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U.S. Department of Transportation

Cooperative Agreement Award Number DTFH6116H00011

*"Beyond Traffic: The Smart City Challenge"*Phase 1 Award – Concept Development and Planning  
for Smart City Challenge Finalists

Signatures	
City of Portland	U.S. Department of Transportation Federal Highway Administration
x 	x 
Printed Name: Charlie Hales	Printed Name: Sarah Tarpgaard
Title: Mayor of Portland, OR	Title: Agreement Officer
Date: March 21, 2016	Date: 3/17/2016

**Award Information**

Award No.:	DTFH6116H00011
Effective Date:	March 17, 2016
Awarded to:  <i>Smart City Challenge Finalist</i>	City of Portland 1120 SW 5 <sup>th</sup> Avenue, Room 1250 Portland, OR 97204-1912  DUNS No: 054971197 TIN No.: 936002236
Sponsoring Office/ Federal Agency Name:	U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA) Office of Acquisition and Grants Management 1200 New Jersey Avenue, SE Mail Drop: E62-204 Washington DC 20590 Attn: Sarah Tarpgaard, HCFA-32
Total Amount:	Federal Share: \$100,000 Recipient Share: \$ 0 Total Value: \$100,000
Catalog of Federal Domestic Assistance (CFDA) Number:	20.200 Highway Research & Development
Period of Performance	Six Months (3/17/16 – 9/16/2016)
Type of Award:	Fixed Amount Cooperative Agreement
Authority:	23 U.S.C. §516(a)
Procurement Request:	HOIT212116019/000001
Funds Obligated:	\$100,000
Accounting Data:	15X0447060-0000-021DT20672-2101-000000-25305-61006600, \$100,000
Payment Instructions	See "Payment" Clause for Instructions and Milestone Payment Plan

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## SECTION A – PROGRAM DESCRIPTION

### 1. STATEMENT OF PURPOSE

The purpose of this cooperative agreement is to provide Federal funding for the awardee (the "Smart City Challenge Finalist") to:

- Conduct concept development and planning activities such as development of technical demonstration plans and budget plan documents, and performance of pre-implementation planning;
- Prepare a detailed application for implementation of a Smart City Challenge demonstration;
- Participate in a number of planning, outreach and educational opportunities with USDOT personnel and others to further develop their plans; and
- Further the Smart City Finalist's plans even if they do not receive the Smart City Challenge demonstration award.

### 2. LEGISLATIVE AUTHORITY

Specific statutory authority for conducting this effort is found in the Intelligent Transportation Systems Research Program in 23 U.S.C. §516(a), which authorizes the Secretary of Transportation to "...carry out a comprehensive program of intelligent transportation system research and development, and operational tests of intelligent vehicles, intelligent infrastructure systems, and other similar activities."

Section 6002(a) of the Fixing America's Surface Transportation Act (FAST Act) legislation provides funding for transportation research authorized to be appropriated out of the Highway Trust Fund.

The authority to enter into a cooperative agreement for this effort is found under 23 US Code § 502 - Surface Transportation Research, Development, and Technology, paragraph (b) (3) which states:

“(3) **cooperation, grants, and contracts.** — The Secretary may carry out research, development, and technology transfer activities related to transportation—

(A) independently;

(B) in cooperation with other Federal departments, agencies, and instrumentalities and Federal laboratories; or

(C) by making grants to, or entering into contracts and cooperative agreements with one or more of the following: the National Academy of Sciences, the American Association of State Highway and Transportation Officials, any Federal laboratory, Federal agency, State agency, authority, association, institution, for-profit or nonprofit corporation, organization, foreign country, or any other person.”

### 3. BACKGROUND

In February of 2015, the United States Department of Transportation (USDOT) released “*Beyond Traffic 2045: Trends and Choices*.” Beyond Traffic examines the long-term and emerging trends affecting our Nation’s transportation system and the implications of those trends. It describes how demographic and economic trends, as well as changes in technology, governance, and our climate are affecting how people and goods travel today, and how they could affect travel in the future. It outlines choices that will require cities to think differently about how we move, how we move things, how we move better, how we adapt, and how we align decisions and dollars. Smart cities are emerging as a concept that can be used to address these issues starting today. The trends identified in Beyond Traffic have major implications for cities. Cities deliver many benefits – greater employment opportunities, greater access to healthcare and education, and greater access to entertainment, culture and the arts. As a result, people are moving to cities at an unprecedented rate. Our population is expected to grow by 70 million over the next 30 years, and most of this population growth will be concentrated in metropolitan areas or cities. Growing urbanization will continue to put significant strain on city infrastructure and transportation networks.

Transportation is critical to making a city work. Many cities see advantages in urbanization, but these cities are also saddled with concentrated growth, shrinking revenues, and increased transportation demand. Inefficiencies in our transportation system cost Americans, on average, each over 40 hours stuck in traffic each year – an annual financial cost of \$121 billion. At the same time, research indicates that cities account for 67% of all greenhouse gases (GHGs) released into the atmosphere. The

transportation sector is the second-biggest source of GHG emissions, responsible for emitting 28% of GHGs into the atmosphere.

To overcome these challenges, cities must find ways to foster the emergence of technologies that have the potential to transform transportation. A number of trends in technology are taking place. How we collect and analyze data, how communications and mobile platforms evolve, and when connected and automated vehicle technologies emerge, are questions that hold the promise of making our future transportation system safer, more accessible and efficient, and more environmentally sustainable.

With Intelligent Transportation Systems (ITS) laying the groundwork for innovative transportation solutions, many cities are currently serving as laboratories for new types of transportation services. Smart cities are emerging as a next-generation approach for city management, taking the steps forward along the transportation technology continuum. Integrating ITS, connected vehicle technologies, automated vehicles, and other advanced technologies – along with new mobility concepts that leverage the sharing economy – within the context of a city provides the enhance travel experiences and make moving people and goods safer, more efficient, and more secure. By enhancing the effective management and operation of the transportation system, smart city solutions can leverage existing infrastructure investments, enhance mobility, sustainability, and livability for citizens and businesses, and greatly increase the attractiveness and competitiveness of cities and regions.

In December 2015, the USDOT issued Notice of Funding Opportunity (NOFO) No. DTFH6116RA00002 inviting submittal of Smart City Challenge Phase 1 applications by 2/4/2016. The USDOT selected seven Smart City Challenge Finalists to receive \$100,000 fixed amount cooperative agreement awards to fund concept development and planning activities. This award represents one of those agreements.

Under a separately issued Notice of Funding Opportunity, estimated to be released on or about 3/18/2016, the USDOT intends to request submittal of a detailed Smart City Challenge demonstration application, with competition limited to the seven Smart City Challenge Finalists.

#### 4. DELIVERABLES

The Smart City Challenge Finalist shall provide the following milestones/deliverables under this cooperative agreement. **Note:** Section 508 requirements are included in General Terms and Conditions available online at:  
<http://www.fhwa.dot.gov/aaa/generaltermsconditions.cfm>

Deliverable	Due Date	Section 508 Compliant?
<u>Kick-off Meeting</u> with the USDOT.	Webinar scheduled for 3/23/2016 from 2 pm to 3:30 pm Eastern	No
<u>Monthly Progress Reports</u> to document technical activities performed (concept development activities, technical and budget documentation development activities, application development activities, and pre-implementation planning activities). See Monthly Progress Reports clause below.	Report 1: Due one month after the effective date of the award. Report 2: Due two months after the effective date of the award. Report 3: Due three months after the effective date of the award. Report 4: Due five months after the effective date of the award.	No
<u>Participation</u> in informational webinars, meetings and conferences to be conducted by USDOT personnel and others.	See estimated schedule below. Finalists are invited to attend all meetings if possible. Mandatory meetings are designated below.	No
<u>Participation</u> in Oral Presentations to USDOT representatives.	TBD	No
<u>A three-minute video</u> presenting the proposed demonstration.	Within 3 months after the effective date of the award.	Yes
<u>A final report</u> that incorporates stakeholder inputs and documents plans to implement the vision in the future and lessons learned during the process.	Within 5 months after the effective date of the award.	Yes

Estimated Schedule of Informational Webinars and Meetings		
Webinar or Meeting	Date	Finalist Personnel to Attend
<b>(Mandatory)</b> Kick-off Meeting. Webinar kickoff meeting with the USDOT.	3/23/2016 from 2 pm to 3:30 pm Eastern	Team Leader, Grants/Business Manager, and key staff
World Economic Forum in San Diego (In-person, travel to San Diego)	3/31/2016	Mayor
<b>(Mandatory)</b> USDOT Technical Assistance Meeting #1 – Partnerships at USDOT Headquarters (In-person, travel to DC)	4/4 – 4/5/2016	Team Leader and key staff
USDOT V2I Safety Applications Demonstrations and Connected Vehicle Technical Assistance in Fowlerville, Michigan (In-person, travel to Fowlerville, Michigan / Detroit area)	4/19 – 4/21/2016 (Demonstration on 4/20/2016)	Technical staff wanting to understand V2I Safety Applications to support deployment considerations
<b>(Mandatory)</b> Smart City Challenge Finalist Roundtable in City with Senior USDOT Officials (In-person, in Finalist's City)	TBD – 1 day in each city (April/May)	Mayor and other key city and partner leadership
International Trip to Europe TBD (In-person, travel to Europe)	4/17 – 4/24/2016 (Copenhagen, Amsterdam, and Oslo)	Mayor and one other staff
USDOT Technical Assistance Meeting #2 – Connected Vehicle Boot Camp (Webinar or travel to DC, TBD)	TBD – 2 days in Washington, DC and possibly two, 2 hour webinars	Key Technical Staff focused on connected vehicle implementation
Smart City Challenge Finalist Presentations. Estimated 3 invitational presentations given by Finalists at conferences or meetings TBD.	Est. dates: (1) 6/6/2016: Telecomm. Industry Association in Dallas; (2) 6/13/2016: ITS America Annual meeting in San Jose, CA; (3) TBD.	TBD



**SECTION B – FEDERAL AWARD INFORMATION****1. TYPE OF AWARD**

The award type is a fixed amount cooperative agreement.

**2. COST SHARING OR MATCHING**

Cost sharing or matching is NOT required for this award.

**3. PERIOD OF PERFORMANCE**

The estimated period of performance is six months.

**4. DEGREE OF FEDERAL INVOLVEMENT**

The USDOT anticipates substantial Federal involvement with the Smart City Challenge Finalist ("Recipient") during the course of this agreement. The anticipated Federal involvement will include technical assistance, education and guidance to the Recipient.

**5. MILESTONE PAYMENT PLAN**

The Recipient may request payment in accordance with the following Milestone Payment Plan. Upon successful completion of the following deliverables or milestones, the Recipient may submit a Request for Fixed Amount Payment as shown below. The USDOT will make payment based on determination that the Recipient has adequately completed of the following deliverables or milestones.

NOTE: Under a fixed amount award, the Recipient is NOT required to report actual costs incurred to the Government. Rather, the Recipient will be paid the fixed amounts listed below for adequate completion of the deliverables or milestones listed below, and compliance with the terms of the award.

Milestone Payment Plan		
Milestone or Deliverable	Due Date	Fixed Amount
Kick-off Meeting – conduct a kickoff meeting with the USDOT.	Within two weeks after award	\$20,000
Monthly Progress Report 1	One month after the effective date of the award.	\$20,000
Monthly Progress Report 2	Two months after the effective date of the award.	\$20,000
Monthly Progress Report 3	3 months after the effective date of the award.	\$5,000
Monthly Progress Report 4	5 months after the effective date of the award.	\$5,000
A three-minute video presenting the proposed demonstration.	Within 3 months after award	\$5,000
A final report that incorporates stakeholder inputs and documents plans to implement the vision in the future and lessons learned during the process.	Within 5 months after award	\$25,000

## **SECTION C – FEDERAL AWARD ADMINISTRATION INFORMATION**

### **1. FEDERAL AWARD NOTICES**

Only the Agreement Officer (AO) can commit the USDOT. The award document, signed by the AO, is the authorizing document. Only the AO can bind the Federal Government to the expenditure of funds.

### **2. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS**

General terms, conditions, and governing regulations that apply to this agreement are available online at: <http://www.fhwa.dot.gov/aaa/generaltermsconditions.cfm>

The online list dated March 6, 2015 of "GENERAL TERMS AND CONDITIONS FOR ASSISTANCE AWARDS" shall apply to the resulting award.

\*Note: The Payment clause listed online in the list of General Terms does not apply to this fixed amount award. See Payment clause below for payment instructions applicable to this award.

Special terms and conditions follow. These terms will be included in the resulting award.

#### **A. PUBLIC ACCESS TO DOCUMENTS**

The Recipient agrees that the resulting deliverables/documentation submitted to the USDOT under this Agreement may be posted online for public access and/or shared by USDOT with other interested parties. The USDOT anticipates the documents cited herein may be posted on a USDOT website or other appropriate website.

#### **B. PERSONALLY IDENTIFIABLE INFORMATION (PII)**

Personally Identifiable Information (PII) as defined at CFR Part 200.79 and 2 CFR 200.82 at will not be requested unless necessary and only with prior written approval of the AO with concurrence from the Agreement Officer's Technical Representative (AOR).

**C. AVAILABLE FUNDING**

Currently, Federal funding in the amount of \$100,000 is obligated to the award for performance. This award is fully funded. The USDOT's liability to make payments to the Recipient is limited to those funds obligated under this Agreement as indicated herein and any subsequent amendments.

**D. PAYMENT**

The Recipient may submit Invoices to request fixed amount payments for completed milestones or deliverables in accordance with the Milestone Payment Plan included in this award.

Requests must include:

- Invoice Number and Date
- Cooperative Agreement Award Number
- Recipient Name and Address
- DUNS Number
- Recipient Point of Contact (Email and Phone Number)
- Milestone or Deliverable Name and Date Completed
- Fixed Amount Requested (must match Milestone Payment Plan)

The Recipient shall submit invoices to the payment office via DELPHI eInvoicing System.

The AO or Agreement Specialist reserve the right to withhold processing invoices until adequate completion of the milestone or deliverable is demonstrated. After AOR approval, the AO will certify and forward the request for reimbursement to the payment office via DELPHI eInvoicing System.

**DELPHI eInvoicing System Registration and Information**

The Recipient must have Internet access to register and use the DELPHI eInvoicing System. Prompt registration for DELPHI eInvoicing System is important in order to reduce the possibility of delayed payments.

All persons accessing the DELPHI eInvoicing System will be required to have their own unique user ID and password. It is not possible to have a generic ID and password for a Recipient.

To register for DELPHI eInvoicing System, Recipients must eAuthenticate and activate an account by contacting their AO and providing the full name, title, phone number and e-mail address for the appropriate point(s) of contact (POC) who will submit payment requests. Within two weeks the POC should receive an invite to

sign up for the system. The POC will also receive a form to verify their identity. The POC must complete the form, and present it to a Notary Public for verification. The POC will return the notarized form to:

DOT Enterprise Service Center  
FAA Accounts Payable, AMZ-100  
PO Box 25710  
Oklahoma City, OK 73125

When the form is received and validated, the Recipient POC will receive a unique user ID and password via e-mail. POCs should contact their AO with any changes to their system information.

Applicants registered with other DOT Agencies, such as Federal Aviation Administration or Federal Railroad Administration, must also apply for access with FHWA in order to request payment from FHWA.

To facilitate your use of the DELPHI eInvoicing system, comprehensive user's information is available at <http://www.dot.gov/policy-initiatives/delphi-einvoicing-system-training-materials>.

### **Account Management**

The Applicant should contact their AO when POCs have left their organization or are no longer will be submitting invoices, with the full name, title, phone number, e-mail address, and user ID of the POC. The user ID will then be removed. If a user ID becomes inactive/times out due no activity, the Recipient should contact their AO with the full name, title, phone number, e-mail address, and user ID of the POC to be reactivated. To prevent being timed out due to no-activity, users should login once within 45 days of their last login.

### **Waivers**

The Department of Transportation Financial Management officials may, on a case by case basis, waive the requirement to register and use the DELPHI eInvoicing System. Waiver request forms can be obtained on the DELPHI eInvoicing website (<http://www.dot.gov/cfo/delphi-einvoicing-system.html>) or by contacting the AO. Applicants must explain why they are unable to use or access the Internet to register and enter payment requests.

All waiver requests should be sent to via mail to:

Director of the Office of Financial Management  
US Department of Transportation, B-30  
Office of Financial Management, Room W93-431  
1200 New Jersey Avenue SE  
Washington DC 20590-0001

or electronically to: [DOTElectronicInvoicing@dot.gov](mailto:DOTElectronicInvoicing@dot.gov)

The Director of the DOT Office of Financial Management will confirm or deny the request within approximately 30 days.

If a Recipient is granted a Waiver, Requests for advance or reimbursement and required supporting documents, should be sent via regular U.S. Postal Service to the following address:

Federal Highway Administration  
Markview Processing  
P.O. Box 268865  
Oklahoma City, OK 73126-8865  
Attention: Sarah Tarpgaard

Requests for advance or reimbursement submitted via an overnight service must use the following physical address:

MMAC  
FHWA/AMZ-150  
6500 MacArthur Blvd.  
Oklahoma City, OK 73169  
Attention: Sarah Tarpgaard

Express Delivery Point of Contact: Ryan Wisniewski, 405-954-8252

#### **E. PROGRAM INCOME**

Pursuant to 2 CFR 200.307, Program income earned during the agreement period must be added to the Federal award and used for the purposes and under the conditions of the Federal award, unless otherwise approved by the AO. Program income must not be used to offset the Federal or Recipient contribution to this project.

#### **F. SUBAWARDS**

N/A for this fixed amount award.

**G. DESIGNATION AS RESEARCH OR NON-RESEARCH AGREEMENT**

This agreement is designated as: NON-RESEARCH

**H. CONFERENCE SUPPORT RESTRICTIONS**

N/A for this fixed amount award.

**I. AGREEMENT PERFORMANCE REQUIREMENTS SUMMARY**

N/A

**J. DISPUTES**

The parties to this Agreement will communicate with one another in good faith and in a timely and cooperative manner when raising issues under this provision. Any dispute, which for the purposes of this provision includes any disagreement or claim, between the FHWA and the Recipient concerning questions of fact or law arising from or in connection with this Agreement and whether or not involving alleged breach of this Agreement, may be raised only under this Disputes provision.

Whenever a dispute arises, the parties will attempt to resolve the issues involved by discussion and mutual agreement as soon as practical. In no event will a dispute which arose more than three months prior to the notification made under the following paragraph of this provision constitute the basis for relief under this article unless FHWA waives this requirement.

Failing resolution by mutual agreement, the aggrieved party will document the dispute by notifying the other party in writing of the relevant facts, identify unresolved issues and specify the clarification or remedy sought. Within five working days after providing written notice to the other party, the aggrieved party may, in writing, request a decision from one level above the AO. The AO will conduct a review of the matters in dispute and render a decision in writing within thirty calendar days of receipt of such written request. Any decision of the AO is final and binding unless a party will, within thirty calendar days, request further review as provided below.

Upon written request to the FHWA Director, Office of Acquisition and Grants Management or designee, made within thirty calendar days after the AO's written decision or upon unavailability of a decision within the stated time frame under the

preceding paragraph, the dispute will be further reviewed. This review will be conducted by the Director, Office of Acquisition and Grants Management. Following the review, the Director, Office of Acquisition and Grants Management, will resolve the issues and notify the parties in writing. Such resolution is not subject to further administrative review and to the extent permitted by law, will be final and binding. Nothing in this Agreement is intended to prevent the parties from pursuing disputes in a United States Federal Court of competent jurisdiction.

### **3. REPORTING**

#### **ADDRESSES FOR SUBMITTAL OF REPORTS AND DOCUMENTS**

The Recipient must submit all required reports and documents electronically, referencing the Agreement number, to the Agreement Officer (AO) and the Agreement Officer's Representative (AOR) as listed below in Section D.

#### **MONTHLY PROGRESS REPORTS**

The Recipient must submit an electronic copy of the Standard Form - Performance Progress Report (SF-PPR), to the AOR and the AO as follows.

Report 1: Due one month after the effective date of the award.

Report 2: Due two months after the effective date of the award.

Report 3: Due three months after the effective date of the award.

Report 4: Due five months after the effective date of the award.

The SF-PPR content directions are available online in various locations such as:

<http://www.fema.gov/media-library/assets/documents/29485>

Note: The directions contained in this clause regarding frequency of reporting take precedence over the directions contained in the SF-PPR. When conflict exists between the SF-PPR and this clause, the text of this clause shall take precedence.

The Performance Progress Report must include the required certification pursuant to 2 CFR 200.415.



The Recipient shall address the following in Block 10, Performance Narrative:

- Summarize technical activities performed during the reporting period such as concept development activities, technical and budget documentation development activities, application development activities, and pre-implementation planning activities.
- Summarize technical engagement activities conducted with USDOT representatives.
- Summarize problems encountered, plans to mitigate problems, and any requests for USDOT assistance.
- Summarize plans for next reporting period.

Submit an electronic copy to the ITS JPO at the following address:

[ITSPProjects@dot.gov](mailto:ITSPProjects@dot.gov).

NOTE: The Recipient is not required to report to USDOT any budgetary information or costs incurred under this fixed amount award.

**SECTION D – FEDERAL AWARDING AGENCY CONTACTS**

Address questions to the Agreement Officer (AO) at [Sarah.Tarpgaard@dot.gov](mailto:Sarah.Tarpgaard@dot.gov), and/or the appointed Agreement Officer's Representative (AOR) as follows.

<b>Finalist City</b>	<b>Award #</b>	<b>USDOT Technical Point of Contact (AOR)</b>
Austin	DTFH6116H00006	<a href="mailto:Brian.Cronin@dot.gov">Brian.Cronin@dot.gov</a>
Columbus	DTFH6116H00007	<a href="mailto:Robert.Sheehan@dot.gov">Robert.Sheehan@dot.gov</a>
Denver	DTFH6116H00008	<a href="mailto:Robert.Sheehan@dot.gov">Robert.Sheehan@dot.gov</a>
Kansas City	DTFH6116H00009	<a href="mailto:Brian.Cronin@dot.gov">Brian.Cronin@dot.gov</a>
Pittsburgh	DTFH6116H00010	<a href="mailto:Kevin.Dopart@dot.gov">Kevin.Dopart@dot.gov</a>
Portland	DTFH6116H00011	<a href="mailto:Robert.Sheehan@dot.gov">Robert.Sheehan@dot.gov</a>
San Francisco	DTFH6116H00012	<a href="mailto:Kevin.Dopart@dot.gov">Kevin.Dopart@dot.gov</a>