

### FAX COVER SHEET

TO	LarryMcDonnell
COMPANY	DepartmentofAdministration,PurchasingDivision2019
FAX NUMBER	13045583970
FROM	MichaelCarvelli
DATE	2023-06-28 00:50:37 GMT
RE	SOLICITATION NO.: CRFQ 0803 DOT2300000149

### COVER MESSAGE

VENDOR NAME: i3 Celtic, and i3 Verticals Company  
 BUYER: Larry D McDonnell  
 SOLICITATION NO.: CRFQ 0803 DOT2300000149  
 BID OPENING DATE: 28 June 2023  
 BID OPENING TIME:  
 1:30 PM EST  
 FAX NUMBER:  
 304-558-3970

RECEIVED

2023 JUN 28 AM 8:24

WV PURCHASING  
DIVISION



Ce;toc4Dep  
artment of  
Administrati  
on  
Purchasing  
Division  
2019  
Washington  
Street East  
Post Office  
Box 50130  
Charleston,  
WV 25305-  
0130

State of West Virginia Centralized  
Request for Quote Info

Technology

<b>Proc Folder:</b> 1234660			<b>Reason for Modification:</b>
<b>Doc Description:</b> Automated Hauling Permit System RFQ (81230076)			
<b>Proc Type:</b> Central Master Agreement			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2023-06-13	2023-06-28 13:30	CRFQ 0803 DOT2300000149	1

**BID RECEIVING LOCATION**

BID CLERK  
DEPARTMENT OF ADMINISTRATION  
PURCHASING DIVISION  
2019 WASHINGTON ST E  
CHARLESTON WV 25305  
US

**VENDOR**

**Vendor Customer Code:**

**Vendor Name :**

i3 Celtic an i3 Verticals company

**Address :** 8961

**Street :** East Bell Road, Suite 101

**City :** Scottsdale

**State :** AZ

**Country :** USA

**Zip :** 85260

**Principal Contact :**

Michael Carvelli

Vendor Contact Phone: 623-910-9202 Extension:

**FOR INFORMATION CONTACT THE BUYER**

Larry D McDonnell  
304-558-2063  
larry.d.mcdonnell@wv.gov

Vendor Signature X *michael carvelli* FEIN# 71-0927550 DATE 27 June 2023

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION**

**REQUEST FOR QUOTATION:**

The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Department of Transportation (WVDOT) to establish an open-end contract for an Automated Hauling Permit System to be utilized by the WV Transportation Division, per the attached documentation.

INVOICE TO		SHIP TO	
DEPT. OF TRANSPORTATION 1900 KANAWHA BLVD E, BLD. 5 RM-720		DEPT. OF TRANSPORTATION 1900 KANAWHA BLVD E, BLD. 5 RM-720	
CHARLESTON	WW	CHARLESTON	WW
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Pri
1	Cloud-based software as a service - Total Overall Cost	1.00000	EA		

Comm Code	Manufacturer	Specification	Model #
81162000			

**Extended Description:**  
Automated Hauling Permit  
  
System RFQ (81230076) See  
attached pricing page and CRFQ  
documentation.

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	Technical Questions due by 4:00PM EST	2023-06-21

## INSTRUCTIONS TO VENDORS SUBMITTING BIDS

**1. REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

**2. MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

**3. PREBID MEETING:** The item identified below shall apply to this Solicitation.

- A pre-bid meeting will not be held prior to bid opening
- A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be

permitted to sign in but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

**4. VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted emails should have the solicitation number in the

subject line. Question Submission Deadline:

Submit Questions to: June 21, 2023 by 4:00PM EST

2019 Washington

Street, East

Charleston, WV

25305

Fax: (304) 558-3970

Email: [larry.d.mcdonnell@wv.gov](mailto:larry.d.mcdonnell@wv.gov)

**5. VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

**6. BID SUBMISSION:** All bids must be submitted on or before the date and time of the bid opening listed in section 7 below. Vendors can submit bids electronically through wvOASIS, in paper form delivered to the Purchasing Division at the address listed below either in person or by courier, or in facsimile form by faxing to the Purchasing Division at the number listed below. Notwithstanding the foregoing, the Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via email. Bids submitted in paper or facsimile form must contain a signature. Bids submitted in wvOASIS are deemed to be electronically signed.

Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason.

**For Request for Proposal ("RFP") Responses Only:** Submission of a response to a Request for Proposal is not permitted in wvOASIS. In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal prior to the bid opening date and time identified in Section 7 below, plus <sup>N/A</sup> convenience copies of each to the Purchasing Division at the address shown below. Additionally, the Vendor should clearly identify and segregate the cost proposal from the technical proposal in a separately sealed envelope.

**Bid Delivery Address and Fax Number:**

Department of Administration,  
Purchasing Division 2019  
Washington Street East  
Charleston, WV 25305-0130  
Fax: 304-558-3970

A bid submitted in paper or facsimile form should contain the information listed below on the face of the submission envelope or fax cover sheet. Otherwise, the bid may be rejected by the Purchasing Division.

VENDOR NAME: i3 Celtic, and i3 Verticals Company  
BUYER: Larry D McDonnell  
SOLICITATION NO.: CRFQ 0803 DOT2300000149  
BID OPENING DATE: 28 June 2023  
BID OPENING TIME:  
1:30 PM EST

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304-558-3970

**7. BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by *wvOASIS* (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date **June 28, 2023 at 1:30PM EST**  
and Time:



Bid Opening Location: Department of Administration,  
Purchasing Division 2019 Washington Street East  
Charleston, WV 25305-0130

**8. ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

**9. BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

**10. ALTERNATE MODEL OR BRAND:** Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

- [ ] This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

**11. EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

**12. COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

**13. REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

**14. UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

**15. PREFERENCE:** Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and must include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at: [www.state.wv.us/admin/purchase/vrc/Venpref.pdf](http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf).

**15A. RECIPROCAL PREFERENCE:** The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. Any request for reciprocal preference must include with the bid any information necessary to evaluate and confirm the applicability of the preference. A request form to help facilitate the request can be found at: [www.state.wv.us/admin/purchase/vrc/Venpref.pdf](http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf).

**16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37 and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly

certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

**17. WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

**18. ELECTRONIC FILE ACCESS RESTRICTIONS:** Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

**19. NON-RESPONSIBLE:** The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform or lacks the integrity and reliability to assure good-faith performance.”

**20. ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

**21. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE**

**CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT  
SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**22. WITH THE BID REQUIREMENTS:** In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.

**23. EMAIL NOTIFICATION OF AWARD:** The Purchasing Division will attempt to provide bidders with e-mail notification of contract award when a solicitation that the bidder participated in has been awarded. For notification purposes, bidders must provide the Purchasing Division with a valid email address in the bid response. Bidders may also monitor wvOASIS or the Purchasing Division's website to determine when a contract has been awarded.

**24. ISRAEL BOYCOTT CERTIFICATION:** Vendor's act of submitting a bid in response to this solicitation shall be deemed a certification from bidder to the State that bidder is not currently engaged in, and will not for the duration of the contract, engage in a boycott of Israel. This certification is required by W. Va. Code § 5A-3-63.

## GENERAL TERMS AND CONDITIONS:

**1. CONTRACTUAL AGREEMENT:** Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

**2. DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

**2.1. "Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

**2.2. "Bid" or "Proposal"** means the vendors submitted response to this solicitation.

**2.3. "Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

**2.4. "Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.

**2.5. "Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.

**2.6. "Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

**2.7. "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

**2.8. "State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

**2.9. "Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

**3. CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:



**Term Contract**

**Initial Contract Term:** The Initial Contract Term will be for a period of one (1) year. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as \_\_), and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

**Renewal Term:** This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to five (5) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)



**[ ] Alternate Renewal Term** – This contract may be renewed for \_\_\_\_\_ succe approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

**Delivery Order Limitations:** In the event that this contract permits delivery orders, a delivery order may only be issued during the time this

Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.



**[ ] Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within \_\_\_\_\_ day  
s.

[ ] **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within \_\_\_\_\_ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that:

the contract will continue for \_\_\_\_\_ years;

the contract may be renewed for \_\_\_\_\_ successive \_\_\_\_\_ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's Office (Attorney General approval is as to form only).

[ ] **One-Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

[ ] **Construction/Project Oversight:** This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as \_\_\_\_\_), and continues until the project for which the vendor is providing oversight is complete.

**Other:** Contract Term specified in \_\_\_\_\_

**4. AUTHORITY TO PROCEED:** Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

**5. QUANTITIES:** The quantities required under this Contract shall be



determined in accordance with the category that has been identified as applicable to this Contract below.

- [✓] Open End Contract:** Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.
- [✓] Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.
- [ ] Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

[ ] **One-Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

[ ] **Construction:** This Contract is for construction activity more fully defined in the specifications.

**6. EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One-Time Purchase contract.

**7. REQUIRED DOCUMENTS:** All of the items checked in this section must be provided to the Purchasing Division by the Vendor as specified:

[ ] **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

**8. INSURANCE:** The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or

change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

- Commercial General Liability Insurance** in at least an amount of: \_\_\_\_\_ per  
\$1,000,000.00  
occurrence.
- Automobile Liability Insurance** in at least an amount of: \_\_\_\_\_ per occurrence.
- Professional/Malpractice/Errors and Omission Insurance** in at least an amount of:  
\_\_\_\_\_ per occurrence. Notwithstanding the forgoing,  
Vendor's are not required to list the State as an additional insured for this  
type of policy.
- Commercial Crime and Third Party Fidelity Insurance** in an amount of:  
\_\_\_\_\_ per occurrence.
- Cyber Liability Insurance** in an amount of: ~~\$1,000,000.00~~ \_\_\_\_\_ per  
amount of: occurrence.
- Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.
- Pollution Insurance** in an amount of: \_\_\_\_\_ per occurrence.
- Aircraft Liability** in an amount of: \_\_\_\_\_ per occurrence.

**9. WORKERS' COMPENSATION INSURANCE:** Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

**10. VENUE:** All legal actions for damages brought by Vendor against the State shall be brought in the West Virginia Claims Commission. Other causes of action must be brought in the West Virginia court authorized by statute to exercise jurisdiction over it.

**11. LIQUIDATED DAMAGES:** This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

- \_\_\_\_\_ for \_\_\_\_\_.
- Liquidated Damages Contained in the Specifications.
- Liquidated Damages Are Not Included in this Contract.

**12. ACCEPTANCE:** Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

**13. PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

**14. PAYMENT IN ARREARS:** Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software

maintenance, licenses, or subscriptions may be paid annually in advance.

**15. PAYMENT METHODS:** Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

**16. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

**17. ADDITIONAL FEES:** Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

**18. FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

**19. CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

**20. TIME:** Time is of the essence regarding all matters of time and performance in this Contract.

**21. APPLICABLE LAW:** This Contract is governed by and interpreted

under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.

**22. COMPLIANCE WITH LAWS:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**23. ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

**24. MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

**25. WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

**26. SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions

which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

**27. ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

**28. WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

**29. STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

**30. PRIVACY, SECURITY, AND CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

**31. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**32. LICENSING:** In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**33. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.



**34. VENDOR NON-CONFLICT:** Neither Vendor nor its representatives are permitted to have any interest, nor shall they acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

**35. VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

**36. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

**37. NO DEBT CERTIFICATION:** In accordance with West Virginia

Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

**38. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

**39. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

- [✓] Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.
- [ ] Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at [purchasing.division@wv.gov](mailto:purchasing.division@wv.gov).

**40. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

**41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the

United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
  1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
  2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

#### **42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL:**

In

Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not

produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

**43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE:** W. Va. Code § 6D-1-

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requires that for contracts with an actual or estimated value of at least \$1 million, the Vendor must submit to the Agency a disclosure of interested parties prior to beginning work under this Contract. Additionally, the Vendor must submit a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-work interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a

national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

**44. PROHIBITION AGAINST USED OR REFURBISHED:** Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

**45. VOID CONTRACT CLAUSES:** This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

**46. ISRAEL BOYCOTT:** Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Michael Carvelli, President

(Address) 8961 E Bell Road, Suite 101 Scottsdale, AZ85260

(Phone Number) / (Fax Number) 623- 910- 9202 / 480-991-4200

(Email address) Michael.carvelli@celtic.bz

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair

and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

*I3 Celtic an i3 Verticals Company*

(Company) *michael carvelli*

(Signature of Authorized Representative)

Michael Carvelli, President 27 June 2023

(Printed Name and Title of Authorized Representative) (Date)

623- 910- 9202 / 480-991-4200 (Phone Number) (Fax Number)

Michael.carvelli@celtic.bz

(Email Address)

**REQUEST FOR QUOTATION**  
**Automated Routing OS/OW Permit System (81230076)**  
**CRFQ DOT23\*149**

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**SPECIFICATIONS**

- 1. PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Department of Transportation to establish an open-end contract for an Automated Hauling Permit System (AHPS).

**Overview**

Ensuring safety of the traveling public, protecting taxpayer funded infrastructure in roads and bridges, and enabling efficient travel of oversize (OS) and overweight (OW) traffic throughout WV are critical responsibilities of the WVDOT. Currently, WVDOT utilizes an automated OS/OW permitting system provided and hosted by Bentley Systems, Inc which provides real-time live load analysis of most bridge structures through use of existing Bentley LAHPS dataset/model information. In addition, the system manages route restrictions and provides a web-based user interface (UI).

Recently WVDOT has undergone a production load rating system change, with all routine bridge load rating performed with AASHTOWare Bridge Rating (BrR). For this reason, WVDOT seeks an automated permitting solution that will provide all necessary requirements outlined in this RFQ while directly interfacing with BrR for real-time live load analysis of WVDOT bridges.

The overall purpose of this RFQ is to solicit bids for the development and maintenance of a new automated OS/OW hauling permit system (AHPS) that directly interfaces with BrR's Load Rating Tool (LRT) and is able to utilize data from WVDOT's current bridge inspection database (currently this is Bentley Asset Reliability Inspections). In addition, the AHPS will also need to meet the following agency requirements:

- 1.1** Must integrate fully with the West Virginia State Treasurer's Office (STO) E- Government payment system to capture all payments.
- 1.2** Must provide a user-friendly, quick, and easy permit application for hauling permit applicants.
- 1.3** Must provide thorough and complete route analysis of all routes within WVDOT network, including Interstate, US,

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WV, and county routes.

- 1.4** Must provide an automated process that maintains WVDOT's current level of auto-issuance of OS/OW permits (80-85%).
- 1.5** Must provide real-time data exchanges, as appropriate.
- 1.6** Must provide a secured solution with ample oversight of all HPS operations.
- 1.7** Must provide the ability to modify or adapt AHPS as needed, based on business changes that result from WVDOT initiatives, future legislation and or FHWA mandates and other internal or external sources as requested by WVDOT.

- 2. DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

- 2.1 "Contract Item" or "Contract Items"** means the list of items identified in Section 3.1 below and on the Pricing Pages.

- 2.2 "Pricing Pages"** means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A, and used to evaluate the Solicitation responses.

- 2.3 "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

- 3. QUALIFICATIONS:** Vendor, or Vendor's staff if requirements are inherently limited to individuals rather than corporate entities, shall have the following minimum qualifications:

- 3.1** Vendor must provide, upon request, showing their experience with having successfully completed a minimum of two (2) implementations of an existing Automated Hauling Permit System (AHPS) within an organization of similar size and complexity or larger than WVDOT.

- 3.2** Vendor must provide, upon request, showing a minimum of three (3) years of experience providing the proposed AHPS to be eligible for award.

- 3.3** Vendor must provide, upon request, Vendors Project Manager specifically assigned to manage the resulting contract(s) must have managed at least three (3) software implementation projects of similar scope and complexity within the last ten



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(10) years.

**3.4** Vendor must provide, upon request, Vendors Project Manager specifically assigned to manage the resulting contract(s) has managed at least one (1) implementation project that involved the proposed software major version (e.g. 5.XX) within the last five (5) years.

**3.5** Vendor must provide, upon request, a list of key management, customer service and other roles to be used in the fulfillment of the contract(s) (in addition to the Project Manager). Role descriptions, including requisite qualifications and experience of the specific employee assigned to each role, must also be included if requested.

**4. GENERAL REQUIREMENTS:**

**4.1 Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

**4.1.1 Automated Hauling Permit System (AHPS) : Core System Requirements**

**4.1.1.1** AHPS must be a web-based hosted solution.

**i3-Celtic Response:**

i3-Celtic and its hosting partner Microsoft Azure will be responsible for all software and hardware acquisition and maintenance, and support of the proposed CTS-PARS.

The CTS-PARS is developed using Microsoft .Net, ESRI ArcGIS Services, and support SQL Server/Oracle Database.

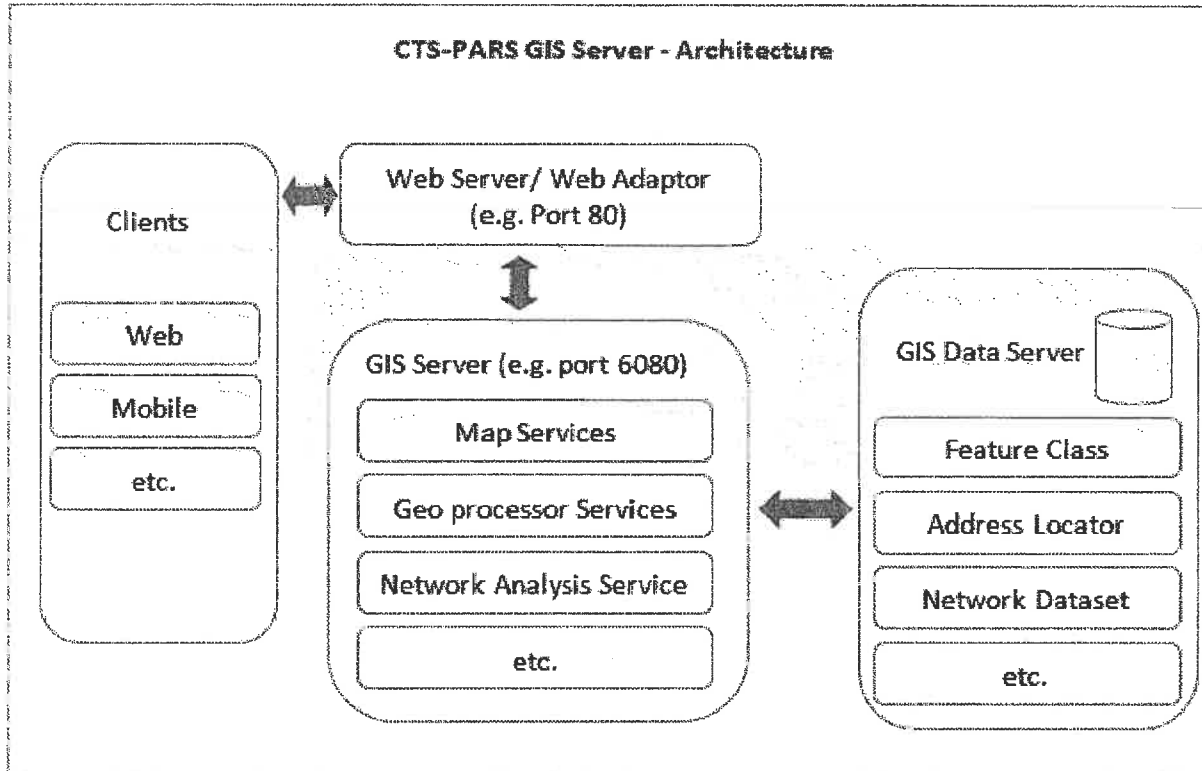
The components of the CTS-PARS can be summarized as follows:

- Clients - Web browsers are used to connect to web applications running in the GIS Services. The system supports all standard browsers, including Microsoft Edge, Google Chrome, Firefox, and Safari.
- Web Server – The GIS Web Server Adaptor allows the GIS Server to integrate with the permitting system web server. The Web adaptor forwards requests to the GIS Server.
- GIS Server – The GIS Server process GIS Service request and communicates with the GIS database server.
- Data Server – Following databases shall be created/maintained:
  - o The GIS database contains a feature class, feature table, locator, dataset, network dataset, etc.
  - o THE CTS-PARS OLTP and OLAP database contains data, including permit customers, permit transactions, payments, credentials, and more.

The following is a high-level CTS-PARS GIS Server Architecture:

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The CTS-PARS universal interface controller (UIC) shall integrate with WVDOT other asset categories and data, including enterprise data warehouse and other State systems, to include roadways, interchanges, ramps, and structures in the evaluation of routes state-wide.

- 4.1.1.2** AHPS must support (be tested on and certified on) the following Web Browsers, at minimum: Microsoft Edge, Google Chrome, Mozilla Firefox, and Apple Safari.

**i3-Celtic Response:**

CTS-PARS is a web-based UI solution. The system supports all standard browsers, including Microsoft Edge, Google Chrome, Firefox, and Safari.

- 4.1.1.3** AHPS must issue a credential or permit within five (5) inutes for auto-generated permits or credentials or five (5) minutes after the last manual approval.

**i3-Celtic Response:**

CTS-PARS is a high-performance web-based application. Considering the straightforward application flow and available options to pre-populate data to reduce data entry time, the permit credential can be issued in less than 5 min.

- 4.1.1.4** Vendor must be responsible for all equipment, labor, and services necessary to set-

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up and maintain the internet connectivity to support access to the system at the vendor hosting location.

**i3-Celtic Response:**

i3-Celtic and its hosting partner Microsoft Azure will be responsible for all software and hardware acquisition and maintenance, and support of the proposed CTS-PARS.

- 4.1.1.5** Vendor must administer the system databases and services on servers located at the vendor's facility and maintain the system database for continuity and data integrity.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.6** AHPS must be available twenty-four (24) hours a day, 7 days a week except for during agreed-upon scheduled maintenance.

**i3-Celtic Response:**

CTS-PARS shall be hosted in the Azure Cloud in a proposed load-balanced and database mirroring setup for redundancy and maximum accessibility to the system. CTS-PARS Solution shall meet greater than 99.9% uptime on a 24/7, 365-days per year basis except for scheduled maintenance. For example, if a system experiences 45 minutes of unplanned downtime in a month, and the total time in the month is 43,800 minutes (30 days x 24 hours x 60 minutes), the availability would be calculated as follows:

$$\text{Availability} = (43,800 - 45) / 43,800 = 99.9\%$$

i3-Celtic will work with the WVDOT team to set specific uptime and availability targets for CTS-PARS that shall be included in service level agreements (SLAs).

- 4.1.1.7** Vendor must operate on a network offering adequate performance to meet the business requirements for the system and enhance or upgrade as required to maintain performance.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.8** AHPS must be able to respond to needs for additional capacity without performance degradation as the State's needs scale.

**i3-Celtic Response:**

CTS-PARS can scale out and scale up using additional Infrastructure provisioning. The proposed solution can be sized considering 150 transactions per minute (average) with a Peak number of transactions up to 600.

- 4.1.1.9** AHPS data must be available in a non-proprietary standard, such as ASCII data files (e.g., comma separated values).

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.10** AHPS data must not be subject to any copyright, patent, trademark or other trade secret regulation.

**i3-Celtic Response:** We will meet this requirement.

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- 4.1.1.11** AHPS must have direct integration with WVDOT owned Bridge BrR and route GIS databases provided through an ESRI endpoint.

**i3-Celtic Response:**

CTS-PARS will be

- using GIS database, network dataset, locator, and map services to show map, layers, find address and generate route.
- integrated with BrR to do bridge analysis of bridges in the generated route.

- 4.1.1.12** AHPS must allow for a configurable workflow for various levels of WVDOT users (eg:) administrators, central office permit technician, district office review

**i3-Celtic Response:**

CTS-PARS provides configurable workflow and application fording rules that allow the system to add permit application in the workflow for review by an authorized user.

The workflow can be configured depending on WVDOT specific regulations and requirements of the state. However, the system considers the following parameters for the approval workflow:

- 1) Determine the size and weight of the load
- 2) Check permit requirements: These include the weight and size limits, the types of vehicles, the number of axles, and the specific routes that are permitted.
- 3) Review and approval: After the permit application has been submitted, it will be reviewed by the authorized user group(s). This review process period depends on the complexity of the load and the number of permits being requested.
- 4) Issuance of permit: Once the permit has been approved, it will be issued to the applicant. The permit will include information about the standard and specific restrictions.
- 5) Compliance and enforcement: The system may require for approval of the bridge engineer to ensure that the load is being transported in compliance with the permit.

The permit approval workflow business rule includes compliance with regulations to ensure that the application has been reviewed and approved by required user groups.

- 4.1.1.13** AHPS must provides automated issuance of OS/OW permits based on real-time route analysis coupled with real-time bridge live load analysis interfaced through AASHTOWare BrR's LRT.

**i3-Celtic Response:**

CTS-PARS generates real-time routes considering provided stops and vehicle details. The system identifies bridges on the route and utilizes those bridges to do bridge analysis through BrR.

- 4.1.1.14** AHPS must have a comprehensive database that allows reporting and querying functionality for a myriad of data reports and performance measures.

**i3-Celtic Response:** CTS-PARS offers a set of production-proven standard reports, including Route Usage, Bridge Usage, and more. The system also provides additional MIS Reports, Inquiries, and an Ad-hoc report feature with the availability of Graphical Charts. All reports and inquiries include mandatory and optional search parameters, including date range, customer account, permit number, commodities, load, and dimensions, and more.

- 4.1.1.15** AHPS must have web-based mapping, created by the vendor based on WVDOT

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GIS/LRS information.

**i3-Celtic Response:**

The CTS-PARS routing system is developed using ESRI ArcGIS Services.

Base Map – Our routing solution leverages the ESRI base map along with either ESRI street map premium (SMP) data or the state-provided routable road network.

ESRI SMP provides quarterly updates. If we use State-provided data, we will align our update process with state releases. We recommend applying updates annually.

However, i3-Celtic has developed a process to update the road network as and when required. i3-Celtic will work with WVDOT to schedule, test, and approve updates to the road network data. WVDOT and i3-Celtic must put additional efforts into the conflation process to align structure updates on the road network.

The system creates a log of changes to the road network while updating the system records (including impacted active restrictions, routes, and structures).

**4.1.1.16 AHPS must have GIS database support for routing.**

**i3-Celtic Response:**

The CTS-PARS routing system utilizes GIS data to generate safer route for travel. However, it also provides the option for manual route (non-GIS) that require approval and undergo a review process in the queue.

**4.1.1.17 AHPS must have intelligent route routing and analysis, including self-routing, which incorporates current route and bridge restrictions and real-time bridge analysis from AASHTOWare BrR's LRT.**

**i3-Celtic Response:**

CTS-PARS generates real-time routes considering provided stops and vehicle details. The system identifies bridges on the route and utilizes those bridges to do bridge analysis through BrR.

**4.1.1.18 AHPS must have security management.**

**i3-Celtic Response:** We will meet this requirement.

**4.1.1.19 AHPS must have vertical and horizontal clearance management for inventoried structures by interfacing with WVDOT bridge inspection database to gather known clearances.**

**i3-Celtic Response:**

i3-Celtic has the experience to integrate and reference the State's bridge information to create an accurate and up-to-date representation of the bridges on the GIS dataset using the following steps:

- Data acquisition: Collecting bridge data
- Feature extraction: Extract features of interest related to the bridges
- Georeferencing: Establishing a common coordinate system or reference framework that enables the different data sources to be aligned and overlaid on top of each other
- Matching: Comparing the extracted features from each data source and finding matches or similarities between them. Identify differences in the shape, size,

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location, and orientation of the features and find ways to align them.

- Conflation: Merging or aligning the features from various sources to create a more accurate representation of the bridges on the map.

CTS-PARS route solver process will validate the load and dimensions restriction of bridges and retrieve bridge data in a tabular format based on the user-entered route. The Bridge engineer has the option to add/remove bridges from the list and run "Bridge Analysis." The system will allow the bridge engineer to export load and dimension data in XML format as required by the AASHTO BrR. Based on the AASHTO BrR result, the bridge engineer will provide recommendations of allowable load & dimensions, weight, speed limit, and center line restrictions.

- 4.1.1.20** AHPS must allow restriction management through provided route/bridge clearance inventory data as well as temporary restrictions as added by WVDOT personnel as needed.

**i3-Celtic Response:**

The steps to update bridge data on a GIS map typically involve the following:

- Reviewing the new data: Ensure that it is accurate and up to date.
- Update the database: Once the new data has been verified, update the attributes associated with the bridge, such as its location, physical characteristics, and weight restrictions.
- Conflate the new data: If the new structure is not in a GIS format, it will need to be converted into a GIS-compatible format and then conflated with the existing GIS data. This involves aligning the new data with the existing data and ensuring that the two datasets are accurate and consistent.
- Verify the updated data: Verify that the updated bridge data is displayed correctly on the GIS map by conducting route analysis to ensure that the routing information is accurate.
- Publish the updated data: Once the updated data has been verified and confirmed, it can be published for production use.

CTS-PARS includes a powerful Restrictions Management module that allows authorized users to enter in real-time any permanent or temporary road restrictions, including seasonal road restrictions, and provides an interface to integrate with Agency's Restrictions Management System. When road restriction changes occur, affected permit holders can be automatically notified via WVDOT-preferred electronic notification, including email or text messages.

- 4.1.1.21** AHPS must have the ability to interface bridge load rating data that is outside of AASHTOWare BrR's database, including ratings by capacity table and spreadsheets.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.22** AHPS must authenticate, authorize, create and update users against the state Microsoft Active Directory Domain.

**i3-Celtic Response:** i3-Celtic has experience integrating our COTS Solution with State's Azure Active Directory and other single sign-on services.

- 4.1.1.23** AHPS must be built and secured utilizing an industry acceptable security architecture to meet guidelines set forth by: CIS Center Internet Security (CIS), National Institute of Standards and Technology (NIST) or National Security Agency (NSA).

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**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.24** AHPS must have security measures to ensure that the WVDOT's System application and data is protected.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.25** Vendor must integrate all payments to be captured and processed to the West Virginia State Treasurer's Office E- Government system for all permit fee payment options for customers, including credit/debit card and EFT/ACH.

**i3-Celtic Response:**

The integration between the State designated merchant service provider, and CTS-PARS will be accomplished through an API or a web service through i3-Celtic's universal interface controller. The web services enable the secure transmission of credit card information and provide real-time authorization and settlement of transactions that allows CTS-PARS shall confirm the payment and issue credentials.

- 4.1.1.26** AHPS must have finance and accounting management and reporting.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.27** AHPS must include but not limited to incorporate bridge load rating data that is outside of BrR's database, including ratings by capacity table, or by spreadsheet.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.28** Post Go Live, the vendor must use a change management process, that includes coordination with a designated WVDOT contact (to be identified by WVDOT during the implementation of the System), for notification and tracking of change requests as well as critical outages.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.29** AHPS must maintain all data accurately; data loss must be avoided.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.1.30** Vendor must provide a Business Continuity Procedure Plan and Disaster Recovery Plan before WVDOT Go Live. These plans must be approved by WVDOT.

**i3-Celtic Response:**

**Backup/Archive routine**

Archiving and retention of the data will start with the business. Based on WVDOT's data-retention policies that involve cross-organizational teams (legal, compliance & records), i3-Celtic will outline the approaches to retain and purge data. After WVDOT's archival retention period has passed, i3-Celtic will delete the archived database and associated system package as required.

**Disaster Recovery Plan**

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i3-Celtic shall provide a well-structured and production proven Disaster recovery and business continuity plan to WVDOT.

i3-Celtic will work with WVDOT to finalize and test a business continuity, disaster recovery and backup process. While finalizing this process, i3-Celtic assures that CTS-PARS will be available within an agreed upon recovery window. We have preliminarily identified a 4-hour maximum recovery window for an unplanned operational disruption called Simple Outages and a 24-hour system recovery window for a catastrophic disaster called Minor Catastrophes affecting the data center. The Major Catastrophes recovery window will be dependent on the nature of catastrophe and i3-Celtic will review and work with WVDOT to identify the recovery window. i3-Celtic is committed to providing the best possible experience to our customers and will give its best effort to recover the system.

The following activities defines the Backup and Recovery service parameters that will be performed by the i3-Celtic team:

- Execution and checking of scheduled data backups to ensure backup process ran as scheduled.
- Remedial activities required to resolve backup and restore failures.
- Recovery of Supported Applications and Production Databases after a declared Disaster Recovery Event
- Monitoring of backup job success/failure, start time, time to backup.
- Testing of backup and recovery operations (restoration and validation)

The following is our proposed disaster recovery approach:

**Major Catastrophes**

These types of events suggest that the computer hosting facility has been wiped out via some tragic event (earthquake, flood, fire etc.) and the location and computers are no longer available. This type of catastrophe suggests that the WVDOT and i3-Celtic will need evaluate possibilities and agree upon the recovery window and process. This could mean new equipment purchase, new cloud service, etc. i3-Celtic will assist in the installation at a new site and restore the latest backup of the data and application.

As an interim solution, the database and application could be made available through the development environment with minimal functionality to include printing and would have access for internal users only.

**Minor Catastrophes**

These types of events suggest that something has happened to the server(s), and it is no longer available, but the hosting facility is still in service. New server (s) need to be acquired and installed at the hosting facility, backups retrieved, and the database and application restored.

While waiting for the equipment, the Production environment will be using the UAT server and backups can be retrieved and restored.

Upon restore of production environment the UAT environment will be restored.

**Simple Outages**

Some disasters are not as overwhelming as others and these we can categorize as simple outages where the database and/or the application has been rendered unusable and out of service at any point in time.

These types of events can be rectified by a restore of the then most current version of the database and or deployment of the then most current version of the application.

The best plans in preparation for disaster recovery are to have the most current data available quickly to minimize the time between the event and the time when operations are restored to the production environment. The following describes our approach to backing up data in a timely manner to achieve restoration of the system functionality to the users as quickly as possible given the disaster circumstances. The following is our proposed backup planning:

**Windows Server Maintenance Windows**

Windows updates are critical to the security of the any computer system, Windows updates are set to download automatically and be manually installed each weekend during the maintenance window. The projected maintenance window is currently Sunday 9 AM to Noon Mountain Standard Time. This is



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dependent on what batch jobs are running at the time. Many times, Windows updates can be installed without service interruption; others may require a reboot of a server. Therefore, update installations may be performed manually. SQL Server patches are released from time to time from Microsoft are to be installed in production once a patch has been installed and application tested in the development system.

**Database Servers**

The application has a production database server and a UAT/Disaster Recovery database standby server to which each production transaction is replicated to in near real time.

**Windows Server Backups**

The following servers will be backed up on a regular basis:

Machines:

- Production Database Server
- Production Web Servers
- Production CTS
- Virtual Domain Controller
- File share Server

**Real Time Transactional Replication**

The Production Database Server is replicated to a stand-by database server in the different UAT Environment. This data is stored on a separate data store than the production environment. This will allow for minimal down time if the original Production Database Server encounters a problem.

**Database Server Maintenance Jobs**

To ensure that each database continues to operate as efficiently as possible, maintenance jobs are required. Table indexes are reorganized or rebuilt, and database statistics collected.

**Off-Site Backup Process**

Production database backups are copied to the different geolocation on a regular nightly schedule after local backups are completed as above.

During the technical discussion sessions, i3-Celtic shall demonstrate its backup and disaster recover approach. Our current disaster recover approach is as follows:

**Resolution Steps**

- 1) Notify Customer
- 2) Determine the extent of the Disaster:
  - Bad virtual server
  - Bad physical server
  - Bad storage
  - Hosting Location lost

**Recovery Steps**

Recovery steps are provided below based on disaster type.

Bad Virtual Server

Recover Server from Template (a template server is a copy of a server waiting to deploy – This server has all necessary software installed, once a new server is created from a template application data will need to be restored to that server)

Existing Templates:

- Web Server Template
- SQL Server Database Server Template
- Email Server Template
- Domain Controller Template

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• File Server Template

Bad Storage Centre:

- The Virtual machines are stored on the storage center; this consists of multiple physical hard disks and controllers. In the event of a disk failure or other problem the storage center will automatically alert Dell Support and send emails to i3-Celtic Support Staff notifying them of an issue.
- If the Storage Center goes off-line the system will be down and appropriate action will need to be taken before the system is back up.
- The backup environment will need to consist of the following items to get the system back on-line.
  - One webserver
  - One SQL Server with CTS-PARS
  - One mail server
  - One File share Backup restored.
  - Database backup (CTS-PARS) restored.
  - Router backup restored (if needed)
  - One domain controller (if needed)

Hosting Location lost: Microsoft Azure will be contacted to restore the offsite backups. The Process of building the servers and finding a replacement location will begin at Azure facility. In the meantime, if required, the environment will be created at a i3-Celtic location and restored to operational readiness until the normal hosting facility is restored at Azure.

#### **4.1.2 Automated Hauling Permit System (AHPS) Data and Security Requirements**

##### **4.1.2.1 AHPS should conform with State of West Virginia Office of Technology Cloud SaaS Addendum.**

**i3-Celtic Response:** We will meet this requirement.

##### **4.1.2.2 AHPS must allow for SSO (Single Sign-On) from WVDOT network to AHPS for users.**

**i3-Celtic Response:**

CTS-PARS solution is built on top of a secured solution architecture that controls user authentication and encrypts confidential user information such as passwords. The system supports single sign-on authentication and is configurable to support authentication using both LDAP and Azure.

##### **4.1.2.3 AHPS must encrypt browser session data between the server and client (e.g. in transit) using at a minimum Transport Layer Security (TLS) 1.2 encryption.**

**i3-Celtic Response:**

CTS-PARS communication uses SSL (secured channel) to ensure secure data communication while in motion. CTS-PARS encrypts confidential data using industry-standard encryption methodology. Encryption includes passwords and security answers in the database while at rest. i3-Celtic has implemented an AES 256 encryption algorithm for data encryption. The system provides the capability to integrate with WVDOT-provided SSL certificates or any third party-provided certificates (TLS >= 1.2) for data encryption in transit.

##### **4.1.2.4 AHPS must support 256-bit encryption and TLS 1.2.**

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement and the same has been

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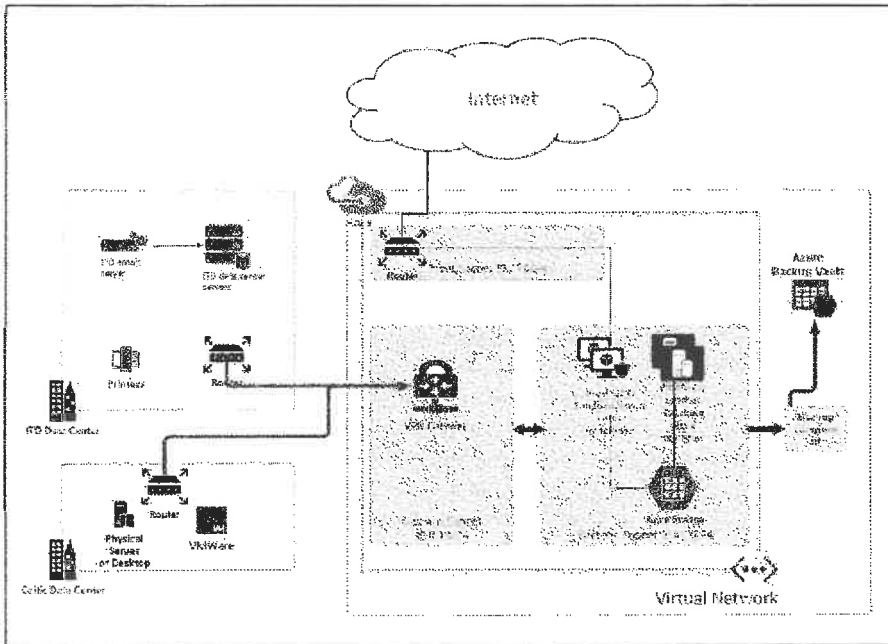
addressed in our response to requirement 4.1.2.3.

**4.1.2.5** Vendor must have a web server, and it must be separate from the database server, physically or logically.

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement. We do follow standard practice by keeping Application and Database Server separately.

The diagram below shows the physical network diagram that shall be used to host CTS-PARS in the Microsoft Azure Cloud



Azure meets a broad set of international and industry-specific compliance standards, such as General Data Protection Regulation (GDPR), ISO 27001, HIPAA, FedRAMP, SOC 1 and SOC 2, as well as country-specific standards. One measure of Azure's commitment to the privacy of customer data is adoption of the world's first code of practice for cloud privacy, ISO/IEC 27018.

At i3-Celtic we follow strict security standards as per the i3-Celtic security guide that is similar to ISO 27001 security practices. As required, i3-Celtic will pursue ISO 27001 Certification prior to the contract award.

All hosts, servers and devices will have currently supported and hardened operating systems, anti-virus software, firewalls, anti-spam, anti-spyware, and anti-malware utilities. Our hosting facility will also be configured with advanced malware protection, application visibility & control and URL filtering. Communications will be established using a secured channel to prevent unauthorized tampering of the data. The secured hosting infrastructure provides for confidentiality (i.e., No unauthorized access), Integrity (i.e., No tampering), and Authenticity (i.e., No impersonation). CMCS provides intrusion detection to lock accounts after multiple logons attempts and an audit trail is maintained.

All critical patches for operating systems, databases, web services, etc., will be applied within three working days of release by their respective manufacturers. i3-Celtic will apply maintenance updates in the pre-

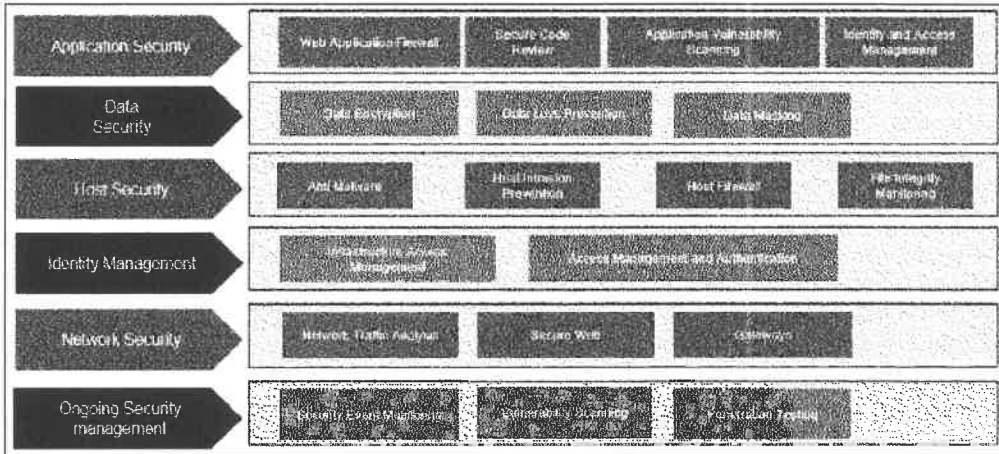
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production environment to ensure there is no unintentional disruption to the security mechanisms of the application or supporting hardware.

CMCS is tested to eliminate attacks such as cross-site scripting, SQL Injection, and path traversal attacks. CMCS communication uses SSL (secured channel) and tracks / logs all authorized / unauthorized logon attempts along with a corresponding public IP address. CMCS encrypts confidential data including passwords and security answers into the database. I3-Celtic resources will access the MoDOT data for support through the application. The MoDOT database will reside in the US only. In the event of any deviation from this plan, we will obtain the necessary permission from MoDOT.

I3-Celtic will grant access to MoDOT or third party upon written request from MoDOT.

The following diagram shows our proposed security solution:



Service type	Description
Production Server	Two (4 vCPU(s), 16 GB RAM); Windows 2016 OS
Production Database Server	One (4 vCPU(s), 16 GB RAM); SQL Server 2016
Nonproduction Database server	One (4 vCPU(s), 16 GB RAM); SQL Server 2016
Nonproduction Application server	Three (2 vCPU(s), 8 GB RAM); Windows 2016 OS
VPN to i3-Celtic and SD	VPN Gateways type, Basic VPN tier, VPN outbound VPN gateway type

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External IP address	3 Dynamic IP Addresses, 3 Static IP Addresses, 0 Remaps
Network Storage	
Offsite backup	1 instance(s) x 500, GRS
Domain Controller	One (1 vCPU(s), 4 GB RAM); Windows 2016 OS
Security Center Subscription	Standard tier, 4 nodes
F5 WAF	F5 web application firewall solution. (2 instances (HA configuration))

**4.1.2.6** AHPS must encrypt Personally Identifiable Information (PII) during transmission, use, and storage.

**i3-Celtic Response:**

Our system follows industry standards data retention approach and it is flexible enough to comply with the WVDOT retention policy.

During the requirement gathering session, we will understand and document the encryption requirements with WVDOT personnel.

In addition, we also mask all the PII information in the database and do not store any critical information in the logs.

**4.1.2.7** AHPS must allow WVDOT Administrator Users to create, modify, disable, and reactivate user access and security rights for others.

**i3-Celtic Response:**

CTS-PARS is a browser-based application that provides the User Management functionality that allows administrator users to grant, modify, disable, and reactivate security level permission to other user roles as needed.

**4.1.2.8** AHPS must allow for multiple levels of user permissions as well as custom permissions. (eg: A role for "Administrative Uses" that would allow them to run specific reports but not allow non-Administrative users to run the reports).

**i3-Celtic Response:**

CTS-PARS is a browser-based, role-based system that provides a User Management module to create user roles to allow or limit access to functionalities for different user types and modules within the system.

AHPS must log unauthorized access attempts by date, time, user id, device and location. The log would be available to WVDOT Staff upon request within twenty-four (24) hours.

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**i3-Celtic Response:**

CTS-PARS provides the User Activity logging and reporting functionality that tracks user activities such as login, logout, user privilege changes, accounts created, deleted, changed, or suspended, and administrative overrides. The system also logs all the requests/responses to interfaces and system errors. All the logs will include required information like Date, Time, UserID, Device and location as requested in above requirement.

- 4.1.2.10** Vendor must provide backup and restorative services; offline storage must be encrypted. The encrypted backup must meet Federal Information Processing Standard (FIPS) "FIPS 140-2" or the National Institute of Standard and Technology (NIST) Advanced Encryption Standard (AES) "AES-256)

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement. We are using Microsoft Azure backup and Site-recovery for configuring System backups and Offsite backups. Azure meets a broad set of international and industry-specific compliance standards, such as General Data Protection Regulation (GDPR), ISO 27001, HIPAA, FedRAMP, SOC 1 and SOC 2, as well as country-specific standards. One measure of Azure's commitment to the privacy of customer data is adoption of the world's first code of practice for cloud privacy, ISO/IEC 27018.

- 4.1.2.11** Vendor must store credentials in a one-way salted hash if state-owned Microsoft Active Directory is not used.

**i3-Celtic Response:**

i3-Celtic ensures that all credentials will be stored using a one-way salted hash mechanism. This approach enhances security by protecting sensitive information and aligns with industry best practices.

- 4.1.2.12** Vendor must support intruder lockout after no less than three (3) and no more than ten (10) incorrect login attempts.

**i3-Celtic Response:**

CTS-PARS allows up to 5 incorrect attempts before locking out the account while tracking the audit trails of the locked-out account. CTS-PARS is customizable enough to configure the account lockout for incorrect login attempts as per the requirement.

- 4.1.2.13** Vendor must have a back-up data center geographically separated from primary data center by at least three hundred (300) miles.

**i3-Celtic Response:**

i3-Celtic proposes Azure Gov Cloud with a secured data center. The Azure platform is pre-configured with all CIS standards and best practices that ensures WVDOT that the system software platform is built and hardened, utilizing an industry-standard acceptable security architecture. The proposed infrastructure is secured with virtual network and not exposed outside of this virtual network. The connection between WVDOT and i3-Celtic will use a VPN tunnel to access the environments. External users will be restricted to accessing the application using secured HTTPS protocol.

Azure meets a broad set of international and industry-specific compliance standards, such as General Data Protection Regulation (GDPR), ISO 27001,

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HIPAA, FedRAMP, SOC 1 and SOC 2, as well as country-specific standards. One measure of Azure's commitment to the privacy of customer data is adoption of the world's first code of practice for cloud privacy, ISO/IEC 27018. While configuring the Disaster recovery the above requirement of WV DOT will be addressed adequately.

**4.1.2.14** Vendor data centers must have power backup.

**i3-Celtic Response:**

As stated in the requirement 4.1.2.13 the proposed solution will be hosted on the Microsoft Azure Cloud and is compliant with most of the Security standards Microsoft is committed to provide continuous Up time for system and ensure that adequate Power backup is available within the datacenter.

**4.1.2.15** Vendor must have data backup and restore procedures.

**i3-Celtic Response:**

i3-Celtic has well established backup and restore procedures. The following activities defines the Backup and Recovery service parameters that will be performed by the i3-Celtic team:

- Execution and checking of scheduled data backups to ensure backup process ran as scheduled
- Remedial activities required to resolve backup and restore failures
- Recovery of Supported Applications and Production Databases after a declared Disaster Recovery Event
- Monitoring of backup job success/failure, start time, time to backup.
- Testing of backup and recovery operations (restoration and validation)

**4.1.2.16** Vendors Data Center and must be restricted to authorized personnel with controls such as biometric or proximity badge solutions (either or both). Vendor policies for granting access must be in place and followed. Access must only be granted to those with a need to perform tasks in the Data Center.

**i3-Celtic Response:**

At i3-Celtic, we prioritize the security of our clients' data. i3-Celtic is ISO 27001:2013 compliant, and we have established stringent Access Control Policies to ensure the highest level of security at both the application and server levels. Our comprehensive policies govern access permissions, ensuring that access is granted solely to individuals with a legitimate need to perform tasks within the data center.

**4.1.2.17** AHPS must be tested for input validation that ensures it is protected from buffer overflow, cross-site scripting, SQL injection, and unauthorized access of files and/or directories on the server.

**i3-Celtic Response:**

CTS-PARS is tested to eliminate attacks such as cross-site scripting, SQL Injection, and path traversal attacks. CTS-PARS communication uses SSL (secured channel) and tracks / logs all authorized / unauthorized logon attempts along with a corresponding public IP address. CTS-PARS encrypts confidential data including passwords and security answers into the database. i3-Celtic resources will access the WV DOT data for support through the application. The WV DOT database will

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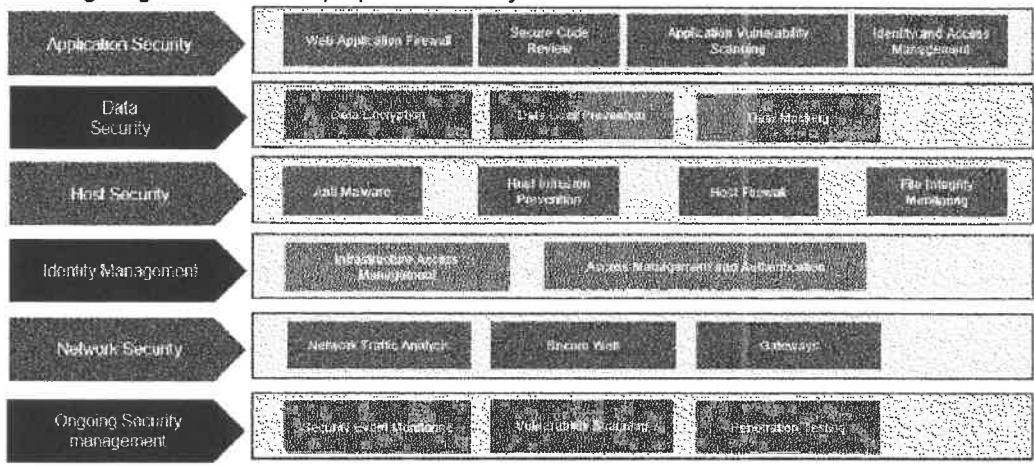
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reside in the US only. In the event of any deviation from this plan, we will obtain the necessary permission from WVDOT.

**4.1.2.18** AHPS must be tested for intrusion detection and must support the detection of illegal entrance into a computer system.

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement. All hosts, servers and devices will have currently supported and hardened operating systems, anti-virus software. The following diagram shows our proposed security solution:



**4.1.2.19** AHPS must have application software security in its baseline product and must not utilize operating system or database security only.

i3-Celtic has a well-defined information security policy, standards, and guidelines for their representatives (employee and Sub-contractors) along with an established process for policy enforcement and tracking which is aligned to ISO 27001:2013 Information Security Standards. i3-Celtic's information security framework is supported by a set of supplementary policies, procedures & standards aimed at achieving the enterprise-level information security objectives.

CTS-PARS has been developed using industry-recommended secure coding standards such as OWASP top 10, SANS 25, etc. and adhered to a Secure SDLC process through its development process. i3-Celtic will be leveraging a Secure SDLC framework which involves following secure coding practices & periodic scanning for known vulnerabilities for any software developed/customized for the modernization program.

**4.1.2.20** AHPS must secure and authorize access to the underlying data and databases of the application.

**i3-Celtic Response:** We will meet this requirement.

**4.1.2.21** AHPS must have automated systems in place to ensure malware is detected and prevented.



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**i3-Celtic Response:**

All hosts, servers and devices will have currently supported and hardened operating systems, anti-virus software, firewalls, anti-spam, anti-spyware, and anti-malware utilities. The hosting facility will also be configured with advanced malware protection, application visibility & control and URL filtering. Communications will be established using a secured channel to prevent unauthorized tampering of the data. The secured hosting infrastructure provides for confidentiality (i.e., No unauthorized access), Integrity (i.e., No tampering), and Authenticity (i.e., No impersonation). CMCS provides intrusion detection to lock accounts after multiple logins attempts and an audit trail is maintained.

All critical patches for operating systems, databases, web services, etc., will be applied within 60 days of release by their respective manufacturers as required.

- 4.1.2.22** Vendor must ensure that information exchanged between devices via the System must be secured and encrypted.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.2.23** Vendor must monitor system and security logs generated by the System. The logs must be monitored by an automated system 24/7, all days of the year. WVDOT must be alerted within one (1) hour of a security alert.

**i3-Celtic Response:**

i3-Celtic will have a single point of contact for all security incident handling and management.

i3-Celtic has a comprehensive Security Incident Response and Management procedure which elaborates the steps to be taken for reporting, isolating, handling incidents, and learning from security incidents. All incidents are captured by and reported to the respective departments and are handled according to the nature of the incident.

The Incident Handling activities carried out by the Incident Response Team are:

- Determine the extent of damage and classify the severity of the incident
- Contain the damage – prevent other systems from being damaged (e.g., by removing the system from the network)
- Determine how the incident happened and remove the cause. Recover services.
- Escalate medium and high severity alerts to Head of the department
- Inform the affected stakeholders
- Be available on call and escalate severe incidents regardless of the time of the day
- Preserve log files and other evidence

- 4.1.2.24** Vendor must provide security audit reports upon request, if available.

**i3-Celtic Response:** We will meet this requirement.

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- 4.1.2.25** AHPS must support capturing username, user ID, timestamp, success/failure of the transaction, originating PC identifier, and transaction description as part of the security log attributes.

**i3-Celtic Response:**

CTS-PARS supports capturing security log attributes including username, user ID, timestamp, transaction success/failure, IP Address, and transaction description. These attributes are integral to our comprehensive security logging mechanism, ensuring thorough monitoring and accountability.

- 4.1.2.26** Vendors hosting facility must provide physical security controls over ingress and egress.

Vendor must perform security testing as part of the development process.

**i3-Celtic Response:**

CTS-PARS has been tested for OWASP's top 10 vulnerabilities to ensure that the application does not disclose any sensitive data during application failure. i3-Celtic has an established Real-Time Predictive Threat Modeling solution in place for conducting vulnerability assessments and penetration testing regularly, and timely remediation of identified vulnerabilities as per industry best practices.

- 4.1.2.28** Vendor must maintain a single point of contact for the duration of all security issues.

**i3-Celtic Response:**

i3-Celtic will adhere to this requirement as addressed in requirement 4.1.2.23.

- 4.1.2.29** Vendor must conduct a security of review of the system prior to WVDOT Go-Live. The Vendor review must uncover vulnerabilities and, if any are found, identify them to the Contractor for corrective action prior to launch.

**i3-Celtic Response:**

i3-Celtic acknowledges the need for a comprehensive security review of the system before Go-Live. As part of our commitment to ensuring a secure environment, we will conduct a thorough evaluation to identify any vulnerabilities. If any vulnerabilities are discovered, we will communicate to WVDOT resources, providing detailed information for corrective actions to be taken prior to the launch.

We prioritize the security and integrity of our systems and are dedicated to delivering a robust and protected solution.

- 4.1.2.30** Prior to going live, the Vendor must provide WVDOT with validation of independent 3rd party security reviews performed on the application and system environment.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.2.31** Vendor must ensure the System has been tested and hardened to prevent security flaws

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**i3-Celtic Response:**

i3-Celtic will work with WVDOT to design and deliver a comprehensive security test plan, test cases, test scripts, and documentation for comprehensive test management and test strategy for WVDOT, but not limited to, the following sections:

1. Introduction
  - 1.1. Purpose
  - 1.2. Objective
  - 1.3. Project Background
2. Release Scope
  - 2.1. Test coverage for various releases
  - 2.2. Types of Testing (functional, integration, end-to-end, automation, security, performance, multilingual, usability and accessibility, customer experience, cross-browser, data migration testing, etc.) and the testing approach. For e.g., End-to-end security testing covers the testing approach to ensure that the application is compliant to zero tolerance security model
3. Software Life cycle
  - 3.1. Testing approach
  - 3.2. Test planning
  - 3.3. Test Execution
  - 3.4. Entry and Exit criteria
  - 3.5. Testing Tools (for e.g., HP ALM, TFS, CITS, Selenium, etc.)
  - 3.6. Test Environment and Infrastructure
  - 3.7. Test Data management
  - 3.8. Test Results documentation
  - 3.9. Test Suspension/Resumption Criteria
  - 3.10. Configuration Management
4. Assumptions
5. Dependencies
6. Constraints
7. Risks and mitigation Plan
8. Project Management
  - 8.1. Project Schedule
  - 8.2. Roles and responsibilities
  - 8.3. Testing Deliverables
  - 8.4. Communication and status reporting
  - 8.5. Testing Metrics
  - 8.6. Code promotion/migration process
  - 8.7. Change management
  - 8.8. Escalation procedures
9. Defect Management
10. Testing Status Reporting
11. UAT (User Acceptance Testing) support

**4.1.2.32** AHPS subsequent application enhancements or upgrades must not remove or degrade security requirements.

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**i3-Celtic Response:**

i3-Celtic will provide a **security plan** to WVDOT to include policies, procedures, system capabilities, work steps and other actions to meet WVDOT security requirements.

- 4.1.2.33** Vendor must provide ongoing security testing, at minimum, on an annual basis. Tests must focus on the technical, administrative and physical security controls that have been designed into the system architecture to provide the necessary confidentiality, integrity and availability and verified by a mutually agreed upon independent third party or WVDOT.

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement as stated in requirement 4.1.2.31.

- 4.1.2.34** Vendor must return to WVDOT all data held by Vendor in its performance of the Contract, in a format and in a manner as designated by WVDOT; and must certify that any and all copies of data, including back up and disaster recovery, will be destroyed upon WVDOT request.

**i3-Celtic Response:**

At i3-Celtic, we understand the importance of a seamless on-boarding process and compliance with the State's regulations. We are committed to fulfilling the necessary steps to ensure a smooth transition into the project. i3-Celtic will hand over all the data pertinent to the project to WVDOT.

- 4.1.2.35** Vendor must maintain a secure hosted system and provide all necessary hardware, software, and internet bandwidth to manage the system and support users with permission based logins.

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement and commits to providing all necessary hardware and software and Internet bandwidth to maintain secured hosting system.

The bandwidth requirements for the proposed CTS-PARS solution are as follows:

- Minimum bandwidth - 100 MBPS
- Optimum Bandwidth – 1 GBPS
- Internet bandwidth – 100 MBPS

Below are hardware requirements:

Service type	Description
Production Server	Two (4 vCPU(s), 16 GB RAM); Windows 2016 OS
Production Database Server	One (4 vCPU(s), 16 GB RAM); SQL Server 2016

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Nonproduction Database server	One (4 vCPU(s), 16 GB RAM); SQL Server 2016
Nonproduction Application server	Three (2 vCPU(s), 8 GB RAM); Windows 2016 OS
VPN to i3-Celtic and SD	VPN Gateways type, Basic VPN tier, VPN outbound VPN gateway type
External IP address	3 Dynamic IP Addresses, 3 Static IP Addresses, 0 Remaps
Network Storage	
Offsite backup	1 instance(s) x 500, GRS
Domain Controller	One (1 vCPU(s), 4 GB RAM); Windows 2016 OS
Security Center Subscription	Standard tier, 4 nodes
F5 WAF	F5 web application firewall solution. (2 instances (HA configuration))

**4.1.2.36** AHPS must allow users to access the system via web- based internet browser. No system browser plug-ins or client software will be permitted.

**i3-Celtic Response:**

CTS-PARS is a completely browser-based solution. It does not require any additional plug-ins or client software for users to operate it.

**4.1.2.37** Vendors web-based system must be compatible and in conformance with HTML5, CS 2.1, XML 1.2 W3C standards.

**i3-Celtic Response:**

CTS-PARS is compatible and is compliant with the HTML5, CS 2.1, CML 1.2 and W3C Standards as stated in above requirement.

**4.1.2.38** AHPS must encrypt browser session data between the server and client (e.g., in transit) using TLS encryption.

**i3-Celtic Response:**

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CTS-PARS communication uses SSL (secured channel) to ensure secure data communication while in motion. CTS-PARS encrypts confidential data using industry-standard encryption methodology. Encryption includes passwords and security answers into the database while at rest.

CTS-PARS encrypts confidential data including passwords and security answers in the database. I3-Celtic has implemented an AES 256 encryption algorithm for data encryption

CTS-PARS has the capability to integrate with WVDOT provided SSL certificates or any 3rd party provide certificates (TLS >= 1.2) for Data encryption in transit.

**4.1.2.39** AHPS must authenticate all customers and Authorized Users to prevent access to inappropriate or confidential data or services.

**i3-Celtic Response:**

The secured hosting infrastructure of CTS-PARS provides for confidentiality (i.e., No unauthorized access), Integrity (i.e., No tampering), and Authenticity (i.e., No impersonation) which authenticates all users and prevents them from accessing any inappropriate or confidential data.

**4.1.2.40** AHPS must not store authentication credentials or sensitive data in its code.

**i3-Celtic Response:**

Our solution is following industry standards data retention approach and it is flexible enough to comply with WVDOT retention policy. i3-Celtic will discuss with WVDOT officials and finalize it. In addition to User consent, we are masking all the PII information in the Database and not storing any such information in the codebase.

**4.1.2.41** AHPS must prevent the display of any user's password in readable form.

**i3-Celtic Response:**

CTS-PARS is following industry standards data retention approach and it is flexible enough to comply with WVDOT retention policy. i3-Celtic will discuss with WVDOT officials and finalize it. In addition to User consent, we are masking all the PII information in the Database and not storing any such information in the logs. All the fields like passwords, SSN and other sensitive information are masked by default.

**4.1.2.42** AHPS must force customers who have not logged into the system for a configurable amount of time (initially set to 365 days) to do a password recovery.

**i3-Celtic Response:**

The CTS-PARS solution sends a password expiration notification to alert the user of the inactivity within the past 90 days (about 3 months). The system requires such users to reset their password to retrieve their access. CTS-PARS solution can be configured to fulfill the above requirement.

**4.1.2.43** AHPS must be tested for the intrusion detection and must support the detection of illegal entrance into a computer system.

**i3-Celtic Response:**

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i3-Celtic will adhere to the above requirement.

- 4.1.2.44** Vendor must provide WVDOT with a secure FTP site (sFTP) to be used by WVDOT for uploading and downloading files prior to Go-Live.

**i3-Celtic Response:**

i3-Celtic will comply with the above requirement. i3-Celtic will set up a secure FTP setup so that the required files can be uploaded and downloaded.

- 4.1.2.45** AHPS must validate each command from an Authorized User for the proper privileges.

**i3-Celtic Response:**

CTS-PARS is a browser-based, role-based solution whereby, depending on the assigned role, the user will be granted access to specific modules and functionality within the system that can be accessed 24/7. CTS-PARS (COTS) in-built RBAC (Role Based Access Control) to authorize users seeking information at Navigation Tab Level, Page level and Field level.

- 4.1.2.46** AHPS must log all attempted accesses that fail authentication.

**i3-Celtic Response:**

CTS-PARS provides the User Activity logging and reporting functionality. With this functionality all the failed login attempts are recorded and logged into the system. The system also logs all the requests/responses to interfaces and system errors.

- 4.1.2.47** AHPS must log all successful and unsuccessful login attempts including at a minimum username and validation result (whether a success or failure), and record when user exits the system.

**i3-Celtic Response:**

CTS-PARS provides the User Activity logging and reporting functionality that tracks user activities such as login, logout, user privilege changes, accounts created, deleted, changed, or suspended, and administrative overrides. The system also logs all the requests/responses to interfaces and system errors.

- 4.1.2.48** Vendor must provide System Performance Reports Weekly and monthly performance metric reports Monthly Accuracy report, Issuance report (emails bounce back), processing time reports, system availability (planned and unplanned outages), bug report, and release reports to WVDOT.

**i3-Celtic Response:**

i3-Celtic will adhere to this requirement. Underperformance testing, critical business scenarios will be considered for Load, Stress and Endurance performance testing. The performance testing will validate that the product is meeting performance measures as per requirements.

- 4.1.2.49** AHPS must timeout (e.g. require logging in again) after a specified length of inactive time in the System. The system must allow WVDOT the ability to vary the length of time before the system times out based on factors such as the User's Permissions

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and the tasks being performed.

**i3-Celtic Response:**

CTS-PARS has inbuilt functionality to track down inactive sessions. The system warns the user before timing out the session that you have been inactive, and your session will be logged out. The session timeout value is also customizable and the required timeout value as per WVDOT can be configured in the system.

**4.1.3 Automated Hauling Permit System (AHPS) Administrator and UI Requirements**

**4.1.3.1** Vendor must provide a UI for WVDOT to submit and monitor system problem tickets with the Vendor.

**i3-Celtic Response:**

As a part of our support and maintenance process, i3-Celtic shall follow a service level agreement (SLA) to provide all necessary ongoing service and support to the system.

Throughout the project implementation phase and during system support and maintenance, we provide a robust browser-based incident tracking system – i3-Celtic Jira Service Desk (CJSD), which allows any reported incidents to be prioritized and addressed in a timely manner.

**4.1.3.2** AHPS UI must respond to all user interactions within three (3) seconds at a minimum



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**i3-Celtic Response:**

CTS-PARS can scale out and scale up using additional Infrastructure provisioning. The proposed solution can be sized considering 150 transactions per minute (average) with a Peak number of transactions up to 600. Response time of Simple transactions is in the range of <5 seconds, and medium workload transactions are in the range of 3-6 seconds. For Bulk calculations, the response time will be higher.

- 4.1.3.3** AHPS must allow Administrative Users the ability to add or remove a user from one (1) or more privilege groups or System while maintaining historical information.

**i3-Celtic Response:**

CTS-PARS is a browser-based, role-based solution whereby, depending on the assigned role, the user will be granted access to specific modules and functionality within the system that can be accessed 24/7. CTS-PARS (COTS) in-built RBAC (Role Based Access Control) to authorize users seeking information at Navigation Tab Level, Page level and Field level.

Authorized users can manage privilege groups (Role) or can add or remove a user from a privilege group.

- 4.1.3.4** AHPS must allow an Administrative User to add or remove AHPS privileges to other AHPS users, while maintaining historical information of privileges associated with AHPS users.

**i3-Celtic Response:**

CTS-PARS is a browser-based, role-based solution where authorized user can create new or edit existing privileges that includes defining new role, manage access level, manage users in role.

- 4.1.3.5** AHPS must allow Administrative Users the ability to add, activate, and disable user accounts.

**i3-Celtic Response:**

Depending on the business scenarios, the CTS-PARS allows authorized users to add various flags on the customer account as follows:

- 1) Permit Account Status – When the account is suspended or deactivated, the system will restrict internal and external users from processing any transaction but allows them to collect the payment.
  - 2) OSS order flag – Enabled when permit account status is "Suspended".
- CTS-PARS has the module that allows to create new Permit Account with default Active Status.

- 4.1.3.6** AHPS must allow Administrative Users the ability to assign multiple roles to the same user.

**i3-Celtic Response:**

CTS-PARS is a browser-based, role-based solution whereby, Authorized user can assign single user in multiple roles but in different office location.

- 4.1.3.7** AHPS must allow Administrative Users the ability to maintain roles and the associated functions.

**i3-Celtic Response:**

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CTS-PARS (COTS) in-built RBAC (Role Based Access Control) to authorize users seeking information at Navigation Tab Level, Page level and Field level.

- 4.1.3.8** Vendor must coordinate with WVDOT as requested to configure System user groups and privileges at no additional cost.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.3.9** Vendor must allow ad hoc registration applications to mimic existing or updated registration applications; AHPS must have version control and document history management capabilities.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.3.10** AHPS must log all activities to a central server for audit trail purposes.

**i3-Celtic Response:**

CTS-PARS logs event-based activities and application transactions of users throughout the system.

The user activity logging provides tracking of users, including user login to logout, creating a new permit account, updating customer account, and administrative overrides.

The system provides user activity statistics and other Management Information reports, including performance statistics, user accounts reporting, and system log reports.

The system stores the logs, transaction history or activities for audit trail purpose on shared path or in database.

- 4.1.3.11** AHPS must log all activities to a central server to validate all application transactions.

**i3-Celtic Response:**

CTS-PARS logs event-based activities and application transactions of users throughout the system.

The user activity logging provides tracking of users, including user login to logout, creating a new permit account, updating customer account, and administrative overrides.

The system provides user activity statistics and other Management Information reports, including performance statistics, user accounts reporting, and system log reports.

The system stores the logs, transaction history or activities for audit trail purpose on shared path or in database.

- 4.1.3.12** AHPS must log edits to system records for user accounts and restrictions. The log must include, but is not limited to, recording User Identification (ID), and performed action.

**i3-Celtic Response:**

CTS-PARS keeps history or transaction which is for audit trail purpose.

- 4.1.3.13** AHPS log entries must include the username if the log entry is a result of a user action.

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**i3-Celtic Response:**

CTS-PARS keeps details like user id, date and time, IP of client etc. to help audit trail when required.

- 4.1.3.14** All logs must be kept for a minimum of 30 months (2.5 years) or as defined/requested by WVDOT Record Retention Policy.

**i3-Celtic Response:**

i3-Celtic will outline the approaches to retain logs. After MVDOT's logs retention period has passed, i3-Celtic will delete the logs.

- 4.1.3.15** Vendor must provide annual certification to Administrative Users to validate that the automated system backup and restore procedures are functioning and tested.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.3.16** Vendor must provide Role & Privilege Management that supports the granting of abilities to External and Authorized Users or groups of External and Authorized Users of a computer, application, or network.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.3.17** Vendor must offer one (1) rules repository within the System where WVDOT business rules will be defined,

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updated and maintained. Once defined, the business rules can be deployed at single, multiple or all locations, if requested or needed by WVDOT.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.3.18** AHPS must use WVDOT configurable rules to ensure data integrity and standardization within any input fields. (e.g., the letter 'A' cannot be entered as part of an Employer Identification Number (EIN), vehicle make codes must adhere to WVDOT abbreviations)

**i3-Celtic Response:**

This type validation is usually implemented through code and is not currently configurable. i.e., change in rule will need new release.

- 4.1.3.19** AHPS must provide an integrated help utility that provides guidance for Authorized Users in performing transactions.

**i3-Celtic Response:**

CTS-PARS comes with a fully integrated user guide that can be accessed from any transaction screen of the application and is relevant to the user role logged in at that instant. This approach limits access to user manuals for the intended user roles.

**4.1.4 Automated Hauling Permit System (AHPS) Plan Requirements**

- 4.1.4.1** Vendor must provide a project plan and timeline after contract award. The Preliminary Project Plan must include, at minimum: continuously updated resource-loaded Schedule (all Project resources, Contractor and WVDOT included), Communication Plan, Training Plan, Support Plan, Architecture Plan, Release Plan, Issue and Risk Management Plan, Resource Plan, Information Management Plan, Quality Assurance Plan, system implementation, testing (including criteria), and Go Live. The Go Live date should be within twelve (12) month of contract award or another date if mutually agreed to by WVDOT and the Vendor.

**i3-Celtic Response:**

i3-Celtic will leverage Project Management's best practices applicable to the Agile framework. i3-Celtic will onboard a seasoned Project Manager with extensive experience in managing similar projects. The Project Manager will work in collaboration with the WVDOT project manager counterpart from the start of the project through go-live while working with WVDOT in collaboration for tracking and ensuring the quality throughout the project duration and to ensure that the program is delivered on time and within budget. The Project Manager will be supported by the Functional team, Development and PMO team to ensure successful execution of the Agile releases.

The below diagram provides a 3-tiered governance view, with stakeholders involved and focus on outcomes.

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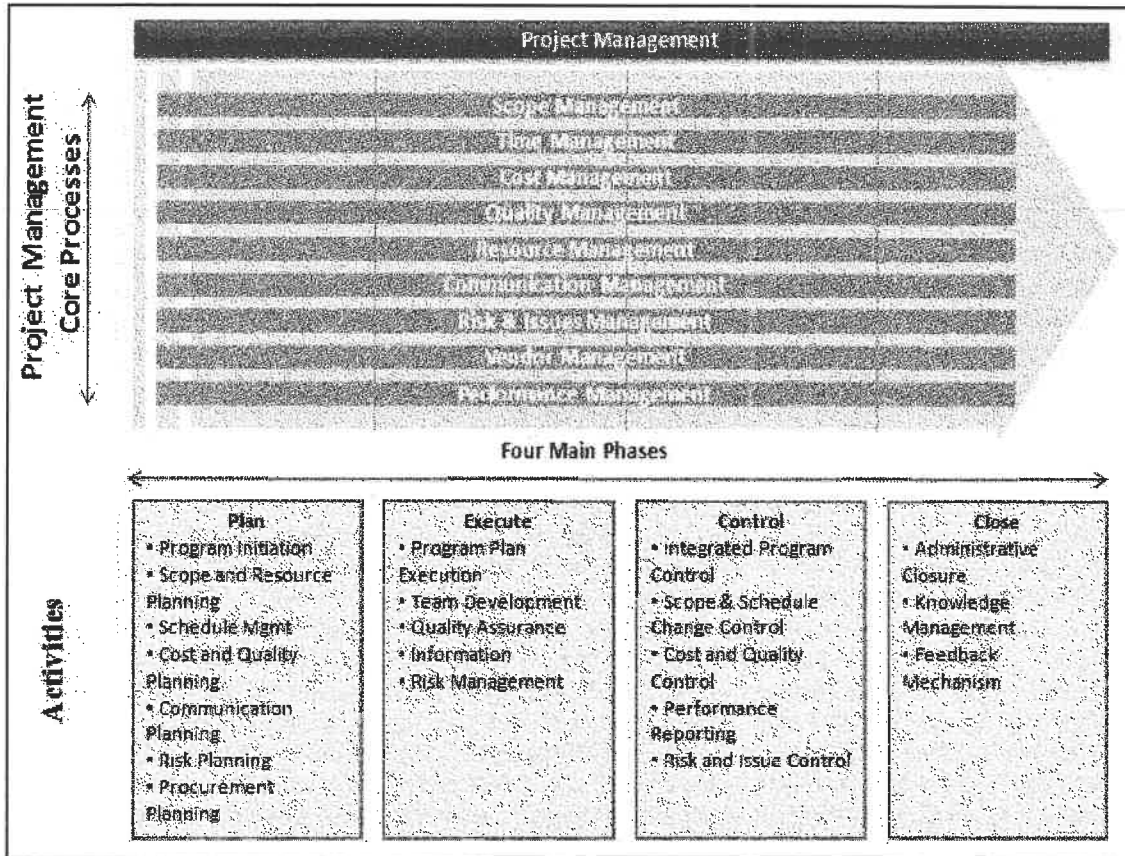
What	Who	Cadence	Outcomes
<b>Portfolio</b> <ul style="list-style-type: none"> <li>Value Streams</li> <li>Strategic Themes</li> <li>Epic Discovery</li> <li>Budget/Funding</li> </ul>	<ul style="list-style-type: none"> <li>Steering Committee</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly or as decisions are needed</li> </ul>	<ul style="list-style-type: none"> <li>New value targeted</li> <li>Prioritized epics</li> <li>Understanding of MVP</li> <li>Investment decisions</li> </ul>
<b>Program</b> <ul style="list-style-type: none"> <li>Program backlog</li> <li>Group of 5 sprint teams</li> <li>Architectural runway</li> <li>Simple budgets</li> </ul>	<ul style="list-style-type: none"> <li>Project Manager and PMO / RTE</li> <li>Product Management</li> <li>System Architects</li> <li>SME and Leads</li> </ul>	<ul style="list-style-type: none"> <li>Program Increment</li> </ul>	<ul style="list-style-type: none"> <li>Value Achievement</li> <li>Commitment (Current PI)</li> <li>Alignment</li> <li>Release on demand</li> </ul>
<b>Team</b> <ul style="list-style-type: none"> <li>Team backlogs</li> <li>Develop on cadence</li> <li>Stories, spikes, refactoring</li> <li>Traditional sprint teams</li> </ul>	<ul style="list-style-type: none"> <li>Development team</li> <li>Scrum master</li> <li>Product owner</li> </ul>	<ul style="list-style-type: none"> <li>2 week sprints</li> </ul>	<ul style="list-style-type: none"> <li>Working software - value delivered</li> <li>Code quality</li> <li>Continuous release</li> </ul>

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ject Management framework (based on the Project Management Institute's PMBOK), will be used to plan and execute this program. The framework organizes project management processes into four main phases linked by the results they produce—the result or outcome of one becomes an input to another. It provides for well-defined deliverables, entry and exit criteria, and activity definitions in each of these phases.

The four main phases follow a rigorous structure to plan, execute, control, and close the nine Project Management core processes as depicted in the picture. The Project Management Office (PMO) manages the processes. The four PMO phases are specific to project management and can be applied to any Project Lifecycle model.

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A process-centric perspective is provided to the Project Management framework by the nine core processes of Scope, Time, Cost, Quality, Resource, Communication, Risk/Issue, Performance and Vendor Management.

These core process areas are aligned to the Agile execution framework.

- **Scope Management:** Scope Management ensures that the project includes all the work required to complete it successfully. Key Scope Management activities include:
  - Prioritize Portfolio backlog
  - Split epics, prioritize features
  - Prioritize Product backlog
  - Prioritize team sprint backlog
- **Time Management:** Time Management ensures the timely delivery and completion of the project. Key time management activities include:
  - Fixed Sprints and Program Increment durations
  - Frequent backlog grooming
  - Prioritize user stories
  - Observed team velocity
  - User stories sized based on Agile estimation techniques
  - Team members commit to the sprint backlog

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- **Cost Management:** Cost Management ensures that the project is completed within the approved budget. Key cost management activities include:
  - Plan Agile Release Train (ART) Funding
  - Allocation based on customer demand
  - Determine the Agile Release Train budget
  - Control costs at a Program Increment boundary
- **Quality Management:** Quality Management ensures that the project adheres to the quality standards as planned. Key Quality management activities include:
  - Definition of ready
  - Behavior-driven development (BDD) / Test-driven development (TDD)
  - Continuous integration
  - Definition of Done / Pair testing
- **Resource Management:** Resource Management ensures the most effective utilization of resources for the project. Key Resource management activities include:
  - Evaluate team capacity
  - Dedicated teams assigned
  - Retrospectives and continuous learning by teams
  - Self-organized teams
- **Communication Management:** Communication Management ensures an ongoing cycle of collecting and disseminating project information. Key Communication management activities include:
  - Setting up a Governance model for the program
    - Identify business owners
    - Align to a common vision
    - Frequent collaboration and team agreements
  - The daily stand-up meeting, sprint demos and retrospective meetings
  - Publish work status on Kanban boards
  - Highly collaborative environment; lean portfolio metrics published regularly
- **Risk & Issues Management:** Risk & issues Management ensures the identification, analysis and resolution of project risks and issues. Key Risk & Issue management activities include:
  - Deliver in small increments; mid Program increment reviews
  - Fishbone and 5 Why techniques to analyze impediments
  - Regular Scrum of Scrum meetings to identify impediments
  - Swarm and proactively resolve impediments
- **Integration/Performance Management:** The Release Train Engineer (RTE) and the PMO team capture agile metrics at period intervals to track the progress of the agile release train. The metrics are captured at sprint, release, and project level. Representative metrics include:
  - Sprint Velocity
  - Sprint Defect density
  - Release Productivity
  - Release defect density
  - Release effort variance
  - Project Productivity in story points
  - Project defect density
  - Project schedule variance

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- **Procurement/Vendor Management:** Procurement/Vendor Management ensures the acquisition of services and goods for successful project completion. Key Procurement management activities include:
  - Establish strategic relationships
  - Develop business partnerships
  - Align with Lean and Agile practices
  - Close contracts

The following is our proposed schedule for the deliverables. i3-Celtic will work with the WVDOT project manager to finalize the project plan and deliverable schedule.

No.	Cross-Reference Section	Deliverable Name	Anticipated Submission/Due Date
1	6.1	Project Management Plan (PMP)	June 22, 2020
2	6.2	Integrated Master Schedule	June 22, 2020
3	6.3	Final Implementation Plan	June 22, 2020
4	6.4	Requirements Traceability Verification Matrix	June 22, 2020
5	6.5	Solution Security Plan	August 14, 2020
6	6.6	COTS System Technical Architecture Design	October 30, 2020
7	6.7	System Design Document - ORION Integration	October 30, 2020
8	6.8	System Design Document - External (Third Party) Interfaces	May 28, 2021
9	6.9	System Design Document - COTS Software Customizations	May 28, 2021
10	6.10	COTS Software Configuration Design for IFTA	December 22, 2020
11	6.11	COTS Software Configuration Design for IRP	January 29, 2021
12	6.12	COTS Software Configuration Design for Audit	February 24, 2021
13	6.13	Data Migration and Data Conversion Plan	November 9, 2020
14	6.14	Initial Legacy Data Mapping to COTS	July 9, 2021
15	6.15	Development Completion Software Milestone	January 31, 2022
16	6.16	Configuration Completion Software Milestone	March 31, 2022
17	6.17	Final Legacy Data Mapping to COTS	October 15, 2021
18	6.18	Security Testing Plan	August 31, 2021
19	6.19	Key Performance Measures Criteria Report	September 30, 2021
20	6.20	Security Verification	February 28,



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No.	Cross-Reference Section	Deliverable Name	Anticipated Submission/Due Date
			2023
21	6.21	UAT Completion Report	March 31, 2023
22	6.22	Training and Training Materials	April 28, 2023
23	6.23	Final System and User Documentation	April 28, 2023

No.	Cross-Reference Section	Deliverable Name	Anticipated Submission/Due Date	
	24	6.24	Deployment Implementation Plan and Checklist	May 31, 2023
	25	6.25	Final Solution	May 31, 2023
	26	6.26	Post Implementation Acceptance	June 19, 2023
	27	6.27	Operations and Maintenance (O&M) Plan	June 19, 2023
	28	6.28	Warranty Completion Report	June 24, 2024
	29	6.29	Operations Transition Plan	June 19, 2023
	30	6.30	Turnover Plan	June 24, 2024
	31	6.31	Project Closure Report	June 24, 2024

**4.1.4.2** Vendor must develop a Transition Plan acceptable to WVDOT that complies with the requirements of this RFQ. The objectives of the Transition Plan are to minimize disruption of services provided to WVDOT and to provide for an orderly and controlled transition of the Vendor responsibilities to a successor at the conclusion of the contract period or for any other reason the Contractor cannot complete the responsibilities of the contract. A draft Transition Plan must be submitted to WVDOT for review within one-hundred eighty (180) calendar days after execution of the Contract. The Transition Plan must be submitted, with any necessary revisions, to WVDOT for a final review.

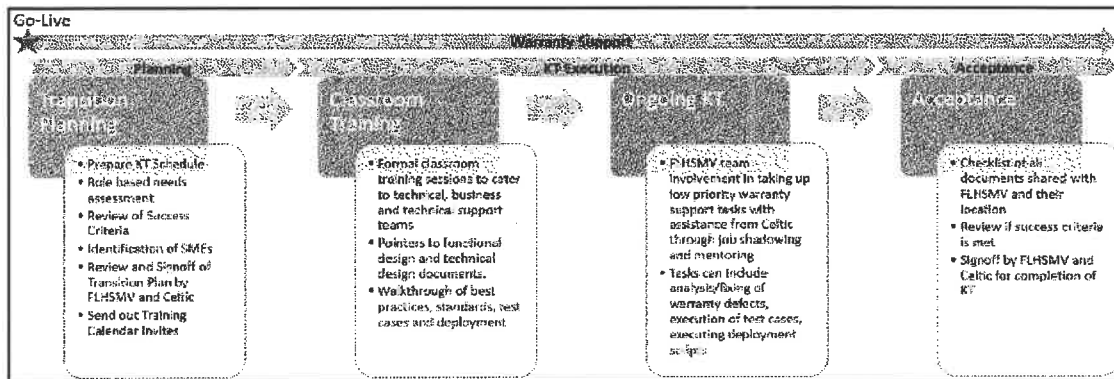
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**i3-Celtic Response:**

i3-Celtic will follow a structured approach to transitioning the knowledge of application services to the WVDOT team for the maintenance & operations Phase of the Project.

i3-Celtic will conduct knowledge transfer of the solution to the WVDOT resources after the Go-live to assist them in becoming self-sufficient during the production support phase. Knowledge Transfer is a detailed process of planning, scheduling, imparting, and monitoring of transfer of knowledge and skills from i3-Celtic to the WVDOT team. The goal of knowledge transfer is to provide the WVDOT team with the knowledge and skills of the new system to ensure the WVDOT team can assume service delivery responsibilities for the new solution. Knowledge transfer is not end-user training or communication activities. Identified resources must have a baseline set of skills prior to knowledge transfer activities as knowledge transfer does not include training on specific tools, performing data corrections, software, or hardware.

The transition process can be typically depicted into phases mentioned in the below figure:



i3-Celtic will assist WVDOT to meet the following business objectives:

- Incident and enhancement requests including fee changes will be reported via the Incidents Tracking System. Supporting documents including screenshots can be uploaded with the incident for clarification.
- Define issue priorities depending on business needs.
- i3-Celtic support personnel will review the incident and confirm their understanding with WVDOT before it moves through the process.
- As an incident moves through the defect resolution process, it will move through various stages. Each status change will generate an email to WVDOT and i3-Celtic support as follows:
  - New - New incident is reported.
  - Confirm - The incident has been reviewed and is understood.
  - Feedback - The incident has been reviewed and more information is required from the customer for clarification.

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- Assign - The incident is assigned to the development.
- QA - Work is completed and being tested.
- Fixed - QA Testing is complete.
- Resolved - Ready for business user acceptance testing.
- Closed - Business has approved the incident and it will be scheduled for release to production.
- Ensure that the security of WVDOT's confidential data is always maintained.
- Establish excellent communication and a good working/business relationship.
- Minimize the impact on the business by utilizing off-hours to perform scheduled or preventative maintenance processes when possible.
- i3-Celtic provides a pool of support personnel that will be assigned to this contract to manage and respond to calls for service based on required skill sets and problem determination.

This process will form the basis for establishing how we work together to ensure and monitor the quality of the support provided to WVDOT by i3-Celtic.

**4.1.5 Automated Hauling Permit System (AHPS) Support Requirements**

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- 4.1.5.1** Vendor must provide technical support to Authorized Users to solve problems related to products and services provided. This support includes, but is not limited to:
- 4.1.5.1.1** Deployment Support – Vendor must support for the AHPS application deployment and related infrastructure processes including the creation of the deployment plan. This includes on-site support as needed.
- 4.1.5.1.2** Post Implementation (Production (GO Live) Support) – Vendor must provide post implementation support for each major phase of the project.

**i3-Celtic Response:**

i3-Celtic recommends a 60 to 90-day warranty after go-live.

**Support and Maintenance Service**

During the term of the contract, i3-Celtic will follow the terms of the service level agreement (SLA). i3-Celtic will do the necessary issue and bug fixes as part of support and maintenance. i3-Celtic proposed using our browser-based incident tracking system, which allows any reported incidents to be prioritized and addressed in a timely manner. Incident tracking should have the capability of emailing notification to the required project personnel for action and resolution. In this way, management will be fully aware of all incidents and their status at any given time.

i3-Celtic provides Level 2 technical support for business-issued permits during normal business hours. We provide an after-hours contact number for any emergencies outside of business hours.

i3-Celtic team will perform the following activities as part of Level 2 support:

- Provide a quick First-Level Resolution (FLR)
- Compliance with the required response times
- On-time routing of the required incidents
- Resolving common incident types quickly using issue resolution procedures
- Reporting results of root cause analysis to identified stakeholders within defined timeframes for priority incidents
- Prepare status reports and attend service review meetings as required
- Continuous improvement and help to the Level 1 Support team

**Optional 24/7 Helpdesk**

i3-Celtic provides Level 2 technical support during normal business hours. We also provide a dedicated resource for technical support after normal business hours and on weekends for business-issued permits.

**Scheduled Maintenance**

i3-Celtic will work with the agency to produce a matrix that will help determine deployment frequency. The matrix will consider numerous factors such as the type of fix (hotfix / new features/ product upgrade/ maintenance release), severity, and the priority of the defect or

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functionality to determine the release frequency.

The following represents a sample matrix for release frequency:

	<b>Severity</b>	<b>Priority</b>	<b>Frequency</b>	<b>Duration</b>
Hotfix	High	High	Immediate	1 Hr.
New Features	Medium	High	Quarterly	4-6 Hrs.
System Upgrade	Medium	Medium	Depends on the Road map	8-24 Hrs.
Maintenance Release	Medium	Medium	Monthly	2 Hrs.

For i3-Celtic SaaS Model, we will be responsible for all software and hardware acquisition, maintenance, and support of the proposed CTS-PARS Solution. Our solution will leverage the deployment of the COTS solution on Azure Cloud. Planned Outages will include any OS patches or Product fix pack releases. i3-Celtic will follow a strong change management process to deploy these changes in the Production environment. Patches are generally applied in Off hours, and frequency is generally once in a quarter.

**4.1.5.2** Vendor must offer phone, email, and website support options 24 hours, seven (7) days a week, 365 days a year with a two (2) hour response time.

**i3-Celtic Response:**

i3-Celtic agrees to comply with the above requirement.

**4.1.5.3** Vendors yearly maintenance must include system hosting, any required software and security updates, development which may be required to implement administrative and legislative action (e.g. new permit types), and at least two-hundred (200) hours of development time for other upgrades requested by the state agency per year.

**i3-Celtic Response:**

As a part of our annual support and maintenance services, i3-Celtic agrees to assist WVDOT with system hosting, software and security updates, development of new permit types, and a minimum of two hundred (200) hours of development time for additional upgrades as required by WVDOT.

**4.1.5.4** AHPS must archive and index permit information.

**i3-Celtic Response:**

CTS-PARS provides the ability to archive and purge the permit information. The archival and retention of the permit information will be based on the policies implemented in accordance with WVDOT.

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**Backup/Archive Routine**

Archiving and retention of the data will start with the business. Based on WVDOT's data-retention policies that involve cross-organizational teams (legal, compliance & records), i3-Celtic will outline the approaches to retain and purge data. After WVDOT's archival retention period has passed, i3-Celtic will delete the archived database and associated system package as required.

**4.1.5.5 AHPS must keep any sensitive Data or communications private from unauthorized individuals and programs.****i3-Celtic Response:**

i3-Celtic's proposed solution comprises security controls derived from various regulatory requirements, standards, and industry best practices are detailed below:

- All application and system users will be provisioned in the Active Directory and will be named users. Application and system service accounts will be configured for use without actual login privileges, thereby avoiding the need to have multiple users share mechanisms to grant access.
- Authentication and Authorization controls, combined with Encryption where possible (Data at rest and Data in motion), will be implemented to protect against unauthorized information disclosure. All Users will be authenticated using a State provided authentication solution, i.e., Microsoft Active Directory for all users of the WVDOT system, and the i3-Celtic COTS solution, which is the core component of the solution, provides role-based authorization where each user can be assigned a role based on their job function.
- All user access with privileges to modify data/software will be controlled via Azure Active Directory and will be combined with strong change management procedures. Where possible, all builds, and deployments will be automated to ensure that only authorized and approved software is moved to the production environment. Further data security controls such as Encryption, IP-based access to the database, security audits, and monitoring for DB activity will be implemented to prevent unauthorized access/modification to data. All privileged user actions will be audited and configured with Azure Sentinel to detect anomalies and unauthorized access attempts.
- The proposed solution will be deployed in a Highly Available (HA) configuration of the data/application. Transaction traffic will be load balanced to ensure traffic volume is distributed to all Pods of the HA configurations.
- Security Audit configurations will be enabled on all critical applications and supporting Infrastructure (Container services, Database, etc.); audit configurations will include:
  - User Authentication login/Log off, User Activity Log
  - Event Logging, Transaction logging
  - Access to sensitive Data or Files - transaction logs, confidential record logs (application logging and database triggers)
  - Modification/ Deletion of Sensitive data or files. - transaction logs
  - Addition/ Modification/deletion of application roles - user and roll management logging.
  - Addition/ Modification/deletion to application configuration files/parameters.
  - Application service or System restarts
  - The above configurations will help identify any anomalies and audit any changes. i3-Celtic has proposed to use Azure Sentinel to support continuous monitoring requirements.
- All sensitive application configuration files will be protected and will leverage Integrity monitoring solutions authorized by the state. Any system-specific configurations will be limited to specific roles and users.
- The proposed solution will be configured with session timeouts to prevent unauthorized system usage. The system will further use timestamps to be matched for any system-to-system communications; any difference in timestamps will lead to a request being denied. Any privileged emergency accounts created for

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administrators will be time bound only for the duration required, and permissions will be rolled back to the least privilege for their day-to-day operations.

- Users need to satisfy multiple conditions such as – successful Authentication, Authorization to access certain objects & permissions via RBAC, and in some instances, restricted access from specific IP addresses/subnets, etc., will be implemented before granting access to the application and systems. Multiple conditions are met before granting permissions to an object.
- As indicated in the overall application architecture, multiple layers of defense will be implemented to prevent a successful attack/unauthorized access – An in-depth defense strategy includes – network protection via firewalls/proxy solutions and gateways, OS security, application security controls, access security controls, data protection strategies, continuous monitoring for User and Application activity.
- Each time user is required to access sensitive systems or information, access control checks will be performed, which include validating for an active session, user roles and associated privileges, access location, and in some cases, access restricted to business hours.
- Secure coding practices and validated libraries will be re-used for any development involved. i3-Celtic will adopt secure coding practices from OWASP and SANS and adopt secure libraries in the .Net Security framework.
- If any vulnerabilities/risks are identified for critical components which can compromise the system, appropriate remediation measures or compensating controls will be implemented to protect the system. i3-Celtic has proposed various vulnerability assessment tools such as Azure Defender for Infrastructure Vulnerability Assessment and Container Vulnerability Assessment. i3-Celtic will conduct periodic assessments to ensure known vulnerabilities are identified and remediation steps are implemented.

For information exchange between different systems and external systems/interfaces – secure channels will be used, such as HTTPS, SFTP, Azure ExpressRoute, etc., where end-to-end channels are encrypted. If any data file exchange is involved, files will be encrypted where supported using FIPS-compliant encryption modules to support confidentiality requirements. Application and database will support fail-safe configurations where the system rolls back any uncommitted changes when the system is unable to complete its action or task before terminating to protect data Integrity. In case of any system failure, the application and underlying infrastructure will be configured such that any sensitive data is not accessible during system failures. Regular backups will be taken to ensure data/system can be restored to the last known good configuration. All critical system components will be configured to support high availability for multiple scenarios – single component failure, site failure, and DR scenarios.

**4.1.5.6** AHPS must, in addition to production environments, support one (1) or more non-production environment(s) that WVDOT can use for testing and training.

**i3-Celtic Response:**

i3-Celtic will provide WVDOT with access to the sandbox and training environments.

**Sandbox Environment** - As the core functionality is verified and configured or modified, i3-Celtic will deploy versions of the COTS product for WVDOT's personnel to familiarize themselves with the look and feel of the new system and provide valuable feedback to the development team for early issues resolution. The use of the sandbox will provide some initial training and will give users a feeling of ownership when they see their feedback implemented and displayed on the screen.

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**Training Environment** - i3-Celtic will provide access to a Training environment to allow WVDOT Trainers to familiarize themselves with system functionality as early as possible. i3-Celtic will deliver Training as closely as possible to Go Live so that knowledge and skill are retained through the transition by users into the production environment. i3-Celtic will build, maintain, and support the Training Environment in each Release.

**4.1.5.7** AHPS non-production environments must match the production environment to ensure product patches and tests performed successfully in the non-production environments work in the production environment.

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement.

**4.1.5.8** AHPS must allow an Administrative User to determine which users are currently logged into the system.

**i3-Celtic Response:** We will meet this requirement.

**4.1.5.9** AHPS must include an archival system for data and data images throughout the life of the contract.

**i3-Celtic Response:**

**Backup/Archive routine**

Archiving and retention of the data will start with the business. Based on WVDOT's data-retention policies that involve cross-organizational teams (legal, compliance & records), i3-Celtic will outline the approaches to retain and purge data. After WVDOT's archival retention period has passed, i3-Celtic will delete the archived database and associated system package as required.

We will configure the retention period for the retrieval of archived/purged documents in accordance with WVDOT.

**4.1.5.10** AHPS must be configurable to enable the System Administrator to modify parameters to define the historical data retention duration.

**i3-Celtic Response:**

Our COTS CTS-PARS solution is configurable to allow modifications to the data retention duration. i3-Celtic will configure or allow the System Administrator to configure the retention period for the retrieval of archived/purged documents in accordance with WVDOT.



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**4.1.5.11** AHPS must archive restriction data.

**i3-Celtic Response:**

Our CTS-PARS provides the ability to the archival and purge facility to allow data archival and purge from the database based on the period as defined in accordance with WVDOT.

**4.1.5.12** AHPS must provide the ability to archive permit information at a minimum of five (5) years. The archive permit information must be available to create future permits.

**i3-Celtic Response:**

The CTS-PARS solution provides the ability to retrieve archived or purged permit information within a pre-defined retention period. i3-Celtic will configure the retention period for the retrieval of archived permit information in accordance with WVDOT.

**4.1.5.13** Other than updates of the browser software, AHPS must not require client side installations to enable functionality and fixes that are implemented from server side installs and updates.

**i3-Celtic Response:** We will meet this requirement.

**4.1.5.14** At the WVDOT's discretion, authorized third parties may be given limited access to AHPS.

**i3-Celtic Response:**

The CTS-PARS solution will provide web-based access to the authorized third-party users through a self-service portal to perform limited functions as determined.

During the requirement gathering sessions, i3-Celtic will work with WVDOT to define the list of functions accessible to the third-party users.

**4.1.5.15** Vendor must work with WVDOT to configure AHPS map restriction symbols that are non-ambiguous and meet WVDOT's approval.

**i3-Celtic Response:**

i3-Celtic will adhere to the above requirement.

CTS-PARS Restriction management functionality allows authorized users to add and update restrictions manually.

CTS-PARS provides a scheduled batch process to import and update restrictions with an optional well-defined workflow to manually review and approve restrictions data feeds. The system displays specific locations graphically based on the type and category of restrictions.

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During the requirement gathering session, i3-Celtic will document the details pertaining to map restriction symbols as per WVDOT's requirement.

**4.1.5.16** When an Administrative User overrides a transaction of an Authorized User or Customer AHPS must send a notification to the overridden user. This notification must include information about who and why the override was initiated.

**i3-Celtic Response:** We will meet this requirement.

**4.1.5.17** AHPS must provide the capability for Authorized Users to access and report on data stored in the system including, but not limited to, the following: User Accounts and Authorizations, User Actions related to Restrictions, User Authentications, Restriction details, Restriction notifications (incoming and outgoing), Permit Applications, Permits Issues, Permits Denied, Permits Amended, Cancelled Permits, and Suspended Permits.

**i3-Celtic Response:**  
CTS-PARS solution allows authorized users full access to data stored in the system with the ability to generate reports based on the stored data.

The solution provides the Report and Inquiry functionality to generate various on-demand reports or inquire for specific information based on relevant user inputs including but not limited to User Accounts and Authorizations, User Actions related to Restrictions, User Authentications, Restriction details, Restriction notifications (incoming and outgoing), Permit Applications, Permits Issues, Permits Denied, Permits Amended, Cancelled Permits, and Suspended Permits.

**4.1.6 Automated Hauling Permit System (AHPS) Customization Requirements**

**4.1.6.1** Vendor must customize AHPS system to meet WVDOT's requirements listed in this RFQ or requested later by WVDOT.

**i3-Celtic Response:** We will meet this requirement.

**4.1.6.1.1** System Customizations requested after contract award will be requested to the Vendor from WVDOT and mutually agreed upon in an hourly rate SOW.

**i3-Celtic Response:** We will meet this requirement.

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- 4.1.6.1.2** AHPS must visually notify the permit office staff of all failures (weight, clearance, temporary restrictions), and notify the permit office staff of the WVDOT districts in which the failures occur. At that point, the system should have the ability to send those permits to those districts for review allowing the district to approve, approve with conditions, or deny. There should also be a text box for the districts to make comments.

**i3-Celtic Response:**

CTS-PARS displays all pre-defined business rules for the queue process, providing pass or fail results. The system utilizes the defined workflow to determine the necessary entities for review and sends corresponding notifications accordingly.

**4.1.7 Automated Hauling Permit Routing Systems (AHPS) : Business Operation Requirements**

- 4.1.7.1** AHPS must interoperate with WVDOT GIS, LRS, and any other data necessary to assist in dynamic routing of permitted vehicles/loads.

**i3-Celtic Response:** We will meet this requirement.

- 4.1.7.2** AHPS must interoperate WVDOT AASHTOWare BrR; AHPS will be required to utilize AASHTOWare BrR data to assist in dynamic routing and analysis of permitted vehicles/loads.

**i3-Celtic Response:**

CTS-PARS route solver process will validate the load and dimensions restriction of bridges and retrieve bridge data in a tabular format based on the user-entered route.

- 4.1.7.3** AHPS must have and use a rules engine, comprised of one (1) or more business rules, for permit applications and fee calculations.

**i3-Celtic Response:**

CTS-PARS offers a very sophisticated permit definition module with an in-built rules engine for managing business rules for permit application rules, fee calculation rules, workflow, application rules, and check and restriction management rules.

The fees section allows for managing fixed and dynamic fees rules as follows:

- Fixed fees based on fees type.
- Dynamic fees are based on fixed fees and other criteria such as load and dimension, weight, distance, vehicle type, transaction type etc.

- 4.1.7.4** AHPS must use the Rules Engine to determine if a mandatory combination of AHPS calculations, data entry, interface, answer/response, approvals, or document storage has

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been met.

**i3-Celtic Response:**

CTS-PARS offers a permit definition module with an in-built rules engine for managing business rules for permit application rules, fee calculation rules, workflow, application rules, and check and restriction management rules.

Permit Business Rules Section allows for managing multiple validations and business rules as follows:

- Edit Rules – Allows for managing business rules for different sections of the permit application that provide a hard stop with an appropriate message and allows the user to proceed with a warning message.
- Application forwarding rules – Allows for managing business rules to add an application in the workflow for review by an authorized user or forward the application as an issue.

**4.1.7.5 AHPS Rules Engine must calculate the fees, credits, refunds and taxes for each transaction type, vehicle type and road usage**

**i3-Celtic Response:**

CTS-PARS offers a very sophisticated permit definition module with an in-built rules engine for managing business rules for permit application rules, fee calculation rules, workflow, application rules, and check and restriction management rules.

The fees section allows for managing fixed and dynamic fees rules as follows:

- Fixed fees based on fees type.
- Dynamic fees are based on fixed fees and other criteria such as load and dimension, weight, distance, vehicle type, transaction type etc.

**4.1.7.6 AHPS must host the HPS including all software and hardware.**

**i3-Celtic Response:** We will meet this requirement.

**4.1.7.7 AHPS must enforce that data entry fields must only be used for what they are intended (e.g. date field only accepts date format, address field must contain addresses)**

**i3-Celtic Response:**

CTS-PARS incorporates standard field-level validation across the entire application. This ensures that data entered by users adheres to predefined rules and requirements. By implementing field-level validation, CTS-PARS helps to maintain data integrity and accuracy, reducing the likelihood of errors and inconsistencies.

**4.1.7.8 AHPS must be designed to prevent redundant data entry by HPS Authorized Users throughout the UI.**

**i3-Celtic Response:**

CTS-PARS offers several features that assist users in reducing data entry efforts:

1. Prepopulating common details: The system automatically populates frequently used information such as customer details, default contact information, conditions, fees, and mandatory documents. This eliminates the need for users to repeatedly enter the same data, saving time and effort.
2. Fields auto-complete feature: CTS-PARS includes an auto-complete feature for fields, which suggests and completes entries based on previously entered information. This helps users by reducing the need to

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manually type repetitive or similar data.

3. Reducing data entry work through saved details: Users can select and use pre-saved vehicle details, axle details, and pre-defined routes, minimizing the need for manual data entry. This streamlines the process and ensures accuracy by utilizing previously saved information.
4. Option to duplicate pre-issued permits: CTS-PARS allows users to duplicate pre-issued permits while still providing the flexibility to modify any necessary details. This feature eliminates the need to recreate permits from scratch, saving time and effort for users.

- 4.1.7.9** AHPS must provide the capability to suspend Customers for confirmed reasons including, but not limited to: Non-payment, Fraud and Violations.

**i3-Celtic Response:**

Depending on the business scenarios, the CTS-PARS allows authorized users to add various flags on the customer account as follows:

- 1) Permit Account Status – When the account is suspended or deactivated, the system will restrict internal and external users from processing any transaction but allows them to collect the payment.
- 2) OSS order flag – Enabled when permit account status is "Suspended".

- 4.1.7.10** AHPS must support the grouped data sets as layers on the base map. At a minimum, the following grouped data sets must be configured by the Contractor in cooperation with

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WVDOT: Accidents, Bridge Out, Closure, Counties, District, District Offices, Flooding, Incidents, Open, Parades, Pavement Markings, Reduced to One Lane, Restriction, Road Work, Seasonal Road Closures, Special Restrictions. The AHPS must also have the ability to turn layers on and off based on user type.

**i3-Celtic Response:**

i3-Celtic will collaborate closely with WVDOT to finalize the layer requirements for CTS-PARS.

The current implementation of CTS-PARS includes the following layers:

1. Restrictions
2. Counties
3. Bridges
4. Exits
5. Mile Marker
6. Interstate Roads
7. Federal Roads
8. State Roads
9. Local Roads

However, the specific layer requirements may vary based on WVDOT's needs and preferences. i3-Celtic will work diligently to understand and incorporate the required layers as per WVDOT's guidance.

**4.1.7.11 AHPS must use a Rules Engine.**

**i3-Celtic Response:**

CTS-PARS offers a very sophisticated permit definition module with an in-built rules engine for managing business rules for permit application rules, fee calculation rules, workflow, application rules, and check and restriction management rules.

**4.1.7.12 AHPS must provide the capability for an Administrative User to define custom business rules for a permit application.**

**i3-Celtic Response:**

CTS-PARS offers a permit definition module with an in-built rules engine for managing business rules for permit application rules, fee calculation rules, workflow, application rules, and check and restriction management rules. Permit Business Rules Section allows for managing multiple validations and business rules as follows:

- Edit Rules – Allows for managing business rules for different sections of the permit application that provide a hard stop with an appropriate message and allows the user to proceed with a warning message.
- Application forwarding rules – Allows for managing business rules to add an application in the workflow for review by an authorized user or forward the application as an issue.

**4.1.7.13 AHPS must have business rule revisions by an Administrative User must have an approval loop, with the ability for one (1) or more additional Administrative Users to review and approve the revision, prior to implementation.**

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**i3-Celtic Response:**

This would be a new feature to be developed and included.

- 4.1.7.14** AHPS must provide the capability to auto-select business rules on a permit application based on pre-defined logic.

**i3-Celtic Response:**

CTS-PARS provides the capability to auto-select business rules on a permit application based on pre-defined logic. The system is designed to automatically apply the appropriate business rules according to the predefined logic, streamlining the permit application process.

- 4.1.7.15** AHPS must provide the capability for an Administrative User to override auto-selected business rules on a permit application.

**i3-Celtic Response:**

CTS-PARS offers a permit definition module with an in-built rules engine for managing business rules. Our rule engine supports the following types.

- 1) Warning Rules: These rules allow the user to proceed with a warning message, indicating potential issues or concerns.
- 2) Hard Stop Rules: These rules do not allow the user to proceed until the data is corrected to meet the specified requirements.
- 3) Override Rules: Similar to hard stop rules, these rules also require the user to correct the data. However, administrative users have the option to override the rule and proceed.
- 4) Forwarding Rules: These rules are designed to check for manual review requirements, forwarding the application to the appropriate reviewer or workflow based on specific criteria.

- 4.1.7.16** Vendor must provide the capability to create a viewable extract of all existing business rules.

**i3-Celtic Response:**

CTS-PARS also offers a permit definition module in inquiry mode that displays all the business rules, fees configurations, conditions etc. Authorized user can assign permit definition inquiry access to desired role.

- 4.1.7.17** AHPS must retain the location where the fee is collected on each transaction.

**i3-Celtic Response:**

CTS-PARS offers a financial report that gives transaction-wise fee collected in each location.

- 4.1.7.18** AHPS must provide the ability for Customers to initiate, conduct and pay for permits at different WVDOT locations that provides the service requested. (e.g., A permit initiated at WVDOT central office can be paid at same location).

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**i3-Celtic Response:**

CTS-PARS provides a secure payment system that enables users to initiate, process, and make payments for permits at any office location. The system offers users the flexibility to choose between online and offline payment options. Whether they prefer to make payments online or at any physical office location, CTS-PARS accommodates both methods to ensure a seamless payment experience.

**4.1.7.19** AHPS must allow for any data elements, as defined, and configured by WVDOT, to print on Permits or communications. (e.g., bar codes, unique user identifier, standardized headers, and footers)

**i3-Celtic Response:**

CTS-PARS includes a template management module that allows authorized users to create and modify templates used for communication, including email, letters, notifications, text messages, and standard reports.

The report can be downloaded and edited using Crystal Reports designer. After completing an update, the new template can be uploaded and published for use in production.

i3-Celtic has implemented an AAMVA-compliant barcode and check digit logic on the permit and a QR code to retrieve permit documents.

i3-Celtic will share the existing permit credential template, which includes crucial details such as customer information, permit duration, vehicle specifics, load details, route information, directions, and conditions. Additionally, we will work together to identify any additional data elements that may be necessary for the permit credential template.

**4.1.7.20** AHPS must provide the ability to input notes in a text field, with a minimum character count of five thousand (5,000) and associate it with the transaction or customer record.

**i3-Celtic Response:**

CTS-PARS offers a comment section for all transactions or modules like customer, account, queue, etc.

The comments feature allows the user to enter the description to the free-form Comment box. That allows characters up to 5,000.

- Select an appropriate Access Level for each comment (Internal, Public, or Restricted).
- Delete Allowed checkbox – All comments default with this checkbox unchecked (meaning all comments will remain on the record until the record is purged.) If the user wants to allow deletion of a comment in the future, then check this checkbox before adding the comment to the record. When this checkbox is checked, a "Delete" link will appear on the right of the comment.
- Select Add/Update Comment to save the comment to the record.
- Clear Comment – click this button to remove the details entered in the comment section and reset it.

**4.1.7.21** AHPS allow an address to be marked as undeliverable and record the date the indicator was applied.

**i3-Celtic Response: We would like clarification on this requirement.**

**4.1.7.22** AHPS must allow Authorized Users to create new records. When duplicates exist, the



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AHPS must provide an alert and allow Authorized Users to perform overrides.

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**i3-Celtic Response: This would be a new feature to be developed.**

**4.1.7.23** AHPS must perform real-time live load bridge analysis for oversize and overweight vehicles for every bridge on every route, less exceptions included in these requirements.

**3-Celtic Response:** We will meet this requirement.

**4.1.7.23.1** AHPS must have the ability for authorized users to tag/toggle bridges in the list from AssetWise as bridges that do not require deep analysis (eg: deep buried culverts with no live load effect)

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.23.2** AHPS must report any bridges that should have a file for analysis that currently do not.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.23.3** AHPS must kick back for technical review to WVDOT if automation finds any file that are missing.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.24** AHPS must perform real-time live load bridge analysis utilizing the American Association of State Highway and Transportation Officials (AASHTOWare) Bridge Rating (BrR) system: AASHTOWare Rating Tool and WVDOT's BrR Database.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.25** AHPS must utilize BrR's Load Rating Tool (LRT) for fast processing of the majority of WVDOT's bridge inventory.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.26** Bridges not currently included in the LRT but with a complete BrR model in the database, allow some level of prescreening for approval with a developed capacity table or other WVDOT approved method.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

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**4.1.7.27** AHPS must provide means and methods to operate the required version of BrR on the contractor's hardware and servers, disconnected from WVDOT. The version will match WVDOT's production version of the software. The contractor will provide a means and method to accept BrR database backup files at a frequency of WVDOT choice (daily, weekly, monthly, or quarterly). Vendor must have the ability to determine, through automation, if the database file that was provided has new or changed information, and if so, be able to automatically pull that into the HPS for production use without manual intervention.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.28** AHPS must interact with the BrR software with the following:

**4.1.7.28.1** AHPS must send Customer entered axle weights, spacing, and bridges on the Customer entered route to be analyzed by the BrR system.

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**i3-Celtic Response:**

The system will allow the bridge engineer to export load and dimension, axle data in XML format as required by the AASHTO BrR.

**4.1.7.28.2** AHPS must receive bridge analysis from BrR and use them to determine the next step.

**i3-Celtic Response:**

CTS-PARS displays ASHTO BrR result. Based on the AASHTO BrR result, the bridge engineer will provide recommendations of allowable load & dimensions, weight, speed limit, and center line restrictions.

**4.1.7.28.3** AHPS must interact with BrR on various bridge rating levels and scenarios.

**4.1.7.28.3.1** AHPS must provide low impact and no impact ratings for review.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.28.3.2** AHPS must provide one lane loading scenarios for review.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.29** AHPS must apply travel restrictions (speed and specified lane) and resend axle weights, spacing and bridges.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.30** AHPS must allow for a feedback loop with the BrR software until a permit can be issued with or without restrictions, denied, or sent for a manual analysis.

**i3-Celtic Response:**

While we have this capability, we will need to coordinate with the Bridge Engineer.

**4.1.7.31** AHPS must be capable of routing (through workflow) a permit request to the WVDOT Operations Division – Bridge Permit Section (OM-BPS) team for manual bridge analysis. This permit request must include a list of all bridges crossed and the results of the automatic analysis.

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**i3-Celtic Response:**

CTS-PARS provides configurable workflow and application forwarding rules that allow the system to add permit applications in the workflow for review by an authorized user. CTS-PARS permit queue comes with general and advanced search/filter criteria that help business users to narrow down the data.

Workflow rule can be defined to manage manual approval from distinct roles and departments.

**4.1.8 Automated Hauling Permit Routing Systems (AHPS) : WVDOT Bridge Analysis Requirements**

**4.1.8.1 AHPS must populate results of bridge analyses into the transaction record of the permit.**

**i3-Celtic Response:**

CTS-PARS route solver process will validate the load and dimensions restriction of bridges and retrieve bridge data in a tabular format based on the user-entered route. The Bridge engineer has the option to add/remove bridges from the list and run "Bridge Analysis". The system will allow the bridge engineer to export load and dimension data in XML format as required by the AASHTO BrR. Based on the AASHTO BrR result, the bridge engineer will provide recommendations of allowable load & dimensions, weight, speed limit, and centre line restrictions.

**4.1.8.2 AHPS must utilize the results of bridge analysis to determine the validity of a prospective route. If the bridge analysis fails, the AHPS must perform the following actions with the Customer:**

**4.1.8.2.1 Alert Customer of the failed bridge analysis, but the customer should only get a message saying there are one of more failures while showing the location on the map. The customer should not be given any load rating information.**

**i3-Celtic Response:**

CTS-PARS has the option in the review process to reject or assign back to the carrier the permit request for further action. Customer will get email notification with only details/reason which is provided by the reviewer in comments.

**4.1.8.2.2 Allow Customer to select a different route.**

**i3-Celtic Response:**

CTS-PARS allows authorized users to assign back (feedback) to permit application to customer to correct data or to select to different route. The customer will get a feedback email notification with the provided details to be followed.

**4.1.8.2.3 Allow Customer to cancel the permit application.**

**i3-Celtic Response:**

CTS-PARS allows authorized users to reject the permit request or allow customers to cancel the work in progress permit.

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**4.1.8.2.4** Allow Customer to place the request in a held/pending state.

**i3-Celtic Response:**

CTS-PARS has hold transaction which allows user to put issued permit on hold which can be reactivated through amendment transaction.

**4.1.8.3** AHPS reporting and querying capabilities as defined in Appendix B

**4.1.8.3.1** AHPS must be capable of creating reports showing all permits on roads or bridges over any time frame.

**i3-Celtic Response:**

CTS-PARS offers a set of production-proven standard reports, including Route Usage, Bridge Usage, and more. The system also provides additional MIS Reports, Inquiries, and an Ad-hoc report feature with the availability of Graphical Charts. All reports and inquiries include mandatory and optional search parameters, including date range, customer account, permit number, commodities, load, and dimensions, and more.

**4.1.8.3.2** AHPS must have the ability to query permits on selected routes in various states of approval (pending, approved, and denied.).

**i3-Celtic Response:**

CTS-PARS includes a Route Usage report that currently includes only approved permits. i3-Celtic will work closely with WVDOT to gain a comprehensive understanding of the desired usage requirements and implement any necessary adjustments to the report accordingly.

**4.1.8.3.3** AHPS must have the fully functional ability to query based on various permit parameters on various routes (e.g. show the permits that have been requested, approved, and denied crossing a certain route with a certain dimension parameter set, and certain weight parameter.).

**i3-Celtic Response:**

CTS-PARS offers reports on subjects such as Bridge Usage and Route Usage. These reports provide both mandatory and optional search parameters, including date range, customer details, commodities, load, dimensions, and more. i3-Celtic will collaborate closely with WVDOT to identify any additional parameters that would be useful and integrate them into the system.

**4.1.9 Automated Hauling Permit Routing Systems (AHPS) : LRS Analysis Requirements**

**4.1.9.1** AHPS must have a Geographical Information System (GIS) web-based mapping system. WVDOT currently uses ESRI GIS and LRS software, including ArcGIS Desktop, ArcGIS Server, ArcGIS Online and Roads & Highways LRS, using MS SQL Server database.

**i3-Celtic Response:**

The CTS-PARS is developed using Microsoft .Net, ESRI ArcGIS Services, ArcGIS API for JavaScript applications, and supports SQL Server/Oracle Database.

The components of the CTS-PARS can be summarized as follows:

- Clients - Web browsers are used to connect to web applications running in the GIS Services. The system supports all standard browsers, including Microsoft Edge, Google Chrome, Firefox, and Safari.

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- Web Server – The GIS Web Server Adaptor allows the GIS Server to integrate with the permitting system web server. The Web adaptor forwards requests to the GIS Server.
- GIS Server – The GIS Server process GIS Service request and communicates with the GIS database server.
- Data Server – Following databases shall be created/maintained:
  - The GIS database contains a feature class, feature table, locator, dataset, network dataset, etc.
  - THE CTS-PARS OLTP and OLAP database contains data, including permit customers, permit transactions, payments, credentials, and more.

CTS-PARS leverages Esri ArcGIS technology and toolsets, making the system tightly integrated with jurisdictional network layers and easy to maintain for those already managing their roadway network with Esri. We are an authorized Esri partner.

- 4.1.9.2** AHPS must utilize WVDOT's GIS highway, bridge, ramp, and interchange names. The AHPS must use an WVDOT defined source for all road nomenclature and will include a web API.

**i3-Celtic Response:**

i3-Celtic recommends using an ESRI base map along with either ESRI street map premium (SMP) data or the state-provided routable road network.

The road network will have different layers of data overlaid on the base map, including state-provided routable road network, other boundaries and road networks, temporary restrictions, structures, and more.

CTS-PARS has been developed utilizing Esri ArcGIS in combination with i3-Celtic's proprietary modules, and we will leverage WVDOT's confirmed GIS data and infrastructure to provide a scalable, robust solution to exceed WVDOT's expectations for CTS-PARS.

- 4.1.9.3** AHPS must have the ability to use WVDOT's GIS length, width, height, and weight limitations on roadways, ramps, interchanges, and structures to analyze routes and identify permanent restrictions on a route based on length, width, height, and weight. Information is derived from the transportation asset management system (TAMS), LRS, the bridge database or other electronic formats.

**i3-Celtic Response:**

During the technical discussion sessions, i3-Celtic will understand the available data source from ArcGIS Roads and Highways LRS. The system will be configured to establish a workflow and automatically update ArcGIS Roads and Highways LRS roadway data and restrictions in CTS-PARS.

- 4.1.9.4** AHPS must process WVDOT GIS data to create a mapping solution with a geo-coded database for use within the AHPS.

**i3-Celtic Response:**

The CTS-PARS supports SQL Server and Oracle Database and has the capability to work with spatial data.

- 4.1.10 Automated Hauling Permit Routing Systems (AHPS) : Customer Requirements**

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**4.1.10.1** AHPS must have the ability to issue permits to Customers.

**i3-Celtic Response:**

CTS-PARS is a web-based application that allows customers to apply for and obtain permits online

**4.1.10.2** AHPS must provide step-by-step driving instructions and map(s) to Customer.

**i3-Celtic Response:**

The CTS-PARS-generated credential includes a route map, turn-by-turn direction details, as well as any applicable conditions and warnings associated with the generated route.

**4.1.10.3** AHPS must support all axle configurations including, but not limited to, trunnion trailers or trailers with a trunnion axle configuration when applying for a permit.

**i3-Celtic Response:**

CTS-PARS permit load and dimension section allows for the selection of commodity type, transportation type, total weight, length (total length, front overhanging, rear overhanging), width (total width, side overhang), and axle configuration (including axle type, individual axle weights, total weight, and axle spacing, total spacing)

**4.1.10.4** AHPS should provide a Customer the ability to bookmark map views.

**i3-Celtic Response:** We will meet this requirement.

**4.1.10.5** AHPS should provide the ability to "jump" to a bookmarked or stored map view.

**i3-Celtic Response:** We will meet this requirement.

**4.1.10.6** AHPS should provide Customers to save a minimum of ten (10) bookmark map views to their user profile.

**i3-Celtic Response:** We will meet this requirement.

**4.1.10.7** AHPS should support workflow that allows a Motor Carrier to view, approve or be notified of pending permit payment requests from the trucker operators employed by that Motor Carrier.

**i3-Celtic Response:** We would like clarification.

**4.1.10.8** AHPS must support handheld device access to the AHPS.

**i3-Celtic Response:** is this asking for a mobile application? (4.1.10.12)



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**4.1.10.9** AHPS must provide the ability to enter and submit a new permit application via a handheld device.

**i3-Celtic Response:** We will meet this requirement.

**4.1.10.10** AHPS must support a secure connection from handheld devices including at a minimum, but not limited to, Apple iOS, Android, MS Windows Mobile, and new/future mobile operating systems.

**i3-Celtic Response:** We will meet this requirement.

**4.1.10.11** AHPS must provide the ability to view/display an approved permit on a handheld device.

**i3-Celtic Response:**

**4.1.10.12** AHPS must provide the ability to sign/attest the permit electronically by the vehicle driver on a handheld device.

**i3-Celtic Response:** We will meet this requirement.

**4.1.10.13** AHPS must provide the capability to create a new permit application.

**i3-Celtic Response:**

Customization: Permit definition can be used to create new permit however it is not 100% configurable some level of code changes are required to make it functional.

**4.1.10.14** AHPS must provide the ability to create a new permit application by type including but not limited to: single trip oversize/overweight, single trip mobile home, annual oversize/overweight, annual mobile home, annual seagoing, and annual timber permits.

**i3-Celtic Response:**

Customization: Permit definition can be used to create new permit however it is not 100% configurable some level of code changes are required to make it functional.

**4.1.10.15** AHPS must provide the ability to select a Motor Carrier address from a list of addresses when the Motor Carrier has more than one.

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**i3-Celtic Response:**

CTS-PARS supports multiple addresses (10 addresses) and also allows you to select multiple address from the entered (10 addresses).

- 4.1.10.16** AHPS must provide the ability for a Customer to enter permit application information including but not limited to: anticipated move date, willingness to accept alternate route, maximum acceptable additional miles, permit delivery method (e.g., fax, email), fax number, and email address.

**i3-Celtic Response:**

The CTS-PARS allows customers to apply for the permit and obtain permits online. By entering all the required details like travel dates, load details, vehicle details, route points and also allows to select the delivery type option (email or fax) to get the permit credential.

- 4.1.10.17** AHPS must provide the ability to request multiple permits with identical loads, route, and equipment from a single permit application, including round trip permits.

**i3-Celtic Response:**

The CTS-PARS has the option to select the Number of Identical Permits required with similar details including round trip details.

The system generates different permits with the same permit details.

- 4.1.10.18** AHPS must provide the ability to enter emergency move information including but not limited to: Emergency type, emergency description, date of move, agency or utility contact name, agency or utility contact telephone number, location of emergency, and justification for the emergency move.

**i3-Celtic Response: This would be a new feature to be developed.**

- 4.1.10.19** AHPS must use map symbols common to the industry.

**i3-Celtic Response:**

In CTS-PARS, commonly used map symbols are employed based on the source data subject. These symbols help to represent various features and elements on the map accurately. The symbols are selected in accordance with standard cartographic conventions and industry best practices.

Moreover, CTS-PARS provides an icon configuration module that allows users to edit and customize map icons or symbols. With this module, users have the flexibility to modify the appearance and representation of icons as per their preferences or specific requirements. This feature enables users to tailor the visual presentation of the map to align with their needs and improve the overall user experience.

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**4.1.10.20** AHPS map must display restriction data using icon symbols common to the industry.

**i3-Celtic Response:**

In CTS-PARS, restriction map symbols are employed based on the source data subject. The symbols are selected in accordance with standard cartographic conventions and industry best practices.

Moreover, CTS-PARS provides an icon configuration module that allows users to edit and customize map icons or symbols

**4.1.10.21** AHPS map must display non-restriction data using icons common to the industry.

**i3-Celtic Response:**

In CTS-PARS, commonly used map symbols are employed based on the source data subject. These symbols help to represent various features and elements on the map accurately. The symbols are selected in accordance with standard cartographic conventions and industry best practices.

Moreover, CTS-PARS provides an icon configuration module that allows users to edit and customize map icons or symbols

**4.1.10.22** AHPS map symbols must be easily identifiable to any user when displayed in color and in black and white to meet ADA requirements as defined by ADA best practices:

**4.1.10.22.1** <https://www.ada.gov/pcatoolkit/chap5toolkit.htm>

**i3-Celtic Response:**

This would be customization of the ADA Map and Icon Configuration

**4.1.10.23** AHPS must support symbolization through multiple attributes, such as charts (stacked, pie, bar graphs), and quantities (graduated symbol, graduated color, or proportional symbol) as defined in Appendix B - Minimum Reports.

**i3-Celtic Response:**

Customization: We have route usage and bridge usage reports, additional can be created as required in Appendix B

**4.1.10.24** AHPS map must contain a legend that automatically updates as new icons are imported and associated with restriction types and locations, included in the user fee structure outlined above.

**i3-Celtic Response:**

Not Clear: "user fee structure" seems to be typo error?

CTS-PARS includes an icon configuration module that allows users to manage and update icon for layers. When an icon is modified through this module, the changes are reflected on the map and legend automatically.

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**4.1.10.25** AHPS must provide the ability to build a route via a graphic map interface that includes, but is not limited to: all bridges, posted roads, temporary restrictions, individual bridge, and roadway restrictions, turn restrictions, alternate routes, ramp ID, road connector information, identified detours, and emergency restrictions.

**i3-Celtic Response:**

CTS-PARS provides the capability to build a route using a graphic map interface, encompassing various elements such as bridges, posted roads, temporary restrictions, individual bridge, and roadway restrictions, turn restrictions, alternate routes, ramp IDs, road connector information, identified detours, and emergency restrictions.

The system ensures that these factors are taken into account during the route generation process, allowing users to plan routes that consider all relevant restrictions and road conditions.

**4.1.10.26** AHPS must provide a visual map that highlights road construction and maintenance operations, has a zoom feature, and provides dates and restrictions on

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**i3-Celtic Response:**

CTS-PARS includes Restrictions, Counties, Bridges, Exits, Mile Marker, Interstate Roads, Federal Roads, State Roads, Local Roads layers.

However, the specific layer requirements may vary based on WVDOT's needs and preferences. i3-Celtic will work diligently to understand and incorporate the required layers as per WVDOT's guidance.

System provides a toggle button option that enables users to turn on/off specific map layers. This feature allows users to customize their map view and focus on the information that is most important to them, resulting in a clear and personalized display.

System incorporates standard uniform widgets on all map screens, providing users with features such as zooming in, zooming out, zooming to a specific area, zooming to the state border, full-screen mode, base map selection, and location search.

**4.1.10.27** AHPS must provide drivable routes on a permit.

**i3-Celtic Response:**

The CTS-PARS-generated credential includes a drivable route map with turn-by-turn directions and any associated conditions or warnings.

**4.1.10.28** AHPS must provide the capability for a Trucking Permit Service user to maintain a list of Motor Carrier accounts associated with that Trucking Permit Service, with access to any Motor Carrier permit data that is associated specifically with that Trucking Permit Service.

**i3-Celtic Response:**

CTS-PARS allows the selection of a Trucking Permit Service Provider for Motor Carriers to apply for permits and submit them online. A single Trucking Permit Service Provider can work on behalf of multiple Motor Carriers, streamlining the permit application process.

**4.1.10.29** AHPS must provide the capability for an Authorized User to submit a permit application on behalf of a permit applicant.

**i3-Celtic Response:**

CTS-PARS allows authorized users, such as service providers or third-party users, to apply for permits and submit them online on behalf of the applicant.

**4.1.10.30** AHPS must provide the ability to identify the type of permit requested on a permit application.

**i3-Celtic Response:**

We will support this as a new feature.

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**4.1.10.31** AHPS must allow the user to select the permit type based on vehicle, load, and route information.

**i3-Celtic Response:**

We will support this as a new feature.

**4.1.10.32** AHPS must provide the ability to enter load information for a permit application including but not limited to: gross weight, total length, total width, total height, load specifics, load serial ID, , front overhang, back overhang, axle and tire widths, axle loads, tires per axle, axle spacings, distance between extreme axles (distance between the steer axle and last axle of the load).

**i3-Celtic Response:**

In CTS-PARS, customers have the ability to apply for permits and obtain them online. They can enter all the necessary details, including travel dates, load details, vehicle specifications (dimensions, axle details), route points, and other relevant information, to generate the permit credential. By providing these details, customers can ensure that their permit application is complete and accurate, enabling them to obtain the necessary permit for their intended travel.

**4.1.10.33** AHPS must provide the ability to accept attachments; those attachments will be used by WVDOH to enter non-standard gage (NSG) configurations, preferably as needed so that a NSG temporary permit vehicle can be defined through the BrR API for NSG permit analysis.

**i3-Celtic Response:**

We can support this but will need to coordinate with the Bridge Engineer.

**4.1.10.34** AHPS must provide the capability for Customer to enter load and vehicle information (i.e. license plate numbers and issuing state for the tractor and all subsequent trailers).

**i3-Celtic Response:**

CTS-PARS captures vehicle details such as vehicle type, VIN, make, year, plate number, and unit number. The system includes a Vehicle module that allows users to save their account vehicles, reducing data entry time and minimizing errors.

**4.1.10.35** AHPS must provide the ability to specify any parts removed or other physical differences in a load.

**i3-Celtic Response: We would need clarification.**

**4.1.10.36** AHPS must provide the ability to save and select a load type and load dimensions as a favorite.

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**i3-Celtic Response:**

**New Feature:** alternate solution is copy from

CTS-PARS has a "Copy From" functionality that allows customers to reuse previously issued permit details when applying for a new permit. This feature eliminates duplicate entry by automatically populating the new permit with the existing information, while still allowing customers to modify any necessary data as needed.

**4.1.10.37** AHPS must store hauling unit types and trailing unit types as defined by Customer.

**i3-Celtic Response:**

**Not Clear:** we think vehicle module is the solution to this requirement

CTS-PARS captures vehicle details such as vehicle type, VIN, make, year, plate number, and unit number. The system includes a Vehicle module that allows users to save their account vehicles, reducing data entry time and minimizing errors.

**4.1.10.38** AHPS must provide the ability to save and select vehicle information for a permit application from a list of favorites including but not limited to: truck information, trailer information, equipment type, registration number, VIN, number of axles, USDOT number, State.

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**i3-Celtic Response:**

CTS-PARS captures vehicle details such as vehicle type, VIN, make, year, plate number, and unit number. The system includes a Vehicle module that allows users to save their account vehicles, reducing data entry time and minimizing errors.

**4.1.10.39** AHPS must provide the ability to store and select hauling vehicle and equipment information and trailers for a permit application.

**i3-Celtic Response:**

CTS-PARS captures vehicle details such as vehicle type, VIN, make, year, plate number, and unit number. The system includes a Vehicle module that allows users to save their account vehicles, reducing data entry time and minimizing errors.

**4.1.10.40** AHPS support multiple trailer configurations when applying for a permit.

**i3-Celtic Response:**

We can support this customization to allow multiple CTS-PARS allows customers to add multiple vehicles during the permit issuance process. All the vehicle details will be printed on the issued permit credential. i3-Celtic will collaborate with WVDOT to implement necessary changes based on their business requirements.

**4.1.10.41** AHPS must provide the ability to enter and validate axle data.

**i3-Celtic Response:**

The CTS-PARS permit load and dimension section allows users to enter free-form load descriptions or by using a load list as a drop-down. The commodity type and the number of axles will be collected based on the WVDOT's business rules; the system has the ability to be configured to collect and validate the number of axles on the power unit, the trailer, the trailer combination, or a total of all axles.

**4.1.10.42** AHPS must provide the ability to calculate the sum of the axle weights for a permit application.

**i3-Celtic Response:**

The CTS-PARS permit load and dimension section allows users to enter free-form load descriptions or by using a load list as a drop-down. The commodity type and the number of axles will be collected based on the WVDOT's business rules; the system has the ability to be configured to collect and validate the number of axles on the power unit, the trailer, the trailer combination, or a total of all axles. The system also displays the total weight requested on all the provided axles.

**4.1.10.43** AHPS must provide and display an interactive axle spacing diagram.

**i3-Celtic Response:**

In CTS-PARS, the system displays the axle configuration diagram of the vehicles on the application page.



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This diagram provides a visual representation of the vehicle's axle configuration, allowing users to easily understand and verify the information.

Additionally, when the permit credential is issued, the axle configuration diagram is printed on the permit credential itself. This ensures that the axle configuration details are prominently displayed and readily available for reference.

**4.1.10.44** AHPS must provide the ability to enter permit application data for each axle including but not limited to: axle number, distance from previous axle, axle weight, manufacturers rated axle capacity, center to center wheel spacing, number of tires on each axle, and axle and tire width. It is preferred that this be accompanied by a checkbox to indicate if the axle is non-standard gage (NSG).

**i3-Celtic Response:**

The CTS-PARS allows customers to enter the axle details like axle number, distance from previous axle, axle weight, manufacturers rated axle capacity, axle type, number of tires on each axle etc.

i3-Celtic will collaborate with WVDOT to implement necessary changes based on their business requirements.

**4.1.10.45** AHPS must provide the capability for a Customer to review, print, or clone permits and applications they have previously submitted.

**i3-Celtic Response:**

CTS-PARS has a "Copy From" functionality that allows customers to reuse previously issued permit details when applying for a new permit. This feature eliminates duplicate entry by automatically populating the new permit with the existing information, while still allowing customers to modify any necessary data as needed.

System gives the option to print the issued permit through "Reprint" option or print permit credential while applying for the permit.

**4.1.10.46** AHPS must provide the capability to clone an existing permit application.

**i3-Celtic Response:**

CTS-PARS has a "Copy From" functionality that allows customers to reuse previously issued permit details when applying for a new permit. This feature eliminates duplicate entry by automatically populating the new permit with the existing information, while still allowing customers to modify any necessary data as needed.

**4.1.10.47** AHPS must provide the ability to change the move start date to a future date on a cloned application.

**i3-Celtic Response:**

CTS-PARS has a "Copy From" functionality that allows customers to reuse previously

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issued permit details when applying for a new permit. This feature eliminates duplicate entry by automatically populating the new permit with the existing information, while still allowing customers to modify any necessary data as needed.

**4.1.10.48** AHPS must provide the ability to clone applications with all permit information included.

**i3-Celtic Response:**

CTS-PARS has a "Copy From" functionality that allows customers to reuse previously issued permit details when applying for a new permit. This feature eliminates duplicate entry by automatically populating the new permit with the existing information, while still allowing customers to modify any necessary data as needed.

**4.1.10.49** AHPS must provide the ability to withdraw and clone a permit application in submitted status.

**i3-Celtic Response:**

The CTS-PARS has functionality called "Copy From" where customer is allowed to use the issued permit details in the new permit avoiding duplicate entry by the customer. System has the functionality for Cancelling the Permit in any status. i3-Celtic will collaborate closely with WVDOT to integrate clone functionality in any other status if required.

**4.1.10.50** AHPS must provide the ability to delete and withdraw an in- process permit application.

**i3-Celtic Response:**

CTS-PARS includes a functionality that allows users to cancel permits in any status, including open, invoiced, paid, and other in-process statuses. This feature enables users to easily cancel permits that are no longer needed or have become invalid for any reason.

By utilizing the cancellation functionality within CTS-PARS, users can initiate the process of canceling a permit, regardless of its current status.

If the permit is already paid for the system will initiate a payment refund process.

**4.1.10.51** AHPS must provide the ability to withdraw a permit application in submitted status.

**i3-Celtic Response:**

CTS-PARS includes a functionality that allows users to cancel permits in any status, including open, invoiced, paid, and other in-process statuses. This feature enables users to easily cancel permits that are no longer needed or have become invalid for any reason.

By utilizing the cancellation functionality within CTS-PARS, users can initiate the process of canceling a permit, regardless of its current status.

If the permit is already paid for the system will initiate a payment refund process.

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**4.1.10.52** AHPS must provide the ability for the vehicle driver to sign/attest the permit electronically.

**i3-Celtic Response:**

Not Clear:

**4.1.10.53** AHPS must provide the ability to populate data in subsequent fields that has had data entered into previous sections. AHPS must provide Customer the ability to auto populate data from a past approved permit and create a new permit request.

**i3-Celtic Response:**

CTS-PARS has a "Copy From" functionality that allows customers to reuse previously issued permit details when applying for a new permit. This feature eliminates duplicate entry by automatically populating the new permit with the existing information, while still allowing customers to modify any necessary data as needed.

**4.1.10.54** AHPS must identify the impacted section of the roadway or bridge causing a denial in an automated notification.

**i3-Celtic Response:**

CTS-PARS includes a comprehensive restriction management module that captures various details related to restrictions. These details may include the restriction type, duration, impact, reason, and dimension restrictions, among others.

The information captured in the restriction management module is crucial for building a safe route and ensuring compliance with applicable restrictions. The system utilizes this data to generate notifications and alerts, which are sent to customers who have already been issued permits. These notifications provide valuable information regarding the specific restrictions that may affect their travel plans.

**4.1.10.55** AHPS must allow a Customer to resubmit a denied application for reconsideration.

**i3-Celtic Response:**

CTS-PARS queue module includes a comment section where users can add the reason for denial, which is then included in the notification sent to the customer. Furthermore, the workflow has a unique feature that allows reviewers to provide feedback on application processing errors in the comments and assign them to the customer for correction. The customer can make the necessary corrections based on the feedback and resubmit the application for review.

**4.1.10.56** AHPS must provide the ability to perform a route analysis on a submitted permit application.

**i3-Celtic Response:**

Authorized users in CTS-PARS have the capability to make modifications, corrections, and adjustments to submitted permits as necessary to align with business requirements. This functionality enables users to update and refine the permit details or adjust the route as needed, ensuring that the permit accurately reflects the intended travel and meets the specific business needs.

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By allowing authorized users to perform these modifications, CTS-PARS ensures flexibility and adaptability in the permitting process, accommodating any changes or adjustments that may arise after the initial permit submission. This feature streamlines the workflow and allows for efficient management of permits within the system.

**4.1.10.57** AHPS must provide the ability to save an in-process permit application as a draft.

**i3-Celtic Response:**

The CTS-PARS has the auto save functionality, on proceeding from one page system automatically saves that data of the application. Users can quit from that page and can continue from the saved location whenever required from resume permit module.

**4.1.10.58** AHPS must prevent multiple Customers from being able to edit the same permit simultaneously.

**i3-Celtic Response:**

We would need to develop this capability.

**4.1.10.59** AHPS must provide the capability to search existing permit applications specific to each Customer.

**i3-Celtic Response:**

CTS-PARS provides a variety of search options, including account number, legal name, permit type, load code, vehicle dimension, VIN, unit number, plate number, permit duration, status, route origin, route destination, and office location. These search options enable users to quickly locate specific permits or information within the system.

**4.1.10.60** AHPS must support hyperlinks for display when selected from the map.

**i3-Celtic Response:**

CTS-PARS uses hyperlinks in its user interface (UI) to enhance the standard user experience. Examples include using hyperlinks for restrictions icons to display information windows, bridge icons to show bridge details, and Google Street View links for bridges. These hyperlinks provide additional details and resources to users within the application.

**4.1.10.61** AHPS provide Customers as well as Authorized Users the ability to navigate around the map.

**4.1.10.61.1** AHPS map must support click, drag, and pan for map navigation.

**i3-Celtic Response:**

CTS-PARS supports standard map features such as zooming in, zooming out, zooming to the state border, drawing a box to zoom into a specific area, dragging and panning the map.

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It also allows map navigation using the mouse and keyboard, including the mouse wheel and keyboard number pad keys. These features provide users with convenient and flexible ways to interact with the map screens in the application.

**4.1.10.61.2** AHPS map must support the use of the mouse scroll wheel for zooming in and out in map view.

**i3-Celtic Response:**

CTS-PARS supports standard map features such as zooming in, zooming out, zooming to the state border, drawing a box to zoom into a specific area, dragging and panning the map.

It also allows map navigation using the mouse and keyboard, including the mouse wheel and keyboard number pad keys. These features provide users with convenient and flexible ways to interact with the map screens in the application.

**4.1.10.61.3** AHPS map must support drawing a box for center and zoom map navigation.

**i3-Celtic Response:**

CTS-PARS supports standard map features such as zooming in, zooming out, zooming to the state border, drawing a box to zoom into a specific area, dragging and panning the map.

It also allows map navigation using the mouse and keyboard, including the mouse wheel and keyboard number pad keys. These features provide users with convenient and flexible ways to interact with the map screens in the application.

**4.1.10.61.4** AHPS map must be updated with WVDOT provided information within 24 hours.  
Industry external data must be updated as available.

**i3-Celtic Response:**

We will meet this requirement.

**4.1.10.62** AHPS must support the use of map tool tips which allow a user to display information about a feature.

**i3-Celtic Response:**

i3-Celtic provides following out of the box system help:

- Product User Guide – A fully integrated on-line user guide for all functions of the system, navigates as per the application screens.
- Context Sensitive Help - Assist users when mouse pointer is placed on the column or section.

**4.1.10.63** AHPS must provide the capability to build and display a route using a graphic map interface.

**i3-Celtic Response:**

CTS-PARS provides the capability to build and display routes using a graphic map interface. Users can

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interact with the map interface to define the origin, destination, and any waypoints along the route. The system then generates and displays the route on the map, providing a visual representation of the selected route. This allows users to easily visualize and plan their desired route using the intuitive graphic map interface provided by CTS-PARS.

**4.1.10.64**

AHPS must provide summarized  
construction and maintenance information and allow the user to display details including  
but not limited to: date, time, road name.

**i3-Celtic Response:** We will meet this requirement.

**4.1.10.65**

AHPS must provide the capability to route  
a trip for a load manually:

**4.1.10.65.1** AHPS must provide local road data to support routing.**i3-Celtic Response:**

CTS-PARS collaborates with WVDOT to acquire and finalize the required street data for generating routes. This ensures that the system has access to accurate and up-to-date street information, enabling the generation of reliable and precise routes for permit issuance and other purposes. The coordination with WVDOT ensures that CTS-PARS aligns with the official street data provided by the transportation authority, enhancing the overall effectiveness and accuracy of the system.

**4.1.10.65.2** AHPS must provide road names with route naming convention on the permit.**i3-Celtic Response:**

CTS-PARS can utilize ESRI SMP (Street Map Premium) GIS Data or state-provided GIS data as a data source to build the routes. In technical discussions with i3-Celtic, the available data source from ArcGIS Roads and Highways LRS will be assessed and understood.

When generating routes, CTS-PARS will display the route name based on the finalized road data obtained from the selected data source. This ensures that the permit credential and associated route information align with the specific road data used in the system. By integrating the route name from the road data source, CTS-PARS provides accurate and consistent information for permit-related routes.

**4.1.10.65.3** AHPS must provide the ability to alter routes manually.**i3-Celtic Response:**

CTS-PARS offers a user-friendly and feature-rich interface for performing route analysis. The system generates the best suitable route by considering numerous factors such as travel duration, vehicle details, route, and bridge restrictions, as well as temporary restrictions.

However, users have two approaches to generate desired alternate routes manually within the system:

1. **Add Way Point:** Users can manually add Way points between stops to customize the route. This allows them to specify specific locations they want the route to pass through, giving them more control over the generated