

NEVADA DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTAL NOTICE NO. 5 to RFP NO. 497-11-016

Reference is made to the Request for Proposal to Service Providers for RFP #497-11-016 Advanced Second Generation 511 System, upon which proposals will be received until 3:00 p.m., local time, on January 27, 2012.

Following are questions received and the NDOT responses regarding the above referenced RFP:

**QUESTION 1:** With the responses to questions due back to vendors by 12/13, that leaves 4 weeks for a response. Two of those weeks are heavily laden with vacation schedules for the holidays. That leaves roughly two weeks for concentrated effort on this proposal. Will NDOT consider moving the due date for this proposal response out two weeks to accommodate the holidays?

**ANSWER 1:** Yes – NDOT has extended the due date by two weeks, to Friday, January 27<sup>th</sup> at 3:00pm.

Please note that it is not required that every requirement be satisfied in the proposal. Note exceptions taken for the price quoted using the compliance matrix. In the proposals, NDOT is looking for the best value for their budget and will select the best qualified bidder who provides the best value.

**QUESTION 2:** ID017P1 To the extent possible, the IVR shall transfer the telephone charges associated with the initial call to the receiving agency, through the phone service provider of both the 511 system and the receiving agency. Question: Does this requirement simply mean that NDOT will be charged for the MOU's used by 511 callers or is there a broader explanation to this requirement?

**ANSWER 2:** For any call that is transferred to an outside system such as an adjoining state's 511, the cost of that call should be transferred from NDOT to the recipient agency upon successful transfer of the call.

**QUESTION 3:** ID039P2 A severe weather warning read out priority shall be able to be modified by authorized NDOT personnel. Question: a severe weather warning from an accredited weather service comes in a standard xml (or similar) format with standardized messaging. Is it the intent for NDOT so supplement the information included in the warning by means of a floodgate or is there other considerations? Is so, what are they?

**ANSWER 3:** The parent requirement ID039P refers to the IVR messages read in response to the caller's request for information related to a specific location or geographic area. Weather can be an incident impacting travel along specific routes or in specific parts of Nevada. A good example is high wind warnings or winter weather watches along specific sections of roads in Nevada. The child requirement ID039P1 states that as a default, the severe weather warning shall be read out first by the IVR if there are several types of incidents in the area of interest specified by the caller. Types of incidents could be road construction, multi-vehicle accident, local festival restricting travel, etc. ID039P2 requires the ability for authorized NDOT personnel to be able to change the read out priority from first to some other priority. This might be done if a severe multi-vehicle accident closes the road entirely which would make a high wind warning less critical since no one would be traveling in that area.

**QUESTION 4:** DI002X Weather content consists of active alerts by County undergoing adverse weather condition(s) of Nevada DOT specified types, and county-based and crew based forecasts (one for each county for the remainder of “today”, and a second for each county for the following two days). Question: What is NDOT’s intent for the role of crew-based forecasts in the 511 system?

**ANSWER 4:** The Nevada DOT work crews are assigned to 56 defined crew areas geographically spread out over Nevada. Each crew area will have a daily weather forecast for the crews to use to plan their work and a forecast for the next day. These crew-area weather forecasts are required to be associated to the appropriate county in which the crew area is based, and included in the weather reporting capabilities of the NNG511 system. Crew areas are meaningful only to internal NDOT staff and information disseminated publically via 511 does not need to include references to crew areas.

**QUESTION 5:** DI001R2 NDOT road configurations shall include but not be limited to: defining road segments, geo-locating mile markers, identifying features by segment such as rest areas, truck stops, DMS, CCTV, traffic sensors, gas stations and linking them with their geographic coordinates. Question: What is the source of information for truck stops, rest areas and gas stations? Does NDOT have a database containing the location, types of service, etc. for these facilities?

**ANSWER 5:** GIS databases containing the latitude and longitude of businesses along with information concerning the services provided by the business along with hours of operation are commercially available (for examples see <http://www.fargeo.com/services-locator> and [http://nevada.localguides.com/ypcyellow/gas\\_stations.html](http://nevada.localguides.com/ypcyellow/gas_stations.html) ). For NDOT facilities such as rest areas, amenities at the rest areas and other state owned facilities, NDOT will provide the information during the design with updates during the operational phase.

**QUESTION 6:** ID025 A travel planner function shall provide travel options that include driving, public transit, bicycling in cities and areas that provide bike routes, and walking. Question: Is this functionality part of a future roadmap for NDOT or desired baseline functionality. There are no detailed requirements anywhere else in the RFP for this functionality?

**ANSWER 6:** The three related child requirements involve call transfers implying that this requirement can be satisfied by identifying sources that provide this information and transferring the caller to those sources. Likewise the web site can also provide links to different modes of travel. An automated trip planner is not envisioned as a baseline functionality.

**QUESTION 7:** Can you provide a copy of the requirements matrix in Word or Excel?

**ANSWER 7:** Attached.

**QUESTION 8:** What are your current monthly operations and maintenance costs?

**ANSWER 8:** Current average is \$18,000 +/- /month with peaks of \$49,000 +/- /month in the winter months based upon web and IVR usage.

**QUESTION 9:** Can you explain more clearly the division of responsibilities between Kimley-Horn and the chosen NNG511 contractor to modify the CSS?

**ANSWER 9:** Under direction from NDOT, KHA will be writing their interface to the ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications

located at <http://www.ite.org/standards/tmdd/>. All ITS platforms will be compliant with the standard.

**QUESTION 10:** Can you make available any documentation related to the CSS?

**ANSWER 10:** Yes, the successful vendor will be provided all CSS documentation necessary. Under direction from NDOT, KHA will be writing their interface to the ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>. All ITS platforms will be compliant with the standard.

**QUESTION 11:** Attachment A, Section 3.7. Is it your expectation that we provide potential SLAs at this point, or will that wait until negotiations of the operations contract?

**ANSWER 11:** Service level agreements (SLA) need to be proposed by the Contractor and, if the Contractor is selected, the SLAs will be negotiated with NDOT.

**QUESTION 12:** Attachment B, Section 3.3.1, Requirement DI001W2. Can you please clarify what you mean by the word “associate” in this requirement? What is your vision of how a banner alert would be associated with a specific segment, for example?

**ANSWER 12:** The web site is required to show the three Nevada Districts (ID027W15 and ID027W17) where “region” is synonymous with “district”. It is expected that the web site will only show banner alerts for the region being shown on the map (refer to ID012W2). This requirement will require filtering of the banner alerts based on what region the user’s web browser is displaying, if the entire state is displayed then no filtering will occur.

**QUESTION 13:** Attachment B, Section 3.3.1, Requirement DI007W1. We assume that this requirement means that the system has to accommodate a minimum of 6 travel profiles, not that each user has to create a minimum of 6 profiles. Can you please confirm?

**ANSWER 13:** That is correct.

**QUESTION 14:** Attachment B, Section 3.3.1, Requirement ID019W2. Is this requirement setting a usage goal, or should it read that the website “shall be able to handle...”?

**ANSWER 14:** “shall be able to handle” is a better statement of the requirement. NDOT projects that in 5 years there could be 21 million users of the 511 web site and the requirement is to design the site to be able to grow in capacity to handle that amount of usage in 5 years.

**QUESTION 15:** \*\*\*\*\* would like to kindly request NDOT to consider an extension to the proposal submission date of Jan 13, 2011 given the upcoming December holiday period. Would NDOT consider an extension of approximately 2 weeks?

**ANSWER 15:** Yes – NDOT has extended the due date by two weeks, to Friday, January 27<sup>th</sup> at 3:00pm.

**QUESTION 16:** Can you please provide the Requirements Compliance Matrix in Attachment C in an editable format such as MS Word?

**ANSWER 16:** Attached.

**QUESTION 17:** Does the cost evaluation require the Contractor to submit pricing for O&M, as this will be managed under a separate budget and scope of services?

**ANSWER 17:** Yes.

**QUESTION :18** Does the maximum fixed budget of \$430,000 include both the Phase 1 and Phase 2 deployments, or only Phase 1?

**ANSWER 18:** Both phases however Phase 2 depends on NDOT designing, building and deploying a central database that collects all NDOT data statewide and specifying an interface to it for the NNG511 system. At present there is no definitive schedule for when that database will be available or what the interface requirements are although it is expected to be online before the design phase is complete, obviating Phase 1. The work in Phase one is similar in the interface to the data warehouse in Phase 2 and the data is expected to be in the same format in both phases.

**QUESTION 19:** Please identify where contractors can access related proposal documentation referenced in the RFP (e.g. NDOT Second Generation 511 System: Final Data Infrastructure Survey Report dated October 6, 2011).

**ANSWER 19:** Already available.

**QUESTION 20:** What is the currently scheduled deployment date for the Central Data Warehouse that houses all ITS data for the State (note: Attachment A, p. 9 said not yet known at time of publishing RFP, but may now be known and doesn't hurt to ask)?

**ANSWER 20:** Unknown at this time.

**QUESTION 21:** Will NDOT provide the Conditions Reporting System for the first Phase of the project, or is the expectation for the Contractor to provide this as a temporary solution?

**ANSWER 21:** The Contractor should provide the Conditions Reporting System and it should be retained as a backup input subsystem in Phase 2.

**QUESTION 22:** Can you please provide sample data and/or data formats from the existing CCTV camera feed, weather feed, traffic detector data and DMS message feed?

**ANSWER 22:** NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

Additional sample data and/or data formats is available in 2 volumes: Volume 1 contains the Concept-of-Operations and Functional Requirements, while Volume 2 contains the Dialogs and Message content. The design content is also available in zip files as XML and WSDL and as XMLSpy output in HTML format.

<http://www.ite.org/standards/tmdd/3.02.asp>

**QUESTION :23:** On page 8, Attachment B, the RFP states that the CSS will need to be modified to provide the messages along with sign ID and geographic location. Please confirm that it will not be the contractor's responsibility to modify the Kimley-Horn CSS.

**ANSWER 23:** It will not be the vendor's responsibility to modify the CSS. NDOT is currently working with Kimley Horn to develop and test these modifications. It is not expected that the vendor will need to work with Kimley-Horn.

**QUESTION 24:** Page 10, Attachment B states that NDOT's V2P website is currently under development. What is NDOT's estimated completion date?

**ANSWER 24:** Completed. Phase 1 (Reno): <http://www.nevadadot.com/cameras/>.

Phase II Elko is 50% complete and Phase III (Las Vegas) is in the planning stage. It is anticipated that the project should be complete in four to six months.

**QUESTION 25:** Can NDOT please provide details of the CSS access point and data formats?

**ANSWER 25:** All informational data will be relayed via the C2C interface which is TMDD standards based. NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

**QUESTION 26:** Can NDOT please provide interface documentation for the Phase 1 interfaces to CSS and V2P?

**ANSWER 26:** All informational data will be relayed via the C2C interface which is TMDD standards based. NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

**QUESTION 27:** What is the anticipated roadway coverage for the NNG511 system?

**ANSWER 27:** See ID003W. It says Interstates, U.S. and State Roads as a minimum.

**QUESTION 28:** The Statement of Qualification Form states that three projects may be listed as references. Please clarify whether the three references listed are per contractor on the bidder/prime contractor's team or are to represent a total of 3 references per bid team?

**ANSWER 28:** The references should be for the Prime.

**QUESTION 29:** Please clarify which form is to be treated as Attachment E as there appears to be two Attachment E forms, as follows:

- a. Attachment E: Cost Proposal Form
- b. Attachment E: Service Providers Cost Certification of Final Direct Costs

**ANSWER 29:** Attachment E is the Cost Proposal Form. Please see list of attachments on page 9 of the RFP.

**QUESTION 30:** Is there an Attachment F form, as there does not appear to be one included in the RFP package even though there is Attachment G: Worker's Compensation Insurance Affidavit?

**ANSWER 30:** Attachment F is the Consultant Reference Questionnaire. Please see list of attachments on page 9 of the RFP.

**QUESTION 31:** Will NDOT issue a formal acceptance at the end of Phase 1?

**ANSWER 31:** NDOT will formally accept Phase 1 of the NNG511 system through an acceptance test conducted by the NDOT or its designated representative to verify that the delivered system meets the functional and performance requirements as stated in the RFP and base lined at contract award. Phase 2 is a part of the contract and is a deliverable dependent on NDOT providing a central database as described in the RFP.

**QUESTION 32:** Please confirm whether the O&M phase will start immediately after the acceptance of Phase 1 or after the acceptance of Phase 2?

**ANSWER 32:** O&M for Phase 1 will commence upon acceptance of NNG511 Phase 1.

**QUESTION 33:** Please clarify how the NNG511 system will receive data from field devices. Will the NNG511 system need to interface directly to field devices or will the system receive field device data via the CSS?

**ANSWER 33:** The NNG511 system will receive processed field device data in Phase 1 from the CSS, in Phase 2 it will receive field device data from the central data warehouse. Video from CCTV will be through the V2P web site that is under development.

**QUESTION 34:** On the Cost Proposal Form – Attachment E, please clarify whether the Recurring Costs are to include labor costs or only license and hosting costs?

**ANSWER 34:** Non -recurring costs mean engineering labor to deliver and install the product, recurring costs are the costs to operate and maintain the system and as such they include maintenance/support labor and any licensing and hosting costs. NDOT needs to know what it will cost to build the system and what it will cost to operate the system each year.

**QUESTION 35:** Can section dividers have sections headings on them, as well as small section graphics?

**ANSWER 35:** Please see Section VIII-Proposal Content, Part D-Proposal Limitations, Number 2. If there are graphics they will count towards your page count.

**QUESTION 36:** Article V, Section 5 provides that payments are due within 60 calendar days after postmarks for undisputed amounts. Would Nevada DOT consider making payments within 30 days?

**ANSWER 36:** No

**QUESTION 37:** Regarding Cost Evaluation: It is unclear whether this RFP and the associated budget of \$430K is for Phase 1 or for both Phases 1 and 2. Please confirm.

**ANSWER 37:** Refer to ANSWER 18 (Yes Phase 1 and 2).

**QUESTION 38:** Regarding Cost Evaluation: NDOT has specified a limited budget but has also specified a full system procurement approach with an exhaustive list of system specifications and project management processes that are out of scale as compared with the specified budget. The RFP also indicates a desire for contractors to maximize use of existing software and that the NNG511 should be operated as a service. Will alternatives to the system procurement approach that may not meet all of the process and architecture specifications,

such as “software as a service” be evaluated favorable if they can better meet the specified budget?

**ANSWER 38:** The procurement approach follows the FHWA guidelines for ITS project development and actually reduces the risk to the Contractor as well as to NDOT. It is up to the bidder to propose a cost effective way to meet both the technical and work requirements. Ultimately the NDOT will select the firm who offers the best value for the budget with the least risk.

**QUESTION 39:** Will Kimley-Horn Associates be required to work with all proposers and not be permitted to work exclusively for any single proposer?

**ANSWER 39:** Yes, however the NNG511 contractor will not need to work with Kimley-Horn directly. NDOT will primarily work with Kimley-Horn to develop the access point and the contractor will meet the interface specification issued by NDOT to access the data access point.

**QUESTION 40:** Can NDOT provide contact details for all companies which a proposer must work with, if there are others in addition to KHA?

**ANSWER 40:** You must not contact anyone other than Administrative services. To do so would be a violation of the RFP and you will be disqualified. Please see the final paragraph in SECTION I - INSTRUCTIONS TO PROPOSER of the RFP.

**QUESTION 41:** How often is it envisioned that still video frames will be updated and made available from the Data Warehouse?

**ANSWER 41:** The bulk of traffic will be live streaming video at Windows Media Video (WMV) 9, CIF, 15 FPS, at 256 Kbps. Though still images are available for latency links the video renders in 1 to 3 seconds.

**QUESTION 42:** Will the Data Warehouse provide sufficient bandwidth to support the transmission of both the data and video frames at a rate that is useful for 511, e.g., video frames once per minute for all cameras?

**ANSWER 42:** The current dedicated bandwidth availability for video distribution is 100 Mbps. NDOT is in the process of increasing the speed of our internet connection for 511.

The bulk of traffic will be live streaming video using Windows Media Video (WMV) 9, CIF, 15 FPS, at 256 Kbps. Though still images are available for latency links the video renders in 1 to 3 seconds.

**QUESTION 43:** Does the envisioned Data Warehouse approach include consideration of the bandwidth requirements for using C2C with video frames?

**ANSWER 43:** The current dedicated bandwidth availability for video distribution is 100 Mbps. NDOT is in the process of increasing the speed of our internet connection for 511.

The bulk of traffic will be live streaming video using Windows Media Video (WMV) 9, CIF, 15 FPS, at 256 Kbps. Though still images are available for latency links the video renders in 1 to 3 seconds.

**QUESTION 43:** Are video frames expected to be stored for any length of time by the NNG511 and if so how long?

**ANSWER 44:** No video storage by the NNG511 is required.

**QUESTION 45:** Will all video frames be provided in JPEG format?

**ANSWER 45:** Yes, the video will be available in Window Media Video (WMV) 9, still images, and motion jpeg (MJPEG). The video is also available in MPEG4 for interagency partners. MPEG4 will not be part of the 511 system.

**QUESTION 46:** It is fully understood that streaming video will be made available through the NDOT web site, but what are the proposed mechanisms to collect these data feeds seamlessly? How will data be presented to NNG511 and will any additional requirements be placed on the proposer for hardware or software to make this work seamlessly? Is full responsibility for maintaining responsiveness for video streaming under load assumed by NDOT and its video website contractor?

**ANSWER 46:** All informational data will be relayed via the C2C interface which is TMDD standards based. There is provision for transferring the information seamlessly in the standard,

Please review TMDD C2C Communications, Volume 1: Concept of Operations and Requirements. See Section 2.3.6.2.2 Need to share Updated CCTV Device Inventory, page 20 and Section 2.3.6.2.3 Need to Share CCTV Device Status, page 21.

NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

**QUESTION 47:** The budget is limited, can the current budget be enhanced with the delivery of Revenue Generation and Revenue Share activities?

**ANSWER 47:** NDOT is open to solutions that include revenue generation and revenue share activities.

**QUESTION 48:** The budget is limited, but there are huge expectations on both documentation and project management process. Can these be reduced and limited to be more compatible with an approach that maximizes the use of existing software and provides NNG511 as a service rather than a system delivery which seems to be the desired outcome?

**ANSWER 48:** Refer to Answer 38. NDOT must be able to take over the operation and maintenance of the system if the contractor defaults or goes out of business.

**QUESTION 49:** The RFP specifies that initial document reviews require scheduling a minimum of 10 days and subsequent document reviews require a minimum of 5 days. The RFP also infers that activities should cease during review times, 3.1.1 "Any work which proceeds without NDOT approval of the final document is at the contractor's risk" and "The contractor may continue project efforts while submittals are being reviewed at their own risk". There are 10 different Draft documents requiring 10 days review time and 10 Final versions requiring 5 days per document and therefore 150 days altogether. Note that these are the minimums and that large complicated documents such as the Design might well require additional time and that this all assumes all will be final with one complete draft/final cycle, yet there are less than 165 working days between July 1st, 2012 and March 1st 2013. Does NDOT agree that the

approach needing to be adopted must be significantly more agile and less waterfall if this is to be delivered on time? Can any of the proposed activities be reduced or erased to ensure successful completion? For example, a 511 service is being requested but detailed comprehensive system architecture and design documentation is being required whereas specifying functional requirements and SLA parameters would better serve the “511 as a service” model.

**ANSWER 49:** NDOT must be able to take over the operation and maintenance of the system if the contractor defaults or goes out of business therefore NDOT requires the documentation as risk mitigation. Further NDOT needs to be able to see if the developing NNG511 system will meet the requirements sated in the RFP long before the system is delivered to minimize rework costs and meet our stakeholder expectations. It is believed that in most cases a contractor will plan the work in parallel as much as is resource efficient and use existing software as much as practical such that there will be very little or no idle time waiting on review and approvals from NDOT. NDOT believes that systems exist today that meet a majority of the requirements and require little modification to meet the remaining requirements. The bidders are encouraged to study the requirements and note exceptions in the compliance matrix that enable the contractor to deliver a NNG511 system on time and on budget that represents the best value for the NDOT budget.

**QUESTION 50:** The RFP has specified that the 511 website shall have a capacity of 800 cameras across the 3 Districts. How many CCTV cameras are there currently and how is it anticipated that the number of cameras will increase by over time?

**ANSWER 50:** District 1, Reno: 21 cameras, 100 future. District 2, Elko: 3 cameras, 40 future. District 3, Las Vegas: 400 cameras, 600 future (combined city, county, and state)

**QUESTION 51:** No detailed specifications have been provided for the required data interfaces, thus creating undefined risk yet there is a fixed budget. Typically, IT-related projects for development of unspecified software components are done under T&M type contracts. To reduce risk can additional details for the required data interfaces be provided prior to the proposal due date? At a minimum this should include the CSS, RWIS and streaming video access specifications.

**ANSWER 51:** All informational data will be relayed via the C2C interface which is TMDD standards based. There is provision for transferring the information seamlessly in the standard,

NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

Additional sample data and/or data formats is available in 2 volumes: Volume 1 contains the Concept-of-Operations and Functional Requirements, while Volume 2 contains the Dialogs and Message content. The design content is also available in zip files as XML and WSDL and as XMLSpy output in HTML format.

**QUESTION 52:** So16 identifies “external data input”, other than what is specified (CRS, CSS, RWIS, Data Warehouse, video website) what additional data sources should the proposer consider?

**ANSWER 52:** Refer to Figure 7 page 20. External data includes the NDOT Operations staff using remote access.

**QUESTION 53:** So23 refers to “traveling safely” please define what is meant by this term.

**ANSWER 53:** This is a general term and assumes that most or all traveler information provided via a 511 system can be considered supporting the safe travel of system users.

**QUESTION 54:** So25, please define what “broadens the scope of regional mapping displays to provide roadway detail on the local level” means in terms of actual deliverables, GUI requirements, Capabilities, features and functions.

**ANSWER 54:** Please use the RTM in Attachment C, Section 4 Table 2 to look up the 24 related child requirements that provide details on the meaning of S025.

**QUESTION 55:** So26, specifies multi-modal. Please define the NNG511 specific requirements for multi-modal.

**ANSWER 55:** Please refer to S004 and ID034P.

**QUESTION 56:** So36, Please define what scope of road network “must” be included and what is desired. What are the “designated routes of significance”?

**ANSWER 56:** The provision of traveler information on “Routes of Significance” is a federal requirement under the Section 1201 – Real Time System Management Information Program. These routes are generally Interstates, US Routes and State Routes, but the actual routes will be determined with NDOT’s assistance during system design.

**QUESTION 57:** So36, what data is currently available by route, the collection methods by route?

**ANSWER 57:** NDOT will provide that data to the successful vendor during system design.

**QUESTION 58:** So30 Please provide a copy of the NDOT Social Media Standards and Guidelines.

**ANSWER 58:** The NDOT Social Media Standards and Guidelines are currently in development by the Public Information Office of NDOT. It is not expected that these guidelines, once developed, will introduce any restrictions that would impact cost and/or development in any significant way.

**QUESTION 59:** ID0101w There are many requirements relating to the speed of page loading, yet page loading is generally influenced by external activities total outside the proposers control. As an example the time of day can greatly affect page loading times, or a natural disaster can completely remove capability purely because so many people want information at the same time. Therefore it is suggested that page loading times should be measured at the server end, from request to page delivery, is this acceptable to NDOT?

**ANSWER 59:** Yes.

**QUESTION 60:** ID010W4 This requirement seems at odds with ID010W, please clarify. Also the same principle regarding response times over the internet should apply, i.e., measure at the server.

**ANSWER 60:** ID010W refers to a web page being loaded such as the map page or the overlays of specific icons i.e. large data transfers. The individual data provided through the web page should be provided much faster such as a camera image or a specific HAR recording. Verification that the system satisfies the requirement can be measured from the server end to eliminate the variability of real world internet delays and browser and individual personal computer performance.

**QUESTION 61:** ID011W, Please provide the set of values for “Vehicle Controls”.

**ANSWER 61:** Attached.

**QUESTION 62:** ID011W, Is truck parking availability data currently available, are electronic systems in place, and if not when will these systems be on-line? If the data is not available will this requirement be waived?

**ANSWER 62:** The NNG511 system is required to be scalable, so that it can provide this information whether or not the data is currently available. There currently are no interfaces defined to report CVO parking availability but it can be expected that there will be in the future based on some recent work by the CTS-PFS in Vehicle-to-Infrastructure research and capabilities of Roadside Equipment. The requirement to provide the information can be satisfied by the contractor providing the capability in the web and IVR and demonstrating it with simulated data. When actual data becomes available the contractor can expect additional funding to implement the interface.

**QUESTION 63:** ID005P1, How is it suggested that TTY will work with IVR, please define? TTY services for 511 are typically provided via a third party without requiring action on the part of the 511 vendor.

**ANSWER 63:** If the NNG511 system can accommodate callers using the public telephone system service accessible by calling 711, then the requirement will be considered met. Refer to <http://www.relaynevada.com/711.html>

**QUESTION 64:** Di001x, Is there a specific technical reason for requiring WGS (84)? If the proposed 511 satisfies the function of providing weather information by location to the public for requested roads, cities or counties does that meet the intent and therefore not lose scoring?

**ANSWER 64:** WGS84 is the NDOT standard. The requirement is for the coordinate system associated with the weather event be the same coordinate system used by the map in the NNG511 system. If the required functionality is provided, the system meets the requirement.

**QUESTION 65:** DI001R2, Will NDOT provide the GIS data to include all of the listed attributes including gas stations? How is this data updated and how frequently and in what form will it be provided to the 511 contractor to ensure it is always current to the user?

**ANSWER 65:** NDOT will not provide this information. It is believed that this information is commercially available and the cost to acquire this information should be a part of the bidder's proposal.

**QUESTION 66:** DS002M, Asks for data to be stored for an “indefinite” period of time. What forms of offline storage are acceptable (media, device). All digital storage has a lifetime, please define “indefinite”.

**ANSWER 66:** Indefinite for the purposes of this project is 8 years. Digital tape, DVD or CD are acceptable storage media.

**QUESTION 67:** DS007, “the system shall store details provided by NDOT about their facilities”. This is unclear. Please provide enumerations for the facilities and the details to be stored for each.

**ANSWER 67:** Basic facilities would be rest rooms, handicap access, oversize vehicle parking (e.g. semi-trailer trucks), number of trailer/van/SUV parking, overnight parking, picnic area, animal relief area, gas/food/lodging available, etc. NDOT will provide as much information as possible. It will be considered a value add if the bidder can augment the information from commercial sources.

**QUESTION 68:** DF003, Without definition of “process” and the specific data types, volumes, etc. this requirement is too open-ended and impossible to guarantee. For example does it include video or massive data records from some as yet undefined source? Please redefine.

**ANSWER 68:** This requirement can be satisfied by making an incident report available on the 511 website or IVR within 3 seconds of when the source information was input to the system. A simple test would be for an operator to enter an incident in the CRS GUI and note the time it appears on the Web site. The bidder should propose a time that they feel confident they can meet and the conditions under which they can meet it in Appendix C, the Compliance Matrix, and list it as a deviation request.

**QUESTION 69:** DF008, The RFP provides numerous specifications that appear to dictate architecture and design as well as function of the NNG511. That conflicts with the requirement to maximize the use of existing software. We respectfully request that more definition be provided for this requirement or at least that the method for verifying compliance be defined.

**ANSWER 69:** It is the intent of the RFP to specify the functional and performance requirements but not the design. NDOT is looking for best value for the budget and it is expected that some requirements may not be able to be satisfied by an off the shelf system and that may be acceptable if the overall system capability meets NDOT’s expectations. Appendix C should be the vehicle to note what capabilities will not be provided or what requirements need to be modified to deliver a system that fits within the stated budget.

**QUESTION 70:** ID018P, IVR adaptive Error handling, is an interesting concept, but would cause more issues than even natural language. Adaptive controls generally work on a body of data rather than individual data inputs, and trying to change something this complex on an individual fuzzy-logic type basis will inevitably lead to a less capable system. Can other error-handling opportunities be provided, without losing scores?

**ANSWER 70:** Please refer to the RTM to identify the 8 child requirements that provide a better specification of the functionality required for adaptive error handling. There are several 511 systems in use today that provide adaptive error handling as specified in the RFP.

**QUESTION 71:** ID0024, While Negative reports should not be provided, the actual data is provided through the Data Warehouse or operator input, possibly generating such a negative report. Is it expected that the proposer eliminate these? Is “I have no incidents to report at this time” considered a negative report? If so, confidence that the system is operating will be difficult to communicate.

**ANSWER 71:** Requirement ID024 was created in response to the user need expressed in U021 "Get rid of the repeating message of open, no controls" with respect to the IVR and HAR. The IVR response "I have no incidents to report at this time" is NOT considered a negative report.

**QUESTION 72:** Given that the development Phase of the project has a budget limit of \$430,000, can NDOT provide the budget limit for the O&M Phase?

**ANSWER 72:** Not at this time.

**QUESTION 73:** B. Cost Evaluation : "The Nevada DOT expects to allocate a maximum fixed budget of \$430,000 for the detailed design, implementation, installation and acceptance of the system for the project". Does NDOT expect that the proposer will meet all the requirements within the allocated amount of \$430,000? If not, does NDOT have a prioritized list of requirements?

**ANSWER 73:** NDOT expects that bidders will request some modifications to requirements to meet the available budget, and some requirements will not be able to be met during the current contract. Bidders will not be penalized for suggesting alternate wording to requirements. NDOT has 1 requirement listed as priority 2 and 8 listed as priority 3. These are:

Priority 2: ID038W

Priority 3: DI004W, ID027W5, ID027W6, ID028W, ID028W2, ID033P2, ID036P2, ID036P3

**QUESTION 74:** B. Cost Evaluation - Is the \$430,000 allocation for both Phase I and Phase II implementation?

**ANSWER 74:** Yes.

**QUESTION 75:** B. Cost Evaluation - What is the period of performance for the O&M of the 511 system? What type of contract will it be?

**ANSWER 75:** Four years.

**QUESTION 76:** Does NDOT envision that the proposer will include revenue generation opportunities to offset costs or supplement project funds?

**ANSWER 76:** See Answer to Question #47.

**QUESTION 77:** Section 1.4. "The statewide system shall also deliver personalized travel information to subscribers....." - What is the expected usage of the IVR and website in terms of calls per month and website sessions / month?

**ANSWER 77:** The expected usage of the IVR and website should increase with the development of the second generation of 511. However, current average use for IVR is 7,000/day; 50,000/month; web visits is 86,000/month.

**QUESTION 78:** Section 1.4. "hosted and maintained by the selected contractor" - Is the system expected to be redundant? What are the uptime requirements? Is it correct that the contractor can host the system anywhere in the US? Can the system be shared with other systems that contractor may be hosting?

**ANSWER 78:** The system is expected to meet the availability requirements S024, DI001, DS001, DF001, ID001, ID019P, and ID031W however the contractor chooses to design the

system. System may be hosted anywhere within the continental U.S. If the contractor can meet the availability by sharing servers then it is acceptable to share the NNG511 system with other systems. The availability will be subject to SLA requirements to be negotiated.

**QUESTION 79:** Diagram on p. 8, Attachment A - Please confirm that the various subsystems mentioned in the system diagram are already developed and implemented.

**ANSWER 79:** The diagram is a functional block diagram of the required system and the various subsystems do not exist.

**QUESTION 80:** General comment regarding Attachment A, p.8-9 - Transit, rideshare, and bicycling information is not mentioned in the system description for Phase 1 and 2. Is that information not expected to be part of the 511 system?

**ANSWER 80:** Please refer to requirement S004 and the family of child requirements.

**QUESTION 81:** Comment about the Phase I and II architecture diagram - If needed, can the contractor update the architecture, or is the contractor required to implement it as is?

**ANSWER 81:** The requirements as well as the diagrams are functional and do not represent the actual design to be proposed by the bidder.

**QUESTION 82:** Section 3. "The system's functional requirements are maintained in a database that supports requirements traceability, tracks all changes to each requirement, displays the hierarchical relationship of the requirements, and identifies the requirement's root source." - Please confirm whether this database already exists or if it is simply referring to an Excel file.

**ANSWER 82:** The database is maintained in FileMaker Pro 7 version 3.

**QUESTION 83:** Section 3.2.6: "The Contractor shall keep the following general records...." - Is there a document management system currently used within NDOT that can be used for general record keeping? Or is the contractor expected to set up a new document management system for this project.

**ANSWER 83:** NDOT currently has a general record keeping system; however it is expected that the successful vendor set up a new document management system.

**QUESTION 84:** Section 3.3.1. "During Phase 2, the Contractor shall coordinate with NDOT to ensure the integration of data from the NDOT Central Data Warehouse(s) as well as other NTCIP compliant data resources (e.g., NHP, CAD, weather data, etc.)." - Will NDOT Central Data Warehouse access via Nevada Center-to-Center protocol will be NTCIP compliant?

**ANSWER 84:** NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

Yes, the standard is NTCIP compliant. Please review TMDD C2C Communications, Volume 1: Concept of Operations and Requirements. See Table 1, Normative References page 8. <http://www.ite.org/standards/tmdd/3.02/TMDDv3.02-Vol1-draft01.pdf>

The NHP CAD is provided by NHP and needs to be imported through a TMDD interface for the CAD system. The NHP CAD is maintained and controlled by Nevada High Patrol. The CSS

system will have the functionality requirement to pass the incident data. NDOT is aware that we need to complete Table 4. See "Needs to Requirements Traceability Matrix" page 177.

Additional sample data and/or data formats is available in 2 volumes: Volume 1 contains the Concept-of-Operations and Functional Requirements, while Volume 2 contains the Dialogs and Message content. The design content is also available in zip files as XML and WSDL and as XMLSpy output in HTML format.

<http://www.ite.org/standards/tmdd/3.02.asp>

**QUESTION 85:** Section 3.3.3. "The Contractor shall provide at least two different levels of access to public and private agencies (limited access and full access)." - What data or information will be removed from the limited access third party data feed?

**ANSWER 85:** Any personally identifiable information would need to be removed from the limited access data, if indeed those data were a part of the dataset to begin with.

**QUESTION 86:** Section 3.5. NDOT Furnished Equipment - Is the GIS Basemap that NDOT will provide Navteq, Teleatlas, or an internal map?

**ANSWER 86:** NDOT internal map.

**QUESTION 87:** Section 3.5. NDOT Furnished Equipment - Is it possible to get the central data warehouse schema? This will assist us in estimating the effort to integrate the central database with other 511 subsystems.

**ANSWER 87:** NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>. Additional sample data and/or data formats is available in 2 volumes: Volume 1 contains the Concept-of-Operations and Functional Requirements, while Volume 2 contains the Dialogs and Message content. The design content is also available in zip files as XML and WSDL and as XMLSpy output in HTML format.

**QUESTION 88:** Section 1.3. System Concept - What is the speed profile data coverage available through the NDOT district system?

**ANSWER 88:** NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

Please review TMDD C2C Communications, Volume 1: Concept of Operations and Requirements. See Section 2.3.5.3 Need to Share Link Data, page 18.

<http://www.ite.org/standards/tmdd/3.02/TMDDv3.02-Vol1-draft01.pdf>

Additional sample data and/or data formats is available in 2 volumes: Volume 1 contains the Concept-of-Operations and Functional Requirements, while Volume 2 contains the Dialogs and Message content. The design content is also available in zip files as XML and WSDL and as XMLSpy output in HTML format

**QUESTION 89:** Section 1.3. "The concept for Nevada's second generation traveler information phone and web systems is for NDOT, ultimately, to acquire data from the three districts and other sources and store the data in a Central Data Warehouse" - What DBMS is used? Is the contractor expected to only read from the database? Is data collection the responsibility of the

contractor or will NDOT collect the data, process it, and then update the warehouse? Who will be responsible for incorrect or incomplete data in the warehouse?

**ANSWER 89:** The C2C database system will be utilized. Data collection, processing and updating will be the responsibility of NDOT, not the contractor. The contractor is expected only to read from the database, extracting flagged data only. Responsibility for incorrect or incomplete data will rest with NDOT.

**QUESTION 90:** h. "The service area includes the state and counties along with bleed over for the State of Arizona (County of Mohave), State of California (Counties of El Dorado, Inyo, Lassen, Nevada, Placer, and Sierra) and the State of Utah (County of Washington)." - Is the system expected to gather and disseminate the data for adjacent counties? Including severe weather and similar advisories? Including showing it on the web?

**ANSWER 90:** The system is **not** expected to integrate nor disseminate data from adjacent states. This information is provided to help draw a picture of the telecommunications landscape. It is required that a user of the NNG511 system be able to click on an adjacent state if shown in the web page and the system will link to that state's 511 web site.

**QUESTION 91:** i. "The interface with the NDOT employee will be through a map-based graphical user interface preferably using the same or similar map base as the website." - What is the basemap? What is the GIS technology used? Is NDOT open to using Google maps or other open source maps? Who will pay for map license and GIS Software license? If the basemaps are available, will they be provided as a raw data or as a map service?

**ANSWER 91:** Section 3.5 of Attachment A states that NDOT will provide the GIS Base map. The base map is an ESRI product, WGS 84 for which NDOT holds the license. The NDOT GIS Basemap contains the overlays (e.g. tiles) of data that NDOT would like to display on a map of the region. NDOT is open to using Google maps or other open source maps.

**QUESTION 92:** Section 3.1.2.1. Item 1. "Each District will have a one or more workstations that use the CRS GUI" - Are those workstations furnished by NDOT? Will they be removed (software uninstalled) in Phase 2?

**ANSWER 92:** Each district has NDOT-owned computers that can be used as workstations for the CRS.

**QUESTION 93:** Item 3. "The text messages will be converted to speech using concatenated speech files similar to the way the IVR responds to reposes from menu prompts. The speech files in .wav format are sent to the external HAR software for transporting to the operator designated HAR unit." - Is the contractor expected to provide the .wav files for downloading by NDOT?

**ANSWER 93:** The contractor is expected to provide the .wav files for use with both the IVR and HAR. NDOT operators do not want to record the messages themselves and prefer to type the message in using the CRS and have the NNG511 system convert the text to the WAV file

**QUESTION 94:** Item 4. "The website will also support users who subscribe through the website for customized travel alerts." - Is there an existing subscriber and preference data that the contractor is expected to take over? Is this data expected to be stored in an NDOT database or in a database that is part of the new system? What are the PII related conditions?

**ANSWER 94:** Meridian maintains subscriber data. There is an existing subscriber list that the successful vendor will take over and is expected to store.

**QUESTION 95:** Section 3.1.2.2. Figure 8 shows HAR communicating to NNG511 while Figure 5 on page 12 shows HAR communicating to NDOT Data Warehouse directly. - Which mode of communications is correct? If it is as stated in Figure 5 – what type of communications will be between HAR and Data Warehouse?

**ANSWER 95:** Both figures are correct. Figure 5 on page 12 shows the HAR message created by the operator using the CRS GUI in the NNG511 system being sent to a middleware product that is undefined at this point but is expected to be the HAR vendor's software used to send messages to their HAR units. When the data warehouse is available in Phase 2, the same HAR message must be input to the data warehouse for internal NDOT use. Figure 8 on page 22 does not show the input from the middleware software to the central data warehouse to avoid cluttering the diagram.

**QUESTION 96:** Section 3.2.1: "The NNG511 shall provide real time information about NDOT defined sections of roads." - How is the road segment data currently maintained? Are the road segments custom created or do they use TMC IDs that are provided by the basemap. How current is the basemap and the segment data?

**ANSWER 96:** NDOT provides and maintains the road segment data.

**QUESTION 97:** Section 3.2.1: "The NNG511 shall provide selected travel information to registered users based on their travel profile entered into the system when they established a subscription account." - It appears that users can request the conditions between specific points along a freeway/direction. Is this true? Are these points already specified? How granular must the segments be? Is NDOT expecting to provide details from any exit to any exit? Or is the highway segmented based on information availability (such as north of Carson City, or South of Carson City). Are the subscribers expected to get the customized information on IVR once they identify themselves? Are the alerts expected to be on only emails or SMS?

**ANSWER 97:** It is intended that users can request the conditions between specific points along a freeway/direction. The NNG511 system must use the same origin/destination pairs and segments used by the CSS and associated with the travel times reported by the CSS. The details will be worked out during the design Phase between NDOT and the selected bidder.

**QUESTION 98:** Section 3.2.1. "The NNG511 shall provide the capability to generate reports based on saved data." - What data elements are expected to be saved?

**ANSWER 98:** An exhaustive list of reports to be made available will be determined during the design Phase. Refer to ID036P on page 40 of the RFP that lists the reports. There are no specific requirements as to the way in which the reports are generated nor the format of the reports.

**QUESTION 99:** 3.2.1. "The NGG511 shall provide traveler information related to traveling safely, traffic movement and flow, Work Zone activity and commercial trucking." - Please explain the commercial trucking information referred to here.

**ANSWER 99:** Commercial vehicle operations (CVO) are concerned with load limits on bridges and roads and bridge/tunnel clearances. Further, CVO is interested in the location and availability of truck stops, the amenities provided and also truck parking facilities, the number of

parking spots available, what the charges are, etc. Exact details of what data is available and how it can be obtained will be determined in the design Phase.

**QUESTION 100:** Section 3.2.1. "The NNG511 system shall make multi-modal traveler information available to the public through an automated voice response system accessible through the telephone system and an internet accessible website." - The RFP is asking for multi-modal traveler information, but traffic seems to be only mode that is mentioned in RFP. Is NDOT expecting other modes of transportation to be included? If so, more information is needed.

**ANSWER 100:** Call transfers via IVR and hyperlinks on the website to partner agencies such as public transit and regional airports will satisfy this requirement. Multimodal data is not expected to be integrated at the system level.

**QUESTION 101:** Section 3.2.1. "Routes of significance shall be based on local conditions." - Please clarify what "Routes of Significance" mean.

**ANSWER 101:** The provision of traveler information on "Routes of Significance" is a Federal requirement under the Section 1201 – Real Time System Management Information Program. These routes are generally interstates, US routes, state routes, and major arterials, but the actual routes will be determined with NDOT's assistance during system design.

**QUESTION 102:** 3.2.1. "The NNG511 system shall provide/update construction activities from the time of occurrence of 20 min or less outside Metropolitan areas and 10 min or less on highways within Metropolitan areas." - Please confirm that the time mentioned is from a point where this information is entered by operators.

**ANSWER 102:** Correct.

**QUESTION 103:** Section 3.2.1. "The NNG511 system shall provide roadway Weather Information related to hazardous driving conditions/roadway or lane closure information and update it within 20 minutes of being notified of a change." - Please clarify what "being notified of a change" means.

**ANSWER 103:** This means the information should be available on the IVR and web within 20 minutes from the time the event has been updated either by the NDOT operator or via the CSS or the central data warehouse in Phase 2.

**QUESTION 104:** Section 3.2.1. "S009. The NNG511 shall provide the capability to generate reports based on saved data." - Please provide more information on what kind of reports , how they need to be generated, data types, report output formats, and similar information

**ANSWER 104:** See Answer to Question #98.

**QUESTION 105:** Section 3.2.1 "S023 The NGG511 shall provide traveler information related to traveling safely, traffic movement and flow, Work Zone activity and commercial trucking" - What type of data is available on work zone activity and commercial trucking? What will be the source of this data?

**ANSWER 105:** Work zone activity will be location (section of road i.e. from location to location), time of activity, lane closures or detours, expected delays and for how long. NDOT will provide this information that will be manually entered through the CRS in Phase 1 and in Phase 2

available through the data warehouse. The bidder is expected to provide a design for the CRS that supports NDOT personnel by allowing them to enter the work zone information.

**QUESTION 106:** Section 3.2.4. "The NNG511 shall allow the addition, reconfiguration or redefinition of roadway segments without any loss of current or past data." - Same questions as above regarding the segment data and how it is maintained. Why and when are the segments redefined?

**ANSWER 106:** Roads are divided into segments usually according to where traffic sensors are located. The CSS uses the traffic sensor data along with the segments to computer travel times. The bidder must work with Kimley-Horn to understand how roads are partitioned into segments and how travel times and speeds are associated with each segment and how that data can be obtained by the NNG511 system. If NDOT adds more traffic sensors it can be expected that new segments will be defined or that more granularity will be provided by breaking an existing segment into smaller pieces. It should be noted that the current origin/destination pairs used by the CSS for travel time purposes need to be used by the NNG511 system as well.

**QUESTION 107:** Section 3.2.6. "The NNG511 system shall provide multimodal traveler information to include transit, air and rail both interstate and intrastate to assist travelers in their trip planning and mode choices through links to other information providers." - To what extent is this information expected? It seems too much for a \$430,000 contract. Also what would be the geographical extent of a trip planner if they want to use inter and intra state transit, rail and air. Is there a regional transit database maintained by NDOT?

**ANSWER 107:** Call transfers via IVR and hyperlinks on the website to partner agencies such as public transit and regional airports will satisfy this requirement. Multimodal data is not expected to be integrated at the system level.

**QUESTION 108:** Section 3.3.1 DI001W, D1001W1, D1001W2, ID010W, ID010W2, ID010W3, ID010W4 - Please confirm that all those performance related requirements are assumed under regular (non-emergency) load.

**ANSWER 108:** The performance requirements are stated for normal operations.

**QUESTION 109:** Section 3.3.1. " The NNG511 website shall provide details about all NDOT facilities including but not limited to: • Incidents • Construction • Closures • Vehicle controls • Local weather conditions • Rest Areas • Truck parking availability • Welcome Centers and other state information sources that can be requested for a specific location selected by the user through the NV511 website." - What is the extent of this information? Is this information available in database and GIS format?

**ANSWER 109:** NDOT will provide in GIS format.

**QUESTION 110:** Section 3.3.1. " The website shall be able to accommodate increasing use as more people learn and use the NNG511 system." - For how many events shall statistics be gathered?

**ANSWER 110:** The statement refers to the requirement for the web component to be able to grow in capacity and not require a complete redesign in the future as more people log on and use the system.

**QUESTION 111:** Section 3.3.1. "ID039W1. The website subscriber log in password shall be maintained on an https secure web server with a valid certificate." - It seems that this requirement contradicts DS003 (3.3.4, p.45). Please clarify where user information (including authentication data) shall be stored.

**ANSWER 111:** Subscriber profile and associated route details are to be locally available in the NNG511 system to be able to provide alerts to the subscriber. The subscriber's login access to their account is to be maintained on a secure https server.

**QUESTION 112:** Section 3.3.1. ID035W2, ID035W3 - Please confirm that these requirements aren't applicable to the public website and public users will not be allowed to edit road segment data.

**ANSWER 112:** Correct; public users will not be allowed or be able to edit road segment data.

**QUESTION 113:** Section 3.3.1. ID024W "The Website shall comply with Americans with Disabilities Act (ADA) Section 508 requirements." - Conflicts with other part of the RFP where it says it should be made accessible to the extent possible. Full ADA compliance cannot be possible as there will be maps and other UI elements like maps.

**ANSWER 113:** A traveler information IVR system is considered ADA compliant if the state's 711 relay service has the full backend phone number for 511. The website is considered compliant if the majority of the textual information is readable to a screen reader, and/or if the color coded congestion map is available in coloring that can be read by the red/green colorblind.

**QUESTION 114:** Section 3.3.1.2. "ID027W6. For Districts that provide a video tour rather than video from user selected CCTV, the website shall provide a "video tour" option for that region on the website." - Please provide a more detailed description of "video tour" and related requirements

**ANSWER 114:** A video tour is a selection by the District RTMC operator of a number of CCTV cameras whose videos are displayed sequentially on a video wall or monitor. Typically an operator will specify a CCTV, sometimes a particular pan-tilt-zoom configuration and dwell time for the video to be acquired and displayed before the next camera in sequence is selected for display. The video tour can be repeat once, or a number of times or continuously. The video tour option would need to be available through the V2P link that NDOT is developing. If NDOT does not provide the video tours through the V2P then the requirement cannot be met and would be waived.

**QUESTION 115:** Section 3.3.3. "DI001X. Automated weather events shall be geo-located using a fully automated GIS based on World Geodetic System (WGS) 84." - Please explain in more detail what is meant as geo-location using a fully automated GIS.

**ANSWER 115:** A weather event must have a latitude and longitude associated with it. Often a geographic area is associated with a weather event and the geographic area can be defined by a polygon whose corners are specified in latitude and longitude coordinates. If a user is requesting travel information for a segment of road that travels through an area containing a weather event, that weather event must be reported to the traveler. It is left up to the bidder design a solution to satisfy the requirement.

**QUESTION 116:** Section 3.3.3. "DI012 The NNG511 system shall use data from the Nevada's Road Restrictions Reporting System that is used to create the Highway Restrictions Report

(HRR).” - Figures 7 and 8 do not show direct interaction between RRRS and NNG511. Please confirm that RRRS data will be part of the dataset NNG511 receives from CSS (Phase 1) or Data Warehouse (Phase 2).

**ANSWER 116:** In Phase 1 the HRR is entered into the CSS and that information would be obtained from the CSS. In Phase 2 that information will be in the central data warehouse.

**QUESTION 117:** Section 3.3.4. “Although a majority of the data needed by the NNG511 system will be obtained from NDOT’s Central Data Warehouse through the NDOT C2C interface, it is expected that the NNG511 system will acquire only the data flagged by NDOT for use by the 511 system and will store that data in its own relational database where it will also archive information for reporting purposes.” - Will the NDOT C2C interface include spatial data such as road segments (polylines), crew areas (polygons), landmarks (points)?

**ANSWER 117:** NDOT will be utilizing ITE Traffic Management Data Dictionary (TMDD) Standard v3.02 for the Center-to-Center Communications located at <http://www.ite.org/standards/tmdd/>.

Please review TMDD C2C Communications, Volume 1: Concept of Operations and Requirements. See Section 2.3.5 Need to Provide Roadway Network Data, page 17. <http://www.ite.org/standards/tmdd/3.02/TMDDv3.02-Vol1-draft01.pdf>

Additional sample data and/or data formats is available in 2 volumes: Volume 1 contains the Concept-of-Operations and Functional Requirements, while Volume 2 contains the Dialogs and Message content. The design content is also available in zip files as XML and WSDL and as XMLSpy output in HTML format

**QUESTION 118:** Section 3.3.4. “DS002M Data shall be able to be archived off line for an indefinite period of time.” - Please confirm that all data (including real time information on road conditions) will be stored indefinitely. Also please provide an estimate of expected daily data volume.

**ANSWER 118:** Indefinite is considered for practical purposes to be 10 years. A ball park estimate is 1 GByte ( $10^9$  Byte) of data per day for the entire state.

**QUESTION 119:** Section 3.3.6. “ID008. The Information Dissemination function shall provide an outgoing feed to third parties of selected data and video from selected NDOT CCTV cameras.” - Please confirm that “selected” means data flagging for dissemination in the Data Warehouse and doesn’t include additional selection/filtering or flagging in NNG511.

**ANSWER 119:** It is expected that NDOT will designate which CCTV cameras are providing video feeds to third parties and that NDOT has the ability to shut off any camera’s video at any time. The mechanism for doing this would be the NNG511 system.

**QUESTION 120:** Section 3.3.6. “ID015 The Information Dissemination function shall use a universal time code in accordance with the ISO 8601 standard in UTC.” - This requirement appears to contradict ID010P. Which one shall be used?

**ANSWER 120:** ID010P and ID014W refer to the way time is displayed to the public. Internally for time stamps and other functions using the time codes, the ISO 8601 standard is to be used.

**QUESTION 121:** Section 3.3.6. "ID022 The Information Dissemination function shall provide real time traffic information through smart phone applications and social networking sites." - Please explain the NNG511 mobile dissemination strategy. ID022 requires smart phone application while ID028W2 states it as an optional component potentially developed by third parties. ID034W2 requires a mobile version of the website to be developed that would be accessed using mobile web browsers (not platform-specific mobile application as in ID022 and ID028). Which data dissemination via mobile devices approach (or both of them) is required?

**ANSWER 121:** Mobile application development is not required under this contract. The 511 system must include a web page developed for and accessible to the top five most highly used mobile browsers at the time the contract is signed. The amount and type of information that must be made available via this mobile website will be determined during the design phase.

**QUESTION 122:** Section 3.3.7.4. "CR011C. The CRS shall provide a mechanism for authorized NDOT personnel to communicate event information to other agencies or the traveling public directly." - Please clarify what kind of communications (especially reaching traveling public directly) is expected as part of CRS (not through NNG511 data dissemination modules).

**ANSWER 122:** E-mail is one possibility. SMS Text is another.

**QUESTION 123:** Regarding the Requirements Compliance Matrix - Can the Requirements Compliance Matrix be provided in Excel or Word?

**ANSWER 123:** Included.

**QUESTION 124:** Regarding the Evaluation Criteria Form - Is there a maximum score for each of the six individual evaluation criteria shown in the Evaluation Criteria Form?

**ANSWER 124:** Yes. They are listed in order of importance from 1 being the most important and having the most weight to 6 having the least amount of weight.

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## Requirements Compliance Matrix

Indicate with an X in the appropriate column, and additional text as necessary, to what degree your system will meet the technical requirements for the NNG511. Listed below is the legend for the columns.

Section	Section number in which the requirements appears, in Attachment B; System Functional and Performance Specifications.
Req. ID	Requirement Identification code.
Requirement	Full text of the requirement. The requirement wording should be identical to the wording in Attachment B; System Functional and Performance Specifications. If a conflict exists, the wording in Attachment B takes precedence.
Fully met	System as priced and installed can fully meet the requirement.
Cannot Meet for Price Quoted	System cannot meet the requirement as stated and priced; a waiver to meeting the requirement may be required from NDOT.
Met with requirement rewording as indicated	Alternate wording for the requirement that can be fully met for the price quoted.

Requirement ID is the alpha-numeric code associated with each requirement. The Requirements Traceability Matrix (Table 2 in Attachment B) lists the parent-child relationships for each requirement with a summary statement of the requirement. The bidder must respond to the complete statement of the requirement in Attachment B, Section 3 and not to the summary of the requirement shown in Section 4 of Attachment B (e.g. the Requirements Traceability Matrix).

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
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Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.2.1	S001	The NNG511 system shall streamline NDOT information collection, processing and dissemination to minimize duplication of effort and provide a one stop shop for NDOT daily operations and planning.			
3.2.1	S002	The NNG511 system shall provide comprehensive reporting and online display of state and local road restrictions and work zones.			
3.2.1	S003	The Nevada Next Generation 511 shall minimize the time it takes for users to gain access to the system and obtain their desired information.			
3.2.1	S005	The Nevada Next Generation 511 shall provide real time information about NDOT defined sections of roads.			
3.2.1	S006	The Nevada Next Generation 511 shall provide selected travel information to registered users based on their travel profile entered into the system when they established a subscription account.			
3.2.1	S008	The Nevada Next Generation 511 shall provide current traveler information through a web based internet interface and an automated interactive voice response telephone system.			
3.2.1	S009	The Nevada Next Generation 511 shall provide the capability to generate reports based on saved data.			
3.2.1	S010	The Nevada Next Generation 511 shall be able to alert registered users to critical, time sensitive information.			
3.2.1	S016	The Nevada Next Generation 511 shall be able to accept external data input, process the data to create traveler information and inform the public about travel incidents and events reported on roads in Nevada.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.2.1	S023	The NNG511 shall provide traveler information related to traveling safely, traffic movement and flow, Work Zone activity and commercial trucking.			
3.2.1	S025	The NNG511 system shall broaden scope of regional mapping displays to provide more roadway detail on a local level.			
3.2.1	S026	The NNG511 system shall make multimodal traveler information available to the public through an automated voice response system (IVR) accessible through the telephone system and an internet accessible web site.			
3.2.1	S029	The NNG511 system shall provide access to real time traffic information through smart phone applications and social networking sites.			
3.2.1	S031	Routes of significance shall be based on local conditions.			
3.2.1	S033	The NNG511 system shall provide/update construction activities from the time of occurrence of 20 min or less outside Metropolitan areas and 10 min or less on highways within Metropolitan areas.			
3.2.1	S034	The NNG511 system shall provide updates of roadway incidents when an incident was verified within 20 minutes in Non-metropolitan areas and within 10 minutes in metropolitan areas.			
3.2.1	S035	The NNG511 system shall provide roadway Weather Information related to hazardous driving conditions/roadway or lane closure information and update it within 20 minutes of being notified of a change.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.2.1	S036	The NNG511 system shall provide Travel Times for Interstate and designated routes of significance in the Metropolitan areas that are limited access highways.			
3.2.2	S017	The Nevada Next Generation 511 shall be network-based using Transmission Control Protocol/Internet Protocol (TCP/IP) connectivity, the Hypertext Transfer Protocol (HTTP), and XML data format based shall be consistent with TMDD 3.0 (and NTCIP 2306) and the emerging TMDD 3.1 (and NTCIP 2306). SAE J2540 codes shall be used to capture event information			
3.2.2	S018	The Nevada Next Generation 511 shall make use of commercial or existing software to the maximum extent possible.			
3.2.2	S039	The NNG511 system shall store Nevada DOT defined data and messages into a relational database that supports SQL queries..			
3.2.2	S040	The NNG511 system shall be housed and maintained within the continental United States.			
3.2.2	S041	The NNG511 system shall be a privately hosted network-based solution providing a turnkey service for Nevada DOT's 511 traveler information needs.			
3.2.3	S012	The Nevada Next Generation 511 shall provide access and data that supports the management of the system's performance.			
3.2.3	S013	The Nevada Next Generation 511 shall synchronize all servers/workstations to a universal time standard obtained through the internet.			
3.2.3	S014	The Nevada Next Generation 511 shall not degrade the accuracy of the received data.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.2.3	S024	The NNG511 system shall operate 24 hours a day, 7 days a week, 365 days a year (366 during a leap year) with an availability of 99.45% measured daily from midnight to midnight the next day exclusive of planned downtime for maintenance.			
3.2.4	S007	It shall be easy to configure the Nevada Next Generation 511 and add new features.			
3.2.4	S015	The Nevada Next Generation 511 shall allow the addition, reconfiguration or redefinition of roadway segments without any loss of current or past data.			
3.2.4	S019	The Nevada Next Generation 511 shall use the most current technology in a modular design based on the functions performed with well documented interfaces with remote access for maintenance.			
3.2.4	S038	The NNG511 system shall provide an executive handler function that provides: - Process initiation/termination - Process status and monitoring - Event logging including error logging			
3.2.6	S004	The NNG511 system shall provide multimodal traveler information to include transit, air and rail both interstate and intrastate to assist travelers in their trip planning and mode choices through links to other information providers.			
3.2.6	S011	The Nevada Next Generation 511 shall make a feed of selected data and video available to third parties.			
3.2.6	S021	The Nevada Next Generation 511 shall use standards that support open architecture and interoperability with other NDOT systems.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.2.6	S032	The acquisition and dissemination of the real-time data shall be in accordance with the ITS Regional Architectures.			
3.2.7	S022	The NNG511 shall be ADA complaint to the extent possible.			
3.2.7	S030	The NNG511 system shall conform to current Nevada DOT published Social Media Standards and Guidelines			
3.2.8	S042	The NNG511 shall follow the Implementation and Operational Guidelines for 511 Services v3 or newer to the maximum extent practical.			
3.3.1	ID010W	The NNG511 web site shall load every web page within 4 seconds on an ADSL or faster connection.			
3.3.1	ID010W2	Web pages shall always inform the user of what it is doing if there is any delay in providing the requested information of more than 3 seconds.			
3.3.1	ID010W3	When a user selects a HAR icon, the HAR audio shall play the current audio message within 2 seconds.			
3.3.1	ID010W4	When a web icon is clicked, the information shall appear within 1 second excluding the time it takes to buffer a video image.			
3.3.1	ID010W5	The web page map shall refresh at the new zoom level in 4 seconds or less when the user selects a new zoom level.			
3.3.1	ID021W	The Web help page shall provide information in text and/or graphic form on the basic use of the Internet Web site and statewide 511 telephone system, including listings of available information on the site and through the IVR.			
3.3.1	ID021W1	The Web help page shall include an e-mail link to contact the system's webmaster.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID026W	All congestion-related roadway information shall be color-coded as specified by NDOT for ease of understanding by users.			
3.3.1	ID026W1	Roadway speeds that are slower than 45% of the posted speed limit for the segment of road shall be displayed in a unique color that is different from the roadway color .			
3.3.1	ID026W2	Roadway speeds that are slower than 75% but greater than 45% of the posted speed limit for the segment of road shall be displayed in a unique color that is different from the roadway color			
3.3.1	ID026W3	Roadway speeds that are greater than 75% of the posted speed limit for the segment of road shall be displayed in a unique color that is different from the roadway color ..			
3.3.1	ID026W4	<p>If no speed limit data is provided for a roadway segment the color codes related to traffic sensor data for that segment shall be as follows:</p> <ul style="list-style-type: none"> <li>• A color that is different from the roadway color for speeds greater than 50 mph</li> <li>• A different color that is different from the roadway color for speeds between 30 mph and 49 mph</li> <li>• A different color that is different from the roadway color for speeds less than 30 mph</li> <li>• No shading if no data is available (color of roadway remains unchanged)</li> </ul> <p>NDOT reserves the right to select the final colors used.</p>			
3.3.1	ID026W5	Multiple color-coding options shall be provided to meet the needs of color-blind users.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID002W	The NNG511 web site shall provide links on the web page to at least 50 other sources of traveler information when the information sources are available to users.			
3.3.1	ID002W1	Web sites hosted by other agencies to which links shall be provided shall include at a minimum: <ul style="list-style-type: none"> <li>• NDOT</li> <li>• Department of Public Safety</li> <li>• transit agencies;</li> <li>• airport services;</li> <li>• Rail</li> <li>• tourism agencies;</li> <li>• evacuation management agencies;</li> <li>• Cities, Counties, MPOs, and other partners;</li> <li>• Border states (e.g., Utah, California, Arizona, Idaho, Oregon) ATIS services.</li> <li>• Parking;</li> <li>• Major event venues</li> </ul>			
3.3.1	ID002W2	The NNG511 website shall allow contractor to add links on the web page to other sources of traveler information after the initial system is deployed without having to redesign or reconstruct the website.			
3.3.1	ID002W3	The NNG511 web site shall tell the user they are leaving the NV 511web site when transferring to another web site.			
3.3.1	ID003W	The NNG511 web site shall provide traffic conditions details by NDOT defined locations that at a minimum include Interstate, U.S. and Nevada State roads.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	DI007W	The Nevada Next Generation 511 web site shall provide a secure web page for users to register with an email address as their user ID to receive traveler information tailored to their preferences.			
3.3.1	DI007W1	When the user logs in, the user can create profiles and select specific routes and timings to receive email and SMS text alerts.			
3.3.1	DI007W2	Required data shall be: user contact name, their zip code, alert methods (e-mail, telephone, SMS text), a minimum of 6 bi-directional travel profiles that include origin/destination, preferred route, time of day/week/month each travel profile is active and direction of travel (e.g. from origin to destination).			
3.3.1	DI007W3	The alert system shall delete a contact method in a subscribers' account if it receives consecutive bounce backs for each alert sent out to that particular contact device over a five day period.			
3.3.1	DI007W4	The email alert shall contain a method for the recipient to unsubscribe to alerts from the NV511 system such as a message at the bottom of an email alert similar to the following live link: Visit <a href="http://www.nv511.com">http://www.nv511.com</a> to change your subscription or to unsubscribe.			
3.3.1	DI007W5	The email alert shall provide a live link to <a href="http://www.nv511.com">http://www.nv511.com</a> .			
3.3.1	ID001W	The NNG511 Web page shall display header and footer banners classified by NDOT as a "CMS Thin Banner" with details found at <a href="http://apps.nevadadot.com/VendorBanner/default-thin.asp">http://apps.nevadadot.com/VendorBanner/default-thin.asp</a> .			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID001W2	NNG511 shall use the Header_thin.htm which is the header file that displays only the top menu Footer_401.htm is the standard version of the default footer file.			
3.3.1	ID011W	The NNG511 web site shall provide details about all NDOT facilities including but not limited to: <ul style="list-style-type: none"> <li>• Incidents</li> <li>• Construction</li> <li>• Closures</li> <li>• Vehicle controls</li> <li>• Local weather conditions</li> <li>• Rest Areas</li> <li>• Truck parking availability</li> <li>• Welcome Centers</li> </ul> and other state information sources that can be requested for a specific location selected by the user through the NV511 web site.			
3.3.1	ID011W1	NDOT facilities shall be selectable by region (District), road, road segment, City, Metro area or County.			
3.3.1	ID011W2	Regions shall be defined as Northeast Nevada, Northwest Nevada and Southern Nevada.			
3.3.1	ID019W	The web site shall be able to accommodate increasing use as more people learn and use the NNG511 system.			
3.3.1	ID019W1	The Website shall be able to handle a minimum of 10 million page views during the first year of service.			
3.3.1	ID019W2	The website shall handle a minimum of 21 million page views per year by the fifth year of operation.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID019W3	The website shall be able to support an annual increase of at least 3 million page views per year as compared to the previous year.			
3.3.1	ID029W	The Web site shall enable users to view a set of active traffic incidents and events that can be filtered according to incident/event/ controls severity (i.e. Critical, Important, Routine or all incidents) and by region/city/metro area where they are occurring.			
3.3.1	ID030W	The Web site shall display Nevada State required information concerning terms of service, disclaimers and user privacy.			
3.3.1	ID030W1	The web disclaimer shall focus on the personalized aspects of the Web site/511 system for which personal information is collected.			
3.3.1	ID033W	The Web site shall be in English.			
3.3.1	ID037W	Under special situations, such as during evacuations, more detailed information, such as evacuation route information shall be provided as links to other sites through the Web site.			
3.3.1	ID041W	The web site shall have an option for a printer friendly version of the currently viewed page.			
3.3.1	ID042W	When users hover over an event icon on the interactive web map, they shall be provided details of the event and the associated alternate road information if it is provided by Nevada DOT District staff.			
3.3.1	ID042W1	When users click on an event icon on the interactive web map, the details of the event and the associated alternate road information shall remain displayed until clicked on again.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID007W	The Nevada Next Generation 511 shall generate at a minimum periodic reports that include a 511 usage activity report rolled up by year to date, quarterly to date, monthly to date and weekly.			
3.3.1	ID007W1	Users shall be able to generate exportable ad-hoc reports composed of any of the data fields in the NNG511 system database			
3.3.1	ID007W2	Exportable ad-hoc reports shall be generated based on user selected data fields and time periods.			
3.3.1	ID007W3	The Nevada Next Generation 511web shall be able to post surveys on the web page for a NDOT specified number of days to collect customer satisfaction feedback.			
3.3.1	ID032W	The Web site shall provide a usage monitoring capability to obtain information about patterns of usage on different parts of the Web site.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID032W1	<p>The following usage data shall be able to be reported for the web site:</p> <ul style="list-style-type: none"> <li>• Number of Monthly Unique Visitors</li> <li>• Browser type used</li> <li>• Number of Monthly Page Views</li> <li>• Number of Peak Unique Visitors per Day</li> <li>• Number of Peak Unique Visitors Total to date</li> <li>• Number of Peak Page Views per Day</li> <li>• Number of Peak Page View Total to date</li> <li>• Percentage of hits per web category/feature: <ul style="list-style-type: none"> <li>- Camera Views</li> <li>- Construction</li> <li>- No Selection / Information</li> <li>- Road Conditions</li> <li>- Vehicle controls</li> <li>- Segment Reports</li> <li>- Traffic</li> <li>- Transfers</li> <li>- Links to Other Agencies</li> <li>- Travel Times</li> </ul> </li> </ul>			
3.3.1	ID032W2	The format of the reports shall be as specified by Nevada DOT.			
3.3.1	ID032W3	<p>A report of website comments shall be provided monthly reflecting the number of website comments that are:</p> <ul style="list-style-type: none"> <li>- Positive</li> <li>- Negative</li> <li>- Suggestions</li> </ul>			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	DI001W	The 511 web site banner alert messages (scrolling banner message) shall be able to be created by NDOT personnel using the Conditions Reporting GUI.			
3.3.1	DI001W1	NDOT messages shall be associated with a priority levels such that level 1 priority message is displayed on the public web site before a level 2.			
3.3.1	DI001W2	NDOT shall be able to associate banner alert messages with specific Districts (1, 2 and/or 3), crew area, specific roads, road segments, cities, metro areas or counties.			
3.3.1	ID005W	The information dissemination function shall transmit the traffic alert messages to subscribers in the following order of priority: (1) incidents; (2) road controls/restrictions; (3) congestion, (4) construction.			
3.3.1	ID012W	Time critical alerts (e.g. floodgate messages) shall be displayed prominently on the web site such as a scrolling banner or similar method of attracting attention on the web to the message.			
3.3.1	ID012W1	The website alert messages shall be displayed according to what the user is viewing (road segment, crew area, county, city, metro area, and region).			
3.3.1	ID012W2	The Web site shall have the capability of displaying a statewide message on the home page that overrides any existing regional alert message banner for use in displaying time critical alerts to include as a minimum the following: severe weather, evacuation, homeland security, and child abduction alerts.			
3.3.1	ID025W	The map and all content contained on the Web site shall be automatically updated and refreshed whenever new information is available.			
3.3.1	ID025W1	All data provided to users via the Web site shall be time stamped to indicate its freshness.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID025W2	The web site shall indicate the last date/time the web site was updated with new information.			
3.3.1	ID039W	The web site shall offer personalized travel information based on the user's login and associated pre-defined preferences that are part of their profile.			
3.3.1	ID039W1	The web site subscriber log in password shall be maintained on an https secure web server with a valid certificate.			
3.3.1	ID036W	The Web site shall display CCTV camera images from NDOT cameras for access through the website.			
3.3.1	ID036W1	The web site shall provide CCTV icons that show the location of CCTV cameras that can be used to access images from that camera.			
3.3.1	ID036W3	The web site shall require the use of Motion JPEG and/or Windows Media Player (WMV format) to view the camera images.			
3.3.1	ID013W	The NNG511 web site shall provide the ability for NDOT to generate automatic reports of NNG511system quality for NDOT specified time periods (Daily/Monthly/Weekly/Quarterly/Annual).			
3.3.1	ID013W1	The NNG511 web site shall provide NDOT the ability to generate ad-hoc reports of NNG511system quality for NDOT specified time periods (Daily/Monthly/Weekly/Quarterly/Annual).			
3.3.1	ID013W2	System quality shall include but not be limited to: time delays for incident reports defined as the time an incident is received into the system and the date/time the information about that incident is available in the IVR for callers and when it is on the web site.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID014W	The NNG511 web site shall display all data in Pacific Time (Summer GMT-7, Winter GMT-8).			
3.3.1	ID040W	The web site shall display the last date and time the web site was refreshed.			
3.3.1	ID035W	The Web site shall be developed so that it is flexible and scalable to allow the addition/modification of various data elements (e.g., adding new roads and/or changing road segments) without the need for major system redesign.			
3.3.1	ID035W1	The Web site shall use the current road segments provided by NDOT.			
3.3.1	ID035W2	The Web site shall support the ability for NDOT to define road sub-segments by specifying a starting point and ending point for a particular existing road segment.			
3.3.1	ID035W3	The Web site shall support the ability for NDOT to edit or delete the road sub-segments by identifying the road sub-segment and having an edit or delete option.			
3.3.1	ID008W	The NNG511 web site shall refresh and display new events which are active and remove events which have been closed and are no longer active for more than 30 seconds.			
3.3.1	ID017W	The NNG511 web site shall make use of commercial or existing software to the maximum extent possible.			
3.3.1	ID034W	The Web site shall be standards based and avoid the use of proprietary applications.			
3.3.1	ID034W1	The 511 website shall be compatible with the top five internet browsers, as documented by <a href="http://www.w3schools.com/browsers/browsers_stats.asp">http://www.w3schools.com/browsers/browsers_stats.asp</a> or similar source.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID034W2	A mobile version of the 511 website shall be compatible with the top five mobile browsers, as documented by <a href="http://www.netmarketshare.com/browser-market-share.aspx?qprid=0&amp;qpcustomd=1">http://www.netmarketshare.com/browser-market-share.aspx?qprid=0&amp;qpcustomd=1</a> or similar source.			
3.3.1	ID024W	The Website shall comply with ADA Section 508 requirements.			
3.3.1	ID024W1	All information shall be delivered in both a graphic and text-based format using one or more multicolored maps and tables of roadways and other facilities for which information is provided.			
3.3.1	ID024W2	Web images shall have alternate tags so that information regarding the images can be read by a text reader.			
3.3.1	ID024W3	The Web site shall support website users who are color blind.			
3.3.1	ID024W4	The Web site shall support user selectable color schemes for icons and road segment speeds to accommodate color blind users.			
3.3.1	ID031W	The Web site component must have an operational availability of at least 99.95% measured over an operating cycle of 24 hours starting at local midnight.			
3.3.1	ID027W	The web page shall be map based using icons and map overlays to convey traveler information.			
3.3.1	ID027W1	Clicking on or mousing over any of the icons or other data elements shall result in a pop-up window that displays more detailed information.			
3.3.1	ID027W10	The website software shall not limit the number of field devices that information can be displayed for.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID027W11	The web site shall provide a user selectable feature to spread out collocated icons in order to be able to see all the icons at a particular location if multiple icons are displayed on top of each other.			
3.3.1	ID027W12	The web site shall report other state controls such as vehicle restrictions to accommodate weather conditions and other constraints (e.g. chains required or 4 wheel drive with snow tires, etc.)			
3.3.1	ID027W13	Hovering the mouse over or clicking on a color coded road segment shall pop up a window for averaged speed for the selected segment.			
3.3.1	ID027W14	<p>User selectable (on/off) map layers shall be utilized to indicate the location of a variety of information/data points, including but not limited to:</p> <ul style="list-style-type: none"> <li>• Travel times/speeds and/or traffic flow/congestion (Roadway links will be color-coded according to roadway condition.)</li> <li>• Incidents/Events</li> <li>• Controls</li> <li>• Roadwork and Other Construction</li> <li>• Lane and Road Closure</li> <li>• Severe Weather</li> <li>• CCTV locations - clicking on a CCTV icon will result in a pop-up window appearing in which the current video (either snapshot or streaming) will be displayed along with a time stamp indicating the time the image was captured.</li> <li>• Locations of DMS - clicking on a DMS icon will result in a pop-up window appearing in which the current text on that DMS is displayed.</li> </ul>			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID027W15	When the web page opens the first page shall contain a map of the western region to include center on Nevada with its three Districts identified and the ability to move the map to show the following surrounding states: <ul style="list-style-type: none"> <li>• Oregon</li> <li>• California</li> <li>• Arizona</li> <li>• Utah</li> <li>• Idaho</li> </ul>			
3.3.1	ID027W16	Clicking on any state on the map page shall link to that State's 511web site if the web site for that state is available.			
3.3.1	ID027W17	Clicking on any one of the three Nevada regions will bring up a detailed map of the roads and traveler information for the selected region.			
3.3.1	ID027W2	Mousing over or clicking on a CCTV icon shall display the current image for that camera.			
3.3.1	ID027W3	A separate section of the 511 Web site shall contain a list of cameras and their locations specific to a selected region displaying their current image.			
3.3.1	ID027W4	A legend of all illustrations that can be minimized (e.g., color coding of links and icon definitions) shall be available on the same page as the map			
3.3.1	ID027W7	The map shall support the ability to zoom in on portions of the map.			
3.3.1	ID027W8	The website shall provide selectable camera icons to display camera video images at a minimum of 400 CCTVs for District 1 and 200 CCTVs each for Districts 2 and 3 that are available for selection based on NDOT specified zoom layer on the map.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.1	ID027W9	The website shall display the NDOT logo on all video images displayed on all web displays.			
3.3.1	DI006W	The NNG511 web site shall use the most current DMS messages, travel speeds by road segment and travel times obtained from the District CSS to create traveler information.			
3.3.1.1	ID028W	A version of the NNG511 web page shall be optimized for smart phones and tablets that has the same functionality as the public web page to the extent that can be supported by the devices.			
3.3.1.1	ID028W2	The NNG511 system shall be able to work with downloadable applications developed specifically for Nevada DOT for supported smart phones and tablets to include at a minimum the Android, iPhone, iPad and Blackberry.			
3.3.1.1	DI004W	The NNG511 web site shall provide a means for subscribers to register a domestic phone number via the 511 web site to receive automated voice traffic alert messages.			
3.3.1.1	ID027W5	The website shall provide travel times for alternative routes where available as specified by NDOT.			
3.3.1.1	ID027W6	For Districts that provide a video tour rather than video from user selected CCTV, the web site shall provide a "video tour" option for that region on the web site.			
3.3.1.1	DI005W	The NNG511 web site shall only use data from the data warehouse flagged as available for public dissemination.			
3.3.1.1	ID038W	The web site component shall provide travel times between user selectable origin/destination pairs specified by NDOT.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	DI030P	The IVR shall minimize menu navigation.			
3.3.2	DI030P1	Disambiguation of a caller's request shall limit the number of questions asked of the caller to no more than four.			
3.3.2	DI030P2	The IVR menu structure shall allow for selective "barge-in," where the caller may interrupt the menu voice if they already knew how to ask for the information they wanted.			
3.3.2	DI030P3	The IVR shall allow users to short-cut to their information without requiring a series of menu selections (questions and answers).			
3.3.2	DI030P4	The IVR shall allow NDOT to specify what parts of the menu the caller can barge in on.			
3.3.2	ID006P1	The IVR shall start playing the user requested information within 2 seconds of user request or indicate to the caller if information will take longer than 2 seconds to be provided.			
3.3.2	ID039P	The IVR shall provide travel messages in order of priority reading incidents first; then congestion, weather events and finally construction.			
3.3.2	ID039P1	A severe weather warning shall be read first.			
3.3.2	ID039P2	A severe weather warning read out priority shall be able to be modified by authorized NDOT personnel.			
3.3.2	ID022P	The IVR shall provide context sensitive help to callers who request it.			
3.3.2	ID001P	The NNG511 IVR System shall provide telephone numbers of other sources of traveler information when available to users.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID002P	The Nevada Next Generation 511 shall provide attended transfers for call transfers.			
3.3.2	ID002P1	The Nevada Next Generation 511 shall announce the name of the agency the call is being transferred to and the telephone number of the agency.			
3.3.2	ID002P2	If the agency being transferred to is not taking calls, the caller will be informed of the hours of operation of the agency for when they are taking calls.			
3.3.2	ID034P	Transfers to other telephone systems shall be offered by the IVR that provide information about multimodal transportation such as bus, rail, and paratransit services.			
3.3.2	ID034P1	<p>NNG511 system shall provide call transfers to other agencies that will include, at a minimum:</p> <ul style="list-style-type: none"> <li>• NDOT</li> <li>• Department of Public Safety</li> <li>• *NHP</li> <li>• transit agencies;</li> <li>• airport services;</li> <li>• Rail</li> <li>• tourism agencies;</li> <li>• evacuation management agencies;</li> <li>• Cities, Counties, MPOs, and other partners;</li> <li>• Border states (e.g., Utah, California, Arizona, Idaho, Oregon) ATIS services.</li> <li>• Parking;</li> <li>• Major event venues</li> </ul>			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID034P2	The system shall allow changes to be made to the transfer parameters such as telephone number for any outgoing transfer in less than 60 minutes from the time an NDOT request is made for the change during normal working hours, otherwise by the start of the next business day.			
3.3.2	ID003P	The NNG511 IVR System shall provide traffic conditions details by user selected sections of roads.			
3.3.2	ID003P1	The caller shall be able to locate their area of interest by specifying either a road name, direction of travel, highway, exit number, nearest cross road or nearest junction, mile marker number, County, City, Metro area, work area or landmark as applicable according to its reported geographic coordinates.			
3.3.2	ID003P2	The IVR shall recognize local names, aliases and colloquialisms as specified by NDOT for the local area that traveler information is requested for.			
3.3.2	ID041P	The IVR shall be developed so that it is flexible and scalable to allow the addition/modification of various data elements (e.g., adding new roads and/or changing road segments) without redesigning the system.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID008P	<p>The Nevada Next Generation 511 IVR system shall provide details of all facilities including but not limited to:</p> <ul style="list-style-type: none"> <li>• Incidents</li> <li>• Construction</li> <li>• Closures</li> <li>• Vehicle controls</li> <li>• Local weather conditions</li> <li>• Rest Areas</li> <li>• Truck parking availability</li> <li>• Welcome Centers</li> </ul> <p>and other state information sources that can be requested for a specific location selected by the user in the IVR Menu.</p>			
3.3.2	ID036P	<p>IVR call statistics report shall as a minimum include:</p> <ul style="list-style-type: none"> <li>• Total calls</li> <li>• Total transactions (number of condition/forecast requests made by callers)</li> <li>• Average transactions per call</li> <li>• Max transactions for any call</li> <li>• Max number of simultaneous calls (peak calls)</li> <li>• Call duration total</li> <li>• Max call duration</li> <li>• Number of calls to customer comment line</li> <li>• Peak call day of the month</li> <li>• Peak call hour of the month</li> <li>• Most common information request for the month</li> </ul>			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID036P1	IVR call statistics (Telephony Utilization Report or call detail report -CDR ) shall be able to be sorted by date and/or time and/or telephone number and composed into reports and made available in print or transmitted electronically.			
3.3.2	ID036P2	The NNG511 system shall automatically send a Telephony Utilization Report by email sent each day throughout the year to the NDOT NNG511 Project Manager.			
3.3.2	ID038P	The IVR shall be able to generate reports based on time periods that can be specified as hourly, daily, weekly, monthly and yearly basis.			
3.3.2	ID038P1	The IVR shall have an online reporting tool that supports the generation of ad-hoc reports.			
3.3.2	ID038P2	The NNG511 system shall support the creation of ad-hoc reports using the IVR data.			
3.3.2	ID040P	The IVR shall maintain a log of all calls to the system.			
3.3.2	ID009P	The NNG511 IVR system shall play floodgate voice reports of critical time sensitive information read at the start of the phone call.			
3.3.2	ID031P	The IVR shall be able to provide different priority levels of floodgate messages for each entity in the system.			
3.3.2	ID031P1	The levels of floodgate messages shall be statewide, region (District), county, city, and segment of road.			
3.3.2	ID031P1	The levels of floodgate messages shall be statewide, region (District), county, city, and segment of road.			
3.3.2	ID031P2	Each Floodgate message shall be able to be designated as uninterruptable or interruptible.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID031P3	The IVR shall support the ability for NDOT to designate a floodgate message as one that terminates the call after it is played.			
3.3.2	ID031P4	Regions shall be defined as Northeast Nevada, Northwest Nevada and Southern Nevada.			
3.3.2	ID035P	The IVR shall offer the caller personalized travel information based on their pre-defined preferences that is part of their profile.			
3.3.2	ID035P1	The IVR component shall recognize callers based on their telephone numbers identified in their user profile.			
3.3.2	ID032P	When there are no active incidents/events about a requested route, the IVR shall notify the caller that there are no events reported for the route requested.			
3.3.2	ID010P	The NNG511 IVR shall report the time a report was entered or last updated in Pacific Time (Summer GMT-7, Winter GMT-8).			
3.3.2	DF001P	NNG511 shall correlate 511 incidents and events with a specific NDOT location such as road name, direction of travel, highway, exit number, nearest cross road or nearest junction, mile marker number, County, City, Metro area or landmark as applicable according to its reported geographic coordinates.			
3.3.2	DF002P	NNG511 shall identify possible duplicate events or incidents and alert NDOT personnel.			
3.3.2	DF002P1	NNG511 shall alert NDOT personnel of duplicate events by highlighting the possible duplicates on the Conditions Reporting Subsystem graphical user interface.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	DF002P2	NNG511 shall alert NDOT personnel of duplicate events by sending an e-mail alert to designated NDOT personnel.			
3.3.2	ID011P	The NNG511 IVR system shall make use of commercial or existing software to the maximum extent possible.			
3.3.2	ID005P	The NNG511 IVR system shall respond using speech recognition and also touch tone entries.			
3.3.2	ID005P1	IVR system shall be compatible with TTY input.			
3.3.2	ID019P	The IVR must have a daily operational availability of at least 99.95% measured over an operating cycle of 24 hours starting at local midnight.			
3.3.2	ID015P	The IVR Component shall allow 511 callers from throughout the state to: a) Access information using the 511 dialing code; b) Retrieve information using spoken commands (with touch-tone back-up); c) Receive that information as pre-recorded concatenated phrases and d) Have the option to leave a feedback message about the service			
3.3.2	ID015P1	The IVR shall use concatenated speech for all of the responses except where a particular phrase is unavailable then text to speech shall be used.			
3.3.2	ID016P	The IVR Component shall provide spoken menus and messages in English only.			
3.3.2	ID017P	The IVR shall have the ability to transfer calls to other agencies based on the transfer information defined by Nevada DOT.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID017P1	To the extent possible, the IVR shall transfer the telephone charges associated with the initial call, to the receiving agency, through the phone service provider of both the 511 system and the receiving agency.			
3.3.2	ID018P	The IVR shall provide adaptive error handling for calls.			
3.3.2	ID018P1	The IVR shall flag caller choices that it misunderstood and ignore and eliminate them from the list of proper responses.			
3.3.2	ID018P2	The IVR shall learn from the proper answers to help speed the caller through the interaction, and retain the statistics for later use.			
3.3.2	ID018P3	The IVR shall use prompt escalation for handling various levels of recognition and timeout errors.			
3.3.2	ID018P4	The NNG511 IVR shall provide a dedicated response for each of four error states with the first occurrence of an error being considered the first error state and the second occurrence of an error on the same prompt will be considered the second error state and so on until four consecutive errors are detected.			
3.3.2	ID018P5	The response to an error shall be randomized if there are alternate responses at the same error state.			
3.3.2	ID018P6	Upon the fourth error in a single call, the NNG511 IVR shall provide the caller with a response indicating the call is being switched to touchtone mode with an explanation of how to return to voice mode.			
3.3.2	ID018P7	Upon the first error in touchtone mode after having switched due to four consecutive errors at the same prompt, the NNG511 IVR shall tell the caller to try again later and terminate the call.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID025P	The IVR shall be accessible by dialing to 1-877-NVROADS.			
3.3.2	ID025P1	The IVR shall use the existing 511 translation code (e.g. backdoor number) of 877-687-6237 provided by the NDOT service agreement with Verizon Wireless.			
3.3.2	ID026P	The IVR shall answer a call within 3 seconds.			
3.3.2	ID026P1	The IVR shall be able to add additional capacity within 10 business days or less to meet its response time.			
3.3.2	ID026P2	The IVR shall have the ability to handle all calls through no notice bursting capability.			
3.3.2	ID026P3	The IVR Component shall be able to handle a minimum of 4,000 calls per hour with a peak of 200 simultaneous calls that average 2 minutes in duration.			
3.3.2	ID026P4	The IVR Components shall be able to add dedicated port capacity to handle the required call volume.			
3.3.2	ID028P1	If the speech recognition software detects a configurable number of errors by the caller it shall revert to touch tone response and announce that to the caller.			
3.3.2	ID028P2	The IVR shall provide an option key to return to speech recognition by the caller once they are in the touch tone mode.			
3.3.2	ID029P	The IVR shall make maximum use of Universal Grammars to interpret a caller's request for traveler information.			
3.3.2	DI002P	The NNG511 IVR shall use the most current travel speeds by road segment and travel times obtained from the District CSS to create traveler information.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.2	ID033P	The IVR shall provide travel times on road segments identified in the 511 call menu.			
3.3.2	ID033P1	The IVR shall be able to add travel time segments and O/D pairs automatically based on new data when available in data warehouse.			
3.3.2.1	ID036P3	IVR shall provide an option for the caller to take a brief survey.			
3.3.2.1	DI001P	The NNG511 IVR shall only use data from the NDOT data warehouse flagged as available for public dissemination.			
3.3.2.1	ID033P2	As a configurable option at the District level, delay times may be provided instead of travel times.			
3.3.3	DI012	The NNG511 system shall use data from the Nevada's Road Restrictions Reporting System that is used to create the Highway Restrictions Report (HRR).			
3.3.3	DI015	The IVR system shall deliver the requested traveler information efficiently by reducing the amount of user required input.			
3.3.3	DI003	The NNG511 system shall support the identification and configuration of NDOT roads in the NNG511 system database.			
3.3.3	DI004	The NNG511 system shall provide a way for users to register, create profile and subscribe to traveler information via email and other means of personal communication.			
3.3.3	DI011	The NNG511 system shall provide an NDOT user interface to be used to create alert messages for the IVR, Web Banner Alert Messages and Highway Advisory Radio messages.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.3	DI007	All data received by the NNG511 system shall be time stamped in accordance with the ISO 8601 standard in UTC.			
3.3.3	DI001T	A timestamp shall be in the combined date-time format e.g. YYYY-MM-DDTHH:MM:SS (Example: 2011-08-15T19:04:04Z)			
3.3.3	DI009	The NNG511 system shall make use of commercial or existing software to the maximum extent possible.			
3.3.3	DI010	The NNG511 external system interfaces shall be scalable and modular and documented in an Interface Control Document(s).			
3.3.3	DI001	The NNG511 system shall be available to accept data from outside and internal NDOT sources 99.85% of the time each day measured in a 24 hour period from midnight to midnight of the next day.			
3.3.3	DI013	The system shall support the ability for the Contractor to manage road segments in Nevada.			
3.3.3	DI001R	The system shall provide a Contractor interface to add, delete and edit road segments in the system.			
3.3.3	DI001R1	The system shall provide an interface for the Contractor to configure road segments identified in the system.			
3.3.3	DI001R2	NDOT road configurations shall include but not be limited to: defining road segments, geo-locating mile markers, identifying features by segment such as rest areas, truck stops, DMS, CCTV, traffic sensors, gas stations and linking them with their geographic coordinates.			
3.3.3	DI014	The NNG511 shall provide the option to transfer or link users to other sources of traveler information when available.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.3	DI001X	Automated weather events shall be geo-located using a fully automated geographic information system (GIS) based on WGS 84.			
3.3.3	DI002X	Weather content consists of active alerts by County undergoing adverse weather condition(s) of Nevada DOT specified types, and county-based and crew based forecasts (one for each county for the remainder of "today", and a second for each county for the following two days).			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.3	DI003X	Weather types shall at a minimum consist of: <ul style="list-style-type: none"> <li>• TORNADO WARNING</li> <li>• TORNADO WATCH</li> <li>• TORNADO</li> <li>• SEVERE THUNDERSTORM WARNING</li> <li>• SEVERE THUNDERSTORM WATCH</li> <li>• SEVERE THUNDERSTORM</li> <li>• FLASH FLOOD WARNING</li> <li>• FLOOD WARNING</li> <li>• FLOOD WATCH</li> <li>• FLOODING</li> <li>• FREEZING PRECIPITATION ADVISORY</li> <li>• FOG ADVISORY</li> <li>• FOG</li> <li>• WHITE OUT CONDITIONS</li> <li>• WIND ADVISORY</li> <li>• HIGH WIND WARNING</li> <li>• LIGHT SNOW</li> <li>• HEAVY SNOW</li> <li>• BLIZZARD</li> <li>• RAIN</li> <li>• LIGHT RAIN</li> <li>• HEAVY RAIN</li> <li>• FREEZING RAIN</li> <li>• MIXED PRECIPITATION</li> <li>• STRONG WIND</li> <li>• STRONG WIND GUSTS</li> <li>• SEVERE HAIL</li> </ul>			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.3	DI016	The data input function shall interface with the executive handler function to log all incoming data.			
3.3.3	DI001L	All data received by the NNG511 system shall be logged and time stamped with the time of receipt in accordance with the ISO 8601 standard in UTC.			
3.3.3	DI002L	The log shall identify the type of data, when it was received and the source of the data or the name or other identification of the person who entered the data into the system.			
3.3.3.1	DI005	The NNG511 system shall interface with the NDOT Data Warehouse to obtain data for traveler information.			
3.3.3.1	DI017	The system shall interface with the Kimley-Horn CSS at each District to obtain data for traveler information.			
3.3.4	DS002	The NNG511 database shall store the NDOT defined segments of roads and support the configuration of them.			
3.3.4	DS001R	NCDOT road configurations shall include but not be limited to: defining road segments, geolocating mile markers, identifying features by segment such as rest areas, truck stops, DMS, CCTV, traffic sensors, gas stations and linking them with their geographic coordinates.			
3.3.4	DS001R1	Geographic coordinates shall include at a minimum latitude and longitude in micro-degrees			
3.3.4	DS003	The NNG511 database shall store the registered user subscription and profile details.			
3.3.4	DS012	The NNG511 shall be designed to use table driven configuration parameters to make it easy to configure the system and add new features.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.4	DS006	The NNG511 system shall store road segments, mile markers and other configurable parameters into database tables.			
3.3.4	DS007	The NNG511 system shall store details provided by NDOT about their facilities.			
3.3.4	DS004	The NNG511 database shall store the subscriber's cell phone number.			
3.3.4	DS008	The NNG511 system shall store all configuration changes to roadway segments.			
3.3.4	DS009	The NNG511 system shall store all incoming data into the database as it is received.			
3.3.4	DS001T	All data stored in the NNG511 database shall be time stamped when inserted into the database.			
3.3.4	DS002T	Whenever data is deleted from the database, the data deletion event shall be logged and time stamped.			
3.3.4	DS002T1	Data logged shall have sufficient information to identify the type of data entered, modified or deleted and by whom.			
3.3.4	DS010	The NNG511 system data storage shall make use of commercial or existing software to the maximum extent possible.			
3.3.4	DS011	The NNG511 system database design shall be modular and supported with documentation.			
3.3.4	DS013	The NNG511 database shall be a relational database that supports the Standard Query language ( SQL).			
3.3.4	DS001	The NNG511 database availability shall be 99.95% or greater measured in a 24 hour period from midnight to midnight.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.4	DS005	The NNG511 system shall store and manage all data in a relational data base.			
3.3.4	DS001M	Data shall be available online for a period of 90 days unless deleted.			
3.3.4	DS001M1	Data shall be pushed automatically to the NDOT data warehouse every day.			
3.3.4	DS001M2	In the event of a loss of connection between the NNG511 system and the data warehouse, the NNG511 system shall push data to the data warehouse when the connection is reestablished.			
3.3.4	DS001X	New or updated weather information shall be disseminated within 30 seconds of receipt..			
3.3.4	DS002M	Data shall be able to be archived off line for an indefinite period of time.			
3.3.4	DS004M	The NNG511 system shall store the event data, its status and updates to it in the database.			
3.3.4	DS005M	The NNG511 system shall store all incoming data within 2 seconds of receipt by the NNG511 system.			
3.3.5	DF006	All data processed by the NNG511 system shall be time stamped when it completed processing and is ready for dissemination.			
3.3.5	DF012	The NNG511 system shall process received data and provide it for dissemination within 30 seconds.			
3.3.5	DF002	The NNG511 system shall update the event status based on updates received and close the event in the NNG511 system when event has been cleared and no longer impacting travel.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.5	DF003	The NNG511 system shall process all incoming data from external sources within 3 seconds of the time the data is time stamped by the Data input function.			
3.3.5	DF011	NNG511 shall fuse data into traveler information based on NDOT defined locations to include but not be limited to: road name, direction of travel, highway, exit number, nearest cross road or nearest junction, mile marker number, County, City, Metro area, work area or landmark as applicable according to its reported geographic coordinates.			
3.3.5	DF005	The NNG511 system shall process IVR call details to rollup the call statistics for a user specified time period such as Daily/ Monthly/ Weekly/ Quarterly/ Annually or between time of day, day of week, month and years .			
3.3.5	DF004	The NNG511 system shall identify duplicate events and incidents and alert an operator of a possible duplicate event/incident.			
3.3.5	DF007	The NNG511 system shall store received data as-is before processing in one location and store the processed data in a separate location in the database.			
3.3.5	DF008	The NNG511 system data fusion function shall make use of commercial or existing software to the maximum extent possible.			
3.3.5	DF009	The NNG511 system data fusion process shall be modular and supported with documentation.			
3.3.5	DF001	The data fusion function availability shall be 99.80% or greater each 24 hour period as measured from midnight to midnight.			
3.3.5	DF014	The NNG511 system shall associate weather events to specific locations in Nevada based on the geo-coordinates associated with the weather information.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.5	DF001X	New weather information shall be incorporated in the weather data within 30 seconds of when weather events change.			
3.3.5	DF002X	The weather forecasts shall be updated hourly, and weather event alerts shall be updated as they occur.			
3.3.5	DF013	The NNG511 system shall provide a means to control processes, log data and automate NNG511 functions (e.g. an executive handler function).			
3.3.5	DF001E	The executive handler shall be capable of automatic (scheduled) and manual initiation, termination, and re-initiation of system processes.			
3.3.5	DF002E	The executive handler shall have the capability to read scheduled process control from the central database.			
3.3.5	DF003E	The executive handler shall notify personnel if an application fails or is restarted if the personnel have registered for notifications.			
3.3.5	DF003E1	In the case of a failure, the executive handler shall start processes in the same order that they originally started.			
3.3.5	DF003E2	In the case of a process failure due to unavailable resources, the executive handler shall have safeguards to prevent the unrestrained cyclical restart of failed applications.			
3.3.5	DF003E3	It shall be possible to configure the maximum number of retries that the executive handler shall perform when attempting to restart a failed application. It shall also be possible to configure the number of minutes over which the retry counter is maintained.			
3.3.5	DF004E	The executive handler shall have the ability to initialize individual components as well as subsystem groups.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.5	DF005E	The executive handler shall be capable of monitoring, reporting, and displaying the status of all subsystems, subsystem components, and network communications links and components.			
3.3.5	DF005E1	The executive handler shall provide a hierarchical view of the system allowing the user to drill down from a subsystem level to an individual component level.			
3.3.5	DF006E	The executive handler shall log error conditions as they are detected.			
3.3.5	DF007E	The executive handler application shall utilize windows credentials to verify rights to execute.			
3.3.5	DF008E	The NNG511system shall synchronize all servers/workstations to a universal time code standard in accordance with the ISO 8601 standard in UTC. .			
3.3.6	ID024	Negative reports shall not be provided such as "Road open, no controls".			
3.3.6	ID011	NNG511 shall minimize the time taken to provide information requested by users.			
3.3.6	ID023	The traveler information provided by the NNG511 system shall prioritize information delivery based on weather related travel delays and real-time incident/construction activities that cause travel delays.			
3.3.6	ID028	The NNG511 system shall be intuitive and easy to use with help features for users who want to learn about the system.			
3.3.6	ID003	The NNG 511 system shall transfer or link users to other available sources of traveler information as requested.			
3.3.6	ID025	A travel planner function shall provide travel options that include driving, public transit, bicycling in cities and areas that provide bike routes, and walking.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.6	ID004	The Nevada Next Generation 511 shall provide travel information about NDOT defined sections of roads that allow a traveler to make informed decisions about the best route to take that reduces their travel time.			
3.3.6	DI018	The Nevada Next Generation 511 shall provide a way for users to register to subscribe to traffic events and to create travel profiles.			
3.3.6	ID027	The IVR shall capable of adding, modifying, deleting prompt recordings if necessary within 10 business days.			
3.3.6	ID002	The NNG511 system shall provide a web page and a 511 interactive voice response system for use by the public.			
3.3.6	ID021	NNG511 shall provide traveler information based on NDOT specified locations.			
3.3.6	ID007	The Nevada Next Generation 511 shall generate periodic reports that as a minimum contain the following information: <ul style="list-style-type: none"> <li>Total number of calls per day</li> <li>Total number of web visits per day</li> </ul> This information shall be e-mailed to the NNG511 project manager at NDOT daily no later than 7 AM for the previous 24 hours.			
3.3.6	ID006	Alert registered users to critical, time sensitive information in accordance with their registered profiles.			
3.3.6	ID013	The NNG511 shall provide critical and time sensitive information alerts to the public.			
3.3.6	ID008	The Nevada Next Generation 511 shall provide an outgoing feed to third parties of selected data and video from selected NDOT CCTV cameras.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.6	ID001D	The Nevada Next Generation 511 shall provide an outgoing feed of selected data and video feed to third party systems on a scheduled automated batch process basis.			
3.3.6	ID002D	The data and video feeds shall be provided only to third parties who have registered with NDOT and agreed to NDOT terms and conditions for the use of the information.			
3.3.6	ID014	The NNG511 shall monitor the system's quality.			
3.3.6	ID015	The Information Dissemination function shall use a universal time code in accordance with the ISO 8601 standard in UTC.			
3.3.6	ID030	The web design shall allow NDOT to reconfigure the roadway segments without loss of data or the need to reboot the system.			
3.3.6	ID009	The NNG511 shall be able to report on all events currently being actively managed by NDOT.			
3.3.6	ID018	The Nevada Next Generation 511 shall provide information to users by making use of commercial or existing software to the maximum extent possible.			
3.3.6	ID019	The NNG511 system web interface and IVR system process shall be a modular design and be well documented.			
3.3.6	ID020	The NNG511 system shall use standards for traveler information dissemination that support open architecture and interoperability.			
3.3.6	ID010	The NNG511 shall make the traveler information available to the public regardless of their skill level or abilities.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.6	ID001	The NNG511 traveler information shall be available at least 99.85% of the time in any 24 hour period measured from midnight to midnight of the next day.			
3.3.6	ID029	The information dissemination function shall provide more roadway detail on a local level.			
3.3.6	ID022	The NNG511 system shall provide real time traffic information through smart phone applications and social networking sites.			
3.3.6	ID001S	At a minimum social networking sites shall include Facebook and Twitter.			
3.3.6	ID001S1	Major 511 alerts shall be automatically posted to the Nevada DOT Twitter account within 2 minutes of being identified in the NNG511 system.			
3.3.6	ID001S2	A major 511 alert shall be an alert that either or: closes a roadway; has traffic delays exceeding 10 minutes on any non Metropolitan area road segment or exceeding 20 minutes on roadways in Metropolitan areas.			
3.3.6	ID026	The Information Dissemination system shall provide travel time information on user selected origin/destination pairs.			
3.3.7	CR001	The NNG511 shall provide an interface for authorized NDOT personnel to create and manage alerts for critical time sensitive information.			
3.3.7	CR002	The NNG511 shall provide an interface for authorized NDOT personnel to enter and manage events, incidents to include but not be limited to: Weather events, traffic incidents, traffic congestion by road segment, special events, vehicle restrictions by road segment, current and planned construction by day/time of day.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.7	CR003	The CRS shall provide a mechanism to enter events by NDOT defined segment.			
3.3.7	CR007C2	The Conditions Reporting Subsystem shall provide a graphical user interface similar to the map used in the public web page.			
3.3.7	CR007C3	The web map shall display the crew area boundaries as a selectable map layer.			
3.3.7.1	CR001B	The NNG511 shall provide an interface for authorized NDOT personnel to create and manage banner alert messages for the Web.			
3.3.7.1	CR002B	The CRS shall provide a mechanism to enter Amber Alert banner alert messages and Silver Alert banner messages to be displayed on the website.			
3.3.7.1	CR002B1	Authorized NDOT personnel shall be able to type free text to describe the Amber Alert or the Silver Alert.			
3.3.7.2	CR001F	The NNG511 shall provide an interface for authorized NDOT personnel to record and manage Floodgate alerts for the IVR.			
3.3.7.2	CR002F	Authorized NDOT personnel shall be able to record their own voice speaking the details of the Amber Alert and/or the Silver Alert for the IVR floodgate message.			
3.3.7.2	CR002F1	The CRS shall provide a mechanism to enter floodgate messages that are broadcast on the phone system and not be tied to any specific route, but to the entire State or regions of the state or metro areas.			
3.3.7.2	CR002F2	CRS shall save NDOT personnel's recorded messages as .wav files with the speaker's name and date/time created attached to the file name.			
3.3.7.2	CR002F3	Authorized NDOT personnel shall also be able to type free text to describe the Floodgate message.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.7.2	CR002F4	The system shall provide a mechanism for authorized NDOT personnel to specify the area that is affected by the Floodgate message.			
3.3.7.2	CR002F5	The CR subsystem shall provide an option for the system to use Text-to-Speech to create the Floodgate wav. file.			
3.3.7.3	CR001H	The CR subsystem shall support a priority-based queue of messages for HAR dissemination.			
3.3.7.3	CR001H1	If a message is placed in the queue with a higher priority than the currently displayed message, the higher-priority message shall be played by the HAR.			
3.3.7.3	CR001H2	When a message is removed from the queue, the message with the next highest priority shall be displayed.			
3.3.7.3	CR002H	The system shall allow the operator to specify a priority level when activating a message manually.			
3.3.7.3	CR002H1	The default priority level for manual message activation shall be the highest priority level.			
3.3.7.3	CR003H	The NNG511 system shall provide an operator interface for control of Highway Advisory Radio messages.			
3.3.7.3	CR004H	The HAR interface shall provide the NDOT RTMC operator with the ability to create a manual message for a HAR device and send it to the device.			
3.3.7.3	CR004H1	HAR messages that cannot be composed using the pre-recorded phrases or messages shall be able to be created as WAV. files using the recording capability of the Conditions Reporting subsystem workstation that are sent to the external HAR software system.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.7.3	CR004H2	HAR messages that cannot be composed using the pre-recorded phrases or messages shall be able to be created as WAV. files using a text-to-speech function to be included in the CRS.			
3.3.7.3	CR005H	The NNG511 shall provide an interface for authorized NDOT personnel to create and manage highway advisory radio alert messages for an external Highway Advisory radio software system.			
3.3.7.3	CR005H1	Authorized NDOT personnel shall be able to compose a standard HAR message using a drop list of pre-recorded HAR messages and phrases.			
3.3.7.4	CR001C	The NNG511 shall provide an interface for authorized NDOT personnel to create an event or incident in the system as an alternate data input source from the external NDOT Data Warehouse.			
3.3.7.4	CR001C1	The CRS shall provide construction information, lane and ramp closure and restriction information, including location information and start and end times for the closure/restriction.			
3.3.7.4	CR002C	Possible duplication of events or incidents shall be highlighted on the CR subsystem's graphical user interface with an audible alert.			
3.3.7.4	CR002C1	The audio alert function shall be able to be turned off by the NDOT operator.			
3.3.7.4	CR002C2	The alert e-mail shall have an unsubscribe option included in the e-mail to terminate the issuance of e-mail alerts to the person receiving them.			
3.3.7.4	CR003C	The CRS shall provide a login tool for users.			
3.3.7.4	CR003C1	The CRS shall require users to enter an ID and password prior to performing any actions in the system.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.7.4	CR003C2	The CRS shall specify different levels of access for Administrators and Regular Users.			
3.3.7.4	CR004C	The CRS shall provide a mechanism for authorized NDOT personnel to create new events.			
3.3.7.4	CR004C1	The CRS shall provide a mechanism for users to specify the location of the event.			
3.3.7.4	CR004C2	The CRS shall provide a mechanism for users to specify the description of the event.			
3.3.7.4	CR004C3	The CRS shall provide a mechanism for users to enter text information about an event.			
3.3.7.4	CR004C4	The CRS shall provide a mechanism for users to specify the timing of the event.			
3.3.7.4	CR004C5	The CRS shall provide a mechanism for users to select from template events and alter templates to create events.			
3.3.7.4	CR005C	The CRS shall display a 'What You See is What You Get' (WYSIWYG) display of the event entry.			
3.3.7.4	CR006C	The CRS shall provide a mechanism to enter non-road specific events.			
3.3.7.4	CR007C	The segment entry portion of the CRS shall provide a mechanism for authorized NDOT personnel to select from predefined segments when creating event reports.			
3.3.7.4	CR007C1	Crew areas shall be defined by the data in the NDOT provided file MAINTENANCE_CREW_BOUNDARIES.zip.			
3.3.7.4	CR008C	The Administrator shall have the ability to add, delete, or modify segments.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.7.4	CR008C1	The segment entry portion of the CRS shall provide a mechanism for users to select multiple segments and create identical events on all segments selected, as follows: <ul style="list-style-type: none"> <li>• Users may select an individual segment;</li> <li>• Users may select multiple segments of the same road;</li> <li>• Users may select all segments of a road;</li> <li>• Users may select all roads in a district or metro area.</li> </ul>			
3.3.7.4	CR008C2	When identical events are created on adjacent segments possibly due to different sources reporting the same incident , the CRS shall aggregate the events to become one large event that spans both segments.			
3.3.7.4	CR008C3	The segment entry portion of the CRS shall provide a mechanism for users to create the event by: <ul style="list-style-type: none"> <li>• Selecting the segment(s);</li> <li>• Describing the attributes of the event (at least including: road condition, weather, temperature, snow accumulation, wind speed, direction, duration);</li> <li>• Describe the duration of the event.</li> </ul>			
3.3.7.4	CR009C	The CRS shall provide a mechanism for users to view event reports.			
3.3.7.4	CR009C1	The CRS shall provide a mechanism for authorized NDOT personnel to locate and view events from a searchable listing of events.			
3.3.7.4	CR009C2	The CRS shall provide a mechanism for authorized NDOT personnel to print lists of current events			
3.3.7.4	CR009C3	The CRS shall provide a mechanism for authorized NDOT personnel to Edit event reports.			
3.3.7.4	CR009C4	The CRS shall provide a mechanism for authorized NDOT personnel to expire event reports.			

Section	Req.ID	Requirement	Fully Meet	Cannot Meet	Meet with this change to the requirement
3.3.7.4	CR010C	The CRS shall inform users of the results of their actions.			
3.3.7.4	CR010C1	When an event is created or edited successfully, the System shall provide a confirmation that the Event has been created / edited successfully.			
3.3.7.4	CR011C	The CRS shall provide a mechanism for authorized NDOT personnel to communicate event information to other agencies or the traveling public directly.			
3.3.7.4	CR012C	The CRS shall provide a mechanism for authorized NDOT personnel to generate Microsoft Word documents (or text that can be inserted in to Word documents) that describe active events recently entered. For example: The intent is that users could create an event in the CRS and create a document automatically to be printed and faxed (or faxed directly).			
3.3.7.4	CR013C	The CRS shall provide a mechanism for authorized NDOT personnel to send email messages.			
3.3.7.4	CR004	The Conditions Reporting Subsystem shall provide a graphical user interface similar to the map used in the public web page.			