Conduent State & Local Solutions, Inc.

CONDUENT
Transportation

MassDOT Roadway Safety Request for Information & Ideas

Response to RFI –
Area of Interest 1: Speed Safety Cameras

Bid Number: BD-24-1030-CPO01-97703
Due Date: March 28, 2024

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March 28, 2024

The Lab at MassDOT

RE: Roadway Safety RFI BD-24-1030-CPO01-97703 Area of Interest 1 – Speed Safety Cameras

The DOT seeks to improve safety on its roadways and intersections by reducing dangerous speeding, and red light violations. Conduent has the most advanced and proven technology and experience to help the DOT achieve its public safety goals. Conduent is pleased to submit our proposal in response to the request for information from the DOT.

Our Experience

Conduent has significant photo enforcement experience in numerous states and is the vendor of choice for some of the largest photo speed and/or red light enforcement programs in North America such as Memphis, TN; Providence, RI; City of Richmond, VA; Fairfax County, VA; Montgomery County, MD; Maryland State Highway Administration; City of Chicago, IL; Suffolk, NY; and Delaware DOT. Conduent has actively managed photo enforcement programs for over 28 years further solidifying us as a leader in the industry.

Our Equipment

Conduent offers vastly superior equipment than our competitors for both speed and red light enforcement. Our equipment has a small aesthetically pleasing footprint that offers superior issuance rates as well as a high level of reliability necessary to minimize issuance of erroneous violations. An added benefit of our improved issuance rates, and the ability to capture multiple violators simultaneously on your roadways, results in increased warning and citation issuance that helps increase public safety for the State. For speed enforcement we offer two distinctly different types of equipment. We will begin with our DriveSafe® system which also is able to be utilized for red light enforcement. Our DriveSafe system is the latest in camera technology that utilizes three separate eight-megapixel cameras producing 4K video streams. The system is future proof as it is capable of numerous enforcement types without additional hardware which are included in speed and red light enforcement, block the box, automated license plate recognition (ALPR), bus lane/bike lane enforcement, illegal turn, uninsured motorist to name a few. The system uses a smart tracking radar and can capture up to six lanes for enforcement. Each of the three individual cameras can rotate a full 360 degrees including Pan, Tilt, for live viewing of the intersection and surrounding areas.

Our next system the Vitronic POLISCAN FM1 is solely used for speed enforcement and is the most accurate speed detection system for unattended enforcement in the world. The

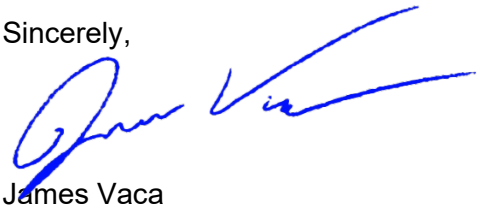
POLISCAN FM1 is a scanning LiDAR based dual 12 megapixel camera system. The system is able to be deployed in a variety of configurations such as mobile (vehicle mounted), Portable Camera Unit (“PCU”) based, or Fixed Pole. The system is unique in that it places a unique evaluation template around the rear of the license plate of the violating vehicle at the time of capture which eliminates any question who the violator is regardless of the number of vehicles in the photo. The POLISCAN is able to capture simultaneous violations with ease and can be deployed more flexibly than other enforcement systems on minor hills and curves. Each system can capture up to 6 lanes of traffic.

Our Database

Conduent provides the most flexible easy to use database in the industry named CiteWeb®. Conduent’s CiteWeb platform is a robust, easy to use database that can be accessed securely anywhere you have internet access, including via either Apple or Android mobile devices. CiteWeb is used for processing violations captured by the speed or red light cameras, storing notes from customer service inquiries related to a citation, reporting on the various status of the violations, and court preparation as well as adjudication. Further advantages of CiteWeb are its fully transparent audit trail to show record of anyone who ever accesses a violation regardless of modification including citizens who access via the Public Portal to view their citation and video. CiteWeb has superior, easy to use search functionality allowing the user the ability to quickly retrieve the desired data that is requested regardless of how specific the required search is conducted.

We are confident that Conduent will exceed the expectations of the DOT and thank you for the opportunity to potentially partner in improving public safety for the State. Should you have any questions regarding our proposal, please contact Dan Seid, our representative for this opportunity, at 202-345-7131 or via email at Daniel.Seid@conduent.com. As Vice President of Conduent State & Local Solutions, Inc., I am authorized to bind Conduent, and make representations on its behalf. You can contact me at 12410 Milestone Center Dr., Suite 400, Germantown MD 20876, via phone at 704-607-8977, or email at Jim.Vaca@conduent.com

Sincerely,



James Vaca

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Area of Interest 1: Speed Safety Cameras

At Conduent, we're dedicated to advancing road safety through innovation and collaboration. We embrace speed management strategies, working alongside our clients to foster safer roadways.

In MassDOT's 2023 Strategic Highway Safety Plan4, the first initiative is Implement Speed Management to Realize Safer Speeds. One tool in the speed management toolbox is 'photo enforcement', also sometimes called 'automated enforcement' or, as the Federal Highway Administration (FHWA) and MassDOT refer to them, 'speed safety cameras'. MassDOT explicitly calls out this technology in Section 4.2 of the Plan in hopes of 'accelerating research and the adoption of technology' through 'prospective pilots for automated enforcement or red light running, speed zones, and work zones'.

FHWA has rated speed safety cameras as a 5-star proven safety countermeasure. They have been shown to reduce roadway fatalities by 20 to 37 percent. (See relevant

studies list below.)

A disclaimer before we go any further: in case you don't keep up to date on Massachusetts law as closely as we do, you need to know that we are not legally allowed to issue tickets, fees, or fines for moving violations without a police officer present in the Commonwealth of Massachusetts.

That doesn't preclude us from testing the technology without fines. This could help us to understand the true scope of the problem of speeding in Massachusetts or exploring non-punitive ways we can aim to reduce serious speeding on our roadways.

Through this RFI, we hope to:

- Better understand how your system can be deployed in a variety of use cases and physical contexts
- Learn about privacy-by-design workflows for your technology, data storage and disposal, and data access
- Understand whether your technology's communication method drives down unsafe behaviors without the threat of a fine
- Understand the impacts of your system in high-crash locations, mid-block crossings, work zones, and intersections

We want to note that we are not interested in revenue-sharing business models with respect to the number of tickets issued (see disclaimer above.) We are obsessively focused on ensuring any speed safety camera system is about safety and not revenue generation.

At Conduent, we share the common vision of MassDOT's commitment to enhancing roadway safety through the implementation of speed management strategies, as outlined in your 2023 Strategic Highway Safety Plan. The emphasis on exploring technologies like speed safety cameras reflects a proactive approach to addressing speeding-related challenges.

Before moving forward, it's essential to acknowledge that we understand the legal constraints in Massachusetts regarding the issuance of tickets for moving violations without a police officer present. While this limitation exists, we remain committed to exploring the potential of speed safety cameras in understanding and addressing speeding issues without punitive measures. This aligns with our shared objective of enhancing road safety across the state.

In response to Area of Interest 1 outlined in the RFI, we aim to provide insights into how our system can be effectively deployed in various scenarios and physical environments. Additionally, we prioritize privacy-by-design workflows to ensure responsible data management practices, including storage, disposal, and access.

Furthermore, we recognize the importance of assessing the efficacy of communication methods in influencing safer behaviors without the imposition of fines. Finally, we understand the impacts of our system in high-crash locations, intersections, work zones, and mid-block crossings is paramount to optimizing its effectiveness in enhancing road safety.

We look forward to the opportunity to collaborate and contribute to the advancement of road safety initiatives in Massachusetts through innovative solutions and partnerships.

Implementation Landscape

1. Where else has your technology been implemented? Or, to the best of your knowledge, would we be the first place to try it?

Table 1-1 provides an overview of recent implementation projects using our automated speed and/or red light enforcement capabilities in conjunction with other associated technologies to meet the specific program requirements of our clients.

Table 1-1. Implementation Landscape Overview

Client / Contract Period	Description of Services Provided
Prince George's County, MD 2014 – Present	46 Red Light Cameras, 64 Photo Speed Cameras, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
Upper Marlboro, MD 2021 – Present	4 Speed Cameras, Violation Processing, Payment Processing, Customer Service, Citation and Correspondence, Print And Mail, Installation and Maintenance Of Equipment
Anne Arundel County, MD 2023 – Present	40 Portable Speed And 10 Red Light Cameras (All systems with LPR). Full Turnkey For Installation And Maintenance Of Equipment, Violation And Payment Processing, Customer Service, Citation, And Correspondence Print And Mail
La Plata, MD 2023 – Present	Provide Equipment Installation And Maintenance For 4 Portable Speed Cameras, Violation And Payment Processing, Customer Service, Reporting, Citation, And Correspondence Print And Mail
Montgomery County, MD 2007 – Present	99 Speed, and 50 Red Light Cameras, Violation Processing, Integrated Voice Response (IVR), Mail And Payment Correspondence Processing, Name And Address Acquisition, Online Violation Lookup, Pay By Phone & Pay-By-Web, Reporting, Customer Service, Training, Evidence Preparation Scheduling And Delivery
City of Manassas, VA 2020 – Present	Contracted for 28 Red Light Approaches Full, Offense Notice Processing, Training, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
City of Wilmington, DE 2005 – Present	34 Red Light Approaches, Back Office Processing, Maintenance, IT Services, Pay-by-Web, 24/7 System Access Support, Expert Witness Testimony
Beverly Hills, CA 2015 – Present	16 Red Light Approaches, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
City of Miami Beach, FL 2010 – Present	10 Red Light Approaches Full, Offense Notice Processing, Training, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony

Client / Contract Period	Description of Services Provided
Illinois Department of Transportation 2000 – Present	5 Statewide Work Zone Speed Enforcement, Training, Customer Service, Maintenance, Lockbox, IVR System, Expert Witness Testimony
Baltimore City, MD 2017 – Present	160 Red Light Cameras, 6 Over Height cameras, Full Offense Notice Processing, Maintenance, Violation processing, Citation print and mail, Correspondence Management, Expert Witness Testimony
Bowie, MD 2009 – Present	8 Portable Speed Cameras, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
Charles County, MD 2012 – Present	6 Portable Speed Cameras, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
Village of Chevy Chase, MD 2007 – Present	4 Fixed Speed Approaches, Full Offense Notice Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
Gaithersburg, MD 2007 – Present	2 Fixed Speed Cameras, 5 Portable Speed Cameras, Full Offense Notice Processing, 2 Mobile Speed Cameras, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
Howard County, MD 2011 – Present	1 mobile van, 5 Portable Speed Cameras, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
Rockville, MD 2007 – Present	8 Fixed Speed Cameras, 2 Mobile Radar Vans, 7 Portable Camera Units, 10 Red Light Cameras, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
Maryland State Highway Administration 2010 – Present	7 Mobile Speed Units, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
Takoma Park, MD 2008 – Present	5 Fixed Speed Cameras, 3 Portable Speed Cameras, 7 Red Light cameras, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
City of Raleigh, NC 2003 – Present	15 Red Light Approaches, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
Suffolk County, NY 2010 – Present	215 Red Light Approaches, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
City of Beaverton, OR 2018 – 2028	8 Red Light Approaches, 2 Mobile Speed Vans, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony
City of Portland, OR 1995 – Present	11 Red Light Approaches, 2 Mobile Speed Vans, 8 Fixed Pole Speed Locations, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Expert Witness Testimony
Philadelphia, PA 2013 – Present	86 Red Light Cameras, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony

Client / Contract Period	Description of Services Provided
City of Providence, RI 2004 – Present	25 Red Light Cameras, 20 Portable Speed Cameras, Full Offense Notice Processing, Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
City of Fairfax, VA 2013 – Present	8 Portable Speed, 10 Red Light Approaches, Full Offense Notice Processing Back Office Processing, Customer Service, Maintenance, Correspondence Management, Lockbox, Online Payments, IVR System, Expert Witness Testimony
Camrose, AB, Canada 1995 – Present	1 Mobile Speed Camera, Full Offense Notice Processing, Back Office Processing, Maintenance, Expert Witness Testimony
Fort McMurray, AB, Canada 1998 – Present	8 Intersection Safety Cameras, 1 Mobile Speed Camera, Full Offense Notice Processing, Back Office Processing, Maintenance, Expert Witness Testimony
Fort Saskatchewan, AB, Canada 2008 – Present	8 Intersection Safety Cameras, Red Light and Fixed Speed, 1 Mobile Speed Camera, Speed on Green Enforcement, Full Offense Notice Processing, Back Office Processing, Maintenance, Expert Witness Testimony
Red Deer, AB, Canada 2000 – Present	4 Red Light Cameras, 3 Mobile Speed Cameras, Full Offense Notice Processing, Back Office Processing, Maintenance, Expert Witness Testimony
Winnipeg, MB, Canada 2002 – Present	33 Intersection Safety Cameras, 11 Mobile Speed Cameras, 5 Handheld Speed Units, Speed on Green Enforcement, Full Offense Notice Processing Back Office Processing, Maintenance, Expert Witness Testimony
Province of Saskatchewan, Canada 2013 – Present	3 Mobile Speed Cameras, Full Offense Notice Processing, Back Office Processing, Maintenance, Expert Witness Testimony
Saskatchewan Government Insurance 2013 – Present	8 Mobile Speed Cameras, Full offense Notice Processing, Back Office Processing, Maintenance, Expert Witness Testimony
County of Fairfax, VA 2022 – Present	10 Photo Speed Cameras for the pilot period and 50 Photo Speed Cameras once the pilot has been completed, Back Office Processing, Customer Service, Maintenance, Online Payments, Lockbox, IVR System, Expert Witness Testimony, Full Offense Notice Processing, Correspondence Management.
Central Falls, RI 2020 – Present	8 Intersection Safety Cameras, 10 Mobile Speed Cameras, Full Offense Notice Processing, Back Office Processing, Maintenance, Expert Witness Testimony
Prince William County, MD 2023 – Present	Implementation currently in progress. 18 Portable Speed Cameras, 8 Intersection Safety Devices, Installation, Maintenance, Back Office processing, Payment Processing, Customer Service, Citation and Correspondence Print and Mail.
City of Richmond, VA 2023 – Present	26 Portable Camera Units (PCUs) with live streaming video within 60 days of contract signing for speed, 50 red light Intersection Safety Cameras, CBI for dashboard, CiteWeb for database, Maintenance via local facility; Violation Processing, Customer Service, Payment Processing, Expert Witness Testimony

Additionally, the following are specific examples of how our photo enforcement technologies promote public safety.

Delaware Department of Transportation

One of the largest, turnkey red light enforcement programs in the United States is the Delaware Department of Transportation (DelDOT) Electronic Red Light Safety Program (ERLSP). In 2014, Conduent successfully installed 51 rear camera systems and 14 front camera systems when awarded the DelDOT ERLSP contract, previously performed by American Traffic Solutions which is now called Verra Mobility).

After a successful implementation, coupled with an outstanding performance by the red light cameras, DelDOT staff approved an amendment for 51 additional rear camera systems to be installed, doubling the number of rear camera systems on the project. Conduent completed the installation of all 51 rear camera systems in March 2017, wrapping up installation four months before the scheduled end date.

We currently operate 102 red light camera systems on the DelDOT ERLSP project, providing all end-to-end services on behalf of the client. We recently executed a new contract after a competitive procurement, which will expand the program to at least 139 total cameras.

Montgomery County, Maryland

Montgomery County's Speed Program is the largest, most complex speed program in North America. This program initially involved 99 active speed cameras and 50 red light cameras in operation, and we successfully implemented this program within a 21 calendar-day deadline.

Also, per the contract, at least 10 more speed and 5 more red light cameras will be added annually to the Program, as well as turnkey maintenance, violation processing, noticing, payment processing, and customer service support.

A 2014 study by the Insurance Institute for Highway Safety (IIHS) found that about seven years after the current speed enforcement program began in Montgomery County, **speed cameras were associated with a 10% reduction in mean speeds and a 62% reduction in the likelihood that a vehicle was traveling more than 10 mph above the speed limit at camera sites**. To request a copy of this study, please feel free to go to the following URL:

https://www.iihs.org/topics/bibliography/ref/2097

To summarize, MassDOT will greatly benefit from the capabilities and proven operation experience that our ALPR technologies can provide to the Commonwealth and its driving public.

Addressing Racial and Equity Concerns

2. Have any of your deployments faced challenges based on racial equity or equity concerns? If so, how did you work with partners to address these concerns?

To face challenges based on racial and other equity concerns, we have implemented agreements and relationships across the company with small businesses and/or minority-owned, woman-owned, and veteran-owned business enterprises nationwide. When partnering with these companies, we use the same approach as we do with our large company partners and focus on bringing the overall best value for the State of Massachusetts.

At Conduent, Diversity, Equity, and Inclusion are not just words on paper or a goal to meet; they are part of our core values and the way we do business. Through teamwork, professionalism, respect, and inclusiveness, we create an environment where our team can achieve their goals and make our clients more successful. Measuring and prioritizing Diversity, Equity, and Inclusion (DE&I) is part of our core company values as shown in Figure 2-1. Our commitment to diversity and inclusion starts at the top, with CEO Clifford Skelton continuing Conduent's participation with CEO Action for Diversity & Inclusion™, the largest CEO-driven business initiative to advance diversity and inclusion within the workplace. In addition, our Global Vice President for Diversity & Inclusion, Remy Kaul, is responsible for developing, implementing, and tracking the success of our overall diversity strategy for Conduent.

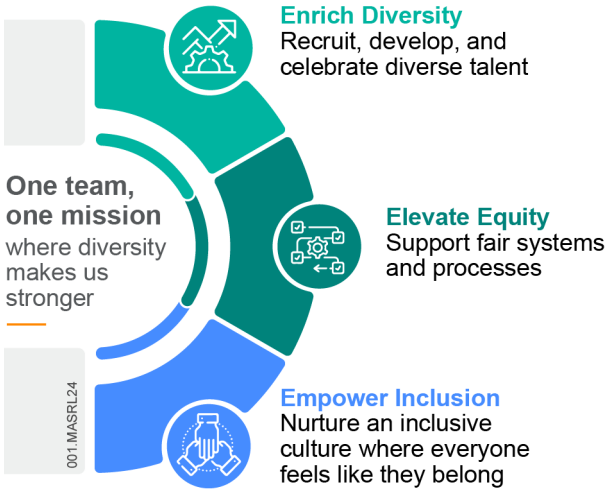


Figure 2-1. United for a Common Mission
A culture interwoven with DE&I represents our commitment to our people. The unique and diverse experiences, perspectives, and skill sets of our global workforce are our greatest asset.

The commitment of our Board of Directors is to conduct business in an environmentally sustainable and socially responsible manner in all our interactions with our stakeholders, including clients, associates, suppliers, shareholders, and global communities. We believe that the backgrounds and qualifications of the directors, considered as a group, should provide a broad diversity of experience, professions, skills, geographic representations, knowledge, and abilities that will allow the Board to fulfill its responsibilities.

Board Demographic Composition. The Board recognizes the tremendous value of having a diverse collection of directors, and as such, also places value on candidates who are women, from an underrepresented racial or ethnic group, who are LGBTQ+, have disabilities, are military veterans, or have other diverse or underrepresented characteristics. Figure 2-2 shows the composition of Conduent's Board.

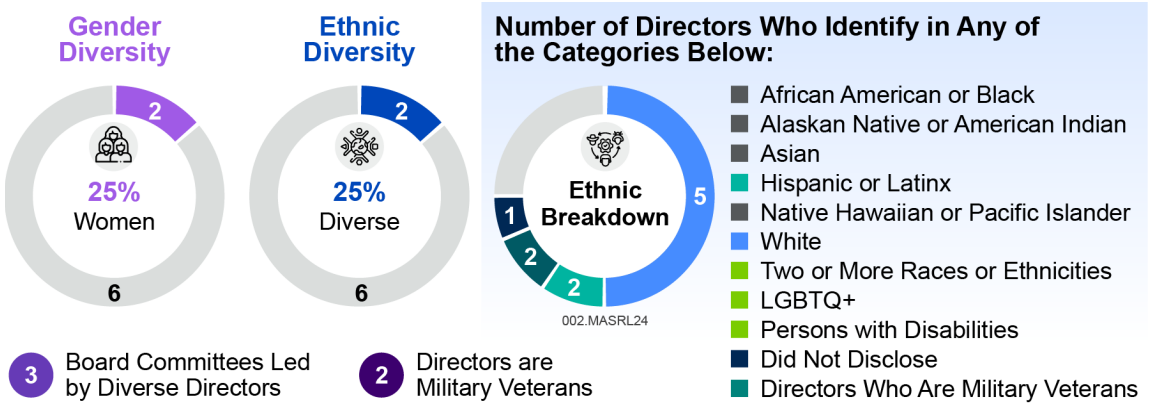


Figure 2-2. Our Board of Directors

A Diverse Board of Directors equals a Diverse Company. By leading with example, we can integrate DE&I into business practices so that it becomes a part of what we do and who we are.

Conduent's Board of Directors is ethnically diverse, while showcasing a wide variety of age groups and tenure as shown in Figure 2-3.

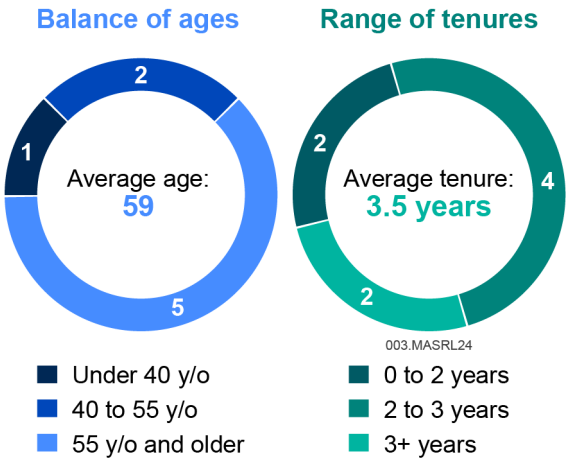


Figure 2-3. Board Diversity

An Ethnically Diverse Board of Directors.

Conduent's Diversity, Equity, and Inclusion Strategies. We continually strive to create teams that are demographically representative of the communities where we employ them, as well as the clients we serve. We have several practices in our talent systems to attract, develop, and retain diverse talent. It's vital to recognize that we cannot sustain diversity and inclusion gains unless our workplace promotes and encourages new ways of problem-solving and diversity of thought. To accomplish that, we promote understanding and inclusion through a comprehensive set of diversity initiatives and strategies, including:

- A balanced workforce strategy that drives equitable people representation in all areas of our company, all around the world
- Work-life programs that assist our associates in the many aspects of their personal lives
- Education and training for all our associates on diversity programs, policies, and achievements Continual development and evolution of strategies that leverage diversity to gain a competitive global advantage and to drive market excellence
- A supplier diversity program that facilitates our active commitment to purchasing supplies and products from small and diverse enterprises
- Partnering with companies sharing the same goals

- Employee Mentoring programs within the Women's Impact Group
- Mitigation of diversity disparities by identifying shortfalls and closing those gaps

Enabling a diverse and inclusive work environment is more than management-driven programs and initiatives. All Conduent employees play an important role in treating their teammates with dignity and respect; and valuing them for their unique talents and contributions. Our commitment is that each employee become familiar with the values that support our inclusive culture. Figure 2-4 displays such commitments toward Diversity, Equity, and Inclusion and our colleagues.

Figure 2-4. Our Commitment to Diversity
Our values drive our success. Ethical Values are critical to the success of the organization, and so are the people within it.

Advancing Diversity and Inclusion. Our diversity and inclusion efforts are central in creating an engaging culture, providing a competitive advantage in serving our clients and growing our business. Our actions in recent years included:

- A comprehensive cross-functional Environmental, Social, and Governance (ESG) program and steering committee with Board oversight
- Ongoing transparency and reporting on ESG topics including disclosure of ESG data aligned with SASB Standards and TCFD Recommendations
- Launching a new DE&I Learning Pathway
- Launching a diversity data and analytics dashboard
- Pledge to CEO Action for Diversity and Inclusion
- Conduent's Healthy Communities Institute provided data and actionable insights on health equity to over 100 communities through our technology and consulting
- Expanded Human Rights Policy to include risk assessments and audits throughout our value chain and developing supplier accountability

Result Highlights. Diversity makes Conduent stronger as a company and creating an inclusive culture where all associates thrive creates value for the customers, clients, and communities that we serve. In fact, our commitment to DE&I has received recognition from the Human Rights Campaign, Forbes, and Comparably for multiple years in a row. We see our diversity as a competitive advantage and critical to creating a culture of inclusion, high performance, and growth. As a result, we have earned the awards shown in Figure 2-5.

Figure 2-5. Diversity Awards

The awards showcase a culture of DE&I support spanning all levels of our organization. These awards are a testimony to our commitment and values, resulting in industry recognition, and an increase in client engagement on DE&I topics.

Employee Impact Groups and Mentoring. Our Employee Impact Groups (EIGs) are diverse communities that enhance the associate experience through engagement, development, and collaboration. EIGs bring value to participants and Conduent through cultural education and awareness, market and community outreach, professional development, recruiting and retention, and client engagement. These EIGs align strategically with our business functions to drive experience in four key areas – Culture, Professional Development, Community, and Innovation. Our active EIGs include:

- Women's Impact Network (WIN)
- Black Impact Group (BIG)
- DisAbility Impact Group (DIG)
- Pride
- LatinX
- Conduent Asian Network (CAN)
- Conduent Salutes!
- Generations

We take these EIG seriously, by providing Mentorship Programs within them, the EIGs deployed hours of professional development activities, tailored to address the specific needs of our diverse workforce. Investing in the workforce yields its results, and since 2020 there has been an increased membership in Employee Impact Groups by 138%. Figure 2-6 displays the latest results as of 2022(Published in June 2023).

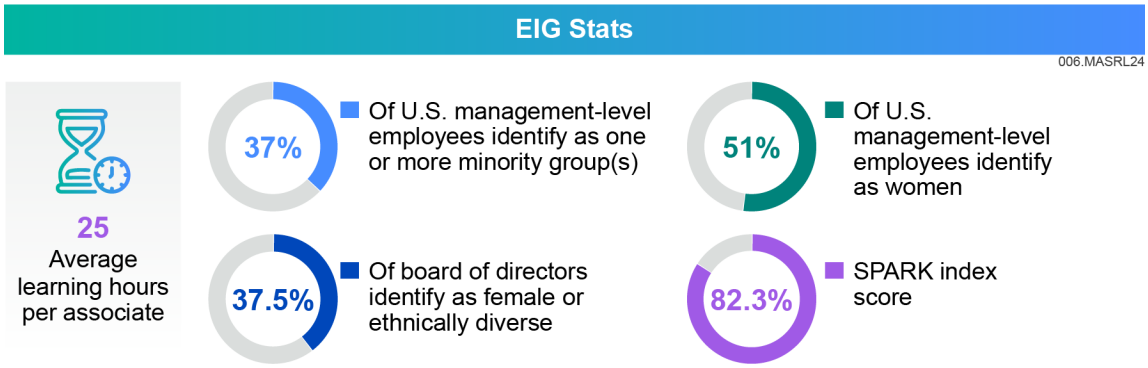


Figure 2-6. Our Strategy for a Diverse Organization

A DE&I strategy with measurable results. Our Social Responsibility Report published in June of each year is proof that investing in DE&I has its benefits across the organization.

Business Relationships Conduent has a commitment to utilizing diverse suppliers. We are continually looking for new subcontracting partners and maintain a database of current diverse suppliers to maximize the opportunities for small business enterprises to participate in the delivery of our solutions. To find firms for inclusion in specific state and local government business opportunities, we adhere to a proven approach for identifying firms that can provide quality products and services in a timely and competitive fashion. In many cases, we use historical data, knowledge of the industry, and estimated value of contracts to develop subcontracting goals with businesses owned by minorities, women, veterans, persons with a disability, and small business enterprises. Figure 2-7 shows a high-level overview of Conduent, Inc. spending with diverse companies (Source: 2022 Corporate Social Responsibility Report).

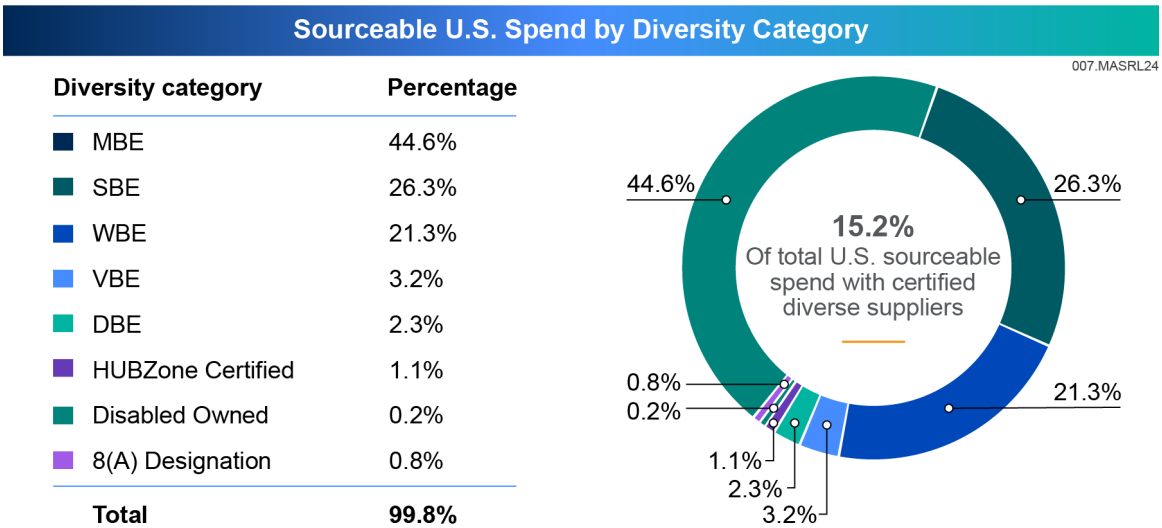


Figure 2-7. Spending Overview

Conduent diverse spending overview. We look for opportunities to partner with diverse companies to support our client delivery activities.

It is important to note that with regards to photo enforcement specifically on the East Coast the programs that utilize speed or red light technology are primarily registered owner enforcement programs. This means that images taken by the systems are purely of the rear of the vehicle, so

images of the driver are not captured. Further to point out that when obtaining registered owner information from the Registry of Motor Vehicles we do not receive information on the race or sex of the driver ensuring there is no amount of racial bias.

New England Presence

3. Do you have staff or a company footprint in New England?

Our local Northeast Regional Office is located at 260 Franklin Street, Suite 500, Boston, MA 02110, and it has been our main support location for New England for nearly 40 years.

Table 3-1. New England Presence

Client	Description
New Hampshire Department of Transportation (NHDOT)	Conduent supported the NHDOT was the successful implementation of an All Electronic Toll (AET) system on the Spaulding Turnpike (Route 16), northbound and southbound in Rochester and in Dover in 2022 that replaced cash toll collection on that roadway. Also, a Customer Service Center in Rochester was established to support the E-Z Pass program.
Providence, Rhode Island	Conduent provides the City with 25 red light camera systems, 15 portable speed camera systems, full offense notice processing, back office processing, maintenance, and expert witness testimony services. The program achieved a controllable issuance rate of 98 percent in 2021. Conduent also provides the City with systems and services for parking ticket processing, including the processing of parking tickets issued manually or by handheld, moving tickets issued manual or by handheld, and photo enforced violations issued by camera systems.
Central Falls, Rhode Island	Since 2022, Conduent has managed seven speed cameras for their speed and red light program for the City to reduce speeding and protect pedestrians. These traffic cameras lower dangerous speeding, particularly near schools. Conduent provides the City with 8 intersection safety camera systems, 10 mobile speed camera units, full offense notice processing, back office processing, maintenance, and expert witness testimony services.

For additional details on our public transportation presence within the Commonwealth of Massachusetts, consult our answer to question 17.

Power and Connectivity

4. Does your hardware solution require a power source? Can it be solar/battery powered? Does it need network connectivity?

For speed enforcement, we have different solutions. The Portable Cabinet Units (PCUs) are powered by easily interchangeable, 12V lithium-ion batteries. Their lifespan can last anywhere from 5 to 10 years with proper care and maintenance. Our comprehensive maintenance program includes all equipment maintenance activities including battery replacement. With regards to network connectivity, this is done via wireless modems easily included in our enclosures. If using our Fixed Pole solution for speed or red light it requires the installation of a separate power pedestal, and hard-wired communications which are installed during the

construction of the systems and will provide continual power, and communications to the system.

Validation Methodology Overview

5. Describe the operational approach your company would take to validate the accuracy of your cameras.

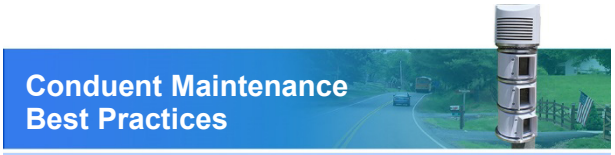
Our calibration practices and our comprehensive maintenance program work together to provide extremely accurate cameras and event capture.

Calibration Services

Every speed and red-light system undergoes an annual calibration check that is kept on file and provided to contested citations. Conduent covers the cost of all calibration activities. Furthermore, each camera system undergoes a daily self-test prior to producing a recorded image. The system cannot go into operation if the annual calibration has not been performed or should the daily self-test fail for any reason preventing the potential issuance of any violations which is a distinct advantage over competitors' systems.

Calibration is done through an intricate process to maintain proper operability. After calibration is completed, we will provide the DOT with a calibration certificate stating the devices meet the requirements and tolerances specified in the manufacturer's calibration directive. Additionally, it is logged within our Computerized Maintenance Management System (CMMS). Reports are available on a specified schedule including performed maintenance, identified system errors, corrective action taken, and operational uptime.

Specifically, our Scanning LiDAR based speed camera systems have an internal clock that is programmed to alert the field service technicians when the required new calibration date is approaching. If new calibration is not performed, the system ceases all operability preventing any possible issuance of violations until the calibration has been performed and the internal clock reset. Our DriveSafe systems have this information stored in our CMMS system used for maintenance which sends out alerts to our technicians as the date approaches.



- Seamless maintenance integration
- Solid and proven maintenance methodologies
- Rapid Response and Repair of Corrective Maintenance
- Improved inventory and asset management practices
- Computerized Maintenance Management System (CMMS)
- Predictive, Preventative, and Corrective Maintenance

Maintenance

Our extensive experience with automated enforcement programs during the last 28 years has helped the industry define how fully-fledged maintenance programs should perform.

Conduent provides complete maintenance services for all aspects of our photo enforcement programs. We pride ourselves on our high standards of service and maintenance. In many of our programs, our average operational uptime is 99 percent, with less than 1 percent of downtime due to scheduled maintenance, testing, and repairs that require our technicians to take the system offline.

Our maintenance approach integrates reliable system components and includes all maintenance policies, practices, and procedures to provide applicable preventive, predictive, and corrective maintenance for the systems. We carefully manage and execute maintenance activities to minimize intrusion on the enforcement environment. Preventive and corrective maintenance practices keep the systems active and operational. We document each activity performed accurately and completely for historical and reporting purposes within the CMMS.

Maintenance Activity

Many factors contribute to a successful maintenance program, and our team's primary gauge is end-to-end system availability. We design, plan, manage, staff, schedule, and execute a maintenance approach to maximize availability. The result is a program built specifically around the needs of the DOT combining a preventive, predictive, and corrective maintenance program that creates high levels of availability in all functional areas of the automated traffic enforcement environment.

Corrective Maintenance

Since corrective maintenance translates directly to system downtime, they are our technicians' highest priority. We focus on restoring the sites to functional compliance in the shortest possible time.

The technician travels in a van that is equipped with the safety components, tools, and spares necessary to make repairs as quickly as possible. Our fully stocked technician vans are essential to camera system performance.

Service vehicles are equipped with external safety and security devices to protect the vehicle operator and the assets within. Vehicles are also stocked with sufficient safety cones, flares, lighting, medical kits, fire extinguishers, jumper cables, safety vests, hard hats, GPS modules, and communication devices. Vehicles have security measures to protect onboard assets and inventory.

All maintenance activities are documented in our CMMS and available for reporting purposes. For each system or component failure, CMMS work orders are entered into the system. All work order entry data are available for reporting within the CMMS.

The reporting capability within the CMMS allows us to supply the DOT with a monthly report that includes all maintenance performed, all system errors identified, and a total system availability time of each camera site.

Figure 5-1 presents a sample report generated from the CMMS providing data specifically related to corrective maintenance.

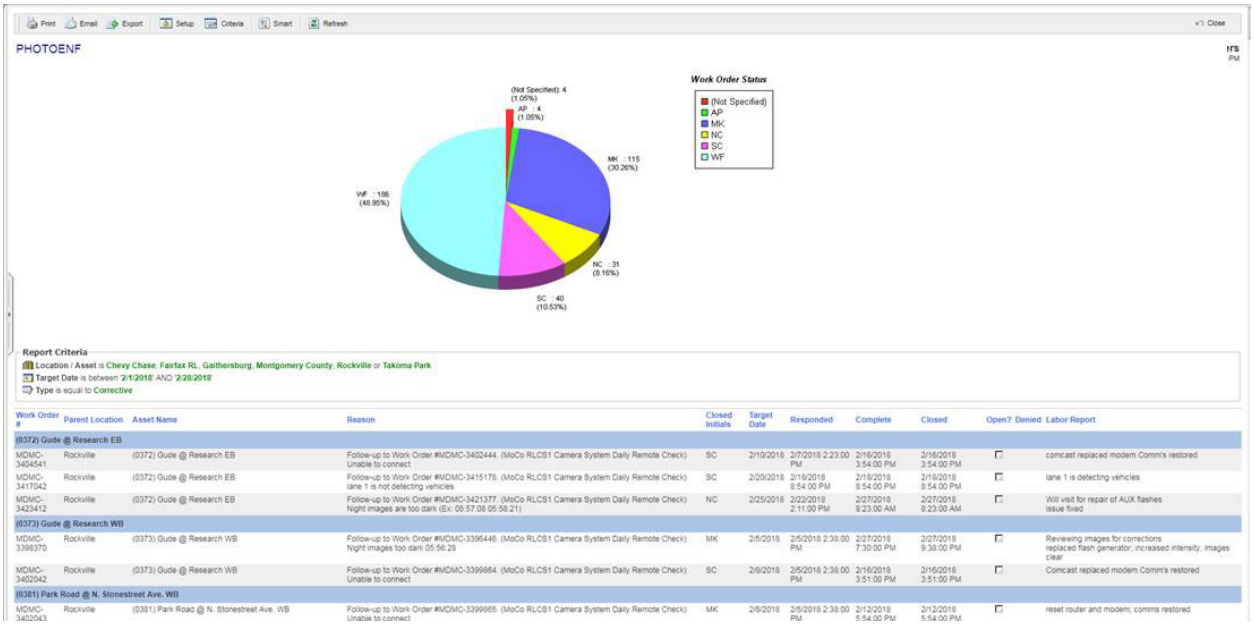


Figure 5-1. Sample Corrective Work Order Report
Maintenance activities require work order generation for historical purposes.

Escalation of Problems

Implementation and operation of the program involves the daily coordination of a complex set of factors both large and small. Should an issue arise which challenges the onsite project management team and DOT representatives, our staff contacts additional backup and support personnel, subject matter experts, and other corporate resources to help resolve critical issues and provide the program's continuity and success. The key to the resolution of issues is keeping both the DOT and Conduent management teams well-informed of potential issues and possible solutions throughout the contract.

In addition to Corrective maintenance, we perform Preventative and Predictive maintenance to minimize the need for corrective maintenance down the road.

Preventive Maintenance

Preventive maintenance includes the visual inspection, cleaning, adjustment, electronic inspection, and calibration of installed components and the areas surrounding those installed components.

Currently, our field maintenance service team performs the following preventive maintenance activities:

- Daily Real-Time System Remote Monitoring Support
- Onsite Fixed Preventive Maintenance Support
- Annual System Calibration Certification

We use the manufacturer's recommended service intervals combined with reviews of component failure rates tracked by CMMS to develop preventive maintenance schedules. Corrective maintenance is less likely with effective and properly balanced preventive maintenance.

All tasks associated with this service will be recorded within the CMMS. We will provide recorded data pertaining to these checks to the DOT in the form of completion reports.

Figure 5-2 represents a sample preventive maintenance schedule report using the CMMS report module.

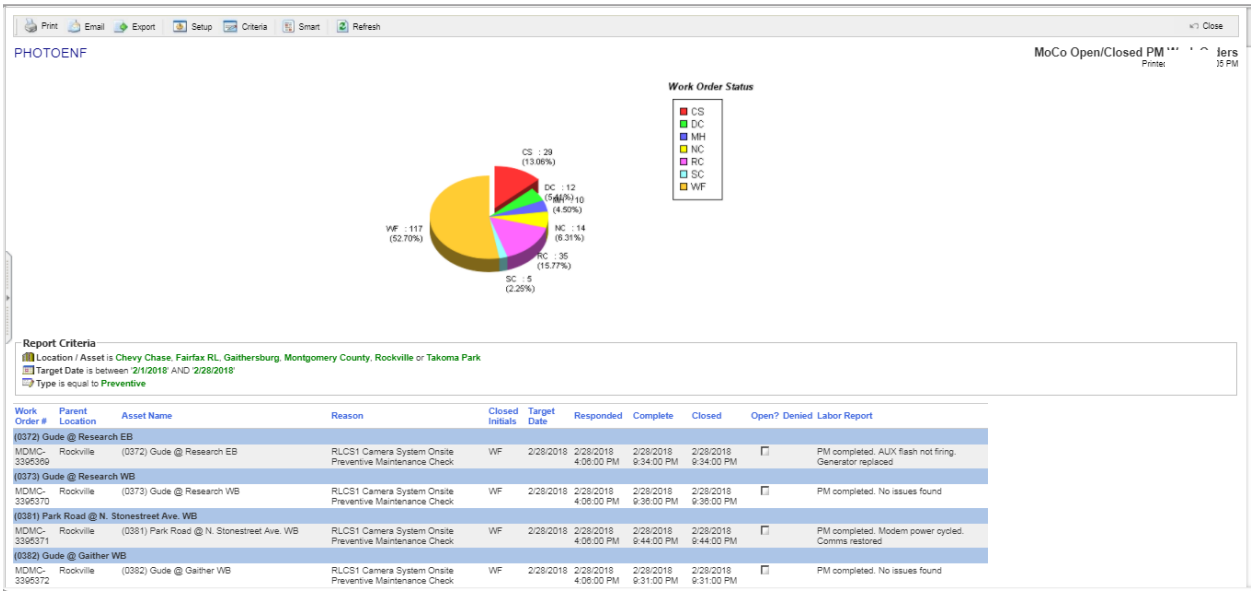


Figure 5-2. Preventative Maintenance Schedule
Provides a summary report of the last and next scheduled onsite PM check.

Predictive Maintenance

Predictive maintenance is based on Reliability Centered Maintenance (RCM) concepts where we make sure assets, we install continue to meet expected performance levels. Using this concept, we perform failure analysis to predict potential or repetitive failures. As part of the analysis, we prepare a graphical representation of the failures over a specified time period detailing the failure items and locations. We use this information, provided at regularly scheduled status meetings to investigate and correct problems and failures that continue to occur on a particular piece of equipment or at a specific location.

We use a condition monitoring approach along with historical maintenance data coming from the CMMS to predict certain maintenance needs, such as necessary adjustments and parts replacements. Through this process, we schedule some part replacements near the end of their useful life, instead of waiting for a failure to occur. We then schedule predictive maintenance actions during off-peak periods. The maintenance manager generates a predictive maintenance schedule on a monthly basis once we compile sufficient historical data.

Embedding condition monitoring principles into a comprehensive maintenance program helps the maintenance team recognize slight abnormalities in equipment appearance, or minor degradations in functionality before any potential failures occur.

CMMS as Database of Record

The CMMS maintenance application tracks all preventative, predictive, break-fix, and open work orders for all equipment so a record of work is always available. The application in addition to maintenance-related activities maintains all records on inventory and rotation schedules.

As the database of record of all things related to field operations, it will contain all data elements needed for the DOT's reporting requirements. The daily and monthly reports will be built, and the format approved by the DOT. Once complete the reports will be generated on an approved schedule and submitted.

The daily report will cover all tasks completed that day including all work orders, daily calibration/deployment log, and camera relocation details. The monthly report will include a rollup of all maintenance performed, system errors (hardware or software), and non-operational time by location and system.

As a robust, proven, and capable maintenance application, CMMS will provide complete transparency into everything occurring on the program and provide easy access to historical data when future requests are made.

License Plate Resolution

6. What is the minimum resolution needed for your software to accurately determine (or 'read') a license plate?

When it comes to image quality, the higher the resolution, the sharper the picture. Our DriveSafe system captures crystal-clear, high-quality images, during night-time, with little or no ambient light, and under severe weather conditions to increase public safety.

DriveSafe uses three separate 4K video cameras. **4K has a resolution of 3840x2160 pixels, which is four times more pixels than HD**, with its total number of pixels being 8,294,400 pixels. It is the dominant standard in television and consumer media. Each camera device offers eight megapixels per camera (4096 X 2160 pixels), producing ultra-high-definition video streams, even in the dark.

By providing maximum clarity and accuracy of license plate capture and violation images, the DriveSafe solution delivers the **highest level of prosecutable images in the industry**. **Our VITRONIC POLISCAN scanning LiDAR solution is a dual twelve-megapixel system which is substantially more than necessary to have crystal clear license plates.**

The minimum resolution required to read a license plate is dependent on the number of lanes being monitored. Both DriveSafe and POLISCAN have the required resolution to capture legible license plates across 6 lanes of traffic.

Weather Resilience and Adaptability

7. How does your technology handle inclement weather? License plate covers? Night-time and direct sunlight?

Our solution is designed to run in all conditions and environments, including adverse weather, heavy traffic, and complex roadway layouts. It has been successfully deployed in some of the most challenging climates, from Canada's extreme cold to Saudi Arabia's extreme heat.

Operating Under Extreme Temperatures

The camera units are completely sealed to operate in **heavy rain, high humidity, and extreme heat and cold**. Testing of the main processors has been completed in temperatures ranging from -40°F to +176°F The image sensors have performed flawlessly in temperatures ranging from -22°F to +185°F, without an enclosure. Handling extreme temperatures is a non-issue for our solution.

Day and Night All-Weather Enforcement

Lighting plays a critical role in achieving high quality, reliable images for any security system. Our camera systems are designed to automatically adapt to changing lighting conditions and record clear, enforceable images during daytime or nighttime under all weather conditions.

These high dynamic range cameras supply clear, legible images in all lighting conditions, regardless of time of day or weather. The quality, especially for night images, is **significantly superior to the competition's** due to the device's ability to use ambient light and a low light illuminator.

A key component of our solution is the VITRONIC POLISCAN FM1 scanning LiDAR system, a LiDAR based digital speed enforcement solution, offering **the most accurate speed detection in the industry today**. VITRONIC POLISCAN produces superior day and nighttime images and can read characters from reflective and non-reflective license plates, in all lighting scenarios, under varying weather conditions, in all seasons.

It is currently deployed throughout world in locations with extreme environmental conditions, from the extreme heat of Saudi Arabia to the cold winters of Saskatchewan, Canada. For optimal operation across varying temperatures, the system automatically monitors its internal temperature and stops operation if the permissible range, between -40°F to +131°F, is exceeded. To prevent operational interruptions during cold weather, the system uses an internal heater that engages automatically as necessary.

Plate Covers and Reflective Materials

Other competitors' systems extract the plate from the environmental shot and then try to balance image quality between environment and plate images. This is an outdated solution. In contrast, each one of DriveSafe's independent license plate cameras are optimized to capture clear characters and numbers on reflective and nonreflective license plates in all weather conditions.

These high dynamic range cameras allow us to correctly expose bright plates, as with reflective material, and dark plates, such as plate covers, in the same plate image. In challenging locations, we can take several plate pictures in succession at different exposure levels to capture different exposures and positions of the same license plate. This process is known as bracketing and supplies an even greater range of license plate exposures

Infrastructure Overview

8. If you provide physical infrastructure as part of your solution, is it mobile or fixed equipment? If mobile, how long does calibration take in a new location? Describe any relevant criteria for the use of one over the other if you offer both.

The Speed Camera System

Our solution is a noninvasive, aesthetically pleasing, highly accurate automated speed enforcement system that comes in three configurations:

- Fixed pole-mounted,
- Mobile vehicle mounted,
- Portable camera unit (PCU) violation capture arrangements

The cameras, radar, and flash units can often be mounted to existing infrastructure. This eliminates the need for poles and helps the equipment blend with the environment. Although DriveSafe can be mounted to existing poles, we can supply our own poles if the MASSDOT prefers.

Each camera resides in an aesthetically pleasing housing with an all-encompassing form factor that **dramatically reduces ancillary components found on competing systems** that can clutter existing infrastructure. There is no physical connection to the traffic control cabinet or physical sensor in the roadway.

Each approach requires one set of the DriveSafe Enforcement Camera, poles, radar, and flash unit. In most cases, the high voltage and communications enclosure can be shared by multiple approaches at the same intersection, but this varies depending on intersection layout.

Easy Installation

The system is engineered to supply a simple, easy installation process, as previously stated, at existing pole locations which considerably decreases the need for construction and minimizes roadway disruption. See Figure 8-1. Its modular design allows maximum location adaptability and flexibility with installation possible directly next to the roadway or the opposite sides of sidewalks. This fitting supplies the advantage of reducing potential repair time due to its use of interchangeable and easily replaceable parts.

As an added value, we can paint the systems to match the architectural environment if MASSDOT desires.

Figure 8-1. Our Three High-Resolution Digital Camera Arrangements
DriveSafe can be easily mounted on existing pole locations to minimize costs and surface disruption while supplying maximum clarity and accuracy of violations imagery and license plate capture.

Minimizing Road Surface Disruption

No two intersections, approaches, or roadways configurations are alike. Further, whether working on commercial or residential areas, road surface disruption is a factor that, if not addressed properly, can cause a variety of time-consuming and costly problems.

To optimize costs, system performance, and avoid delays in installations, we perform a detailed site analysis to capture relevant traffic and violation data. Once compiled, we develop a design/installation plan outlining camera placement for all sites to support **as little disruption of roadway surfaces as possible.**

Calibration

Annual calibration is performed by the manufacturer, through an intricate process, to secure proper operability. After calibration is completed, we provide the MASSDOT with a certificate stating that the equipment meets the requirements and tolerances specified in the manufacturer's calibration directive, including the tested unit's serial number. All calibration activities are done at no cost to the MASSDOT.

Furthermore, each camera system undergoes a daily self-test prior to initiate capturing images. The VITRONIC POLISCAN system will not be go into operation if annual calibration has not been performed, or if for any reason the daily self-test fails, preventing the potential issuance of any violations. **This is a distinct advantage over other competitors' systems.**

Which is the right configuration for you

To reduce complexity and cost, we suggest the PCU configuration for this project. A mobile vehicle is beneficial when moving daily between locations but requires downtime for maintenance. Fixed pole mounted is best suited for areas where you know you will always need constant enforcement and do not expect moving to a different location.

The PCU configuration maximizes camera uptime while reducing setup time, allowing all systems to be set up by one operator. To provide the most dynamic and adaptive method for enforcement, we believe our PCUs are the best choice for this initiative.

Installation Space Requirements

9. Please describe the requirements for any space or physical assets needed for installation of equipment.

Equipment Specifications

Our DriveSafe camera design is nonintrusive and aesthetically pleasing, which helps the equipment blend into the environment.

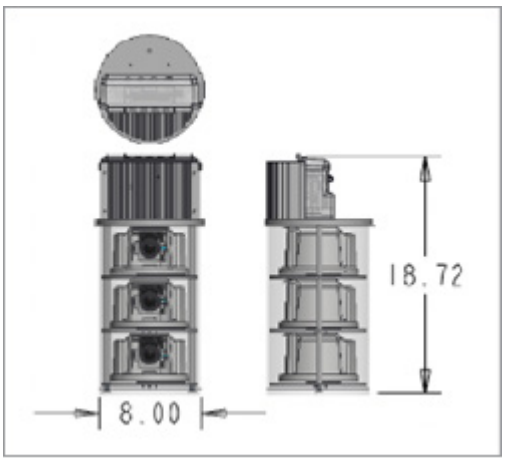
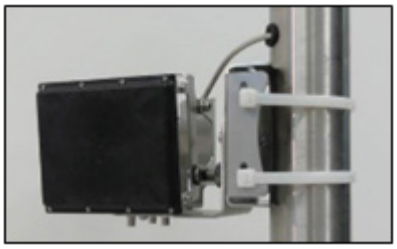
Our systems are completely nonintrusive – there is no physical connection to the traffic control cabinet or physical sensor in the roadway. The DriveSafe camera and flash units can often be mounted to existing infrastructure, which eliminates the need for poles, helping the equipment blend into the environment. The camera resides in an aesthetically pleasing housing with an all-encompassing form factor that dramatically reduces ancillary components found on competing systems that can unnecessarily clutter existing client infrastructure. Tables 9-1 and 9-2 below outline the specifications of the DriveSafe equipment, including size to indicate space needed for installation.

Table 9-1. DriveSafe Enforcement System Specifications

DriveSafe Enforcement System	
Number of Cameras	3 cameras in one housing unit
Image Capture Rate	30 FPS
Video Format	4K video
Video Length	Unlimited
Internal Illuminators	White Light / Infrared
Ethernet Requirement	Wired/Wireless Broadband
DriveSafe Enforcement System Housing	
Dimensions	21" x 8" x 8"
Weight	7 Lbs.
Construction	Polycarbonate
NEMA Rating	Nema 4 rating
Operating Temp	-20° F to 160° F
Input Voltage	11 VDC to 24 VDC or 115 VAC to 240 VAC
LED Night Flash	
Input Voltage	12 VDC or 115 VAC – 240 VAC
Flash Power Range	18 – 200 WS
Weight	4 Lbs.
Flash Housing Dimensions	8” x 7” x 4”

Functions	
Detection	Computer Vision and Tracking Radar
Max. Lanes Monitored	6
Signal Detection	Wired or Non-invasive Video Signal Sensing

Table 9-2. Equipment Required for a Six Lane Intersection

Equipment	Size	
DriveSafe® Enforcement Camera	20” x 8” x 8”	
Camera Pole Pelco Pole with Crash base	4” x 12’	
3DHD Radar Unit	8.3” x 6” x 1.5”	

Equipment	Size	
Flash Unit	9” x 7.5” diameter	
High Voltage and Communications Enclosure	8" x 10" x 4"	

Height and Distance Criteria

10. Please describe any criteria for heights and distances to ensure accuracy of the data collected.

We work with the State to position our Speed and RL cameras in the places best suited for successful enforcement. Our cameras are calibrated to allow for high levels of accuracy based on the positioning of the equipment. Minimum distance requirements are typically for red light enforcement installations. Most enforcement systems operate between 3 feet and 20 feet above the roadway, depending on configuration.

Turnkey Services

11. Do you offer a turnkey service? If so, what is included in that service and what is the minimum scale needed to implement?

Conduent offers turnkey service on almost all our programs and is customizable based on the needs of our clients. This begins with providing installation and maintenance of the equipment, performing two independent levels of image review by our staff before a third and final review is done by our client, performing payment processing via web, phone, and lockbox (mail in) for payments made by citizens, handling customer service calls for citizens, and lastly print and mail of any citations or correspondence.

Data Processing and Review Services

12. Does your company provide data processing, violation review and mailing services? If yes, please describe the general approach for how these services would be delivered. Please pay particular attention to the note above that we are not issuing tickets, fines, or fees in response to the observed violation.

Our CiteWeb® violation management system is a comprehensive, end-to-end platform capable of meeting the evolving efficiency and accuracy requirements of public safety technology investments. The platform includes all processing hardware, software, and components necessary to effectively intake, process, and manage high-volume violation event data. This platform provides for all of your data processing, violation review, and mailing services needs.

Conduent's CiteWeb® System: Flexible, Scalable and Secure

Conduent has made a substantial investment in our hardware and software to offer our clients a flexible, scalable, and secure data intake and management infrastructure. Our CiteWeb system is capable of handling a high volume of infraction data in a secure system supported by a redundant back-up system. The platform allows the State to set parameters for data access permissions at the user and individual module levels. Unique usernames are assigned to authorized end users, who are granted access to only the system modules that they need to perform their job duties. The system is accessible 24/7 for all authorized users.

Our CiteWeb system is a modular, web-based citation processing system that allows flexibility and distributed processing capabilities for the State's photo enforcement program.

- **QC Review.** Deployments load to this queue and wait for senior personnel to review the integrity of the deployment. Once the accuracy of the deployment is confirmed, it is accepted for Initial Review for image crop and license plate entry.
- **Initial Review.** Used for image review, plate image cropping, and data entry of plate and state. Allows for brightness, contrast, sharpening, hue, zoom, blur, and reverse image.

- **Initial Research.** Used for quality control research by a Supervisor of records rejected during Initial Review based on client Business Rules.
- **Verify Review.** Used to blind key plates saved from Initial Review and validate vehicle registration (VR) and registered owner (RO) information against images. Used to select the appropriate co-owner if provided for Gender Match.
- **Verify Research.** Used for quality control research by a Supervisor of records rejected during Verify Review based on client business rules.
- **VR No Hit.** Used to review no-hits received from DMV returns. Ability to error out or save plate as a corrected plate and resend for DMV information.
- **Client Review.** Used by the State to verify an event, approve/disapprove the event as a citation for print and mail and to append their electronic signature to the notice or dismiss violations with justification code.
- **Client Research.** Used for quality control research by a Supervisor of records rejected during Police Review based on client business rules.
- **Deployment Log Entry.** Used to start and end deployments for all of the camera types. This is broken out by system type.
- **Search.** Used to do inquiries of events by citation number, event ID, deployment ID, reviewer, citation date range, action category, location code, RO last name, lane number, plate, state, red time range, amber time range, and/or speed range.
- **Reports.** Used for report generation of standardized reports and graphs. Reports can be created in PDF, EXCEL, CSV, HTML, or Rich text. Review and print standardized monthly reports.
- **Citation History.** Used to display the history of every action associated with a citation.
- **Deployments.** Used to view deployments data (events, status of each event, and pictures or video).
- **Dashboard.** Used to access the dashboard and all of the related dashboard functions.
- **Printing.** Used to do printing process, reprints, and print updates. Printing is based on an automated next action logic that is set up uniquely based on the client business rules.
- **Correspondence Management.** Used to scan and link all received correspondence from a citizen or reply correspondence mailed to the citizen to the corresponding citation.
- **Payment Processing.** Used to input payments through walk-in, lockbox, or batch payment processing and to reconcile and account for deposits made to the State.
- **Court.** Used to schedule hearings and manage the court docket. Ability to enter disposition and uses automated next action logic to modify fines and penalties or to send correspondence. Allows authorized users to suspend activities on events based on predefined business rules.

- **Comments.** Used by authorized personnel to document every communication received and made to a citizen or adds comments to an event.
- **Name and Address Update.** When a transfer of liability is mailed in, this allows users to enter in the driver of the vehicle to print and mail a driver's notice.

The State does not use all of the modules available in CiteWeb for your current program. If additional CiteWeb system functionality is required for the State's program, we will work to provide these changes as required.

Court Documents

Conduent provides the State's court packages that include all details and items necessary to properly conduct hearings. The hearing evidence packages are submitted to all government agencies designated by the State in electronic and printed format. These forms, generated by CiteWeb, contain all the information to set out a speed offense in the State.

Court packets and all related information and images can be viewed and printed by authorized personnel 24/7.

CiteWeb® Reviews and Approvals

For the timely processing of all events for the State, Conduent's team is cross-trained on multiple processing functions within CiteWeb. Among the various processing functions to safeguard citation validity are several review and approval features.

Reviews

Multiple review queues allow the State to review images, violations, videos, and all information associated with each event. The following reviews are performed: Quality Control (QC) Review, Initial Review, Verify Review, and Blind Verify.

Quality Control (QC) Review

CiteWeb displays the list of downloaded deployments and performs a cross-reference check so that images, data, and video are available for a sample of events on the *QC Review* screen. The quality control team confirms data bar accuracy, date/time accuracy, and overall image framing and performs an image/video quality review. If everything for the deployment is accurate, then the deployment is acceptable and assigned to *Initial Review* (Figure 12-1).

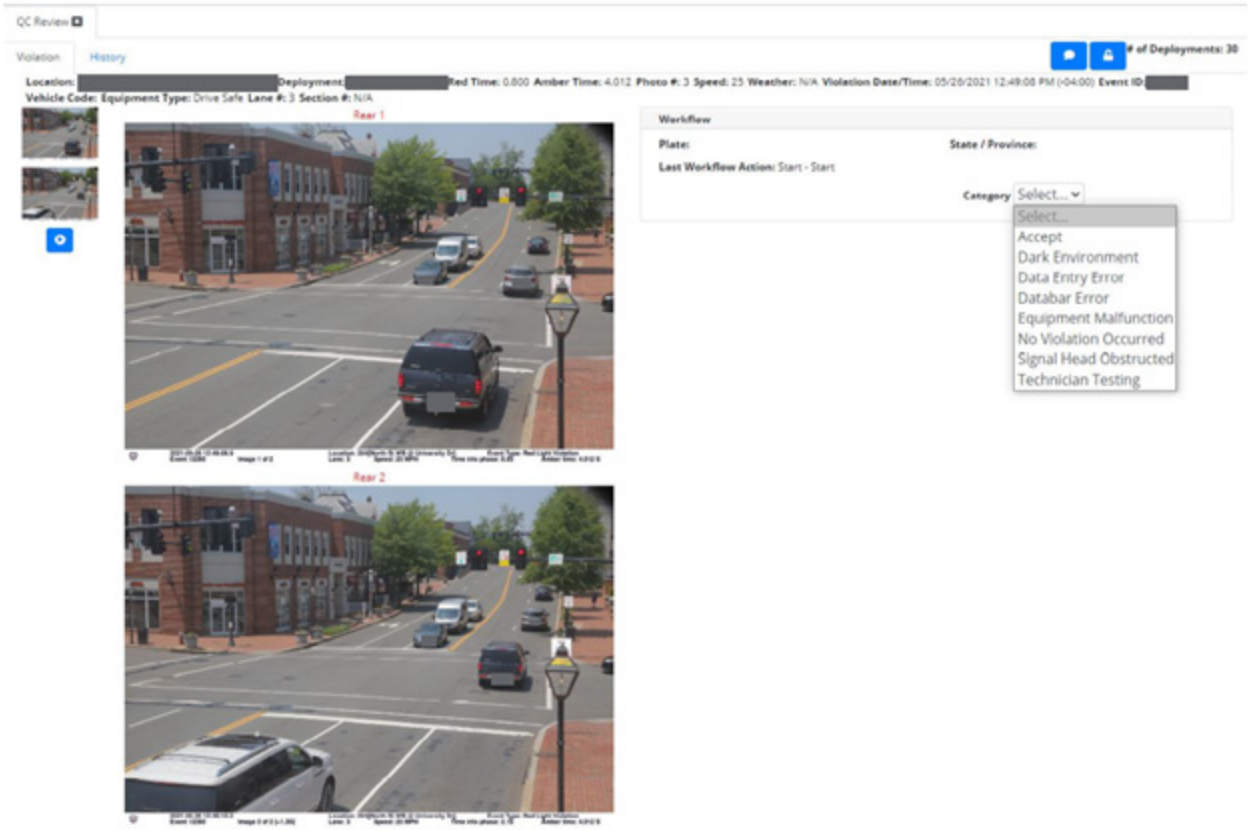


Figure 12-1. *QC Review* Screen in CiteWeb
The quality control team confirms data bar accuracy, date/time accuracy, and overall image framing and performs an image/video quality review.

Initial Review

CiteWeb makes sure that images, data, and videos are available for a sample of events in Quality Control (QC) Review. The quality control team confirms data bar accuracy, date/time accuracy, and overall image framing and performs an image/video quality review. If everything for the deployment is accurate, the deployment is accepted and advanced to Initial Review or vehicle registration (VR) acquisition depending on the license plate read provided by the camera.

On the Initial Review screen, processors ensure that all required data fields and assets are available and populated. This includes:

- Rear images of the violation
- Front images of the violation
- A crop of the license plate
- A crop of the driver
- The license plate, state, and plate type if required
- The date of the violation event
- The time of the violation event
- The location of the violation event

- Speed of the vehicle
- Lane number

On this same screen, processors can update:

- The license plate
- The state
- The plate type
- Blurring of any passengers
- The license plate or driver cropped image

Figure 12-2 displays the Initial Review screen that has all auto-populated data elements.

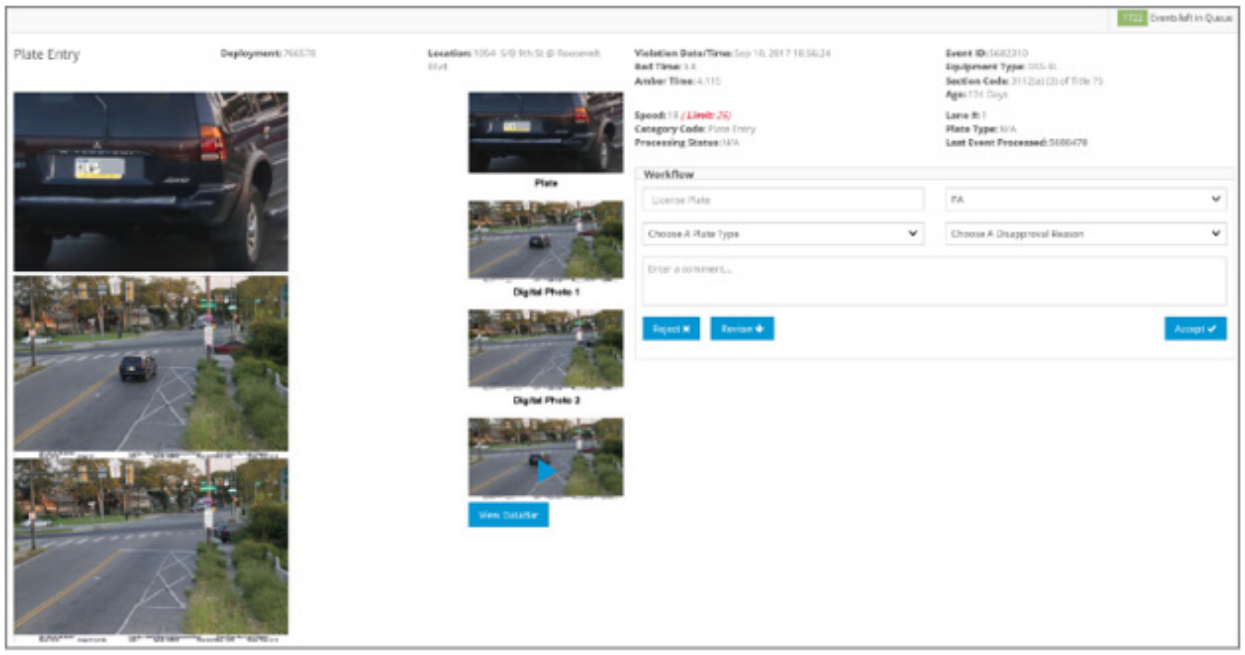


Figure 12-2. Initial Review Display Page
The plate image is always displayed at the top for ease of data confirmation.

In Initial Review, personnel review the images and validate them per the State's Business Rules. The events are then moved to VR lookup. If the event fails to meet the required issuance criteria as defined by the Business Rules, it is rejected with an appropriately defined reject code and placed into the Initial Review Research queue (Figure 12-3) where supervisors verify the rejects and, if appropriate, return the event to the initial review process.

Quality queues are an added feature of CiteWeb that adds a layer of quality assurance on all the images being rejected and accepted for final approval, ensuring that two people have reviewed a sampling to determine the validity of the event before VR acquisition.

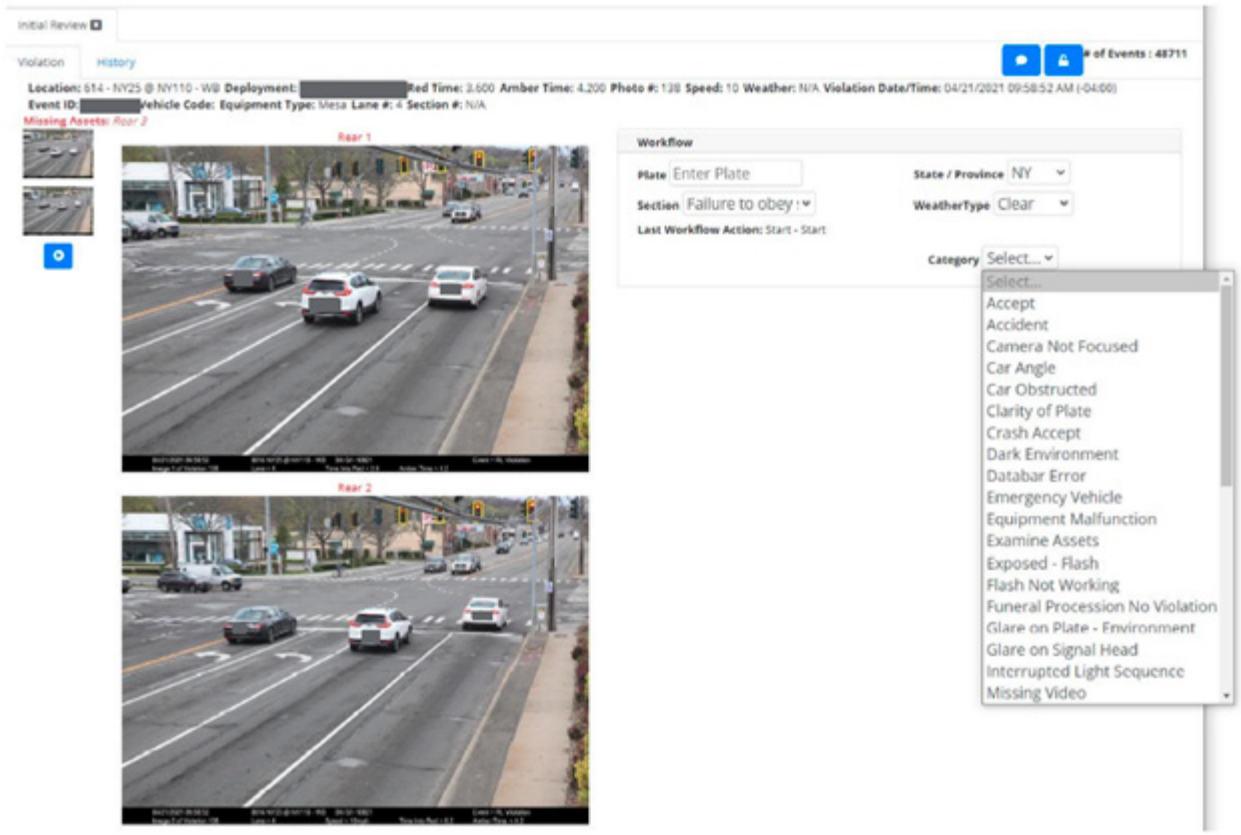


Figure 12-3. Initial Review Research Screen
Supervisors are able to update the reject code to a correct code, edit the face or plate image, accept the reject code, or accept the event. Sample sets are provided and can be increased to review more events.

In Initial Review, the user can select an area on any image, zoom in on this area to magnify that region, and then save this zoomed section as a sub-image of the license plate or driver, replacing the image crop that is provided by the camera. It should be noted, however, that the original images are never altered and are protected from any changes within our database.

We use our national department of motor vehicle (DMV) interfaces to maximize registered owner “hit rates” across the country to support the CiteWeb “No-Hit Review” and “Reject Review” subsystems, which only close an event if there is zero percent chance of a VR return.

We have developed an online interface with NLETS, requiring no human intervention or client involvement, which provides 24-hour registry information return to out of state plates. We use our proprietary software application – Motor Vehicle Registry System (MOVERS) – to access NLETS. We can receive returns on leased, rented, and fleet vehicles as well as individual-owned vehicles.

Unique to our verification process is a secondary review known as “blind verify.” A processor performs a verification of the event data, the registry data, and the event images. At this step, processors confirm the vehicle pictured in the images matches the vehicle make on the registry

return, selects the registered owner name that suits the driver image, and re-validates the event for Business Rule approval. To begin the process, the image review specialist “blindly” types in the license plate as it is read from the image, ensuring accuracy of the information that has been entered. If the entry matches the plate number and state entered during initial review, the registered owner data is displayed for verification, as shown in Figure 12-4.

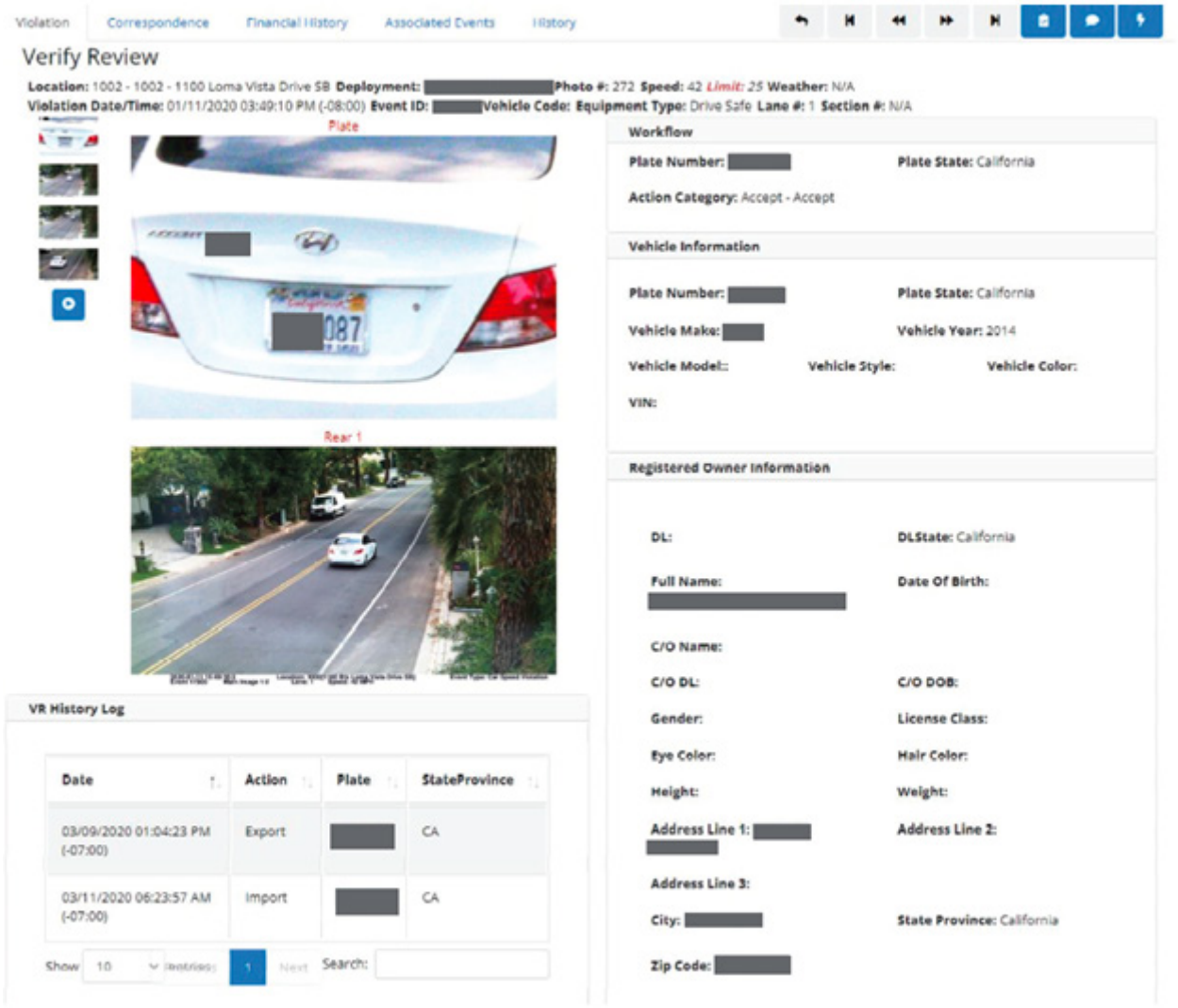


Figure 12-4. Verify Review

The verification screen displays pictures and blind entry of the plate information. Once a match is made to the license plate entered at Initial Review the registered owner information is displayed. The verifier is able to update the license plate and send back to DMV, modify the face, or plate crop, or reject the event.

If the license plate number is different, the processor enters the correct license plate number and the license plate is resent for name and address acquisition again that evening. Once the registry data is displayed, each event is reviewed or is given a specific reject code to identify the reason that it cannot be processed. Rejects are also subject to supervisory review for accuracy and incorporated reports on non-issued events.

If any of the registered owner or vehicle description information is not attainable, the citation is automatically moved into the VR No Hit queue, as shown in Figure 12-5 This queue enables the processor to research each license plate and change the plate data that was originally entered, such as in the event of a typo, and send the corrected plate and ticket number to DMV for registered owner and vehicle description information.

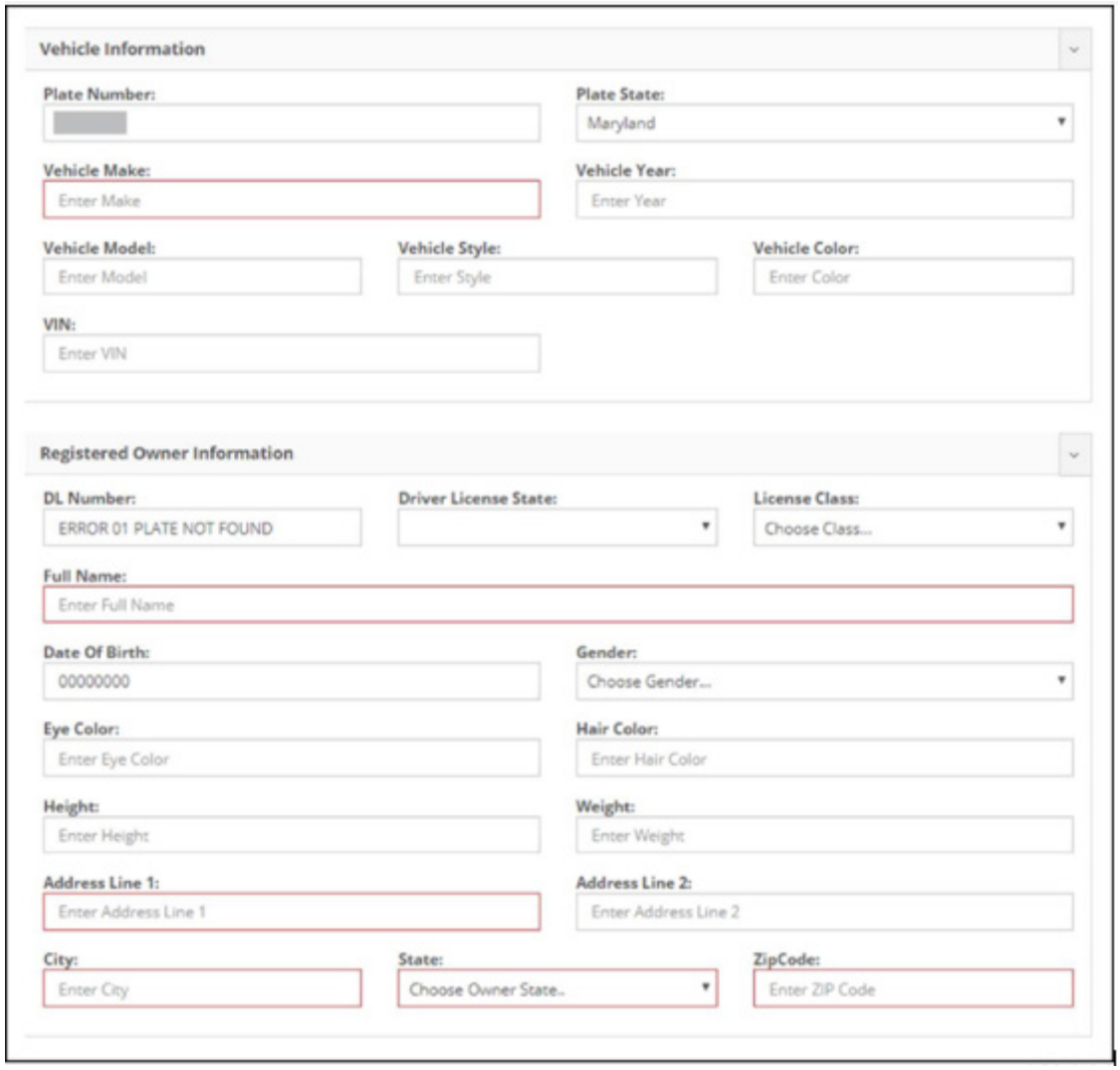


Figure 12-5. VR No Hit Data Entry
Vehicle information and registered owner information can be data entered into this screen and saved to the event.

Authorized personnel have the ability to update registered owner data and vehicle information as needed through the VR No Hit screen.

Each DMV request is recorded into the CiteWeb transaction history. The processor will indicate the state and plate number they are submitting each time. This allows the history within the citation to show each plate sequence that was submitted, so that duplicate submittals are avoided. Figure 12-6 displays the VR History section in the CiteWeb application.

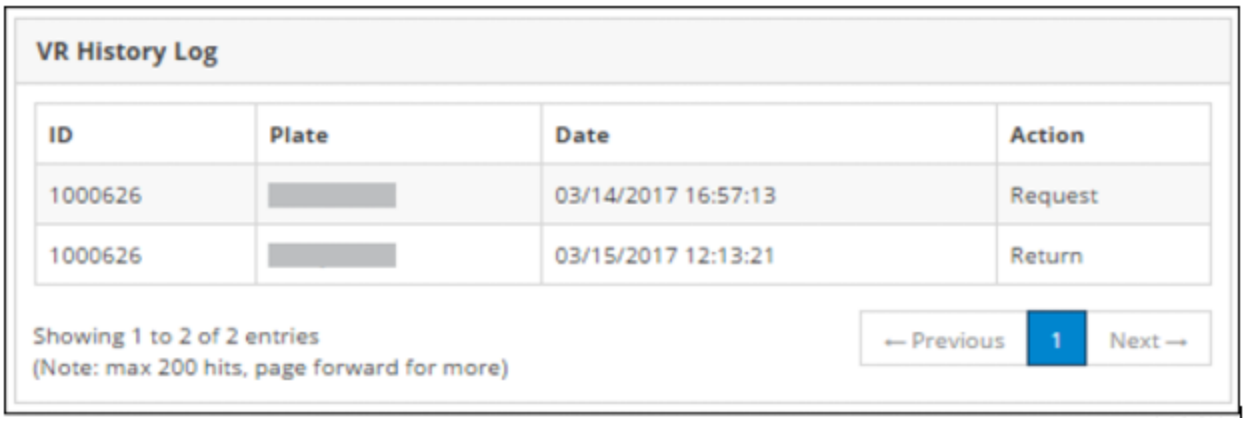


Figure 12-6. Vehicle Registration (VR) History
This section of screen displays the plate/state that have been submitted to DMV, the date and time of the request, and the action taken.

If the citation fails to meet the required issuance criteria as defined by the business rules, it is rejected with the appropriate defined reject code. Both the VR No Hit and the VR History ensure minimization of no-hits from DMVs all over the country.

The approval function of CiteWeb allows the issuing personnel a simple final review/approval opportunity to certify that all citations are in accordance with Massachusetts law before the incidents are issued. When the issuing personnel receives the incident, it has already been reviewed by two processors to verify that all the elements of the incident are pursuant to Business Rules, and that DMV information has been returned.

As shown in Figure 12-7 authorized personnel can review electronic incident images and data. Authorized personnel can make the decision to approve the incident, reject the incident, update plate information if it is entered incorrectly, or send the incident to a supervisor for review. So that a reviewing supervisor can determine if an incident should be issued as a citation, the image set for that incident, as well as the associated incident data, are displayed. Individual images can be selected from the thumbnail ribbon to display as a larger image for closer inspection.

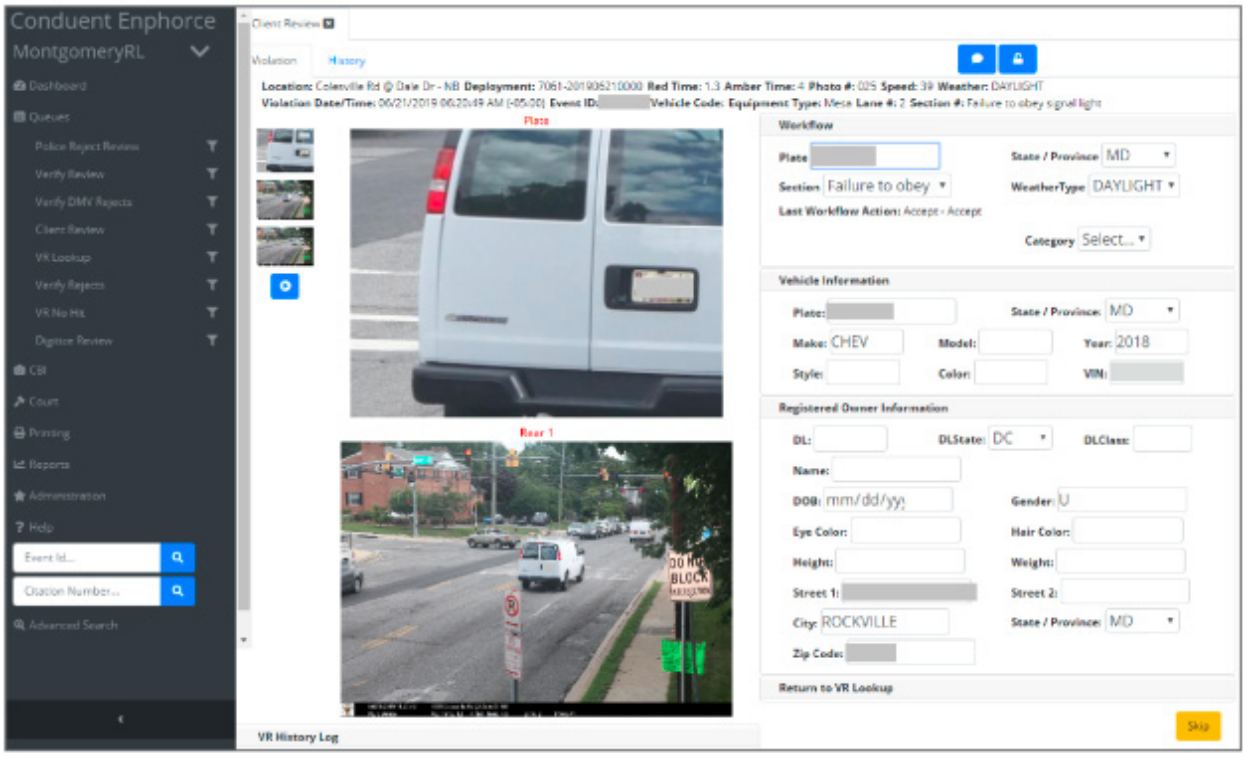


Figure 12-7. CiteWeb Approval Screen for Authorized Officials
Authorized personnel can review the information to make a decision about the validity of the citation, select a reject category if the event doesn't match issuance criteria, enter comments or update plate information and send back to DMV for registered owner information.

CiteWeb is compatible with Apple products and can be accessed remotely for authorized personnel to complete their reviews.

Conduent technical staff perform maintenance on all critical hardware and communications equipment that support the operation of the CiteWeb system. We use preventive maintenance procedures on every critical hardware component on a regular basis. Conduent schedules such maintenance strategically to avoid interfering with CiteWeb operations or adversely affecting performance levels.

History

An added feature that CiteWeb provides is a transparent audit trail on every touch in the database. Most companies will document when an event has been edited or processed. We provide a history record for every time a user views the event as well to provide a clear audit trail on every event. Figure 12-8 shows a screenshot of the History section for each event.

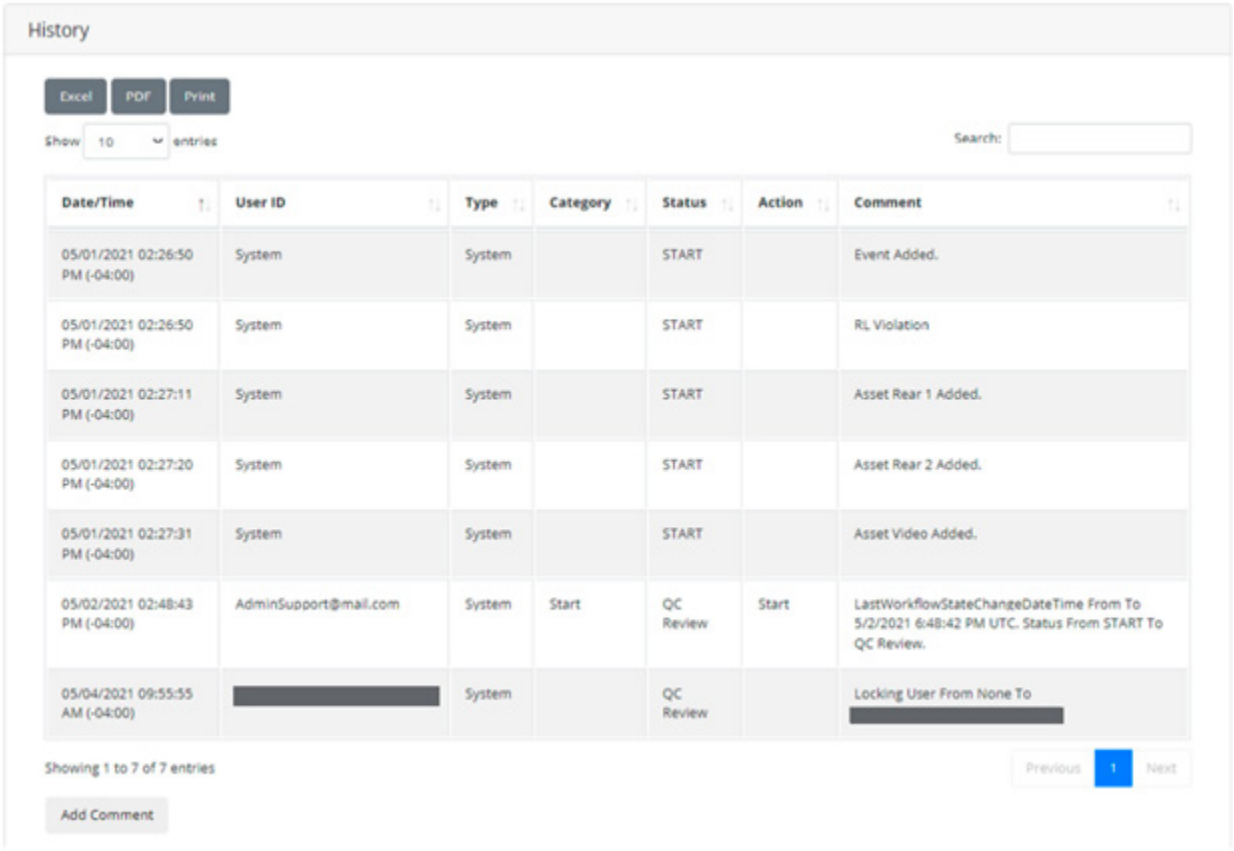


Figure 12-8. History
On every page the History section contains a record of all access, data entry, and amendments performed on a citation.

Motor Vehicle Registry Integration

13. What integration would you need to have with the Registry of Motor Vehicles in order to mail safety messages to drivers who are observed violating the speed limit?

Conduent currently enjoys integrations with Departments of Motor Vehicles in all 50 states and the District of Columbia, allowing us to mail safety messages as soon as violations are captured at the beginning of your contract.

Conduent uses our Motor Vehicle Registry System (MOVERS), an internally developed interface managed by our in-house, dedicated registry group. This proprietary software application, which has been in operation for more than 30 years, works with Registry of Motor Vehicles/Department of Motor Vehicles (RMV/DMV) offices in all 50 US states and the District of Columbia, in addition to the National Law Enforcement Telecommunications System (NLETS). In MOVERS, individual client batch jobs are scheduled to extract the formatted returns from the MOVERS database. The extract includes all information required for the mailing of the citation and status of the return (no-hit, stolen tag, salvaged, make mismatch, etc.). This file is queued to the “DMV RETURN” queue for a second review where the determination is made on mailing the citation. Our registry group maintains Conduent’s relationships with each RMV/DMV, overseeing the operations of requesting and processing returned name and address data, and maintaining contact with all RMV/DMV and NLETS. By constantly monitoring the return process, this group is alert to any changes in the hit rate, which may indicate a change or problem at a RMV/DMV. The registry group consistently refines MOVERS to better meet your changing needs and the changes in state RMV/DMV and NLETS.

In-State RMV Requests

Conduent offers in state name and address acquisition through the Massachusetts Registry of Motor Vehicles.

Out-of-State DMV Requests

The accurate and timely acquisition of out-of-state registered owner information optimizes citation issuance for the City. For these requests, we have an online, direct interface with NLETS that requires no human intervention or client involvement, and we can provide 24-hour registry information return. We have been a Strategic Partner with NLETS Incorporated since 2007 and we continue to build upon our relationship as they improve accuracy and efficiencies.

Safeguards for Accuracy

We will provide the City with a secondary review in our verification process known as “blind verify.” Our review processors perform a verification of the violation data, the registry data obtained from the NLETS, and the violation images. Processors confirm the vehicle pictured in the images matches the vehicle made on the registry returns, and re-validates the violations’ approval.

To begin the process, the image review specialist types in the license plate blindly as it is read from the image, ensuring the accuracy of the information that has been entered:

- If the entry matches the plate number and state originally captured by the original reviewer during the first review, the registered owner data from the RMV/DMV or NLETS is displayed for verification. The verifier then compares the vehicle make and model to the registry information to confirm that the information returned from the RMV/DMV is accurate.
- If the license plate number is different, the processor enters the correct license plate number, and the license plate is resent to RMV/DMV/NLETS for name and address acquisition again that evening.

Once the registry data is displayed, each violation is either validated for final review or is given a specific reject code to identify the reason that it cannot be processed. Rejects are subject to supervisory review for accuracy and incorporated into reports on non-issued events.

Change of Address

Once mail is returned to the post office box as undeliverable, Conduent applies a nixie transaction to CiteWeb using the bar code on the citation.

Implementation Timeline

14. How long would it take you to implement your solution, from signed contract to solution go-live? In other implementations, what tends to slow down the path to deployment?

Our standard implementation process typically takes at least four to six months from the contract execution. Multiple steps are required to set up the overall project, consisting of the front-end and back-office processes. The front-end consists of site selection, plan design/ permitting, and construction. The back office is the buildout of the database for violation processing, customer service, and payment processing. The back-office is built in parallel with the front-end process, so the program goes live once the equipment is installed.

In cases where fixed pole locations or portable cameras require permitting, the plan design/permitting process starts, and notice to proceed is provided once we receive the approved permits for construction to begin. Permit acquisition is often a lengthy process, typically involving at least two plan checks, with the number potentially increasing depending on municipal regulations. Clearly defining these aspects during the request for proposal stage ensures consistency among vendors and facilitates accurate schedule comparisons by the procurement team.

Once the permit is received, construction begins at the designated location, and the necessary infrastructure and camera systems are configured for optimal performance. If permits are not required, we can accelerate the notice to proceed date from the acquisition of permits to the finalization of Business Rules (BR).

We maintain an off-the-shelf inventory to expedite equipment procurement, although lead times for camera systems can range from 90 to 120 days, depending on the specifications. However,

in most cases, this does not significantly delay the deployment of cameras, as other activities proceed concurrently.

The back office is developed in conjunction with the front-end buildout. The first step is to develop the BR. The BR serves as a comprehensive document outlining all the requirements for operating an automated enforcement project according to your specifications, contract requirements, and state & local legislation.

Setting up processes for violation processing, customer service, payment processing, and opening a bank account / obtaining a merchant ID also involves substantial lead time. Developing the BR early in the implementation phase helps mitigate potential delays.

Various factors can potentially slow down implementation, which is why we hold weekly meetings involving relevant stakeholders such as client program management, senior leadership, courts, police, and our internal team members, including implementation and software managers, operations, sales, and leadership.

During our weekly meetings, any schedule changes are communicated, and discussions on mitigating potential delays are held to ensure the project stays on track and within budget. Collaboration with key internal and external stakeholders is crucial for the successful execution of the program.

High-Fidelity Implementation Scenario

15. Describe the smallest high-fidelity implementation scenario you can imagine. Please include information like minimum size of a deployment, minimum suggested duration, what types of costs (not actuals) are included in your business model (e.g., installation, on-going service, mailing, deinstallation).

Conduent has the experience, technical solution, and project team for a successful partnership with the State. Together, we will deliver an industry-leading automated speed and red-light enforcement system. We have the technology, staff, and back-end processing that consistently results in successful traffic enforcement programs. Our state-of-the-art technology and experienced project staff combine to form an unmatched turn-key solution.

Using our proven project management methods, we operate programs with the highest degree of efficiency, producing the greatest results in the shortest amount of time possible. With controllable issuance rates between 90 and 95 percent, we have been able to deliver consistent and reliable photo enforcement services that help our clients achieve their public safety goals. We would incorporate our lessons learned and best practices to confirm we deliver a program that produces benchmark results for the State.

Conduent's team has decades of experience successfully installing and operating thousands of automated enforcement sites for our clients.

Our team will oversee the planning, construction, installation, and maintenance for all the automated enforcement sites specified by the State. Our implementation team has decades of experience in the photo enforcement industry. Prior to starting construction, Conduent will secure all appropriate permits, assess easements, and gain approvals in a timely manner from government agencies, utility company, and private owners. Our designs and installation will conform to all necessary construction standards. We will work diligently to limit any adverse effects on traffic signals, street maintenance and operation, and roadways.

Timeline and Milestone Project Schedule

The cornerstone of any implementation plan is its Implementation Project Schedule, which summarizes the work breakdown structure of tasks to be performed, sequences those tasks, assigns responsibility for the task, and establishes target dates against which progress can be measured. For the State's project, several key milestones will drive the overall schedule and sequencing of events.

Size and Cost of the Program

Conduent has programs of all shapes and sizes. The geographic nature as well as configuration of the solution chosen can help determine the level of support necessary for how small a program can easily be supported without the need to independently dedicate staff to the specific program. Conduent believes the State should pay any vendor via a Fixed fee for compensation which is not tied in any way to volumes of citations issued. This reduces potential public perception issues in which it is thought the vendor is incentivized to issue citations on the program. Our fixed fees paid by our clients cover all costs on the program without additional costs of any kind unless specifically indicated in our pricing assumptions.

Staff Training

16. What is your approach and delivery of staff training as it relates to your proposed solution?

Conduent is recognized as a leader in the automated red light, speed, and photo enforcement industry. Proper training programs and protocols have been a centerpiece of those successes. Our proposal is supported by a team of seasoned professionals that bring a unique, seasoned perspective, and the demonstrated project experience needed to provide the MASSDOT superb training on all system features.

This team has successfully completed manufacturer and Conduent training on all required photo speed enforcement equipment and software. They are highly qualified to supply necessary training in the operation of the camera systems for authorized MASSDOT staff.

By combining classroom and virtual instruction with hands-on training, we maximize employee knowledge retention. After training, comprehensive manuals in electronic form help keep skills sharp, prevent loss of productivity, and performance. These reference guides are updated as policies or programs are changed. We can also supplement training and procedural documentation with other training tools such as on-demand eLearning modules.

Through this combination of unmatched experience and proven teaching methods, **we produce a well-prepared, ready to go team of individuals, capable of producing meaningful contributions throughout the life of the Project, from the very first day of contract operations, with minimal interruption and risk to operations.**

Training Philosophy

For this Project, our team's approach to training is to align contract compliance, quality services, and an understanding of the required processes and solutions. We subscribe to the training practice of Instructional Systems Design. This method follows the ADDIE model (Analyze, Design, Develop, Implement, and Evaluate).

The ADDIE approach was originally developed as an instructional systems development program for military training, where it is imperative to get it right the FIRST TIME. The model eventually transformed and became commonly used to design all types of training. The technique facilitates excellent quality design, clear learning goals, carefully structured content, controlled workloads for students, integrated media, relevant student activities, and assessment strongly tied to the desired learning outcomes.

Initial and Refresher Training

A key differentiator of our training approach is that the curriculum is customized and tailored to meet MASSDOT's specific goals. Another valuable intangible is that your program benefits from our decades of developing and implementing public safety training for various projects across the transportation industry.

By combining computer-based training, classroom instruction, and hands-on training, we maximize the employee's knowledge retention. Virtual training is available through Microsoft Teams or Zoom. To keep the skills of your personnel sharp after training, we supply comprehensive manuals including user guides, program and software overviews, information on camera equipment, and operation.

In addition, we conduct follow-up training as requested and/or needed at MASSDOT's convenience at no additional cost.

Training Time

Our training team meets with you during implementation to discuss personnel training criteria, system access needs, and other relevant training issues for each type of operational employee. We can schedule training at a time and place that is convenient for MASSDOT's team. All designated MASSDOT staff gain working knowledge of the system's technology, operation, and compliance requirements.

MASSDOT trainees use web-enabled computers for inquiry, interpretation of reports and screens, and review of user documentation. By customizing the training, we can supply clear insights into the camera operations, the interface to the traffic signal equipment, camera maintenance, violation processing, and program performance. We also review and discuss the

many options available for reporting to aid in managing operations, monitoring performance, and quality assurance.

Class Size

Hands-on training is a vital component of the training curriculum. It is essential that all individuals involved with the program understand the technology and processes involved with the System. We limit the size of our training classes to a maximum of 15 individuals per training instructor so that trainees can benefit from personalized attention, ask questions freely, and receive hands-on experience with the systems taught. User retention, adoption levels, comprehension, and comfort levels are vastly improved when they can learn by doing.

Proposed Training Outline

Through in-depth training, all designated team members will have working knowledge of the traffic safety camera technology, its operation, and its requirements for compliance. Operators receive training that includes classroom instruction and field service training. The course follows the outline below:

- Program Introduction
  - Red Light Camera
  - Common Questions
  - Camera Installation and Operation
  - Violation Image Evidence
  - Citation Processing
  - Chain of Evidence
    - Function of the Field Service Technician (FST)
    - Evidentiary, Operational, and Technical Issues
  - Camera documentation
  - Court Strategies
  - Court Documentation and Evidence Packages
    - Software Functionality
- Use of PC and LAN Technology for Image Review and Retrieval

The training curriculum can be expanded to include specific modules for law enforcement, hearing officers, adjudication, payment processing, cashier functions, and customer service.

Ongoing Training

Training is not static. Staff quickly forget what they are taught if they do not practice their skills shortly after training. Performance measurements inform us when and where to repeat, continue, or reinforce specific training curricula. We create a series of learning checks and refresher modules scheduled for automatic assignation post training to assess and reinforce retention.

Follow-up training is provided to all personnel on a routine basis at least twice per year. The training focuses on areas that affect program performance, efficiency, and safety. This component is designed to maintain critical skills, procedure compliance, and safety awareness.

Again, our key priority is to provide your staff with the knowledge and skills required to successfully run this Program, as we continue to collaborate with you, throughout the life of the contract, to achieve citizen safety and well-being.

Massachusetts Presence

17. Is your company currently providing services to the Commonwealth of Massachusetts? If so, what kind?

Our local Northeast Regional Office is located at 260 Franklin Street, Suite 500, Boston, MA 02110, and it has been our main support location for the Commonwealth for nearly 40 years.

Table 17-1. Massachusetts Presence

Client	Description
Massachusetts Registry of Motor Vehicles (RMV)	Our strong relationship with the Massachusetts RMV has been a major success factor in maintaining high revenue and collection rates for various municipalities throughout the Commonwealth. Our support staff interacts with RMV personnel to monitor changes and accurately process name and address returns. In late 2019, we also implemented ATLAS as the new online portal application managed by the RMV.
Massachusetts Port Authority (Massport)	Conduent currently is responsible for collecting and reconciling all issued violations, both electronically or in-person, from the Massport Parking Violations Office (PVO). A Centralized Violations Database allows authorized users to edit, add, view, and process tickets and payments. A list is also maintained that includes information of all open, processed, and historic violation tickets.
City of Boston	Since 1982, Conduent has offered our Parking Violation/Parking Management Information Services System (PVPMISS) to the Boston Transportation Department (BTD), Office of the Parking Clerk (OPC). This PVPMISS platform provides the City with a consistent and stable revenue stream, vendor-neutral integration, expert technology support, and a superior Massachusetts Registry of Motor Vehicle (RMV) interface to improve customer service and overall collections.
City of Cambridge	Since 1984, Conduent has provided its Parking Management Information System (PMIS) to the Traffic, Parking and Transportation Department of the City. This includes citations issued manually or by handheld devices, back-end systems, and a website for processing payments, submitting mail adjudication online, and registering plates or licenses to receive alerts. Conduent also provides data entry and balancing routines for updates, generates outgoing correspondence and notices plus an online Residential Permit Parking (RPP) renewal application for Stickers and Visitor passes.
City of Newton	Since 2014, Conduent has provided to the City with a Parking Ticket & Collections System in a browser-based, hosted environment. This system integrates all functions and activities related to parking ticket issuance, processing in real time revenue collection, correspondence, self-service Web applications, adjudication, DMV access, scofflaw and towing services, analytics, and reporting. Our integrated approach allowed the City to eliminate standalone legacy systems and reduce needless redundancies.
City of Somerville	Since 2011, Conduent has provided Ticket and Permit Processing and Management Services to the City. This was accomplished by the implementation of such new technologies as Internet pay-by-check payments, our long term direct relationship with the Massachusetts RMV, and our handheld ticket issuance application. Somerville averages an impressive 93 percent collection rate, which has led to an increase in both per-ticket City revenues and ticket issuance.

Client	Description
City of Waltham	Since 1988, Conduent has provided citation processing services for the City. Its Parking Management Information System (PMIS) includes the eTIMS product line for parking citation processing; RMV name and address; RMV Marks and Clears; Pay-by-Web; Lockbox; Workflow application with correspondence processing and indexing, Notice mailing; Online Dispute Application; Cashiering; Reports; Ruggedized Handheld ticket computers with printers, and a Fleet Portal.

Data Collection Questions

Data Collection Questions and Personal Identifiable Information

18. Personally Identifiable Information (PII) is any information about an individual that can be used to determine an individual's identity, including an individual's name, social security number, date of birth, medical or educational records, geolocation data, photographic images, or other information that is linked to any of the above. If your technology collects data, does your proposed data collection tool involve the collection of PII?

Our solution includes the processing of PII. We capture and process license plate, name, and address data solely for the registered owner information obtained of violators. We take great care to protect and secure PII data. All data is encrypted at rest and in transit. Both Conduent and States's users' access rights are tailored to the requirements of their job functions. All Conduent employees are required to take annual PII and security training with refreshers as needed.

We maintain a formal set of policies and procedures to ensure all security standards are documented and followed. We regularly review and update these policies and procedures to stay current with best practices, regulatory requirements, and ever-evolving cybersecurity and data protection threats.

Authorized personnel with separate and distinct levels of user rights, who have proper authorized security clearance, can access the system including read only, full enter, and edit authorizations. Authorized end users receive unique usernames granting them access to only the modules needed to perform their job duties.

Data Access Questions

19. Provide a brief (yes/no) answer to the following questions:

Table 19-1. Data Access Questions

Question	Yes/No	Brief Explanation
a. Would MassDOT own the raw data collected?	Yes	All the data collected throughout the life of the contract is the MASSDOTs sole property.
b. Would the raw data be anonymized?	Yes	Our camera systems effectively safeguard the data for record keeping and adjudication purposes and protect it from accidental or intentional corruption, destruction, or disclosure. Images and video are instantly encrypted at the camera processor using the industry standard, advanced encryption standard (AES-128). AES has never been cracked (it would take about a billion years to do so) and is safe against any brute force attacks. Violation evidence data, images, and videos are kept together as an encrypted package to secure evidence integrity and security from potential threats such as hackers, viruses, malicious, or inexperienced users. The Raw data is typically stored in a proprietary format that is not readable without the correct software, rendering ii unusable even if it wasn't encrypted.
c. Would the data be deleted periodically? If so, how often?	Yes	Data Deletion is performed according to MASSDOT specifications and following current deletion laws and regulations.
d. Would any third parties have access to the raw data collected?	Yes	The solution allows the MASSDOT to set parameters for data access permissions at the user and individual module levels. Unique usernames are assigned to MASSDOT authorized end users (including third parties), who are granted access to only the system modules that they need to perform their job duties.

Data Lifecycle Overview

20. Provide a brief table that outlines the lifecycle of the data collected. Please indicate the following:

Table 20-1. Data Lifecycle Overview Compliance

Question	Yes/No	Brief Explanation
a) Where will the data be stored and processed?	Yes	Conduent hosts all of the state's data and images in our primary facility in East Windsor, New Jersey and a secure facility in Sandy, Utah. **These data centers are highly secure and classified as Tier-3 data centers that offers 99.98% availability.** Our data centers support multiple network connections to the internet through multiple carriers. Our comprehensive data retention and security procedures protect critical violation information, images, and videos from unauthorized access while preventing data loss, interruption of the State's revenue streams, and disruptions to processing or customer service. An effective storage, backup, and recovery program ensures that we address all aspects of the physical environment, hardware reliability and serviceability, and recovery policies and procedures. We use proactive and

Question	Yes/No	Brief Explanation
		reliable technology solutions and program management to properly audit and restrict access to sensitive and critical data. We provide real-time database syncing between our primary and secondary data centers. In addition, we create incremental daily and full weekly dual back-ups between of the CiteWeb data, images, and videos. One copy of the back-ups is stored locally at the primary data center in East Windsor and the second copy is sent to and stored in our secondary data center in Sandy.
b) Who will own and have access to the data?	Yes	MassDOT owns the data collected as it is your program. Authorized personnel with separate and distinct levels of user rights, who have proper authorized security clearance, can access the system including read only, full enter, and edit authorizations. Authorized end users receive unique usernames granting them access to only the modules needed to perform their job duties.
c) How will data security be maintained?	Yes	Conduent is committed to maintaining the security and privacy of the State's and your constituents' data in the most straight-forward, transparent fashion possible. We conduct SOC 2 Type 2, PCI-DSS Level 1, and ISO-27001 audits to ensure that proper IT security protocols, policies, and procedures are followed. We train all employees about their roles and responsibilities to maintain a safe and secure workplace. In addition, we perform periodic internal audits to ensure all policies and procedures are adhered to as required. To ensure data security, data is encrypted both (1) at rest using MS-SQL database and whole-disk encryption, and (2) in transit using secure, encrypted network protocols such as SFTP, HTTPS, TLS, and VPN tunnels. We maintain a formal set of policies and procedures to ensure all security standards are documented and followed. We regularly review and update these policies and procedures to stay current with best practices, regulatory requirements, and ever-evolving cybersecurity and data protection threats. In the rare event a data breach or incident does occur, we will mobilize our Incident Response (IR) team and follow our written procedures to deal with that incident. The procedure includes impact assessment, data forensics to determine the cause and resolution, and both internal and client management notification plans.
d) Whether the data will contain PII; whether and how any such PII will be anonymized?	Yes	Our solution includes the processing of PII. We capture and process license plate, name, and address data for the registered owners of the vehicles that are violators. We take great care to protect and secure PII data. All data is encrypted at rest and in transit. Both Conduent and the State's users' access rights are tailored to the requirements of their job functions. All Conduent employees are required to take annual PII and security training with refreshers as needed.
e) How will the data be disposed of, destroyed, sent elsewhere, or made public?	Yes	We will purge any data requested by you at specific intervals indicated or by statutory requirements. As this is your data, we will not share this with other entities without your express instructions and consent to do so.
f) In your previous deployments, how long the data will need to be stored before deletion, if applicable.	Yes	We store data for the length of time required by each client. We will work with the State to determine your storage length needs.

Data Collection Risks

21. What risks or vulnerabilities are associated with the data collection you require to perform that tasks stated by your offering?

Conduent has a proven process of minimizing risks when it comes to collecting data. We are committed to maintaining the security and privacy of the State and your constituents' data in the most straight-forward, transparent fashion possible. We conduct SOC 2 Type 2, PCI-DSS Level 1, and ISO-27001 audits to ensure that proper IT security protocols, policies, and procedures are followed. We train all employees about their roles and responsibilities to maintain a safe and secure workplace. In addition, we perform periodic internal audits to ensure all policies and procedures are adhered to as required.

To ensure data security, data is encrypted both (1) at rest using MS-SQL database and whole-disk encryption, and (2) in transit using secure, encrypted network protocols such as SFTP, HTTPS, TLS, and VPN tunnels.

We maintain a formal set of policies and procedures to ensure all security standards are documented and followed. We regularly review and update these policies and procedures to stay current with best practices, regulatory requirements, and ever-evolving cybersecurity and data protection threats.

In the rare event a data breach or incident does occur, we will mobilize our Incident Response (IR) team and follow our written procedures to deal with that incident. The procedure includes impact assessment, data forensics to determine the cause and resolution, and both internal and client management notification plans.

Our system protects all images from accidental or intentional corruption, destruction, or data disclosure. Potential threats include hackers, viruses, and malicious or inexperienced users.

Storing and Encrypting Images

Conduent provides complete end-to-end evidence integrity. Each camera system has sufficient computer and associated equipment to record, document, and track automated traffic enforcement data for record keeping and court purposes. Properly documenting the evidence of a violation is essential to your program's integrity and requires the right technology, which is exactly what we have developed.

Our camera systems effectively safeguard the data for record keeping and adjudication purposes. The images and video are embedded with a data bar that includes crucial data, such as the date, time, location, and amber phase duration, immediately at the time of the violation. The violation evidence is instantly encrypted at the camera processor using the industry standard, advanced encryption standard (AES-256). The violation evidence data, images, and videos are kept together as an encrypted package to ensure evidence integrity and security. Each Worksite Speed Control System is capable of storing onboard a minimum of 48 hours of violation data in the event of communication loss.

Lastly, the case file and associated traffic data is transmitted to our centralized violation management platform, CiteWeb, using a highly secure virtual private network over our Cisco Enterprise platform. This process safeguards your data and provides a reliable and secure chain of custody with logging and reports to account for all events. All violation and vehicle pass data imported into CiteWeb is available for analysis through reporting and the CBI dashboard ensuring complete and comprehensive evidence integrity.

System Backup

Conduent hosts all of the state's data and images in our primary facility in East Windsor, New Jersey and a secure facility in Sandy, Utah. These data centers are highly secure and classified as Tier-3 data centers that offer 99.98% availability. Our data centers support multiple network connections to the internet through multiple carriers. Our comprehensive data retention and security procedures protect critical violation information, images, and videos from unauthorized access while preventing data loss, interruption of the State's revenue streams, and disruptions to processing or customer service.

An effective storage, backup, and recovery program ensures that we address all aspects of the physical environment, hardware reliability and serviceability, and recovery policies and procedures. We use proactive and reliable technology solutions and program management to properly audit and restrict access to sensitive and critical data.

We provide real-time database syncing between our primary and secondary data centers. In addition, we create incremental daily and full weekly dual back-ups between the CiteWeb® processing system data, images, and videos. One copy of the back-ups is stored locally at the primary data center in East Windsor and the second copy is sent to and stored in our secondary data center in Sandy.

Critical failures that can lead to the crippling loss of program data and information are possible if contingency plans are not developed, tested, and put into place before possible failures occur. Conduent can address these needs based on our years of experience as a leader in information technology (IT) solutions for municipal and federal governments.

Our system protects all images from accidental or intentional corruption, destruction, or data disclosure. Potential threats include hackers, viruses, and malicious or inexperienced users.

To protect violation data, we securely transmit recorded violations over VPN to our processing facility within 24 hours of event capture. Once violations are stored in the database, they are ready for your review and issuance. CiteWeb supports a high volume of violations in a secure system with a built-in redundant back up. Images are sent digitally encrypted to our data center using secure connections, stored on the storage-area network (SAN), and fully backed up and recoverable.

CiteWeb handles multiple authorizations through the citation's history. The system displays all account data and a permanent audit trail of every transaction, including authorizations associated with a citation for future inquiry and research.

Motor Vehicle Registration Data Access

22. How have you ensured safe and limited access to motor vehicle registration data and systems in your previous deployments?

With more than three decades of registry interface experience in dealing with Registries of Motor Vehicles (RMVs) and Departments of Motor Vehicles (DMVs) across the United States and Canada, Conduent has a complete, standalone registry support system and staff for the safe retrieval and processing of registration information. Our average relationship with RMVs and DMVs exceeds 25 years.

We will meet your public safety goals and confirm that your data is secure, by transmitting completed violations over virtual private network (VPN) to Conduent's processing facility. The violations are then uploaded to Conduent's datacenter over secured communications lines. Once they are stored in the database, our expert citation processor reviews the violations in CiteWeb and discards any that do not conform to the City's business rules. For all violations compliant with the business rules, the team crops and saves the appropriate images as part of the violation package. The reviewer then enters the license plate data into the system for automated lookup with the Registry of Motor Vehicles (RMV), Department of Motor Vehicles (DMV), or the National Law Enforcement Telecommunications System (NLETS). After registered owner information is received and applied to the violation, a second violation processor rekeys the license plate info to make sure the registered owner and vehicle info is correct per the violation images. If the information is correct the violation is sent to the police in real time for final decision on if the violation should be approved and become a citation.

Registration Retrieval: Obtaining Name and Address of Plate

Accurate, safe, and timely acquisition of registered owner name and address information is essential to the issuance process. **We use this for all of our Transportation clients – that's across our Public Safety, Parking, and Tolling programs. No other provider has the depth and breadth of experience that we do in processing registration requests.** We adhere to all State laws governing the capture and times mandated for the issuance of a violation. The registered owner's information is entered by Conduent's personnel into the processing system with the violation images. To obtain an industry leading RMV/DMV hit rate in excess of 90 percent, Conduent applies a variety of tools and processes, including maintaining relationships in all 50 states and the District of Columbia. We use direct electronic links to state databases to obtain vehicle ownership information safely and efficiently, so violation notices are sent accurately and reliably to registered owners of vehicles committing infractions.

Name and address acquisition cannot be taken for granted and it cannot be assumed that all vendors have the same capabilities – the cost of failure is far too great due to the time-sensitive nature of the issuance of speed citations.

We take full responsibility for acquiring all registered owner information, including name and addresses. Conduent is solely responsible for safely accessing the necessary information needed to accurately identify violator information for both in- and out-of-state captured violations.