Volume I Project Management and Controls

No.	Requirements	Required Inputs	
		Compliance	Comments
		Y - Yes N - No	If "Compliance = N" then Proposer must provide an explanation in this column
333	The Contractor shall develop a checklist that tracks the progress and completion of all implementation activities for the BOS, CSC Operations and Disaster Recovery.		
334	The checklist shall detail those items required to complete the implementation process for all Hardware, Software, Equipment, Interfaces and communications provided as part of the BOS, including terminations and connections.		
335	The checklist shall be used to identify all discrepancies and exceptions, and the Contractor shall be responsible for all corrections.		
336	The checklist shall be used to document all changes identified, and all such changes shall be Approved by the Authority.		
337	A representative(s) from the Authority shall have the right to observe and Approve the implementation.		
338	The Authority shall have the right to perform independent inspections, and the Contractor shall be responsible for the correction of all discrepancies and deficiencies identified during the inspection.		
339	A copy of the checklist, signed and Approved by the Contractor, attesting to the completeness of the implementation, shall be provided to the Authority upon the completion of the implementation activities.		
9.	**General Maintenance and Software Support Services Requirements**		
9.1.	**Operations and Maintenance Meetings**		
9.1.1.	**Monthly Performance Review Meetings and Reporting**		
	The Contractor shall conduct Monthly BOS Performance Review Meetings with the Authority. These meetings shall provide the Authority with a detailed understanding and review of the Contractor's and the BOS's performance for purposes of receiving guidance from the Authority, Authority oversight, work planning and invoicing.		
340	The Contractor shall manage, facilitate and conduct Monthly BOS Performance Review Meetings with the Authority throughout the Operations and Maintenance Phase. At a minimum, the Project Manager (Implementation Phase), Project Manager (Operations and Maintenance Phase), Software Development Manager and a Contractor's CSC Operations Manager (in-person) shall attend these meetings.		
341	The Contractor shall schedule and conduct the Monthly BOS Performance Review Meeting with the Authority to occur no more than one (1) week after the submission of a Monthly BOS Report package by the Contractor.		
342	Performance reviews, including the provision of all required performance reporting, shall be provided by the Contractor to the Authority beginning one (1) month after Go-Live for the previous month. Any trip volume fee adjustments associated with non-performance shall not be assessed until the fourth month following Go-Live, for the previous (third) month's performance; however, this does not relieve the Contractor of required performance prior to the third month and shall not constitute a waiver of any Authority rights or remedies under the Agreement in this regard.		
343	The Contractor shall ensure all issues are addressed and resolved or are placed on the action item list and scheduled for resolution.		

Volume I Project Management and Controls

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		Y - Yes N - No	If "Compliance = N" then Proposer must provide an explanation in this column
344	In addition to other invoicing and payment Requirements, the Contractor shall provide the required monthly performance reports to the Authority, including all required information demonstrating actual performance relative to the Requirements, before an invoice shall be considered for payment. The monthly performance reports structure shall be identified in the Maintenance Plan.		
9.1.2.	**Monthly BOS and Operations Coordination Meetings**		
	During the Operations and Maintenance Phase, the Contractor shall conduct bi-weekly meetings to coordinate the ongoing operation of the CSC. The Contractor shall be responsible for scheduling these meetings and topics for the meeting shall come from the Contractor; the Authority may provide additional topics. The Authority may attend these meetings at its discretion.		
345	The Contractor shall manage, facilitate and conduct the Monthly BOS and Operations Coordination Meetings with the Authority during the Operations and Maintenance Phase in order to understand and prepare for supporting the resolution of BOS-related and Toll Facility related issues and other activities which will affect the CSC Operations.		
346	During the Monthly BOS and Operations Coordination Meetings, the Contractor shall address BOS and operational topics for which input is needed from the Authority, including but not limited to reviewing the Contractor's defect tracking report and prioritizing fixes; coordinating Upgrades and Enhancements Approved by the Change Control Board (CCB); reviewing Security Standards and compliance; coordination of scheduled BOS downtime; resolving issues related to personnel and reviewing the Contractor's CSC and WIC support.		
347	The Contractor shall identify all known BOS and operational issues and required discussion topics and provide them to the Authority in advance of the meeting and update the agenda again just prior to the meeting.		
9.1.3.	**Weekly Coordination and Status Meeting with the ETTM System Contractor**		
	During the Operations and Maintenance Phase, there will be a series of working meetings between the Contractor and the ETTM System Contractor to provide details on new and open issues and work through possible solutions. The Contractor shall be responsible for coordinating and scheduling these meetings and topics for the meeting shall come from the Contractor, the ETTM System Contractor and the Authority.		
348	The Contractor shall manage, facilitate and conduct the Weekly Coordination and Status Meeting with the ETTM System Contractor. These meetings shall be for the purpose of coordination on all new and ongoing issues. The Authority shall be invited to attend these meetings.		
349	During the Weekly Coordination and Status Meetings, the ETTM System Contractor shall review the accuracy and sufficiency of reports, review any discrepancies, and to coordinate any changes to the BOS or ETTM System (such as, bug fixes, Upgrades and Enhancement).		
350	The Contractor shall identify all known BOS, ETTM System and operational issues and required discussion topics and provide them to all attendees and the Authority in advance of the meeting and update the agenda again just prior to the meeting.		
9.1.4.	**Change Control Board Meetings**		

Volume I Project Management and Controls

No.	Requirements	Required Inputs	
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		Y - Yes N - No	If "Compliance = N" then Proposer must provide an explanation in this column
	During the Operations and Maintenance Phase, the Contractor shall conduct the CCB Meetings. The Contractor shall be responsible for conducting and scheduling these meetings in accordance with the Authority developed change control process.		
351	The Contractor shall manage, facilitate and conduct CCB Meetings with the Authority (meeting may be combined with the ETTM System Contractor CCB meeting at the Authority's discretion) on an as-needed basis. These meetings shall be for the purpose of providing status, reviewing, Approving and prioritizing BOS changes (such as, Software enhancements, Software Upgrades, Hardware Upgrades, major bug fixes) and operations changes (such as, policies, Business Rules, operational procedures, phone scripts, and staffing).		
352	The Contractor shall solicit and identify all known statuses and input from the Authority regarding the CCB and provide them to all attendees and the Authority in advance of the meeting and in accordance with the Authority's change control process.		
9.2.	**Safety**		
353	The Contractor shall adhere to all applicable safety standards and guidelines for working on or around energized equipment, including but not limited to the following: · The Authority's safety procedures and guidelines; · local code; · State of California, code, standards, safety procedures and guidelines; · Occupational Safety and Health Administration (OSHA); · National Electrical Manufacturers Association (NEMA) and · National Electrical Code (NEC).		
10.	**Contract Deliverables Requirements List**		
	The following table identifies the Deliverables/Submittals which shall be required for this Project. This table is provided for convenience only; it is the Contractor's responsibility to meet all Requirements.		

Volume II BOS Technology and Functionality

No.	Requirements	Required Inputs					
		Compliance	Status	If Applicable	Source	If Applicable	Comments
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
1.	**Statement of Work and Requirements**						
	The following subsections describe the Statement of Work and the Requirements for the Back Office System (BOS). These Requirements are numbered to track obligations per the Agreement and any changes which may occur during the Project. Many of the Requirements contain underlying lists of specific items and required database fields. The intent of these "including but not limited to" lists is to indicate to the proposer the intent and scope of the Requirement. During design, the naming and number of items and fields will vary; however, all items and fields shall be addresses by the BOS unless the Contractor is formally relieved of the Requirement by the Authority.						
1.1.	**Global System Requirements**						
	The global System Requirements define the overarching Requirements for the Hardware, Software and system comprising the production and non-production environments of the BOS.						
	The Contractor is encouraged to provide innovative solutions that simplify Maintenance, security and the implementation of Upgrades and Enhancements. The Contractor is permitted to use cloud-based and/or premise-based solutions. During the Operations and Maintenance Phase, the entire technical solution and all Third-Party Service Providers must reside and perform the services within the continental United States.						
	The Contractor will be responsible for acquiring and maintaining the applicable Payment Card Industry (PCI) Standards Security Council Level based on the quantity and value of Credit Card transactions processed. The global System Requirements include Requirements for securing PII in accordance with California statutes, the Authority's privacy policy and National Institute of Standards and Technology (NIST) best practices for general information security.						
	Connecting the BOS to the Electronic Toll and Traffic Management (ETTM) System, Interoperable Agencies inside and outside California and to Third-Party Service Providers requires a wide variety of external Interfaces. Providing for these Interfaces will require the Contractor to use existing Interface Control Documents (ICD) when applicable and develop new/more modern Interfaces at the Authority's direction.						
	Although the initial implementation of the BOS will directly support OCTA's I-405 Toll Facility, the BOS design, data schema, financial accounting and reporting approach shall support the future, potential direct support of additional OCTA and non-OCTA Toll Facilities. All functionality provided shall be easily Configured to support these potential additional Toll Facilities.						
	A BOS-provided Performance Management and Monitoring System (PMMS) shall monitor the performance of the BOS and provide incident and work order management capabilities and data points for measuring the Contractor's Operations and Maintenance Phase performance as further detailed in the Maintenance and Software Support Services section of these Requirements.						
1.1.1.	**Environments**						
	The BOS shall include multiple environments as required to complete the design, development, integration, testing, delivery and Acceptance of the BOS and properly operate during the Operations and Maintenance Phase. It is the Contractor's responsibility to provide additional Authority-Approved environments should the ones listed herein be insufficient for the Contractor to deliver the appropriate solution.						
	The operating environment of the BOS shall include, but not be limited to: · the primary BOS;						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
1	· a secondary instance of the BOS to be used for Disaster Recovery (DR) and to support Business Continuity;						
	· telephony system;						
	· the Interactive Voice Response (IVR);						
	· Automatic Call Distribution (ACD);						
	· systems for all servicing all channels of customer communication;						
	· Desktop Environments installed at the I-405 CSC and WIC Facility;						
	· all necessary and required office Equipment (for example, printers, copiers and postage machines);						
	· Desktop Environments and telephony systems for two (2) permanent Authority offices throughout the Term of the Agreement. The telephony systems and Desktop Environments shall include full BOS access and supervisory/manager capabilities related to all customer service communication channels and CSR monitoring applications, and one (1) shared private printer for Authority use;						
	· Desktop Environments and telephony systems for three (3) additional temporary Authority offices/cubicles during mobilization of the Facility and throughout Operational and Acceptance Testing. The telephony systems and Desktop Environments shall include full BOS access and one (1) Desktop Environment and phone system shall include supervisory/manager capabilities related to all customer service communication channels and CSR monitoring applications (in addition to the two (2) permanent Authority offices Desktop Environments and telephony systems);						
	· initial setup, security, and Interface of the I-405 BOS application on desktop computers and peripherals at the OCTA Store WIC (desktop computers and peripherals at the OCTA Store WIC are provided by the Authority);						
	· all network and communications elements;						
	· all required Interfaces and						
	· a data warehouse (Phase II and optional).						
2	The primary BOS server environment shall be located at one or a combination of the following locations:						
	· hosted at a Tier 3 data center facility and						
	· hosted on a well-established cloud service provider.						
3	The primary BOS server environment shall have a dedicated infrastructure such that while hosted at a Tier 3 data center facility or by a well-established cloud service provider, the Authority's dedicated BOS application shall run on dedicated virtual machines and/or containers such that only upgrades to the data center/cloud infrastructure and the Authority's BOS application would potentially affect the uptime of the BOS and there is no possibility of functional or infrastructure upgrades required to service other toll customer's applications would cause any downtime or affect the BOS in any way.						
4	The Contractor shall ensure the BOS is fully operational in accordance with the Performance Measures described in these Requirements, for the Implementation and Operations and Maintenance Phases.						
5	The Contractor shall provide all computing environments required to achieve Commencement of Ramp-up/Customer Services, including but not limited to:						
	· a production environment located within the continental United States and						
	· a DR environment at a secondary location within the continental United States in a different time zone, or cloud-based equivalent;						
	The Contractor shall provide all computing environments required to sustain the day-to-day operations of the BOS by the Go-Live date, including but not limited to:						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
			Required Inputs				
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
6	· a production environment located within the continental United States; · a DR environment at a secondary location within the continental United States in a different time zone, or cloud-based equivalent; · a training environment located at the CSC location; · a test environment and · a development environment.						
7	During both the Implementation Phase and the Operations and Maintenance Phase, the Contractor shall not allow any Authority data or customer PII outside of the U.S. Individuals and entities outside of the U.S. shall only have access to the development environment and shall not have access to customer PII.						
8	The Authority shall have logon access to all BOS environments.						
9	The Contractor shall keep all BOS environments current with all major releases of operating systems, databases, Software and firmware. Releases shall not be more than one (1) release behind the manufacturer's latest major release unless Approved by the Authority. The Contractor shall also make the necessary Software changes required to ensure compatibility with the evolving IT environment.						
10	With the exception of the development and test environments, which may change as part of testing and development cycles, the Contractor shall keep operating systems, databases, Software and firmware consistent across all environments, including, but not limited to configuration and patch level. At least one development and one test environment shall mirror the current production environment at all times during the Operations and Maintenance Phase.						
11	The test environment shall be sufficiently sized to successfully test Software changes and their effect on the production environment, including load and stress testing.						
1.1.1.1.	**Operating and Computing Environments – Production**						
	The Contractor is expected to provide a BOS solution that is a dedicated, hosted and/or cloud-based system and as such should provide for the following operating and computing environment Requirements for production.						
12	The BOS production environment shall use new Hardware and Equipment for any Equipment installed on-premise at Authority's facilities or at a hosting facility.						
13	The BOS production environment shall be a high availability fault-tolerant design configuration of servers, storage, databases and backup systems and connected using high-speed inter-system storage and networking fabric, including any ancillary Equipment necessary to provide a complete production system which meets the Requirements.						
14	In the event of a complete failure of one or more of the components or sub-systems in the BOS production environment, affected components or sub-systems shall failover to the secondary BOS at the DR site. Performance and availability Requirements for the individual components and sub-systems of the BOS shall not be affected.						
15	The design and implementation of the BOS production environment shall ensure no single-point-of-failure exists within the configuration and the BOS shall continue to operate without data loss in the event any single component of the configuration fails.						
16	The operating system used for all servers shall be a multi-user and multi-tasking operating system from a manufacturer that is widely recognized and used in the United States for complex, high-volume database operations.						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
17	The operating system shall be compatible with all Hardware, Software and other BOS components for the duration of the Operations and Maintenance Phase, including but not limited to: · the Relational Database Management System (RDBMS); · the Contractor's application Software; · the Contractor's proposed network and communications topology and · all Desktop Environments and peripherals defined in these Requirements.						
18	The operating system shall fully utilize the high availability BOS server architecture.						
19	The operating system shall be the latest stable version at the time of implementation (unless otherwise Approved by the Authority), field-proven and have a clearly documented Upgrade path and be supported by the manufacturer.						
20	The Contractor shall provide a highly reliable and secure RDBMS for the storage of images, user accounts, transaction/trip data, Violation data and all other data.						
21	The RDBMS shall be the latest version at the time of implementation (unless otherwise Approved by the Authority and field-proven to operate in a complex, high-volume transaction environment.						
22	The RDBMS shall be certified with the operating system, appropriate application Software and shall fully utilize the high availability BOS server architecture.						
23	The RDBMS shall support Upgrades to the operating system, applications, memory, processors and other components.						
24	The RDBMS shall have a clearly documented Upgrade path and be supported by the manufacturer.						
1.1.1.2.	**Operating and Computing Environments – Disaster Recovery (DR)**						
25	For DR purposes the Contractor shall provide a DR computing environment of equivalent size and capabilities to the primary BOS, at a secondary location within the continental United States and in a different time zone from the primary BOS.						
26	The DR environment configuration shall continuously mimic the BOS production environment in terms of configuration and data and shall be capable of performing all functions of the production environment, at the same performance and availability levels described in these Requirements for the primary BOS.						
27	When put into production, the bandwidth provided to the DR site shall provide for the same performance and reduction of latency as the production BOS for both customers and CSC Operations staff.						
28	The DR environment at the DR site shall be capable of being brought on-line and made fully operational in accordance with the Performance Measures.						
29	In the event of a catastrophic failure of the primary BOS, the secondary BOS at the DR site shall be capable of sustaining BOS operations indefinitely, or until such time as the primary BOS can be brought back on-line or a new primary site is identified and made fully operational.						
30	The Contractor shall provide validation that the DR procedures and environment is capable of providing Business Continuity in the event of a catastrophic failure of the primary BOS. This testing shall be coordinated with the Authority and all the results shall be immediately provided to the Authority.						
31	The DR server environment shall be located at one or a combination of the following locations: · a Tier 2 data center facility and · a well-established cloud service provider.						
1.1.1.3.	**Operating and Computing Environments – Data Warehouse (Phase II and Optional)**						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
					Required Inputs		
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	The data warehouse provides for the running of data analytics (Business Intelligence) reporting. It also allows the Authority to either directly or upon request to the Contractor, query data and run reports without having to compete for production reporting resources. The data warehouse environment stores all required data (to be defined during the Implementation Phase) from the BOS.						
32	The Contractor shall provide, as part of the production environment, a separate data warehouse environment for business intelligence and analytics reporting.						
33	The data warehouse shall be dedicated, and the required general reporting shall not depend on the data warehouse in any way.						
34	The Contractor shall be responsible for the design and testing of the extract, transform and load (ETL) process from the BOS during the Implementation Phase and the transfer of data after Go-Live throughout the Operations and Maintenance Phase.						
35	The Contractor shall provide validation that all data transferred to the data warehouse is complete and accurate.						
36	The data warehouse environment shall be updated from production in near-real time.						
37	The data warehouse environment shall be capable of being updated via an ETL process from the production System via a one-way replication.						
38	Because the data warehouse is Phase II functionality, if the option is executed, at start-up of the data warehouse the Contractor shall extract all applicable historical data from the BOS. The design of the data warehouse database schema, ETL process and the data analytics application shall be part of a post Go-Live, Phase II task.						
1.1.1.4.	**Operating and Computing Environments – Training**						
39	The Contractor shall provide a non-production training environment, independent from the production and DR environments, to support the initial and ongoing training of the CSC Operations and Authority's personnel.						
40	The training workstation environments shall be located at the CSC site unless the Contractor can submit and gain Authority's Approval of an alternative location.						
41	The training desktop environment shall replicate the production Desktop Environments, including all peripherals as dictated by the position being trained.						
42	The number of training stations shall be determined by the Contractor to meet the training needs in accordance with the CSC Operations and Facility Mobilization Plan and on-going remedial and new training of personnel.						
43	The Contractor shall provide the capability to restore training environment databases and to periodically refresh the training environment data from the production BOS, using data cleansing procedures Approved by the Authority.						
1.1.1.5.	**Operating and Computing Environments – Test**						
44	The Contractor shall maintain a BOS test environment that matches the BOS production environment configuration for the purpose of testing and verifying software Enhancements and Upgrades prior to being put into production.						
45	At the Authority's request, the Contractor shall provide access to the test environment for independent testing and verification to software Enhancements and Upgrades prior to being put into production.						
46	To the extent possible, the test environment shall interface directly to Third-Party Service Providers and Interoperable Agency test and/or production systems. For example, the DMV and ROV Interfaces.						
1.1.1.6.	**Email, Chat, Fax and Text Messaging**						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
			Required Inputs				
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
47	The Contractor shall provide the capability for manual, scheduled and system triggered outbound/inbound email (including email attachments) and texting that meets the outbound/inbound correspondence Requirements.						
48	The Contractor shall provide the capability for outbound/inbound fax that meets the outbound/inbound correspondence Requirements.						
49	The Contractor shall provide the capability for chat sessions that meets the Requirements.						
50	The Contractor shall provide the capability for multiple outbound domain name emails to avoid spam blocks or may provide an alternative solution.						
51	The Contractor shall provide the capability for Authorized Users to view system-generated status information for electronic messages (such as, email, texting or fax) that are sent from within the BOS application. For example, an Authorized User (e.g., customer service representative) verifies that email messages have been successfully sent from the BOS.						
1.1.1.7.	**Hardware, Software and Other Equipment**						
52	The Contractor shall provide completely new Desktop Environments for all CSC Operations personnel.						
53	The Contractor shall integrate with the BOS all Authority provided or procured 6c transponder readers/programmers for use in the CSC.						
54	The Contractor, with the Approval and assistance of the Authority, shall procure any 6c readers/programmers required for the CSC on a cost pass-through basis.						
55	All Hardware and Software shall be new, commercially available products currently in production, of the latest design/version at the time of purchase (unless otherwise Approved by the Authority) and field-proven in high-volume revenue operations, including but not limited to: · Hardware; · Software; · firmware and · other supplies, Equipment or components.						
56	All Hardware and Software shall be obtainable from multiple sources readily available to the Authority, unless otherwise Approved by the Authority. An exception to this may be the Contractor's custom-developed Software.						
57	The Contractor shall provide a dated invoice for all materials procured under this Agreement. Shipping bills shall be retained and copies furnished to the Authority along with the invoice on which they appear.						
58	All commercial Software provided as part of the BOS shall be enterprise class. Enterprise class applications are designed to be robust and scalable across a large organization and are customizable to meet the specific needs of the BOS. Note: Do not construe this to require enterprise level software licenses. It is the Contractor's responsibility to provide the proper level of software licensing.						
59	The solution furnished and installed shall be appropriately sized for capacity, as required to support growth in traffic volumes. It also shall be scalable, allowing for additional transactions/trips, images and Toll Facilities to be added for all BOS functions while continuing to meet the Performance Measures.						
60	The Contractor shall use field-proven Hardware, Software and Equipment configurations that support future Upgrades to processors, memory, storage, operating system, database and other system components.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
					Required Inputs		
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
61	Licenses and Software media (or online access for downloading media) shall be provided to the Authority for all Hardware, third-party Software and firmware procured, furnished and installed as part of the BOS.						
62	The Contractor shall retain authorized copies (backups) for all Software media as required for use in periodic BOS Maintenance, Upgrades or system restores for a minimum of one year.						
63	All Hardware and Equipment provided to support BOS and CSC Operations shall be networked and fully integrated with the functional BOS (including PMMS) and the Desktop Environments.						
64	The Contractor provided standard Point of Sale devices shall support Europay, MasterCard and Visa (EMV) chip integrated circuit card and contactless Near Field Communication (NFC) devices. The Contractor shall ensure compliance with EMV chip guidelines for chip card transactions and International Standards Organization (ISO)/International Electrotechnical Commission (IEC) 18092 specifications for contactless NFC transactions.						
65	The Contractor provided check scanners (for remote deposit capture) shall include, but not be limited to: · high accuracy Magnetic Ink Character Recognition (MICR) rate; · compliance with "The Check Clearing Act for the 21st Century" (Check 21); · check defacement features and · alphanumeric Optical Character Recognition (OCR) A & B font recognition.						
1.1.1.8.	Network, Communications,Telephony, Security and Surveillance						
66	The Contractor shall provide all required network Equipment and communications lines (including all installation and recurring costs throughout the Term of the Agreement) to connect the CSC and BOS to all required users and systems with sufficient bandwidth to meet all Requirements at no additional cost to the Authority, including: · secure dedicated and redundant Interface connections for all BOS to CSC personnel communications; · remote Contractor personnel; · work-at-home Contractor personnel (under certain Business Continuity procedures); · secure dedicated and redundant Interface connections for all Contractor designated Third-Party Service Providers; · all Contractor provided BOS environments; · secure dedicated and redundant Interface connections for customers accessing the BOS or CSC via telephony, IVR, Self-Service Website, Self-Service Mobile Application (Phase II and optional) and all other channels; · secure dedicated and redundant Interface connection to ETTM System at 4301 W. MacArthur Blvd, Santa Ana, CA 92794; · secure dedicated and redundant Interface connections for the OCTA Store WIC location at 600 S Main St, Orange, CA 92868 via secure public VPN (or other Authority Approved Interface). OCTA will provide all necessary Equipment at the OCTA Store WIC location; · secure dedicated and redundant Interface connections for Authority's staff locations from various locations via secure public VPN (or other Authority Approved Interface). OCTA will provide all necessary Equipment at the Authority staff locations and						

Volume II BOS Technology and Functionality

No.	Requirements	Required Inputs					
		Compliance	Status	If Applicable	Source	If Applicable	Comments
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· secure dedicated and redundant Interface connections for all Authority designated Third-Party Service Providers via secure public VPN (or other Authority Approved Interface). OCTA or others will provide all necessary Equipment at the Third-Party Service Providers locations.						
67	The Contractor shall provide the telephony systems for all CSC Operations personnel at the CSC and the collocated WIC. Note: The telephony system at the OCTA Store WIC at 600 S Main St, Orange, CA 92868 will continue to be provided by OCTA.						
68	As part of the Implementation Phase, the Contractor shall provide and install all network Equipment and communications as required to meet the Requirements.						
69	The Contractor will assume Maintenance, administration and Upgrade of all network Equipment and communications to service the BOS and CSC throughout the Operations and Maintenance Phase.						
70	The network connection to the ETTM System shall be of sufficient bandwidth to support the transfer of images, transactions/trips, Transponder Status Lists and other required files.						
71	The Contractor shall increase throughput and bandwidth as needed to eliminate system latency and meet the Requirements.						
72	The Contractor shall provide network monitoring Software to monitor all Contractor provided and Authority provided infrastructure, network Equipment and communications related to the BOS and CSC. All network notifications and alarms shall be reported to the PMMS.						
73	The Contractor shall provide the capability for time synchronization to one or more certified time server(s). The Contractor shall provide for redundant certified time sources should the primary source be unavailable.						
74	The Contractor shall ensure exact synchronization with the ETTM System.						
75	The Contractor shall provide secure remote access to the full capabilities of the BOS for Authority Authorized Users working remotely.						
76	The Contractor shall be responsible for ensuring that all BOS networks and communications are compliant with the Security Standards.						
1.1.2.	**BOS Functionality**						
	The BOS functionality Requirements begin with the design of a GUI to the BOS. Through the GUI, Authorized Users (from within the CSC) and customers (accessing via the Self-Service Website, and Self-Service Mobile Application (Phase II and optional))) will access a user account and other information within the BOS. This section of the global Requirements also includes Requirements for establishing and controlling user access to the BOS, logging and security controls and maintaining efficient databases through regular purging and archiving of stale records in accordance with the Security Standards.						
1.1.2.1.	**Graphical User Interface (GUI)**						
	The GUI design must include accepted computer industry design standards for ease of readability, understanding and appropriate use of menu-driven operations, user customization and intuitive operation. The GUI should allow for efficient action by CSR or customer minimizing screens and clicks to modify.						
77	The Contractor shall provide a secure, browser-based GUI for the BOS application, Self-Service Website, and all external Interfaces.						
78	The Contractor shall provide for secure communications with the BOS application, all customer portals and all external Interfaces, such as Hypertext Transfer Protocol Secure (HTTPS) or similar.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance Y - Yes N - No*	Status B-Base Product M-Base Modified D-New Development NP-Not Provided*	If Applicable Customer Name and Location	Source O-Offeror S-Sub T-Third Party NA-Not Applicable	If Applicable Subcontractor Name and/or 3rd Party Product/Vendor	Comments *Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
79	The GUI shall adhere to accepted development standards and specifications, including but not limited to World Wide Web Consortium (W3C) and HyperText Markup Language (HTML) Version 5 or current standard.						
80	The Contractor shall follow Payment Card Industry Data Security Standard (PCI DSS) and standard security practices in the design of the GUI for the BOS application, all customer portals and all external Interfaces.						
81	The GUI design and development shall incorporate human factors and usability engineering and be optimized for speed, as well as provide the following controls, including but not limited to: · menus (such as pull down, popup, cascading, leveling, etc.); · allowing for multiple windows within the application, such as to navigate back without having to re-enter a user account; · informational messages; · positive feedback; · exception handling and error dialogs, including logging the error (in the PMMS); · control icons, links and action buttons; · data entry fields, combo boxes, check boxes; · display (read-only) fields and · general and context-specific help menus.						
82	Data entry screens shall have Configurable mandatory fields that require data entry prior to continuing through the process.						
83	The Contractor shall provide field-level validation and format verification upon existing data fields applicable to pre defined formats or standards, including but not limited to: · alpha-numeric; · date; · time; · special characters; · length; · license plate number (based on individual issuing Jurisdiction rules) fields; · transponder numbers; · telephone number; · email address; · ZIP or postal codes and · check-digit, checksum, Modulus-10 or other verification algorithms for fields such as Credit Card number.						
84	The Contractor shall provide field-level "tooltips" or other interactive help, Configurable by the system administrator, that provide specific guidance on any field presented, including but not limited to: · alpha-numeric fields; · date fields; · time fields; · special characters; · username and password; · length restrictions; · license plate number (based on individual issuing Jurisdiction rules) fields;						

Volume II BOS Technology and Functionality

No.	Requirements	Required Inputs					
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	· transponder fields;						
	· telephone number fields;						
	· email address fields;						
	· ZIP or postal code fields and						
	· Credit Card number fields.						
85	The Contractor shall provide the capability for Authorized Users to maintain drop-down lists, including but not limited to:						
	· add items;						
	· deactivate items;						
	· set effective activate and deactivate times;						
	· modify items;						
	· toggle item visibility on/off;						
	· set the display order;						
	· change the display order;						
	· set the default value and						
	· change the default value.						
1.1.2.2.	**BOS Application Requirements**						
86	The Contractor shall provide navigation optimized for speed and with identical screen presentation and user experience, regardless of the browser used. The BOS application shall detect and advise if the browser being used is out-of-date or not supported, as well as instruct where updates can be obtained.						
87	Help menu/dialogue box shall be provided for each screen, each editable field and each selectable option within each screen.						
88	The Contractor shall provide workflow and application help menus that integrate seamlessly into the user interface.						
89	The Contractor shall provide help menus that provide clear descriptions and walk-through procedures for all standard tasks.						
1.1.2.3.	**User Accounts, User-Roles, User-Role Management and Controls**						
	User account management and role management is an important component to the overall security of the solution. Authorized Users are Approved users that have role-based credentials to access the BOS as an employee of the Contractor, employee of the Authority, Third Party Service Provider, or contractor of the Authority.						
90	Authorized Users shall access the BOS using an authenticated, role-based login and be uniquely identified and authenticated using a strong password policy.						
91	The Contractor shall provide the capability for only privileged accounts to use tools with administrative capabilities conforming to the concept of least privilege.						
92	Allow for full integration with Microsoft Active Directory (AD) or similar access system Approved by the Authority so users are not required to enter separate passwords for system access (the BOS shall prompt users for their credentials and not allow pass-through authentication), and that all rules for password security (for example, characters or rotations) are enforced and passed between the network and the application.						
93	The Contractor shall provide the capability to create (Configurable) BOS user accounts.						
94	The Contractor shall provide the capability to create a new user account having the same role/rights as an existing user account.						

Volume II BOS Technology and Functionality

No.	Requirements	Required Inputs					
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95	The Contractor shall provide the capability to allow first name, middle name and/or last name to be changed without having to create a new user account, such as to correct an error or make a change because of marriage or divorce.						
96	The Contractor shall provide the capability to search for Authorized Users using Configurable criteria.						
97	The Contractor shall provide the capability to track user accounts created dates and disabled dates information, since user accounts may be enabled and disabled repeatedly over a period of time (because of leaves of absence, etc.).						
98	The Contractor shall provide the capability to search and view all information about a user account on a particular date and time.						
99	The Contractor shall provide the capability to control all access rights within the BOS through the assignment of user-roles.						
100	The BOS shall prevent the direct assignment of rights to an Authorized User, and all rights must flow from a user-role.						
101	The Contractor shall provide the following user-role capabilities, including but not limited to: · allow Authorized Users to belong to multiple user-roles; · allow the deactivation of a user-role, provided no active Authorized Users are assigned to that role; · ensure modifications to roles are immediately propagated through the BOS and to all Authorized Users currently assigned to the role; · prevent BOS access to users who are not assigned to a user-role and · provide a built-in "read-only" capability that can be added to any user-role, allowing user accounts assigned to that role to view information on the screen and print reports (but not make changes).						
102	The Contractor shall provide the capability for an Authorized User to view the summary of permissions of a user created with multiple user-roles.						
103	The Contractor shall provide the capability for Authorized Users to manage user-roles, including but not limited to: · create new user-roles; · change access rights; · assign and un-assign user-roles to user accounts; · assign and un-assign user accounts to user-roles; · adjust user-roles and · deactivate user-roles.						
104	The Contractor shall provide the capability for Authorized Users to manage multiple levels of access control based on user-roles, including but not limited to: · broad functional level, for example, user-role X is denied access to the user account management functionality; · detailed functional level, for example, user-role Y is allowed access to the user account management functionality but denied access to close user accounts function and · field level, for example, user-role Z is allowed access to the user account management functionality but denied access to the tax-exempt checkbox.						
	The Contractor shall provide the capability for Authorized Users to deny/allow access or allow read-only access, based on user-roles, including but not be limited to: · specific menus; · specific items on a drop-down list;						

Volume II BOS Technology and Functionality

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105	· specific individual screens; · specific functions on a screen; · specific fields within a specific screen; · specific types of transactions/trips; · specific processes; · specific reports; · specific activities based on account status; · specific search capabilities; · specific transaction/trip approval privileges; · specific workstation location access; · specific workstation time restrictions and · specific time restrictions.						
106	The Contractor shall provide the capability to configure Flags as part of a user role definition, so they can be viewed based on user-roles.						
107	The Contractor shall provide the capability to send Alerts to the PMMS for logging and notification based on the assignment/removal of a specific user-role (Configurable as new user-roles are created).						
108	The Contractor shall provide the capability to search for all Authorized Users with a specific role and all user accounts with a specific access right.						
109	The Contractor shall provide the capability to search and report on user-roles for a particular date, distinguishing between an active user account (able to access information according to its roles) an inactive user account (temporarily unable to access information because of a locked password or expired from lack of use) and a disabled user account (a user account no longer able to access information because of the intervention of an Authorized User).						
110	The BOS shall keep a full history of all user-role details with effective dates so the exact rights for a particular user-role can be viewed by Authorized Users at any point in time.						
1.1.2.4.	Logging Mechanisms						
	These mechanisms provide chronological recording of system events and user account activities. They also document the sequence of activities that have been affected at any time during a specific operation, procedure or event.						
111	The Contractor shall provide comprehensive, system-wide logging capabilities ensuring every change to a BOS record of any type is logged with a date/time stamp, including the Authorized User (and IP address) that made the change.						
112	The Contractor shall ensure that system clocks are synchronized. For example, Desktop Environments, Equipment, servers, physical security systems and CSC Surveillance CCTV systems.						
113	The Contractor shall provide the capability to log all changes to user accounts.						
114	The Contractor shall provide the capability to log all changes to the Processing Exception List.						
115	The Contractor shall provide BOS reports, including but not limited to: · reports of logged activity by activity type and · reports of logged activity by user accounts.						
116	The Contractor shall create a log when a user-role is assigned, changed or removed from a user account.						
117	The Contractor shall provide screens so Authorized Users can view all log files.						
118	The Contractor shall provide the capability to log and track all user activities and user accounts viewed by specific user account with date, time stamp, and workstation location.						

Volume II BOS Technology and Functionality

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119	The Contractor shall provide Configurable Alerts to the PMMS for all functions of the BOS which are logged.						
120	The Contractor shall provide logging that includes actions taken within a user account with date and time stamp.						
121	The Contractor shall provide logging of all changes (view, add, delete, modify) to Credit Card information.						
122	The Contractor shall provide logging of all user login attempts, including but not limited to: · username; · originating Internet Protocol (IP) address; · date; · time and · success/failure.						
123	The Contractor shall provide logging of all customer login attempts, including but not limited to: · Uniform Resource Locator (URL); · user account; · browser/platform including version number; · originating IP address; · date; · time and · success/failure.						
124	The Contractor shall provide audit logging capabilities that provides the ability for view access by CSR and/or by account to have the review of users that have accessed the account or Case even if no changes have been logged.						
125	The Contractor shall create a log of all changes to system configurations or settings and record the user name, date, time and IP address from which the change was made.						
126	The Contractor shall be in compliance with all PCI DSS logging requirements while preventing any logging of Credit Card numbers or card verification value data, including debugging and error logs.						
127	The Contractor shall be in compliance with all PII logging requirements while preventing any logging of PII data, including in debugging and error logs.						
128	The Contractor shall provide the capability to generate an Alert to the PMMS when debugging logs are turned on within the production environment.						
129	The Contractor shall prevent tampering with log file data.						
130	The Contractor shall provide the capability to log and track changes to applications, databases and operating systems.						
1.1.2.5.	**BOS Security Standards, PCI-DSS, PII and Best Practices**						
	The Contractor shall provide security and access controls in accordance with the Security Standards. These Security Standards will evolve as standards, best practices and California statutes evolve over the Term of the Agreement.						
	The Contractor's approach to BOS and user security shall continually provide adherence to the latest specifications, publications, policies and standards, including but not be limited to: · compliance with PCI DSS; · protecting the confidentiality of PII in accordance with the Authority's privacy policy;						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
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131	· protecting the confidentiality of PII in accordance with Section 31490 of the Streets and Highways Code and other applicable California statutes; · protecting the confidentiality of PII in accordance with the recommendations in publication 800-122 from the National Institute of Standards and Technology (NIST) or subsequent versions; · protecting the confidentiality of PII in accordance with California Consumer Privacy Act (CCPA); · protecting the confidentiality of PII in accordance with California Online Privacy Protection Act (CalOPPA); · encryption of data in accordance with NIST SP 800-111 Guide to Storage Encryption Technologies for End User Devices; · protecting the confidentiality of PII in accordance with the California Civil Code Section 1747.08.; · account for information security management risk as described by NIST Cybersecurity Framework special publication 800-39; · conformance to applicable best practices for information security management as described by the ISO/IEC 27000 standards; · the security Requirements and · all California and out-of-state DMV security requirements and standards.						
132	The Contractor shall Design the System to anticipate that during the Implementation and/or Maintenance Phases the System will become subject to more restrictive digital privacy laws and regulations (for example, similar to European Union General Data Protection Regulation (GDPR)). During Design within the Implementation Phase, the Contractor shall provide documentation (within applicable deliverables) and demonstrate (during testing) the System's preparedness to anticipate more restrictive privacy Requirements.						
133	The Contractor shall establish and maintain a formal, documented, mandated, BOS and CSC Operations information security policy that shall be communicated to all Contractor and Subcontractors personnel in a relevant, accessible, and understandable form and will be regularly reviewed and evaluated to ensure its operational effectiveness, compliance with all Security Standards, applicable laws and regulations, and to address new threats and risks.						
134	The information security policy shall address all removable media except in the context of Contractor's routine back-ups or as otherwise specifically Approved by the Authority, Contractor shall institute strict physical and logical security controls to prevent transfer of BOS data via removable media.						
135	The Contractor shall provide strong end-to-end encryption for all sensitive information, including PCI and PII) stored within databases (at rest) or being transmitted (in-motion).						
136	The Contractor shall use strong encryption methods such as AES FIPS-179 (128 bits and higher) or RSA (2048 bits and higher), or an equivalent if Approved by the Authority.						
137	The Contractor shall provide encryption keys that are considered sensitive information and stored on appropriately secured servers.						
138	The Contractor shall prevent any unauthorized user, system or database administrator from viewing encrypted information in unencrypted form, while providing the capability for Authorized Users to view encrypted information in unencrypted form to perform tasks based on a defined role.						
139	The Contractor shall ensure that no cardholder data, such as Credit Card numbers or card verification value data, is in any BOS environments.						
140	The Contractor shall ensure that no PII data is in the BOS environments other than production, DR and test.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
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141	The Contractor shall provide comprehensive user credential controls that are compliant with PCI standards, including but not limited to: · prevent the creation of 'generic' user accounts – all user accounts shall be associated to a specific person. For example, use the unique employee ID as a required field for each user account. Duplicate IDs would be rejected and · prevent a user (role-based) from logging in at two different machines at the same time, while allowing a single user on a single machine to have multiple sessions open at the same time.						
142	The Contractor shall provide the capability to configure different user credential controls for different types of users, including but not limited to: · Authorized Users who will access the BOS; · Third-Party Service Providers that access the BOS via external Interfaces and · customers who will access the BOS via the Self-Service Website, Self-Service Mobile Application (Phase II and optional) and the IVR.						
143	All Hardware shall be integrated with the PMMS and configured to provide PMMS alerts in relations to out-of-date security software and patch versions.						
144	All Hardware shall be integrated with the PMMS and configured to provide PMMS alerts in relations to all attempted intrusions, virus attacks, ransomware attacks, spamming, denial of service and attempted/successful unauthorized access.						
145	For any Hardware removed from the BOS, the Contractor shall provide a notarized statement, detailing the removal or destruction method used, the data sets involved, the date of destruction, and the company or individual who performed the destruction. The statement shall be sent to the Authority within fifteen (15) Calendar Days of removal of the Hardware. The destruction or erasure of data or information pursuant to this section shall be in compliance with industry Best Practices (e.g., NIST SP 800-88, Guidelines for Media Sanitization)						
146	The Contractor shall provide a report of all security incidents. The Authority or its third-party designee may, but is not obligated to, perform audits, security tests and intrusion tests of BOS environments that may also include, but are not limited to, interviews of relevant personnel, review of documentation, and/or technical inspection of systems.						
147	The Contractor shall provide for Authority's review any original security reports related to security assessments that the Contractor has undertaken to assess BOS and shall notify the Authority of all security assessments.						
1.1.2.6.	**Archival and Purge Control Mechanisms**						
	The Authority is public and, therefore, are subject to the law governing the retention and disposition of information considered as public record. The Requirements for archiving and purging include Requirements for automating these activities in a way that maintains compliance with the Contractor retention schedule that is provided as part of the Contractor's Maintenance documentation, while providing the Authority a method to Approve the disposition of records before they are deleted.						
148	The Contractors archival and purge processes shall be in compliance with the data retention Requirements set forth in the Security Standards and Volume I, Section 4.2.17 Records.						
149	The Contractor shall provide the capability for fully automated and Configurable storage of historical data (archival) and the permanent deletion of inactive or obsolete data (purging).						

Volume II BOS Technology and Functionality

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				Required Inputs			
150	The Contractor shall provide the capability to store 100 percent of the BOS electronic information in accordance with the data retention Requirements set forth in the Security Standards and Volume I, Section 4.2.17 Records.						
151	The Contractor shall provide the capability to store 100 percent of the BOS electronic historical information indefinitely if they have enduring significance to the Authority's activity (i.e., permanent, evidentiary, and/or historical value) in accordance with the retention schedule. All information, other than that prohibited within the Requirements, will be retained for the duration of the Agreement and archived or moved to long-term storage as deemed appropriate during the Implementation Phase to meet all customer and Authority needs for reporting and data access.						
152	Archival and purge routines shall be Configurable for each impacted data element, including but not limited to: · transactional data; · all formats of customer PII data; · Images (Violations-related and I-Toll-related); · documents; · Notifications; · BOS logs and · third-party provided files.						
153	The Contractor shall provide the capability to archive data on a monthly interval.						
154	The Contractor shall provide the capability to purge archived data on a periodic basis.						
155	Authorized Users shall have the capability to request retrieval of archived data through the Contractor's ticketing system included in the PMMS.						
156	All archived data shall be stored on permanent, long-term storage media and shall be maintained at a secure Authority Approved third-party commercial data storage facility.						
157	Servers shall retain transaction/trip and summarized data, all images and BOS logs online for a specified period of time and then archive that data.						
158	Data shall be purged in accordance with the data retention schedule.						
159	The Contractor shall provide the capability to notify the BOS Maintenance personnel via the PMMS a Configurable number of days in advance and require Authorized User approval for when archival and purging jobs are to be executed, including but not limited to data elements impacted, date range applied and data size impact.						
160	After successful archival of data and confirmation via the PMMS, the deletion of online data shall be automatic, without user intervention and shall generate a message to be transmitted according to the PMMS rules. Absolutely no transactions/trips shall be deleted unless confirmed to be successfully archived.						
161	The BOS servers shall be sized to accommodate for the restoration of selected archived data (one -year minimum).						
162	Authorized Users shall be able to generate queries from the restored data.						
1.1.3.	**Interfaces**						
	The Contractor is responsible for working with the Authority, Interoperable Agencies/California Toll Operators Committee (CTOC) and Third-party Service Providers in designing, developing, documenting, testing and implementing all required Interfaces and portals.						
1.1.3.1.	**General Requirements for External Interfaces**						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
			Required Inputs				
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	Electronic Interfaces are required to provide BOS connectivity. The technical specifications for these Interfaces are documented in ICDs that have either already been developed by the Authority or shall be developed by the Contractor. The ICDs include Requirements for data format and transmission, criteria for acknowledgement and validation of transmitted data and procedures for recording and reconciliation as appropriate for each Interface.						
163	The Contractor shall develop new or comply with existing electronic Interfaces at the direction of the Authority.						
164	The Contractor shall provide for guaranteed transmission of data for all Interfaces and portals.						
165	The Contractor shall provide for 100 percent reconciliation of the transmitted and received data and files.						
166	The Contractor shall provide the capability for Authorized Users to access and view the contents of files, including compressed or encrypted files, which are received by the BOS and transmitted by the BOS in a readable format. Authorized Users shall have the capability to save the contents of such files.						
167	The Contractor shall provide the capability for sending real-time Alerts to the PMMS for Interface and data transmission failures, including but not limited to: · real-time dashboard for managing and monitoring Interfaces; · workflow user Interface for managing and monitoring steps within each Interface; · status and history of executions; · comprehensive scheduling of file transmissions; · tools for viewing data and/or contents of files received via Interfaces and portals (compressed or encrypted); · comprehensive reporting for transmitted and received data and files; · tight integration with the PMMS and notification of failed transmissions and · capability to manually execute a failed transmission.						
168	When using File Transmission Protocol (FTP), the Contractor shall utilize Secure File Transmission Protocols (SFTP) for the transfer of data and/or files via Interfaces and portals.						
169	The Contractor shall provide the capability to transmit and receive multiple files during each scheduled batch.						
170	The Contractor shall provide the capability to transmit and receive multiple full and incremental files in a day.						
171	The Contractor shall utilize file naming conventions that prevent the over-write of data and/or files. For example, include the date and time of transmission.						
172	The Contractor shall provide file handling and processing methods that provide for a complete log of the data and/or file transfer process.						
173	The Contractor shall validate records and identify errors in the received data and/or files, including but not limited to: · mandatory fields; · data formats; · data validity (for example, user account number not found in the BOS); · duplicate records; · unexpected response; · checksum/record count verification and · incorrect status.						

Volume II BOS Technology and Functionality

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				Required Inputs			
174	The Contractor shall provide the capability to correct and re-transmit data and/or files (the process shall be automated to the extent possible).						
175	The Contractor shall provide the capability to process re-transmitted data and/or files.						
176	The Contractor shall provide the capability to transmit the error details to the transmitting entity, as well as record it in the PMMS.						
177	The Contractor shall provide the ability to identify missing records/transactions/images and request the transmission of such missing records/transactions/images.						
178	The Contractor shall reconcile the transmitted records to the records received and accepted by the receiving entity.						
179	The Contractor shall provide the means to identify Interface issues by validating the file transmission process, including but not limited to:						
	· creation and transmission of data and/or a file at the scheduled time, even if there are no records to transmit;						
	· determination if the data and/or a file was transmitted or received at the scheduled time;						
	· creation of Alerts to the PMMS if data and/or a file was not created or received at the scheduled time;						
	· creation of Alerts to the PMMS if received data and/or a file was not acknowledged;						
	· creation of Alerts to the PMMS if records in the received data and/or file had errors when processed;						
	· provide details in real-time to the PMMS of each failed record and						
	· creation of Alerts to the PMMS when a response has not been received for individual records within the expected duration.						
180	The Contractor shall provide data and/or file transmission and reconciliation reports as described in these Requirements.						
181	All responses received from third-party Interfaces and all actions required of the third-party to a file transmitted by the BOS shall be associated with the original transaction, including but not limited to:						
	· Violation data and images;						
	· images of check copies for a payment;						
	· Notifications to customers transmitted by the Collection Agency;						
	· comments and dispositions transmitted in the response file and						
	· emails received from the customer related to a specific transaction/trip or Violation.						
182	The Contractor shall provide the capability for Authorized Users to obtain the history of updates to a transaction/trip.						
183	The Contractor shall provide a dashboard that tracks the progress of data and/or file transmissions through each stage and their acknowledgements by the receiving entity, including but not limited to:						
	· transactions/trips eligible for transmission;						
	· file and/or data created with file name;						
	· file and/or data transmitted;						
	· file and/or data received;						
	· file and/or data accepted;						
	· file and /or data rejected;						
	· file and/or data re-transmitted;						
	· number of records in the file and/or data set;						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
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	· number of unique user accounts and						
	· number of failed records.						
184	The Contractor shall provide the capability for Authorized Users to configure the relevant parameters related to file and/or data transmission for each Interface. For example, scheduling the time-of-day that a specific file is transmitted.						
185	The Contractor shall monitor the disk capacity where files and/or data are deposited and send an Alert to the PMMS and third-party entities (if applicable) if folders are near capacity (Configurable) or full.						
186	The Contractor shall provide the capability to automatically archive successfully processed data and/or files after a number of days (Configurable).						
187	The Contractor shall provide the data to reconcile file transmissions.						
188	The Contractor shall conform to any existing ICDs, including any updates required at the time of design and develop all new ICDs that are required to be developed. It is the Contractor's responsibility to ensure all ICDs (including existing) are accurate, updated and meet the Requirements of the BOS before developing the Interfaces. Standards-based Interfaces shall be used when available and all Interfaces shall be Approved by the Authority.						
189	Where the Third-party Service Provider currently supports or is willing to develop a more modern and current interface, the Contractor shall be responsible for developing the ICD or using the ICD to develop the new Interface as directed by the Authority.						
190	The Contractor shall implement required updates to Interfaces at the direction of the Agencies at no additional cost to the Agencies.						
1.1.3.2.	**Interface to the ETTM System**						
	This Interface connects the BOS with the ETTM System for transmitting transactions/trips, images, toll rate information, transponder files, license plate files and other data to the BOS for processing and for transmitting various data back to the ETTM System.						
191	It is anticipated that the BOS shall receive, process and store an average of four (4) transactions per trip, including both Toll Collection Enforcement Site (TCES) and Toll Transponder Read Site (TTRS) transactions.						
192	If the BOS implementation requires an update to the ETTM System ICDs, the Contractor shall develop the new ICD and coordinate all design, development and testing with the ETTM System Contractor.						
	The ETTM System ICDs may include many data fields, including but not limited to:						
	· trip transaction ID;						
	· trip ID;						
	· timestamp for when the trip started;						
	· amount of time that was being allotted for travel from the pricing sign to the Toll Zone;						
	· Occupancy Setting applied for the overall trip;						
	· Clean Air Vehicle identifier for overall trip;						
	· motorcycle identifier for overall trip;						
	· image-based or a tag-based trip identifier;						
	· total toll rate assigned for the trip;						
	· total toll rate that was in effect at the time of the trip;						
	· primary transponder ID for the overall trip;						
	· license plate number for the overall trip;						
	· Jurisdiction of the license plate for the overall trip;						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
			Required Inputs				
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
193	· license Plate Type for the overall trip;						
	· segment identifier;						
	· lane identifier;						
	· lane mode identifier;						
	· Straddle – This is a yes/no type identifier for whether the vehicle was straddling the lane line when it went through the Toll Zone;						
	· timestamp for when the transaction occurred;						
	· transponder items below shall be enumerated for each transponder read at the Toll Zone, with all of the subsections being listed for each transponder;						
	· transponder ID;						
	· timestamp when the transponder was read;						
	· transponder status;						
	· transponder type;						
	· transponder Occupancy Setting;						
	· primary transponder identifier;						
	· buffered transponder read identifier;						
	· spurious transponder read identifier;						
	· license plate number selected for the transaction based on confidence values;						
	· Jurisdiction of the license plate selected for the transaction based on confidence values;						
	· license Plate Type selected for the transaction based on confidence values;						
	· OCR confidence;						
	· Occupancy Detection System occupancy assigned (if applicable);						
	· occupancy assigned;						
	· Clean Air Vehicle identifier;						
	· motorcycle identifier;						
	· vehicle classification;						
	· Image items below shall be enumerated for each image captured at the Toll Zone, with all of the subsections being listed for each image;						
	· file name for the image;						
	· camera that took the image;						
	· timestamp for when the image was captured;						
	· license plate number reported by the OCR/image review system for the individual image;						
	· Jurisdiction of the license plate reported by the OCR/image review system for the individual image;						
	· license Plate Type reported by the OCR/image review system for the individual image;						
	· OCR confidence value for the license plate assigned by the OCR/image review system for the individual image and						
	· payment type identifies whether the individual transaction registered as an Image-Based or a Transponder-Based Transaction.						
194	The Contractor shall Interface to the ETTM System to obtain and acknowledge 100 percent of all transactions/trips, associated transaction and Violation images in accordance with the ICDs to be developed during Project design.						
	The ETTM System Interface shall be capable of the following Configurable functionality, including but not limited to:						

Volume II BOS Technology and Functionality

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195	· sending the comprehensive and incremental Authority Tag Status Files and License Plate Status Files (for both the CTOC Agencies' and Interoperable Agencies') in real-time and at scheduled intervals (e.g., every 10 minutes). The BOS shall support sending the Tag Status File and Plate Status File as single file or as separate files;						
	· sending Interoperable Agency transponder statuses periodically (incremental and comprehensive) multiple times per day (e.g., every 10 minutes);						
	· sending rental car files (incremental and comprehensive) multiple times per day (e.g., every 10 minutes);						
	· sending Plate Correction List from customer disputes and audit checks no less than every hour;						
	· sending Processing Exception List maintained at the BOS no less than every hour;						
	· receiving Transponder-Based Transactions/Trips;						
	· receiving Image-Based Transactions/Trips (including license plate number, Jurisdiction, and type, if required) and						
	· receiving other files (such as toll rate schedules and variable pricing information).						
196	The Contractor shall provide the capability to positively acknowledge (ACK) message receipt, negatively acknowledge or reject a message (NACK) and reconcile data transmissions from the ETTM System.						
197	The Contractor shall receive and store color and black and white images for each transaction that comprises the trip, from the ETTM System including:						
	· ROI image(s) – average of approximately 8KB per image;						
	· full rear image(s) – average of approximately 450KB per image;						
	· full rear straddle image(s) – average of approximately 450KB per image and						
	· overview image(s) – average of approximately 450KB per image.						
1.1.3.3.	**Interface to the Interoperable Agencies**						
	This Interface connects the BOS with the Interoperable Agencies for data exchange.						
198	The Contractor shall provide the Interface to WRTO/CTOC Interoperable Agencies and Regional and National Hubs, for the functionality described within these Requirements and in accordance with latest and future WRTO/CTOC ICDs. The Contractor shall support Interoperable agencies that will be on different versions of the WRTO/CTOC ICD throughout the Term of the Agreement.						
199	The Contractor shall provide the capability to obtain and acknowledge 100 percent of all transactions/trips and images from Interoperable Agencies.						
200	The Contractor shall provide the capability to transmit 100 percent of all Interoperable Agency customer transactions/trips and images to their respective Interoperable Agencies.						
201	The Contractor shall provide the capability (Configurable) to transmit the Authority's plaza update (including addition of new plaza facilities) information to Interoperable Agencies.						
202	The Contractor shall provide the capability (Configurable) to receive Interoperable Agencies' plaza update (including addition of new plaza facilities) information.						
203	The Contractor shall provide the capability (Configurable) to transmit the Authority's Transponder Status Lists (TSLs) to Interoperable Agencies.						
204	The Contractor shall provide the capability (Configurable) to receive Interoperable Agency TSLs from Interoperable Agencies.						
205	The Contractor shall provide the capability (Configurable) to transmit BOS customer license plate numbers to Interoperable Agencies.						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
206	The Contractor shall provide the capability (Configurable) to receive license plate numbers from Interoperable Agencies.						
1.1.3.4.	**Interface to California and Arizona DMV**						
	This Interface connects to the California, Arizona, Oregon and Nevada DMVs to obtain information (such as name, address, vehicle make/model, CAV designation, VIN) about vehicles which fail to properly pay the toll amount.						
207	The Contractor shall provide and administer a direct DMV Interfaces for the purpose of obtaining for vehicles travelling in the Express Lanes Facility and the placement and release of vehicle Registration Holds, including. · California DMV; · California Temporary License Plate DMV database; · Arizona DMV (including Temporary License Plate DMV database if applicable); · Oregon DMV (including Temporary License Plate DMV database if applicable) and · Nevada DMV (including Temporary License Plate DMV database if applicable).						
208	Whenever available, the Contractor shall use the on-line DMV Interface allowing for real time look ups and updates. If multiple DMV Interfaces are available to provide the same information, during the Implementation Phase the Authority shall direct the Contractor as to which Interface to implement.						
209	The Contractor shall obtain approval from all DMVs to be a processor for the Authority.						
210	The Contractor shall maintain all security requirements required by all DMVs.						
1.1.3.5.	**Interface to Rental Car Service Providers**						
	This Interface connects to Rental Car Service Providers to exchange transactions/trips, vehicle, renter information, rental agreements and payment information with the BOS, for rental cars that incur tolls on the Authority's Toll Facilities.						
211	The Contractor shall provide the capability to transmit and receive vehicle information from all rental car companies using a Rental Car Service Providers.						
212	The Contractor shall provide the Interfaces to Rental Car Service Providers for the functionality described within these Requirements and in accordance with ICDs to be developed during Project design.						
213	The Contractor shall provide the capability to schedule and automatically send periodic (Configurable) detailed rental car account toll transaction/trip files to Rental Car Service Providers.						
1.1.3.6.	**Interface to Tranporation Corridor Agencies (TCA) for the Dispostion of Rental Car Trips**						
	The Transportation Corridor Agencies (TCA) intends to host rental car plates and transponders and collect tolls on behalf of other CTOC agencies.						
214	The Contractor shall provide the capability to transmit and receive vehicle information from TCA in a separate TSL and License Plate Status File IOP file.						
215	The Contractor shall provide the capability to provide TCA with toll amounts due for the plates and transponders in the rental file and process payments from TCA.						
1.1.3.7.	**Interface to the Authority's BOS Bank**						
	This Interface is to the Authority -provided bank to retrieve all required banking information.						
216	The Contractor shall provide an Interface to the Authority Bank to retrieve, process and store all information required to support the all-electronic BOS bank reconciliation process.						
217	The Interface shall support the use of Positive Pay to deter check fraud.						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
1.1.3.8.	Interface to California Franchise Tax Board (FTB) Tax Intercept Program						
	This Interface is to the California FTB Tax Intercept Program to provide and receive all required Tax Intercept information.						
218	The Contractor shall provide an Interface to the California FTB to retrieve, process and store all information required to support the Tax Intercept process.						
1.1.3.9.	Interfaces to Authority's Financial Accounting Systems						
219	The Contractor shall provide an Interface to the Authority's financial accounting system for the purpose of issuing accounts payable checks.						
220	The Contractor shall provide an Interface to the Authority's financial accounting system for the purpose of recording financial activity to the general ledger.						
1.1.3.10.	Interface/Connectivity to Contractor-Provided Services						
	The Contractor shall provide connectivity to service providers for which the Contractor is responsible. The Requirements are not prescriptive as to the Interface type or method.						
221	The Contractor shall provide connectivity to Contractor selected Third-party Service Providers as required to meet the Requirements, including but not limited to: · Collection Agency 1 (Direct Access to BOS is Phase II Functionality); · Collection Agency 2 (Direct Access to BOS is Phase II Functionality); · Customer Satisfaction Survey Provider Subcontractor; · Lockbox Service Provider (optional); · Merchant Service Provider 1; · Merchant Service Provider 2; · 3rd Party ROV Lookup for all 50 states (excluding direct connect DMVs), District of Columbia, U.S. Government and · Print/Mail House Service Provider (optional).						
1.1.4.	Performance Management and Monitoring System						
	The Performance Management and Monitoring System (PMMS) supports BOS Maintenance Requirements for all Hardware, Software and other BOS components by monitoring BOS processes, Equipment, jobs and Interfaces in real-time to identify degradations in performance or availability before they impact end users. The PMMS generates Alerts and creates actionable trouble tickets that can be tracked to resolution.						
222	The Contractor shall provide a PMMS that supports BOS Maintenance Requirements for all Hardware, Software and other BOS components, in accordance with these Requirements.						
223	The Contractor shall provide a PMMS that monitors, Alerts and generates trouble tickets in real-time for all BOS processes, Equipment, jobs and Interfaces, including but not limited to: · communications issues; · electrical power issues; · temperature issues; · Hardware issues; · Software issues or failures; · database issues; · anomalies to the system design; · issues with customer portals (Self-Service Website and Self-Service Mobile Application (Phase II and optional));						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
			Required Inputs				
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· file systems and file system issues;						
	· issues with jobs, processes or data flows;						
	· BOS health – overall and by component;						
	· BOS and application performance;						
	· BOS utilization – disk space, disk IOs, CPU, memory, throughput (Configurable thresholds);						
	· security events;						
	· Logs;						
	· access controls;						
	· CSC CCTV Surveillance System and						
	· CSC physical security systems.						
224	The PMMS shall provide comprehensive recording capabilities, including but not limited to:						
	· log aggregation (from disparate systems or Modules);						
	· event correlation (cause and effect association);						
	· log shipping and						
	· log management functions.						
225	The PMMS shall have the ability to receive success or failure information regarding data management activities, including but not limited to:						
	· backup;						
	· DR data transfer and synchronization status;						
	· data archival and						
	· data restores.						
226	The Contractor shall provide a PMMS that monitors, alerts and tracks, in real-time, unusual or potentially fraudulent activity triggered by users and systems, including but not limited to:						
	· multiple one-time replenishments coupled with closing of customer accounts;						
	· repeated opening and closing of customer accounts;						
	· refunds over a dollar amount (Configurable) and						
	· multiple deposits and refunds on the same customer account.						
227	The PMMS shall monitor that all BOS components have current and up-to-date virus, firewall and spam protection and other security Software that prevent single point of vulnerability from external threats, virus attacks, ransomware, spam protection and unauthorized access.						
228	The Contractor shall provide a PMMS that monitors, alerts and tracks, in real-time, unusual or potentially fraudulent activity, including but not limited to:						
	· attempted network or system intrusions;						
	· attempted malicious attacks and						
	· Unexpected changes to security settings on firewalls and other security systems.						
	The PMMS shall include, but not be limited to the following capabilities:						
	· receiving and monitoring status messages for all BOS Hardware and Software;						
	· grouping, sorting and filtering by message type, time, Equipment, subsystem, etc.;						
	· local trouble ticket manual entry or email entry by users;						
	· automatic work order generation;						
	· storing data in a relational database to allow for data recovery and flexibility in reporting the raw data (including dashboards and ad-hoc reporting);						
	· generating (automatically) monthly performance reports;						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
229	· tracking service requests;						
	· assigning priorities and actions to events;						
	· notifying (automatically) Maintenance personnel via reports, text and email;						
	· assigning trouble tickets to Maintenance personnel;						
	· reassigning (manually) trouble tickets to other Maintenance personnel;						
	· escalating (automatically) trouble tickets to other Maintenance personnel;						
	· recording time of acknowledgement by Maintenance personnel;						
	· recording time of acknowledgement by all subsequently assigned Maintenance personnel;						
	· recording time of repair;						
	· recording time of Equipment recovery;						
	· recording completion of service calls;						
	· attachment of common document type, such as Microsoft Word, Portable Document Format (PDF), email and screen capture images;						
	· providing automatic Alerts for trouble tickets not closed in a specified time;						
	· maintaining and tracking repair Maintenance activity;						
	· calculating response times, repair times and down time from the data entered by the Maintenance staff and automatically generated by the BOS;						
	· accepting and updating trouble tickets from mobile hand-held devices and smart phone entries;						
	· role-based security;						
	· automatic system exception reporting for all processes that are not running;						
	· automatic system workflow exception reporting for all items that are not processing correctly or are hung up in the BOS and						
	· providing hard copy reports on issues, failures and trouble resolution status.						
230	The PMMS shall record all configuration data in a configuration management database, which shall be updated after each system component change, including application of BOS patches.						
231	The PMMS shall provide system Maintenance personnel with screens, dashboards and reports within the PMMS that allows for the verification and monitoring of all processes, programs and scheduled tasks. Failures shall be visible in a PMMS screen accessible to Maintenance personnel. Event and error logs shall be provided to assist Maintenance personnel with investigating problems.						
232	All PMMS screens, dashboards and reports shall be available to Authorized Users from the Authority.						
233	The PMMS shall provide Authorized Users with operational, management and performance reports from the PMMS that include but are not limited to:						
	· summarized and detailed alarm history;						
	· Maintenance paging and response history;						
	· work order status and tracking;						
	· Equipment inventory and life cycle tracking;						
	· Equipment availability;						
	· preventive and predictive Maintenance;						
	· corrective Maintenance;						
	· response and repair times for each of the priorities;						
	· Equipment use history;						
	· Equipment repair history;						
	· total System availability;						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance Y - Yes N - No*	Status B-Base Product M-Base Modified D-New Development NP-Not Provided*	If Applicable Customer Name and Location	Source O-Offeror S-Sub T-Third Party NA-Not Applicable	If Applicable Subcontractor Name and/or 3rd Party Product/Vendor	Comments *Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· sub-System availability for components of the BOS, IVR System, Self-Service Website and Self-Service Mobile Application (Phase II and optional);						
	· Equipment versions, Software versions, firmware versions and serial numbers for all Equipment installed under these Requirements;						
	· incident logs and lost revenue estimates;						
	· performance reports detailing compliance to the Performance Measures;						
	· a detailed list of parts replaced as a result of Maintenance actions;						
	· status of removed parts and Equipment with an aging status for parts under repair or replacement (serial numbers, being repaired in Maintenance shop, purchase replacement part);						
	· performance reports;						
	· an exceptions report summarizing all unusual or significant occurrences during the period and						
	· trend analysis for repetitive failure.						
234	The PMMS shall support the management of preventive/predictive Maintenance schedules.						
235	The PMMS shall provide the capability to automatically generate work orders for preventive/predictive Maintenance tasks.						
236	The Contractor shall provide a PMMS that supports asset management, including but not limited to:						
	· tracking all System Hardware and Software items;						
	· tracking all System Hardware and Software locations;						
	· tracking all System Hardware and Software versions;						
	· tracking all Maintenance and service agreements;						
	· maintaining a list of vendors from which products were procured;						
	· associating the original purchase order number to the individual item;						
	· associating the original vendor to the individual item;						
	· associating all warranty information to the individual item and						
	· providing an Alert prior to warranty, license, and certification expiration.						
1.2.	**BOS Maintenance and Support Requirements**						
	The Requirements described in this section detail the Contractor's responsibility for providing Maintenance and Software Support Services for the BOS, and associated communications and support to operations, including but not limited to:						
	· Hardware Maintenance (servers, storage, network switches, firewalls, routers, etc.) if required;						
	· network administration;						
	· system administration;						
	· administration of CSC Facility physical security systems;						
	· administration of CSC Surveillance CCTV systems at CSC Facility;						
	· database administration;						
	· Maintenance and Software Support Services;						
	· monitoring services;						
	· on-site desktop and application support services within the I-405 CSC and WIC;						
	· on-site desktop and I-405 BOS application support services at the OCTA Store WIC (OCTA provided Equipment);						
	· support of work at home CSRs and operations during Business Continuity;						
	· application support for the Authority's staff and						
	· BOS security.						

Volume II BOS Technology and Functionality

No.	Requirements	Required Inputs					
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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	In delivering the Maintenance and Software Support Services, the Contractor is expected to provide the following services, including but not limited to:						
	· well documented Maintenance schedules and processes;						
	· change and configuration management;						
	· on-site support of the BOS;						
	· complete around-the-clock Maintenance of the BOS;						
	· significant participation with the Authority's staff, meetings and processes and						
	· ample spare parts inventory and support agreements.						
237	The Contractor shall be responsible for performing all Maintenance activities and fully supporting and maintaining the BOS from Go-Live throughout the Operations and Maintenance Phase.						
238	The Contractor shall provide Maintenance, including but not limited to all Equipment, Hardware, Software, cloud-based systems, and systems provided under this Agreement, including Maintenance associated with the compliance with the terms of the Software warranty.						
239	The Contractor shall provide Maintenance and Software Support Services, including but not limited to: monitoring; preventive; predictive; corrective, and emergency Maintenance and Software Support Services, as well as any required and planned Upgrades and Enhancements to be performed on any and all BOS elements.						
240	To ensure BOS performance is optimized, all system administrative functions, if not otherwise automated, shall be performed at regular, scheduled intervals as part of the preventive Maintenance and Software Support Services in accordance with the Maintenance Plan.						
241	The Contractor shall administer, maintain (as required in conjunction with Authority paid Maintenance agreement) and be the point of contact for all Authority provided and paid for Equipment, systems and Maintenance agreements, including uninterruptable power Equipment, power generators, CCTV Surveillance and physical security systems at the I-405 CSC and WIC Facility.						
242	The Contractor shall provide on-site Desktop Environment and BOS application technical support to all Contractor personnel and Authority Authorized Users at all locations from 7 a.m. to 7 p.m. Monday – Friday, Pacific Time and be on-call and available to come on-site 24x7x365.						
243	The Contractor shall provide support for work-at-home CSRs and operations and in accordance with the Approved Disaster Recovery and Business Continuity Plans. For example, during an event similar to the COVID-19 outbreak.						
244	Continuous monitoring of BOS operations shall be performed to verify its functional, processes are being executed as scheduled and that the BOS is operating per Performance Measures. Continuous monitoring shall include but not be limited to: · verifying system alarms and Alerts; · verifying processes/programs/job have successfully completed as scheduled; · evaluating sample transactions data and aggregate data trends for exceptions; · confirming trip/transaction and image transmission to and from the ETTM System; · performing routine diagnostics; · reviewing comparative reports to identify potential system degradation; · confirming successful data transfer, such as the TSL; · confirming data transmission to and from external Interfaces; · correcting identified performance issues; · confirming primary and DR systems are synchronized;						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· monitoring backups;						
	· database administration and monitoring;						
	· general System health;						
	· evaluating storage Requirements and						
	· reviewing error logs and Alerts.						
245	The Contractor shall validate that all BOS components obtain virus protection and security updates as soon as they are available.						
246	The Contractor shall provide advance Notice and obtain Approval when purging jobs that permanently delete data from the system are to be executed, including but not limited to: data elements impacted, date range applied and data size impact.						
247	The Contractor shall re-establish or re-install system files, programs and parameters, as required, following a failure or damage to the system and return the BOS to a fully- operational condition.						
248	The Contractor shall maintain and test up-to-date Software backups (all system Software and data) in accordance with the Maintenance Plan that is secure and protects the integrity of the data.						
249	The Contractor shall provide backups performed on physically separate Hardware and Software from the data being backed up.						
250	The Contractor shall maintain accurate Equipment inventory status and update status.						
1.2.1.	**BOS Hardware Maintenance**						
251	During the Operations and Maintenance Phase, the Contractor shall plan to regularly Upgrade all BOS environments to maintain a high-level of performance, reliability and provide for the implementation of the manufacturer's current system and security firmware/Software. These Upgrades shall be accounted for in the Contractor's Price Proposal and will not be separately paid for by the Authority over the Term of the Agreement.						
252	During the Operations and Maintenance Phase, the Contractor shall Upgrade the Desktop Environments and office Equipment no less than every three (3) years to maintain a high-level of performance and reliability. These Upgrades shall be accounted for in the Contractor's Price Proposal and will not be separately paid for by the Authority over the Term of the Agreement.						
253	BOS Hardware Maintenance shall include but are not limited to: · BOS servers, storage devices, backup devices and network Equipment at the primary BOS site, including all production and non-production BOS environments as required; · BOS servers, storage devices, backup devices and network Equipment at the BOS DR site; · all Contractor-provided desktop Hardware and peripherals; · all Hardware and peripherals that interact with the BOS to the extent that the Contractor-installed Software or applications are negatively affecting the operation of the peripheral; · all CSC office Equipment. For example, copiers and printers and · IVR, ACD and telephony systems.						
1.2.2.	**BOS Network System Maintenance**						
254	Any Maintenance and/or replacement costs shall be included in the Contractor's Price Proposal and will not be separately paid for by the Authority over the Term of the Agreement unless explicitly noted.						

Volume II BOS Technology and Functionality

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				Required Inputs			
255	During the Operations and Maintenance Phase, the Contractor shall plan to regularly Upgrade the network Hardware to maintain a high-level of BOS reliability and provide for the implementation of the manufacturer's current system and security firmware/Software. These Upgrades shall be included in the Contractor's Price Proposal and will not be separately paid for by the Authority over the Term of the Agreement.						
256	The Contractor shall maintain and monitor the BOS network, including connection of the primary and DR BOS locations.						
257	The Contractor shall proactively monitor the WAN network, its connections and its components to respond to any fault or problem.						
258	The Contractor shall monitor all communications with interfacing systems and Third-Party Service Providers.						
259	The Contractor shall monitor all network Alerts and alarms, as well as detect intrusion attempts and prevent intrusions.						
260	The Contractor shall perform the necessary support services required of the Interoperable Agencies in order to keep day to day operations and transfers current, such as operating system Upgrades.						
261	The Contractor shall Upgrade and Update the network security and provide the required Software and monitoring tools to ensure the BOS is always in compliance with the Security Standards.						
1.2.3.	**BOS Administration and Software Support Services**						
262	The Contractor shall include in their Price Proposal all administration, system Maintenance and Software Maintenance costs. The Authority shall only pay for items that are explicitly identified as being paid for by the Authority. Software modifications required to maintain and support the BOS as a part of the normal course of business shall not be considered Upgrades or Enhancements paid for by the Authority. These modifications include but are not limited to: · Updates the System to keep up with and support new mobile devices, mobile browsers, desktop browsers and operating systems, mobile and desktop customer experience trends, mobile payments, trends in mobile device and desktop navigation techniques, as well as updated look and feel for the Self-Service Website and Self-Service Mobile Application (Phase II and optional); · version changes; · configuration or parameter changes; · all changes to Interoperable or CTOC ICDs and related reports; · all changes to ICDs and Interfaces to Contractor-selected Third-Party Service Providers; · minor changes to reports, Software or code; · Software modifications required to ensure BOS is compliant to existing Security Standards and · changes for the Contractor's benefit that improve the Contractor's ability to maintain and support the BOS and to meet the Performance Measures.						
263	The Contractor shall provide Maintenance and Software Support Services for all elements of the BOS, including but not limited to: · operating systems; · databases; · BOS application Software; · third-party Software; · Software change management; · Software configuration management and						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· Software version control.						
264	The Contractor shall maintain all secure website certificates for all websites, including the website serving the Authority managed content, if required.						
265	The Contractor shall provide Maintenance and Software Support Services that include monitoring, preventive, predictive and corrective action to ensure BOS performance is in accordance with Requirements. This shall include but is not limited to:						
	· any daily, weekly or periodic Maintenance required to maintain the BOS at required performance levels (such as, indexing and tuning databases and archiving and purging);						
	· third-party Software or firmware patches, updates and Upgrades, as required and to be compliant with Security Standards, including but not limited to: performing security Software Upgrades, database Upgrades and operating system Upgrades;						
	· Approved adjustments and updates to the BOS data based on a criteria and conditions Approved by the Authority to correct failures and issues;						
	· monitoring of error logs and system logs;						
	· Maintenance of back-ups and backup Software;						
	· Maintenance of all BOS environments;						
	· installation of new Software and confirmation of successful installation;						
	· verify data replication to DR site is occurring as configured and replication is not drifting beyond an acceptable threshold;						
	· verify time synchronization is occurring as configured, and system clocks are not drifting or otherwise incorrect;						
	· modifications to IVR call flow needed to correct routing and call flow problems identified during normal operations;						
	· creation of ad-hoc reports requested by the Authority;						
	· generation of queries as requested by the Authority;						
	· analysis of data as requested by the Authority and						
	· modifications to the Self-Service Website and Self-Service Mobile Application (Phase II and optional) to keep up-to-date with the Authority's policies and general information.						
266	Software support services shall include monitoring and corrective action to ensure BOS performance is in accordance with Requirements, to include database management and operation. This shall include but is not limited to:						
	· investigation and analysis of errors and exceptions and taking corrective action, including correcting the problem and reprocessing the data;						
	· monitoring notifications and initiating corrective actions on application programs to meet Requirements;						
	· updates to the BOS to support Upgrades to Hardware or third-party Software and						
	· updates to the BOS to support all changes to Business Rules and BOS Configurable parameters and deploy changes in production.						
267	The Contractor shall monitor, Upgrade and Update the BOS is always in compliance with the Security Standards.						
268	The Contractor shall ensure Maintenance does not conflict with or cause interruption in service or cause substandard service to the Authority or its customers.						
1.2.4.	**Payment Card Industry (PCI) Security Standards and Compliance**						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	The PCI Security Standards Council is responsible for the development, management, education and awareness of the PCI Security Standards, including the PCI DSS, Payment Application Data Security Standard (PA-DSS). The PCI Security Standards provide guidance for merchants, vendors and security consulting companies to mitigate data breaches and prevent payment cardholder data fraud.						
	The Contractor is responsible for ensuring that PCI compliance is fully achieved prior to the Go-Live date. The Contractor is further required to ensure that the BOS continues to be PCI compliant as outlined in the Maintenance and Operations Phase Requirements.						
269	The Contractor and the BOS shall be in compliance with the appropriate PCI DSS merchant level as defined by the PCI Security Standards Council in place at the time of BOS Go-Live.						
270	The Contractor shall ensure that the BOS is in compliance with any individual additions to the PCI Security Standards since the last major version or the current version published by the PCI Security Standards Council and all future versions.						
271	The Contractor shall utilize the PCI Security Standards Council's Prioritized Approach method to indicate how each PCI Requirement is being addressed prior to Go-Live. The Prioritized Approach shall be submitted to the Authority along with substantiating evidence for review and Approval.						
272	The Contractor shall ensure the BOS is in compliance with PCI-DSS for any Commercial Off-the-Shelf (COTS) Software that will be used in payment applications.						
273	The Contractor shall provide, prior to the BOS Go-Live:						
	· PCI Attestation of compliance by either a qualified ISA or an independent QSA, or as required by PCI DSS;						
	· vulnerability scan by an Approved scanning vendor and						
	· internal and external penetration testing results.						
274	No more than three (3) months after Go-Live the Contractor shall provide a complete Report of Compliance (ROC), including details about the BOS environment and the assessment methodology, as well as documentation regarding the BOS's compliance status for each PCI DSS Requirement. The ROC shall be provided which outlines a clear plan and schedule (in writing) to achieve full PCI compliance no more than six (6) months after Go-Live.						
275	The Contractor shall be responsible for providing a ROC prior to BOS Acceptance.						
1.2.5.	**Interoperability Requirements**						
	The Authority currently has Interoperability agreements with CTOC Agencies and, in the future, it is anticipated that regional and national Interoperable agreements will be established. These Requirements apply to all existing and future Interoperability.						
	Interoperability includes exchanging and processing transactions/trips, customer, transponder, payment, corrections, vehicle data, invoices and reconciliations between the BOS and the Interoperable Agencies. The BOS shall process transactions/trips from Interoperable Agencies for the Authority's customers who have used Interoperable Agency roads, as well as transactions/trips for Interoperable Agencies' customers on the Authority's facility. The Interface supports the transmission and receipt of all files identified in the respective ICDs.						
	At the Authority's direction, the Contractor shall support direct connection and/or connection through a CTOC Agency intermediary to nationally (non-CTOC) Interoperable Agencies.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
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	The BOS and Interoperable Agencies perform validation checks to confirm the transactions/trips are in compliance with the Interoperable Agency ICD and reject any transactions/trips that are not. Validated transactions/trips shall be Posted to a user account in accordance with the Interoperable Agency agreements.						
	The BOS must be prepared to work with other ICDs to send and receive transactions/trips and transaction data and other data files.						
276	The Contractor shall support all Interoperable Agency activities as required by the Authority, including but not limited to: · attend technical meetings; · review and provide comments on documents; · support Interoperable Agency testing as requested; · support modifications to Interoperable specifications and · be compliant with the latest published Interoperable specifications.						
277	The Contractor shall support the addition of Regional and National Interoperability either directly or through a CTOC designated intermediary.						
1.2.6.	**Preventive and Corrective Maintenance Requirements**						
1.2.6.1.	**Preventive Maintenance**						
278	The Contractor shall provide preventive Maintenance on the BOS Hardware, servers, communications network and Software as required.						
279	No less than quarterly the Contractor shall conduct a full network vulnerability scan and web application penetration testing performed by an independent Qualified Security Assessor (QSA).						
280	Separate from the quarterly vulnerability scan, the Contractor shall conduct a full network vulnerability scan and web application penetration testing performed by an independent Qualified Security Assessor (QSA) in conjunction with any network or security changes.						
281	The Contractor shall in accordance with the Approved preventive Maintenance schedule, periodically inspect all Equipment, both major components and support components (such as fans, cabinets, environmental control units, filters, storage units) that constitute the BOS and shall make repairs, cleaning, adjustments and replacements of components as necessary to maintain the Equipment in normal operating condition.						
282	Servers and storage devices shall be periodically checked to verify that storage space is not reaching maximum thresholds; disks are not fragmented or damaged; Software is of the latest version per the configuration management database, and data is being processed and transferred in an appropriate manner. These checks should be performed automatically whenever possible, but must be checked manually if the task cannot be automated.						
283	The BOS shall be monitored to ensure performance is optimal and meets the Performance Measures, including but not limited to: · report generation times; · BOS access times; · IVR statistics; · Self-Service Website access times and · Self-Service Mobile Application (Phase II and optional) access times.						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
284	All Equipment and systems shall be included as part of preventive Maintenance, in accordance with the original Equipment manufacturer's guidelines. Any variations or exceptions shall be noted by the Contractor and Approved in advance by the Authority.						
285	Scheduled Maintenance shall be communicated to the Authority a minimum of seven (7) Calendar Days in advance for approval by the Authority and shall be scheduled for times when the CSC is not operating.						
286	Preventive Maintenance shall be scheduled to be performed by BOS administration staff between 12 AM and 3 AM PST weekdays or in coordination with other roadway closures and Approved by the Authority. Any preventive Maintenance tasks that need to be performed during normal BOS operating hours that is not part of the Approved Preventive Maintenance Schedule shall be Approved in advance by the Authority.						
287	The diagnostic aids, tools and Equipment required to perform preventive Maintenance Equipment analysis shall be provided by the Contractor to the Authority, as necessary to meet the Authority's Maintenance responsibilities.						
288	When preventive Maintenance requires a BOS Service to be made unavailable to the customer, a Notice shall be Posted 24 hours in advance of the outage on the Self-Service Website, Self-Service Mobile Application (Phase II and optional) and through the IVR so customers are aware of the impending outage.						
1.2.6.2.	**Corrective Maintenance**						
289	All Work performed by the Contractor to correct incidents, problems and failures to meet the Requirements shall be considered corrective Maintenance. Such problems include but are not limited to: · failure of BOS functions; · failure of processes and programs; · report failures and issues; · application failures; · data and revenue reconciliation failures; · failures in transmitting and receiving files from the various third-party Interfaces; · errors and exceptions when processing data received from the ETTM System, Interoperable Agencies and third party entities; · network failures and issues; · BOS or component performance issues; · data loss or inaccessibility and · non-conforming availability levels.						
290	When a BOS Service becomes unavailable to the customer due to an unplanned outage or emergency a Notice shall be Posted on the Self-Service Website, Self-Service Mobile Application (Phase II and optional) and IVR as soon as possible so customers are aware of the outage.						
1.2.6.3.	**24X7 Maintenance Coverage**						
291	The Contractor shall provide continuous (24x7) coverage for all monitoring, system administration services and Maintenance-related activities sufficient to meet the Performance Measures.						
1.2.6.4.	**Recording of Maintenance Activities**						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
			Required Inputs				
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
292	The Contractor shall be responsible for logging all reported Maintenance activities. The Contractor also shall be responsible for documenting in detail all information and issues related to a failure condition, providing a corrective action report within one (1) week including all actions taken to complete the correction and a root cause analysis.						
1.2.6.5.	**Maintenance Priorities, Response and Repair Times**						
293	Response and repair time is defined as the time from failure to repair/correction with the BOS being returned to normal operations. The Contractor shall respond to calls and repair times noted in the Performance Measures according to the following priority levels: · Priority 1: Any malfunction or fault that impacts the BOS and CSC Operations ability to serve customers (for example, Self-Service Website functionality unavailable or not operating properly; BOS functionality unavailable or nor operating properly for CSRs servicing customers; phone system not taking calls or not taking all calls; IVR unavailable or not operating properly; notifications or customer communication not being sent immediately when eligible through all channels), results in the loss of revenue, compromises security, causes a hazard to personnel, causes the loss or potential loss of any BOS data, causes loss of redundancy within the BOS components. · Priority 2: Any malfunction or fault that degrades performance but not the BOS or CSC Operation's ability to serve customers. It includes examples such as inaccurate reporting, inability to reconcile revenue, loss of BOS functionality that does not impact customer access to data or service, and/or loss of functionality that impacts the Authority's operational efficiency. · Priority 3: Any malfunction or fault that has the potential to result in a degrading of the BOS or CSC Operations' performance but has not yet and is not anticipated to immediately impact performance.						
294	Any downtime that is a part of scheduled and approved preventive Maintenance, including scheduled new Software releases not associated with a Maintenance event shall not affect the Performance Measures calculation. However, in this event the Contractor does not make the BOS available and/or fully restore CSC Operations within the approved schedule window, the resulting downtime shall be included in the Performance Measure calculations.						
295	Response and repair times for every BOS Maintenance event shall be recorded and reported by the Contractor, and such reports shall be provided to the Authority.						
296	No incident shall be closed by a technician before the Equipment or Software service has logged a recovery. For example, if a service is degraded because of a loss of a redundant component, the incident cannot be closed until the redundant component has been replaced and service has returned to normal.						
1.2.7.	**Certification of PCI DSS Compliance**						
	The Contractor is responsible for providing certification of PCI DSS Compliance.						
297	The Contractor shall complete a PCI DSS assessment by either a qualified Internal Security Assessor (ISA) or an independent Qualified Security Assessor (QSA), or as required by PCI DSS, at the interval required for PCI DSS compliance, including a complete ROC. The Contractor shall be responsible for providing the ISA or QSA at no additional cost to the Authority. The Contractor shall fully cooperate with the Authority at no cost to the Authority in responding to the assessor's requests and implement remedies if any issues are identified.						
298	The Contractor shall complete a full penetration vulnerability and exploitation testing, the results of which shall be provided to the Authority, at the interval required for PCI DSS compliance throughout the Implementation and Operations and Maintenance Phases.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance Y - Yes N - No*	Status B-Base Product M-Base Modified D-New Development NP-Not Provided*	If Applicable Customer Name and Location	Source O-Offeror S-Sub T-Third Party NA-Not Applicable	If Applicable Subcontractor Name and/or 3rd Party Product/Vendor	Comments *Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
				Required Inputs			
299	The Contractor shall be responsible for providing a ROC on an annual basis, no later than the original date thereafter.						
300	The Contractor shall provide all documentation required under PCI, including but not limited to network diagrams and detailed policies and procedures, available to the Authority.						
301	To evaluate the security risk to the BOS and identify potential vulnerabilities, the Contractor shall perform penetration and vulnerability tests in accordance with PCI requirements.						
302	The Contractor shall document and immediately report to the Authority any PCI DSS issues/vulnerabilities found during monthly penetration and vulnerability tests or upon new Software release.						
303	The Contractor is responsible for correcting all deficiencies at the Contractor's cost and ensuring the BOS is PCI DSS compliant and ensuring security risks are handled appropriately.						
304	The Contractor shall furnish copies of all PCI assessment, testing, scanning and compliance documentation including the ROC to the Authority, upon completion of quarterly and annual assessment activities throughout the Implementation and Operations and Maintenance Phases.						
305	The Contractor shall complete a SOC 2 Type 2 assessment by either a qualified Internal Security Assessor (ISA) or an independent Qualified Security Assessor (QSA), or as required by PCI DSS, at the interval required for PCI DSS compliance, including a complete ROC. The Contractor shall be responsible for providing the ISA or QSA at no additional cost to the Authority. The Contractor shall fully cooperate with the Authority at no cost to the Authority in responding to the assessor's requests and implement remedies if any issues are identified.						
1.2.8.	**Emergency Response Management**						
	The Contractor shall be responsible for emergency response management throughout the Operations and Maintenance Phase.						
306	The Contractor shall immediately respond to any emergency situation that has already impacted the BOS or could potentially damage the BOS. The Contractor shall be prepared to put forth all necessary resources to divert or correct an emergency condition.						
307	Such emergency conditions shall be handled in accordance with policies and procedures developed by the Contractor and Approved by the Authority in the Disaster Recovery and Business Continuity Plans. The following are a few examples of emergency conditions: · weather related; · public safety related; · health related. For example, in response to a COVID-19 or similar outbreak; · conditions that invoke the Disaster Recovery and/or Business Continuity Plans; · BOS outages; · third-party power outage or communication failure and · security breaches.						
1.2.9.	**Disaster Recovery and Business Continuity**						
	The Contractor shall be responsible for Disaster Recovery Procedures and testing throughout the Implementation and Operations and Maintenance Phases.						
308	The Contractor shall perform Disaster Recovery procedures in accordance with the Disaster Recovery Plan (DRP) in the event of a disaster and return the BOS to a fully operational condition.						

Volume II BOS Technology and Functionality

No.	Requirements	Required Inputs					
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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
309	The Contractor shall test the Disaster Recovery and Business Continuity procedures on an annual basis to validate that they are functioning per the design. The Authority shall witness the test and the Contractor shall provide a report outlining the test, test results and any anomalies encountered for the Authority's review and approval.						
310	The BOS shall meet the Recovery Point Objective (RPO), Recovery Time Objective (RTO) and level of service (LOS) levels provided in the Performance Measures.						
311	The Contractor shall address any issues encountered from the annual Disaster Recovery and Business Continuity testing.						
312	The Contractor shall support the ETTM System Contractor's Disaster Recovery and Business Continuity annual testing.						
1.2.10.	**Incident and Revenue Loss Reporting**						
313	The Contractor shall work with the Authority to develop a communications protocol for incident and revenue loss reporting (e.g., communications procedures based on incident and priority level).						
314	The Contractor shall immediately notify the Authority of any incident or event where the loss of revenue or data or security breach has occurred or potentially has occurred or could occur. The Contractor shall take immediate action to rectify the condition and return the BOS to normal operations.						
315	In the event of a loss or potential loss of revenue or data or security breach, an incident report shall be provided to the Authority within five (5) Business Days of the incident. The report shall identify the issue and provide a detailed account of the incident; its cause; duration; resolution or planned resolution, and a quantification of actual or potential lost revenue or data or security breach. Regular updates shall be provided until the issue has been fully resolved and closed. The incident and its impacts shall also be further detailed in the subsequent monthly report. The Contractor shall be held responsible for all lost revenue and data and customer impacts, including remediation, in accordance with the terms of the Agreement.						
1.3.	**Future Functionality**						
	The BOS shall be designed to anticipate certain future functionality and Interfaces. The introduction of future functionality, of the type noted in this section, shall be anticipated and not require changes to the Software or System architecture or significant changes to the database structure. However, the accommodations made by the Contractor in anticipation of this potential future functionally shall not negatively impact the development of the BOS or increase the Offeror's Price Proposal.						
316	The introduction of future functionality shall not require changes to the Software or BOS architecture, or significant changes to the database structure including the capability to easily add fields and report on them without affecting the database schema.						
317	The accommodations made by the Contractor in anticipation of potential future functionally shall not negatively impact the development of the BOS or increase the Offeror's Price Proposal.						
318	The Contractor shall provide the capability to Interface with entities providing for national Interoperability in accordance with ICDs to be designated by the Authority and/or developed during Project design. The Contractor shall accommodate new Interfaces (via either a national hub, regional hubs or larger peer-to-peer exchanges) without significant changes to the Software or database structure.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
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319	The BOS design, data schema, financial accounting and reporting approach shall support the future, potential direct support of additional OCTA and non-OCTA Toll Facilities. All functionality provided shall be easily Configured to support these potential additional Toll Facilities. For example, Configurable settings shall be capable of different settings for different Toll Facilities. The design shall not add repetitive and/or additional clicks in order to navigate screens, search data or configure reports while the BOS is supporting only the I-405 Toll Facility. For example, the user shall not have to select "OCTA" or "I-405" until such time as an agency or Toll Facility differentiation is required.						
320	The Contractor shall provide the capability to Interface to new CTOC agencies and national Interoperability without significant changes to the Software or database structure.						
321	The Contractor shall include (but not enhance, configure or develop) all existing base BOS functionality to support the future integration with a Money Service Provider. Throughout the Operations and Maintenance Phase, the Authority may direct the Contractor to integrate with a Money Services Provider for the purpose of providing enhanced access and services for cash paying customers including, obtaining transponders and making payment towards Violation Notices and account balances.						
322	The Contractor shall include (but not enhance, configure or develop) all existing base BOS functionality to support the future integration with an Occupancy Detection System (ODS) that would be integrated into the ETTM System. Throughout the Operations and Maintenance Phase, the Authority may direct the Contractor to integrate with and accept images from an ODS for the purpose of reducing occupancy-based Violations.						
323	The Contractor shall include (but not enhance, configure or develop) all existing base BOS functionality to support the potential introduction of customer invoicing prior to the Violation process described herein. During the Operations and Maintenance Phase, the Authority may direct the Contractor to implement customer invoicing.						
1.4.	**Account Management**						
	There are two account types Registered and Unregistered. Registered account is established when customer opens a pre-paid account with the Express Lanes. An Unregistered account is established by the BOS using the DMV, a ROV Lookup Provider or Affidavit of Non-liability for Violation transactions/trips. Establishment and management of accounts shall be performed per Business Rules.						
	Customers can establish new Registered accounts or convert an Unregistered account to a Registered account. To establish a Registered account, customers must provide customer contact information including name, address, telephone number and email address and vehicle information including license plate number, type and Jurisdiction and vehicle make, model and color. Most accounts will be prepaid and as such customers also must establish a replenishment method to be used to replenish prepaid tolls when the account reaches the Insufficient Balance Threshold. Credit Card replenishment is strongly encouraged, but customers can also select cash or check replenishment. The Authority may elect to allow certain accounts to be postpaid and receive a monthly invoice for tolls due.						
	The types of accounts are provided in the following tables:						
	Unregistered accounts are established by the BOS for Violation transactions/trips using the DMV or ROV Lookup Provider. Unregistered accounts may be converted to Registered accounts based on fulfilling all of the required Business Rules for establishing these accounts.						
1.4.1.	**General Account Management**						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	The Authority's customers have many options for account establishment and Maintenance and to obtain transponders, in the manner they prefer.						
324	The Contractor shall provide an efficient series of input fields to collect the information necessary to open a FasTrak account. The fields should require little "clicking' or advancement through multiple pages to reduce the time needed to input the account establishment data.						
325	Support comprehensive account management that allows for the setup and Maintenance of all account types in accordance with Business Rules.						
326	The Contractor shall provide the capability to establish accounts via methods, including but not limited to:						
	· Self-Service Website;						
	· Self-Service Mobile Application (Phase II and optional);						
	· mail;						
	· telephone;						
	· fax;						
	· walk-in;						
	· automatically using information provided by rental car companies and						
	· automatically using information provided by the ROV Lookup.						
327	The Contractor shall provide the capability to maintain accounts via methods, including but not limited to:						
	· Self-Service Website;						
	· Self-Service Mobile Application (Phase II and optional);						
	· IVR;						
	· mail;						
	· telephone;						
	· email;						
	· chat;						
	· text;						
	· fax and						
	· walk-in.						
328	The Contractor shall provide the capability for transponders to be requested via methods including but not limited to:						
	· Self-Service Website;						
	· Self-Service Mobile Application (Phase II and optional);						
	· mail;						
	· telephone;						
	· IVR;						
	· fax, and						
	· walk-in.						
	The Contractor shall provide the capability for the Maintenance of account types designated as, including but not limited to:						
	· Private (prepaid) – an account established in an individual name;						
	· Business (prepaid) – an account established in a business name;						

Volume II BOS Technology and Functionality

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329	· Non-revenue (no payment) - an account established at the Authority's direction for vehicles entitled to toll-free travel;						
	· Invoice (postpaid) – an account established to allow the customer to receive an invoice periodically (Configurable) for toll usage. The customer may elect to provide Credit Card or ACH information to be charged automatically to pay the invoice;						
	· Rental car (prepaid) – for Rental Car Service Providers;						
	· Private Registered Video (prepaid) – an account for individuals who do not want or cannot use transponders;						
	· Business Registered Video (prepaid) – an account for companies and business that do not want or cannot use transponders and						
	· Unregistered/Violator (postpaid) – an account created using the information provided by the DMV or ROV Lookup Provider. May include more than one vehicle if the ROV Lookup information is an exact match. These may also be referred to as violator accounts.						
330	The Contractor shall provide the capability to apply Business Rules and account Requirements for each valid account type, including but not limited to:						
	· whether prepayment is required;						
	· payment options;						
	· whether a transponder is required;						
	· transponder sale price (by transponder type);						
	· replenishment amounts;						
	· contact method (mail, email, text, etc.);						
	· Insufficient Balance Thresholds (by Credit Card or cash/check payments) and						
	· account balance.						
331	The Contractor shall provide a Registered account creation process that logically leads an Authorized User through the necessary steps to create an account.						
332	The Contractor shall provide the capability to convert an Unregistered account to a Registered account while maintaining the same account number and all account history.						
333	The Contractor shall provide the capability to change from one account type and Account Plan to another while maintaining the same account number and all account history.						
334	The Contractor shall provide on-screen guidance during the account creation process regarding missing or improperly formatted information. The Authorized User shall not be able to move to the next step until the required information is provided in the appropriate format.						
335	The Contractor shall provide the capability, when opening a new account, to automatically identify other account(s) associated with that account name, address or vehicle.						
336	The Contractor shall provide the capability to require the account agreement and privacy policy be acknowledged and a record of that acknowledgment saved in the BOS prior to establishing a Registered account or when converting to a Registered account.						
337	The Contractor shall provide the capability for the auto-creation of an Unregistered account (should one not already exist for that license plate number) based on an Image-Based Transaction/Trip being eligible for Violation processing and information provided by ROV Lookup.						
338	The Contractor shall provide the capability to merge and unmerge accounts. This process shall logically lead the Authorized User through all necessary steps to merge one account into another.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
339	The Contractor shall provide the capability for customers to have multiple mail addresses, email addresses, phone numbers and authorized contact information on the account.						
340	The Contractor shall provide the capability to identify the source of the information for both Unregistered and Registered accounts.						
341	The Contractor shall provide address adjustment logic to all addresses including those received from DMVs and ROV Look-up Service Providers, Skip Trace Service Providers and customers that includes but is not limited to: · the capability, when adding contact information, to assist the Authorized User by requiring zip code be entered first, then providing a pre-populated city and state; · verification, to ensure the address exists; · standardization, to normalize US addresses, such as "Drive" becomes "Dr." and · selection from all potential address results.						
342	The Contractor shall provide the capability to accept or reject the recommended changes provided during address validation or normalization.						
343	The Contractor shall provide for a real-time address standardization options when entering addresses, including but not limited to: · addresses entered via a customer portal (Self-Service Website and Self-Service Mobile Application (Phase II and optional)) and · addresses entered by an Authorized User.						
344	The Contractor shall provide the capability for multiple active addresses and apply them to their designated use, including all prior addresses for all account types, including but not limited to: · shipping and · billing.						
345	The Contractor shall provide the capability to store address history and make all addresses accessible in the account.						
346	The Contractor shall provide the capability to acquire and store multiple addresses, including all prior addresses for all account types, including but not limited to: · Customer provided via the Affidavit of Non-Liability · ROV Lookup provided; · Skip Tracing; · National Change of Address (NCOA) and · Collection Agency provided.						
347	The Contractor shall provide the capability to add international addresses.						
348	The Contractor shall provide the capability to automatically populate (or provide multiple options for selection) the city and state upon entry of the ZIP code (including Canada and Mexico).						
349	The Contractor shall provide periodic updates, at least quarterly, to the ZIP code/city/state list, at a minimum, as additional information becomes available.						
350	The Contractor shall provide the capability to prevent the account holder's name from being changed unless Approved by an Authorized User.						
351	The Contractor shall provide the capability for email address confirmation by the customer by comparing a re-keyed email address. The addition of unmatched entries shall not be allowed.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
			Required Inputs				
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352	The Contractor shall provide the capability when email addresses are added to an account (both Registered and Unregistered), to perform the email address confirmation process prior to finalizing the entry on the account. For example, an email is sent to the email address provided with a link by which the customer can confirm they have control of the email account. A message shall be displayed indicating the email address will not be added until the confirmation process is complete.						
353	The Contractor shall provide the capability to enter and categorize comments on accounts.						
354	The Contractor shall provide the capability to insert BOS-generated comments on actions initiated by the BOS.						
355	The Contractor shall provide the capability to force Authorized Users to enter comments or have the BOS automatically enter comments on actions processed on an account, including but not limited to: · disputes; · dismissals; · transfer transactions/trips to another account; · payment of Violation Notices through the account; · reversals of payments and dismissals; · waivers; · corrections and · adjustments.						
356	The Contractor shall provide the capability to set the default PIN as the last 4 digits of the primary phone number, which can be updated in the BOS and IVR.						
357	The Contractor shall provide the capability to validate a PIN used for identifying an authorized contact. The PIN shall be masked (not visible to CSRs) such that the CSR will ask the customer for the PIN and the customer will provide the PIN and the CSR will enter that number into the system and the system will validate the PIN. This way the CSR cannot give the customer any hints.						
358	The Contractor shall provide the capability to securely email the PIN to the valid primary email address or text message on the account and require that the PIN be subsequently changed.						
359	The Contractor shall provide the capability to establish and configure security questions and validate customer response prior to the release of the PIN to the customer. The security questions related to the PIN shall be the same as those used by the customer via the Self-Service Website or CSR assisted password reset.						
360	The Contractor shall provide the capability for all account types to have multiple communication channels, including but not limited to: · Phone (day/night); · cell phone; · additional phone numbers; · email; · additional email addresses; · fax; · text messaging and · mail.						
361	The Contractor shall provide the capability to select a preferred communication channel for specific customer communications.						

Volume II BOS Technology and Functionality

No.	Requirements	Required Inputs					
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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
362	The Contractor shall provide the capability to capture opt-in/opt-out preferences and record and store the customer's election for certain items, including but not limited to: · e-blast; · text messages; · statements and · marketing / newsletters.						
363	The Contractor shall provide an account summary (an account overview including name, address, vehicles, license plates, email, phone, payment method, etc.) in a printer-friendly format to be used for, including but not limited to: · handing to walk-in customers; · inserting with mail transponder Fulfillment; · mailing to customers and · sending to customers via secure email.						
364	The Contractor shall provide the capability to log all account changes and provide the capability to view details, including but not limited to: · prior value; · the new value; · user ID; · date/time and · user information, such as BOS, Authorized User or customer-originated.						
1.4.2.	**Vehicles, License Plates and Transponders**						
	The BOS shall support comprehensive license plate, vehicle information and transponder management functionality.						
365	The Contractor shall provide the capability to manage a drop-down list of vehicle attributes, including but not limited to: · vehicle manufacturer; · vehicle make; · vehicle model; · vehicle year; · vehicle color; · Clean Air decal number (not a drop-down) and · transponder exception specifying that the make and model requires an externally mounted transponder or special mounting locations for windshield transponders.						
366	The Contractor shall provide the capability to add multiple license plates and associated vehicle information to an account.						
367	The Contractor shall Update and maintain the BOS's list of vehicle manufacturers and models as necessary to keep the list current.						
368	The Contractor shall provide the capability to track the time period that a license plate is active on an account. This includes the start date and time and the end date and time. This is called the "Active Period". In most circumstances the customer would add the vehicle to their account with no end date but if it was a rental car it would have an end date/time.						
369	The Contractor shall provide the capability to add a license plate number to an account with a back dated start date and time. The allowable back date period shall be Configurable.						

Volume II BOS Technology and Functionality

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370	The Contractor shall provide the capability when adding a new license plate number to an account to automatically identify other account(s) associated with that license plate.						
371	The Contractor shall provide the capability to identify that the vehicle(s) will be only on the account temporarily based on information provided by the customer, for example, a rental car, loaner from the car dealer or an out of town guest, and to prompt the user to enter a start date and time and an end date and time.						
372	The Contractor shall provide the capability for vehicles identified as temporary to be added to the account even if the license plate number is already on a rental car account.						
373	The Contractor shall provide the capability to associate information with a license plate, including but not limited to:						
	· license Plate Type;						
	· license plate Jurisdiction;						
	· vehicle is a Clean Air Vehicle (CAV);						
	· vehicles CAV eligibility has expired;						
	· Clean Air Vehicle decal number;						
	· vehicle has a Disabled Persons license plate;						
	· vehicle has a Disable Veterans license plate'						
	· vehicle make;						
	· vehicle model;						
	· vehicle year;						
	· vehicle color;						
	· transponder;						
	· transponder type;						
	· transponder friendly name (chosen by the customer);						
	· ROV;						
	· ROV address;						
	· ROV Lookup date and						
	· indication the license plate is a temporary license plate.						
374	The Contractor shall provide the capability to require or not require a one-to-one relationship between sticker transponders and vehicle in accordance with Business Rules.						
375	The Contractor shall provide the ability to make the one-to-one correlation between the sticker transponder and vehicle after a Configurable number of transactions/trips with the same transponder and vehicle.						
376	The Contractor shall provide the capability, if the one-to-one relationship is required, allow for Authorized Users to override the Requirement as necessary, for example when a transponder is replaced.						
377	The Contractor shall provide the capability for a many-to-one relationship between transponder and vehicle based on transponder type, account type and in accordance with Business Rules.						
378	The Contractor shall provide the capability to record the history of ROV information associated with each license plate.						
379	The Contractor shall provide the capability to search for license plate history and effective date ranges across multiple accounts.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
380	The Contractor shall provide the capability to transfer vehicle(s) and associated license plate(s) between accounts while maintaining the associated vehicle transaction/trip history on the original account.						
381	The Contractor shall provide the capability to add license plates from all 50 states, DC, U.S. Government, Canada and Mexico.						
382	The Contractor shall provide the capability to record transponder delivery method, such as in person via the WIC or by mail.						
383	The Contractor shall provide the capability to record transponder issue date and time.						
384	The Contractor shall provide the capability to record and associate a payment for every transponder sold.						
385	The Contractor shall provide the capability to track customer transponder requests.						
386	The Contractor shall provide the capability to age Fulfillment requests and automatically send an Alert when a Fulfillment request has exceeded a Configurable amount of time.						
387	The Contractor shall provide the capability for the Authorized User to override the BOS selected transponder mount type, such as windshield or head lamp.						
388	The Contractor shall provide the capability for the Authorized User to override the customer selected transponder mount type, such as windshield or head lamp.						
389	The Contractor shall provide the capability to read a transponder number (using a barcode reader) and automatically associate it to an account instead of requiring the transponder number to be typed in.						
390	The Contractor shall provide the capability for Authorized Users to enter multiple vehicles in a tabular format.						
391	The Contractor shall provide the capability to upload a file with vehicle information for the entry of a large number of vehicles.						
392	The Contractor shall provide the capability for transferring transponders between accounts while maintaining the associated transponder transaction/trip history on the original account.						
393	The Contractor shall provide the capability to monitor for excessive image-based tolls at the account level and at the vehicle or license plate level.						
1.4.3.	**Account Plans**						
	The Authority offers Account Plans which offer benefits to customers who meet the qualifying criteria. These plans may be assigned at the individual transponder, or account level and each may have only one Account Plan assigned to it. These Account Plans are Configured in the BOS and the BOS shall have the flexibility to apply the relevant Account Plan(s) based on the Business Rules.						
	The Authority also allows for non-revenue passage for qualified vehicles. The Account Plan functionality shall be used to support this program by applying a Configurable percent discount to specific transactions/trips on specific facilities in accordance with the Business Rules.						
	The Account Plans currently offered by the Authority are listed below. The Contractor should expect that plans may be added, deleted or modified over the course of the Operations and Maintenance Phase.						
	· Convenience Plan –a one-time lifetime fee (Configurable);						
	· Standard Plan – monthly fee and discount after a Configurable # of transactions/trips and up to a Configurable maximum per month;						
	· Special Access Plan – provides free or discounted toll rates for three or more riders per vehicle, motorcycles, eligible CAVs, vehicles with disabled veteran or disabled person license plate, and						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance Y - Yes N - No*	Status B-Base Product M-Base Modified D-New Development NP-Not Provided*	If Applicable Customer Name and Location	Source O-Offeror S-Sub T-Third Party NA-Not Applicable	If Applicable Subcontractor Name and/or 3rd Party Product/Vendor	Comments *Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· Non-revenue Plan – which provides a Configurable discount (up to 100 percent) one or more of the Authority's facilities.						
394	The Contractor shall provide the capability to assign Account Plans at the account level.						
395	The Contractor shall provide the capability to assign Account Plans at the transponder level.						
396	The Contractor shall provide the capability to assign Account Plans at the license plate level.						
397	Prevent the transfer of Account Plans when the transponder or the license plate is moved to another account in accordance with the Business Rules.						
398	The Contractor shall provide the capability to enroll customers in Account Plans.						
399	The Contractor shall provide the capability for configuring and offering various Account Plans with a combination of features, including but not limited to: · percentage discount; · dollar amount discount or transaction count discount with a maximum amount; · time duration, such as an Account Plan may only be available for a limited time or may require renewal every year; · method of calculating the discount, such as a transaction-level discount where members get a 50 percent discount on every qualifying toll transaction or a rebate credit on following month based on the frequency of trips within a period of time; · monthly maximum discount based on total dollar amount or number of transactions/trips; · use of Posting Date or Transaction Date to qualify transactions/trips for a rebate; · specific criteria for qualification; · a cost to join the Account Plan and · proof of eligibility, such as a vehicle registration as proof of registration criteria with ability for customer to upload electronically.						
400	The Contractor shall provide the capability to track toll transactions/trips in frequency transponder-based discounts.						
401	The Contractor shall provide the capability to apply rebates or toll credits as lump-sum account level credits.						
402	The Contractor shall provide the capability to apply and reverse discounts to a range of toll transactions/trips on an account.						
403	The Contractor shall provide the capability to clearly indicate which discount was applied to any given transaction/trip.						
404	The Contractor shall provide the capability to configure a non-revenue plan (up to 100 percent discount) to a transponder or license plate on all or specific tolling locations for a specific Toll Facility.						
405	The Contractor shall provide the capability to associate discount eligibility documentation (such as, a utility bill as proof of residence) to a transponder or vehicle.						
1.4.3.1.	Special Access Plans						
406	The Contractor shall provide multiple Special Access Plans providing free or discounted toll rates (subject to change at the Authority's discretion both during the Implementation Phase and Operations and Maintenance Phase), including but not limited to: · always HOV eligible when in I-405 Express Lanes (designated carpool); · motorcycles; · eligible CAVs; · vehicles with disabled veteran license plate and						

Volume II BOS Technology and Functionality

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	· vehicles with disabled person license plate.						
407	With the exception of the occupancy which is validated by the ETTM System and reflected in the discounted toll rate assigned to the transaction/trip by the ETTM System, the Contractor shall provide the capability to validate all vehicles to ensure they meet the requirements for a Special Access Plan, This validation shall include:						
	· attach documentation provided by the customer as proof of meeting the requirements for a Special Access Plan and queue for manual verification;						
	· manually review the image of the flagged vehicle license plate noting the transponder used in the special access vehicle						
	· assign the respective code to the transponder to indicate the respective discount (clean air vehicle, motorcycle, etc);						
	· upon successfully matching the transponder to the license plate, charge the appropriate discount to all transactions/trips by that transponder including the first trip;						
	· if the transaction/trip including that license plate does not have an associated transponder read, the discounted rate will be charged but the customer will be contacted to rectify the transponder situation and						
	· for plates and transponders that are successfully matched include the appropriate code in the CTOC file.						
1.4.3.2.	**Promotions**						
	The BOS shall be able to manage promotions, promotion codes and credits. Balances related to promotions are tracked individually by promotion and separately from the account balance. Only eligible transactions can be deducted from promotional balances. Promotional balances are not refunded and can only be applied to tolls on the Authority's Toll Facility.						
408	The Contractor shall provide the capability to offer a Configurable number of weeks-worth of free travel on the Authority's Toll Facility for new accounts.						
409	The Contractor shall provide the capability to account and track promotions balances individually (for example, by promotion code) separately from the account balance.						
410	The Contractor shall provide the capability to display the promotion balances and associated expiration date of the promotion balances so that the CSRs and customers can see the various promotion balances separately from the account's cash balance.						
411	The Contractor shall provide the capability (Configurable) to specify what types of transactions/trips are eligible to be deducted from promotional balances.						
412	The Contractor shall provide the capability to track multiple promotions within an account and correctly determine which account or promotion balance should be depleted first (for example, by type of promotion, by the earliest issue or expiration end date or maximum discount yielded).						
413	The Contractor shall provide the capability to prevent promotional balances from being refunded to customers in the event of account closure or specific customer request.						
414	The Contractor shall provide the capability to credit toll payments back to the promotion balance if toll transactions/trips are reversed or adjusted.						
415	The Contractor shall provide the capability to set an expiration date for promotions.						
	The Contractor shall provide the capability to offer promotions by Authority or Toll Facility with a combination of features and parameters, including but not limited to:						
	· assignment of a promotion code to a company or event;						

Volume II BOS Technology and Functionality

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416	· Configurable period of time (promotion start date and duration or end date); · Authority offering the promotion; · Toll Facility(ies) where the promotion can be used; · discount percentage per transaction/trip; · discount amount per transaction/trip; · eligibility (new accounts, existing accounts or both; existing accounts opened for more than an amount of time (Configurable)); · source (Self-Service Website or with a CSR); · source advertising channel ("where did you hear about it?"); · entry into a raffle/sweepstakes and · credit to the account.						
417	The Contractor shall provide the capability to setup "refer-a-friend" promotion codes where both the referred (new) customer and the customer who referred the new customer enjoy the benefits of the promotion.						
418	The Contractor shall provide the capability to apply rebates to accounts sponsored by a third party (such as a shopping mall).						
419	The Contractor shall provide the capability to periodically (monthly) invoice the third-party sponsor for all rebates submitted and applied to accounts.						
420	The Contractor shall provide the capability to expense promotional credits as used to the Authority where the credit was applied reducing that Authority's toll revenue.						
1.4.4.	**Fees, Penalties and Transactions**						
	Penalties and fees are types of Financial Transactions that are assessed in addition to the toll amount or toll charge or in relation the customer's account management. Penalties and fees can be assessed at the account level, Notification level or transaction level. At the account level, a returned payment fee or a Credit Card decline fee might be assessed in the event a check was returned unpaid by the customer's bank or a Credit Card payment was declined. At the Notification level, a monthly statement fee might be assessed when a statement is mailed to the customer. At the transaction level, penalties are assessed when a transaction/trip is not paid and it becomes a Violation. Fees and penalties should be associated with the lowest possible level. Those fees related to specific transactions/trips should be associated with those transactions/trips. Fees and penalties related to Notification should be associated with that Notification, and all other fees and penalties should be associated with the account stments to that transaction would be Posted to the current Revenue Day. The BOS shall have the capability to report on both the unadjusted transaction amount and the adjusted transaction amount based on transaction plaza and lane, hence the reason adjustments to transactions/trips shall be tied to but not change the original transaction. ow゛ ⹁嫩聚明Ā⹂，「Z⸍⹂⹀叐⹁:1āḏ⹂Ả À振Ā⹂ù狐Ā˅⹂17ā袄⹂Ả À瘊ĀḎZ⸍剝ㅼÀ瘊Ā⹂c⹍⹁嫩聚明Ā⹂row⹂0.3Ê⹂捒⹂Ā∇⹂12ā⹂ć↲⹂sāӾ⹂Z⸍Ã∇⹂A12ā⹂v⹂=⹂11⹂⹂v⹃À振Ā⹂row゛ ⹁嫩聚明Ā⹂，「Z⸍⹂⹀叐⹁:1āḏ⹂Z⸍Ả À振Ā						
421	The Contractor shall provide the capability to apply fees and penalties (automatically and manually) to accounts.						
422	The Contractor shall provide the capability to apply fees and penalties (currently penalty is assessed to the Violation only), including but not limited to: · at the account level; · at the transponder level; · at the license plate level;						

Volume II BOS Technology and Functionality

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	· at the Notification level and						
	· at the transaction level.						
423	The Contractor shall provide the capability to define and charge account-related fees and penalties based on a set of Configurable parameters, including but not limited to:						
	· hub processing fee (the Authority acting as a hub for other entities);						
	· roaming fee (the Authority acting as a hub for other entities);						
	· account fee;						
	· administrative fee;						
	· Interoperable customer transaction fee;						
	· returned payment fee – Insufficient Funds;						
	· Credit Card decline fee;						
	· ACH decline fee;						
	· transponder purchase fee;						
	· Excessive I-Toll (Image-Based Toll) fee;						
	· invoicing fee;						
	· statement fee, depending on method of delivery;						
	· late fee;						
	· delinquent account fee;						
	· account re-activation fee;						
	· Violation penalty;						
	· delinquent Violation penalty;						
	· collection fee;						
	· account deactivation fee;						
	· Account Plan membership fee;						
	· Registration Hold fee and						
	· balance below Insufficient Balance Threshold fee.						
424	The Contractor shall provide the capability to maintain the parameters (Configurable) related to fees and penalties.						
425	The Contractor shall provide the capability to create new fees and penalties.						
426	The Contractor shall provide the capability to manually apply custom fees and penalties to accounts.						
427	The Contractor shall provide the capability for the assessment of fees based on account activities, for all accounts or specific account type(s).						
428	The Contractor shall provide the capability to notify the customer via the channel(s) defined within the Business Rules, Operations Plan and SOPs when a fee or penalty is assessed.						
429	The Contractor shall provide the capability to schedule a start and end date/time when a fee or penalty change will go into effect/conclude. For example, the statement fee is $2.00 until July 31, 2024, after which it will increase to $3.00.						
1.4.5.	Registered Account Replenishment						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	Registered accounts are established with a valid replenishment method for prepaid balances to be restored as toll and fee transactions deplete the prepaid balance. Account replenishment options are Credit Card, cash, check, ACH and money order. Replenishment by Credit Card can be set up to be automatic (auto-replenishment). For auto-replenishment, the BOS determines the replenishment timing and minimum amount based on parameters (Configurable). Replenishment by cash, check, ACH or money order requires the customer to replenish the account manually by mailing a check or visiting a WIC. Customers without an auto-replenishment method also may make a one-time payment by Credit Card or ACH.						
430	The Contractor shall provide the capability for one or more auto-replenishment methods within an account for all electronic payment methods.						
431	The Contractor shall provide separate replenishment parameters (Configurable) for all account types, including but not limited to:						
	· fixed replenishment amount;						
	· replenishment threshold based on a percentage of the replenishment amount;						
	· replenishment thresholds based on the number of transponders on the account;						
	· replenishment amount based on the number of transponders on the account;						
	· replenishment amounts calculated based on average use for a period (Configurable) of time or a fixed amount, whichever is greater. For example, average use over the prior (3) month period as compared to $30);						
	· number of replenishment failures before next method is attempted and						
	· number of declines before a replenishment method is suspended based on appropriate reject reasons.						
432	The Contractor shall provide the capability for Authorized Users to identify individual accounts that are not subjected to auto-replenishment recalculation.						
433	The Contractor shall provide the capability for account replenishment options based on Insufficient Balance Thresholds.						
434	The Contractor shall provide the capability for automatic account replenishments via Credit Card and ACH.						
435	The Contractor shall provide the capability for a hierarchical usage sequence for auto-replenishment methods for an account, such as primary method ACH and secondary method Visa Credit Card #1.						
436	The Contractor shall provide for a stepped approach to failed auto-replenishments where an attempt is made to collect from the primary replenishment method a number of times (Configurable), followed by the secondary method and continuing until attempts have been made to replenish from all replenishment methods.						
437	The Contractor shall provide the capability for automatically suspending an auto-replenishment method because of a number of declines (Configurable) and decline reason code. For example, if the reason for a decline is a closed account, the number of retries would be zero.						
438	The Contractor shall provide the capability for automatically removing the suspension of an auto-replenishment method when there is an update to the Credit Card number, expiration date or any other related information.						
439	The Contractor shall provide the ability to automatically update Credit Card expiration dates through the Merchant Service Provider.						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
440	The Contractor shall provide the capability to check if the Credit Card or ACH information is associated with another account when setting up an auto-replenishment method. The Contractor shall provide an Alert to the CSR of such condition and options to cancel or continue.						
441	The Contractor shall provide the capability for an Alert to be sent to the PMMS of a failed auto-replenishment event because of BOS or Interface errors.						
442	The Contractor shall provide the capability for the manual replenishing of accounts, regardless of payment method, on both a one-time and ongoing basis.						
443	The Contractor shall provide the capability to check account balances each time a transaction is Posted to an account, as well as automatically submit an auto-replenishment attempt using the primary valid replenishment method when replenishment criteria is met.						
1.4.6.	**Adjustments and Reversals**						
	Adjustments and reversals are routinely processed in the BOS and are applied to any type of toll or Financial Transaction. Examples of such adjustments include correcting a toll rate, which would result in a change in toll, accepting a customer dispute for an incorrect charge, which would result in the reversal of the toll, or waiving or reducing a Violation penalty. Adjustments and reversals can be processed for single transactions, such as in the examples above, or in bulk. An example of a bulk adjustment is reversing all charges for a specific Toll Facility during a specific time period, as would be the case for an accident in the general-purpose lanes. Every adjustment and reversal requires the entry of a reason code identifying the reason for the adjustment or reversal. Adjustments and reversals must be associated with the original transaction, but must not change the original transaction. The original transaction must be preserved in the BOS once the transaction has been Posted to the account. Any adjustments to that transaction would be Posted to the current Revenue Day. The BOS shall have the capability to report on both the unadjusted transaction amount and the adjusted transaction amount based on transaction plaza and lane, hence the reason adjustments to transactions/trips shall be tied to but not change the original transaction.						
444	The Contractor shall provide the capability to make corrections, adjustments and reversals to transactions/trips while preserving the original transaction, including the original Transaction Date and amount. Any corrections, adjustments or reversals shall be tied to, but not change, the original transaction/trip.						
445	The Contractor shall provide the capability to properly disposition transactions/trips that are adjusted and/or reversed and are already in a Violation Notice stage.						
446	All corrections, adjustments and reversals shall be Posted to the current Revenue Date so as not to affect prior closed Revenue Dates.						
447	The Contractor shall provide the capability for full reversals of any type of transaction with a reason code (Configurable), preserving complete history.						
448	The Contractor shall provide the capability for partial reversals of any type of transaction with a reason code (Configurable), preserving complete history.						
449	The Contractor shall provide the capability to require that a reason code be entered for every adjustment and reversal.						
450	The Contractor shall provide the capability for multiple corrections, adjustments and/or reversals to be made on a single transaction/trip while preventing the sum of such corrections, adjustments and/or reversals to exceed the amount of the original transaction/trip.						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
451	The Contractor shall provide the capability to establish Courtesy Credit amounts (Configurable) by Courtesy Credit type. Courtesy Credits shall be used for toll charges only on the Authority's Toll Facility and are not refundable and are charged as an expense when issued to customers.						
452	The Contractor shall provide the capability to apply Courtesy Credits to accounts and require the entry of comments and reason assignment from allowable reason. The reason selected will determine how the expense is charged (transaction level or account level (50/50).						
453	The Contractor shall provide the capability to Authorized Users to configure all relevant parameters related to establishing role-based dollar amount thresholds for transactions that affect Authority's revenue, including but not limited to: · adjustments, · debits; · credits and · reversals.						
454	The Contractor shall provide the capability for Authorized Users to Post adjustments, credits and reversals up to their role-based threshold amount (Configurable).						
455	The Contractor shall provide the capability to establish a Case when Authorized Users are unable to process a transaction as a result of reaching their role-based adjustment, credit or reversal limits (Configurable) or not authorized for the particular action.						
456	The Contractor shall provide the capability to establish a Case for a higher-level of approval when Authorized Users are unable to process a transaction as a result of reaching their role-based adjustment, credit or reversal limits (Configurable). The Authorized User who Approved the transaction shall be recorded and associated with the transaction.						
457	The Contractor shall provide detailed tracking of individual adjustments, credits and/or reversals and categorize each separately.						
458	The Contractor shall provide a trip and/or transaction search and adjustment screen(s) where Authorized Users can enter the selection criteria, retrieve the transactions/trips and make bulk adjustments or reversals. This capability shall allow the selection of groups of transactions/trips to which the correction will apply and adjustment comments entered for the affected transactions/trips. The Authorized User shall be allowed to select/deselect specific transactions/trips within the group. For example, the Authority may require all trips/transactions that include a certain toll point between 2 a.m. and 5 a.m. on a specific date to be fully reversed or all transactions at that toll point to be charged $1.00.						
459	The Contractor shall provide the capability to process adjustments and reversals that affect Interoperable Agency customers in accordance with the applicable Interoperable specifications and include these transactions/trips in the reconciliation reporting based on adjustment Posting Date (not original Transaction Date).						
460	The Contractor shall provide the capability to transfer transactions/trips (financial or tolls) to another account. For example, a check Posted incorrectly to an account gets reversed and re-Posted to the appropriate account.						
461	The Contractor shall provide the capability to adjust the eligibility for discounts and promotions when transactions are corrected, adjusted or reversed.						
462	The Contractor shall provide the capability to adjust discounts and promotions when transactions are adjusted, corrected or reversed.						

Volume II BOS Technology and Functionality

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1.4.7.	**Account Statuses**						
	Account statuses determine how transactions/trips are processed and associated to accounts.						
463	The Contractor shall provide account statuses, including but not limited to: · active (accounts in good standing); · low balance (account below replenishment threshold – Credit Card has declined or cash account below threshold); · delinquent (Registered accounts only – accounts that fall below the Insufficient Balance Threshold); · collection (account information has been sent to the Collection Agencies); · pending close (Registered accounts only – accounts scheduled to close remain in this status for a Configurable number of days to allow for final transactions/trips to clear) and · closed (closed accounts).						
464	The Contractor shall provide the capability to automatically, according to Business Rules, transition between account statuses.						
465	The Contractor shall provide the capability to set a different period of time (Configurable) before accounts automatically transition from pending close to closed based on the reason the account is to be closed.						
466	The Contractor shall provide capability for customer Notification (Configurable) when the account status changes.						
467	The Contractor shall provide the capability to use the account's status in determining whether or not to Post a transaction/trip to the account. For example, only Post transactions to an account in active or pending close statuses.						
468	The Contractor shall provide the capability to automatically set an account to delinquent status once the account balance reaches below the Insufficient Balance Threshold or a Configurable number of days from the low balance notification.						
469	The Contractor shall provide the capability to automatically set accounts to pending close status upon a request to close the account and take automatic actions, including but not limited to: · deactivate plates and vehicles on the account; · deactivate transponders on the account and · prorating of prepaid discount fees.						
470	The Contractor shall provide the capability to automatically age an account from pending close to closed status after a period of time (Configurable) and to take automatic actions, including but not limited to: · removing payment methods on the account; · assessing the appropriate fees; · expiring promotion credits; · processing the refund amount bringing the balance to zero and · processing the refund automatically based on criteria or approval.						
471	The Contractor shall provide the capability for capturing multiple levels of reason codes for an account closing at "pending close" time.						
472	The Contractor shall provide the capability for the reactivation (back to an active status) of an account in the pending close and closed statuses.						
473	The Contractor shall provide the capability to prevent transactions from Posting to closed accounts.						
474	The Contractor shall provide the capability for Authorized Users to add comments to closed accounts.						

Volume II BOS Technology and Functionality

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1.4.8.	**Account Flags**						
	Account Flags are used to identify meaningful conditions and information about the account, its transactions/trips, vehicles, transponders and payment methods which are used to trigger a Notification or other actions and for reporting. During design, the Contractor shall describe the ways in which these types of information shall be identified to the customers and Authorized Users.						
475	The Contractor shall provide the capability to set and maintain Flags (Configurable) that can be displayed on accounts for issues related to the account, a license plate, or transponder on the account.						
476	The Contractor shall provide the capability to automatically set Flags on account based on conditions and events, including but not limited to: · bad address; · bad email address/no email address; · bad phone number (for both calls and texts); · account closed in Collections; · account was not completely opened; · account has debt which was written-off; · account has debt which was written-off in Collections; · account has an Investigative Review in process; · account has an open refund request; · no active vehicles; · no active transponder (applicable only to FasTrak accounts); · transponder in certain status, for example, lost or stolen (not applicable to Unregistered accounts); · excessive toll at license plate level (not applicable to Unregistered accounts); · temporary license plate; · account is in pending to close status (not applicable to Unregistered accounts); · account has an open Case; · customer participates in a non-revenue Account Plan (not applicable to Unregistered accounts); · customer enrolled in Account Plan (s) (not applicable to Unregistered accounts); · Special Access Plan on the account or on a vehicle on the account (not applicable to Unregistered accounts); · unresolved returned check; · unresolved Credit Card decline on the account; · at least one Credit Card marked by the BOS as bad (not applicable to Unregistered accounts); · at least one Credit Card is expired or is expiring within a number (Configurable) of days (not applicable to Unregistered accounts); · account has at least one suspended auto-replenishment method (not applicable to Unregistered accounts; · account has unpaid Violation(s) not applicable to Unregistered accounts); · account has debt in Collections; · one or more vehicles on the account has been placed on Registration Hold; · at least one license plate on the account has an unpaid Violation(s); · an Administrative Review has been scheduled for the account; · at least one Violation associated with the account has a Civil Judgement and · account was subject to Escheatment.						

Volume II BOS Technology and Functionality

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477	The Contractor shall provide the capability for Authorized Users to manually set account Flags, including but not limited to: · high priority comment; · bad phone number (for both calls and texts); · bad address; · do not accept checks for payment; · inactive account; · account needs to be referred to a supervisor; · account holder is deceased and · CSC has been informed of account holder bankruptcy.						
478	The Contractor shall provide the capability to display all active Flags on an account upon accessing the account information.						
479	The Contractor shall provide the capability to automatically clear Flags based on criteria.						
480	The Contractor shall provide the capability for Authorized Users to manually clear Flags no longer applicable to an account.						
1.4.9.	**Transponders**						
	There are different types of transponders, with each having a distinct purpose. The Authority may issue the types of transponders described below.						
	· Interior sticker transponders (non-switchable) – are permanently affixed on the inside of a vehicle's windshield. These transponders cannot be moved between vehicles.						
	· Breakable interior sticker transponders (non-switchable) – are permanently affixed on the inside of a vehicle's windshield. These transponders cannot be moved between vehicles because they are designed to break if removed after they have been applied to a surface.						
	· Three-position hard-case transponders (switchable) – are mounted on the inside of a vehicle's windshield with mounting strips that allow a customer to switch between three Occupancy Setting modes.						
	· Exterior headlight transponders (non-switchable) – are clear stickers which are permanently affixed to the motorcycle's or vehicle's headlight.						
481	The Contractor shall provide for transponder statuses (Configurable), including but not limited to: · inactive; · valid and · invalid.						
482	The Contractor shall provide the capability to manually change transponder statuses, such as when a customer calls to report a transponder has been stolen.						
483	The Contractor shall provide the capability to automatically change transponder statuses. For example, when a transponder that is in inventory with an inactive status is subsequently added to an account, the status changes to active.						
484	The Contractor shall provide the capability to track a transponder's current status and status history.						
485	The Contractor shall provide the capability to automatically change the transponder status from valid to invalid for all transponders on an account when the account balance is equal to or below a balance (Configurable).						
486	The Contractor shall provide the capability to automatically change the transponder status from invalid to valid for all transponders on an account when the account balance is above a balance (Configurable).						

Volume II BOS Technology and Functionality

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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
487	The Contractor shall notify the customer when the transponder changes status.						
1.4.10.	**Incoming Customer Communication**						
488	The Contractor shall provide the capability to track, store and electronically view all incoming customer contact-related information on all account types.						
489	The Contractor shall provide the capability to associate incoming customer communication with the account for all communication channels in accordance with the Security Standards, including but not limited to: · phone; · email (including attachments); · Self-Service Website; · Self-Service Mobile Application (Phase II and optional); · chat; · text messaging; · fax; · mail and · in-person contact.						
490	The Contractor shall provide the capability to track and account for all incoming customer communication.						
491	The Contractor shall provide the capability for a CSR to upload a file and have it associated with an account, including but not limited to: · an audio file from a recorded conversation; · a PDF file, such as, an outbound email or mail piece and · an image file, such as, a scanned document emailed by a customer.						
492	The Contractor shall provide the capability to view data files or play audio files associated with accounts.						
493	The Contractor shall provide the capability to scan incoming print communications and save the resulting image in the BOS. The Contractor's solution shall be robust, enterprise-level and integrated with the BOS and with capabilities including but not limited to: · bulk scanning; · indexing, sorting, collating; · bulk demographic data entry and · automatic assignment to accounts.						
	The Contractor shall provide the capability to categorize all incoming communication via drop-down menu options (Configurable), including but not limited to: · application; · account close request; · account information change; · administrative review request; · Affidavit of Non-Liability; · bankruptcy document; · Clean Air Vehicle proof; · complaint; · contest notice;						

Volume II BOS Technology and Functionality

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494	· death certificate;						
	· dispute;						
	· divorce decree;						
	· financial hardship;						
	· general correspondence/inquiry;						
	· lease agreement;						
	· marriage license;						
	· other miscellaneous;						
	· payment;						
	· police report;						
	· proof that the vehicle was rental or leased vehicle;						
	· proof that the vehicle was sold/stolen;						
	· rental car agreement;						
	· returned mail – with forwarding address;						
	· returned mail – without forwarding address;						
	· sale documentation;						
	· transponder request and						
	· vehicle registration.						
495	The Contractor shall provide the capability to search for all incoming communication.						
496	The Contractor shall provide the capability to create a Case for each incoming communication piece scanned into the BOS. Each scanned communications piece will either initiate a new Case or be associated with an existing one, as determined by an Authorized User.						
497	Create a customer contact record for all automated customer contacts. For example, if the customer provides a new address and phone number, the BOS shall automatically create a contact record that says customer contacted the BOS via Self-Service Website to update address and cell phone number.						
498	The Contractor shall provide the capability to track contacts based on channel or contact reasons.						
499	The Contractor shall provide the capability to set and maintain customer contact attributes, including but not limited to:						
	· channels;						
	· date and time;						
	· actions;						
	· contact reasons;						
	· comments and						
	· comment category.						
1.5.	**Image Transfer and Transaction/Trip Processing**						
1.5.1.	**Transaction/Trip Transfer**						
	The ETTM System captures transactions and images for Transponder-Based Transactions/Trips and Image-Based Transactions/Trips and handles automatic and manual image review. The transaction/trip is created by the ETTM System. The ETTM System sends the full formed trip, associated transactions, image(s) and license plate data (if needed) to the BOS.						
500	The Contractor shall provide the capability to accept and store images related to transactions/trips, Violations, I-Tolls from the ETTM System in accordance with ICD.						

Volume II BOS Technology and Functionality

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501	The Contractor shall provide the capability for customers and Authorized Users to retrieve, view and print images related to transactions/trips, Violations and I-Tolls.						
502	The Contractor shall provide the capability to associate images with the related transaction/trip in the BOS based on information provided by the ETTM System.						
503	The Contractor shall provide the capability to transmit the status of image acquisition errors to the ETTM System Contractor and the PMMS.						
504	The Contractor shall provide the capability to categorize failed images into error codes and exception codes for reporting purposes.						
505	Reconcile and report transaction file discrepancies, errors and rejects by reason.						
506	The Contractor shall provide the capability to send and receive all data and files between the ETTM System and the BOS in compliance with the ETTM System Contractor's ICDs, and any updates made to them must meet the Requirements of the Statement of Work and Requirements.						
507	The Contractor shall provide the capability to support a list of ETTM Systems with which the BOS shall Interface to receive Transponder-Based and Image-Based Transactions. All received transactions/trips shall be verified against the list of ETTM Systems.						
508	The Contractor shall provide the capability to receive and maintain a listing of each Toll Facility's tolling points and lanes (including designation of direction) from which the BOS shall receive transactions/trips. All transactions/trips received shall be verified against the Toll Zone and lane (including designation of direction) listing for each Toll Facility.						
509	The Contractor shall provide the capability to receive and process Transponder-Based and Image-Based Transactions/Trips from each ETTM System.						
510	The Contractor shall provide the capability to validate the Transponder-Based Transactions/Trips and Image-Based Transactions/Trips transmitted by the ETTM System meet the Requirements of the ICD.						
511	The Contractor shall provide the capability to validate the transactions/trips to ensure compliance to Interface Requirements and established parameters for each Toll Facility and identify errors and exceptions.						
512	The Contractor shall provide the capability to accept, but not Post to accounts or process further Transponder-Based and Image-Based Transactions/Trips that have failed the verifications and cannot be processed further as submitted for collecting tolls at the BOS. Such rejected transactions/trips include but are not limited to: · transactions/trips are older than the established parameters; · transactions/trips do not belong to Toll Facilities on the Toll Facilities list; · transactions/trips do not belong to a Toll Zone on the Toll Facility list; · internal transponder identification number is not valid; · transaction/trip is a duplicate of a Posted Transponder-Based Transaction/Trip on the account; · transaction/trip is a duplicate of a Posted I-Toll Transaction/Trip on the account; · transaction/trip is a duplicate of a Violation transaction/trip on the account; · transaction/trip was rejected by the Interoperable/CTOC Agency and · transaction/trip is not in compliance with the ICD.						
	The Contractor shall provide the capability to identify duplicate transaction/trip verification (Configurable) for each Toll Facility, based on various criteria, including but not limited to: · Toll Facility; · Toll Zone;						

Volume II BOS Technology and Functionality

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513	· direction of travel; · lane; · transaction/trip time differential; · transaction/trip type: · account type; · license plate number and · transponder number.						
514	The Contractor shall provide the capability to reconcile transmitted transaction/trip counts and errors by date sent to the BOS and Transaction/Trip Date and Time.						
515	The Contractor shall provide the capability to categorize failed transactions/trips into error codes and exception codes for reporting purposes.						
516	The Contractor shall provide the capability to accept and process corrected transactions/trips that have been previously rejected.						
1.5.2.	**Transmission Error Identification**						
517	The Contractor shall provide the capability to send status of transaction/trip transmission and/or verification errors to the PMMS.						
518	The Contractor shall provide the capability to identify when the actual number of Transponder-Based Transactions/Trips and Image-Based Transactions/Trips received from an ETTM System is a percentage (Configurable) below the expected number for each Toll Zone and lane based on historical volumes and send an Operational Alert Notification to the PMMS.						
519	The Contractor shall provide the capability to identify when percentage (Configurable) of trips sent as image-based has increased compared to historical data and send an Operational Alert Notification to the PMMS.						
520	The Contractor shall provide the capability to identify when the actual number of images acquired is a percentage (Configurable) below the expected amount for each Toll Zone and lane and send an Operational Alert Notification to the PMMS.						
521	The Contractor shall provide the capability to create transmission failure Alerts based on parameters, including but not limited to missing plazas and delayed transactions by Toll Facility and transaction/trip type.						
522	The Contractor shall provide the capability to identify if there are missing images from a specific Toll Zone (Configurable number over a Configurable period of time) and send an Operational Alert Notification to the PMMS.						
523	The Contractor shall provide the capability (Configurable) to retry the acquisition of images for transactions/trips initially identified as not having images.						
524	The Contractor shall provide the capability to match the acquired image with its transaction/trip.						
525	The Contractor shall provide the capability to identify transactions/trips for which images were expected but are missing and generate an Operational Alert Notification to the PMMS if images are missing for more than a number of transactions/trips (Configurable) and after an amount (Configurable).						
526	The Contractor shall provide the capability to transmit the status of image acquisition errors to Authorized Users.						
527	The Contractor shall provide the capability to categorize failed images into error codes and exception codes for reporting purposes.						

Volume II BOS Technology and Functionality

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1.5.3.	**Interoperability**						
	The Authority is already Interoperable with the other toll agencies in California. During the Implementation Phase and Operations and Maintenance Phase, it is likely that Interoperability will expand to include all U.S. states and regions. The Authority intends to participate in regional and national Interoperability.						
	The BOS and the Interoperable/CTOC Agencies shall exchange files in accordance with the most current ICDs.						
528	Provide the capability to create/transmit and receive/process all Interoperable/CTOC files in accordance with the latest WRTO/CTOC ICD. See Attachment A: WRTO and CTOC Technical Specification for Interagency Electronic Data Interchange for current ICD.						
529	Provide the capability to create/transmit and receive/process all Interoperable/CTOC files in accordance with the Authority's Business Rules. The Contractor shall support Interoperable agencies that will be on different versions of the WRTO/CTOC ICD throughout the Term of the Agreement.						
1.5.3.1.	**OCTA Customers on Interoperable Agency Facilities**						
	Customers who have an Active Registered account may use the Toll Facilities of Interoperable/CTOC Agencies. Transactions/trips generated on the Interoperable facilities will be transmitted to the BOS for processing and Posting to accounts. Interoperable/CTOC Agencies will receive disposition for each submitted transaction/trip in accordance with their individual Interoperable/CTOC Agency ICD. Images will not be provided by Interoperable Agencies. The BOS shall meet the following Requirements related to Transponder-Based Transactions/Trips and Image-Based Transactions/Trips submitted by Interoperable/CTOC Agencies.						
530	The Contractor shall provide the capability to create, transmit and exchange all data and files between the BOS and Interoperable/CTOC Agencies in compliance with the existing ICDs and any updates made to them to meet the Requirements of the Statement of Work.						
531	The Contractor shall provide the capability to receive and process Transponder-Based Transactions/Trips and Image-Based Transactions/Trips from the Interoperable/CTOC Agencies.						
532	The Contractor shall provide the capability to validate that the Transponder-Based Transactions and Image-Based Transactions/Trips transmitted by the Interoperable/CTOC Agencies meet the criteria for qualification, including but not limited to:						
	· Transponder-Based Transactions/Trips and Image-Based Transactions/Trips transmitted by the Interoperable/CTOC Agencies are Posted when the associated account and transponder were active;						
	· Transponder-Based Transactions/Trips and Image-Based Transactions/Trips meet the Requirements of the ICD and						
	· Image-Based Transactions/Trips have a license plate number, Jurisdiction and Plate Type (if applicable), and the transaction occurred when the associated account and plate were active.						
533	The Contractor shall provide transaction/trip disposition to Interoperable/CTOC Agencies for each submitted Transponder-Based Transaction/Trip and Image-Based Transaction/Trip.						
1.5.3.2.	**Interoperable/CTOC Customers on Authority Toll Facility**						

Volume II BOS Technology and Functionality

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	Interoperable/CTOC Agency customers who have accounts at other Interoperable/CTOC Agencies may use the Authority's Toll Facility. These customers may create Transponder-Based Transactions/Trips and Image-Based Transactions/Trips. The BOS identifies such transactions as Interoperable/CTOC Transactions/Trips, validates such transactions/trips are in compliance with Interoperable/CTOC ICDs and transmits them to the Interoperable/CTOC Agency for processing and Posting to the appropriate accounts. The Authority may assess a Configurable 'roaming/hub processing fee' based on the transaction/trip type. Interoperable/CTOC Agencies will transmit the disposition for each submitted transaction/trip to the BOS in accordance with their individual Interoperable/CTOC ICD.						
	The BOS shall meet the following Requirements related to Interoperable/CTOC Transponder-Based Transactions/Trips and Image-Based Transactions/Trips.						
534	The Contractor shall provide the capability to receive and validate Transponder-Based Transactions/Trips and Image-Based Transactions/Trips from the ETTM System.						
535	The Contractor shall provide the capability to validate that the Transponder-Based Transactions/Trips and Image-Based Transactions/Trips are in compliance with the Interoperable/CTOC ICDs.						
536	The Contractor shall provide the capability to, if configured, assess the appropriate 'roaming/hub processing fee' based on the transaction/trip type.						
537	The Contractor shall provide the capability to identify clean air vehicles and motorcycles for discounts from Interoperable/CTOC Agencies.						
538	The Contractor shall provide the capability to transmit Transponder-Based Transactions/Trips and Image-Based Transactions/Trips to the appropriate Interoperable/CTOC Agency.						
539	The Contractor shall provide the capability to receive transaction/trip disposition from the Interoperable/CTOC Agencies for each transmitted Transponder-Based Transaction/Trip and Image-Based Transaction/Trip.						
540	The Contractor shall provide the capability to invoice IOP, make payments to IOP and receive post payments from IOP, retain and aging of IOP receivables.						
1.5.4.	**Monitoring – Operations and System Performance**						
	The Authority requires monitoring tools to effectively track and manage operations with the goals of optimizing efficiency, performance and customer service. The Authority requires clear visual and graphical representation of the workflow statuses and the provision of Alerts to identify backlogs and problems on a timely basis.						
541	The BOS shall provide pictorial representations (dashboard) of the BOS operations and performance, and Authorized Users performance and productivity at all stages of inbound customer contact points and operations process flow.						
542	The BOS shall provide Authorized Users the ability to customize and personalize their dashboard to display data elements selected by the user.						
543	The BOS shall provide user interface in real-time to review and be alerted to problems, exceptions, issues and variance from Performance Measures by means of conditional formatting.						
544	The BOS shall provide users with the capability to drill to the individual details and back-up information of any transaction/trip state, status or problem.						
545	The BOS shall provide user interface to establish various thresholds (Configurable) to monitor and assess BOS and operations performance in areas such as inbound calls, emails, chat, cases, transponder requests, etc.						

No.	Requirements	Required Inputs					
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		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
546	The BOS shall generate automated notifications to the PMMS when specified deviations from established thresholds are detected within a user defined period of time (Configurable) and provide such notifications on the dashboard.						
1.5.5.	**Transaction/Trip Processing Lists**						
1.5.5.1.	**Processing Exception List**						
	The Processing Exception List is a list of license plates and transponders used to identify Transponder-Based Transactions/Trips and Image-Based Transactions/Trips that require manual review and disposition prior to final processing due to known customer service and/or processing issues.						
547	The Contractor shall provide the capability to maintain a separate Processing Exception List of license plates and transponders for each Toll Facility.						
548	The Contractor shall provide the capability for Authorized Users to add, delete and maintain the Processing Exception List of license plates and transponders.						
549	All changes to the Processing Exception List shall require Authority Approval.						
550	The Contractor shall provide the capability for Authorized Users to enter effective start and end dates for each license plates and transponder.						
551	The Contractor shall provide the capability for Transponder-Based Transactions/Trips and Image-Based Transactions/Trips that are active on the Processing Exception List to not be processed by the BOS until manually reviewed and dispositioned.						
552	The Contractor shall provide the capability via a processing exception screen to review each transaction and image and either reintroduce the Transponder-Based Transactions/Trips and Image-Based Transactions/Trips for normal BOS processing or have them remain unprocessed.						
553	The Contractor shall provide the capability via a processing exception screen to review Transponder-Based Transactions/Trips and Image-Based Transactions/Trips multiple times before reintroducing them for BOS processing.						
554	The Contractor shall provide the capability for reintroduced Transponder-Based Transactions/Trips and Image-Based Transactions/Trips to follow all of the applicable processing rules. For example, if the time process time threshold has been exceeded the normal dispositioning process would occur.						
555	All Transponder-Based Transactions/Trips and Image-Based Transactions/Trips subject to the processing exceptions shall be included in all applicable transactional and financial reporting.						
1.5.5.2.	**Plate Correction List**						
	The Plate Correction List contains license plate numbers identified by the CSC Operations as being problematic based on customer disputes or QA processes and requiring analysis and correction by the ETTM System Contractor to prevent recurring issues.						
556	The Contractor shall provide the capability to provide a separate Plate Correction List for each Toll Facility.						
557	The Contractor shall provide the capability for Authorized Users to add, delete and maintain the Plate Correction List of license plates with all available plate information.						
558	The Contractor shall provide the capability for Authorized Users to electronically send the Plate Correction List to the ETTM System Contractor.						
559	The Contractor shall provide the capability to search for, retrieve and correct plates added to the Plate Correction List to avoid the same errors from occurring for transactions that are in process.						
1.5.6.	**Customer Validation and Transaction/Trip Posting**						

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		Compliance	Status	If Applicable	Source	If Applicable	Comments
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	Upon the completion of the initial verifications and processing, the BOS shall attempt to Post the transactions/trips to accounts. The sequence in which the Posting occurs is determined during design.						
1.5.6.1.	**Transaction/Trip Posting - General**						
	Generally, the toll rate assigned by the ETTM System is the rate that the customer is charged. On Express Lane facilities, the toll rate depends on the numbers of occupants in the vehicle. Some transponders have the ability to indicate the number of occupants in the vehicle depending on where the customer has set the switch. Account Plans, plate codes and transponder codes such as the Clean Air Vehicle or motorcycle may also affect the toll rate. During the Operations and Maintenance Phase, it is anticipated that the occupancy required to receive a discounted or $0 toll rate will change (for example, from 2+ to 3+).						
560	The Contractor shall provide the capability to set and maintain rules (Configurable) that define the order and sequence in which transactions/trips are processed for Posting to the various account types.						
561	The Contractor shall use the Authority's Business Rules and existing hierarchy in developing the rules for Posting trips.						
562	The Contractor shall provide the capability to set and maintain rules (Configurable) that define the order in which the transactions/trips shall be processed and their final outcome, including but not limited to: · type of the transaction/trip (Transponder-Based or Image-Based); · the submitting Entity (Toll Facility, Authority or Interoperable/CTOC Agency); · the presence of a transponder in the transaction/trip; · account type; · account status; · the status of the transponder at the time of the transaction/trip and · the availability of an image.						
563	The Contractor shall provide the capability to store multiple transponders per transaction/trip and charge the transponder according to the rules.						
564	The Contractor shall provide the capability to transmit Interoperable Transponder-Based Transactions/Trips to Interoperable/CTOC Agencies to Post to the Interoperable/CTOC Agency accounts.						
565	The Contractor shall provide the capability to validate Transponder-Based Transactions/Trips and account type and support the processing order (Configurable) of transactions/trips with transponders, per Business Rules.						
566	The Contractor shall process the transaction as an Image-Based Transaction if a Transponder-Based Transaction/Trip cannot be Posted to an account, but it contains the license plate data, then depending on the reject reason. For example, if a Transponder-Based Transaction/Trip was rejected by an Interoperable/CTOC Agency due to insufficient funds on the account, then the transaction/trip can be processed as an Image-Based Transaction/Trip if an image is available.						
567	The Contractor shall provide the capability to reprocess transactions as Image-Based Transactions/Trips if Transponder-Based Transactions/Trips cannot be Posted to an account and are rejected by the BOS, in accordance with the processing order (Configurable) based on the reject reason.						
568	The Contractor shall provide the capability to validate the transaction/trip and account type and support the processing order (Configurable) of Image-Based Transactions/Trips per Business Rules.						

Volume II BOS Technology and Functionality

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569	The Contractor shall provide the capability to insert pauses, of durations (Configurable), in transaction processing within the transaction/trip processing sequence to allow for other interactions (for example, a grace period to allow customer to provide payment before a transaction is Posted to a rental car account or an Unregistered account).						
570	The Contractor shall provide the capability to configure whether payments are guaranteed for both Transponder-Based Transactions/Trips and Image-Based Transactions/Trips for each Interoperable/CTOC Agency.						
571	The Contractor shall provide the capability to Post a Transponder-Based Transaction/Trip that is guaranteed for Interoperable/CTOC Agencies to the account, regardless of the account balance.						
572	The Contractor shall provide the capability to Post an Image-Based Transaction/Trip that is guaranteed for Interoperable/CTOC Agencies to the account, regardless of the account balance.						
573	The Contractor shall provide the capability to process Transponder-Based Transactions/Trips and Image-Based Transactions/Trips to an account based on date and time the transaction/trip was received by the BOS in First in First Out (FIFO) order.						
574	The Contractor shall provide the capability to attempt to Post a toll transaction/trip (OCTA or Interoperable/CTOC) that did not Post to the account initially at Configurable intervals for a Configurable amount of time.						
575	The Contractor shall provide the capability to Post tolls/trips based on the particular tolling location. For example, if the transponder has a non-revenue plan for a particular Toll Facility, then transactions/trips for that transponder are charged $0.00 for transactions/trips on that Toll Facility.						
1.5.6.2.	**I-Toll Transaction/Trip Posting**						
	Transponders sometimes fail to read when the customer uses the Toll Facilities. This results in the capture and processing of the customer license plate image by the ETTM System. An Image-Based Transaction/Trip along with the license plate image(s) and data is ultimately submitted to the BOS for processing. Accounts with a number of I-Tolls deemed excessive may be notified and those customers may be charged a fee.						
	The BOS identifies the license plate as belonging to the Authority or Interoperable/CTOC account and verifies that the Image-Based Transaction/Trip is eligible for Posting to the account as an I-Toll Transaction/Trip. An I-Toll shall be Posted to an account in accordance with Business Rules. For an Interoperable/CTOC account, an I-Toll shall be sent to the Interoperable Agency for processing only if the license plate is on the valid license plate file for the Transaction Date. Image(s) for I-Toll Transactions/Trips shall be retained by the BOS.						
576	The Contractor shall provide the capability to identify and Post I-Tolls belonging to the Authority or Interoperable/CTOC account based on a combination of factors, including but not limited to: · the account status at the time of the transaction/trip; · current account status; · account open date; · effective date and time range for the license plate on the account; · Account Plans associated with the account, transponder or license plate; · license plate number; · license plate Jurisdiction; · license Plate Type; · license plate status;						

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	· license plate image;						
	· whether the license plate was on the account at the time of the transaction/trip and						
	· the account balance.						
577	The Contractor shall store the image(s) associated with I-Toll Transactions/Trips.						
578	The Contractor shall provide the capability to check each time a license plate is added to a Registered account and when a license plate start date/time is changed and every day after until resolved to see if any Violations match that license plate and Post all applicable Violations to the account in accordance with Business Rules.						
579	The Contractor shall provide the capability to setup the parameters (Configurable) which trigger an Excessive I-Toll Notification.						
580	The Contractor shall provide the capability to set up the parameters (Configurable), which trigger the application of the Excessive I-Toll fee, including a grace period after a customer is notified.						
581	The Contractor shall provide the capability to apply the Excessive I-Toll fee in the future only when a percentage (Configurable) of monthly transactions are processed by plate.						
1.5.6.3.	**Toll and Discount Posted**						
	The transactions/trips submitted by the ETTM System and the Interoperable/CTOC Agencies will contain multiple toll rates based on the Toll Facility or Interoperable/CTOC Agency, the type of facility and the transaction/trip type (listed below). Based on the Business Rules, the BOS shall apply the applicable discounts and charge the account the correct toll rate.						
582	The Contractor shall provide the capability to apply applicable discounts for Account Plans associated with the account, transponder or license plate to the Transponder-Based and Image-Based Transactions/Trips.						
583	The Contractor shall provide the capability to Post the appropriate toll and discounts to Transponder-Based Transactions/Trips and the Image-Based Transactions/Trips based on various conditions (Configurable), including but not limited to: · type of transaction/trip received from the ETTM System, for example non-revenue; · type of transaction/trip received from the Interoperable/CTOC Agencies; · type of Toll Facility, for example Express Lanes; · account balance; · type of transaction/trip at the time of Posting (FasTrak, I-Toll or Violation); · account type; · Flags on the account, for example Excessive I-Toll and · transponder and plate designators (CAV).						
1.5.6.4.	**Owner Identification**						
	For those Image-Based Transactions/Trips that do not Post to an existing account or Interoperable/CTOC account, the registered owner name and address information for the vehicle (based on the license plate) needs to be obtained from DMV or ROV Lookup Provider sources.						
584	The Contractor shall establish a direct Interface with the California Department of Motor Vehicles (DMV) to perform an ROV look up for each transaction with California license plates.						
585	The Contractor shall establish a direct Interface with the Arizona, Oregon and Nevada Department of Motor Vehicles (DMV) to perform an ROV look up for any applicable trip.						

Volume II BOS Technology and Functionality

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586	The Contractor shall provide a ROV Lookup Service Provider to be used to perform an ROV Lookup for each transaction with license plates from all other States, the District of Columbia and the U.S. Government.						
587	The Contractor shall provide the capability to identify California temporary plates based on numbering sequence and other information provided by the DMV.						
588	The Contractor shall provide the capability to lookup temporary license plates issued by the California DMV utilizing a separate database for temporary plates.						
589	The Contractor shall provide the capability to obtain and store Vehicle Identification Number (VIN) for a temporary license plate and using the VIN, associate the temporary license plate to permanent plate to ensure only a single Unregistered account is created for the vehicle and that California DMV hold is placed on the permanent plate, if applicable.						
590	The Contractor shall provide the capability to manage addresses associated with Protected Plates agencies, which is the agency name returned from the DMV or ROV Lookup Provider for license plates of customers affiliated with federal, state or local agencies allowed to shield addresses. including but not limited to:						
	· allow Authorized Users to input, delete and update the addresses associated with Protected Plates agencies;						
	· electronically check against the Protected Plate data when a Protected Plate agency name is returned from the DMV or ROV Lookup Provider;						
	· automatically produce the Violation Notice with the Protected Plate agency address;						
	· allow the option for an Authorized User to review, edit and approve the Violation Notice prior to sending and						
	· if there is no match for a Protected Plate agency, hold the Violation for a Configurable period of time and allow an Authorized User to manually enter an address when obtained and send.						
591	The Contractor shall provide the capability to establish separate, ROV Lookup parameters (Configurable) to obtain the ROV, based on various criteria including but not limited to:						
	· whether the license plate is issue by a state which there is a direct DMV connection or through an ROV Lookup Service Provider;						
	· whether the license plate is a temporary plate (California only);						
	· Flags on the account, for example if the account has a bad address Flag or ROV is stale, then ROV Lookup is performed at intervals (Configurable) until a new address is obtained and						
	· cost of ROV Lookup, for example if ROV Lookups are at no cost then perform lookup every time (possibly daily) when a Violation Notice is about to be issued for the license plate.						
592	The Contractor shall provide the capability to identify and manage Violations which do not meet the criteria for a Violation Notice to be issued because the Violation date is greater than the Configurable number of days old.						
593	The Contractor shall provide the capability to identify and manage Violations which do not meet the criteria for a Violation Notice to be issued based on Business Rules.						
594	The Contractor shall provide the capability to identify and manage Violations which have no match after ROV Lookup and allow for a Configurable number of days to attempt to obtain the ROV through other methods.						

Volume II BOS Technology and Functionality

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595	The Contractor shall provide the capability to view the transaction/trip and its associated image(s) and select the correct license plate registration information in the event there are multiple ROV matches returned by the ROV Lookup Service Provider for a particular license plate.						
596	The Contractor shall provide the capability to review the results and take appropriate action of partial ROV information matches and confirm the account that matches the ROV name and address.						
597	The Contractor shall provide the capability to automatically create an Unregistered account for the license plate using the ROV results if there is no match to an existing Registered or Unregistered account.						
598	The Contractor shall provide the capability to identify potential match to a Registered account based on name and address and notify the customer and add the plate and transactions.						
599	The Contractor shall provide the capability to review the transactions/trips where the registration information is not available. The BOS shall retrieve all images associated with the transactions/trips and make them available to the Authorized User for review. The Authorized User can take the following action on the transactions/trips, including but not limited to: · manually enter the ROV data and · correct the license plate data.						
600	The Contractor shall provide the capability to re-submit license plates for ROV Lookup a number of times (Configurable) and after a period of time (Configurable) if the license plate is returned from the ROV Lookup Service Provider with no match or an error. The configuration shall be based on the type of error and the status of the communications.						
601	The Contractor shall provide the capability, if there is no response for the ROV Lookup after the number of retries (Configurable), and license plate registration information cannot be obtained, to automatically set the transaction/trip to "Unknown DMV status".						
602	The Contractor shall provide the capability, if the ROV information cannot be obtained, Post the transaction to a Registered account if the transaction/trip also contained an OCTA transponder read.						
603	The Contractor shall provide the capability to automatically record, set and maintain the ROV Lookup source based on license plate Jurisdiction.						
604	The Contractor shall provide the capability to set the length of time (Configurable by Jurisdiction) before ROV information needs to be rechecked before the license plate registration information is considered stale and must be acquired again.						
605	The Contractor shall provide the capability to set the length of time (Configurable) before ROV information for temporary license plates needs to be rechecked individually to obtain the associated permanent license plate number.						
606	The Contractor shall provide the capability to retain all historical ROV Lookup information, including but not limited to: · source of license plate ROV data; · ROV data changes and · the date the data was obtained.						
1.5.6.5.	Transfer of Responsibility						
	The California Vehicle Code provides for the registered owner of a vehicle to name another individual as the person responsible for toll evasion notices. In order to comply with this Requirement, the BOS will need to record the named responsible person and process applicable NTEV accordingly.						

Volume II BOS Technology and Functionality

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607	The Contractor shall provide the capability to transfer the responsibility to another party, including but not limited to: · uploading supporting documentation; · allowing for Authorized Users to enter the responsible party's name and address information for one or many Violation Notices; · dismissing the Violation Notices (including applicable tolls and fees) for the original ROV; · establishing an Unregistered account for the new ROV; · issuing Violation Notice(s) as applicable to the new ROV and · maintain history of the responsibility transfer activities.						
1.6.	**Registered and Unregistered Account Notifications**						
1.6.1.	**Outgoing Notifications**						
	The creation and sending of outgoing Notifications includes multiple distribution channels, such as electronic transmission (email, text), print and mail, and outbound phone calls. Notification management shall provide several methods of delivery and allow for configuring how each Notification item shall be delivered. All Notifications related to an account shall be associated with that account and Case, if applicable, in the BOS.						
	Alerts are normally Notifications that customers opt-in for so that they can be notified (usually by text or email) when their account needs attention or when activities occur on their account. Alerts can also be Notifications based on account events of which the Authority would like customers to be informed.						
	Notifications are sent using distribution channels, such as email, text, phone call and United States Postal Service (USPS) mail.						
	There are unique Notification items, for example, a Notice of Toll Evasion Violation, an insufficient balance letter or an email Notification that the customer's account has been replenished.						
	Each Notification item has criteria which triggers its generation. When an account meets specified criteria, the account qualifies for a specific Notification item. For example, an account qualifies for a Credit Card Expiring Notification one month before the Credit Card expiration date and an account qualifies for a Violation Notice after the ROV information has been obtained.						
608	The Contractor shall provide all outgoing Notifications with a standard look and feel and submit samples of all Notifications to the Authority for Approval, prior to distribution to customers.						
609	The Contractor shall provide a Notification management process regardless of the Notification item or the distribution channel used to send the Notification.						
610	The Contractor shall develop a communication matrix for configuring the Notifications and their allowable distribution channel. This matrix shall be Configurable and will change over the life of the Contract.						
611	The Contractor shall provide a process to automatically issue each Notification when the criteria in the Business Rules is met.						
612	The Contractor shall produce and deliver print Notifications to the USPS Monday – Friday.						
613	The Contractor or its Print/Mail House Service Provider (optional) shall produce and deliver the Notifications to the USPS within two (2) Business Days of the Notification meeting the Business Rules for generation.						
614	The Contractor shall produce and deliver all electronic or phone Notifications to the customer within one (1) Business Day of the Notification meeting the Business Rules for generation.						

Volume II BOS Technology and Functionality

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615	The Contractor is responsible for the quality and accuracy of the all Notification and shall review Notifications produced in-house or by its Print/Mail House Service Provider (optional), as the Contractor deems necessary to ensure accuracy of the notifications for complete addresses, correct information and Notification template/version and accurate dates.						
616	The Contractor shall provide the capability to automatically associate all outbound Notifications with the appropriate account and Case, if applicable.						
617	The Contractor shall provide the capability for customers to opt-in for Alerts and select the conditions that will result in the creation of Alerts. Customer shall have a choice of selecting the method in which they receive the Alert; a text or email.						
618	The Contractor shall provide the capability to automatically initiate customer Alert Notification based on account events, including but not limited to: · an I-Toll was Posted to the account; · Violation on license plate registered to customer's address on file; · transponder order placed; · transponder shipped; · Credit Card expiry date within days (Configurable) of expiry; · account balance an amount above Insufficient Balance Threshold (Configurable); · daily account balance; · payment Posted to account; · returned check; · account auto-replenishment (Credit Card) failure/declined Credit Card; · an ACH transaction is rejected and · account changes (Configurable), such as the addition of a vehicle to the account or change of password.						
619	The Contractor shall provide the capability to automatically initiate customer communications and Notifications based on account events including but not limited to the following. · account creation welcome letter/account profile; · Excessive I-Toll threshold is exceeded; · account auto-replenishment (Credit Card) failure/declined Credit Card; · an ACH transaction is rejected; · Credit Card update successful (from the Credit Card update service); · Credit Card update failure (from the Credit Card update service); · Credit Card is within a number of days (Configurable) from its expiration; · Credit Card has expired; · partial payment; · temporary license plate expired; · auto-replenishment suspended; · auto-replenishment recalculation; · returned check; · account suspended; · delinquent account second notice; · Warning of Registration Hold (Configurable to only send based on the amount of time since the delinquent Notification);						

Volume II BOS Technology and Functionality

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	· statement available;						
	· postpaid invoice;						
	· Notice of Toll Evasion Violation generated;						
	· Notice of Delinquent Toll Evasion Violation generated;						
	· Violation dispute accepted;						
	· Violation dispute rejected by reason;						
	· incomplete Affidavit of Non-Liability;						
	· customer-initiated review-related Notification;						
	· Administrative Hearing scheduled;						
	· account balance level is below the Insufficient Balance Threshold;						
	· account is flagged with a bankruptcy;						
	· undeliverable mail;						
	· undeliverable email;						
	· bad phone (for both calls and text)/fax situation;						
	· forgotten password, PIN or username and						
	· account status changes (Configurable).						
620	Distribute Notifications through distribution channels, including but not limited to: · mail; · email; · text messaging; · Self-Service Mobile Application push Notifications (Phase II and optional); · fax; · outbound CSR call by developing a list of calls to be made and · automated outbound call.						
621	The Contractor shall provide the capability for electronic Notifications to be sent as the body of an email in a format (Configurable), including but not limited to text and HTML.						
622	The Contractor shall provide the capability for electronic Notifications to be sent as a link to the Self-Service Website in the body of an email.						
623	The Contractor shall provide the capability (Configurable) to define Notification type and size, for example, postcard or letter.						
624	The Contractor shall provide settings (Configurable) for distribution channel for each Notification item, including but not limited to: · Authority required distribution channel(s); · customer preference and · preferred address type for mailing, for example, home, business or ROV Lookup provided.						
625	The Contractor shall provide the capability for a Notification item to be distributed using multiple distribution channels. For example, send the Notification to the customer's preferred distribution channel, which is email and by mail, based on the Authority's preference.						
626	The Contractor shall provide the capability to identify multiple Notifications that are generated for a customer and combine their mailing.						
627	The Contractor shall provide the capability to check the NCOA database before a Notification is mailed and use the NCOA address if it is the latest.						

Volume II BOS Technology and Functionality

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				Required Inputs			
628	The Contractor shall provide the capability to validate the existing email address anytime a new email address is provided.						
629	The Contractor shall provide the capability to send manually-generated, bulk email Notifications.						
630	The Contractor shall provide the capability to send scheduled and ad-hoc, bulk text Notifications.						
631	The Contractor shall provide the capability to send scheduled and ad-hoc, bulk mail Notifications.						
632	The Contractor shall provide the capability to read, capture, and create the USPS Intelligent Mail Barcode on incoming and outbound mail.						
633	The Contractor shall provide the capability for Notifications to include images, graphics, and lists (for example, lists of license plates and/or transponders) as well as text.						
634	The Contractor shall provide standard templates for each Notification item.						
635	The Contractor shall provide the capability to add a barcode, scan line or Quick Response Code to each outgoing Notification piece (excluding text and email body copy Notifications) so the returned Notification can be scanned and automatically associated with the proper account and, if applicable, Case. The barcode shall be visible in the top of the envelope window so as not to interfere with the USPS but to be available to scan as returned mail without having to open the envelope.						
636	The Contractor shall provide the capability to add checksum digits to barcodes on Notices and other correspondence that will likely return to the BOS or Lockbox Service Provider (optional) or Collection Agency. Barcode readers shall be able to support such checksum on barcodes and the BOS shall validate it.						
637	The Contractor shall provide the capability to ensure historical Notifications associated with accounts do not change (maintain original form and content) regardless of any changes that are subsequently made to the template for that Notification item.						
638	The Contractor shall provide the capability to create and assign version numbers/dates to Notification templates.						
639	The Contractor shall provide the capability to manage/configure Notifications and their attributes according to Business Rules, including but not limited to: · add new Notifications; · deactivate Notifications; · view and select for activation past versions of Notifications; · criteria; · frequency; · escalation path; · whether based on actual account balance or balance due (calculated); · whether to send for third-party address look up; · a variable due date based on the number of days (Configurable) until payment is due; · a fixed date due (for example, monthly customer Anniversary Day); · number of days until action must be taken; · the number of days between the due date and escalation to the next Notification level; · number of days between the creation date and issue date; · a fixed issue date (for example, monthly customer Anniversary Day); · the number of Business Days between the due date and escalation to the next Notification level; · number of Business Days between the creation date and issue date; · number of times to resend;						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· number of days before the Notification is resent;						
	· whether or not to resend or reissue if a new address is received;						
	· whether to escalate but not print if address is marked 'bad';						
	· allowable distribution channel(s);						
	· distribution channel escalation;						
	· number of days from the mailing of the dispute reject letter to extend the Violation Notice payment date;						
	· eligible address type, for example, Notice of Toll Evasion Violation must be mailed to the ROV's address as provided by the ROV Lookup source;						
	· address source priority, for example, mail to the ROV Lookup address and if that piece is returned with a forwarding address then use forwarding address;						
	· Notification response address, for example, some Notifications may require that payment go to the Lockbox Service Provider (optional) while others require response be sent to the BOS;						
	· Notification return address, for example, some Notifications may use the return address of the Collection Agency while others will use the mail house address;						
	· Notification quality review sample size and						
	· whether Notification quality review and approval is required.						
640	The Contractor shall provide the capability for Notification to have a mailing date match the actual mail date of the USPS on the Notification. For example, if quality review activities and printing take two days, then the issue date would be two (2) days later than the date that the Notification was created.						
641	The Contractor shall provide the capability for Authorized Users to view all versions of each Notification item (including those items that have been modified), including but not limited to:						
	· date modified;						
	· version number;						
	· Authorized User who made the modification(s) and						
	· samples of the Notification as it looked in all previous versions.						
642	The Contractor shall provide the capability to select a Notification target audience, for either pre-developed or ad-hoc Notification, using criteria including but not limited to:						
	· use of a particular Toll Facility (overall or by direction);						
	· use of a particular Toll Zone (overall or by direction);						
	· use of a particular Toll Facility or Toll Zone during a specified period of time;						
	· use of a particular payment method;						
	· transactions/trips by time period;						
	· transactions/trips by ZIP code;						
	· transactions/trips by Vehicle Type;						
	· transactions/trips by account type;						
	· transactions/trips by Account Plan;						
	· transactions/trips by transponder type;						
	· recipients of Notice of Toll Evasion Violation issued for selectable Toll Facility use;						
	· recipients of Notice of Toll Evasion Violation issued for selectable time periods and						
	· recipients of Notice of Toll Evasion Violation issued for a combination of selectable Toll Facility use and selectable time period.						

Volume II BOS Technology and Functionality

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643	The Contractor shall provide the capability to view and Approve Notifications prior to distribution to the customer.						
644	The Contractor shall provide the capability to email, send to the Print/Mail House Service Provider (optional) for printing and mailing or reprint at a local printer any Notification directly from the account, Case or Notification search screens. For example, the customer called about a Case and requests that the CSR resend the letter by email to the customer. The CSR is in the Case and clicks to resend the letter to the provided email address.						
645	The Contractor shall design the Notifications to meet all criteria for receiving the lowest postage rate.						
646	The Contractor shall employ bulk mail rates and other mailing economies, including, the capacity for pre-sorting mail by zip code and USPS Intelligent Mail Barcode to ensure the most cost-effective postage rates are obtained.						
647	The Contractor shall provide all postage meters and establish all post office boxes needed for customer communications.						
648	Outgoing mailed Notification materials shall use the following materials: · all mailed Notifications - 24lb paper; · all mailed Notifications up to 3 pages - #10 window envelope; · all mailed Notifications 4- 9 pages – 6"x 9" envelope; · all mailed Notifications 10 or more pages – 9"x 12"; · the non- Authority provided flyer - a single 8.5" x 11" piece of paper and · all return envelopes - #9 window envelopes.						
649	All Notifications printed in color shall use two colors.						
1.6.1.1.	**Print/Mail House Service Provider (optional)**						
	The use of a third-party Print/Mail House Service Provider is at the discretion of the Contractor and shall be at no additional cost to the Authority. If provided, the following Requirements apply.						
650	If the Contractor elects to use a third-party Print/Mail House Service Provider (optional), the selected third-party Print/Mail House Service Provider shall be located in and mailing the Authority's Notifications from the State of California.						
651	The Contractor shall provide the capability to resend any files rejected or not received by the Print/Mail House Service Provider and update the Notifications with new mail and due dates as applicable.						
652	The Contractor shall provide the capability to transmit fully created Notification items for printing and distribution to the Print/Mail House Service Provider, if utilized, for example, in Adobe PDF or XML format.						
653	The Contractor shall provide the capability to transmit Notification items as a data file for printing and distribution to the Print/Mail House Service Provider, if utilized.						
1.6.1.2.	**Notification Tracking, Distribution and Returned Mail Processing**						
654	The Contractor shall provide the capability to track the USPS Intelligent Mail Barcode Notification delivery response for each individual Notification.						
655	The Contractor shall provide the capability to send an Operational Alert Notification to the PMMS if reconciliation from the Print/Mail House Service Provider (optional) has not been received in a specified amount of time (Configurable).						
	The Contractor shall provide the capability to assign a status to each individual Notification, including but not limited to: · qualified;						

Volume II BOS Technology and Functionality

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656	· in quality review; · sent to Print/Mail House Service Provider (optional); · acknowledged by the Print/Mail House Service Provider (optional); · distributed; · undeliverable and · reissued.						
657	The Contractor shall provide the capability to create a Notification record for each Notification generated, including but not limited to: · distribution channel; · date the account qualified to have that Notification generated; · date the Notification was generated; · date the Notification was sent to the Print/Mail House Service Provider (optional); · due date (if applicable); · date the Notification was printed; · date the Notification was mailed; · date the Notification was identified as undeliverable and · date the Notification was reissued, for example, if a Notification is returned with a forwarding address, a new Notification is sent to the new address.						
658	The Contractor shall provide the capability to check the NCOA database before a Notification is mailed and use the NCOA address if it is the latest based on the address selection hierarchy (Configurable) for the Notification item.						
659	The Contractor shall provide the capability to automatically associate and store a copy of the Notification with the account upon successful mailing of the Notification as verified and provided by the BOS or Print/Mail House Service Provider (optional).						
660	The Contractor shall provide the capability to process returned mail and enter a new address, if notified by the Print/Mail House Service Provider (optional) or the USPS.						
661	The Contractor shall provide the capability to process returned mail and mark the address as undeliverable if notified by the Print/Mail House Service Provider (optional) or the USPS.						
662	The Contractor shall provide the capability to process returned mail in bulk and mark the address as undeliverable if notified by the Print/Mail House Service Provider (optional) or the USPS without having to access each account and individual Notification in BOS. For example, by scanning the Notification barcode into a BOS form for an entire batch of returned mail.						
663	The Contractor shall provide the capability to Flag returned mail as undeliverable and Flag the address as bad.						
664	The Contractor shall provide the capability to prevent Notifications from being escalated and sent to addresses marked as undeliverable or to continue to escalate and generate such Notifications but not print them (Configurable).						
665	The Contractor shall provide the capability for an Authorized User to initiate a manual Skip Tracing process on an individual record.						
666	The Contractor shall provide the capability, when a mailing address is found to be bad, to automatically perform Skip Tracing and add the acquired mailing address or other contact information to the account and identify the source of the address as Skip Tracing.						

Volume II BOS Technology and Functionality

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			Required Inputs				
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667	The Contractor shall, if a new address was provided, automatically mark the returned Notification as returned and generate a new Notification with new dates as applicable. Escalation dates, if applicable, in the BOS shall be updated based on the new Notification dates.						
668	The Contractor shall provide the capability to manually select Notifications to be re-sent, for example, when a new address has been provided and manually entered.						
669	The Contractor shall provide the capability to send a Notification to a customer regarding an undeliverable mail situation by using a different distribution channel (Configurable).						
670	The Contractor shall provide periodic checks for bad (bounced) emails and mark them as undeliverable after a number of failed delivery attempts (Configurable).						
671	The Contractor shall provide the capability to send a Notification to a customer regarding an undeliverable email situation by using a different distribution channel (Configurable).						
672	The Contractor shall provide the capability to mark phone (for both calls and text) and fax numbers as bad after a number of failed contact attempts (Configurable).						
673	The Contractor shall provide the capability to send a Notification to a customer regarding a bad phone (for both calls and text)/fax number situation by using a different distribution channel (Configurable).						
1.6.2.	**Registered Account Statements, Postpaid Invoices and Violation Notices – General**						
	Statements – statements are generated for customers with Registered accounts, which customers can choose to receive by mail or email, or they can access statements online or via a mobile device.						
	Postpaid Invoices – if the Authority elects to offer postpaid accounts, those customers will receive an invoice on their Anniversary Day listing each transaction/trip for the billing cycle. If a postpaid account has no new transactions or other financial activity for a billing cycle, the customer will not receive an invoice. Non-payment of the first invoice shall result in the generation of a late invoice with additional fees. Non-payment of the late invoice shall result in the account being flagged as delinquent. The postpaid account shall continue to receive invoices for subsequent transactions/trips and delinquent debt may be placed in Collections. At such time each unpaid transaction/trip identified by the users will be considered a Violation and the customer shall receive a Notice of Toll Evasion Violation with each unpaid transaction.						
	Violation Notices – issued in accordance with the California Vehicle Code (CVC) and Authority Business Rules.						
674	The Contractor shall provide the capability to determine the account Anniversary Day, based on account type, including but not limited to: · account type; · account creation date; · date of first transaction and · date of initial invoice.						
675	The Contractor shall provide the capability to generate the statements on the Anniversary Day even if the account has no transactions/trips and other financial activity for the current statement cycle (Configurable).						
676	The Contractor shall provide the capability to generate the invoices on the Anniversary Day only if there are unpaid transactions/trips or other financial activity on the account that have not appeared on an invoice (Configurable).						

Volume II BOS Technology and Functionality

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				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
677	The Contractor shall provide the capability to automatically change the Anniversary Day when a new invoice is issued in place of an old invoice that is canceled. For example, if an invoice is issued on 1/5 and then returned by the USPS on 1/10, then reissued 1/15, reset the Anniversary Day from 1/5 to 1/15 to give the customer enough time to pay the 1/15 invoice before sending the next one.						
678	The Contractor shall provide the capability to generate the appropriate type of correspondence (statement, invoice), based on the account type, and account balance on the Anniversary Day or during the billing cycle.						
679	The Contractor shall provide the capability (Configurable) to set and maintain statement, invoice and Violation Notice generation parameters, including but not limited to: · type of correspondence based on account type, such as a Registered account receives a statement and Unregistered (violator) account a receives Violation Notice; · whether to include multiple Violations on a single notice by number of days since first transaction or number of transactions; · date when statement is generated, such as fixed end of the month for all accounts, any fixed date within a month or Anniversary Day; · type of statement, invoice, such as monthly, quarterly, annual; · delivery channel, such as electronic or mail; · acceptable payment methods; · acceptable payment channels; · invoice fee assessed each time an invoice is mailed and · document fee amount, such as a fee for a paper statement and electronic statements are no cost.						
680	The Contractor shall provide the capability to generate each type of statement, invoice and Violation Notice based on, including but not limited to: · rolling Anniversary Day; · fixed day; · number of days from transaction (Configurable); · customer specified day of the month; · dollar amount threshold; · number of transactions/trips; · fixed time period; · Transaction Date; · combination of number of transactions/trips and fixed time period; · combination of dollar amount threshold and fixed time period and · combination of number of transactions/trips and dollar amount threshold.						
681	The Contractor shall provide the capability for distributing statements, suppressing the delivery of statements and assessing statement fees (if applicable) based on the following, including but not limited to: · account type; · Flag on the account. For example, accounts with USPS Coding Accuracy Support System (CASS™) lookup failure or bad address shall not be mailed a statement; · delivery channel and · delivery status. For example, if a statement fails CASS™ for address lookup, the fee shall not be charged.						

Volume II BOS Technology and Functionality

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682	The Contractor shall provide the capability (Configurable) to utilize various addresses on the account for mailing statements, invoices and Violation Notices.						
683	The Contractor shall provide the capability to generate statements, invoices and Violation Notices manually, such as when specifically requested by the customer, in any format available for BOS-generated Notifications. Applicable fee(s) shall be charged for those statements.						
684	The Contractor shall provide the capability to balance the generation of statements, invoices and Violation Notices over a period of time, based on volume.						
685	The Contractor shall provide a numbering methodology for invoices, Violation Notices and accounts for the purposes of proper lifecycle documentation, reporting, adjudication and customer service.						
1.6.3.	**Customer Statements – Registered Accounts**						
	Account statements for Registered accounts are generated monthly/quarterly as selected by the customer and as allowed by the Business Rules on the date Configured in the BOS.						
686	The Contractor shall provide the capability to generate Registered account statements that detail all account activity, including but not limited to: · prior balances on the account; · toll transaction/trip activity on the account (posting date, entry/exit location, date, and time, toll amount); · payments on the account (replenishment and one-time payments); · adjustments and credits; · discounts and rebates; · other financial activity on the account; · addition of transponders and purchase of inventory items; · account status; · customer message and global message; · fees assessed on the account and · current balance on the account.						
687	Registered account statements shall list individual transactions that Posted to the account, including but not limited to: · Transponder-Based Transactions/Trips that Posted to the account by transponder and · I-Toll Transactions/Trips that Posted to the account by license plate.						
688	The Contractor shall provide the capability to include customer communication inserts along with customer statements based on user selected criteria, for example zip code and account type.						
1.6.4.	**Customer Invoices – Postpaid Accounts**						
	Most Authority customers are required to maintain a prepaid account balance in order to avoid Violations. In the future, the Authority may enter into postpaid agreements with customers which will permit the use of the Authority's Toll Facility without a prepaid balance. Under this circumstance, the BOS shall periodically bill customers for usage in accordance with the following Requirements.						
689	The Contractor shall provide the capability to support account-based invoicing on postpaid accounts, where the monthly invoice reflects the license plate and transponder transactions that Posted to the account during the billing cycle.						
690	The Contractor shall provide the capability to generate a late invoice which include applicable fees if the first invoice is not paid in full by the payment due date.						

Volume II BOS Technology and Functionality

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691	The Contractor shall provide the capability to Flag the postpaid account as delinquent and generate an Operational Alert Notification if the late invoice is not paid in full by the payment due date.						
692	The Contractor shall provide Authorized Users the capability to suspend a delinquent postpaid account at which time. all subsequent transactions/trips on the account are considered Violations.						
693	The Contractor shall provide the capability to initiate the delinquency process once the account is suspended on the unpaid transactions/trips which includes generation of Violation Notice and escalation of the delinquent balance on the account to Collections.						
694	The Contractor shall provide the capability to generate postpaid invoices that fully detail all activity, including but not limited to: · prior balance; · current charges; · payments; · adjustments; · detailed listing of all transponder transactions/trips on the account; · detailed listing of I-Toll Transactions/Trips on the account and · detailed listing of all license plate transactions/trips on the account.						
695	The Contractor shall provide the capability (Configurable) to set and maintain invoice generation and transaction aging parameters, including but not limited to: · invoice generation and aging timeline, for example, generate the monthly invoice thirty-days from the Anniversary Day, and amount owed is considered past due and eligible for delinquency process if not paid within five-days of the due date; · account suspension parameters, for example, if account is not suspended by a user within number of days (Configurable) of it being delinquent then BOS shall suspend the account; · number of invoices to issue before account is considered delinquent; · grace period for aging unpaid invoices on an account, for example, a five-day grace period is applied before a late invoice is generated for an unpaid invoice; · eligibility criteria, for example, if customer has at least one (Configurable) un-invoiced toll transaction/trip or other Financial Transaction within the billing cycle then generate a monthly invoice; · aging thresholds and values, for example, if the past due amount on the account is more than $5.00 and is more than thirty days past due then late fee is assessed; · payment thresholds based on underpayment amount for each status or workflow stage, for example, if invoice is underpaid by less than $0.25, then the amount owed on the invoice is considered closed and · fee structure, for example, the fees to be assessed and whether the fees are to be assessed at the invoice level or transaction level.						
696	The Contractor shall provide the capability at each status or workflow stage to perform the following actions, including but not limited to: · identify the transactions/trips that are eligible for invoicing; · add applicable fees; · add applicable advisory language; · generate next invoice for the time frame established and · transmit the invoice to the customer.						

Volume II BOS Technology and Functionality

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697	The Contractor shall provide the capability to enter a forwarding address obtained from returned mail communicated via Interface from an external vendor or manually input, which will result in the re-issue of the monthly invoice and its associated transactions/trips into the transaction aging process. The re-issued invoice shall have a new issue date and a new due date.						
1.6.5.	**Violations Notification**						
	Violators receive a Notice of Toll Evasion Violation when their Violations are eligible for Notification. A Notice of Toll Evasion Violation referred to as Violation Notice may have multiple Violations on the notice where each unpaid transactions/trip is assessed penalties or may only have one Violation per notice. Each Notice of Toll Evasion Violation will contain transaction(s)/trip(s), as well as a fee amount, a penalty, and other information as required by the California Vehicle Code.						
	Violation Noticing and escalation is divided into the following stages:						
	· Noticing – In this stage violators are notified of their Violation(s) when the unpaid transactions/trips escalate to Violations. The Notice of Toll Evasion Violation will list the Violation(s) that occurred during the Configurable time period with each Violation showing the toll amount, the fee amount and the penalty due. Failure to pay the Notice of Toll Evasion Violation within the timeline will result in the escalation of the Violation(s) and the generation of Notice of Delinquent Toll Evasion Violation. Each Violation may be assessed additional fees/penalties.						
	· Registration Hold – If the Violation(s) on the Notice of Delinquent Toll Evasion Violation remains unpaid past the payment due date, the Violation(s) are eligible for a Registration Hold. Currently Registration Holds are only placed for vehicles registered in California.						
	· Tax Intercept –Unpaid Violations may be sent to the California Franchise Board for collection through the Tax Intercept Program.						
	· Collections – Unpaid Violations may be sent to a third-party Collection Agency. The Contractor may be required to send a pre-collection letter using updated information from the Collections Agency.						
1.6.5.1.	**Violator Notifications**						
698	The Contractor shall, based on the Violation Notice eligibility criteria, per the Business Rules, provide the capability to perform Violation Notice, including but not limited to: · first level Notice or the Notice of Toll Evasion Violation; · escalate to second level Notice or Notice of Delinquent Toll Evasion Violation, and · Registration Hold warning and pre-collections Notice, if eligible.						
699	The Contractor shall provide the capability to process Image-Based Transactions/Trips through the Violation process, per the Business Rules, including but not limited to: · verify that the Configurable time frame for making a payment has passed; · convert the Image-Based Transactions/Trips to a Violation by assessing the applicable fees and penalties; · verify that no Internal Review, Administrative Hearing or Superior Court Appeal has been requested; · verify that there is no account hold (occurs when there is a Case that requires the CSR to investigate the violator account and all Violation workflow events are suspended) on the Violations; · verify that there is no account hold on the Notice; · verify that there is no account hold on the account; · verify that license plate is not on an account that has account balance above the Insufficient Balance Threshold;						

Volume II BOS Technology and Functionality

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	· verify that the required number of Violations are open;						
	· verify that the Notice is open;						
	· verify that the payment due date has passed;						
	· verify that the Configurable payment mailing/processing grace period has passed;						
	· verify that the Violations are eligible for escalation to a Notice;						
	· verify that the Notice is eligible for the next level of noticing;						
	· escalate the Notice to the next level;						
	· add applicable penalties and						
	· notify the violator of the escalated Notice.						
700	The Contractor shall provide the capability for a CSR to manage all Notices on the account, including but not limited to:						
	· list all open Notices on the account;						
	· view all open Notices on the account;						
	· re-print any Notice;						
	· view all open Notices by escalation level;						
	· view selected Notices;						
	· view all closed Notices;						
	· view all closed Notices by escalation level;						
	· process Notice payments;						
	· process Violation payments;						
	· dismiss an open Notice;						
	· dismiss fees and/or penalty on a Violation but never the toll amount without the approval of an Authorized User with the authority to dismiss tolls;						
	· dismiss Violations within an open Notice;						
	· process Violations for Posting to a customer's transponder or Registered License Plate account;						
	· process Violations for Posting to an Interoperable/CTOC Agency account if license plate is on the Interoperable/CTOC Agency plate list and						
	· process other Flagged Violations on the license plate for Posting to an Interoperable/CTOC Agency account if license plate is on the Interoperable/CTOC Agency plate list.						
701	The Contractor shall provide the capability to establish a "sinner to saint" program where part or full amount of the fee and/or penalty is credited to the account as a toll credit. The "sinner to saint" program is offered to violator that meet certain criteria including but not limited to:						
	· first time violator and						
	· less than a Configurable number of Violations.						
702	The Contractor shall provide the capability to offer violators an "early bird special" a Configurable percent reduction in fee and penalty amounts are made if the violator makes an early payment. The "early bird special" program shall be made available to all Violation payments or the first time the violator gets a Violation Notice (Configurable).						
703	The Contractor shall provide the capability to Configure the BOS to support Notice-based Violation escalation, for example if first level Notice is not resolved within the timeline established, then the first level Notice is escalated to the second level Notice that reflects only the outstanding balance on the first level Notice plus additional penalties per unpaid Violation, even though the account may have additional Violations.						

Volume II BOS Technology and Functionality

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				Required Inputs			
704	The Contractor shall provide the capability to dismiss selected individual Violations on a Notice and prevent their escalation, while allowing the remaining Violations/Notice to escalate.						
705	The Contractor shall provide the capability to place a Notice on account hold and enter the account hold reason at any escalation level. When an account hold is placed, the Violation aging process is suspended.						
706	The Contractor shall provide the capability to place selected individual Violations on hold at any escalation level, including Violations that are not on a Notice.						
707	The Contractor shall provide the capability to prevent the aging and escalation of Violations and Notices that are placed on account hold.						
708	The Contractor shall provide the capability to continue processing the Violations and Notices a Configurable number of Calendar Days after an account hold is released.						
709	The Contractor shall provide the capability to restart the Violation aging timeline a Configurable number of Calendar Days after the issuance of the dispute rejected Notification.						
710	The Contractor shall provide the Configurable capability to automatically initiate multiple escalations on a Notice at the same time based on the type of license plate, for example initiate a vehicle Registration Hold and escalate the Notice to Collections if the license plate was issued in a Jurisdiction that permits concurrent Registration Hold and Collections.						
711	The Contractor shall provide the capability to process Violations for the rental car license plate transactions/trips with the same license plate number and within the same renter's rental period, per the Configurable Business Rules.						
712	The Contractor shall provide the capability to identify Unregistered accounts that qualify as "repeat violators" on a Configurable basis based on Business Rules including but not limited to: · number of open Violations on the account; · no ROV information obtained; · outstanding balance on the account and · total number of Violations on the account for a given time period.						
713	The Contractor shall provide the capability to assess additional penalties on Violations/Notices on Unregistered accounts that are Flagged as repeat violator.						
714	The Contractor shall provide the capability to transmit the license plate data of repeat violator to the ETTM System at Configurable intervals to support manual enforcement of repeat violators.						
715	The Contractor shall provide the capability for Authorized Users to force selected Notices from one escalation level to another and by-pass the eligibility criteria.						
716	The Contractor shall provide the capability to configure and maintain Violation Notice parameters for each escalation level, including but not limited to: · the minimum number of Violations over a Configurable period of time to initiate a Violation Notice; · the aging timelines for escalation of Notices, for example the timeline for escalating from a first level Notice to a second level Notice if the Notice is not paid or dismissed; · the penalties assessed on individual Image-Based Transaction/Trip; · the individual Notice level penalties; · maximum penalty that can be assessed on individual Image-Based Transaction/Trip and account; · the Notice underpayment percentage thresholds to prevent escalation; · the Notice underpayment amount thresholds to prevent escalation;						

Volume II BOS Technology and Functionality

No.	Requirements	Compliance	Status	If Applicable	Source	If Applicable	Comments
				Required Inputs			
		Y - Yes N - No*	B-Base Product M-Base Modified D-New Development NP-Not Provided*	Customer Name and Location	O-Offeror S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	*Comment required if "No" in Column C or "Not Provided" in Column D, optional otherwise.
	· the maximum Notice amount to be paid to by-pass an escalation level;						
	· the maximum number of Violations on the Notice to halt escalation;						
	· the maximum amount due on a Notice to halt escalation;						
	· allowable "sinner to saint" offers for violators who establish Registered accounts and						
	· allowable "early bird special" offers.						
717	The Contractor shall provide the capability to automatically advance to the proper Notice processing screen when the Notice barcode is read via the barcode reader.						
718	The Contractor shall provide the capability to escalate or place on hold the Notices Flagged as 'bad address' as defined by the Business Rules.						
719	The Contractor shall provide the Configurable capability to process Notices if a good address is subsequently found for a Notice or account that is Flagged as a 'bad address' based on the escalation level, including but not limited to:						
	· retain the new address;						
	· reissue the Notice to the new address, for example if it is a second level Notice then the second level Notice is reissued to the new address with a new due date and						
	· reintroduce the Notice and its associated Violations into the Violation workflow at the appropriate place, per the Business Rules.						
720	The Contractor shall provide the capability to process Violation against a home account or Interoperable/CTOC Agency per the Business Rules, including but not limited to:						
	· Post the Violation transactions/trips;						
	· Post the transaction/trips at the appropriate toll rate;						
	· dismiss part of the fees or the whole fee amount;						
	· dismiss part of the penalties or the whole penalty amount;						
	· pay the fees and						
	· pay the penalties.						
721	The Contractor shall provide the capability to identify and retrieve Violation related records into a search results grid, including but not limited to:						
	· Violation ID number;						
	· Notice ID number;						
	· location of Violation;						
	· license plate number;						
	· license Plate Type;						
	· license plate Jurisdiction;						
	· customer name;						
	· customer address;						
	· transaction/trip date range;						
	· user ID;						
	· phone numbers;						
	· email addresses;						
	· Violation escalation status;						
	· account Flags (for example Notice on hold);						
	· address type;						
	· bad address;						

Volume II BOS Technology and Functionality

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	· Violation disposition reason;						
	· Violation disposition statuses (for example paid);						
	· payment receipt number;						
	· comments and						
	· Alerts.						
722	The Contractor shall provide the capability to drill down from the final open or closed escalated Notice to the related previous Notices.						
723	The Contractor shall provide the capability to drill down from the current Notice that is open to the related Violations and images.						
724	The Contractor shall provide the capability to generate an on-demand Violation Notice and activity statement based on various, Configurable selection criteria that shows the history of Violations, including but not limited to:						
	· all related Notice ID number(s);						
	· all individual Violations;						
	· payments made;						
	· adjustments made;						
	· related disputes and results;						
	· Violation dismissals;						
	· settlements that closed Violations;						
	· history of holds placed on Notice;						
	· current status of Notice and						
	· current status for each Violation.						
725	The Contractor shall provide the capability to generate an on-demand summary violator account statement based on various, Configurable selection criteria that shows the history of the account, including but not limited to:						
	· number of Notices on the account by escalation;						
	· all related Notice ID number(s) and current status;						
	· all individual Violations and current status;						
	· payments made;						
	· adjustments made;						
	· related disputes and results;						
	· Violation dismissals and reason;						
	· Notice dismissals and reason;						
	· settlements that closed Violations;						
	· history of holds placed on Notices;						
	· current status for each Notice and						
	· current status for each Violation.						
726	The Contractor shall provide the capability to generate a detailed violator account statement based on various selection criteria that shows the history of the account, including but not limited to:						
	· listing of all Notices on the account and their escalation status;						
	· listing of all disputes on the account that were accepted and rejected;						
	· payments made against the Notices;						
	· listing of all Violations closed due to dismissals;						

Volume II BOS Technology and Functionality

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	· listing of all Violations closed due to settlements and						
	· listing of all account holds or Flags on the account.						
727	The Contractor shall provide the capability to attach the generated Statement to the account and make it automatically available through the account history.						
1.6.5.2.	**Registered Account Violators**						
	When a prepaid Registered account's balance reaches an Insufficient Balance Threshold and all replenishment attempts have failed or when a postpaid, Registered account's invoice is past due, future transactions are Violation transactions/trips and Unregistered accounts are established. Registered account holders usually resolve any account issues bringing the account balance back to good standing so an approach that easily resolves Violations in such situations must be provided along with a method to inform customer of outstanding Violations for plates on their account.						
728	The Contractor shall provide the capability to associate the Unregistered account(s) and Violations created for vehicles on a Registered account while maintaining the privacy of all account holders (both Registered and Unregistered).						
729	The Contractor shall provide the capability to inform Registered account holders of outstanding Violation on vehicles registered to their account while maintaining the privacy of all account holders (both Registered and Unregistered).						
1.7.	**Payment Processing**						
1.7.1.	**Payment Processing – General Requirements**						
730	The Contractor shall utilize the Authority's Bank Accounts in accordance with the flow of funds depicted in Figure 1 3 Customer Transaction Settlement, in Section 1.14.3.						
731	The Contractor shall comply with the California Civil Code Section 1747.08 related to personal identification laws.						
732	The BOS shall initiate Credit Card payments with the Merchant Service Provider(s) that will process the electronic payments and deposit funds in the Bank Accounts provided by the Authority in accordance with the flow of funds depicted in Figure 1 3 Customer Transaction Settlement, in Section 1.14.3.						
733	The Contractor shall comply with PCI and all applicable merchant card association agreements and other applicable regulations for the exchange of Credit Card payments.						
734	The BOS shall accept payments through all commercially-available payment methods, including but not limited to: cash, check, money order, certified check, cashier's check, ACH and Credit Card.						
735	Certain payment methods, such as cash, EMV chip integrated circuit card and mobile contactless NFC shall be accepted only at WICs.						
736	The BOS shall accept payments through its agreements with Lockbox Service Provider (optional) and Collection Agency.						
737	The Contractor shall implement appropriate controls to ensure the security of payment transactions, including controls over cash, checks and customer Credit Card information. These controls shall be PCI and GAAP compliant and meet the requirements for a Statement on Standards for Attestation Engagements (SSAE)-18 Type II Audit.						
738	Credit Card and ACH information shall be tokenized and the information shall be stored by a certified 3rd party processor. The 3rd party processor(s) may also be the Contractor-provided Merchant Service Provider and/or another Contractor-provided certified 3rd Party.						

Volume II BOS Technology and Functionality

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739	The Contractor shall process, deposit and record all customer payments the same day received from the customer, using the most efficient and cost-effective methods available in the industry (for example, by utilizing remote deposit/Check 21 as opposed to sending physical checks to the bank).						
740	The BOS shall provide the capability to process all payments accepted and apply them toward, including but not limited to: · prepaid balance, · specific toll transactions, · specific account fees, · purchase of inventory items (ex. transponders), · invoice payments, · Violation Notice payments and · Account Plans.						
741	The BOS shall handle all payment exceptions including but not limited to: · partial payments, · overpayments, · return payment, · chargebacks, · errors in applying payments, · refunds and · reversals.						
742	All successful payments made via Credit Card shall have a viewable, searchable authorization code for the transaction which shall be included on applicable reports.						
743	The Contractor shall provide the capability to process transactions, including but not limited to: · sales; · chargebacks, chargeback reversals and representments; · returned payments (for example, returned checks); · payment plan payments; · adjustments; · reversals; · voids and · refunds (except for cash).						
744	The Contractor shall provide for the processing of all payments and account replenishments, including but not limited to: · account prepaid balance; · tolls; · fees; · penalties; · invoices; · Notices; · non-toll transactions; · transponder sales (full price, warranty sale, no sale, promos and coupons); · Account Plans and · inventory purchases, including transponders.						

Volume II BOS Technology and Functionality

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745	The Contractor shall provide real-time, fully automated payment clearing and processing for all electronic payment methods.						
746	The Contractor shall interface with one or more Merchant Service Providers (no more than three) for the purpose of settling Credit Card transactions.						
747	The Contractor shall send replenishment requests to, and capture the results returned from, the Merchant Service Provider and update accounts accordingly.						
748	The Contractor shall provide the capability to process a payment for multiple, unrelated charges (bulk payments) and accommodate the reversal of such payment. For example, pay an invoice or Violation Notice (for one or multiple Violations) in one account and fund another account's prepaid balance or Post batch payments from rental processors for individual transactions/Violation Notices.						
749	The Contractor shall provide a proven and reliable method of communicating with the Merchant Service Provider(s).						
750	The Contractor shall provide the capability to identify and process overpayments, including but not limited to: · re-assign to an alternate account; · apply to unpaid transactions/trips; · refund overpaid amounts and · apply overpaid amounts to account balance.						
751	The Contractor shall provide the capability to notify the customer about all partial and overpayments.						
752	The Contractor shall provide tracking of payment transactions by, including but not limited to: · Transaction Date; · Posting Date and · payment channel.						
753	The Contractor shall provide the capability to apply multiple payment methods for a single payment. For example, for a $30.00 amount due, allow payment of $20.00 from a Credit Card associated with the account and $10.00 cash.						
754	The reversal of any payment shall result in the items paid being marked as unpaid, having the same effect as if those items had never been paid (for example, when a Violation payment is returned, escalation resumes at the point where it left off as opposed to restarting from the beginning of the escalation process).						
755	The Contractor shall provide the capability to use the available account balance as payment for all inventory items (for example, transponders) and show the detailed changes in account balance in the user Interface, to customers on the Self-Service Website and on customer statements.						
756	The Contractor shall engineer the payment process to prevent double-payments, for example, prevent an Authorized User or customer from making two identical payments by clicking the payment button twice.						
757	The Contractor shall engineer the payment process to prevent an Authorized User or customer from making payments in excess of a certain amount (Configurable).						
758	The Contractor shall display a confirmation page that includes payment method details (Credit Card numbers obscured) and amount to be paid prior to the Authorized User or customer being allowed to submit a payment.						
759	The Contractor shall provide audit trail and exception reporting that helps reconcile discrepancies between the BOS and the Merchant Service Provider.						

Volume II BOS Technology and Functionality

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760	The Contractor shall provide summary and detail data by payment type on the processing status of all transactions, including a description of all failures.						
761	The Contractor shall provide Authorized Users the detailed reasons for Credit Card declines, including but not limited to: · invalid card number; · name mismatch; · card Security Code mismatch; · contact Credit Card company and · address mismatch.						
762	The Contractor shall create an audit trail and an Operational Alert Notification via the PMMS regarding failures in the processes that Interface with the Bank.						
763	The Contractor shall create an audit trail and an Operational Alert Notification via the PMMS regarding failures in the processes that interface with the Merchant Service Provider or with the communications to the Merchant Service Provider.						
764	The Contractor shall provide the capability to notify customers of failures in the processes that interface with the Merchant Service Provider (for example, when there is a loss of communication between the BOS and the Merchant Service Provider).						
765	The Contractor shall provide the capability to notify customers about various auto-replenishment activities. For example, replenishment was successful with secondary payment method, or replenishment failed.						
766	The Contractor shall provide detailed tracking and reconciliation of payments.						
767	The Contractor shall provide the capability to accept payments to a Registered account resulting in the payment of all unpaid Violation Notices and Violations on the linked Unregistered accounts plus fees and/or penalty based upon escalation stage (Configurable).						
768	The Contractor shall provide the capability to set a payment hierarchy for Registered accounts (Configurable) that determines the order in which payments are applied, including but not limited to: · in FIFO order; · by Transaction Date; · by Posting Date; · by payment item type (for example, tolls then fees) and · by combination of date and transaction/trip type.						
769	The Contractor shall provide the capability to set a payment hierarchy Configurable for Unregistered accounts that determines the order in which payments are applied, including but not limited to: · in FIFO order; · by Transaction Date; · by Posting Date; · by payment item type (for example, Violation Notices, penalties then fees) and · by combination of date and transaction/trip type.						
770	The Contractor shall provide the capability to accept payments for specific items as requested by the customer (and allowed under the Business Rules).						
771	The Contractor shall produce receipts for all payments in both real-time (on demand) and automatic (for auto replenishment).						
772	The Contractor shall transmit receipts to customers on customer request via any Notification channel.						

Volume II BOS Technology and Functionality

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773	The Contractor shall allow for reprinting of receipts for all payments in a PCI-compliant format. Reprinted receipts shall be exact copies of the original receipt and shall include the duplicative nature of the document and include the date of the reprint (for example, the reprinted receipt shall be marked "COPY" and indicate the date of the copy with the original receipt date also reflected on the document).						
774	The Contractor shall provide the capability to trace each payment to the transactions paid and each transaction paid or prepayment to a payment, including but not limited to: · invoices; · Violation Notices; · tolls; · prepaid tolls; · fees and · penalties.						
775	The Contractor shall provide the capability to accept payments for transactions/trips associated with a license plate that has not yet been associated with an account.						
776	All receipts shall contain a payment reference number that is traceable through the entire payment clearing process. For example, a Credit Card payment's reference number as printed on the receipt will also appear on the customer's Credit Card statement and is a searchable field in the database, enabling a CSR to identify a payment applied to an account from only the details available on a customer's Credit Card statement.						
777	The Contractor shall provide the capability to convert an Unregistered account to a Registered account, taking one payment for the outstanding Violation amounts and the amount required to open a Registered account.						
778	The Contractor shall provide the capability to search for a payment by date, payment source, Credit Card # or Bank Account information.						
779	The Contractor shall provide the capability for Authorized Users to conduct research on un-allocated funds, including viewing images of original payment items (checks), correspondence, and data entered into the BOS at the time the check was Posted.						
780	The Contractor shall provide the capability for Authorized Users to Post payments from un-allocated funds to accounts while preserving the payment's audit trail (for example, once applied to the account, Authorized Users shall have the ability to determine when the payment was Posted to un-applied, any activity that occurred while it was in that status, and when it was Posted from un-applied to the account).						
781	The Contractor shall provide the capability to age un-applied payments, to report on such payments and to generate Alerts when un-applied payments have exceeded a specified age (Configurable).						
1.7.2.	**Payment Methods and Handling**						
782	The Contractor shall provide the capability to accept payments, including but not limited to: · in-person at WICs; · over the phone with a CSR; · over the phone via the IVR; · automatic payments; · via the Self-Service Website; · via the Self-Service Mobile Application (Phase II and optional); · via mail and						

Volume II BOS Technology and Functionality

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	· via the Lockbox Service Provider (optional).						
783	The Contractor shall provide the capability to calculate the required payment during account creation based on, but not limited to: · the prepayment Requirements; · cost of inventory items (for example, transponders) and · any Account Plan fees.						
784	The Contractor shall provide the capability to store Credit Card information for one-time payments (for example, permit customers to enter Credit Card information once and then use that stored Credit Card to make one-time payments on their account without being required to rekey the Credit Card information).						
785	The Contractor shall provide the capability to accept payments, including but not limited to: · one-time payments; · recurring fixed amount payments; · recurring varying amount payments; · a combination of fixed and varying amounts (payment plan monthly payment plus recurring auto replenishment); · recurring maximum replenishment amount per payment method on the account (for example, if the replenishment amount is $10,000 but maximum replenishment allowed for that Credit Card is $1,000 there should be 10 $1,000 replenishments); · recurring payments on a fixed day of the month; · recurring payments every "x" number of days (for example, every 28 days); · recurring payments for Postpaid accounts as, fixed number of days after the invoice is issued (Configurable) and · recurring payments triggered by account balance.						
786	The Contractor shall provide the capability to accept and Post in the BOS payments and adjustments transmitted from the Collection Agency.						
787	The Contractor shall provide the capability to process payments directly in the BOS for all accounts in any status with any balance.						
788	The Contractor shall provide the capability to accept the following types of payments made in-person or by mail at all Approved locations, including but not limited to: · cash (at in-person locations only); · check; · cashier's check; · certified check; · money order; · e-check (not available by mail); · Credit Card; · ACH; · EMV chip integrated circuit card (at in-person locations only) and · mobile contactless NFC (at in-person locations only).						
789	The Contractor shall provide the capability to accept Credit Card payments made via the IVR, via the Self-Service Website and via the Self-Service Mobile Application (Phase II and optional).						
	The Contractor shall provide the capability to accept all major Credit Cards, including:						

Volume II BOS Technology and Functionality

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790	· Visa; · MasterCard; · American Express and · Discover Card.						
791	The Contractor shall provide the capability for accepting Credit Card, EMV and mobile contactless NFC payments via POS devices for payments made in-person.						
792	The Contractor shall provide the capability for accepting Credit Card payments by manually entering Credit Card information for payments made in-person.						
793	The Contractor shall provide the capability to Post payment transaction(s) to the account when payment related actions occur, including but not limited to: · successful payment processing, and · unsuccessful payment processing, for example recording a failed attempt.						
794	The Contractor shall provide the capability to refund checks that have been Posted to the BOS but cannot be matched successfully to an account.						
795	The Contractor shall provide the capability to Flag that an account has had returned checks.						
796	The Contractor shall provide the capability to Flag that an account has had declined Credit Card charges.						
797	The Contractor shall provide the capability for an Authorized User to correct or reverse payments applied in error, including but not limited to payments applied to multiple transactions or accounts, via Cases.						
798	The Contractor shall provide the capability to require approvals for payment corrections via Cases.						
799	The Contractor shall provide the capability to prevent corrections to or reversals of payments that have already been refunded, for example, payments that have been reversed entirely cannot be reversed again or refunded.						
800	The Contractor shall ensure all adjustments to payments are shown on the account and are reconciled.						
801	The Contractor shall provide the capability to process multiple chargebacks on a payment if the previous chargebacks are reversed or represented.						
802	The Contractor shall provide detailed tracking of payments by payment categories, for example, payments, declines, reversals, returned payments, chargebacks, chargebacks reversals, chargeback representments, refunds, voided refunds and replenishment.						
803	The Contractor shall provide detailed tracking of payments by payment methods, for example, cash; check; Credit Card; ACH and mobile contactless NFC.						
804	The Contractor shall provide detailed tracking of payments by payment type, for example, Visa; MasterCard; American Express and Discover Card.						
805	The Contractor shall provide detailed tracking of payments by payment items, for example, invoices; Violation Notices; fees; penalties; tolls and prepaid tolls.						
806	The Contractor shall provide detailed tracking of payments by payment locations, for example, Self-Service Website, Self-Service Mobile Application (Phase II and optional), Lockbox Service Provider (optional) and Collection Agency.						
1.7.3.	**Merchant Service Provider (MSP)**						
	The MSPs shall process all Credit Card, Debit Card and ACH Services described in these Requirements.						

Volume II BOS Technology and Functionality

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807	The Contractor shall contract with two (2) separate MSPs for processing of BOS payments. The Contractor shall work with the Authority in determining the volumes and types of processing assigned to each MSP, which may result in shared processing or all processing being assigned to one (1) of the MSPs.						
808	The Contractor and MSPs shall provide Credit Card and Debit authorization for the BOS (card not present / internet and card present for the Walk-in Center) utilizing one or more merchant identification numbers.						
809	The Contractor and MSPs shall provide ACH clearing for the BOS.						
810	The Contractor and MSPs shall provide complete, flexible and timely online reporting services, including detailed transactions on chargebacks, card transactions, deposit totals and batch totals and summary information per merchant and for the Authority overall.						
811	The Contractor and MSPs shall provide all reporting online.						
812	The Contractor and MSPs shall provide a monthly analysis statement showing detailed charges for all account services for each merchant ID, including a combined statement analysis.						
813	The Authority shall be assigned dedicated MSP account representatives that can be contacted through a toll-free number and email.						
814	The MSPs shall provide customer support during business hours Monday through Friday 7:00 a.m. until 6:00 p.m. PST.						
815	The MSPs shall provide seven (7) days per week technical support utilizing a customer service phone number.						
816	The Contractor and MSPs shall cooperate with the Authority on assignment of accounts. The Authority will assign all bank accounts for the Authority's settlements and merchant activity. No merchant numbers or identifications shall be assigned to the Authority without written notice from the MSPs and Approved by the Authority.						
817	The Contractor and MSPs shall provide payment, settlement, and refunding services.						
818	The Contractor and MSPs shall provide daily settlement of merchant accounts.						
819	The Contractor and MSPs shall make next day deposits after settlement into the OCTA bank accounts.						
820	The Contractor and MSPs shall provide immediate online access to outstanding retrieval requests and chargebacks.						
821	The Contractor and MSPs shall provide a fully electronic online chargeback system that will accept electronic signatures and support files to satisfy outstanding retrieval requests and chargebacks.						
822	The Contractor and MSPs shall provide the ability to generate ad hoc reports with extracted information based on user-defined parameters.						
1.7.4.	**Payment Processing and Lockbox (optional)**						
	The use of a Lockbox Service Provider is at the discretion of the Contractor and shall be at no additional cost to the Authority. If provided, the following Requirements apply.						
823	The Contractor shall process, Post to the appropriate accounts, and reconcile payments transmitted by the Lockbox Service Provider if the Contractor elects to utilize a Lockbox Service Provider.						
824	The Contractor shall create an audit trail and an Operational Alert Notification via the PMMS regarding failures in the processes that Interface with the Lockbox Service Provider.						
825	The Contractor shall provide the capability to associate images of checks and stubs received at the Lockbox Service Provider to the proper account.						

Volume II BOS Technology and Functionality

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826	The Contractor shall provide the capability to receive and process Lockbox Exceptions and ensure payments are appropriately accounted for, including but not limited to: · correspondence items and customer comments associated with payments; · payments the Lockbox Service Provider is unable to associate to an account and · payments that the BOS is unable to Post to an account.						
827	The Contractor shall provide the capability for Authorized Users to research and determine the disposition of Lockbox Exceptions, including but not limited to: · Posting payment to the account; · refund payment to customer or · hold as un-allocated funds.						
828	The Contractor shall provide the capability to automatically create Cases for Lockbox Exceptions. For example, if a check was received without a payment coupon, it cannot be associated with an account and research must occur.						
829	The Contractor shall provide the capability to identify criteria which trigger specific Lockbox Exceptions (Configurable) which are flagged for further review, including but not limited to: · discrepancy above a threshold between amount on check and amount due; · payment made to accounts in particular statuses; · check dollar amount and · multiple payments for the same amount on the same account in the same batch or processing day.						
830	The Contractor shall provide the capability to electronically receive and process correspondence received at the Lockbox Service Provider, for example changes of address.						
831	The Contractor shall provide the capability for Authorized Users to view un-allocated funds (funds which have been Posted to the BOS but which have not been Posted to an account).						
832	The Lockbox Service Provider processing services shall take place within the State of California.						
1.7.5.	**Credit Card Processing**						
	The most common payment method in the BOS is Credit Card. The BOS shall have a simple and intuitive Interface with the Merchant Service Provider. The most efficient and cost-effective means of accepting Credit Card payments shall be employed in the BOS by the Contractor.						
	The Contractor's solution shall provide Credit Card payment tokenization and hosted third party Credit Card storage (or equivalent solution). This method is designed to eliminate the need to store Credit Card numbers within the BOS database therefore reducing risks and efforts for PCI Compliance.						
833	The Contractor shall contract with an Authority approved Merchant Service Provider.						
834	The Contractor shall use a Payment Gateway or a Direct Connection between the BOS and the Merchant Service Provider.						
835	The Contractor shall process all Credit Card payment transactions via the Merchant Service Provider.						
836	The Contractor shall provide for Payment Tokenization and Hosted Third Party Credit Card storage (or equivalent solution) such that the Credit Card information is not stored in the BOS.						
837	The Contractor shall provide an automated credit card update service (including both expiration dates and newly issued cards).						
838	The Contractor shall provide the capability to issue refunds to Credit Cards.						
839	The Contractor shall provide the capability to track data related to Credit Card inquiries, for example, capture date of inquiry, disposition date and disposition results when inquiries about Credit Card charges are received.						

Volume II BOS Technology and Functionality

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840	The Contractor shall provide the capability for Credit Card chargebacks and permit investigation of the details as Cases.						
841	The Contractor shall provide the capability for Authorized Users to reverse Credit Card chargebacks and to allow for a number of chargeback representments (Configurable)						
842	The Contractor shall provide the capability to credit accounts immediately upon a successful Credit Card payment authorization.						
843	The Contractor shall provide an Operational Alert Notification to the PMMS if a Merchant Service Provider response for a transaction is not received within a Configurable amount of time.						
844	The Contractor shall provide an Operational Alert Notification to the PMMS if a Merchant Service Provider response for an account contains codes that indicate the need for the Authority to contact the Credit Card company, for example a "referral code".						
845	The Contractor shall provide the capability to update accounts with the results from the Merchant Service Provider, for example a Credit Card transaction failed to authorize or settle due to a mismatched address error.						
846	The Contractor shall provide the capability to identify potential fraudulent Credit Card transactions and send an Operational Alert Notification to the PMMS, for example, when there are multiple failed authorizations for a single card.						
847	The Contractor shall provide, for validation purposes, fields to capture and store within the BOS Credit Card information, including but not limited to: · token; · Credit Card expiration date; · name on the card; · ZIP code and · billing address associated with the card.						
848	The Contractor shall provide the capability to submit disputes to chargebacks.						
849	The Contractor shall provide the capability to receive updates to individual customer Credit Card expiration dates from the MSPs.						
1.7.6.	**ACH Processing**						
	The cost of processing ACH transactions is generally lower than the cost of processing a Credit Card transaction, which is one of the primary reasons for including Requirements for this payment method. Many commercial customers also prefer ACH to Credit Card replenishment. ACH carries its own set of risks and challenges, which the Contractor will need to address. For example, the Contractor will need to address the timing of crediting an account after an ACH transaction is initiated and how ACH rejections will be processed.						
	Like the Credit Card process, the Contractor's solution shall provide Credit Card payment tokenization and hosted third-party routing and account number storage (or equivalent solution).						
850	The BOS and CSC Operations shall remain current with industry standards and advancements in technology and security related to Credit Card and ACH payments.						
851	The Contractor shall provide an Interface to the Merchant Service Provider or bank for ACH payment.						
852	The Contractor shall provide for ACH tokenization and hosted third-party ACH storage (or equivalent solution) such that ACH information is not stored in the BOS.						
853	Process all ACH payment transactions via the third-party hosted services.						

Volume II BOS Technology and Functionality

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854	Provide capability to process both ACH debits and ACH credits with the Merchant Service Provider or bank.						
855	Provide a selection for "Checking" and "Savings" account designation when ACH is selected for replenishment and ensure transmission to the bank carries such information.						
856	Provide the capability to verify the customer Bank Account information and availability of funds with the Merchant Service Provider prior to initiating an ACH debit.						
857	Credit customer's account immediately upon initiating an ACH debit.						
858	Provide the capability to reverse an ACH payment if declined by the bank.						
859	Provide an Alert to the PMMS if an ACH response for a transaction is not received from the bank within a Configurable amount of time.						
860	Provide sufficient protections (and Alert to the PMMS) to prevent multiple (duplicate) ACH payments for the same Bank Account number within a Configurable period.						
1.7.7.	**Check/Money Order Processing**						
	Checks received from customers shall be processed in the most efficient and cost-effective manner available in the payment processing industry.						
861	The Contractor shall provide the capability to accept checks (personal, cashier's or certified) as a form of payment.						
862	The Contractor shall provide the capability to accept money orders as a form of payment.						
863	The Contractor shall use Check 21 to electronically deposit checks and convert checks into ACH transactions.						
864	The Contractor shall Post to customer accounts and deposit into the Authority's bank account within one (1) Business Day of receipt.						
865	The Contractor shall provide scanning capability at the initial check or money order receiving and processing point. The resulting image shall be stored in the BOS, be available to Authorized Users and electronically transmitted to the bank for deposit.						
866	The Contractor shall provide the capability to mask Bank Account information, including the MICR line, for stored check images.						
867	The Contractor shall provide check scanning tools such that the resulting image can be optimized via image enhancing tools, including options for saving original and enhanced images.						
868	The Contractor shall provide the capability, when accepting check or money order payments, to automatically populate the check or money order number field via check scanner.						
869	The Contractor shall provide the capability to credit accounts immediately upon check or money order payment.						
870	The Contractor shall provide the capability to associate checks and stubs received at the BOS to the proper account.						
871	The Contractor shall provide the ability to receive batch payments from rental agencies to be applied to individual transactions.						
872	The Contractor shall provide the capability to batch process checks by scanning a payment coupon and check, automatically Post payments to customer accounts, automatically associate images with customer accounts and provide exception processing.						
873	The Contractor shall provide the capability to reverse all forms of check or money order payment if declined or returned by the bank, including the assessment of applicable fees.						

Volume II BOS Technology and Functionality

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874	The Contractor shall provide all armored services required for the physical transfer of cash or payment instruments.						
875	The Contractor shall provide live check verification at the WIC.						
876	The Contractor shall provide all reconciliations of funds received to BOS Posting and the Authority's bank account.						
1.7.8.	**Cash Processing**						
877	The Contractor shall provide the capability to accept cash as a form of payment.						
878	The Contractor shall provide a cash change fund and cash change fund management functionality, including but not limited to: · beginning balance; · ending balance and · reconciliation.						
879	The Contractor shall provide the capability to credit the account immediately upon receipt of cash payment.						
880	The Contractor shall provide the capability to process cash payment reversals.						
881	The Contractor shall provide the capability to set threshold amounts and role-based limits for cash payment reversals (Configurable.)						
882	The Contractor shall provide the capability to require approval for cash payment reversals using Cases.						
1.7.9.	**Online Wallet Payment Processing**						
	The BOS shall accept payments made via Online Wallet on all its online customer portals (Self-Service Website and Self-Service Mobile Application (Phase II and optional)). The specific Online Wallet services (up to five) will be defined during the Implementation Phase.						
883	The Contractor shall provide the capability to accept payments by Online Wallet. The Authority will elect to implement up to five of the most prominent Online Wallet payments available in the market at the time of the Implementation Phase.						
884	Online Wallet payments shall generally mirror the Credit Card functionality in terms of payments, return payments, refunds, reversals and chargeback capabilities.						
885	The Contractor shall provide detailed tracking of payments made by Online Wallet.						
886	The Contractor shall provide the capability to issue refunds to an Online Wallet. If the Online Wallet provider does not support automatic refunds (many Online Wallet providers require a manual process for refunds), or the underlying Credit Card associated with Online Wallet has been closed or expired, the BOS shall be capable of allowing Authorized Users to reverse the payment in the BOS and issue refunds by check.						
887	The Contractor shall provide the capability to track data related to Online Wallet inquiries, for example, capture date of inquiry, disposition date and disposition results when inquiries about Online Wallet charges are received.						
888	The Contractor shall provide the capability to credit accounts immediately upon a successful Online Wallet payment authorization.						
889	The Contractor shall provide an Operational Alert Notification to the PMMS if a response from an Online Wallet provider for an account is not received within a specified amount of time (Configurable).						
1.7.10.	**BOS Bank Interface Requirements**						
	The Contractor shall manage the Bank Accounts and the Interface from the BOS to the Authority's bank.						
890	The Contractor shall provide the Interface for Check 21.						

Volume II BOS Technology and Functionality

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891	The Contractor shall provide the capability to upload checks issued to customers (refunds/disbursements) to the bank for the purpose of Positive Pay. The file shall include, but not be limited to: · BOS Bank Account number; · check number; · check date; · check amount and · payee name (may be truncated based on bank's requirements).						
892	The Contractor shall provide automated reconciliation with the Authority's Bank.						
1.7.11.	**Refunds and Disbursements**						
	The Contractor will process and issue all refunds and disbursements to customers per the Business Rules and as determined by the Authority.						
893	The Contractor shall provide the capability to process refunds and disbursements for account closures, sales of transponder(s), overpayments, Violation disputes and other payments.						
894	The Contractor shall provide processes for refunds based on the original transaction and ensure such refunds are shown on the account history and are reconciled.						
895	The Contractor shall have the capability to restrict the method of refund to the original method of payment.						
896	The Contractor shall provide an automated approval process for Authority approval for all refunds over a Configurable amount						
897	The Contractor shall provide the capability to configure parameters related to refunds, including but not limited to: · type of payments that are not eligible for refund; · the criteria for refunds by payment methods (Credit Card, ACH, check, cash, money order etc.); · the hold period for Credit Card refunds and check refunds; · maximum (role-based) allowable refund payment by Payment Type. For example, a refund of more than $250 might require manager approval; · minimum (role-based) allowable refund payment by Payment Type. For example, the Authority may elect not to issue a check refund for less than $1.00 unless requested by the customer and · manual review of eligible refunds before processing the refunds.						
898	The Contractor shall provide the capability to determine eligibility and issue refunds automatically to customers based on various activities on the account, including but not limited to: · closure of an account; · unapplied checks/money order and · overpayment of an invoice or Violation Notice where no outstanding invoices, Violation Notices or unbilled tolls exist.						
899	The Contractor shall provide the capability to review and process all eligible refunds and initiate the refund process.						
900	The Contractor shall provide the capability to route a refund approval through Cases, to require multiple approvals of refunds and to accommodate the refund approval process.						
901	The Contractor shall provide the capability to issue refunds using the same method that the payment was received. For example, a check payment will be refunded by check and Credit Card to the same Credit Card.						

Volume II BOS Technology and Functionality

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902	The Contractor shall provide the capability to issue refunds by check after approval by an Authorized User when the Credit Card which was used for the original payment method has been deactivated or based on a customer request.						
903	The Contractor shall provide the capability for the automated processing of refunds (for example, for a successful account closure) and automatically create a Case for an Authorized User to issue the refund.						
904	The Contractor shall provide the capability to store all details regarding check refunds issued which shall be viewable by Authorized Users on the account, including but not limited to: · check number; · check amount; · date check was issued; · check payee details; · the date the check cleared the bank; · notes; · the reference number and · reason for issuing the check.						
905	The Contractor shall provide the capability to void a refund or disbursement check, which shall restore the payable balance.						
906	The Contractor shall provide the capability to void and reissue a refund or disbursement check.						
907	The Contractor shall provide the capability for Authorized Users to manually override the refund payee information, for example, when a refund is due to a deceased customer's estate.						
908	The Contractor shall provide the capability for Authorized Users to initiate refunds from unapplied payments (for example when a payment that was made to the BOS in error is deposited but is not applied to an account and needs to be refunded).						
909	The Contractor shall provide the capability to record refund checks issued by the Authority in the BOS. For example, certain refund checks may be issued from the Authority's financial accounting systems; these checks shall then be recorded in the BOS against the customer's account and reported in financial reports as a check issued by the Authority.						
1.7.12.	**Bankruptcy**						
	Generally, the bankruptcy process begins with an official notice of bankruptcy being issued by a court. This notice generally requires creditors to "stay" any escalation while the bankruptcy is processed through the courts. When the bankruptcy is finalized, the court sends an official notification which will indicate any reductions in amount due.						
910	The Contractor shall provide the capability to manage accounts for customers who have filed for bankruptcy.						
911	The Contractor shall provide the capability to record the effective date of a bankruptcy and bankruptcy type, which automatically flags the account for bankruptcy, holds all activity on outstanding debt which occurred prior to the filing date and issues a letter to the debtor or attorney on file.						
912	The Contractor shall provide the capability to enter the 'as of' (stay) date of bankruptcy and apply Business Rules to transactions occurring after that date (new tolls incurred after the bankruptcy date are billable).						
913	The Contractor shall provide the capability to record when a bankruptcy has been granted which will write off all outstanding penalties and generate a letter to the customer requesting payment of the tolls.						

Volume II BOS Technology and Functionality

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914	The Contractor shall provide the capability to cease escalation of any transactions that occurred on or before the "stay" date (typically the bankruptcy filing date).						
915	The Contractor shall provide the capability to continue processing transactions subsequent to the date and time of bankruptcy notification.						
916	The Contractor shall provide the ability to record a dismissed bankruptcy and restart the escalation and collection process.						
917	The Contractor shall provide the ability to record and store all bankruptcy filings required by the courts.						
1.7.13.	**Shift Management**						
	The Contractor shall reconcile the financial and asset activity of every person that works in the BOS at the end of each shift.						
918	The Contractor shall provide the capability for the BOS to automatically open a shift for an Authorized User at the time of first applicable transaction based upon user role.						
919	The Contractor shall provide the capability to prompt for beginning balance or Authorized User bank (including option to list denominations).						
920	The Contractor shall provide the capability to populate opening shift balance and assign a unique Authorized User ID, including location, for all transactions processed during the shift.						
921	The Contractor shall provide the capability to automatically prompt to close a shift at logout time if an open shift exists.						
922	The Contractor shall provide the capability to display and reconcile all transactions and activity in a shift.						
923	The Contractor shall provide the capability to separate transactions that affect the Authorized User's deposit, for example, cash, check, ACH, Credit Card or other payment, from transactions that affect the BOS balances, for example, waiving a fee for a customer.						
924	The Contractor shall provide the capability for reconciliation of transponders and other inventory items issued and payments.						
925	The Contractor shall provide the capability to create an Alert to the supervisor when a CSR's bank goes above a threshold (Configurable). For example, if CSR's bank goes above $200 the supervisor may want the CSR to do a "bank drop."						
926	The Contractor shall provide feedback to Authorized User if the shift does not balance.						
927	The Contractor shall provide the capability for an Authorized User to attempt to balance the shift a number of times (Configurable).						
928	The Contractor shall provide the capability to escalate the shift to an Authorized User for research and closing after a number of unsuccessful attempts (Configurable) has been reached.						
929	The Contractor shall provide settings to either display or not display the shift variance dollar amount to the Authorized User during shift closing (Configurable).						
930	The Contractor shall provide settings to either display or not display the shift inventory (transponders and other inventory items) variance amount to the Authorized User during shift closing (Configurable).						
931	The Contractor shall provide the capability to configure all relevant parameters related to closing a shift, with a default value that can be overridden based on unique user ID, including but not limited to: · the number of times the Authorized User can attempt to balance the shift; · the amount of allowed variance by dollars and · the amount of allowed variance by percentage.						
932	The Contractor shall provide the capability to close a shift once it is balanced.						