

Q&As - Autonomous Vehicle Research Testbed: On Base Shuttle Pilot

Question: Can non-US citizens participate in the testbed project even though it is on Fort Carson?

Answer: Yes, non-US citizens can participate in this RFP. All personnel who are requesting unescorted access to Fort Carson and not in possession of a DOD ID card or installation pass/badge will undergo a National Crime Information Center (NCIC) background check. This check involves verifying the individual's identity and checking their criminal history.

Question: Please clarify what is expected for the HAZMAT plan.

Answer: The Fort Carson Environmental Battle Book provides guidance on how hazardous materials are to be managed on the installation. The document is available for reference at the following web address:

<https://www.carson.army.mil/assets/docs/dpw/stormwater/environmental-battlebook.pdf>

It is appropriate for the proposer's HAZMAT plan to follow the guidance provided in this document.

Question: Do you have a contractor that runs a mobility service in place at the moment? Would you want the successful vendor to contract with this company to provide the day to day operations and maintenance of the autonomous vehicle (AV)?

Answer: US Ignite does not have a contractor that runs a mobility service in place on Fort Carson at the moment. For several years, Fort Carson has contracted with a traditional, non-AV shuttle provider (i.e., a small, 7-passenger minivan) to provide shuttle services for service members aligned to Fort Carson. Our expectation is that the AV supplier will provide a turn-key service for automated transportation. This may be provided by the AV developer or one of their operations partners.

Question: Are there specific levels of authorizations required to be physically on the base (i.e. when our team is on base for set-up or operations)?

Answer: The access requirements for visitors, contractors and vendors can be found under the Security and Access Control Division's webpage. There are specific tabs detailing the procedures and requirements for various durations of access needed. US Ignite will help vendor coordinate with base to obtain access necessary to carry out the implementation of the project.

<https://home.army.mil/carson/index.php/my-fort/all-services/sac>

Question: For the purposes of understanding what organizations have the control to do site or road modifications are the two routes on deemed private sites or is there an element of public roads? Also, who maintains the roadway?

Answer: Fort Carson is a Federal Property and the roads are not for public use and access to the base is restricted. Both shuttle routes are entirely within Fort Carson on vehicle roadways with standard vehicles and users. Fort Carson owns, manages, and maintains the roads. All

maintenance is managed by Fort Carson Department of Public Works (DPW). Any necessary site or roadway modifications will be routed through the DPW for approval and coordination.

Question: Is there any flexibility from the AV provider to suggest alternatives to the routes? For example, if slight modifications, based on the technology today, would be required?

Answer: Yes, the final design and configuration of the route(s) will be determined with input from the AV provider considering the technical capabilities of the shuttle.

Question: How would the decision be made to go for one or two vehicles? Pricing only?

Answer: The decision to go for one or two vehicles will be weighed by US Ignite and its stakeholders, once all pricing information is received from proposers.

Question: Would a consultant / vehicle provider be recommended or is the preference for an AV company only?

Answer: US Ignite does not have a preference. US Ignite welcomes and encourages partnerships among diverse companies.

Question: How do you plan on testing the AV system as being “impenetrable to attempted access by outside parties”?

Answer: US Ignite, program partners and the US Army will work with the selected supplier to verify the system security.

Question: How are points allocated if utilizing a small or minority business for less than 25% of the contract value?

Answer: No bonus points will be awarded if small or minority business is utilized for less than 25% of the contract value.

Question: Will vehicle storage be provided? If so,

- a. Will the location be secure?
- b. Will the location be climate controlled?
- c. Will the location be within close proximity (1/4 mile or less) of routes?

Answer: Fort Carson is currently looking for indoor, climate-controlled storage areas in close proximity to the proposed AV shuttle routes. Proposers should work with the following assumptions at this time.

- a. A secure storage area will be provided
- b. The storage area will be in close proximity to the shuttle route
- c. Level 2, or 240 Volts, electrical service will be provided

Question: Will charging infrastructure be provided, and if so:

- a. Please provide details of equipment to be provided.
- b. Who will be responsible for expenses related to charging of vehicle(s)?

Answer: Electrical service connection at 240 Volts (outlets) will be provided by Fort Carson. The selected vendor will be responsible for expenses related to the charging of the vehicle.

Question: Please provide details regarding any existing V2X infrastructure along the routes.

Answer: The network is being designed and installed for the final shuttle route will have a dedicated wireless network and a higher bandwidth connection at the vehicle charging station for offloading large datasets during service hours.

Question: Is a Table of Contents desired/required for the technical proposal, and if so, does it count against the 20-page limit?

Answer: A table of contents is optional and is not required. A table of contents will count against the 20-page limit for the Technical Proposal.

Question: Would US Ignite consider expanding the page limit to at least 25 pages to enable bidders to provide a thorough, detailed response?

Answer: The page limit remains at 20-pages for the Technical Proposal.

Question: Should technical proposals be submitted via PDF file format?

Answer: PDF or word format is acceptable to US Ignite.

Question: Is there a file size limit to the US Ignite email system we should be aware of for email attachments?

Answer: The size limit is 50 MB. If you wish to deliver a file larger than 50 MB, please contact Meghan Histan to arrange a file transfer.

Question: Are there any security clearance or badging requirements for staff working on base, beyond those indicated within Appendix A – Scope of Services, #18?

Answer: The access requirements for Visitors, Contractors and Vendors as well as FAQs can be found under the Directorate of Emergency Services webpage. Please see www.carson.army.mil/organizations/des.html.

Question: Can the pricing proposal be provided as a separate, individual document for ease of completion and submission?

Answer: Yes, but please be sure to use Appendix B to complete and submit your cost proposal.

Question: How are Small Businesses classified and/or defined? By what entity?

Answer: Various types of certification are available from different private organizations and public agencies. Each certifying group has its own form and requires specific information and documentation. There are 5 primary types of certification:

- Federal: Central Contractor Registration (CCR) and the U.S. Small Business Administration (SBA)
- State: State Governments and DOTs
- Local: City or County Governments
- Corporate: National and Regional Councils
- Consultants: Business Procurement and Assistance Centers



You may self-certify your business as a small business, but you must also meet the federal government's definition of a small business.

Question: If "Option #2: Airfield Shuttle Loop" is the proposer's preferred route for the first phase, would V2I technology for traffic signal integration be required?

Answer: While this loop does not have traffic signals, we would like your RFP response to include information about your V2I capabilities.

Question: Could you provide some additional context as to why a NHTSA exemption for FMVSS or adherence to FMVSS is required on base? Typically, US military bases are not subject to FMVSS compliance for vehicles used on installation roadways.

Answer: This is not a requirement, though US Ignite would like your response to include information about FMVSS adherence on previous projects. If the proposer has completed NHTSA's Voluntary Safety Self-Assessment a link to that report would be appreciated. A third-party operational safety and performance verification will be used to confirm the shuttle is safe to operate on the base.

Question: Would an approval from the Colorado State Patrol and the Colorado Department of Transportation satisfy as a replacement for the requirement of NHTSA exemption or FMVSS adherence?

Answer: All proposer certifications and verifications will be reviewed by US Ignite.

Question: Can you give any insight as to the criteria for the "pass-fail evaluation" that will be conducted by an independent third-party prior to the AV servicing passengers?

Answer: This criterion will be formulated by the independent third-party. US Ignite and the independent third-party vendor will formulate these criteria once the third-party vendor is procured. The selected proposer will be made aware of the "pass-fail evaluation" criteria as soon as these criteria are finalized and established. There will be an operational safety and performance evaluation to the pass-fail evaluation review - this will be aligned operational safety best practices.

Question: Would the performance and payment bond still be required if the proposer does not subcontract services to a third party?

Answer: Yes, a performance and payment bond will still be required. Though the RFP mentions a \$2M Performance and Payment Bond or a Letter of Irrevocable Credit, US Ignite is willing to be flexible on this requirement.

Question: Is there a possibility for us to request an extension to submit our formal response to the RFP?

Answer: At this time, the deadline for the RFP remains at January 17, 2020.

Question: How firm is delivery date of April 1, 2020?

Answer: US Ignite would strongly prefer a delivery date of April 1, 2020. However, we know that sometimes projects anticipate unforeseen delays. As such, US Ignite will accept minor schedule delays.

Question: The vehicle we propose seats 5 + safety driver which is the minimum. Would it be acceptable to propose 2 of them to provide more throughput?

Answer: Yes, this is acceptable.

Question: Item 26 calls out "working in earnest" with the researchers. We are happy to do that, but would like to know if there is a review process whereby "working in earnest" transitions into, say, "Time and Materials" for more extensive work?

Answer: US Ignite, the selected proposer, and researchers from a university will work together in collaboration. US Ignite and the selected proposer will ensure that the work requested fits into the tasks of the agreed upon firm-fixed price contract.

Question: Can you clarify the proposed "onboard analysis compute platform" that needs to be able to plug into our data stream? This is not expected to be a problem unless this platform makes excessive demands on the core processing platform interfering with its work.

Answer: Data would not be processed on board; it would be sent over the network for processing in a separate analytics cluster run by researchers at UC Boulder. Data streamed during operations is expected to be light event-based data for things like status or location updates, and possibly video if there are onboard cameras capable of streaming. Data offload would primarily happen during out of service periods to feed a separate research analytics platform at UC Boulder.

Question: Regarding routes - is there interest in having two shuttles to cover both proposed routes?

Answer: Yes, there could be interest in having two shuttles to cover both of the proposed routes (one shuttle for each route). You can include the pricing for the second shuttle in your cost proposal.

Question: What DSRC roadside unit is planned for traffic light interactions? Are other types of roadside units planned?

Answer: There are currently no traffic lights along the proposed route. Network design is ongoing but DSRC devices are not currently a part of the design.

Question: When troops are marching on the road, is it typically a platoon of 3 men across with 8-10 rows? Or is it more like a squad in single file? Is this a common occurrence?

Answer: Groups can vary but they are typically around the size of a platoon that typically consists of four individuals across and six to 10 individuals long. These groups may be marching or running and may have front and rear runners with flags or vests to manage traffic or safety.

Question: The RFP requests the ‘Proposer’s Organizational Chart’ in Section 5.d. Is this requesting the Organization chart we propose for the project or is this for the Organizational Chart of the company as a whole?

Answer: The organization chart should be project-specific (not for the entire company).

Question: The RFP calls for only one route to be deployed but two are included in the RFP. Please describe the process to select the final route. Is the decision made by US Ignite solely in response to the proposals or is this decided between US Ignite and the awardee(s)? Is a recommendation expected in the proposal?

Answer: The final route will be decided with input from US Ignite, Fort Carson, and the winning proposer. The final design and configuration of the route(s) will be determined with input from the AV provider considering the technical capabilities of the shuttle.

Question: Please provide a list of all operational data points which are requested and the frequency at which they should be reported. With whom will this data be shared?

Answer: In order to support the testbed and modeling elements of the project, the vendor should be willing to share data on telemetry, operations, performance, battery charge, LIDAR, RADAR, Video or other data collected as part of vehicle operations and environmental factors based on the availability of data from the devices onboard. Data is to be shared with the Department of Defense, US Ignite and any of their approved subcontractors for research and evaluation purposes. It is not required to be made open and will not be used for purposes other than research, evaluation, and reporting.

Question: With regard to “live sensor data” mentioned in Operating System Requirements – who should be able to view the live data (and video feeds)? Is it acceptable if the proposer is solely able to view the data or must US Ignite (or other partners) be able to view this live data as well? If the latter, what is the requested access to the data and the frequency to view it?

Answer: Data is to be shared and viewable with the Department of Defense, US Ignite and any of their approved subcontractors for research and evaluation purposes. It is not required to be made open and will not be used for purposes other than research, evaluation, and reporting.

Question: Generally, it is our understanding that roadways in the area are controlled access (with fencing and gates). Are these roads considered private property or for public use? If the former, please explain your understanding of the requirement for a NHTSA waiver.

Answer: The roadways are neither private property or public roadways. They are considered [Defense Access Roadways](#) and are under the management of the Department of Defense and Federal Government. The general safety requirements of public roadways apply but decisions and access is controlled by the discretion of the Federal Government. The NHTSA is not required but highly desirable as an indicator of due diligence for safety factors and alignment with the strategic direction of TSA policies as it relates to Autonomous Vehicles.

Question: Must the audible “next stop announcement” be made by through the capability of the Vehicle, or can this be performed by the onboard attendant? Is voice or chime required?



Answer: US Ignite does not have a preference.

Question: Typically, our practice is that software updates are rolled out in batches rather than updating the entire fleet at once. Taking this into consideration, what is an acceptable timeline to receive the latest software update after it is released?

Answer: Software updates in batches is acceptable to US Ignite.

Question: Please confirm that the proposal cover and section divider pages are not part of the 20-page limit for the subject proposal.

Answer: A proposal cover and section divider pages will count against the 20-page limit for the technical proposal.

Question: Is the \$2M dollar bond requirement flexible?

Answer: Yes, the \$2M dollar bond requirement is flexible regarding the amount and timing. A proposer does not need to have a bond in place by the submission deadline. If the \$2M bond requirement would be a hardship for the selected proposer, US Ignite is willing to work the selected proposer during the contract negotiation phase to arrive at an amount that provides comfort to both parties.

Question: Is the delivery date of April specifically mean having the vehicle on site ready to go?

Answer: Yes, ideally the vehicle would be on-site (and would be ready for testing). Passengers would not be served until July 2020.