ATLAS

Proposal to Provide

Professional Services for the 2026 Pavement Management System Update

January 16, 2026

Prepared for
Humboldt County Association of Governments (HCAOG)

January 16, 2026

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Rancho Cordova, CA95670
T:916.378.1101
www.**oneatlas**.com

Humboldt County Association of Governments (HCAOG)
Amy Eberwein, Administrative Services Officer
611 I Street, Suite B
Eureka, CA 95501

Subject: Response to Request for Proposals for 2026 Pavement Management System Update

Dear Mrs. Eberwein Selection Committee Members,

The Humboldt County Association of Governments (HCAOG) requires a team of highly qualified pavement engineers to provide services to complete the 2026 Pavement Management System (PMS) Update. Atlas Technical Consultants (CA) Inc. (Atlas) is a leading professional services firm with a nationwide footprint specializing in pavement engineering; special inspection and material testing, infrastructure design and modeling; environmental compliance and permitting; and program, project, and construction management.

Atlas is a recognized leader in pavement engineering services, with experience in pavement management, design, evaluation, maintenance planning, and forensic investigations. We have successfully delivered a wide range of pavement engineering projects throughout California and beyond. We employ more than 3,300 staff, including California-licensed professional civil engineers, pavement engineers, and construction managers, and support personnel, certified inspectors and testing technicians.

We employ more than 400 staff throughout California. With offices located in Rancho Cordova, San Ramon, Oakland, Modesto, San Luis Obispo, Whittier, Riverside, and San Diego, our team is strategically placed throughout the region to provide services as quickly and efficiently as possible.

Why Atlas

Extensive Regional Experience
Our team brings in-depth knowledge of California's pavement systems, including several Caltrans rehabilitation projects located throughout the state, backed by a proven track record of regional success

Highly Qualified Team
For this project, we have assembled a team of highly specialized pavement engineers, including PhD holders and California PE-licensed professionals, offering the expertise necessary to meet the specific needs of this project.

Innovative Subconsultant Support
We've partnered with Tiger Eye Engineering **(TEE)**, a firm with decades of staff experience on pavement management projects and advanced AI-powered technology to enhance our service offerings.

CONTACT INFORMATION FOR THE FIRM:

3101 Zinfandel Drive, Suite 320,
Rancho Cordova, CA 95670
p. 916.387.1101

Farzan Kazemi, PhD, PE
Project Manager
p. 755.357.4620
farzan.kazemi@oneatlas.com

www.oneatlas.com

Our team of specialized pavement engineers bring decades of combined experience. Our project/contract manager, Farzan Kazemi, PhD, PE, has over 12 years of industry experience. Dr. Kazemi has worked extensively with agencies across and beyond California. He has provided pavement management updates for agencies such as Napa County. He has also recently conducted pavement structural design for interstate I-15 staging in San Bernardino County.

We believe that our qualifications will show that Atlas is the best-suited pavement management program service consultant to the HCAOG for the following reasons:

- We consistently provide exceptional client service, remain highly responsive to our clients' needs, and continually demonstrate our ability to provide the necessary support to ensure projects are delivered successfully.

- Atlas has the capabilities and resources to perform all the services required during this contract. We will deliver a commitment to the HCAOG to focus on safety, efficient communication, low cost, schedule adherence, and quality service.

Atlas offers to perform the Scope of Work as described in the RFP, in accordance with all specified terms and conditions. This proposal is valid for sixty (60) business days from the proposal due date.

We appreciate the opportunity to submit this proposal to the HCAOG, and we are confident that we can provide these services in the timely and cost-effective manner that you expect from Atlas. **Should you have any questions, or require additional information, you can contact Farzan Kazemi, PhD, PE, Atlas' project manager, via the contact information listed above.**

Sincerely,

Aaron Prchlik, PE
Vice President – Northern California
3101 Zinfandel Drive, Suite 320
Rancho Cordova, CA 95670
916.633.8464

Proven Experience: Recent San Marcos Pavement Rehabilitation Project - Completed October 2025

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1. Understanding of Project

Understanding of Project

The Humboldt County Association of Governments (HCAOG) is undertaking the 2026 Pavement Management System (PMS) Update to provide its member jurisdictions with a consistent, reliable, and data-driven framework for evaluating pavement conditions, prioritizing maintenance and rehabilitation (M&R) investments, and understanding the long-term impacts of funding decisions. The updated PMS will support planning and policy decisions for the seven cities, the County of Humboldt, and applicable roads on Tribal lands, using the MTC StreetSaver® Online Edition as the required analytical platform.

Atlas Technical Consultants (Atlas) understands that the effectiveness of the PMS Update depends on accurate pavement condition data, reliable PCI analysis, and clear communication of results to both technical staff and policy makers. The project is not simply a data update, but a coordinated regional effort that must integrate local agency practices, historical investment patterns, maintenance prioritization, and future funding realities into a unified system.

Key elements of Atlas' understanding include:

- Early coordination with HCAOG staff and the Technical Advisory Committee (TAC) to confirm project objectives, schedule, data needs, and service level assumptions
- Safe, consistent pavement data collection across urban, rural, and Tribal road networks in accordance with MTC standards
- Translation of pavement condition data into practical, cost-effective Maintenance and Rehabilitation (M&R) strategies that reflect both engineering best practices and local experience
- Development of clear, jurisdiction-specific reports and multiple budget scenarios that illustrate tradeoffs between funding levels and long-term pavement performance
- Effective communication of results through technical and non-technical presentations, supported by hands-on training to ensure long-term usability of the PMS

Atlas recognizes that HCAOG and its member agencies rely on the PMS as an ongoing decision-support tool. By combining disciplined project management, standardized data collection, collaborative strategy development, and clear reporting, Atlas will deliver a PMS update that supports informed budget allocations and provides lasting value to the region beyond the completion of this project.

2. Qualifications and Experience

A. Firm

200+ Staff in Northern California
3,300 Staff Nationally

Atlas was formed in 2017 through the strategic combination of several respected infrastructure services. Our formation–combining high-performing firms and deep materials expertise–did more than build scale, it defined how we operate. The technical rigor, local accountability and practical mindset built into our DNA are the things that now distinguish Atlas.

The Atlas team operates throughout California and brings directly applicable experience working throughout Northern California specifically. Atlas brings a comprehensive background working on a number of pavement condition related projects with Caltrans, including the Pavement Investigation on SR-58 project, located in San Bernardino County as well as the I-710 Long Life Pavement Rehabilitation project located in Los Angeles. Additionally, Atlas worked with Caltrans on the US-50 Multimodal Corridor Enhancement and Rehabilitation Design Build Project, located in District 3.

Atlas has strategically partnered with Tiger Eye Engineering LLC (TEE), an industry leader in AI-driven pavement evaluation, for this project to provide innovative and efficient pavement solutions. We have assembled a team of skilled professionals capable of providing the range of pavement engineering expertise and scope of services required to successfully deliver this project. Our team of key staff includes 8 licensed professional engineers (PEs) and 10 PhD holders.

Statements of Compliance

There is no historical, pending or threatened litigation, action or proceeding against, decree, injection or judgment affecting Atlas which could materially and adversely impact the ability of Atlas to fulfill its obligations under this agreement.

Atlas has not been convicted of fraud or any related offenses in connection with public contracts.

Atlas has bot been debarred, suspended, or otherwise declared ineligible to participate in public contracts.

Atlas is in compliance with applicable local, state and federal industry and regulatory requirements.

Atlas Technical Consultants (CA) Inc. is a wholly owned subsidiary of Atlas Technical Consultants LLC, Atlas Technical Consultants (CA) Inc. does not hold a controlling or financial interest in any other firms or organizations.

Atlas Technical Consultants (CA) Inc.

Year Established: 2017
Type of Organization: Corporation
DIR Registration: 1001002829
CSLB License: 1114947

Qualifications

Atlas is a nationally recognized engineering and consulting firm with extensive experience supporting public agencies in pavement evaluation, maintenance planning, and infrastructure decision-making. Atlas routinely works with cities, counties, and state transportation agencies to deliver data-driven pavement assessments, condition evaluations, and long-term maintenance and rehabilitation (M&R) strategies that support capital planning and policy decisions.

Atlas's qualifications for performing the services requested in this RFP are grounded in its experience delivering pavement condition assessments, rehabilitation support, and pavement management–related services for agencies of similar scale and complexity. Our teams combine technical expertise, standardized evaluation methodologies, and practical knowledge of local agency practices to produce results that are accurate, defensible, and implementable.

Relevant Project Experience
Citywide Pavement Rehabilitation Program (2025), San Marcos, CA

In 2025, Atlas provided materials testing and pavement-related support services to Dudek & Associates for the City of San Marcos as part of its Citywide Pavement Rehabilitation Program. Atlas's scope included laboratory and field testing services associated with asphalt removal and replacement, evaluation of pavement sections, recommendations for subgrade stabilization, and full-depth reclamation (FDR) testing. This work required close coordination with City staff and contractors and provided Atlas with direct experience supporting citywide pavement programs and rehabilitation decision-making.

Street Improvements and Pavement Evaluation (2024), **Johnston City, TX**

Atlas performed pavement evaluations for street improvement projects in Johnson City in 2024. The project involved evaluating roadway pavement conditions and identifying surface distresses including block cracking, alligator cracking, and longitudinal and transverse cracking. Based on observed conditions, Atlas developed long-term maintenance and rehabilitation (M&R) strategies to support the City's planning and budgeting efforts. This project demonstrates Atlas's experience translating pavement condition data into actionable treatment recommendations for municipal agencies.

Public Schools Pavement Network Evaluation (2020), **Georgia Department of Transportation (GDOT)**

In 2020, Atlas completed a pavement network evaluation for the Georgia Department of Transportation (GDOT) covering public school driveways across 17 counties within GDOT District 6. Atlas assessed pavement conditions, documented distresses, collected geotagged photographs, and segmented pavement networks for analysis. The project included identifying current and future repair needs, developing M&R recommendations, and preparing budget estimates to support long-term planning. This effort demonstrates Atlas's ability to manage large, multi-jurisdictional pavement assessments and deliver consistent, data-driven results for public agencies.

B. Key Personnel

Key
- ■ Atlas Staff (ATC)
- ■ TEE Staff (TEE)

* Key Staff

HUMBOLDT COUNTY ASSOCIATION OF GOVERNMENTS (HCAOG)

PROJECT MANAGER
*Farzan Kazemi, PhD, PE (ATC)

CONTRACT MANAGER
Aaron Prchlik, PE (ATC)

TASK 1: KICK-OFF MEETING, PROJECT MANAGEMENT, AND REPORTING

TASK LEAD
*Farzan Kazemi, PhD, PE
Project Manager

TECHNICAL SUPPORT
*Hamed Majidifard, PhD, PE
Quality Manager

TASK 2: RISK MANAGEMENT

TASK LEAD
*Raul Chavez
Risk and Safety Expert

TECHNICAL SUPPORT
*Farzan Kazemi, PhD, PE
Project Manager

*Hamed Majidifard, PhD, PE
TEE Senior Engineer

TASK 3: DATA COLLECTION AND REPORTING

TASK LEAD
*Farzan Kazemi, PhD, PE
Project Manager

TECHNICAL SUPPORT
Baron Colbert, PhD
Atlas Engineer IV (Senior)

*Raul Chavez, MS
Atlas Engineer III (Mid-Senior)

TASK 4: REVIEW MAINTENANCE AND REHABILITATION STRATEGIES

TASK LEAD
*Hamed Majidifard, PhD, PE
Task Lead

TECHNICAL SUPPORT
*William Buttlar, PhD, PE
TEE Vice President

Yaw Adu-Gyamfi, PhD
TEE Project Manager

*Farzan Kazemi
Project Manager

Chad Davis, PE
Atlas Pavement Engineering Expert

*Amir Ghanbari, PhD, PE
TEE Senior Engineer

TASK 5: FINAL REPORTS

TASK LEAD
*Farzan Kazemi, PhD, PE
Project Manager

TECHNICAL SUPPORT
*Hamed Majidifard, PhD, PE
TEE Senior Engineer

Baron Colbert, PhD
Atlas Engineer IV (Senior)

Morteza Mirshekari, PhD, PE, GE
Atlas Senior Engineer

Reza Saeedzadeh, PhD, PE, GE
Atlas Principal Engineer

TASK 6: PRESENTATION OF COMPLETED PMS UPDATE

TASK LEAD
*Farzan Kazemi, PhD, PE
Project Manager

TECHNICAL SUPPORT
*Hamed Majidifard, PhD, PE
TEE Senior Engineer

*William Buttlar, PhD, PE
TEE Vice President

TASK 7: TRAINING

TASK LEAD
*Farzan Kazemi, PhD, PE
Project Manager

TECHNICAL SUPPORT
*Hamed Majidifard, PhD, PE
TEE Senior Engineer

*Amir Ghanbari, PhD, PE
TEE Senior Engineer

Communication Plan

Effective communication is critical to the success of construction inspection activities. Our communication plan is structured to provide clarity, responsiveness, and accountability throughout the duration of the project, including routine coordination, issue resolution, and emergency response. The plan includes daily interaction protocols, formal reporting structures, and a defined chain of command to facilitate seamless collaboration among all stakeholders.

1. Purpose

The purpose of this Communication Plan is to establish a structured framework for the timely and accurate exchange of information amount all project stakeholders, confirming that Atlas services are aligned with project progress, regulatory requirements, and client expectations.

2. Objectives

- Provide transparency in project decisions and daily operations
- Maintain clear lines of responsibility and authority
- Enable timely resolution of field and contract issues
- Establish after-hours and emergency response protocols
- Foster trust and alignment among between Atlas and HCAOG
- Support the delivery of a high-quality, compliant, and on-schedule project

3. Primary Points of Contact

ROLE	NAME	CONTACT	AVAILABILITY
Project Manager	Farzan Kazemi, PhD, PE	775.357.4620 farzan.kazemi@oneatlas.com	Primary day-to-day contact/ On-call 24hrs
Contract Manager	Aaron Prchlik, PE	916.633.8464 aaron.prchlik@oneatlas.com	As Needed

Below is contact information for our subconsultant team members

FIRM	RESPONSIBLE PERSON	CONTACT INFORMATION
Tiger Eye Engineering LLC (TEE)	Hamed Majidifard, PhD, PE	573.424.3926 hamed@tigereye-eng.com

4. Methods and Tools of Communication

EMAIL	GENERAL USE
Email	Daily correspondence, submittals, RFIs, documentation
Phone Calls	Immediate issues, coordination, after-hours contact
Meetings	Progress updates, coordination, issue resolution
Reports	Final project deliverables

Communication Plan

5. After-Hours & Emergency Communication

- **On-Call Availability:** Atlas will maintain an on-call staff availability during evenings, weekends, and holidays for emergencies. Upon notification from HCAOG, Atlas will initiate immediate communication to the members of the team who are most qualified to address the issue. We will track issues from notification to resolution while maintaining continuous communication with the appropriate HCAOG personnel and will develop and submit a written report within 48 hours of resolving the issue.

- **Emergency Response:** The designated emergency contact for this project is our project manager, Farzan Kazemi, PhD, PE.

- **Incident Communication:** All incidents will be documented and communicated to the client immediately via phone and followed up within 24 hours.

Example

Atlas' high-level of responsiveness extends across all levels of our organization–from field crews to management staff and company leadership.

An example from our Caltrans work illustrates this commitment: In November 2023, our team demonstrated exceptional communication and responsiveness during the I-10 freeway fire incident in Los Angeles. From the moment we arrived on-site over the weekend, we maintained constant coordination with Caltrans and other key stakeholders, so that everyone remained informed and aligned. Our leadership remained actively engaged throughout the response, participating in daily meetings held late at night and early in the morning to stay ahead of evolving site conditions and logistical needs. We pulled out all the stops to mobilize additional personnel, transferring employees from multiple states to support the accelerated timeline. To prevent any operational delays, we rapidly coordinated with local testing facilities to secure required clearances and maintain workforce readiness. This unified, around-the-clock effort was instrumental in not only meeting, but exceeding the projected schedule to safely reopen the freeway. Our proactive communication, agility and all-hands-on-deck approach helped build trust, provide seamless collaboration, and reinforced our commitment to delivering results under pressure.

C. References

CLIENT	REFERENCE INFORMATION
Dudek & Associates	Vincent W. Gaby
DURATION	760.802.7218
2024-2025	wgaby@gox.net
ATLAS STAFF	1645 South Rancho Santa Fe Road
• Farzan Kazemi, PhD, PE	San Marcos, CA 92078
• Chad Davis, PE	

City of San Marcos 2024/2025 Citywide Pavement Rehabilitation Project: 2024 Surface Seal Project; CIP ST011, *San Marcos, CA*

Our scope of work included asphalt pavement removal and replacement, slurry seal and microsurfacing, cold mill and overlay operations, and recommendations for subgrade stabilization. We also provided specialized soil-cement mix design recommendations and conducted full-depth reclamation (FDR) testing to ensure proper structural integrity of the rehabilitated roadways.

These pavement improvements were carried out across four major roadways and 62 residential streets, requiring detailed materials testing and close coordination with the project team to ensure quality and compliance with City specifications. The total Atlas service cost for this project was $116,086, reflecting the scale and complexity of the testing and support services delivered.

CLIENT	REFERENCE INFORMATION
Caltrans District 59	Seyedhamed Sadati
DURATION	916.205.8871
2025-Ongoing	seyedhamed.sadati@dot.ca.gov
ATLAS STAFF	1120 N Street
• Aaron Prchlik, PE	Sacramento, CA 95814
• Farzan Kazmi, PE	

Materials Inspection and Quality Assurance Services On-Call Contract; , *Caltrans District 1*

Atlas partnered with Caltrans on major bridge replacement and culvert widening projects to enhance roadway safety, durability, and long-term pavement performance. Our team delivered comprehensive QA, source inspection, and materials engineering services, including detailed reviews of concrete mix designs, welding plans, and structural steel components. We also performed advanced material testing on Ultra High-Performance Concrete, asphalt binders, and reinforcing steel to ensure compliance with stringent standards. These efforts support pavement management goals by improving structural integrity, reducing maintenance cycles, and extending the service life of critical transportation infrastructure.
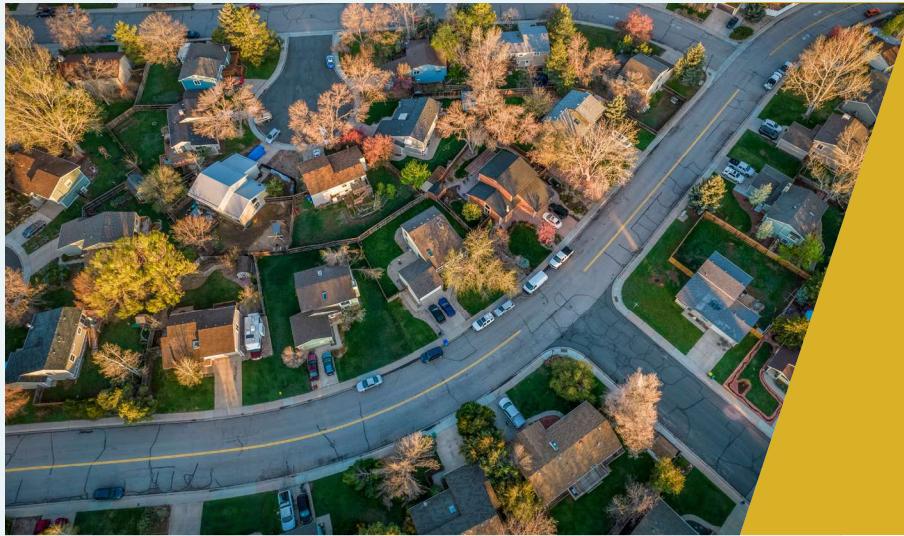

CLIENT	REFERENCE INFORMATION
County of San Diego, CA	E. David Gasaway
DURATION	Senior Civil Engineer
2016-Ongoing	858.560.2125
ATLAS STAFF	edgar.gasaway@sdcounty.ca.gov
• Morteza Mirshekari, PhD, PE, GE	1600 Pacific Highway, Room 402
	San Diego, CA 92101

As-Needed Material Inspection and Testing Services and Geotechnical Consulting, *San Diego, CA*

FY22-23 and 23-24 Countywide AC Overlay: Atlas supported the County's pavement management by providing quality assurance testing for asphalt materials and installation. We delivered rapid test results, mix design verification, and dispute resolution, while advising inspectors on testing methods and assisting with field issues like subgrade stabilization.

FY21-22 Countywide Coring: Atlas collected pavement data by coring nearly 300 sites to measure thickness and subgrade conditions. Using GIS mapping and specialized equipment, we ensured safe, efficient operations and delivered immediate results to the County, enabling accurate pavement section matrices for management decisions.

CLIENT
Weld County, CO

DURATION
2025-2026

REFERENCE INFORMATION
Joshua Holbrook, 970.400.3744
jholbrook@weld.gov
Weld County Public Works Dept.
PO Box 758, 1111 H Street, Greeley, CO

TEE STAFF
- Hamed Majidifard, PhD, PE
- Amir Ghanbari, PhD, PE

Pavement Condition Assessment and Pavement Management System Update, *Weld County, CO*

TEE's vehicle-based Automated Data Collection System collected georeferenced, high-resolution imagery and LiDAR surface geometry measurements for 735 centerline miles of County-maintained roads. TEE's AI-based Distress Detection System rectified the survey imagery and identified all pavement distresses across the network with type, extent, and severity measurements in accordance with the ASTM D6433 standard, producing a Pavement Condition Index (PCI). The Detection System was also used to locate and classify all transportation assets contiguous to the roadway (sidewalks, curb and gutter, etc.). TEE combined the new PCI data with the County's historical pavement and drainage data to create an updated Overall Condition Index (OCI). The distress data and condition indices were integrated into the County's Cartegraph PMS with adherence to OpenGov Cloud requirements, enabling the County to produce all required reports and develop data-driven work plans. TEE also delivered a web-based visualization and exploration dashboard, which will allow County staff to quickly access high-quality images of all pavement distresses, understand current network health trends, and generate custom reports.

CLIENT
City and County of Honolulu, HI

DURATION
2025-Ongoing

REFERENCE INFORMATION
Abbas S. Kachwalla, 217.281.2550
abbas.katchwalla@aecom.com
300 South Grand, Suite 900, Los
Angeles, CA 90071

TEE STAFF
- Hamed Majidifard, PhD, PE
- Amir Ghanbari, PhD, PE

Road and Asset Data Collection, *Honolulu, HI*

As a subconsultant to AECOM, TEE conducted a detailed assessment of 1,800 lane miles of City and County-owned roads across Oahu, Hawaii. Using its automated data collection suite, TEE gathered high-resolution imagery, 360-degree video, LiDAR surface geometry, and other sensor data with full network coverage. This data was processed through TEE's AI-based system to identify over 39 pavement distress types and calculate Pavement Condition Index (PCI) scores. The system also captured accurate data and imagery for all asset classes, including curb-and-gutter and ADA ramps, enabling comprehensive asset condition analysis.

All pavement and asset data were collected simultaneously using a single vehicle, completing the project ahead of schedule. The data is now being integrated into TEE's web-based visualization dashboard, allowing stakeholders to view distress data and pavement imagery interactively. Additionally, data will be exported to Esri-based formats for use in the City and County's Asset Management and GIS systems.

3. Approach

Task 1: Kick-Off Meeting, Project Management, and Reporting

Atlas will initiate the project with a formal kickoff meeting with HCAOG staff and the Technical Advisory Committee (TAC). The kickoff meeting will be used to confirm a shared understanding of project objectives, scope, schedule, and expectations, and to discuss initial implementation steps. In accordance with Attachment B of the RFP package, the kickoff meeting will include review and confirmation of pavement maintenance procedures, available agency resources, historical expenditure levels, desired service levels, required data inputs, and coordination needs with HCAOG member jurisdictions and Tribal agencies. The TAC meets on the first Thursday of each month at 2:30 p.m., and Atlas will coordinate meeting logistics accordingly.

Following the kickoff meeting, Atlas will prepare a technical memorandum summarizing the meeting outcomes, decisions, assumptions, and action items. Atlas will also develop and maintain a detailed project management framework that defines major tasks, milestones, meetings, deliverables, and quality control checkpoints. Farzan Kazemi, PhD, PE, will serve as the dedicated Project Manager and primary point of contact, responsible for overall coordination, schedule and budget control, and day-to-day communication with HCAOG staff.

Project management activities will include regular coordination with HCAOG staff, TAC members, participating jurisdictions, and Tribal representatives to monitor progress, address questions, resolve issues, and ensure adherence to the approved schedule and budget. Atlas will implement internal quality assurance and quality control (QA/QC) procedures at key stages of the work to ensure deliverables are accurate, consistent, and compliant with the Metropolitan Transportation Commission (MTC) Pavement Management System User Guide and HCAOG requirements.

Atlas will provide ongoing reporting to support transparency and effective project oversight. Monthly status updates and invoices will document work performed, staff hours, progress by task, and budget status. The project meeting schedule and milestones will be updated as necessary throughout the project to reflect coordination needs and approved adjustments.

Deliverables for Task 1:

- Technical memorandum summarizing the kickoff meeting
- Schedule of project meetings and project milestones (updated as necessary)
- Monthly statues updates and invoices

Task 2: Risk Management

Atlas will implement appropriate preventive measures to minimize risk to both project personnel and the general public during all field data collection activities associated with the Pavement Management System Update. Safety considerations will be integrated into project planning prior to the start of fieldwork and maintained throughout the duration of data collection.

All field staff will be equipped with appropriate personal protective equipment (PPE), including high-visibility reflective safety vests, and will follow established safety protocols while operating in proximity to active roadways. Data collection activities will be planned to minimize exposure to traffic and public interaction to the greatest extent practicable.

If conditions warrant, Atlas will provide traffic control measures at its own expense in accordance with applicable standards to ensure the safety of field personnel and the traveling public. Atlas will coordinate internally to ensure that safety procedures are consistently applied across all jurisdictions and roadway environments, including urban, rural, and Tribal road networks.

Deliverables for Task 2:

- Written acknowledgment and agreement confirming Atlas' adherence to the risk management and safety requirements outlined in the Scope of Work

Task 3: Data Collection and Reporting

Atlas will perform comprehensive pavement inventory and condition data collection for all seven HCAOG member cities and the unincorporated areas of Humboldt County, including applicable roads on Tribal lands. This task will also include collecting data for roadway segments constructed since the last PMS update, as well as migrating data for roads that have been annexed since the previous update, with no more than two centerline miles of previously uncounted roadway anticipated. All work will be performed in accordance with the Metropolitan Transportation Commission (MTC) Pavement Management System (PMS) User Guide and the MTC Pavement Distress Identification Manual.

The objective of this task is to collect accurate, consistent, and repeatable pavement inventory and condition data to support Pavement Condition Index (PCI) calculations, maintenance and rehabilitation (M&R) strategy development, and long-term budget forecasting within the MTC StreetSaver® Online Edition.

Data Collection Approach

TEE's Automated Data Collection Suite will be mobilized and operated by Atlas engineers to update the pavement inventory and condition ratings for County roads, including those on Tribal lands and newly constructed or previously uncounted roads. The system will provide a comprehensive assessment of street geometry, surface type, surface condition, pavement distresses, road quality, and drainage characteristics, which will be used to produce PCI ratings for each paved road and street.

The automated, vehicle-based survey system integrates multiple high-resolution cameras, including 360-degree imagery, LiDAR sensors, accelerometers, and embedded inertial navigation and measurement units (INU/IMU). This sensor array captures hyper-granular, geo-referenced data with full network coverage in a single route, producing high-definition digital video and detailed measurements of pavement surface geometry, ride quality, and distress characteristics.

Figure 1: *Examples of TEE Data Collection Sensors*

Street sections will be segmented in accordance with criteria established in the MTC PMS User Guide. Where roadway configurations require it (e.g., multi-lane facilities), multiple passes will be performed to ensure that all pavement distresses are clearly imaged and measured. Surveys will be conducted without the need for lane closures, consistent with the safety approach described in Task 2.

The system captures the measurements necessary to identify and rate pavement distresses in accordance with ASTM D6433 and the MTC Pavement Distress Identification Manual. Distresses evaluated will include, but are not limited to, alligator cracking, bleeding, block cracking, bumps and sags, corrugation, depressions, edge cracking, joint reflection cracking, lane or shoulder drop-off, longitudinal and transverse cracking, patching and utility cuts, polished aggregate, potholes, railroad crossings, rutting, weathering, and raveling.
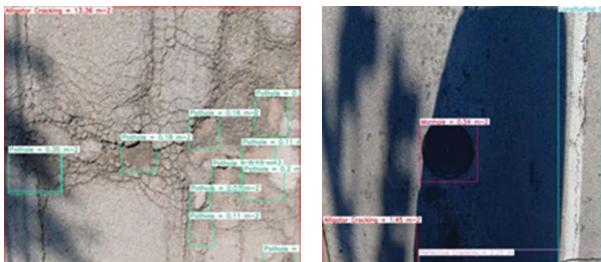

Figure 2: *Example of TEE's Comprehensive and Highly Detailed Rutting and Surface Geometry Measurements with LiDAR*

A key advantage of the automated system is consistency across operators and survey cycles. TEE employs strict calibration and quality assurance protocols to ensure consistent inputs for AI-based detection models, eliminating rater bias and gaps in coverage and supporting year-to-year performance trend analysis.

AI-Based Assessment and PCI

TEE's AI-based distress detection system has been trained using more than one million expert-annotated images collected over multiple years and is capable of identifying and classifying more than 39 distinct distress types on both flexible (asphalt) and rigid (concrete) pavements. The AI models annotate imagery to identify distress type, severity, and extent, which are then used to calculate PCI values on a standardized 0–100 scale.
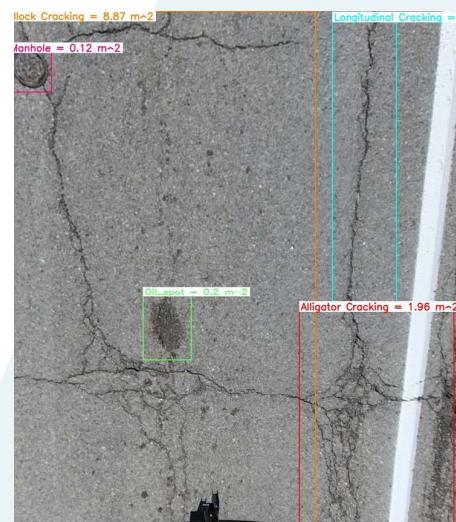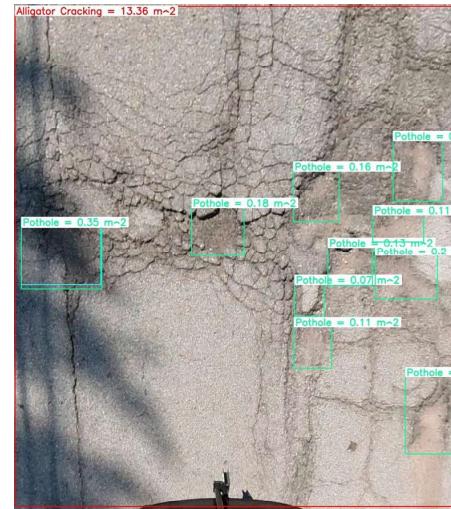

Figure 3: *Example of Flexible Pavement Distresses Detected in Jefferson City, MO*
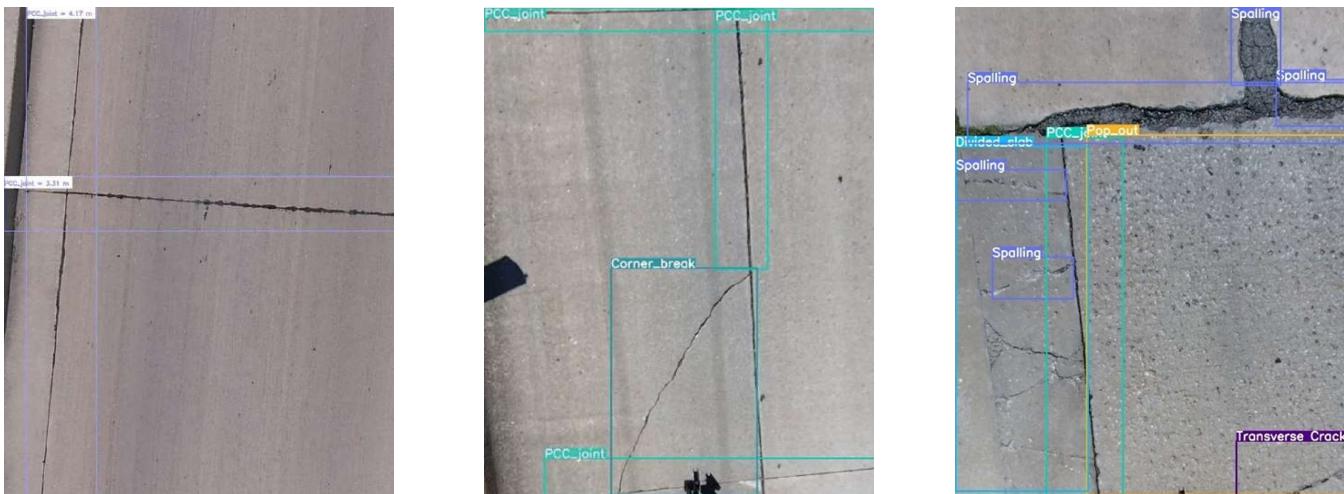
Figure 4: Example of Rigid Pavement Distress Detected in Jefferson City, MO
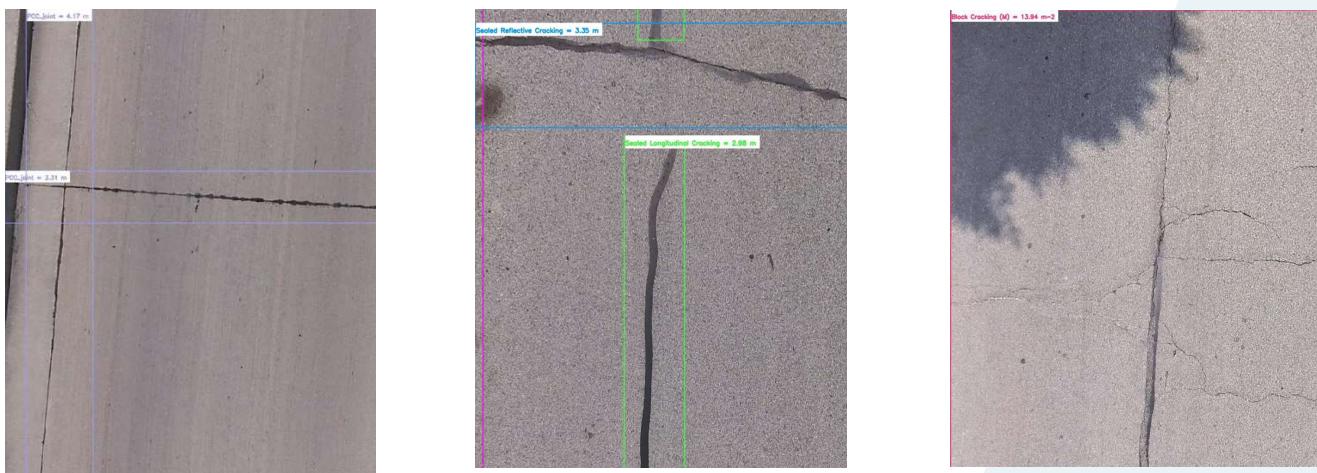
New PCC
PCI: 98
Excelent
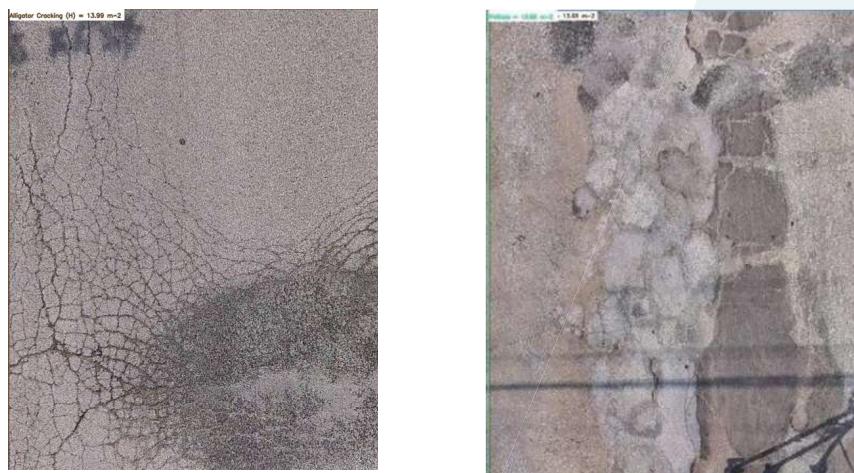
Sealed Cracks
PCI 82
Good

Block Cracking
PCI 60
Fair

Severe
Fatigue Cracking
PCI: 35
Very Poor

Multiple Potholes
PCI: 15
Failed

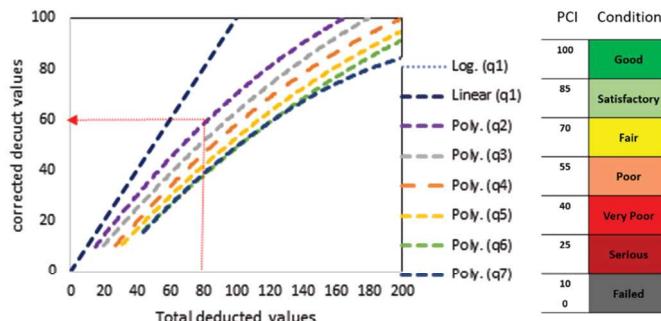*Figure 5: Distress Detection vs PCI*

Figure 6: *Deducted Values Curves and PCI Scales*

All distress identifications and PCI ratings are subject to automated and manual quality control checks under the supervision of a Professional Engineer. Atlas and TEE engineers will validate results to confirm compliance with ASTM D6433 and MTC requirements prior to agency review and database upload.

Roughness measurements, expressed as International Roughness Index (IRI), can be derived from LiDAR-based surface profiles collected during the survey. The solid-state LiDAR system generates dense, high-resolution point clouds, while the integrated IMU captures vehicle motion. These data are processed through a real-time SLAM pipeline to create a motion-compensated 3D pavement surface model.

Longitudinal pavement profiles are extracted along wheel paths and analyzed using a quarter-car dynamic model consistent with industry standards. The resulting IRI values provide a continuous, high-resolution assessment of pavement smoothness. The system has been calibrated and validated against Class 1 inertial profiler data and meets ASTM E-950 Class 1 guidelines. Where applicable, IRI results will be included alongside PCI ratings and distress imagery in final deliverables.

Quality Assurance and Quality Control (QA/QC)

Atlas will implement a rigorous QA/QC program throughout the data collection and processing phases. This program will include calibration checks, data validation reviews, and spot verification to confirm consistency between collected imagery, distress identification, and computed PCI values. Automated outputs generated through AI-assisted distress recognition will be reviewed by experienced pavement engineers to verify accuracy and resolve any anomalies prior to database upload.

Internal QA/QC checkpoints will be conducted before data is finalized in StreetSaver® to ensure compliance with the MTC PMS User Guide, StreetSaver® requirements, and HCAOG expectations. This process minimizes subjectivity, enhances data credibility, and ensures defensible results suitable for policy-level decision-making.

StreetSaver® Integration and GIS Compatibility

All validated pavement condition and inventory data will be uploaded into the MTC StreetSaver® Online Edition. Atlas will verify that roadway segmentation, attributes, and condition data align with existing GIS centerline data provided by HCAOG and its member agencies. Final datasets will be compatible with existing GIS systems and support mapping, reporting, and future updates.

All approved pavement condition and inventory data will be provided in GIS format, at a minimum as downloadable ESRI shapefiles, with each surveyed street segment represented by a corresponding GIS feature. High-resolution, geo-referenced images documenting pavement distresses will be provided to support mapping and condition review.
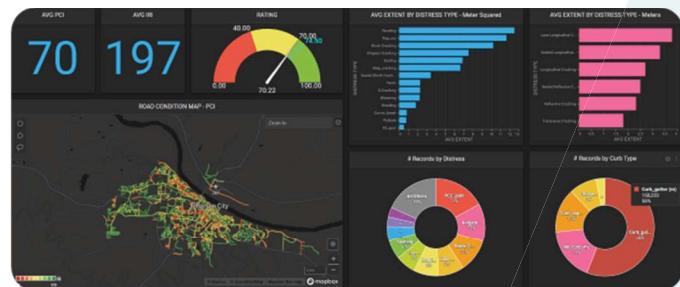
Figure 7: *Interactive Data Visualization Map Jefferson City Roads Conditions (Heavy AI Platform)*
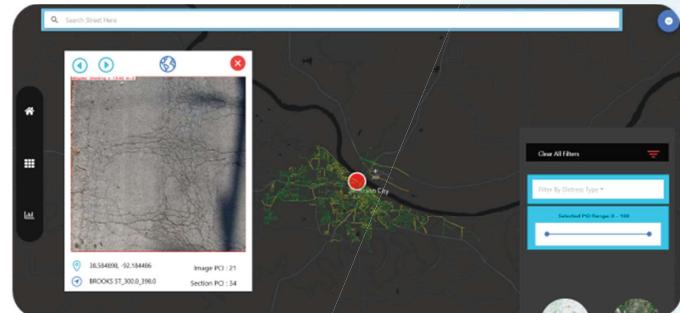
Figure 8: *Image Integrated Interactive Data Visualization Map for Jefferson City Roads*

Figure 9: *Example of Data Filtering According to a User-defined PCI Range*

If authorized, Atlas and TEE can provide access to a web-based visualization platform for viewing annotated pavement imagery and condition ratings; however, this platform is not required to meet the Scope of Work.

Safety Considerations

Data collection activities inherently involve working in proximity to active roadways. Atlas mitigates these risks through the use of automated data collection technologies that eliminate the need for personnel to be on foot or within traffic lanes. This approach significantly reduces exposure to traffic hazards while maintaining high data quality and efficiency. Atlas has a dedicated staff, Raul Chavez, MS, PE, who is an experienced safety expert that will follow established safety protocols throughout the data collection process.

Deliverables for Task 3:

- Inventory and condition information for each paved road and street by jurisdiction
- Photographs of pavement conditions throughout the county
- Data entered into the PMS database and provided is GIS format

Task 4: Review Maintenance and Rehabilitation Strategies

Using the validated pavement condition and inventory data developed in Task 3, Atlas will review and refine maintenance and rehabilitation (M&R) strategies for each HCAOG member jurisdiction and applicable roads on Tribal lands. The purpose of this task is to establish appropriate treatment strategies that are technically sound, cost-effective, and consistent with local agency practices and pavement performance objectives.

M&R Strategy Development

Atlas will utilize the MTC StreetSaver® Online Edition to apply maintenance and rehabilitation decision trees consistent with the Metropolitan Transportation Commission (MTC) Pavement Management System User Guide. Pavement Condition Index (PCI) results and observed distress characteristics will be used to identify suitable treatments across the full range of pavement conditions, including preventive maintenance, rehabilitation, and reconstruction.

Treatment recommendations will include commonly applied strategies such as chip seals, thin overlays, structural overlays, and other appropriate treatments based on pavement condition and functional classification. Atlas will work with local representatives to determine reasonable unit cost assumptions for recommended treatments and to ensure consistency with local construction practices and historical experience.

Agency Coordination and Review

Atlas will review proposed M&R strategies with HCAOG staff and designated representatives from member jurisdictions and Tribal agencies. This coordination will allow for confirmation of treatment assumptions, refinement of decision criteria, and alignment of recommended strategies with local priorities and operational considerations prior to finalization.

Deliverables for Task 4:

- Maintenance and rehabilitation decision trees

Task 5: Final Report

Atlas will develop Pavement Management Program (PMP) Final Reports for each of the seven HCAOG member cities, the County of Humboldt, and applicable roads on Tribal lands. The Final Reports will integrate the pavement condition data and maintenance and rehabilitation (M&R) strategies developed in prior tasks into clear, defensible decision-support documents suitable for both technical staff and policy makers.

Final Report Development

Each Final Report will be prepared in accordance with the Metropolitan Transportation Commission (MTC) Pavement Management System User Guide and will be generated using data housed within the MTC StreetSaver® Online Edition. Reports will present a clear picture of current pavement conditions, future performance projections, and funding needs, allowing member agencies to understand both near-term priorities and long-term system impacts.

Final Reports will include, at a minimum:

- Executive summary highlighting key findings and recommendations
- Pavement inventory and network summary
- Pavement Condition Index (PCI) results and condition distribution
- Maintenance and rehabilitation decision trees and treatment strategies
- Historical and current M&R activity summaries (as available)
- Budget needs and multi-year funding scenarios
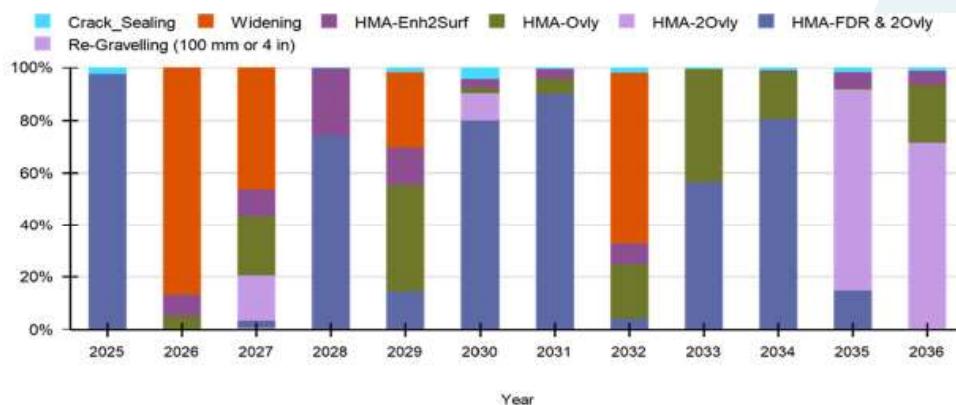- Recommended multi-year work plans identifying priority projects

Figure 10: Example PMP Scenario Figure: Capital Expenditure by Treatment Type

Report content will be tailored, where appropriate, to reflect jurisdiction-specific characteristics such as roadway functional classifications, local treatment practices, and funding considerations, while maintaining consistency across jurisdictions to support regional-level analysis.

PMS Database Update

In conjunction with report development, Atlas will finalize and update the StreetSaver® PMS database to reflect approved inventory, condition, treatment, and analysis data developed during the project. The updated database will support future analysis, reporting, and PMS updates by HCAOG and its member agencies.

Quality Assurance and Review

Atlas will perform internal quality assurance and quality control (QA/QC) reviews prior to submittal of draft reports. Draft reports will be provided to HCAOG for review and comment, and Atlas will incorporate consolidated comments to prepare final reports suitable for adoption and presentation.

Deliverables for Task 5

- Draft and final Pavement Management Program reports

- Updated StreetSaver®PMS database

Task 6 Presentation of Completed Pavement Management System Update

Upon completion of the Pavement Management System (PMS) Update and Final Reports, Atlas will prepare and deliver formal presentations to communicate the results, findings, and recommendations of the study. Presentations will be tailored to their respective audiences to ensure clarity, transparency, and effective decision-making.

Technical Advisory Committee (TAC) Presentation

Atlas will develop and present a detailed technical presentation to the HCAOG Technical Advisory Committee. The presentation will summarize the overall PMS update process and key technical outcomes, including pavement condition results, Pavement Condition Index (PCI) distributions, maintenance and rehabilitation decision trees, and budget scenario results developed using the MTC StreetSaver® Online Edition.

The TAC presentation will provide an opportunity for technical staff to review assumptions, ask questions, and confirm that the PMS Update meets technical and operational expectations prior to presentation to the HCAOG Board.

HCAOG Board Presentation

Atlas will prepare a separate presentation for the HCAOG Board of Directors, designed for a non-technical audience. This presentation will focus on high-level findings, system condition trends, funding needs, and the implications of different budget scenarios on future pavement performance. Technical information will be translated into clear visuals and concise summaries to support policy-level discussion and decision-making.

- Technical presentation to the HCAOG Technical Advisory Committee (PowerPoint or similar)

- Presentation to the HCAOG Board of Directors tailored to a non-technical audience (PowerPoint or similar)

Task 7 Training

Atlas will provide one day of hands-on computer training for HCAOG staff and participating member jurisdictions on the use of the MTC StreetSaver® Program. The training will be conducted via Zoom or another virtual platform, consistent with the Scope of Work requirements. The objective of this task is to ensure agency staff are capable of effectively using, maintaining, and updating the Pavement Management System following completion of the project.

Training Approach

Training will be led by Atlas's Project Manager, Farzan Kazemi, PhD, PE, with support from experienced StreetSaver® specialists. The training session will be structured to combine guided instruction with practical demonstrations using the updated HCAOG PMS data. Content will be tailored to the needs and experience levels of participating staff to maximize usability and knowledge retention

Training Content

Training topics will include, at a minimum:

- Data entry and editing

- Pavement Contition Index (PCI) calculations

- Budget analysis and scenario evaluation

- Report generation

- Use of the Geographic Information System (GIS) Toolbox

Atlas will emphasize practical workflows and best practices to support day-to-day use of StreetSaver® by agency staff. Training will focus on enabling users to independently update pavement data, adjust assumptions, rerun analyses, and generate reports as funding levels and priorities evolve. Training materials and reference documentation will be provided to support continued learning beyond the formal training sessions.

Deliverables for Task 7

- Training Manuals

4. Work Plan & Schedule

Task	Task Description	MAR 2026	APR 2026	MAY 2026	JUN 2026	JUL 2026	AUG 2026	SEP 2026	OCT 2026	NOV 2026	DEC 2026	JAN 2027	FEB 2027
Task 1	Kick-Off Meeting, Project Management, and Reporting	■	■	■	■	■	■	■	■	■	■	■	■
Task 2	Risk Management (Field Safety Oversight)		■	■	■								
Task 3	Pavement Data Collection and Reporting		■	■	■	■	■						
Task 4	Review Maintenance & Rehabilitation Strategies							■	■				
Task 5	Final Reports and Budget Scenarios									■	■	■	
Task 6	Presentation of Completed PMS Update											■	■
Task 7	Training (Virtual, One Day)												■

Notes

- Task 1 (Project Management occurs continuously throughout the project and includes monthly status updates and invoices.
- Task 2 (Risk Management) overlaps with field data collection activities.
- Task 3 (Data Collection) includes agency review, QA/QC, StreetSaver® entry, and GIS deliverables.
- Task 5 includes development of a minumum of four budget scenarios, draft/final reports, and database updates.
- Task 7 is scheduled after final reports to ensure training reflects final data and analysis.

5. Cost Proposal

Professional Services for the 2026 Pavement Management System Update
(HCAOG)

Proposer:
Atlas Technical Consultans (CA), Inc.
3101 Zinfandel Drive, Suite 320
Rancho Cordova, California 95670

Hour Breakdown by Task and Staff

Company	Staff	Role	Loaded Hourly Rate	TASK 1 KICK-OFF MEETING, PROJECT MANAGEMENT, AND REPORTING	TASK 2: RISK MANAGEMENT	TASK 3: DATA COLLECTION AND REPORTING	TASK 4: REVIEW MAINTENANCE AND REHABILITATION STRATEGIES	TASK 5: FINAL REPORTS	TASK 6: PRESENTATION OF COMPLETED PMS UPDATE	TASK 7: TRAINING
Atlas Technical Consultants	Farzan Kazemi, PhD, PE	ATLAS - Principal Engineer	$ 250.00	32		24	16	64	16	16
	Aaron Prchlik, PE	ATLAS - Project Manager	$ 287.00	16				8		
	Raul Chavez, MS	ATLAS - Engineer III	$ 170.00		32	240				
	Baron Colbert, PhD	ATLAS - Engineer IV (Senior)	$ 195.00			16		8		
	Chad Davis, PE	ATLAS - Project Manager	$ 287.00		4			8		
	Morteza Mirshekari, PhD, PE, GE	ATLAS - Principal Engineer	$ 250.00					8		
	Reza Saeedzadeh, PhD, PE, GE	ATLAS - Principal Engineer	$ 250.00					8		
Tiger Eye Engineering	Bill Buttlar, PhD, PE	TEE - Vice President	$ 240.00	16	8	8	8	16		
	Amir Ghanbari, PhD, PE	TEE - Senior Engineer	$ 180.00			8	80		16	16
	Hamed Majidi, PhD, EIT	TEE - Senior Engineer	$ 180.00	64		40	120	32	16	16
	Yaw Adu-Gyamfi, PhD	TEE - Project Managemer	$ 220.00		16	40	16			

Cost Breakdown by Task and Staff

Company	Staff	Role	Loaded Hourly Rate	TASK 1 KICK-OFF MEETING, PROJECT MANAGEMENT, AND REPORTING	TASK 2: RISK MANAGEMENT	TASK 3: DATA COLLECTION AND REPORTING	TASK 4: REVIEW MAINTENANCE AND REHABILITATION STRATEGIES	TASK 5: FINAL REPORTS	TASK 6: PRESENTATION OF COMPLETED PMS UPDATE	TASK 7: TRAINING
Atlas Technical Consultants	Farzan Kazemi, PhD, PE	ATLAS - Principal Engineer	$ 250.00	$ 8,000.00	$ -	$ 6,000.00	$ 4,000.00	$ 16,000.00	$ 4,000.00	$ 4,000.00
		0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Aaron Prchlik, PE	ATLAS - Project Manager	$ 287.00	$ 4,592.00	$ -	$ -	$ -	$ 2,296.00	$ -	$ -
	Raul Chavez, MS	ATLAS - Engineer III	$ 170.00	$ -	$ 5,440.00	$ 40,800.00	$ -	$ -	$ -	$ -
	Baron Colbert, PhD	ATLAS - Engineer IV (Senior)	$ 195.00	$ -	$ -	$ 3,120.00	$ -	$ 1,560.00	$ -	$ -
	Chad Davis, PE	ATLAS - Project Manager	$ 287.00	$ -	$ 1,148.00	$ -	$ -	$ 2,296.00	$ -	$ -
	Morteza Mirshekari, PhD, PE, GE	ATLAS - Principal Engineer	$ 250.00	$ -	$ -	$ -	$ -	$ 2,000.00	$ -	$ -
	Reza Saeedzadeh, PhD, PE, GE	ATLAS - Principal Engineer	$ 250.00	$ -	$ -	$ -		$ 2,000.00	$ -	$ -
		0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tiger Eye Engineering	Bill Buttlar, PhD, PE	TEE - Vice President	$ 240.00	$ 3,840.00	$ 1,920.00	$ 1,920.00	$ 1,920.00	$ 3,840.00	$ -	$ -
	Amir Ghanbari, PhD, PE	TEE - Senior Engineer	$ 180.00	$ -	$ -	$ 1,440.00	$ 14,400.00	$ -	$ 2,880.00	$ 2,880.00
	Hamed Majidi, PhD, EIT	TEE - Senior Engineer	$ 180.00	$ 11,520.00	$ -	$ 7,200.00	$ 21,600.00	$ 5,760.00	$ 2,880.00	$ 2,880.00
	Yaw Adu-Gyamfi, PhD	TEE - Project Manager	$ 220.00	$ -	$ 3,520.00	$ 8,800.00	$ 3,520.00	$ -	$ -	$ -
		Total Cost per Task		$ 27,952.00	$ 12,028.00	$ 69,280.00	$ 45,440.00	$ 35,752.00	$ 9,760.00	$ 9,760.00

Total Project Cost: $ 209,972.00

6. Required Attachments

SUBCONSULTANT LIST – RFP EXHIBIT C

The proposal shall include a complete list of all proposed subconsultants. All subconsultants listed must be provided a meaningful element of work within the defined scope of work. Changes to this Subconsultant List will not be allowed without prior written approval from RTPA.

Proposed Subconsultants

Subconsultant Firm Name and Address	Scope of Work	Dollar Amount of Work
Name: Tiger Eye Engineering LLC **Address:** 1601 S. Providence Road, 119D, Columbia, MO 65211	Automated vehicle-based pavement data collection and AI-assisted distress assessment.	$102,720
Name Address		$
Name Address		$
Name Address		$
Name Address		$
Name Address		$

Atlas Technical Consultants (CA) Inc.
_____
Name of Lead Firm

Aaron Prchlik, PE - Vice President, Northern California
_____
Printed Name and Title of Signatory

_____   01/16/2026
                                             _____
Signature   Date

Farzan Kazemi, PhD, PE
Project Manager

YEARS OF EXPERIENCE
12

EDUCATION
PhD, Pavement/Civil Engineering
MS, Civil Engineering
BS, Civil Engineering

LICENSES
- Professional Engineer, Civil, CA No. 96647

ATLAS OFFICE LOCATION
Rancho Cordova, CA

Dr. Kazemi, PhD, PE, specializes in pavement condition assessment, design, and testing, with extensive experience in automated and manual distress surveys. He has led pavement management and rehabilitation projects for multiple state DOTs, including Caltrans, Nevada, New Jersey, Delaware, Virginia, Maryland, Pennsylvania, and New York. His expertise includes overseeing evaluations, data collection, core calibrations, and providing maintenance recommendations, while ensuring quality control and innovation in statewide pavement programs.

Various Pavement Managment Projects, Napa County - CA | *Napa County*
Consultant Task Order Manager. Dr. Kazemi devleoped the report and contributed to the pavement management project for Napa County, CA. His work involved conducting pavement condition assessments, analyzing data, and providing strategic recommendations for maintenance and rehabilitation. This project was essential in helping Napa County make infomred decisions to improve and maintain its road infrastructure efficiently. (2019)

Various Pavement Mangement Projects, Camden - NJ | *City/County of Camden*
Consultant QC/QA Manager. Dr. Kazemi managed pavement management projects for Camden County and the City of Camden in New Jersey. These projects involved assessing pavement conditions, analyzing distress data, and developing maintenance and rehabilitation plans. Dr. Kazemi's work provided valuable data-driven recommendations to support the City and County in prioritizing road repairs and optimizing their pavement management budgets. (2019-2020

West Virginia Statewide Pavement Data Collection and Evaluation, Statewide - WV | *West Virginia Department of Transportation*
Consultant Contract Manager. Dr. Kazemi was responsible for quality control, innovation, and precision in a statewide pavement data collection and evaluation project for West Virginia. This project invonved using advanced mobile data collectiono techniques and sensor-based systems to gather pavement condition data across the state. Dr. Kazemi's role was pivotal in ensuring data accuracy and providing actionable recommendations for West Virginia's pavement management strategy. (2019-2020)

Pavement Condition Surveys and Data Collection, Various - Various | *Various State DOTs*
Consultant Contract Manager. Dr. Kazemi has been involved in pavement condition surveys & data collection projects across several states, including the DOTs of Delaware, Virginia, Maryland, Pennsylvania, and New York. He led evaluations using GPR and FWD testing, performed core calibrations, and developed recommendations for pavement maintenance and rehabilitaiton. (2020-2022)

Various Pavement Projects, Hamilton - NJ | *Advanced Infrastructure Design*
Lead Project Engineer (Pavement). Dr. Kazemi independently managed projects, prepared proposals, directly directly interacted with clients, and submitted reports. He provided pavement design and evaluation for roadway, intersection, bridge, and toll projects. He managed pavement projects for State agencies, counties, and townships and provided term agreements on pavement screening and bridge rehabilitation. Dr. Kazemi was involved in an extensive reserach project ($3.5M) with New Jersey DOT and Rowan University. He performed concrete pavement distress and repair identification and geo-mapping using CADD and supported ride quality projects (data collection, analysis, and resolution). In addition, he provided advanced GID VIsualization of pavement test results (FWD, GPR). (2020-2022)

Raul Chavez
Risk and Safety Expert

Mr. Chavez has over 30 years of experience in process improvement, specializing in data-driven decision-making and cost reduction. He is highly skilled in researching, developing, documenting, and implementing strategies that drive operational efficiency and enhance profitability. His specialties include Six Sigma methodology, ISO implementation, root cause analysis, Lean methodology, SIPOC, risk management, and training development, enabling him to deliver measurable results and foster continuous improvement within organizations.

Professional and Technical Specialist Engineering Services, Statewide - CA | *METS Caltrans*
Quality Engineer. Mr. Chavez supports Caltrans Materials Engineering and Testing Services (METS) as a Materials Manager coordinating and managing the samples and test results between Caltrans Labs and external labs, designing a procedure and tracker to manage the samples and generate status and results periodic reports. The tracker is used by labs and accounting departments. Mr. Chavez developed a new Independent Assurance (IA) quality manual, associated processes, and supporting documents. He delivered the completed draft, including dashboards, ten weeks (26%) early to align with the end of the year 12/2021 goals for the three branch chiefs. In addition, he provided support to the METS Quality Management Branch in developing the METS Quality Manual from 07/2021 to 12/2022, updated their IA Program Manual and websites from 09/2022 to 12/2023, with supporting procedures, identified procedures in need of documentation, supporting documents, and a new METS Manual of Procedures during the year 2022. Mr. Chavez developed the RSP Laboratory Manual, the Field and Forensic Services Quality Branch Manual, and assisted on the AB 1282 implementation with quality tools. He worked with the Statewide Materials Support Branch in items like the preparation for the Capital Outlay Support development process (2021-2025), and he is member of the core team that developed the Skid Testing Study for the Field and Forensic Services Branch, leading the laboratory and field tests, including data collection field surveys, upgraded user manuals, assisting on developing presentations and on the implementation processes of the new technology from 01/2022 to present. (2021-Ongoing)

Various Projects, Cypress - CA | *Safran Cabin Inc.*
Site Performance Improvement Manager. Mr. Chavez directed continuous business process improvement and risk management efforts across all departments. He conducted training in process improvement methodologies. He selected green and black belt candidates and supported quality audits. Mr. Chavez trained 97% of personnel in Lean Sigma belts and implemented RFID to improve inventory management, reducing cycle count time and increasing inventory accuracy to 100%. (2019-2020)

Various Projects, Sacramento - CA | *Cox Automotive Inc.*
Business Process Improvement Manager. From strategy development to implementation, Mr. Chavez executed and directed continuous business process improvement efforts within Collateral Management Services and Document Digital Services. He initiated a quality management system and trained in process improvement methodologies. He also managed project selection, training, and the development of a network of improvement advisors (NIA) across operations. (2013-2019)

Hamed Majidifard, PhD, PE
TEE Senior Engineer

Dr. Majidifard's project experience includes the development and deployment of machine learning techniques to evaluate pavement and infrastructure conditions, rating, and roughness. He has undertaken several projects to develop programming approaches that utilize machine learning techniques to forecast low and high-temperature asphalt mixture performance properties. He has also applied deep learning techniques to create a automated pavement evaluation and monitoring system, following ASTM procedures. A full software suite has also been developed, which highly allows seamless integration of collected data and condition ratings into visualization software and client-specific GIS platforms.

Pavement Condition Assessment and Asset Management System Update, **Jefferson City - MO |** *City of Jefferson City*
Project Manager. Dr. Majidifard served as project manager for a comprehensive inspection of roadway and curb and gutter infrastructure for the City of Jefferson City, MO using a cutting-edge and highly cost-effective automated distress detection and rating system built around advanced machine learning algorithms. His responsibilities included project management, field operations management, and overseeing pavement condition data collection (2025)

Pavement Condition Assessment and Data Visualization, **City and County of Honolulu - HI |** *City and County of Honolulu*
Project Engineer. Dr. Majidifard is currently responsible for managing the field operations, data collection, and GIS services for the automated pavement inspection of roadway pavement for the County of Honolulu, HI. Scope of services includes roadways, sidewalk, and asset inspection. Condition indices will be developed per client specification. (2025-Ongoing)

Pavement Condition Assessment Project, **Thornton - CO |** *City of Thornton, CO*
Project Manager. In 2024, Dr. Majidifard was the project manager for the assessment of 421 miles of pavement for the City of Thornton, Colorado. His responsibilities included overseeing data collection, model training, quality control, validation, and analysis. Advanced machine learning software programs were developed and used to evaluate pavement conditions by identifying over 4 different distress types and calculating Pavement Condition Index (PCI) ratings following ASTM D6433 standards. The results were integrated into the City's pavement management program to optimize maintenance and repair strategies. Dr. Majidifard will also provide treatment recommendations and expertise over the course of the ten-year contract (2024-Ongoing)

Sidewalk Condition Assessment and Ramp Evaluation Project, **City of Topeka - KS |** *City of Topeka, KS*
Project Engineer. In 2024, Dr. Majidifard oversaw the data collection and field operations for an assessment of 700 miles of sidewalks and ramp evaluations for the City of Topeka, Kansas. His responsibilities included project management, GIS services and updates, and the implementation of an AI-based distress identification system that produced a complete sidewalk condition index and ADA/PROWAG compliance database. He also participated in the design and implementation of the comprehensive data collection system used to integrate GPS, LiDAR, video footage, IMU, and accelerometer data to accurately measure sidewalk slopes and detect surface irregularities. He also played a key role in validating the final condition indices and reports, delivering the results of the assessment in a clear, actionable format. (2024-2025)

William Buttlar, PhD, PE
TEE Vice President

YEARS OF EXPERIENCE
37

EDUCATION
PhD, Civil Engineering

MS, Civil Engineering

BS, Civil Engineering

LICENSES
- Professional Engineer, Civil, IL No. 062052460

TEE OFFICE LOCATION
Columbia, MO

Dr. Buttlar is a managing partner of Tiger Eye Engineering and a Professor of Civil Environmental Engineering at the University of Missouri-Columbia, where he holds the Glen Barton Endowed Faculty Chair in Flexible Pavements. He is also the Founding Director of the Missouri Center Transportation Innovation, and Editor- In-Chief of the International Journal of Road Materials and Pavement Design. Dr. Buttlar specializes for in pavement evaluation and design, modeling and machine learning, material characterization, pavement management systems, and pavement sustainability and resilience. Dr. Buttlar has served as the project manager/ technical lead for many pavement evaluation, design and management projects for various state highway agencies, tollways, and cities across the United States over the past 3 decades

Pavement Condition Assessment and Data Visualization, Honolulu - HI | *City and County of Honolulu*
Senior Reviewer. Dr. Buttlar served as senior reviewer for an automated pavement inspection of 1,800 lane miles of roadway pavement using Tiger Eye's automated distress detection and rating system, as well as the development of data visualization dashboards customized for the County of Honolulu. Scope of services include roadways, sidewalk, and asset inspection. Condition indices will be developed per client specification (2025-Ongoing)

Pavement Condition Assessment Project, Thornton - CO | *City of Thornton, CO*
Contract Manager and Senior Reviewer. Dr. Buttlar served as contract manager and senior reviewer for the assessment of 421 miles of pavement for the City of Thornton. His responsibilities included project/contract management, overseeing quality assurance and control processes in data collection and processing, and the final review of the advanced machine learning software programs used to evaluate pavement conditions by identifying over 40 different distress types and calculating Pavement Condition Index (PCI) ratings following ASTM D6433 standards. (2024-Ongoing)

Sidewalk Condition Assessment and Ramp Evaluation Project, Topeka - KS | *City of Topeka, KS*
Senior Reviewer. In 2024, Dr. Buttlar oversaw the data processing and final deliverables for an assessment of 700 miles of sidewalks and ramp evaluations for the City of Topeka, Kansas. His responsibilities included project management, contract management, and overseeing quality assurance and control processes in data collection and processing. He also participated in the design and implementation of the comprehensive data collection system used to integrate GPS, LiDAR, video footage, IMU, and acceleometer data to accurately measure sidewalk slopes and detect surface irregularities. He also played a key role in validating the final condition indices and reports, delivering the results of the assessment in a clear, actionable format. *2024-2025

Pavement Condition Assessment and Asset Management System Update, Jefferson City - MO | *City of Jefferson City, MO*
Contract Manager and Senior Reviewer. This project involved a comprehensive inspection of roadway and curb and gutter infrastructure for Jefferson City, MO using a cutting-edge and highly cost-effective automated distress detection and rating system built around advanced machine learning algorithms. His responsibilities included project/contract management, overseeing quality assurance and control processes in data collection and processing, and validation and preparation of the final pavement condition report and updated asset inventory. (2025)

Amir Ghanbari, PhD, PE
TEE Senior Engineer

YEARS OF EXPERIENCE
10

EDUCATION
PhD, Pavement Engineering

MS, Transportation Materials

BS, Civil Engineering

LICENSES
- Professional Engineer, Civil, NC No.061497

TEE OFFICE LOCATION
Raleigh, NC

Amir Ghanbari, PhD, is a dedicated project manager/engineer with a strong background in pavement management, pavement materials, highway and airport pavement design, and construction supported by ten years of work experience. Amir has extensive experience with pavement management systems, non-destructive testing and falling weight deflectometer back calculations, pavement condition index analysis, pavement life cycle cost analysis and preservation techniques, highway and airport pavement design, and asphalt material characterization. He has also contributed to several FHWA reports and 20 published articles. Amir is proficient with various types of pavemen asset management software such as ESA, AgileAssets, PAVER, StreetSaver, Lucity, and Cartegraph.

Pavement Management System, Temecula - CA | *City of Temecula, CA*
Project Manager. Dr. Ghanbari oversaw the implementation of a pavement management system project for the City of Temecula. Using automated technology to collect pavement data that adhered to ASTM D6433 standards, a pavement condition database was created. Amir collaborated with the City to create a short-term CIP for pavements and participated in the presentation of results to City stakeholders. (2023)

Pavement Management Program Update, Oceanside - CA | *City of Oceanside, CA*
Project Engineer. Implemented a pavement management system and the automated ASTM D6433 PCI survey of more than 500 miles of the City's roadways. IRI ride quality data as well as rutting data were collected of each roadway. Structural testing was also conducted on the arterials and collectors (224 miles in total) using a Fast FWD system to assess the City's network SI. Amir supported the development of a five-year pavement preservation with M&R Plans. (2022)

Automated Pavement Condition Assessment Project, Irvine - CA | *City of Irvine, CA*
Project Manager and Engineer. Dr. Ghanbari supported Irvine's automated pavement condition assessment project in 2021 as project manager/engineer. The data was collected on the entire City network. In addition, he analyzed the FWD data conducted deflection testing on major roads using FastFWD. The data was collected and loaded into the City's Pavement Management System and he ran training activities for the City. (2021)

Pavement Condition Survey; Sidewalk Inventory and Select Project-Level GPR Testing Project, Dallas - TX | *City of Dallas, TX*
Project Manager. Dr. Ghanbari managed pavement condition surveys following ASTM D6433 PCI standards, GPR testing, and ASTM E3303 survey for 600 miles of City network. Data was seamlessly integrated into the City's PM system, Pavement Analyst (Agile Asset). Amir also implemented a map module to integrate and display pavement condition and other data in a format consistent with the control network system. The project included comprehensive sidewalk and ADA ramp inventory, which was incorporated into the City's GIS. (2022-2023)

Disadvantaged Business Enterprise (DBE) Statement

Atlas Technical Consultants (Atlas) is committed to full compliance with all applicable Disadvantaged Business Enterprise (DBE) requirements and has a strong record of supporting DBE participation on federally and state-funded projects. In accordance with current guidance from Caltrans indicating that DBE goal setting for state-originating funds is paused, Atlas understands that a specific DBE utilization plan is not required for this procurement and that a general statement of DBE outreach and compliance is sufficient.

Historically, Atlas has consistently implemented DBE outreach and Good Faith Effort (GFE) practices, including advertising opportunities, engaging qualified DBE firms, and ensuring fair and equitable access to contracting opportunities. Based on past Caltrans performance evaluations, Atlas has achieved a 9.3 rating in the DBE/DVBE Participation category, reflecting our demonstrated commitment to fostering DBE involvement and growth.

Atlas will continue to adhere to all applicable Equal Employment Opportunity (EEO) and DBE requirements throughout the duration of this contract and remains prepared to support DBE participation to the maximum extent feasible, consistent with governing regulations and agency guidance.

Affirmative Action Statement

Atlas is an equal opportunity employer and actively works to ensure its employment related decisions are not made on the basis of race, color, creed, religion, national origin, ancestry, citizenship status, age, disability, sex, gender, gender identity or expression, sexual orientation, marital status, pregnancy, veteran status, genetic information, or any other characteristic protected by applicable federal, state, or local laws. This commitment applies to decisions with respect to recruitment, hiring, placement, promotion, transfer, training, compensation, benefits, employee activities, layoff, recall, leaves of absence, access to facilities and programs, and general treatment during employment.

See EEO Statement of Policy on next page.

STATEMENT OF POLICY - EQUAL OPPORTUNITY EMPLOYER

Atlas Technical Consultants LLC and its subsidiaries ("Atlas") is committed to compliance in all respects with all applicable anti-discrimination laws. Atlas is an equal opportunity employer and actively works to ensure its employment-related decisions are not made on the basis of race, color, creed, religion, national origin, ancestry, citizenship status, age, disability, sex, gender, gender identity or expression, sexual orientation, marital status, pregnancy, veteran status, genetic information, or any other characteristic protected by applicable federal, state, or local laws. This commitment applies to decisions with respect to recruitment, hiring, placement, promotion, transfer, training, compensation, benefits, employee activities, layoff, recall, leaves of absence, access to facilities and programs, and general treatment during employment.

As part of this commitment, Atlas expressly prohibits any form of workplace harassment, including when such harassment is based on a protected characteristic. Atlas's Human Resources team also actively works to ensure that employees and/or applicants who, due to a disability, a sincerely held religious belief or observance, as a result of pregnancy or related medical conditions, or for any other reason addressed in applicable law, are in need of a reasonable accommodation are provided such an accommodation.

Atlas strictly prohibits retaliation against anyone who complies in good faith with Atlas's reporting expectations or otherwise participates in an investigation into potential conduct inconsistent with the company's commitment.

Employees are informed of Atlas's commitment in this regard and provided clear guidance related to the complaint and investigation procedures utilized by Atlas to ensure that any actions inconsistent with the company's equal employment opportunities commitment are identified as effectively and efficiently as possible so that, when necessary, appropriate remedial action can be taken.

By:

Name: Jacqueline C. Hinman

Title: Chief Executive Officer

Date: November 4, 2025

ATLAS