

WRONG-WAY DRIVER DETECTION & NOTIFICATION SYSTEMS REQUEST FOR PROPOSALS

Addendum No. 3

Issued February 26, 2024

This is an addendum to the Wrong-Way Driver Detection & Notification Systems Request for Proposals (RFP) offered by the North Carolina Turnpike Authority.

Prospective Respondents: You are hereby notified of the following information in regard to the referenced RFP:

- Section A - Official log of Proposers' questions and NCTA's responses
- Section B – Official revisions to the Wrong-Way Driver Detection & Notification Systems RFP

All other terms, conditions and requirements of the original RFP dated January 17, 2024, remain unchanged unless modified by this Addendum.

Section A: Official Log of Proposers' questions and NCTA's responses

Below are the answers to questions submitted in response to the above referenced RFP.

Note: The below list includes the remaining list of questions that NCTA received but did NOT respond to in Addendum 02 (which was issued on February 6, 2024).

#	Page	Section	Section Description	Proposer Question	NCTA Response
2	14 of 35	2.3.1	Performance requirements	Are there any performance measures in the contract for detection rates, false alarms, etc.?	Per this Addendum 03, language for performance measures has been added to Attachment 1: Use Cases. Please reference the latest version of Attachment 1 on the NCTA Connect Site .
3	1 of 35	1.	Scope of Work	Will the proposer be allowed to mount devices to existing structures? Or have access to existing camera feeds?	See Specific Task Order Scope of Work.
4	27 of 35	2.6.4	Main	Has NCTA developed a SOP for operations of an WWD event? Will this be provided to proposers? Or is it the proposer's responsibility to help the operations come up with the SOP?	NCTA and NCDOT developed an SOP for the current WWD implementations. During system design, the Contractor's input may be requested for updating the SOP to accommodate system changes.
7	Part I 8 of 18	2.21	DBE, MBE, WBE	Given that MBE, SBE and WBE participation are encouraged, but not required, how will this be scored?	Technical Proposal evaluation and scoring will be based on the content provided in each of the 5 Proposal Sections outlined in RFP Part IV, Section 1.2. If a Proposer would like to provide information regarding 'Disadvantaged, Minority, Women Business Enterprises', it can be included within Technical Proposal Section I: Firm and Team Qualifications.
8	Part III 13 of 35	2.3	System Design and Functional Requirements	Please clarify the expectations for detailed design for the field installation. Typically, a detailed plans would be prepared for each installation location. This section implied that another civil designer will be preparing the design plans for each location. Please confirm.	Detailed designs are required of the Proposer for all Scenarios, except Scenario B and D.

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
9	Part III 15 of 35	2.3.3	Infrastructure Requirements	There seems to be a contradiction as it relates to new electrical service. See requirements 82, 85. 95. One requirement says that no new electrical service is required, but since new electrical cabinets are being installed, we assume that new electrical service will need to be fed into this cabinet to power the new equipment there. Please confirm the extent of the electrical service that must be installed here.	Electrical service is not required of the Proposer for Scenarios B and D. For other Scenarios, assume electrical service is also not required. Details regarding the need for electrical service will be worked out in the project specific task order. If electrical service is needed, the Contractor shall apply for electrical service in the name of NCTA.
10	Part III 2 of 35	1.1	Procurement Scenarios	Are we required to install all electrical infrastructure including conduits, pull boxes, splice vaults, cabling, electrical service, foundations, poles, etc.? If yes, what assumptions should we make in our pricing as it relates to the length of cabling, power conductors, conduits, etc.	See NCTA's Response above to Item #9.
11	Part III 16 of 35	2.3.3	Infrastructure Requirements	Requirement 81- Can details be provided on the end-to-end fiber optic architecture and the fiber optic switches that will need to be installed in the new roadside cabinets?	The end-to-end architecture for each NCTA project can be found in Attachments 4, 5 and 6. Also, reference NCTA's Response to Item #12 for fiber optic switch information.
12	Part III 16 of 35	2.3.3	Infrastructure Requirements	Requirement 81 – Please confirm the make and model of new fiber optic switches that we will be required to provide?	Ruggedcom RSG910C Comnet CNGE11FX3TX8MS or approved equivalent.
14	Part III, Page 14 of 35	2.3.1 – 55	Detection Requirements	Requirement states “Detection device shall be able to detect Wrong-Way moving vehicles at a maximum distance of 300 ft with minimal false positives or false negatives in all weather conditions.” Are there specific accuracy requirements the solution shall meet?	Yes. Per this Addendum 03, language for performance measures has been added to Attachment 1: Use Cases. Please reference the latest version of Attachment 1 on the NCTA Connect Site .
22	Part III, Page 29 of 35	2.7.1 – 191.f	Maintenance Plan	Requirement states “The Maintenance Plan shall include: coverage and personnel locations”. Will employees working outside of the United States be approved?	They will be considered.

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
24	Part III, Page 29 of 35	2.7.1 – 191.Q	Maintenance Plan	Requirement states “The Maintenance Plan shall include: monitoring the ITSM dashboards”. Who is providing these dashboards?	NCTA/NCDOT will provide the ITSM and associated dashboards.
25	Part III, Page 32 of 35	2.7.4 – 475.X	Detailed Maintenance Requirements	Requirement states “All Maintenance incidents, activities and monitoring include, but are not limited to: x) creation of ad-hoc data queries requested by NCTA”. Can a sample query be provided?	A sample query would be all data from MM/DD/YYYY HH:MM:SS.mmm to end. All logs and video shall be provided.
26	Part III, Page 32 of 35	2.7.4 – 475.Z	Detailed Maintenance Requirements	Requirement states “All Maintenance incidents, activities and monitoring include, but are not limited to: z) analysis of data as requested by NCTA”. Can an example be provided of the analysis that could be requested?	Same as NCTA’s Response to Item #26 above, plus maintenance logs/alerts.
28	Part III, Page 33 of 35	2.7.8 - 498	Recording of Maintenance Activities	Requirement states “The Contractor and NCTA will utilize the ITSM for initiating the work orders. ITSM shall be utilized for recording and tracking all maintenance and Software support services performed on the WWDDNS. Additionally, all equipment provided under this Contract shall be tracked through ITSM from the purchase to their disposal”. Is the Proposer providing the ITSM or is this an existing tool that NCTA has access to? If existing, please provide details on the current ITSM.	NCTA/NCDOT will provide the ITSM and associated dashboards. The ITSM is ServiceNow.
29	Part IV, Page 2 of 10	1.2.C.2 a and b	Proposal Section I: Firm and Team Qualifications	<p>Document requests information on Proposer and Subcontractors’ “relevant experience in the following areas: Completed, in the last five (5) calendar years, at least one (1) project working in Wrong-Way Driver Detection and Notification Systems in North America, b. (OR) Developed, operated, and maintained, at least one (1) active ITS project in North America.”</p> <p>Does this request apply to the Contractor and the equipment manufacturer? Will projects outside of North America be considered?</p>	This applies to the Proposer. Request is for North American Projects.

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
32	Part IV, Page 6 of 10 & Part III, Page 24 of 35	Wrong-Way Driver Detection & Notification Systems RFP	Section I.2 Content of Technical Proposal & Section 2.4.6 Constructor Coordination	Please verify language regarding the Constructor. Scenarios seem to indicate either the infrastructure is in place, or infrastructure would need to be completed by the bidder. References to the Constructor's participation, and required proposer coordination with the Constructor, do not seem aligned with the listed scenarios, please clarify.	Actual Scope of Work, including requirements for Construction will be defined in the applicable Task Order.
33	Attachment 3, all pages	Attachments	Attachment 3	SOME Task Orders in Attachment 3 include CONTENT OF TASK ORDER PROPOSAL instructions sections, which are not completely aligned with Part IV Proposal Content instructions in the RFP. Please confirm that Part IV Proposal Content instructions in the RFP take precedence over Attachment 3 instructions.	Confirmed. RFP Part IV Proposal Content instructions take precedence over Attachment 3 instructions.
34	Attachment 3, Attachment 3 Pages 1 to 10	Attachments	Attachment 3	Please clarify why Task Orders #1 and #2 in Attachment 3 do not include CONTENT OF TASK ORDER PROPOSAL instructions sections, whereas the other Task Order descriptions in Attachment 3 do.	Per this Addendum 03, Task Order #1 and #2 in Attachment 3 have been updated to include CONTENT OF TASK ORDER PROPOSAL instructions.
35	Attachment 3, Pages 26 and 31	Attachments	Attachment 3	Please note that the RFP requests a 20-page technical response that includes the overall approach for at least one scenario, with additional 10-page increment each of the remaining 6 scenarios in the A-G scenario set. On the other hand, in Attachment 3, some of the sample Task Orders appear to require separate 20-page Technical Proposals each as an "Addendum to Technical Proposal." Please advise: does this mean that you expect to receive one 80-page primary technical proposal + several 20-page additional technical proposal Addenda? Given that the technical solutions for each scenario are going to be the same, the additional 20-page proposals would be inevitably repetitious, and it is also unclear how they would factor into the	The Proposal shall follow the page limits stated in the RFP Part IV: Proposal Content instructions. Per this Addendum 03, a new table (<i>Table A</i>) has been added under RFP Part IV to further clarify and outline the combined total page limitations for Technical Proposal Sections 3-5. <u>Please Note:</u> Per this Addendum 03, Scenario E has been removed. Therefore, the Page Count Limitations outlined in Table 1-3 (found in RFP Part IV) have been adjusted accordingly.

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
				evaluation procedure described in the RFP. Please advise.	
36	Attachment 3, Pages 42,47,52 and 57	Attachments	Attachment 3	When it comes to project management, documentation, testing, MOT, and other administrative and management costs needed for every system design and delivery, should they all be included in group 0 MOB + MOT of the price sheet for Scenario A? Additionally, where should we include them in the price sheets for Scenarios B through G?	Scenarios B and D (Task Order #1 & #2) are anticipated to be installed on a greenfield facility. Mobilization costs should be captured under "Other".
37	Page 31	Exhibits	Exhibit D-6 Price Proposals	If we have to use the Sheet G to quote the Scenario G2, please clarify where we can include the RSUs quotation.	See NCTA's Response to Item #38 below.
38	Attachment 3, Pages 53 and 58	Attachments	Attachment 3	Please confirm that the Price Proposals for quoting Scenarios G1 and G2 will use sheet G for both.	Per this Addendum 03, the Scenario G Price Sheet was removed, and replaced with a 'Scenario G1 Price Sheet' and a 'Scenario G2 Price Sheet'. <u>Please Note:</u> The Scenario G1 & Scenario G2 Price Sheets are exactly the same; zero differences. Please reference the latest version of Exhibit D-6: Price Proposal on the NCTA Connect Site .
39	Attachment 3, Page 52	Attachments	Attachment 3	Please confirm why the option to attach a Price Proposal Backup for the Scenario F does not include the testing and training cost line? Please confirm we can include this information.	Training for maintenance vendor can be included in "Other".
40	Attachment 3, Pages 42,47,52 and 57	Attachments	Attachment 3	What is the Implementation and Installation Schedule for the Task Order Sample (Scenarios A, C, E, F, and G)?	For Scenarios A, C, F, and G, the Proposer shall provide a typical schedule that has been used on deployed projects similar in scope. State any assumptions in the proposal. <u>Please Note:</u> Per this Addendum 03, Scenario E has been removed entirely from the RFP, Exhibit D-6 & Attachment 3.

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
42	Part V, Page 1 of 39	Wrong-Way Driver Detection & Notification Systems RFP	Section 1.1 Payment Terms and Conditions, Item 3	The Contractor shall invoice NCTA in the Operations and Maintenance Phase in accordance with the amounts set forth in the Approved Contractor Price Proposal Exhibit D-7, Forms for monthly Operations and Maintenance payments, but Exhibit D-7, Forms is the Proposer Questions Form. Please confirm where can find the information.	Per this Addendum 03, the incorrect reference to 'Exhibit D-7' has been corrected. It now references 'Exhibit D-6' which is the Price Proposal Form.
43	Page 24 and following	Exhibits	Exhibit D-6 Price Proposals	Currently, there is no place to price the two Extended 3-year Maintenance periods. Please confirm proposers are not requested to price these extended periods, otherwise, please provide an updated pricing sheet to include them.	Confirmed. Proposers are not required to price the extended periods.
44	Part V, Terms and Conditions	Wrong-Way Driver Detection & Notification Systems RFP	Section 1 Contract Terms and Conditions	How long should the prices provided for the sample scenarios (A,C,E,F, and G) be valid?	In accordance with RFP Part I, Section 2.19 all Price Proposals must remain valid for 240 Calendar Days after the deadline for submitting the Proposal. This time period pertains to the sample scenario pricing as well. <u>Please Note:</u> Per this Addendum 03, Scenario E has been removed entirely from the RFP, Exhibit D-6 & Attachment 3.
45	Page 9	Exhibits	Exhibit C Price Proposal Instructions	Item 10 of the Price Proposal Instructions states "Maintenance labor costs should be entered in 2024-dollar values. No price escalation will be allowed above the costs provided on the Price Proposal Forms to complete the Work for this Price Proposal" Please explain how the escalation is to be applied for the 5-year maintenance, as well as for the two possible extensions of 3-years.	Per this Addendum 03, language in Exhibit C: Price Proposal Instructions has been updated to state: "No price escalation <u>beyond CPI adjustments</u> will be allowed [...]" No escalation beyond CPI adjustments is to be included in the Price Proposal since escalation will be additionally included in price resubmissions for each separate Task Order. Please enter 2024-dollar values for all items in the Price Proposal.
47	Page 24 and following	Exhibits	Exhibit D-6 Price Proposals	Please clarify where we have to include the maintenance spares in all the cost sheets.	Initial Spares should be placed under "Other".

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
48	Attachment 3, Pages 22 to 39	Attachments	Attachment 3	Regarding scenarios E, F, G1, and G2, what level of integration is expected between the equipment installed by the Contractor and the existing systems (Toll Sites, STOC and TMC)? What functionalities is the operator expected to be able to perform on the equipment installed by the Contractor?	To be detailed in each Task Order. State any assumptions made in Technical Proposal. <u>Please Note:</u> Per this Addendum 03, Scenario E has been removed entirely from the RFP, Exhibit D-6 & Attachment 3.
49	RFP	Wrong-Way Driver Detection & Notification Systems RFP	---	As a general matter, are KPIs foreseen for the equipment and solutions provided by the Contractor? Please include information regarding the KPIs considered.	Per this Addendum 03, language for performance measures has been added to Attachment 1: Use Cases. Please reference the latest version of Attachment 1 on the NCTA Connect Site .
50	.---	Attachments	Attachment 3	For notification and other notification systems, is a dedicated graphical user interface expected for all scenarios, or only for those requiring operator action?	For all notifications requiring operator action, a graphic interface is required.
51	.---	Attachments	Attachment 3	We assume that the communications infrastructure to the TMC is outside of the WWD provider's scope of the proposal, is this assumption correct? Please provide details.	To be defined in Task Orders. Task Order #1 and #2 provide fiber access to TMC from the facilities.
52	Attachment 3, Pages 32 to 36	Attachments	Attachment 3	Regarding Scenario G1, we assume from the information provided that the number of VDS equipment to be replaced would be 14 in the mainline sections and 16 in the ramps, is this assumption correct?	No. The equipment that should be replaced is 18 mainlines and 18 ramps.
53	Attachment 3, Pages 22 to 26	Attachments	Attachment 3	Does the proposed Scenario E system have to display detection and operate on field equipment from the TMC control center, or would it be an autonomous driver notification system based on autonomous on-road notification via LED panels to detect Wrong-Way drivers?	Per this Addendum 03, Scenario E has been removed entirely from the RFP, Exhibit D-6 & Attachment 3.
54	Attachment 3, Pages 22 to 26	Attachments	Attachment 3	Regarding Scenario E, the requirement for integration, testing, and Level III maintenance of a notification system activated from 12 AET ramp sites with an existing detection system provided and maintained by	Per this Addendum 03, Scenario E has been removed entirely from the RFP, Exhibit D-6 & Attachment 3.

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
				the RTCS Contractor, could you specify the communication protocol employed?	
55	.---	Attachments	Attachment 3	For scenarios A, B, C, D, E, and F, please confirm that the operation of existing and new field equipment will be carried out by the existing TMC.	Confirmed. <u>Please Note:</u> Per this Addendum 03, Scenario E has been removed entirely from the RFP, Exhibit D-6 & Attachment 3.
57	Attachment 3, Pages 32 to 41 & Part III, Page 20 of 35	Attachments & Wrong-Way Driver Detection & Notification Systems RFP	Attachment 3 & Section 2.3.6 Other ITS	The upgrade of existing tools used by the TMC (new equipment, operating logics, reporting, data, alarms, etc.) is assumed to be outside the scope of the project. Related to scenarios G and requirement ""125 The Contractor shall be responsible for the integration of ITS to existing tools used by the nearest TMC, such as an ATMS"". Please provide a little more detail as to which existing tools the requirement refers to, and which communication protocols are available.	NCTA and NCDOT developed an SOP for the current WWD implementations that do not integrate to a central ATMS. During system design, the Contractor's input may be requested for updating the SOP to accommodate system changes that are applicable at that time.
58	---	Attachments	Attachment 3	Regarding the current TMC, what are its communication mechanisms with third-party SCADAS/TMC/ATMS (C2C NTCIP, webservices, etc.)?	The communication mechanism supported by the TMC is NTCIP.
62	Attachment 3, Pages 37 to 41	Attachments	Attachment 3	Regarding scenario G2, what system is being used to detect Wrong-Way drivers? Is this detection information sent directly to the operators of the STOC by the TMC, and who then triggers the notification system proposed by the Contractor?	The system provided by the Contractor detects Wrong-Way drivers and sends the notifications to the TMC.
63	Part I, Page 15 of 18	Wrong-Way Driver Detection & Notification Systems RFP	Section 3.3 Price Proposals	The RFP states, "The Evaluation Committee will then apply the formula provided in this Part I, Administrative, Section 3.4 to the price provided in each Price Proposal to calculate the Cost Per Point score per qualified Scenario." There are 7 scenario-based price sheets in this RFP. Which one will be used as the Proposed Cost input to calculate the Cost Per Point for evaluation purposes?	Each submitted Scenario will receive: 1) a Technical Score and 2) a Cost Per Point (which will be calculated based on the Proposed Cost input provided by the Proposer for that Scenario).

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
64	---	Attachments	Attachments 4-6	The RFP does not specify the mounting location or provisions for the sensors. Will the sensor be mounted on the same pole as the wrong-way sign? Will the WWDS cabinet be installed on the same pole?	For Scenarios B and D, the sensors will be mounted on the provided pedestals. The cabinet will also be mounted on a pedestal unless the Contractor proposes a different location and includes that design and cost in their proposal. For other Scenarios, the mounting location and other details about the sensors and cabinet shall be provided by the Contractor as part of their solution.
65	Part III, Pages 19-20 of 35	Wrong-Way Driver Detection & Notification Systems RFP	Section 2.3.5 Communications	Requirement 113 includes the statement, "The Contractor is responsible for all network equipment/switching at the WWDDNS site and is responsible for all elements of the Local Area Network (LAN)". Please confirm that the Contractor must provide the network electronic devices for the LAN in the WWDS site for scenarios B and D. According to the wording in section 2.3.5, "Communication requirements apply to Task Orders in which fiber-optic and network infrastructure is being installed by the Contractor, specifically Scenario A and C"	Confirmed that the Contractor must provide the network electronic devices (wireless radios, Ethernet cable, etc.) for the LAN at the WWDS site for Scenarios B and D.
66		Wrong-Way Driver Detection & Notification Systems RFP	Section 2.3.5 Communications	Requirement 113 includes the statement "The Contractor is responsible for Wide Area Network (WAN) connections to the NCTA TMC. ". Please confirm that the contractor must provide the network electronic devices for the WAN of the WWDS system for scenarios B and D. According to the wording in section 2.3.5, "Communication requirements apply to Task Orders in which fiber-optic and network infrastructure is being installed by the Contractor, specifically Scenario A and C"	Confirmed that the Contractor must provide the network electronic devices (Ethernet switches, jumpers, etc.) for the WAN at the WWDS site for Scenarios B and D.
67		Attachments	Attachment 4	Scenario B and D Project drawings for 540 Section 1 (R-2721A) do not show connection of WWDS system fibers to the Layer 3 switches in Hubs 4, Hub 5 and T36 AET Vault. The drawing show the fibers of the Slate buffer of the Toll trunk cable connected to the	Confirmed that the Contractor does not provide Layer 3 switches for the WWDS system in these locations or other locations.

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
				<p>Layer 3 switch, and the Blue buffer used by the WWDS system is not connected to the Layer 3 switch according to the drawings. Please confirm that the Contractor does not need to provide Layer 3 switches for the WWDS system in these locations or other locations. In case that the contractors is required to provide Layer 3 switches, please clarify quantities and locations to be installed.</p>	
69		Attachments	Attachment 4	<p>Scenario B Project drawings for 540 Section 1 (R-2721A) show fiber drop connection reaching only one Pedestal for the two WWDS system Ramp sites in the same ramp. Please clarify if the six count fiber optic drop cable will reach only one Pedestal for WWDDN-R1A and WWDDN-R1B, one Pedestal for WWDDN-R2A and WWDDN-R2B, and one pedestal for WWDDN-R3A and WWDDN-R3B.</p>	<p>Confirmed. Fiber-optic drop proximate to one pedestal per ramp (only).</p>
70		Attachments	Attachment 4	<p>Scenario D Project drawings for 540 Section 1 (R-2721A) show no fiber drop connection reaching Pedestals for the four WWDS system Mainline sites connected to the Toll Vault. Please clarify if the fiber optic drop cable will reach only one Pedestal for WWDDN-M1A and WWDDN-M1B, one Pedestal for WWDDN-M2A and WWDDN-M2B, and that the pedestal will be in the locations of WWDDN-M1A and WWDDN-M2A. Please be aware that the estimated distance between WWDDN-M1A and Toll Vault seems to be above 300', same for WWDDN-M2A.</p>	<p>No fiber-optic drops are provided to the pedestals. The current system employed on Tri-Ex uses contact closure to activate the signs, via serial radio. Should the Proposer prefer another method of communication with the pedestals, they should propose and cost an alternate methodology.</p>
72	---	Attachments	Attachment 4	<p>Scenario B and D Project drawings for Complete 540 do not show spare fibers spliced to WWDS system drop cables. Please clarify if the drop cable will be spliced to spare fiber to provide spare fibers allocated for the use of the WWDS system.</p>	<p>At this time, the architecture only allows for two fibers in each direction; assuming unidirectional SFP's, there would be no spare fibers. The Contractor may include additional splicing to provide an added level of redundancy/maintainability.</p>

Section A: Official Log of Proposers' questions and NCTA's responses

#	Page	Section	Section Description	Proposer Question	NCTA Response
73	Page 4	Attachments	Attachment 1	The Attachment 1 states, "Wrong-way driver detected. Expected Outcome: All LED signs are activated simultaneously within an acceptable time frame allowing the driver going the wrong way to see the sign and react. LED signs deactivate after an acceptable amount of time..." a.) What is the "acceptable" time frame? b.) What is the minimum distance from the wrong-way sign the system should trigger the LEDs?	<ol style="list-style-type: none"> 1. 250 ms 2. Depends on the design and how far away the signs are from the detection zone.
74	Page 5	Attachments	Attachment 1	The Attachment 1 states, "Generic Anomaly (I.e. incident, stopped vehicle, debris in the roadway, pedestrian) Expected Outcome: Anomaly is correctly detected and appropriate alerts are received for the necessary response." a.) Please define an "incident." b.) What is the minimum size of debris to be detected and reported? c.) Is the list of generic anomalies the minimum mandatory incidents our system must detect? d.) What is the required range and accuracy for detecting non-vehicles?	<ol style="list-style-type: none"> A) In this list an incident is a vehicle accident. B) Provide the capabilities of the system being proposed that can meet the performance requirements in Attachment 1. C) It is an example list of typical events expected on the facility that require detection. D) Provide the capabilities of the system being proposed that can meet the performance requirements in Attachment 1.

Section B: Official revisions to the Wrong-Way Driver Detections & Notification Systems RFP

REVISIONS: Following are the revisions to the RFP documents (deletions are in red text and struck through, additions are in red text and underlined)

1. Under RFP Part I Administrative, Section I.1, Scenario E was removed.

- ~~• **Scenario E: Notification System** – Integrate and test a notification system, either software or browser-based, that will receive information from existing detection sites and provide alerts to TMC operators by email, text, and pop-up video.~~
- **Scenario F: Deterrence Only** – Installation and integration of wrong-way warning sign(s) or

2. Under RFP Part III Scope of Work and Requirements, Section I.1, Section E was removed.

- ~~• **Scenario E: Notification System** – Integrate and test a notification system that will receive information from existing detection sites and provide alerts to TMC operators by email, text, and pop-up video.~~
- **Scenario F: Deterrence Only** – Installation and integration of wrong-way warning sign(s) or

3. Under RFP Part I Administrative, Table I-1 has been modified as follows:

Milestone	Date
RFP Issued	Jan 17, 2024
Proposer Questions Due	Jan 30, 2024 (4:00 p.m. EDT)
NCTA Responses to Questions Completed	Feb 26, 2024
Technical Proposals Due	Mar 20, 2024 (4:00 p.m. EDT)
Notification to Proposers Shortlisted for Oral Presentations	Apr 17, 2024

4. Under RFP Part III Scope of Work and Requirements, Section I.2, the following deletion was made:

I. Triangle Expressway

See Attachment 3 for example Scenario A, C, ~~E~~, and G2 Task Orders for potential deployments of WWDDNS on Triangle Expressway.

The existing Triangle Expressway Intelligent Transportation System (ITS) has the following features:

- i) 72-strand fiber-optic trunkline is provided throughout the facility

5. Under RFP Part III Scope of Work and Requirements, Section 2.3.4, the following deletion was made:

2.3.4 Notification Requirements

Scenarios A, B, C, D, and ~~E~~ include providing and integrating detection into a notification platform.

108	The Notification system shall alert TMC personnel via email and/or text within 10 seconds
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6. Under RFP Part IV Proposal Content, Table I-3 has been modified as follows:

Section B: Official revisions to the Wrong-Way Driver Detections & Notification Systems RFP

Table I-3: Proposal Page Limitations

Proposal Sections to be Completed by a Proposer	Page Count Limitations
Cover Letter	Up to 2 pages
Executive Summary	Up to 2 pages
Section 1: Firm and Team Qualifications	Limited to a combined total of 10 printed pages (excluding all table of contents, list of tables, or list of figures) and a font of 12 point.
Section 2: Past Project Performance	
Section 3: Approach to Scope of Work and Requirements	Initially limited to 20 pages with each additional Scenario proposed adding 10 to the limit (excluding all table of contents, list of tables, list of figures), and a font of 12 point. <i>Example: If all 67 Scenarios are included in the proposal, then there is a limit of 870 pages.</i>
Section 4: Approach to Implementation and Integration	
Section 5: Approach to Testing and Maintenance	
Forms & Submittals	No limitations
Price Proposal	No limitations

7. Under RFP Part IV Proposal Content, Section I.2, the following language and Table have been added:

Table A below outlines the combined total page number limitation for Proposal Sections 3-5 based on the number of Scenarios proposed.

Table A: Proposal Sections 3-5 Page Limitations

Number of Scenarios included in Proposal	Page Count Limitations for Proposal Sections 3-5
Proposal includes only 1 Scenario	Limited to 20 pages max
Proposal includes 2 Scenarios	Limited to 30 pages max
Proposal includes 3 Scenarios	Limited to 40 pages max
Proposal includes 4 Scenarios	Limited to 50 pages max
Proposal includes 5 Scenarios	Limited to 60 pages max
Proposal includes 6 Scenarios	Limited to 70 pages max

8. Under RFP Part IV Proposal Content, Table I-4 has been modified as follows:

Table I-4: Key Team Personnel Roles and Commitments

Project Principal:	Installation/Maintenance Manager:
All Scenarios	All Scenarios
Contractor Project Manager:	Quality Assurance Manager:
All Scenarios	All Scenarios
Technical Manager:	Test Manager:
Scenarios A, B, C, D, E , and G	Scenarios A, B, C, D, E , and G

Section B: Official revisions to the Wrong-Way Driver Detections & Notification Systems RFP

- 9. Under RFP Part V Terms and Conditions, Section I.1, the incorrect reference to Exhibit D-7 was corrected to reference Exhibit D-6.

I.1 Payment Terms and Conditions

1. Payment terms are net thirty (30) Calendar Days after receipt of a correct invoice. NCTA is responsible for all payments under the Contract. A “correct” invoice is one that contains an accurate description of the amounts due, is in the Approved format, has no errors, includes all required supporting information including payment Approvals, and meets all other Requirements for invoicing set forth in **Part III, Scope of Work and Requirements**.
2. The Contractor shall invoice NCTA for the Implementation Phase based on milestone payments set forth in **Exhibit B, Payment Schedule for each Project**. Exhibit B is provided for references and the Contractor shall not completed Exhibit B in its Price Proposal.
3. The Contractor shall invoice NCTA in the Operations and Maintenance Phase in accordance with the amounts set forth in the Approved Contractor Price Proposal **Exhibit D-67, Forms** for monthly Operations and Maintenance payments. Adjustments to these payments may be made for Contractor performance below required Functional Requirements as further set forth in **Part III, Scope of Work and Requirements**.

- 10. Additional language has been added to the last two pages of **Attachment I: Use Cases**; outlined below.
 - a. *Note: For the latest version, reference the *Attachments – Addendum 03* document found on the [NCTA Connect Site](#).

Performance Requirements

KPI	Requirement Description	Performance Requirement
1	Wrong Way Vehicle Detection	99.9% of incidents
2	Wrong Way Vehicle False Detections	< .2% of Detections
3	Detection Accuracy	95% of vehicles
4	Wrong Way Infrastructure	99.5% availability
5	Wrong Way Data Retention	>= 90 days

1. Wrong Way Vehicle Detection Accuracy (KPIs 1, 2, and 3)
 The system must accurately detect wrong-way vehicles traveling from 5 mph to 120 mph and avoid false alarms that can lead to unnecessary panic or desensitization to warnings. It should detect wrong-way drivers quickly and initiate an immediate response to prevent accidents. This includes triggering alerts for the driver, notifying law enforcement or traffic management

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centers, and, if within the scope of work, activating warning signs for other drivers. The system should be able to function correctly under various environmental conditions including rain, fog, snow, and during nighttime. The monthly score will be calculated as per the sampling and evaluation methodology agreed upon between NCTA and the contractor.

2. Availability of Integration with Traffic Infrastructure (KPI 4)

The system should have mechanisms to alert the wrong-way driver, potentially through flashing lights or electronic signs. It should also alert other drivers in the vicinity and communicate with traffic management systems or law enforcement agencies. The system should have mechanisms to alert the wrong-way driver, potentially through flashing lights or electronic signs. It should also alert other drivers in the vicinity and communicate with traffic management systems or law enforcement agencies in a timely manner. Availability is defined as the percentage of time:

1. The system is available to alert wrong way drivers.
2. The system is available to communicate with the traffic management Infrastructure and provide the alert within 10 seconds.

The monthly score will be calculated as per the sampling and evaluation methodology agreed upon between NCTA and the contractor.

3. Data Recording and Retention

The system should record incidents for future analysis, helping in understanding the causes of such occurrences and improving road safety measures. The data shall be retained for no less than 90 days and exportable in a common readable format. The monthly score will be calculated as per the sampling and evaluation methodology agreed upon between NCTA and the contractor.

4. Other Detection (KPI 3)

The system should accurately detect vehicles under various conditions and environments, minimizing false positives (detecting something as a vehicle when it's not) and false negatives (failing to detect a vehicle). Non-vehicle detections shall be detected and classified as an anomaly (i.e. incident, stopped vehicle, debris in the roadway, pedestrian). The monthly score will be calculated as per the sampling and evaluation methodology agreed upon between NCTA and the contractor.

11. The following modifications have been made to **Attachment 3: Task Order #1, #2, and Scenario Samples**:

- a. 'Task Order Example Scenario E' was deleted.
 - i. Reference pages 26 – 30 of Attachment 3 to see red-line deletions.
- b. Scenario B (Task Order #1) and Scenario D (Task Order #2) have been updated to include the Section titled 'Content of Task Order Proposal'.
 - i. Reference pages 7-8 & pages 13-14 of Attachment 3 to see red-line changes.
- c. ***Note**: For the latest version, reference the *Attachments – Addendum 03* document found on the [NCTA Connect Site](#).

12. In **Exhibit C: Price Proposal Instructions**, the following modifications were made to Item #9 & #10:

- a. ***Note**: For the latest version, reference the *Exhibits – Addendum 03* document found on the [NCTA Connect Site](#).

9. For the first two Task Orders submitted with the RFP, no price escalation **beyond CPI adjustments** will be allowed above the costs provided on the Price Proposal Sheets to complete this Work. For subsequent task orders, an updated price proposal will be obtained.
10. The Price Proposal shall include all costs, fees, and applicable taxes needed to meet the requirements of the RFP, included in **Part III, Scope of Work and Requirements**. Implementation and future task order scenario pricing should be entered in 2024-dollar values. Maintenance labor costs should be entered in 2024-dollar values. No price escalation **beyond CPI adjustments** will be allowed above the costs provided on the Price Proposal Forms to complete the Work for this Price Proposal. Prices shall be the maximum Price for work outlined in this Exhibit C.

13. In **Exhibit D-6: Price Proposal**, the following modifications were made:

- a. The file titled 'Scenario E WWDDN Price Sheet' was removed.
- b. The file titled 'Scenario G WWDDN Price Sheet' was removed.

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- c. Two (2) new files were added which are titled: 'Scenario G1 WWDDN Price Sheet' and 'Scenario G2 WWDDN Price Sheet'.
- d. *Note: For the latest version, reference the *Exhibits – Addendum 03* document found on the [NCTA Connect Site](#).