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California Air Resources Board (CARB) Heavy Duty Inspection and Maintenance (HD I/M), Senate Bill (SB) 210 Project

(Also Known As: Clean Truck Check – Vehicle Inspection System (CTC-VIS Project)

Special Project Report

September 2025

CALIFORNIA AIR RESOURCES BOARD

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1.1 Project Background/Summary

Statewide, approximately 12 million Californians currently live in communities that exceed the federal standard for ozone and fine particulate matter (PM 2.5). The South Coast and the San Joaquin Valley air basins need critical actions to reduce emissions to reach federal attainment standards. Achieving federal air quality standards in these regions, as well as across the State, will provide essential public health protection by reducing hospitalizations for heart and lung related causes, decreasing emergency room visits, and reducing incidences of asthma. Most critically, exposure to PM 2.5 and ozone is associated with increased risk of premature mortality. In addition, toxic diesel PM accounts for approximately 75 percent of air pollution-related cancer risk in California. Mobile source emissions (i.e., those from cars, trucks, and off-road equipment) are the largest contributors to the formation of ozone and toxic diesel PM in California.

CARB's pre-existing HD inspection programs consist of the Heavy-Duty Vehicle Inspection Program (HDVIP) and Periodic Smoke Inspection Program (PSIP). HDVIP relies on field inspections by CARB staff to test a small percentage of vehicles per year, and PSIP required self-inspections by California fleets of two or more vehicles whereby the fleets keep test records in case of an audit and have been replaced by this Clean Truck Check program. Neither of these pre-existing programs relies on the submission of vehicle test data to a central database. Additionally, neither of these pre-existing programs subject all vehicles operating in California to annual testing requirements. The HDVIP and PSIP programs were established in the 1990's, before the development of after-treatment emissions control systems that can dramatically reduce PM and oxides of nitrogen (NOx) emissions when operating properly. Both HDVIP and PSIP rely on smoke opacity inspections to determine vehicle compliance. Smoke opacity testing does not measure NOx emissions and thus does not have the ability to determine if those after-treatment systems are properly maintained. CARB research, testing, and modeling indicates that the levels of in-use emissions are significantly higher than expected based on current engine and vehicle standards. This indicates that current NOx and PM emissions are significantly higher as a result of failure to maintain vehicles properly. Emissions control systems on vehicles have become more effective, but also more complex, and the opacity-based test procedures included as part of HDVIP and PSIP to detect malfunctions have not kept pace with current technology. The current HDVIP and PSIP opacity testing requirements are no longer sufficient indicators of whether the complete emissions control system on a modern-day vehicle is operating as designed, and thus, new HD vehicle inspection requirements must be established to ensure HD

vehicle emissions control systems operate properly and maintain low emissions while operating in California.

Due to this pressing need to reduce emissions from the HD vehicle sector, the California legislature passed, and Governor Newsom signed SB210, which directs CARB and relevant agencies to develop a Heavy-duty Inspection and Maintenance (HD I/M) program which is referred to as the Clean Truck Check program. Since the 1980s, passenger cars and light-duty trucks have been subject to an I/M program (Smog Check Program) in California that requires vehicles to have regular OBD inspections to ensure working emissions control systems are properly functioning to register with the California DMV. Exhaust after-treatment emissions control systems have long been in use in light-duty passenger vehicles starting in the 1970s, but these types of systems have only come in to use in HD vehicles in the last 15 years. Now that HD vehicles are equipped with after-treatment systems such as diesel particulate filters, selective catalytic reduction systems, and related sensors, the HD I/M program ensures all of these emissions control systems are functioning properly as needed.

Successful implementation of a comprehensive HD I/M program is expected to deliver significant statewide PM and NOx emissions benefits beyond that of pre-existing regulations. In 2024, this program is expected to reduce 8.7 tons per day (tpd) NOx and 0.09 tpd PM emissions in the San Joaquin Valley. In 2037, it is projected to cut statewide NOx emissions by 81.9 tpd and PM emissions by 0.7 tpd. The PM and NOx reduction would result in roughly 7,600 avoided premature deaths and 6,000 avoided hospitalizations statewide, which are equivalent to monetized health benefits of $76.2 billion for the 2023-2050 period.

1.2 Project Status

The CTC-VIS project is divided into two (2) phases. Phase 1 development and User Acceptance Testing (UAT) is complete, and the functionality has been in production since October 2023. Phase 2 is planned to complete by October 2025, and new functionality will be released into production on October 31, 2025.

Note: In Amendment 1, this Project is divided into Phase 1a and 1b, Phase 2, Phase 3, and Phase 4. The project team made the decision to have Phase 2 Release 1 and 2, which includes Phase 3 and 4 scope.

The project is currently generating $30M in annual revenue through annual vehicle compliance fees. The table below details the project's scopes and its status.

#	Project Scope	Status
1	Develop a solution that supports HD I/M vehicle/fleet registration and determination of the program compliance for	Completed

#	Project Scope	Status
	all in/out-of-state HD vehicles operating on California roadways.	
2	Develop a solution that will utilize periodic submission of HD vehicle test data to ensure vehicle's emission control systems are operating properly.	Completed
3	Develop an information technology (IT) database (system) to collect and track vehicle test data, assess the data to determine compliance, and generate lists of noncompliant vehicles for which DMV registration may be withheld.	Completed
4	Develop a financial transaction account management system for processing and tracking all compliance fees, fines, and other monetary values at the vehicle/fleet owner level that can integrate with existing CARB accounting practices. Generally accepted account management principals need to be applied.	Completed
5	Develop a solution that will generate a valid HD I/M compliance certificate.	Completed
6	Develop a solution to allow for collection of vehicle test data at specific predetermined intervals.	Completed
7	Integrate with CARB's Enforcement Division (ED) systems to obtain existing and/ or new enforcement actions, including California Highway Patrol (CHP) violations, prior to issuance of the program compliance certificate.	Completed
8	Integrate with California DMV interface to obtain vehicle and vehicle owner information. HD I/M compliance must be confirmed prior to issuance of new or renewed vehicle registrations.	Completed
9	Design and build a secure network and supporting system to capture OBD, opacity, or visual inspection via Telematics vendors' systems, external HD I/M testers (as defined in the California Code of Regulations (CCR) Title 13, Section 2197.1 HD I/M Tester Requirements), and Referees for analysis of vehicle compliance or non-compliance.	Completed
10	Integrate with a modernized identity management protocol and facility to ensure secure user-account generation and administrator access to the HD I/M system.	Completed

#	Project Scope	Status
11	Ensure that the system meets the needs of CHP, DMV and Department of Transportation (DOT) to the extent required to meet all HD I/M requirements in a timely manner as indicated by CARB.	Completed
12	Ensure data integrity of all source system data, prior to sending to HD I/M for consumption.	Completed
13	Develop a solution that will allow Referee testers and CARB staff the ability to approve of a vehicle request for an exemption from HD I/M requirements.	Planned to complete October 2025
14	Build and implement a real-time interface to ED data sets including ED Citations, CHP Citations, Remote Sensing Device (RSD) failure type, Automatic License Plate Reader (ALPR) data (Vehicle Identification Number (VIN) and license plate number) and HD I/M tester certification information.	Planned to complete in October 2025
15	Support Organizational Change Management planning and implementation including Cultural Change Management, Stakeholder communication and outreach and end user and internal user training.	Planned to complete in October 2025
16	Develop a solution that will facilitate fraud detection and prevention including a Referee inspection requirement.	Planned to complete October 2025

System integration expenditures by the end of Phase 2 are expected to be $17.8M and AWS hosting are expected to be $1.1M.

1.3 Reason for Proposed Change

The HD I/M Project (Clean Truck Check (CTC)) successfully designed, developed, and implemented (DDI) three (3) production releases in 2023, 2024, and 2025. The last DDI release is currently scheduled for October 31, 2025. The Project has an opportunity to improve the system by implementing critical backlog enhancements to optimize several functional areas of the CTC-VIS solution and add new functionalities based on lessons learned and stakeholder's feedback. These added enhancements will significantly boost the CTC-VIS's user-friendliness to both internal and external users, gain State's confidence on the system's robust automated test data verification and authentication to prevent fraudulent activities, hence ensure the program's estimated emission reduction and revenues are achieved. The Project requests to extend the DDI from November 1, 2025, through December 31, 2026, and start the M&O phases on January 1, 2027, through December 31, 2030.The original contract approved the Contractor who successfully implemented its cloud solution for hosting the HD I/M system (Clean Truck Check – Vehicle Inspection System (CTC-VIS)). In early 2024 California Department of

Technology (CDT) directed the Project to comply with the Technical Letter 23-03 Cloud Computing Policy Cloud Smart policy, resulting in transitioning from the Contractor to the CDT cloud hosting and CARB taking over software license costs. The Project submitted Amendment 1 to document the transition of the hosting to CDT's cloud hosting and reduce software license scope and costs. The Project requests to redirect unspent Financial Analysis Worksheet (FAW) CARB line items as well as additional funding to cover the CDT cloud hosting and software license costs as well as additional functionalities and enhancements to the CTC-VIS solution requested as part of this SPR.

1.4 Proposed Project Change

1.4.1 Proposed Project Change Summary

The CARB HD I/M Project (also known as CTC-VIS) seeks to extend the Design, Development, and Implementation (DDI) by fourteen (14) months, and add up to $18.4M to the Contractor's contract. The requested $18.4M also includes the mandatory optional hours costs for the 4 M&O years allotted in the current contract. The proposed changes the project is seeking are:

- **On Board Diagnostic (OBD) Test Submission and Fraud Detection**: Enhancements to ingest and translate raw CAN data from test submissions thereby improving the ability to identify modified vehicles and/or simulators being used to commit fraudulent HD I/M emissions inspections.
- **OBD Test Device Certification Platform**: Enhances the OBD Test Device Certification lifecycle to ensure only compliant hardware is used by tracking certification status from submission to completion.
- **DMV Interface:** Enhances the interfacing between DMV and CARB, replace manual workflows, and enable real-time compliance updates.
- **Credentialed Tester Portal:** Implements hierarchical account structure for Credentialed Tester users thereby providing centralized oversight and streamlined workflows. Adds Multi Factor Authentication (MFA) to prevent fraudulent testers from accessing the system.
- **Vehicle/Fleet Owner Portal**: Enhances Vehicle/Fleet Owner appointment scheduling, multi-document upload, automated eligibility checks, and compliance notifications.
- **Fee and Payment Processing:** Enhances the payment module to include configurable fee rules and extended functionalities for administrators.
- **Compliance Configuration and Management:** Implements a rules engine to manage vehicle compliance logics and testing requirements. Provide CARB flexibility to configure the program requirement checks.
- **Enhanced System Configuration**: Enhances administrator functionality to improve management of reference values, take action on entities, and search devices and test submissions.

- **iText Software**: Continues the software licensing for iText PDF application to support the required PDF generation for CTC compliance documents.
- **Robust System M&O Support:** Ensures sufficient Contractor's support on the original contract's scopes and add-on enhancements as part of this SPR.

1.4.2 Proposed Project Change Details

1.4.2.1 On Board Diagnostic (OBD) Test Submission and Fraud Detection

This builds upon the current OBD data handling platform to include the capability of processing the raw OBD data format. The system will be upgraded to ingest and store raw CAN messages with precision timestamps, distinguishing between request and response types. It will also translate hexadecimal data from all specified SAE protocols (J1939, J1979, J1979-2) into a human-readable format.

This capability will enable an automated validation process that scrutinizes every OBD test submission for authenticity. Key anti-fraud checks include:

- Verifying the Firmware Verification Number against registered device firmware.
- Confirming VIN consistency between the data header and CAN messages.
- Rejecting duplicate or out-of-sequence records to prevent data replay attacks.

This automated vetting process provides CARB with a high degree of confidence in the data used for enforcement and analysis. The engine will also evaluate submissions against specific program rules, like CALID/CVN validation for specific VINs or vehicle groups etc. and automatically flag or fail non-adherent test results. Preventing fraudulent or invalid data from entering the system at the point of ingestion will minimize downstream data correction efforts and ensure that compliance decisions are based on a foundation of verifiable information.

1.4.2.2 OBD Test Device Certification Platform

The platform will feature a comprehensive module for the complete lifecycle management of OBD test device certification. This system will enable CARB to add and manage device make and models, update firmware and verification numbers, and track the certification status of a device from "submitted" to "complete." CARB's OBD Test Device Certification team will be able to configure the number of devices a vendor can use for pre-certification testing and access all raw and translated data submitted during the certification process.

As part of this test device certification platform, a new Device Vendor Portal will be developed. The portal will allow vendors to better manage their certified device models, perform batch upload of unique serial numbers, and keep their device firmware information up to date. Vendors will have access to register devices for pre-certification and field testing, view the results of their data submissions, and access both raw and translated OBD data.

This added feature will reduce the administrative burden on CARB staff, who will retain master control to manage the entire device landscape. This creates a transparent and efficient workflow, ensuring all hardware submitting data is compliant and up to date.

1.4.2.3 DMV Interface

This DMV interface enhancement will replace the current manual process with a fully automated, reliable, and secure data exchange pipeline with the DMV. A real-time REST web API will be delivered to service on-demand and/or batch requests from DMV on vehicle program compliance status. CARB administrators will have full control to modify the submission schedule and access a complete audit history of all transmissions.

1.4.2.4 Credentialed Tester Portal

Driven by tester feedback, this feature will provide a transformative master account structure for the tester portal. This represents a foundational shift from the current individual-user model to a more sophisticated, team-based framework. This major enhancement will empower a primary "master" user to manage an entire team of representative testers, providing centralized oversight of all associated accounts and their test submissions from a single dashboard. This change will dramatically streamline workflows for testing organizations and significantly improve data accountability for CARB.

Testers will also be able to register, manage, and remove their OBD test devices and submit required documentation, such as Visual Inspection attachments, directly through their accounts. The portal will provide clear success or failure messaging for all actions, ensuring a user-friendly and efficient experience that is tailored to the specific needs and notification preferences of the tester role.

As part of the enhanced credentialed tester feature, Multi-Factor Authentication (MFA) will be required for all credentialed tester accounts. This brand-new layer of security is specifically designed to prevent fraudulent or banned testers from accessing the system, ensuring all tests are submitted by verified, legitimate users.

1.4.2.5 Vehicle/Fleet Owner Portal

The Vehicle/Fleet Owner Portal's functionality will be expanded with a new suite of on-demand capabilities that empower users and streamline all program interactions. Major feature enhancements will include:

- A complete appointment management system for Referee tests.
- An easy-to-use multi-document upload capability.
- An automated vehicle eligibility check prior to submission.
- A critical notification system for compliance updates.

These upgrades will create a more user-centric experience, significantly improving stakeholder satisfaction and driving program compliance.

1.4.2.6 Fee and Payment Processing

The system's current payment functionality will be significantly upgraded to create a more flexible and automated financial processing module. The system will be designed to accommodate future changes to the fee rules, including variations in vehicle group, amount, and frequency.

1.4.2.7 Compliance Configuration and Management

The system will be upgraded to give CARB more control over the program's logic directly. CARB administrator will be able to configure, manage, and deactivate a wide array of business rules governing the entire compliance lifecycle without requiring developer intervention. This includes setting testing requirements (i.e., OBD, opacity, visual), defining testing frequencies, and managing criteria for vehicle compliance certificates.

This approach future-proofs the system against regulatory changes, allowing CARB to implement updates directly through an administrative interface, whether adjusting fee structures or modifying inspection checklists.

1.4.2.8 Enhanced System Configuration

A robust set of configuration tools will be developed for CARB Administrators, ensuring they have the flexibility to adapt the platform as program needs evolve, this includes the ability to manage list of values (add/deactivate) and manage user and entity deactivation rules. The system will also feature robust search functionalities, allowing CARB staff to easily find test devices by model or vendor, and access all test submission from a particular device.

1.4.2.9 iText Software Licensing

iText software is currently being used since October 2023 and is being added to the contract. The Contractor has absorbed costs for DDI Year 1 and Year 2. Adding this software will allow for payment for DDI Year 3, DDI Year 4 plus 2 months, and 4 years of M&O. The CTC-VIS system produces multiple electronic copies of compliance documents, which is generated for external users such as Vehicle Compliance certificates, Affirmation of Fleet Wide Compliance certificates, Five-Day passes, etc. in PDF format for their records. The iText software licensing is needed to continue supporting PDF file generation adhering to ADA compliance requirements for the CTC-VIS.

1.4.2.10 Robust System M&O Support

Given the current system’s complexity along with the additional functionalities as part of the SPR, it is critical to ensure there is an adequate support from the Contractor during the M&O phases. The requested additional Contractor resources for M&O will allow for timely support if unexpected production issues arisen as well as necessary system enhancements to accommodate end user’s needs. The CTC-VIS database is expected to continually evolve given the first time State implementing a comprehensive Clean Truck Check program on heavy-duty vehicles. A robust CTC-VIS operation will help increase end users’ confidence in State’s

implementation of this critical program in reducing significant harmful emissions from heavy-duty vehicles operating in California.

The following three staffing categories and associated budget recommendations (% of an estimated $20,000,000 DDI budget) follow industry best practices and are adjusted based on experience with prior projects, the size, and complexity of CTC-VIS. The recommendation is to add an additional nine (9) contractor team members spread across the three categories, in addition to the five (5) contract budgeted Lights-On staff and three (3) Mandatory Optional staff (if approved).

Additional best practices to support the staffing estimation efficacy across the three categories below include the ongoing M&O year-by-year refinement of staffing estimates based on actual operational data as the program matures as well as fluctuations in legislation or regulation impacting the program.

a. Lights-On Maintenance and Operations Staffing
   - Best Practice Staffing: 11% of DDI Budget
   - Recommended CTC-VIS Staffing: 11% of DDI Budget = 3 additional staff

Lights-On Maintenance and Operations cover mandatory support activities to keep the system running reliably. This includes minor critical enhancements (less than two weeks in effort), defect repair, and necessary operational fixes that do not alter core functionality.

b. Enhancement Staffing
   - Best Practice Staffing: 17% of DDI Budget
   - Recommended CTC-VIS Staffing: 9% of DDI Budget = 3 additional staff

Functional enhancements involve adding, changing, or deleting functionality, and may include developing new subsystems. The plan is to make ongoing improvements that keep the CTC-VIS application current and relevant. Enhancement work usually requires specialized skills based on the functionality requirements in question.

c. Operational Enhancement Staffing
   - Best Practice Staffing: 7.5% of DDI Budget
   - Recommended CTC-VIS Staffing: 4% of DDI Budget = 3 additional staff

Whereas Lights-On Operational Maintenance covers the day-to-day running of the application, including monitoring, hosting, backups, and incident response, this does not cover planned operational improvements. By including additional Operations Staff, the team could improve the infrastructure and technical components that would not normally occur with lights-on maintenance & operations. Improvements could include AWS architecture updates for cost savings, pre-meditated performance and security enhancements, cross-training to optimize coverage and flexibility, and automation of routine operational tasks to improve accuracy and efficiency of execution, which further supports a more seamless transition to State staff when the time comes to turn CTC-VIS system maintenance over to CARB.

1.4.3 Cost Summary Tables

The table below details the additional Contractor's costs for this SPR.

Title	Cost
On Board Diagnostic (OBD) Test Submission and Fraud Detection	$2,020,000
OBD Test Device Certification Platform	$1,065,000
DMV Interface	$810,000
Credentialed Tester Portal	$105,000
Vehicle/Fleet Owner Portal	$30,000
Fee and Payment Processing	$82,000
Compliance Configuration and Management	$215,000
Enhanced System Configuration	$65,500
DDI Scope Sub-Total	**$4,392,500**
Extend DDI M&O 14 Months	$2,015,417
DDI iText Software Licensing (6/1/2025 – 12/31/2026)	$72,833
DDI Microsoft Software (6/1/2026 – 12/31/2026)	$78,052
DDI M&O Cost Sub-Total	**$2,166,302**
Base Maintenance & Operation Target Year 1 - 4	$1,890,000
Base M&O Enhancement (includes mandatory optional hours allotted in the current contract)	$6,800,000
Operations	$3,000,000
M&O iText Software Licenses	$184,000
M&O Sub-Total	**$11,874,000**
Total Amount Requested	**$18,432,802.00**

1.5 Feasible Alternatives

The team could simply maintain the current system developed during Phase 1 and 2. However, the current system, while meeting the project objectives, has many opportunities for more user-friendly screens, streamline business processes, as well as robust program compliance data verification and authentication. Not improving the current CTC-VIS database will have the following impact:

Impact on Emissions Compliance

The compliance levels within the Clean Truck Check program will be negatively impacted due to higher risks of fraudulent test data submission. These issues will lead to an increase in non-compliant, malfunctioning vehicles continuing to operate in California, resulting in a reduction in emissions achieved from vehicle repairs within the program. The Program risks not meeting statutory and regulatory requirements.

Impact on Revenue Generation

The Clean Truck Check program generates an estimated $30 million dollars in revenue per year through annual vehicle compliance fees. Without the requested system enhancements, fraudulent testing activity may not be addressed in a timely manner. This risks non-compliant vehicles and fleets circumventing the program requirements, including the annual fee requirement.

CARB Resource Capacity Savings

The current DMV interface still requires staff manual work to SFTP CTC compliance list. Without a fully automated compliance data transmission process via API, current state resources will not be able to be redeployed to activities that are of higher and better use.

User Experience and Impacts to Transportation Businesses

User experience will be negatively impacted, specifically:

- The lack of a more systematic platform to manage tester accounts will potentially delay efficient testing services to the regulated entities. Impacting trucking and business operations throughout the state will have longer wait times to get their vehicle compliance status assessed.
- The lack of enhanced Vehicle/Fleet Owner features will make it less convenient for fleets to manage their account and vehicle information, and consequently potential delay in their ability to meet the program compliance requirements.
- As mentioned above, the current system is required to issue electronic copies of various program compliance documents including vehicle compliance certificates that vehicle owners can use as their proof of compliance. The lack of ADA adherent iText software could result in unlevel playing fields for vehicle owners with disability in accessing their program compliance documents.
- Unaddressed fraudulent activities that may result from not improving the current system's test data processing and validation will lead to an unlevel playing field between those fleets that are properly complying with the regulation and those that are skirting the requirements, hurting those fleets that are properly complying with the program. These issues will result in public frustration, confusion for the regulated industry, and a loss of user acceptance and confidence in the Clean Truck Check program, hindering the growth of the program and hurting transportation businesses operating in California.

1.6 Implementation Plan

The Project Team will utilize the existing Project's DDI processes for breaking down the work efforts and deliverables utilizing the Work Order Authorization (WOA) and Work Order Acceptance Document (WAD) processes. All WOAs, WADs, and any potential change requests will be included as tasks within the project schedule.

2.0 Updated Project Management Plan

2.1 Project Manager Qualifications

This SPR has no impact on the Project Manager qualifications. CARB will retain the same Project Manager.

2.2 Project Management Methodology

The project team will continue to leverage a hybrid project management methodology. This hybrid approach defines high level epics through a short discovery and then iteratively develops functionality using a Scrum development methodology. This project management methodology is defined in the current contract and project management plans.

2.3 Project Organization

This SPR has no impact on the Project organizational structure. CARB will retain the same organizational structure.

2.4 Project Priorities

The project priority is Phase 2 Releases 3&4, which the proposed scope changes are identified in Section 1.4.1 Proposed Project Change. This work effort is a fixed price bid, and all extended DDI scope is to be completed by the Contractor by December 31, 2026.

2.5 Project Plan

2.5.1 Project Scope

The project scope is identified in Section 1.4.1 Proposed Project Change, which will extend DDI to December 2026 and enhance M&O years. The Project will utilize the existing project schedule processes, and it will be updated to reflect added work effort tasks, WOAs, WADs, and deliverables.

2.5.2 Project Assumptions

This SPR has no impact on the Project assumptions.

2.5.3 Project Phasing

The Project has been using a phased development approach which included Phase 1a and 1b, and Phase 2 Release 1 and 2, which includes Phase 3 and Phase 4 scope. This proposal seeks to add Release 3 and 4 in Phase 2, using three-week sprints in duration.

2.5.4 Project Roles and Responsibilities

This SPR has no impact on the Project Roles and Responsibilities.

2.5.5 Project Schedule

Prior to this SPR, the DDI ends on 10/31/2025. The following table provides updated project schedule for this SPR.

Task Name	Start Date	Finish Date
DDI Maintenance and Operations	**11/3/2025**	**12/30/2026**
Task 1 Task Management - TAPs	**11/3/2025**	**11/19/2026**
Task 2 - System Implementation (DDI)	**11/3/2025**	**12/30/2026**
Phase 2 Release 3 Implementation	11/14/2025	6/25/2026
Phase 2 Release 4 Implementation	6/26/2026	12/30/2026
Maintenance & Operations/90 Days Stabilization/6 mos. Warranty	**1/1/2027**	**6/30/2028**
Stabilization Period (90-Cal Days) - parallel with M&O	1/1/2027	3/31/2027
6-Month Warranty	4/1/2027	9/30/2027
Maintenance & Operations (Full System - SLAs in-play post Stabilization Period) - 1.5 Years	1/1/2027	6/30/2028

2.6 Project Monitoring and Oversight

The Project has been using a phased development approach which includes Phase 1a and Phase 1b, Phase 2 – Release 1 and Release 2, which Phase 3 and 4 scope was included. This proposal seeks to add Phase 2 – Releases 3 and 4, utilizing the existing sprint methodology. The Project will continue using the WOA process for approving scope work efforts. The WADs will be used by the State to accept and approve the completed work defined in the WOA.

2.7 Project Quality

This SPR has no impact on the types of Project Quality efforts.

2.8 Change Management

This SPR has no impact on the change management for the project. The project will follow the change management process outlined in the Change Management Plan.

2.9 Authorization Required

The Steering Committee has approved CR 010 that extend DDI by fourteen (14) months, add scope as defined in Section 1.4 Proposed Project Change, and add budget of $18.4M, which is the input into this SPR.

2.10 Updated Risk Management Plan

This SPR has no impact on the Risk Management Plan for the project. The project will follow the risk management plan outlined in the Project Plan.

2.11 Risk Register

This SPR has no impact on the risk register for the project. The risk register will continue to be updated according to the Risk Management Plan.

2.12 Updated Financial Analysis Worksheets (FAW)

Executive Cost Summary Changes:

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
Planning Costs (One-Time)	$8,147,898	$5,885,867	-$2,262,031	The costs have been trued up based on the actual invoices paid to CDT and external consulting and professional services (i.e., IV& V and Estrada contract for CARB PM and BA)
Project Costs (One-Time)	$27,300,602	$33,617,765	$6,317,163	The costs have been trued up based on the actual expenses for staff, CDT, and external contracts (IV&V, Estrada, and Oncore (now called Voyatek). In addition, these costs also have taken into account the additional funding needed for the Contractor (Voyatek) to extend the DDI for 14 months to add on critical functionalities and enhancements.
Future Operations IT Staff & OE&E Costs (Continuing)	$8,093,664	$8,650,320	$556,656	The costs have been increased to include additional funding needs for Contractor's contract during M&O to ensure sufficient Contractor resources to support a robust M&O.
TOTAL PROJECT COSTS	**$43,542,164**	**$48,153,952**	**$4,611,788**	**The line-item changes above have resulted in an increase in the total project costs of $4.6M.**
Annual Fut. Ops. IT Costs (M&O)	$4,058,974	$5,766,880	$1,707,906	The costs have been increased to include additional funding needs for

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
				Contractor's contract during M&O phases

Project Cost Changes:

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
Existing Staff To Be Redirected – Monthly Salary – Rows 8 through 19	The monthly salary for each classification is in Column C	Updated monthly salary for each classification is in Column C	Cost changes embedded in the line items below	The monthly salary has been updated to FY25/26 for each classification.
Existing Staff To Be Redirected – Positions – Rows 8 through 19	The number of each position is in Columns T, V, X, & Z	The updated number of each position is in Columns T, V, X, & Z	Cost changes embedded in the line items below	The number of positions has been trued up based on actual staff working on the CTC-VIS project. The Contractor has met and exceeded expectations. CARB staff has successfully established a good working relationship with the Contractor, significantly streamlining the project development and implementation process. The project overall has been progressing more efficiently than originally expected, enabling staff reallocation to other aspects of Clean Truck Check implementation with higher need that are not CTC-VIS related.
Total Salaries and Wages – Row 123	$1,846,571	$1,675,706	-$170,865	Updated monthly salaries and positions have resulted in updated total salaries and wages for existing staff.
Overtime, Holiday, Others – Row 124	$0	-$58,000	-$58,000	Adjustments have been made to the Total Salaries and Wages for Existing Staff To Be Redirected

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
				to reflect actual salary for each classification in FYs prior to FY25/26. As staff salaries increased each FY, the negative values in this line item reflect the lower actual costs paid out to staff in the prior FYs.
Dept. Benefits Rate (%Salaries/Wages) – Row 125	$1,144,504	$946,725	-$197,779	Updated total salaries and wages for existing staff have resulted in updated benefits rate for existing staff.
New Staff – Monthly Salary – Rows 129 thru 141	The monthly salary for each classification is in Column C	Updated monthly salary for each classification is in Column C	Cost changes embedded in the line items below	The monthly salary has been updated to FY25/26 for each classification.
New Staff – Positions – Rows 129 through 141	The number of each position is in Columns T, V, X, & Z	The updated number of each position is in Columns T, V, X, & Z	Cost changes embedded in the line items below	The number of positions has been trued up based on actual staff working on the CTC-VIS project. The Contractor has met and exceeded expectations. CARB staff has successfully established a good working relationship with the Contractor, significantly streamlining the project development and implementation process. The project overall has been progressing more efficiently than originally expected, enabling staff reallocation to other aspects of Clean Truck Check implementation with higher need that are not CTC-VIS related.
Total Salaries and Wages – Row 234	$1,975,116	$848,557	-1,126,559	Updated monthly salaries and positions have resulted in

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
				updated total salaries and wages for new staff.
Overtime, Holiday, Others – Row 235	$0	-$19,145	-$19,145	Adjustments have been made to the Total Salaries and Wages for New Staff to reflect actual salary for each classification in FYs prior to FY25/26. As staff salaries increased each FY, the negative values in this line item reflect the lower actual costs paid out to staff in the prior FYs.
Dept. Benefits Rate (% of Salaries/Wages) – Row 236	$1,224,177	$525,936	-$698,241	Updated total salaries and wages for new staff have resulted in updated benefits rate for new staff.
Total Personal Services – All Staff – Row 246	$6,190,369	$3,919,778	-$2,270,591	The updated costs in the above line items have resulted in the updated total personal services costs for all staff. The costs have been trued up based on actual staff working on the CTC-VIS project. The Contractor has met and exceeded expectations. CARB staff has successfully established a good working relationship with the Contractor, significantly streamlining the project development and implementation process. The project overall has been progressing more efficiently than originally expected, enabling staff reallocation to other aspects of Clean Truck Check implementation with higher need that are not CTC-VIS related.
New Staff's Operating Expenses and Equipment (OE&E) – Sum of the	$792,600	$494,900	-$297,700	The reduced staff mentioned above has led to the reduced OE&E costs. In addition, OE&E costs have been trued up for the

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
amounts from rows 249 through 258				past FYs: In the original FAW, the Utilities line item (which was meant for IT) was $4000 per employee regardless of existing or new staff. It has been updated to $3000 per existing employee and $4000 per new employee. Starting FY 25/26, the Utilities (or IT) line item has been updated to $10,000 per employee regardless of existing or new staff.
Subtotal - Consulting and professional Services: Interdepartmental – Row 270	$386,667	$1,186,425	$799,758	The costs have been trued up based on the actual invoices paid to CDT (Statewide Technology Procurement, Project Approvals, and Project Oversight)
Subtotal – Consulting and professional Services: External – Row 282	$19,524,967	$25,592,165	$6,067,198	The costs have been updated to: • Trued up based on the actual payment to Estrada, MCorp, and PCG vendors for the CARB PM, BA, and IV&V • Remove the AWS Hosting and software licensing costs originally included in the contract. CTC-VIS database has been moved from Contractor hosting to CDT AWS hosting (Amendment 1). • Reflect actual Unanticipated Costs were used during DDI ($1,527,430 spent vs. $1,625,252 allocated in Amendment 1) • Add funding to the Contractor's costs to cover the extended DDI (14 months) for the requested functionalities and

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
				enhancements (See Section 1.4.3), specifically: • Total DDI Scope = 4,392,500 split between 8 months in FY25/26 and 6 months in FY26/27 • Extend DDI M&O = $2,015,417 split between 8 months in FY25/26 and 6 months in FY26/27 • iText Costs = $72,833 split between 13 months in FY 25/26 and 6 months in FY 26/27 • Microsoft Costs = $78,052 split between 1 month in FY 25/26 and 6 months in FY 26/27.
Subtotal – Consolidated Data centers – Row 296	$406,000	$2,424,498	$2,018,498	The costs have been updated to: • Remove the original AWS Hosting costs as they were already accounted for in the Contractor cost line item above. Note that, the Contractor costs for AWS hosting should not be $406,000. It should have been $938,952. • Add CDT AWS Hosting costs of $969,799 for FY24/25 and subsequent FYs assuming AWS hosting need remains similar for the subsequent years.
TOTAL EXPENDITURES – ALTERNATIVE 1 OPERATIONS COSTS	**$27,300,602**	**$33,617,765**	**$6,317,163**	**All of the line-item changes above have resulted in an increase in the total costs of Alternative 1 operation.**

Future Ops Cost Changes:

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
Existing Staff To Be Redirected + New Staff Monthly Salary – Rows 7 through 11 & rows 128 through 139	The monthly salary for each classification is in Column C	Updated monthly salary for each classification is in Column C	Cost changes embedded in the line items below	The monthly salary has been updated to FY25/26 for each classification.
Existing Staff To Be Redirected + New Staff – Positions – Rows 7 through 11 & rows 128 through 139	The number of each position is in Columns F & H	The updated number of each position is in Columns F & H	Cost changes embedded in the line items below	Given the current project progress, which has been smooth and efficient so far, the projected staff need during M&O has been reduced and redirected to work on other aspects of the Clean Truck Check program that have higher need.
Total Personal Services – All Staff – Row 255 (Column AG)	$2,389,678	$275,048	-$2,114,630	Updated monthly salaries and positions have resulted in updated total salaries and wages for all staff.
New Staff's OE&E – Rows 258 through 267 (Sum of the amounts in column AG)	$254,000* Note: The Stage 4-FAW formula seemed to not take into account row 267 – Utilities costs; hence for this line item, the sum amount provided here only include row 258 through 266.	$40,500	-$213,500	The reduced staff mentioned above led to the reduced OE&E costs.

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
Subtotal – Consulting and professional Services: External – Row 291 (Column AG)	$3,297,280	$4,756,581	$1,459,301	The costs have been updated to include additional funding to the Contractor's costs to support a robust M&O (See Section 1.4.3), specifically: • Additional requested annual M&O's Contractor costs: $2,922,500 (the cost table in section 1.4.3 listed the amount for 4 M&O years, (1,890,000+6,800,000+3,000,000)/4 = $2,922,500) • Additional annual iText costs: $46,000 (the cost table in section 1.4.3 listed the amount for 4 M&O years, 184,000/4 = $46,000)
Subtotal – Consolidated Data centers – Row 305 (Column AG)	$168,000	$969,799	$801,799	The costs have been updated to: • Remove the original AWS Hosting costs as they were already accounted for in the Contractor costs • Include CDT AWS Hosting costs. Again, the AWS Hosting costs should have been $938,952 in the original FAW.
Total Personal Services Expenditures – Row 360 (Column AG)	$2,389,678	$275,048	-$2,114,630	The updated costs in the above line items have resulted in the updated total personal services costs for all staff.
Total OE&E Expenditures – Row 361 (Column AG)	$3,719,280	$5,766,880	$2,047,600	The updated costs in the above line items have resulted in the updated total OE&E expenditures.
TOTAL EXPENDITURES – ALTERNATIVE 1 FUTURE OPERATIONS COSTS	**$6,108,958**	**$6,041,928**	**-$67,030**	**The two line item changes above have resulted in a decrease in the total average costs of Alternative 1 future operation.**