (AML) Code to automate data transformation and projection routines. Developed a land records database by entering parcel attributes from hard copy forms into Excel spreadsheets, saving

data to ASCII format, and importing info INFO tables. Wrote new AML code for a customized graphical user interface (GUI) demonstrating ArcInfo functionality of basemap and land records maintenance. The GUI included applications to perform data entry, data transformation, data conversion, QA/QC, and mapping.

Database Design and Quality Control Implementation, City of Charleston, South Carolina. Project manager responsible for the logical and physical design of planimetric and cadastral databases. The database designs were used to guide the development of new cadastral and planimetric GIS layers including roads, buildings, tidal wetlands, non-tidal wetlands, waterways and property boundaries. Developed customized ArcInfo and ArcView quality control applications to validate digital data deliveries against the accepted database designs. Prepared customized Arc Macro Language (AML) routines to automate development of ArcInfo Librarian data storage layers.

Photogrammetric QC and Training, Water Authority, El Paso, Texas. Developed QA/QC procedures and applications to assist water utility with review and acceptance of raster and planimetric datasets. Provided assistance and training to data vendor (Surdex Corporation) on implementing standardized routines for translating AutoCAD files into ESRI shapefile formats.

Forest Inventory and Data Conversion, US Forest Service. Developed customized ArcInfo data entry menus and routines to digitize and link tree stand polygons with valid data attributes as specified in tabular tree stands datasets. Following data validation and QC, integrated tree stands layers with the Forest Service's Oracle database. Prepared summary reports based on analysis of tree stands database.

NPDES Stormwater Inventory, Montgomery County, Maryland. Prepared digital network of stormwater infrastructure as part of county's NPDES mapping efforts. Linked tabular files to produce summary reports of pipe and structure characteristics.

NPDES Stormwater Mapping, Prince George's County, Maryland. Managed the preparation and conversion of hard copy map sheets into a seamless ArcInfo coverage of stormwater network. Database design and development of RDBMS files relating NPDES attributes to linear and point features.

Presentations

ESRI User Conference - 2005, 2000, 1997

Towson GIS Conference – 2007, 2003, 2001, 1997

ESRI Mid-Atlantic User Group (MUG) Conference - 1996

ESRI Southeast Regional User Group (SERUG) Conference - 1999

Professional Development

ArcHydro Geodatabase Design, ESRI, 2005

Visual Basic for Applications (VBA), ESRI, 2005

Bentley GeoGraphics, Bentley Corp., 2005

Geodatabase Design, ESRI, 2002

Project Management Training (PMI), Penn State University, 2000 - 2001

GeoMedia Professional, Intergraph Corp., 2000

Programming with Avenue, ESRI, 1999

Programming with AML, ESRI, 1994



Education

B.S. in Computer Science,
Rensselaer Polytechnic
Institute (RPI), 1985

Areas of Expertise

Software Engineering
System Integration
Standards (ITS, Emergency and
Industry)
Traffic Management
Traveler Information
National/Regional ITS
Architecture

ITS and Emergency Response Standards

NTCIP
IEEE 1512
TMDD
Emergency Data Exchange
Language (EDXL)
Common Alert Protocol (CAP)
OGC WMS/WFS
Others

Languages

C, C++, JAVA, SOAP, XML,
JavaScript, SQL, Oracle,
PostgreSQL, Waba, Open
Source Tools

Operating Systems

Windows NT/2000/XP/Server
2003, Windows CE (embedded
systems), and Linux.

Software Development Tools

Borland, JBuilder, MS Visual
C++, MS FrontPage, MS Visual
Developer, Eclipse

Mr. Robison has 20 years of experience in software engineering and over the last eight years has proactively pursued new technologies to advance Intelligent Transportation Systems (ITS). He has extensive expertise in Advanced Transportation Management Systems (ATMS), Archive Data Management Systems, Traveler Information, Strategic Highway Data Analysis, Regional and Statewide Integration, and ITS Standards. He has expertise and experience in open architecture integration efforts including: TMC-to-TMC, TMC-to-device, TMS-to-511, TMC-to-CAD, TMC-to-arterial, and TMC-to-archive systems. He has experience in ITS and industry standards and integrating new and legacy ITS field devices. Mr. Robison is results-orientated, innovative, and has an outstanding capability in applying technology to provide real world solutions.

Professional Experience

- Senior Software Engineer in the reuse of the VDOT Statewide Data Gateway for incident information collection, dissemination and management in the Hampton Roads, VA area. This system, the Regional Traffic Incident Management Information System, RTIMIS, integrates the VDOT transportation management system, state and local police 911 systems, and local government transportation systems.
- Senior Software Engineer for the VDOT I-81 Systems Integration contract where he was a key team member in the enhancement and deployment of the ATMSs within the I-81 Corridor. Mr. Robison was instrumental in the design and development of rule-based scenario responses, integration of legacy field devices, IP-based video control and monitoring software, and digital video switcher solutions that replace the need for expensive analog switchers.
- Senior Software Engineer responsible for the design and development of a web-based video distribution system currently used by VDOT and their PPTA partner to share video over the Internet for stakeholders and the traveling public across multiple states.
- Senior Software Engineer supporting the VDOT Strategic Highway Data Analysis project where Mr. Robison prepared the database and hundreds of reports used for assessing trends and causal factors including: 1) Bike crash reports for Districts, Jurisdictions, and Statewide, 2) Intersection crash reports for Districts, Jurisdictions, and Statewide, 3) Pedestrian crash reports for Districts, Jurisdictions, and Statewide, and 4) Run-off-the-road crash reports for Districts, Jurisdictions, and Statewide. These reports were used by analysts to generate the Strategic Highway Safety Plan.
- Senior Software Engineer for the VDOT Richmond/Tri-cities System Manager Contract. Mr. Robison was responsible for the open architecture design and deployment of the ATMS. Innovative components include a real-time GIS based graphical user interface, and Java based client interface. Mr. Robison provided the software for communications to/from multiple roadway devices (with varying



Publications / Presentations

“Improving Incident Management using GIS and Real-time Information”, ESRI-MUG 2006 Annual Conference

“Interagency Data Sharing: Institutional, Operational, and Technical Issues”, 2006 VA GIS Conference

“Embracing Change in Real World ITS Deployments – Minimizing Fragile Systems, Maximizing Your Investment”, 2002 ITS America Conference

protocols) to include Dynamic Message Signs, CCTV, Highway Advisory Radio, and Traffic Sensor Stations.

- As part of the VDOT Richmond/Tri-cities System Manager Contract, Mr. Robison was responsible for the design and development of the integration of state police Computer Aided Dispatch data with the VDOT ATMS. This integration platform evolved to the VDOT Statewide Data Gateway, which is used to share real-time information between all the VDOT transportation management centers, 1st responders, the VDOT 511 traveler information system, the Transportation Emergency Operations Center, and other stakeholders. This platform provides a highly scalable system that supports all the ITS standards including IEEE 1512, TMDD, Common Alert Protocol, and others.
- Senior Software Engineer responsible for the design and development of an ATMS Interactive Training System used for hands-on operator training. This system provides the means for operators to exercise all the ATMS system functionality without disrupting on-going operations. Additionally, it allows the playback of past incidents for customized training, whether in a rural or urban environment.
- Senior Software Engineer for the VDOT Archive Data Management System (ADMS) Virginia project. Mr. Robison supported the design and development of the web-based application for searching and processing gigabytes of archived traffic sensor and incident data collected on a statewide basis.
- Senior Software Engineer supporting the VDOT Hampton Roads Phase 3 project. Mr. Robison was responsible for the requirements analysis and design of the communications node processor and associated test computer used to test communications to/from the roadway devices.
- Lead Software Architect, Anaheim Decision Support System, Anaheim CA – Responsible for the design and development of the center-to-center interties between the City of Anaheim TMC and Caltrans District 12 TMC. Developed middleware solution to abstract a legacy system that provided a means for standardized information exchange between the two centers.
- Software Engineer, Las Vegas NV - Designed and developed hardware and software solutions to integrate remote radar systems into the range information network. Projects included the transmission of data over voice-grade telephone lines and live video over standard T1 telephone lines.



Innovative Software Solutions

JONATHAN CLARK

Education

University of North Carolina,
Chapel Hill, NC, BS in
Mathematical Sciences with
Computer Science emphasis,
1987, Magna Cum Laude

Areas of Expertise

Software Engineering
System Integration
Testing
Configuration Management
Traffic Management
Emergency Management
Incident Management
Data Sharing
ISO 9001

Languages

C++, JAVA and JavaScript,
ColdFusion,

Operating Systems

RSX-11 (DEC systems), RMX-
86/88 (embedded systems),
Windows NT/2000/XP/Server
2003, Windows CE (embedded
systems), and Linux.

Software Development Tools

JBuilder, Microsoft Visual C++,
Microsoft Visual Developer,
Eclipse, JIRA, Confluence,
AcuRev

Mr. Clark is an experienced senior software engineer with 17 years of professional experience. He has in-depth expertise and experience in the full software lifecycle process, best practices, and has successfully managed the development of numerous software and database systems.

Professional Experience

- Sr. Software Engineer for the VDOT I-81 Systems Integration contract where he was the Task Manager for the Traffic Signal Integration Task. This task included requirements definition, and design of the integration of the existing traffic signal system with the Advanced Transportation System (ATMS), OpenTMS Enterprise.

Mr. Clark was a key team member for the development of the next generation OpenTMS Enterprise System for the I-81 corridor supporting the addition of a module that monitors all activities conducted by the system and alerts the operator, if needed. He supported the replacement of the Afton Mountain Fog System, which required integration with an undocumented, unsupported legacy Variable Message Sign. This system also implemented a rule-based algorithm to activate fog responses, e.g., post messages and turn on fog lights, automatically.

- Technical Manager for the Hampton Roads, VA Metropolitan Planning Organization (MPO) Regional Requirements Analysis where he has conducted interviews with 17 local city traffic departments, 17 local emergency response agencies, state police, state department of transportation, and other significant regional traffic stakeholders to ascertain and document requirements, a top level architecture, and a concept of operations for a system to fuse emergency dispatch and transportation data in to a real time map-based common regional view of the transportation in Hampton Roads, available to all stakeholders and potentially the general public.
- Technical Manager for the Hampton Roads, VA MPO Regional Incident Sharing System Prototype: Create a working prototype, including city traffic, state DOT, state police, and city emergency response participants, of a system to fuse emergency dispatch and transportation data in to a real time map-based common regional view of the transportation in Hampton Roads, available to all stakeholders and potentially the general public.
- Prior to joining Open Roads, Mr. Clark was a Development Systems Manager with both development and technical management responsibilities. He developed applications using database (SQL), Cold Fusion, XML, Soap, Python, Perl, and Visual Basic and .NET. He effectively managed a team of web developers to implement an Internet system supporting 85 sales offices. He coordinated with management to prioritize projects and define project requirements.
- Senior Software Developer and Technical Manager who developed software



JONATHAN CLARK

applications using Visual C++ and Windows CE environment. Mr. Clark developed and managed ISO 9001 procedures. He coordinated with engineering staff (electronics, mechanical, etc.) to prioritize projects and allocate software resources.

- Senior Software Engineer where he was the Technical Leader of a team of engineers that implemented both PC based and embedded Point of Sale (POS) system. He was also the Technical leader of a team of engineers that implemented embedded gasoline dispenser and control systems. He developed a software and hardware architecture for new products in conjunction with third party vendors and other engineering disciplines. He coordinated the successful launch of new products with project management, sales, and service organizations. Mr. Clark acquired comprehensive experience in C++, HTML, JavaScript, Linux, Visual C++ and Windows CE and software engineering best practices.



Innovative Software Solutions

JOHN HORNER

Education

Master of Civil Engineering,
North Carolina State University,
2006; M.S. Computer Science,
North Carolina State University,
1992; B.A. English Literature,
University of North Carolina,
1983

Areas of Expertise

Software Engineering
System Integration
Transportation Engineering
System Integration
Testing
Statistical/Data Analysis
Traveler Information
Expert Systems

Languages

Java, C, XML, SGML, SQL,
J2EE, JDBC; working
knowledge of C++, Lisp,
Prolog, PERL

Operating Systems

Windows NT/2000/XP/Server
2003, UNIX

Software Development Tools

Eclipse, CVS, Ant, Weblogic,
AcuRev

Publications / Presentations

“The Impact on Travel
Behavior of Proximity to
Major Urban Centers”
(2006, TRB Compendium of
Papers)

“Data Reuse Methods for
Transportation Planning in
Small and Medium Sized
Towns” (Submitted)

Mr. Horner has 16 years of experience in software engineering including all phases of the development process from requirements analysis to architectural design, coding, verification and packaging. Mr. Horner offers a unique combination of civil engineering with a focus on Transportation/ITS and his 16 years of experience as a software developer.

Professional Experience

- Senior Software Engineer who is responsible for all aspects of software development, testing and deployment. Mr. Horner is instrumental in working with clients to understand end user requirements and translating them to technical solutions. He has worked with numerous stakeholders in the Hampton Roads, VA area including VDOT, state and local emergency responders, and local government agencies to develop a concept of operations and gather functional requirements for an incident management application.
- Senior Software Engineer who developed a database agnostic architecture for an Advanced Transportation Management System. This architecture allows the integration with any SQL-compliant database. Mr. Horner implemented automated testing scripts for system testing.
- Transportation Engineer under a Southeastern Transportation Center Research Fellowship who performed statistical analyses on survey data to identify different classes of travel behavior in small towns. Mr. Horner developed new quantitative classification scheme to guide planners in making choices on transferring survey data and trip generation rates from town to town.
- Senior Systems Developer for SAS Institute supporting Financial Applications Development. Mr. Horner redesigned a calculation engine for an existing commercial product achieving a one hundred fold performance increase. He developed server side technology for a global enterprise financial application grossing millions annually. He conceived and implemented a framework for authoring and executing automated test scripts for the product.
- Applications Developer for SAS Institute Publications Technology Development. Mr. Horner designed and implemented the company’s first online publication ordering system. He designed and implemented a tool integrating SAS software with SGML publishing software. This was presented at a national user’s conference demonstrating software engineering best practices.
- Teaching Associate at the North Carolina State University (NCSU) Computer Science Department. Mr. Horner was fully responsible for all aspects of undergraduate data structures class where he determined curriculum, lectured and evaluated students.
- Research Assistant at the NCSU where he designed an Internet website employing artificial intelligence. He also designed and implemented a database and applications for the placement office.



Innovative Software Solutions

Education:

B.S. Computer Science, Virginia Polytechnic Institute and State University, 2002

Certifications

Security Access Control
Security Intrusion Detection

Areas of Expertise

Software Engineering
System Integration
System Usability
System Testing
Configuration Management
Database Management
Geographical Information Systems
Traffic Management
Data Archival
Physical Security Systems

Languages

C, C++, Java, JavaScript,
HTML, SQL, XML, BASIC

Operating Systems

Windows NT/2000/XP/2003 and
Linux

Software Development Tools

Eclipse, JBuilder, CBuilder, MS
Visual C++, MS Visual
Developer, ESRI ArcIMS, ESRI
ArcGIS Engine/Server, AccuRev,
JIRA, Confluence, Open Source
Tools

Training

Crystal Reports
Configuration Management

Publications / Presentations

"A GIS Solution to Traffic
Management", ESRI-MUG
2006 Annual Conference

DANIEL J. SKIFFINGTON

Mr. Skiffington is a software engineer who supports all aspects of the software lifecycle process to include: requirements analysis, system design, coding, testing, deployment, maintenance, configuration management, and documentation for both web-based and client/server applications. He has been instrumental in the development and maintenance of Advanced Transportation Management Systems, Data Archival Management Systems, and Geographical Information Systems. Mr. Skiffington is a self-starter, conceptual and logical thinker who has contributed both as a developer and technical lead.

Professional Experience

- Software Engineer for the VDOT I-81 Corridor System Integration Contract who was responsible for component enhancements for the Advanced Transportation Management System. He has been a key team member contributing in the following areas:
 - Upgraded the Variable Message Sign module functionality and has supported the integration of numerous types of mobile and fixed signs. He has worked side-by-side with sign vendor staff to troubleshoot integration and communications hand-shaking.
 - Supported the development of the travel time module that interfaces with the field device server to update data, report and display the travel time in tabular, map and graphical (time history) format.
 - Responsible for many of the iterative system releases and associated acceptance testing and training.
 - Key team member in the upgrade from ESRI MapObjects to ESRI ArcGIS Engine. Mr. Skiffington conceptualized and developed a significantly improved system architecture that improved the overall performance. This effort was successfully conducted over a compressed timeframe.
 - Developed an excellent and professionally packaged set of reports including graphics showing operational and system performance measures. This report is fully automated and can be executed over varying durations.
 - Provides on-going technical support for system maintenance, releases, documentation, and configuration management.
- Software Engineer for the VDOT Archive Data Management System (ADMS) Virginia sponsored by FHWA. His responsibilities included supporting the development of the web portal used by transportation and emergency planners. Mr. Skiffington was the key resource in developing the real-time update for the web-based Geographical Information System map using ESRI ArcIMS. This module provided incident and flow/speed updates on the map display. He gained experience with open source programming tools in conjunction with Tomcat web server on this project.



DANIEL J. SKIFFINGTON

- Software Engineer for the VDOT Richmond System Manager Contract who was responsible for maintenance and enhancements to the Advanced Transportation Management System. Specifically, Mr. Skiffington was a key team member in the upgrade of the commercial-off-the-shelf (COTS) tools used within the system.
- Software Engineer who conducted acceptance testing on various ITS products. Mr. Skiffington verified the accuracy of acceptance test procedures against software requirements and the system functionality. He provided independent testing on a commercial video distribution system product and updated corresponding user and system administrator manuals.

Jason Dong, Sr. Analyst (EnterInfo)

Education

M.S., Information Technology, Virginia Polytechnic Institute and State University, 2003
M.S., Urban Planning and GIS, Virginia Polytechnic Institute and State University, 1996
B.S., Architecture, Tsinghua University, 1993

General Experience Summary

Mr. Dong has over ten years of extensive GIS and Internet mapping application programming experience. He is a Microsoft Certified Solutions Developer with extensive GIS and Internet mapping application programming experience in Visual Basic, Active Server Pages, Visual InterDev, HTML, Java, JavaScript, Map Objects, Internet Map Server, ArcIMS, GeoMedia Objects, and GeoMedia Web Map. Mr. Dong is especially experienced in database design and implementation using SQL Server, Oracle and Oracle Spatial Cartridge, with primary focus in the design and implementation of large-scale multi-tier client-server and WEB-based application with the latest IT and mapping technologies.

Specific Experience Summary

Mr. Dong is one of the most experienced developers specializing in integrated WEB-based GIS solutions. A lead developer of several successful enterprise-wide GIS systems, he has successfully integrated GIS with GPS, electronic sensors, weather sensors, wireless communication devices, voice recognition engines, and image capturing systems.

Work Experience

Enterprise Information Solutions, Inc., Vice President of Software Development, 11/2001 – Present.

Overall responsibilities as the software architect to guide system design and software engineering process for multiple projects. Primary duties include designing and leading the implementation of critical system components.

Step9 Software Inc. Senior Developer, 4/2001 – 11/2001

Designed and led the implementation of iCustomer portal application for a telecommunications customer relationship and order management system. This project utilized development skills in object-oriented design using UML and Visio, database design with Visio, SQL Server 2000 and Visual Basic 6.

Enterprise Information Solutions, Inc., Director of Internet Technology, 1997 – 2001

Managed several information system and application development projects for various customers, several samples of which are cited below. Responsible for managing the software development staff consisting of system analysts and programmers. Hands-on system design and programming practices include the coding of critical elements of various projects. Established the software engineering procedures and coding standards for the company.

- ***CHART EORS Internet/Intranet Web Mapping for the Maryland State Highway Administration***

Led the implementation of a state-of-the-art traffic monitoring WEB site for the Maryland State Highway Administration to display road speed sensor, road condition status, real-time video and snapshot camera information through an integrated mapping interface. Designed and developed the WEB mapping site using ASP, IIS4.0, Visual Basic, COM, HTML and JavaScript, MapObjects Internet Map Server and SQL Server 7.0 as the backend database.

- ***Signing and Lighting Project Management System for Maryland State Highway Administration's Office of Traffic and Safety***

Led the implementation of an Intranet WEB site using ArcIMS, ASP, IIS, Oracle 8i spatial cartridge and ArcSDE to manage, display and report map and project information through an easy to use WEB interface.

- ***Real Time Crime Reporting for the State of Delaware's Dept. of Public Safety***

Designed and led the implementation of an enterprise-wide intranet application to provide all Delaware law enforcement personnel with real-time access to crime data reported from police cars through wireless CDPD communication. Installed and configured Oracle 8.0.5 database and FailSafe clustering. Designed and set up the database table structure, views and triggers. Developed object-oriented design using UML and Visual Modeler. Performed performance tuning for Oracle and Spatial Cartridge. Developed WEB site using ASP/JavaScript and GeoMedia Web Enterprise. Implemented Microsoft Cluster Server to provide 24-7 availability for the IIS/ASP application and Oracle 8.0.5 server to support thousands of client users on the Delaware State Police's intranet.

- ***Client/Server Vehicle Tracking System for the Delaware State Police***

Developed the system consists of server software, administration tools, and client application which allow real time wireless communication of vehicle GPS information to central server, allowing multiple monitoring stations to perform vehicle location query and map display.

- ***Palm Field Data Collection Application***

Developed Oracle 8i/Lite application with Satellite Forms on Palm OS to collect field data and synchronize with central database server. Developed Palm Query Application to query and update data from wireless PalmVII PDAs.

- ***Live Map for Enterprise Information Solutions, Inc.***

WEB based GIS solution that offers an organization the ability to distribute their data warehouse to field workers, allowing edits, updates, and inserts, seamlessly through lightweight software components.

- ***DocView for Montgomery County, Maryland***

Automated road survey application that field crews used to distinguish different roadway conditions throughout the entire county.

Enterprise Information Solutions, Inc., GIS Application Engineer, 1995 – 1997

Was responsible for the full life cycle software project implementation including designing, planning, coding and testing of software products utilizing Visual Basic and various GIS software packages. Designed, developed and maintained Internet mapping and database intensive and websites. Administered a large-scale MS SQLServer database.

Palm Beach County, Florida, Planning Department, Database Administrator, 1995

Established a county-wide parcel-based land use database using MS FoxPro. Developed FoxPro program for data updates and browsing. Analyzed potential sites for hurricane shelter suitability based on land use and zoning data.

Roger Leung, Senior Developer (EnterInfo)

Education

Ph.D., Chemical Engineering, University of Florida, 1986

M.S, Chemical Engineering, University of Florida, 1981

General Experience Summary

A MicroSoft certified professional with extensive experience in developing GIS applications using MicroSoft and ESRI development tools, Dr. Leung's wide experience in application development, website development, Internet programming include MS Windows 95/98/NT/2000 applications, MS Visual Basic and MS Visual InterDev, XML, JavaScript, IIS applications, Active Server Pages (ASP), HTML, COM, DCOM, and ActiveX programming. He also has relational database design and development experience in Oracle 8 (SQL*Plus 8, Developer/2000 R2.1, Designer/2000 R2.1 & LifeCycle), MS SQL Server 7.0, MS Access, DAO/ADO/RDO/SQL, and data warehousing and analysis. He has used SAS for statistical design experiments and data analysis and graphing. Additional software experience includes Crystal Reports and Microsoft OLAP (SQL Server 7). Dr. Leung is experienced in many environments, including IBM mainframe (VMS, COBOL, JCL), Wang VS minicomputer, and IBM PC (Professional Basic/DOS).

Specific Experience Summary

Dr. Leung has extensive experience in integrating GIS solutions with WEB technologies. Specific GIS programming and software experience include ESRI ArcIMS, ArcSDE, ArcInfo 8, ArcObjects, MapObjects, MapObjects LT, MapObjects Internet Map Server (MoIMS), ArcView Avenue, ArcView, ArcInfo, and IDRISI.

Work Experience

Enterprise Information Solutions, Inc., Sr. Computer Software Analyst, 2000 – Present

Soletron Global Services, Systems Analyst, 1999 - 2000

W.L. Gore & Associates, Information Systems Manager, 1996 - 1999

RELEVANT PROJECTS

Highway Management Information System for Maryland State Highway Administration

Dr. Leung was the Key Developer for the redesign and implementation of this vital database. The HMIS is currently being migrated from Informix to Oracle and redesigned to comply with new FHA modified data requirements for the Highway Performance Monitoring System.

Traffic Monitoring System Support and Development for the Maryland State Highway Administration

EnterInfo maintains, supports, configures and develops the Traffic Monitoring System (TMS) database for the Maryland State Highway Administrator (SHA). The TMS database is ORACLE-based and stores over 300GB of the traffic data generated by a variety of the electronic devices such as monitoring sensors, cameras, signals, and hardwired panels. Dr. Leung is a key team member responsible for the support of the Oracle database and map publishing. This project requires data migration from Informix to ORACLE. Dr. Leung completed many WEB programming tasks using various development tools including VB, ORACLE Designer, Java script and ASP.

Delaware Environmental Information System for the Delaware Department of Natural Resources and Environmental Control

Developed a WEB-based GIS application using ArcIMS-based MapView. Retrieved data from multiple databases and merged into an enterprise-wide SQL Server. Developed geocoding utilities using Visual Basic and ESRI MapObjects. Customized GIS components using JavaScript and XML. The technologies used in this system include MS Windows 2000 Advanced Server, ESRI ArcIMS 3.0, ESRI ArcSDE 8.0, ESRI ArcObjects, MS SQL Server 7.0, IIS applications, MS Active Server Pages (ASP), Java Script, XML, and MS Visual Basic 6.0.

Willie Choi, Systems Analyst (EnterInfo)

Education

B.S. Computer Science, University of Maryland at College Park, 2002

B.A., Economics, University of Maryland at College Park, 2002

General Experience Summary

Mr. Choi has 3 years and 7 months of experience in systems analysis, application programming, database support, and software testing. Graduated from one of the top computer science programs in the nation, Mr. Choi has demonstrated strong technical capabilities, intuitive solution development, and the ability to complete complicated task for large-scale mission critical systems. Mr. Choi is proficient with various WEB development tools and Oracle/SQLServer database. As a young developer, he has always become the key developer providing effective solutions for the development team.

Specific Experience Summary

C#.NET, VB.NET, ASP.NET, Java, SQL, PL/SQL, C, C++, Pascal, HTML, Perl, VBScript, Visual Basic, JavaScript, PHP, ColdFusion, ASP, XML, J2ME, MS Visual Studio.NET, InstallShield, MS SQL Server, MS Visual Basic, ColdFusion MX, Dreamweaver, SQL PLUS, TOAD, Dr. Java, JBuilder, ORACLE, SourceSafe.

Work Experience

POSITION: Enterprise Information Solutions, Application Developer, (January 2007 – Present)

Duties/Responsibilities: Mr. Choi is responsible to perform WEB, client/server, and desktop programming tasks using various development tools. He is also responsible for performing technical support tasks for Oracle and SQLServer database systems.

POSITION: Trawick & Associates, Bethesda, MD Programmer Analyst (January 2004 – January 2007)

Duties/Responsibilities: Mr. Choi was responsible for the system development life cycle (design, implementation, testing, and packaging) and post development maintenance of the OREIS project using VB, C# .NET, TCP/IP, Advanced Encryption Standard (AES), and MSSQL. He developed OREIS online for the Regional Information Sharing System's (RISS) Anti-Terrorism Information Exchange (ATIX) using ColdFusion and JavaScript. He developed the OREIS WEB Service module for The National Law Enforcement Telecommunications System (NLETS) using C# .NET and Global Justice XML Data Model (GJXDM) and the OREIS mobile environment module using J2ME, ASP.NET and web service. Mr. Choi also developed a WEB based Graphic Information System (GIS) interface using ASP.NET, MSSQL, and Google Map's API. In addition to the software programming, Mr. Choi also has provide technical support and performed helpdesk duties for users.

POSITION: Invertix, Annandale, VA Software Developer (July 2003 – January 2004)

Duties/Responsibilities: Mr. Choi participated in the maintenance and development of the mNet project for the Federal Bureau of Investigation's (FBI) Law Enforcement Online (LEO). He modified existent and implement new functionalities to the system using ColdFusion, JavaScript, Smart Pass, and ORACLE. Mr. Choi also performed Oracle database support tasks. He created PL/SQL procedures to automate the data loading, integrity verification, and tables joining work. He also developed various scripts to stress testing the reliability of different projects.

Lei Zhong, Developer (EnterInfo)

Education

M.S. Urban Planning, Virginia Polytechnic Institute and State University, Blacksburg, VA
M.S. (candidate), Computer Science, Johns Hopkins University, Laurel, MD., 2001 – ongoing
B.A., Architecture, Tsinghua University, Beijing, China, 1993
Certified as Master of Urban and Regional Planning GIS, December 2000
Sun Certified Java Programmer, May 2001

General Experience Summary

A Java certified developer with extensive experience in developing WEB-based GIS applications using MicroSoft, Java, and ESRI development tools, Mr. Zhong has wide knowledge of GIS theory and strong skills in GIS packages. He has over three years programming experience in GIS application development using Visual Basic, Visual InterDEV, ESRI's MapObjects, ArcIMS, and ArcSDE. He is skilled in C++ programming and object-oriented design. His experience in application development, website development, and Internet programming include MS Windows 95/98/NT/2000 applications, MS Visual Basic and MS Visual InterDev, XML, JavaScript, IIS applications, Active Server Pages (ASP), HTML, COM, DCOM, and ActiveX programming. His knowledge of relational database design and development include Oracle 8 (SQL*Plus 8, Developer/2000 R2.1, Designer/2000 R2.1 & LifeCycle), MS SQL Server 7.0, MS Access, and DAO/ADO/RDO/SQL.

Specific Experience Summary

Mr. Zhong has extensive experience in integrating GIS solutions with WEB technologies. GIS programming and software experience include ESRI ArcIMS, ArcSDE, ArcInfo 8, ArcObjects, MapObjects, MapObjects LT, MapObjects Internet Map Server (MOIMS), ArcView Avenue, ArcView, ArcInfo, and IDRISI.

Work Experience

Enterprise Information Solutions, Inc., Applications Developer, 2001 – present

CHART – Emergency Operations Center for the Maryland State Highway Administration

As Applications Developer, Mr. Zhong provided GIS applications development services for the internal Intranet and the public WEB site of the State's traffic monitoring and emergency operations center. These development efforts include working with the following:

- Device Editor Tool - MapObjects Client/Server Application. This system allows users to add/edit the spatial locations and attributes for devices. It works on shapefiles as well as SQL Server database. Updates are made to the live data.
- CHARTWeb Internet Site - Public MO IMS Site. This works with SQL Server data and shapefiles. Responsibilities included installing and deploying MO IMS, establishing several MO IMS services, performing system testing and enhancing performance through load balancing efforts.
- EORS Intranet Site - MO IMS Site. This works with SQL Server data and shapefiles.

Environmental Systems & Tech. Inc., Programmer, 1999-2000

Developed Internet-based applications for environmental database management with VB and MapObjects.

VA Polytechnic Institute and State University, Computer Lab Administrator, 1998-2000

- Co-administered the Urban Planning Department computer lab
- Redesigned and maintained WEB site for the Association of Chinese Students and Scholars at VA Tech

Nanshan Institute of Architectural Design, China

As CADD Coordinator, founded and developed the computer lab for the Institute serving over 40 users

Weilin Sung, Application Programmer (EnterInfo)

Education and Certification

M.S., Computer Science, George Washington University, Washington, DC, 05/2000.

B.S., Engineering and Aeronautical Engineering, Tamkang University, Taiwan, 05/1995.

Sun Certified Web Component Developer (SCWCD, Exam 310-080), Alexandria, VA, 10/2003

Sun Certified Programmer for the Java 2 Platform (SCJP, Exam 310-025), Arlington, VA, 04/2002

General Experience Summary

Mr. Sung is a Web Developer with over seven years experience. He has broad development experience using both Microsoft technologies such as Visual Studio.Net, ASP.Net, Visual Basic and Java technologies using JSP and Java Servlet. He has over 6 years of experience with web application development using all these tools and Java Script, XML, XSLT and XML DOM. He is a Sun Certified Programmer/Web Developer with two Java Certificates (SCJP and SCWCD) from Sun Microsystems. He has seven years of experience developing systems using popular relational databases including Oracle9i, SQL Server and Access.

Specific Experience Summary

Mr. Sung has over five years of experience implementing GIS on Intranet and Internet environments using ESRI's ArcSDE, ArcIMS system. Mr. Sung is also very proficient in the suite of ESRI products such as ArcGIS and ArcObjects. He is has over four years of experience working with ESRI's ArcSDE product managing GeoDatabases using Microsoft SQL Server and Oracle 9i. Mr. Sung has developed many IT and GIS applications for the Maryland State Highway Administration. He understands MDOT operation requirements and is familiar with MDOT's IT, GIS, and quality assurance requirements. Mr. Sung has is proficient with linear referencing, dynamic segmentation, and most popular transportation network models. Mr. Sung is familiar with the LDAP and Single Sign On technologies. All the development tasks that he has performed require the use of SourceSafe or ClearCase configuration management software. Mr. Sung has a strong working knowledge of requirement management and automated testing software.

Work Experience

PRESENT POSITION: Enterprise Information Solutions, Inc., Applications Developer, (May 2000 – Present)

Mr. Sung has successfully developed many desktop, client/server, and WEB applications for government clients. Some project examples include:

Developed a web-based, map-enabled traffic information application for Maryland State Highway Administration (CHART). This application provides real-time traffic information for the general public over the world-wide-web and is programmed using ASP.Net, ArcIMS4, ArcSDE, XML, XSLT, and SQL Server 7.

Developed the WEB based Memorandum of Action search application for Maryland State Highway Administration. This WEB application is developed using ASP, Java Script and HTML. The application allows the users to search SHA's memorandums scanned in PDF format based on the attributes stored in the backend Oracle database.

Programmed a Traffic Control Device (TCD) web system for Maryland State Highway Administration using ESRI ArcIMS 3.1, SDE, ASP, JavaScript, XML, and Oracle8i. The enterprise web system provided many functions to manipulate maps, such as zoom in, zoom out, zoom to, pan, identify, and spatial query. The application also allowed the users to add or modify the spatial information in Oracle8i through web interface in real-time by using SDE.

Designed and programmed a 3-tier web system for Maryland State Highway Administration. The online traffic information retrieval system included a file indexing system implemented using HTML, JavaScript, and ASP, a PDF file system, and a back-end database system using Oracle8i. The enterprise web solution provided the employees of Maryland State Highway Administration an efficient and convenient way to retrieve desired electronic documents from their archives.

Built a web based GIS application for the World Bank. The application provides online search for World Bank projects and displays different coloring schemes for the World Bank's key development indicators on the map using ASP.Net, ArcIMS4, ArcSDE, XML, XSLT, Oracle9i, and SQL Server 2000. Developed a VB 6.0 application for Verizon. The application provided Verizon field workers a visual and instinctive data entry/modify system instead of the traditional form filling system. The user-friendly system helped Verizon workers to set up their cable installation and maintenance database, which was built upon Access 2000, by instinct and minimized typing. After every workday, these individual systems will be synchronized with center database and data will be uploaded for central processing.

As a Computer Technician with the **Metropolitan Washington Airport Authority, (May 1999-May 2000)**, Mr. Sung designed a MS Access database and developed SQL statements to manage the facilities of the airport. Mr. Sung also designed and programmed a Personal Information Manager system for the department using Sybase, JavaScript and HTML and tested the application on the web using PowerDynamo 3.0.

Bo Yang, QA/QC Specialist (EnterInfo)

Education

M.S. Computer Science, Towson University, Maryland, 2003
B.S., Biochemistry, Zhongshan University, P.R.China, 1999
Oracle Certified OCA, 2004

General Experience Summary

Ms. Yang is an Oracle certified DBA with extensive experience in geo-spatial database processing. She has successfully complete WEB development projects, Data mining and database application design, and image asset solution projects. Ms. Yang is proficient with ESRI GIS applications including ArcGIS, ArcView, ArcSDE, ArcIMS, shapefiles, and geodatabase. She has completed programming tasks using Java, JSP, JavaScript, HTML, XML, ColdFusion, C++, OpenGL, and VB Studio.

Specific Experience Summary

Ms. Yang is proficient with most major GIS applications, client/server development tools, RDBMS, WEB programming and document management solutions. She has hands-on experience processing data for GIS related IT projects. Her software applications experience include: ESRI ArcIMS, ArcGIS, ArcView, LaserScan Lamps2, Oracle, SQL Server, and Access.

Work Experience

Enterprise Information Solutions, Inc., GIS Data Specialist, 2003 – Present
Towson University, Network Assistant, 2001-2003

RELEVANT PROJECTS

Ms. Yang performed production and QA/QC duties for several image asset inventory projects. The projects involve the reviewing and editing of data records in Oracle, MicroSoft Access, and ESRI ArcGIS and geodatabase. Ms Yang used image based asset application to create asset inventories and validate database records using the photo images captured along the roads. Ms. Bo reviewed and approved the images captured by the field crew and asset records collected using the images.

- Ms. Yang used LaserScan and ArcGIS mapping application to apply updates to the NOAA electronic nautical charts (ENC). The work requires through understanding of the various nautical related sources produced by cost guard, corps of engineers, utility companies, and private sources. Ms. Yang demonstrated high productivity and quality work superior among the co-workers.
- Ms. Yang completed network support and WEB programming tasks using HTML and JavaScript. She completed an on-line book selling system using JSP and Java Servlet to handle the parsing and communication between the server and the browser front-end.

Rob Hranac
Vice President

Expertise Rob Hranac's experience revolves around the connection between transportation systems and information technology. He has a decade of practical experience working with public sector agencies deploying technology to monitor, model, and optimize a broad array of transportation systems. He has specific expertise in geographic information systems, travel demand models, and traffic microsimulation models.

Education M.S., Transportation Engineering, University of California at Berkeley, 2001
M.C.P, City Planning, University of California at Berkeley, 2001
B.S., Systems Engineering, Boston University, 1997
B.A., Economics, Boston University, 1997

Experience **Federal Highway Administration, Next Generation Simulation (NGSIM) Project.** During his time at Cambridge Systematics, Mr. Hranac was the project manager of the Next Generation Simulation program for the Federal Highway Administration (FHWA), a multi-million dollar, multi-year program to improve traffic microsimulation models. For the FHWA, Mr. Hranac helped manage the provision of new and improved analysis tools for transportation operations and associated research. In this capacity, he oversaw a complex consortium of four major research universities and a dozen sub-contractors as they researched next generation traffic microsimulation algorithms. Mr. Hranac also led the first major successful vehicle trajectory data collection effort in two decades. As side products of these efforts, Mr. Hranac successfully lobbied the Massachusetts Institute of Technology to release their traffic simulator (MITSIM) under an open source license. He also led the development of a practical open source tool that translate video images into detailed sub-second locations and dimensions of vehicles.

Orange County Transportation Authority, State Route 91 Dynamic Pricing. For the Orange County Transportation Authority (OCTA), Mr. Hranac developed a dynamic pricing algorithm for State Route 91 (SR91). SR 91 currently operates using variable pricing, which changes hourly on a fixed tolling schedule, based on historical demand on the corridor, rather than current traffic conditions. As a first step in making the transition to dynamic pricing, OCTA installed a travel time monitoring system and creating a dynamic pricing algorithm. The dynamic pricing algorithm developed by Mr. Hranac for OCTA is more complex than traditional HOT lane dynamic pricing algorithms, because the goals of the agency are more complex than simply filling excess capacity on an existing HOV lane. Rather, they include interactions between corridor efficiency, guaranteed reliability, and bond obligations. As such, the OCTA dynamic pricing model takes a novel pricing approach to harmonize these conflicting goals.

Jaimyoung Kwon, Ph.D.

Associate

Expertise Dr. Jaimyoung Kwon is an expert in the statistical analysis of freeway and arterial systems. His academic research and practical experience has focused on the development of modeling techniques that align performance monitoring inputs with pragmatic outputs for traffic engineers. Dr. Kwon is a professor of statistics at California State University and works part time for Berkeley Transportation Systems.

Education Ph.D., Statistics, University of California at Berkeley, 2000
M.S., Statistics, Seoul National University, 1996
B.A., Computer Science and Statistics, Seoul National University, 1994

Experience **PeMS 7.0 Development.** For Caltrans, Dr. Kwon was the principal statistician of the Freeway Performance Measurement System (PeMS), version 7.0. Dr. Kwon solved some of the most complex issues surrounding statewide performance measures in California, including: the prediction of travel time; data quality monitoring; and estimation of truck traffic volume. In this role, Dr. Kwon developed various statistical methodologies for freeway PeMS project, including: (1) visualization of extremely large datasets, (2) probabilistic detection of loop malfunctions in real time and analysis of general data quality issues, (3) imputation of missing/bad loop data, (4) analysis of freeway incident data and study of the relationship between incidents and traffic conditions, (5) study of high-occupancy vehicle (HOV) lane utilization, (6) estimation of truck traffic volume from loop data, and (4) travel time prediction

PeMS 6.0 Development. For Caltrans, Dr. Kwon was the principal statistician of the Freeway Performance Measurement System (PeMS), version 6.0. In this role, Dr. Kwon worked broadly on the application of statistics to transportation science, analyzing large spatio-temporal data from freeway loop detectors. In support of this earlier version of PeMS, Dr. Kwon developed various background statistical methodologies for the freeway project, including the basics of detector diagnostics and large scale imputation.

Bill Morris

Data Warehouse Architect

14 Years of Experience

Expertise	Bill Morris is an expert in the development of the internal processing engine of large-scale data warehousing and analysis systems. He has been working for nearly fifteen years as a professional data analyst and engineer. His expertise includes data warehousing, network programming and systems integration.
Education	M.A., Linguistics, University of Wisconsin at Madison, 1994 B.S., Computer Science, University of Wisconsin at Madison, 1992
Experience	<p>PeMS 7.0 Development. For Caltrans, Mr. Morris was a principal architect of the Freeway Performance Measurement System (PeMS). In particular, his duties included the development of a data processing engine for: aggregation; diagnostics; and performance measure computation. He has developed routines within PeMS for Caltrans that support equipment configuration management, as well as real-time logic and monitoring of the freeway system itself.</p> <p>PeMS Spokane Deployment. For the Spokane Regional Transportation Council, Mr. Morris led the deployment of a performance monitoring system to be shared between the state transportation district and regional metropolitan planning organization. Mr. Morris managed all aspects of the deployment, including system integration with detectors, user interface customization, and user training.</p>

Karl Petty, Ph.D.
President

Expertise

Dr. Karl Petty is the President of Berkeley Transportation Systems, Inc. He holds a Ph.D. in Electrical Engineering from UC Berkeley and has been a Director of Engineering managing software development teams in multiple Silicon Valley firms. Dr. Petty oversaw the development of PeMS for Caltrans and has since fostered its expansion into an internationally leading transportation business intelligences software platform. Dr. Petty sits on the Transportation Research Board's Freeway Operations Committee and – as such – is an expert on the application of freeway performance monitoring regimes to transportation performance measurement programs.

Education

Ph.D., Computer Science, University of California at Berkeley, 1997
B.S., Electrical Engineering, Michigan State University, 1991

Experience

PeMS 7.0 Development. For Caltrans, Dr. Petty developed and oversaw the expansion of the Freeway Performance Measurement System (PeMS) to encompass all real-time freeway data within the state of California, as well as several other deployments in other states and internationally.

Inktomi. For Inktomi, Dr. Petty served as director of engineering for media. In this role, he was initially in charge of the MediaBridge Core Networking Team. His responsibilities expanded to include management of three additional software development teams: the Content Distribution System (a product to synchronize distribution of content to web pages), Media Publisher (a product that allows users to setup, maintain and run streaming video presentations), and the Traffic Director (a redirection product). Dr. Petty was also responsible for management and professional development of development managers and engineers, interfacing with QA managers, working directly with product management on direction, and assisting product marketing with messaging.

Eric Shieh

Associate

12 Years Experience

Expertise Eric Shieh is an expert in the end-to-end development and delivery of complex data systems in the fields of enterprise transportation business intelligence software. His areas of focus lie in the architecting of frameworks that provide stable and scaleable foundations for performing complex, data-intensive analysis on transportation systems.

Education B.S., Computer Science, University of California at Berkeley, 1996

Experience **PeMS 7.0 Development.** For Caltrans, Mr. Shieh has served as user interface lead on the PeMS 7.0 development and deployment. In this capacity, he has developed the fundamental set of reporting templates used statewide by Caltrans engineers to manage the performance of the state freeway network. This included the development of two and three dimensional plots for freeway and bottleneck analysis used in the I-880 corridor analysis effort, as well as the fundamental maps and interfaces used by engineers statewide.

Arterial/Freeway Travel Time Comparison. For the San Diego Association of Governments (SANDAG), Eric has worked to develop a system of route-based comparisons. This system measures travel times on freeways and parallel arterials and provides freeway managers with the tradeoff between network points in real time.

Open Harbor Software. During his time at Open Harbor, Mr. Shieh managed the development and deployment of their trade management platform by coordinating the product management, development, quality assurance, and operations teams to ensure delivery of features within schedule and without disruption. During his tenure as Software Delivery Manager, he emphasized testing methodology, reined in scope creep, and promoted communications between divisions resulting in the first major deployment without the need for downtime or rollbacks. He also developed the user interface architecture for DHL's Trade Automation Services (TAS) website which has provided international shipping services to its customers for over three years.

SUMMARY OF QUALIFICATIONS

Technical executive recognized for leadership in solving significant technical and business problems. Proven success in assessing situations and rapidly developing appropriate solutions. Developed products as the founder of a software startup, migrated existing products to new platforms and turned around floundering engineering organizations.

Instrumental in the rapid growth of TFS, co-Founded iKnowMed, responsible for operations as COO at Kivera and currently delivering dynamic content products for Tele Atlas. Utilize a hands-on, collaborative approach to insure that delivered products meet customer needs.

EDUCATION

- B.A. Computer Science - University of California, Berkeley

EXPERIENCE

Tele Atlas

2003 - present

Director, Dynamic Content, Product Development & Engineering

Responsible for the Dynamic Travel Content (DTC) group for Tele Atlas, North America which delivers dynamic content such as traffic incidents, real-time speed data, historical speed and weather information to both the private sector and to state governments.

- Responsible for: source acquisition, customer relationships, data center operations and engineering of new products and delivery platforms
- Development of the dynamic content strategy for Tele Atlas and supports business development activities. Maintain relationships with all of the current and emerging dynamic content suppliers.
- Developed an industry consortium for location referencing with closest competitor and have presented papers on the topic at US and European industry conferences.

Kivera

2001 - 2002

Chief Operating Officer/Acting VP Engineering

Responsible for engineering, QA, product management, finance, HR, consulting, IT, customer support and Facilities. Kivera is a leading Location Based Services (LBS) engine provider to the wireless, auto navigations and web market.

- Led the engineering team to dramatically improve the quality and performance of Location Based Services (LBS) engine that included an indexed database of every street and address range in North America and Europe.
- Reorganized and restructured chaotic management and engineering situation and implemented basic processes needed in this growing organization. Orchestrated significant organizational changes without major disruptions or morale issues.

iKnowMed

1995 - 2000

Co-Founder, Vice President Engineering

1 of 3 founders of iKnowMed. Key member of senior management team which took company from 3 to 100 employees and through 3 rounds of financing.

- Developed prototype to secure funding and built engineering team of 40 developers.
- Architected object-oriented 3-tier system used to replace paper charts in physician offices.
- Implemented iKnowChart and deployed it in less than 1 year. iKnowChart has a patented user interface, sophisticated rules engine and a coded, hierarchical vocabulary of over 100,000 clinical terms.

iKnowMed

Vice President Implementation & Client Services

- Developed a team of 20 implementation consultants to implement iKnowChart nationally to 100 physicians in 6 months.
- Led team that developed interfaces between iKnowChart and hospital, local lab, local practice management, scheduling and billing systems.
- Led iKnowMed's Entrepreneur's Foundation team that included continued participation by more than ½ the company in community events.

Medicus Systems

1995

Senior Project Manager

- Responsible for delivery of Resource Case Management product and was a senior member of technical product migration team
- Implemented prototype and design for EMPI component. (Enterprise-wide Master Person Index)
- Member of the architecture team to develop hospital-based outcomes information system

TRW Financial Systems

1982 - 1994

Director of Industry Systems

Rose up through the ranks from system developer, application developer to project manager to Manager of Project managers.

- Developed real-time image systems for large financial institutions including: Citibank, Pacific Bell, Continental Bank, Bank of America and American Express. Systems included multiple UNIX servers, custom high-bandwidth network protocol, specialized hardware for high speed image capture and sub-second image display.
- Technical member of the sales team that was responsible for large system sales to financial institutions.
- Director, Quality Management, responsible for process improvement initiatives.

Résumé

MARK E. HALLENBECK

Washington State Transportation Center
1107 NE 45th Street, Suite 535
University of Washington, MS-354802
Seattle, Washington 98105
(206) 543-6261

EDUCATION

1980 MS, Civil Engineering, University of Washington
1979 BS, Civil Engineering, University of Washington

PROFESSIONAL ASSOCIATIONS

Transportation Research Board , Committees AFD30, ABJ20,
Conference Chair NATMEC 2004

PROFESSIONAL EXPERIENCE

Director, Washington State Transportation Center (TRAC), University of Washington, Seattle, Washington, July 1, 1993 to present

Affiliate Faculty, Departments of Civil and Environmental Engineering and Urban Design and Planning, University of Washington, Seattle, Washington, September 1989 - present, teaching Intelligent Transportation Systems, Urban Transportation Planning, and Traffic Engineering

Senior Research Engineer - Associate Director, Washington State Transportation Center (TRAC), University of Washington, Seattle, Washington, September 1984 to June 1993

Senior Consultant, Peat, Marwick, Mitchell & Co., Management Systems Department, Washington, D.C., July 1980 to August 1984

Selected Project Experience at TRAC

Current responsibilities include managing and conducting research projects in all aspects of transportation engineering with specific emphasis on traffic data collection, and Intelligent Transportation System implementation as well as directing TRAC's client relations, administrative and office functions. Specific projects include:

- NCHRP 20-58(3). Detailed Planning for Research on Providing a Highway System with Reliable Travel Times, Technical Consultant. Providing input to this key NCHRP project based on the findings from four years of analysis of data archives from the Puget Sound freeway management system.
- Traffic Congestion Monitoring - Urban, Principal Investigator, for WSDOT. In this project, was responsible for developing alternative plans and strategies for measuring urban traffic congestion in Washington state. Plans include the collection of travel time data using AVI tags on cars, HOVs, and buses, in conjunction with the AVI based transit signal priority system being installed in the Puget Sound area.

**Selected Project
Experience at TRAC
(Continued)**

- NCHRP 7-16 – Recommended Revisions to the AASHTO Guidelines for Traffic Data Programs, Technical Consultant to Cambridge Systematics, Inc. for this revision to these national guidelines
- Statewide Archive, Principal Investigator, for WSDOT. The development of a GIS based, web accessible system for providing access to traffic data collected by a wide variety of ITS devices being installed by WSDOT. The intent is to provide universal, easy access to data generated with ITS equipment.
- Smart Highways Network Manager Working Paper. Principal Investigator, for Florida Turnpike Enterprise, as sub to PBS&J. This project described what data handling resources were needed by the highway agency of the future as that agency strives to take advantage of the data generated by the VII and IVI programs.
- Update of the Federal Highway Administration’s Traffic Monitoring Guide. Principal Investigator for this project to revise and refine the traffic data collection guidance provided by FHWA to the states.
- Framework For Developing Incident Management Systems. Project Manager, for FHWA and WSDOT. Developed a document that describes the steps necessary for developing a formal, efficient incident response program. Products from this project include a report discussing the needs, issues and potential designs of incident response systems, a step-by-step framework for developing such a system, and a case study of how such a system was developed and evolved over time.
- NW Region FLOW Evaluation. Principal Investigator, for WSDOT of four consecutive two years projects, that have resulted in the development and active use of a data archive and analysis process used to monitor the frequency, geographic extent, and duration of congestion on the Puget Sound freeway system.
- FHWA Incident Management Workshop. Principal Investigator, for FHWA for this project that refined and presents the FHWA workshop on incident management (Demo 86).
- Western States Transparent Borders Project, Principal Investigator for this project that is determined the institutional and regulatory barriers to implementing IVHS CVO technologies that should improve the efficiency of interstate truck freight movements.

Confidentiality Claims

In accordance with Section A-2, Part M of the RFP, this section identifies the specific portions of the proposal that are deemed by INRIX to contain confidential, proprietary information or trade secrets. The following table identifies all parts of the proposal, both in Volume I and Volume II, that are to be protected and not disclosed under the Access to Public Records Act, State Government Article, Title 10, Subtitle 6, Annotated Code of Maryland.

Section	Page(s)	Content to be Protected	Rationale
Volume I, Tab 3, Technical Proposal	3-9 through 3-10	INRIX Traffic Fusion Engine section	Confidential details on INRIX competitive business advantage and technical know how
Volume I, Tab 3, Technical Proposal	3-11	INRIX Partner Portal section	Confidential technical details of INRIX solutions
Volume I, Tab 3, Technical Proposal	3-12, 3-15 through 3-19, 3-23, 3-24, 3-29 through 3-31, 3-33, 3-34	Real-Time Traffic Data Requirements Table and supporting information (specific pages in section)	Confidential details of INRIX solutions, architecture, market coverage and partner relationships
Volume I, Tab 4, Risk Analysis	3-44 through 3-48	Risk Analysis section	Confidential details on INRIX competitive business advantage including IP and Source Data aggregation and analysis methods
Volume II, Tab 2, Pricing	29 and 30 of section	Pricing, Specific proposed option	Confidential details on innovative option pricing

Traffic Data and Associated Services along the I-95 Corridor

Volume II - Financial



RFP 82085N

Prepared for:



INRIX

Table of Contents

RFP 82085N
Traffic Data and Associated Services
along the I-95 Corridor



Volume II - Financial

Table of Contents

Section 1	Solicitation/Contract Form
Section 2	Pricing <ul style="list-style-type: none">— <i>Pricing for the Core System</i>— <i>INRIX Traffic Data Services Cost Model</i>— <i>Consulting Services Costs</i>
Section 3	Other Forms
Section 4	MBE Participation

PART I – THE SCHEDULE
SECTION A-1 – SOLICITATION / CONTRACT FORM

1. CONTRACT NUMBER	2. SOLICITATION NUMBER 82085N	3. TYPE OF SOLICITATION NEGOTIATED (RFP)	4. DATE ISSUED 04/27/07	5. REQUISITION NUMBER R07615
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6. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742	7. ADDRESS PROPOSAL TO University of Maryland Department of Procurement & Supply Attn.: RFP Number82085N 2113-R Chesapeake Building College Park, Maryland 20742-3111
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SOLICITATION

8. Sealed proposals in original plus number of copies specified in Section A-2, Subsection D for furnishing the supplies or services in the Schedule will be received at the location specified in Item 7 (if no location is specified in Item 7, then the location specified in Item 6) until the date and time specified in Section A-2, Subsection E.

CAUTION – LATE Submissions, Modifications, and Withdrawals; see Section A-2, Subsection F entitled "Late Proposals". All offers are subject to all terms and conditions contained in this solicitation.

9. FOR INFORMATION CALL	A. NAME	B. TELEPHONE (NO COLLECT CALLS)		C. E-MAIL ADDRESS	D. FAX NUMBER
		AREA CODE	NUMBER		
	Bruce D. Brewer	301	405-5829	bbrewer@umd.edu	301-314-9565

OFFER (Must be fully completed by Contractor)

10. In compliance with the above, the undersigned agrees, if this offer is accepted within the time period specified in Section A-2, Subsection G, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the Schedule.

11. ACKNOWLEDGEMENT OF AMENDMENTS

The Contractor acknowledges receipt of all amendments to the SOLICITATION.


YES – X Amendments have been received

This contract incorporates the Solicitation/Request for Proposal and any amendments thereto, as well as Contractor's proposal and amendments thereto. In the event of a discrepancy between the terms of this contract, including amendments and modifications made thereto, and Contractor's proposal and amendments thereto, the discrepancy shall be resolved by giving precedence in the following order:

- a) This Contract, including the Solicitation/Request for Proposal and amendments and modifications made thereto
- b) Contractor's proposal, including amendments and modifications made to the proposal.

This contract, including the documents incorporated by reference and any negotiated changes prior to contract award, contains the entire agreement of the parties and supersedes all prior agreements and understandings, oral or otherwise, between the parties.

12. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	13. CONTRACTOR REMIT-TO ADDRESS Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033	14. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Print or Type) Bryan Mistele, President and CEO
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15. TELEPHONE NUMBER	16. SIGNATURE	17. OFFER DATE
AREA CODE 425	NUMBER 284-3801	EXT. NA
		June 22, 2007

AWARD (To be completed by University)

18. ACCEPTED AS TO ITEMS LABELED	19. AMOUNT	20. FRS ACCOUNT NUMBER
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21. ADMINISTERED BY (If other than Item 6)

22. NAME OF PROCUREMENT OFFICER (Type or Print)	23. UNIVERSITY OF MARYLAND (Signature of Procurement Officer)	24. AWARD DATE
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IMPORTANT – Award will be made on this Form or by other authorized official written notice.

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A001	2. DATE ISSUED 06/08/07	3. NUMBER OF PAGES 13
4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)	
6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc., 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER 82085N	
	7B. DATED 04/27/07	

8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning 1 copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

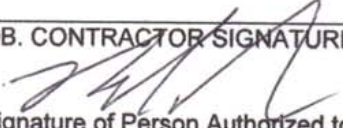
9.1 This Amendment Serves To:

- 9.1.1 Provide an updated Excel price-proposal spreadsheet.
- 9.1.2 This Amendment serves to convey the Questions received from vendors, and Answers.
- 9.1.3 This Amendment Serves to convey a PDF file of Attendees at the Pre Proposal Conference.
- 9.1.4 This Amendment Serves to convey a PDF file of the report "Cellular Probe Data Evaluation Case Study: The Baltimore Multimodal Traveler Information System (MMTIS).
- 9.1.5 This Amendment Serves to convey a MS Word listing of all vendors receiving the RFP.
- 9.1.6 This Amendment Serves to Modify reporting requirements as defined in the Minority Business Enterprise (MBE) Participation, Page 69, "Contract Administration Requirements" as follows:
On a Monthly Basis, the Contractor is required to provide the Procurement Officer as defined in Section G/Contract Administration Data, Paragraph 5 "Notices", an MBE Subcontractor Activity report defining: (1) The dollar expenditure of all Service Task Orders for the reporting month, (2) the MBE subcontract dollar expenditure for the reporting month, (3) a total contract aggregate dollar expenditure of all Service Task Orders, and (4) a total contract dollar amount of all MBE subcontract funding under the contract.

9.2 **The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**

9.3 **By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, Vice President, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) Bruce D. Brewer
10B. CONTRACTOR SIGNATURE  (Signature of Person Authorized to Sign)	10C. DATE SIGNED 6/8/07

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A002	2. DATE ISSUED 06/13/07	3. NUMBER OF PAGES 12
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4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)
---	---


6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER <p style="text-align: center;">82085N</p> 7B. DATED <p style="text-align: center;">04/27/07</p>
---	--

8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning 1 copy(ies) of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

- 9. DESCRIPTION OF AMENDMENT**
- 9.1 This Amendment Serves To Convey additional Questions/Answers submitted by the required date on the RFP, but inadvertently excluded in the A001 Response. The Additional Questions/Responses concern numbers 40 – 43. Responses under Questions 1 – 39 are repeated unaltered.**
 - 9.2 Contractor's MBE Attachment B provided with their proposal shall denote the Subcontractors the Contractor intends to utilize in attaining the overall goal of 25%. Amendment A002 (1) deletes the requirement to assign an independent goal to each subcontractor proposed, and (2) provides revised MBE Attachment B forms.**
 - 9.2 The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**
 - 9.3 By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, VP, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) <p style="text-align: center;">Bruce D. Brewer</p>	
10B. CONTRACTOR SIGNATURE  (Signature of Person Authorized to Sign)	10C. DATE SIGNED <p style="text-align: center;">6/15/07</p>	

AMENDMENT OF SOLICITATION

1. AMENDMENT NUMBER A003	2. DATE ISSUED 06/15/07	3. NUMBER OF PAGES 1
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4. ISSUED BY UNIVERSITY OF MARYLAND DEPARTMENT OF PROCUREMENT AND SUPPLY 2113-R CHESAPEAKE BUILDING COLLEGE PARK, MARYLAND 20742 POINT OF CONTACT: Bruce D. Brewer TELEPHONE NUMBER: 301-405-5829 FACSIMILE NUMBER: 301-314-9565 ELECTRONIC MAIL ADDRESS: bbrewer@umd.edu	5. ADMINISTERED BY (If other than Item 4)
--	---

6. NAME, ADDRESS AND FEI NUMBER OF CONTRACTOR Inrix, Inc. 4055 Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033 FEI#: 201296081	7A. AMENDMENT OF SOLICITATION NUMBER <p style="text-align: center;">82085N</p> 7B. DATED <p style="text-align: center;">04/27/07</p>
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8. AMENDMENT OF SOLICITATION

The solicitation identified in 7A above is amended as set forth in Item 9.
 The due date and time specified for receipt of offers/bids **X is not extended.**
 Contractor must acknowledge receipt of this amendment prior to the due date and time specified in the solicitation or as amended, by completing Items 6 and 10 and returning **1 copy(ies)** of the amendment to the Issuing Office identified in Item 4.
FAILURE OF CONTRACTOR'S ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR RECEIPT OF OFFERS/BIDS PRIOR TO THE DUE DATE AND TIME SPECIFIED MAY RENDER CONTRACTOR'S OFFER UNACCEPTABLE/NON-RESPONSIVE AND SUBJECT TO REJECTION.

9. DESCRIPTION OF AMENDMENT

- 9.1 This Amendment Serves To Convey one additional Questions/Answer deemed by the Committee to be of significant value to warrant distribution.**
- 9.2 Please Clarify the following:**
- 9.1.1 Question: That on Page 36, Section G, Subsection 3/Schedule of Payments, Note 2 under Paragraph 2.5, "Mobility" should be "Mobilization", and clarify it to mean that there is a cap on the total mobilization costs equal to 20% of the annual fee,**
- 9.1.2 Response: The word "Mobility" as referenced in 9.1.1 is revised to read "mobilization". And, the, 20% cap remains unchanged.**
- 9.3 The Due Date for Proposals of Friday, 22 June 2007, 4:00 P.M. ET as defined in Section A-2/Instructions, Conditions, and notices to Contractors, Paragraph E/Closing Date is not extended.**
- 9.4 By Signing this Amendment, the contractor accepts the incorporation of these revisions.**

Except as provided herein, all terms and conditions of the document referenced in Item 7A, including previous amendments, if any, shall remain in full force and effect.

10A. NAME AND TITLE OF SIGNER (Type or Print) Rick Schuman, VP, Public Sector	11A. NAME OF PROCUREMENT OFFICER (Type or Print) <p style="text-align: center;">Bruce D. Brewer</p>	
10B. CONTRACTOR SIGNATURE  (Signature of Person Authorized to Sign)	10C. DATE SIGNED 6/18/07	

Pricing

This section contains the pricing information as requested by the RFP, in three parts:

- √ Real-Time Traffic Data Services for the Core System
- √ Cost Model for Traffic Data Services to be used as Contract Pricing
- √ Consulting Services

Pricing for the Core System

As shown on the following page, we have offered a compelling price for the complete Core System as described in the RFP. Our core system pricing is based upon the following:

- √ Covers INRIX's core service, utilizing source data INRIX utilizes to serve all of our customers. Enhanced source data options will require supplemental funding as described in this proposal;
- √ Per centerline mile, 24x7 coverage;
- √ Pricing provided is for the mandatory coverage in the core system, 1531 centerline miles of freeways;
- √ Start-up/Mobilization pricing is based upon the rate schedule below; and
- √ Arterial/alternate route coverage will be provided at no cost initially in the core system (or a resulting system of analogous size of roughly 900 centerline miles) for the base period. If arterial/alternate route coverage is included in years 4-10, a rational per mile price will be established based upon negotiation with the Coalition, although it will not exceed the freeway mileage per year price (the rationale for this is that INRIX and the Coalition are not currently in a position to value the quality of arterial data provided, and the relative importance of source data – if any – to be provided by the Coalition's member agencies to create the service such as signal system data, etc.).

INRIX Service Rate Schedule

Contract Year	1	2	3	4	5	6	7	8	9	10
Mobilization \$/mile*	150	150	150	160	165	170	175	180	185	190
Annual Cost \$/mile	750	750	750	800	825	850	875	900	925	950

* = For coverage added that year

SECTION B, PART 2.0 PRICE PROPOSAL FORM - RFP 82085N Amendment A001

R007 05/21/07

ITEM	DESCRIPTION	QTY	PRICE
1	Startup-Mobilization Fees (if applicable)	1	\$ 229,650.00

Item	DESCRIPTION	QTY	Base Contract Period			Optional Seven (7) Year Renewal Periods							TOTAL		
			Year 1/ Base Year 1	Year 2/ Base Year 2	Year 3/ Base Year 3	Year 4/ Option Year 1	Year 5/ Option Year 2	Year 6/ Option Year 3	Year 7/ Option Year 4	Year 8/ Option Year 5	Year 9/ Option Year 6	Year 10/ Option Year 7			
2	Data Subscription fee Base 3 year period	1	\$ 1,148,250.00	\$ 1,148,250.00	\$ 1,148,250.00										\$ 3,444,750.00

ITEM	DESCRIPTION	QTY	Base Contract Period			Optional Seven (7) Year Renewal Periods							TOTAL
			Year 1/ Base Year 1	Year 2/ Base Year 2	Year 3/ Base Year 3	Year 4/ Option Year 1	Year 5/ Option Year 2	Year 6/ Option Year 3	Year 7/ Option Year 4	Year 8/ Option Year 5	Year 9/ Option Year 6	Year 10/ Option Year 7	
3	Data Subscription fee, Option Years 4 - 10	1				\$ 1,224,800.00	\$ 1,263,075.00	\$ 1,301,350.00	\$ 1,339,625.00	\$ 1,377,900.00	\$ 1,416,175.00	\$ 1,454,450.00	\$ 9,377,375.00
TOTAL												\$ 13,051,775.00	

Item	Labor Categories	Est. Hours	Base Year 1		Base Year 2		Base Year 3		Option Year 1		Option Year 2	
			Hourly Rate	Extension	Hourly Rate	Extension	Hourly Rate	Extension	Hourly Rate	Extension	Hourly Rate	Extension
1	Project Manager	75	\$ 168.00	\$ 12,600.00	\$ 173.04	\$ 12,978.00	\$ 178.23	\$ 13,367.34	\$ 183.58	\$ 13,768.36	\$ 189.09	\$ 14,181.41
2	Senior Engineer/Analyst	100	\$ 149.05	\$ 14,905.35	\$ 153.74	\$ 15,374.38	\$ 158.59	\$ 15,858.50	\$ 163.58	\$ 16,358.23	\$ 168.74	\$ 16,874.07
4	Engineer/Analyst	140	\$ 125.98	\$ 17,636.50	\$ 130.64	\$ 18,289.46	\$ 135.49	\$ 18,968.06	\$ 140.52	\$ 19,673.35	\$ 145.76	\$ 20,406.46
5	Junior Engineer/Analyst	230	\$ 95.64	\$ 21,996.98	\$ 99.05	\$ 22,781.36	\$ 102.59	\$ 23,595.33	\$ 106.26	\$ 24,440.11	\$ 110.07	\$ 25,316.90
6	Senior Programmer	100	\$ 143.30	\$ 14,330.00	\$ 120.74	\$ 12,073.80	\$ 125.03	\$ 12,503.21	\$ 129.49	\$ 12,948.87	\$ 134.11	\$ 13,411.42
7	Programmer	125	\$ 117.10	\$ 14,637.63	\$ 98.08	\$ 12,260.09	\$ 101.55	\$ 12,694.13	\$ 105.16	\$ 13,144.50	\$ 108.89	\$ 13,611.87
8	Junior Programmer	200	\$ 96.20	\$ 19,240.00	\$ 99.89	\$ 19,977.20	\$ 103.72	\$ 20,744.52	\$ 107.72	\$ 21,543.25	\$ 111.87	\$ 22,374.77
9	Systems Engineer	100	\$ 157.66	\$ 15,765.87	\$ 162.88	\$ 16,287.76	\$ 168.28	\$ 16,827.76	\$ 173.87	\$ 17,386.52	\$ 179.65	\$ 17,964.74
10	Database Management Specialist	125	\$ 107.79	\$ 13,474.13	\$ 111.83	\$ 13,979.08	\$ 116.03	\$ 14,504.22	\$ 120.40	\$ 15,050.41	\$ 124.95	\$ 15,618.53
11	Clerical/Administrative Support	350	\$ 63.70	\$ 22,295.00	\$ 65.69	\$ 22,990.10	\$ 67.74	\$ 23,707.37	\$ 69.85	\$ 24,447.53	\$ 72.03	\$ 25,211.34
Subtotal Labor:				\$ 166,881.45		\$ 166,991.22		\$ 172,770.44		\$ 178,761.13		\$ 184,971.53

Item	Labor Categories	Est. Hours	Option Year 3		Option Year 4		Option Year 5		Option Year 6		Option Year 7	
			Hourly Rate	Extension	Hourly Rate	Extension	Hourly Rate	Extension	Hourly Rate	Extension	Hourly Rate	Extension
1	Project Manager	75	\$ 194.76	\$ 14,606.85	\$ 200.60	\$ 15,045.06	\$ 206.62	\$ 15,496.41	\$ 212.82	\$ 15,961.30	\$ 219.20	\$ 16,440.14
2	Senior Engineer/Analyst	100	\$ 174.07	\$ 17,406.58	\$ 179.56	\$ 17,956.29	\$ 185.24	\$ 18,523.79	\$ 191.10	\$ 19,109.67	\$ 197.15	\$ 19,714.55
4	Engineer/Analyst	140	\$ 151.20	\$ 21,168.54	\$ 156.86	\$ 21,960.81	\$ 162.75	\$ 22,784.53	\$ 168.86	\$ 23,641.02	\$ 175.23	\$ 24,531.66
5	Junior Engineer/Analyst	230	\$ 114.03	\$ 26,227.02	\$ 118.14	\$ 27,171.79	\$ 122.40	\$ 28,152.62	\$ 126.83	\$ 29,170.97	\$ 131.43	\$ 30,228.36
6	Senior Programmer	100	\$ 138.92	\$ 13,891.56	\$ 143.90	\$ 14,389.99	\$ 149.07	\$ 14,907.45	\$ 154.45	\$ 15,444.73	\$ 200.03	\$ 20,003.29
7	Programmer	125	\$ 112.78	\$ 14,096.90	\$ 116.80	\$ 14,600.33	\$ 120.98	\$ 15,122.88	\$ 125.32	\$ 15,665.33	\$ 162.28	\$ 20,285.62
8	Junior Programmer	200	\$ 116.20	\$ 23,240.49	\$ 120.71	\$ 24,141.91	\$ 125.40	\$ 25,080.59	\$ 130.29	\$ 26,058.14	\$ 135.38	\$ 27,076.28
9	Systems Engineer	100	\$ 185.63	\$ 18,563.14	\$ 191.82	\$ 19,182.47	\$ 198.23	\$ 19,823.50	\$ 204.87	\$ 20,487.04	\$ 211.74	\$ 21,173.92
10	Database Management Specialist	125	\$ 129.68	\$ 16,209.53	\$ 134.60	\$ 16,824.38	\$ 139.71	\$ 17,464.10	\$ 145.04	\$ 18,129.76	\$ 150.58	\$ 18,822.48
11	Clerical/Administrative Support	350	\$ 74.28	\$ 25,999.59	\$ 76.61	\$ 26,813.08	\$ 79.01	\$ 27,652.65	\$ 81.48	\$ 28,519.16	\$ 84.04	\$ 29,413.52
Subtotal Services:				\$ 191,410.21		\$ 198,086.10		\$ 205,008.51		\$ 212,187.13		\$ 227,689.83

TOTAL ESTIMATED SERVICES:	\$ 1,904,757.53
TOTAL DATA	\$ 13,051,775.00
TOTAL CONTRACT	\$ 14,956,532.53



INRIX Traffic Data Services Cost Model

The INRIX team and approach is offering a simple, cost-effective, aggressive and realistic pricing model to the Coalition as it seeks value for its investments. INRIX offers a simplified “per mile” pricing for its standard data services, along with straightforward enhancement options to further improve available data or to trial innovative approaches to data enhancement that will improve freeway data quality and/or improve or enable limited access/alternate route data delivery. While it may be tempting to offer complex formulas, soft matches, the appearance of cost-sharing, etc., we believe our approach provides the clearest method of pricing transparency as well as a model that could thrive – both for the Coalition and for INRIX – for up to the full 10 year term of the potential contract.

For coverage increases associated with follow-on task orders, the table titled *INRIX Service Rate Schedule* provides the costing based upon the year the contract year the task order is executed. The annual per mile fee will be prorated to cover only the months operational in the initial contract year (1/12th of the annual fee due for each operational month). The start-up fee will be based upon the year a task is authorized to add coverage.

Further, INRIX recognizes that over the potential 10-year lifespan of the contract, it is a near certainty that source data not used or contemplated at present will be available to INRIX and the Coalition for possible inclusion to improve data quality in covered areas. For this project, INRIX will adopt a simple philosophy: if the inclusion of source data is something that occurs nationally, and/or has a clear cost/benefit to our clients other than the Coalition, this data will be incorporated into our services at no additional charge to the project. If new source data provides a quality lift (improved data on existing coverage or enabling new coverage) sought by the Coalition but is not nationally deployable, not a benefit to our other customers or cost prohibitive, then additional funding will be sought from the Coalition to include the source. We understand cases in which Coalition investment is appropriate; it may not be 100% of the cost. We commit to work with the Coalition to establish the appropriate percentage of funding for specific project enhancements.

As part of this proposal, INRIX offers three unique options to enhance coverage in certain regions of the Coalition as desired by member agencies, in addition to the INRIX core service fees (in the unexpected event that a member agency seeks to deploy a data enhancement option along roadways not already covered by INRIX) per mile INRIX “standard data service” fees in the table titled *INRIX Service Rate Schedule* would be required to allow us to ingest, process and provide the data for these new roads.

- √ **SpeedInfo**, self contained radar sensors to enhance or extend coverage when/where desired by Coalition member agencies;
- √ **DTS**, and its potential to migrate traditional traffic count stations in Virginia, possibly Florida, and even other Coalition states to also act as real-time sensor stations; and,

- √ A trial by **TruePosition** (an E-911 equipment provider) to assess an innovative approach to use existing equipment to improve data services, particularly along arterials/alternate routes. Note this trial will be conducted utilizing TruePosition test equipment located in the Wilmington, DE, area and will serve as both a technology and business model laboratory for the Coalition and INRIX.

The following pages describe the pricing models for each of these three options.

Additional Data Feeds

As described in more detail in the Technical Volume, INRIX currently has several additional data feeds available that could fulfill Item #4 of the Real Time Traffic Data Requirements table in the RFP. These include:

- √ Predictive flow data – forward-looking speed information along a specific section of roadway, at 15 minute increments with up to a one year time horizon.
- √ Key route drive times – inferred drive times for certain pre-selected routes, based on current traffic speeds.
- √ Key route drive time, predictive – inferred drive times for pre-selected routes, based on predictive data
- √ Incidents (events, construction, accidents, etc) – traffic incidents reported by data providers
- √ Incidents (flow data) – reports of traffic congestion for specific sections of roads, in most cases based on INRIX flow data, and in some cases augmented with data from other providers, such as Clear Channel’s Total Traffic Network.
- √ Events – traffic-impacting events in major urban markets up to one year in advance that have in excess of 10,000 people attending.

It is not possible to provide specific cost estimates at present for each feed, given the IDIQ nature of the contract. INRIX welcomes the chance to describe these feeds in more detail, understand the Coalition’s interest and subsequently develop appropriate scope and price proposals for tasking.



SpeedInfo

INRIX is offering the Coalition – as an option – the ability to add SpeedInfo doppler radar sensors as source data for the project. As with other elements of the INRIX proposal, the pricing model is quite simple: \$200/sensor/month, with member agencies determining where and when they would like sensors deployed. Any request can be completed within 4 months of task order execution. The following describes the pricing, terms and conditions.

FastRoute Traffic Speed Data Service

The Traffic Speed Data Service is a turn-key data service program. SpeedInfo will deploy and operate the sensor network for a minimum term of three (3) years. The data service program includes the following:

- √ Sensor, solar panel, mounting hardware, installation*
- √ Operation expense (i.e. communications and maintenance)
- √ Traffic data and server license
- √ Cost of installation
- √ Repair / replace sensors if they fail during the maintenance period

Under this program, SpeedInfo owns the sensor and the data it generates.

The customer licenses the data from SpeedInfo and has unlimited rights to distribute the data to anyone they wish. INRIX will include the sensor data as source data into the INRIX Fusion Engine. SpeedInfo may also distribute the data to 3rd parties.

Terms and Conditions

- √ Minimum quantity: 10 sensors (per task)
- √ All invoices are 2% 15, net 30days. FOB Destination.
- √ All prices are subject to change without notice.
- √ No early termination on service contracts.

* installation assumes customer authorized to provide right-of-way or access to infrastructure and does not include costs for permits or local fees, if any.

Warranty

Fastroute™ Data Service Warranty is one year from date of shipment. During warranty period, SpeedInfo will repair or replace, at its option, and pay for ground shipping and normal re-installation costs.

Limited Warranty – DVSS-100 Sensor

Subject to the Limitations, Exclusions and Disclaimers hereof, SpeedInfo Corporation (“SpeedInfo”) warrants that the DVSS-100 Doppler Vehicle Sensor and FastRoute™ traffic data service (hereinafter collectively or individually referred to as “Product” as appropriate) purchased from SpeedInfo, a SpeedInfo distributor, or a SpeedInfo reseller will conform to SpeedInfo’s specifications and be free from defects in material or workmanship for the respective Limited

Warranty period. SpeedInfo does not warrant that the Product will meet the specific requirements of the end-user customer.

If the Product, while subject to this Limited Warranty, is defective in material or workmanship during the warranty period, then SpeedInfo, at its option, will REPAIR or REPLACE the Product.

All exchanged parts and Products replaced under this Limited Warranty will become property of SpeedInfo. SpeedInfo's sole obligation is to supply (or pay for) all labor necessary to repair the Product found to be defective within the Limited Warranty period and to repair or replace defective parts with new parts or, at the option of SpeedInfo, serviceable used parts that are equivalent or superior to new parts performance.

WARRANTY LIMITATION AND EXCLUSION

THIS WARRANTY SETS FORTH SPEEDINFO'S MAXIMUM LIABILITY FOR ITS PRODUCT. THIS WARRANTY EXTENDS ONLY TO PRODUCTS PURCHASED FROM SPEEDINFO OR AN SPEEDINFO AUTHORIZED RESELLER. SpeedInfo shall have no further obligation under the foregoing Limited Warranty if the Product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications (including use of an unauthorized mount), tampering, alterations, or service other than by SpeedInfo or its authorized agents, causes other than from ordinary use or failure to properly use the Product in the application for which said Product was intended.

Remanufactured Products and Software Products are exempt from the foregoing Limited Warranty. Please refer to the appropriate Remanufactured Product Limited Warranty or Software Product Limited Warranty for applicable Warranty information.

IN NO EVENT WILL SPEEDINFO BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, OR PUNITIVE DAMAGES, OR ANY DAMAGES FOR LOST DATA, BUSINESS INTERRUPTION, LOST PROFITS, LOST REVENUE, OR LOST BUSINESS, ARISING OUT OF OR IN CONNECTION WITH USE OF THE DATA OR THIS AGREEMENT.

DISCLAIMER OF UNSTATED WARRANTIES

THE WARRANTY PRINTED ABOVE IS THE ONLY WARRANTY APPLICABLE TO THIS PRODUCT. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE DISCLAIMED. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF AND THE FOREGOING WARRANTY SHALL NOT BE EXTENDED, ALTERED OR VARIED EXCEPT BY WRITTEN INSTRUMENT SIGNED BY SPEEDINFO. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY MAY LAST, SO SUCH LIMITATIONS MAY NOT APPLY.



DTS

DTS is the exclusive contractor responsible for the service, installation, maintenance and repair of more than 400 statewide traffic monitoring sites for VDOT's Statewide Data Collection and Services Program. DTS has been providing services to VDOT in this capacity since 2001 and is under contract through 2010 (including option years). With DTS as part of the INRIX team for this project, the Coalition or any member agency, can utilize DTS's capabilities to convert traditional traffic count stations that do not report in real-time, to fully functional real-time sensor stations.

The attached price list of Pay Items from the Virginia DOT contract will be the basis for all task order pricing to the Coalition or any member agency that wishes to adapt its count stations for dual use. Each task would be scoped separately as it is likely no two agency configurations would require the same items. DTS would provide a fee estimate along with the scope based upon this pay item list. As noted at the bottom of the list, these prices are valid through the end of calendar year 2010 with defined escalation rates the remaining life of the contract between INRIX and the University of Maryland. This is a significant value-added enhancement as it makes available to all Coalition member agencies the nation's foremost experts in leveraging traffic count stations for real-time use in a cost-effective manner that does not impact the primary purposes of the stations, and it does so in a manner that both locks in pricing and gives the Coalition and its members the flexibility needed to match defined pay items to each project's scope. Further, INRIX will not place an additional management fee on the pay item prices, making this asset available beyond Virginia at no additional cost.

Following the Pay Items and Descriptions below are five sample task work orders illustrating a range of potential scenarios in which DTS could upgrade existing count stations. The scenarios are:

- √ DTS upgrades existing CCS site to provide real time data, with IP modem, larger solar panel if not currently installed. (e.g., Virginia)
- √ Assume existing site with functioning sensors, solar panel and IP modem – DTS provides Stopwatch enabled counter paid for via a monthly data payment which includes ongoing maintenance of electronics. (e.g., Florida)
- √ Member agency already owns ADR – PLUS Peek counters enabled for this real time data application. Therefore use Pay Item 6 to provide data support. (e.g., Georgia and North Carolina)
- √ Supply and install new electronics, solar and modem. (e.g., South Carolina and all states north of Virginia)
- √ A brand new non intrusive site using a Wavetronix sensor

VDOT CCS Pay Items

Pay Item No.	Pay Item	Unit Price
1	ATR Annual Lease - Classification / Volume / Speed collection	\$3,600.00
2	ATR Annual Lease -Volume / Speed collection	\$3,300.00
3	ATR Annual Lease - WIM data addition	\$7,200.00
4	ATR - Annual Lease - Real-Time data addition	\$600.00
5	Modem annual lease	\$600.00
6	Operation and Maintenance of all VDOT ATR & Modem Equipment	\$3,240.00
7	CDMA Modem and Associated Components	
7A	CDMA Modem & Maintenance (0 - 99 units) Annual	\$720.00
7B	CDMA Modem & Maintenance (100 - 149 units) Annual	\$600.00
7C	CDMA Modem & Maintenance (150 - 199 units) Annual	\$480.00
7D	CDMA Modem & Maintenance (>200 units) Annual	\$360.00
8	Mobilization - Interstate Location	\$4,750.00
9	Mobilization - Non-Interstate Location	\$2,750.00
10	Mobilization - Outside Contract Area	\$500.00
11	Mobilization - Flaggers Required	\$2,500.00
12	Mobilization - No MOT	\$1,100.00
13	Install complete new 2 lane CCS	\$15,499.00
14	Install complete new 3 lane CCS	\$19,097.00
15	Install complete new 4 lane CCS	\$22,600.00
16	Install complete new 5 lane CCS	\$26,000.00
17	Install complete new 6 lane CCS	\$29,800.00
18	Install complete new 1 lane WIM Station	\$33,234.00
18A	Install complete new 1 lane WIM Station (Staggered configuration)	\$24,234.00
19	Install complete new 2 lane WIM Station	\$60,078.00
19A	Install complete new 2 lane WIM Station (Staggered configuration)	\$42,078.00
20	Install complete new 3 lane WIM Station	\$88,212.00
20A	Install complete new 3 lane WIM Station (Staggered configuration)	\$61,212.00
21	Install complete new 4 lane WIM Station	\$113,849.00
21A	Install complete new 4 lane WIM Station (Staggered configuration)	\$77,849.00
22	Calibrate 1 lane WIM station	\$3,162.00
23	Calibrate Additional WIM Lanes; Per Lane	\$500.00
24	Inspection of WIM installed by a certified representative from the manufacturer (initial day)	\$1,700.00
24A	Inspection of WIM installed by a certified representative from the manufacturer each additional day)	\$1,200.00

25	Special Project Labor & Materials Cost	
25A	Laborer Service Rate	\$45.00
25B	Technician / Electrician Service Rate	\$85.00
25C	Sr. Technician	\$115.00
25D	Application Specialist	\$130.00
26	Additional cost for each WIM lane wider than 11'8-3/8"	\$250.00
27	Install / replace complete set of CCS road sensors per lane	\$3,800.00
28	Install / replace complete set of WIM road sensors per lane	\$26,450.00
28A	Install / replace complete set of WIM road sensors per lane (Staggered Configuration)	\$17,450.00
29	Install / replace inductive loop	\$875.00
30	Install / replace piezoelectric sensor	\$2,002.00
31	Install / replace WIM sensor	\$12,750.00
31A	Install / replace WIM sensor (Staggered Configuration)	\$8,250.00
32	Piezoelectric sensor cable lead wire, per foot, over standard length (>400 foot)	\$0.15
33	Install / replace cabinet	\$3,500.00
33A	Type 336S UNF Aluminum Solar Cabinet (F&I) on existing pole	\$3,615.00
33B	Install / Replace Type 4 Cabinet on existing metal pole.	\$1,987.00
34	Install / replace post	\$800.00
34A	Install / Replace Pole & Base on existing concrete foundation	\$1,518.00
34B	Install / Replace Pole & Base w/ concrete foundation	\$1,846.00
35	Remove / dispose of post and cabinet	\$500.00
36	Remove / dispose of post and cabinet (in quantities > 10)	\$475.00
37	Install / replace solar panel	\$1,200.00
38	Upgrade / Oversize Solar Panel	\$1,800.00
38A	Upgrade / Install Large Solar Panel (F&I) 80W	\$2,549.00
39	Remove sensor and fill with grout	\$450.00
40	Remove WIM sensor and fill with grout	\$600.00
41	Install / replace junction box	\$720.00
42	Install / replace concrete platform	\$250.00
43	Mark Buried Sensors	\$300.00
44	On-site Data Retrieval	\$300.00
45	Install Site Grounding Electrodes	
45A	Standard / Preferred Method	\$150.00
45B	Modified / Preferred Method	\$175.00
45C	Trench Burial Method	\$200.00
46	Pavement Repair (Seal/Fill Cracks at CCS)	\$950.00
47	Maintain Vegetation	\$500.00
48	Initial CCS Inspection	\$250.00
49	CCS Preconstruction Inspection	\$400.00

50	Preventative Maintenance Inspection (CCS)	\$400.00
51	WIM - Routine Inspection (non-MOT)	\$500.00
52	WIM - Sensor Profile Inspection & Correction	\$1,200.00
53	Welcome Center Inspection/Plan ea.	\$1,500.00
54	Service Call Charge	\$100.00
55	Service Call Response - 24 Hour	\$450.00
56	Service Call Response - 48 Hour	\$400.00
57	RTMS Support Installation	\$750.00
58	Non-Intrusive Sensor Station Installation	\$14,788.00
58A	Galvanized Steel 35' Pole with Concrete Foundation (F&I)	\$7,196.00
58A	Galvanized Steel 35' Pole with Concrete Foundation (F&I) Power coat finish	\$8,275.40
58B	Soil tests and design submittals	\$1,025.00
58C	Heavy Duty BX Series 40' Self Supporting Tower with Hinged Base (F&I)	\$5,861.00
59	Additional Trenching and Conduit	
59A	Trenching (in units of 10 ft.)	\$25.00
59B	Conduit (in units of 10 ft.)	\$5.00
60	Standard Directional Boring for conduit installation, single location, 3" Schedule 80 conduit included, per foot (F&I)	\$58.00
61	Standard Directional Boring for conduit installation, single location, 2" Schedule 40 conduit included, per foot (F&I)	\$50.00
62	Standard Directional Boring for conduit installation, single location, (2) 2" Schedule 40 conduits included, per foot (F&I)	\$54.00
67	Wavetronix Non-Intrusive SS-125 Annual Lease - Volume and/or Speed collection	\$3,600.00
68	SmarTek SAS-1 Non-Intrusive Annual Lease – Volume and/or Speed collection	\$3,600.00
69	License free 902-928 MHz 900 SS Radio Modem (Freewave FGR-115RC Radio Modem or equivalent) w/ antenna, cable, and wall transformer. (F&I)	\$1,500.00
70	Upgrade ADR with 4MB of additional memory to facilitate increased storage for complex traffic studies.	\$1,444.00

Pay Item Descriptions

1) ATR Annual Lease – Classification / Volume / Speed collection – This pay item will be for the lease of contractor provided ATR equipment. The pay item includes all costs associated with connection, operation and maintenance of the equipment. The lease payment will be based on the amount of valid data produced as per paragraph 3.11. Payment will be made monthly at 1/12th the annual rate. The contractor shall identify in its proposal any proposed price increases for the addition of new counters at various points in the contract. If

none are made, the price quoted shall be valid for all new counters added for the length of the contract.

2) ATR Annual Lease – Volume / Speed collection – This pay item will be for the lease of contractor provided ATR equipment. The pay item includes all costs associated with connection, operation and maintenance of the equipment. The lease payment will be based on the amount of valid data produced as per paragraph 3.11. Payment will be made monthly at 1/12th the annual rate. The contractor shall identify in its proposal any proposed price increases for the addition of new counters at various points in the contract. If none are made, the price quoted shall be valid for all new counters added for the length of the contract.

3) ATR Annual Lease – WIM data addition – This pay item is for the additional fee for lease of contractor provided ATR equipment that includes the WIM electronics. For WIM sites that are also collecting classification, volume and speed data, this will be paid in addition to pay item 1. The lease payment will be based on the amount of valid WIM data produced as per paragraph 3.11. Payment will be made monthly at 1/12th the annual rate. The contractor shall identify in its proposal any proposed price increases for the addition of new counters at various points in the contract. If none are made, the price quoted shall be valid for all new counters added for the length of the contract.

4) ATR Annual Lease – Real-Time data addition – This pay item is for the additional fee for lease of contractor provided ATR equipment that has the Real-Time feature enabled. This pay item will be paid in addition to pay item 1. The lease payment will be based upon the amount of valid Real-Time data produced as per paragraph 3.11. Payment will be made monthly at 1/12th the annual rate. The contractor shall identify in its proposal any proposed price increases for the addition of Real-Time data at various points in the contract. If none are made, the price quoted shall be valid for all new additions added for the length of the contract.

5) Modem Annual Lease – This pay item will be for the lease of contractor provided landline modem equipment. The pay item includes all costs associated with connection, operation and maintenance of the equipment. The lease payment will be based on the amount of valid data produced as per paragraph 3.11. Payment will be made monthly at 1/12th the annual rate.

6) Operation and Maintenance of VDOT ATR & Modem Equipment – This pay item will be for the operation and maintenance of VDOT provided ATR and modem equipment. The contractor will be responsible for all counter activity, to include parts replacement and repair, just as they would under pay items 1 and 2. The lease payment will be based on the amount of valid data produced as per paragraph 3.11. Payment will be made monthly at 1/12th the annual rate.

7) CDMA Modem – This pay item will be for the lease of contractor provided CDMA modem equipment and associated components (12volt solar panel and regulator). The pay item includes all costs associated with connection, operation

and maintenance of the equipment. The lease payment will be based on the amount of valid data produced as per paragraph 3.11. Payment will be made monthly at 1/12th the annual rate.

8) Mobilization; Interstate Location – This pay item is for mobilization to an Interstate CCS for installation or repair. Mobilization is defined as the charge to take one fully outfitted maintenance/construction work crew to the work site for the duration of time necessary to complete all work assignments at that work site. Mobilization charges shall include Maintenance of Traffic (MOT) costs.

9) Mobilization; NonInterstate Location – This pay item is for mobilization to a nonInterstate CCS for installation or repair. Mobilization is defined as the charge to take one fully outfitted maintenance/construction work crew to the work site for the duration of time necessary to complete all work assignments at that work site. Mobilization charges shall include Maintenance of Traffic (MOT) costs.

10) Mobilization; Outside Contract Area – This pay item is for mobilization to a location outside the contracted districts. The pay item will be paid in addition to the amount paid for the mobilization by type of CCS (Pay Items 8 or 9). The offeror may provide one price for all districts, or may further break this pay item down by cost per each of VDOT's other districts.

11) Mobilization; Flaggers required – This pay item is for use at CCSs where flag personnel are required by the Virginia Work Area Protection Manual. This pay item will be in addition to the amount paid for the mobilization by type of CCS (Pay Items 8 or 9). The purpose of this pay item is to reimburse for costs related to the required flagging operations. VDOT will not pay "Mobilization; Flaggers required" if personnel who are normally assigned to the construction crew are diverted to flagging operations or if contract management, technical or administrative personnel are used as flaggers. The intent is to cover costs related to hiring additional personnel on a short-term basis used only to perform the flagging operation.

12) Mobilization; No MOT – This pay item is for mobilization to a location for work that does not include lane closures. Shoulder closures may be required as part of the pay item. This pay item would normally be associated with a work crew performing tasks on the shoulder of the road only such as replacement of cabinets, poles, grounding or maintaining vegetation. The pay item will be per work crew per day. If multiple locations are visited in one day, the pay item will be paid only once per day. It is not for technician work performing service calls, counter repair, site inspections, sensor marking, data retrieval, solar panel replacement or other work associated with a single technician working alone.

13) Install complete new 2 lane CCS – This pay item is for furnishing materials and installing a 2 lane CCS. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be

included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

14) Install complete new 3 lane CCS – This pay item is for furnishing materials and installing a 3 lane CCS. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

15) Install complete new 4 lane CCS – This pay item is for furnishing materials and installing a 4 lane CCS. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

16) Install complete new 5 lane CCS – This pay item is for furnishing materials and installing a 5 lane CCS. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

17) Install complete new 6 lane CCS – This pay item is for furnishing materials and installing a 6 lane CCS. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item

also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

18) Install complete new 1 lane WIM station – This pay item is for furnishing materials and installing a 1 lane WIM. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

19) Install complete new 2 lane WIM station – This pay item is for furnishing materials and installing a 2 lane WIM. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

20) Install complete new 3 lane WIM station – This pay item is for furnishing materials and installing a 3 lane WIM. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

21) Install complete new 4 lane WIM station – This pay item is for furnishing materials and installing a 4 lane WIM. All materials and labor including but not limited to metal pole, cabinet, solar panel, in road sensors and pull boxes will be provided and installed in a professional manner. All conduit and trenching will be included if the physical distance is less than 75 feet. The distance will be measured in a straight-line fashion starting at the sensor array midpoint on the shoulder of the roadway to the cabinet post. After the 75 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

22) Calibrate 1 lane WIM station – This pay item is for calibrating a newly installed 1 lane WIM station and also for periodic recalibration of existing 1 lane

WIM stations. Contractor shall calibrate WIM station according to ASTM E131802 which requires two test trucks, at least one of which is a class 9, 5 axle tractor trailer, loaded to at least 90% of GVWR, making multiple test runs at various speeds. Contractor is responsible for providing the loaded test trucks and drivers, static weighing and measuring the trucks, recording the data for each run, and making adjustments to the WIM calibration. All data recorded shall be provided to VDOT including documentation of any calibration adjustments

23) Calibrate additional lanes of WIM equipment; per lane – This pay item is for calibrating a newly installed WIM lane and also for periodic recalibration of existing WIM lanes. The pay item will be for all lanes of WIM after the first WIM lane pay item (Item 22) and will be paid for each additional WIM lane calibrated. Contractor shall calibrate WIM lanes according to ASTM E131802 which requires two test trucks, at least one of which is a class 9, 5 axle tractor trailer, loaded to at least 90% of GVWR, making multiple test runs at various speeds. Contractor is responsible for providing the loaded test trucks and drivers, static weighing and measuring the trucks, recording the data for each run, and making adjustments to the WIM calibration. All data recorded shall be provided to VDOT including documentation of any calibration adjustments.

24) Inspect WIM station installation, per lane – This pay item is an additional quality control measure and is for inspection of a WIM installation by a certified representative from the manufacturer. This representative shall not be on the contractor's staff/payroll. The representative shall provide the VDOT Contract Administrator with an installation inspection report which verifies that each lane of the installation was completed according to the manufacturer's standards and/or VDOT specifications.

25) Information Only: Special Project Labor & Materials Cost – This pay item is for the cost of performing general labor for additional tasks upon the request of the Contract Administrator. The labor rate calculation shall be provided along with the bid price. The labor rate should be calculated so as to recover all direct and indirect labor costs, supervision costs as well as all associated overhead. Labor costs shall be calculated by multiplying the estimated hours needed for the task by the bid rate for each labor category. This rate will only be paid in one hour increments. The total labor cost for each assigned project may not exceed the estimate by more than 15%. 25 A) Laborer – The laborer shall be a member of a crew that generally performs the roadway construction work and or other hands-on tasks (i.e. digging, mixing and forming concrete)

25 B) Technician / Electrician – The technician or electrician shall be skilled in the use of the ATR and/or modem, solar panel and general electronics.

26) Additional cost for each WIM lane wider than 11'83/8" – This pay item is for the additional cost for installing WIM sensors in wide lanes. For a typical lane up to 11'83/8", 4 quartz sensors will be installed in each piezo slot, 2 each 0.75m and 2 each 1.00m. Sensors shall be lane edge to lane edge with a gap

between the middle two sensors up to 25/ 8". For lanes over 11'83/ 8", 1 each 0.75m and 3 each 1.00m sensors shall be used.

27) Install / replace complete set of CCS road sensors per lane – This pay item is for furnishing and installing all road sensors for a single lane (two inductive loops and one piezoelectric sensor) and make connections through existing junction boxes to existing traffic cabinet. All conduit and trenching will be included if the physical distance is less than 10 feet. After the 10 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

28) Install / replace complete set of WIM road sensors per lane – This pay item is for furnishing and installing all road sensors for a single lane (one inductive loop and two quartz piezoelectric sensors) and making connections through existing junction boxes to existing traffic cabinet. All conduit and trenching will be included if the physical distance is less than 10 feet. After the 10 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

29) Install / replace inductive loop – This pay item is for furnishing and installing one inductive loop and make connections through existing junction boxes to existing traffic cabinet. All conduit and trenching will be included if the physical distance is less than 10 feet. After the 10 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

30) Install / replace piezoelectric sensor – This pay item is for furnishing and installing one piezoelectric sensor and making connections through existing junction boxes to existing traffic cabinet. All conduit and trenching will be included if the physical distance is less than 10 feet. After the 10 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

31) Install / replace Weigh in Motion (WIM) sensor – This pay item is for furnishing and installing one WIM sensor and making connections through existing junction boxes to existing traffic cabinet. All conduit and trenching will be included if the physical distance is less than 10 feet. After the 10 foot point, any additional trenching and conduit will be paid in 10 foot units. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

32) Piezoelectric sensor cable lead wire, per foot, over standard length (200foot) – Each sensor shall normally be provided with a 100200 foot length. This pay item is for lead-in lengths required in excess of 200 feet. The unit of measure is per foot over the standard 200foot length.

33) Install / replace cabinet and metal post assembly – This pay item is for furnishing and installing one cabinet and metal pole and making all connections within the cabinet. The pay item also includes removal of old pole and cabinet as necessary and all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

34) Install / replace post – This pay item is for furnishing and installing one wood post and connecting an existing cabinet. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

35) Remove / dispose of post and cabinet – This pay item is for removing and disposing of an existing traffic cabinet and wood or metal pole and associated equipment.

36) Remove / dispose of wooden post and cabinet – This pay item is for removing and disposing of existing traffic cabinet and wood or metal pole and associated equipment in quantities of 10 or more.

37) Install / replace solar panel – This pay item is for furnishing and installing one solar panel and making connections.

38) Upgrade / Oversize Solar Panel – This pay item is for furnishing and installing one oversize solar panel and making connections. The contractor shall use a 60watt size for price planning purposes. Variations on that size will be individually negotiated prior to installation.

39) Remove Sensor / Fill With Grout – This pay item is for removing an existing Phillips channel piezoelectric sensor and filling the slot with grout material. 40) Remove WIM Sensor / Fill With Grout. This pay item is for removing an existing Kistler WIM sensor and filling the slot with grout material.

41) Install / replace junction box – This pay item is for furnishing and installing one junction box. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

42) Install / replace concrete platform – This pay item is for installing one concrete platform. The platform shall be installed using A3 concrete 4 inches thick and 2 foot by 3 foot in dimension. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to preconstruction condition.

43) Mark Buried Sensors – This pay item is for the marking of buried VDOT TMS sensors. Normally this will be used in response to a call for marking utilities for a project not related to this contract. When requested by the VDOT Contract Administrator, the contractor shall have at least 24 hours to respond. This pay item is not for use when the contractor is marking a location for its own contract construction work.

44) On Site Data Retrieval – This pay item is for the manual onsite retrieval of traffic data if the contractor is required to retrieve data during periods when

auto poll communications with the counter are not possible due to telephone line problems. The pay item will be per CCS and per visit as requested by the VDOT Contract Administrator. Note that this may include data collection from two co-located ATRs if the CCS operates with two. This pay item shall not be used for situations where contractor maintained communications equipment is the cause for the communication failure. If downtime due to an ATR, modem or electronic issue occurs, the data download shall occur without cost to VDOT.

45) Information Only: Install Site Grounding Electrodes using three different methods.

45 A) Standard / Preferred Method – This pay item is for installation of grounding materials at an existing CCS or WIM. The pay item is not for inclusion as an additional cost item at a new installation, as grounding is to be included in new installations. See Paragraph 3.20 for a description of the installation method required. Pricing is per 8foot ground rod installed using this method.

45 B) Modified / Preferred Method – This pay item is for installation of grounding materials at an existing CCS or WIM. The pay item is not for inclusion as an additional cost item at a new installation, as grounding is to be included in new installations. See Paragraph 3.20 for a description of the installation method required. Pricing is per 8foot ground rod installed using this method.

45 C) Trench Burial Method – This pay item is for installation of grounding materials at an existing CCS or WIM. The pay item is not for inclusion as an additional cost item at a new installation, as grounding is to be included in new installations. See Paragraph 3.20 for a description of the installation method required. Pricing will be per 8foot units using this method.

46) Pavement Repair (Seal / Fill Road cracks at CCS) – This pay item is for completing filling road cracks in the area of CCS sensors as per Paragraph 3.16.a.

47) Maintain Vegetation – This pay item is for maintaining vegetation around CCS locations as per Paragraph 3.16.b. Routine trimming and maintenance to ease access, is expected as part of inspection and service call activity where site visits are made and is not to be invoiced under this pay item.

48) Initial CCS Inspection – This pay item is for an initial site inspection visit and is to be used one time only for existing CCSs and at the beginning of the contract. All sensors are to be evaluated, new equipment installed and operations verified. This pay item is not for use at new sites as they are installed, as the set up and installation of equipment shall be included in the install price.

49) CCS Pre-construction Inspection – This pay item is for conducting CCS inspections prior to maintenance and shall be performed in accordance with the specifications described in Paragraph 3.15.b.

50) Preventative Maintenance Inspection – This pay item is for conducting a preventative maintenance inspection when requested to do so by the VDOT Contract Administrator. The inspection shall be performed in accordance with the specifications described in Paragraph 3.16.d.

51) WIM - Routine Inspection (non-MOT) – This pay item is for conducting a review and maintenance inspection of Kistler sensor and inspection of weigh electronics found in 3.16.d.

52) WIM - Sensor Profile Inspection & Correction – This pay item is for conducting a review and maintenance inspection of Kistler sensor and inspection of weigh electronics and to include roadway sensor maintenance repairs found in 3.16.d.

53) Welcome Center Inspection – This pay item is for conducting a survey of the conditions at a VDOT Welcome Center, developing a data collection plan and presenting the plan to the VDOT Contract Administrator. See Paragraph 3.30 for detail.

54) Service Call Charge – This pay item is for service calls that meet the criteria for separate payment as detailed in paragraph 3.12.

55) Service Call Response – 24 Hour. This pay item is for costs related to a faster than normal contract specification (10 days) service call response time. When requested by the VDOT Contract Administrator, the contractor shall respond to and resolve the data problem, which generated the service call within 24 hours of notice. See paragraph 3.12 for more detail.

56) Service Call Response – 48 Hour. This pay item is for costs related to a faster than normal contract specification (10 days) service call response time. When requested by the VDOT Contract Administrator, the contractor shall respond to and resolve the data problem, which generated the service call within 48 hours of notice. See Paragraph 3.12 for more detail.

57) RTMS Support Installation – This pay item is for installing the support system required by VDOT’s portable nonintrusive traffic data collection program. See paragraph 3.16.e for details.

58) NonIntrusive Sensor Station Installation – This pay item is for costs related to the installation of a traffic data collection station using nonintrusive technology. The contractor shall include all costs, to include all materials, electronics, installation and operation along with a detailed product description. See paragraph 3.29.

59) Information Only: Additional Trenching and Conduit pay items.

59A) Trenching – This pay item is for additional trenching above and beyond the listed amounts in the pay items above to be paid in increments of 10 foot.

59B) Conduit – This pay item is for additional installation of conduit above and beyond the listed amounts in the pay items above to be paid in increments of 10 foot.

60) ATR Purchase Option – This pay item is for VDOT’s optional purchase of contractor owned ATR equipment at the end of contract. If exercised, the purchase will include ATR as well as all peripheral items required to operate the equipment such as batteries connections, regulators and etc.

61) Modem Purchase Option – This pay item is for VDOT’s optional purchase of contractor owned landline modem communication equipment at the end of contract. If exercised, the purchase will include modem as well as all peripheral items required to operate the equipment.

62) ATR Purchase Option – This pay item is for VDOT’s optional purchase of contractor owned WIM ATR equipment at the end of contract. If exercised, the purchase will include ATR as well as all peripheral items required to operate the equipment such as batteries connections, regulators and etc.

63) CDMA Modem Purchase Option – This pay item is for VDOT’s optional purchase of contractor owned Modem communications equipment at the end of contract. If exercised, the purchase will include modem as well as all peripheral items required to operate the equipment.

Recently Added / New Pay Items

- A. Non-Intrusive Sensor Infrastructure Components
- B. Large Solar Panel
- C. Non-Intrusive Data Lease
 - Wavetronix SS-125 HD Sensor
 - SmarTek SAS-1
- D. Spread Spectrum RM
- E. ADR Memory Upgrade
- F. Cabinet Components

The pay item descriptions and their pricing are presented as an addendum to the current contract. Mobilization is not included in any item unless specifically listed and will be added as required. System calibrations, professional engineering studies, soil samples, cabinets, conduits, solar panels, batteries, lighting protection, pull boxes, etc. are only included where specifically listed.

A. Quotation for Non-Intrusive Sensor Infrastructure Components

Pay Item	Description	Price ea.
58A	Galvanized Steel 35' Pole with Concrete Foundation (F&I) 10" Diameter Wall thickness 0.179" Length = 35'	\$7,196.00 (F&I) Standard Finish
	Finish = Galvanized Powder-coated pole add 15% Pole will have one hand hole and a pole-cap LF-1 provided (VDOT Spec 1301.10) Installed with breakaway bolts if within 30' of edge of vehicular travel.	\$8,275.40 (F&I) Powder-coated Finish
58B	Soil tests and design submittals	\$1,025.00

58C	Heavy Duty BX Series 40' Self Supporting Tower with Hinged Base (F&I) Includes: HDBX40 Tower BXHC78 Hinged Base Finish = Galvanized Concrete Base (4.5'W x 4'D)	\$5,861.00 (F&I)
33A	Type 336S UNF Aluminum Solar Cabinet (F&I) on existing pole Includes 2 19" Rack 2 Shelves 1 Document Drawer 1 Angle-Bracket Mounting Shelf 1 Dual Door #2 Lock 1 Pair of pole mounting brackets 1 Back panel w/ terminal strips 1 EDCO Solar surge protector 1 Ground buss bar	\$3,615.00 (F&I)

B. Quotation for 80 Watt Solar Panel Installation

Pay Item	Description	Price ea.
38A	Upgrade / Install Large Solar Panel (F&I) Includes bracket, connections, (1) 12Vdc 100AH Battery (MK8A31 or equivalent), and (1) solar regulator (SUNSAVER SS-10L-12 or equivalent) Panel Electrical Specifications (Example) Maximum power (Pmax) 80W Voltage at Pmax (Vmp) 17.6V Current at Pmax (Imp) 4.55A Warranted minimum Pmax 76W Short-circuit current (Isc) 4.8A Open-circuit voltage (Voc) 22.1V Temperature coefficient of Isc (0.065±0.015)%/ °C Temperature coefficient of Voc -(80±10)mV/°C Temperature coefficient of power -(0.5±0.05)%/ °C NOCT (Air 20°C; Sun 0.8kW/m ² ; wind 1m/s) 47±2°C Maximum series fuse rating 15A (20A for U version) Maximum system voltage 600V (U.S. NEC) 1000V (TÜV Rheinland & IEC 61215)	\$2,549.00 (F&I)

C. Quotation for Non-Intrusive Data: Wavetronix SS-125 HD Sensor / SmarTek SAS-1

Pay Item	Description	Price ea.
67	Wavetronix Non-Intrusive SS-125 Annual Lease – Volume and/or Speed collection <i>VDOT is the party responsible for downloading, converting, and importing the data into a format that can be used by their traffic database management system.</i>	\$3,600.00
67A	Wavetronix Non-Intrusive SS-125 Purchase Option – Volume and/or Speed collection (exercisable after 1 year of operation)	\$5,152.00
67B	Wavetronix Non-Intrusive SS-125 Purchase Option – Volume and/or Speed collection (exercisable after 2 years of operation)	\$3,864.00
67C	Wavetronix Non-Intrusive SS-125 Purchase Option – Volume and/or Speed collection (exercisable after 3 years of operation)	\$2,576.00
67D	Wavetronix Non-Intrusive SS-125 Purchase Option – Volume and/or Speed collection (exercisable after 4 years of operation)	\$1,788.00
67E	Wavetronix Non-Intrusive SS-125 Purchase Option – Volume and/or Speed collection (exercisable after 5 years of operation)	\$1,588.00
68	SmarTek SAS-1 Non-Intrusive Annual Lease – Volume and/or Speed collection <i>VDOT is the party responsible for downloading, converting, and importing the data into a format that can be used by their traffic database management system.</i>	\$3,600.00
68A	SmarTek Non-Intrusive SAS-1 Purchase Option – Volume and/or Speed collection (exercisable after 1 year of operation)	\$4,152.00
68B	SmarTek Non-Intrusive SAS-1 Purchase Option – Volume and/or Speed collection (exercisable after 2 years of operation)	\$2,864.00
68C	SmarTek Non-Intrusive SAS-1 Purchase Option – Volume and/or Speed collection (exercisable after 3 years of operation)	\$1,576.00
68D	SmarTek Non-Intrusive SAS-1 Purchase Option – Volume and/or Speed collection (exercisable after 4 years of operation)	\$788.00

D. Quotation for License Free SS Radio Modem

Pay Item	Description	Price ea.
69	License free 902-928 MHz 900 SS Radio Modem (Freewave FGR-115RC Radio Modem or equivalent) w/ antenna, cable, and wall transformer. (Furnish & Install) – Includes all freight, materials, and equipment. This price for this item does not include any monthly service charges and/or programming charges. Mobilization is extra. DTS will program SSRM with channel information provided by the customer. Specifically, this item includes: (1) License free 902-928 MHz, 115Kbps Spread Spectrum Wireless Data Radio Modem in ruggedized enclosure, 6-30 volts with RS232 / RS485 interface, N Type RF Connector (1) External Omni-directional antenna with cable and magnetic or permanent mount base (1) AC wall transformer	\$1,500.00

E. ADR Memory Upgrade

Pay Item	Description	Price ea.
70	Upgrade ADR with 4MB of additional memory to facilitate increased storage for complex traffic studies Specifically, this item includes: Installation of (1) PCMCIA Memory Slot into the ADR Installation of (1) 2MB or 4MB SRAM Memory Expansion Card Reallocate the ADR memory	\$1,444.00

F. Cabinet Components

Pay Item	Description	Price ea.
33B	Install / Replace Type 4 Cabinet on existing metal pole.	\$1,987.00
34A	Install / Replace Pole & Base on existing concrete foundation Specifically, this item includes: Installation of a 4" Aluminum pole up to 16' in height with break-way frangible base.	\$1,518.00
34B	Install / Replace Pole & Base w/ concrete foundation Specifically, this item includes: Installation of concrete foundation (24"W X 30"D) Installation of a 4" Aluminum pole up to 16' in height with break-way frangible base.	\$1,846.00

Additional Notes:

1. Task Pricing valid through 12/31/2010
2. **Task Pricing Escalation** - The Task prices will be adjusted in each additional year of the contract beyond 2010. Any changes would either be based on the latest 12 months CPIW services sector of the Consumer Price Index of the US Bureau of Labor versus the base year index, or a mutually agreed upon price that has been negotiated. The base year index for this calculation will be 2008.



DIGITAL TRAFFIC SYSTEMS, INC.
 2700-A POCAHONTAS TRAIL
 QUINTON, VA 23141
 OFFICE: 804.381.5300
 FAX: 804.932.5009

June 18, 2007

SCENARIO 1: DTS upgrade to field infrastructure of existing Continuous Count Station (already equipped with a Peek ADR+ Counter) to provide real time data, with IP modem, and larger solar panel if not currently installed. Assumes State already has Stopwatch application license.

DOT Contract Administrator
 Traffic Engineering
 Department of Transportation
 123 USA Street
 Anywhere, US 12345

RE: Site ID: 12345678
 Work Order: 123-D1-12345678

Dear Contract Administrator:

Subject: Station ID **12345678** Request for Authorization to Perform Upgrade

DTS will upgrade an existing count station site to provide real time data, install IP based wireless modem with antenna, install dual 65 watt solar panels with bracketing, install (1) 12VDC 100AH battery, and (1) new 12VDC 10Amp solar low voltage disconnect charge controller and program existing Peek ADR+ traffic recorder for dual use.

The contract pay items to perform the recommended upgrades are (one-time upgrade cost):

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price
1	12	Mobilization - Shoulder Work Required	\$1,100.00	\$1,100.00
2	38	Upgrade / Oversize Solar Panel Includes: 2 65 Watt Solar panels 1 12Vdc 100AH battery 1 12V 10Amp Solar Charge Controller 1 Wiring	\$1,800.00	\$3,600.00
1	50	Preventative Maintenance Inspection Includes and physical and electrical inspection of existing sensors, all sensor and power connections, grounding, and electronics.	\$400.00	\$400.00
The total estimated contract price to bring about this upgrade is:				\$5,100.00

Best regards,
 David Newman
 Program Manager
 Digital Traffic Systems

 Approved
 DOT Contract Administrator
 Print Name:

June 18, 2007
 Date



DIGITAL TRAFFIC SYSTEMS, INC.
 2700-A POCAHONTAS TRAIL
 QUINTON, VA 23141
 OFFICE: 804.381.5300
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June 18, 2007

DOT Contract Administrator
 Traffic Engineering
 Department of Transportation
 123 USA Street
 Anywhere, US 12345

Scenario 2: Assumes an existing site with functioning sensors, solar panel and IP modem – DTS to commission and maintain a Stopwatch enabled counter at the site, and receives a monthly data payment which includes ongoing maintenance of electronics.

RE: Site ID: 12345678
 Work Order: 123-D1-12345678

Dear Contract Administrator:

Subject: Station ID **12345678** Request for Authorization to Perform Upgrade

DTS leases a real-time (Stopwatch) enabled automatic traffic data recorder at an existing count station site where an IP based wireless modem and sufficient power is already available and in good working condition. Prior to installing the new equipment DTS will perform a preventative maintenance inspection to verify that all sensors, power, and grounding meet the minimum specifications.

The contract pay items to perform the one-time recommended upgrades are:

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price
1	12	Mobilization - Shoulder Work Required	\$1,100.00	\$1,100.00
1	50	Preventative Maintenance Inspection	\$400.00	\$400.00
The total estimated contract price to bring about this upgrade is:				\$1,500.00

Annual data, maintenance, and operational costs:

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price (Annual)
1	1	ATR Annual Lease - Classification / Volume / Speed collection*	\$3,600.00	\$3,600.00
Total:				\$3,600.00

*The lessor shall bear all costs associated with connection, operation and maintenance of the equipment. Payment will be made monthly at 1/12th the annual rate.

Best regards,
 David Newman
 Program Manager
 Digital Traffic Systems

 Approved
 DOT Contract Administrator
 Print Name:

June 18, 2007
 Date





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 2700-A POCAHONTAS TRAIL
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June 18, 2007

Scenario 3: Customer already owns ADR –PLUS Peek counters enabled for this real time data application. Therefore use Pay Item 6 to provide ongoing field technical support and traffic data.

DOT Contract Administrator
 Traffic Engineering
 Department of Transportation
 123 USA Street
 Anywhere, US 12345

RE: Site ID: 12345678
 Work Order: 123-D1-12345678

Dear Contract Administrator:

Subject: Station ID **12345678** Request for Authorization to Perform Upgrade

DTS assumes responsibility for DOT owned real-time (Stopwatch) enabled automatic traffic data recorder at an existing count station site where an IP based wireless modem and sufficient power is already available and in good working condition. Prior to assuming responsibility of the DOT owned equipment DTS will perform a preventative maintenance inspection to verify that all sensors, power, and grounding meet the minimum specifications. Items found to be outside of acceptable tolerances or that need repair will be billed separately.

The contract pay items to perform the recommended inspection are (one-time cost):

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price
1	12	Mobilization - Shoulder Work Required	\$1,100.00	\$1,100.00
1	50	Preventative Maintenance Inspection	\$400.00	\$400.00
The total estimated contract price to bring about this upgrade is:				\$4,740.00

Annual reoccurring data, maintenance, and operational costs:

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price (Annual)
1	6	Operation and Maintenance of DOT ADR & Modem Equipment	\$3,240.00	\$3,240.00
Total:				\$3,240.00

*Operation and Maintenance of DOT owned Automatic Data Recorder & Modem equipment. This pay item will be for the operation and maintenance of DOT provided ADR and modem equipment. The contractor will be responsible for all counter activity, to include parts replacement and repair (installation of new equipment extra). Payment will be made monthly at 1/12th the annual rate.

Best regards,
 David Newman
 Program Manager
 Digital Traffic Systems

Approved
 DOT Contract Administrator
 Print Name:

June 18, 2007
 Date





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 2700-A POCAHONTAS TRAIL
 QUINTON, VA 23141
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June 18, 2007

Scenario 4: DTS supplies and install new counter, solar and modem at an existing sensor site.

DOT Contract Administrator
 Traffic Engineering
 Department of Transportation
 123 USA Street
 Anywhere, US 12345

RE: Site ID: 12345678
 Work Order: 123-D1-12345678

Dear Contract Administrator:

Subject: Station ID **12345678** Request for Authorization to Perform Upgrade

DTS leases a real-time (Stopwatch) enabled automatic traffic data recorder at an existing count station site. DTS installs IP based wireless modem with antenna, install dual 65 watt solar panels with bracketing, install (1) 12VDC 100AH battery, and (1) new 12VDC 10Amp solar low voltage disconnect charge controller. Prior to installing the new equipment DTS will perform a preventative maintenance inspection to verify that all sensors, power, and grounding meet the minimum specifications.

The contract pay items to perform the one-time recommended upgrades are:

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price
1	12	Mobilization - Shoulder Work Required	\$1,100.00	\$1,100.00
2	38	Upgrade / Oversize Solar Panel	\$1,800.00	\$3,600.00
1	50	Preventative Maintenance Inspection	\$400.00	\$400.00
The total estimated contract price to bring about this upgrade is:				\$5,100.00

Annual data, maintenance, and operational costs:

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price (Annual)
1	1	ATR Annual Lease - Classification / Volume / Speed collection*	\$3,600.00	\$3,600.00
1	7A	CDMA Modem & Maintenance (0 - 99 units)**	\$720.00	\$720.00
Total:				\$4,320.00

*DTS leases a real-time automatic traffic data recorder. The lessor (DTS) shall bear all costs associated with connection, operation and maintenance of the equipment. Payment will be made monthly at 1/12th the annual rate.

**DTS leases a IP based wireless modem. The DOT is responsible for the monthly connection or communication charges. The lessor (DTS) shall bear all costs associated with connection, operation and maintenance of the equipment. Payment will be made monthly at 1/12th the annual rate.

Best regards,
 David Newman
 Program Manager
 Digital Traffic Systems

 Approved
 DOT Contract Administrator
 Print Name:

June 18, 2007
 Date





DIGITAL TRAFFIC SYSTEMS, INC.
 2700-A POCAHONTAS TRAIL
 QUINTON, VA 23141
 OFFICE: 804.381.5300
 FAX: 804.932.5009

June 18, 2007

Scenario 5: Install a brand new non intrusive site with DTS owned Wavetronix sensor.

DOT Contract Administrator
 Traffic Engineering
 Department of Transportation
 123 USA Street
 Anywhere, US 12345

RE: Site ID: 12345678
 Work Order: 123-D1-12345678

Dear Contract Administrator:

Subject: Station ID **12345678** Request for Authorization to Perform Upgrade

Project Scope: Install a Traffic Monitoring System for use with a Wavetronix sensor. The non-intrusive count station to be installed for the collection of traffic count data. All materials and labor including but not limited to metal pole, cabinet, solar panel, and pull boxes will be provided and installed in a professional manner. The pay item also includes all labor and materials such as grass seed and straw required for grounds keeping to return the location to a preconstruction condition.

The estimate to perform this work includes:

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price
1	12	Mobilization – Shoulder Work	\$1,100.00	\$1,100.00
1	33B	Install / Replace Type 4 Cabinet on existing metal pole.	\$1,987.00	\$1,987.00
2	38A	Upgrade / Install Large Solar Panel (F&I) 80W	\$2,549.00	\$5,098.00
4	45B	Grounding Modified / Preferred Method	\$175.00	\$700.00
1	48B	Initial ATR/WIM/CDMA Site Inspection	\$1,500.00	\$1,500.00
1	58A	Galvanized Steel 35' Pole with Concrete Foundation (F&I)	\$7,196.00	\$7,196.00
1	58B	Soil tests and design submittals	\$1,025.00	\$1,025.00
1	59A	Trenching (in units of 10 ft.)	\$25.00	\$25.00
1	59B	Conduit (in units of 10 ft.)	\$5.00	\$5.00

The total estimated contract price to complete this work: \$18,636.00

Annual data, maintenance, and operational costs:

Estimated Qty	Pay Item No.	Pay Item	Unit Price	Total Price (Annual)
1	1	ATR Annual Lease - Classification / Volume / Speed collection*	\$3,600.00	\$3,600.00
1	7A	CDMA Modem & Maintenance (0 - 99 units)**	\$720.00	\$720.00

Total: \$4,320.00

*DTS leases a real-time non-intrusive sensor / automatic traffic data recorder. The lessor (DTS) shall bear all costs associated with connection, operation and maintenance of the equipment. Payment will be made monthly at 1/12th the annual rate.

**DTS leases a IP based wireless modem. The DOT is responsible for the monthly connection & communication charges. The lessor (DTS) shall bear all costs associated with connection, operation and maintenance of the equipment. Payment will be made monthly at 1/12th the annual rate.

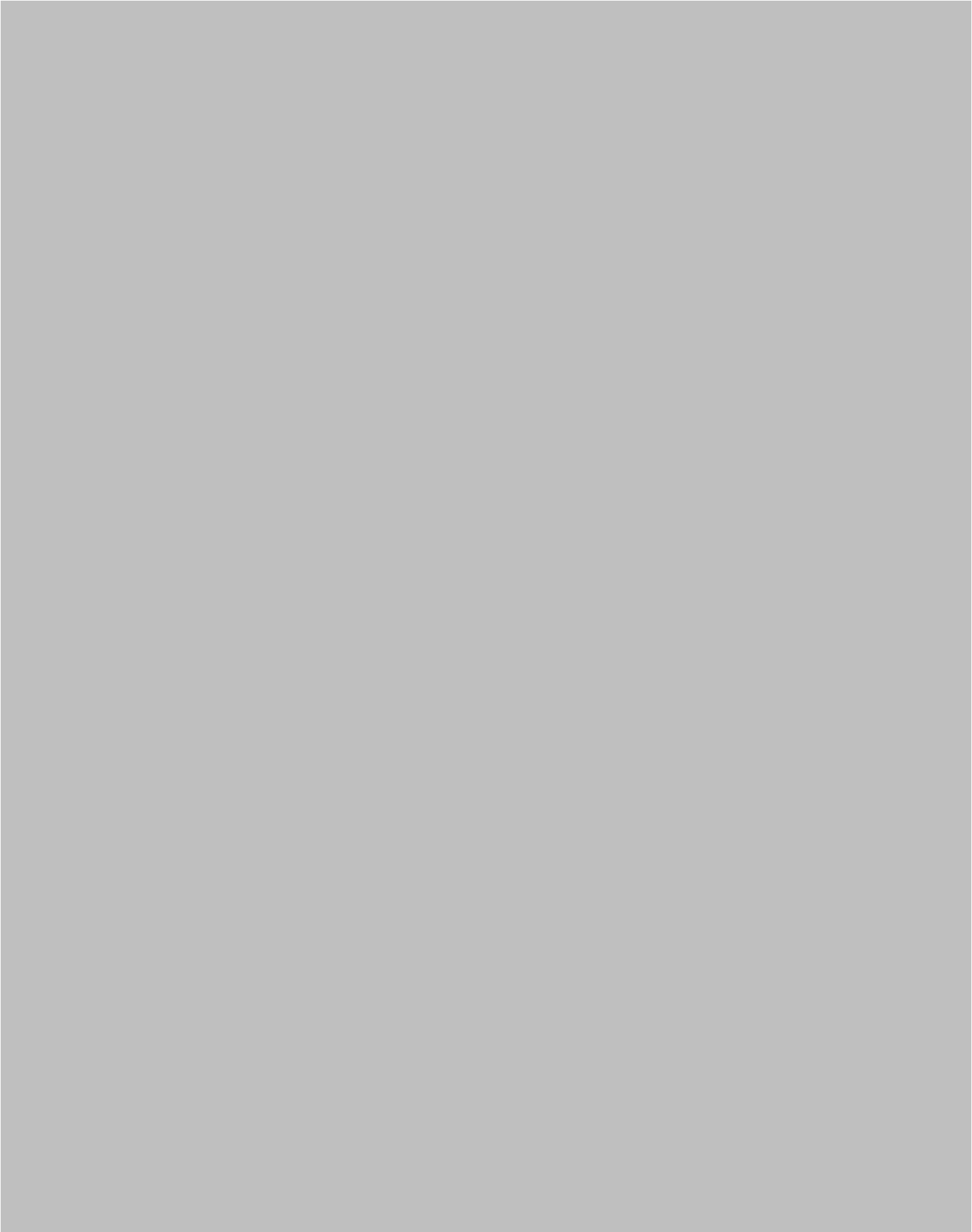
Best regards,
 David Newman
 Program Manager
 Digital Traffic Systems

June 18, 2007

Approved _____
 DOT Contract Administrator
 Print Name:

Date





THIS PAGE CONTAINS REDACTED INRIX CONFIDENTIAL INFORMATION





Consulting Services Costs

The category labor rates submitted for the consulting services portion of Volume II – Financial are presented as blended, fully loaded, hourly labor rates for each category and offer an accurate, yet simplified representation, of what hourly rates for task order work are likely to be over the initial three years and seven optional years of the contract.

The purpose of developing blended rates is to provide a weighted average (not a simple arithmetic mean) category rate that properly reflects which team member is most likely to do a particular type of work. In addition to the blended rates provided, attached is also a one-page rate sheet for each of the companies described in the Consulting Services portion of the Volume I –Technical Proposal. This way, each company is represented fairly and equitably (through weighted blending) during the evaluation of the proposal, while also maintaining its individual rate structure through the duration of the project.

You will notice that not every firm offered rates in every labor category. The primary reason for this is that each firm is playing to their strengths and is expected to be a strong contributor in their particular area(s) of expertise. However, knowing that there could be a variety of tasks and that all levels of experience and skill sets could be needed, even within a given labor category, a quick review and comparison reveals that within categories, rates can vary widely. It is this variation that the weighted, blended rates help address.

For each task performed under Consulting Services, the appropriate firm, skill set and level of experience will necessitate which firm(s) and labor categories are used. This process will ensure that the Coalition and its members receive the right solution and for each and every task.

PBS&J		Fully Loaded Hourly Rate				
Project Role	Company	Base Year 1	Base Year 2	Base Year 3	Option Year 1	Option Year 2
Project Manager	PBS&J	\$167.00	\$172.01	\$177.17	\$182.49	\$187.96
Sr. Engineer/Analyst	PBS&J	\$143.17	\$147.46	\$151.89	\$156.44	\$161.14
Engineer/ Analyst	PBS&J	\$120.00	\$123.60	\$127.31	\$131.13	\$135.06
Jr. Engineer/ Analyst	PBS&J	\$90.00	\$92.70	\$95.48	\$98.35	\$101.30
Sr. Programmer	PBS&J	\$158.00	\$162.74	\$167.62	\$172.65	\$177.83
Programmer	PBS&J	\$125.00	\$128.75	\$132.61	\$136.59	\$140.69
Jr. Programmer	PBS&J	\$85.00	\$87.55	\$90.18	\$92.88	\$95.67
Systems Engineer	PBS&J	\$183.00	\$188.49	\$194.14	\$199.97	\$205.97
D'base Specialist	PBS&J	\$90.00	\$92.70	\$95.48	\$98.35	\$101.30
Clerical/ Admin	PBS&J	\$63.00	\$64.89	\$66.84	\$68.84	\$70.91
		Option Year 3	Option Year 4	Option Year 5	Option Year 6	Option Year 7
Project Manager	PBS&J	\$193.60	\$199.41	\$205.39	\$211.55	\$217.90
Sr. Engineer/Analyst	PBS&J	\$165.97	\$170.95	\$176.08	\$181.36	\$186.80
Engineer/ Analyst	PBS&J	\$139.11	\$143.29	\$147.58	\$152.01	\$156.57
Jr. Engineer/ Analyst	PBS&J	\$104.33	\$107.46	\$110.69	\$114.01	\$117.43
Sr. Programmer	PBS&J	\$183.17	\$188.66	\$194.32	\$200.15	\$206.15
Programmer	PBS&J	\$144.91	\$149.26	\$153.73	\$158.35	\$163.10
Jr. Programmer	PBS&J	\$98.54	\$101.49	\$104.54	\$107.68	\$110.91
Systems Engineer	PBS&J	\$212.15	\$218.51	\$225.07	\$231.82	\$238.77
D'base Specialist	PBS&J	\$104.33	\$107.46	\$110.69	\$114.01	\$117.43
Clerical/ Admin	PBS&J	\$73.03	\$75.23	\$77.48	\$79.81	\$82.20

Open Roads Consulting, Inc.		Fully Loaded Hourly Rate				
Project Role	Company	Base Year 1	Base Year 2	Base Year 3	Option Year 1	Option Year 2
Project Manager	ORCI	\$172.00	\$177.16	\$182.47	\$187.95	\$193.59
Sr. Engineer/Analyst	ORCI	\$165.00	\$169.95	\$175.05	\$180.30	\$185.71
Engineer/ Analyst	ORCI	\$135.00	\$139.05	\$143.22	\$147.52	\$151.94
Jr. Engineer/ Analyst	ORCI	\$98.00	\$100.94	\$103.97	\$107.09	\$110.30
Sr. Programmer	ORCI	\$165.00	\$169.95	\$175.05	\$180.30	\$185.71
Programmer	ORCI	\$135.00	\$139.05	\$143.22	\$147.52	\$151.94
Jr. Programmer	ORCI	\$98.00	\$100.94	\$103.97	\$107.09	\$110.30
Systems Engineer	ORCI	\$150.00	\$154.50	\$159.14	\$163.91	\$168.83
D'base Specialist	ORCI	\$130.00	\$133.90	\$137.92	\$142.05	\$146.32
Clerical/ Admin	ORCI	\$65.00	\$66.95	\$68.96	\$71.03	\$73.16
		Option Year 3	Option Year 4	Option Year 5	Option Year 6	Option Year 7
Project Manager	ORCI	\$199.40	\$205.38	\$211.54	\$217.88	\$224.42
Sr. Engineer/Analyst	ORCI	\$191.28	\$197.02	\$202.93	\$209.02	\$215.29
Engineer/ Analyst	ORCI	\$156.50	\$161.20	\$166.03	\$171.01	\$176.14
Jr. Engineer/ Analyst	ORCI	\$113.61	\$117.02	\$120.53	\$124.14	\$127.87
Sr. Programmer	ORCI	\$191.28	\$197.02	\$202.93	\$209.02	\$215.29
Programmer	ORCI	\$156.50	\$161.20	\$166.03	\$171.01	\$176.14
Jr. Programmer	ORCI	\$113.61	\$117.02	\$120.53	\$124.14	\$127.87
Systems Engineer	ORCI	\$173.89	\$179.11	\$184.48	\$190.02	\$195.72
D'base Specialist	ORCI	\$150.71	\$155.23	\$159.88	\$164.68	\$169.62
Clerical/ Admin	ORCI	\$75.35	\$77.61	\$79.94	\$82.34	\$84.81

EnterInfo		Fully Loaded Hourly Rate				
Project Role	Company	Base Year 1	Base Year 2	Base Year 3	Option Year 1	Option Year 2
Project Manager	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	EnterInfo	\$130.00	\$133.90	\$137.92	\$142.05	\$146.32
Engineer/ Analyst	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Engineer/ Analyst	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Programmer	EnterInfo	\$100.00	\$103.00	\$106.09	\$109.27	\$112.55
Programmer	EnterInfo	\$87.50	\$90.13	\$92.83	\$95.61	\$98.48
Jr. Programmer	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Systems Engineer	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D'base Specialist	EnterInfo	\$80.00	\$82.40	\$84.87	\$87.42	\$90.04
Clerical/ Admin	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
		Option Year 3	Option Year 4	Option Year 5	Option Year 6	Option Year 7
Project Manager	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	EnterInfo	\$150.71	\$155.23	\$159.88	\$164.68	\$169.62
Engineer/ Analyst	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Engineer/ Analyst	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Programmer	EnterInfo	\$115.93	\$119.41	\$122.99	\$126.68	\$130.48
Programmer	EnterInfo	\$101.44	\$104.48	\$107.61	\$110.84	\$114.17
Jr. Programmer	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Systems Engineer	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D'base Specialist	EnterInfo	\$92.74	\$95.52	\$98.39	\$101.34	\$104.38
Clerical/ Admin	EnterInfo	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Berkeley Transport. Systems		Fully Loaded Hourly Rate				
Project Role	Company	Base Year 1	Base Year 2	Base Year 3	Option Year 1	Option Year 2
Project Manager	BTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	BTS	\$152.63	\$160.26	\$168.27	\$176.68	\$185.52
Engineer/ Analyst	BTS	\$130.00	\$136.50	\$143.33	\$150.49	\$158.02
Jr. Engineer/ Analyst	BTS	\$100.00	\$105.00	\$110.25	\$115.76	\$121.55
Sr. Programmer	BTS	\$160.00	\$168.00	\$176.40	\$185.22	\$194.48
Programmer	BTS	\$126.17	\$132.48	\$139.10	\$146.06	\$153.36
Jr. Programmer	BTS	\$100.00	\$105.00	\$110.25	\$115.76	\$121.55
Systems Engineer	BTS	\$122.29	\$128.41	\$134.83	\$141.57	\$148.65
D'base Specialist	BTS	\$134.31	\$141.03	\$148.08	\$155.48	\$163.25
Clerical/ Admin	BTS	\$75.00	\$78.75	\$82.69	\$86.82	\$91.16
		Option Year 3	Option Year 4	Option Year 5	Option Year 6	Option Year 7
Project Manager	BTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	BTS	\$194.79	\$204.53	\$214.76	\$225.50	\$236.77
Engineer/ Analyst	BTS	\$165.92	\$174.21	\$182.92	\$192.07	\$201.67
Jr. Engineer/ Analyst	BTS	\$127.63	\$134.01	\$140.71	\$147.75	\$155.13
Sr. Programmer	BTS	\$204.21	\$214.42	\$225.14	\$236.39	\$248.21
Programmer	BTS	\$161.03	\$169.08	\$177.53	\$186.41	\$195.73
Jr. Programmer	BTS	\$127.63	\$134.01	\$140.71	\$147.75	\$155.13
Systems Engineer	BTS	\$156.08	\$163.88	\$172.08	\$180.68	\$189.72
D'base Specialist	BTS	\$171.42	\$179.99	\$188.99	\$198.44	\$208.36
Clerical/ Admin	BTS	\$95.72	\$100.51	\$105.53	\$110.81	\$116.35

Tele Atlas North America		Fully Loaded Hourly Rate				
Project Role	Company	Base Year 1	Base Year 2	Base Year 3	Option Year 1	Option Year 2
Project Manager	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	TANA	\$180.00	\$185.40	\$190.96	\$196.69	\$202.59
Engineer/ Analyst	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Engineer/ Analyst	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Programmer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Programmer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Programmer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Systems Engineer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D'base Specialist	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Clerical/ Admin	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
		Option Year 3	Option Year 4	Option Year 5	Option Year 6	Option Year 7
Project Manager	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	TANA	\$208.67	\$214.93	\$221.38	\$228.02	\$234.86
Engineer/ Analyst	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Engineer/ Analyst	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Programmer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Programmer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Programmer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Systems Engineer	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D'base Specialist	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Clerical/ Admin	TANA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

TRAC - UW		Fully Loaded Hourly Rate				
Project Role	Company	Base Year 1	Base Year 2	Base Year 3	Option Year 1	Option Year 2
Project Manager	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	TRAC	\$132.11	\$137.40	\$142.89	\$148.61	\$154.55
Engineer/ Analyst	TRAC	\$104.75	\$108.94	\$113.30	\$117.83	\$122.54
Jr. Engineer/ Analyst	TRAC	\$68.21	\$70.94	\$73.78	\$76.73	\$79.80
Sr. Programmer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Programmer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Programmer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Systems Engineer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D'base Specialist	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Clerical/ Admin	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
		Option Year 3	Option Year 4	Option Year 5	Option Year 6	Option Year 7
Project Manager	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sr. Engineer/Analyst	TRAC	\$162.28	\$168.77	\$175.52	\$182.54	\$189.84
Engineer/ Analyst	TRAC	\$128.67	\$133.82	\$139.17	\$144.74	\$150.53
Jr. Engineer/ Analyst	TRAC	\$83.79	\$87.14	\$90.62	\$94.25	\$98.02
Sr. Programmer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Programmer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Jr. Programmer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Systems Engineer	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
D'base Specialist	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Clerical/ Admin	TRAC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Other Forms

Included in this tab are signed forms required by the RFP:

- √ Proposal Affidavit
- √ Conflict of Interest Affidavit
- √ Federal certifications
- √ Contract Administration Data

PART IV - REPRESENTATIONS AND INSTRUCTIONS
Section K - Representations, Certifications, and Other Statements of Contractors
UNIVERSITY OF MARYLAND PROPOSAL AFFIDAVIT

A. AUTHORIZED REPRESENTATIVE

I HEREBY AFFIRM THAT:

I am the (title) President and CEO and the duly authorized representative of (business) Inrix, Inc. and that I possess the legal authority to make this Affidavit on behalf of myself and the business for which I am acting.

B. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, §6-220, Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business):

C. AFFIRMATION REGARDING OTHER CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

(1) Been convicted under state or federal statute of:

(a) A criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or

(b) Fraud, embezzlement, theft, forgery, falsification or destruction of records or receiving stolen property;

(2) Been convicted of any criminal violation of a state or federal antitrust statute;

(3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. §1961 et seq., or the Mail Fraud Act, 18 U.S.C. §1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;

(4) Been convicted of a violation of the State Minority Business Enterprise Law, §14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(5) Been convicted of a violation of §11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsections (1)—(5) above;

(7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract; or

(8) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in §§B and C(1)—(7) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment):

D. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment

or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension).

E. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

(1) The business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and

(2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (you must indicate the reasons why the affirmations cannot be given without qualification):

F. SUB-CONTRACT AFFIRMATION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

G. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business has:

(1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

(2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or offeror or of any competitor, or otherwise taken any action in restraint of

free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

H. FINANCIAL DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate \$100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches \$100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

I. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, §§14-101—14-108, Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State, during a calendar year in which the person receives in the aggregate \$100,000 or more shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election.

J. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)

I CERTIFY THAT:

(1) Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.

(2) By submission of its bid or offer, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:

- (a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;
- (b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;
- (c) Prohibit its employees from working under the influence of drugs or alcohol;
- (d) Not hire or assign to work on the contract anyone whom the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;

- (e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;
- (f) Establish drug and alcohol abuse awareness programs to inform its employees about:
 - (i) The dangers of drug and alcohol abuse in the workplace;
 - (ii) The business' policy of maintaining a drug and alcohol free workplace;
 - (iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and
 - (iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;
- (g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §J(2)(b), above;
- (h) Notify its employees in the statement required by §J(2)(b), above, that as a condition of continued employment on the contract, the employee shall:
 - (i) Abide by the terms of the statement; and
 - (ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;
- (i) Notify the procurement officer within 10 days after receiving notice under §J(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;
- (j) Within 30 days after receiving notice under §J(2)(h)(ii), above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:
 - (i) Take appropriate personnel action against an employee, up to and including termination; or
 - (ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and
- (k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of §J(2)(a)—(j), above.

(3) If the business is an individual, the individual shall certify and agree as set forth in §J(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.

(4) I acknowledge and agree that:

- (a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;
- (b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and
- (c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.

K. CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT

I FURTHER AFFIRM THAT:

- (1) The business named above is a (domestic ___) (foreign ___) corporation registered in accordance with the Corporations and Associations Article, Annotated Code of Maryland, and that it is in good standing and has filed all of its annual reports, together with filing fees, with the Maryland State

Department of Assessments and Taxation, and that the name and address of its resident agent filed with the State Department of Assessments and Taxation is: Name: Address: ___ .

Inrix, Inc. is a Delaware corporation that is not yet registered to do business in Maryland. However, upon award of this contract, Inrix will promptly complete that registration.

(2) Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

L. CONTINGENT FEES

I FURTHER AFFIRM THAT:

The business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the business, to solicit or secure the Contract, and that the business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on the making of the Contract.

M. Repealed.

N. ACKNOWLEDGEMENT

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: 6/22/07 By: 

Bryan Mistele
President and CEO

Contractor's Federal Employer Identification Number (FEIN): 201296081

CONFLICT OF INTEREST INFORMATION

A. Each solicitation that will result in the selection of a Contractor who will assist a unit in the formation, evaluation, selection, award, or execution of a State contract shall provide notice of the requirement of this regulation.

B. "Conflict of interest" means that, because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

C. "Person" has the meaning stated in COMAR 21.01.02.01B (64) and includes a bidder, offeror, Contractor, consultant or subcontractor or subconsultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a bid or offer is made.

D. If the Procurement Officer makes a determination prior to award that facts or circumstances exist giving rise or which could in the future give rise to a conflict in interest, the procurement officer may reject a bid or offer under COMAR 21.06.02.03B.

E. After award the State may terminate the contract, in whole or in part, if it deems such termination necessary to avoid an actual or potential conflict of interest. If the Contractor knew or reasonably could have been expected to know of an actual or potential conflict of interest prior to or after award and did not disclose it or misrepresented relevant information to the Procurement Officer, the State may terminate the contract for default, institute proceedings to debar the Contractor from further State contracts, or pursue such other remedies as may be permitted by law or the contract.

F. A conflict of interest may be waived if the Procurement Officer, with approval of the agency head or designee, determines that waiver is in the best interest of the State. The determination shall state the reasons for the waiver and any controls that avoid, mitigate, or neutralize the conflict of interest.

G. Each bidder or offeror responding to a solicitation that will result in the selection of a Contractor who will assist a unit in the formation, evaluation, selection, award, or execution of another State contract shall provide the affidavit and disclosures set forth in Subsection H of this regulation to the Procurement Officer with the bid or offer and such other times as may be required by the Procurement Officer.

H. The affidavits and disclosures required by Subsection G of this regulation shall be in substantially the same form as follows:

CONFLICT OF INTEREST AFFIDAVIT AND DISCLOSURE

A. "Conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

B. "Person" has the meaning stated in COMAR 21.01.02.01B(64) and includes a bidder, offeror, Contractor, consultant, or subcontractor or subconsultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a bid or offer is made.


C. The bidder or offeror warrants that, except as disclosed in D below, there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a conflict of interest.

D. The following facts or circumstances give rise or could in the future give rise to a conflict of interest (explains in detail--attach sheets if necessary):

E. The bidder or offeror agrees that if an actual or potential conflict of interest arises after the date of this affidavit, the bidder or offeror will immediately make a full disclosure in writing to the Procurement Officer of all relevant facts and circumstances. This disclosure shall include a description of actions which the bidder or offeror has taken and proposes to take to avoid, mitigate, or neutralize the actual or potential conflict of interest. If the contract has been awarded and performance of the contract has begun, the Contractor shall continue performance until notified by the Procurement Officer of any contrary action to be taken.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Date: 6/22/07

By: 
Bryan Mistele
President and CEO

ATTACHMENT C6

CONTRACT-FUNDED

AFFIDAVIT FOR ANTI-LOBBYING CERTIFICATION, DEBARMENT CERTIFICATION, AND CLEAN AIR AND WATER CERTIFICATION

Contractors should review the instructions for certification included in the regulations before completing this form. Signature on this form denotes compliance with certification requirements under Federal Acquisition Regulation (FAR). The certifications shall be treated as material representations of fact upon which reliance will be placed by the University of Maryland in making a determination to award the order.

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

(a) 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 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 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) 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 instruction.

(c) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients 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.

2. DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

The undersigned certifies to the best of his knowledge and belief, that the company and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any offenses enumerated in paragraph (I)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

3. CLEAN AIR AND WATER. The undersigned certifies that

(a) Any facility to be used in the performance of this proposed contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

(b) The undersigned will immediately notify the University buyer, before award, of the receipt of any communications from the Administrator, or a designee, of the EPA, indicating that any facility that the undersigned proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The undersigned will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

I understand that a false statement on this certification may be grounds for rejection of this bid or proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Inrix, Inc.

Name of Contractor



Signature of Authorized Representative

6/22/07

Date

Bryan Mistele, President and CEO

Printed Name and Title of Authorized Representative

[] I am unable to certify to the above statements. My explanation is attached.

Section G - Contract Administration Data

1. Roles of the University of Maryland Program Manager and Procurement Officer

The Procurement Officer is the University of Maryland's authorized representative for all pre-contract matters related to this contract. Additionally, throughout the duration of the contract, the Procurement Officer shall be the only individual with authority to modify any provisions of this contract including, without limitation, the statement of work, pricing or any other sections.

The University of Maryland Program Manager Mr. Philip Tarnoff at 301-403-4619 and designated staff shall be the principal interface on behalf of the University of Maryland for post-award technical matters, and shall have the authority to explain and provide further details regarding the University of Maryland's expectations concerning the work to be performed hereunder and/or the items to be provided herein. The Program Manager and designated staff shall have no authority to modify any provisions of this contract.

2. Invoicing

The Contractor shall provide the following invoicing services. Invoices shall reflect the price structure as defined in Section B/Pricing, and Section G, Subsection 3 below.

Throughout the duration of any resultant contract, the Contractor shall provide one paper copy of each invoice. The paper invoice must contain the following minimum information:

- a. Invoice Number
- b. Invoice Date
- c. The word ORIGINAL printed on the original copy of the document.
- d. The full company or corporate name and address; payment address if it differs from corporate address.
- e. The full nine (9) digit Federal Tax Identification number (for U.S. Contractors only) or Social Security Number.
- f. Purchase order number and/or contract number.

Direct invoices to the following address:

University of Maryland
Attn.: Accounts Payable Department
Chesapeake Building – Room 3101
College Park, MD 20742

Any invoice that is unclear, illegible or does not conform to these specific requirements shall be returned to the Contractor for re-issuance.

3. Schedule of Payments

3.1 The essence of this contract is the provision of data. Task orders will authorize the provision of real-time traffic data for specific roadways in a geographical area for a specified period of time. This coverage will include a certain defined linear

bidirectional mileage. The defined mileage will form a component of the payment terms.

- 3.2 Payment for any mobilization costs will be due upon authorization of the task order. Data subscription fees will be invoiced at the end of the calendar month for which the data was provided. Each monthly payment will be based on an agreed upon monthly data fee (I) and adjusted by the product of the percentage uptime of the system (T) and the percent of mileage for which data was delivered (M) in the following manner:

Monthly data fee = I

Percentage of uptime of the data service (availability) = T %

Percentage of total mileage reported through the data service (reliability) = M %

Payment = I*T*M

Notes:

1. Periods of low traffic flow (defined earlier) will be excluded from the coverage area calculation as appropriate.
2. The mobility payment shall not exceed 20% of the equivalent annual payment

For example:

The negotiated mileage to be covered is 1,000 miles for a monthly fee of \$50k. The data service availability was 98% of the time. Then:

T = 0.98

For this time when data was available for the 1,000 miles, if 100 miles of data was not provided for half of the month, then:

The average coverage is reduced by $100/1000*0.5 = 5\%$, thus M = 0.95

Hence: Payment = I*T*M = $50,000*0.98*0.95 = \$46,550$

4. Assignment

No part of the work specified herein may be assigned or transferred to another Contractor without the prior written authorization of the Procurement Officer.

5. Notices

Notices under this contract shall be in writing and shall be considered effective upon personal delivery to the individual listed below or five calendar days after deposit in any U.S. mailbox, first class and addressed to the other party as follows:

For the University of Maryland:

Bruce D. Brewer
Procurement & Supply
University of Maryland
2113R Chesapeake Building
College Park, MD 20742-3111
Telephone: 301-405-5829
Facsimile: 301-314-9565
Email: **bbrewer@umd.edu**

For Contractor: (please complete the following)

Rick Schuman
Vice President, Public Sector
Inrix
9832 Montclair Circle, Suite 201
Apopka, FL 32703
Telephone: 407-298-4346
Facsimile: 866-643-9301
Email: **rick@inrix.com**

MBE Participation

Included in this tab are signed forms required by the RFP related to Minority Business Enterprise Participation in the Project:

- √ MBE Affidavit
- √ MBE Participation Schedule

**CERTIFIED MBE UTILIZATION AND FAIR SOLICITATION
AFFIDAVIT**

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the procurement officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

In conjunction with the bid or offer submitted in response to Project Name “Traffic Data and Associated Services along the I-95 Corridor”, Solicitation No. “82085N”, I affirm the following:

1. I acknowledge the overall certified Minority Business Enterprise (MBE) participation goal of **25** percent and, if specified in the solicitation, sub goals of ___ percent for MBEs classified as African American-owned and ___ percent for MBEs classified as women-owned. I have made a good faith effort to achieve this goal.

OR

After having made a good faith effort to achieve the MBE participation goal, I conclude I am unable to achieve it. Instead, I intend to achieve MBE participation of _____ percent and request a waiver of the remainder of the goal. Within 10 business days of receiving notice that our firm is the apparent low bidder or the apparent awardee, I will submit a written waiver request that complies with COMAR 21.11.03.11. I acknowledge that the MBE subcontractors/suppliers listed in the MBE Participation Schedule will be used to accomplish the percentage of MBE participation that I intend to achieve.

2. I have identified the specific commitment of certified MBEs by completing and submitting an MBE Participation Schedule with the bid or proposal.
3. I understand that if I am notified that I am the apparent awardee, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier.

Outreach Efforts Compliance Statement (Attachment C)

MBE Subcontractor Project Participation Statement of Intent to Subcontract (Attachment D)

MBE Waiver Request (if applicable) (Attachment E)

MBE Unavailability Form (if applicable) (Attachment F)

Any other documentation required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal.

I acknowledge that if I fail to return each completed document within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has already been awarded and the required documentation is not submitted, the award is voidable.

4. In the solicitation of subcontract quotations or offers, MBE subcontractors were provided not less than the same information and amount of time to respond, as were non-MBE subcontractors.

I solemnly affirm under the penalties of perjury that the contents of this paper are true to the best of my knowledge, information, and belief.

Inrix, Inc.

Bidder/Offeror Firm Name

4055 Lake Washington Blvd, NE, Suite 200
Address

Kirkland, WA 98033
City, State, Zip



Signature of Authorized Representative

Bryan Mistele, President and CEO
Printed Name, Title

425-284-3800
Phone

866-643-9301
Fax

bryan@inrix.com
E-Mail

6/22/07
Date

Submit this MBE Affidavit with Bid or Offer

