

FDP Cost Reimbursement Subaward

Federal Awarding Agency: Other [Type in Agency]		Department of Transportation
Pass-Through Entity (PTE): REGENTS OF THE UNIVERSITY OF MICHIGAN		Subrecipient: CITY OF ANN ARBOR
PTE PI: Jim Sayer		Sub PI: Raymond Hess
PTE Federal Award No: 693JJ32450012		Subaward No: SUBK00018825
Project Title: Advanced Transportation Technology and Innovation (ATTAIN) Program "ATTAIN AACE 2.0: The Ann Arbor Connected Environment Reimagined"		
Subaward Budget Period: Start: 02/08/2024 End: 02/07/2027		Amount Funded This Action (USD): \$ 121,285.00
Estimated Period of Performance: Start: 02/08/2024 End: 02/07/2027		Incrementally Estimated Total (USD): \$ 121,285.00
Terms and Conditions		
<p>1. PTE hereby awards a cost reimbursable subaward, (as determined by 2 CFR 200.331), to Subrecipient. The Statement of Work and budget for this Subaward are as shown in Attachment 5. In its performance of Subaward work, Subrecipient shall be an independent entity and not an employee or agent of PTE.</p> <p>2. Subrecipient shall submit invoices not more often than monthly and not less frequently than quarterly for allowable costs incurred. Upon the receipt of proper invoices, the PTE agrees to process payments in accordance with this Subaward and 2 CFR 200.305. All invoices shall be submitted using Subrecipient's standard invoice, but at a minimum shall include current and cumulative costs (including cost sharing), breakdown by major cost category, Subaward number, and certification, as required in 2 CFR 200.415(a). Invoices that do not reference PTE Subaward number shall be returned to Subrecipient. Invoices and questions concerning invoice receipt or payments shall be directed to the party's Financial Contact, shown in Attachment 3A.</p> <p>3. A final statement of cumulative costs incurred, including cost sharing, marked "FINAL" must be submitted to PTE's Financial Contact, as shown in Attachment 3A, not later than 60 days after the final Budget Period end date. The final statement of costs shall constitute Subrecipient's final financial report.</p> <p>4. All payments shall be considered provisional and are subject to adjustment within the total estimated cost in the event such adjustment is necessary as a result of an adverse audit finding against the Subrecipient.</p> <p>5. Matters concerning the technical performance of this Subaward shall be directed to the appropriate party's Principal Investigator as shown in Attachments 3A and 3B. Technical reports are required as shown in Attachment 4.</p> <p>6. Matters concerning the request or negotiation of any changes in the terms, conditions, or amounts cited in this Subaward, and any changes requiring prior approval, shall be directed to the PTE's Authorized Official Contact and the Subrecipient's Authorized Official Contact shown in Attachments 3A and 3B. Any such change made to this Subaward requires the written approval of each party's Authorized Official as shown in Attachments 3A and 3B.</p> <p>7. The PTE may issue non-substantive changes to the Budget Period(s) and Budget Bilaterally. Unilateral modification shall be considered valid 14 days after receipt unless otherwise indicated by Subrecipient when sent to Subrecipient's Authorized Official Contact, as shown in Attachment 3B.</p> <p>8. Each party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law.</p> <p>9. Either party may terminate this Subaward with 30 days written notice. Notwithstanding, if the Awarding Agency terminates the Federal Award, PTE will terminate in accordance with Awarding Agency requirements. PTE notice shall be directed to the Authorized Official Contact, and Subrecipient notice shall be directed to the Authorized Official Contact as shown in Attachments 3A and 3B. PTE shall pay Subrecipient for termination costs as allowable under Uniform Guidance, 2 CFR 200, or 45 CFR Part 75 Appendix IX, as applicable</p> <p>10. By signing this Subaward, including the attachments hereto which are hereby incorporated by reference, Subrecipient certifies that it will perform the Statement of Work in accordance with the terms and conditions of this Subaward and the applicable terms of the Federal Award, including the appropriate Research Terms and Conditions ("RTCs") of the Federal Awarding Agency, as referenced in Attachment 2. The parties further agree that they intend this subaward to comply with all applicable laws, regulations, and requirements.</p>		
By an Authorized Official of the PTE: John Tucker Digitally signed by John Tucker Date: 2024.08.29 13:24:16 -04'00'		By an Authorized Official of the Subrecipient: Brian Steglitz Name: Brian Steglitz Date: 3/21/24 Title: Public Services Area Administrator
Name: John Tucker	Date	
Title: Contract Administration Senior		

Attachment 1 **Certifications and Assurances**

Subaward Number:

SUBK00018825

Certification Regarding Lobbying (2 CFR 200.450)

By signing this Subaward, the Subrecipient Authorized Official certifies, to the best of his/her knowledge and belief, that no Federal appropriated funds have been paid or will be paid, by or on behalf of the Subrecipient, 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 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 in accordance with 2 CFR 200.450.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or intending 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 Subrecipient shall complete and submit Standard Form -LLL, "Disclosure Form to Report Lobbying," to the PTE.

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 31 U.S.C. 1352. 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.

Debarment, Suspension, and Other Responsibility Matters (2 CFR 200.214 and 2 CFR 180)

By signing this Subaward, the Subrecipient Authorized Official certifies, to the best of his/her knowledge and belief that neither the Subrecipient nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency, in accordance with 2 CFR 200.213 and 2 CFR 180.

Audit and Access to Records

Subrecipient certifies that it will provide PTE with notice of any adverse findings which impact this Subaward.

Subrecipient certifies compliance with applicable provisions of 2 CFR 200.501-200.521. If Subrecipient is not required to have a Single Audit as defined by 200.501, Awarding Agency requirements, or the Single Audit Act, then Subrecipient will provide notice of the completion of any required audits and will provide access to such audits upon request.

Subrecipient will provide access to records as required by parts 2 CFR 200.337 and 200.338 as applicable.

Program for Enhancement of Contractor Employee Protections (41 U.S.C 4712)

Subrecipient is hereby notified that they are required to: inform their employees working on any federal award that they are subject to the whistleblower rights and remedies of the program; inform their employees in writing of employee whistleblower protections under 41 U.S.C §4712 in the predominant native language of the workforce; and include such requirements in any agreement made with a subcontractor or subgrantee.

The Subrecipient shall require that the language of the certifications above in this Attachment 1 be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

Use of Name

Neither party shall use the other party's name, trademarks, or other logos in any publicity, advertising, or news release without the prior written approval of an authorized representative of that party. The parties agree that each party may use factual information regarding the existence and purpose of the relationship that is the subject of this Subaward for legitimate business purposes, to satisfy any reporting and funding obligations, or as required by applicable law or regulation without written permission from the other party. In any such statement, the relationship of the parties shall be accurately and appropriately described.

Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment

Pursuant to 2 CFR 200.216, Subrecipient will not obligate or expend funds received under this Subaward to: (1) procure or obtain; (2) extend or renew a contract to procure or obtain; or (3) enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services (as described in Public Law 115-232, section 889) as a substantial or essential component of any system, or as a critical technology as part of any system.

Attachment 2
Federal Award Terms and Conditions

Subaward Number

SUBK00018825

Required Data Elements

The data elements required by Uniform Guidance are incorporated in the attached Federal Award.

This Subaward Is:

Research & Development Subject to FFATA

Awarding Agency Institute (If Applicable)

Federal Award Issue Date	FAIN	Assistance Listing No.
02/08/24	693JJ32450012	20.200

Assistance Listing Program Title (ALPT)

Highway Research and Development Program

Key Personnel Per NOA

See Attached Notice of Award

General Terms and Conditions

By signing this Subaward, Subrecipient agrees to the following:

1. To abide by the conditions on activities and restrictions on expenditure of federal funds in appropriations acts that are applicable to this Subaward to the extent those restrictions are pertinent. This includes any recent legislation noted on the Federal Awarding Agency's website:

<https://www.transportation.gov/>

2. 2 CFR 200

3. The Federal Awarding Agency's grants policy guidance, including addenda in effect as of the beginning date of the period of performance or as amended found at:

See Attached Notice of Award

4. Research Terms and Conditions, including any Federal Awarding Agency's Specific Requirements found at:

See Attached Notice of Award except for the following :

- a. No-cost extensions require the written approval of the PTE. Any requests for a no-cost extension shall be directed to the Administrative Contact shown in Attachment 3A, not less than 30 days prior to the desired effective date of the requested change.
- b. Any payment mechanisms and financial reporting requirements described in the applicable Federal Awarding Agency Terms and Conditions and Agency-Specific Requirements are replaced with Terms and Conditions (1) through (4) of this Subaward; and
- c. Any prior approvals are to be sought from the PTE and not the Federal Awarding Agency.
- d. Title to equipment as defined in 2 CFR 200.1 that is purchased or fabricated with research funds or Subrecipient cost sharing funds, as direct costs of the project or program, shall vest in the Subrecipient subject to the conditions specified in 2 CFR 200.313.
- e. Prior approval must be sought for a change in Subrecipient PI or change in Key Personnel (defined as listed on the NOA).

5. Treatment of program income: Additive

Special Terms and Conditions:

Data Sharing and Access:

Subrecipient agrees to comply with the Federal Awarding Agency's data sharing and/or access requirements as reflected in the NOA or the Federal Awarding Agency's standard terms and conditions as referenced in General Terms and Conditions 1-4 above.

No additional requirements

Data Rights:

Subrecipient grants to PTE the right to use data created in the performance of this Subaward solely for the purpose of and only to the extent required to meet PTE's obligations to the Federal Government under its PTE Federal Award.

Copyrights:

Subrecipient Grants to PTE an irrevocable, royalty-free, non-transferable, non-exclusive right and license to use, reproduce, make derivative works, display, and perform publicly any copyrights or copyrighted material (including any computer software and its documentation and/or databases) first developed and delivered under this Subaward solely for the purpose of and only to the extent required to meet PTE's obligations to the Federal Government under its PTE Federal Award.

Subrecipient grants to PTE the right to use any written progress reports and deliverables created under this Subaward solely for the purpose of and only to the extent required to meet PTE's obligations to the Federal Government under its Federal Award.

Promoting Objectivity in Research (COI):

Subrecipient must designate herein which entity's Financial Conflicts of Interest policy (COI) will apply: Subrecipient

If applying its own COI policy, by execution of this Subaward, Subrecipient certifies that its policy complies with the requirements of the relevant Federal Awarding Agency as identified herein: Department of Transportation

Subrecipient shall report any financial conflict of interest to PTE's Administrative Representative or COI contact, as designated on Attachment 3A. Any financial conflicts of interest identified shall, when applicable, subsequently be reported to Federal Awarding Agency. Such report shall be made before expenditure of funds authorized in this Subaward and within 45 days of any subsequently identified COI.

Work Involving Human or Vertebrate Animals (Select Applicable Options)

No Human or Vertebrate Animals

This section left intentionally blank.

Human Subjects Data (Select One)

Not Applicable

This section left intentionally blank

This section left intentionally blank

Additional Terms

Applicant Identifier 23-PAF01619 in response to Opportunity ID 693JJ322NF00010, is incorporated herein by reference as applicable.

Prime Terms are applicable to this Subaward; the Award Notice is provided within Attachment 6.

Attachment 3A
Pass-Through Entity (PTE) Contacts

Subaward Number:

SUBK00018825

PTE Information

Entity Name: REGENTS OF THE UNIVERSITY OF MICHIGAN

Legal Address:
3003 S. State Street
Ann Arbor, MI 48109-1287

Website: www.umich.edu

PTE Contacts

Central Email: Subcontracts@umich.edu

Principal Investigator Name: Jim Sayer

Email: jimsayer@umich.edu Telephone Number: 734-764-4159

Administrative Contact Name: John Tucker, Contract Administration Senior - Office of Contract Administration

Email: jandyt@umich.edu Telephone Number: 734-936-1993

COI Contact email (if different to above): FCOI.Reports@umich.edu

Financial Contact Name: Office of Contract Administration, Accounting Team

Email: subcontracts.accounting@umich.edu Telephone Number: (734) 764-8204

Email invoices? Yes No Invoice email (if different): Subcontract.invoices@umich.edu.

Authorized Official Name: Peter J. Gerard, Associate Director - Office of Contract Administration

Email: Subcontracts@umich.edu Telephone Number: (734) 764-8204

PI Address:

UMTRI - Administration
2901 Baxter Rd., Room 158
Ann Arbor MI 48109-2150

Administrative Address:

Sponsored Programs - Office of Contract Administration
5065 Wolverine Tower, 3003 S. State St.,
Ann Arbor, MI 48109-1287

Invoice Address:

Email only: Subcontract.invoices@umich.edu.

Attachment 3B

Research Subaward Agreement Subrecipient Contacts

Subaward Number:

SUBK00018825

Subrecipient Information for FFATA reporting

Entity's UEI/DUNS Name:

City of Ann Arbor

EIN No.:

38-6004534

Institution Type:

Other

UEI / DUNS:

R9C4BRD4M7L9

Currently registered in SAM.gov:

 Yes No

Parent UEI / DUNS:

Exempt from reporting executive compensation:

Yes No

(if no, complete 3B pg2)

Place of Performance Information for FFATA reporting

Physical Address, City, State (if U.S.) and Country:

U.S. Entities only (insert information for Place of Performance):

Congressional District:

12th

Zip Code+4:

48107-8647

[Zip Code Look-up](#)**Subrecipient Contacts**

Central Email:

Website:

Principal Investigator Name:

Email:

Telephone Number:

Administrative Contact Name:

Email:

Telephone Number:

Financial Contact Name:

Ed Ader

Email:

eader@a2gov.org

Telephone Number:

734-794-6426 x 43913

Invoice Email:

eader@a2gov.org

Authorized Official Name:

Email:

Telephone Number:

Legal Address:

301 East Huron St.
P.O. Box 8647
Ann Arbor, MI 48107-8647

Administrative Address:

301 East Huron St.
P.O. Box 8647
Ann Arbor, MI 48107-8647

Payment Address:

Dept. #77621
City of Ann Arbor Treasurer
P.O. Box 77000
Detroit, MI 48277-0621

Attachment 3B-2
Highest Compensated Officers

Subaward Number:
SUBK00018825

Subrecipient:

Institution Name: CITY OF ANN ARBOR

PI Name: Raymond Hess

Highest Compensated Officers

The names and total compensation of the five most highly compensated officers of the entity(ies) must be listed if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and \$25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1) Internal Revenue Code of 1986.

Officer 1 Name:

Officer 1 Compensation:

Officer 2 Name:

Officer 2 Compensation:

Officer 3 Name:

Officer 3 Compensation:

Officer 4 Name:

Officer 4 Compensation:

Officer 5 Name:

Officer 5 Compensation:

Attachment 4

Reporting and Prior Approval Terms

Subrecipient agrees to submit the following reports (PTE contacts are identified in Attachment 3A):

Technical Reports:

- Monthly technical/progress reports will be submitted to the PTE's Principal Investigator within 15 days of the end of the month.
- Quarterly technical/progress reports will be submitted within 30 days after the end of each project quarter to the PTE's Principal Investigator .
- Annual technical / progress reports will be submitted within 60 days prior to the end of each budget period to the PTE's Principal Investigator . Such report shall also include a detailed budget for the next Budget Period, updated other support for key personnel, certification of appropriate education in the conduct of human subject research of any new key personnel, and annual IRB or IACUC approval, if applicable.
- A Final technical/progress report will be submitted to the PTE's Principal Investigator within 60 days of the end of the Project Period or after termination of this award, whichever comes first.
- Technical/progress reports on the project as may be required by PTE's Principal Investigator in order for the PTE to satisfy its reporting obligations to the Federal Awarding Agency.

Prior Approvals:

Carryover:

Carryover is automatic

Other Reports:

- In accordance with 37 CFR 401.14, Subrecipient agrees to notify both the Federal Awarding Agency via iEdison and PTE's Financial Contact within 60 days after Subrecipient's inventor discloses invention(s) in writing to Subrecipient's personnel responsible for patent matters. The Subrecipient will submit a final invention report using Federal Awarding Agency specific forms to the PTE's Financial Contact within 60 days of the end of the Project Period to be included as part of the PTE's final invention report to the Federal Awarding Agency.

A negative report is required: Yes

- Property Inventory Report (only when required by Federal Awarding Agency), specific requirements below.

Additional cost sharing requirements included below:

Additional Technical and Reporting Requirements:

Closeout documents: The Closeout documents provided within ATTACHMENT 6 must be completed and returned along with the Final Invoice.

INVOICING: The invoices shall be e-mailed to Subcontract.invoices@umich.edu for processing. In addition to the invoicing terms and conditions identified on face-page of the Subaward, each invoice must include the following:

- a. PO # 3008027293
- b. A unique invoice number: Each payment request must be identified by a unique invoice number, which can only be used one time regardless of the number of Michigan contracts or orders held by an organization.
- c. Invoice period: The period for which the expenditures apply
- d. Amount actually expended according to each budget/cost category, including COST-SHARE if applicable. Sufficient detail must be provided.
- e. Remittance address
- f. Per face page, each invoice must include a certification, signed by an official who is authorized to legally bind the non-Federal entity, which reads as follows: "By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate, and the expenditures, disbursements and cash receipts are for the purposes and objectives set forth in the terms and conditions of the Federal award. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code Title 18, Section 1001 and Title 31, Sections 3729-3730 and 3801-3812)

Attachment 5
Statement of Work, Cost Sharing, Indirects & Budget**Statement of Work** Below Attached, pagesIf award is FFATA eligible and SOW exceeds 4000 characters, include a *Subrecipient Federal Award Project Description***Budget Information**

Indirect Information	Indirect Cost Rate (IDC) Applied	<input type="text" value="33.43"/> %	Cost Sharing	<input type="checkbox"/> Yes
Rate Type:	<input type="text" value="Modified Total Direct Costs"/>		If Yes, include Amount: \$	<input type="text" value="26,140.00"/>

Budget Details Below Attached, pages

Subrecipient is responsible for making sure that costs incurred/charged are allowable in accordance with the terms and conditions of the Federal award.

Budget Totals

Direct Costs	\$ <input type="text" value="91,139.00"/>
Indirect Costs	\$ <input type="text" value="30,146.00"/>
Total Costs	\$ <input type="text" value="121,285.00"/>

All amounts are in United States Dollars

Task 1. Program Management (27 hours) Participate project meetings and coordinate task assignment.

Task 2. System Engineering Design (97 hours) Provide design input on network, intersection devices placement and integration.

Task 3. C-V2X Infrastructure Retrofit (1041 hours) Support for field device installation. Prepare and pre-program devices prior to field installation. Deploy firewall to accommodate the smart intersection network communication needs. Remove existing RSU devices where applicable, and install new RSU at project locations.

Task 4. C-V2X Intersection Certification (85 hours) Support C-V2X intersection certification as related to traffic signal controller configuration.

Task 8. Data Collection, Management, and Analysis (51 hours) Support data transmission and collection.

Task 9. Outreach and Education and Workforce Development (24 hours)

Assist project team in outreach. Provide input in the development of implementation guide for infrastructure owner operators.

CoAA University of Michigan Transportation Research Institute
to USDOT/FHWA-NOFO Number: 693JU32NF0010
Advanced Transportation Technology and Innovation (ATTAIN)
"AACE 2.0: The Ann Arbor Connected Environment, Reimagined"

CoAA University of Michigan Transportation Research Institute
to USDOT/FHWA-NOFO Number: 693JU32NF0010
Advanced Transportation Technology and Innovation (ATTAIN)

CoAA University of Michigan Transportation Research Institute
to USDOT/FHWA-NOFO Number: 693JU32NF0010
Advanced Transportation Technology and Innovation (ATTAIN)

CoAA University of Michigan Transportation Research Institute
to USDOT/FHWA-NOFO Number: 693JU32NF0010
Advanced Transportation Technology and Innovation (ATTAIN)

FEDERAL BUDGET YEAR 1				TOTAL BUDGET 06/01/23 - 09/30/24				
Name*	Project Role	Hourly Rate	Amount	Name*	Project Role	Hourly Rate	Amount	
Moreno, Mark	Supervisor	\$42.78	17	727	Moreno, Mark	\$44.06	41	1,80
Tracy, Ashton	Electrician	\$27.21	19	517	Tracy, Ashton	\$28.03	43	1,205
Ranney, Joe	Electrician	\$27.21	19	517	Ranney, Joe	\$28.03	43	1,205
Tomich, John	Electrician	\$38.54	61	2,351	Tomich, John	\$39.69	141	5,597
Hogan, Scott	Electrician	\$31.44	19	597	Hogan, Scott	\$32.39	43	1,393
Patterson, David	Electrician	\$32.15	19	611	Patterson, David	\$33.11	43	1,424
Niem, Andrew	Electrician	\$28.56	19	543	Niem, Andrew	\$29.42	43	1,265
Osborne, Jake	Electrician	\$29.24	19	556	Osborne, Jake	\$30.12	43	1,295
Gunner, Pete	Electrician	\$29.24	19	556	Gunner, Pete	\$30.12	43	1,295
Longworth, Steph	Electrician	\$38.67	19	697	Longworth, Steph	\$37.77	43	1,624
Sype, Jeremy	Electrician	\$38.54	19	732	Sype, Jeremy	\$39.69	43	1,707
Stein, Tyler	Electrician	\$27.21	19	517	Stein, Tyler	\$28.03	43	1,205
Total Salaries		268	0	Total Salaries		612	21,021	
<i>Sick/Vacation/Holiday (POOL)</i>		0%	0	<i>Sick/Vacation/Holiday (POOL)</i>		0%	0	
<i>Fringes Benefits (Permanent Staff)</i>		67%	5,976	<i>Fringes Benefits (Permanent Staff)</i>		67%	14,084	
<i>Fringes Benefits (Gradcare)</i>		0%	0	<i>Fringes Benefits (Gradcare)</i>		0%	0	
<i>FICA (Temps)</i>		0.00%	0	<i>FICA (Temps)</i>		0.00%	0	
Subtotal Labor				Subtotal Labor				
14,896				35,106				

FEDERAL BUDGET YEAR 2				TOTAL BUDGET 06/01/24 - 05/31/25				
Name*	Project Role	Hourly Rate	Amount	Name*	Project Role	Hourly Rate	Amount	
Moreno, Mark	Supervisor	\$42.78	17	727	Moreno, Mark	\$44.06	41	1,80
Tracy, Ashton	Electrician	\$27.21	19	517	Tracy, Ashton	\$28.03	43	1,205
Ranney, Joe	Electrician	\$27.21	19	517	Ranney, Joe	\$28.03	43	1,205
Tomich, John	Electrician	\$38.54	61	2,351	Tomich, John	\$39.69	141	5,597
Hogan, Scott	Electrician	\$31.44	19	597	Hogan, Scott	\$32.39	43	1,393
Patterson, David	Electrician	\$32.15	19	611	Patterson, David	\$33.11	43	1,424
Niem, Andrew	Electrician	\$28.56	19	543	Niem, Andrew	\$29.42	43	1,265
Osborne, Jake	Electrician	\$29.24	19	556	Osborne, Jake	\$30.12	43	1,295
Gunner, Pete	Electrician	\$29.24	19	556	Gunner, Pete	\$30.12	43	1,295
Longworth, Steph	Electrician	\$38.67	19	697	Longworth, Steph	\$37.77	43	1,624
Sype, Jeremy	Electrician	\$38.54	19	732	Sype, Jeremy	\$39.69	43	1,707
Stein, Tyler	Electrician	\$27.21	19	517	Stein, Tyler	\$28.03	43	1,205
Total Salaries		268	0	Total Salaries		612	21,021	
<i>Sick/Vacation/Holiday (POOL)</i>		0%	0	<i>Sick/Vacation/Holiday (POOL)</i>		0%	0	
<i>Fringes Benefits (Permanent Staff)</i>		67%	5,976	<i>Fringes Benefits (Permanent Staff)</i>		67%	14,084	
<i>Fringes Benefits (Gradcare)</i>		0%	0	<i>Fringes Benefits (Gradcare)</i>		0%	0	
<i>FICA (Temps)</i>		0.00%	0	<i>FICA (Temps)</i>		0.00%	0	
Subtotal Labor				Subtotal Labor				
14,896				35,106				

OTHER DIRECT COSTS				APPARATUS			
Apparatus				Apparatus			
1801	2016 Ingalls Road	12.72	204	1801	0.0 Ingersoll Rand	12.72	204
4240	2009 Dodge Caravan	15.76	1576	4240	0.0 Dodge Caravan	15.76	0
4242	2014 Ford F-150 XL	7.91	380	4242	2014 Ford F-150 XL	7.91	380
4248	2006 GMC C-1500	7.88	304	4248	2006 GMC C-1500	7.88	304
4249	2016 Ford F-250-4X	8.78	421	4249	2016 Ford F-250-4X	8.78	421
4271	4x4	0	0	4271	Cable Tied Trailer	8.34	0
4364	Cable Tie	8.34	0	4364	4x4	4.405	77
4405	2001 Reel Trailer	4.18	77	4405	2011 Red Trailer	4.8	77
4406	2013 Tech Trailer	9.5	152	4406	2013 Tech Trailer	9.5	152
4410	2007 Triple L Trail	9.44	0	4410	007 Triple L Trail	9.55	0
4417	0	0	0	4417	0	0	0
4418	2013 Equipment Trail	2.65	0	4418	Equipment Trail	2.65	0
4505	2013 Dump Truck	15.18	243	4505	2013 Dump Truck	15.18	243
4603	2000 Ford F-750	25.95	3,322	4603	2000 Ford F-750	25.95	3,322
4604	2018 Freightliner	2.973	4604	2018 Freightliner	2.973	4604	0
4612	Platform Truck	10.24	1,311	4612	Platform Truck	10.24	1,311
4616	Bucket Truck	2,582	2,582	4616	Bucket Truck	2,582	2,582
4617	2011 Ford F-750	31.55	3155	4617	2011 Ford F-750	31.55	3155
4644	Frontline Digger Derr	46.44	4644	4644	Frontline Digger Derr	46.44	4644
4733	Compact Excavato	8.11	4733	4733	Compact Excavato	14.48	232
6298	GMC Sierra 3544	9.21	6298	6298	GMC Sierra 3544	9.21	0
Subtotal Other Direct Costs				Subtotal Other Direct Costs			
16,731				11,341			

TRAVEL		SUBTOTAL OTHER DIRECT COSTS	
Washington, DC	0	0	0
Conference (various locations)	0	0	0
Local Transportation	0	0	0
Subtotal Travel Costs	0	0	0
Total Direct Cost	32,131	47,046	91,139
Indirect Costs	33.43%	15,599	30,146
Estimated Total Cost	42,764	62,645	11,981
Indirect Costs	33.43%	0	0
Estimated Total Cost	42,764	0	121,265

Travel
Washington, DC
Conference (various locations)
Local Transportation
Subtotal Travel Costs

Total Direct Cost

Indirect Costs

Estimated Total Cost

Indirect Costs

Estimated Total Cost

Travel
Washington, DC
Conference (various locations)
Local Transportation
Subtotal Travel Costs

Total Direct Cost

Indirect Costs

Estimated Total Cost

Travel
Washington, DC
Conference (various locations)
Local Transportation
Subtotal Travel Costs

Total Direct Cost

Indirect Costs

Estimated Total Cost

FEDERAL BUDGET YEAR 3				TOTAL BUDGET 06/01/25 - 05/31/26				
Name*	Project Role	Hourly Rate	Amount	Name*	Project Role	Hourly Rate	Amount	
Moreno, Mark	Supervisor	\$42.78	17	727	Moreno, Mark	\$44.06	41	1,80
Tracy, Ashton	Electrician	\$27.21	19	517	Tracy, Ashton	\$28.03	43	1,205
Ranney, Joe	Electrician	\$27.21	19	517	Ranney, Joe	\$28.03	43	1,205
Tomich, John	Electrician	\$38.54	61	2,351	Tomich, John	\$39.69	141	5,597
Hogan, Scott	Electrician	\$31.44	19	597	Hogan, Scott	\$32.39	43	1,393
Patterson, David	Electrician	\$32.15	19	611	Patterson, David	\$33.11	43	1,424
Niem, Andrew	Electrician	\$28.56	19	543	Niem, Andrew	\$29.42	43	1,265
Osborne, Jake	Electrician	\$29.24	19	556	Osborne, Jake	\$30.12	43	1,295
Gunner, Pete	Electrician	\$29.24	19	556	Gunner, Pete	\$30.12	43	1,295
Longworth, Steph	Electrician	\$38.67	19	697	Longworth, Steph	\$37.77	43	1,624
Sype, Jeremy	Electrician	\$38.54	19	732	Sype, Jeremy	\$39.69	43	1,707
Stein, Tyler	Electrician	\$27.21	19	517	Stein, Tyler	\$28.03	43	1,205
Total Salaries		268	0	Total Salaries		612	21,021	
<i>Sick/Vacation/Holiday (POOL)</i>		0%	0	<i>Sick/Vacation/Holiday (POOL)</i>		0%	0	
<i>Fringes Benefits (Permanent Staff)</i>		67%	5,976	<i>Fringes Benefits (Permanent Staff)</i>		67%	14,084	
<i>Fringes Benefits (Gradcare)</i>		0%	0	<i>Fringes Benefits (Gradcare)</i>		0%	0	
<i>FICA (Temps)</i>		0.00%	0	<i>FICA (Temps)</i>		0.00%	0	
Subtotal Labor				Subtotal Labor				
14,896				Subtotal Labor				
57,882				57,882				

TOTAL BUDGET 06/01/23 - 05/31/26			
Hourly Rate	Hrs	Amount	Hourly Rate
\$44.06	1,393	63,65	\$45.39
\$28.03	1,205	17,139	\$28.87
\$28.03	1,205	17,139	\$28.87
\$39.69	141	5,597	\$40.89
\$33.11	43	1,424	\$34.11
\$30.12	141	5,597	\$30.30
\$31.02	141	5,597	\$31.02
\$33.36	43	1,393	\$33.36
\$34.11	6	23,239	\$34.11
\$30.30	6	18,264	\$30.30
\$31.02	6	18,2	

CoAA, University of Michigan Transportation Research Institute
to USDOT/FHWA- NOFO Number: 693JU2NF00010
Advanced Transportation Technology and Innovation (ATTAIN)
Program

CoAA_University of Michigan Transportation Research Institute
to USDOT/FHWA- NOFO Number: 693JU32NF00010
Advanced Transportation Technology and Innovation (ATTAIN)

CoAA, University of Michigan Transportation Research Institute
to USDOT/FHWA- NOFO Number: 693JU32NF00010
Advanced Transportation Technology and Innovation (ATTAIN)

CoAA, University of Michigan
Michigan
Transportation
Research Institute

COST SHARE BUDGET YEAR 1

TOTAL BUDGET 06/01/23 - 05/31/24

Name*	Project Role	Hourly Rate	Hrs	Amount	Name*	Project Role	Hourly Rate	Hrs	Amount		
Hess, Raymond	Transportation Manager	\$53.46	9	481	Hess, Raymond	Transportation Mgr	\$55.06	11	606		
Stegitz, Brian	Public Services Area Admin/Engineer	\$74.42	5	372	Stegitz, Brian	Public Services Admin/Engineer	\$76.66	6	460		
Liu, Luke	ITSD Director	\$48.50	51	2,474	Liu, Luke	Engineer	\$49.96	56	2,798		
Shewchuk, Tom	Network Administration	\$72.68	13	945	Shewchuk, Tom	ITSD Director	\$74.86	15	1,123		
Harris, David	Network Administration	\$52.32	51	2,668	Harris, David	Network Adminis.	\$53.89	56	3,018		
Total Salaries			129	6,940	Total Salaries			144	8,004		
<i>Sick/Vacation/Holiday (POOL)</i>			0		<i>Sick/Vacation/Holiday (POOL)</i>			0			
<i>Fringes Benefits (Permanent Staff)</i>			572	67%	<i>Fringes Benefits (Permanent Staff)</i>			714	67%		
<i>Fringes Benefits (Graduate)</i>			0	0%	<i>Fringes Benefits (Graduate)</i>			0	0%		
<i>FICA (Temps)</i>			0	0.00%	<i>FICA (Temps)</i>			0	0.00%		
Subtotal Labor				7,512	Subtotal Labor			8,718			
Equipment											
<i>Subtotal Equipment</i>											
Subtotal Equipment											
Subcontract Partners											
<i>Subtotal Subcontract Partners</i>											
Subtotal Subcontract Partners											
Other Direct Costs											
<i>Tuition Waiver</i>											
Responent/Subject Fees											
Research Supplies											
Consultants											
General Supplies											
Data Expenses											
Subtotal Other Direct Costs											
Travel											
<i>Washington, DC</i>											
<i>Subtotal Travel Costs</i>											
Subtotal Travel Costs											
Total Direct Cost											
7,512											
Imputed Indirect Costs											
33.43%											
Estimated Total Cost											
10,013											
Cost Share Amount											
10,013											
Cost Share Amount											
11,621											

COST SHARE BUDGET YEAR 2

TOTAL BUDGET 06/1/24 - 05/31/25

Name*	Project Role	Hourly Rate	Hrs	Amount	Name*	Project Role	Hourly Rate	Hrs	Amount		
Hess, Raymond	Transportation Manager	\$53.46	9	481	Hess, Raymond	Transportation Mgr	\$55.06	11	606		
Stegitz, Brian	Public Services Area Admin/Engineer	\$74.42	5	372	Stegitz, Brian	Public Services Admin/Engineer	\$76.66	6	460		
Liu, Luke	ITSD Director	\$48.50	51	2,474	Liu, Luke	Engineer	\$49.96	56	2,798		
Shewchuk, Tom	Network Administration	\$72.68	13	945	Shewchuk, Tom	ITSD Director	\$74.86	15	1,123		
Harris, David	Network Administration	\$52.32	51	2,668	Harris, David	Network Adminis.	\$53.89	56	3,018		
Total Salaries			129	6,940	Total Salaries			144	8,004		
<i>Sick/Vacation/Holiday (POOL)</i>			0		<i>Sick/Vacation/Holiday (POOL)</i>			0			
<i>Fringes Benefits (Permanent Staff)</i>			572	67%	<i>Fringes Benefits (Permanent Staff)</i>			714	67%		
<i>Fringes Benefits (Graduate)</i>			0	0%	<i>Fringes Benefits (Graduate)</i>			0	0%		
<i>FICA (Temps)</i>			0	0.00%	<i>FICA (Temps)</i>			0	0.00%		
Subtotal Labor				7,512	Subtotal Labor			8,718			
Equipment											
<i>Subtotal Equipment</i>											
Subtotal Equipment											
Subcontract Partners											
<i>Subtotal Subcontract Partners</i>											
Subtotal Subcontract Partners											
Other Direct Costs											
<i>Tuition Waiver</i>											
Responent/Subject Fees											
Research Supplies											
Consultants											
General Supplies											
Data Expenses											
Subtotal Other Direct Costs											
Travel											
<i>Washington, DC</i>											
<i>Subtotal Travel Costs</i>											
0											
Total Direct Cost											
8,718											
Indirect Costs											
33.43%											
Estimated Total Cost											
10,013											
Cost Share Amount											
10,013											
Cost Share Amount											
11,621											

COST SHARE BUDGET YEAR 3

TOTAL BUDGET 06/1/25 - 05/31/26

Name*	Project Role	Hourly Rate	Hrs	Amount	Name*	Project Role	Hourly Rate	Hrs	Amount		
Hess, Raymond	Transportation Manager	\$53.46	9	481	Hess, Raymond	Transportation Mgr	\$55.06	11	606		
Stegitz, Brian	Public Services Area Admin/Engineer	\$74.42	5	372	Stegitz, Brian	Public Services Admin/Engineer	\$76.66	6	460		
Liu, Luke	ITSD Director	\$48.50	51	2,474	Liu, Luke	Engineer	\$49.96	56	2,798		
Shewchuk, Tom	Network Administration	\$72.68	13	945	Shewchuk, Tom	ITSD Director	\$74.86	15	1,123		
Harris, David	Network Administration	\$52.32	51	2,668	Harris, David	Network Adminis.	\$53.89	56	3,018		
Total Salaries			129	6,940	Total Salaries			144	8,004		
<i>Sick/Vacation/Holiday (POOL)</i>			0		<i>Sick/Vacation/Holiday (POOL)</i>			0			
<i>Fringes Benefits (Permanent Staff)</i>			572	67%	<i>Fringes Benefits (Permanent Staff)</i>			714	67%		
<i>Fringes Benefits (Graduate)</i>			0	0%	<i>Fringes Benefits (Graduate)</i>			0	0%		
<i>FICA (Temps)</i>			0	0.00%	<i>FICA (Temps)</i>			0	0.00%		
Subtotal Labor				7,512	Subtotal Labor			8,718			
Equipment											
<i>Subtotal Equipment</i>											
Subtotal Equipment											
Subcontract Partners											
<i>Subtotal Subcontract Partners</i>											
Subtotal Subcontract Partners											
Other Direct Costs											
<i>Tuition Waiver</i>											
Responent/Subject Fees											
Research Supplies											

Attachment 6

Notice of Award (NOA) and any additional documents

- The following pages include the NOA and if applicable any additional documentation referenced throughout this Subaward.
- Not incorporating the NOA or any additional documentation to this Subaward.

- 1. Award No.** 693JJ32450012
- 4. Award To**
 Regents of the University of Michigan
 3003 S. State Street
 Ann Arbor, MI 48109
 SAM UEI No.: GNJ7BBP73WE9
 TIN No.: 38-6006309
- 6. Period of Performance**
 36 Months from the Effective Date of Award
- 8. Type of Agreement**
 Cooperative Agreement
- 10. Procurement Request No.** HOTM240014PR
- 12. Submit Payment Requests To**
 See "Payment" clause in General Terms and Conditions
- 14. Accounting and Appropriations Data**
 15X144A060.0000.070V44A600.7001000000.41010.61006600.0000000000.0000000000.00000000
 00.0000000000 - \$9,859,240.00
- 15. Research Title and/or Description of Project**
 AACE 2.0: The Ann Arbor Connected Environment Reimagined
- 16. Regents of the University of Michigan**

Signature

Name: Geoffrey S. Chatas
 Title: Executive Vice President & Chief Financial Officer

02-01-2024

Date

subk00018825

- 2. Effective Date**
 See No. 17 Below
- 3. Assistance Listing No. & Title**
 20.200

- 5. Sponsoring Office**
 U.S. Department of Transportation
 Federal Highway Administration
 Office of Acquisition & Grants Management
 1200 New Jersey Avenue, SE
 HCFA-32, Mail Drop E62-204
 Washington, DC 20590

- 7. Total Amount**
 Federal Share: \$9,859,240.00
 Recipient Share: \$2,847,185.00
- Total: **\$12,706,425.00**

- 9. Authority**
 Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act, Pub. L. 117-58 (Nov. 15, 2021)

- 11. Federal Funds Obligated**
\$9,859,240.00

- 13. Payment Office**
See "Payment" clause in General Terms and Conditions

- 14. Accounting and Appropriations Data**
 15X144A060.0000.070V44A600.7001000000.41010.61006600.0000000000.0000000000.00000000
 00.0000000000 - \$9,859,240.00

- 15. Research Title and/or Description of Project**
 AACE 2.0: The Ann Arbor Connected Environment Reimagined

- 16. Regents of the University of Michigan**

ROBIN K HOBBS

Digitally signed by ROBIN K HOBBS
Date: 2024.02.08 13:06:09 -05'00'

Signature

Title: Agreement Officer

Date

TABLE OF CONTENTS

SECTION A - AGREEMENT DESCRIPTION.....	4
A.1 STATEMENT OF PURPOSE.....	4
A.2 LEGISLATIVE AUTHORITY	4
A.3 BACKGROUND	5
A.4 VISION, GOALS, AND FOCUS AREAS	7
A.5 STATEMENT OF WORK	9
A.6 DELIVERABLES.....	9
SECTION B – AWARD INFORMATION	12
B.1 TYPE OF AWARD	12
B.2 AVAILABLE FUNDING	12
B.3 COST SHARING OR MATCHING.....	12
B.4 PERIOD OF PERFORMANCE	12
B.5 DEGREE OF FEDERAL INVOLVEMENT	12
SECTION C - AWARD ADMINISTRATION INFORMATION	13
C.1 FEDERAL AWARD NOTICES	13
C.2 GENERAL TERMS AND CONDITIONS.....	13
C.3 STATUTORY AND NATIONAL POLICY REQUIREMENTS.....	13
C.4 ADDITIONAL TERMS AND CONDITIONS.....	13
C.5 REPORTING	21

ATTACHMENT(s):

1. Technical Application (51 Pages): AACE_2.0_Volume_I_Final
2. Budget Application (65 Pages): AACE 2.0 Volume II_Final

SECTION A - AGREEMENT DESCRIPTION

A.1 STATEMENT OF PURPOSE

The Federal Highway Administration (FHWA) enters into this Cooperative Agreement (Agreement) with the Regents of the University of Michigan to deploy, install, and operate advanced transportation technologies to improve safety, mobility, efficiency, system performance, intermodal connectivity, and infrastructure return on investment. These model deployments are expected to provide benefits in the form of:

- reduced traffic-related fatalities and injuries;
- reduced traffic congestion and improved travel time reliability;
- reduced transportation-related emissions;
- optimized multimodal system performance;
- improved access to transportation alternatives, including for underserved populations;
- improved integration of payment systems;
- public access to real-time integrated traffic, transit, and multimodal transportation information to make informed travel decisions;
- cost savings to transportation agencies, businesses, and the traveling public; or
- other benefits to transportation users and the general public.

The purpose of this Agreement is to promote the use of innovative transportation solutions. The deployment of these technologies will provide Congress and the United States Department of Transportation (DOT) with valuable real-life data and feedback to inform future decision making.

A.2 LEGISLATIVE AUTHORITY

Specific statutory authority for conducting this effort is found in 23 U.S.C. § 503(c)(4), which authorizes the Secretary of Transportation to "... provide grants to eligible entities to deploy, install, and operate advanced transportation technologies to improve safety, mobility, efficiency, system performance, intermodal connectivity, and infrastructure return on investment."

Per 23 U.S.C. §503(c)(4)(I)(i), funding for this effort is expected to be made available from amounts authorized under 23 U.S.C. §§ 512 through 518, as well as § 503(b), and §503(c). The Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act, Pub. L. 117-58 (Nov. 15, 2021) amended 23 U.S.C. 503(c)(4), creating the ATTAIN Program.

The authority to enter into an assistance agreement for this effort is found under 23 U.S.C. §502 - Surface Transportation Research, Development, and Technology, paragraphs (a)(1) and (b)(3)(C), which state:

(a)Basic Principles Governing Research and Technology Investments.-

(1)Applicability.-The research, development, and technology provisions of this section shall apply throughout this chapter.

(b)General Authority.—

(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.

Per 23 U.S.C. 503(c)(4), as amended by the Infrastructure Investment and Jobs Act, Pub. L. 117-58 (Nov. 15, 2021), the Federal share of the cost of a project for which a cooperative agreement is awarded under this subsection shall not exceed 80 percent of the cost of the project.

A.3 BACKGROUND

Projects funded under this initiative will deploy advanced transportation and congestion management technologies, including:

- i. **Advanced traveler information systems** – Systems that provide real-time, predicted, and individualized information about travel choices based on data from sensors (traffic, weather), mobile sources (personal portable devices, connected vehicles), and other information systems (public transportation, shared-use mobility, traffic incident management, construction, parking, congestion pricing/tolls or other costs) to allow travelers and shippers to make informed decisions regarding destinations, when to travel, routes, or modes. This information should be publicly accessible and not limited to users with smartphones;
- ii. **Advanced transportation management technologies** – Technologies that assist transportation system operators in managing and controlling the performance of their systems to provide optimal services or respond to dynamic conditions, including inter-jurisdictional and intermodal coordination; technologies may include traffic signal equipment, advanced data collection and processing (from sensors, connected vehicles, and other mobile sources, other information systems), dynamic lane controls/configurations, and cooperative transportation management algorithms including pricing strategies across jurisdictions/agencies/facilities/modes;
- iii. **Advanced transportation technologies to improve emergency evacuation and response by Federal, State, and local authorities** – Technologies and systems that assist transportation system operators, emergency management agencies, and public safety agencies in the facilitation of evacuation (including contraflow and emergency shoulder use), post-incident re-entry, or other emergency response activities (including search and rescue activities and delivering life-saving or life-sustaining commodities) to respond to an incident that occurs with or without advance notice; technologies and systems may include closed-circuit television and other video surveillance, traffic counters, remote sensing and detection devices, mobile communication units, permanent or portable changeable message signs,

- ramp gates, third party traffic data, real-time traveler information systems, and highway advisory radio;
- iv. **Infrastructure maintenance, monitoring, and condition assessment** – Technologies and systems that monitor the behavior or assess the condition of transportation infrastructure to allow agencies to better manage their transportation assets through optimizing resource allocation, preventative maintenance processes, and responses to critical conditions;
 - v. **Advanced public transportation systems** – Technologies that assist public transportation system operators or other shared mobility entities in managing and optimizing the provision of public transportation and mobility services; technologies may include remote fleet monitoring systems, coordinated communication systems, algorithms, and applications to enable better transit connections for users, advanced data collection and processing (from sensors, mobile/connected sources, other information systems) to provide dynamic, responsive transit services, and communication and data systems that enable shared mobility services;
 - vi. **Transportation system performance data collection, analysis, and dissemination systems** – Technologies and systems that actively monitor the performance of and interactions between transportation systems and permit agencies and other interested entities to conduct analyses and research and explore innovative, value-added products and services;
 - vii. **Advanced safety systems, including vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications, technologies associated with automated vehicles, and other collision avoidance technologies, including systems using cellular technology** – Deployment of technology-based safety systems such as described at Safer Car (<http://www.safercar.gov/>) or at the Intelligent Transportation Systems (ITS) Program <https://www.its.dot.gov/index.htm>, or other applicable safety technologies;
 - viii. **Integration of intelligent transportation systems with the Smart Grid and other energy distribution and charging systems** – Technologies that link information from ITS and other transportation systems with information from the Smart Grid and other energy distribution and charging systems to provide users with better information related to opportunities for recharging electric vehicles, and to provide energy distribution agencies with better information related to potential transportation-user demand;
 - ix. **Integrated corridor management systems** – Integrated Corridor Management (ICM) is the coordination of individual transportation network partners (stakeholders) and the coordinated operation of their supportive facilities across all local, county, regional, and State agencies, such that “the whole” creates a unified, interconnected, and multimodal response during severe, prolonged, or exceptional atypical events that shut down trunk freeways or require a holistic regional response. Through an ICM approach, transportation agencies manage the corridor as a multimodal system and make operational and safety decisions for the benefit of the corridor as a whole facility. FHWA is interested in increasing the deployment of ICM;
 - x. **Advanced parking reservation or variable pricing systems** – Technologies and systems designed to significantly reduce search time and cruising for parking for either personal vehicles or for trucks, including using pricing to manage and shift parking demand for personal vehicles to reflect the available supply of both parking and roadway capacity, and technologies and systems designed to guide truck or other drivers directly to available parking;
 - xi. **Electronic pricing, toll collection, and payment systems** – Technologies that permit users to electronically conduct financial transactions for mobility services across jurisdictions and

- agencies, such as unified fare collection, payment, and tolling systems across transportation modes;
- xii. **Technology that enhances high occupancy vehicle toll lanes, cordon pricing, or congestion pricing** – High Occupancy Toll (HOT) lanes and cordon pricing are both types of congestion pricing. Congestion Pricing involves the imposition of fees or tolls that vary based on the level of demand for travel on a highway facility, geographic area, or parking facilities. The fees may vary according to a fixed schedule or in real-time based on actual travel conditions. While pricing generates revenue, this strategy has a primary focus on managing congestion, environmental impacts, and other external costs. FHWA is seeking innovative and accurate methods of informing, monitoring, and applying any, or all, of these tenets;
 - xiii. **Integration of transportation service payment systems** – Technologies and processes for facilitating transactions and payment across multimodal and/or multiagency transportation organizations. Integration of payment systems across municipalities and regions can facilitate seamless travel across a variety of modes, improving mobility and convenience, and creating mutually beneficial relationships between modes that improve overall system performance and flexibility. Open, account-based architectures are being implemented that make it easier for these payment methods to be adapted to meet differing local needs, built around coordination and collaboration among various entities – from mobility service providers to payment processors to technology suppliers;
 - xiv. **Advanced mobility access and on-demand transportation service technologies, such as dynamic ridesharing and other shared-use mobility applications and information systems to support human services for elderly and disabled individuals** – Technologies, applications, and information systems that leverage data and communications systems to allow public agencies and human service organizations to provide improved demand-responsive, coordinated, and/or seamless mobility services to at-risk users such as the elderly, disabled, or other individuals that require transportation assistance. Also of interest are dynamic ridesharing and other shared-use mobility applications being made available more broadly to the general public with a particular emphasis on highly innovative services (measured in improved user/system experience rather than technology for its own sake) or new approaches leading to step-change increases in system performance and/or service scale;
 - xv. **Dedicated Short-Range Communications** – Retrofitting dedicated short-range communications (DSRC) technology deployed as part of an existing pilot program to cellular vehicle-to-everything (C-V2X) technology, subject to the condition that the retrofitted technology operates only within the existing spectrum allocations for connected vehicle systems; or
 - xvi. **Advanced transportation technologies** – Advanced transportation technologies, in accordance with the research areas described in section 6503 of title 49.

A.4 VISION, GOALS, AND FOCUS AREAS

FHWA recognizes that each location has unique attributes, and each location's proposed deployment will be tailored to its vision and goals. Applications may be submitted for deploying any eligible technology. However, this section provides a framework for Applicants to consider in the development of a proposed deployment by presenting DOT's vision, goals, and focus areas. The FHWA's vision for the ATTAIN Program is the deployment of advanced technologies and related strategies to address issues and challenges in safety, mobility, sustainability, economic vitality, equity, and air quality that are confronted by transportation systems owners and operators. The advanced technologies are integrated into the routine functions of the location or jurisdiction and play a critical role in helping agencies and the public address their challenges.

Management systems within transportation and across other sectors (e.g., human services, energy, and logistics) share information and data to communicate between agencies and with the public. These management systems provide benefits by maximizing efficiencies based on the intelligent management of assets and the sharing of information using integrated technology solutions. The advanced technology solutions and the lessons learned from their deployment are used in other locations, scaled in scope and size to increase successful deployments and provide widespread benefits to the public and agencies.

Goals for the ATTAIN Program include:

- Improve the mobility of people and goods;
- Improve the durability and extend the life of transportation infrastructure;
- Reduced costs and improved return on investments, including through optimization of existing transportation capacity;
- Protect the environment and deliver environmental benefits that alleviate congestion, reduce transportation-related emissions, and streamline traffic flow;
- Measurement and improvement of the operational performance of the applicable transportation networks;
- Reduction in the number and severity of traffic crashes and an increase in driver, passenger, and pedestrian safety;
- Collection, dissemination, and use of real-time traffic-related information including, but not limited to work zone, weather, transit, paratransit, and parking, to improve mobility, reduce congestion, and provide for more efficient and accessible, and integrated transportation services, including access to safe, reliable, and affordable connections to employment, education, healthcare, freight facilities, and other services;
- Facilitate account-based payments for transportation access and services and integrate payment systems across modes;
- Monitoring transportation assets to improve infrastructure management, reduce maintenance costs, prioritize investment decisions, and ensure a state of good repair;
- Delivery of economic benefits by reducing delays, improving system performance and throughput, and providing for the safe, efficient, and reliable movement of people, goods, and services;
- Accelerated deployment of V2V, V2I, vehicle-to-pedestrian, and technologies associated with automated vehicles and other advanced technologies;
- Integration of advanced technologies into transportation system management and operations;
- Demonstration, quantification, and evaluation of the impact of these advanced technologies, strategies, and applications towards improved safety, efficiency, equity, and sustainable movement of people and goods;
- Reproducibility of successful systems and services for technology and knowledge transfer to other locations facing similar challenges; and
- Incentivize travelers—
 - to share trips during periods in which travel demand exceeds system capacity; or
 - to shift trips to periods in which travel demand does not exceed system capacity.

A.5 STATEMENT OF WORK

The Recipient shall execute their proposed work plan as detailed in Attachment 1.

A.6 DELIVERABLES

The Recipient shall provide the deliverables detailed in Attachment 1 and the following items:

*Award date is shown on page 1, Block 17, FHWA signature date.

** FHWA may agree to modify due dates, upon the reasonable request of the Regents of the University of Michigan

Deliverable	Approximate Due Date	Section 508 Compliant?
Kick-off Meeting Conduct a kick-off meeting with DOT at a mutually agreed-upon location or format, if remote.	Within 4 weeks after the execution of this Agreement.	No
Quarterly Progress Reports Submit progress reports to document activities performed, anticipated activities, and any changes to schedule or anticipated issues.	Quarterly in accordance with Section C.5.B	No
Project Management Plan The Recipient shall submit to FHWA's Agreement Officer's Representative (AOR) for approval a Project Management Plan, which shall include, at a minimum: <ol style="list-style-type: none">A Statement of Work, with a description of Tasks and Sub-Tasks by which the project work activities will be organized, executed, and monitored;A Project Schedule (Gantt Chart or equivalent) displaying begin and end times for each Task and Sub-Task, plus achievement of Project Milestones;A description of major Project Milestones, including key Reports, the start of operations of important systems or subsystems, and other important deliverables or events;A Risk Management Plan, which includes: identification and assessment of all known risks, assignment of risk roles and responsibilities, processes for monitoring and controlling risks, and a risk registry;A Staffing Table, which identifies a single Project Manager, plus project staff and/or consultants that will lead and support each Task (or Sub-Task if appropriate); andA Project Budget, displaying planned expenditures for each Task, with a further breakdown by Cost Element for each Task, and by the federal share vs. non-federal share.	Within 60 days after execution of this Agreement.	No

<p>Project Evaluation Plan</p> <p>The Recipient shall submit to FHWA's AOR for approval an Evaluation Plan, which shall include, at a minimum:</p> <ul style="list-style-type: none"> i. Statement of Project Objectives; ii. List of Evaluation Criteria (e.g., quantitative performance metrics and/or qualitative assessments) tailored to the Project Objectives; iii. Description of data-collection procedures tailored to these criteria, which could include, for example, before/after data, surveys, interviews, system-monitoring data, or other data needed to report on achievement of project objectives; and iv. Outline of Evaluation Report (1-page, <u>draft</u> list of topics to be addressed). 	Within 120 days after execution of this Agreement.	No
<p>Data Management Plan (DMP)</p> <p>The Recipient shall submit to FHWA for approval a DMP that provides a preliminary overview of data that may be collected or created through the project, which shall include, at a minimum:</p> <ul style="list-style-type: none"> a) Data description b) Data access policies c) Data storage and retention approach <p>The Recipient shall then update the DMP throughout the project with more details on the data that is collected or created, including information on data rights and standards. Additional information on DMPs can be found at: https://ntl.bts.gov/ntl/public-access/creating-data-management-plans-extramural-research.</p>	Within 90 days after execution of this Agreement, to be updated throughout the project.	No
<p>Systems Engineering Documents</p> <p>In accordance with 23 CFR 940.11, the Recipient shall submit electronic copies of the milestone Systems Engineering documents applicable to each component of this project for approval by FHWA's AOR. For all ITS elements funded by the agreement, this shall include, at a minimum:</p> <ul style="list-style-type: none"> a) Systems Engineering Review Form (SERF); b) Concept of Operations (ConOps); c) Systems Engineering Management Plan (SEMP); d) Other SE documents as deemed necessary by FHWA; e) System Verification Plan; f) System Validation Plan; and g) Results of the system verification and system validation Plans. <p>FHWA approval will be required for the Concept of Operations and the System Engineering Management Plan. Results of the System Verification and System Validation Plans are to be provided to FHWA to verify such plans were followed and that the system components have been properly implemented, but FHWA approval of those documents is not required.</p>	As applicable	No

<p>Annual Budget Review and Program Plan Reporting</p> <p>Submit the Annual Budget Review and Program Plan Report. The report should describe:</p> <p>(1) Overview and schedule of tasks, activities, milestones, and deliverables for the upcoming year, to include:</p> <ul style="list-style-type: none"> • the latest deliverables table or project management schedule; and • a discussion of whether the current approved Technical Application attached to the award needs to be updated or not. If an update is warranted, propose the updates. <p>(2) Overview and forecast budget for the upcoming year, including:</p> <ul style="list-style-type: none"> • a discussion of whether the current approved Budget Application attached to the award needs to be updated or not. If an update is warranted, propose the updates. 	<p>60 days prior to the anniversary date of execution of this Agreement, in accordance with C.5.C</p>	<p>No</p>
<p>Report to the Secretary</p> <p>Submit a report to the Secretary that describes:</p> <p>a. Deployment and operational costs of the project compared to the benefits and savings the project provides; and</p> <p>b. How the project has met the original expectations projected in the deployment plan submitted with the application, such as:</p> <ol style="list-style-type: none"> 1. data on how the project has helped reduce traffic crashes, congestion, costs, and other benefits of the deployed systems; 2. data on the effect of measuring and improving transportation system performance through the deployment of advanced technologies; 3. the effectiveness of providing real time integrated traffic, transit, and multimodal transportation information to the public to make informed travel decisions; and 4. lessons learned and recommendations for future deployment strategies to optimize transportation efficiency and multimodal system performance. 	<p>Annually, beginning one year after the execution of this Agreement.</p>	<p>Yes</p>
<p>Final Report</p> <p>The Recipient shall provide a final report within 90 days after the termination or expiration of this Agreement. The FHWA AOR, in consultation with the Recipient, will determine the final design and scope of the evaluation and report. Submit an electronic copy of all reports to the ATTAIR mailbox at ATTAIN@dot.gov, and to Ryan.Buck@dot.gov, Jim.Garling@dot.gov, Sharon.Cuevas@dot.gov, and Thomas.Fisher@dot.gov</p>	<p>Within 90 days after the termination or expiration of this Agreement</p>	<p>Yes</p>

Note: Applicable requirements, to include those pertaining to Section 508, are included in the Agreement General Terms and Conditions available online at:

https://www.fhwa.dot.gov/cfo/contractor_recip/gtandc_generaltermsconditions.cfm

SECTION B – AWARD INFORMATION

B.1 TYPE OF AWARD

This award is a cost-reimbursement Cooperative Agreement.

B.2 AVAILABLE FUNDING

The total amount of Federal funding that may be provided under this Agreement is identified on Page 1 of this Agreement in Item 7, for the entire period of performance, subject to the limitations shown below:

- a. Currently, Federal funds identified on Page 1 of this Agreement, Items 11 and 14, are obligated to this Agreement. This Agreement is fully funded.
- b. The FHWA's liability to make payments to the Recipient is limited to those funds obligated under this Agreement.
- c. Costs associated with contingency estimates require prior written approval from FHWA before they are eligible for reimbursement.

B.3 COST SHARING OR MATCHING

Cost sharing or matching is required, with the maximum Federal share being 80%; therefore, a minimum non-federal cost share of 20% is required. The Recipient's cost share value is stated in Block No. 7 on Page 1 of this cooperative agreement. Cost sharing or matching means the portion of project costs not paid by Federal funds. For a more complete definition, please see the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 CFR Part 200, including section §200.306 on Cost Sharing or matching. Other Federal funds may be leveraged for the deployment but cannot be considered as part of the ATTAIN matching funds, unless otherwise authorized by statute.

The Recipient's match can be met through direct financial support or through "in-kind" services. By the completion date of the Agreement, the Recipient must have met the cost-sharing requirement. All cost share contributions must be submitted with sufficient detail and/or documentation to support the fair market value of the contribution. If additional detail and/or documentation are determined necessary in order to verify the contribution, the Recipient will provide the requested information in a timely fashion.

B.4 PERIOD OF PERFORMANCE

The period of performance for this Agreement is delineated on Page 1 in Item 6.

B.5 DEGREE OF FEDERAL INVOLVEMENT

The FHWA anticipates substantial Federal involvement between it and the Recipient during the project. The anticipated Federal involvement will include: technical assistance and guidance to the Recipient; participation in status meetings, including kick-off meeting and project reviews; review and comment on draft documents, as appropriate; performance reporting and financial reporting to ensure that the objectives and the terms and conditions of the agreement are met; and monitoring of performance.

SECTION C - AWARD ADMINISTRATION INFORMATION

C.1 FEDERAL AWARD NOTICES

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

C.2 GENERAL TERMS AND CONDITIONS

General terms and conditions, including payment procedures, compliance requirements for Section 508 of the Rehabilitation Act of 1973 (as amended in 1998), and governing regulations that apply to this Agreement are available online at:

https://www.fhwa.dot.gov/cfo/contractor_recip/gtandc_generaltermsconditions.cfm - Recipient General Terms and Conditions for Assistance awards. Effective date: March 6, 2015.

C.3 STATUTORY AND NATIONAL POLICY REQUIREMENTS

In addition to the FHWA's General Terms and Conditions incorporated by reference in Section C.2, this award shall be administered pursuant to the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards found in 2 CFR Part 200, as adopted by FHWA at 2 CFR Part 1201. Applicable Federal laws, rules, and regulations set forth in title 23, U.S.C., including 23 U.S.C. 113, and 23 and 49 CFR shall also apply to all awards provided under this program.

C.4 ADDITIONAL TERMS AND CONDITIONS

C.4.A PUBLIC ACCESS TO DOCUMENTS

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

C.4.B INDIRECT COSTS

Indirect costs are allowable under this Agreement in accordance with the Recipient's Federally Negotiated Indirect Cost Rates as documented in writing and approved by the Recipient's cognizant Government agency. In the absence of such Government-approved indirect rates, the following rates are approved for use under this Agreement as shown below:

Table C.4.B – Indirect Costs

Type*	Indirect Rate	Period	Ceiling Rate (%)	Base
Prov	Sick/Vacation/Holiday	Period of Performance	28.5%	Direct labor of pool designated full time employees
Prov	Fringe	Award – 8/31/2024	30%	Direct labor of all full time employees
Prov	Fringe	Award – 8/31/2024	7.65%	Direct labor of students and temporary employees
Pred	F&A	Award – 6/30/2024	56%	Direct costs excluding tuition, equipment and subcontract costs over \$25K per subcontract

*Types of Rates: Pred - Predetermined; Fixed; Final; Prov: (Provisional/billing); or De minimus.

In the event the Recipient determines the need to adjust the above listed rates, the Recipient will notify the AO of the planned adjustment and provide a rationale for such adjustment. In the event such adjustment rates have not been audited by a Federal agency, the adjustment of rates must be pre-approved in writing by the AO.

This Indirect Cost provision does not operate to waive the limitations on Federal funding provided in this document. The Recipient's audited final indirect costs are allowable only insofar as they do not cause the Recipient to exceed the total obligated funding.

C.4.C DATA RIGHTS

The Recipient must make available to the FHWA copies of all work developed in performance with this Agreement, including but not limited to software and data. Data rights under this Agreement shall be in accordance with 2 CFR §200.315, Intangible property.

C.4.D PERSONALLY IDENTIFIABLE INFORMATION (PII)

Personally Identifiable Information (PII), as defined in 2 CFR §200.1, will not be requested unless necessary and only with prior written approval of the AO with concurrence from the AOR. PII is defined as any information about a human being, living or dead, regardless of nationality, that is maintained by an agency and that permits identification of that individual to be reasonably inferred by either direct or indirect means (as in data mining), including, but not limited to, name, social security number, date and place of birth, mother's maiden name, biometric records, education, financial transactions, medical history, non-work telephone numbers, and any other personal information that is linked or linkable to an individual.

C.4.E CHANGES

Changes. The Recipient agrees to obtain the prior approval of FHWA for any significant change related to the proposal as required by 2 CFR 200 and 2 CFR 1201. This includes, but is not limited to:

- a) changes in the overall project budget which result in a shift of \$25,000 or more of the original budget between tasks;

- b) any significant revision of the scope, schedule, goals, objectives, or tasks of the proposal Scope of Work, or related activities (regardless of whether there is an associated budget revision requiring prior approval); and
- c) changes in key personnel, program manager, or prime contractor.

C.4.F KEY PERSONNEL

As noted in C.4.E above, the Recipient must provide notice to the AO of any changes in Key Personnel specified in the award. The notice will provide a Resume of the replacement for such Key Personnel to the individuals noted in section C.4.F below. The following person(s) are/have been identified as Key Personnel:

Table C.4.F -- Key Personnel

Names	Title/Position
Dr. James Sayer	University of Michigan, Principal Investigator (PI), UMTRI Director
Dr. Henry Liu	University of Michigan, Co-PI, Mcity Director
Debby Bezzina	University of Michigan, Senior Program Manager
Raymond Hess	City of Ann Arbor, Transportation Manager
Steve Kuciembra	ITE, Deputy Executive Director and CTO

C.4.G 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.

C.4.H SUBAWARDS AND SUBCONTRACTS

Unless described in the application and funded in the approved award, the Recipient shall obtain prior written approval from the FHWA agreement officer pursuant to 2 C.F.R. 200.308 and 23 C.F.R. 172 as applicable for the subaward, transfer, or contracting out of any work under this agreement.

The following subawards and subcontracts are currently approved under this Agreement:

Table C.4.H Approved Subawards and Subcontracts

Name
City of Ann Arbor
Integral Blue
WSP
ITE
Shulman Technologies

Approval of additional subawards or subcontracts under the agreement is contingent upon the Recipient

providing a fair and reasonable cost/price determination. Consent to enter into additional subawards or subcontracts will be issued through a formal amendment to the Agreement, or by written notification from the AO.

C.4.I ORDER OF PRECEDENCE

The Recipient's technical and budget applications are accepted, approved, and incorporated herein as Attachment 1 and Attachment 2. In the event of any conflict between this Agreement document and the Recipient's application, this Agreement document shall prevail.

C.4.J DESIGNATION AS RESEARCH OR NON-RESEARCH AGREEMENT

This Agreement is designated as: *RESEARCH AND DEVELOPMENT*

C.4.K CONFERENCE SUPPORT RESTRICTIONS

The Recipient must obtain written approval from the AOR prior to incurring any costs for conference or meeting support. See the definition of conference as contained in 2 CFR §200.432.

Food and beverage costs are not allowable conference/meeting expenses for reimbursement under this Agreement.

Note: Costs of meals are allowable as a travel per diem expense for individuals on travel status and pursuant to the Travel clause of this Agreement.

C.4.L TRAVEL

Allowable costs for travel and per diem authorized under this agreement will be reimbursed in accordance with the travel costs section of 2 CFR 200.475.

C.4.M AGREEMENT PERFORMANCE REQUIREMENTS SUMMARY

Not Applicable.

C.4.N RESTRICTIONS ON LOBBYING

The Recipient agrees to comply with the requirements of 49 CFR Part 20, New Restrictions on Lobbying. Further, the Recipient agrees to file a certification, and a Disclosure of Lobbying Activities Form (SF LLL) form if required, in accordance with 49 CFR 20.110.

C.4.O PUBLIC ACCESS REQUIREMENTS AND COMPLIANCE

In response to the White House Office of Science and Technology Policy memorandum dated February 22, 2013, entitled Increasing Access to the Results of Federally Funded Scientific Research, DOT is incorporating Public Access requirements into all funding awards (grants) for scientific research. This section sets forth the requirements a funding Recipient must satisfy to be in full compliance with the USDOT Public Access plan. For all wholly or partially federally funded scientific research agreements, the Recipient hereby agrees to comply with the requirements of the USDOT Public Access plan. The Recipient is required to include these obligations in any sub- awards or other related funding

agreements. The full requirements of the DOT Public Access plan requirements include, but are not limited to, the following:

A. Copyright License

Recipient hereby grants to the USDOT a worldwide, non-exclusive, non-transferable, paid-up, royalty-free copyright license, including all rights under copyright, to any and all Publications and Digital Data Sets as such terms are defined in the USDOT Public Access plan, resulting from scientific research funded either fully or partially by this funding agreement. Recipient herein acknowledges that the above copyright license grant is first in time to any and all other grants of a copyright license to such Publications and/or Digital Data Sets, and that USDOT shall have priority over any other claim of exclusive copyright to same.

B. Reporting and Compliance Activities

Recipient hereby agrees to satisfy the reporting and compliance requirements as set forth in the USDOT Public Access plan, including, but not limited to, the submission and approval of a Data Management Plan, the use of Open Researcher and Contributor ID (ORCID) numbers, the creation and maintenance of a research project record in the Transportation Research Board's (TRB) Research in Progress (RiP) database, and the timely and complete submission of all required publications and associated digital data sets as such terms are defined in the DOT Public Access plan. Additional information about how to comply with the requirements can be found at: <https://ntl.bts.gov/public-access/how-comply>.

C.4.P DEBARMENT CERTIFICATION

In accordance with 2 C.F.R. Part 1200 and 2 C.F.R. § 180.335, The Recipient certifies to the best of its knowledge and belief that neither it nor any of its principals: (1) are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency; (2) have been convicted, or had a civil judgment rendered against it or its principals, within the preceding three years of any of the offenses listed at 2 C.F.R. 180.800(a); (3) are presently indicted for or otherwise criminally or civilly charged by a governmental entity with the commission of any of the offenses listed in 2 C.F.R. 180.800(a); or (4) have had one or more public transactions terminated within the preceding three years for cause of default. In addition, in accordance with 2 C.F.R. §§ 180.435 and 180.445, the Recipient will comply with subpart C of 2 C.F.R. Part 180, will communicate to all lower tier participants of their obligation to comply with subpart C of 2 C.F.R. Part 180, and will ensure that the requirement to comply with subpart C of 2 C.F.R. Part 180 is expressly made a term or condition in any such lower tier transaction.

C.4.Q NON-DISCRIMINATION

The Recipient hereby agrees that, as a condition of receiving any Federal financial assistance under this agreement, it will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. § 2000d), related non-discrimination statutes (i.e., 23 U.S.C. § 324, Section 504 of the Rehabilitation Act of 1973 as amended, and the Age Discrimination Act of 1975), and applicable regulatory requirements to the end that no person in the United States shall, on the grounds of race, color, national origin, sex, handicap, or age be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity for which the Recipient receives Federal financial

assistance. The specific requirements of the Department of Transportation Civil Rights assurances (required by 49 C.F.R. §§ 21.7 and 27.9) are incorporated in the agreement.

C.4.R 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 an 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, identifying unresolved issues, and specifying the clarification or remedy sought. The AO, or other cognizant FHWA division office personnel in the case of a project administered through a State DOT, 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.

C.4.S PROGRAM REQUIREMENTS

In connection with any program or activity conducted with or benefiting from funds awarded under this notice, recipients of funds must comply with all applicable requirements of Federal law, including, without limitation, the Constitution of the United States; the conditions of performance, non-discrimination requirements, and other assurances made applicable to the award of funds in accordance with regulations of the Department of Transportation; and applicable Federal financial assistance and contracting principles promulgated by the Office of Management and Budget. In complying with these requirements, recipients, in particular, must ensure that no concession agreements are denied, or other contracting decisions made on the basis of speech or other activities protected by the First Amendment. If the Department determines that a recipient has failed to comply with applicable Federal requirements, the Department may terminate the award of funds and disallow previously incurred costs, requiring the recipient to reimburse any expended award funds.

In particular, Executive Order 14005 directs the Executive Branch Departments and agencies to maximize the use of goods, products, and materials produced in, and services offered in, the United States through the terms and conditions of Federal financial assistance awards. If selected for an award, grant recipients

must be prepared to demonstrate how they will maximize the use of domestic goods, products, and materials in constructing their project. Any grant projects involving vehicle acquisition must involve only vehicles that comply with applicable Federal Motor Vehicle Safety Standards and Federal Motor Carriers Safety Regulations, or vehicles that are exempt from Federal Motor Vehicle Safety Standards or Federal Motor Carrier Safety Regulations in a manner that allows for the legal acquisition and deployment of the vehicle or vehicles.

The following national policy considerations need to be addressed by project sponsors before they can receive federal funds for the program:

1. Critical Infrastructure Security and Resilience

It is the policy of the United States to strengthen the security and resilience of its critical infrastructure against both physical and cyber threats. Each applicant selected for funding must demonstrate, prior to the signing of the grant agreement, an effort to consider and address physical and cyber security risks relevant to the transportation mode and type and scale of the project. Projects that have not appropriately considered and addressed physical and cyber security and resilience in their planning, design, and project oversight, as determined by the Department and the Department of Homeland Security, will be required to do so before receiving funds for construction, consistent with Presidential Policy Directive 21 - Critical Infrastructure Security and Resilience and the National Security Presidential Memorandum on Improving Cybersecurity for Critical Infrastructure Control Systems.

2. Domestic Preference Requirements

As expressed in Executive Order 14005, "Ensuring the Future Is Made in All of America by All of America's Workers" (86 FR 7475), the executive branch should maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States. Funds made available under this notice are subject to the domestic preference requirement at 23 U.S.C. 313, 23 CFR 635.410, and 2 CFR 200.322. The Department expects all applicants to comply with those requirements.

3. Civil Rights and Title VI

Recipients of Federal transportation funding will be required to comply fully with the Americans with Disabilities Act of 1990 (ADA), Title VI of the Civil Rights Act of 1964, and all other civil rights requirements. The Department's and the applicable Operating Administrations' Office of Civil Rights may work with awarded projects to ensure full compliance with Federal civil rights requirements.

4. Federal Contract Compliance

As a condition of award and consistent with Executive Order (EO) 11246, Equal Employment Opportunity (30 FR 12319, and as amended), all Federally assisted contractors are required to make good faith efforts to meet the goals of 6.9 percent of construction project hours being performed by women, in addition to goals that vary based on geography for construction work hours and for work being performed by people of color. Under Section 503 of the Rehabilitation Act and its implementing regulations, affirmative action obligations for certain contractors include an aspirational employment goal of 7 percent of workers with disabilities.

The U.S. Department of Labor's Office of Federal Contract Compliance Programs (OFCCP) is charged with enforcing Executive Order 11246, Section 503 of the Rehabilitation Act of 1973, and the Vietnam Era

Veterans' Readjustment Assistance Act of 1974. OFCCP has a Mega Construction Project Program through which it engages with project sponsors as early as the design phase to help promote compliance with non-discrimination and affirmative action obligations. OFCCP will identify projects that receive an award under this notice and are required to participate in OFCCP's Mega Construction Project Program from a wide range of Federally-assisted projects over which OFCCP has jurisdiction and that have a project cost above \$35 million. DOT will require project sponsors with costs above \$35 million that receive awards under this funding opportunity to partner with OFCCP, if selected by OFCCP, as a condition of their DOT award.

5. Performance and Program Evaluation

As a condition of the grant award, grant recipients may be required to participate in an evaluation undertaken by DOT or another agency or partner. The evaluation may take different forms, such as an implementation assessment across grant recipients, an impact and/or outcomes analysis of all or selected sites within or across grant recipients, or a benefit/cost analysis or assessment of return on investment. DOT may require applicants to collect data elements to aid the evaluation. As a part of the evaluation, as a condition of the award, grant recipients must agree to: (1) make records available to the evaluation contractor or DOT staff; (2) provide access to program records, and any other relevant documents to calculate costs and benefits; (3) in the case of an impact analysis, facilitate the access to relevant information as requested; and (4) follow evaluation procedures as specified by the evaluation contractor or DOT staff.

Recipients and subrecipients are also encouraged to incorporate program evaluation, including associated data collection activities from the outset of their program design and implementation, to meaningfully document and measure their progress towards meeting an agency priority goal(s). Title I of the Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act), Pub. L. No. 115-435 (2019) urges Federal awarding agencies and Federal assistance recipients and subrecipients to use program evaluation as a critical tool to learn, to improve equitable delivery, and to elevate program service and delivery across the program lifecycle. Evaluation means "an assessment using systematic data collection and analysis of one or more programs, policies, and organizations intended to assess their effectiveness and efficiency." 5 U.S.C. § 311. Credible program evaluation activities are implemented with relevance and utility, rigor, independence and objectivity, transparency, and ethics (OMB Circular A-11, Part 6 Section 290).

Evaluation costs are allowable costs (either as direct or indirect), unless prohibited by statute or regulation, and such costs may include the personnel and equipment needed for data infrastructure and expertise in data analysis, performance, and evaluation. (2 CFR Part 200).

C.4.T ADDITIONAL REQUIREMENTS

The Recipient agrees to comply with the provisions of 2 CFR 200 as adopted by the Department of Transportation in accordance with 2 CFR 1201, which implements government-wide Federal requirements for grants and agreements with State and local governments. Also, The Recipient agrees to comply with Environmental Protection Agency guidelines at 40 C.F.R. Part 247, which implements the Resource Conservation and Recovery Act of 1976 and relates to the procurement of recycled products. The Recipient agrees to comply with the provisions of 23 CFR 771, which prescribes the policies and procedures of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) for implementing the National Environmental Policy Act of 1969 as amended (NEPA) and supplements the NEPA regulation of the Council on Environmental Quality (CEQ), 40 CFR parts 1500 through 1508 (CEQ regulation). Together these regulations set forth all FHWA, FTA, and U.S. DOT requirements under NEPA for the processing of highway and public transportation projects. Additionally, The Recipient agrees to

comply with all applicable laws, regulations, and FHWA requirements, including, but not limited to 2 C.F.R. Part 1200, 49 C.F.R. Parts 11, 20, 21, 24, 26, 27, 29, & 32, applicable provisions in 23 U.S.C., including 23 U.S.C. 112 (letting of contracts), 23 U.S.C. 113 (payment of prevailing rate of wage) and 313 (Buy America), and 23 C.F.R.

C.4.U CLOSEOUT OF AGREEMENT FILE

The Government will initiate the administrative closeout of the cooperative agreement after receiving evidence that all technical work and administrative requirements have been completed. The Recipient shall furnish all required documents in support of the closeout of the cooperative agreement within the timeframes requested by the Government. The Government anticipates the timeframe to complete the administrative closeout of the cooperative agreement will not exceed twelve (12) months.

C.5 REPORTING

C.5.A ADDRESS FOR SUBMITTAL OF REPORTS AND DOCUMENTS

The Recipient must submit all required reports and documents electronically, under a transmittal letter referencing the Agreement number, to the following address(es) follows:

- **Ryan Buck**, Agreement Specialist at the following email address: Ryan.Buck@dot.gov
- **Jim Garling**, ATTAIN Program Manager at the following email address: Jim.Garling@dot.gov
- **Sharon Cuevas**, ATTAIN Program Manager at the following email address:
Sharon.Cuevas@dot.gov
- **Tom Fisher** Agreement Officer's Representative at the following email address:
Thomas.Fisher@dot.gov

C.5.B QUARTERLY PROGRESS REPORT

The Recipient must submit an electronic copy of the SF-PPR (Performance Progress Reports) to the FHWA staff identified under clause C.5.A on or before the 30th of the month following the calendar quarter being reported. Final PPRs are due 90 days after the end of the Agreement period of performance. The SF-PPR is available online [at this link](#).

Table C.5.B -- Quarterly Progress Report Periods

Calendar quarters are defined as:	Reports due on or before:
1 st : January – March	April 30 th
2 nd : April – June	July 30 th
3 rd : July – September	October 30 th
4 th : October – December	January 30 th

The quarterly progress report must include the required certification pursuant to 2 CFR §200.415, the SF-PPR cover page and the SF-PPR Block 10 Performance Narrative. The Recipient shall complete the Quarterly Reporting Template, expanding on SF PPR Block 10 as necessary, to include the following information:

- a. Work performed for the current quarter;
- b. Work planned for the upcoming quarter;

- c. Status of all planned procurement activities, proposed procurement schedules, and a list of key procurement milestone dates;
- d. Description of any problem encountered or anticipated that will affect the completion of the work within the time and fiscal constraints as set forth in the Agreement, together with recommended solutions to such problems; or a statement that no problems were encountered;
- e. A tabulation, clearly delineated by Federal share, cost share, and total, of the current and cumulative costs expended by cost element (labor, travel, indirect costs, sub-recipient/subcontractor, etc.) by quarter versus budgeted costs;
- f. Work performed in support of the FHWA and DOT Strategic Goals (see Section A.4 – Vision, Goals, and Focus Areas);
- g. Budget revisions; and
- h. To the extent practical, the above items shall be organized and presented to correspond with the Tasks, Schedule, and Milestones as described in the Project Management Plan defined in Section A6.

In the SF-PPR Block 11, Other Attachments, include the following information as attached pages:

- a. SF-425, Federal Financial Report;
- b. SF-425A, Federal Financial Report Attachment (if applicable); and
- c. SF-LLL, Disclosure of Lobbying Activities

C.5.C ANNUAL BUDGET REVIEW AND PROGRAM PLAN

The Recipient must submit an electronic copy of the Annual Budget Review and Program Plan to the Agreement Officer 60 days prior to the anniversary date of the execution of this Agreement. The Annual Budget Review and Program Plan must provide a detailed schedule of activities, estimate of specific performance objectives, include forecasted expenditures, and schedule of milestones for the upcoming year. If there are no proposed deviations from the Approved Project Budget, the Annual Budget Review must contain a statement stating such. The Recipient must meet via teleconference or web conference with the FHWA to discuss the Annual Budget Review and Program Plan. Work proposed under the Annual Budget Review and Program Plan must not commence until AO's written approval is received.

